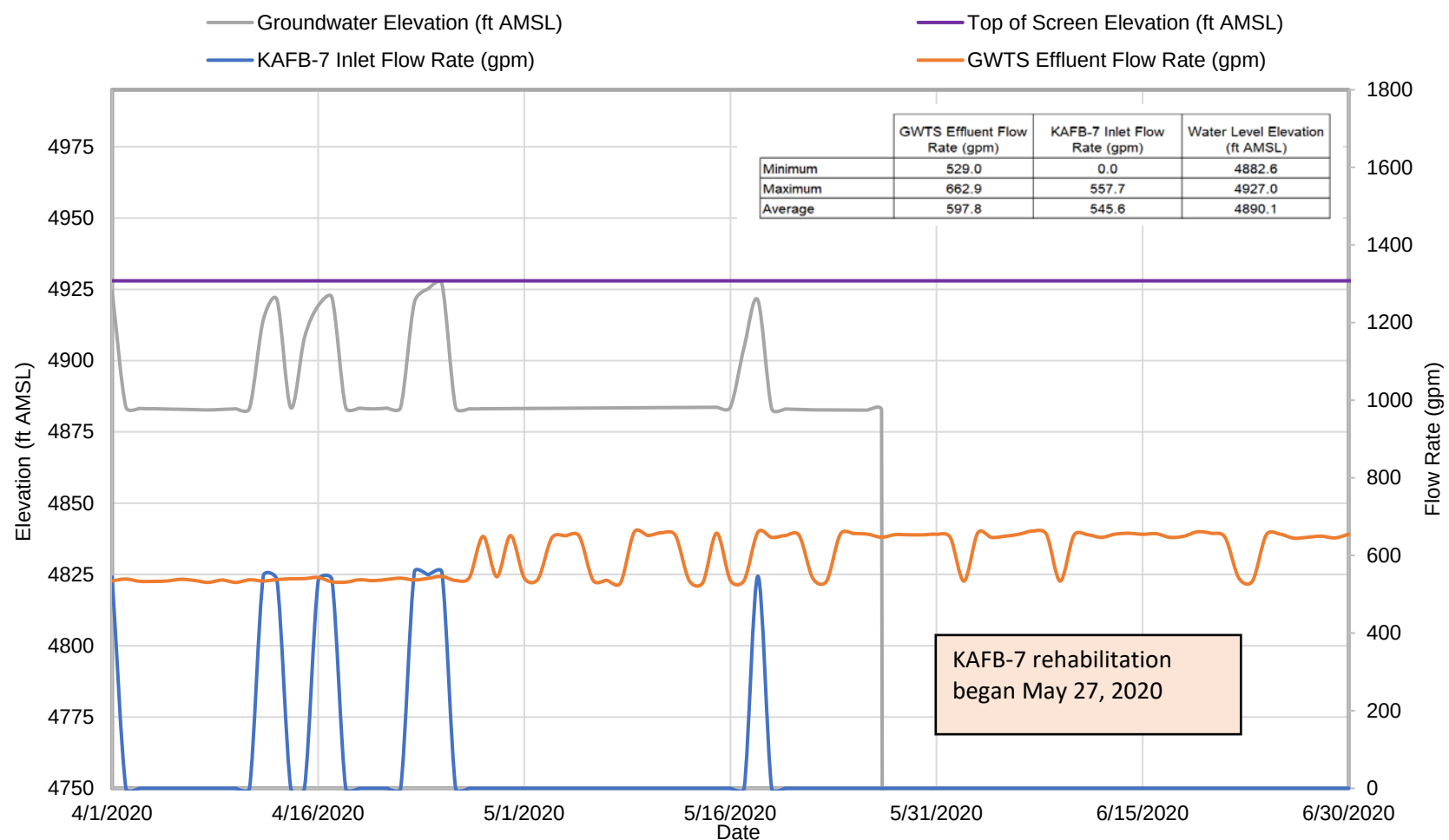


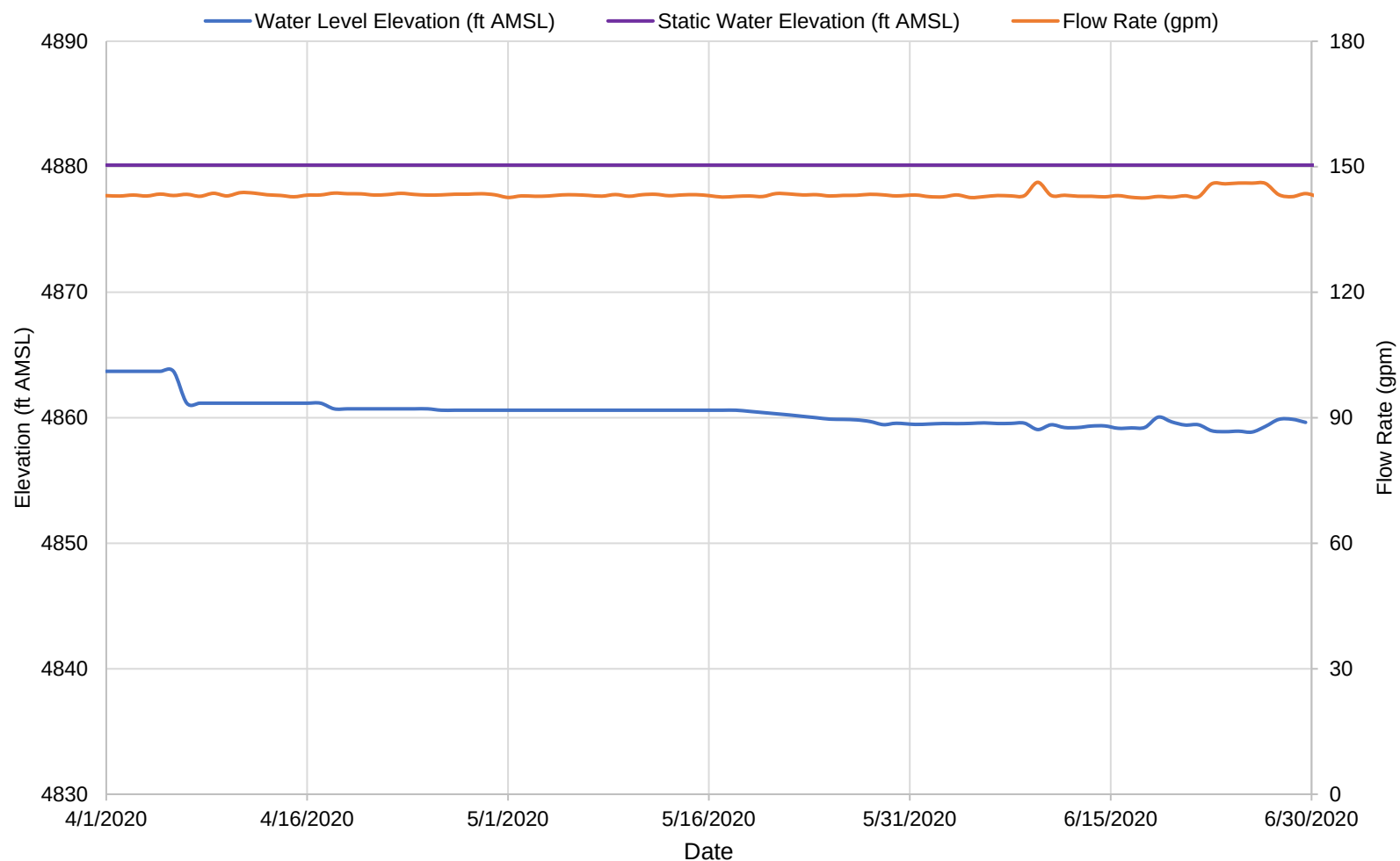
Q2 2020 WELL PERFORMANCE FIGURES

**Figure I-1-1
Well KAFB-7**



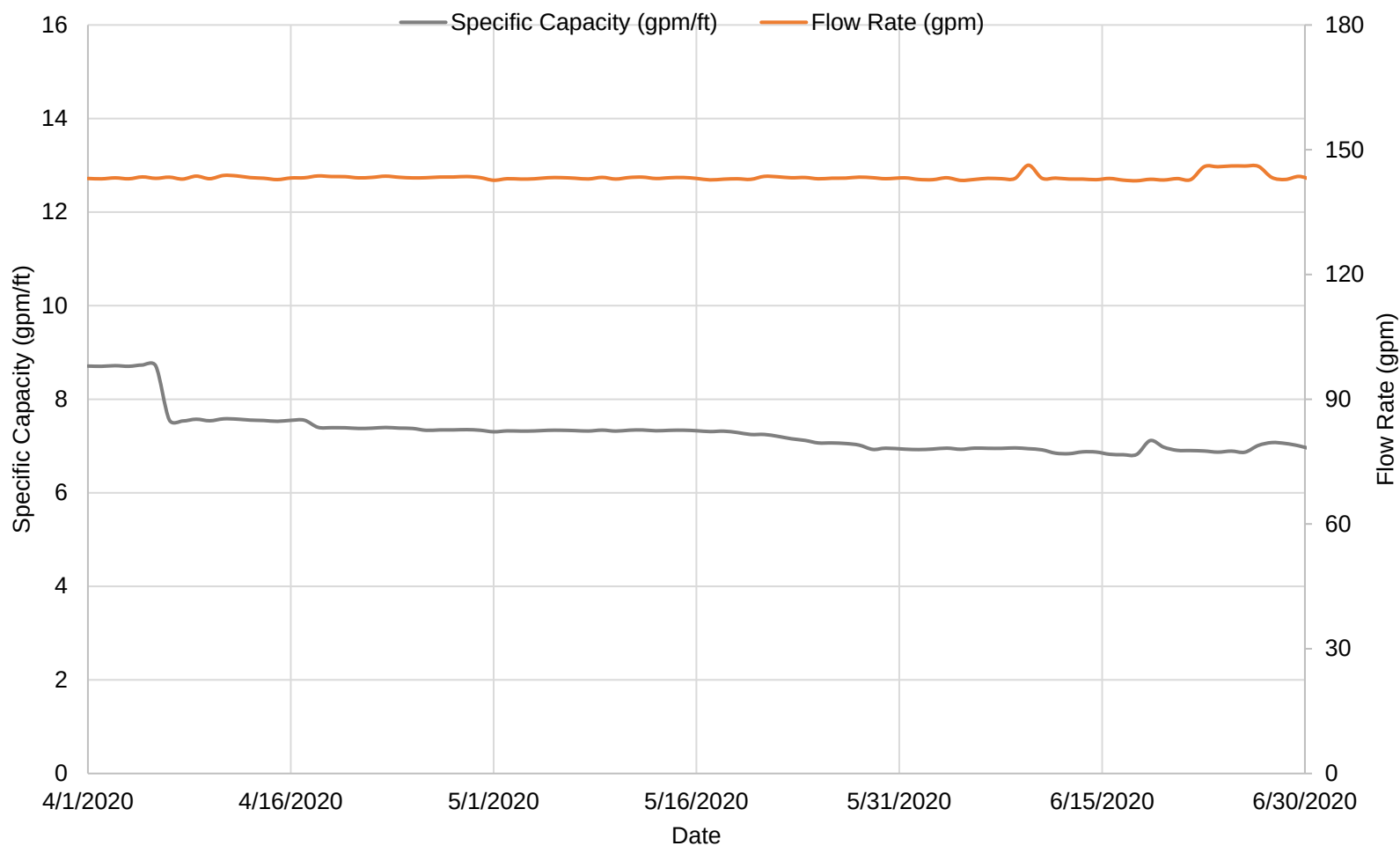
AMSL = above mean sea level
ft = foot/feet
gpm = gallons per minute

**Figure I-1-2
KAFB-106228**



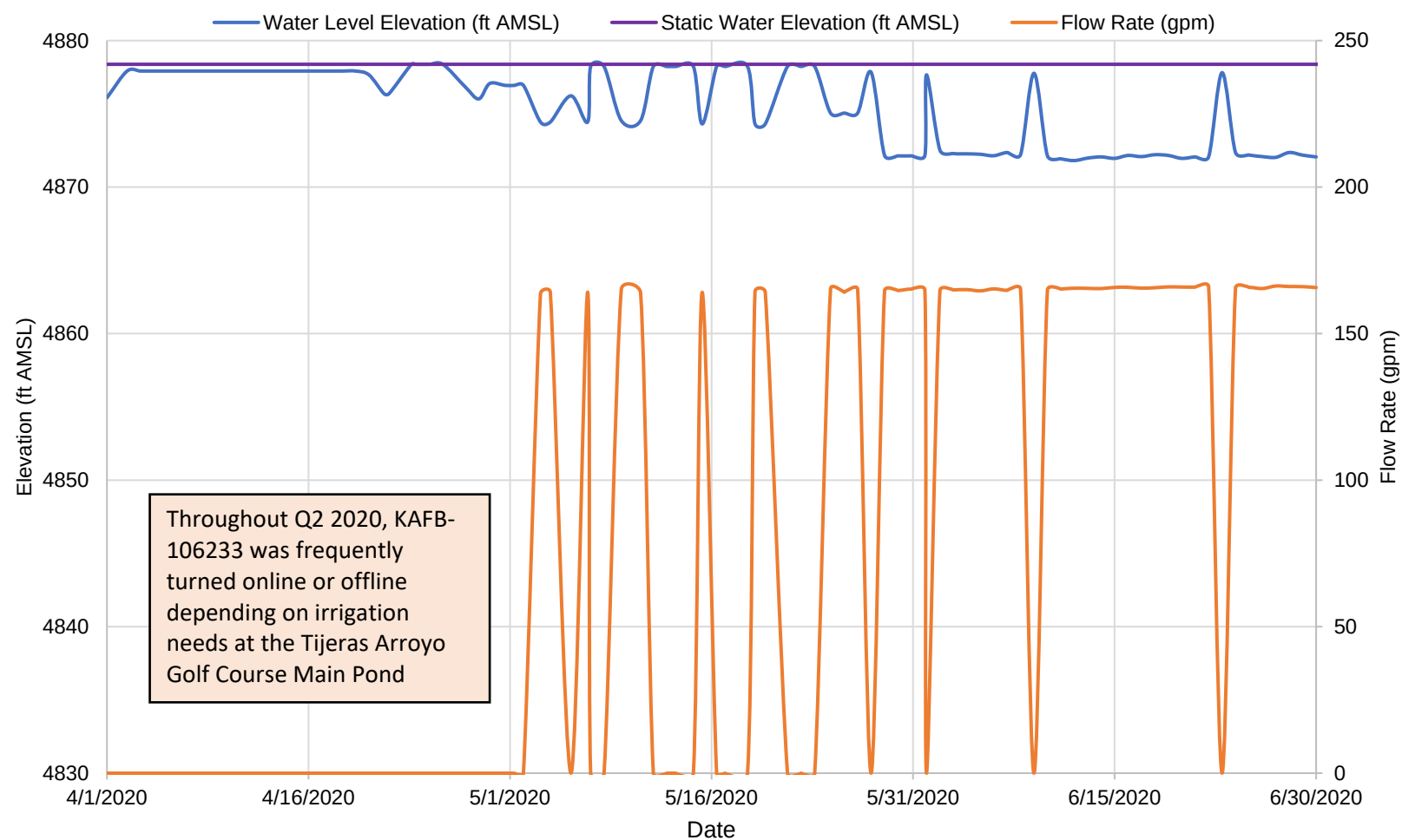
Water level elevation and flow rate are graphed from daily values.
 Static water elevation is approximately groundwater elevation when GWTS is non-operational.
 AMSL = above mean sea level
 ft = foot/feet
 gpm = gallons per minute

**Figure I-1-3
KAFB-106228**



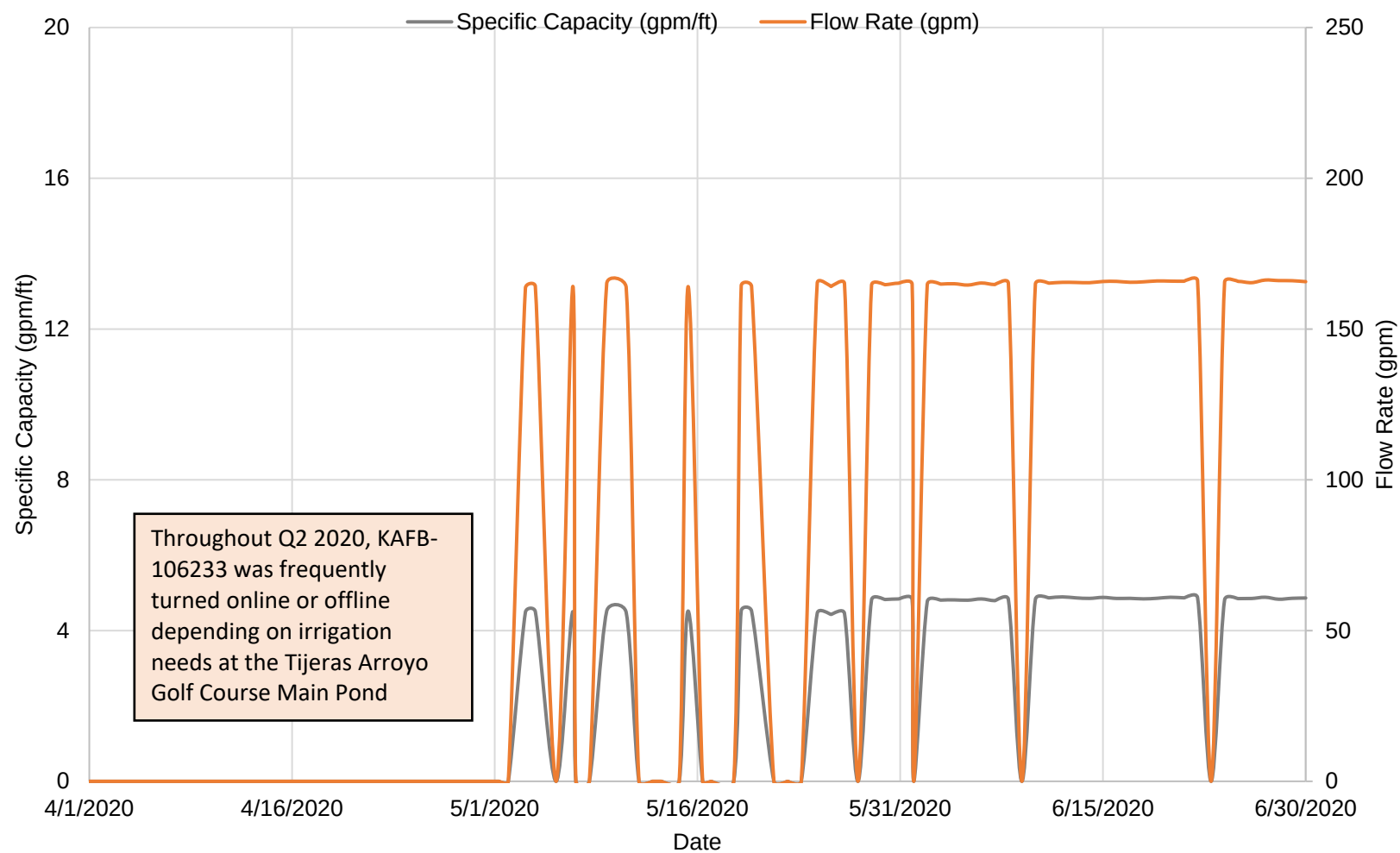
Flow rate is graphed from daily values.
ft = foot/feet
gpm = gallons per minute

**Figure I-1-4
KAFB-106233**



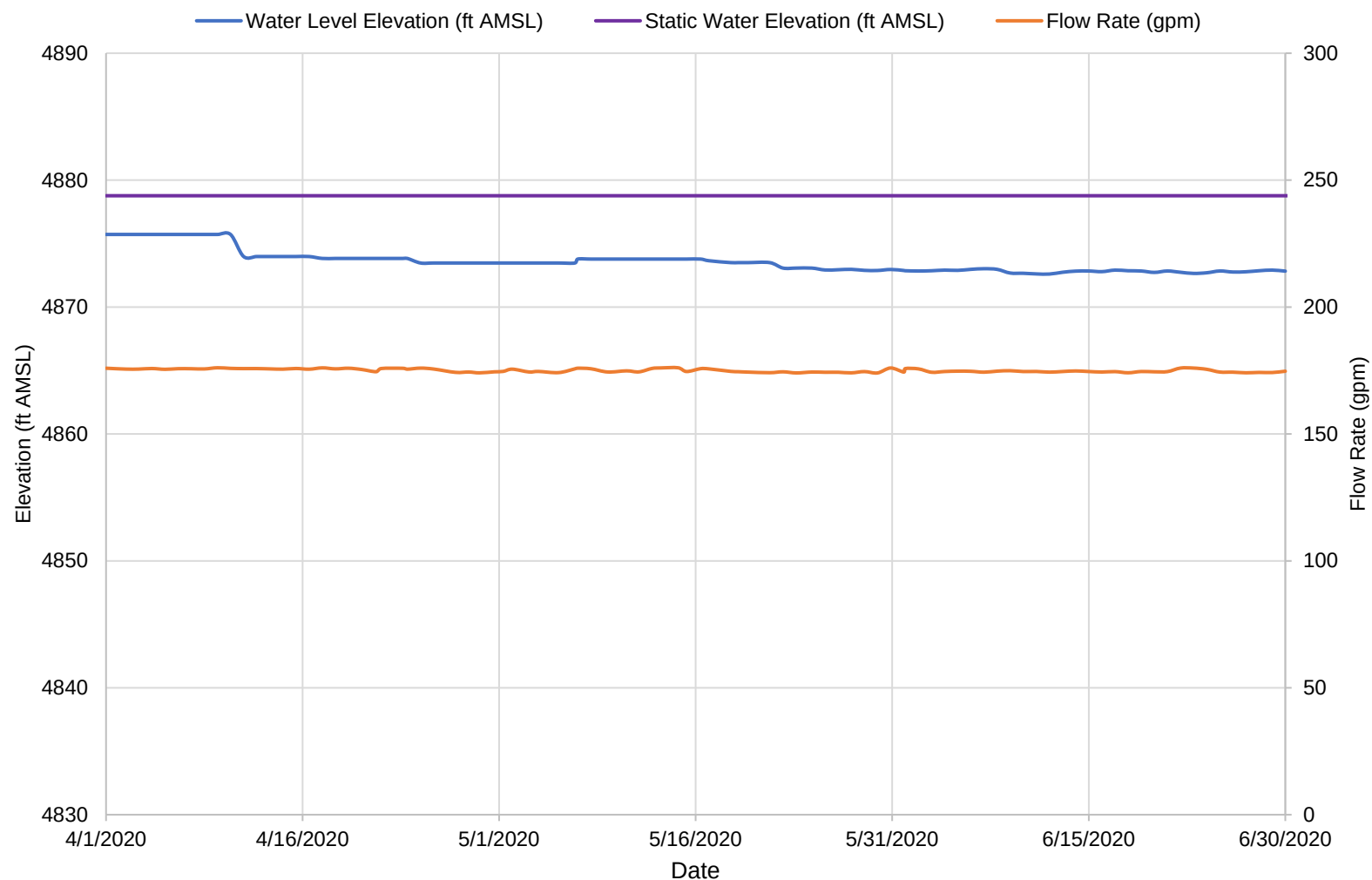
Water level elevation and flow rate are graphed from daily values.
 Static water elevation is approximately groundwater elevation when GWTS is non-operational.
 AMSL = above mean sea level
 ft = foot/feet
 gpm = gallons per minute

**Figure I-1-5
KAFB-106233**



Flow rate is graphed from daily values.
ft = foot/feet
gpm = gallons per minute

**Figure I-1-6
KAFB-106234**

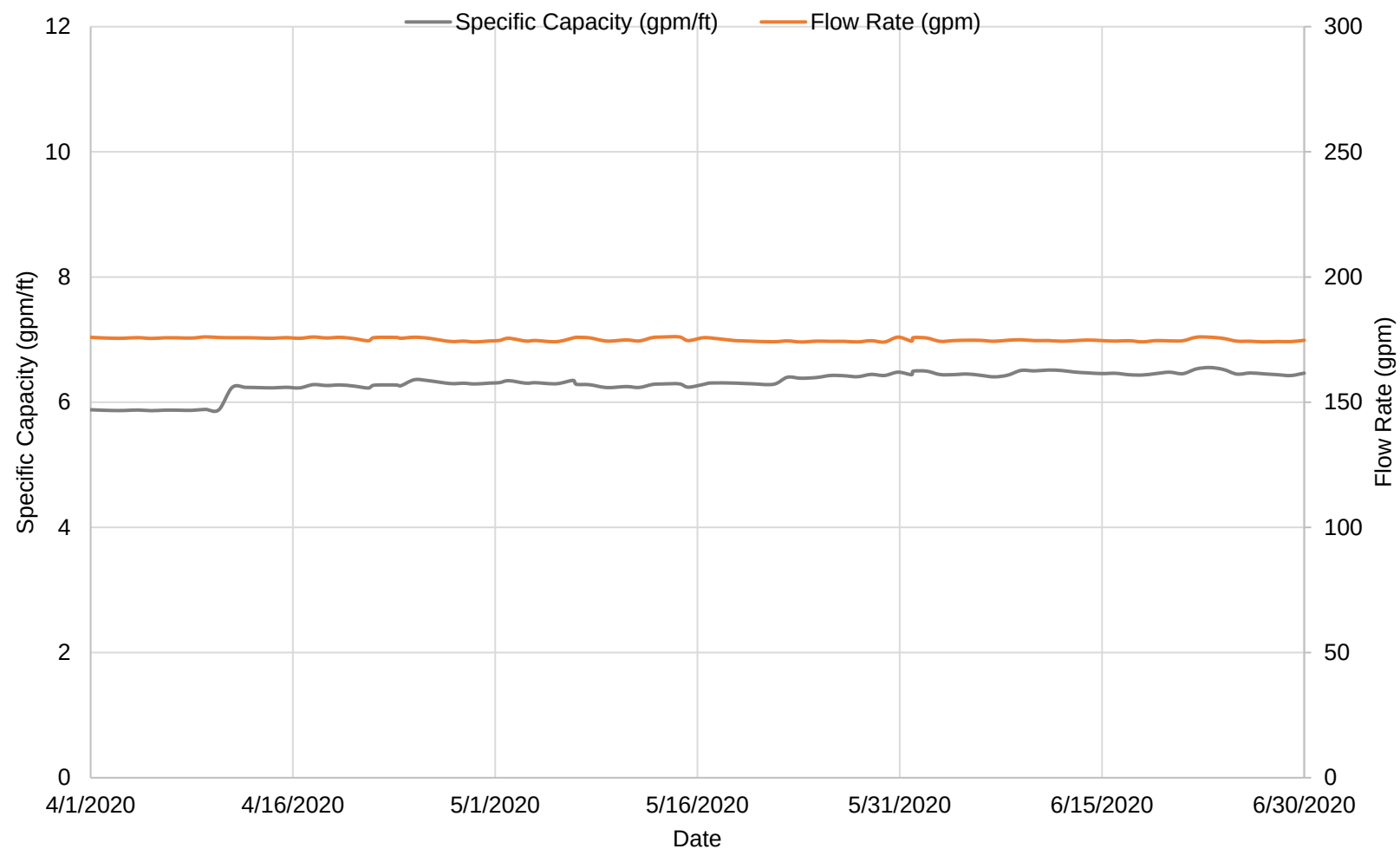


Water level and flow rate are graphed from daily values.
 Static water elevation is approximately groundwater elevation when GWTS is non-operational.
 AMSL = above mean sea level
 ft = foot/feet
 gpm = gallons per minute

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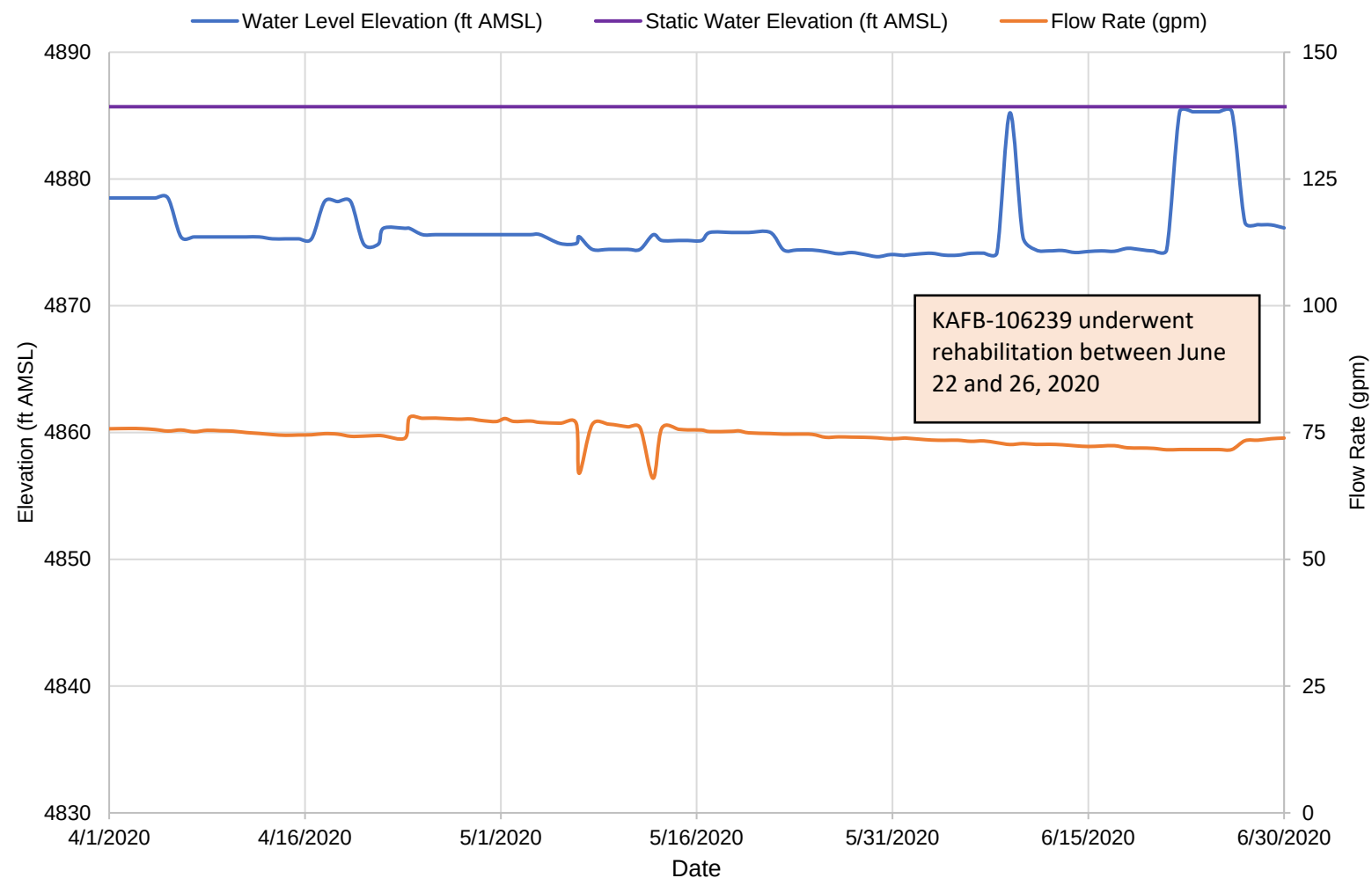
September 2020

**Figure I-1-7
KAFB-106234**



Flow rate is graphed from daily values.
ft = foot/feet
gpm = gallons per minute

**Figure I-1-8
KAFB-106239**



Water level and flow rate are graphed from daily values.

Static water elevation is approximately groundwater elevation when GWTS is non-operational.

AMSL = above mean sea level

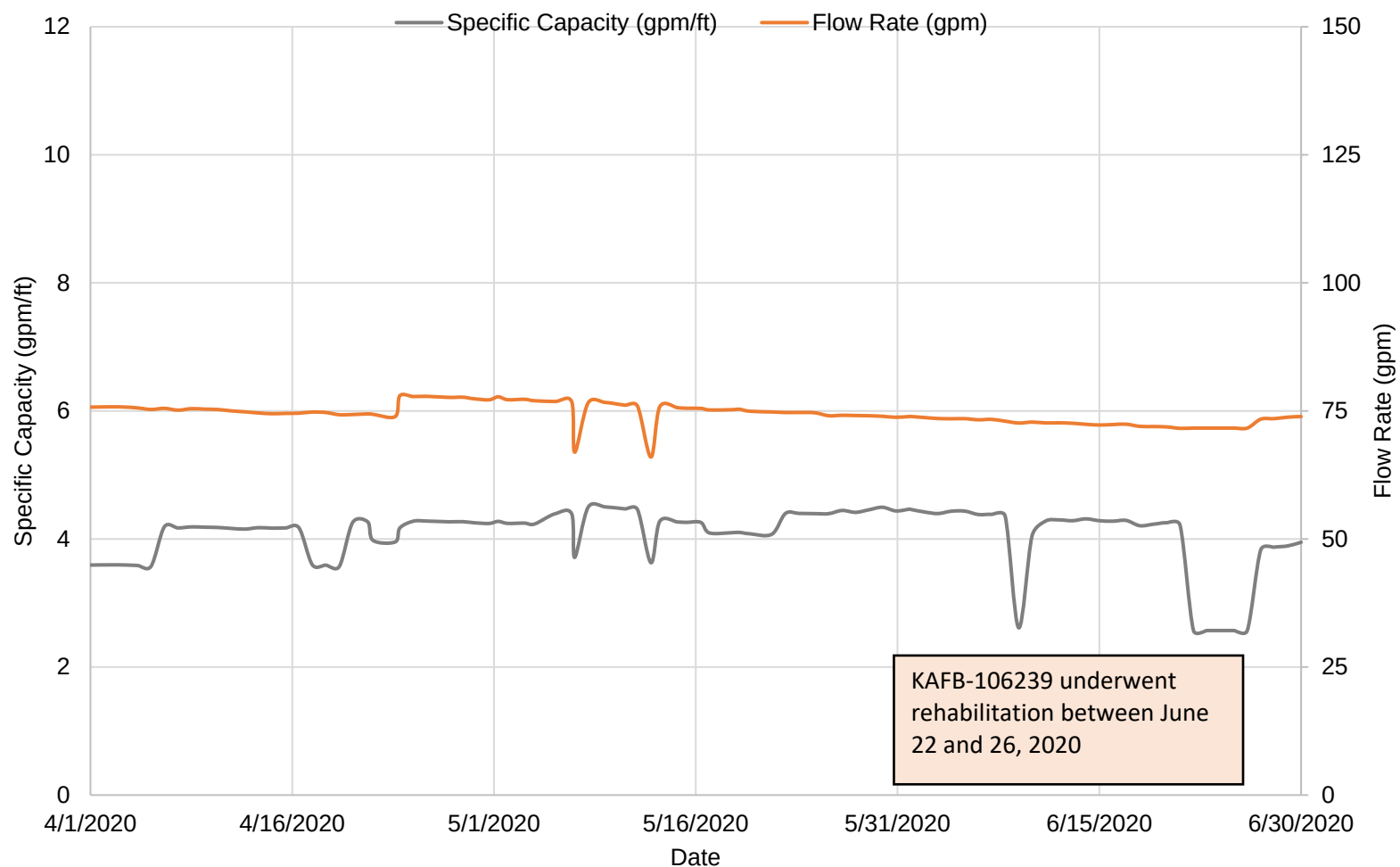
ft = foot/feet

gpm = gallons per minute

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Figure I-1-9
KAFB-106239



Flow rate is graphed from daily values.
ft = foot/feet
gpm = gallons per minute

Q2 2020 WELL PERFORMANCE TABLES

Table I-1-1
Extraction Well KAFB-106228 Performance Figure Data, Q2 2020

Date	Flow Rate (gpm)	WL Elevation (ft AMSL)	Drawdown (ft)	Specific Capacity (gpm/ft)	Transmissivity (gal/d•ft)
4/1/2020	143.09	4863.70	16.43	8.71	13063.60
4/2/2020	143.00	4863.70	16.43	8.70	13055.39
4/3/2020	143.23	4863.70	16.43	8.72	13076.38
4/4/2020	143.01	4863.70	16.43	8.70	13056.30
4/5/2020	143.46	4863.70	16.43	8.73	13097.38
4/6/2020	143.12	4863.70	16.43	8.71	13066.34
4/7/2020	143.40	4861.16	18.97	7.56	11338.96
4/8/2020	142.94	4861.16	18.97	7.54	11302.58
4/9/2020	143.65	4861.16	18.97	7.57	11358.72
4/10/2020	143.03	4861.16	18.97	7.54	11309.70
4/11/2020	143.81	4861.16	18.97	7.58	11371.38
4/12/2020	143.70	4861.16	18.97	7.58	11362.68
4/13/2020	143.30	4861.16	18.97	7.55	11331.05
4/14/2020	143.14	4861.16	18.97	7.55	11318.40
4/15/2020	142.82	4861.16	18.97	7.53	11293.09
4/16/2020	143.21	4861.16	18.97	7.55	11323.93
4/17/2020	143.26	4861.16	18.97	7.55	11327.89
4/18/2020	143.70	4860.71	19.42	7.40	11099.38
4/19/2020	143.55	4860.71	19.42	7.39	11087.80
4/20/2020	143.52	4860.71	19.42	7.39	11085.48
4/21/2020	143.24	4860.71	19.42	7.38	11063.85
4/22/2020	143.35	4860.71	19.42	7.38	11072.35
4/23/2020	143.64	4860.71	19.42	7.40	11094.75
4/24/2020	143.38	4860.71	19.42	7.38	11074.67
4/25/2020	143.23	4860.71	19.42	7.38	11063.08
4/26/2020	143.27	4860.60	19.53	7.34	11003.84
4/27/2020	143.43	4860.60	19.53	7.34	11016.13
4/28/2020	143.44	4860.60	19.53	7.34	11016.90
4/29/2020	143.55	4860.60	19.53	7.35	11025.35
4/30/2020	143.30	4860.60	19.53	7.34	11006.14
5/1/2020	142.66	4860.60	19.53	7.30	10956.99
5/2/2020	143.03	4860.60	19.53	7.32	10985.41
5/3/2020	142.94	4860.60	19.53	7.32	10978.49
5/4/2020	143.01	4860.60	19.53	7.32	10983.87
5/5/2020	143.27	4860.60	19.53	7.34	11003.84
5/6/2020	143.29	4860.60	19.53	7.34	11005.38
5/7/2020	143.15	4860.60	19.53	7.33	10994.62
5/8/2020	142.97	4860.60	19.53	7.32	10980.80
5/9/2020	143.35	4860.60	19.53	7.34	11009.98
5/10/2020	142.95	4860.60	19.53	7.32	10979.26
5/11/2020	143.32	4860.60	19.53	7.34	11007.68
5/12/2020	143.41	4860.60	19.53	7.34	11014.59
5/13/2020	143.08	4860.60	19.53	7.33	10989.25
5/14/2020	143.26	4860.60	19.53	7.34	11003.07
5/15/2020	143.32	4860.60	19.53	7.34	11007.68
5/16/2020	143.09	4860.60	19.53	7.33	10990.02
5/17/2020	142.75	4860.60	19.53	7.31	10963.90

Table I-1-1
Extraction Well KAFB-106228 Performance Figure Data, Q2 2020

Date	Flow Rate (gpm)	WL Elevation (ft AMSL)	Drawdown (ft)	Specific Capacity (gpm/ft)	Transmissivity (gal/d•ft)
5/18/2020	142.92	4860.60	19.53	7.32	10976.96
5/19/2020	143.01	4860.51	19.62	7.29	10933.49
5/20/2020	142.88	4860.41	19.72	7.25	10869.99
5/21/2020	143.59	4860.32	19.81	7.25	10870.71
5/22/2020	143.49	4860.22	19.91	7.21	10810.40
5/23/2020	143.26	4860.11	20.02	7.16	10733.77
5/24/2020	143.32	4860.00	20.13	7.12	10679.58
5/25/2020	143.01	4859.89	20.24	7.07	10598.57
5/26/2020	143.15	4859.87	20.26	7.07	10598.47
5/27/2020	143.18	4859.83	20.30	7.05	10579.80
5/28/2020	143.41	4859.70	20.43	7.02	10529.37
5/29/2020	143.27	4859.45	20.68	6.93	10391.92
5/30/2020	143.03	4859.56	20.57	6.95	10430.00
5/31/2020	143.24	4859.47	20.66	6.93	10399.81
6/1/2020	142.85	4859.50	20.63	6.92	10386.57
6/2/2020	142.80	4859.54	20.59	6.94	10403.11
6/3/2020	143.26	4859.53	20.60	6.95	10431.55
6/4/2020	142.63	4859.55	20.58	6.93	10395.77
6/5/2020	142.85	4859.59	20.54	6.95	10432.08
6/6/2020	143.12	4859.54	20.59	6.95	10426.42
6/7/2020	143.03	4859.55	20.58	6.95	10424.93
6/8/2020	143.09	4859.57	20.56	6.96	10439.45
6/9/2020	146.28	4859.06	21.07	6.94	10413.86
6/10/2020	143.14	4859.44	20.69	6.92	10377.48
6/11/2020	143.18	4859.22	20.91	6.85	10271.16
6/12/2020	142.95	4859.22	20.91	6.84	10254.66
6/13/2020	142.94	4859.34	20.79	6.88	10313.13
6/14/2020	142.80	4859.35	20.78	6.87	10307.99
6/15/2020	143.09	4859.16	20.97	6.82	10235.34
6/16/2020	142.69	4859.19	20.94	6.81	10221.35
6/17/2020	142.54	4859.23	20.90	6.82	10230.14
6/18/2020	142.89	4860.05	20.08	7.12	10674.05
6/19/2020	142.72	4859.67	20.46	6.98	10463.34
6/20/2020	143.06	4859.42	20.71	6.91	10361.66
6/21/2020	142.82	4859.44	20.69	6.90	10354.28
6/22/2020	145.94	4858.96	21.17	6.89	10340.58
6/23/2020	145.91	4858.89	21.24	6.87	10304.38
6/24/2020	146.10	4858.93	21.20	6.89	10337.26
6/25/2020	146.08	4858.86	21.27	6.87	10301.83
6/26/2020	146.01	4859.31	20.82	7.01	10519.45
6/27/2020	143.32	4859.87	20.26	7.07	10611.06
6/28/2020	142.85	4859.88	20.25	7.05	10581.48
6/29/2020	143.58	4859.63	20.50	7.00	10505.85
6/30/2020	142.75	4859.52	20.61	6.93	10389.37

Notes:

AMSL = above mean sea level

d = day

ft = foot/feet

gal = gallon

gpm = gallons per minute

WL = water level

Table I-1-2
Extraction Well KAFB-106233 Performance Figure Data, Q2 2020

Date	Flow Rate (gpm)	WL Elevation (ft AMSL)	Drawdown (ft)	Specific Capacity (gpm/ft)	Transmissivity (gal/d·ft)
4/1/2020	0.00	4876.10	--	--	--
4/2/2020	0.00	4877.92	--	--	--
4/3/2020	0.00	4877.92	--	--	--
4/4/2020	0.00	4877.92	--	--	--
4/5/2020	0.00	4877.92	--	--	--
4/6/2020	0.00	4877.92	--	--	--
4/7/2020	0.00	4877.92	--	--	--
4/8/2020	0.00	4877.92	--	--	--
4/9/2020	0.00	4877.92	--	--	--
4/10/2020	0.00	4877.92	--	--	--
4/11/2020	0.00	4877.92	--	--	--
4/12/2020	0.00	4877.92	--	--	--
4/13/2020	0.00	4877.92	--	--	--
4/14/2020	0.00	4877.92	--	--	--
4/15/2020	0.00	4877.92	--	--	--
4/16/2020	0.00	4877.92	--	--	--
4/17/2020	0.00	4877.92	--	--	--
4/18/2020	0.00	4877.92	--	--	--
4/19/2020	0.00	4877.92	--	--	--
4/20/2020	0.00	4877.66	--	--	--
4/21/2020	0.00	4876.38	--	--	--
4/22/2020	0.00	4876.38	--	--	--
4/23/2020	0.00	4878.38	--	--	--
4/24/2020	0.00	4878.38	--	--	--
4/25/2020	0.00	4878.38	--	--	--
4/26/2020	0.00	4878.38	--	--	--
4/27/2020	0.00	4876.84	--	--	--
4/28/2020	0.00	4876.02	--	--	--
4/29/2020	0.00	4877.07	--	--	--
4/30/2020	0.00	4876.94	--	--	--
5/1/2020	0.00	4876.94	--	--	--
5/2/2020	0.00	4876.94	--	--	--
5/3/2020	163.61	4874.44	36.45	4.49	6732.92
5/4/2020	164.15	4874.44	36.45	4.50	6755.14
5/5/2020	0.00	4876.23	--	--	--
5/6/2020	164.15	4874.44	36.45	4.50	6755.14
5/7/2020	0.00	4878.23	--	--	--
5/8/2020	0.00	4878.23	--	--	--
5/9/2020	165.02	4874.54	36.55	4.51	6772.37
5/10/2020	163.75	4874.54	36.55	4.48	6720.25
5/11/2020	0.00	4878.23	--	--	--
5/12/2020	0.00	4878.23	--	--	--
5/13/2020	0.00	4878.23	--	--	--
5/14/2020	0.00	4878.23	--	--	--
5/15/2020	164.09	4874.31	36.32	4.52	6776.84
5/16/2020	0.00	4878.23	--	--	--
5/17/2020	0.00	4878.23	--	--	--
5/18/2020	0.00	4878.23	--	--	--
5/19/2020	164.36	4874.31	36.32	4.53	6788.00
5/20/2020	164.13	4874.31	36.32	4.52	6778.50

Table I-1-2
Extraction Well KAFB-106233 Performance Figure Data, Q2 2020

Date	Flow Rate (gpm)	WL Elevation (ft AMSL)	Drawdown (ft)	Specific Capacity (gpm/ft)	Transmissivity (gal/d-ft)
5/21/2020	0.00	4878.23	--	--	--
5/22/2020	0.00	4878.23	--	--	--
5/23/2020	0.00	4878.23	--	--	--
5/24/2020	165.26	4875.05	37.06	4.46	6688.88
5/25/2020	164.12	4875.05	37.06	4.43	6642.74
5/26/2020	165.05	4875.05	37.06	4.45	6680.38
5/27/2020	0.00	4877.84	--	--	--
5/28/2020	164.55	4872.16	34.17	4.82	7223.44
5/29/2020	164.70	4872.13	34.14	4.82	7236.38
5/30/2020	165.20	4872.13	34.14	4.84	7258.35
5/31/2020	164.79	4872.16	34.17	4.82	7233.98
6/1/2020	0.00	4877.66	--	--	--
6/2/2020	164.65	4872.52	34.53	4.77	7152.48
6/3/2020	164.90	4872.29	34.30	4.81	7211.37
6/4/2020	165.02	4872.27	34.28	4.81	7220.83
6/5/2020	164.59	4872.24	34.25	4.81	7208.32
6/6/2020	165.26	4872.14	34.15	4.84	7258.86
6/7/2020	164.76	4872.36	34.37	4.79	7190.57
6/8/2020	165.19	4872.21	34.22	4.83	7240.94
6/9/2020	0.00	4877.77	--	--	--
6/10/2020	164.87	4872.14	34.15	4.83	7241.73
6/11/2020	165.22	4871.93	33.94	4.87	7302.00
6/12/2020	165.49	4871.81	33.82	4.89	7339.89
6/13/2020	165.45	4871.98	33.99	4.87	7301.41
6/14/2020	165.37	4872.06	34.07	4.85	7280.75
6/15/2020	165.77	4871.96	33.97	4.88	7319.84
6/16/2020	165.81	4872.16	34.17	4.85	7278.75
6/17/2020	165.51	4872.08	34.09	4.86	7282.63
6/18/2020	165.66	4872.21	34.22	4.84	7261.54
6/19/2020	165.95	4872.16	34.17	4.86	7284.90
6/20/2020	165.89	4871.96	33.97	4.88	7325.14
6/21/2020	165.86	4872.06	34.07	4.87	7302.32
6/22/2020	165.98	4872.06	34.07	4.87	7307.60
6/23/2020	0.00	4877.81	--	--	--
6/24/2020	165.52	4872.36	34.37	4.82	7223.74
6/25/2020	165.81	4872.19	34.20	4.85	7272.37
6/26/2020	165.38	4872.08	34.09	4.85	7276.91
6/27/2020	166.25	4872.03	34.04	4.88	7325.94
6/28/2020	166.07	4872.36	34.37	4.83	7247.75
6/29/2020	166.03	4872.18	34.19	4.86	7284.15
6/30/2020	165.71	4872.06	34.07	4.86	7295.71

Notes:

AMSL = above mean sea level

d = day

ft = foot/feet

gal = gallon

gpm = gallons per minute

WL = water level

Table I-1-3
Extraction Well KAFB-106234 Performance Figure Data, Q2 2020

Date	Flow Rate (gpm)	WL Elevation (ft AMSL)	Drawdown (ft)	Specific Capacity (gpm/ft)	Transmissivity (gal/d-ft)
4/1/2020	175.90	4875.72	29.92	5.88	8818.52
4/2/2020	175.56	4875.72	29.92	5.87	8801.47
4/3/2020	175.56	4875.72	29.92	5.87	8801.47
4/4/2020	175.78	4875.72	29.92	5.88	8812.50
4/5/2020	175.47	4875.72	29.92	5.86	8796.96
4/6/2020	175.72	4875.72	29.92	5.87	8809.49
4/7/2020	175.70	4875.72	29.92	5.87	8808.49
4/8/2020	175.62	4875.72	29.92	5.87	8804.48
4/9/2020	176.08	4875.72	29.92	5.89	8827.54
4/10/2020	175.84	4875.72	29.92	5.88	8815.51
4/11/2020	175.75	4873.98	28.18	6.24	9355.04
4/12/2020	175.76	4873.98	28.18	6.24	9355.57
4/13/2020	175.64	4873.98	28.18	6.23	9349.18
4/14/2020	175.53	4873.98	28.18	6.23	9343.33
4/15/2020	175.79	4873.98	28.18	6.24	9357.17
4/16/2020	175.52	4873.98	28.18	6.23	9342.80
4/17/2020	176.04	4873.83	28.03	6.28	9420.62
4/18/2020	175.65	4873.83	28.03	6.27	9399.75
4/19/2020	175.90	4873.83	28.03	6.28	9413.13
4/20/2020	175.41	4873.83	28.03	6.26	9386.91
4/21/2020	174.53	4873.83	28.03	6.23	9339.81
4/22/2020	175.78	4873.83	28.03	6.27	9406.71
4/23/2020	175.87	4873.83	28.03	6.27	9411.52
4/24/2020	175.53	4873.83	28.03	6.26	9393.33
4/25/2020	175.94	4873.47	27.67	6.36	9537.77
4/26/2020	175.58	4873.47	27.67	6.35	9518.25
4/27/2020	174.27	4873.47	27.67	6.30	9447.24
4/28/2020	174.40	4873.47	27.67	6.30	9454.28
4/29/2020	174.08	4873.47	27.67	6.29	9436.94
4/30/2020	174.48	4873.47	27.67	6.31	9458.62
5/1/2020	174.65	4873.47	27.67	6.31	9467.84
5/2/2020	175.53	4873.47	27.67	6.34	9515.54
5/3/2020	174.43	4873.47	27.67	6.30	9455.91
5/4/2020	174.63	4873.47	27.67	6.31	9466.75
5/5/2020	174.17	4873.47	27.67	6.29	9441.81
5/6/2020	175.65	4873.47	27.67	6.35	9522.05
5/7/2020	175.91	4873.78	27.98	6.29	9430.49
5/8/2020	175.69	4873.78	27.98	6.28	9418.69
5/9/2020	174.42	4873.78	27.98	6.23	9350.61
5/10/2020	174.86	4873.78	27.98	6.25	9374.20
5/11/2020	174.46	4873.78	27.98	6.24	9352.75
5/12/2020	175.81	4873.78	27.98	6.28	9425.13
5/13/2020	176.01	4873.78	27.98	6.29	9435.85
5/14/2020	176.08	4873.78	27.98	6.29	9439.60
5/15/2020	174.60	4873.78	27.98	6.24	9360.26
5/16/2020	175.73	4873.78	27.98	6.28	9420.84
5/17/2020	175.65	4873.65	27.85	6.31	9460.50
5/18/2020	174.65	4873.50	27.70	6.31	9457.58
5/19/2020	174.53	4873.50	27.70	6.30	9451.08
5/20/2020	174.37	4873.50	27.70	6.29	9442.42

Table I-1-3
Extraction Well KAFB-106234 Performance Figure Data, Q2 2020

Date	Flow Rate (gpm)	WL Elevation (ft AMSL)	Drawdown (ft)	Specific Capacity (gpm/ft)	Transmissivity (gal/d•ft)
5/21/2020	174.14	4873.50	27.70	6.29	9429.96
5/22/2020	174.48	4873.07	27.27	6.40	9597.36
5/23/2020	174.05	4873.07	27.27	6.38	9573.71
5/24/2020	174.39	4873.07	27.27	6.39	9592.41
5/25/2020	174.30	4872.92	27.12	6.43	9640.49
5/26/2020	174.31	4872.94	27.14	6.42	9633.94
5/27/2020	174.08	4872.97	27.17	6.41	9610.60
5/28/2020	174.57	4872.89	27.09	6.44	9666.11
5/29/2020	174.04	4872.88	27.08	6.43	9640.32
5/30/2020	175.99	4872.96	27.16	6.48	9719.62
5/31/2020	174.39	4872.88	27.08	6.44	9659.71
6/1/2020	175.76	4872.86	27.06	6.50	9742.79
6/2/2020	175.64	4872.84	27.04	6.50	9743.34
6/3/2020	174.31	4872.86	27.06	6.44	9662.42
6/4/2020	174.60	4872.91	27.11	6.44	9660.64
6/5/2020	174.74	4872.89	27.09	6.45	9675.53
6/6/2020	174.69	4872.97	27.17	6.43	9644.28
6/7/2020	174.34	4873.02	27.22	6.40	9607.27
6/8/2020	174.74	4872.97	27.17	6.43	9647.04
6/9/2020	174.92	4872.68	26.88	6.51	9761.16
6/10/2020	174.59	4872.66	26.86	6.50	9750.00
6/11/2020	174.62	4872.61	26.81	6.51	9769.86
6/12/2020	174.36	4872.60	26.80	6.51	9758.96
6/13/2020	174.60	4872.74	26.94	6.48	9721.60
6/14/2020	174.82	4872.83	27.03	6.47	9701.44
6/15/2020	174.60	4872.84	27.04	6.46	9685.65
6/16/2020	174.40	4872.79	26.99	6.46	9692.48
6/17/2020	174.56	4872.91	27.11	6.44	9658.43
6/18/2020	174.11	4872.86	27.06	6.43	9651.33
6/19/2020	174.60	4872.84	27.04	6.46	9685.65
6/20/2020	174.49	4872.73	26.93	6.48	9719.09
6/21/2020	174.56	4872.84	27.04	6.46	9683.43
6/22/2020	175.96	4872.74	26.94	6.53	9797.33
6/23/2020	175.96	4872.65	26.85	6.55	9830.17
6/24/2020	175.47	4872.70	26.90	6.52	9784.57
6/25/2020	174.39	4872.84	27.04	6.45	9674.00
6/26/2020	174.34	4872.76	26.96	6.47	9699.93
6/27/2020	174.10	4872.78	26.98	6.45	9679.39
6/28/2020	174.25	4872.86	27.06	6.44	9659.09
6/29/2020	174.20	4872.91	27.11	6.43	9638.51
6/30/2020	174.72	4872.83	27.03	6.46	9695.89

Notes:

AMSL = above mean sea level

d = day

ft = foot/feet

gal = gallon

gpm = gallons per minute

WL = water level

Table I-1-4
Extraction Well KAFB-106239 Performance Figure Data, Q2 2020

Date	Flow Rate (gpm)	WL Elevation (ft AMSL)	Drawdown (ft)	Specific Capacity (gpm/ft)	Transmissivity (gal/d-ft)
4/1/2020	75.74	4878.50	21.08	3.59	5389.47
4/2/2020	75.80	4878.50	21.08	3.60	5393.74
4/3/2020	75.76	4878.50	21.08	3.59	5390.89
4/4/2020	75.59	4878.50	21.08	3.59	5378.80
4/5/2020	75.29	4878.50	21.08	3.57	5357.45
4/6/2020	75.50	4875.43	18.01	4.19	6288.17
4/7/2020	75.15	4875.43	18.01	4.17	6259.02
4/8/2020	75.44	4875.43	18.01	4.19	6283.18
4/9/2020	75.35	4875.43	18.01	4.18	6275.68
4/10/2020	75.27	4875.43	18.01	4.18	6269.02
4/11/2020	75.00	4875.43	18.01	4.16	6246.53
4/12/2020	74.82	4875.43	18.01	4.15	6231.54
4/13/2020	74.60	4875.28	17.86	4.18	6265.40
4/14/2020	74.46	4875.28	17.86	4.17	6253.64
4/15/2020	74.52	4875.28	17.86	4.17	6258.68
4/16/2020	74.56	4875.28	17.86	4.17	6262.04
4/17/2020	74.78	4878.22	20.80	3.60	5392.79
4/18/2020	74.69	4878.22	20.80	3.59	5386.30
4/19/2020	74.26	4878.22	20.80	3.57	5355.29
4/20/2020	74.30	4874.86	17.44	4.26	6390.48
4/21/2020	74.42	4874.86	17.44	4.27	6400.80
4/22/2020	74.35	4876.11	18.69	3.98	5967.09
4/23/2020	73.90	4876.11	18.69	3.95	5930.98
4/24/2020	77.97	4876.11	18.69	4.17	6257.62
4/25/2020	77.81	4875.61	18.19	4.28	6416.44
4/26/2020	77.85	4875.61	18.19	4.28	6419.74
4/27/2020	77.64	4875.61	18.19	4.27	6402.42
4/28/2020	77.68	4875.61	18.19	4.27	6405.72
4/29/2020	77.38	4875.61	18.19	4.25	6380.98
4/30/2020	77.17	4875.61	18.19	4.24	6363.66
5/1/2020	77.76	4875.61	18.19	4.27	6412.31
5/2/2020	77.19	4875.61	18.19	4.24	6365.31
5/3/2020	77.27	4875.61	18.19	4.25	6371.91
5/4/2020	76.99	4875.61	18.19	4.23	6348.82
5/5/2020	76.84	4874.91	17.49	4.39	6590.05
5/6/2020	76.80	4874.91	17.49	4.39	6586.62
5/7/2020	66.94	4875.45	18.03	3.71	5569.05
5/8/2020	76.58	4874.45	17.03	4.50	6745.16
5/9/2020	76.65	4874.45	17.03	4.50	6751.32
5/10/2020	76.13	4874.45	17.03	4.47	6705.52
5/11/2020	75.94	4874.45	17.03	4.46	6688.78
5/12/2020	65.99	4875.60	18.18	3.63	5444.72
5/13/2020	75.84	4875.15	17.73	4.28	6416.24
5/14/2020	75.63	4875.15	17.73	4.27	6398.48
5/15/2020	75.52	4875.15	17.73	4.26	6389.17
5/16/2020	75.50	4875.15	17.73	4.26	6387.48
5/17/2020	75.19	4875.78	18.36	4.10	6142.97
5/18/2020	75.24	4875.78	18.36	4.10	6147.06
5/19/2020	75.33	4875.78	18.36	4.10	6154.41
5/20/2020	74.94	4875.78	18.36	4.08	6122.55

Table I-1-4
Extraction Well KAFB-106239 Performance Figure Data, Q2 2020

Date	Flow Rate (gpm)	WL Elevation (ft AMSL)	Drawdown (ft)	Specific Capacity (gpm/ft)	Transmissivity (gal/d•ft)
5/21/2020	74.80	4875.78	18.36	4.07	6111.11
5/22/2020	74.69	4874.40	16.98	4.40	6598.06
5/23/2020	74.70	4874.40	16.98	4.40	6598.94
5/24/2020	74.64	4874.40	16.98	4.40	6593.64
5/25/2020	74.06	4874.27	16.85	4.40	6592.88
5/26/2020	74.15	4874.10	16.68	4.45	6668.17
5/27/2020	74.10	4874.20	16.78	4.42	6623.96
5/28/2020	74.06	4874.04	16.62	4.46	6684.12
5/29/2020	73.95	4873.87	16.45	4.50	6743.16
5/30/2020	73.76	4874.04	16.62	4.44	6657.04
5/31/2020	73.91	4873.97	16.55	4.47	6698.79
6/1/2020	73.91	4873.99	16.57	4.46	6690.71
6/2/2020	73.71	4874.09	16.67	4.42	6632.57
6/3/2020	73.52	4874.14	16.72	4.40	6595.69
6/4/2020	73.47	4873.99	16.57	4.43	6650.88
6/5/2020	73.49	4873.99	16.57	4.44	6652.69
6/6/2020	73.27	4874.14	16.72	4.38	6573.27
6/7/2020	73.35	4874.15	16.73	4.38	6576.51
6/8/2020	73.00	4874.17	16.75	4.36	6537.31
6/9/2020	0.00	4885.22	--	--	--
6/10/2020	72.82	4875.40	17.98	4.05	6075.08
6/11/2020	72.66	4874.40	16.98	4.28	6418.73
6/12/2020	72.68	4874.33	16.91	4.30	6447.07
6/13/2020	72.59	4874.36	16.94	4.29	6427.69
6/14/2020	72.39	4874.20	16.78	4.31	6471.10
6/15/2020	72.25	4874.28	16.86	4.29	6427.94
6/16/2020	72.34	4874.33	16.91	4.28	6416.91
6/17/2020	72.41	4874.30	16.88	4.29	6434.54
6/18/2020	71.99	4874.53	17.11	4.21	6311.22
6/19/2020	71.95	4874.43	17.01	4.23	6344.80
6/20/2020	71.88	4874.32	16.90	4.25	6379.88
6/21/2020	71.60	4874.40	16.98	4.22	6325.09
6/22/2020	0.00	4885.30	--	--	--
6/23/2020	0.00	4885.30	--	--	--
6/24/2020	0.00	4885.30	--	--	--
6/25/2020	0.00	4885.30	--	--	--
6/26/2020	0.00	4885.30	--	--	--
6/27/2020	73.39	4876.58	19.16	3.83	5745.56
6/28/2020	73.49	4876.40	18.98	3.87	5807.96
6/29/2020	73.78	4876.38	18.96	3.89	5837.03
6/30/2020	73.91	4876.14	18.72	3.95	5922.28

Notes:

AMSL = above mean sea level

d = day

ft = foot/feet

gal = gallon

gpm = gallons per minute

WL = water level

DAILY INSPECTIONS AND RECORD FORMS

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					3130120 Time: 1012	3131120 0750	411120 0756	412120 0745	413120 1118	111	111
HMI	Well KAFB-106228	GW flow, FT-3001 (gpm)	0-200 gpm	Daily	143	143	143	143	143		
		Wellhead Pressure (psig)	< 150 psig	Daily	68.1 169	67.6	67.5	68.5	68.4		
		Water Level Above Transducer (ft)	---	Daily	13.97	14.14	14.14	14.35	14.35		
	Well KAFB-106233	GW flow, FT-7001 (gpm)	0-200 gpm	Daily	OFF	OFF	OFF	OFF	OFF		
		Wellhead Pressure (psig)	< 150 psig	Daily	---	---	---	---	---		
		Water Level Above Transducer (ft)	---	Daily	39.93	39.82	39.82	39.82	40.46		
	Well KAFB-106234	GW flow, FI-7002(gpm)	0-200 gpm	Daily	176	176	176	176	176		
		Wellhead Pressure (psig)	< 150 psig	Daily	18.5 18.5	18.5	18.5	18.6	18.5		
		Water Level Above Transducer (ft)	---	Daily	28.44	27.96	27.96	28.26	28.26		
	Well KAFB-106239	GW flow, FI-7002(gpm)	0-200 gpm	Daily	76	76	76	76	76		
		Wellhead Pressure (psig)	< 150 psig	Daily	51.0 50.1	51.2	51.2	51.3	51.3		
		Water Level Above Transducer (ft)	---	Daily	18.27	18.70	18.7	19.81	19.01		
	Influent Pump Skid (1)	GW flow (gpm)	0-400 gpm	Daily	210	210	210	210	210		
		Totalizer (1000 gal)	---	Daily	365541400	365800400	366081512	366364048	366694116		
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	0.14	0.12	0.13	0.13	0.13		
		Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.12	0.13	0.13	0.13	0.13		
	Influent Pump Skid (2)	GW flow (gpm)	0-400 gpm	Daily	245	245	245	245	245		
		Totalizer (1000 gal)	---	Daily	24084224	241084644	241388408	241686572	242034828		
		Bag filter differential pressure, F-212A, PDI-3202A	<15 psid	Daily	0.13	0.12	0.12	0.12	0.12		
		Bag filter differential pressure, F-212B, PDI-3202B	<15 psid	Daily	0.08	0.09	0.09	0.09	0.09		
	Effluent Skid Pump (1)	GW flow (gpm)	0-400 gpm	Daily	260	260	261	260	261		
		Totalizer (1000 gal)	---	Daily	40916930	409377468	409611733	409835990	410105861		
	Effluent Skid Pump (2)	GW flow (gpm)	0-400 gpm	Daily	259	261	260	266	261		
		Totalizer (1000 gal)	---	Daily	339632644	339855780	340166996	340444336	340769108		
	Injection Well 7	Pressure (psig)	0-120 psig	Daily	0.4	0.0	0.0	0.0	0.4		
		Water Level Above Transducer (ft)	10-30 ft	Daily	56.94	85.14	95.20	57.73	57.22		
	Golf Course Pond	Pond Level (ft)	0.7-3.5 ft	Daily	4.53	4.22	4.22	4.46	4.37		
HIMs	Influent Pump Skid (1)	Frequency (Hz, P112A B)	>30 Hz	Daily	41.80 41.30	42.4 42.43	41.71 41.70	40.31 40.27	41.64 41.05		
		Amperage (A, P112A B)	>10 A	Daily	8.5 8.7	8.7 8.9	8.5 8.7	8.2 8.4	8.16 8.7		
		Sand Filter Differential Pressure (psi)	>1 psi	Daily	4.9	4.9	4.5	4.9	5		
	Influent Pump Skid (2)	Frequency (Hz, P212A B)	>30 Hz	Daily	47.4 47.71	46.23 46.23	45.36 45.57	47.84 47.85	48.0 48.14		
		Amperage (A, P212A B)	>10 A	Daily	10.6 10.3	10.2 10.1	10.10 9.8	10.7 10.4	10.6 10.5		
		Sand Filter Differential Pressure (psi)	>1 psi	Daily	9	5	6	9	10.5		
	Effluent Pump Skid (1)	Frequency (Hz, P118)	>30 Hz	Daily	43.10	43.24	43.48	43.15	43.60		
		Amperage (A, P118)	>10 A	Daily	13.9	13.8	13.8	13.8	13.8		
	Effluent Pump Skid (2)	Frequency (Hz, P218)	>30 Hz	Daily	42.57	42.28	41.47	41.46	41.96		
		Amperage (A, P218)	>10 A	Daily	12.8	12.9	12.6	12.7	12.7		
Well Vault	KAFB-106228	Totalizer (Mgal)	---	Weekly	112.1908	---	---	---	---		
Well Vault		GW flow, FT-3001 (gpm)	0-200 gpm	Weekly	138.6	---	---	---	---		
Well Vault	KAFB-106239	Totalizer (Mgal)	---	Weekly	69.0184	---	---	---	---		
Well Vault		GW flow, FT-3001 (gpm)	0-200 gpm	Weekly	75.8	---	---	---	---		
Well Control House	KAFB-106233	Wellhead Pressure (psig)	< 150 psig	Weekly	OFF	---	---	---	---		
		GW flow, FT-7001 (gpm)	0-200 gpm	Weekly	---	---	---	---	---		
	KAFB-106234	Totalizer (Mgal)	---	Weekly	173.0506	---	---	---	---		
		Wellhead Pressure (psig)	< 150 psig	Weekly	---	---	---	---	76		
		GW flow, FT-7002 (gpm)	0-200 gpm	Weekly	175.3	---	---	---	---		
		Totalizer (Mgal)	---	Weekly	262.2281	---	---	---	---		
Well Head	KAFB-7	Effluent Line Pressure, PI-7005	< 150 psig	Weekly	18.056	---	---	---	---		
		*Totalizer (1000 gal)	---	Weekly	204795.0	---	---	---	---		
Well Head	KAFB-7	GW flow (gpm)	0-800 gpm	Weekly	---	---	---	---	---		

* The KAFB-7 Totalizer reading should be recorded weekly as well as on days when the effluent flow is changed between KAFB-7 and the Golf Course Main Pond.

Notes:

(234
wayhead
psig)
var on
vault

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					3130120 Time: 0945	3131120 0740	4111120 0735	4121120 0737	4131120 1105	111	111
GWTS	Influent Pump Skid (Train 1)	Inlet pressure pump skid, PI-3102 (psig)	< 60 psig	Daily	32	32	32	30	31		
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	0.132 0.088	0.127	0.130	0.128	0.128		
		Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.134 0.119	0.129	0.127	0.130	0.132		
		Sand filter differential pressure, SF-101 (1)	---	Daily	31	30.5	30	29	30		
		Sand filter differential pressure, SF-101 (2)	---	Daily	30.5	30.5	30	28	29		
		Outlet pressure pump skid, PI-3103 (psig)	< 60 psig	Daily	7.9 73.0	8.9	8.9	8.1	8.9		
		GW flow (gpm)	0-500 gpm	Daily	210.0	210.4	210.3	209.9	210.1		
		Totalizer (Mgal)	---	Daily	367.0923	367.3221	367.5742	367.8227	368.1154		
		Bag filters changed?	yes/no	Daily	YES	NO	NO	NO			
	Influent Pump Skid (Train 2)	Inlet pressure pump skid, PI-3202 (psig)	< 60 psig	Daily	43	40	41	44.5	44		
		Bag filter differential pressure, F212A	<15 psid	Daily	0.088	0.088	0.088	0.087	0.086		
		Bag filter differential pressure, F212B	<15 psid	Daily	0.119	0.122	0.116	0.121	0.121		
		Sand filter differential pressure, SF-201 (1)	---	Daily	39.5	37.375	38	41	41		
		Sand filter differential pressure, SF-201 (2)	---	Daily	37	36	36	37	36		
		Outlet pressure pump skid, PI-3203, (psig)	< 60 psig	Daily	13.0	13.7	13.0	13.8	13.0		
		GW flow (gpm)	0-500 gpm	Daily	245.0	245.3	245.7	244.7	245.2		
		Totalizer (Mgal)	---	Daily	330.6483	330.9292	331.2408	331.5513	331.9120		
		Bag filters changed?	yes/no	Daily	NO	NO	NO	NO			
	GAC (Train 1)	V-114A Pressure, PI-3104A (psig)	0-20 psig	Daily	7.9	8.0	8.0	7.9	8.1		
		Between Tanks, PI-3105 (psig)	0-20 psig	Daily	7.2	9.2	9.0	9.1	9.1		
		V-114B Pressure, PI-3104B (psig)	0-20 psig	Daily	7.7	7.5	7.3	7.3	7.6		
		Which Tank is Lead?	---	Daily	A	A	A	A	A		
		Which Tank is Lag?	---	Daily	B	B	B	B	B		
	GAC (Train 2)	V-214A Pressure (psig)	0-20 psig	Daily	5.2	5.9	5.0	5.9	5.1		
		Between Tanks (psig)	0-20 psig	Daily	12.5	13.1	12.5	13.2	12.8		
		V-214B Pressure (psig)	0-20 psig	Daily	8.7	9.1	8.8	9.4	8.9		
		Which Tank is Lead?	---	Daily	B	B	B	B	B		
		Which Tank is Lag?	---	Daily	A	A	A	A	A		
	Effluent Pump Skid (Train 1)	Inlet press. pump skid, PI-3108 (psig)	< 60 psig	Daily	22.5	22.2	21.8	22.1	21.5		
		Bag filter differential pressure, F-118A	<15 psid	Daily	0	0	0	0	0		
		Bag filter differential pressure, F-118B	<15 psid	Daily	0	0	0	0	0		
		Upstream outlet press. pump tree (psig)	< 60 psig	Daily	20.54	20.63	19.81	20.31	19.74		
		GW flow (gpm)	0-500 gpm	Daily	260.1	260.3	260.5	260.5	260.6		
	Effluent Pump Skid (Train 2)	Totalizer (Mgal)	---	Daily	382.0672	382.3060	382.5566	382.8022	383.0480		
		Inlet press. pump skid, PI-3208 (psig)	< 60 psig	Daily	21.9	22	21.1	21.5	21.1		
		Bag filter differential pressure, F-218A	<15 psid	Daily	0	0	0	0	0		
		Bag filter differential pressure, F-218B	<15 psid	Daily	0	0	0	0	0		
		Upstream outlet press. pump tree (psig)	< 60 psig	Daily	20.45	20.20	19.20	20.25	19.77		
	Backwash System	GW flow (gpm)	0-500 gpm	Daily	261.1	260.5	259.9	260.1	260.6		
		Totalizer (Mgal)	---	Daily	326.6599	326.9463	327.2789	327.5527	327.9095		
		Clarifier Level (ft)	---	Daily	NO-YES	NO	NO	NO	cell 2 2.6		
		Clarifier Discharged to Sump?	yes/no	Daily	cell 2 2.6	cell 2 2.6	cell 2 2.6	cell 2 2.6	NO		
		Upstream Filter Pressure (psi)	>30 psig	Daily	>100	>100	>100	>100	>100		
	Sodium Hypochlorite Generator	Downstream Filter Pressure (psi)	>30 psig	Daily	>100	>100	>100	>100	>100		
		Brine Tank Filled with Salt?	yes/no	Daily	YES	YES	YES	YES	YES		
		Generator Inlet Pressure (psi)	>30 psig	Daily	42	42	44	43	43		
		Generator Faulted?	yes/no	Daily	NO	NO	NO	NO	NO		
		Oxidant Tank Level (ft)	>2 ft	Daily	1.9	3.1	2.6	2.3	3.35		
		Train 1 Dosing Pump Faulted?	yes/no	Daily	OFF	OFF	OFF	OFF	OFF		
		Train 2 Dosing Pump Faulted?	yes/no	Daily	NO	NO	NO	NO	NO		
		Train 1 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily	OFF	OFF	OFF	OFF	OFF		
		Train 2 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily	0.12	0.10	0.11	0.12	0.09		

Notes:

BW
72
1630

AC 86°F - Running
VFD 27.8 °C
Ambient 58 °F
Amps 33.14
Hz 54.23
BUs 635
Volts out 431

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					4/6/20	4/7/20	4/8/20	4/9/20	4/10/20	1/1	1/1
HMI	Well KAFB-106228	GW flow, FT-3001 (gpm)	0-200 gpm	Daily	Time: 1730 14.3	0820 14.3	0722 14.3	0730 14.3	0740 14.3		
		Wellhead Pressure (psig)	< 150 psig	Daily	65.1 67.9	67.6	67.6	68.6	68.6		
		Water Level Above Transducer (ft)	---	Daily	14.35	13.35	13.35	13.35	13.35		
	Well KAFB-106233	GW flow, FT-7001 (gpm)	0-200 gpm	Daily	OFF	OFF	OFF	OFF	OFF		
		Wellhead Pressure (psig)	< 150 psig	Daily	---	---	---	---	---		
		Water Level Above Transducer (ft)	---	Daily	40.46	40.46	40.46	40.46	40.46		
	Well KAFB-106234	GW flow, FI-7002(gpm)	0-200 gpm	Daily	176	176	175	176	176		
		Wellhead Pressure (psig)	< 150 psig	Daily	18.5 18.55	18.5	18.5	18.5	18.5		
		Water Level Above Transducer (ft)	---	Daily	28.6	28.26	28.26	28.26	28.26		
	Well KAFB-106239	GW flow, FI-7002(gpm)	0-200 gpm	Daily	75	75	75	75	75		
		Wellhead Pressure (psig)	< 150 psig	Daily	51.3 50.2	51.3	51.3	51.3	51.3		
		Water Level Above Transducer (ft)	---	Daily	18.01 18.01	18.01	18.01	18.01	18.01		
	Influent Pump Skid (1)	GW flow (gpm)	0-400 gpm	Daily	210	210	210	210	210		
		Totalizer (1000 gal)	---	Daily	367,109.92	367,109,160	367,109,176	367,109,320	367,109,400		
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	210	0.13	0.13	0.13	0.12		
		Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.13	0.13	0.13	0.13	0.13		
	Influent Pump Skid (2)	GW flow (gpm)	0-400 gpm	Daily	0.13	245	245	244	245		
		Totalizer (1000 gal)	---	Daily	242,846,212	245,209,012	245,502,176	243,803,212	244,111,960		
		Bag filter differential pressure, F-212A, PDI-3202A	<15 psid	Daily	245	0.12	0.12	0.12	0.12		
		Bag filter differential pressure, F-212B, PDI-3202B	<15 psid	Daily	0.12 0.09	0.09	0.09	0.09	0.09		
	Effluent Skid Pump (1)	GW flow (gpm)	0-400 gpm	Daily	259	260	260	260	260		
		Totalizer (1000 gal)	---	Daily	410,761,472	411,000,000	411,235,157	411,454,242	411,699,360		
	Effluent Skid Pump (2)	GW flow (gpm)	0-400 gpm	Daily	260	260	260	260	262		
		Totalizer (1000 gal)	---	Daily	341,571,816	341,864,488	342,134,284	342,413,628	342,700,340		
	Injection Well 7	Pressure (psig)	0-120 psig	Daily	0.4	0.4	0.4	0.4	0.4		
		Water Level Above Transducer (ft)	10-30 ft	Daily	57.22	57.22	57.22	56.70	56.7		
	Golf Course Pond	Pond Level (ft)	0.7-3.5 ft	Daily	4.18	4.13	4.14	4.14	4.63		
HIMs	Influent Pump Skid (1)	Frequency (Hz, P112A B)	>30 Hz	Daily	42.12 42.17	46.52 46.34	40.92 40.94	41.03 41.10	41.08 41.15		
		Amperage (A, P112A B)	>10 A	Daily	8.7 8.8	10.30 10.00	8.40 8.50	8.40 8.60	8.4 8.6		
		Sand Filter Differential Pressure (psi)	>1 psi	Daily	5	5	5	5	5		
	Influent Pump Skid (2)	Frequency (Hz, P212A B)	>30 Hz	Daily	46.26 46.20	41.23 41.29	48.40 48.29	48.19 48.18	47.39 47.41		
		Amperage (A, P212A B)	>10 A	Daily	10.2 9.9	8.40 8.60	10.70 10.50	10.70 10.40	10.5 10.3		
		Sand Filter Differential Pressure (psi)	>1 psi	Daily	6	7	8	9	10.5		
	Effluent Pump Skid (1)	Frequency (Hz, P118)	>30 Hz	Daily	43.11	44.52	43.38	43.26	44.74		
		Amperage (A, P118)	>10 A	Daily	13.7	14.20	13.80	13.90	14.2		
	Effluent Pump Skid (2)	Frequency (Hz, P218)	>30 Hz	Daily	42.17	43.76	42.18	42.54	42.80		
Amperage (A, P218)		>10 A	Daily	12.19	13.20	12.80	13.00	13.00			
Well Vault	KAFB-106228	Totalizer (Mgal)	---	Weekly	118.0050	---	---	---	---		
GW flow, FT-3001 (gpm)		0-200 gpm	Weekly	139.0	---	---	---	---			
Well Vault	KAFB-106239	Totalizer (Mgal)	---	Weekly	69.7897	---	---	---	---		
GW flow, FT-3001 (gpm)		0-200 gpm	Weekly	75.5 139.0	---	---	---	---			
Well Control House	KAFB-106233	Wellhead Pressure (psig)	< 150 psig	Weekly	---	---	---	---	---		
		GW flow, FT-7001 (gpm)	0-200 gpm	Weekly	---	---	---	---	---		
		Totalizer (Mgal)	---	Weekly	173.0524	---	---	---	---		
	KAFB-106234	Wellhead Pressure (psig)	< 150 psig	Weekly	76.80	---	---	---	---		
		GW flow, FT-7002 (gpm)	0-200 gpm	Weekly	175.5	---	---	---	---		
		Totalizer (Mgal)	---	Weekly	264.0136	---	---	---	---		
	Well Control House	Effluent Line Pressure, PI-7005	< 150 psig	Weekly	17.9	---	---	---	---		
Well Head	KAFB-7	*Totalizer (1000 gal)	---	Weekly	205952.2	---	---	---	---		
GW flow (gpm)		0-800 gpm	Weekly	---	---	---	---	---			

* The KAFB-7 Totalizer reading should be recorded weekly as well as on days when the effluent flow is changed between KAFB-7 and the Golf Course Main Pond.

Notes:

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					4/6/20 Time: 0730	4/7/20 0800	4/8/20 0730	4/9/20 0719	4/10/20 0735	1/1	1/1
GWTS	Influent Pump Skid (Train 1)	Inlet pressure pump skid, PI-3102 (psig)	< 60 psig	Daily 33	46.42	31	30	31	31		
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	0.123	0.127	0.126	0.129	0.126		
		Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.127	0.127	0.128	0.127	0.131		
		Sand filter differential pressure, SF-101 (1)	---	Daily	40	30	29	29	29		
		Sand filter differential pressure, SF-101 (2)	---	Daily	38	29	28	28	28		
		Outlet pressure pump skid, PI-3103 (psig)	< 60 psig	Daily	210.2	8.5	8.6	8.2	8.7		
		GW flow (gpm)	0-500 gpm	Daily	368.8375	210.2	210.6	210.5	210.5		
		Totalizer (Mgal)	---	Daily	368.8354	369.0935	369.3396	369.5909	369.8462		
	Influent Pump Skid (Train 2)	Bag filters changed?	yes/no	Daily No	8.0	No	No	No	No		
		Inlet pressure pump skid, PI-3202 (psig)	< 60 psig	Daily	42	40	44	45	43.5		
		Bag filter differential pressure, F212A	<15 psid	Daily	0.091	0.085	0.085	0.080	0.088		
		Bag filter differential pressure, F212B	<15 psid	Daily	0.118	0.118	0.116	0.124	0.122		
		Sand filter differential pressure, SF-201 (1)	---	Daily	32	37	41	41	41		
		Sand filter differential pressure, SF-201 (2)	---	Daily	31	35	37	37	35		
		Outlet pressure pump skid, PI-3203, (psig)	< 60 psig	Daily	11.9	13.6	13.0	13.0	12.1		
		GW flow (gpm)	0-500 gpm	Daily	245.4	245.1	244.7	245.3	245.2		
	GAC (Train 1)	Totalizer (Mgal)	---	Daily	322.8049	333.1262	333.4311	333.7416	334.0645		
		Bag filters changed?	yes/no	Daily	No	No	No	No	No		
		V-114A Pressure, PI-3104A (psig)	0-20 psig	Daily	7.7	8.0	8.0	8.0	8.1		
		Between Tanks, PI-3105 (psig)	0-20 psig	Daily	9.0	9.1	9.1	9.1	9.1		
		V-114B Pressure, PI-3104B (psig)	0-20 psig	Daily	7.4	7.4	7.2	7.5	7.4		
	GAC (Train 2)	Which Tank is Lead?	---	Daily	A	A	A	A	A		
		Which Tank is Lag?	---	Daily	B	B	B	B	B		
		V-214A Pressure (psig)	0-20 psig	Daily	5.0	5.9	5.0	5.1	5.1		
		Between Tanks (psig)	0-20 psig	Daily	12.1	13.5	12.1	12.9	12.8		
		V-214B Pressure (psig)	0-20 psig	Daily	8.1	9.1	8.1	8.9	8.8		
	Effluent Pump Skid (Train 1)	Which Tank is Lead?	---	Daily	B	B	B	B	B		
		Which Tank is Lag?	---	Daily	A	A	A	A	A		
		Inlet press. pump skid, PI-3108 (psig)	< 60 psig	Daily	22	21.5	21.5	22.5	23.1		
		Bag filter differential pressure, F-118A	<15 psid	Daily	0	0	0	0	0		
		Bag filter differential pressure, F-118B	<15 psid	Daily	0	0	0	0	0		
	Effluent Pump Skid (Train 2)	Upstream outlet press. pump tree (psig)	< 60 psig	Daily	20.15	19.71	19.84	20.88	21.10		
		GW flow (gpm)	0-500 gpm	Daily	260	261.0	260.1	261.4	260.8		
		Totalizer (Mgal)	---	Daily	383.8179	384.0771	384.3263	384.5771	384.8407		
		Inlet press. pump skid, PI-3208 (psig)	< 60 psig	Daily	21.5	21.0	21.1	22	22.2		
		Bag filter differential pressure, F-218A	<15 psid	Daily	0	0	0	0	0		
	Backwash System	Bag filter differential pressure, F-218B	<15 psid	Daily	0	0	0	0	0		
		Upstream outlet press. pump tree (psig)	< 60 psig	Daily	20.24	19.71	19.84	20.88	21.25		
		GW flow (gpm)	0-500 gpm	Daily	260	260.3	260.4	260.6	259.9		
		Totalizer (Mgal)	---	Daily	328.7911	329.1070	329.4078	329.7137	330.0306		
		Clarifier Level (ft)	---	Daily	Cell 2, 2.6'	Cell 2, 2.6'	Cell 2, 2.6'	Cell 2, 2.6'	Cell 2, 2.6'		
	Sodium Hypochlorite Generator	Clarifier Discharged to Sump?	yes/no	Daily	No	No	No	No	No		
		Upstream Filter Pressure (psi)	>30 psig	Daily	2100	2100	2100	2100	2100		
		Downstream Filter Pressure (psi)	>30 psig	Daily	2100	2100	2100	2100	2100		
		Brine Tank Filled with Salt?	yes/no	Daily	Yes	Yes	Yes	Yes	Yes		
		Generator Inlet Pressure (psi)	>30 psig	Daily	42	41	41	41	41		
		Generator Faulted?	yes/no	Daily	No	No	No	No	No		
		Oxidant Tank Level (ft)	>2 ft	Daily	2.2'	3.3'	2.45'	2.5'	2.0'		
		Train 1 Dosing Pump Faulted?	yes/no	Daily	OFF	OFF	OFF	OFF	OFF		
		Train 2 Dosing Pump Faulted?	yes/no	Daily	No	No	No	No	No		
		Train 1 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily	OFF	OFF	OFF	OFF	OFF		
		Train 2 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily	0.12	0.15	0.10	0.12	0.12		

Notes:

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					4/13/20 Time: 0717	4/14/20	4/15/20	4/16/20	4/17/20	/ /	/ /
HMI	Well KAFB-106228	GW flow, FT-3001 (gpm)	0-200 gpm	Daily	143	144	144	143	144		
		Wellhead Pressure (psig)	< 150 psig	Daily	68.3 67.2	68.3	68.3	68.3	68.3		
		Water Level Above Transducer (ft)	---	Daily	14.08	14.08	14.08	14.08	13.87		
	Well KAFB-106233	GW flow, FT-7001 (gpm)	0-200 gpm	Daily	OFF	OFF	OFF	OFF	OFF		
		Wellhead Pressure (psig)	< 150 psig	Daily	---	---	---	---	---		
		Water Level Above Transducer (ft)	---	Daily	40.46	40.46	40.46	40.46	40.46		
	Well KAFB-106234	GW flow, FI-7002(gpm)	0-200 gpm	Daily	176	176	176	176	176		
		Wellhead Pressure (psig)	< 150 psig	Daily	18.5 18.4	18.5	18.5	18.6	18.6		
		Water Level Above Transducer (ft)	---	Daily	28.18	28.18	28.18	28.18	28.18		
	Well KAFB-106239	GW flow, FI-7002(gpm)	0-200 gpm	Daily	75	75	75	74	75		
		Wellhead Pressure (psig)	< 150 psig	Daily	50.6 50.6	50.6	50.6	50.6	50.6		
		Water Level Above Transducer (ft)	---	Daily	18.87	17.98	17.80	17.87	17.86		
	Influent Pump Skid (1)	GW flow (gpm)	0-400 gpm	Daily	210	210	210	210	210		
		Totalizer (1000 gal)	---	Daily	367,109,776	367,109,884	367,109,902	367,109,952	367,110,144		
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	0.12	0.12	0.13	0.13	0.13		
		Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.13	0.13	0.13	0.13	0.13		
	Influent Pump Skid (2)	GW flow (gpm)	0-400 gpm	Daily	245	245	245	245	245		
		Totalizer (1000 gal)	---	Daily	245,011,140	245,404,878	245,704,580	245,917,840	246,230,236		
		Bag filter differential pressure, F-212A, PDI-3202A	<15 psid	Daily	0.12	0.12	0.12	0.12	0.12		
		Bag filter differential pressure, F-212B, PDI-3202B	<15 psid	Daily	0.09	0.09	0.08	0.08	0.09		
	Effluent Skid Pump (1)	GW flow (gpm)	0-400 gpm	Daily	260	259	260	259	260		
		Totalizer (1000 gal)	---	Daily	412,378,462	412,679,877	412,910,880	413,073,554	413,313,994		
	Effluent Skid Pump (2)	GW flow (gpm)	0-400 gpm	Daily	260	260	260	260	260		
		Totalizer (1000 gal)	---	Daily	343,538,144	343,909,136	344,185,896	344,383,480	344,674,928		
	Injection Well 7	Pressure (psig)	0-120 psig	Daily	-0.0	0.0	-0.0	-0.0	-0.0		
		Water Level Above Transducer (ft)	10-30 ft	Daily	95.82	97.50	87.48	77.29	94.95		
	Golf Course Pond	Pond Level (ft)	0.7-3.5 ft	Daily	4.10	4.64	4.83	4.32	3.91		
HIMs	Influent Pump Skid (1)	Frequency (Hz, P112A B)	>30 Hz	Daily	40.76 40.84	40.74 40.67	41.57 41.58	40.11 40.12	40.57 40.50		
		Amperage (A, P112A B)	>10 A	Daily	8.40 8.50	8.30 8.50	8.5 8.6	8.20 8.40	8.3 8.5		
		Sand Filter Differential Pressure (psi)	>1 psi	Daily	5	5	5	5	5		
	Influent Pump Skid (2)	Frequency (Hz, P212A B)	>30 Hz	Daily	46.33 46.40	47.19 47.27	46.40 46.45	45.46 45.38	46.71 46.73		
		Amperage (A, P212A B)	>10 A	Daily	10.20 10.00	10.40 10.20	10.3 10.0	10.00 9.80	10.2 10.0		
		Sand Filter Differential Pressure (psi)	>1 psi	Daily	10	13.5	5	5	5.5		
	Effluent Pump Skid (1)	Frequency (Hz, P118)	>30 Hz	Daily	42.66	42.97	42.92	43.75	43.68		
		Amperage (A, P118)	>10 A	Daily	13.80	13.70	13.70	15.10	13.9		
	Effluent Pump Skid (2)	Frequency (Hz, P218)	>30 Hz	Daily	42.15	41.89	42.30	46.73	42.86		
Amperage (A, P218)		>10 A	Daily	12.80	12.70	12.80	14.10	12.8			
Well Vault	KAFB-106228	Totalizer (Mgal)	---	Weekly	119,992.5	---	---	---			
GW flow, FT-3001 (gpm)		0-200 gpm	Weekly	138.8	---	---	---	---			
Well Vault	KAFB-106239	Totalizer (Mgal)	---	Weekly	70,540.9	---	---	---			
GW flow, FT-3001 (gpm)		0-200 gpm	Weekly	74.8	---	---	---	---			
Well Control House	KAFB-106233	Wellhead Pressure (psig)	< 150 psig	Weekly	OFF	---	---	---	---		
		GW flow, FT-7001 (gpm)	0-200 gpm	Weekly	---	---	---	---	---		
		Totalizer (Mgal)	---	Weekly	175,052.9	---	---	---	---		
	KAFB-106234	Wellhead Pressure (psig)	< 150 psig	Weekly	76 psig	---	---	---	---		
		GW flow, FT-7002 (gpm)	0-200 gpm	Weekly	175.0	---	---	---	---		
		Totalizer (Mgal)	---	Weekly	265,767.4	---	---	---	---		
	Well Control House	Effluent Line Pressure, PI-7005	< 150 psig	Weekly	17.9	---	---	---	---		
Well Head	KAFB-7	*Totalizer (1000 gal)	---	Weekly	206,975.0	---	---	---			
GW flow (gpm)		0-800 gpm	Weekly	---	---	---	---	---			

* The KAFB-7 Totalizer reading should be recorded weekly as well as on days when the effluent flow is changed between KAFB-7 and the Golf Course Main Pond.

Notes:

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					4/13/20	4/14/20	4/15/20	4/16/20	4/17/20	1/1	1/1
GWTS	Influent Pump Skid (Train 1)	Inlet pressure pump skid, PI-3102 (psig)	< 60 psig	Daily	Time: 0705 30.5	0233 30.5	1428 31.0	0717 34.5	0811 30.0		
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	0.126	0.129	0.126	0.129	0.128		
		Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.128	0.129	0.129	0.130	0.129		
		Sand filter differential pressure, SF-101 (1)	---	Daily	29	29	29	29	28		
		Sand filter differential pressure, SF-101 (2)	---	Daily	28	28	29	27	27		
		Outlet pressure pump skid, PI-3103 (psig)	< 60 psig	Daily	7.5	8.2	8.8	7.5	8.9		
		GW flow (gpm)	0-500 gpm	Daily	210.2	210.5	210.7	210.5	210.7		
		Totalizer (Mgal)	---	Daily	370.5997	370.9305	371.1850	371.3622	371.6243		
	Influent Pump Skid (Train 2)	Bag filters changed?	yes/no	Daily	No	No	No	No			
		Inlet pressure pump skid, PI-3202 (psig)	< 60 psig	Daily	40.5	42.5	40	39.8	41.9		
		Bag filter differential pressure, F212A	<15 psid	Daily	0.088	0.085	0.087	0.088	0.087		
		Bag filter differential pressure, F212B	<15 psid	Daily	0.127	0.122	0.120	0.119	0.126		
		Sand filter differential pressure, SF-201 (1)	---	Daily	38	40	38	37	39		
		Sand filter differential pressure, SF-201 (2)	---	Daily	32	32	37	36	37.5		
		Outlet pressure pump skid, PI-3203, (psig)	< 60 psig	Daily	13.9	13.9	13.1	13.0	13.9		
		GW flow (gpm)	0-500 gpm	Daily	245.5	245.1	244.6	244.6	245.5		
	GAC (Train 1)	Totalizer (Mgal)	---	Daily	334.9405	335.3991	335.7108	335.9293	336.2546		
		Bag filters changed?	yes/no	Daily	No	No	No	No			
		V-114A Pressure, PI-3104A (psig)	0-20 psig	Daily	8.0	7.9	8.1	8.0	8.1		
		Between Tanks, PI-3105 (psig)	0-20 psig	Daily	9.1	9.1	9.1	9.1	8.9		
		V-114B Pressure, PI-3104B (psig)	0-20 psig	Daily	7.5	7.5	7.3	7.5	7.5		
	GAC (Train 2)	Which Tank is Lead?	---	Daily	A	A	A	A	A		
		Which Tank is Lag?	---	Daily	B	B	B	B	B		
		V-214A Pressure (psig)	0-20 psig	Daily	6.0	5.5	5.1	5.1	5.9		
		Between Tanks (psig)	0-20 psig	Daily	13.1	13.5	12.2	12.8	13.1		
		V-214B Pressure (psig)	0-20 psig	Daily	9.5	9.1	8.6	8.9	9.7		
	Effluent Pump Skid (Train 1)	Which Tank is Lead?	---	Daily	B	B	B	B	B		
		Which Tank is Lag?	---	Daily	A	A	A	A	A		
		Inlet press. pump skid, PI-3108 (psig)	< 60 psig	Daily	22.0	22.0	21.8	22.0	22.8		
		Bag filter differential pressure, F-118A	<15 psid	Daily	1421.0	0	0	0	0		
		Bag filter differential pressure, F-118B	<15 psid	Daily	0	0	0	0	0		
	Effluent Pump Skid (Train 2)	Upstream outlet press. pump tree (psig)	< 60 psig	Daily	20.10	19.85	19.86	20.00	20.76		
		GW flow (gpm)	0-500 gpm	Daily	265.0	260.5	259.4	261.4	260.6		
		Totalizer (Mgal)	---	Daily	385.5886	385.9217	386.1756	386.3555	386.6179		
		Inlet press. pump skid, PI-3208 (psig)	< 60 psig	Daily	21.0	21.1	21.1	20.0	22		
		Bag filter differential pressure, F-218A	<15 psid	Daily	0	0	0	0	0		
	Backwash System	Bag filter differential pressure, F-218B	<15 psid	Daily	0	0	0	0	0		
		Upstream outlet press. pump tree (psig)	< 60 psig	Daily	20.10	19.85	19.55	20.00	20.75		
		GW flow (gpm)	0-500 gpm	Daily	330.9446	260.7	260.1	259.9	260.5		
		Totalizer (Mgal)	---	Daily	260.5	331.3192	331.6559	331.8729	332.1915		
		Clarifier Level (ft)	---	Daily	Cell 2, 2.6'	Cell 2, 2.6'	Cell 2, 2.6'	Cell 2, 2.6'	Cell 2, 2.6'		
	Sodium Hypochlorite Generator	Clarifier Discharged to Sump?	yes/no	Daily	No	No	No	No	No		
		Upstream Filter Pressure (psi)	>30 psig	Daily	7100	7100	7180	7100	7100		
		Downstream Filter Pressure (psi)	>30 psig	Daily	7100	7100	7100	7100	7100		
		Brine Tank Filled with Salt?	yes/no	Daily	Yes	Yes	Yes	Yes	Yes		
		Generator Inlet Pressure (psi)	>30 psig	Daily	39	40	40	40	40		
		Generator Faulted?	yes/no	Daily	No	No	No	No	No		
		Oxidant Tank Level (ft)	>2 ft	Daily	2.3'	3.3'	2.8'	2.5'	2.1'		
		Train 1 Dosing Pump Faulted?	yes/no	Daily	OFF	OFF	OFF	OFF	OFF		
		Train 2 Dosing Pump Faulted?	yes/no	Daily	No	No	No	No	No		
		Train 1 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily	OFF	OFF	OFF	OFF	OFF		
		Train 2 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily	0.10	0.15	0.10	0.10	0.14		

Notes:

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					4/20/20	4/21/20	4/22/20	4/23/20	4/24/20	4/25/20	4/26/20
HMI	Well KAFB-106228	GW flow, FT-3001 (gpm)	0-200 gpm	Daily	132.6	143	143	144	144		
		Wellhead Pressure (psig)	< 150 psig	Daily	68.3	67.26	68.3	68.3	68.7		
		Water Level Above Transducer (ft)	---	Daily	12.90	12.90	12.9	13.81	13.81		
	Well KAFB-106233	GW flow, FT-7001 (gpm)	0-200 gpm	Daily	OFF	163	OFF	OFF	OFF		
		Wellhead Pressure (psig)	< 150 psig	Daily		22.6	22.91				
		Water Level Above Transducer (ft)	---	Daily	39.07	35.65	39.39	39.39	40.39		
	Well KAFB-106234	GW flow, FI-7002(gpm)	0-200 gpm	Daily	176	174	176	176	176		
		Wellhead Pressure (psig)	< 150 psig	Daily	18.4	18.55	23.0	18.5	18.5		
		Water Level Above Transducer (ft)	---	Daily	28.03	28.03	28.03	28.52	28.52		
	Well KAFB-106239	GW flow, FI-7002(gpm)	0-200 gpm	Daily	74.7	74	74	74	74		
		Wellhead Pressure (psig)	< 150 psig	Daily	50.1	50.1	50.1	51.1	51.1		
		Water Level Above Transducer (ft)	---	Daily	18.09	18.09	18.09	18.69	18.69		
	Influent Pump Skid (1)	GW flow (gpm)	0-400 gpm	Daily	210	359	210	210	209		
		Totalizer (1000 gal)	---	Daily	367144600	367175016	367347040	367347080	367347112		
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	0.13	0.37	0.12	0.13	0.13		
		Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.13	0.38	0.13	0.13	0.13		
	Influent Pump Skid (2)	GW flow (gpm)	0-400 gpm	Daily	245	245	245	245	247		
		Totalizer (1000 gal)	---	Daily	247191300	247427616	247724236	248021564	248313008		
		Bag filter differential pressure, F-212A, PDI-3202A	<15 psid	Daily	0.12	0.12	0.13	0.12	0.12		
		Bag filter differential pressure, F-212B, PDI-3202B	<15 psid	Daily	0.08	0.09	0.09	0.09	0.09		
	Effluent Skid Pump (1)	GW flow (gpm)	0-400 gpm	Daily	260	385	259	260	260		
		Totalizer (1000 gal)	---	Daily	414055779	414249287	414535712	414763497	414990887		
	Effluent Skid Pump (2)	GW flow (gpm)	0-400 gpm	Daily	259	260	259	262	260		
		Totalizer (1000 gal)	---	Daily	345567500	345788760	346064672	346342016	346617004		
	Injection Well 7	Pressure (psig)	0-120 psig	Daily	0.0	0.4	0.4	0.0	-0.0		
		Water Level Above Transducer (ft)	10-30 ft	Daily	57.06	57.06	57.06	77.83	99.35		
	Golf Course Pond	Pond Level (ft)	0.7-3.5 ft	Daily	4.45	4.49	4.78	5.0	4.98		
HIMs	Influent Pump Skid (1)	Frequency (Hz, P112A B)	>30 Hz	Daily	42.25	42.25	48.81	48.71	42.07	42.51	41.81
		Amperage (A, P112A B)	>10 A	Daily	8.8	8.9	11.4	11.7	8.7	8.8	8.9
		Sand Filter Differential Pressure (psi)	>1 psi	Daily	5	9	5.5	5.5	5.5	5.5	5.5
	Influent Pump Skid (2)	Frequency (Hz, P212A B)	>30 Hz	Daily	46.53	46.53	45.57	45.57	47.11	47.09	44.85
		Amperage (A, P212A B)	>10 A	Daily	10.4	10.1	10.0	9.8	10.5	10.1	9.8
		Sand Filter Differential Pressure (psi)	>1 psi	Daily	10.5	3	3	3.5	9.5	9.7	11.1
	Effluent Pump Skid (1)	Frequency (Hz, P118)	>30 Hz	Daily	42.82	48.36	43.31	42.79	42.57	42.57	42.57
		Amperage (A, P118)	>10 A	Daily	13.7	16.6	13.9	13.7	13.7	13.7	13.7
	Effluent Pump Skid (2)	Frequency (Hz, P218)	>30 Hz	Daily	42.21	42.46	42.51	42.15	42.23	42.23	42.23
		Amperage (A, P218)	>10 A	Daily	12.8	12.8	12.8	12.9	12.8	12.8	12.8
	Well Vault	Totalizer (Mgal)	---	Weekly	121.7010						
		GW flow, FT-3001 (gpm)	0-200 gpm	Weekly	138.3						
Well Control House	KAFB-106233	Totalizer (Mgal)	---	Weekly	71.2928						
		GW flow, FT-3001 (gpm)	0-200 gpm	Weekly	94.7						
		Wellhead Pressure (psig)	< 150 psig	Weekly	OFF	102.8					
	KAFB-106234	GW flow, FT-7001 (gpm)	0-200 gpm	Weekly	OFF	162.8					
		Totalizer (Mgal)	---	Weekly	173.0529	173.0557					
		Wellhead Pressure (psig)	< 150 psig	Weekly	77.82						
	Well Control House	GW flow, FT-7002 (gpm)	0-200 gpm	Weekly	175.3	173.8					
		Totalizer (Mgal)	---	Weekly	267.5502	267.7693					
	Well Head	Effluent Line Pressure, PI-7005	< 150 psig	Weekly	18.5	22.1					
		*Totalizer (1000 gal)	---	Weekly	208253.5						

* The KAFB-7 Totalizer reading should be recorded weekly as well as on days when the effluent flow is changed between KAFB-7 and the Golf Course Main Pond.

Notes:

94% 94%
56.59 Hz 82 gpm
35.48 Amps 54 psi
632 Bus 17.26 level
451 volts out

100% 95%
88-90 gpm 81 gpm - 83 gpm
39.51 57.36 Hz
36.20 Amps
633.39 Bus
456.14 volts
55.9F Ambient

VFD 18.5
AC 78°F
54.19 Hz
33.17 Amps
636.03 Bus
431.39 volts out

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					4/12/20 Time: 13:19	4/12/20 0804	4/12/20 0745	4/12/20 0740	4/12/20 0720	1/1	1/1
GWTS	Influent Pump Skid (Train 1)	Inlet pressure pump skid, PI-3102 (psig)	< 60 psig	Daily	33.5	38.5	32	33	32		
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	0.128	0.369	0.129	0.126	0.127		
		Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.127	0.374	0.128	0.129	0.126		
		Sand filter differential pressure, SF-101 (1)	---	Daily	32	36	29	29	20		
		Sand filter differential pressure, SF-101 (2)	---	Daily	31	31	28	27	29		
		Outlet pressure pump skid, PI-3103 (psig)	< 60 psig	Daily	9.4	12.4	8.6	8.1	8.6		
		GW flow (gpm)	0-500 gpm	Daily	210.1	360.5	210.2	210.5	210.3		
		Totalizer (Mgal)	---	Daily	372.4335	312.6444	372.7548	373.2044	373.4532		
		Bag filters changed?	yes/no	Daily	No	No	No	No	No		
	Influent Pump Skid (Train 2)	Inlet pressure pump skid, PI-3202 (psig)	< 60 psig	Daily	41.5	38.5	41	38.5	46		
		Bag filter differential pressure, F212A	<15 psid	Daily	0.086	0.087	0.089	0.089	0.087		
		Bag filter differential pressure, F212B	<15 psid	Daily	0.116	0.123	0.121	0.124	0.120		
		Sand filter differential pressure, SF-201 (1)	---	Daily	245.1	245.5	39	37	44		
		Sand filter differential pressure, SF-201 (2)	---	Daily	337.2466	337.4912	37	32	26		
		Outlet pressure pump skid, PI-3203, (psig)	< 60 psig	Daily	13.9	13.9	13.9	13.9	13.9		
		GW flow (gpm)	0-500 gpm	Daily	36.5	245.6	245.1	245.1	245.1		
		Totalizer (Mgal)	---	Daily	337.798	338.1051	338.4136				
		Bag filters changed?	yes/no	Daily	No	No	No	No	No		
	GAC (Train 1)	V-114A Pressure, PI-3104A (psig)	0-20 psig	Daily	8.1	9.8	8.1	8.1	8.1		
		Between Tanks, PI-3105 (psig)	0-20 psig	Daily	14.1	11.9	9.1	7.2	7.2		
		V-114B Pressure, PI-3104B (psig)	0-20 psig	Daily	7.8	7.9	7.7	7.6	7.7		
		Which Tank is Lead?	---	Daily	A	A	A	A	A		
	GAC (Train 2)	V-214A Pressure (psig)	0-20 psig	Daily	5.9	6	6	5.9	5.9		
		Between Tanks (psig)	0-20 psig	Daily	13.6	13.2	13.5	13.8	13.5		
		V-214B Pressure (psig)	0-20 psig	Daily	9.5	9.7	9.5	9.5	9.6		
		Which Tank is Lead?	---	Daily	B	B	B	B	B		
	Effluent Pump Skid (Train 1)	Inlet press. pump skid, PI-3108 (psig)	< 60 psig	Daily	22.0	24.5	22	22.1	21.9		
		Bag filter differential pressure, F-118A	<15 psid	Daily	0	0	0	0	0		
		Bag filter differential pressure, F-118B	<15 psid	Daily	0	0	0	0	6		
		Upstream outlet press. pump tree (psig)	< 60 psig	Daily	20.37	20.22	20.10	20.43	19.97		
		GW flow (gpm)	0-500 gpm	Daily	260.0	386.8	260.7	260.3	260.4		
	Effluent Pump Skid (Train 2)	Totalizer (Mgal)	---	Daily	387.4311	387.6420	387.9556	388.1207	388.4545		
		Inlet press. pump skid, PI-3208 (psig)	< 60 psig	Daily	21.8	21.8	21.3	21.8	21.2		
		Bag filter differential pressure, F-218A	<15 psid	Daily	0	0	0	0	0		
		Bag filter differential pressure, F-218B	<15 psid	Daily	0	0	0	0	0		
		Upstream outlet press. pump tree (psig)	< 60 psig	Daily	20.39	20.30	20.11	20.52	20.05		
	Backwash System	GW flow (gpm)	0-500 gpm	Daily	260.6	259.8	260.4	259.9	260.305		
		Totalizer (Mgal)	---	Daily	333.1731	333.4157	333.7187	334.0274	334.3246		
	Sodium Hypochlorite Generator	Clarifier Level (ft)	---	Daily	Cell 2 2.6	Cell 2 2.6	Cell 2 2.6	Cell 2 2.6	Cell 2 2.6		
		Clarifier Discharged to Sump?	yes/no	Daily	No	No	No	No	No		
		Upstream Filter Pressure (psi)	>30 psig	Daily	>100	>100	>100	102	102		
		Downstream Filter Pressure (psi)	>30 psig	Daily	>100	>100	>100	98	100		
		Brine Tank Filled with Salt?	yes/no	Daily	Yes	Yes	Yes	Yes	Yes		
		Generator Inlet Pressure (psi)	>30 psig	Daily	39	39	40	39	39		
		Generator Faulted?	yes/no	Daily	No	No	No	No	No		
		Oxidant Tank Level (ft)	>2 ft	Daily	2.2	1.85	3.0	2.6	2.2		
		Train 1 Dosing Pump Faulted?	yes/no	Daily	OFF	No	OFF	OFF	OFF		
		Train 2 Dosing Pump Faulted?	yes/no	Daily	No	No	No	No	No		
		Train 1 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily	OFF	0.11	OFF	OFF	OFF		
		Train 2 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily	0.11	0.10	0.13	0.14	0.10		

Notes:

Manual
Back
Wash
T2

Manual
BW
T2

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					4/27/20 Time: 0720	4/28/20	4/29/20	4/30/20	5/1/20	1/1	1/1
HMI	Well KAFB-106228	GW flow, FT-3001 (gpm)	0-200 gpm	Daily	143	143	143	143	143		
		Wellhead Pressure (psig)	< 150 psig	Daily	68.8/67.49	68.8	68.8	68.6	68.6		
		Water Level Above Transducer (ft)	---	Daily	13.79	13.79	13.79	13.79	13.79		
	Well KAFB-106233	GW flow, FT-7001 (gpm)	0-200 gpm	Daily	OFF	163 OFF	OFF	163	163		
		Wellhead Pressure (psig)	< 150 psig	Daily	---	22.7	---	22.5	23.3		
		Water Level Above Transducer (ft)	---	Daily	40.39	35.47	40.10	34.74	35.63		
	Well KAFB-106234	GW flow, FI-7002(gpm)	0-200 gpm	Daily	175	174	176	163	175		
		Wellhead Pressure (psig)	< 150 psig	Daily	18.5	23.0	18.5	23.0	23.1		
		Water Level Above Transducer (ft)	---	Daily	27.67	27.67	27.67	22.67	27.67		
	Well KAFB-106239	GW flow, FI-7002(gpm)	0-200 gpm	Daily	78	78	77	78	77		
		Wellhead Pressure (psig)	< 150 psig	Daily	52.4	52.4	52.4	52.4	52.4		
		Water Level Above Transducer (ft)	---	Daily	18.19	18.17	17.17	17.17	17.17		
	Influent Pump Skid (1)	GW flow (gpm)	0-400 gpm	Daily	210	365	210	365	360		
		Totalizer (1000 gal)	---	Daily	367,347,160	367,712,128	367,793,672	368,080,616	368,327,776		
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	0.12	0.39	0.13	0.38	0.37		
		Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.13	0.38	0.13	0.37	0.38		
	Influent Pump Skid (2)	GW flow (gpm)	0-400 gpm	Daily	245	245	245	245	245		
		Totalizer (1000 gal)	---	Daily	249,223,452	249,629,724	249,843,168	250,239,928	250,564,500		
		Bag filter differential pressure, F-212A, PDI-3202A	<15 psid	Daily	0.12	0.12	0.12	0.12	0.12		
		Bag filter differential pressure, F-212B, PDI-3202B	<15 psid	Daily	0.09	0.09	0.09	0.09	0.09		
	Effluent Skid Pump (1)	GW flow (gpm)	0-400 gpm	Daily	260	380	260	380	385		
		Totalizer (1000 gal)	---	Daily	415,684,188	416,134,562	416,307,726	416,709,732	417,040,930		
	Effluent Skid Pump (2)	GW flow (gpm)	0-400 gpm	Daily	263	260	261	260	261		
		Totalizer (1000 gal)	---	Daily	347,460,492	347,837,884	348,036,364	348,406,020	348,707,264		
	Injection Well 7	Pressure (psig)	0-120 psig	Daily	0.4	0.4	0.4	0.4	0.4		
		Water Level Above Transducer (ft)	10-30 ft	Daily	57.60	57.09	57.09	37.109	57.09		
	Golf Course Pond	Pond Level (ft)	0.7-3.5 ft	Daily	3.93	4.49	4.27	4.44	4.51		
HIMs	Influent Pump Skid (1)	Frequency (Hz, P112A B)	>30 Hz	Daily	41.99 41.99	48.07 48.09	47.68 47.70	48.64 48.59	46.01 46.00		
		Amperage (A, P112A B)	>10 A	Daily	8.60 8.70	11.30 11.60	8.16 8.17	11.7 11.7	10.7 10.9		
		Sand Filter Differential Pressure (psi)	>1 psi	Daily	6	5	4.5	10.1	5		
	Influent Pump Skid (2)	Frequency (Hz, P212A B)	>30 Hz	Daily	44.60 44.66	46.01 45.82	48.36 48.31	46.38 46.39	46.51 46.44		
		Amperage (A, P212A B)	>10 A	Daily	9.70 9.70	10.10 9.90	10.8 10.5	10.3 10.0	10.3 10.0		
		Sand Filter Differential Pressure (psi)	>1 psi	Daily	8	10	10.5	12.5	6.5-7		
	Effluent Pump Skid (1)	Frequency (Hz, P118)	>30 Hz	Daily	43.12	49.45	42.32	47.13	48.57		
		Amperage (A, P118)	>10 A	Daily	13.90	16.80	13.6	16.6	16.5		
	Effluent Pump Skid (2)	Frequency (Hz, P218)	>30 Hz	Daily	41.87	43.66	41.81	43.02	42.73		
		Amperage (A, P218)	>10 A	Daily	12.70	13.20	12.17	13.0	12.9		
Well Vault	KAFB-106228	Totalizer (Mgal)	---	Weekly	122.7799	---	---	---	---		
Well Vault		GW flow, FT-3001 (gpm)	0-200 gpm	Weekly	138.7	---	---	---	---		
Well Vault	KAFB-106239	Totalizer (Mgal)	---	Weekly	72.0458	---	---	---	---		
Well Vault		GW flow, FT-3001 (gpm)	0-200 gpm	Weekly	77.7	---	---	---	---		
Well Control House	KAFB-106233	Wellhead Pressure (psig)	< 150 psig	Weekly	22.92	---	104 (mud)	---	---		
		GW flow, FT-7001 (gpm)	0-200 gpm	Weekly	163.1	---	163	---	---		
		Totalizer (Mgal)	---	Weekly	273.4283	---	---	---	---		
	KAFB-106234	Wellhead Pressure (psig)	< 150 psig	Weekly	23.03	---	80 (crawl)	---	---		
		GW flow, FT-7002 (gpm)	0-200 gpm	Weekly	173.7	---	174	---	---		
		Totalizer (Mgal)	---	Weekly	269.2855	---	---	---	---		
Well Head	KAFB-7	Effluent Line Pressure, PI-7005	< 150 psig	Weekly	22	---	---	---	---		
		*Totalizer (1000 gal)	---	Weekly	210162.0	---	---	---	---		
		GW flow (gpm)	0-800 gpm	Weekly	---	---	---	---	---		

* The KAFB-7 Totalizer reading should be recorded weekly as well as on days when the effluent flow is changed between KAFB-7 and the Golf Course Main Pond.

Notes:

71
Just
Back
washed

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					4/27/20	4/28/20	4/29/20	4/30/20	5/1/20	1	1
GWTS	Influent Pump Skid (Train 1)	Inlet pressure pump skid, PI-3102 (psig)	< 60 psig	Daily	Time: 0706 32	1504 32.5	0743 31	1500 38	1622 32.5		
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	0.128	0.381	0.128	0.388	0.377		
		Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.128	0.380	0.129	0.382	0.378		
		Sand filter differential pressure, SF-101 (1)	---	Daily	0.12830	29	30	36	29		
		Sand filter differential pressure, SF-101 (2)	---	Daily	0.12828	28	30	28	28		
		Outlet pressure pump skid, PI-3103 (psig)	< 60 psig	Daily	8.5	12.0	8.6	12.4	11.7		
		GW flow (gpm)	0-500 gpm	Daily	210.3	364.9	210.0	365.1	360.6		
		Totalizer (Mgal)	---	Daily	374.2080	374.6949	374.8826	375.2166	375.6765		
	Influent Pump Skid (Train 2)	Bag filters changed?	yes/no	Daily	No	No	No	No	No		
		Inlet pressure pump skid, PI-3202 (psig)	< 60 psig	Daily	37.5	40.5	45	41	41		
		Bag filter differential pressure, F212A	<15 psid	Daily	0.089	0.089	0.088	0.087	0.087		
		Bag filter differential pressure, F212B	<15 psid	Daily	0.118	0.120	0.124	0.121	0.122		
		Sand filter differential pressure, SF-201 (1)	---	Daily	35	38	42	39	39		
		Sand filter differential pressure, SF-201 (2)	---	Daily	31	32	36	31	36		
		Outlet pressure pump skid, PI-3203, (psig)	< 60 psig	Daily	13.0	14.0	13.9	13.1	13.1		
		GW flow (gpm)	0-500 gpm	Daily	245.3	245.0	244.3	244.5	245.0		
	GAC (Train 1)	Totalizer (Mgal)	---	Daily	339.3554	339.7369	339.9972	340.4099	348.7414		
		Bag filters changed?	yes/no	Daily	No	No	No	No	No		
		V-114A Pressure, PI-3104A (psig)	0-20 psig	Daily	8.1	9.5	8.0	9.7	9.9		
		Between Tanks, PI-3105 (psig)	0-20 psig	Daily	9.1	11.9	8.9	11.8	11.8		
		V-114B Pressure, PI-3104B (psig)	0-20 psig	Daily	7.5	7.9	7.8	7.9	7.9		
		Which Tank is Lead?	---	Daily	A	A	A	A	A		
	GAC (Train 2)	Which Tank is Lag?	---	Daily	B	B	B	B	B		
		V-214A Pressure (psig)	0-20 psig	Daily	5.0	5.9	6	5.1	5.1		
		Between Tanks (psig)	0-20 psig	Daily	12.8	13.5	13.5	13.0	12.9		
		V-214B Pressure (psig)	0-20 psig	Daily	8.5	9.1	9.6	8.9	8.8		
		Which Tank is Lead?	---	Daily	B	B	B	B	B		
		Which Tank is Lag?	---	Daily	A	A	A	A	A		
	Effluent Pump Skid (Train 1)	Inlet press. pump skid, PI-3108 (psig)	< 60 psig	Daily	22.8	25.5	21.1	27	25		
		Bag filter differential pressure, F-118A	<15 psid	Daily	0	0	0	0	0		
		Bag filter differential pressure, F-118B	<15 psid	Daily	0	0	0	0	0		
		Upstream outlet press. pump tree (psig)	< 60 psig	Daily	20.81	20.98	19.41	22.71	20.71		
		GW flow (gpm)	0-500 gpm	Daily	260.8	260.2	259.5	282.5	385.2		
	Effluent Pump Skid (Train 2)	Totalizer (Mgal)	---	Daily	389.2139	389.7023	389.8950	390.3322	390.6928		
		Inlet press. pump skid, PI-3208 (psig)	< 60 psig	Daily	22.0	22.0	20.9	24	22		
		Bag filter differential pressure, F-218A	<15 psid	Daily	0	0	0	0	0		
		Bag filter differential pressure, F-218B	<15 psid	Daily	0	0	0	0	0		
		Upstream outlet press. pump tree (psig)	< 60 psig	Daily	20.81	20.98	19.54	22.61	20.79		
	Backwash System	GW flow (gpm)	0-500 gpm	Daily	260.2	260.5	260.7	264.2	260.1		
		Totalizer (Mgal)	---	Daily	335.2522	335.6670	335.8882	336.2928	336.6244		
	Sodium Hypochlorite Generator	Clarifier Level (ft)	---	Daily	Cell 2, 2.6'	Cell 2, 2.6'	Cell 2, 2.6'	Cell 2, 2.6'	Cell 2, 2.6'		
		Clarifier Discharged to Sump?	yes/no	Daily	No	No	No	No	YES		
		Upstream Filter Pressure (psi)	>30 psig	Daily	100	100	105	103	103		
		Downstream Filter Pressure (psi)	>30 psig	Daily	100	100	103	99	102		
		Brine Tank Filled with Salt?	yes/no	Daily	YES	YES	YES	YES	YES		
		Generator Inlet Pressure (psi)	>30 psig	Daily	39	39	39	39	38		
		Generator Faulted?	yes/no	Daily	No	No	No	No	No		
		Oxidant Tank Level (ft)	>2 ft	Daily	2.7'	2.2'	1.9'	2.95	2.55		
		Train 1 Dosing Pump Faulted?	yes/no	Daily	No	OFF	OFF	OFF	OFF		
		Train 2 Dosing Pump Faulted?	yes/no	Daily	No	No	No	OFF	OFF		
		Train 1 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily	OFF	OFF	OFF	OFF	OFF		
		Train 2 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily	0.11	0.15	0.09	0.09	0.11		

Notes:

81 Amps
29 Volts
1.23 Volts Brine pump
69°F Water
99°F Oxidant Temp
33 psi
21 gph

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					317.120 Time: 1140	513.120 0832	516.120 0748	517.120 0807	518.120 0744	1 1	1 1
HMI	Well KAFB-106228	GW flow, FT-3001 (gpm)	0-200 gpm	Daily	145	143	143	143	143		
		Wellhead Pressure (psig)	< 150 psig	Daily	68.8 67.50	68.8	68.9	68.9	68.9		
		Water Level Above Transducer (ft)	---	Daily	12.79	12.79	12.79	12.79	13.16		
	Well KAFB-106233	GW flow, FT-7001 (gpm)	0-200 gpm	Daily	163	164	OFF	OFF	OFF		
		Wellhead Pressure (psig)	< 150 psig	Daily	23.2 22.72	23.2	---	---	---		
		Water Level Above Transducer (ft)	---	Daily	35.45	34.45	39.24	40.24	40.24		
	Well KAFB-106234	GW flow, FI-7002(gpm)	0-200 gpm	Daily	174	174	176	176	176		
		Wellhead Pressure (psig)	< 150 psig	Daily	23.0 23.12	23.1	18.5	18.5	18.5		
		Water Level Above Transducer (ft)	---	Daily	27.67	27.67	27.67	27.67	27.98		
	Well KAFB-106239	GW flow, FI-7002(gpm)	0-200 gpm	Daily	77	77	77	77	76		
		Wellhead Pressure (psig)	< 150 psig	Daily	52.4 51.82	52.4	52.3	52.3	51.6		
		Water Level Above Transducer (ft)	---	Daily	17.17	17.11	16.49	16.49	17.03		
	Influent Pump Skid (1)	GW flow (gpm)	0-400 gpm	Daily	360	360	210	210	210		
		Totalizer (1000 gal)	---	Daily	38913245	369670422	369785778	369785778	369785856		
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	0.37	0.37	0.13	0.13	0.13		
		Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.36	0.37	0.13	0.13	0.13		
	Influent Pump Skid (2)	GW flow (gpm)	0-400 gpm	Daily	245	245	245	245	245		
		Totalizer (1000 gal)	---	Daily	251421380	251691764	251919820	252287774	252706156		
		Bag filter differential pressure, F-212A, PDI-3202A	<15 psid	Daily	0.12	0.12	0.12	0.12	0.12		
		Bag filter differential pressure, F-212B, PDI-3202B	<15 psid	Daily	0.09	0.09	0.09	0.09	0.09		
	Effluent Skid Pump (1)	GW flow (gpm)	0-400 gpm	Daily	384	385	259	260	260		
		Totalizer (1000 gal)	---	Daily	417963032	418353	418614180	418878812	418997944		
	Effluent Skid Pump (2)	GW flow (gpm)	0-400 gpm	Daily	261	255030	260	260	260		
		Totalizer (1000 gal)	---	Daily	349503988	349745664	350022788	350310056	350704728		
	Injection Well 7	Pressure (psig)	0-120 psig	Daily	0.4	0.4	0.4	0.4	0.4		
		Water Level Above Transducer (ft)	10-30 ft	Daily	57.09	57.09	57.09	57.09	57.09		
	Golf Course Pond	Pond Level (ft)	0.7-3.5 ft	Daily	4.25	4.58	4.44	4.24	4.25		
HIMs	Influent Pump Skid (1)	Frequency (Hz, P112A B)	>30 Hz	Daily	50.01 50.00	49.16 49.24	40.80 40.8	41.07 41.00	41.63 41.62		
		Amperage (A, P112A B)	>10 A	Daily	11.8 12.1	11.6 11.9	8.4 8.6	8.4 8.6	8.6 8.7		
		Sand Filter Differential Pressure (psi)	>1 psi	Daily	14	10.5	6	5.0	5.5		
	Influent Pump Skid (2)	Frequency (Hz, P212A B)	>30 Hz	Daily	47.14 47.8	46.28 46.20	46.64 46.7	45.60 45.61	45.35 45.80		
		Amperage (A, P212A B)	>10 A	Daily	10.5 10.2	10.2 9.9	10.4 10.1	10.1 9.8	10.2 9.9		
		Sand Filter Differential Pressure (psi)	>1 psi	Daily	12.8	5	8	9.5	5.5		
	Effluent Pump Skid (1)	Frequency (Hz, P118)	>30 Hz	Daily	49.80	48.00	42.91	43.00	43.25		
		Amperage (A, P118)	>10 A	Daily	16.7	16.1	13.7	13.8	13.9		
	Effluent Pump Skid (2)	Frequency (Hz, P218)	>30 Hz	Daily	42.27	42.78	42.30	42.24	41.88		
		Amperage (A, P218)	>10 A	Daily	12.8	12.9	12.8	12.8	12.7		
Well Vault	KAFB-106228	Totalizer (Mgal)	---	Weekly	124.1724	---	---	---	---		
Well Vault	KAFB-106239	GW flow, FT-3001 (gpm)	0-200 gpm	Weekly	139.2	---	---	---	---		
Well Control House	KAFB-106233	Totalizer (Mgal)	---	Weekly	72.8230	---	---	---	---		
		GW flow, FT-3001 (gpm)	0-200 gpm	Weekly	77.2	---	---	---	---		
		Wellhead Pressure (psig)	< 150 psig	Weekly	---	103	---	---	---		
	KAFB-106234	GW flow, FT-7001 (gpm)	0-200 gpm	Weekly	163.6	---	---	---	---		
		Totalizer (Mgal)	---	Weekly	173.7391	---	---	---	---		
		Wellhead Pressure (psig)	< 150 psig	Weekly	---	78.03 AF	---	---	---		
	Well Control House	GW flow, FT-7002 (gpm)	0-200 gpm	Weekly	173.9	---	---	---	---		
Well Head	KAFB-7	Totalizer (Mgal)	---	Weekly	271.0397	---	---	---	---		
		Effluent Line Pressure, PI-7005	< 150 psig	Weekly	22 ps	---	---	---	---		

* The KAFB-7 Totalizer reading should be recorded weekly as well as on days when the effluent flow is changed between KAFB-7 and the Golf Course Main Pond.

Notes:

VFO 37.8 °C
AC 77 °F
Amb. 68 °F
Amps 34.49
Hz 54.41

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					5/14/20 Time: 11:15	5/15/20 08:20	5/16/20 07:37	5/17/20 07:57	5/18/20 07:29	1	1
GWTS	Influent Pump Skid (Train 1)	Inlet pressure pump skid, PI-3102 (psig)	< 60 psig	Daily	41	39	31	31	32		
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	0.376	0.369	0.128	0.128	0.129		
		Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.379	0.380	0.129	0.129	0.130		
		Sand filter differential pressure, SF-101 (1)	---	Daily	28	36	30	29	30		
		Sand filter differential pressure, SF-101 (2)	---	Daily	28	29	28	27	29		
		Outlet pressure pump skid, PI-3103 (psig)	< 60 psig	Daily	12.4	12.5	8.2	8.2	7.9		
		GW flow (gpm)	0-500 gpm	Daily	360.4	360.4	210.2	210.3	210.1		
	Influent Pump Skid (Train 2)	Totalizer (Mgal)	---	Daily	376.6727	377.0921	377.3798	377.6359	377.7171		
		Bag filters changed?	yes/no	Daily	No	No	No	No	No		
		Inlet pressure pump skid, PI-3202 (psig)	< 60 psig	Daily	42.5	41	42	39.5	40		
		Bag filter differential pressure, F212A	<15 psid	Daily	0.084	0.092	0.029	0.091	0.088		
		Bag filter differential pressure, F212B	<15 psid	Daily	0.120	0.125	0.119	0.121	0.120		
		Sand filter differential pressure, SF-201 (1)	---	Daily	39	39	38	37	38		
		Sand filter differential pressure, SF-201 (2)	---	Daily	32	37	28	32	36		
	GAC (Train 1)	Outlet pressure pump skid, PI-3203, (psig)	< 60 psig	Daily	13.1	13.1	13.2	13.9	13.9		
		GW flow (gpm)	0-500 gpm	Daily	246.0	245.5	246.0	245.2	245.3		
		Totalizer (Mgal)	---	Daily	341.6285	341.8983	342.2055	342.5252	342.9146		
		Bag filters changed?	yes/no	Daily	No	No	No	No	No		
		V-114A Pressure, PI-3104A (psig)	0-20 psig	Daily	9.5	9.5	8.0	8.1	8.1		
		Between Tanks, PI-3105 (psig)	0-20 psig	Daily	11.8	11.6	9.2	9.1	9.1		
		V-114B Pressure, PI-3104B (psig)	0-20 psig	Daily	7.9	7.9	7.7	7.6	7.8		
	GAC (Train 2)	Which Tank is Lead?	---	Daily	A	A	A	X	A		
		Which Tank is Lag?	---	Daily	B	B	B	B	B		
		V-214A Pressure (psig)	0-20 psig	Daily	5.1	5.0	5.0	5.9	5.9		
		Between Tanks (psig)	0-20 psig	Daily	12.9	12.9	12.5	13.6	13.1		
		V-214B Pressure (psig)	0-20 psig	Daily	8.9	8.7	8.5	9.7	9.0		
		Which Tank is Lead?	---	Daily	B	B	B	B	B		
		Which Tank is Lag?	---	Daily	A	A	A	A	A		
	Effluent Pump Skid (Train 1)	Inlet press. pump skid, PI-3108 (psig)	< 60 psig	Daily	24.9	24	22	22	22		
		Bag filter differential pressure, F-118A	<15 psid	Daily	0	0	0	0	0		
		Bag filter differential pressure, F-118B	<15 psid	Daily	0	0	0	0	0		
		Upstream outlet press. pump tree (psig)	< 60 psig	Daily	20.25	19.42	20.11	20.21	20.11		
		GW flow (gpm)	0-500 gpm	Daily	385.1	385.3	259.6	260.7	260.4		
	Effluent Pump Skid (Train 2)	Totalizer (Mgal)	---	Daily	391.5970	392.1165	392.4025	392.6504	392.9241		
		Inlet press. pump skid, PI-3208 (psig)	< 60 psig	Daily	21.8	21	21.6	21.5	21.5		
		Bag filter differential pressure, F-218A	<15 psid	Daily	0	0	0	0	0		
		Bag filter differential pressure, F-218B	<15 psid	Daily	0	0	0	0	0		
		Upstream outlet press. pump tree (psig)	< 60 psig	Daily	20.27	19.46	20.07	20.04	20.05		
	Backwash System	GW flow (gpm)	0-500 gpm	Daily	260.4	260.1	260.4	260.2	260.5		
		Totalizer (Mgal)	---	Daily	337.7280	337.7626	338.0462	338.3817	338.7670		
		Clarifier Level (ft)	---	Daily	Cell 2 2.6	Cell 2 2.6	Cell 2 2.6	Cell 2 2.6	Cell 2 2.6		
		Clarifier Discharged to Sump?	yes/no	Daily	Yes	No	No	No	No		
		Upstream Filter Pressure (psi)	>30 psig	Daily	>100	>100	102	>100	105		
	Sodium Hypochlorite Generator	Downstream Filter Pressure (psi)	>30 psig	Daily	>102	>100	100	>100	102		
		Brine Tank Filled with Salt?	yes/no	Daily	Yes	Yes	Yes	Yes	Yes		
		Generator Inlet Pressure (psi)	>30 psig	Daily	40	39	39	39	39		
		Generator Faulted?	yes/no	Daily	No	No	No	No	No		
		Oxidant Tank Level (ft)	>2 ft	Daily	3.0	2.7	2.3	2.9	3.1		
		Train 1 Dosing Pump Faulted?	yes/no	Daily	OFF	OFF	OFF	OFF	OFF		
		Train 2 Dosing Pump Faulted?	yes/no	Daily	No	No	No	No	No		
		Train 1 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily	OFF	OFF	OFF	OFF	OFF		
		Train 2 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily	0.13	0.11	0.40	0.09	0.11		

Notes:

Both
T1, T2
Back
washed

81 Amps
29 Volts
1.17 volts Brine P.
72° F
105° F Oxidant
21 GPM

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					5/11/20 Time: 1407	5/12/20 0740	5/13/20 0745	5/14/20 0732	5/15/20 1214	1	1
HMI	Well KAFB-106228	GW flow, FT-3001 (gpm)	0-200 gpm	Daily	143	143	144	143.5	143		
		Wellhead Pressure (psig)	< 150 psig	Daily	69.9	68.0	69.0	68.7	68.4	67.4	
		Water Level Above Transducer (ft)	---	Daily	13.16	13.16	13.16	13.16	13.16		
	Well KAFB-106233	GW flow, FT-7001 (gpm)	0-200 gpm	Daily	164	OFF	164	OFF	164		
		Wellhead Pressure (psig)	< 150 psig	Daily	22.6	---	23.1	---	23.0	22.8	
		Water Level Above Transducer (ft)	---	Daily	24.71	39.59	35.24	40.24	35.32		
	Well KAFB-106234	GW flow, FI-7002 (gpm)	0-200 gpm	Daily	175	176	175	176	174		
		Wellhead Pressure (psig)	< 150 psig	Daily	23.0	18.5	23.1	18.5	23.1	23.9	
		Water Level Above Transducer (ft)	---	Daily	27.98	27.98	27.98	27.98	27.98		
	Well KAFB-106239	GW flow, FI-7002 (gpm)	0-200 gpm	Daily	76	76	76	76	76		
		Wellhead Pressure (psig)	< 150 psig	Daily	51.6	51.4	51.4	50.9	50.9	51.29	
		Water Level Above Transducer (ft)	---	Daily	17.03	17.16	17.16	17.73	17.73		
	Influent Pump Skid (1)	GW flow (gpm)	0-400 gpm	Daily	360	210	360	210	360		
		Totalizer (1000 gal)	---	Daily	370883.672	371109.640	371531.968	371534.640	371801.208		
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	0.38	0.13	0.38	0.13	0.38		
	Influent Pump Skid (2)	Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.38	0.13	0.37	0.12	0.38		
		GW flow (gpm)	0-400 gpm	Daily	245	245	244	245	245		
		Totalizer (1000 gal)	---	Daily	253702.448	253937.512	254144.336	254479.168	254836.472		
	Effluent Skid Pump (1)	Bag filter differential pressure, F-212A, PDI-3202A	<15 psid	Daily	0.12	0.10	0.13	0.13	0.12		
		Bag filter differential pressure, F-212B, PDI-3202B	<15 psid	Daily	0.09	0.12	0.10	0.09	0.09		
		GW flow (gpm)	0-400 gpm	Daily	385	260	385	260	385		
	Effluent Skid Pump (2)	Totalizer (1000 gal)	---	Daily	420129.886	420454.502	420760.424	420761.550	421329.240		
		GW flow (gpm)	0-400 gpm	Daily	260	259	260	260	260		
		Totalizer (1000 gal)	---	Daily	351632.392	351850.508	352045.004	352365.028	352702.232		
	Injection Well 7	Pressure (psig)	0-120 psig	Daily	0.4	0.4	0.4	0.4	0.4		
		Water Level Above Transducer (ft)	10-30 ft	Daily	57.09	57.09	57.09	57.09	57.09		
		Pond Level (ft)	0.7-3.5 ft	Daily	4.50	4.42	4.65	4.50	4.56		
HIMs	Influent Pump Skid (1)	Frequency (Hz, P112A B)	>30 Hz	Daily	46.89	48.98	42.30	47.26	41.90	47.53	47.51
		Amperage (A, P112A B)	>10 A	Daily	11.5	11.7	8.6	11.0	8.7	11.1	11.5
		Sand Filter Differential Pressure (psi)	>1 psi	Daily	12	4.9	7.5	4.9	9		
	Influent Pump Skid (2)	Frequency (Hz, P212A B)	>30 Hz	Daily	46.96	46.8	47.80	47.66	45.40	46.54	46.27
		Amperage (A, P212A B)	>10 A	Daily	10.4	10.1	10.6	10.7	10.1	10.3	9.5
		Sand Filter Differential Pressure (psi)	>1 psi	Daily	8.5	8.5	9	9	9.5		
	Effluent Pump Skid (1)	Frequency (Hz, P118)	>30 Hz	Daily	48.25	43.17	48.60	42.27	48.53		
		Amperage (A, P118)	>10 A	Daily	16.4	13.8	16.5	13.6	16.5		
		Frequency (Hz, P218)	>30 Hz	Daily	42.27	42.07	41.22	41.44	42.35		
		Amperage (A, P218)	>10 A	Daily	12.8	12.9	12.7	12.6	12.8		
Well Vault	KAFB-106228	Totalizer (Mgal)	---	Weekly	---	---	---	---	126.3788		
Well Vault	KAFB-106239	GW flow, FT-3001 (gpm)	0-200 gpm	Weekly	---	---	---	138.9	138.9		
Well Control House	KAFB-106233	Totalizer (Mgal)	---	Weekly	---	---	---	---	74.0264		
		GW flow, FT-3001 (gpm)	0-200 gpm	Weekly	---	---	---	---	75.7		
		Wellhead Pressure (psig)	< 150 psig	Weekly	---	---	---	---	103.9		
	KAFB-106234	GW flow, FT-7001 (gpm)	0-200 gpm	Weekly	---	---	---	163.9	163.9		
		Totalizer (Mgal)	---	Weekly	---	---	---	174.6694	174.6		
		Wellhead Pressure (psig)	< 150 psig	Weekly	---	---	---	---	78.9		
		GW flow, FT-7002 (gpm)	0-200 gpm	Weekly	---	---	---	174.0	174.0		
Well Head	KAFB-7	Totalizer (Mgal)	---	Weekly	---	---	---	273.8187	273.8187		
		Effluent Line Pressure, PI-7005	< 150 psig	Weekly	---	---	---	22.1	22.1		
		*Totalizer (1000 gal)	---	Weekly	---	---	---	---	---		
		GW flow (gpm)	0-800 gpm	Weekly	---	---	---	---	---		

* The KAFB-7 Totalizer reading should be recorded weekly as well as on days when the effluent flow is changed between KAFB-7 and the Golf Course Main Pond.

Notes:

Site 1 2016.2.
300 psi
Amb 55
AC 78°F
VFD 24.6
Amps 34.50
54.23 Hz

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					5/11/20	5/12/20	5/13/20	5/14/20	5/15/20	1	1
GWTS	Influent Pump Skid (Train 1)	Inlet pressure pump skid, PI-3102 (psig)	< 60 psig	Daily	Time: 1355	0725	0735	0740	1202		
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	39	32.5	35.5	32.8	34.5		
		Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.376	0.130	0.376	0.129	0.376		
		Sand filter differential pressure, SF-101 (1)	---	Daily	0.377	0.130	0.378	0.130	0.375		
		Sand filter differential pressure, SF-101 (2)	---	Daily	35	31	32	30	33		
		Outlet pressure pump skid, PI-3103 (psig)	< 60 psig	Daily	28	31	28	30	28		
		GW flow (gpm)	0-500 gpm	Daily	12.4	9.6	12.4	8.3	12		
		Totalizer (Mgal)	---	Daily	360.8	210.7	359.8	209.5	359.9		
	Influent Pump Skid (Train 2)	Bag filters changed?	yes/no	Daily	379.0251	379.3848	379.7141	379.9343	380.3327		
		Inlet pressure pump skid, PI-3202 (psig)	< 60 psig	Daily	No	40.5	43.5	39	40		
		Bag filter differential pressure, F212A	<15 psid	Daily	0.088	0.094	0.097	0.093	0.092		
		Bag filter differential pressure, F212B	<15 psid	Daily	0.121	0.126	0.128	0.127	0.124		
		Sand filter differential pressure, SF-201 (1)	---	Daily	38	40	41	37.5	38		
		Sand filter differential pressure, SF-201 (2)	---	Daily	36	37	37	31.5	32.5		
		Outlet pressure pump skid, PI-3203, (psig)	< 60 psig	Daily	13.9	14.1	13.2	14.1	14.1		
		GW flow (gpm)	0-500 gpm	Daily	244.5	245.9	245.2	245.4	245.4		
	GAC (Train 1)	Totalizer (Mgal)	---	Daily	343.9459	344.1891	344.4032	344.7358	345.1050		
		Bag filters changed?	yes/no	Daily	No						
		V-114A Pressure, PI-3104A (psig)	0-20 psig	Daily	9.3	8.94	9.6	8.2	9.5		
		Between Tanks, PI-3105 (psig)	0-20 psig	Daily	11.7	9.4	11.8	9.0	11.6		
		V-114B Pressure, PI-3104B (psig)	0-20 psig	Daily	7.9	7.8	7.9	7.8	7.9		
	GAC (Train 2)	Which Tank is Lead?	---	Daily	A	A	A	A	A		
		Which Tank is Lag?	---	Daily	B	B	B	B	B		
		V-214A Pressure (psig)	0-20 psig	Daily	6.0	5.9	4.9	5.9	6		
		Between Tanks (psig)	0-20 psig	Daily	13.5	13.7	12.3	13.8	13.7		
		V-214B Pressure (psig)	0-20 psig	Daily	9.8	9.1	8.3	8.9	8.9		
	Effluent Pump Skid (Train 1)	Which Tank is Lead?	---	Daily	B	B	B	B	B		
		Which Tank is Lag?	---	Daily	A	A	A	A	A		
		Inlet press. pump skid, PI-3108 (psig)	< 60 psig	Daily	24	21.9	23.9	21	24.5		
		Bag filter differential pressure, F-118A	<15 psid	Daily	0	0	0	0	0		
		Bag filter differential pressure, F-118B	<15 psid	Daily	0	0	0	0	0		
	Effluent Pump Skid (Train 2)	Upstream outlet press. pump tree (psig)	< 60 psig	Daily	19.62	19.94	19.61	19.11	20.22		
		GW flow (gpm)	0-500 gpm	Daily	385.2	261.2	385.7	260.3	385.0		
		Totalizer (Mgal)	---	Daily	394.0539	394.4201	394.7515	394.9723	395.3726		
		Inlet press. pump skid, PI-3208 (psig)	< 60 psig	Daily	21	21.1	21	20.3	21.8		
		Bag filter differential pressure, F-218A	<15 psid	Daily	0	0	0	0	0		
	Backwash System	Bag filter differential pressure, F-218B	<15 psid	Daily	0	0	0	0	0		
		Upstream outlet press. pump tree (psig)	< 60 psig	Daily	19.69	19.37	19.51	19.15	20.09		
		GW flow (gpm)	0-500 gpm	Daily	260.5	260.2	260.4	260.1	260.4		
		Totalizer (Mgal)	---	Daily	339.7846	340.0244	340.2391	340.5727	340.9430		
		Clarifier Level (ft)	---	Daily	Cell 2 2.6	Cell 2 2.6	Cell 2 2.6	Cell 2 2.6	Cell 2 2.6		
	Sodium Hypochlorite Generator	Clarifier Discharged to Sump?	yes/no	Daily	No	YES	No FES PF	No	No		
		Upstream Filter Pressure (psi)	>30 psig	Daily	103	>100	>100	103	103		
		Downstream Filter Pressure (psi)	>30 psig	Daily	101	>100	>100	100	100		
		Brine Tank Filled with Salt?	yes/no	Daily	Yes	Yes	Yes	Yes	Yes		
		Generator Inlet Pressure (psi)	>30 psig	Daily	40	40	40	39	39		
		Generator Faulted?	yes/no	Daily	No	No	No	No	No		
		Oxidant Tank Level (ft)	>2 ft	Daily	3.4	2.95	2.45	2.10	3.2		
		Train 1 Dosing Pump Faulted?	yes/no	Daily	OFF	OFF	No	OFF	No		
		Train 2 Dosing Pump Faulted?	yes/no	Daily	No	No	No	No	No		
		Train 1 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily	OFF	OFF	0.06	OFF	0.05		
		Train 2 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily	0.09	0.09	0.11	0.09	0.12		

Notes:

Manual
Back
wash
TI

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					5/18/20 Time: 1100	5/19/20	5/20/20	5/21/20	5/22/20	/ /	/ /
HMI	Well KAFB-106228	GW flow, FT-3001 (gpm)	0-200 gpm	Daily	143	143	143	143	143		
		Wellhead Pressure (psig)	< 150 psig	Daily	68.9	68.7	68.6 67.0	68.6	68.4		
		Water Level Above Transducer (ft)	---	Daily	13.70	13.7	12.70	12.70	12.41		
	Well KAFB-106233	GW flow, FT-7001 (gpm)	0-200 gpm	Daily	164	164	164	164	164		
		Wellhead Pressure (psig)	< 150 psig	Daily	23.0	22.5	22.8 22.7	23.1	22.9		
		Water Level Above Transducer (ft)	---	Daily	35.06	35.32	35.32	35.02	34.65		
	Well KAFB-106234	GW flow, FI-7002(gpm)	0-200 gpm	Daily	175	174	175	175	175		
		Wellhead Pressure (psig)	< 150 psig	Daily	23.0	23.1	23.1 23.11	23.1	23.1		
		Water Level Above Transducer (ft)	---	Daily	27.70	27.70	27.70	27.70	27.27		
	Well KAFB-106239	GW flow, FI-7002(gpm)	0-200 gpm	Daily	75	75	75	75	75		
		Wellhead Pressure (psig)	< 150 psig	Daily	50.4	50.4	50.4 50.76	50.4	50.8		
		Water Level Above Transducer (ft)	---	Daily	17.73	17.78	17.78	17.78	16.98		
	Influent Pump Skid (1)	GW flow (gpm)	0-400 gpm	Daily	360	360	360	360	360		
		Totalizer (1000 gal)	---	Daily	372441536	37260488	373312080	37405472	374171392		
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	0.37	0.38	0.37	0.38	0.38		
		Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.38	0.38	0.38	0.38	0.38		
	Influent Pump Skid (2)	GW flow (gpm)	0-400 gpm	Daily	245	247	245	245	244		
		Totalizer (1000 gal)	---	Daily	255705020	255914474	256278800	256624952	256874920		
		Bag filter differential pressure, F-212A, PDI-3202A	<15 psid	Daily	0.13	0.12	0.12	0.13	0.13		
		Bag filter differential pressure, F-212B, PDI-3202B	<15 psid	Daily	0.10	0.10	0.10	0.09	0.09		
	Effluent Skid Pump (1)	GW flow (gpm)	0-400 gpm	Daily	386	385	385	385	386		
		Totalizer (1000 gal)	---	Daily	42224314	422505614	422967474	423493366	423728898		
	Effluent Skid Pump (2)	GW flow (gpm)	0-400 gpm	Daily	261	260	260	264	260		
		Totalizer (1000 gal)	---	Daily	353524076	353778668	354065564	354392656	354629072		
	Injection Well 7	Pressure (psig)	0-120 psig	Daily	0.5	0.5	0.5	0.5	0.4		
		Water Level Above Transducer (ft)	10-30 ft	Daily	58.19	57.17	57.17	57.17	56.73		
	Golf Course Pond	Pond Level (ft)	0.7-3.5 ft	Daily	4.29	4.10	4.18	4.43	4.29		
HIMs	Influent Pump Skid (1)	Frequency (Hz, P112A B)	>30 Hz	Daily	48444850	48474843	450450	47484744	47124707		
		Amperage (A, P112A B)	>10 A	Daily	11.3 11.6	11.4 11.5	10.1 10.8	11.1 11.3	11.0 11.2		
		Sand Filter Differential Pressure (psi)	>1 psi	Daily	10.5	11	5	8	8		
	Influent Pump Skid (2)	Frequency (Hz, P212A B)	>30 Hz	Daily	46044600	44804481	45024507	43754377	44804476		
		Amperage (A, P212A B)	>10 A	Daily	10.3 9.9	9.9 9.5	10.0 9.6	9.7 9.3	9.9 9.5		
		Sand Filter Differential Pressure (psi)	>1 psi	Daily	5	5.12	5.5	6	6.5		
	Effluent Pump Skid (1)	Frequency (Hz, P118)	>30 Hz	Daily	4878	4856	4981	4926	4833		
		Amperage (A, P118)	>10 A	Daily	16.6	16.5	17.0	16.7	16.5		
	Effluent Pump Skid (2)	Frequency (Hz, P218)	>30 Hz	Daily	4280	4276	4289	4267	4191		
Amperage (A, P218)		>10 A	Daily	12.9	12.8	13.0	12.7	12.7			
Well Vault	KAFB-106228	Totalizer (Mgal)	---	Weekly	---	---	127.3868	---	---		
GW flow, FT-3001 (gpm)		0-200 gpm	Weekly	---	---	138.6	---	---			
Well Vault	KAFB-106239	Totalizer (Mgal)	---	Weekly	---	---	74.5737	---	---		
GW flow, FT-3001 (gpm)		0-200 gpm	Weekly	---	---	73.2	---	---			
Well Control House	KAFB-106233	Wellhead Pressure (psig)	< 150 psig	Weekly	---	---	82	---	---		
		GW flow, FT-7001 (gpm)	0-200 gpm	Weekly	---	---	164.3	---	---		
		Totalizer (Mgal)	---	Weekly	---	---	175.2755	---	---		
	KAFB-106234	Wellhead Pressure (psig)	< 150 psig	Weekly	---	---	103	---	---		
		GW flow, FT-7002 (gpm)	0-200 gpm	Weekly	---	---	173.7	---	---		
		Totalizer (Mgal)	---	Weekly	---	---	275.0857	---	---		
	Well Control House	Effluent Line Pressure, PI-7005	< 150 psig	Weekly	---	---	22.1	---	---		
Well Head	KAFB-7	*Totalizer (1000 gal)	---	Weekly	---	---	---	---			
		GW flow (gpm)	0-800 gpm	Weekly	---	---	---	---	---		

* The KAFB-7 Totalizer reading should be recorded weekly as well as on days when the effluent flow is changed between KAFB-7 and the Golf Course Main Pond.

Notes:

39.2 VFD
80°F AC
3435 amp
5424 H2
74°F Amb
Filter Running
2.50

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					5/18/20	5/19/20	5/20/20	5/21/20	5/22/20	1/1	1/1
GWTS	Influent Pump Skid (Train 1)	Inlet pressure pump skid, PI-3102 (psig)	< 60 psig	Daily	38	39	33	36	36.5		
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	0.325	0.375	0.373	0.382	0.376		
		Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.376	0.374	0.377	0.379	0.375		
		Sand filter differential pressure, SF-101 (1)	---	Daily	35	36	29	32	34		
		Sand filter differential pressure, SF-101 (2)	---	Daily	28	28	28	28	29		
		Outlet pressure pump skid, PI-3103 (psig)	< 60 psig	Daily	12	11.9	12.5	12.5	10.4		
		GW flow (gpm)	0-500 gpm	Daily	360.1	360.2	359.9	360.6	260.1		
		Totalizer (Mgal)	---	Daily	381,3048	381,6093	382,0977	382,6733	382,9056		
	Influent Pump Skid (Train 2)	Bag filters changed?	yes/no	Daily	No	No	382,0977 (No)	No	No		
		Inlet pressure pump skid, PI-3202 (psig)	< 60 psig	Daily	40	37	39	36.5	38.5		
		Bag filter differential pressure, F212A	<15 psid	Daily	0.092	0.095	0.094	0.093	0.096		
		Bag filter differential pressure, F212B	<15 psid	Daily	0.123	0.124	0.125	0.128	0.124		
		Sand filter differential pressure, SF-201 (1)	---	Daily	38	25	37	34	38		
		Sand filter differential pressure, SF-201 (2)	---	Daily	36	32	35	32	35		
		Outlet pressure pump skid, PI-3203, (psig)	< 60 psig	Daily	13.7	14.1	14.1	14.1	14.1		
		GW flow (gpm)	0-500 gpm	Daily	245.5	245.3	245.6	244.9	245.5		
	GAC (Train 1)	Totalizer (Mgal)	---	Daily	346,0058	346,2831	346,5725	346,9561	347,1975		
		Bag filters changed?	yes/no	Daily	No	No	No	No	No		
		V-114A Pressure, PI-3104A (psig)	0-20 psig	Daily	9.7	9.5	9.7	9.4	9.3		
		Between Tanks, PI-3105 (psig)	0-20 psig	Daily	11.8	11.7	11.8	11.6	11.7		
		V-114B Pressure, PI-3104B (psig)	0-20 psig	Daily	7.9	7.9	7.9	7.9	7.9		
	GAC (Train 2)	Which Tank is Lead?	---	Daily	A	A	A	A	A		
		Which Tank is Lag?	---	Daily	B	B	B	B	B		
		V-214A Pressure (psig)	0-20 psig	Daily	5	5.9	5.9	6	5.9		
		Between Tanks (psig)	0-20 psig	Daily	12.9	13.9	13.7	13.9	13.9		
		V-214B Pressure (psig)	0-20 psig	Daily	8.7	9.6	8.9	8.9	9.7		
	Effluent Pump Skid (Train 1)	Which Tank is Lead?	---	Daily	B	B	B	B	B		
		Which Tank is Lag?	---	Daily	A	A	A	A	A		
		Inlet press. pump skid, PI-3108 (psig)	< 60 psig	Daily	24.5	24.9	25.6	24.9	24.2		
		Bag filter differential pressure, F-118A	<15 psid	Daily	0	0	0	0	0		
		Bag filter differential pressure, F-118B	<15 psid	Daily	0	0	0	0	0		
	Effluent Pump Skid (Train 2)	Upstream outlet press. pump tree (psig)	< 60 psig	Daily	20.17	20.24	21.18	20.25	20.04		
		GW flow (gpm)	0-500 gpm	Daily	385.2	385.1	384.7	385.3	385.1		
		Totalizer (Mgal)	---	Daily	396,3490	396,6560	397,1529	397,7265	397,9600		
		Inlet press. pump skid, PI-3208 (psig)	< 60 psig	Daily	21.7	21.9	22.8	21.9	21.3		
		Bag filter differential pressure, F-218A	<15 psid	Daily	0	0	0	0	0		
	Backwash System	Bag filter differential pressure, F-218B	<15 psid	Daily	0	0	0	0	0		
		Upstream outlet press. pump tree (psig)	< 60 psig	Daily	20.21	20.22	21.22	20.35	20.03		
		GW flow (gpm)	0-500 gpm	Daily	260.5	260.4	260.0	260.5	260.2		
		Totalizer (Mgal)	---	Daily	341,8463	342,1243	342,4350	342,7982	343,0451		
		Clarifier Level (ft)	---	Daily	Cell 2 2.6	Cell 2 2.6	Cell 2 2.6	Cell 2 2.6	Cell 2 2.6		
	Sodium Hypochlorite Generator	Clarifier Discharged to Sump?	yes/no	Daily	YES	No	Yes	No	No		
		Upstream Filter Pressure (psi)	>30 psig	Daily	102 IF	105	110	103	103		
		Downstream Filter Pressure (psi)	>30 psig	Daily	102	102	105	100	100		
		Brine Tank Filled with Salt?	yes/no	Daily	Yes	Yes	Yes	Yes	Yes		
		Generator Inlet Pressure (psi)	>30 psig	Daily	40	40	40	37	39		
		Generator Faulted?	yes/no	Daily	No	No	No	No	No		
		Oxidant Tank Level (ft)	>2 ft	Daily	2.75	2.3	1.95	5.1	2.25		
		Train 1 Dosing Pump Faulted?	yes/no	Daily	No	No	No	No	OFF		
		Train 2 Dosing Pump Faulted?	yes/no	Daily	No	No	No	No	No		
		Train 1 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily	0.07	OFF	OFF	OFF	OFF		
		Train 2 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily	0.12	0.12	0.13	0.12	0.13		

Notes:

Back washed over night
TI Back washed
TI Back Washed
79 amps
29 volts
1.17 Volts broke pump

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					Time: / /	5/26/20	5/27/20	5/28/20	5/29/20	/ /	/ /
HMI	Well KAFB-106228	GW flow, FT-3001 (gpm)	0-200 gpm	Daily		0.706	0.710	1.037	0.742		
		Wellhead Pressure (psig)	< 150 psig	Daily		144	143	143	143		
		Water Level Above Transducer (ft)	---	Daily		68.2	68.2	67.7	68.1/67.13		
	Well KAFB-106233	GW flow, FT-7001 (gpm)	0-200 gpm	Daily		12.03	12.02	11.93	11.66		
		Wellhead Pressure (psig)	< 150 psig	Daily		164	164	164	165		
		Water Level Above Transducer (ft)	---	Daily		22.9	22.9	22.8	22.9/23.02		
	Well KAFB-106234	GW flow, FI-7002(gpm)	0-200 gpm	Daily		34.48	34.53	34.28	34.00		
		Wellhead Pressure (psig)	< 150 psig	Daily		174	174	174	174		
		Water Level Above Transducer (ft)	---	Daily		23.1	23.1	23.0	23.0/23.13		
	Well KAFB-106239	GW flow, FI-7002(gpm)	0-200 gpm	Daily		27.12	27.16	27.06	26.43		
		Wellhead Pressure (psig)	< 150 psig	Daily		74	74	74	74		
		Water Level Above Transducer (ft)	---	Daily		50.5	50.4	50.4	50.3/50.27		
	Influent Pump Skid (1)	GW flow (gpm)	0-400 gpm	Daily		16.85	16.73	16.67	16.50		
		Totalizer (1000 gal)	---	Daily		360	359	360	359		
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily		375,394,472	375,341,088	376,147,500	376,716,944		
		Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily		0.38	0.38	0.38	0.38		
	Influent Pump Skid (2)	GW flow (gpm)	0-400 gpm	Daily		0.38	0.38	0.38	0.37		
		Totalizer (1000 gal)	---	Daily		245	244	245	245		
		Bag filter differential pressure, F-212A, PDI-3202A	<15 psid	Daily		258,041,532	285,335,348	285,674,036	288,434,660		
		Bag filter differential pressure, F-212B, PDI-3202B	<15 psid	Daily		0.13	0.13	0.12	0.13		
	Effluent Skid Pump (1)	GW flow (gpm)	0-400 gpm	Daily		0.09	0.09	0.09	0.10		
		Totalizer (1000 gal)	---	Daily		385	386	385	388		
	Effluent Skid Pump (2)	GW flow (gpm)	0-400 gpm	Daily		425,216,812	425,407,978	425,810,010	426,208,896		
		Totalizer (1000 gal)	---	Daily		256	260	261	260		
	Injection Well 7	Pressure (psig)	0-120 psig	Daily		355,733,348	356,012,308	356,333,412	356,578,532		
		Water Level Above Transducer (ft)	10-30 ft	Daily		0.4	0.4	0.4	0.4		
	Golf Course Pond	Pond Level (ft)	0.7-3.5 ft	Daily		56.63	56.65	OFFLINE/REHAB	OFFLINE		
		Frequency (Hz, P112A B)	>30 Hz	Daily		4.09	4.21	4.11	3.57		
HIMs	Influent Pump Skid (1)	Amperage (A, P112A B)	>10 A	Daily		45.15	45.25	46.61	46.58	46.85	46.89
		Sand Filter Differential Pressure (psi)	>1 psi	Daily		10.50	10.70	10.80	11.00	10.90	11.20
		Frequency (Hz, P212A B)	>30 Hz	Daily		5	6	7	7	10	10
	Influent Pump Skid (2)	Amperage (A, P212A B)	>10 A	Daily		45.40	45.49	43.86	43.83	43.07	42.95
		Sand Filter Differential Pressure (psi)	>1 psi	Daily		10.10	9.60	9.80	9.30	9.50	9.10
		Frequency (Hz, P218)	>30 Hz	Daily		8	5	5	5	5	5
	Effluent Pump Skid (1)	Amperage (A, P118)	>10 A	Daily		48.85	48.94	48.60	48.41		
		Frequency (Hz, P218)	>30 Hz	Daily		16.50	16.60	16.60	16.90		
	Effluent Pump Skid (2)	Amperage (A, P218)	>10 A	Daily		41.93	42.37	42.33	43.71		
		Frequency (Hz, P218)	>30 Hz	Daily		12.80	12.80	13.00	13.40		
Well Vault	KAFB-106228	Totalizer (Mgal)	---	Weekly					129.1728		
Well Vault	KAFB-106239	GW flow, FT-3001 (gpm)	0-200 gpm	Weekly					139.3		
Well Control House	KAFB-106233	Totalizer (Mgal)	---	Weekly					75.5326		
		Wellhead Pressure (psig)	< 150 psig	Weekly					74.1		
		GW flow, FT-7001 (gpm)	0-200 gpm	Weekly					23.02		
	KAFB-106234	Totalizer (Mgal)	---	Weekly					165.61		
		Wellhead Pressure (psig)	< 150 psig	Weekly					176.5329		
		GW flow, FT-7002 (gpm)	0-200 gpm	Weekly					23.13		
		Totalizer (Mgal)	---	Weekly					173.8		
Well Head	KAFB-7	Effluent Line Pressure, PI-7005	< 150 psig	Weekly					277.3208		
		*Totalizer (1000 gal)	---	Weekly					220		
		GW flow (gpm)	0-800 gpm	Weekly							

* The KAFB-7 Totalizer reading should be recorded weekly as well as on days when the effluent flow is changed between KAFB-7 and the Golf Course Main Pond.

Notes:

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					1/1	5/26/20	5/27/20	5/28/20	5/29/20	1/1	1/1
GWTS	Influent Pump Skid (Train 1)	Inlet pressure pump skid, PI-3102 (psig)	< 60 psig	Daily	Time: 1:11	0710	0703	1034	0736		
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily		34.5	34.5	35.5	36.5		
		Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily		0.377	0.377	0.376	0.375		
		Sand filter differential pressure, SF-101 (1)	---	Daily		0.380	0.380	0.370	0.378		
		Sand filter differential pressure, SF-101 (2)	---	Daily		36	31	31	32		
		Outlet pressure pump skid, PI-3103 (psig)	< 60 psig	Daily		28	28	28	28		
		GW flow (gpm)	0-500 gpm	Daily		12.0	12.0	12.5	11.5		
		Totalizer (Mgal)	---	Daily		360.0	360.4	360.6	360.2		
		Bag filters changed?	yes/no	Daily		384.3550	384.7462	385.1869	385.6122		
	Influent Pump Skid (Train 2)	Inlet pressure pump skid, PI-3202 (psig)	< 60 psig	Daily		No	No	No	No		
		Bag filter differential pressure, F212A	<15 psid	Daily		39.0	36.0	34.5	40.5		
		Bag filter differential pressure, F212B	<15 psid	Daily		0.094	0.094	0.095	0.093		
		Sand filter differential pressure, SF-201 (1)	---	Daily		0.129	0.126	0.128	0.128		
		Sand filter differential pressure, SF-201 (2)	---	Daily		36	33	32	38		
		Outlet pressure pump skid, PI-3203, (psig)	< 60 psig	Daily		33	32	32	37		
		GW flow (gpm)	0-500 gpm	Daily		13.5	13.8	13.5	14.0		
		Totalizer (Mgal)	---	Daily		245.3	244.7	244.5	245.4		
		Bag filters changed?	yes/no	Daily		348.4218	348.7278	349.0790	349.3476		
	GAC (Train 1)	V-114A Pressure, PI-3104A (psig)	0-20 psig	Daily		No	No	No	No		
		Between Tanks, PI-3105 (psig)	0-20 psig	Daily		9.1	9.5	9.5	9.5		
		V-114B Pressure, PI-3104B (psig)	0-20 psig	Daily		11.5	11.5	11.8	11.5		
		Which Tank is Lead?	---	Daily		7.9	7.9	8.0	8.0		
		Which Tank is Lag?	---	Daily		A	A	A	A		
	GAC (Train 2)	V-214A Pressure (psig)	0-20 psig	Daily		B	B	B	B		
		Between Tanks (psig)	0-20 psig	Daily		5.0	5.0	5.0	6.0		
		V-214B Pressure (psig)	0-20 psig	Daily		13.0	13.0	12.9	13.5		
		Which Tank is Lead?	---	Daily		8.5	8.5	8.1	9.1		
		Which Tank is Lag?	---	Daily		B	B	B	B		
	Effluent Pump Skid (Train 1)	Inlet press. pump skid, PI-3108 (psig)	< 60 psig	Daily		A	A	A	A		
		Bag filter differential pressure, F-118A	<15 psid	Daily		24.5	24.5	24.0	27.0		
		Bag filter differential pressure, F-118B	<15 psid	Daily		0	0	0	0		
		Upstream outlet press. pump tree (psig)	< 60 psig	Daily		0	0	0	0		
		GW flow (gpm)	0-500 gpm	Daily		20.26	20.36	20.46	24.53		
	Effluent Pump Skid (Train 2)	Totalizer (Mgal)	---	Daily		384.2	385.5	385.8	386.8		
		Inlet press. pump skid, PI-3208 (psig)	< 60 psig	Daily		399.7181	399.8108	400.2524	400.6800		
		Bag filter differential pressure, F-218A	<15 psid	Daily		21.5	22.0	22.0	26.0		
		Bag filter differential pressure, F-218B	<15 psid	Daily		0	0	0	0		
		Upstream outlet press. pump tree (psig)	< 60 psig	Daily		0	0	0	0		
	Backwash System	GW flow (gpm)	0-500 gpm	Daily		20.28	20.36	20.46	24.53		
		Totalizer (Mgal)	---	Daily		260.6	260.3	262.5	260.6		
		Clarifier Level (ft)	---	Daily		344.2685	344.5752	344.9284	345.1966		
		Clarifier Discharged to Sump?	yes/no	Daily		Cell 2, 2.6'	Cell 2, 2.6'	Cell 2, 2.6'	Cell 2, 2.6'		
		Upstream Filter Pressure (psi)	>30 psig	Daily		Cont.	Cont.	Cont.	Cont.		
	Sodium Hypochlorite Generator	Downstream Filter Pressure (psi)	>30 psig	Daily		>100	>100	>100	>100		
		Brine Tank Filled with Salt?	yes/no	Daily		>100	>100	>100	>100		
		Generator Inlet Pressure (psi)	>30 psig	Daily		425	425	425	420		
		Generator Faulted?	yes/no	Daily		39	39	38	42		
		Oxidant Tank Level (ft)	>2 ft	Daily		No	No	No	No		
		Train 1 Dosing Pump Faulted?	yes/no	Daily		2.8'	2.4'	1.9'	3.1'		
		Train 2 Dosing Pump Faulted?	yes/no	Daily		OFF	OFF	OFF	OFF		
		Train 1 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily		No	No	No	No		
		Train 2 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily		OFF	OFF	OFF	OFF		
						0.12	0.15	0.12	0.12		

Notes:

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					6/11/20 Time: 0720	6/12/20 0859	6/13/20 1219	6/14/20 1214	6/15/20 1109	/ /	/ /
HMI	Well KAFB-106228	GW flow, FT-3001 (gpm)	0-200 gpm	Daily	143	143	143	143	143		
		Wellhead Pressure (psig)	< 150 psig	Daily	67.6	67.4	67.9	67.6	67.9 66.8		
		Water Level Above Transducer (ft)	---	Daily	11.69	11.75	11.67	11.73	11.37		
	Well KAFB-106233	GW flow, FT-7001 (gpm)	0-200 gpm	Daily	165	164	165	165	165		
		Wellhead Pressure (psig)	< 150 psig	Daily	22.9	22.9 2301	22.9	22.9	22.9		
		Water Level Above Transducer (ft)	---	Daily	34.07	34.45	34.17	34.20	34.15		
	Well KAFB-106234	GW flow, FI-7002(gpm)	0-200 gpm	Daily	174	174	175	175	174		
		Wellhead Pressure (psig)	< 150 psig	Daily	23.1	23.1 23.4	23.1	23.1	23.1		
		Water Level Above Transducer (ft)	---	Daily	27.03	27.03	27.08	27.12	27.09		
	Well KAFB-106239	GW flow, FI-7002(gpm)	0-200 gpm	Daily	74	74	74	74	74		
		Wellhead Pressure (psig)	< 150 psig	Daily	50.0	49.9 50.4	50.2	50.0	50.1		
		Water Level Above Transducer (ft)	---	Daily	16.53	16.67	16.62	16.62	16.60		
	Influent Pump Skid (1)	GW flow (gpm)	0-400 gpm	Daily	360	360	360	360	360		
		Totalizer (1000 gal)	---	Daily	378,622.648	378,691,496	379,473,408	380,062,816	380,674,512		
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	0.37	0.37	0.38	0.38	0.38		
		Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.38	0.38	0.38	0.38	0.38		
	Influent Pump Skid (2)	GW flow (gpm)	0-400 gpm	Daily	245	245	245	245	245		
		Totalizer (1000 gal)	---	Daily	259,822,080	260,138,620	260,474,129	260,770,288	261,053,216		
		Bag filter differential pressure, F-212A, PDI-3202A	<15 psid	Daily	0.13	0.13	0.13	0.12	0.13		
		Bag filter differential pressure, F-212B, PDI-3202B	<15 psid	Daily	0.10	0.10	0.12	0.09	0.09		
	Effluent Skid Pump (1)	GW flow (gpm)	0-400 gpm	Daily	385	385	385	385	385		
		Totalizer (1000 gal)	---	Daily	427,566,800	428,347,964	428,347,156	428,777,510	429,229,820		
	Effluent Skid Pump (2)	GW flow (gpm)	0-400 gpm	Daily	260	260	260	260	260		
		Totalizer (1000 gal)	---	Daily	357,416,724	357,716,808	358,034,532	358,313,644	358,581,300		
	Injection Well 7	Pressure (psig)	0-120 psig	Daily	0.4	0.4	0.4	0.4	0.4		
		Water Level Above Transducer (ft)	10-30 ft	Daily	OFFLINE	OFFLINE	OFFLINE	OFFLINE	OFFLINE		
	Golf Course Pond	Pond Level (ft)	0.7-3.5 ft	Daily	4.27	4.25	4.28	4.29	3.96		
HIMs	Influent Pump Skid (1)	Frequency (Hz, P112A B)	>30 Hz	Daily	47.09 47.19	45.69 45.61	46.10 46.11	47.45 47.40	47.39 47.38		
		Amperage (A, P112A B)	>10 A	Daily	11.10 11.20	10.8 10.8	10.7 10.9	11.0 11.3	11.0 11.3		
		Sand Filter Differential Pressure (psi)	>1 psi	Daily	5	5.0	6	7.5	9.9		
	Influent Pump Skid (2)	Frequency (Hz, P212A B)	>30 Hz	Daily	46.39 46.42	47.0 47.13	44.93 44.93	46.13 46.07	46.07 46.01		
		Amperage (A, P212A B)	>10 A	Daily	10.30 10.80	10.4 10.0	7.9 9.5	10.1 9.8	10.1 9.7		
		Sand Filter Differential Pressure (psi)	>1 psi	Daily	9	10.5	5	5	5.1		
	Effluent Pump Skid (1)	Frequency (Hz, P118)	>30 Hz	Daily	51.08	48.70	48.32	49.64 49	48.28		
		Amperage (A, P118)	>10 A	Daily	17.30	16.6	16.5	16.7	16.4		
	Effluent Pump Skid (2)	Frequency (Hz, P218)	>30 Hz	Daily	44.40	41.98	42.21	41.88	42.25		
Amperage (A, P218)		>10 A	Daily	13.50	12.70	12.7	12.70	12.8			
Well Vault	KAFB-106228	Totalizer (Mgal)	---	Weekly	---	---	---	130,565.4			
GW flow, FT-3001 (gpm)		0-200 gpm	Weekly	---	---	---	---	139.0			
Well Vault	KAFB-106239	Totalizer (Mgal)	---	Weekly	---	75.9774	---	---			
GW flow, FT-3001 (gpm)		0-200 gpm	Weekly	---	73.9	---	---	---			
Well Control House	KAFB-106233	Wellhead Pressure (psig)	< 150 psig	Weekly	---	103	---	---	---		
		GW flow, FT-7001 (gpm)	0-200 gpm	Weekly	---	164.9	---	---	---		
		Totalizer (Mgal)	---	Weekly	---	177.2959	---	---	---		
	KAFB-106234	Wellhead Pressure (psig)	< 150 psig	Weekly	---	82	---	---	---		
		GW flow, FT-7002 (gpm)	0-200 gpm	Weekly	---	173.7	---	---	---		
		Totalizer (Mgal)	---	Weekly	---	278.3748	---	---	---		
Well Control House	Effluent Line Pressure, PI-7005	< 150 psig	Weekly	---	21.1	---	---	---			
Well Head	KAFB-7	*Totalizer (1000 gal)	---	Weekly	---	---	---	---			
		GW flow (gpm)	0-800 gpm	Weekly	---	---	---	---	---		

* The KAFB-7 Totalizer reading should be recorded weekly as well as on days when the effluent flow is changed between KAFB-7 and the Golf Course Main Pond.

Notes:

VPA 31.1 °F
Amb 79 °F
Amps 34.28
Hz 54.26
AC 85 °F

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					6/11/20 Time: 0719	6/12/20	6/13/20	6/14/20	6/15/20	/ /	/ /
GWTS	Influent Pump Skid (Train 1)	Inlet pressure pump skid, PI-3102 (psig)	< 60 psig	Daily	36.0	36.0	34.0	36.0	37.0		
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	0.378	0.380	0.378	0.377	0.375		
		Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.379	0.381	0.379	0.369	0.382		
		Sand filter differential pressure, SF-101 (1)	---	Daily	32	39	30	32	34		
		Sand filter differential pressure, SF-101 (2)	---	Daily	28	58	28	28	27		
		Outlet pressure pump skid, PI-3103 (psig)	< 60 psig	Daily	11.5	12.0	12.4	12.7	12.0		
		GW flow (gpm)	0-500 gpm	Daily	360.4	360.2	360.5	360.2	360.4		
		Totalizer (Mgal)	---	Daily	387.6689	387.3640	387.9213	388.4080	388.8725		
	Influent Pump Skid (Train 2)	Bag filters changed?	yes/no	Daily	No	No	No	No	No		
		Inlet pressure pump skid, PI-3202 (psig)	< 60 psig	Daily	41.5	41.5	37.5	39.5	59.9		
		Bag filter differential pressure, F212A	<15 psid	Daily	0.091	0.092	0.093	0.096	0.094		
		Bag filter differential pressure, F212B	<15 psid	Daily	0.124	0.123	0.121	0.132	0.125		
		Sand filter differential pressure, SF-201 (1)	---	Daily	39	38.54 PF	35	37	37		
		Sand filter differential pressure, SF-201 (2)	---	Daily	35	32.38 PF	34	36	36		
		Outlet pressure pump skid, PI-3203, (psig)	< 60 psig	Daily	14.1	14.1	14.2	13.8	14.2		
		GW flow (gpm)	0-500 gpm	Daily	245.2	244.8	244.6	244.8	245.3		
	GAC (Train 1)	Totalizer (Mgal)	---	Daily	350.2661	350.5923	350.9416	351.2465	351.5395		
		Bag filters changed?	yes/no	Daily	No	No	No	No	No		
		V-114A Pressure, PI-3104A (psig)	0-20 psig	Daily	9.5	9.7	9.5	9.6	9.6		
		Between Tanks, PI-3105 (psig)	0-20 psig	Daily	11.8	11.5	11.8	11.7	11.8		
		V-114B Pressure, PI-3104B (psig)	0-20 psig	Daily	8.0	7.9	7.9	7.9	7.9		
		Which Tank is Lead?	---	Daily	A	A	A	A	A		
		Which Tank is Lag?	---	Daily	B	B	B	B	B		
	GAC (Train 2)	V-214A Pressure (psig)	0-20 psig	Daily	6.0	5.9	6.0	3.1	5.9		
		Between Tanks (psig)	0-20 psig	Daily	13.0	13.9	13.9	13.1	13.9		
		V-214B Pressure (psig)	0-20 psig	Daily	9.5	8.9	8.9	8.9	8.9		
		Which Tank is Lead?	---	Daily	B	B	B	B	B		
		Which Tank is Lag?	---	Daily	A	A	A	A	A		
	Effluent Pump Skid (Train 1)	Inlet press. pump skid, PI-3108 (psig)	< 60 psig	Daily	30.0	24.1	24.2	24.2	24.5		
		Bag filter differential pressure, F-118A	<15 psid	Daily	0	0	0	0	0		
		Bag filter differential pressure, F-118B	<15 psid	Daily	0	0	0	0	0		
		Upstream outlet press. pump tree (psig)	< 60 psig	Daily	25.01	19.64	20.07	20.03	20.06		
		GW flow (gpm)	0-500 gpm	Daily	388.5	385.4	385.8	384.5	385.5		
		Totalizer (Mgal)	---	Daily	402.1447	402.4416	402.9972	403.4885	403.9561		
	Effluent Pump Skid (Train 2)	Inlet press. pump skid, PI-3208 (psig)	< 60 psig	Daily	26.5	21.1	21.5	21.6	21.5		
		Bag filter differential pressure, F-218A	<15 psid	Daily	0	0	0	0	0		
		Bag filter differential pressure, F-218B	<15 psid	Daily	0	0	0	0	0		
		Upstream outlet press. pump tree (psig)	< 60 psig	Daily	23.01	19.61	20.06	20.02	20.03		
		GW flow (gpm)	0-500 gpm	Daily	264.4	260.9	260.4	259.5	260.3		
		Totalizer (Mgal)	---	Daily	346.1169	346.4461	346.7932	347.1003	347.3953		
	Backwash System	Clarifier Level (ft)	---	Daily	Cell 2, 2.6	Cell 2, 2.6	Cell 2, 2.6	Cell 2, 2.6	Cell 2, 2.6		
		Clarifier Discharged to Sump?	yes/no	Daily	Cont.	No	No	No	No		
	Sodium Hypochlorite Generator	Upstream Filter Pressure (psi)	>30 psig	Daily	100	>100	>100	>100	103		
		Downstream Filter Pressure (psi)	>30 psig	Daily	99	>100	>100	>100	99		
		Brine Tank Filled with Salt?	yes/no	Daily	YES	YES	YES	YES	YES		
		Generator Inlet Pressure (psi)	>30 psig	Daily	33	44	43	43	42		
		Generator Faulted?	yes/no	Daily	No	No	No	No	No		
		Oxidant Tank Level (ft)	>2 ft	Daily	2.5	2.95	2.5	2.1	3.2		
		Train 1 Dosing Pump Faulted?	yes/no	Daily	OFF	OFF	OFF	OFF	OFF		
		Train 2 Dosing Pump Faulted?	yes/no	Daily	No	No	No	No	No		
		Train 1 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily	OFF	OFF	OFF	OFF	OFF		
		Train 2 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily	0.12	0.13	0.12	0.12	0.10		

Notes:

72
Just
Back
Washed

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					6/18/20 Time: 1005	6/19/20 0754	6/10/20 0751	6/11/20 1323	6/12/20 0941	1/1	1/1
HMI	Well KAFB-106228	GW flow, FT-3001 (gpm)	0-200 gpm	Daily	143	146	143	143	143		
		Wellhead Pressure (psig)	< 150 psig	Daily	67.6	58.7	67.7	67.2 66.72	67.4		
		Water Level Above Transducer (ft)	---	Daily	11.67	11.10	11.56	11.42	11.27		
	Well KAFB-106233	GW flow, FT-7001 (gpm)	0-200 gpm	Daily	OFF	OFF	165	166	165		
		Wellhead Pressure (psig)	< 150 psig	Daily	---	---	22.9	23.0	22.9 22.88		
		Water Level Above Transducer (ft)	---	Daily	39.69	39.65	34.42	33.92	33.81		
	Well KAFB-106234	GW flow, FI-7002(gpm)	0-200 gpm	Daily	176	176	174	174	173		
		Wellhead Pressure (psig)	< 150 psig	Daily	18.5	18.5	23.1	23.1	23.1 23.16		
		Water Level Above Transducer (ft)	---	Daily	27.12	26.88	26.85	26.83	26.74		
	Well KAFB-106239	GW flow, FI-7002(gpm)	0-200 gpm	Daily	73	OFF	73	73	73		
		Wellhead Pressure (psig)	< 150 psig	Daily	49.8	---	49.7	49.7 49.6	49.6		
		Water Level Above Transducer (ft)	---	Daily	16.72	27.77	17.93	16.99	16.80		
	Influent Pump Skid (1)	GW flow (gpm)	0-400 gpm	Daily	210	210	360	360	260		
		Totalizer (1000 gal)	---	Daily	382503632	382672 072	382691952	383478896	384021872		
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	0.13	0.13	0.38	0.37	0.37		
	Influent Pump Skid (2)	Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.13	0.13	0.37	0.38	0.38		
		GW flow (gpm)	0-400 gpm	Daily	245	245	244	245	245		
		Totalizer (1000 gal)	---	Daily	261728940	262189364	262387736	262757052	263003048		
	Effluent Skid Pump (1)	Bag filter differential pressure, F-212A, PDI-3202A	<15 psid	Daily	0.13	0.13	0.13	0.13	0.13		
		Bag filter differential pressure, F-212B, PDI-3202B	<15 psid	Daily	0.10	0.10	0.10	0.09	0.09		
		GW flow (gpm)	0-400 gpm	Daily	260	261	384	385	385		
	Effluent Skid Pump (2)	Totalizer (1000 gal)	---	Daily	430546416	430816072	431051722	431609780	431992632		
		GW flow (gpm)	0-400 gpm	Daily	266	259	260	260	260		
		Totalizer (1000 gal)	---	Daily	359408024	359654776	359841684	360184960	360412916		
	Injection Well 7	Pressure (psig)	0-120 psig	Daily	0.4	0.4	0.4	0.4	0.4		
		Water Level Above Transducer (ft)	10-30 ft	Daily	OFFLINE	OFFLINE	OFFLINE	OFFLINE	OFFLINE		
	Golf Course Pond	Pond Level (ft)	0.7-3.5 ft	Daily	4.23	4.84	4.07	4.09	3.75		
HIMs	Influent Pump Skid (1)	Frequency (Hz, P112A B)	>30 Hz	Daily	42.71 42.95	42.53 42.51	47.60 47.62	46.49 46.44	46.54 46.53		
		Amperage (A, P112A B)	>10 A	Daily	8.8 8.9	8.7 8.8	11.1 11.3	10.9 11.1	10.9 11.0		
		Sand Filter Differential Pressure (psi)	>1 psi	Daily	8.5	2.0	3	5.5	7		
	Influent Pump Skid (2)	Frequency (Hz, P212A B)	>30 Hz	Daily	46.08 46.11	46.55 46.66	48.81	49.89	50.17		
		Amperage (A, P212A B)	>10 A	Daily	10.2 9.8	10.3 9.9	13.4	13.4	13.7		
		Sand Filter Differential Pressure (psi)	>1 psi	Daily	9.5	1.0	4.5	5.5	6-6.5		
	Effluent Pump Skid (1)	Frequency (Hz, P118)	>30 Hz	Daily	43.22	44.12	47.98	49.22	48.71		
		Amperage (A, P118)	>10 A	Daily	13.8	14.0	16.4	16.8	16.6		
	Effluent Pump Skid (2)	Frequency (Hz, P218)	>30 Hz	Daily	41.49	42.24	41.80	42.24	42.17		
		Amperage (A, P218)	>10 A	Daily	12.17	12.8	12.7	12.8	12.8		
Well Vault	KAFB-106228	Totalizer (Mgal)	---	Weekly	---	---	---	131,776.5	---		
Well Vault		GW flow, FT-3001 (gpm)	0-200 gpm	Weekly	---	---	---	138.7	---		
Well Vault	KAFB-106239	Totalizer (Mgal)	---	Weekly	---	---	---	76,795.7	---		
Well Vault		GW flow, FT-3001 (gpm)	0-200 gpm	Weekly	---	---	---	73.0	---		
Well Control House	KAFB-106233	Wellhead Pressure (psig)	< 150 psig	Weekly	---	---	---	102	---		
		GW flow, FT-7001 (gpm)	0-200 gpm	Weekly	---	---	---	165.4	---		
		Totalizer (Mgal)	---	Weekly	---	---	---	178,983.6	---		
	KAFB-106234	Wellhead Pressure (psig)	< 150 psig	Weekly	---	---	---	(82) 70.3 70.5	---		
		GW flow, FT-7002 (gpm)	0-200 gpm	Weekly	---	---	---	173.14	---		
		Totalizer (Mgal)	---	Weekly	---	---	---	280,584.0	---		
Well Head	KAFB-7	Effluent Line Pressure, PI-7005	< 150 psig	Weekly	---	---	---	21.1	---		
		*Totalizer (1000 gal)	---	Weekly	---	---	---	---	---		
Well Head	KAFB-7	GW flow (gpm)	0-800 gpm	Weekly	---	---	---	---	---		
					---	---	---	---	---		

* The KAFB-7 Totalizer reading should be recorded weekly as well as on days when the effluent flow is changed between KAFB-7 and the Golf Course Main Pond.

Notes:

HMI
Pond
4.10
Stadler
2.76

0850
VFD 29.1 °C
AC 81°F
Amb 76°F
H2 54.25
Amps 33.76

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					6/18/20	6/19/20	6/20/20	6/21/20	6/22/20	7/1/20	7/1/20
GWTS	Influent Pump Skid (Train 1)	Inlet pressure pump skid, PI-3102 (psig)	< 60 psig	Daily	33.5	32.5	36	34.3	35.0		
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	0.131	0.129	0.137	0.377	0.376		
		Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.130	0.127	0.383	0.378	0.379		
		Sand filter differential pressure, SF-101 (1)	---	Daily	31	31	32.5	30	32		
		Sand filter differential pressure, SF-101 (2)	---	Daily	29	31	31	28	27.5		
		Outlet pressure pump skid, PI-3103 (psig)	< 60 psig	Daily	8.8	8.8	12.1	12.8	12.6		
		GW flow (gpm)	0-500 gpm	Daily	210.0	210.0	360.8	360.4	359.7		
		Totalizer (Mgal)	---	Daily	390.2922	390.5844	390.8427	391.4429	391.8559		
	Influent Pump Skid (Train 2)	Bag filters changed?	yes/no	Daily	No	No	No				
		Inlet pressure pump skid, PI-3202 (psig)	< 60 psig	Daily	40	40.5	36	37	37.9		
		Bag filter differential pressure, F212A	<15 psid	Daily	0.121	0.094	0.094	0.095	0.098		
		Bag filter differential pressure, F212B	<15 psid	Daily	0.094	0.126	0.131	0.131	0.127		
		Sand filter differential pressure, SF-201 (1)	---	Daily	37.5	38	35	35	36		
		Sand filter differential pressure, SF-201 (2)	---	Daily	32	32	34	32	33		
		Outlet pressure pump skid, PI-3203, (psig)	< 60 psig	Daily	14.4	14.2	14.3	14.6	14.3		
		GW flow (gpm)	0-500 gpm	Daily	245.5	245.4	245.8	245.2	243.3		
	GAC (Train 1)	Totalizer (Mgal)	---	Daily	352.4465	352.7162	352.9198	353.2962	353.5551		
		Bag filters changed?	yes/no	Daily	No	No	No				
		V-114A Pressure, PI-3104A (psig)	0-20 psig	Daily	8.9	8.1	9.8	9.6	9.9		
		Between Tanks, PI-3105 (psig)	0-20 psig	Daily	8.9	9.1	11.8	11.8	11.8		
		V-114B Pressure, PI-3104B (psig)	0-20 psig	Daily	7.9	7.9	7.9	7.9	7.9		
		Which Tank is Lead?	---	Daily	A	A	A	A	A		
		Which Tank is Lag?	---	Daily	B	B	B	B	B		
	GAC (Train 2)	V-214A Pressure (psig)	0-20 psig	Daily	6.0	5.9	5.9	5.9	5.9		
		Between Tanks (psig)	0-20 psig	Daily	13.9	13.9	14.0	13.9	14.1		
		V-214B Pressure (psig)	0-20 psig	Daily	8.9	8.8	8.7	8.8	8.8		
		Which Tank is Lead?	---	Daily	B	B	B	B	B		
		Which Tank is Lag?	---	Daily	A	A	A	A	A		
	Effluent Pump Skid (Train 1)	Inlet press. pump skid, PI-3108 (psig)	< 60 psig	Daily	21.8	23.0	24.1	25	24.5		
		Bag filter differential pressure, F-118A	<15 psid	Daily	0	0	0	0	0		
		Bag filter differential pressure, F-118B	<15 psid	Daily	0	0	0	0	0		
		Upstream outlet press. pump tree (psig)	< 60 psig	Daily	19.80	22.5	19.81	20.45	19.79		
		GW flow (gpm)	0-500 gpm	Daily	261.5	261.1	385.3	385.6	385.5		
		Totalizer (Mgal)	---	Daily	405.3819	405.6764	405.9396	406.5387	406.9540		
	Effluent Pump Skid (Train 2)	Inlet press. pump skid, PI-3208 (psig)	< 60 psig	Daily	21	22.8	21.1	21.9	21.5		
		Bag filter differential pressure, F-218A	<15 psid	Daily	0	0	0	0	0		
		Bag filter differential pressure, F-218B	<15 psid	Daily	0	0	0	0	0		
		Upstream outlet press. pump tree (psig)	< 60 psig	Daily	19.62	21.23	19.79	20.36	20.10		
		GW flow (gpm)	0-500 gpm	Daily	260.6	261.5	260.7	260.2	260.3		
		Totalizer (Mgal)	---	Daily	348.3012	348.5720	348.7804	349.1535	349.4157		
	Backwash System	Clarifier Level (ft)	---	Daily	Cell 2 2.6	Cell 2 2.6	Cell 2 2.6	Cell 2 2.6	Cell 2 2.6		
		Clarifier Discharged to Sump?	yes/no	Daily	No	No (Yes)	No	No	No		
		Upstream Filter Pressure (psi)	>30 psig	Daily	>100	>100	>100	>100	>100		
		Downstream Filter Pressure (psi)	>30 psig	Daily	>100	>100	>100	>100	>100		
		Brine Tank Filled with Salt?	yes/no	Daily	Yes	Yes	Yes	Yes	Yes		
		Generator Inlet Pressure (psi)	>30 psig	Daily	42	42	41	42	41		
		Generator Faulted?	yes/no	Daily	No	No	No	No	No		
		Oxidant Tank Level (ft)	>2 ft	Daily	2.05	2.3	2.8	2.3	1.95		
	Sodium Hypochlorite Generator	Train 1 Dosing Pump Faulted?	yes/no	Daily	OFF	OFF	OFF	OFF	OFF		
		Train 2 Dosing Pump Faulted?	yes/no	Daily	No	No	No	No	No		
		Train 1 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily	OFF	OFF	OFF	OFF	OFF		
		Train 2 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily	0.13		0.15	0.11	0.10		

Notes:

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TI
Back
wash
last
night

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					6/1/20 10:45	6/1/20 12:31	6/1/20 12:57	6/1/20 10:30	6/1/20 10:30	1/1	1/1
HMI	Well KAFB-106228	GW flow, FT-3001 (gpm)	0-200 gpm	Daily	143	143	143	143	143		
		Wellhead Pressure (psig)	< 150 psig	Daily	67.0	67.2	67.3	67.0	67.1		
		Water Level Above Transducer (ft)	---	Daily	11.38	11.38	11.41	12.24	11.90		
	Well KAFB-106233	GW flow, FT-7001 (gpm)	0-200 gpm	Daily	165	166	166	166	165		
		Wellhead Pressure (psig)	< 150 psig	Daily	23.0	22.9	23.0	23.0	23.0		
		Water Level Above Transducer (ft)	---	Daily	33.97	34.05	34.12	34.10	34.07		
	Well KAFB-106234	GW flow, FI-7002(gpm)	0-200 gpm	Daily	175	175	174	175	174		
		Wellhead Pressure (psig)	< 150 psig	Daily	23.1	23.1	23.1	23.1	23.1		
		Water Level Above Transducer (ft)	---	Daily	26.94	27.03	27.09	27.04	27.04		
	Well KAFB-106239	GW flow, FI-7002(gpm)	0-200 gpm	Daily	73	72	72	72	72		
		Wellhead Pressure (psig)	< 150 psig	Daily	49.4	49.3	49.3	49.1	49.1		
		Water Level Above Transducer (ft)	---	Daily	16.85	16.93	16.91	17.52	16.90		
	Influent Pump Skid (1)	GW flow (gpm)	0-400 gpm	Daily	36.0	35.9	36.0	35.9	36.1		
		Totalizer (1000 gal)	---	Daily	38575512	38664568	38735016	38789124	38844918		
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	0.38	0.37	0.38	0.38	0.38		
	Influent Pump Skid (2)	Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.38	0.37	0.38	0.38	0.37		
		GW flow (gpm)	0-400 gpm	Daily	246	245	245	245	245		
		Totalizer (1000 gal)	---	Daily	26902223	26921700	26951876	26974536	26997666		
	Effluent Skid Pump (1)	Bag filter differential pressure, F-212A, PDI-3202A	<15 psid	Daily	0.13	0.13	0.13	0.12	0.12		
		Bag filter differential pressure, F-212B, PDI-3202B	<15 psid	Daily	0.09	0.09	0.10	0.09	0.09		
		GW flow (gpm)	0-400 gpm	Daily	385	385	385	385	385		
	Effluent Skid Pump (2)	Totalizer (1000 gal)	---	Daily	73337170	733931632	734567476	735110924	735630016		
		GW flow (gpm)	0-400 gpm	Daily	26.0	25.9	26.0	26.1	26.0		
		Totalizer (1000 gal)	---	Daily	36127852	361569700	361855048	362068336	362295032		
	Injection Well 7	Pressure (psig)	0-120 psig	Daily	0.4	0.4	0.4	0.4	0.4		
		Water Level Above Transducer (ft)	10-30 ft	Daily	OFF LINE	OFF LINE	OFF LINE	OFF LINE	OFF LINE		
		Pond Level (ft)	0.7-3.5 ft	Daily	3.82	3.97	4.19	3.96	3.71		
	Golf Course Pond	Pond Level (ft)	0.7-3.5 ft	Daily	4.82	4.82	4.82	4.82	4.82		
HIMs	Influent Pump Skid (1)	Frequency (Hz, P112A B)	>30 Hz	Daily	48.22	48.22	48.22	48.22	48.22		
		Amperage (A, P112A B)	>10 A	Daily	11.4	11.5	11.6	11.3	11.7		
		Sand Filter Differential Pressure (psi)	>1 psi	Daily	9.8	11	11.5	5	5		
	Influent Pump Skid (2)	Frequency (Hz, P212A B)	>30 Hz	Daily	51.45	50.62	51.44	49.79	49.71		
		Amperage (A, P212A B)	>10 A	Daily	14.0	13.8	14.7	11.20	11.00		
		Sand Filter Differential Pressure (psi)	>1 psi	Daily	9.5	10	10.5	14	5		
	Effluent Pump Skid (1)	Frequency (Hz, P118)	>30 Hz	Daily	49.20	48.35	48.14	46.30	46.70		
		Amperage (A, P118)	>10 A	Daily	16.7	16.4	16.4	16.40	16.60		
		Frequency (Hz, P218)	>30 Hz	Daily	42.31	41.51	42.24	41.20	41.17		
	Effluent Pump Skid (2)	Amperage (A, P218)	>10 A	Daily	12.7	12.6	12.8	12.80	12.80		
		Totalizer (Mgal)	---	Weekly	---	---	132.9874	---	---		
		GW flow, FT-3001 (gpm)	0-200 gpm	Weekly	---	---	138.5	---	---		
Well Vault	KAFB-106239	Totalizer (Mgal)	---	Weekly	---	---	77.7281	---	---		
Well Vault	KAFB-106233	GW flow, FT-3001 (gpm)	0-200 gpm	Weekly	---	---	72.5	---	---		
Well Control House	KAFB-106233	Wellhead Pressure (psig)	< 150 psig	Weekly	---	---	103	---	---		
		GW flow, FT-7001 (gpm)	0-200 gpm	Weekly	---	---	165.7	---	---		
		Totalizer (Mgal)	---	Weekly	---	---	180.4305	---	---		
	KAFB-106234	Wellhead Pressure (psig)	< 150 psig	Weekly	---	---	82	---	---		
		GW flow, FT-7002 (gpm)	0-200 gpm	Weekly	---	---	173.5	---	---		
		Totalizer (Mgal)	---	Weekly	---	---	382.1006	---	---		
Well Head	KAFB-7	Effluent Line Pressure, PI-7005	< 150 psig	Weekly	---	---	22	---	---		
		*Totalizer (1000 gal)	---	Weekly	---	---	---	---	---		
		GW flow (gpm)	0-800 gpm	Weekly	---	---	---	---	---		

* The KAFB-7 Totalizer reading should be recorded weekly as well as on days when the effluent flow is changed between KAFB-7 and the Golf Course Main Pond.

Notes:

was June 29, will be June 06,

228
Dig (minor)
under
ARV to
nipple
connection
Bring pipe wrench
next visit

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
GWTS	Influent Pump Skid (Train 1)	Inlet pressure pump skid, PI-3102 (psig)	< 60 psig	Daily	6/15/20 12:33	6/16/20 12:20	6/17/20 12:44	6/18/20 10:30	6/19/20 07:00		
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	37	38	38	34.5	33.0		
		Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.380	0.378	0.377	0.383	0.381		
		Sand filter differential pressure, SF-101 (1)	---	Daily	0.581	0.377	0.376	0.376	0.383		
		Sand filter differential pressure, SF-101 (2)	---	Daily	34	35	35	31	29		
		Outlet pressure pump skid, PI-3103 (psig)	< 60 psig	Daily	28	28	27.5	29	28		
		GW flow (gpm)	0-500 gpm	Daily	12.5	12.8	12.0	13.0	12.5		
		Totalizer (Mgal)	---	Daily	360.7	360.4	357.8	360.7	360.5		
		Bag filters changed?	yes/no	Daily	393.5447	393.8647	394.3600	394.8049	395.2235		
		Inlet pressure pump skid, PI-3202 (psig)	< 60 psig	Daily	No	No	No	No	No		
	Influent Pump Skid (Train 2)	Bag filter differential pressure, F212A	<15 psid	Daily	40.2	40	42	47.5	40.5		
		Bag filter differential pressure, F212B	<15 psid	Daily	0.094	0.093	0.096	0.088	0.092		
		Sand filter differential pressure, SF-201 (1)	---	Daily	0.125	0.129	0.128	0.118	0.126		
		Sand filter differential pressure, SF-201 (2)	---	Daily	38	38	39	45	38		
		Outlet pressure pump skid, PI-3203 (psig)	< 60 psig	Daily	32.5	32	32	36	37		
		GW flow (gpm)	0-500 gpm	Daily	19.4	14.5	14.5	13.9	13.9		
		Totalizer (Mgal)	---	Daily	244.8	245.1	244.8	245.1	245.1		
		Bag filters changed?	yes/no	Daily	357.4854	354.8121	355.1226	355.3582	355.6095		
		V-114A Pressure, PI-3104A (psig)	0-20 psig	Daily	No	No	No	No	No		
	GAC (Train 1)	Between Tanks, PI-3105 (psig)	0-20 psig	Daily	7.8	7.6	7.7	10.1	9.5		
		V-114B Pressure, PI-3104B (psig)	0-20 psig	Daily	11.7	11.8	11.7	11.8	11.8		
		Which Tank is Lead?	---	Daily	2.9	2.9	2.9	8.0	8.0		
		Which Tank is Lag?	---	Daily	A	A	A	A	A		
	GAC (Train 2)	V-214A Pressure (psig)	0-20 psig	Daily	B	B	B	B	B		
		Between Tanks (psig)	0-20 psig	Daily	5.9	6.0	5.9	5.5	5.0		
		V-214B Pressure (psig)	0-20 psig	Daily	14.1	14.0	14.0	13.5	13.0		
		Which Tank is Lead?	---	Daily	8.9	8.7	8.7	9.0	8.5		
	Effluent Pump Skid (Train 1)	Which Tank is Lag?	---	Daily	B	B	B	B	B		
		Inlet press. pump skid, PI-3108 (psig)	< 60 psig	Daily	A	A	A	A	A		
		Bag filter differential pressure, F-118A	<15 psid	Daily	24.5	24.0	24.2	24.5	24.0		
		Bag filter differential pressure, F-118B	<15 psid	Daily	0	0	0	0	0		
	Effluent Pump Skid (Train 2)	Upstream outlet press. pump tree (psig)	< 60 psig	Daily	0	0	0	0	0		
		GW flow (gpm)	0-500 gpm	Daily	20.10	19.54	19.97	18.31	19.89		
		Totalizer (Mgal)	---	Daily	385.0	385.1	385.3	385.5	385.6		
		Inlet press. pump skid, PI-3208 (psig)	< 60 psig	Daily	708.4486	708.9921	709.4713	709.4179	710.3295		
	Backwash System	Bag filter differential pressure, F-218A	<15 psid	Daily	21.6	21.0	21.5	21.1	21.1		
		Bag filter differential pressure, F-218B	<15 psid	Daily	350.3985	350.3985	350.3985	350.3985	350.3985		
		Upstream outlet press. pump tree (psig)	< 60 psig	Daily	20.14	19.57	20.44	18.31	19.89		
		GW flow (gpm)	0-500 gpm	Daily	22.2603	260.4	260.6	261.6	259.9		
	Sodium Hypochlorite Generator	Totalizer (Mgal)	---	Daily	350.9426	350.6506	350.7879	351.2272	351.4693		
		Clarifier Level (ft)	---	Daily	Cell 2 2.6'	Cell 2 2.6'	Cell 2 2.6'	Cell 2 2.6'	Cell 2 2.6'		
		Clarifier Discharged to Sump?	yes/no	Daily	No	No	No	No	No		
		Upstream Filter Pressure (psi)	>30 psig	Daily	2100	2100	208	2100	2100		
		Downstream Filter Pressure (psi)	>30 psig	Daily	2100	2100	205	2100	2100		
		Brine Tank Filled with Salt?	yes/no	Daily	Yes	Yes	Yes	Yes	Yes		
		Generator Inlet Pressure (psi)	>30 psig	Daily	43	44	44	44	43		
		Generator Faulted?	yes/no	Daily	No	No	No	No	No		
		Oxidant Tank Level (ft)	>2 ft	Daily	2.2'	2.4'	2.25'	2.65'	2.4'		
		Train 1 Dosing Pump Faulted?	yes/no	Daily	OFF	OFF	OFF	OFF	OFF		
		Train 2 Dosing Pump Faulted?	yes/no	Daily	No	No	No	No	No		
		Train 1 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily	0.5	0.5	0.5	0.5	0.5		
		Train 2 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily	0.12	0.14	0.10	0.10	0.10		

Notes:

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	
					6.124120 Time: 0738	6.124120 1053	6.124120 0741	6.125120 1050	6.126120 0844	1	1	
HMI	Well KAFB-106228	GW flow, FT-3001 (gpm)	0-200 gpm	Daily	146	146	146	146				
		Wellhead Pressure (psig)	< 150 psig	Daily	58.6	58.7	58.2 61.5	58.1				
		Water Level Above Transducer (ft)	---	Daily	11.03	11.07	11.15	11.07				
	Well KAFB-106233	GW flow, FT-7001 (gpm)	0-200 gpm	Daily	OFF	OFF	OFF	165	166			
		Wellhead Pressure (psig)	< 150 psig	Daily	---	---	23.04	23.0	22.9			
		Water Level Above Transducer (ft)	---	Daily	39.60	39.75	39.82	24.12	24.04			
	Well KAFB-106234	GW flow, FI-7002(gpm)	0-200 gpm	Daily	176	176	175	174	174			
		Wellhead Pressure (psig)	< 150 psig	Daily	18.5	18.5	18.5 23.1	23.1	23.2			
		Water Level Above Transducer (ft)	---	Daily	26.90	26.86	26.90	26.92	26.91			
	Well KAFB-106239	GW flow, FI-7002(gpm)	0-200 gpm	Daily	OFF	OFF	OFF	OFF				
		Wellhead Pressure (psig)	< 150 psig	Daily	Rehab	Rehab	Rehab	Rehab				
		Water Level Above Transducer (ft)	---	Daily	27.95	---	---	---				
	Influent Pump Skid (1)	GW flow (gpm)	0-400 gpm	Daily	210	210	210	360	360			
		Totalizer (1000 gal)	---	Daily	390244976	390244976	390244976	390951664	391542864			
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	0.13	0.13	0.13	0.38	0.39			
		Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.13	0.13	0.13	0.39	0.38			
		GW flow (gpm)	0-400 gpm	Daily	245	246	245	245	245			
		Totalizer (1000 gal)	---	Daily	26587288	266095156	266270940	266498496	266682204			
		Bag filter differential pressure, F-212A, PDI-3202A	<15 psid	Daily	0.12	0.13	0.13	0.13	0.12			
		Bag filter differential pressure, F-212B, PDI-3202B	<15 psid	Daily	0.09	0.10	0.10	0.09	0.09			
		GW flow (gpm)	0-400 gpm	Daily	239	260	260	385	386			
		Totalizer (1000 gal)	---	Daily	433731504	437630156	437833424	438501416	439057500			
		GW flow (gpm)	0-400 gpm	Daily	260	260	260	260	260			
		Totalizer (1000 gal)	---	Daily	363115708	363328100	363440504	363702004	363814428			
	Injection Well 7	Pressure (psig)	0-120 psig	Daily	0.4	0.5	0.5	0.5	0.5			
		Water Level Above Transducer (ft)	10-30 ft	Daily	OFF	OFF	OFF	OFF	OFF			
	Golf Course Pond	Pond Level (ft)	0.7-3.5 ft	Daily	3.01	3.76	4.20	3.67	3.13			
Frequency (Hz, P112A [B])		>30 Hz	Daily	40.92 40.95	40.88 40.07	41.07 41.07	46.81 46.83	47.44 47.41				
HIMs	Influent Pump Skid (1)	Amperage (A, P112A [B])	>10 A	Daily	8.4 8.5	8.3 8.4	8.5 8.6	11.0 11.1	11.0 11.2			
		Sand Filter Differential Pressure (psi)	>1 psi	Daily	4.5	4.5	4.9	5.5	9			
		Frequency (Hz, P212A [B])	>30 Hz	Daily	47.36 47.32	44.0 44.09	45.88 45.60	44.32 44.41	46.7 46.73			
	Influent Pump Skid (2)	Amperage (A, P212A [B])	>10 A	Daily	10.50 10.20	9.7 9.5	10.1 9.9	9.7 9.5	10.2 9.9			
		Sand Filter Differential Pressure (psi)	>1 psi	Daily	6	6	5.5-6	6	5.5			
		Frequency (Hz, P118)	>30 Hz	Daily	43.32	48.70	46.01	48.71	48.71			
	Effluent Pump Skid (1)	Amperage (A, P118)	>10 A	Daily	13.8	14.4	14.6	16.5	16.6			
		Frequency (Hz, P218)	>30 Hz	Daily	41.77	42.5	44.03	42.26	41.74			
		Amperage (A, P218)	>10 A	Daily	12.70	12.6	13.3	12.8	12.8			
	Effluent Pump Skid (2)	Totalizer (Mgal)	---	Weekly	---	---	137.3695	---	---			
		GW flow, FT-3001 (gpm)	0-200 gpm	Weekly	---	---	171.5	---	---			
	Well Vault	KAFB-106228	Totalizer (Mgal)	---	Weekly	---	---	---	---			
GW flow, FT-3001 (gpm)	0-200 gpm		Weekly	---	No Key	---	---	---				
Well Vault	KAFB-106239	Wellhead Pressure (psig)	< 150 psig	Weekly	---	No Key	---	---	---			
GW flow, FT-7001 (gpm)		0-200 gpm	Weekly	---	---	102	---	---				
Well Control House	KAFB-106233	Totalizer (Mgal)	---	Weekly	---	---	165.6	---	---			
		Wellhead Pressure (psig)	< 150 psig	Weekly	---	---	181.5746	---	---			
		GW flow, FT-7002 (gpm)	0-200 gpm	Weekly	---	---	30.102	---	---			
	KAFB-106234	GW flow, FT-7002 (gpm)	0-200 gpm	Weekly	---	---	173.5	---	---			
		Totalizer (Mgal)	---	Weekly	---	---	285.8666	---	---			
		Effluent Line Pressure, PI-7005	< 150 psig	Weekly	---	---	22.1	---	---			
Well Head	KAFB-7	*Totalizer (1000 gal)	---	Weekly	---	---	---	---				
GW flow (gpm)		0-800 gpm	Weekly	---	---	---	---	---				

* The KAFB-7 Totalizer reading should be recorded weekly as well as on days when the effluent flow is changed between KAFB-7 and the Golf Course Main Pond.

Notes:

239
Rehab

239
Rehab

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					6/22/20 Time: 0725	6/23/20	6/24/20	6/25/20	6/24/20	1/1	1/1
GWTS	Influent Pump Skid (Train 1)	Inlet pressure pump skid, PI-3102 (psig)	< 60 psig	Daily	30	29	30	35.5	35.5		
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	0.129	0.127	0.130	0.378	0.383		
		Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.130	0.132	0.132	0.377	0.375		
		Sand filter differential pressure, SF-101 (1)	---	Daily	27	28	28	32	32		
		Sand filter differential pressure, SF-101 (2)	---	Daily	28	27	28	28	28		
		Outlet pressure pump skid, PI-3103 (psig)	< 60 psig	Daily	8.9	8.0	8.7	12.4	12.9		
		GW flow (gpm)	0-500 gpm	Daily	210.1	210.2	210.5	560.2	359.9		
		Totalizer (Mgal)	---	Daily	376.6483	376.9322	377.1538	377.6959	398.1477		
		Bag filters changed?	yes/no	Daily	No	No	No	No	No		
		Influent Pump Skid (Train 2)	Inlet pressure pump skid, PI-3202 (psig)	< 60 psig	Daily	42.0	37	38.5	37.5	40.2	
	Bag filter differential pressure, F212A		<15 psid	Daily	0.092	0.087	0.91	0.090	0.091		
	Bag filter differential pressure, F212B		<15 psid	Daily	0.123	0.126	0.120	0.120	0.126		
	Sand filter differential pressure, SF-201 (1)		---	Daily	39	35	36.5	35	38		
	Sand filter differential pressure, SF-201 (2)		---	Daily	38	32	34	32.5	36		
	Outlet pressure pump skid, PI-3203, (psig)		< 60 psig	Daily	14.5	14.4	14.5	14.4	14.5		
	GW flow (gpm)		0-500 gpm	Daily	244.7	244.9	245.0	244.9	245.5		
	Totalizer (Mgal)		---	Daily	356.5254	356.7571	356.9368	357.1703	357.3627		
	Bag filters changed?		yes/no	Daily	No	No	No	No	No		
	GAC (Train 1)		V-114A Pressure, PI-3104A (psig)	0-20 psig	Daily	8.1	8.1	8.1	9.6	9.8	
		Between Tanks, PI-3105 (psig)	0-20 psig	Daily	9.1	9.0	9.0	11.8	11.8		
		V-114B Pressure, PI-3104B (psig)	0-20 psig	Daily	7.9	7.9	7.9	7.9	7.9		
		Which Tank is Lead?	---	Daily	A	A	A	A	A		
	GAC (Train 2)	Which Tank is Lag?	---	Daily	B	B	B	B	B		
		V-214A Pressure (psig)	0-20 psig	Daily	6.0	6.0	5.9	5.9	5.9		
		Between Tanks (psig)	0-20 psig	Daily	13.9	14.1	14.1	14.0	14.0		
		V-214B Pressure (psig)	0-20 psig	Daily	9.5	9.5	9.6	9.7	9.8		
	Effluent Pump Skid (Train 1)	Which Tank is Lead?	---	Daily	B	B	B	B	B		
		Which Tank is Lag?	---	Daily	A	A	A	A	A		
		Inlet press. pump skid, PI-3108 (psig)	< 60 psig	Daily	21.9	27	26.9	25	25.2		
		Bag filter differential pressure, F-118A	<15 psid	Daily	0	0	0	0	0		
	Effluent Pump Skid (Train 2)	Bag filter differential pressure, F-118B	<15 psid	Daily	0	0	0	0	0		
		Upstream outlet press. pump tree (psig)	< 60 psig	Daily	19.75	25.15	26.21	20.44	20.36		
		GW flow (gpm)	0-500 gpm	Daily	260.9	263.8	262.4	260.5	260.9	387.8	
		Totalizer (Mgal)	---	Daily	411.7706	412.0563	412.2770	412.6249	413.2817		
	Backwash System	Inlet press. pump skid, PI-3208 (psig)	< 60 psig	Daily	20.9	26.5	27.9	22	22.4		
		Bag filter differential pressure, F-218A	<15 psid	Daily	0	0	0	0	0		
		Bag filter differential pressure, F-218B	<15 psid	Daily	0	0	0	0	0		
		Upstream outlet press. pump tree (psig)	< 60 psig	Daily	19.68	25.24	26.68	20.42	20.87		
	Sodium Hypochlorite Generator	GW flow (gpm)	0-500 gpm	Daily	257.1	263.0	260.3	258.10	260.1		
		Totalizer (Mgal)	---	Daily	352.3703	352.6047	352.7807	412.8249	353.2053		
		Clarifier Level (ft)	---	Daily	No	< 112.26	< 112.26	< 112.26	< 112.26		
		Clarifier Discharged to Sump?	yes/no	Daily	< 112.26	No	No	No	No		
		Upstream Filter Pressure (psi)	>30 psig	Daily	>100	>100	110	>100	>100		
		Downstream Filter Pressure (psi)	>30 psig	Daily	>100	>100	105	>100	>100		
		Brine Tank Filled with Salt?	yes/no	Daily	Yes	Yes	Yes	Yes	Yes		
		Generator Inlet Pressure (psi)	>30 psig	Daily	44	44	42	43	43		
		Generator Faulted?	yes/no	Daily	No	No	No	No	No		
		Oxidant Tank Level (ft)	>2 ft	Daily	2.9	2.6	2.35	2.1	1.8		
		Train 1 Dosing Pump Faulted?	yes/no	Daily	OFF	OFF	OFF	OFF	OFF		
		Train 2 Dosing Pump Faulted?	yes/no	Daily	No	No	No	No	No		
	Sodium Hypochlorite Generator	Train 1 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily	OFF	OFF	OFF	OFF	OFF		
		Train 2 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily	0.20	0.14	0.11	0.12	0.10		

Notes:

260.5
353.0150

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					6/29/20	6/30/20	7/1/20	1/1	1/1	1/1	1/1
HMI	Well KAFB-106228	GW flow, FT-3001 (gpm)	0-200 gpm	Daily	Time: 0715 143	1158 143	0716 143				
		Wellhead Pressure (psig)	< 150 psig	Daily	67.5 / 66.81	67.1	67.4				
		Water Level Above Transducer (ft)	---	Daily	11.96	11.73	11.52				
	Well KAFB-106233	GW flow, FT-7001 (gpm)	0-200 gpm	Daily	166	166	166				
		Wellhead Pressure (psig)	< 150 psig	Daily	22.9	22.9	23.0				
		Water Level Above Transducer (ft)	---	Daily	34.23	34.00	33.89				
	Well KAFB-106234	GW flow, FT-7002 (gpm)	0-200 gpm	Daily	174	174	175				
		Wellhead Pressure (psig)	< 150 psig	Daily	23.1	23.1	23.1				
		Water Level Above Transducer (ft)	---	Daily	27.16	26.44	26.85				
	Well KAFB-106239	GW flow, FT-7002 (gpm)	0-200 gpm	Daily	74	74	74				
		Wellhead Pressure (psig)	< 150 psig	Daily	49.9 / 49.73	49.8	49.8				
		Water Level Above Transducer (ft)	---	Daily	18.92	18.62	18.41				
	Influent Pump Skid (1)	GW flow (gpm)	0-400 gpm	Daily	360	360	360				
		Totalizer (1000 gal)	---	Daily	343,652.520	344,186.640	344,706.486				
		Bag filter differential pressure, F112A, PDI-3102A	< 15 psid	Daily	0.38	0.38	0.38				
		Bag filter differential pressure, F112B, PDI-3102B	< 15 psid	Daily	0.38	0.38	0.38				
	Influent Pump Skid (2)	GW flow (gpm)	0-400 gpm	Daily	244	245	245				
		Totalizer (1000 gal)	---	Daily	269,175.336	269,672.752	269,151.920				
		Bag filter differential pressure, F-212A, PDI-3202A	< 15 psid	Daily	0.13	0.13	0.13				
		Bag filter differential pressure, F-212B, PDI-3202B	< 15 psid	Daily	0.09	0.09	0.09				
	Effluent Skid Pump (1)	GW flow (gpm)	0-400 gpm	Daily	385	388	385				
		Totalizer (1000 gal)	---	Daily	441,042.072	441,540.940	441,030.088				
	Effluent Skid Pump (2)	GW flow (gpm)	0-400 gpm	Daily	260	262	261				
		Totalizer (1000 gal)	---	Daily	364,767.568	365,007.100	365,226.609				
	Injection Well 7	Pressure (psig)	0-120 psig	Daily	0.5	0.5	0.5				
	Golf Course Pond	Water Level Above Transducer (ft)	10-30 ft	Daily	OFF LINE	OFF LINE	OFF LINE				
		Pond Level (ft)	0.7-3.5 ft	Daily	4.85	4.05	4.00				
HIMs	Influent Pump Skid (1)	Frequency (Hz, P112A B)	> 30 Hz	Daily	48.80 / 48.76	48.88 / 47.94	48.81 / 48.80				
		Amperage (A, P112A B)	> 10 A	Daily	11.51 / 11.6	11.30 / 11.40	11.80 / 11.60				
		Sand Filter Differential Pressure (psi)	> 1 psi	Daily	11	11	12				
	Influent Pump Skid (2)	Frequency (Hz, P212A B)	> 30 Hz	Daily	47.70 / 47.80	48.16 / 48.27	47.72 / 47.73				
		Amperage (A, P212A B)	> 10 A	Daily	7.6 / 7.5	10.60 / 10.40	9.90 / 9.60				
		Sand Filter Differential Pressure (psi)	> 1 psi	Daily	5	5	9				
	Effluent Pump Skid (1)	Frequency (Hz, P118)	> 30 Hz	Daily	47.05	48.4	48.93				
		Amperage (A, P118)	> 10 A	Daily	16.70	17.10	16.60				
	Effluent Pump Skid (2)	Frequency (Hz, P218)	> 30 Hz	Daily	42.03	45.8	42.10				
		Amperage (A, P218)	> 10 A	Daily	12.80	13.60	12.80				
Well Vault	KAFB-106228	Totalizer (Mgal)	---	Weekly	135.3476	---	---				
Well Vault		GW flow, FT-3001 (gpm)	0-200 gpm	Weekly	39.1	---	---				
Well Vault	KAFB-106239	Totalizer (Mgal)	---	Weekly	78.1916	---	---				
Well Vault		GW flow, FT-3001 (gpm)	0-200 gpm	Weekly	73.5	---	---				
Well Control House	KAFB-106233	Wellhead Pressure (psig)	< 150 psig	Weekly	23.04	---	---				
		GW flow, FT-7001 (gpm)	0-200 gpm	Weekly	168.3	---	---				
	KAFB-106234	Totalizer (Mgal)	---	Weekly	182.7415	---	---				
		Wellhead Pressure (psig)	< 150 psig	Weekly	23.16	---	---				
	Well Control House	GW flow, FT-7002 (gpm)	0-200 gpm	Weekly	173.8	---	---				
		Totalizer (Mgal)	---	Weekly	285.0887	---	---				
Well Head	KAFB-7	Effluent Line Pressure, PI-7005	< 150 psig	Weekly	22	---	---				
Well Head		*Totalizer (1000 gal)	---	Weekly	---	---	---				
		GW flow (gpm)	0-800 gpm	Weekly	---	---	---				

* The KAFB-7 Totalizer reading should be recorded weekly as well as on days when the effluent flow is changed between KAFB-7 and the Golf Course Main Pond.

Notes:

Daily and Weekly Inspection Log for the Kirtland AFB GWTS

Location	Component	Item	Normal Range	Recordation Frequency	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					4/29/20	5/30/20	7/1/20	1/1	1/1	1/1	1/1
GWTS	Influent Pump Skid (Train 1)	Inlet pressure pump skid, PI-3102 (psig)	< 60 psig	Daily	38	37.5	39				
		Bag filter differential pressure, F112A, PDI-3102A	<15 psid	Daily	0.375	0.377	0.378				
		Bag filter differential pressure, F112B, PDI-3102B	<15 psid	Daily	0.378	0.375	0.378				
		Sand filter differential pressure, SF-101 (1)	---	Daily	0.334	35	36				
		Sand filter differential pressure, SF-101 (2)	---	Daily	28	26	28				
		Outlet pressure pump skid, PI-3103 (psig)	< 60 psig	Daily	128	11.5	12.5				
		GW flow (gpm)	0-500 gpm	Daily	360.2	360.2	360.5				
		Totalizer (Mgal)	---	Daily	399.7592	400.1669	400.5614				
		Bag filters changed?	yes/no	Daily	No	No	No				
		Inlet pressure pump skid, PI-3202 (psig)	< 60 psig	Daily	35.5	44.0	37.0				
	Influent Pump Skid (Train 2)	Bag filter differential pressure, F212A	<15 psid	Daily	0.091	0.095	0.091				
		Bag filter differential pressure, F212B	<15 psid	Daily	0.122	0.128	0.123				
		Sand filter differential pressure, SF-201 (1)	---	Daily	34	34	36				
		Sand filter differential pressure, SF-201 (2)	---	Daily	32	32	31				
		Outlet pressure pump skid, PI-3203, (psig)	< 60 psig	Daily	143	14.5	14.5				
		GW flow (gpm)	0-500 gpm	Daily	245.3	244.5	245.0				
		Totalizer (Mgal)	---	Daily	358.3569	358.6177	358.8666				
		Bag filters changed?	yes/no	Daily	No	No	No				
		V-114A Pressure, PI-3104A (psig)	0-20 psig	Daily	9.7	9.5	9.5				
		Between Tanks, PI-3105 (psig)	0-20 psig	Daily	11.8	11.5	11.5				
	GAC (Train 1)	V-114B Pressure, PI-3104B (psig)	0-20 psig	Daily	7.9	8.0	8.0				
	GAC (Train 2)	Which Tank is Lead?	---	Daily	A	A	A				
		Which Tank is Lag?	---	Daily	B	B	B				
		V-214A Pressure (psig)	0-20 psig	Daily	6	6	6.0				
		Between Tanks (psig)	0-20 psig	Daily	13.9	14	14.0				
		V-214B Pressure (psig)	0-20 psig	Daily	9.5	9.5	9.5				
		Which Tank is Lead?	---	Daily	B	B	B				
		Which Tank is Lag?	---	Daily	A	A	A				
		Inlet press. pump skid, PI-3108 (psig)	< 60 psig	Daily	24	27	25				
		Bag filter differential pressure, F-118A	<15 psid	Daily	0	0	0				
		Bag filter differential pressure, F-118B	<15 psid	Daily	0	0	0				
	Effluent Pump Skid (Train 1)	Upstream outlet press. pump tree (psig)	< 60 psig	Daily	19.77	18.94	20.30				
		GW flow (gpm)	0-500 gpm	Daily	285	285.7	285.7				
		Totalizer (Mgal)	---	Daily	444.9003	445.3067	445.7052				
		Inlet press. pump skid, PI-3208 (psig)	< 60 psig	Daily	21	20	22.0				
		Bag filter differential pressure, F-218A	<15 psid	Daily	0	0	0				
	Effluent Pump Skid (Train 2)	Bag filter differential pressure, F-218B	<15 psid	Daily	0	0	0				
		Upstream outlet press. pump tree (psig)	< 60 psig	Daily	19.91	18.94	20.30				
		GW flow (gpm)	0-500 gpm	Daily	260.0	260.2	259.6				
		Totalizer (Mgal)	---	Daily	354.1865	354.4334	354.6880				
		Clarifier Level (ft)	---	Daily	6'11.2, 2.6'	6'11.2, 2.6'	6'11.2, 2.6'				
	Backwash System	Clarifier Discharged to Sump?	yes/no	Daily	No	No	No				
	Sodium Hypochlorite Generator	Upstream Filter Pressure (psi)	>30 psig	Daily	2100	2100	2100				
		Downstream Filter Pressure (psi)	>30 psig	Daily	2100	2100	2100				
		Brine Tank Filled with Salt?	yes/no	Daily	Yes	Yes	Yes				
		Generator Inlet Pressure (psi)	>30 psig	Daily	43	42	41				
		Generator Faulted?	yes/no	Daily	No	No	No				
		Oxidant Tank Level (ft)	>2 ft	Daily	2.7	2.5	2.25				
		Train 1 Dosing Pump Faulted?	yes/no	Daily	OFF	OFF	OFF				
		Train 2 Dosing Pump Faulted?	yes/no	Daily	No	No	No				
		Train 1 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily	OFF	OFF	OFF				
		Train 2 Free Chlorine (ppm)	0.1 - 0.3 ppm	Daily		0.10	0.10				

Notes:

WEEKLY INSPECTIONS AND RECORD FORMS

KAFB BFF: Weekly Inspection Form for GWTS

Train: 1

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	3-31-2020
Feed pump seals free of leaks			
Pump vibration normal (i-ALERT®)			
Oil reservoir for feed pumps full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi	✓		
Vent air from top of filter housings <u>Yes</u>			
Notes: <u>New bag filters 3/30/2020</u>			

Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	3/31/2020
Pressure drop less than 15 psig for each bed			
Vent air from top of carbon beds <u>Yes</u>			
Notes:			

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Treated water discharge pump seal free of leaks			
Pump vibration normal (i-ALERT®)			
Oil reservoir for feed pump full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings <u>Yes</u>			
Notes: <u>Same elec motor noise</u> <u>New bag filters last week</u>			

Calrifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	✓	✓	✓
Notes:			
Name: <u>Pete Ferranti</u> Signature: <u>Pete Ferranti</u>			

KAFB BFF: Weekly Inspection Form for GWTS

Train: 2

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	3/31/2020
Feed pump seals free of leaks	↓	↓	
Pump vibration normal (i-ALERT®)	↓	↓	
Oil reservoir for feed pumps full	↓	↓	
Pump oil has been changed within last 90 days	↓	↓	
Filter housing gaskets free of leaks	↓	↓	
Filter differential pressure less than 15 psi	↓	↓	
Vent air from top of filter housings Yes	↓	↓	
Notes: P-224 212A some ODE elec, motor barely noise (Not bad)			

Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	
Pressure drop less than 15 psig for each bed	↓	↓	
Vent air from top of carbon beds Yes	↓	↓	
Notes:			

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	
Treated water discharge pump seal free of leaks	↓	↓	
Pump vibration normal (i-ALERT®)	↓	↓	
Oil reservoir for feed pump full	↓	↓	
Pump oil has been changed within last 90 days	↓	↓	
Filter housing gaskets free of leaks	↓	↓	
Filter differential pressure less than 15 psi	↓	↓	
Vent air from top of filter housings Yes	↓	↓	
Notes: New bag filters last week			

Calrifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	✓
Notes:			
Name: Pete Ferrand Signature: Pete Ferrand			

KAFB BFF: Weekly Inspection Form for GWTS

Train: 1

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	4-6-2020 0935
Feed pump seals free of leaks			
Pump vibration normal (I-ALERT®) Flashing Green			
Oil reservoir for feed pumps full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings	Yes		
Notes:			

Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good		
Pressure drop less than 15 psig for each bed			
Vent air from top of carbon beds	Yes		
Notes:			

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	4-6-2020 0940
Treated water discharge pump seal free of leaks			
Pump vibration normal (I-ALERT®) 2 Green bars (App)			
Oil reservoir for feed pump full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings	Yes		
Notes: Star Electric Motor bearby noise same			

Calrifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good		
Notes: Pete Jamar 4-6-2020			

KAFB BFF: Weekly Inspection Form for GWTS

Train: 2

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	4-6-2020 0950
Feed pump seals free of leaks			
Pump vibration normal (I-ALERT® Green bar (App))			
Oil reservoir for feed pumps full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings	Yes		
Notes: P-212A, same electric motor no's			

Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good		
Pressure drop less than 15 psig for each bed			
Vent air from top of carbon beds	Yes		
Notes:			

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good		
Treated water discharge pump seal free of leaks			
Pump vibration normal (I-ALERT® App shows Green bar)			
Oil reservoir for feed pump full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings	Yes		
Notes:			

Calrifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good		
Notes: Peter Zimm 4-6-2020			

KAFB BFF: Weekly Inspection Form for GWTS

Train: 1

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PI-	4-13-2020 1145
Feed pump seals free of leaks			
Pump vibration normal (i-ALERT®)			
Oil reservoir for feed pumps full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings Yes			
Notes: P-112 B etc beady from rear sear (slow drip)			

Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Pressure drop less than 15 psig for each bed			
Vent air from top of carbon beds Yes			
Notes:			

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Treated water discharge pump seal free of leaks			
Pump vibration normal (i-ALERT®)			
Oil reservoir for feed pump full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings Yes			
Notes:			

Calrifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Notes:			
Name: Pete Ferrand Signature: Pete Ferrand			

KAFB BFF: Weekly Inspection Form for GWTS

Train: 2

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	4-13-2020 1130
Feed pump seals free of leaks	↓	↓	↓
Pump vibration normal (i-ALERT®) <i>Flashing Green</i>	↓	↓	↓
Oil reservoir for feed pumps full	↓	↓	↓
Pump oil has been changed within last 90 days	↓	↓	↓
Filter housing gaskets free of leaks	↓	↓	↓
Filter differential pressure less than 15 psi	↓	↓	↓
Vent air from top of filter housings <i>Yes</i>	↓	↓	↓
Notes: <i>I alert 11 App - all green bars</i>			

Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good		
Pressure drop less than 15 psig for each bed	↓		
Vent air from top of carbon beds <i>Yes</i>	↓		
Notes:			

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	↓	↓	↓
Treated water discharge pump seal free of leaks	↓	↓	↓
Pump vibration normal (i-ALERT®) <i>11 Bars green</i>	↓	↓	↓
Oil reservoir for feed pump full	↓	↓	↓
Pump oil has been changed within last 90 days	↓	↓	↓
Filter housing gaskets free of leaks	↓	↓	↓
Filter differential pressure less than 15 psi	↓	↓	↓
Vent air from top of filter housings <i>Yes</i>	↓	↓	↓
Notes:			

Calrifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	↓	↓	↓
Notes:			
Name: <i>Pete Ferraro</i> Signature: <i>Pete Ferraro</i>			

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Train: 1

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	4-21-2020
Feed pump seals free of leaks	↓	↓	↓
Pump vibration normal (i-ALERT®) 1 Flashing green	↓	↓	↓
Oil reservoir for feed pumps full	↓	↓	↓
Pump oil has been changed within last 90 days	↓	↓	↓
Filter housing gaskets free of leaks	↓	↓	↓
Filter differential pressure less than 15 psi	↓	↓	↓
Vent air from top of filter housings	↓	↓	↓
Notes: p-112 B slow rear seal leak at bearing frame. changed oil 4-17-2020 (levels are good)			

1035

Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	4-21-2020
Pressure drop less than 15 psig for each bed	↓	↓	↓
Vent air from top of carbon beds	↓	↓	↓
Notes:			

1040

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	4-21-2020
Treated water discharge pump seal free of leaks	↓	↓	↓
Pump vibration normal (i-ALERT®) 2 Green bars app.	↓	↓	↓
Oil reservoir for feed pump full	↓	↓	↓
Pump oil has been changed within last 90 days	↓	↓	↓
Filter housing gaskets free of leaks	↓	↓	↓
Filter differential pressure less than 15 psi	↓	↓	↓
Vent air from top of filter housings	↓	↓	↓
Notes: change oil 4-17-2020			

Calrifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	4-21-2020
Notes: Filters clean, no leaks			
Name: Pete Ferraro Signature: Pete Ferraro			

KAFB BFF: Weekly Inspection Form for GWTS

Train: 2

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	4-21-2020
Feed pump seals free of leaks	↓	↓	
Pump vibration normal (i-ALERT®) 2 App shows green			
Oil reservoir for feed pumps full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi	↓	↓	
Vent air from top of filter housings	↓	↓	
Notes: oil changed 4-17-2020			

1045

Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	
Pressure drop less than 15 psig for each bed	↓	↓	
Vent air from top of carbon beds	↓	↓	
Notes:			

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	
Treated water discharge pump seal free of leaks	↓	↓	
Pump vibration normal (i-ALERT®) 2 (app) green bars			
Oil reservoir for feed pump full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings	↓		
Notes: oil changed 4-17-2020			

Calrifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks		↓	↓
Notes: -6-			
Name: Pete Ferrante Signature: Pete Ferrante			

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Train: 1

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	JL	4/27/2020 0800
Feed pump seals free of leaks	↓	↓	↓
Pump vibration normal (i-ALERT®)	↓	↓	↓
Oil reservoir for feed pumps full	↓	↓	↓
Pump oil has been changed within last 90 days	↓	↓	↓
Filter housing gaskets free of leaks	↓	↓	↓
Filter differential pressure less than 15 psi	↓	↓	↓
Vent air from top of filter housings	↓	↓	↓
Notes:			

Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	JL	
Pressure drop less than 15 psig for each bed	↓	↓	
Vent air from top of carbon beds	↓	↓	
Notes:			

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	JL	
Treated water discharge pump seal free of leaks	↓	↓	
Pump vibration normal (i-ALERT®)	↓	↓	
Oil reservoir for feed pump full	↓	↓	
Pump oil has been changed within last 90 days	↓	↓	
Filter housing gaskets free of leaks	↓	↓	
Filter differential pressure less than 15 psi	↓	↓	
Vent air from top of filter housings	↓	↓	
Notes:			

Calrifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	JL	
Notes:			
Name: <u>JOSEPH LIVINGSTON</u> Signature: <u>[Signature]</u>			

KAFB BFF: Weekly Inspection Form for GWTS

Train: 2

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	JL	4/27/2020 0820
Feed pump seals free of leaks	↓	↓	↓
Pump vibration normal (i-ALERT®)	↓	↓	↓
Oil reservoir for feed pumps full	↓	↓	↓
Pump oil has been changed within last 90 days	↓	↓	↓
Filter housing gaskets free of leaks	↓	↓	↓
Filter differential pressure less than 15 psi	↓	↓	↓
Vent air from top of filter housings	↓	↓	↓
Notes:			

Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	JL	
Pressure drop less than 15 psig for each bed	↓	↓	
Vent air from top of carbon beds	↓	↓	
Notes:			

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	JL	
Treated water discharge pump seal free of leaks	↓	↓	
Pump vibration normal (i-ALERT®)	↓	↓	
Oil reservoir for feed pump full	↓	↓	
Pump oil has been changed within last 90 days	↓	↓	
Filter housing gaskets free of leaks	↓	↓	
Filter differential pressure less than 15 psi	↓	↓	
Vent air from top of filter housings	↓	↓	
Notes:			

Calrifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	JL	
Notes:			
Name: <u>JOSH LIVINGSTON</u> Signature: <u>[Signature]</u>			

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Train: 1

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	5-4-2020 1405
Feed pump seals free of leaks	↓	↓	
Pump vibration normal (i-ALERT®) <i>Flashing green</i>	↓	↓	
Oil reservoir for feed pumps full	↓	↓	
Pump oil has been changed within last 90 days	↓	↓	
Filter housing gaskets free of leaks	↓	↓	
Filter differential pressure less than 15 psi	↓	↓	
Vent air from top of filter housings	↓	↓	
Notes: <i>P-112B bearing frame rear seal drip (oil level is good)</i>			

Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	
Pressure drop less than 15 psig for each bed	↓	↓	
Vent air from top of carbon beds <i>YES</i>	↓	↓	
Notes:			

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	
Treated water discharge pump seal free of leaks	↓	↓	
Pump vibration normal (i-ALERT®) <i>2 Application (green)</i>	↓	↓	
Oil reservoir for feed pump full	↓	↓	
Pump oil has been changed within last 90 days	↓	↓	
Filter housing gaskets free of leaks	↓	↓	
Filter differential pressure less than 15 psi	↓	↓	
Vent air from top of filter housings	↓	↓	
Notes: <i>Noisy ODE electric motor bearing to be replaced 5-8-2020</i>			

Clarifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	
Notes: <i>changed bag filters for clarification</i>			
Name: <i>Pete Ferrar</i> Signature: <i>Pete Ferrar</i>			

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Train: 2

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	5-4-2020 1430
Feed pump seals free of leaks	↓	↓	↓
Pump vibration normal (i-ALERT®) 2 App shows green bars	↓	↓	↓
Oil reservoir for feed pumps full	↓	↓	↓
Pump oil has been changed within last 90 days	↓	↓	↓
Filter housing gaskets free of leaks	↓	↓	↓
Filter differential pressure less than 15 psi	↓	↓	↓
Vent air from top of filter housings	↓	↓	↓
Notes:			

Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	
Pressure drop less than 15 psig for each bed	↓	↓	
Vent air from top of carbon beds Yes	↓	↓	
Notes:			

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	
Treated water discharge pump seal free of leaks	↓	↓	
Pump vibration normal (i-ALERT®) 2 App (green bars)	↓	↓	
Oil reservoir for feed pump full	↓	↓	
Pump oil has been changed within last 90 days	↓	↓	
Filter housing gaskets free of leaks	↓	↓	
Filter differential pressure less than 15 psi	↓	↓	
Vent air from top of filter housings	↓	↓	
Notes:			

Calrifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	✓
Notes:			
Name: <u>Pete Ferranti</u> Signature: <u>Pete Ferranti</u>			

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Train: 1

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	5-15-2020 1225
Feed pump seals free of leaks	↓	↓	↓
Pump vibration normal (i-ALERT®) Flashing green	↓	↓	↓
Oil reservoir for feed pumps full	↓	↓	↓
Pump oil has been changed within last 90 days	↓	↓	↓
Filter housing gaskets free of leaks	↓	↓	↓
Filter differential pressure less than 15 psi	↓	↓	↓
Vent air from top of filter housings YES	↓	↓	↓
Notes: P112A, B laser align 5-13-2020 (Quiet) Both Pumps - small rear seal bearing frame drip.			

Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	
Pressure drop less than 15 psig for each bed	↓	↓	
Vent air from top of carbon beds YES	↓	↓	
Notes:			

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	
Treated water discharge pump seal free of leaks	↓	↓	
Pump vibration normal (i-ALERT®)	↓	↓	
Oil reservoir for feed pump full	↓	↓	
Pump oil has been changed within last 90 days	↓	↓	
Filter housing gaskets free of leaks	↓	↓	
Filter differential pressure less than 15 psi	↓	↓	
Vent air from top of filter housings YES	↓	↓	
Notes: Rebuilt motor + alignment 5-12-2020 No leaks			

Clarifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	5-15-2020
Notes: change clarifier bag filter 5-15-2020			
Name: Pete Ferraro Signature: Pete Ferraro			

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Train: 2

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	5-15-2020 1230
Feed pump seals free of leaks	↓	↓	↓
Pump vibration normal (i-ALERT®) 2 App., Green Bars	↓	↓	↓
Oil reservoir for feed pumps full	↓	↓	↓
Pump oil has been changed within last 90 days	↓	↓	↓
Filter housing gaskets free of leaks	↓	↓	↓
Filter differential pressure less than 15 psi	↓	↓	↓
Vent air from top of filter housings YES	✓	✓	↓
Notes: P212A, B Laser aligned 5-12-2020 P212A some electric motor noise, DE bearing a little warm			

Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	↓
Pressure drop less than 15 psig for each bed	↓	↓	↓
Vent air from top of carbon beds YES	✓	✓	↓
Notes:			

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	↓
Treated water discharge pump seal free of leaks	↓	↓	↓
Pump vibration normal (i-ALERT®)	↓	↓	↓
Oil reservoir for feed pump full	↓	↓	↓
Pump oil has been changed within last 90 days	↓	↓	↓
Filter housing gaskets free of leaks	↓	↓	↓
Filter differential pressure less than 15 psi	↓	↓	↓
Vent air from top of filter housings YES	✓	✓	↓
Notes: New motor bore in March 2020 slight rear bearing frame oil drip			

Calrifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	✓
Notes:			
Name: Pete Ferran Signature: Pete Ferran			

KAFB BFF: Weekly Inspection Form for GWTS

Train: 1

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	FF	5-22-20
Feed pump seals free of leaks			
Pump vibration normal (i-ALERT®) <i>Green</i>			
Oil reservoir for feed pumps full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings	✓		
Notes:			

Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good		
Pressure drop less than 15 psig for each bed	↓		
Vent air from top of carbon beds <i>yes</i>			
Notes:			

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Treated water discharge pump seal free of leaks			
Pump vibration normal (i-ALERT®) <i>2 Green bars</i>			
Oil reservoir for feed pump full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings			
Notes:			

Calrifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks		✓	
Notes: <i>Tarp full of moths</i> <i>No leaks</i>			
Name: <i>Rete Ferraro</i> Signature: <i>Rete Ferraro</i>			

0782

KAFB BFF: Weekly Inspection Form for GWTS

Train: 2

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	5-22-20
Feed pump seals free of leaks			
Pump vibration normal (i-ALERT®) <u>2 Green bars</u>			
Oil reservoir for feed pumps full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings			
Notes: <u>Flashing red at 1st log-in, later flashing green (documented #5)</u>			

0750

Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Pressure drop less than 15 psig for each bed			
Vent air from top of carbon beds			
Notes:			

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Treated water discharge pump seal free of leaks			
Pump vibration normal (i-ALERT®) <u>2 Green bars</u>			
Oil reservoir for feed pump full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings			
Notes: <u>small oil drop at rear seal, bearing frame (pump)</u>			

Calrifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	✓	✓	✓
Notes:			

Name: <u>Pete Ferran</u>	Signature: <u>Pete Ferran</u>
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KAFB BFF: Weekly Inspection Form for GWTS

Train: 1

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	JL	5/29/2020
Feed pump seals free of leaks			
Pump vibration normal (i-ALERT®)			
Oil reservoir for feed pumps full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings			
Notes:			

0730

Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Pressure drop less than 15 psig for each bed			
Vent air from top of carbon beds			
Notes:			

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Treated water discharge pump seal free of leaks			
Pump vibration normal (i-ALERT®)			
Oil reservoir for feed pump full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings			
Notes:			

Calrifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	✓	✓	✓
Notes:			
Name: <u>JOSEPH LIVINGSTON</u> Signature: <u>[Signature]</u>			

KAFB BFF: Weekly Inspection Form for GWTS

Train: 2

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	JL	5/29/2020 0730
Feed pump seals free of leaks			
Pump vibration normal (i-ALERT®)			
Oil reservoir for feed pumps full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings			
Notes:			

Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Pressure drop less than 15 psig for each bed			
Vent air from top of carbon beds			
Notes:			

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Treated water discharge pump seal free of leaks			
Pump vibration normal (i-ALERT®)			
Oil reservoir for feed pump full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings			
Notes:			

Calrifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Notes:			
Name: <u>JOSEPH LIVINGSTON</u> Signature: <u>[Signature]</u>			

KAFB BFF: Weekly Inspection Form for GWTS

Train: 1

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	8-5-2020 1200
Feed pump seals free of leaks			
Pump vibration normal (i-ALERT®) <i>Flashing Green</i>			
Oil reservoir for feed pumps full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings <i>Yes</i>			
Notes:			

Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Pressure drop less than 15 psig for each bed			
Vent air from top of carbon beds <i>Yes</i>			
Notes:			

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Treated water discharge pump seal free of leaks			
Pump vibration normal (i-ALERT®) <i>12 App, Green bars</i>			
Oil reservoir for feed pump full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings <i>Yes</i>			
Notes:			

Calrifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks		✓	✓
Notes:			
Name: <i>Peter J. ...</i>	Signature: <i>Peter J. ...</i>		

KAFB BFF: Weekly Inspection Form for GWTS

Train: 2

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	6-5-2020 1215
Feed pump seals free of leaks	↓	↓	↓
Pump vibration normal (i-ALERT®) 2 App, Green Bars	↓	↓	↓
Oil reservoir for feed pumps full	↓	↓	↓
Pump oil has been changed within last 90 days	↓	↓	↓
Filter housing gaskets free of leaks	↓	↓	↓
Filter differential pressure less than 15 psi	↓	↓	↓
Vent air from top of filter housings YES	↓	↓	↓
Notes: P-212B had a loud noise (screech) - high pitch, Pat Pickett says it's likely a resonant issue. Turn off and back on and the noise went away.			

Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	
Pressure drop less than 15 psig for each bed	↓	↓	↓
Vent air from top of carbon beds YES	↓	↓	↓
Notes:			

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good		
Treated water discharge pump seal free of leaks	↓	↓	↓
Pump vibration normal (i-ALERT®) 2 App, Green Bars	↓	↓	↓
Oil reservoir for feed pump full	↓	↓	↓
Pump oil has been changed within last 90 days	↓	↓	↓
Filter housing gaskets free of leaks	↓	↓	↓
Filter differential pressure less than 15 psi	↓	↓	↓
Vent air from top of filter housings YES	↓	↓	↓
Notes:			

Calrifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	✓
Notes:			
Name: Pete Ferrari			
Signature: <i>Pete Ferrari</i>			

KAFB BFF: Weekly Inspection Form for GWTS

Train: 1

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	6-12-20
Feed pump seals free of leaks			
Pump vibration normal (i-ALERT®)	Flashing Green		
Oil reservoir for feed pumps full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings	yes		
Notes:			

1010

Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good		
Pressure drop less than 15 psig for each bed			
Vent air from top of carbon beds	yes		
Notes:			

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Treated water discharge pump seal free of leaks			
Pump vibration normal (i-ALERT®)	2 Green bars		
Oil reservoir for feed pump full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings	yes		
Notes:			

Calrifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Notes:			
Name: <u>Pete Ferran</u> Signature: <u>Pete Ferran</u>			

KAFB BFF: Weekly Inspection Form for GWTS

Train: 2

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	6-12-20
Feed pump seals free of leaks			
Pump vibration normal (i-ALERT®) <u>2 → P212A Good</u>			
Oil reservoir for feed pumps full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings <u>Yes</u>			
Notes: <u>P212B, Motor making loud noise, iAlert 2 is dead</u>			

1020

Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	
Pressure drop less than 15 psig for each bed			
Vent air from top of carbon beds <u>Yes</u>			
Notes:			

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Treated water discharge pump seal free of leaks			
Pump vibration normal (i-ALERT®) <u>2 Green Bars</u>			
Oil reservoir for feed pump full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings <u>Yes</u>			
Notes:			

Calrifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	
Notes:			
Name: <u>Pete Ferraro</u> Signature: <u>Pete Ferraro</u>			

KAFB BFF: Weekly Inspection Form for GWTS

Train: 1

	Condition	Inspector	Date/Time
Groundwater Feed (tank, feed pumps and pre-filter)	Good	PF	6-16-2020 1400
Pipes, fittings and instruments free of leaks			
Feed pump seals free of leaks			
Pump vibration normal (i-ALERT®) / <i>Flashing Green</i>			
Oil reservoir for feed pumps full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings <i>Yes</i>			
Notes:			

	Condition	Inspector	Date/Time
Carbon Adsorbers	Good		
Pipes, fittings and instruments free of leaks			
Pressure drop less than 15 psig for each bed			
Vent air from top of carbon beds <i>Yes</i>			
Notes:			

	Condition	Inspector	Date/Time
Treated Water Discharge (tank, feed pumps and post-filter)	Good		
Pipes, fittings and instruments free of leaks			
Treated water discharge pump seal free of leaks			
Pump vibration normal (i-ALERT®) / <i>2 Green Bars</i>			
Oil reservoir for feed pump full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings <i>Yes</i>			
Notes:			

	Condition	Inspector	Date/Time
Clarifier and Backwashing Lines			
Pipes, fittings and instruments free of leaks			
Notes:			
Name: <i>Pete Ferrari</i>	Signature: <i>Peter J. ...</i>		

KAFB BFF: Weekly Inspection Form for GWTS

Train: 2

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	6-16-2020 1350
Feed pump seals free of leaks	P212A - Good		
Pump vibration normal (i-ALERT®)	2 - P212B, motor		
Oil reservoir for feed pumps full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings	↓		
Notes: P212B Electric Motor is to be replaced this week, running one pump for now			

Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good		
Pressure drop less than 15 psig for each bed	↓		
Vent air from top of carbon beds	↓		
Notes:			

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good		
Treated water discharge pump seal free of leaks			
Pump vibration normal (i-ALERT®)	2 Green bars		
Oil reservoir for feed pump full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings			
Notes:			

Calrifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	✓	✓	✓
Notes:			
Name: <u>Pete Ferran</u> Signature: <u>Peter Ferran</u>			

KAFB BFF: Weekly Inspection Form for GWTS

Train: 1

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	6/25/20
Feed pump seals free of leaks	↓		
Pump vibration normal (i-ALERT®) Flashing Green	Flash		
Oil reservoir for feed pumps full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings	✓		
Notes:			

Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good		
Pressure drop less than 15 psig for each bed	↓		
Vent air from top of carbon beds			
Notes:			

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good		
Treated water discharge pump seal free of leaks	↓		
Pump vibration normal (i-ALERT®) Yes			
Oil reservoir for feed pump full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi	✓		
Vent air from top of filter housings			
Notes: P112A → Green be P118 - i-alert 2 died, put in i-alert 1, flashing green			

Clarifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	✓	✓
Notes:			
Name: <u>Pete Ferrari</u> Signature: <u>Pete Ferrari</u>			

KAFB BFF: Weekly Inspection Form for GWTS

Train: 2

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	6/25/20
Feed pump seals free of leaks			
Pump vibration normal (i-ALERT®) P112A Green Bars P112B Flushing green			
Oil reservoir for feed pumps full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings			
Notes:			

1120

Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good		
Pressure drop less than 15 psig for each bed			
Vent air from top of carbon beds Yes			
Notes:			

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good		
Treated water discharge pump seal free of leaks			
Pump vibration normal (i-ALERT®) 12 Green Bars			
Oil reservoir for feed pump full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings			
Notes:			

Calrifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good		
Notes:			
Name: <u>Pete Ferraro</u> Signature: <u>Pete Ferraro</u>			

KAFB BFF: Weekly Inspection Form for GWTS

Train: 1

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PF	6-29-2020 0940
Feed pump seals free of leaks			
Pump vibration normal (i-ALERT®) <i>Flashing Green</i>			
Oil reservoir for feed pumps full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings <i>Yes</i>	✓		
Notes:			

Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good		
Pressure drop less than 15 psig for each bed			
Vent air from top of carbon beds <i>Yes</i>			
Notes:			

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks			
Treated water discharge pump seal free of leaks			
Pump vibration normal (i-ALERT®) <i>Flashing Green</i>			
Oil reservoir for feed pump full			
Pump oil has been changed within last 90 days			
Filter housing gaskets free of leaks			
Filter differential pressure less than 15 psi			
Vent air from top of filter housings <i>Yes</i>			
Notes:			

Calrifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	✓	✓	✓
Notes:			
Name: <i>Pete Ferran</i> Signature: <i>Pete Ferran</i>			

KAFB BFF: Weekly Inspection Form for GWTS

Train: 2

Groundwater Feed (tank, feed pumps and pre-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good	PE	6-29-20 9:55
Feed pump seals free of leaks	↓	↓	↓
Pump vibration normal (i-ALERT®) 1, 2 All Green	↓	↓	↓
Oil reservoir for feed pumps full	↓	↓	↓
Pump oil has been changed within last 90 days	↓	↓	↓
Filter housing gaskets free of leaks	↓	↓	↓
Filter differential pressure less than 15 psi	↓	↓	↓
Vent air from top of filter housings Yes	↓	↓	↓
Notes:			

Carbon Adsorbers	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good		
Pressure drop less than 15 psig for each bed	↓		
Vent air from top of carbon beds Yes	↓		
Notes:			

Treated Water Discharge (tank, feed pumps and post-filter)	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	Good		
Treated water discharge pump seal free of leaks	↓		
Pump vibration normal (i-ALERT®) 2 Green bars	↓		
Oil reservoir for feed pump full	↓		
Pump oil has been changed within last 90 days	↓		
Filter housing gaskets free of leaks	↓		
Filter differential pressure less than 15 psi	↓		
Vent air from top of filter housings Yes	↓		
Notes: Small rear seal leak (oil) at bearing frame			

Calrifier and Backwashing Lines	Condition	Inspector	Date/Time
Pipes, fittings and instruments free of leaks	↓	↓	↓
Notes:			
Name: <u>Pete Ferran</u>	Signature: <u>Pete Ferran</u>		

MONTHLY INSPECTIONS AND RECORD FORMS

Monthly Operation and Maintenance Inspections
Vaults

Wellhead Vault KAFB-106228	Condition	Inspected by	Date/Time
wellhead vault dry and free of debris	Good	PF/CB	4-3-2020 800
Air relief valve (ARV-3005) outlet clear	↓	↓	↓
Pressure in double wall pipe interstitial space (PI-3002) is near zero after ventvalve is opened for 2 minutes and then closed	↓	↓	↓
Piping, valves and electrical boxes are free of leaks and external corrosion	↓	↓	↓
Electrical cables, vault cover and seals intact	↓	↓	↓
Locks on electrical shed and panels intact	↓	↓	↓
Valve Vault KAFB-106228 (Louisiana inside base fence)	Condition	Inspected by	Date/Time
Vault dry and free of debris	Good	PF	4-6-2020 1045
Air relief valve (ARV-3008) outlet clear	↓	↓	↓
Pressure in double wall pipe interstitial space (PI-3003) is near zero after ventvalve is opened for 2 minutes and then closed	↓ (1st time moisture in interstitial space)	↓	↓
Piping, valves and electrical boxes are free of leaks and external corrosion	↓	↓	↓
Electrical cables, vault cover and seals intact	↓	↓	↓
Wellhead Vault KAFB-106233 Well has been off	Condition	Inspected by	Date/Time
Vault dry and free of debris	Good	PF/CB	4-3-2020 1040
Air relief valve (ARV-4001) outlet clear	↓	↓	↓
Pressure in double wall pipe interstitial space (PI-4001) is near zero after ventvalve is opened for 2 minutes and then closed	↓	↓	↓
Piping, valves and electrical boxes are free of leaks and external corrosion	↓	↓	↓
Electrical cables, vault cover and seals intact	↓	↓	↓
Wellhead Vault KAFB-106234	Condition	Inspected by	Date/Time
Vault dry and free of debris	Good	PF/CB	4-3-2020 1105
Air relief valve (ARV-5001) outlet clear	↓	↓	↓
Pressure in double wall pipe interstitial space (PI-5001) is near zero after ventvalve is opened for 2 minutes and then closed	↓	↓	↓
Piping, valves and electrical boxes are free of leaks and external corrosion	↓	↓	↓
Electrical cables, vault cover and seals intact	↓	↓	↓
Air Release Valve Vault - Eastern Avenue	Condition	Inspected by	Date/Time
wellhead vault dry and free of debris - 233 ARV still has drip (every two seconds) leave off (233 leak) - 234	234 Good	PF/CB	4-2-2020 1210
Air relief valve (ARV-6001 and ARV-6002) outlets clear → discharge leak, leave off	Good	↓	↓
Piping, valves and electrical boxes are free of leaks and external corrosion	Good	↓	↓
Electrical cables intact	Good	↓	↓
Vault cover and seals intact	Good	↓	↓
Wellhead Vault KAFB-106239	Condition	Inspected by	Date/Time
Vault dry and free of debris	Good	PF/CB	4-3-2020 0930
Pressure in double wall pipe interstitial space (PI-7001) is near zero after ventvalve is opened for 2 minutes and then closed	↓	↓	↓
Piping, valves and electrical boxes are free of leaks and external corrosion	↓	↓	↓
Electrical cables, vault cover and seals intact	↓	↓	↓
Junction Vault KAFB-106239 (Ridgecrest inside base fence)	Condition	Inspected by	Date/Time
Vault dry and free of debris	Good	PF	4-6-2020 1100
Piping, valves and electrical boxes are free of leaks and external corrosion	↓	↓	↓
Electrical cables, vault cover and seals intact	↓	↓	↓
Well Control House (WCH) - Gibson Avenue (inside base fence)	Condition	Inspected by	Date/Time
WCH dry and free of debris	Good	PF	4-6-2020 0945
Air relief valve (ARV-3008) outlet clear → Bleed off	↓	↓	↓
Pressure in double wall pipe interstitial spaces (PI-7001 and PI-7002) is near zero after space is vented at wellhead.	↓	↓	↓
Piping, valves and electrical boxes are free of leaks and external corrosion	↓	↓	↓
Electrical cables intact	↓	↓	↓

Monthly Operation and Maintenance Inspections
Vaults

Valve Vault WCH to GWTS (Louisiana inside base fence) <i>Some moisture</i>	Condition	Inspected by	Date/Time
Vault dry and free of debris	<i>Good</i>	<i>PF</i>	<i>4-6-2020 1045</i>
Air relief valve (ARV-8001) outlet clear	<i>↓</i>	<i>↓</i>	<i>↓</i>
Piping, valves and electrical boxes are free of leaks and external corrosion			
Electrical cables intact			

Air Relief Valve Vaults on Discharge line (on base) <i>ARV #3 Scan of last leak by at dis-</i>	Condition	Inspected by	Date/Time
Vault dry and free of debris <i>charge pipe, open & close 3 times (leak stopped)</i>	<i>Good</i>	<i>PF</i>	<i>4-6-2020 1245-1300</i>
Air relief valve outlets clear	<i>"</i>	<i>"</i>	<i>"</i>

KAFB Well 7 Wellhead <i>Facility # 26039</i>	Condition	Inspected by	Date/Time
Well 7 flowmeter vault dry and free of debris <i>(Rabbit Army to hot box, called PAT, sweep out bent welding)</i>	<i>Good</i>	<i>PF</i>	<i>4-6-2020 1145</i>
Air relief valve (ARV-9012) outlet clear	<i>Good</i>		
V-Smart valve hydraulic oil reservoir full	<i>NA</i>		
Piping, valves and electrical boxes are free of leaks and external corrosion	<i>Good</i>		
Electrical cables intact	<i>Good</i>		
Filter pressure reading within green on dial	<i>NA</i>		
Oil temperature between 90-110 degrees Fahrenheit	<i>N/A</i>		
Oil clear and without solids	<i>N/A</i>	<i>↓</i>	<i>↓</i>

Golf Course Main Pond	Condition	Inspected by	Date/Time
GCMP water level consistent with HMI <i>4.14' station Rod 2.38'</i>	<i>Good</i>	<i>PF</i>	<i>4-6-2020 1302</i>
Discharge line clear of obstruction(s)	<i>"</i>	<i>"</i>	<i>"</i>

Monthly Operation and Maintenance Inspections
Vaults

Date/Inspected by: PF + GB	4-3-2020 (vault)										
Flowmeter Inspection Items	FIT-3001	FIT-7001	FIT-7002	FIT-239	FIT-3102	FIT-3108	FIT-3202	FIT-3208	FIT-3120	FIT-3120	KAFB-7
Flow reading operational	Yes	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good
PLC totalizer functional	Yes										
No moisture in readout	Yes										
Free of mechanical damage	Yes										
Readings consistent with past operations	Yes	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

overstating gpm's by 37.65 gpm at last check

FE/FIT- 3001, located in KAFB-106228 well vault. Magmeter (flow and totalizer) that measures well flow to the GWTS.
FE/FIT- 7001, located in well control house. Magmeter (flow and totalizer) that measures well flow to the GWTS.
FE/FIT- 7002, located in well control house. Magmeter (flow and totalizer) that measures well flow to the GWTS.
FE/FIT- , located in KAFB-106239 well vault. Magmeter (flow and totalizer) that measures well flow to the GWTS.
FE/FIT- 3102, located on the Train 1 feed pump skid in the treatment building. Magmeter (flow and totalizer) that measures flow from the feed tank to carbon beds.
FE/FIT- 3108, located on the Train 1 discharge pump skid in the treatment building. Magmeter (flow and totalizer) that measures flow from the treated water tank to discharge line.
FE/FIT- 3202, located on the Train 2 feed pump skid in the treatment building. Magmeter (flow and totalizer) that measures flow from the feed tank to carbon beds.
FE/FIT- 3208, located on the Train 2 discharge pump skid in the treatment building. Magmeter (flow and totalizer) that measures flow from the treated water tank to discharge line.
FI/FQI- 3120, located on the effluent bypass in the treatment building. Turbine meter (local) with analog flow rate and mechanical totalizer readout in increments of 100 gallons. Measures water volume discharged to the truck bay.
FI/FQI-KAFB-7, located in existing vault near KAFB-7. Turbine meter with analog flow rate and mechanical totalizer readout in increments of 1,000 gallons. Measures injection volume into KAFB-7.

* HMI reads 4 gpm higher than the vault meter. Two months ago I conducted a bucket test that revealed the vault meter is closer to what's being pumped. Notified Z & C Solutions.

Peter J. Mann

**Monthly Operation and Maintenance Inspections
Vaults**

Wellhead Vault KAFB-106228	Condition	Inspected by	Date/Time
wellhead vault dry and free of debris	Good	PF-JRL	5-21-2020 0730
Air relief valve (ARV-3005) outlet clear	↓	↓	↓
Pressure in double wall pipe interstitial space (PI-3002) is near zero after ventvalve is opened for 2 minutes and then closed	↓	↓	↓
Piping, valves and electrical boxes are free of leaks and external corrosion	↓	↓	↓
Electrical cables, vault cover and seals intact	↓	↓	↓
Locks on electrical shed and panels intact	↓	↓	↓
Valve Vault KAFB-106228 (Louisiana inside base fence)	Condition	Inspected by	Date/Time
Vault dry and free of debris	Good	PF	5-20-2020 0950
Air relief valve (ARV-3008) outlet clear	↓	↓	↓
Pressure in double wall pipe interstitial space (PI-3003) is near zero after ventvalve is opened for 2 minutes and then closed	↓	↓	↓
Piping, valves and electrical boxes are free of leaks and external corrosion	↓	↓	↓
Electrical cables, vault cover and seals intact	↓	↓	↓
Wellhead Vault KAFB-106233	Condition	Inspected by	Date/Time
Vault dry and free of debris	Good	PF/SRL	5-21-2020 0845
Air relief valve (ARV-4001) outlet clear	↓	↓	↓
Pressure in double wall pipe interstitial space (PI-4001) is near zero after ventvalve is opened for 2 minutes and then closed	↓	↓	↓
Piping, valves and electrical boxes are free of leaks and external corrosion	↓	↓	↓
Electrical cables, vault cover and seals intact	↓	↓	↓
Wellhead Vault KAFB-106234	Condition	Inspected by	Date/Time
Vault dry and free of debris	Good	PF/TRL	5-21-2020 0915
Air relief valve (ARV-5001) outlet clear	↓	↓	↓
Pressure in double wall pipe interstitial space (PI-5001) is near zero after ventvalve is opened for 2 minutes and then closed	↓	↓	↓
Piping, valves and electrical boxes are free of leaks and external corrosion	↓	↓	↓
Electrical cables, vault cover and seals intact	↓	↓	↓
Air Release Valve Vault - Eastern Avenue	Condition	Inspected by	Date/Time
wellhead vault dry and free of debris	Good	PF/SRL	5-21-2020 1020
Air relief valve (ARV-6001 and ARV-6002) outlets clear <i>Replace ARV with new one (no leaks)</i>	↓	↓	↓
Piping, valves and electrical boxes are free of leaks and external corrosion	↓	↓	↓
Electrical cables intact	↓	↓	↓
Vault cover and seals intact	↓	↓	↓
Wellhead Vault KAFB-106239	Condition	Inspected by	Date/Time
Vault dry and free of debris	Good	PF/SRL	5-21-2020 0810
Pressure in double wall pipe interstitial space (PI-7001) is near zero after ventvalve is opened for 2 minutes and then closed	↓	↓	↓
Piping, valves and electrical boxes are free of leaks and external corrosion	↓	↓	↓
Electrical cables, vault cover and seals intact	↓	↓	↓
Junction Vault KAFB-106239 (Ridgecrest inside base fence)	Condition	Inspected by	Date/Time
Vault dry and free of debris	Good	PF	5-20-2020 1320
Piping, valves and electrical boxes are free of leaks and external corrosion	↓	↓	↓
Electrical cables, vault cover and seals intact	↓	↓	↓
Well Control House (WCH) - Gibson Avenue (inside base fence)	Condition	Inspected by	Date/Time
WCH dry and free of debris	Good	PF	5-20-2020 0830
Air relief valve (ARV-3008) outlet clear	↓	↓	↓
Pressure in double wall pipe interstitial spaces (PI-7001 and PI-7002) is near zero after space is vented at wellhead.	↓	↓	↓
Piping, valves and electrical boxes are free of leaks and external corrosion	↓	↓	↓
Electrical cables intact	↓	↓	↓

Monthly Operation and Maintenance Inspections
Vaults

Valve Vault WCH to GWTS (Louisiana inside base fence)	Condition	Inspected by	Date/Time
Vault dry and free of debris	Good	PF	5-20-2020 0945
Air relief valve (ARV-8001) outlet clear	↓	↓	↓
Piping, valves and electrical boxes are free of leaks and external corrosion	↓	↓	↓
Electrical cables intact	↓	↓	↓

Air Relief Valve Vaults on Discharge line (on base)	Condition	Inspected by	Date/Time
Vault dry and free of debris	Good	PF	5-20-2020 11-1300
Air relief valve outlets clear	"	"	"

KAFB Well 7 Wellhead	Condition	Inspected by	Date/Time
Well 7 flowmeter vault dry and free of debris	Good	PF	5-20-2020 1030
Air relief valve (ARV-9012) outlet clear	Good	↓	↓
V-Smart valve hydraulic oil reservoir full	Good	↓	↓
Piping, valves and electrical boxes are free of leaks and external corrosion	Good	↓	↓
Electrical cables intact	NA/Good	↓	↓
Filter pressure reading within green on dial	NA	↓	↓
Oil temperature between 90-110 degrees Farenheit	NA	↓	↓
Oil clear and without solids	NA	↓	↓

Golf Course Main Pond	Condition	Inspected by	Date/Time
GCMP water level consistent with HMI	Good	PF	5-20-2020 1133
Discharge line clear of obstruction(s)	"	"	"

Monthly Operation and Maintenance Inspections
Vaults

Date/Inspected by: PF 5-20-21-2020	Flowmeters										
Flowmeter Inspection Items	FIT- 3001	FIT- 7001	FIT- 7002	FIT- 239	FIT- 3102	FIT- 3108	FIT- 3202	FIT- 3208	FIT- 3120	FIT- 3120	KAFB-7
Flow reading operational	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Being Replaced with V-Cone beginning 5-26-2020
PLC totalizer functional	Good	↓	↓	↓	↓	↓	↓	↓	↓	↓	Off-line Yes
No moisture in readout	Good	↓	↓	↓	↓	↓	↓	↓	↓	↓	Good
Free of mechanical damage	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	Good
Readings consistent with past operations	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	Yes

FE/FIT- 3001, located in KAFB-106228 well vault. Magmeter (flow and totalizer) that measures well flow to the GWTS. (Cover states gpm by 4) - NM1

FE/FIT- 7001, located in well control house. Magmeter (flow and totalizer) that measures well flow to the GWTS.

FE/FIT- 7002, located in well control house. Magmeter (flow and totalizer) that measures well flow to the GWTS.

FE/FIT- , located in KAFB-106239 well vault. Magmeter (flow and totalizer) that measures well flow to the GWTS.

FE/FIT- 3102, located on the Train 1 feed pump skid in the treatment building. Magmeter (flow and totalizer) that measures flow from the feed tank to carbon beds.

FE/FIT- 3108, located on the Train 1 discharge pump skid in the treatment building. Magmeter (flow and totalizer) that measures flow from the treated water tank to discharge line.

FE/FIT- 3202, located on the Train 2 feed pump skid in the treatment building. Magmeter (flow and totalizer) that measures flow from the feed tank to carbon beds.

FE/FIT- 3208, located on the Train 2 discharge pump skid in the treatment building. Magmeter (flow and totalizer) that measures flow from the treated water tank to discharge line.

FI/FQI- 3120, located on the effluent bypass in the treatment building. Turbine meter (local) with analog flow rate and mechanical totalizer readout in increments of 100 gallons. Measures water volume discahrged to the truck bay.

FI/FQI-KAFB-7, located in existing vault near KAFB-7. Turbine meter with analog flow rate and mechanical totalizer readout in increments of 1,000 gallons. Measures injection volume into KAFB-7.

Peter Juran 5-21-2020

Monthly Operation and Maintenance Inspections
Vaults

Wellhead Vault KAFB-106228	Condition	Inspected by	Date/Time
wellhead vault dry and free of debris → some moisture on piping under ARV, will watch	Good	PF/SM	6-11-2020 0820
Air relief valve (ARV-3005) outlet clear	↓	↓	↓
Pressure in double wall pipe interstitial space (PI-3002) is near zero after ventvalve is opened for 2 minutes and then closed	↓	↓	↓
Piping, valves and electrical boxes are free of leaks and external corrosion	↓	↓	↓
Electrical cables, vault cover and seals intact	↓	↓	↓
Locks on electrical shed and panels intact	↓	↓	↓
Valve Vault KAFB-106228 (Louisiana inside base fence)	Condition	Inspected by	Date/Time
Vault dry and free of debris	Good	PF/SM	6-11-2020 1015
Air relief valve (ARV-3008) outlet clear	↓	↓	↓
Pressure in double wall pipe interstitial space (PI-3003) is near zero after ventvalve is opened for 2 minutes and then closed	↓	↓	↓
Piping, valves and electrical boxes are free of leaks and external corrosion	↓	↓	↓
Electrical cables, vault cover and seals intact	↓	↓	↓
Wellhead Vault KAFB-106233	Condition	Inspected by	Date/Time
Vault dry and free of debris	Good	PF/SM	6-11-2020 0912
Air relief valve (ARV-4001) outlet clear	↓	↓	↓
Pressure in double wall pipe interstitial space (PI-4001) is near zero after ventvalve is opened for 2 minutes and then closed	↓	↓	↓
Piping, valves and electrical boxes are free of leaks and external corrosion	↓	↓	↓
Electrical cables, vault cover and seals intact	↓	↓	↓
Wellhead Vault KAFB-106234	Condition	Inspected by	Date/Time
Vault dry and free of debris	Good	PF/SM	6-11-2020 0940
Air relief valve (ARV-5001) outlet clear	↓	↓	↓
Pressure in double wall pipe interstitial space (PI-5001) is near zero after ventvalve is opened for 2 minutes and then closed	↓	↓	↓
Piping, valves and electrical boxes are free of leaks and external corrosion	↓	↓	↓
Electrical cables, vault cover and seals intact	↓	↓	↓
Air Release Valve Vault - Eastern Avenue	Condition	Inspected by	Date/Time
wellhead vault dry and free of debris	Good	PF/SM	6-11-2020 0935
Air relief valve (ARV-6001 and ARV-6002) outlets clear → working good	↓	↓	↓
Piping, valves and electrical boxes are free of leaks and external corrosion	↓	↓	↓
Electrical cables intact	↓	↓	↓
Vault cover and seals intact	↓	↓	↓
Wellhead Vault KAFB-106239	Condition	Inspected by	Date/Time
Vault dry and free of debris → killed 2 black widows	Good	PF/SM	6-11-2020 0855
Pressure in double wall pipe interstitial space (PI-7001) is near zero after ventvalve is opened for 2 minutes and then closed	↓	↓	↓
Piping, valves and electrical boxes are free of leaks and external corrosion	↓	↓	↓
Electrical cables, vault cover and seals intact	↓	↓	↓
Junction Vault KAFB-106239 (Ridgecrest inside base fence)	Condition	Inspected by	Date/Time
Vault dry and free of debris	Good	PF	6-11-2020 1405
Piping, valves and electrical boxes are free of leaks and external corrosion	↓	↓	↓
Electrical cables, vault cover and seals intact	↓	↓	↓
Well Control House (WCH) - Gibson Avenue (inside base fence) Retrieved 5 gal bucket ~ 1/2 gal	Condition	Inspected by	Date/Time
WCH dry and free of debris	Good	PF	6-11-2020 0755
Air relief valve (ARV-3008) outlet clear → working good	↓	↓	↓
Pressure in double wall pipe interstitial spaces (PI-7001 and PI-7002) is near zero after space is vented at wellhead.	↓	↓	↓
Piping, valves and electrical boxes are free of leaks and external corrosion	↓	↓	↓
Electrical cables intact	↓	↓	↓

Monthly Operation and Maintenance Inspections
Vaults

Valve Vault WCH to GWTS (Louisiana inside base fence)	Condition	Inspected by	Date/Time
1/2" water on floor, go back far shop vac, ~ 3 gallons water	Good	PF / JM	6-11-2020 1015
Vault dry and free of debris	↓	↓	↓
Air relief valve (ARV-8001) outlet clear			
Piping, valves and electrical boxes are free of leaks and external corrosion			
Electrical cables intact			

Air Relief Valve Vaults on Discharge line (on base)	Condition	Inspected by	Date/Time
ARV #3 leaking, will rebuild soon	Good	PF	6-11-2020 1200-1400
Vault dry and free of debris	↓	↓	"
Air relief valve outlets clear → outlet running stream of water, close off			

KAFB Well 7 Wellhead	Condition	Inspected by	Date/Time
Well 7 flowmeter vault dry and free of debris	Under Rehabilitation	PF	6-11-2020
Air relief valve (ARV-9012) outlet clear	↓	↓	↓
V-Smart valve hydraulic oil reservoir full			
Piping, valves and electrical boxes are free of leaks and external corrosion			
Electrical cables intact			
Filter pressure reading within green on dial			
Oil temperature between 90-110 degrees Fahrenheit	↓	↓	↓
Oil clear and without solids			

Golf Course Main Pond	Condition	Inspected by	Date/Time
GCMP water level consistent with HMI 4.10' steady Rod 2.76'	Good	PF	6-11-2020 1200-
Discharge line clear of obstruction(s)	"	"	

→ Rebuilt ARV #3 6-16-2020 / kit #SPK3-201CX002 (soft seat) PF.
Effluent

Monthly Operation and Maintenance Inspections
Vaults

Date/Inspected by: <i>DF 6-11-2020</i>	Flowmeters										
Flowmeter Inspection Items	FIT- 3001	FIT- 7001	FIT- 7002	FIT- 239	FIT- 3102	FIT- 3108	FIT- 3202	FIT- 3208	FIT- 3120	FIT- 3120	KAFB-7
Flow reading operational	<i>Good</i>	<i>Good</i>	<i>Good</i>	<i>Good</i>	<i>Good</i>	<i>Good</i>	<i>Good</i>	<i>Good</i>	<i>Good</i>	<i>Good</i>	<i>Replacing meter</i>
PLC totalizer functional	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	
No moisture in readout	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	
Free of mechanical damage	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	
Readings consistent with past operations	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	

FE/FIT- 3001, located in KAFB-106228 well vault. Magmeter (flow and totalizer) that measures well flow to the GWTS. *→ HMI overstates gpm by 4 gpm*
FE/FIT- 7001, located in well control house. Magmeter (flow and totalizer) that measures well flow to the GWTS.
FE/FIT- 7002, located in well control house. Magmeter (flow and totalizer) that measures well flow to the GWTS.
FE/FIT- , located in KAFB-106239 well vault. Magmeter (flow and totalizer) that measures well flow to the GWTS.
FE/FIT- 3102, located on the Train 1 feed pump skid in the treatment building. Magmeter (flow and totalizer) that measures flow from the feed tank to carbon beds.
FE/FIT- 3108, located on the Train 1 discharge pump skid in the treatment building. Magmeter (flow and totalizer) that measures flow from the treated water tank to discharge line.
FE/FIT- 3202, located on the Train 2 feed pump skid in the treatment building. Magmeter (flow and totalizer) that measures flow from the feed tank to carbon beds.
FE/FIT- 3208, located on the Train 2 discharge pump skid in the treatment building. Magmeter (flow and totalizer) that measures flow from the treated water tank to discharge line.
FI/FQI- 3120, located on the effluent bypass in the treatment building. Turbine meter (local) with analog flow rate and mechanical totalizer readout in increments of 100 gallons. Measures water volume discahrged to the truck bay.
FI/FQI-KAFB-7, located in existing vault near KAFB-7. Turbine meter with analog flow rate and mechanical totalizer readout in increments of 1,000 gallons. Measures injection volume into KAFB-7.

Peter Luman 6-11-2020

WEEKLY YARD INSPECTIONS

Weekly Yard Inspection - ICAID BFF Project					
Inspected by:	Galveston Begaye				
Date:	04-03-2020				
Safety Information	Yes	No	NA	Corrective Action Taken	Comments
Is emergency contact information in place and up to date?	☒	☐	☐		
Are signs present for emergency safety equipment? (eyewash, fire extinguisher, etc.)	☒	☐	☐		
Are flammables storage signs in place and legible?	☒	☐	☐		
Is caution tape in tact around the IDW storage area?	☐	☐	☒		
Containment	Yes	No	NA		Comments
Are all flammables stored in the appropriate cabinet?	☒	☐	☐		
Are the refrigerator, freezer, and flammable liquid storage areas free of leaks or spills?	☒	☐	☐		
Are the portable restroom exteriors free of leaks or spills?	☒	☐	☐		
Are the EA vehicles and compressors free of leaks or spills?	☒	☐	☐		
Cleanliness	Yes	No	NA		Comments
Is the yard free of trash?	☒	☐	☐		
Is the yard free of weeds?	☒	☐	☐		
Is all equipment clear of the yard and put away?	☒	☐	☐		
Are all 55 gallon drums stacked properly on pallets in the IDW yard?	☒	☐	☐		
Are all IDW yard signs in place and upright?	☒	☐	☐		
Functionality	Yes	No	NA		Comments
Is the yard free of obstructions or safety hazards? (slip, trip, fall, etc.)	☒	☐	☐		
Is the gravel driveway intact for vehicle access?	☒	☐	☐		
Is the enclosed fence upright and intact?	☒	☐	☐		
Are all locks smooth and functional? (trailer, refrigerator, etc.)	☒	☐	☐		

Weekly Yard Inspection - KAAD BFF Project					
Inspected by:	Pete Ferraro				
Date:	4-18-2020				
Safety Information	Yes	No	NA	Corrective Action Taken	Comments
Is emergency contact information in place and up to date?	☒	☐	☐		
Are signs present for emergency safety equipment? (eyewash, fire extinguisher, etc.)	☒	☐	☐		
Are flammables storage signs in place and legible?	☒	☐	☐		
Is caution tape in tact around the IDW storage area?	☐	☐	☒		
Containment	Yes	No	NA		Comments
Are all flammables stored in the appropriate cabinet?	☒	☐	☐		
Are the refrigerator, freezer, and flammable liquid storage areas free of leaks or spillage?	☒	☐	☐		
Are the portable restroom exteriors free of leaks or spillage?	☐	☐	☒		
Are the EA vehicles and compressors free of leaks or spillage?	☒	☐	☐		
Cleanliness	Yes	No	NA		Comments
Is the yard free of trash?	☒	☐	☐		
Is the yard free of weeds?	☒	☐	☐		4m cutting and pulling weeds weekly
Is all equipment clear of the yard and put away?	☒	☐	☐		
Are all 55 gallon drums stacked properly on pallets in the IDW yard?	☒	☐	☐		
Are all IDW yard signs in place and upright?	☒	☐	☐		
Functionality	Yes	No	NA		Comments
Is the yard free of obstructions or safety hazards? (slip, trip, fall, etc.)	☒	☐	☐		
Is the gravel driveway intact for vehicle access?	☒	☐	☐		
Is the enclosed fence upright and intact?	☒	☐	☐		
Are all locks smooth and functional? (trailer, refrigerator, etc.)	☒	☐	☐		

Weekly Yard Inspection - KAFB OFF Project					
Inspected by:	Pete Ferraro				
Date:	4-17-2020				
Safety Information	Yes	No	NA	Corrective Action Taken	Comments
Is emergency contact information in place and up to date?	☒	☐	☐		
Are signs present for emergency safety equipment? (eyewash, fire extinguisher, etc.)	☒	☐	☐		
Are flammables storage signs in place and legible?	☒	☐	☐		
Is caution tape in tact around the IDW storage area?	☐	☐	☒		
Containment	Yes	No	NA		Comments
Are all flammables stored in the appropriate cabinet?	☒	☐	☐		
Are the refrigerator, freezer, and flammable liquid storage areas free of leaks or spillage?	☒	☐	☐		
Are the portable restroom exterior free of leaks or spillage?	☒	☐	☐		
Are the EA vehicles and compressors free of leaks or spillage?	☐	☐	☐		
Cleanliness	Yes	No	NA		Comments
Is the yard free of trash?	☒	☐	☐		
Is the yard free of weeds?	☒	☐	☐		
Is all equipment clean of the yard and put away?	☒	☐	☐		
Are all 55 gallon drums stacked properly on pallets in the IDW yard?	☒	☐	☐		
Are all IDW yard signs in place and upright?	☒	☐	☐		
Functionality	Yes	No	NA		Comments
Is the yard free of obstructions or safety hazards? (trip, fall, etc.)	☒	☐	☐		
Is the gravel driveway intact for vehicle access?	☒	☐	☐		
Is the enclosed fence upright and intact?	☒	☐	☐		
Are all locks smooth and functional? (trolley, refrigerator, etc.)	☒	☐	☐		

Weekly Yard Inspection - KAIB BFF Project				
Inspected by:	Pete Ferraro			
Date:	4-23-2020			
Safety Information	Yes	No	NA	
Is emergency contact information in place and up to date?	☒	☐	☐	
Are signs present for emergency safety equipment? (eyewash, fire extinguisher, etc.)	☒	☐	☐	
Are flammables storage signs in place and legible?	☒	☐	☐	
Is caution tape in tact around the IDW storage area?	☐	☐	☒	
Containment	Yes	No	NA	
Are all flammables stored in the appropriate cabinet?	☒	☐	☐	
Are the refrigerator, freezer, and flammable liquid storage areas free of leaks or spillage?	☒	☐	☐	
Are the portable restroom exteriors free of leaks or spillage?	☒	☐	☐	
Are the EA vehicles and compressors free of leaks or spillage?	☒	☐	☐	
Cleanliness	Yes	No	NA	
Is the yard free of trash?	☒	☐	☐	
Is the yard free of weeds?	☒	☐	☐	Cutting weekly with hoe (field off yard)
Is all equipment clear of the yard and put away?	☒	☐	☐	
Are all 55 gallon drums stacked properly on pallets in the IDW yard?	☒	☐	☐	
Are all IDW yard signs in place and upright?	☐	☐	☐	
Functionality	Yes	No	NA	
Is the yard free of obstructions or safety hazards? (trip, fall, etc.)	☒	☐	☐	
Is the gravel driveway intact for vehicle access?	☒	☐	☐	
Is the enclosed fence upright and intact?	☐	☐	☐	
Are all locks smooth and functional? (trailer, refrigerator, etc.)	☒	☐	☐	

Weekly Yard Inspection - KAFB BFF Project					
Inspected by:	J. Livingston				
Date:	4/27/2020				
Safety Information	Yes	No	NA	Corrective Action Taken	Comments
Is emergency contact information in place and up to date?	☒	☐	☐		
Are signs present for emergency safety equipment? (eyewash, fire extinguisher, etc.)	☒	☐	☐		
Are flammables storage signs in place and legible?	☒	☐	☐		
Is caution tape in tact around the IDW storage areas?	☐	☐	☒		
Contaminant	Yes	No	NA		Comments
Are all flammables stored in the appropriate cabinet?	☒	☐	☐		
Are the refrigerator, freezer, and flammable liquid storage areas free of leaks or spillage?	☒	☐	☐		
Are the portable restroom exteriors free of leaks or spillage?	☒	☐	☐		
Are the EA vehicles and compressors free of leaks or spillage?	☒	☐	☐		
Cleanliness	Yes	No	NA		Comments
Is the yard free of trash?	☒	☐	☐		
Is the yard free of weeds?	☒	☐	☐		
Is all equipment clear of the yard and put away?	☒	☐	☐		
Are all 55 gallon drums stacked properly on pallets in the IDW yard?	☒	☐	☐		
Are all IDW yard signs in place and upright?	☒	☐	☐		
Functionality	Yes	No	NA		Comments
Is the yard free of obstructions or safety hazards? (trip, trip, fall, etc.)	☒	☐	☐		
Is the gravel driveway intact for vehicle access?	☒	☐	☐		
Is the enclosed fence upright and intact?	☒	☐	☐		
Are all locks smooth and functional? (trolley, refrigerator, etc.)	☒	☐	☐		

Weekly Yard Inspection - (K)AFB BFF Project				
Inspected by:	Pete Ferran			
Date:	May 05, 2020			
Safety Information	Yes	No	NA	
Is emergency contact information in place and up to date?	☒	☐	☐	
Are signs present for emergency safety equipment? (eyewash, fire extinguisher, etc.)	☒	☐	☐	
Are OSHA storage signs in place and legible?	☒	☐	☐	
Is caution tape in tact around the IDW storage area?	☐	☐	☒	
Contaminant	Yes	No	NA	
Are all flammables stored in the appropriate cabinet?	☒	☐	☐	
Are the refrigerators, freezer, and flammable liquid storage areas free of leaks or spillage?	☒	☐	☐	
Are the portable restroom exterior free of leaks or spillage?	☒	☐	☐	
Are the EA vehicles and compressors free of leaks or spillage?	☒	☐	☐	
Cleanliness	Yes	No	NA	
Is the yard free of trash?	☒	☐	☐	
Is the yard free of weeds?	☐	☒	☐	Will begin cutting down by section
Is all equipment clear of the yard and put away?	☒	☐	☐	Making come back
Are all 55 gallon drums stacked properly on pallets in the IDW yard?	☒	☐	☐	
Are all IDW yard signs in place and upright?	☒	☐	☐	
Functionality	Yes	No	NA	
Is the yard free of obstructions or safety hazards? (trip, trip, fall, etc.)	☒	☐	☐	
Is the gravel driveway intact for vehicle access?	☒	☐	☐	
Is the enclosed fence upright and intact?	☒	☐	☐	
Are all locks smooth and functional? (trailer, refrigerator, etc.)	☒	☐	☐	

Weekly Yard Inspection - Kirtland AFB BFF Project				
Inspected by:	Pete Ferran			
Date:	5-15-2020			
Safety Information	Yes	No	NA	
Is emergency contact information in place and up to date?	☒	☐	☐	
Are signs present for emergency safety equipment? (eyewash, fire extinguisher, etc.)	☒	☐	☐	
Are flammables storage signs in place and legible?	☒	☐	☐	
Is caution tape in tact around the IDW storage area?	☐	☐	☒	
Containment	Yes	No	NA	
Are all flammables stored in the appropriate cabinet?	☒	☐	☐	
Are the refrigerator, freezer, and flammable liquid storage areas free of leaks or spillage?	☒	☐	☐	
Are the portable restroom exteriors free of leaks or spillage?	☒	☐	☐	
Are the EA vehicles and compressors free of leaks or spillage?	☒	☐	☐	
Cleanliness	Yes	No	NA	
Is the yard free of trash?	☒	☐	☐	
Is the yard free of weeds?	☐	☒	☐	New starts
Is all equipment clear of the yard and put away?	☒	☐	☐	
Are all 55 gallon drums stacked properly on pallets in the IDW yard?	☒	☐	☐	
Are all IDW yard signs in place and upright?	☐	☐	☐	
Functionality	Yes	No	NA	
Is the yard free of obstructions or safety hazards? (slip, trip, fall, etc.)	☒	☐	☐	
Is the gravel driveway intact for vehicle access?	☒	☐	☐	
Is the enclosed fence upright and intact?	☐	☐	☐	Made some repairs this week
Are all locks smooth and functional? (trailer, refrigerator, etc.)	☒	☐	☐	

Weekly Yard Inspection - KAIR OFF Project				
Inspected by:	Pete Ferraro			
Date:	5-22-2020			
Safety Information	Yes	No	NA	Corrective Action Taken
Is emergency contact information in place and up to date?	☒	☐	☐	
Are signs present for emergency safety equipment? (eyewash, fire extinguisher, etc.)	☒	☐	☐	
Are flammables storage signs in place and legible?	☒	☐	☐	
Is caution tape in tact around the IDW storage area?	☐	☐	☒	
Containment	Yes	No	NA	Comments
Are all flammables stored in the appropriate cabinet?	☒	☐	☐	
Are the refrigerator, freezer, and flammable liquid storage areas free of leaks or spillage?	☒	☐	☐	
Are the portable restroom exteriors free of leaks or spillage?	☒	☐	☐	
Are the EA vehicles and compressors free of leaks or spillage?	☒	☐	☐	
Cleanliness	Yes	No	NA	Comments
Is the yard free of trash?	☒	☐	☐	
Is the yard free of weeds?	☐	☐	☒	Started cutting by section
Is all equipment clear of the yard and put away?	☒	☐	☐	
Are all 55 gallon drums stacked properly on pallets in the IDW yard?	☒	☐	☐	
Are all IDW yard signs in place and upright?	☒	☐	☐	
Functionality	Yes	No	NA	Comments
Is the yard free of obstructions or safety hazards? (trip, fall, etc.)	☒	☐	☐	
Is the gravel driveway intact for vehicle access?	☒	☐	☐	
Is the enclosed fence upright and intact?	☒	☐	☐	
Are all locks smooth and functional? (trailer, refrigerator, etc.)	☒	☐	☐	

Weekly Yard Inspection - ICA/IA OFF Project				
Inspected by:	JOSEPH LIVINGSTON			
Date:	5/29/2020			
Safety Information	Yes	No	NA	
Is emergency contact information in place and up to date?	☒	☐	☐	
Are signs present for emergency safety equipment? (eyewash, fire extinguisher, etc.)	☒	☐	☐	
Are flammable storage signs in place and legible?	☒	☐	☐	
Is caution tape for use around the IDW storage area?	☐	☐	☒	
Contamination	Yes	No	NA	
Are all flammables stored in the appropriate cabinet?	☒	☐	☐	
Are the refrigerator, freezer, and flammable liquid storage areas free of leaks or spillage?	☒	☐	☐	
Are the portable restroom ceilings free of leaks or spillage?	☒	☐	☐	
Are the EA vehicles and compressors free of leaks or spillage?	☒	☐	☐	
Cleanliness	Yes	No	NA	
Is the yard free of trash?	☒	☐	☐	
Is the yard free of weeds?	☒	☐	☐	
Is all equipment clean of the yard and put away?	☒	☐	☐	
Are all 55 gallon drums stacked properly on pallets in the IDW yard?	☒	☐	☐	
Are all IDW yard signs in place and upright?	☒	☐	☐	
Functionality	Yes	No	NA	
Is the yard free of obstructions or safety hazards? (trip, fall, etc.)	☒	☐	☐	
Is the gravel driveway intact for vehicle access?	☒	☐	☐	
Is the enclosed fence upright and intact?	☒	☐	☐	
Are all locks smooth and functional? (trailer, refrigerator, etc.)	☒	☐	☐	

Weekly Yard Inspection - (Kirtland AFB BFF Project)				
Inspected by:	Pete Ferraro			
Date:	6-4-2020			
Safety Information	Yes	No	NA	
Is emergency contact information in place and up to date?	☒	☐	☐	
Are signs present for emergency safety equipment? (eyewash, fire extinguisher, etc.)	☒	☐	☐	
Are flammable storage signs in place and legible?	☒	☐	☐	
Is caution tape in tact around the IDW storage area?	☐	☐	☒	
Containment	Yes	No	NA	
Are all flammables stored in the appropriate cabinet?	☐	☐	☐	
Are the refrigerator, freezer, and flammable liquid storage areas free of leaks or spillage?	☒	☐	☐	
Are the portable restroom exterior free of leaks or spillage?	☒	☐	☐	
Are the EA vehicles and compressors free of leaks or spillage?	☐	☐	☐	
Cleanliness	Yes	No	NA	
Is the yard free of trash?	☒	☐	☐	
Is the yard free of weeds?	☐	☒	☐	
Is all equipment clear of the yard and put away?	☒	☐	☐	
Are all 55 gallon drums stacked properly on pallets in the IDW yard?	☒	☐	☐	
Are all IDW yard signs in place and upright?	☒	☐	☐	
Functionality	Yes	No	NA	
Is the yard free of obstructions or safety hazards? (trip, fall, etc.)	☒	☐	☐	
Is the gravel driveway intact for vehicle access?	☐	☐	☒	
Is the enclosed fence upright and intact?	☐	☐	☐	
Are all locks smooth and functional? (trailer, refrigerator, etc.)	☐	☐	☐	

Weekly Yard Inspection - IAW BFF Project				
Inspected by:	Pete Ferraro			
Date:	6-12-2020			
Safety Information	Yes	No	NA	
Is emergency contact information in place and up to date?	☒	☒	☒	
Are signs present for emergency safety equipment? (eyewash, fire extinguisher, etc.)	☒	☒	☒	
Are flammable storage signs in place and legible?	☒	☒	☒	
Is caution tape in tact around the IAW storage area?	☒	☒	☒	
Containment	Yes	No	NA	
Are all flammables stored in the appropriate cabinet?	☒	☒	☒	
Are the refrigerators, freezer, and flammable liquid storage areas free of leaks or spillage?	☒	☒	☒	
Are the portable restroom containers free of leaks or spillage?	☒	☒	☒	
Are the EA vehicles and compressors free of leaks or spillage?	☒	☒	☒	
Cleanliness	Yes	No	NA	
Is the yard free of trash?	☒	☒	☒	
Is the yard free of weeds?	☒	☒	☒	Keep cutting
Is all equipment clear of the yard and put away?	☒	☒	☒	
Are all 55 gallon drums stacked properly on pallets in the IAW yard?	☒	☒	☒	
Are all IAW yard signs in place and upright?	☒	☒	☒	
Functionality	Yes	No	NA	
Is the yard free of obstructions or safety hazards? (pile, trip, fall, etc.)	☒	☒	☒	
Is the gravel driveway intact for vehicle access?	☒	☒	☒	
Is the enclosed fence upright and intact?	☒	☒	☒	
Are all locks smooth and functional? (trailer, refrigerator, etc.)	☒	☒	☒	

Weekly Yard Inspection - Kirtland AFB Project				
Inspected by	Pete Ferrari			
Date	6-19-2020			
Safety Information	Yes	No	NA	Comments
Is emergency contact information in place and up to date?	☒	☐	☐	
Are signs present for emergency safety equipment? (eyewash, fire extinguisher, etc.)	☒	☐	☐	
Are flammable storage signs in place and legible?	☒	☐	☐	
Is caution tape in tact around the IOW storage area?	☐	☐	☒	
Compressed Gases	Yes	No	NA	Comments
Are all Compressed gases stored in the appropriate cabinet?	☒	☐	☐	
Are the refrigerators, freezer, and flammable liquid storage areas free of leaks or spillage?	☒	☐	☐	
Are the portable restroom exterior free of leaks or spillage?	☒	☐	☐	
Are the BA vehicles and compressors free of leaks or spillage?	☒	☐	☐	
Flammable Liquids	Yes	No	NA	Comments
Is the yard free of leaks?	☒	☐	☐	
Is the yard free of wastes?	☐	☒	☐	Needs are multiplying
Is all equipment clean of the yard and put away?	☒	☐	☐	
Are all 55 gallon drums stacked properly on pallets in the IOW yard?	☒	☐	☐	
Are all IOW yard signs in place and upright?	☒	☐	☐	
Obstructions	Yes	No	NA	Comments
Is the yard free of obstructions or safety hazards? (trip, trip, fall, etc.)	☒	☐	☐	
Is the ground depressed/loose for vehicle access?	☒	☐	☐	
Is the overhead fence upright and intact?	☒	☐	☐	
Are all locks secure and functional? (puller, refrigerator, etc.)	☒	☐	☐	

Weekly Yard Inspection - Kirtland AFB BFF Project				
Inspected by:	Pete Ferraro			
Date:	6-25-2020			
Safety Information	Yes	No	NA	
Is emergency contact information in place and up to date?	☒	☐	☐	
Are signs present for emergency safety equipment? (eye wash, fire extinguisher, etc.)	☒	☐	☐	
Are flammable storage signs in place and legible?	☒	☐	☐	
Is caution tape in tact around the IDW storage area?	☐	☐	☒	
Containment	Yes	No	NA	
Are all flammables stored in the appropriate cabinet?	☒	☐	☐	
Are the refrigerators, freezer, and flammable liquid storage areas free of leaks or spillage?	☒	☐	☐	
Are the portable restrooms outside free of leaks or spillage?	☒	☐	☐	
Are the EA vehicles and compressors free of leaks or spillage?	☒	☐	☐	
Cleanliness	Yes	No	NA	
Is the yard free of trash?	☐	☒	☐	
Is the yard free of weeds?	☐	☒	☐	
Is all equipment clear of the yard and put away?	☒	☐	☐	
Are all 55 gallon drums stacked properly on pallets in the IDW yard?	☒	☐	☐	
Are all IDW yard signs in place and upright?	☒	☐	☐	
Obstruction	Yes	No	NA	
Is the yard free of obstructions or safety hazards? (pile, trip, fall, etc.)	☒	☐	☐	
Is the ground driveway intact for vehicle access?	☒	☐	☐	
Is the enclosed fence upright and intact?	☒	☐	☐	
Are all tools secured and functional? (wrench, refrigerator, etc.)	☒	☐	☐	

Extraction Well Filter Pack Tagging Table

Filter Pack Tagging						
Well		KAFB-106228	KAFB-106233 ^a	KAFB-106234	KAFB-106239	Notes
January	Date/Time	01/29/2020 0815	01/29/2020 0926	01/29/2020 0954	01/29/2020 0844	
	WL Depth (ft)	463.24	437.02	453.61	465.74	
	Filter Pack Depth (ft)	418.88	419.88	429.52	432.09	
February	Date/Time	02/07/2020 1120	02/07/2020 1210	02/07/2020 1238	02/07/2020 1147	
	WL Depth (ft)	462.3	436.85	453.4	465.60	
	Filter Pack Depth (ft)	418.87	419.87	429.52	432.07	
March	Date/Time	3/25/2020 0821	3/25/2020 0913	3/25/2020 0941	3/25/2020 0846	
	WL Depth (ft)	462.50	436.3	452.82	464.51	
	Filter Pack Depth (ft)	418.92	419.77	429.52	432.00	
April	Date/Time	04/03/2020 0804	04/03/2020 0914	04/3/2020 0956	04/03/2020 0838	Used interface probe as tape measure
	WL Depth (ft)	462.6	436.38	453.05	464.84	
	Filter Pack Depth (ft)	418.72	419.68	429.52	431.84	
May	Date/Time	5/21/2020 0802	5/21/2020 0848	5/21/2020 0916	5/21/2020 0822	
	WL Depth (ft)	463.90	441.97	453.23	465.97	
	Filter Pack Depth (ft)	418.94	419.89	429.52	432.02	
June	Date/Time	6/11/2020 0820	6/11/2020 0912	6/11/2020 0940	6/11/2020 0855	
	WL Depth (ft)	464.92	442.40	453.75	466.08	
	Filter Pack Depth (ft)	418.82	419.8	429.52	431.96	
July	Date/Time					
	WL Depth (ft)					
	Filter Pack Depth (ft)					
August	Date/Time					
	WL Depth (ft)					
	Filter Pack Depth (ft)					
September	Date/Time					
	WL Depth (ft)					
	Filter Pack Depth (ft)					
October	Date/Time					
	WL Depth (ft)					
	Filter Pack Depth (ft)					
November	Date/Time					
	WL Depth (ft)					
	Filter Pack Depth (ft)					
December	Date/Time					
	WL Depth (ft)					
	Filter Pack Depth (ft)					
bgs = below ground surface ft = feet NM = not measured				Bottom of Silver mark (ft) = Red mark (ft) = Yellow mark (ft) =		429 429.62 429.28
Filter pack tagging tool reference points						
^a On October 22, 2019, KAFB-106233 was turned offline to facilitate injection into KAFB-7 until KAFB-7 could be rehabilitated. Rehabilitation pending.						

SHUTDOWN LOGS

Kirtland AFB GWTS System Shutdown Log

Date of shutdown	Time of shutdown	Date of restart	Time of restart	Was system completely shut down?	If No, which equipment was shut down?	Reason for shutdown	Name:
		6/26/20	1244	YES ☒ NO ☐	239	Rehab 239	PF
6/26/20	1254			YES ☒ NO ☐	228	Check for CE, Divert CE	PF
6/26/20	1259	6/26/20	1303	YES ☒ NO ☐	239	Divert to ext. Supply	PF
		6/26/20	1348	YES ☐ NO ☐	228	Run both 228, 239 through T2	PF
				YES ☐ NO ☐			
				YES ☐ NO ☐			
				YES ☐ NO ☐			
				YES ☐ NO ☐			
				YES ☐ NO ☐			
				YES ☐ NO ☐			
				YES ☐ NO ☐			
				YES ☐ NO ☐			
				YES ☐ NO ☐			
				YES ☐ NO ☐			

Kirtland AFB GWTS System Shutdown Log

Date of shutdown	Time of shutdown	Date of restart	Time of restart	Was system completely shut down?	If No, which equipment was shut down?	Reason for shutdown	Name:
5/23/20	1616	5/24/20	0636	YES ☐ NO ☒	233		JL
5/24/20	2036	5/25/20	0700	YES ☐ NO ☒	233		JL
5/25/20	2100	5/26/20	0537	YES ☐ NO ☒	233		JL
5/26/20	1933	5/27/20	0526	YES ☐ NO ☒	233		JL
5/27/20	1735	5/28/20	0545	YES ☐ NO ☒	233		JL
5/28/20	0828	6/2/20	0723	YES ☐ NO ☒	233		PF
6-8-20	0731	6-8-20	0731	YES ☐ NO ☒	233		PF
6-8-20	0731	6-8-20	2325	YES ☐ NO ☒	233		PF
6-8-20	2325	6-10-20	0712	YES ☐ NO ☒	233		PF
6-9-20	0523	6-10-20	0712	YES ☐ NO ☒	239		PF
6/18/20	0706	6/18/20	1129	YES ☐ NO ☒	Tran 2 (228+239)	P-212B Motor Swap	JL
6/22/20	0215			YES ☐ NO ☒	233, 239		PF
		6/24/20	0825	YES ☐ NO ☒	233-on		PF
6/26/20	0942	6/26/20	0950	YES ☐ NO ☒		SUMP (INTERNAL) High level	PF
				YES ☐ NO ☒			

Kirtland AFB GWTS System Shutdown Log

Date of shutdown	Time of shutdown	Date of restart	Time of restart	Was system completely shut down?	If No, which equipment was shut down?	Reason for shutdown	Name:
		4/30/20	0710	YES ☐ NO ☒	233 & W		PF
4/30/20	1520	5/1/20	0731	YES ☐ NO ☒	233		PF
5/1/20	1654	5/3/20	0626	YES ☐ NO ☐	233		PF
5/5/20	1253	5/9/20	0644	YES ☐ NO ☒	233		PF
5/10/20	1722	5/11/20	0731	YES ☐ NO ☒	233		PF
5/11/20	1601	5/12/20	1558	YES ☐ NO ☒	233		PF
5/13/20	0749	5/14/20	1020	YES ☐ NO ☒	233		PF
5/14/20	1533	5/15/20	0720	YES ☐ NO ☒	233		PF
5/17/20	1428	5/17/20	1457	YES ☐ NO ☒	from control	change over to well 7 from GC	GOB
5/18/20	0737	5/18/20	0756	YES ☒ NO ☐	T1 396.2881 T2 341.8064 Well 7 210599.9	Pond levels — 0854 2.5 Rod 4.27 HM/	PF <u>to GCMP</u>
5/16/20	0903	5/18/20	0756	YES ☐ NO ☒	233	233	PF
5/18/20	1618	5/19/20	0538	YES ☐ NO ☒	233	↓	PF
5/21/20	1540	5/22/20	0723	YES ☐ NO ☒	233	↓	PF
5/22/20	1558	5/23/20	0759	YES ☐ NO ☒	233	↓	JL

$I_1 = 396.1100$
 $I_2 = 341.5889$
 $W7 = N/A$

Kirtland AFB GWTS System Shutdown Log

Date of shutdown	Time of shutdown	Date of restart	Time of restart	Was system completely shut down?	If No, which equipment was shut down?	Reason for shutdown	Name:
4-1-20	1218	4-1-20	1236	YES ☒ NO ☐	T1 382.6000 T2 327.3085 Well 7 205952.2	change to GCMP	PF
4/11/20	1422	4/11/20	1426	YES ☒ NO ☐	T1 385.1623 T2 330.4216 Well 7 205953.0	Change to Well 7	JRL
4/13/20	0740	4/13/20	0740	YES ☒ NO ☐	T1 385.5480 T2 330.9564 Well 7 206945.0	(did not shut down) Change to GCMP	JRL
4/15/20	0925	4/15/20	0925	YES ☒ NO ☐	T1 386.1246 T2 331.5913 Well 7 206995.0	change to Well 7	PF
4/17/20	1210	4/17/20	1230	YES ☒ NO ☐	T1 386.6546 T2 332.2362 Well 7 208253.5	change to GCMP	PF
4/21/20	0713 PF	4/21/20	0713	YES ☒ NO ☐	233 ONLY		PF
4/21/20	1442			YES ☒ NO ☐	233		
4/22/20	1447	4/22/2020	1502	YES ☒ NO ☐	T1 388.0274 T2 333.8073 Well 7 208253.5	change to well 7	PF
		4/24/2020	0805	YES ☒ NO ☐	239	271 74 to 78 gpm	PF
4/25/20	1705	4/25/20	1723	YES ☒ NO ☐	T1 388.8126 T2 334.7616 Well 7 210162.0	change to GCMP	PF
		4/27/20	0758	YES ☒ NO ☐	233 online		JL
4/27/20	1557	4/28/20	0719	YES ☒ NO ☐	233	233	PF
4/28/20	1616	4/29/20	0840	YES ☒ NO ☐	233		PF
4/29/20	1143			YES ☒ NO ☐	233		

Sampling Results from Well Disinfection

Table I-1-5
Kirtland BFF Well Disinfection Analyses, Q2 2020

Well Location ID:			KAFB-106239			KAFB-106239			KAFB-106239		
Field Sample ID:			GW239-202-PreDis			KAFB-106239-WR-pre			KAFB-106239-WR-post		
Sample Date:			6/19/2020			6/25/2020			6/29/2020		
Sample Type:			REG			REG			REG		
Analytical Method	Analyte	Project Screening Level^a	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD
Method E300.1 (µg/L)	Bromate	10	ND	U	25	ND	U	5	ND	U	5
	Chlorite	1,000	ND	U	20	ND	U	20	ND	U	20
Method E331.0 (µg/L)	Perchlorate	14	0.15	--	0.1	0.2	--	0.1	0.16	--	0.1

^a Screening Value based on EPA Safe Drinking Water Act Maximum Contaminant Level for chlorite and bromate (May 2018); and NMED tapwater non-cancer screening value for perchlorate (2018).

µg/L = microgram per liter

AFB = Air Force Base

BFF = Bulk Fuels Facility

EPA = U.S. Environmental Protection Agency

ID = identification

KAFB = Kirtland Air Force Base

MCL = maximum contaminant level

ND = not detected

NMED= New Mexico Environment Department

REG = normal field sample

RL = Reporting limit

Val Qual = validation qualifier

Shading = detected concentrations above the detection limit

Bold/Shading = reported concentrations exceed the project screening level

Val Quals based on independent data validation

U = Qualifier denotes the analyte was analyzed but not detected above the detection limit. The value associated with the U-qualifier is the reporting limit.

-- = Validation qualifier not assigned.

Table I-2-1
NM 811 Ticket Summary for Groundwater Conveyance Line April - June 2020

Year	Month	Date	Ticket #	Status
2020	April	4/3/2020	20AP030452	Site Marked
		4/8/2020	20AP080229	UFO Cleared - Emergency Locate
	May	5/1/2020	20MY010074	Site Marked
		5/14/2020	20MY140072	UFO Cleared
		5/18/2020	20MY180731	UFO Cleared
		5/20/2020	20MY200480	UFO Cleared
		5/26/2020	20MY260176	Site Marked

Notes:

UFO CLEARED - The Underground Facility Owner/Operator (UFO) has determined they do not have any underground lines in the area of excavation.

No NM811 tickets were generated for the groundwater conveyance line in June 2020

From: eticket@nm811.org
To: [NM811BFF](#)
Subject: NM811 Locate Ticket: 20AP030452
Date: Friday, April 3, 2020 2:20:48 PM

NM811 LOCATE REQUEST

TICKET NUMBER:	20AP030452	Update of:	
Ticket Type:	Standard Locate	For Code:	KAFB
Creation Date:	04/03/20 14:20	Seq Num:	1

Excavator Information

Company:	Tri West Fence	Main Contact Phone:	(575) 791-5979
Address:	110 Denny Rd	Secondary Phone:	
City, St, Zip:	Bernalillo, NM 87004	Main Contact Email:	
Company Phone:	(505) 867-6433	Alternate Contact:	BRYANT THOMAS
Company Fax:		Alternate Contact Phone:	(505) 400-0373
Main Contact:	ORLANDO ORTIZ	Alternate Contact Email:	

Work Information

State:	NM	Work To Begin:	04/07/20 AT 14:15
County:	BERNALILLO	Expire Date:	04/28/20 AT 14:15
Place:	ALBUQUERQUE		
Address:	1100 LOUISIANA BLVD SE		
Intersection:	GIBSON BLVD SE		
Latitude:	35.058511	Longitude:	-106.568819
Secondary Lat:	35.062928	Secondary Long:	-106.564946
Work Type:	Install - Fencing	Working For:	CITY OF ALBUQUERQUE
Pre-marked:	No	Mechanical Boring:	No
Contact Prior to Locating:	No	Contact After Locating:	No

Driving Directions

Spotting Instructions

START AT SW CORNER OF PROPERTY ALONG LOUISIANA 600FT TO MEMORIAL PARK AND APARTMENT COMPLEX GOING E ALONG PARKING LOT FOR APPROX 300 FT ALSO SPOT 50 FT WIDE FROM GPS: 35.062274-106.566046 TO GPS: 35.062270-106.565181 Area Marked in White

Remarks

No Hazards - Open Access

 TRSQ: [W8T10NR03ES25SE] [W8T10NR04ES30SW]

Utilities Notified:

Code	Name	Manually Added
ABQSD	CITY OF ALBUQUERQUE - STORM DRAINS	False
ABQWA	ALBUQUERQUE/BERNALILLO COUNTY WUA	False
ADBC	ADB COMPANIES	False
COA	CITY OF ALBUQUERQUE	False
JONE	COMCAST - ALBUQUERQUE	False
KAFB	KIRTLAND AIR FORCE BASE	False
MCI1	MCI CABLE SEC	False
NMGAQ	NEW MEXICO GAS COMPANY - ALBUQUERQUE	False
PNMAB	PNM ELECTRIC - ALBUQUERQUE	False
QLNN	CENTURYLINK LOCAL NETWORK CENTRAL	False
UPN	UNITE PRIVATE NETWORKS, LLC	False

From: eticket@nm811.org
To: [NM811BFF](#)
Subject: NM811 Emergency Locate Ticket: 20AP080229
Date: Wednesday, April 8, 2020 8:19:41 AM
Importance: High

NM811 EMERGENCY LOCATE REQUEST

TICKET NUMBER:	20AP080229	Update of:	
Ticket Type:	Emergency Locate	For Code:	KAFB
Creation Date:	04/08/20 08:19	Seq Num:	1

Excavator Information

Company:	volt incorporated	Main Contact Phone:	(505) 573-4954
Address:	1120 Blanca ave	Secondary Phone:	
City, St, Zip:	los lunas, NM 87031	Main Contact Email:	dannyvoltinc@gmail.com
Company Phone:	(505) 573-4954	Alternate Contact:	
Company Fax:		Alternate Contact Phone:	
Main Contact:	danny padilla	Alternate Contact Email:	

Work Information

State:	NM	Work To Begin:	04/08/20 AT 10:15
County:	BERNALILLO		
Place:	ALBUQUERQUE		
Address:	1041 LOUISIANA BLVD SE		
Intersection:	EASTERN AVE SE		
Latitude:	35.059991	Longitude:	-106.569364
Secondary Lat:	35.060325	Secondary Long:	-106.568753
Work Type:	Emergency - Electric	Working For:	COMCAST
Pre-marked:	Yes	Mechanical Boring:	No
Contact Prior to Locating:	No	Contact After Locating:	No

Driving Directions

Spotting Instructions

FROM THE NW CORNER OF THE PROPERTY SPOT A 30 FT WIDE PATH ALONG WHITE LINES IN ALLEY GOING S APPROX 30 FT

Remarks

No Hazards - Open Access Crew is on site.

 TRSQ: [W8T10NR03ES25SE]

Utilities Notified:

Code	Name	Manually Added
ABQWA	ALBUQUERQUE/BERNALILLO COUNTY WUA	False
ADBC	ADB COMPANIES	False
JONE	COMCAST - ALBUQUERQUE	False
KAFB	KIRTLAND AIR FORCE BASE	False
MCI1	MCI CABLE SEC	False
NMGAQ	NEW MEXICO GAS COMPANY - ALBUQUERQUE	False
PNMAB	PNM ELECTRIC - ALBUQUERQUE	False
QLNN	CENTURYLINK LOCAL NETWORK CENTRAL	False
UPN	UNITE PRIVATE NETWORKS, LLC	False

From: eticket@nm811.org
To: [NM811BFF](#)
Subject: NM811 Locate Ticket: 20MY010074
Date: Friday, May 1, 2020 8:07:22 AM

NM811 LOCATE REQUEST

TICKET NUMBER:	20MY010074	Update of:	
Ticket Type:	Standard Locate	For Code:	KAFB
Creation Date:	05/01/20 08:07	Seq Num:	1

Excavator Information

Company:	CABLECOM	Main Contact Phone:	(505) 369-0063
Address:	8401A JEFFERSON ST NE	Secondary Phone:	
City, St, Zip:	ALBUQUERQUE, NM 87113	Main Contact Email:	MICHAEL.GALLEGOS@CABLECOMLLC.NET
Company Phone:	(505) 369-0063	Alternate Contact:	
Company Fax:		Alternate Contact Phone:	
Main Contact:	MICHAEL GALLEGOS	Alternate Contact Email:	

Work Information

State:	NM	Work To Begin:	05/05/20 AT 08:15
County:	BERNALILLO	Expire Date:	05/27/20 AT 08:15
Place:	ALBUQUERQUE		
Address:	1041 LOUISIANA BLVD SE		
Intersection:	EASTERN AVE SE		
Latitude:	35.059932	Longitude:	-106.56951
Secondary Lat:	35.060397	Secondary Long:	-106.568813
Work Type:	Install - See Remarks	Working For:	COMCAST
Pre-marked:	Yes	Mechanical Boring:	No
Contact Prior to Locating:	No	Contact After Locating:	No

Driving Directions

Spotting Instructions

25FT RAD OF THE POLE MARKED IN WHITE SW CORNER OF THE PROPERTY AT EASTERN AVE & THE ALLEY

Remarks

TYPE OF WORK: PLACING AN ANCHOR No Hazards - Open Access

 TRSQ: [W8T10NR03ES25SE]

Utilities Notified:

Code	Name	Manually Added
ABQSD	CITY OF ALBUQUERQUE - STORM DRAINS	False
ABQWA	ALBUQUERQUE/BERNALILLO COUNTY WUA	False
ADBC	ADB COMPANIES	False
JONE	COMCAST - ALBUQUERQUE	False
KAFB	KIRTLAND AIR FORCE BASE	False
MCI1	MCI CABLE SEC	False
NMGAQ	NEW MEXICO GAS COMPANY - ALBUQUERQUE	False
PNMAB	PNM ELECTRIC - ALBUQUERQUE	False
QLNN	CENTURYLINK LOCAL NETWORK CENTRAL	False
UPN	UNITE PRIVATE NETWORKS, LLC	False

From: eticket@nm811.org
To: [NM811BFF](#)
Subject: NM811 Locate Ticket: 20MY140072
Date: Thursday, May 14, 2020 7:42:39 AM

NM811 LOCATE REQUEST

TICKET NUMBER:	20MY140072	Update of:	
Ticket Type:	Standard Locate	For Code:	KAFB
Creation Date:	05/14/20 07:42	Seq Num:	1

Excavator Information

Company:	KATHLEEN PIERSON	Main Contact Phone:	(505) 263-2883
Address:	6413 MITCHELL RD SE	Secondary Phone:	
City, St, Zip:	ALBUQUERQUE, NM 87108	Main Contact Email:	KPPIERS@CENTURYLINK.NET
Company Phone:	(505) 263-2883	Alternate Contact:	
Company Fax:		Alternate Contact Phone:	
Main Contact:	KATHLEEN PIERSON	Alternate Contact Email:	

Work Information

State:	NM	Work To Begin:	05/18/20 AT 07:45
County:	BERNALILLO	Expire Date:	06/09/20 AT 07:45
Place:	ALBUQUERQUE		
Address:	6413 MITCHELL RD SE		
Intersection:	ODLUM DR SE		
Latitude:	35.05667	Longitude:	-106.570715
Secondary Lat:	35.057416	Secondary Long:	-106.56997
Work Type:	Install - Posts	Working For:	SELF
Pre-marked:	No	Mechanical Boring:	No
Contact Prior to Locating:	No	Contact After Locating:	No

Driving Directions

Spotting Instructions

SPOT THE W SIDE OF THE HOUSE.

Remarks

No Hazards - Open Access

 TRSQ: [W8T10NR03ES36NE]

Utilities Notified:

Code	Name	Manually Added
ABQWA	ALBUQUERQUE/BERNALILLO COUNTY WUA	False
JONE	COMCAST - ALBUQUERQUE	False
KAFB	KIRTLAND AIR FORCE BASE	False
MCI1	MCI CABLE SEC	False
NMGAQ	NEW MEXICO GAS COMPANY - ALBUQUERQUE	False
PNMAB	PNM ELECTRIC - ALBUQUERQUE	False
QLNN	CENTURYLINK LOCAL NETWORK CENTRAL	False

From: eticket@nm811.org
To: [NM811BFF](#)
Subject: NM811 Locate Ticket: 20MY180731
Date: Monday, May 18, 2020 2:40:32 PM

NM811 LOCATE REQUEST

TICKET NUMBER:	20MY180731	Update of:	
Ticket Type:	Standard Locate	For Code:	KAFB
Creation Date:	05/18/20 14:40	Seq Num:	1

Excavator Information

Company:	AMERICAN FENCE	Main Contact Phone:	(505) 681-3244
Address:	9634 2ND ST	Secondary Phone:	
City, St, Zip:	ALBUQUERQUE, NM 87114	Main Contact Email:	BRIAN.NICKELL@AMERICANFENCE.COM
Company Phone:	(505) 897-3103	Alternate Contact:	
Company Fax:		Alternate Contact Phone:	
Main Contact:	BRIAN NICKELL	Alternate Contact Email:	

Work Information

State:	NM	Work To Begin:	05/20/20 AT 14:45
County:	BERNALILLO	Expire Date:	06/11/20 AT 14:45
Place:	ALBUQUERQUE		
Address:	1606 SAN PEDRO DR SE		
Intersection:	RIDGECREST DR SE		
Latitude:	35.051376	Longitude:	-106.573163
Secondary Lat:	35.052975	Secondary Long:	-106.569301
Work Type:	Install - Fencing	Working For:	CITY OF ALBUQUERQUE
Pre-marked:	Yes	Mechanical Boring:	No
Contact Prior to Locating:	No	Contact After Locating:	No

Driving Directions

USS BULLHEAD MEMORIAL PARK

Spotting Instructions

AROUND THE ELECTRICAL UNITS IN THE PARKING LOT FAR EAST END OF BULLHEAD PARK & W OF NEW DAY YOUTH & FAMILY SERVICES BLDG, Area Marked in White paint & flags

Remarks

No Hazards - Open Access

 TRSQ: [W8T10NR03ES36NE]

Utilities Notified:

Code	Name	Manually Added
ABQWA	ALBUQUERQUE/BERNALILLO COUNTY WUA	False
JONE	COMCAST - ALBUQUERQUE	False
KAFB	KIRTLAND AIR FORCE BASE	False
MCI1	MCI CABLE SEC	False
NMGAQ	NEW MEXICO GAS COMPANY - ALBUQUERQUE	False
PNMAB	PNM ELECTRIC - ALBUQUERQUE	False
QLNN	CENTURYLINK LOCAL NETWORK CENTRAL	False

From: eticket@nm811.org
To: [NM811BFF](#)
Subject: NM811 Locate Ticket: 20MY200480
Date: Wednesday, May 20, 2020 12:12:31 PM

NM811 LOCATE REQUEST

TICKET NUMBER:	20MY200480	Update of:	
Ticket Type:	Standard Locate	For Code:	KAFB
Creation Date:	05/20/20 12:12	Seq Num:	1

Excavator Information

Company:	Tri West Fence	Main Contact Phone:	(505) 369-8782
Address:	110 Denny Rd	Secondary Phone:	
City, St, Zip:	Bernalillo, NM 87004	Main Contact Email:	JESSE@TRIWESTFENCE.COM
Company Phone:	(505) 867-6433	Alternate Contact:	
Company Fax:		Alternate Contact Phone:	
Main Contact:	JESSE FERNANDEZ	Alternate Contact Email:	

Work Information

State:	NM	Work To Begin:	05/22/20 AT 12:15
County:	BERNALILLO	Expire Date:	06/15/20 AT 12:15
Place:	ALBUQUERQUE		
Address:	7600 SOUTHERN AVE SE		
Intersection:	GROVE ST SE		
Latitude:	35.058089	Longitude:	-106.568969
Secondary Lat:	35.067328	Secondary Long:	-106.559377
Work Type:	Install - See Remarks	Working For:	THE CITY OF ALBUQUERQUE
Pre-marked:	No	Mechanical Boring:	No
Contact Prior to Locating:	No	Contact After Locating:	No

Driving Directions

PHIL CHACON PARK

Spotting Instructions

AREAS MARKED IN WHITE ON N SIDE OF THE PARK ENTRANCES (2 ENTRANCES)

Remarks

INSTALL: TRAFFIC TYPE GATE No Hazards - Open Access

 TRSQ: [W8T10NR03ES25NE] [W8T10NR03ES25SE] [W8T10NR03ES36NE] [W8T10NR04ES30NW] [W8T10NR04ES30SW]
 [W8T10NR04ES31NW]

Utilities Notified:

Code	Name	Manually Added
ABQSD	CITY OF ALBUQUERQUE - STORM DRAINS	False
ABQSL	CITY OF ALBUQUERQUE - STREET LIGHTING DEPT	False
ABQWA	ALBUQUERQUE/BERNALILLO COUNTY WUA	False
ADBC	ADB COMPANIES	False
APS	ALBUQUERQUE PUBLIC SCHOOLS	False
COA	CITY OF ALBUQUERQUE	False
JONE	COMCAST - ALBUQUERQUE	False
KAFB	KIRTLAND AIR FORCE BASE	False
MCI1	MCI CABLE SEC	False
NMGAQ	NEW MEXICO GAS COMPANY - ALBUQUERQUE	False
PNMAB	PNM ELECTRIC - ALBUQUERQUE	False
QLNN	CENTURYLINK LOCAL NETWORK CENTRAL	False
UPN	UNITE PRIVATE NETWORKS, LLC	False

From: eticket@nm811.org
To: [NM811BFF](#)
Subject: NM811 Locate Ticket: 20MY260176
Date: Tuesday, May 26, 2020 8:04:29 AM

NM811 LOCATE REQUEST

TICKET NUMBER:	20MY260176	Update of:	
Ticket Type:	Standard Locate	For Code:	KAFB
Creation Date:	05/26/20 08:04	Seq Num:	1

Excavator Information

Company:	ANTHONY BEARDSLEY	Main Contact Phone:	(505) 702-4742
Address:	928 GEORGIA ST SE	Secondary Phone:	
City, St, Zip:	ALBUQUERQUE, NM 87108	Main Contact Email:	ANTHONY.BEARDSLEY@BIA.GOV
Company Phone:	(505) 702-4742	Alternate Contact:	
Company Fax:		Alternate Contact Phone:	
Main Contact:	ANTHONY BEARDSLEY	Alternate Contact Email:	

Work Information

State:	NM	Work To Begin:	05/28/20 AT 08:00
County:	BERNALILLO	Expire Date:	06/18/20 AT 08:00
Place:	ALBUQUERQUE		
Address:	928 GEORGIA ST SE		
Intersection:	ROSS AVE SE		
Latitude:	35.062295	Longitude:	-106.572023
Secondary Lat:	35.062488	Secondary Long:	-106.571492
Work Type:	Install - See Remarks	Working For:	SELF
Pre-marked:	No	Mechanical Boring:	No
Contact Prior to Locating:	No	Contact After Locating:	No

Driving Directions

Spotting Instructions

SPOT BEHIND THE PROPERTY, IN THE ALLEY.

Remarks

INSTALLING POSTS FOR A GATE. DOGS ON PROPERTY, KEPT INSIDE - OPEN ACCESS

 TRSQ: [W8T10NR03ES25SE]

Utilities Notified:

Code	Name	Manually Added
ABQWA	ALBUQUERQUE/BERNALILLO COUNTY WUA	False
JONE	COMCAST - ALBUQUERQUE	False
KAFB	KIRTLAND AIR FORCE BASE	False
NMGAQ	NEW MEXICO GAS COMPANY - ALBUQUERQUE	False
QLNN	CENTURYLINK LOCAL NETWORK CENTRAL	False

 225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1925		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-GWTS1-040220					
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eest.com EA Amanda Smith: asmith@eest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eest.com EA				YEAR: 2020 QUARTER: Q2					
PROJECT SITE AND PHASE: ST106/SS111				LAB PO NUMBER: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258											
				ANALYSIS REQUIRED (Specify number of bottles)													
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEN (8260C)	EDB (8071)	Total As, Pb, Cd, Cr, Na, Mg (8200A/8010C)	Disolved Fe, Mn (8010C)	Chloride, Bromide, Sulfate (8010C)	Nitrate-Nitrite (3532)	Ammonia (35450NH3)	Sulfide (35450S2CF)	Alkalinity (35450S2CF)	COMMENTS	
1	GWTS-EFF1-040220	04/02/2020	1020	6	--	3	--	2	--	1*	--	--	--	--	--	--	
2	GWTS-EFF1DUP-040220	04/02/2020	1020	6	--	3	--	2	--	1*	--	--	--	--	--	--	
3	GWTS-GAC1-040220	04/02/2020	1035	6	--	3	--	2	--	1*	--	--	--	--	--	--	
4	GWTS-INF1-040220	04/02/2020	1050	6	--	3	--	2	--	1*	--	--	--	--	--	--	
5	GWTS-TB01-040220	04/02/2020	1055	4	--	2	--	2	--	--	--	--	--	--	--	--	
6																	
COMMENTS: *Dissolved Fe, Mn aliquot was field filtered.																	
SAMPLER(S): <i>Pete Ferrari</i>										COURIER AND SHIPPING NUMBER: Fedex: <i>815528257602</i>							
RELINQUISHED BY:										RECEIVED BY:							
DATE										DATE							
TIME										TIME							
Printed Name and Signature: <i>Pete Ferrari</i>										Printed Name and Signature: <i>Pete Ferrari</i>							
Printed Name and Signature:										Printed Name and Signature:							
Printed Name and Signature:										Printed Name and Signature:							
Printed Name and Signature:										Printed Name and Signature:							
Printed Name and Signature:										Printed Name and Signature:							

 225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-GWTS2-040220											
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				YEAR: 2020 QUARTER: Q2											
PROJECT SITE AND PHASE: ST106/SS111				LAB PO NUMBER: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258																	
				ANALYSIS REQUIRED (Specify number of bottles)																			
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs	BTEX	BTEXN	EDB	(801)	Total As, Pb, Cd, K, Na, Mg	Dissolved Fe, Mn	(6010C)	Chloride, bromide, sulfate	(300.0)	Nitrate-Nitrite	(353.2)	Ammonia	(SM4500NH3)	Sulfide	(SM4500SCF)	Alkalinity	(SM2320B)	COMMENTS
1	GWTS-EFF2-040220	04/02/2020	0920	18	--	9	--	6	--	3*	--	--	--	--	--	--	--	--	--	--	--	--	Additional Volume Provided for MSMSD
2	GWTS-GAC2-040220	04/02/2020	0950	6	--	3	--	2	--	1*	--	--	--	--	--	--	--	--	--	--	--	--	
3	GWTS-INF2-040220	04/02/2020	1000	6	--	3	--	2	--	1*	--	--	--	--	--	--	--	--	--	--	--	--	
4	GWTS-FB02-040220	04/02/2020	0920	5	--	3	--	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Collected simultaneously with GWTS-EFF2-040220
5																							
6																							
COMMENTS: *Dissolved Fe, Mn aliquot was field filtered.																							
SAMPLER(S): <i>Pete Ferraro</i>										COURIER AND SHIPPING NUMBER: <i>Fedex: 815528257602</i>													
RELINQUISHED BY:										RECEIVED BY:													
DATE TIME										DATE TIME													
Printed Name and Signature: <i>Pete Ferraro</i>										Printed Name and Signature:													
Printed Name and Signature: <i>Pete Ferraro</i>										Printed Name and Signature:													
Printed Name and Signature:										Printed Name and Signature:													
Printed Name and Signature:										Printed Name and Signature:													
Printed Name and Signature:										Printed Name and Signature:													



Groundwater Purge and Sampling Log

Year: **2020**
Quarter: **Q2 April**

Project: Kirtland AFB BFF ST-106/SS-111

Well ID:

Purge Information and Field Parameter

Date: 04/02/2020

Purge Start Time: -- Purge Rate: -- L/min X 0.265 = -- gal/min

Description of first water purged: Clear, odorless

Drawdown Limit: -- ft (based on previous water level)

Time	Sample Location	Facility	Turbidity (NTU)	Temp. (°C)	Saturated DO (%)	DO (mg/L)	Specific Conductance (µS/cm)	pH	ORP (mV)
Historical Data:									
1018	EFF1	GWTS	0.30	19.6	56.5	5.16	592	7.35	542.7
0946	GAC1	GWTS	0.30	20.0	16.3	1.49	466.7	7.31	95.6 <i>PA</i>
1045	INF1	GWTS	0.24	19.7	68.7	6.29	593	7.78	372.8
0916	EFF2	GWTS	0.28	19.9	51.0	4.63	465.4	7.26	67.3
0946	GAC2	GWTS	0.30	20.0	16.3	1.49	466.7	7.31	95.6
0956	INF2	GWTS	0.31	20.1	61.7	5.60	467.3	7.73	604.9
0956	GAC1	GWTS	0.32	19.6	26.0	2.39	593	7.34	411.2
1032									

Sample Time: 0916-1045 Sample Date: 04/02/2020

Purge End Time: --

Bubbles in the vials? ☐ Yes ☒ No Where? NA Amount NA Size NA

Sampled by: Pete Ferreri Sampler Signature: Pete Ferreri

IDW Management

IDW will be taken to:

Sample Information

Drum No. Estimated volume per IDW drum (gal)

1

2

Total

--

IDW Label:

--

Sample ID: GWTS-XXXX-040220

Duplicate ID: GWTS-EFFXDUP-040220
(if applicable)

COC#: COC-GWTSX-040220

Sampling Method: Tap

Sampling Medium: Water

Comments:

Reviewed by: Initials: Review Date: Page 1 of 1

Copy

225 Schilling Circle Suite 400 Hunt Valley, MD Tel No: (410) 884-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD				COC NUMBER									
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA									
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258		YEAR: 2020 QUARTER: Q2									
		ANALYSIS REQUIRED (Specify number of bottles)													
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8280C)	BTEX (8280C)	ED9 (9011)	Disolved Fe, Mn (9010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Ammonia (3450NH3)	Sulfide (3450SCF)	Alkalinity (3450SCF)	(SM2320B)	COMMENTS
1	GWTS-EFF1-060320	06/03/2020	0905	6	--	3	--	2	--	1*	--	--	--	--	
2	GWTS-EFF1DUP-060320	06/03/2020	0905	6	--	3	--	2	--	1*	--	--	--	--	
3	GWTS-GAC1-060320	06/03/2020	0919	6	--	3	--	2	--	1*	--	--	--	--	
4	GWTS-INF1-060320	06/03/2020	0927	6	--	3	--	2	--	1*	--	--	--	--	
5	GWTS-TB01-060320	06/03/2020	0930	4	--	2	--	2	--	--	--	--	--	--	
6															
COMMENTS: *Dissolved Fe, Mn aliquot was field filtered.															
SAMPLER(S): J Livingston				COURIER AND SHIPPING NUMBER: FedEx: 8160 9541 3907											
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME	
Printed Name and Signature: J Livingston				6/3/2020		1030		Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature:							
Printed Name and Signature:								Printed Name and Signature:							

Caps

 225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-GWTS2-060320				
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				YEAR: 2020 QUARTER: Q2				
PROJECT SITE AND PHASE: ST106/SS111				LAB PO NUMBER: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 558-7258										
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)												COMMENTS
				Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	EDS (8011)	Total As, Pb, Cd, K, Na, Mg (6020, 6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Ammonia (SM450NH3)	Sulfide (SM450S2CF)	Alkalinity (SM450B)		
1	GWTS-EFF2-060320	06/03/2020	0824	18	--	9	--	6	--	3*	--	--	--	--	Additional Volume Provided for MSMSD	
2	GWTS-GAC2-060320	06/03/2020	0843	6	--	3	--	2	--	1*	--	--	--	--		
3	GWTS-INF2-060320	06/03/2020	0853	6	--	3	--	2	--	1*	--	--	--	--		
4	GWTS-FB02-060320	06/03/2020	0824	5	--	3	--	2	--	--	--	--	--	--	Collected simultaneously with GWTS-EFF2-060320	
5																
6																
COMMENTS: *Dissolved Fe, Mn aliquot was field filtered.																
SAMPLER(S): J Livingston								COURIER AND SHIPPING NUMBER: Fedex: 8160 9541 3907								
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME		
Printed Name and Signature: J Livingston				6/3/2020		1030										
Printed Name and Signature:																
Printed Name and Signature:																
Printed Name and Signature:																
Printed Name and Signature:																

Year: 2020
Quarter: Q2 June

Well ID:

Date: 06/03/2020

Description of first water purged:

Drawdown Limit: _____ ft (based on previous water level)

[illegible]

Sample Time: 0820-0923 Sample Date: 06/03/2020

Purge End Time:

Bubbles in the vials? ☐ Yes

Where?

NA

Amount

NA

Size

11A

Sampled by:

JUST LIVINGSTON

Sampler Signature:

Sample Information

Drum No.	Estimated volume per IDW drum (gal)
1	10
2	10
3	10
4	10
5	10
6	10
7	10
8	10
9	10
10	10
11	10
12	10
13	10
14	10
15	10
16	10
17	10
18	10
19	10
20	10
21	10
22	10
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79	10
80	10
81	10
82	10
83	10
84	10
85	10
86	10
87	10
88	10
89	10
90	10
91	10
92	10
93	10
94	10
95	10
96	10
97	10
98	10
99	10
100	10

1

2

Total

IDW Label:

Sample ID: GWTS-XXXX-060320

Duplicate ID:
(if applicable) GWTS-EFFXDUP-060320

COC#: COC-GWTSX-060320

Sampling Method: Tap

Sampling Medium: Water

Comments:

Reviewed by:

Initials:

Review Date:

Page 1 of 1

 225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD				COC NUMBER COC-GWTS1-051120													
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA		YEAR: 2020 QUARTER: Q2											
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258															
ANALYSIS REQUIRED (Specify number of bottles)																			
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(6011)	(6011)	(6011)	(6011)	(6011)	(6011)	(6011)	(6011)	(6011)	(6011)	(6011)	(6011)	(6011)	(6011)	COMMENTS
1	GWTS-EFF1-051120	05/11/2020	1115	18	--	9	--	6	--	3*	--	--	--	--	--	--	--	--	Additional Volume Provided for MS/MSD
2	GWTS-GAC1-051120	05/11/2020	1140	6	--	3	--	2	--	1*	--	--	--	--	--	--	--	--	
3	GWTS-INF1-051120	05/11/2020	1150	6	--	3	--	2	--	1*	--	--	--	--	--	--	--	--	
4	GWTS-FB01-051120	05/11/2020	1115	5	--	3	--	2	--	--	--	--	--	--	--	--	--	--	Collected simultaneously with GWTS-EFF1-051120
5	GWTS-TB01-051120	05/11/2020	1235	4	--	2	--	2	--	--	--	--	--	--	--	--	--	--	
6																			
COMMENTS: *Dissolved Fe, Mn aliquot was field filtered.																			
SAMPLER(S): <i>Pete Ferraro</i>										COURIER AND SHIPPING NUMBER: Fedex: 8155 2825 6878									
RELINQUISHED BY:										RECEIVED BY:									
DATE TIME										DATE TIME									
Printed Name and Signature: <i>Pete Ferraro</i>										Printed Name and Signature: <i>Dylan Schmeelk</i>									
DATE TIME: <i>5-11-2020 1430</i>										DATE TIME: <i>5-11-2020 1330</i>									
Printed Name and Signature: <i>Dylan Schmeelk</i>										Printed Name and Signature:									
DATE TIME: <i>5-11-2020 1430</i>										DATE TIME:									
Printed Name and Signature:										Printed Name and Signature:									
DATE TIME:										DATE TIME:									
Printed Name and Signature:										Printed Name and Signature:									
DATE TIME:										DATE TIME:									

 225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1825		CHAIN-OF-CUSTODY RECORD				COC NUMBER COC-GWTS2-051120										
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601		FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@east.com EA Amanda Smith: asmith@east.com EA Pam Moss: pmoss@east.com EA		YEAR: 2020								
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258		QUARTER: Q2										
ANALYSIS REQUIRED (Specify number of bottles)																
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	(2500C) VOCs	(8260C) BTEX	(8260C) BTEX	(8260C) EDR	(8260C) Total As, Pb, Cu, Ni, Mn	Dissolved Fe, Mn	(6010C) Chloride, bromide, sulfate	(300.0) Nitrate-Nitrite	(353.2) Ammonia	(354.500M-H) Sulfide	(354.500SCF) Alkalinity	COMMENTS
1	GWTS-EFF2-051120	05/11/2020	1200	6	--	3	--	2	--	1*	--	--	--	--	--	
2	GWTS-EFF2DUP-051120	05/11/2020	1200	6	--	3	--	2	--	1*	--	--	--	--	--	
3	GWTS-GAC2-051120	05/11/2020	1215	6	--	3	--	2	--	1*	--	--	--	--	--	
4	GWTS-INF2-051120	05/11/2020	1230	6	--	3	--	2	--	1*	--	--	--	--	--	
5																
6																
COMMENTS: *Dissolved Fe, Mn aliquot was field filtered.																
SAMPLER(S): Pete Ferrari								COURIER AND SHIPPING NUMBER: Fedex: 8155 2825 6878								
RELINQUISHED BY:								RECEIVED BY:								
DATE: 5-11-2020 TIME: 1430								DATE: 5-11-2020 TIME: 1330								
Printed Name and Signature: Pete Ferrari								Printed Name and Signature: Dylan Schmeelk								
Printed Name and Signature: Dylan Schmeelk								Printed Name and Signature:								
Printed Name and Signature:								Printed Name and Signature:								
Printed Name and Signature:								Printed Name and Signature:								

Year:	2020
Quarter:	Q2 May

Well ID:

Date: 05/11/2020

Description of first water purged: Clear and odorless

Drawdown Limit: _____ ft (based on previous water level)

[illegible]

Sample Time: _____ Sample Date: 05/11/2020

Purge End Time: _____

Bubbles in the vials? ☐ Yes ☒ No Where? _____ Amount _____ Size _____

Sampled by: Pete Ferraro Sampler Signature: Pete Ferraro

IDW will be taken to:

IDW Label:

—

Total	-
-------	---

Sample Information

Sample ID: GWTS-XXXX-051120

Duplicate ID:
(if applicable) GWTS-EFFXDUP-051120

COC#: COC-GWTSX-051120

Sampling Method: Tap

Sampling Medium: Water

Comments:

Reviewed by: _____ Initials: _____ Review Date: _____ Page 1 of 1

APPENDIX I-4

Data Quality Evaluation Report – Groundwater Treatment System Samples (April–June 2020)

LIST OF ACRONYMS AND ABBREVIATIONS

%	percent
AFB	Air Force Base
BTEX	benzene, toluene, ethylbenzene, and total xylenes
DL	detection limit
DoD	Department of Defense
EC	Eurofins Calscience
EDB	ethylene dibromide
ELLE	Eurofins Lancaster Laboratories Environmental, LLC
EPA	U.S. Environmental Protection Agency
GAC	granular activated carbon
GWTS	groundwater treatment system
ICP	inductively coupled plasma
ICS	interference check sample
LCS	laboratory control sample
LCSD	laboratory control sample duplicate
LOD	limit of detection
LOQ	limit of quantification
MDL	method detection limit
MRL	method reporting limit
MS	matrix spike
MSD	matrix spike duplicate
O&M	operations and maintenance
Q2	second quarter of the year (April 1 through June 30)
QAPjP	Quality Assurance Project Plan
QC	quality control
QSM	Quality Systems Manual
RPD	relative percent different
SDG	sample delivery group
SW	Solid Waste
VOA	volatile organic analysis
VOC	volatile organic compound

DATA QUALITY EVALUATION REPORT – GROUNDWATER TREATMENT SYSTEM SAMPLES (APRIL–JUNE 2020)

1. LABORATORY DATA QUALITY SUMMARY

This Data Quality Evaluation Report describes the findings of the data validation performed for the analysis of samples collected during second quarter (Q2) of 2020 associated with the groundwater treatment system (GWTS) and associated extraction and monitoring wells. These data were collected in support of the Work Plan, Bulk Fuels Facility Expansion of the Dissolved-Phase Plume GWTS Design Revision 2, Solid Waste Management Units ST-106 and SS-111, Kirtland Air Force Base (AFB), New Mexico (Kirtland AFB, 2017a). Sampling and analysis for the Q2 2020 events were conducted in accordance with the procedures and overall quality control (QC) and quality assurance protocols presented in the following documents: (1) Operations and Maintenance (O&M) Plan GWTS Bulk Fuels Facility Solid Waste Management Units ST-106/SS-111, Kirtland AFB, New Mexico (Kirtland AFB, 2017b); (2) Quality Assurance Project Plan (QAPjP) (Kirtland AFB, 2017a); and (3) Standard Operating Procedure for Disinfection of the GWTS Remediation Wells and Groundwater Monitoring Wells, Discharge Permit DP-1839, Bulk Fuels Facility Solid Waste Management Units ST-106/SS-111, Kirtland AFB, New Mexico (Kirtland AFB, 2018).

Samples discussed in this report were collected during the months of April, May, and June 2020 and include monthly samples from (1) the untreated influent (GWTS-BFF-INF1 and GWTS-BFF-INF2), (2) a port located after the lead granular activated carbon (GAC) vessel (GWTS-BFF-GAC1 and GWTS-BFF-GAC2) but before the final GAC vessel, and (3) the treated effluent (GWTS-BFF-EFF1 and GWTS-BFF-EFF2). In addition to the monthly samples, pre- and post-disinfection treatment samples were collected from wells KAFB-106239, KAFB-106005, and KAFB-106028. Field QC samples were collected in association with the Q2 GWTS monthly and disinfection treatment sampling, and included three field duplicates, three trip blanks, and three field blank samples.

Samples collected from the GWTS treatment trains and extraction wells were shipped to Eurofins Lancaster Laboratories Environmental, LLC (ELLE), Lancaster, Pennsylvania for analysis. ELLE maintains a current Department of Defense (DoD) Environmental Laboratory Accreditation Program certification to perform the analyses required for this project. Sample analyses were performed in accordance with the following guidance documents:

- DoD Quality Systems Manual (QSM), Version 5.1.1 (DoD, 2018)
- U.S. Environmental Protection Agency (EPA) Solid Waste (SW) 846 – Test Methods for Evaluating SW, Third Edition and Updates (1986).

Q2 2020 GWTS and well samples were analyzed for the following list of parameters and methods as required:

- ***Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX)***—Method SW8260C.
- ***Ethylene Dibromide (EDB)***—Method SW8011.
- ***Dissolved Metals (Iron and Manganese)***—Method SW6010C.

Samples collected from wells KAFB-106239, KAFB-106005, and KAFB-106028 for pre- and post-disinfection monitoring were shipped to Eurofins Calscience (EC), Irvine and Garden Grove, California for analysis of drinking water disinfectants. Samples were analyzed in accordance with EPA Methods for Chemical Analysis of Water and Wastes (1993) and Determination of Perchlorate in Drinking Water by Liquid Chromatography Electrospray Ionization Mass Spectrometry (2005). Disinfectant analysis included the following list of parameters:

- **Bromate and Chlorite**—Method E300.1B.
- **Perchlorate**—Method E331.0.

Chemical analytical data for Q2 2020 were reported by ELLE in sample delivery groups (SDGs) KR421, KR446, and 410-3311-1. Q2 2020 analytical data were reported by EC in SDGs 440-267742-1 and 440-268223-1 Appendix I-4 – Table 1 summarizes GWTS, groundwater, and field QC samples; collection date; laboratory SDG; and analytical parameters for the Q2 2020 sampling events.

A third-party subcontractor, Environmental Data Services, Inc., Virginia Beach, Virginia, conducted EPA Stage 3 data validation on 100 percent (%) of the Q2 2020 sample data associated with the GWTS and well disinfection treatment samples. Analytical data validation was performed using the quality criteria specified in the following documents, analytical guidelines, and methods:

- Work Plan (includes QAPjP) (Kirtland AFB, 2017a), O&M Plan (Kirtland AFB, 2016, 2017b, 2018)
- DoD QSM for Environmental Laboratories, Version 5.1.1 (DoD, 2018)
- EPA Test Methods for Evaluating SW, Physical/Chemical Methods (SW 846, Third Edition and updates) (EPA, 1986)
- EPA Methods for Chemical Analysis of Water and Wastes (EPA, 1993)
- Determination of Perchlorate in Drinking Water by Liquid Chromatography Electrospray Ionization Mass Spectrometry (EPA, 2005)
- EPA Contract Laboratory Program, National Functional Guidelines for Superfund Organic Methods Data Review (EPA, 2014a)
- EPA Contract Laboratory Program, National Functional Guidelines for Inorganic Superfund Data Review (EPA, 2014b).

The following QC criteria were included in the EPA Stage 3 validation as applicable to the analytical method:

- Sample preservation and extraction and analysis holding times
- Laboratory method blank contamination
- Surrogate spike recoveries (organic analyses)
- Laboratory control sample (LCS) and LCS duplicate (LCSD) recoveries
- Matrix spike (MS) and matrix spike duplicate (MSD) sample recoveries
- Relative percent difference (RPD)
- Initial and continuing calibrations

- Inductively coupled plasma (ICP) interference check samples (metals)
- ICP serial dilutions (metals)
- Second column confirmation (for EDB analysis only)
- Trip and field blank results
- Field duplicate sample precision.

Analytical data were reviewed for all sampling events to evaluate precision, accuracy (bias), representativeness, comparability, completeness, and sensitivity as defined below:

- *Precision* is expressed as the RPD between the results of replicate sample analyses: sample duplicates, LCSDs, and MSDs. When analyte RPDs exceed the acceptance criteria, the data are qualified accordingly.
- *Accuracy (bias)* is demonstrated by recovery of target analytes from fortified blank and sample matrices, LCS/LCSD, and MS/MSD, respectively. For organic methods, bias is also demonstrated through recovery of surrogates from each field and QC sample. A comparison was made from the recovery of target analytes from fortified samples to the acceptance criteria defined in the QAPjP (Kirtland AFB, 2017a) and DoD QSM. When the acceptance criteria are not available in the QAPjP or DoD QSM, results are compared with the laboratory in-house control limits. When these criteria are not met, the data are qualified accordingly. Bias may be indicated as high or low.
- *Representativeness* of the samples submitted for analysis is ensured by adherence to standard sampling techniques and standard analytical method protocols.
- *Comparability* of sample results is ensured through the use of approved sampling and analysis methods and comparison of sample results to historical sample data.
- *Completeness* of data is evaluated based on contractual, analytical, and technical completeness for the quarterly data. Technical completeness of data is used to assess overall project completeness and is expressed as a percentage of the ratio of the number of usable data results to the total number of analytical data results. Only rejected data (R-qualified) are considered not usable to achieve project objectives.
- *Sensitivity* is determined by the ability to achieve the established method-specific reporting limits in accordance with DoD QSM requirements and includes establishing the detection limit (DL), limit of detection (LOD), and limit of quantitation (LOQ). For this project, the laboratory will report positive results to the DL and results between the DL and LOQ will be flagged with a J-qualifier and reported as estimated data. Pre- and post-disinfection well data are not being reported per the DoD QSM since the analysis is being performed using drinking water methods. These analytical data are reported to the method detection limit (MDL) and positive results between the MDL and the method reporting limit (MRL) will be flagged with a J-qualifier and reported as estimated data. Sensitivity is evaluated based on comparison of the sample reporting limits to the project screening levels.

The following sections present the EPA Stage 3 data validation findings for the Q2 2020 sample data. Appendix I-4 – Table 2 presents the data qualification flags and reason codes to be applied to analytical data, if required.

1.1 DATA QUALITY FINDINGS

1.1.1 Sample Preservation and Sample Extraction and Analysis Holding Times (Reason Code HT)

The sample coolers and samples contained within the coolers were received intact at the laboratory below 6 degrees Celsius, per EPA guidelines. All samples were preserved appropriately per the requirements of EPA method guidelines, with no exceptions. Sample holding times were evaluated by comparing the (1) sample collection date to the sample extraction date, and (2) extraction date to the analysis date to determine if the method-specified holding times were exceeded. Q2 2020 sample extraction and analysis holding times were met for all samples.

1.1.2 Laboratory Method Blanks (Reason Code MB)

The GWTS sample results were evaluated with respect to the laboratory method blank prepared and analyzed for each analytical batch for each analytical method. Based on the DoD QSM requirements (2018), laboratory method blank concentrations are considered acceptable when contaminant levels in the blank are less than one-half the LOQ for target analytes and less than the LOQ for common laboratory contaminants. Analytical method-specific blank criteria were used for evaluation of the well disinfection analyses. No detections of analytes were reported in method blank samples that resulted in data qualification for the Q2 2020 samples.

1.1.3 Initial and Continuing Calibration Blanks (Reason Code CB/CCB)

Initial and continuing calibration blank criteria were reviewed to ensure that the instruments were free of contamination prior to sample analysis. Based on the DoD QSM requirements (2018), calibration blank concentrations are considered acceptable when contaminant levels in the blank are less than one-half the LOQ for target analytes and less than the LOQ for common laboratory contaminants. Analytical method-specific control criteria were used for the evaluation of the well disinfection analyses. Initial and continuing calibration blank data were within control criteria for the Q2 2020 sample analyses. All percent relative standard deviation and/or correlation coefficients and relative response factor criteria were within control limits and no data were qualified based on initial and continuing calibration blank criteria.

1.1.4 Surrogate Recoveries (Reason Code SURR)

Surrogate compounds are added to field and laboratory QC samples for organic analysis to evaluate the matrix effect and method performance on an individual sample basis. All surrogate compound recoveries for the Q2 2020 sample data were within method control criteria or did not result in data qualification since the recoveries were above the control limit and the associated sample results were non-detect.

1.1.5 Laboratory Control Sample/Laboratory Control Sample Duplicate Recoveries and Precision (Reason Codes LCS/RPD)

The LCS is an aliquot of an analyte-free matrix spiked with target analytes that are prepared with each analytical batch for each analytical method. The recovery of target analytes from the LCS analysis is a measurement of method performance in an interference-free sample matrix. All LCS recoveries for the Q2 2020 data were within method control limits or were above the upper control limit and did not result in data qualification since the analyte was non-detect in the associated samples.

1.1.6 Matrix Spike/Matrix Spike Duplicate Recoveries and Precision (Reason Codes MS/MSD and RPD)

The MS and MSD samples are a portion of a field sample or a standard reference material spiked with target analytes that are prepared with each analytical batch and method as appropriate. The MS/MSD results are used to evaluate any bias introduced to the method due to matrix interference, and to measure bias and precision for each analytical batch.

MS/MSD project-specific samples were collected for each of the monthly GWTS sampling events, achieving the QAPjP rate of one per 20 samples for the GWTS routine monitoring program. MS/MSD recoveries for the Q2 2020 sample data were within method control criteria with the exception of one MS/MSD recovery for EDB in SDG KR421, which was above the control limit. The associated samples were non-detect and no data were qualified based on MS/MSD for Q2 2020.

1.1.7 Initial and Continuing Calibration Verification (Reason Code CCV)

Instrument calibration is performed for all analyses in accordance with method requirements. The linear analytical range is established for each method by analysis of calibration standards prepared at increasing concentrations that cover the expected sample concentration range. The acceptability of the initial calibration is determined by calculation of a percent relative standard deviation or coefficient. Routinely during sample analysis, the stability of the analytical system is monitored by analysis of continuing calibration standards at concentrations near the mid-point of the instrument calibration range. The percent difference values between the relative response factor in the initial calibration and the relative response factor in the continuing calibration are reviewed to ensure instrument calibration criteria are within method control limits. All initial and continuing calibration verifications met the method-specific control criteria for the Q2 2020 analytical data.

1.1.8 Interference Check Sample (Reason Code ICS)

The interference check sample (ICS) verifies the inter-element and background correction factors for metals analysis using ICP instrumentation. The ICSs were analyzed at the required frequencies, and all ICS results are within the established control criteria for the ICP analytical methods for the Q2 2020 analytical data.

1.1.9 Inductively Coupled Plasma Serial Dilution (Reason Code SD)

The ICP serial dilution determines whether significant physical or chemical interferences exist due to sample matrix. When the concentration of an analyte exceeds 50 times the DL for ICP and 100 times the DL for ICP mass spectrometry, the ICP serial dilution is performed and the results between the original analysis and the diluted analysis are compared. The results of the ICP serial dilution are deemed acceptable when a percent difference between the original analysis and the diluted analysis is less than or equal to 10%.

ICP serial dilution was performed based on the above criteria for the Q2 2020 samples as deemed appropriate. ICP serial dilution results were within the above criteria for all samples and analytes for the Q2 2020 data.

1.1.10 Sample Confirmation (Reason Code RPD)

As required by DoD and EPA analytical method guidance, sample detections for EDB require confirmation using a second column analysis. EDB sample detections for the Q2 2020 data analyzed using EPA Method SW8011 were confirmed by a second column analysis and reported from the primary column. Any detection of EDB on the second column is considered confirmed unless it appears to be associated with matrix interference. Sample GWTS-INF2-060320 in SDG 410-3311-1 (June event) exhibited a percent difference between the two columns greater than the control criteria. As a result, the EDB detection in sample GWTS-INF2-060320 was “J” qualified, signifying estimated data. Appendix I-4 – Table 3 summarizes sample results qualified based on second column confirmation for Q2 2020.

1.1.11 Field Blanks for Volatile Organic Compounds (Reason Code FB)

Field blanks serve as a check for possible volatile organic compounds (VOCs) (BTEX and EDB) in air associated with a sampling location. The field blanks are prepared in the field during sampling by pouring ultra-pure water into EPA-certified clean sample containers and exposing the container to the environment at a particular sample location that may be associated with airborne VOCs.

Field blanks for the Q2 2020 sampling events are collected as deemed necessary based on the site conditions at the time of sample collection. Three field blank samples were collected in association with the Q2 sampling events. There were no detections of BTEX or EDB in the Q2 field blank samples. Appendix I-4 – Table 4 presents the results for the field blank samples collected during the Q2 2020 sampling events.

1.1.12 Trip Blanks for Volatile Organic Compounds (Reason Code TB)

Trip blanks were prepared by the laboratory and stored with the groundwater samples collected for BTEX and EDB analysis. In accordance with the QAPjP requirements, trip blank samples are to be included at a rate of one per cooler when sampling groundwater samples for VOC analysis. A trip blank sample was included with each GWTS sample shipment. No headspace was reported in any of the trip blank sample vials upon receipt or analysis. No detections of BTEX or EDB were reported in trip blank samples for Q2 sampling events. Appendix I-4 – Table 4 summarizes the results for trip blank samples for the Q2 2020 sampling events.

1.1.13 Equipment Rinse Blanks (Reason Code EB)

No equipment rinse blank samples are required to be collected in conjunction with the GWTS sampling since samples are collected directly from a designated sampling port using dedicated sampling equipment. In addition, equipment rinse blanks were not collected in association with the extraction well samples in Q2 2020.

1.1.14 Field Duplicate Samples

In accordance with the project QAPjP requirements (Kirtland AFB, 2017a), field duplicate samples are collected at a frequency of 10% of the total number of GWTS samples for each monthly sampling event. Field duplicate samples are not collected in association with the well disinfection samples. Three field duplicate samples were collected during the Q2 2020 sampling events in association with 18 GWTS samples (16.6%). This exceeds the 10% project requirement for the Q2 2020 event.

Field duplicate RPD was evaluated by calculating the RPD between the parent sample and the duplicate sample. The RPD was calculated using the following equation:

$$RPD = |(S-D)/[(S+D)/2]| \times 100$$

where

S = Sample result.
D = Duplicate result.

Acceptable precision control criteria are established at less than or equal to 35% for water samples. The RPD was calculated between pairs of field duplicate samples when both results are reported at or above the LOQ.

The results for the field duplicate samples collected during Q2 2020 are presented on Appendix I-4 – Table 5. The field duplicate results demonstrate acceptable overall field sampling procedures and analytical method precision.

1.1.15 Professional Judgement

Professional judgement may be applied by a third-party data validation subcontractor or the project chemist during the data review process to apply validation qualifiers based on site-specific and project-specific knowledge, historical data, comparability of data, and analytical expertise. Professional judgement was not used to apply or revise any data qualifiers applied by the validation subcontractor for the Q2 2020 sampling events.

1.2 COMPLETENESS

The following sections present a discussion of contractual, analytical, and technical completeness for the Q2 2020 monitoring analytical data. Completeness calculations were performed for the samples that are used for project decisions. Completeness results are presented in the following sections.

1.2.1 Contractual Completeness

Contractual completeness is a quantitative determination of the number of unqualified results compared to the total number of sample results expressed as a percentage, based on data qualified for QC outliers related to analytical method performance. These include data qualified for calibration or method blank contamination, missed holding times, sample receipt condition, LCS recovery, and/or precision. The contractual completeness goal is 95% per quarterly event. Contractual completeness was calculated as follows:

$$\text{Percent Contractual Completeness} = \frac{\text{Number of Unqualified Results}}{\text{Total Number of Results}} \times 100$$

For the Q2 2020 sampling events, no sample results were qualified during data validation based on contractual completeness criteria. Contractual completeness for the Q2 2020 events is 100%, achieving the 95% contractual completeness objective.

1.2.2 Analytical Completeness

Analytical completeness is a quantitative measure of the number of unqualified data results compared to the total number of results expressed as a percentage, based on the target analytes qualified for exceedances of QC requirements based on calibration, LCS, MS/MSD, surrogate, method precision, and laboratory method blank contamination results. The analytical completeness goal is 90% for the project. Analytical completeness was calculated as follows:

$$\text{Percent Analytical Completeness} = \frac{\text{Number of Unqualified Results}}{\text{Total Number of Results}} \times 100$$

One out of 168 sample results were qualified “J” due to the EDB second column confirmation criteria exceedance. The analytical completeness for the Q2 sample data is 99.4%. The 90% analytical completeness objective was achieved for the Q2 2020 sampling events.

1.2.3 Technical Completeness

Technical completeness is a quantitative measure of the data usability based on the number of rejected data compared to the total number of sample results. The technical completeness goal for each method is equal to or greater than 95%. The technical completeness calculation considers all data that are not rejected (R-qualified) to be usable data to achieve project objectives. The technical completeness was calculated as follows:

$$\text{Percent Technical Completeness} = \frac{\text{Number of Usable Results}}{\text{Total Number of Results}} \times 100$$

The project data quality objectives were achieved for all methods and samples for the Q2 2020 sampling events. The technical completeness for the Q2 2020 data is 100% for all analytical parameters. Technical completeness is presented in Appendix I-4 – Table 6.

1.2.4 Data Analysis Completeness

As a part of the data review process, chain-of-custody forms and project data deliverables are reviewed against the project requirements in the Work Plan (Kirtland AFB, 2017a) and O&M Plan (Kirtland AFB, 2016, 2017b, 2018) to ensure compliance with the sampling plan and that analytical results were reported for all planned methods and samples. Data completeness for the Q2 data deliverables was determined to be 100% complete. Level 4 analytical data packages for Q2 2020 data are provided in Appendix I-5.

1.3 REPRESENTATIVENESS AND COMPARABILITY

Q2 2020 sampling was conducted in accordance with the sampling and analysis protocols and standard operating procedures documented in the O&M Plan (Kirtland AFB, 2016, 2017b, 2018). Approved procedures were used to collect, preserve, document, and ship samples to the ELLE and EC laboratories, thus ensuring the samples collected for the Q2 2020 sampling events were representative of the conditions.

Groundwater samples for BTEX and EDB were collected in 40-milliliter volatile organic analysis (VOA) vials preserved with hydrochloric acid and shipped to ELLE at a temperature less than 6 degrees Celsius. Samples received in VOA vials were inspected to evaluate the presence or absence of any headspace (estimated in millimeters) and documented as sample condition on the laboratory sample receipt report.

No VOA vials collected for Q2 2020 presented headspace greater than 6 millimeters upon receipt at the laboratory.

The project laboratory (ELLE) maintains current DoD Environmental Laboratory Accreditation Program certification and adhered to the analytical methods documented in the project QAPjP and DoD QSM requirements to prepare and analyze samples and report the data. This ensured the comparability of the analytical results between different samples and different sampling events. The EC project laboratories for the well disinfection sample analysis maintain state-specific drinking water certification. For the Q2 2020 GWTS data, an EPA Stage 3 validation was performed on 100% of the analytical data to verify that the laboratory complied with the DoD QSM, project QAPjP, and method requirements. QC results that exceeded method control criteria resulted in data qualification as presented in the previous sections. Based on a review of the completed sample collection logs, chain-of-custody forms, sample receipt forms, and laboratory data packages, the analytical data reported for the Q2 2020 sampling events achieved the project data representativeness and comparability requirements.

1.4 SENSITIVITY

Data sensitivity for the Q2 2020 analytical data was achieved by complying with the analytical method guidelines and reporting limits specified in the project QAPjP. The analytical methods used for sample analysis achieved the lower of the Kirtland AFB Hazardous Waste Permit Number NM9570024423 (New Mexico Environment Department, 2010) and New Mexico Administrative Code Title 20.6.2.3103, Standards for Groundwater of 10,000 Milligrams per Liter Total Dissolved Solids Concentration or Less (New Mexico Administrative Code, 2018). Project screening levels are presented in the QAPjP, Attachment 1, Table 1-1. For the Q2 2020 analytical results, detections of target compounds reported below the LOQ and MRL are J-flagged as estimated values. Non-detect analytes are reported at the LOD per the DoD QSM requirements unless as noted above and reported at the MRL for the well disinfection data.

1.5 CONCLUSIONS

The analytical data reported for the Q2 2020 GWTS and well disinfection samples have been reviewed for precision, accuracy (bias), representativeness, comparability, completeness, and sensitivity. One data quality criteria exceedance was noted for EDB result for second column confirmation percent difference. Associated sample data were qualified “J” signifying an estimated sample result. The 95% technical completeness goal was achieved for all analytical methods for the Q2 2020 sampling events. All data are usable to achieve the project data quality objectives.

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Table 1
Groundwater Sample Collection Summary Q2 2020

Well Location ID	Field Sample ID	Sample Date	Sample Delivery Group	Analytical Parameter^a	Comments
GWTS-BFF-EFF2	GWTS-EFF2-040220	4/2/2020	KR421	BTEX, EDB, Metals	MS/MSD
Field Blank	GWTS-FB02-040220	4/2/2020	KR421	BTEX, EDB	—
GWTS-BFF-GAC2	GWTS-GAC2-040220	4/2/2020	KR421	BTEX, EDB, Metals	—
GWTS-BFF-INF2	GWTS-INF2-040220	4/2/2020	KR421	BTEX, EDB, Metals	—
GWTS-BFF-EFF1	GWTS-EFF1-040220	4/2/2020	KR421	BTEX, EDB, Metals	—
GWTS-BFF-EFF1	GWTS-EFF1DUP-040220	4/2/2020	KR421	BTEX, EDB, Metals	Field Duplicate
GWTS-BFF-GAC1	GWTS-GAC1-040220	4/2/2020	KR421	BTEX, EDB, Metals	—
GWTS-BFF-INF1	GWTS-INF1-040220	4/2/2020	KR421	BTEX, EDB, Metals	—
Trip Blank	GWTS-TB01-040220	4/2/2020	KR421	BTEX, EDB	—
GWTS-BFF-EFF1	GWTS-EFF1-051120	5/11/2020	KR446	BTEX, EDB, Metals	MS/MSD
Field Blank	GWTS-FB01-051120	5/11/2020	KR446	BTEX, EDB	—
GWTS-BFF-GAC1	GWTS-GAC1-051120	5/11/2020	KR446	BTEX, EDB, Metals	—
GWTS-BFF-INF1	GWTS-INF1-051120	5/11/2020	KR446	BTEX, EDB, Metals	—
GWTS-BFF-EFF2	GWTS-EFF2-051120	5/11/2020	KR446	BTEX, EDB, Metals	—
GWTS-BFF-EFF2	GWTS-EFF2DUP-051120	5/11/2020	KR446	BTEX, EDB, Metals	Field Duplicate
GWTS-BFF-GAC2	GWTS-GAC2-051120	5/11/2020	KR446	BTEX, EDB, Metals	—
GWTS-BFF-INF2	GWTS-INF2-051120	5/11/2020	KR446	BTEX, EDB, Metals	—
Trip Blank	GWTS-TB01-051120	5/11/2020	KR446	BTEX, EDB	—
GWTS-BFF-EFF2	GWTS-EFF2-060320	6/3/2020	410-3311-1	BTEX, EDB, Metals	MS/MSD
Field Blank	GWTS-FB02-060320	6/3/2020	410-3311-1	BTEX, EDB	—
GWTS-BFF-GAC2	GWTS-GAC2-060320	6/3/2020	410-3311-1	BTEX, EDB, Metals	—
GWTS-BFF-INF2	GWTS-INF2-060320	6/3/2020	410-3311-1	BTEX, EDB, Metals	—
GWTS-BFF-EFF1	GWTS-EFF1-060320	6/3/2020	410-3311-1	BTEX, EDB, Metals	Field Duplicate
GWTS-BFF-GAC1	GWTS-GAC1-060320	6/3/2020	410-3311-1	BTEX, EDB, Metals	—
GWTS-BFF-INF1	GWTS-INF1-060320	6/3/2020	410-3311-1	BTEX, EDB, Metals	—
Trip Blank	GWTS-TB01-060320	6/3/2020	410-3311-1	BTEX, EDB	—
KAFB-106239	GW239-202-PreDis	6/19/2020	440-267742-1	Bromate, Chlorite, Perchlorate ^b	—

Table 1
Groundwater Sample Collection Summary Q2 2020

Well Location ID	Field Sample ID	Sample Date	Sample Delivery Group	Analytical Parameter^a	Comments
KAFB-106005	KAFB-106005-WR-post	6/30/2020	440-268223-1	Bromate, Chlorite, Perchlorate ^b	—
KAFB-106005	KAFB-106005-WR-pre	6/29/2020	440-268223-1	Bromate, Chlorite, Perchlorate ^b	—
KAFB-106028	KAFB-106028-WR-post	6/29/2020	440-268223-1	Bromate, Chlorite, Perchlorate ^b	—
KAFB-106028	KAFB-106028-WR-pre	6/24/2020	440-268223-1	Bromate, Chlorite, Perchlorate ^b	—
KAFB-106239	KAFB-106239-WR-post	6/29/2020	440-268223-1	Bromate, Chlorite, Perchlorate ^b	—
KAFB-106239	KAFB-106239-WR-pre	6/25/2020	440-268223-1	Bromate, Chlorite, Perchlorate ^b	—

^aAnalytical methods include: Method SW8260C for BTEX; Method SW8011 for EDB; Method SW6010C for dissolved iron and manganese.

^b Analytical methods include: Method E300.1B for bromate and chlorite; Method E331.0 for perchlorate.

— = no comments

BTEX = benzene, toluene, ethylbenzene, and total xylenes

EDB = ethylene dibromide

ID = identification

MS = matrix spike

MSD = matrix spike duplicate

Table 2
Data Qualification Flags and Reason Codes

Data Qualifier Definitions for Data Validation	
Qualifier	Definition
	No Qualifier indicates that the data are acceptable both qualitatively and quantitatively.
U	The analyte was analyzed for but was not detected above the detection limit. The value associated with the U-qualifier is the limit of detection.
J	The analyte was analyzed for and was positively identified, but the reported numerical value may not be consistent with the amount actually present in the environmental sample. Results are estimated, although the data are considered usable and may be used as appropriate to meet project objectives. Results are qualitatively acceptable and quantitatively uncertain.
J-	The analyte was positively identified; the associated numerical value is its approximate concentration with a low bias in the sample.
J+	The analyte was positively identified; the associated numerical value is its approximate concentration with a high bias in the sample.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
R	The analyte was analyzed for, but the presence <u>or</u> absence of the analyte has not been verified. Re-sampling and re-analysis may be necessary to confirm or deny the presence of the analyte. Results are rejected, and data are <u>unusable</u> for any purposes.

Reason Codes for Data Validation	
Reason Code	Description
CB/CCB	Calibration blank or continuing calibration blank outside of control limits
CCV	Calibration verification outside of control limits
EB	Equipment rinse blank contamination
FB	Field blank contamination
FD	Field duplicate sample results out of control criteria
HT	Holding time exceedance
ICS	Interference check sample
LCS	Laboratory control sample recovery out of control criteria
MB	Method blank contamination
MS/MSD	Matrix spike/matrix spike duplicate recovery outside of control criteria
RPD	Relative percent difference outside of control limits
SD	Inductively coupled plasma serial dilution out of control criteria
SURR	Surrogate recovery outside of control limits
TB	Trip blank contamination

Table 3
Qualified Sample Results Q2 2020

Well Location ID	Sample Name	Sample Delivery Group	Collection Method	Sample Type	Analyte	Data Qualifier	Validation Reason Code
GWTS-BFF-INF2	GWTS-INF2-060320	410-3311-1	Grab	N	1,2-Dibromoethane	J	Percent difference between columns

ID = identification

N = normal field sample

Qualifiers:

J = Qualifier denotes the analyte was positively identified, but the associated numerical value is estimated.

Table 4
Field Quality Control Sample Results Q2 2020

		Field Sample ID:	GWTS-FB02-040220			GWTS-TB01-040220			GWTS-FB01-051120			GWTS-TB01-051120			GWTS-FB02-060320			GWTS-TB01-060320		
		Sample Date:	4/2/2020			4/2/2020			5/11/2020			5/11/2020			6/3/2020			6/3/2020		
		Sample Type:	FB			TB			FB			TB			FB			TB		
Parameter	Analytical Method	Analyte	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD
EDB	Method SW8011 (µg/L)	1,2-Dibromoethane	ND	U	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	Benzene	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Ethylbenzene	ND	U	0.8	ND	U	0.8	ND	U	0.8	ND	U	0.8	ND	U	0.8	ND	U	0.8
		Toluene	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Xylenes, total	ND	U	2	ND	U	2	ND	U	2	ND	U	2	ND	U	2	ND	U	2

Table 4
Field Quality Control Sample Results Q2 2020

µg/L = microgram per liter.

EDB = ethylene dibromide (1,2-dibromoethane).

FB = field blank.

ID = identification.

LOD = limit of detection.

ND = not detected above the detection limit.

TB = trip blank.

Val Qual = validation qualifier.

VOC = volatile organic compound.

Shading = detected concentrations above the detection limit.

Qualifiers:

Val Qual based on independent data validation.

U = Qualifier denotes the analyte was analyzed but not detected above the detection limit. The value associated with the U-qualifier is the LOD.

Table 5
Field Duplicate Sample Results Q2 2020

			Well Location ID:				GWTS-BFF-EFF1			GWTS-BFF-EFF1			GWTS-BFF-EFF1			GWTS-BFF-EFF1			GWTS-BFF-EFF2			GWTS-BFF-EFF2		
			Field Sample ID:				GWTS-EFF1-040220			GWTS-EFF1DUP-040220			GWTS-EFF1-060320			GWTS-EFF1DUP-060320			GWTS-EFF2-051120			GWTS-EFF2DUP-051120		
			Sample Date:				4/2/2020			4/2/2020			6/3/2020			6/3/2020			5/11/2020			5/11/2020		
			Sample Type:				REG			Field Duplicate			REG			Field Duplicate			REG			Field Duplicate		
Parameter	Analytical Method	Analyte	NMAC NMWQCC ^a	EPA MCL ^b	EPA RSL ^c	Project Screening Level ^d	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD	Result	Val Qual	LOD
EDB	Method SW8011 (µg/L)	1,2-Dibromoethane	0.1	0.05	0.075	0.05	ND	U	0.019	ND	U	0.02	ND	U	0.019	ND	U	0.019	ND	U	0.019	ND	U	0.019
VOCs	Method SW8260C (µg/L)	Benzene	5	5	4.5	5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Ethylbenzene	700	700	15	700	ND	U	0.8	ND	U	0.8	ND	U	0.8	ND	U	0.8	ND	U	0.8	ND	U	0.8
		Toluene	1,000	1000	1100	1,000	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5
		Xylenes, total	620	10000	190	620	ND	U	2	ND	U	2	ND	U	2	ND	U	2	ND	U	2	ND	U	2
Dissolved Metals	Method SW6010C (mg/L)	Iron, dissolved	1.0	NS	NS	1	ND	U	0.103	ND	U	0.103	ND	U	0.1	ND	U	0.1	ND	U	0.103	ND	U	0.103
		Manganese, dissolved	0.2	NS	NS	0.2	ND	U	0.0052	ND	U	0.0052	ND	U	0.0052	ND	U	0.0052	ND	U	0.0052	ND	U	0.0052

Table 5
Field Duplicate Sample Results Q2 2020

^a NMWQCC numeric standards per the New Mexico Administrative Code Title 20.6.2.3101A, Standards for Groundwater of 10,000 mg/L Total Dissolved Solids Concentration or Less (NMAC, 2018).
^b EPA National Primary Drinking Water Regulations, MCLs and Secondary MCLs, Title 40 CFR Part 141, 143 (May 2018).
^c EPA Region 6 RSL for Tapwater (May 2020) for hazard index = 1.0 for noncarcinogens and a 10-5 cancer risk level for carcinogens.
^d The project screening level was selected to satisfy the requirements of the Kirtland AFB Hazardous Waste Permit Number NM9570024423 as the lowest of (1) NMWQCC numeric standard or (2) EPA MCL. If no NMQWCC numeric standard or MCL exists for any analyte, then the project screening level will be the EPA RSL.

microgram per liter
AFB = Air Force Base
EDB = ethylene dibromide (1,2-dibromoethane)
EPA = U.S. Environmental Protection Agency
ID = identification
LOD = limit of detection
MCL = maximum contaminant level
mg/L= milligram per liter
ND = nondetect
NMAC = New Mexico Administrative Code
NMWQCC = New Mexico Water Quality Control Commission
NS = not specified
Q2 = second quarter
REG = normal field sample
RSL = regional screening level
Val Qual = validation qualifier
VOC = volatile organic compound

Shading = detected concentrations above the detection limit
Bold/Shading = reported concentrations exceed the project screening level

Val Quals based on independent data validation:
U = Qualifier denotes the analyte was analyzed but not detected above the detection limit. The value associated with the U-qualifier is the LOD.

Table 6
Technical Data Completeness Q2 2020

Analytical Parameter	Field/Field Duplicate Sample Analytes	Quality Control Sample Analytes (TB and FB)	Qualified Analytes	Percent Technical Completeness^a
BTEX (SW8260C)	84	24	0	100
Ethylene dibromide (SW8011)	21	6	1	100
Dissolved metals (SW6010C) ^b	42	0	0	100
Anions (E300.1B) ^c	14	0	0	100
Perchlorate (E331.0)	7	0	0	100

^a Percent technical completeness including analytes qualified as estimated data. No data were rejected.

^b Dissolved metals (SW6010C) = iron and manganese.

^c Anions (E300.1B) = bromate and chlorite.

BTEX = benzene, toluene, ethylbenzene, and total xylenes

FB = field blank

TB = trip blank



Environment Testing
America

ANALYTICAL REPORT

Job Number: 410-3311-1

Job Description: Kirtland AFB

For:

EA Engineering, Science, and Technology
405 S. Highway 121 bypass
Building C
Suite 100
Lewisville, TX 75067

Attention: Pamela J Moss

A handwritten signature in black ink that reads "Kay Hower". The signature is fluid and cursive, with the first name "Kay" and last name "Hower" clearly distinguishable.

Approved for release.
Kay G Hower
Principal Project Manager
7/16/2020 9:59 AM

Kay G Hower, Principal Project Manager
2425 New Holland Pike, Lancaster, PA, 17601
(717)556-7364
kayhower@eurofinsus.com
07/16/2020
Revision: 1

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Eurofins Lancaster Laboratories Env, LLC

2425 New Holland Pike, Lancaster, PA 17601

Tel (717) 656-2300 Fax (717) 656-2681 www.EurofinsUS.com

Job Number: 410-3311-1

Job Description: Kirtland AFB

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments. QC data that exceed the upper limits and are associated with non-detect samples are qualified but no further narration is needed since the bias is high and does not change a non-detect result. Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

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Definitions/Glossary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-3311-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

GC Semi VOA

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
U	Undetected at the Limit of Detection.

Metals

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
1C	Result is from the primary column on a dual-column method.
2C	Result is from the confirmation column on a dual-column method.
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

**Job Narrative
410-3311-1****Receipt**

The samples were received on 6/4/2020 10:47 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.4° C.

GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-3311-1

Client Sample ID: GWTS-EFF1-060320**Lab Sample ID: 410-3311-1**

No Detections.

Client Sample ID: GWTS-EFF1DUP-060320**Lab Sample ID: 410-3311-2**

No Detections.

Client Sample ID: GWTS-GAC1-060320**Lab Sample ID: 410-3311-3**

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Ethylene Dibromide (1C)	0.010	J	0.029	0.0097	ug/L	1		8011	Total/NA

Client Sample ID: GWTS-INF1-060320**Lab Sample ID: 410-3311-4**

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Manganese	12		10	3.1	ug/L	1		6010C	Dissolved

Client Sample ID: GWTS-TB01-060320**Lab Sample ID: 410-3311-5**

No Detections.

Client Sample ID: GWTS-EFF2-060320**Lab Sample ID: 410-3311-6**

No Detections.

Client Sample ID: GWTS-GAC2-060320**Lab Sample ID: 410-3311-7**

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Ethylene Dibromide (1C)	0.011	J	0.029	0.0096	ug/L	1		8011	Total/NA

Client Sample ID: GWTS-INF2-060320**Lab Sample ID: 410-3311-8**

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Ethylene Dibromide (2C)	0.024	J J1	0.029	0.0097	ug/L	1		8011	Total/NA
Manganese	4.2	J	10	3.1	ug/L	1		6010C	Dissolved

Client Sample ID: GWTS-FB02-060320**Lab Sample ID: 410-3311-9**

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-3311-1

Client Sample ID: GWTS-EFF1-060320

Lab Sample ID: 410-3311-1

Date Collected: 06/03/20 09:05

Matrix: Water

Date Received: 06/04/20 10:47

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.20	U	1.0	0.20	ug/L	-		06/17/20 16:15	1
Ethylbenzene	0.40	U	1.0	0.40	ug/L	-		06/17/20 16:15	1
Toluene	0.20	U	1.0	0.20	ug/L	-		06/17/20 16:15	1
Xylenes, Total	1.4	U	6.0	1.4	ug/L	-		06/17/20 16:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		81 - 118		06/17/20 16:15	1
4-Bromofluorobenzene (Surr)	96		85 - 114		06/17/20 16:15	1
Dibromofluoromethane (Surr)	102		80 - 119		06/17/20 16:15	1
Toluene-d8 (Surr)	97		89 - 112		06/17/20 16:15	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U	0.029	0.0097	ug/L	-	06/06/20 03:40	06/09/20 00:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	70		46 - 136	06/06/20 03:40	06/09/20 00:08	1
1,1,2,2-Tetrachloroethane (2C)	76		46 - 136	06/06/20 03:40	06/09/20 00:08	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	100	U	210	41	ug/L	-	06/09/20 09:25	06/12/20 10:59	1
Manganese	5.2	U	10	3.1	ug/L	-	06/09/20 09:25	06/12/20 10:59	1

Client Sample ID: GWTS-EFF1DUP-060320

Lab Sample ID: 410-3311-2

Date Collected: 06/03/20 09:05

Matrix: Water

Date Received: 06/04/20 10:47

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.20	U	1.0	0.20	ug/L	-		06/17/20 16:37	1
Ethylbenzene	0.40	U	1.0	0.40	ug/L	-		06/17/20 16:37	1
Toluene	0.20	U	1.0	0.20	ug/L	-		06/17/20 16:37	1
Xylenes, Total	1.4	U	6.0	1.4	ug/L	-		06/17/20 16:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		81 - 118		06/17/20 16:37	1
4-Bromofluorobenzene (Surr)	96		85 - 114		06/17/20 16:37	1
Dibromofluoromethane (Surr)	103		80 - 119		06/17/20 16:37	1
Toluene-d8 (Surr)	96		89 - 112		06/17/20 16:37	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U	0.029	0.0095	ug/L	-	06/06/20 03:40	06/09/20 00:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	68		46 - 136	06/06/20 03:40	06/09/20 00:25	1
1,1,2,2-Tetrachloroethane (2C)	76		46 - 136	06/06/20 03:40	06/09/20 00:25	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	100	U	210	41	ug/L	-	06/09/20 09:25	06/12/20 11:08	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-3311-1

Client Sample ID: GWTS-EFF1DUP-060320

Lab Sample ID: 410-3311-2

Date Collected: 06/03/20 09:05

Matrix: Water

Date Received: 06/04/20 10:47

Method: 6010C - Metals (ICP) - Dissolved (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	5.2	U	10	3.1	ug/L	-	06/09/20 09:25	06/12/20 11:08	1

Client Sample ID: GWTS-GAC1-060320

Lab Sample ID: 410-3311-3

Date Collected: 06/03/20 09:19

Matrix: Water

Date Received: 06/04/20 10:47

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.20	U	1.0	0.20	ug/L	-		06/17/20 16:59	1
Ethylbenzene	0.40	U	1.0	0.40	ug/L	-		06/17/20 16:59	1
Toluene	0.20	U	1.0	0.20	ug/L	-		06/17/20 16:59	1
Xylenes, Total	1.4	U	6.0	1.4	ug/L	-		06/17/20 16:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		81 - 118		06/17/20 16:59	1
4-Bromofluorobenzene (Surr)	96		85 - 114		06/17/20 16:59	1
Dibromofluoromethane (Surr)	102		80 - 119		06/17/20 16:59	1
Toluene-d8 (Surr)	96		89 - 112		06/17/20 16:59	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.010	J	0.029	0.0097	ug/L	-	06/06/20 03:40	06/09/20 00:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	77		46 - 136	06/06/20 03:40	06/09/20 00:42	1
1,1,2,2-Tetrachloroethane (2C)	80		46 - 136	06/06/20 03:40	06/09/20 00:42	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	100	U	210	41	ug/L	-	06/09/20 09:25	06/12/20 11:11	1
Manganese	5.2	U	10	3.1	ug/L	-	06/09/20 09:25	06/12/20 11:11	1

Client Sample ID: GWTS-INF1-060320

Lab Sample ID: 410-3311-4

Date Collected: 06/03/20 09:27

Matrix: Water

Date Received: 06/04/20 10:47

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.20	U	1.0	0.20	ug/L	-		06/17/20 17:21	1
Ethylbenzene	0.40	U	1.0	0.40	ug/L	-		06/17/20 17:21	1
Toluene	0.20	U	1.0	0.20	ug/L	-		06/17/20 17:21	1
Xylenes, Total	1.4	U	6.0	1.4	ug/L	-		06/17/20 17:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		81 - 118		06/17/20 17:21	1
4-Bromofluorobenzene (Surr)	96		85 - 114		06/17/20 17:21	1
Dibromofluoromethane (Surr)	103		80 - 119		06/17/20 17:21	1
Toluene-d8 (Surr)	96		89 - 112		06/17/20 17:21	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U	0.029	0.0096	ug/L	-	06/06/20 03:40	06/09/20 00:59	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-3311-1

Client Sample ID: GWTS-INF1-060320

Lab Sample ID: 410-3311-4

Date Collected: 06/03/20 09:27

Matrix: Water

Date Received: 06/04/20 10:47

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	73		46 - 136	06/06/20 03:40	06/09/20 00:59	1
1,1,2,2-Tetrachloroethane (2C)	79		46 - 136	06/06/20 03:40	06/09/20 00:59	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	100	U	210	41	ug/L		06/09/20 09:25	06/12/20 11:14	1
Manganese	12		10	3.1	ug/L		06/09/20 09:25	06/12/20 11:14	1

Client Sample ID: GWTS-TB01-060320

Lab Sample ID: 410-3311-5

Date Collected: 06/03/20 09:30

Matrix: Water

Date Received: 06/04/20 10:47

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.20	U	1.0	0.20	ug/L			06/17/20 14:26	1
Ethylbenzene	0.40	U	1.0	0.40	ug/L			06/17/20 14:26	1
Toluene	0.20	U	1.0	0.20	ug/L			06/17/20 14:26	1
Xylenes, Total	1.4	U	6.0	1.4	ug/L			06/17/20 14:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		81 - 118		06/17/20 14:26	1
4-Bromofluorobenzene (Surr)	96		85 - 114		06/17/20 14:26	1
Dibromofluoromethane (Surr)	101		80 - 119		06/17/20 14:26	1
Toluene-d8 (Surr)	96		89 - 112		06/17/20 14:26	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U	0.029	0.0096	ug/L		06/06/20 03:40	06/09/20 01:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	81		46 - 136	06/06/20 03:40	06/09/20 01:16	1
1,1,2,2-Tetrachloroethane (2C)	82		46 - 136	06/06/20 03:40	06/09/20 01:16	1

Client Sample ID: GWTS-EFF2-060320

Lab Sample ID: 410-3311-6

Date Collected: 06/03/20 08:24

Matrix: Water

Date Received: 06/04/20 10:47

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.20	U	1.0	0.20	ug/L			06/17/20 15:09	1
Ethylbenzene	0.40	U	1.0	0.40	ug/L			06/17/20 15:09	1
Toluene	0.20	U	1.0	0.20	ug/L			06/17/20 15:09	1
Xylenes, Total	1.4	U	6.0	1.4	ug/L			06/17/20 15:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		81 - 118		06/17/20 15:09	1
4-Bromofluorobenzene (Surr)	95		85 - 114		06/17/20 15:09	1
Dibromofluoromethane (Surr)	103		80 - 119		06/17/20 15:09	1
Toluene-d8 (Surr)	96		89 - 112		06/17/20 15:09	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-3311-1

Client Sample ID: GWTS-EFF2-060320

Lab Sample ID: 410-3311-6

Date Collected: 06/03/20 08:24

Matrix: Water

Date Received: 06/04/20 10:47

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U	0.029	0.0097	ug/L	—	06/06/20 03:40	06/09/20 02:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	90		46 - 136				06/06/20 03:40	06/09/20 02:24	1
1,1,2,2-Tetrachloroethane (2C)	81		46 - 136				06/06/20 03:40	06/09/20 02:24	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	100	U	210	41	ug/L	—	06/08/20 10:15	06/12/20 11:15	1
Manganese	5.2	U	10	3.1	ug/L	—	06/08/20 10:15	06/12/20 11:15	1

Client Sample ID: GWTS-GAC2-060320

Lab Sample ID: 410-3311-7

Date Collected: 06/03/20 08:43

Matrix: Water

Date Received: 06/04/20 10:47

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.20	U	1.0	0.20	ug/L	—		06/17/20 17:43	1
Ethylbenzene	0.40	U	1.0	0.40	ug/L	—		06/17/20 17:43	1
Toluene	0.20	U	1.0	0.20	ug/L	—		06/17/20 17:43	1
Xylenes, Total	1.4	U	6.0	1.4	ug/L	—		06/17/20 17:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		81 - 118					06/17/20 17:43	1
4-Bromofluorobenzene (Surr)	95		85 - 114					06/17/20 17:43	1
Dibromofluoromethane (Surr)	103		80 - 119					06/17/20 17:43	1
Toluene-d8 (Surr)	96		89 - 112					06/17/20 17:43	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.011	J	0.029	0.0096	ug/L	—	06/06/20 03:40	06/09/20 03:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	82		46 - 136				06/06/20 03:40	06/09/20 03:14	1
1,1,2,2-Tetrachloroethane (2C)	86		46 - 136				06/06/20 03:40	06/09/20 03:14	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	100	U	210	41	ug/L	—	06/09/20 09:25	06/12/20 11:17	1
Manganese	5.2	U	10	3.1	ug/L	—	06/09/20 09:25	06/12/20 11:17	1

Client Sample ID: GWTS-INF2-060320

Lab Sample ID: 410-3311-8

Date Collected: 06/03/20 08:53

Matrix: Water

Date Received: 06/04/20 10:47

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.20	U	1.0	0.20	ug/L	—		06/17/20 18:05	1
Ethylbenzene	0.40	U	1.0	0.40	ug/L	—		06/17/20 18:05	1
Toluene	0.20	U	1.0	0.20	ug/L	—		06/17/20 18:05	1
Xylenes, Total	1.4	U	6.0	1.4	ug/L	—		06/17/20 18:05	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-3311-1

Client Sample ID: GWTS-INF2-060320

Lab Sample ID: 410-3311-8

Date Collected: 06/03/20 08:53

Matrix: Water

Date Received: 06/04/20 10:47

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		81 - 118		06/17/20 18:05	1
4-Bromofluorobenzene (Surr)	97		85 - 114		06/17/20 18:05	1
Dibromofluoromethane (Surr)	102		80 - 119		06/17/20 18:05	1
Toluene-d8 (Surr)	97		89 - 112		06/17/20 18:05	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide (2C)	0.024	J J1	0.029	0.0097	ug/L		06/06/20 03:40	06/09/20 03:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	75		46 - 136	06/06/20 03:40	06/09/20 03:31	1
1,1,2,2-Tetrachloroethane (2C)	93		46 - 136	06/06/20 03:40	06/09/20 03:31	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	100	U	210	41	ug/L		06/09/20 09:25	06/12/20 11:21	1
Manganese	4.2	J	10	3.1	ug/L		06/09/20 09:25	06/12/20 11:21	1

Client Sample ID: GWTS-FB02-060320

Lab Sample ID: 410-3311-9

Date Collected: 06/03/20 08:24

Matrix: Water

Date Received: 06/04/20 10:47

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.20	U	1.0	0.20	ug/L			06/17/20 14:47	1
Ethylbenzene	0.40	U	1.0	0.40	ug/L			06/17/20 14:47	1
Toluene	0.20	U	1.0	0.20	ug/L			06/17/20 14:47	1
Xylenes, Total	1.4	U	6.0	1.4	ug/L			06/17/20 14:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		81 - 118		06/17/20 14:47	1
4-Bromofluorobenzene (Surr)	95		85 - 114		06/17/20 14:47	1
Dibromofluoromethane (Surr)	102		80 - 119		06/17/20 14:47	1
Toluene-d8 (Surr)	96		89 - 112		06/17/20 14:47	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U	0.029	0.0096	ug/L		06/06/20 03:40	06/09/20 03:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	80		46 - 136	06/06/20 03:40	06/09/20 03:48	1
1,1,2,2-Tetrachloroethane (2C)	82		46 - 136	06/06/20 03:40	06/09/20 03:48	1

Eurofins Lancaster Laboratories Env, LLC

Default Detection Limits

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-3311-1

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Analyte	LOQ	DL	Units
Benzene	1.0	0.20	ug/L
Ethylbenzene	1.0	0.40	ug/L
Toluene	1.0	0.20	ug/L
Xylenes, Total	6.0	1.4	ug/L

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Prep: 8011

Analyte	LOQ	DL	Units
Ethylene Dibromide (1C)	0.030	0.010	ug/L
Ethylene Dibromide (2C)	0.030	0.010	ug/L

Method: 6010C - Metals (ICP) - Dissolved

Prep: Non-Digest Prep

Analyte	LOQ	DL	Units
Iron	200	40	ug/L
Manganese	10	3.0	ug/L

Surrogate Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-3311-1

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (81-118)	BFB (85-114)	DBFM (80-119)	TOL (89-112)
410-3311-1	GWTS-EFF1-060320	101	96	102	97
410-3311-2	GWTS-EFF1DUP-060320	100	96	103	96
410-3311-3	GWTS-GAC1-060320	103	96	102	96
410-3311-4	GWTS-INF1-060320	102	96	103	96
410-3311-5	GWTS-TB01-060320	101	96	101	96
410-3311-6	GWTS-EFF2-060320	103	95	103	96
410-3311-6 MS	GWTS-EFF2-060320	102	100	101	98
410-3311-6 MSD	GWTS-EFF2-060320	99	101	100	99
410-3311-7	GWTS-GAC2-060320	102	95	103	96
410-3311-8	GWTS-INF2-060320	103	97	102	97
410-3311-9	GWTS-FB02-060320	100	95	102	96
LCS 410-13905/5	Lab Control Sample	102	100	100	99
LCSD 410-13905/7	Lab Control Sample Dup	101	100	100	99
MB 410-13905/9	Method Blank	103	96	103	96

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		1122TCA1 (46-136)	1122TCA2 (46-136)
410-3311-1	GWTS-EFF1-060320	70	76
410-3311-2	GWTS-EFF1DUP-060320	68	76
410-3311-3	GWTS-GAC1-060320	77	80
410-3311-4	GWTS-INF1-060320	73	79
410-3311-5	GWTS-TB01-060320	81	82
410-3311-6	GWTS-EFF2-060320	90	81
410-3311-6 MS	GWTS-EFF2-060320	87	75
410-3311-6 MSD	GWTS-EFF2-060320	85	75
410-3311-7	GWTS-GAC2-060320	82	86
410-3311-8	GWTS-INF2-060320	75	93
410-3311-9	GWTS-FB02-060320	80	82
LCS 410-10943/2-A	Lab Control Sample	67	72
LCSD 410-10943/3-A	Lab Control Sample Dup	74	77
MB 410-10943/1-A	Method Blank	73	80

Surrogate Legend

1122TCA = 1,1,2,2-Tetrachloroethane

QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-3311-1

Method: 8260C DOD - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 410-13905/9

Matrix: Water

Analysis Batch: 13905

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.20	U	1.0	0.20	ug/L			06/17/20 13:32	1
Ethylbenzene	0.40	U	1.0	0.40	ug/L			06/17/20 13:32	1
Toluene	0.20	U	1.0	0.20	ug/L			06/17/20 13:32	1
Xylenes, Total	1.4	U	6.0	1.4	ug/L			06/17/20 13:32	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		81 - 118		06/17/20 13:32	1
4-Bromofluorobenzene (Surr)	96		85 - 114		06/17/20 13:32	1
Dibromofluoromethane (Surr)	103		80 - 119		06/17/20 13:32	1
Toluene-d8 (Surr)	96		89 - 112		06/17/20 13:32	1

Lab Sample ID: LCS 410-13905/5

Matrix: Water

Analysis Batch: 13905

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	20.0	19		ug/L		97	42 - 138
Ethylbenzene	20.0	20		ug/L		101	79 - 121
Toluene	20.0	19		ug/L		97	80 - 121
Xylenes, Total	60.0	62		ug/L		103	79 - 121

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	102		81 - 118
4-Bromofluorobenzene (Surr)	100		85 - 114
Dibromofluoromethane (Surr)	100		80 - 119
Toluene-d8 (Surr)	99		89 - 112

Lab Sample ID: LCSD 410-13905/7

Matrix: Water

Analysis Batch: 13905

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	20.0	19		ug/L		94	42 - 138	2	20
Ethylbenzene	20.0	20		ug/L		100	79 - 121	1	20
Toluene	20.0	19		ug/L		97	80 - 121	0	20
Xylenes, Total	60.0	62		ug/L		103	79 - 121	0	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	101		81 - 118
4-Bromofluorobenzene (Surr)	100		85 - 114
Dibromofluoromethane (Surr)	100		80 - 119
Toluene-d8 (Surr)	99		89 - 112

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-3311-1

Method: 8260C DOD - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 410-3311-6 MS

Matrix: Water

Analysis Batch: 13905

Client Sample ID: GWTS-EFF2-060320

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.20	U	20.0	21		ug/L		103	42 - 138
Ethylbenzene	0.40	U	20.0	21		ug/L		107	79 - 121
Toluene	0.20	U	20.0	21		ug/L		104	80 - 121
Xylenes, Total	1.4	U	60.0	66		ug/L		110	79 - 121

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	102		81 - 118
4-Bromofluorobenzene (Surr)	100		85 - 114
Dibromofluoromethane (Surr)	101		80 - 119
Toluene-d8 (Surr)	98		89 - 112

Lab Sample ID: 410-3311-6 MSD

Matrix: Water

Analysis Batch: 13905

Client Sample ID: GWTS-EFF2-060320

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.20	U	20.0	20		ug/L		98	42 - 138	5	20
Ethylbenzene	0.40	U	20.0	21		ug/L		104	79 - 121	3	20
Toluene	0.20	U	20.0	20		ug/L		99	80 - 121	4	20
Xylenes, Total	1.4	U	60.0	64		ug/L		107	79 - 121	3	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		81 - 118
4-Bromofluorobenzene (Surr)	101		85 - 114
Dibromofluoromethane (Surr)	100		80 - 119
Toluene-d8 (Surr)	99		89 - 112

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Lab Sample ID: MB 410-10943/1-A

Matrix: Water

Analysis Batch: 11304

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 10943

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.020	U	0.030	0.010	ug/L		06/06/20 03:40	06/08/20 23:17	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane (1C)	73		46 - 136	06/06/20 03:40	06/08/20 23:17	1
1,1,2,2-Tetrachloroethane (2C)	80		46 - 136	06/06/20 03:40	06/08/20 23:17	1

Lab Sample ID: LCS 410-10943/2-A

Matrix: Water

Analysis Batch: 11304

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 10943

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylene Dibromide (1C)	0.128	0.101		ug/L		79	60 - 140

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-3311-1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC) (Continued)

Lab Sample ID: LCS 410-10943/2-A

Matrix: Water

Analysis Batch: 11304

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 10943

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1,1,2,2-Tetrachloroethane (1C)	67		46 - 136
1,1,2,2-Tetrachloroethane (2C)	72		46 - 136

Lab Sample ID: LCSD 410-10943/3-A

Matrix: Water

Analysis Batch: 11304

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 10943

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylene Dibromide (1C)			0.128	0.113		ug/L		89	60 - 140	12	20
Surrogate	LCSD	LCSD									
	%Recovery	Qualifier									
1,1,2,2-Tetrachloroethane (1C)	74										
1,1,2,2-Tetrachloroethane (2C)	77										

Lab Sample ID: 410-3311-6 MS

Matrix: Water

Analysis Batch: 11304

Client Sample ID: GWTS-EFF2-060320

Prep Type: Total/NA

Prep Batch: 10943

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Ethylene Dibromide (1C)	0.019	U	0.121	0.112		ug/L		92	60 - 140		
Surrogate	MS	MS									
	%Recovery	Qualifier									
1,1,2,2-Tetrachloroethane (1C)	87										
1,1,2,2-Tetrachloroethane (2C)	75										

Lab Sample ID: 410-3311-6 MSD

Matrix: Water

Analysis Batch: 11304

Client Sample ID: GWTS-EFF2-060320

Prep Type: Total/NA

Prep Batch: 10943

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylene Dibromide (1C)	0.019	U	0.123	0.0961		ug/L		78	60 - 140	15	20
Surrogate	MSD	MSD									
	%Recovery	Qualifier									
1,1,2,2-Tetrachloroethane (1C)	85										
1,1,2,2-Tetrachloroethane (2C)	75										

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 410-11156/1-A

Matrix: Water

Analysis Batch: 12730

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 11156

Analyte	MB	MB		LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	100	U		210	41	ug/L		06/08/20 10:15	06/12/20 11:09	1
Manganese	5.2	U		10	3.1	ug/L		06/08/20 10:15	06/12/20 11:09	1

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-3311-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LCS 410-11156/2-A

Matrix: Water

Analysis Batch: 12730

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 11156

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	400	411		ug/L		103	87 - 115
Manganese	20.0	20.8		ug/L		104	90 - 114

Lab Sample ID: MB 410-11456/1-A

Matrix: Water

Analysis Batch: 12678

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 11456

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	100	U	210	41	ug/L		06/09/20 09:25	06/12/20 09:50	1
Manganese	5.2	U	10	3.1	ug/L		06/09/20 09:25	06/12/20 09:50	1

Lab Sample ID: LCS 410-11456/2-A

Matrix: Water

Analysis Batch: 12678

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 11456

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	400	424		ug/L		106	87 - 115
Manganese	20.0	20.9		ug/L		104	90 - 114

Lab Sample ID: 410-3311-6 MS

Matrix: Water

Analysis Batch: 12730

Client Sample ID: GWTS-EFF2-060320

Prep Type: Dissolved

Prep Batch: 11156

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	100	U	400	429		ug/L		107	75 - 125
Manganese	5.2	U	20.0	21.1		ug/L		106	75 - 125

Lab Sample ID: 410-3311-6 MSD

Matrix: Water

Analysis Batch: 12730

Client Sample ID: GWTS-EFF2-060320

Prep Type: Dissolved

Prep Batch: 11156

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	100	U	400	439		ug/L		110	75 - 125	2	20
Manganese	5.2	U	20.0	21.0		ug/L		105	75 - 125	0	20

Lab Sample ID: 410-3311-6 DU

Matrix: Water

Analysis Batch: 12730

Client Sample ID: GWTS-EFF2-060320

Prep Type: Dissolved

Prep Batch: 11156

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Iron	100	U	100	U	ug/L		NC	20
Manganese	5.2	U	5.2	U	ug/L		NC	20

Lab Sample ID: LRC 410-12678/14

Matrix: Water

Analysis Batch: 12678

Client Sample ID: Lab Control Sample

Analyte	Spike Added	LRC Result	LRC Qualifier	Unit	D	%Rec	%Rec. Limits
Manganese	20000	18300		ug/L		92	90 - 110

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-3311-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LRC 410-12678/15

Matrix: Water

Analysis Batch: 12678

Client Sample ID: Lab Control Sample

Analyte	Spike Added	LRC Result	LRC Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	300000	327000		ug/L	-	109	90 - 110

Lab Sample ID: LRC 410-12678/16

Matrix: Water

Analysis Batch: 12678

Client Sample ID: Lab Control Sample

Analyte	Spike Added	LRC Result	LRC Qualifier	Unit	D	%Rec	%Rec. Limits
Manganese	10000	9800		ug/L	-	98	90 - 110

Lab Sample ID: LRC 410-12678/17

Matrix: Water

Analysis Batch: 12678

Client Sample ID: Lab Control Sample

Analyte	Spike Added	LRC Result	LRC Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	150000	152000		ug/L	-	101	90 - 110

Lab Sample ID: LRC 410-12730/14

Matrix: Water

Analysis Batch: 12730

Client Sample ID: Lab Control Sample

Analyte	Spike Added	LRC Result	LRC Qualifier	Unit	D	%Rec	%Rec. Limits
Manganese	20000	18600		ug/L	-	93	90 - 110

Lab Sample ID: LRC 410-12730/15

Matrix: Water

Analysis Batch: 12730

Client Sample ID: Lab Control Sample

Analyte	Spike Added	LRC Result	LRC Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	300000	300000		ug/L	-	100	90 - 110

Lab Sample ID: LRC 410-12730/16

Matrix: Water

Analysis Batch: 12730

Client Sample ID: Lab Control Sample

Analyte	Spike Added	LRC Result	LRC Qualifier	Unit	D	%Rec	%Rec. Limits
Manganese	10000	9840		ug/L	-	98	90 - 110

Lab Sample ID: LRC 410-12730/17

Matrix: Water

Analysis Batch: 12730

Client Sample ID: Lab Control Sample

Analyte	Spike Added	LRC Result	LRC Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	150000	149000		ug/L	-	100	90 - 110

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QC Association Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-3311-1

GC/MS VOA

Analysis Batch: 13905

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-3311-1	GWTS-EFF1-060320	Total/NA	Water	8260C DOD	
410-3311-2	GWTS-EFF1DUP-060320	Total/NA	Water	8260C DOD	
410-3311-3	GWTS-GAC1-060320	Total/NA	Water	8260C DOD	
410-3311-4	GWTS-INF1-060320	Total/NA	Water	8260C DOD	
410-3311-5	GWTS-TB01-060320	Total/NA	Water	8260C DOD	
410-3311-6	GWTS-EFF2-060320	Total/NA	Water	8260C DOD	
410-3311-7	GWTS-GAC2-060320	Total/NA	Water	8260C DOD	
410-3311-8	GWTS-INF2-060320	Total/NA	Water	8260C DOD	
410-3311-9	GWTS-FB02-060320	Total/NA	Water	8260C DOD	
MB 410-13905/9	Method Blank	Total/NA	Water	8260C DOD	
LCS 410-13905/5	Lab Control Sample	Total/NA	Water	8260C DOD	
LCSD 410-13905/7	Lab Control Sample Dup	Total/NA	Water	8260C DOD	
410-3311-6 MS	GWTS-EFF2-060320	Total/NA	Water	8260C DOD	
410-3311-6 MSD	GWTS-EFF2-060320	Total/NA	Water	8260C DOD	

GC Semi VOA

Prep Batch: 10943

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-3311-1	GWTS-EFF1-060320	Total/NA	Water	8011	
410-3311-2	GWTS-EFF1DUP-060320	Total/NA	Water	8011	
410-3311-3	GWTS-GAC1-060320	Total/NA	Water	8011	
410-3311-4	GWTS-INF1-060320	Total/NA	Water	8011	
410-3311-5	GWTS-TB01-060320	Total/NA	Water	8011	
410-3311-6	GWTS-EFF2-060320	Total/NA	Water	8011	
410-3311-7	GWTS-GAC2-060320	Total/NA	Water	8011	
410-3311-8	GWTS-INF2-060320	Total/NA	Water	8011	
410-3311-9	GWTS-FB02-060320	Total/NA	Water	8011	
MB 410-10943/1-A	Method Blank	Total/NA	Water	8011	
LCS 410-10943/2-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 410-10943/3-A	Lab Control Sample Dup	Total/NA	Water	8011	
410-3311-6 MS	GWTS-EFF2-060320	Total/NA	Water	8011	
410-3311-6 MSD	GWTS-EFF2-060320	Total/NA	Water	8011	

Analysis Batch: 11304

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-3311-1	GWTS-EFF1-060320	Total/NA	Water	8011	10943
410-3311-2	GWTS-EFF1DUP-060320	Total/NA	Water	8011	10943
410-3311-3	GWTS-GAC1-060320	Total/NA	Water	8011	10943
410-3311-4	GWTS-INF1-060320	Total/NA	Water	8011	10943
410-3311-5	GWTS-TB01-060320	Total/NA	Water	8011	10943
410-3311-6	GWTS-EFF2-060320	Total/NA	Water	8011	10943
410-3311-7	GWTS-GAC2-060320	Total/NA	Water	8011	10943
410-3311-8	GWTS-INF2-060320	Total/NA	Water	8011	10943
410-3311-9	GWTS-FB02-060320	Total/NA	Water	8011	10943
MB 410-10943/1-A	Method Blank	Total/NA	Water	8011	10943
LCS 410-10943/2-A	Lab Control Sample	Total/NA	Water	8011	10943
LCSD 410-10943/3-A	Lab Control Sample Dup	Total/NA	Water	8011	10943
410-3311-6 MS	GWTS-EFF2-060320	Total/NA	Water	8011	10943
410-3311-6 MSD	GWTS-EFF2-060320	Total/NA	Water	8011	10943

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QC Association Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-3311-1

Metals

Prep Batch: 11156

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-3311-6	GWTS-EFF2-060320	Dissolved	Water	Non-Digest Prep	
MB 410-11156/1-A	Method Blank	Total/NA	Water	Non-Digest Prep	
LCS 410-11156/2-A	Lab Control Sample	Total/NA	Water	Non-Digest Prep	
410-3311-6 MS	GWTS-EFF2-060320	Dissolved	Water	Non-Digest Prep	
410-3311-6 MSD	GWTS-EFF2-060320	Dissolved	Water	Non-Digest Prep	
410-3311-6 DU	GWTS-EFF2-060320	Dissolved	Water	Non-Digest Prep	

Prep Batch: 11456

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-3311-1	GWTS-EFF1-060320	Dissolved	Water	Non-Digest Prep	
410-3311-2	GWTS-EFF1DUP-060320	Dissolved	Water	Non-Digest Prep	
410-3311-3	GWTS-GAC1-060320	Dissolved	Water	Non-Digest Prep	
410-3311-4	GWTS-INF1-060320	Dissolved	Water	Non-Digest Prep	
410-3311-7	GWTS-GAC2-060320	Dissolved	Water	Non-Digest Prep	
410-3311-8	GWTS-INF2-060320	Dissolved	Water	Non-Digest Prep	
MB 410-11456/1-A	Method Blank	Total/NA	Water	Non-Digest Prep	
LCS 410-11456/2-A	Lab Control Sample	Total/NA	Water	Non-Digest Prep	

Analysis Batch: 12678

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-3311-1	GWTS-EFF1-060320	Dissolved	Water	6010C	11456
410-3311-2	GWTS-EFF1DUP-060320	Dissolved	Water	6010C	11456
410-3311-3	GWTS-GAC1-060320	Dissolved	Water	6010C	11456
410-3311-4	GWTS-INF1-060320	Dissolved	Water	6010C	11456
410-3311-7	GWTS-GAC2-060320	Dissolved	Water	6010C	11456
410-3311-8	GWTS-INF2-060320	Dissolved	Water	6010C	11456
MB 410-11456/1-A	Method Blank	Total/NA	Water	6010C	11456
LCS 410-11456/2-A	Lab Control Sample	Total/NA	Water	6010C	11456
LRC 410-12678/14	Lab Control Sample		Water	6010C	
LRC 410-12678/15	Lab Control Sample		Water	6010C	
LRC 410-12678/16	Lab Control Sample		Water	6010C	
LRC 410-12678/17	Lab Control Sample		Water	6010C	

Analysis Batch: 12730

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-3311-6	GWTS-EFF2-060320	Dissolved	Water	6010C	11156
MB 410-11156/1-A	Method Blank	Total/NA	Water	6010C	11156
LCS 410-11156/2-A	Lab Control Sample	Total/NA	Water	6010C	11156
LRC 410-12730/14	Lab Control Sample		Water	6010C	
LRC 410-12730/15	Lab Control Sample		Water	6010C	
LRC 410-12730/16	Lab Control Sample		Water	6010C	
LRC 410-12730/17	Lab Control Sample		Water	6010C	
410-3311-6 MS	GWTS-EFF2-060320	Dissolved	Water	6010C	11156
410-3311-6 MSD	GWTS-EFF2-060320	Dissolved	Water	6010C	11156
410-3311-6 DU	GWTS-EFF2-060320	Dissolved	Water	6010C	11156

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Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-3311-1

Client Sample ID: GWTS-EFF1-060320**Lab Sample ID: 410-3311-1****Date Collected: 06/03/20 09:05****Matrix: Water****Date Received: 06/04/20 10:47**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	13905	06/17/20 16:15	TQ4J	ELLE
Total/NA	Prep	8011			10943	06/06/20 03:40	UKQ8	ELLE
Total/NA	Analysis	8011		1	11304	06/09/20 00:08	AC3T	ELLE
Dissolved	Prep	Non-Digest Prep			11456	06/09/20 09:25	UAMX	ELLE
Dissolved	Analysis	6010C		1	12678	06/12/20 10:59	UPJE	ELLE

Client Sample ID: GWTS-EFF1DUP-060320**Lab Sample ID: 410-3311-2****Date Collected: 06/03/20 09:05****Matrix: Water****Date Received: 06/04/20 10:47**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	13905	06/17/20 16:37	TQ4J	ELLE
Total/NA	Prep	8011			10943	06/06/20 03:40	UKQ8	ELLE
Total/NA	Analysis	8011		1	11304	06/09/20 00:25	AC3T	ELLE
Dissolved	Prep	Non-Digest Prep			11456	06/09/20 09:25	UAMX	ELLE
Dissolved	Analysis	6010C		1	12678	06/12/20 11:08	UPJE	ELLE

Client Sample ID: GWTS-GAC1-060320**Lab Sample ID: 410-3311-3****Date Collected: 06/03/20 09:19****Matrix: Water****Date Received: 06/04/20 10:47**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	13905	06/17/20 16:59	TQ4J	ELLE
Total/NA	Prep	8011			10943	06/06/20 03:40	UKQ8	ELLE
Total/NA	Analysis	8011		1	11304	06/09/20 00:42	AC3T	ELLE
Dissolved	Prep	Non-Digest Prep			11456	06/09/20 09:25	UAMX	ELLE
Dissolved	Analysis	6010C		1	12678	06/12/20 11:11	UPJE	ELLE

Client Sample ID: GWTS-INF1-060320**Lab Sample ID: 410-3311-4****Date Collected: 06/03/20 09:27****Matrix: Water****Date Received: 06/04/20 10:47**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	13905	06/17/20 17:21	TQ4J	ELLE
Total/NA	Prep	8011			10943	06/06/20 03:40	UKQ8	ELLE
Total/NA	Analysis	8011		1	11304	06/09/20 00:59	AC3T	ELLE
Dissolved	Prep	Non-Digest Prep			11456	06/09/20 09:25	UAMX	ELLE
Dissolved	Analysis	6010C		1	12678	06/12/20 11:14	UPJE	ELLE

Client Sample ID: GWTS-TB01-060320**Lab Sample ID: 410-3311-5****Date Collected: 06/03/20 09:30****Matrix: Water****Date Received: 06/04/20 10:47**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	13905	06/17/20 14:26	TQ4J	ELLE

Eurofins Lancaster Laboratories Env, LLC

Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-3311-1

Client Sample ID: GWTS-TB01-060320**Lab Sample ID: 410-3311-5****Date Collected: 06/03/20 09:30****Matrix: Water****Date Received: 06/04/20 10:47**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			10943	06/06/20 03:40	UKQ8	ELLE
Total/NA	Analysis	8011		1	11304	06/09/20 01:16	AC3T	ELLE

Client Sample ID: GWTS-EFF2-060320**Lab Sample ID: 410-3311-6****Date Collected: 06/03/20 08:24****Matrix: Water****Date Received: 06/04/20 10:47**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	13905	06/17/20 15:09	TQ4J	ELLE
Total/NA	Prep	8011			10943	06/06/20 03:40	UKQ8	ELLE
Total/NA	Analysis	8011		1	11304	06/09/20 02:24	AC3T	ELLE
Dissolved	Prep	Non-Digest Prep			11156	06/08/20 10:15	UAMX	ELLE
Dissolved	Analysis	6010C		1	12730	06/12/20 11:15	UPJE	ELLE

Client Sample ID: GWTS-GAC2-060320**Lab Sample ID: 410-3311-7****Date Collected: 06/03/20 08:43****Matrix: Water****Date Received: 06/04/20 10:47**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	13905	06/17/20 17:43	TQ4J	ELLE
Total/NA	Prep	8011			10943	06/06/20 03:40	UKQ8	ELLE
Total/NA	Analysis	8011		1	11304	06/09/20 03:14	AC3T	ELLE
Dissolved	Prep	Non-Digest Prep			11456	06/09/20 09:25	UAMX	ELLE
Dissolved	Analysis	6010C		1	12678	06/12/20 11:17	UPJE	ELLE

Client Sample ID: GWTS-INF2-060320**Lab Sample ID: 410-3311-8****Date Collected: 06/03/20 08:53****Matrix: Water****Date Received: 06/04/20 10:47**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	13905	06/17/20 18:05	TQ4J	ELLE
Total/NA	Prep	8011			10943	06/06/20 03:40	UKQ8	ELLE
Total/NA	Analysis	8011		1	11304	06/09/20 03:31	AC3T	ELLE
Dissolved	Prep	Non-Digest Prep			11456	06/09/20 09:25	UAMX	ELLE
Dissolved	Analysis	6010C		1	12678	06/12/20 11:21	UPJE	ELLE

Client Sample ID: GWTS-FB02-060320**Lab Sample ID: 410-3311-9****Date Collected: 06/03/20 08:24****Matrix: Water****Date Received: 06/04/20 10:47**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C DOD		1	13905	06/17/20 14:47	TQ4J	ELLE
Total/NA	Prep	8011			10943	06/06/20 03:40	UKQ8	ELLE
Total/NA	Analysis	8011		1	11304	06/09/20 03:48	AC3T	ELLE

Eurofins Lancaster Laboratories Env, LLC

Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-3311-1

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Eurofins Lancaster Laboratories Env, LLC

Accreditation/Certification Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-3311-1

Laboratory: Eurofins Lancaster Laboratories Env, LLC

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	1.01	11-30-20

Eurofins Lancaster Laboratories Env, LLC

Method Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-3311-1

Method	Method Description	Protocol	Laboratory
8260C DOD	Volatile Organic Compounds (GC/MS)	SW846	ELLE
8011	EDB, DBCP, and 1,2,3-TCP (GC)	SW846	ELLE
6010C	Metals (ICP)	SW846	ELLE
5030C	Purge and Trap	SW846	ELLE
8011	Microextraction	SW846	ELLE
Non-Digest Prep	Preparation, Non-Digested Aqueous Metals	EPA	ELLE

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Eurofins Lancaster Laboratories Env, LLC

Sample Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-3311-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
410-3311-1	GWTS-EFF1-060320	Water	06/03/20 09:05	06/04/20 10:47	
410-3311-2	GWTS-EFF1DUP-060320	Water	06/03/20 09:05	06/04/20 10:47	
410-3311-3	GWTS-GAC1-060320	Water	06/03/20 09:19	06/04/20 10:47	
410-3311-4	GWTS-INF1-060320	Water	06/03/20 09:27	06/04/20 10:47	
410-3311-5	GWTS-TB01-060320	Water	06/03/20 09:30	06/04/20 10:47	
410-3311-6	GWTS-EFF2-060320	Water	06/03/20 08:24	06/04/20 10:47	
410-3311-7	GWTS-GAC2-060320	Water	06/03/20 08:43	06/04/20 10:47	
410-3311-8	GWTS-INF2-060320	Water	06/03/20 08:53	06/04/20 10:47	
410-3311-9	GWTS-FB02-060320	Water	06/03/20 08:24	06/04/20 10:47	

Eurofins Lancaster Laboratories Env, LLC

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laborator Job No.: 410-3311-1

SDG No.: _____

Instrument ID: 9915 Analysis Batch Number: 8012Lab Sample ID: IC 410-8012/6 Client Sample ID: _____Date Analyzed: 05/04/20 13:24 Lab File ID: LY04I04.D GC Column: R-624SilMS 30 ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Dichloroethane-d4 (Surr)	7.52	Incomplete Integration	dalea	05/06/20 06:55
1,2,3-Trichloropropane	12.49	Missed Peak	dalea	05/05/20 07:33

Lab Sample ID: IC 410-8012/7 Client Sample ID: _____Date Analyzed: 05/04/20 13:46 Lab File ID: LY04I05.D GC Column: R-624SilMS 30 ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3-Trichloropropane	12.49	Missed Peak	dalea	05/05/20 07:36

Lab Sample ID: IC 410-8012/9 Client Sample ID: _____Date Analyzed: 05/04/20 14:30 Lab File ID: LY04I07.D GC Column: R-624SilMS 30 ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,2-Dichloropropane	6.39	Incomplete Integration	dalea	05/05/20 07:40
Toluene	9.99	Missed Peak	dalea	05/05/20 07:41
Tetrachloroethene	10.53	Missed Peak	dalea	05/05/20 07:41
1,2,3-Trichloropropane	12.49	Missed Peak	dalea	05/05/20 07:42
Hexachlorobutadiene	14.66	Missed Peak	dalea	05/05/20 07:42

Lab Sample ID: ICV 410-8012/11 Client Sample ID: _____Date Analyzed: 05/04/20 14:52 Lab File ID: LY04V01.D GC Column: R-624SilMS 30 ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3-Trichloropropane	12.49	Missed Peak	dalea	05/05/20 07:43

8260C DOD

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laborator Job No.: 410-3311-1

SDG No.: _____

Instrument ID: 9915 Analysis Batch Number: 13905Lab Sample ID: CCVIS 410-13905/3 Client Sample ID: _____Date Analyzed: 06/17/20 11:20 Lab File ID: LU17C01.D GC Column: R-624SilMS 30 ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
t-Butyl alcohol-d10 (IS)	4.48	Incomplete Integration	mellinger c	06/17/20 11:57
2,2-Dichloropropane	6.39	Incomplete Integration	mellinger c	06/17/20 12:00
1,4-Dioxane	8.84	Incomplete Integration	mellinger c	06/17/20 12:00
1,2,3-Trichloropropane	12.49	Incomplete Integration	mellinger c	06/17/20 12:00

Lab Sample ID: LCS 410-13905/5 Client Sample ID: _____Date Analyzed: 06/17/20 12:04 Lab File ID: LU17L01.D GC Column: R-624SilMS 30 ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
t-Butyl alcohol-d10 (IS)	4.50	Incomplete Integration	mellinger c	06/17/20 12:43

Lab Sample ID: LCSD 410-13905/7 Client Sample ID: _____Date Analyzed: 06/17/20 12:48 Lab File ID: LU17L02.D GC Column: R-624SilMS 30 ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
t-Butyl alcohol-d10 (IS)	4.51	Incomplete Integration	mellinger c	06/17/20 13:43

Lab Sample ID: MB 410-13905/9 Client Sample ID: _____Date Analyzed: 06/17/20 13:32 Lab File ID: LU17B01.D GC Column: R-624SilMS 30 ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
t-Butyl alcohol-d10 (IS)	4.50	Incomplete Integration	mellinger c	06/17/20 14:01

8260C DOD

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laborator Job No.: 410-3311-1

SDG No.: _____

Instrument ID: 9915 Analysis Batch Number: 13905Lab Sample ID: 410-3311-6 MSD Client Sample ID: _____Date Analyzed: 06/17/20 15:53 Lab File ID: LU17S06.D GC Column: R-624SilMS 30 ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
t-Butyl alcohol-d10 (IS)	4.49	Incomplete Integration	mellinger c	06/18/20 07:02

Lab Sample ID: 410-3311-1 Client Sample ID: _____Date Analyzed: 06/17/20 16:15 Lab File ID: LU17S07.D GC Column: R-624SilMS 30 ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
t-Butyl alcohol-d10 (IS)	4.50	Incomplete Integration	mellinger c	06/18/20 07:08

Lab Sample ID: 410-3311-2 Client Sample ID: _____Date Analyzed: 06/17/20 16:37 Lab File ID: LU17S08.D GC Column: R-624SilMS 30 ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
t-Butyl alcohol-d10 (IS)	4.49	Incomplete Integration	mellinger c	06/18/20 07:08

Lab Sample ID: 410-3311-3 Client Sample ID: _____Date Analyzed: 06/17/20 16:59 Lab File ID: LU17S09.D GC Column: R-624SilMS 30 ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
t-Butyl alcohol-d10 (IS)	4.48	Incomplete Integration	mellinger c	06/18/20 07:09

8260C DOD

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laborator Job No.: 410-3311-1

SDG No.: _____

Instrument ID: 9915 Analysis Batch Number: 13905Lab Sample ID: 410-3311-4 Client Sample ID: _____Date Analyzed: 06/17/20 17:21 Lab File ID: LU17S10.D GC Column: R-624SilMS 30 ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
t-Butyl alcohol-d10 (IS)	4.50	Incomplete Integration	mellinger c	06/18/20 07:09

Lab Sample ID: 410-3311-7 Client Sample ID: _____Date Analyzed: 06/17/20 17:43 Lab File ID: LU17S11.D GC Column: R-624SilMS 30 ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
t-Butyl alcohol-d10 (IS)	4.50	Incomplete Integration	mellinger c	06/18/20 07:10

Lab Sample ID: 410-3311-8 Client Sample ID: _____Date Analyzed: 06/17/20 18:05 Lab File ID: LU17S12.D GC Column: R-624SilMS 30 ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
t-Butyl alcohol-d10 (IS)	4.49	Incomplete Integration	mellinger c	06/18/20 07:10

Lab Sample ID: CCVC 410-13905/29 Client Sample ID: _____Date Analyzed: 06/17/20 22:29 Lab File ID: LU17S26.D GC Column: R-624SilMS 30 ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloromethane	2.29	Peak assignment corrected	johnsons	06/17/20 22:54
t-Butyl alcohol-d10 (IS)	4.49	Incomplete Integration	mellinger c	06/18/20 07:19
1,4-Dioxane	8.84	Incomplete Integration	mellinger c	06/18/20 07:20
1,2,3-Trichloropropane	12.49	Peak assignment corrected	johnsons	06/17/20 22:55

8260C DOD

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
GCS_EDB1G_00001	05/21/20	04/21/20	Hexane, Lot 194476	2 mL	GCS_EDBMSE_00001	0.014 mL	1,2-Dibromo-3-Chloropropane	0.35105 ppb
							Ethylene Dibromide	0.35035 ppb
							1,1,2,2-Tetrachloroethane	0.17255 ppb
.GCS_EDBMSE_00001	05/21/20	04/21/20	ACETONE, Lot 192473	100 mL	GCS_EDBMSINE_00001	1 mL	1,2-Dibromo-3-Chloropropane	50.15 ppb
							Ethylene Dibromide	50.05 ppb
							1,1,2,2-Tetrachloroethane	24.65 ppb
..GCS_EDBMSINE_00001	05/21/20	04/21/20	ACETONE, Lot 192473	10 mL	GCS_EDBcrv_C_00001	0.25 mL	1,2-Dibromo-3-Chloropropane	5015 ppb
							Ethylene Dibromide	5005 ppb
							1,1,2,2-Tetrachloroethane	2465 ppb
...GCS_EDBcrv_C_00001	11/29/21	AccuStandard, Lot 215111396-01			(Purchased Reagent)		1,2-Dibromo-3-Chloropropane	200.6 ug/mL
							Ethylene Dibromide	200.2 ug/mL
...GCS_PCAsstock_00003	10/03/26	AccuStandard, Lot 216101019			(Purchased Reagent)		1,1,2,2-Tetrachloroethane	197.2 ug/mL
GCS_EDB2G_00001	05/21/20	04/21/20	Hexane, Lot 194476	2 mL	GCS_EDBMSE_00001	0.025 mL	1,2-Dibromo-3-Chloropropane	0.626875 ppb
							Ethylene Dibromide	0.625625 ppb
							1,1,2,2-Tetrachloroethane	0.308125 ppb
.GCS_EDBMSE_00001	05/21/20	04/21/20	ACETONE, Lot 192473	100 mL	GCS_EDBMSINE_00001	1 mL	1,2-Dibromo-3-Chloropropane	50.15 ppb
							Ethylene Dibromide	50.05 ppb
							1,1,2,2-Tetrachloroethane	24.65 ppb
..GCS_EDBMSINE_00001	05/21/20	04/21/20	ACETONE, Lot 192473	10 mL	GCS_EDBcrv_C_00001	0.25 mL	1,2-Dibromo-3-Chloropropane	5015 ppb
							Ethylene Dibromide	5005 ppb
							1,1,2,2-Tetrachloroethane	2465 ppb
...GCS_EDBcrv_C_00001	11/29/21	AccuStandard, Lot 215111396-01			(Purchased Reagent)		1,2-Dibromo-3-Chloropropane	200.6 ug/mL
							Ethylene Dibromide	200.2 ug/mL
...GCS_PCAsstock_00003	10/03/26	AccuStandard, Lot 216101019			(Purchased Reagent)		1,1,2,2-Tetrachloroethane	197.2 ug/mL
GCS_EDB3P_00001	05/21/20	04/21/20	Hexane, Lot 194476	2 mL	GCS_EDBMSE_00001	0.05 mL	1,2-Dibromo-3-Chloropropane	1.25375 ppb
							Ethylene Dibromide	1.25125 ppb
							1,1,2,2-Tetrachloroethane	0.61625 ppb
.GCS_EDBMSE_00001	05/21/20	04/21/20	ACETONE, Lot 192473	100 mL	GCS_EDBMSINE_00001	1 mL	1,2-Dibromo-3-Chloropropane	50.15 ppb
							Ethylene Dibromide	50.05 ppb
							1,1,2,2-Tetrachloroethane	24.65 ppb
..GCS_EDBMSINE_00001	05/21/20	04/21/20	ACETONE, Lot 192473	10 mL	GCS_EDBcrv_C_00001	0.25 mL	1,2-Dibromo-3-Chloropropane	5015 ppb
							Ethylene Dibromide	5005 ppb
							1,1,2,2-Tetrachloroethane	2465 ppb
...GCS_EDBcrv_C_00001	11/29/21	AccuStandard, Lot 215111396-01			(Purchased Reagent)		1,2-Dibromo-3-Chloropropane	200.6 ug/mL
							Ethylene Dibromide	200.2 ug/mL
...GCS_PCAsstock_00003	10/03/26	AccuStandard, Lot 216101019			(Purchased Reagent)		1,1,2,2-Tetrachloroethane	197.2 ug/mL
GCS_EDB4AC_00001	05/21/20	05/05/20	Hexane, Lot 200226	2 mL	GCS_EDBMSE_00001	0.1 mL	1,2-Dibromo-3-Chloropropane	2.5075 ppb
							Ethylene Dibromide	2.5025 ppb
							1,1,2,2-Tetrachloroethane	1.2325 ppb
.GCS_EDBMSE_00001	05/21/20	04/21/20	ACETONE, Lot 192473	100 mL	GCS_EDBMSINE_00001	1 mL	1,2-Dibromo-3-Chloropropane	50.15 ppb
							Ethylene Dibromide	50.05 ppb
							1,1,2,2-Tetrachloroethane	24.65 ppb
..GCS_EDBMSINE_00001	05/21/20	04/21/20	ACETONE, Lot 192473	10 mL	GCS_EDBcrv_C_00001	0.25 mL	1,2-Dibromo-3-Chloropropane	5015 ppb
							Ethylene Dibromide	5005 ppb
							1,1,2,2-Tetrachloroethane	2465 ppb
...GCS_EDBcrv_C_00001	11/29/21	AccuStandard, Lot 215111396-01			(Purchased Reagent)		1,2-Dibromo-3-Chloropropane	200.6 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...GCS_PCAsstock_00003	10/03/26		AccuStandard, Lot 216101019		(Purchased Reagent)		Ethylene Dibromide	200.2 ug/mL
							1,1,2,2-Tetrachloroethane	197.2 ug/mL
GCS_EDB4AM_00001	06/15/20	05/15/20	Hexane, Lot 200226	2 mL	GCS_EDBMSF_00001	0.1 mL	Ethylene Dibromide	2.5025 ppb
							1,1,2,2-Tetrachloroethane	1.2325 ppb
.GCS_EDBMSF_00001	06/15/20	05/15/20	ACETONE, Lot 192473	100 mL	GCS_EDBMSINF_00001	1 mL	Ethylene Dibromide	50.05 ppb
							1,1,2,2-Tetrachloroethane	24.65 ppb
..GCS_EDBMSINF_00001	06/15/20	05/15/20	ACETONE, Lot 192473	10 mL	GCS_EDBcrv_C_00001	0.25 mL	Ethylene Dibromide	5005 ppb
					GCS_PCAsstock_00003	0.125 mL	1,1,2,2-Tetrachloroethane	2465 ppb
...GCS_EDBcrv_C_00001	11/29/21		AccuStandard, Lot 215111396-01		(Purchased Reagent)		Ethylene Dibromide	200.2 ug/mL
...GCS_PCAsstock_00003	10/03/26		AccuStandard, Lot 216101019		(Purchased Reagent)		1,1,2,2-Tetrachloroethane	197.2 ug/mL
GCS_EDB5G_00001	05/21/20	04/21/20	Hexane, Lot 194476	2 mL	GCS_EDBMSE_00001	0.175 mL	1,2-Dibromo-3-Chloropropane	4.38812 ppb
							Ethylene Dibromide	4.37937 ppb
							1,1,2,2-Tetrachloroethane	2.15687 ppb
.GCS_EDBMSE_00001	05/21/20	04/21/20	ACETONE, Lot 192473	100 mL	GCS_EDBMSINE_00001	1 mL	1,2-Dibromo-3-Chloropropane	50.15 ppb
							Ethylene Dibromide	50.05 ppb
							1,1,2,2-Tetrachloroethane	24.65 ppb
..GCS_EDBMSINE_00001	05/21/20	04/21/20	ACETONE, Lot 192473	10 mL	GCS_EDBcrv_C_00001	0.25 mL	1,2-Dibromo-3-Chloropropane	5015 ppb
					GCS_PCAsstock_00003	0.125 mL	Ethylene Dibromide	5005 ppb
							1,1,2,2-Tetrachloroethane	2465 ppb
...GCS_EDBcrv_C_00001	11/29/21		AccuStandard, Lot 215111396-01		(Purchased Reagent)		1,2-Dibromo-3-Chloropropane	200.6 ug/mL
...GCS_PCAsstock_00003	10/03/26		AccuStandard, Lot 216101019		(Purchased Reagent)		Ethylene Dibromide	200.2 ug/mL
							1,1,2,2-Tetrachloroethane	197.2 ug/mL
GCS_EDB6G_00001	05/21/20	04/21/20	Hexane, Lot 194476	2 mL	GCS_EDBMSE_00001	0.25 mL	1,2-Dibromo-3-Chloropropane	6.26875 ppb
							Ethylene Dibromide	6.25625 ppb
							1,1,2,2-Tetrachloroethane	3.08125 ppb
.GCS_EDBMSE_00001	05/21/20	04/21/20	ACETONE, Lot 192473	100 mL	GCS_EDBMSINE_00001	1 mL	1,2-Dibromo-3-Chloropropane	50.15 ppb
							Ethylene Dibromide	50.05 ppb
							1,1,2,2-Tetrachloroethane	24.65 ppb
..GCS_EDBMSINE_00001	05/21/20	04/21/20	ACETONE, Lot 192473	10 mL	GCS_EDBcrv_C_00001	0.25 mL	1,2-Dibromo-3-Chloropropane	5015 ppb
					GCS_PCAsstock_00003	0.125 mL	Ethylene Dibromide	5005 ppb
							1,1,2,2-Tetrachloroethane	2465 ppb
...GCS_EDBcrv_C_00001	11/29/21		AccuStandard, Lot 215111396-01		(Purchased Reagent)		1,2-Dibromo-3-Chloropropane	200.6 ug/mL
...GCS_PCAsstock_00003	10/03/26		AccuStandard, Lot 216101019		(Purchased Reagent)		Ethylene Dibromide	200.2 ug/mL
							1,1,2,2-Tetrachloroethane	197.2 ug/mL
GCS_EDBICVK_00001	05/21/20	04/21/20	Hexane, Lot 194476	2 mL	GCS_EDBMSE_00001	0.05 mL	1,1,2,2-Tetrachloroethane	0.61625 ppb
.GCS_EDBMSE_00001	05/21/20	04/21/20	ACETONE, Lot 192473	100 mL	GCS_EDBMSINE_00001	1 mL	1,1,2,2-Tetrachloroethane	24.65 ppb
..GCS_EDBMSINE_00001	05/21/20	04/21/20	ACETONE, Lot 192473	10 mL	GCS_PCAsstock_00003	0.125 mL	1,1,2,2-Tetrachloroethane	2465 ppb
...GCS_PCAsstock_00003	10/03/26		AccuStandard, Lot 216101019		(Purchased Reagent)		1,1,2,2-Tetrachloroethane	197.2 ug/mL
GCS_EDBICVK_00001	05/21/20	04/21/20	Hexane, Lot 194476	2 mL	GCS_EDBMSE_00001	0.05 mL	Ethylene Dibromide	1.25125 ppb
.GCS_EDBMSE_00001	05/21/20	04/21/20	ACETONE, Lot 192473	100 mL	GCS_EDBMSINE_00001	1 mL	Ethylene Dibromide	50.05 ppb
..GCS_EDBMSINE_00001	05/21/20	04/21/20	ACETONE, Lot 192473	10 mL	GCS_EDBcrv_C_00001	0.25 mL	Ethylene Dibromide	5005 ppb
...GCS_EDBcrv_C_00001	11/29/21		AccuStandard, Lot 215111396-01		(Purchased Reagent)		Ethylene Dibromide	200.2 ug/mL
GCS_EIBK_B_00001	12/04/20	02/20/20	Hexane, Lot 195793	200 mL	GCS_EIBK_INB_00001	0.12 mL	1,1,2,2-Tetrachloroethane	1.1832 ppb
.GCS_EIBK_INB_00001	12/04/20	02/20/20	Hexane, Lot 195793	10 mL	GCS_PCAsstock_00002	0.1 mL	1,1,2,2-Tetrachloroethane	1972 ppb
..GCS_PCAsstock_00002	03/15/28		AccuStandard, Lot 218031224		(Purchased Reagent)		1,1,2,2-Tetrachloroethane	197.2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
MP_1:1HCl_00004	12/08/20	06/08/20	DI Water, Lot DI06082020	20000 mL	MT_HCl_JT_00003	10000 mL	Hydrogen Chloride	188500 ug/mL
.MT_HCl_JT_00003	11/11/23		J.T.Baker, Lot 0000217157		(Purchased Reagent)		Hydrogen Chloride	37.7 %
MP_1:1HNO3_00003	10/23/20	04/23/20	DI Water, Lot DI004232020	20000 mL	MT_HNO3_JT_00003	10000 mL	Nitric acid	349000 ug/mL
.MT_HNO3_JT_00003	06/09/24		J.T.Baker, Lot 0000234822		(Purchased Reagent)		Nitric acid	69.8 %
MSV_4ppbEE_00010	05/04/20	05/04/20	DI Water, Lot 12232019	1000 mL	MSV_DCFM_00013	2 uL	Dichlorofluoromethane	0.004 ug/mL
					MSV_V_2CEVE_00066	4 uL	2-Chloroethyl vinyl ether	0.004 ug/mL
					MSV_V_EE_00003	4 uL	Ethyl ether	0.0039994 ug/mL
					MSV_V_Gas_00073	2 uL	Bromomethane	0.004 ug/mL
							Chloroethane	0.004 ug/mL
							Chloromethane	0.004 ug/mL
							Dichlorodifluoromethane	0.004 ug/mL
							Trichlorofluoromethane	0.004 ug/mL
							Vinyl chloride	0.004 ug/mL
					MSV_V_VOA1_00054	4 uL	1,1,1,2-Tetrachloroethane	0.004 ug/mL
							1,1,1-Trichloroethane	0.004 ug/mL
							1,1,2,2-Tetrachloroethane	0.004 ug/mL
							1,1,2-Trichloroethane	0.004 ug/mL
							1,1-Dichloroethane	0.004 ug/mL
							1,1-Dichloroethene	0.004 ug/mL
							1,1-Dichloropropene	0.004 ug/mL
							1,2,3-Trichlorobenzene	0.004 ug/mL
							1,2,3-Trichloropropane	0.004 ug/mL
							1,2,4-Trichlorobenzene	0.004 ug/mL
							1,2,4-Trimethylbenzene	0.004 ug/mL
							1,2-Dibromo-3-Chloropropane	0.004 ug/mL
							1,2-Dichlorobenzene	0.004 ug/mL
							1,2-Dichloroethane	0.004 ug/mL
							1,2-Dichloropropane	0.004 ug/mL
							1,3,5-Trimethylbenzene	0.004 ug/mL
							1,3-Dichlorobenzene	0.004 ug/mL
							1,3-Dichloropropane	0.004 ug/mL
							1,4-Dichlorobenzene	0.004 ug/mL
							1-Chlorohexane	0.004 ug/mL
							2,2-Dichloropropane	0.004 ug/mL
							2-Chlorotoluene	0.004 ug/mL
							4-Chlorotoluene	0.004 ug/mL
							4-Isopropyltoluene	0.004 ug/mL
							Benzene	0.004 ug/mL
							Bromobenzene	0.004 ug/mL
							Bromoform	0.004 ug/mL
							Carbon tetrachloride	0.004 ug/mL
							Chlorobenzene	0.004 ug/mL
							Chlorodibromomethane	0.004 ug/mL
							Chloroform	0.004 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							cis-1,2-Dichloroethene	0.004 ug/mL
							cis-1,3-Dichloropropene	0.004 ug/mL
							Dibromomethane	0.004 ug/mL
							Dichlorobromomethane	0.004 ug/mL
							Ethylbenzene	0.004 ug/mL
							Ethylene Dibromide	0.004 ug/mL
							Hexachlorobutadiene	0.004 ug/mL
							Isopropylbenzene	0.004 ug/mL
							m-Xylene & p-Xylene	0.008 ug/mL
							Methylene Chloride	0.004 ug/mL
							n-Butylbenzene	0.004 ug/mL
							N-Propylbenzene	0.004 ug/mL
							Naphthalene	0.004 ug/mL
							o-Xylene	0.004 ug/mL
							sec-Butylbenzene	0.004 ug/mL
							Styrene	0.004 ug/mL
							tert-Butylbenzene	0.004 ug/mL
							Tetrachloroethene	0.004 ug/mL
							Toluene	0.004 ug/mL
							trans-1,2-Dichloroethene	0.004 ug/mL
							trans-1,3-Dichloropropene	0.004 ug/mL
							Trichloroethene	0.004 ug/mL
							1,4-Dioxane	0.2 ug/mL
							2-Methyl-2-propanol	0.08 ug/mL
							Isobutyl alcohol	0.2 ug/mL
							Isopropyl alcohol	0.08 ug/mL
							Methacrylonitrile	0.04 ug/mL
							Propionitrile	0.08 ug/mL
							trans-1,4-Dichloro-2-butene	0.04 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	0.004 ug/mL
							2-Chloro-1,3-butadiene	0.004 ug/mL
							2-ethoxy-2-methyl butane	0.004 ug/mL
							Carbon disulfide	0.004 ug/mL
							Cyclohexane	0.004 ug/mL
							Ethyl methacrylate	0.004 ug/mL
							Hexane	0.004 ug/mL
							Iodomethane	0.004 ug/mL
							Isopropyl ether	0.004 ug/mL
							Methyl methacrylate	0.004 ug/mL
							Methyl tert-butyl ether	0.004 ug/mL
							n-Heptane	0.004 ug/mL
							Tert-amyl methyl ether	0.004 ug/mL
							Tert-butyl ethyl ether	0.004 ug/mL
					MSV_V_VOA2_00028	12 uL	1,4-Dioxane	0.2 ug/mL
							2-Methyl-2-propanol	0.08 ug/mL
							Isobutyl alcohol	0.2 ug/mL
							Isopropyl alcohol	0.08 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Methacrylonitrile	0.04 ug/mL
							Propionitrile	0.08 ug/mL
							trans-1,4-Dichloro-2-butene	0.04 ug/mL
					MSV_V_VOA3_00026	1.6 uL	2-Butanone (MEK)	0.008 ug/mL
							2-Hexanone	0.008 ug/mL
							2-Nitropropane	0.008 ug/mL
							4-Methyl-2-pentanone (MIBK)	0.008 ug/mL
							Acetone	0.008 ug/mL
							Acrylonitrile	0.004 ug/mL
							Tetrahydrofuran	0.008 ug/mL
							Acrolein	0.0400005 ug/mL
					MSV_V_VOA6_00033	4 uL	1,2,3-Trimethylbenzene	0.004 ug/mL
							3-Chloro-1-propene	0.004 ug/mL
							Chlorobromomethane	0.004 ug/mL
							Methyl acetate	0.004 ug/mL
							Methylcyclohexane	0.004 ug/mL
							Pentachloroethane	0.004 ug/mL
					MSV_VCYC_00002	32 uL	Cyclohexanone	0.200005 ug/mL
.MSV DCFM 00013	05/20/20		AccuStandard, Lot 219051360		(Purchased Reagent)		Dichlorofluoromethane	2000 ug/mL
.MSV V 2CEVE 00066	06/03/20	05/04/20	Methanol, Lot DX212	5 mL	MSV V1B 2CEVE 00036	1 mL	2-Chloroethyl vinyl ether	1000 ug/mL
..MSV V1B 2CEVE 00036	06/30/22		Restek, Lot A0158674		(Purchased Reagent)		2-Chloroethyl vinyl ether	5000 ug/mL
.MSV V EE 00003	10/28/20	04/28/20	Methanol, Lot DX212	100 mL	MSV EE MISCSK 00004	2.059 mL	Ethyl ether	999.85 ug/mL
..MSV EE MISCSK 00004	10/28/20	04/28/20	Methanol, Lot DX212	10 mL	MSV EE Neat 00002	0.4856 g	Ethyl ether	48560 ug/mL
...MSV EE Neat 00002	11/30/21		Chem Service, Lot 7967000		(Purchased Reagent)		Ethyl ether	1 g/g
.MSV_V_Gas_00073	05/11/20		Restek, Lot A0150705		(Purchased Reagent)		Bromomethane	2000 ug/mL
							Chloroethane	2000 ug/mL
							Chloromethane	2000 ug/mL
							Dichlorodifluoromethane	2000 ug/mL
							Trichlorofluoromethane	2000 ug/mL
							Vinyl chloride	2000 ug/mL
.MSV_V_VOA1_00054	06/03/20	05/04/20	Methanol, Lot DX212	5 mL	MSV_V#1B_00053	1 mL	1,1,1,2-Tetrachloroethane	1000 ug/mL
							1,1,1-Trichloroethane	1000 ug/mL
							1,1,2,2-Tetrachloroethane	1000 ug/mL
							1,1,2-Trichloroethane	1000 ug/mL
							1,1-Dichloroethane	1000 ug/mL
							1,1-Dichloroethene	1000 ug/mL
							1,1-Dichloropropene	1000 ug/mL
							1,2,3-Trichlorobenzene	1000 ug/mL
							1,2,3-Trichloropropane	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2,4-Trimethylbenzene	1000 ug/mL
							1,2-Dibromo-3-Chloropropane	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Dichloroethane	1000 ug/mL
							1,2-Dichloropropane	1000 ug/mL
							1,3,5-Trimethylbenzene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Appendix I-5

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dichloropropane	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1-Chlorohexane	1000 ug/mL
							2,2-Dichloropropane	1000 ug/mL
							2-Chlorotoluene	1000 ug/mL
							4-Chlorotoluene	1000 ug/mL
							4-Isopropyltoluene	1000 ug/mL
							Benzene	1000 ug/mL
							Bromobenzene	1000 ug/mL
							Bromoform	1000 ug/mL
							Carbon tetrachloride	1000 ug/mL
							Chlorobenzene	1000 ug/mL
							Chlorodibromomethane	1000 ug/mL
							Chloroform	1000 ug/mL
							cis-1,2-Dichloroethene	1000 ug/mL
							cis-1,3-Dichloropropene	1000 ug/mL
							Dibromomethane	1000 ug/mL
							Dichlorobromomethane	1000 ug/mL
							Ethylbenzene	1000 ug/mL
							Ethylene Dibromide	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Isopropylbenzene	1000 ug/mL
							m-Xylene & p-Xylene	2000 ug/mL
							Methylene Chloride	1000 ug/mL
							n-Butylbenzene	1000 ug/mL
							N-Propylbenzene	1000 ug/mL
							Naphthalene	1000 ug/mL
							o-Xylene	1000 ug/mL
							sec-Butylbenzene	1000 ug/mL
							Styrene	1000 ug/mL
							tert-Butylbenzene	1000 ug/mL
							Tetrachloroethene	1000 ug/mL
							Toluene	1000 ug/mL
							trans-1,2-Dichloroethene	1000 ug/mL
							trans-1,3-Dichloropropene	1000 ug/mL
							Trichloroethene	1000 ug/mL
					MSV_V#2B_00062	1 mL	1,4-Dioxane	12500 ug/mL
					MSV_V#2B_00062	1 mL	2-Methyl-2-propanol	5000 ug/mL
							Isobutyl alcohol	12500 ug/mL
							Isopropyl alcohol	5000 ug/mL
							Methacrylonitrile	2500 ug/mL
							Propionitrile	5000 ug/mL
					MSV_V#4C_00048	1 mL	trans-1,4-Dichloro-2-butene	2500 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	1000 ug/mL
							2-Chloro-1,3-butadiene	1000 ug/mL
							2-ethoxy-2-methyl butane	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Appendix I-5

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Carbon disulfide	1000 ug/mL
							Cyclohexane	1000 ug/mL
							Ethyl methacrylate	1000 ug/mL
							Hexane	1000 ug/mL
							Iodomethane	1000 ug/mL
							Isopropyl ether	1000 ug/mL
							Methyl methacrylate	1000 ug/mL
							Methyl tert-butyl ether	1000 ug/mL
							n-Heptane	1000 ug/mL
							Tert-amyl methyl ether	1000 ug/mL
							Tert-butyl ethyl ether	1000 ug/mL
..MSV_V#1B_00053	06/03/20		Restek, Lot A0158586			(Purchased Reagent)	1,1,1,2-Tetrachloroethane	5000 ug/mL
							1,1,1-Trichloroethane	5000 ug/mL
							1,1,2,2-Tetrachloroethane	5000 ug/mL
							1,1,2-Trichloroethane	5000 ug/mL
							1,1-Dichloroethane	5000 ug/mL
							1,1-Dichloroethene	5000 ug/mL
							1,1-Dichloropropene	5000 ug/mL
							1,2,3-Trichlorobenzene	5000 ug/mL
							1,2,3-Trichloropropane	5000 ug/mL
							1,2,4-Trichlorobenzene	5000 ug/mL
							1,2,4-Trimethylbenzene	5000 ug/mL
							1,2-Dibromo-3-Chloropropane	5000 ug/mL
							1,2-Dichlorobenzene	5000 ug/mL
							1,2-Dichloroethane	5000 ug/mL
							1,2-Dichloropropane	5000 ug/mL
							1,3,5-Trimethylbenzene	5000 ug/mL
							1,3-Dichlorobenzene	5000 ug/mL
							1,3-Dichloropropane	5000 ug/mL
							1,4-Dichlorobenzene	5000 ug/mL
							1-Chlorohexane	5000 ug/mL
							2,2-Dichloropropane	5000 ug/mL
							2-Chlorotoluene	5000 ug/mL
							4-Chlorotoluene	5000 ug/mL
							4-Isopropyltoluene	5000 ug/mL
							Benzene	5000 ug/mL
							Bromobenzene	5000 ug/mL
							Bromoform	5000 ug/mL
							Carbon tetrachloride	5000 ug/mL
							Chlorobenzene	5000 ug/mL
							Chlorodibromomethane	5000 ug/mL
							Chloroform	5000 ug/mL
							cis-1,2-Dichloroethene	5000 ug/mL
							cis-1,3-Dichloropropene	5000 ug/mL
							Dibromomethane	5000 ug/mL
							Dichlorobromomethane	5000 ug/mL
							Ethylbenzene	5000 ug/mL
							Ethylene Dibromide	5000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Hexachlorobutadiene	5000 ug/mL
							Isopropylbenzene	5000 ug/mL
							m-Xylene & p-Xylene	10000 ug/mL
							Methylene Chloride	5000 ug/mL
							n-Butylbenzene	5000 ug/mL
							N-Propylbenzene	5000 ug/mL
							Naphthalene	5000 ug/mL
							o-Xylene	5000 ug/mL
							sec-Butylbenzene	5000 ug/mL
							Styrene	5000 ug/mL
							tert-Butylbenzene	5000 ug/mL
							Tetrachloroethene	5000 ug/mL
							Toluene	5000 ug/mL
							trans-1,2-Dichloroethene	5000 ug/mL
							trans-1,3-Dichloropropene	5000 ug/mL
							Trichloroethene	5000 ug/mL
..MSV_V#2B_00062	06/03/20		Restek, Lot A0147800		(Purchased Reagent)		1,4-Dioxane	62500 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Isopropyl alcohol	25000 ug/mL
							Methacrylonitrile	12500 ug/mL
							Propionitrile	25000 ug/mL
							trans-1,4-Dichloro-2-butene	12500 ug/mL
..MSV_V#4C_00048	06/03/20		Restek, Lot A0158660		(Purchased Reagent)		1,1,2-Trichloro-1,2,2-trifluoroethane	5000 ug/mL
							2-Chloro-1,3-butadiene	5000 ug/mL
							2-ethoxy-2-methyl butane	5000 ug/mL
							Carbon disulfide	5000 ug/mL
							Cyclohexane	5000 ug/mL
							Ethyl methacrylate	5000 ug/mL
							Hexane	5000 ug/mL
							Iodomethane	5000 ug/mL
							Isopropyl ether	5000 ug/mL
							Methyl methacrylate	5000 ug/mL
							Methyl tert-butyl ether	5000 ug/mL
							n-Heptane	5000 ug/mL
							Tert-amyl methyl ether	5000 ug/mL
							Tert-butyl ethyl ether	5000 ug/mL
.MSV_V_VOA2_00028	06/03/20	05/04/20	Methanol, Lot DX212	5 mL	MSV_V#2B_00063	1 mL	1,4-Dioxane	12500 ug/mL
							2-Methyl-2-propanol	5000 ug/mL
							Isobutyl alcohol	12500 ug/mL
							Isopropyl alcohol	5000 ug/mL
							Methacrylonitrile	2500 ug/mL
							Propionitrile	5000 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
..MSV_V#2B_00063	06/03/20		Restek, Lot A0147800		(Purchased Reagent)		1,4-Dioxane	62500 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							Isobutyl alcohol	62500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MSV_V_VOA3_00026	06/03/20	05/04/20	Methanol, Lot DX212	5 mL	MSV_V#3B_00032	1 mL	Isopropyl alcohol	25000 ug/mL
							Methacrylonitrile	12500 ug/mL
							Propionitrile	25000 ug/mL
							trans-1,4-Dichloro-2-butene	12500 ug/mL
							2-Butanone (MEK)	5000 ug/mL
							2-Hexanone	5000 ug/mL
							2-Nitropropane	5000 ug/mL
							4-Methyl-2-pentanone (MIBK)	5000 ug/mL
							Acetone	5000 ug/mL
							Acrylonitrile	2500 ug/mL
..MSV_V#3B_00032	06/03/20		Restek, Lot A0158677		MSV VACR 00007	1 mL	Tetrahydrofuran	5000 ug/mL
							Acrolein	25000.3 ug/mL
							2-Butanone (MEK)	25000 ug/mL
							2-Hexanone	25000 ug/mL
							2-Nitropropane	25000 ug/mL
							4-Methyl-2-pentanone (MIBK)	25000 ug/mL
							Acetone	25000 ug/mL
							Acrylonitrile	12500 ug/mL
							Tetrahydrofuran	25000 ug/mL
							(Purchased Reagent)	
..MSV_VACR_00007	06/12/20	04/13/20	Methanol, Lot DX212	10 mL	MSV_VACR_STK_00007	9.14 mL	Acrolein	125002 ug/mL
...MSV_VACR_STK_00007	06/12/20	04/13/20	Methanol, Lot DX212	10 mL	MSV_ACROLEIN_00004	1.4503 g	Acrolein	136763 ug/mL
...MSV_ACROLEIN_00004	06/12/20		Chem Service, Lot 9413200				Acrolein	0.943 g/g
.MSV_V_VOA6_00033	05/30/20	04/30/20	Methanol, Lot DX212	5 mL	MSV_V#6_00014	1 mL	1,2,3-Trimethylbenzene	1000 ug/mL
							3-Chloro-1-propene	1000 ug/mL
							Chlorobromomethane	1000 ug/mL
							Methyl acetate	1000 ug/mL
							Methylcyclohexane	1000 ug/mL
							Pentachloroethane	1000 ug/mL
							(Purchased Reagent)	
..MSV_V#6_00014	05/30/20		Restek, Lot A0146393				1,2,3-Trimethylbenzene	5000 ug/mL
							3-Chloro-1-propene	5000 ug/mL
							Chlorobromomethane	5000 ug/mL
							Methyl acetate	5000 ug/mL
							Methylcyclohexane	5000 ug/mL
							Pentachloroethane	5000 ug/mL
							(Purchased Reagent)	
.MSV_VCYC_00002	08/28/20	02/28/20	50/50 MeOH/Water, Lot DX212	200 mL	MSV_VCYC_STK_00002	4.155 mL	Cyclohexanone	6250.16 ug/mL
..MSV_VCYC_STK_00002	08/28/20	02/28/20	50/50 MeOH/Water, Lot DX212	10 mL	MSV_CYC_00002	3.0085 g	Cyclohexanone	300850 ug/mL
...MSV_CYC_00002	05/31/23		Chem Service, Lot 9219800				Cyclohexanone	1 g/g
MSV_DCFM_00013	05/20/20		AccuStandard, Lot 219051360				Dichlorofluoromethane	2000 ug/mL
MSV_HP23_ISSS_00002	08/04/20	02/04/20	Methanol, Lot DX212	10 mL	MSV_8260_SS_00019	1 mL	1,2-Dichloroethane-d4 (Surr)	250 ug/mL
							4-Bromofluorobenzene (Surr)	250 ug/mL
							Dibromofluoromethane (Surr)	250 ug/mL
							Toluene-d8 (Surr)	250 ug/mL
							1,4-Dichlorobenzene-d4	250 ug/mL
					MSV_Cus826_IS_00020	1 mL	Chlorobenzene-d5 (IS)	250 ug/mL
							Fluorobenzene (IS)	250 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MSV_8260_SS_00019	03/31/22		Restek, Lot A0146938		(Purchased Reagent)		t-Butyl alcohol-d10 (IS)	1250 ug/mL
							1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
.MSV_Cus826_IS_00020	05/31/21		Restek, Lot A0138205		(Purchased Reagent)		Toluene-d8 (Surr)	2500 ug/mL
							1,4-Dichlorobenzene-d4	2500 ug/mL
							Chlorobenzene-d5 (IS)	2500 ug/mL
							Fluorobenzene (IS)	2500 ug/mL
MSV_Q_QVOA1_00027	06/03/20	05/04/20	Methanol, Lot DX212	25 mL	MSV_Q#1B_00032	1 mL	t-Butyl alcohol-d10 (IS)	12500 ug/mL
							Benzene	40 mg/L
							Ethylbenzene	40 mg/L
							Toluene	40 mg/L
.MSV_Q#1B_00032	04/30/22		Restek, Lot A0148625		(Purchased Reagent)		Benzene	1000 ug/mL
							Ethylbenzene	1000 ug/mL
							Toluene	1000 ug/mL
MSV_Q_QVOA1_00033	07/15/20	06/15/20	Methanol, Lot DX212	25 mL	MSV_Q#1B_00040	1 mL	Benzene	40 mg/L
							Ethylbenzene	40 mg/L
							Toluene	40 mg/L
.MSV_Q#1B_00040	04/30/22		Restek, Lot A0148625		(Purchased Reagent)		Benzene	1000 ug/mL
							Ethylbenzene	1000 ug/mL
							Toluene	1000 ug/mL
MSV_V_2CEVE_00066	06/03/20	05/04/20	Methanol, Lot DX212	5 mL	MSV_V1B_2CEVE_00036	1 mL	2-Chloroethyl vinyl ether	1000 ug/mL
	.MSV_V1B_2CEVE_00036	06/30/22	Restek, Lot A0158674		(Purchased Reagent)		2-Chloroethyl vinyl ether	5000 ug/mL
MSV_V_BFB_00002							1,2-Dichloroethene, Total	
							Tentatively Identified Compound	
							Xylenes, Total	
.MSV_VBFB_STK_00002	07/28/20	01/28/20	Methanol, Lot DX212	10 mL	MSV_VBFB_STK_00002	0.117 mL	BFB	49.8701 ug/mL
..MSV_4BFB_NEAT_00001	01/31/21	Chem Service, Lot 8995800			MSV_4BFB_NEAT_00001	1.0656 g	BFB	106560 ug/mL
					(Purchased Reagent)		BFB	1 g/g
MSV_V_EE_00003	10/28/20	04/28/20	Methanol, Lot DX212	100 mL	MSV_EE_MISCSK_00004	2.059 mL	Ethyl ether	999.85 ug/mL
.MSV_EE_MISCSK_00004	10/28/20	04/28/20	Methanol, Lot DX212	10 mL	MSV_EE_Neat_00002	0.4856 g	Ethyl ether	48560 ug/mL
..MSV_EE_Neat_00002	11/30/21	Chem Service, Lot 7967000			(Purchased Reagent)		Ethyl ether	1 g/g
MSV_V_Gas_00073	05/11/20		Restek, Lot A0150705		(Purchased Reagent)		Bromomethane	2000 ug/mL
							Chloroethane	2000 ug/mL
							Chloromethane	2000 ug/mL
							Dichlorodifluoromethane	2000 ug/mL
							Trichlorofluoromethane	2000 ug/mL
							Vinyl chloride	2000 ug/mL
MSV_V_VOA1_00054	06/03/20	05/04/20	Methanol, Lot DX212	5 mL	MSV_V#1B_00053	1 mL	1,1,1,2-Tetrachloroethane	1000 ug/mL
							1,1,1-Trichloroethane	1000 ug/mL
							1,1,2,2-Tetrachloroethane	1000 ug/mL
							1,1,2-Trichloroethane	1000 ug/mL
							1,1-Dichloroethane	1000 ug/mL
							1,1-Dichloroethene	1000 ug/mL
							1,1-Dichloropropene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Appendix I-5

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,3-Trichlorobenzene	1000 ug/mL
							1,2,3-Trichloropropane	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2,4-Trimethylbenzene	1000 ug/mL
							1,2-Dibromo-3-Chloropropane	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Dichloroethane	1000 ug/mL
							1,2-Dichloropropane	1000 ug/mL
							1,3,5-Trimethylbenzene	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dichloropropane	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1-Chlorohexane	1000 ug/mL
							2,2-Dichloropropane	1000 ug/mL
							2-Chlorotoluene	1000 ug/mL
							4-Chlorotoluene	1000 ug/mL
							4-Isopropyltoluene	1000 ug/mL
							Benzene	1000 ug/mL
							Bromobenzene	1000 ug/mL
							Bromoform	1000 ug/mL
							Carbon tetrachloride	1000 ug/mL
							Chlorobenzene	1000 ug/mL
							Chlorodibromomethane	1000 ug/mL
							Chloroform	1000 ug/mL
							cis-1,2-Dichloroethene	1000 ug/mL
							cis-1,3-Dichloropropene	1000 ug/mL
							Dibromomethane	1000 ug/mL
							Dichlorobromomethane	1000 ug/mL
							Ethylbenzene	1000 ug/mL
							Ethylene Dibromide	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Isopropylbenzene	1000 ug/mL
							m-Xylene & p-Xylene	2000 ug/mL
							Methylene Chloride	1000 ug/mL
							n-Butylbenzene	1000 ug/mL
							N-Propylbenzene	1000 ug/mL
							Naphthalene	1000 ug/mL
							o-Xylene	1000 ug/mL
							sec-Butylbenzene	1000 ug/mL
							Styrene	1000 ug/mL
							tert-Butylbenzene	1000 ug/mL
							Tetrachloroethene	1000 ug/mL
							Toluene	1000 ug/mL
							trans-1,2-Dichloroethene	1000 ug/mL
							trans-1,3-Dichloropropene	1000 ug/mL
							Trichloroethene	1000 ug/mL
					MSV_V#2B_00062	1 mL	1,4-Dioxane	12500 ug/mL
							2-Methyl-2-propanol	5000 ug/mL

REAGENT TRACEABILITY SUMMARY

Appendix I-5

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Isobutyl alcohol	12500 ug/mL
							Isopropyl alcohol	5000 ug/mL
							Methacrylonitrile	2500 ug/mL
							Propionitrile	5000 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
					MSV_V#4C_00048	1 mL	1,1,2-Trichloro-1,2,2-trifluoroethane	1000 ug/mL
					2-Chloro-1,3-butadiene		1000 ug/mL	
					2-ethoxy-2-methyl butane		1000 ug/mL	
					Carbon disulfide		1000 ug/mL	
					Cyclohexane		1000 ug/mL	
					Ethyl methacrylate		1000 ug/mL	
					Hexane		1000 ug/mL	
					Iodomethane		1000 ug/mL	
					Isopropyl ether		1000 ug/mL	
					Methyl methacrylate		1000 ug/mL	
					Methyl tert-butyl ether		1000 ug/mL	
					n-Heptane		1000 ug/mL	
					Tert-amyl methyl ether		1000 ug/mL	
					Tert-butyl ethyl ether		1000 ug/mL	
.MSV_V#1B_00053	06/03/20	Restek, Lot A0158586			(Purchased Reagent)		1,1,1,2-Tetrachloroethane	5000 ug/mL
							1,1,1-Trichloroethane	5000 ug/mL
							1,1,2,2-Tetrachloroethane	5000 ug/mL
							1,1,2-Trichloroethane	5000 ug/mL
							1,1-Dichloroethane	5000 ug/mL
							1,1-Dichloroethene	5000 ug/mL
							1,1-Dichloropropene	5000 ug/mL
							1,2,3-Trichlorobenzene	5000 ug/mL
							1,2,3-Trichloropropane	5000 ug/mL
							1,2,4-Trichlorobenzene	5000 ug/mL
							1,2,4-Trimethylbenzene	5000 ug/mL
							1,2-Dibromo-3-Chloropropane	5000 ug/mL
							1,2-Dichlorobenzene	5000 ug/mL
							1,2-Dichloroethane	5000 ug/mL
							1,2-Dichloropropane	5000 ug/mL
							1,3,5-Trimethylbenzene	5000 ug/mL
							1,3-Dichlorobenzene	5000 ug/mL
							1,3-Dichloropropane	5000 ug/mL
							1,4-Dichlorobenzene	5000 ug/mL
							1-Chlorohexane	5000 ug/mL
							2,2-Dichloropropane	5000 ug/mL
							2-Chlorotoluene	5000 ug/mL
							4-Chlorotoluene	5000 ug/mL
							4-Isopropyltoluene	5000 ug/mL
							Benzene	5000 ug/mL
							Bromobenzene	5000 ug/mL
							Bromoform	5000 ug/mL
							Carbon tetrachloride	5000 ug/mL

REAGENT TRACEABILITY SUMMARY

Appendix I-5

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chlorobenzene	5000 ug/mL
							Chlorodibromomethane	5000 ug/mL
							Chloroform	5000 ug/mL
							cis-1,2-Dichloroethene	5000 ug/mL
							cis-1,3-Dichloropropene	5000 ug/mL
							Dibromomethane	5000 ug/mL
							Dichlorobromomethane	5000 ug/mL
							Ethylbenzene	5000 ug/mL
							Ethylene Dibromide	5000 ug/mL
							Hexachlorobutadiene	5000 ug/mL
							Isopropylbenzene	5000 ug/mL
							m-Xylene & p-Xylene	10000 ug/mL
							Methylene Chloride	5000 ug/mL
							n-Butylbenzene	5000 ug/mL
							N-Propylbenzene	5000 ug/mL
							Naphthalene	5000 ug/mL
							o-Xylene	5000 ug/mL
							sec-Butylbenzene	5000 ug/mL
							Styrene	5000 ug/mL
							tert-Butylbenzene	5000 ug/mL
							Tetrachloroethene	5000 ug/mL
.MSV_V#2B_00062	06/03/20	Restek, Lot A0147800			(Purchased Reagent)		Toluene	5000 ug/mL
							trans-1,2-Dichloroethene	5000 ug/mL
							trans-1,3-Dichloropropene	5000 ug/mL
							Trichloroethene	5000 ug/mL
							1,4-Dioxane	62500 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							Isobutyl alcohol	62500 ug/mL
.MSV_V#4C_00048	06/03/20	Restek, Lot A0158660			(Purchased Reagent)		Isopropyl alcohol	25000 ug/mL
							Methacrylonitrile	12500 ug/mL
							Propionitrile	25000 ug/mL
							trans-1,4-Dichloro-2-butene	12500 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	5000 ug/mL
							2-Chloro-1,3-butadiene	5000 ug/mL
							2-ethoxy-2-methyl butane	5000 ug/mL
							Carbon disulfide	5000 ug/mL
							Cyclohexane	5000 ug/mL
							Ethyl methacrylate	5000 ug/mL
							Hexane	5000 ug/mL
							Iodomethane	5000 ug/mL
							Isopropyl ether	5000 ug/mL
							Methyl methacrylate	5000 ug/mL
							Methyl tert-butyl ether	5000 ug/mL
.MSV_V_VOA1_00066	07/15/20	06/15/20	Methanol, Lot DX212	5 mL	MSV_V#1B_00073	1 mL	n-Heptane	5000 ug/mL
							Tert-amyl methyl ether	5000 ug/mL
							Tert-butyl ethyl ether	5000 ug/mL
							Benzene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Ethylbenzene	1000 ug/mL
							Toluene	1000 ug/mL
.MSV_V#1B_00073	07/15/20		Restek, Lot A0158586		(Purchased Reagent)		Benzene	5000 ug/mL
							Ethylbenzene	5000 ug/mL
							Toluene	5000 ug/mL
MSV_V_VOA2_00028	06/03/20	05/04/20	Methanol, Lot DX212	5 mL	MSV_V#2B_00063	1 mL	1,4-Dioxane	12500 ug/mL
							2-Methyl-2-propanol	5000 ug/mL
							Isobutyl alcohol	12500 ug/mL
							Isopropyl alcohol	5000 ug/mL
							Methacrylonitrile	2500 ug/mL
							Propionitrile	5000 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
.MSV_V#2B_00063	06/03/20		Restek, Lot A0147800		(Purchased Reagent)		1,4-Dioxane	62500 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Isopropyl alcohol	25000 ug/mL
							Methacrylonitrile	12500 ug/mL
							Propionitrile	25000 ug/mL
							trans-1,4-Dichloro-2-butene	12500 ug/mL
MSV_V_VOA3_00026	06/03/20	05/04/20	Methanol, Lot DX212	5 mL	MSV_V#3B_00032	1 mL	2-Butanone (MEK)	5000 ug/mL
							2-Hexanone	5000 ug/mL
							2-Nitropropane	5000 ug/mL
							4-Methyl-2-pentanone (MIBK)	5000 ug/mL
							Acetone	5000 ug/mL
							Acrylonitrile	2500 ug/mL
							Tetrahydrofuran	5000 ug/mL
.MSV_V#3B_00032	06/03/20		Restek, Lot A0158677		MSV_VACR 00007	1 mL	Acrolein	25000.3 ug/mL
					(Purchased Reagent)		2-Butanone (MEK)	25000 ug/mL
							2-Hexanone	25000 ug/mL
							2-Nitropropane	25000 ug/mL
							4-Methyl-2-pentanone (MIBK)	25000 ug/mL
							Acetone	25000 ug/mL
							Acrylonitrile	12500 ug/mL
							Tetrahydrofuran	25000 ug/mL
.MSV_VACR 00007	06/12/20	04/13/20	Methanol, Lot DX212	10 mL	MSV_VACR STK 00007	9.14 mL	Acrolein	125002 ug/mL
..MSV_VACR STK 00007	06/12/20	04/13/20	Methanol, Lot DX212	10 mL	MSV_ACROLEIN 00004	1.4503 g	Acrolein	136763 ug/mL
...MSV_ACROLEIN 00004	06/12/20		Chem Service, Lot 9413200		(Purchased Reagent)		Acrolein	0.943 g/g
MSV_V_VOA6_00033	05/30/20	04/30/20	Methanol, Lot DX212	5 mL	MSV_V#6_00014	1 mL	1,2,3-Trimethylbenzene	1000 ug/mL
							3-Chloro-1-propene	1000 ug/mL
							Chlorobromomethane	1000 ug/mL
							Methyl acetate	1000 ug/mL
							Methylcyclohexane	1000 ug/mL
							Pentachloroethane	1000 ug/mL
.MSV_V#6_00014	05/30/20		Restek, Lot A0146393		(Purchased Reagent)		1,2,3-Trimethylbenzene	5000 ug/mL
							3-Chloro-1-propene	5000 ug/mL
							Chlorobromomethane	5000 ug/mL
							Methyl acetate	5000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Methylcyclohexane	5000 ug/mL
							Pentachloroethane	5000 ug/mL
MSV_VCYC_00002	08/28/20	02/28/20	50/50 MeOH/Water, Lot DX212	200 mL	MSV_VCYC_STK_00002	4.155 mL	Cyclohexanone	6250.16 ug/mL
.MSV_VCYC_STK_00002	08/28/20	02/28/20	50/50 MeOH/Water, Lot DX212	10 mL	MSV_CYC_00002	3.0085 g	Cyclohexanone	300850 ug/mL
..MSV_CYC_00002	05/31/23		Chem Service, Lot 9219800		(Purchased Reagent)		Cyclohexanone	1 g/g
MT_IA_CCV_00043	07/08/20	06/10/20	A 1% HNO3 5% HCL, Lot 078331	1000 mL	MT_S_901S1_VH_00005	5 mL	Iron	25.02 ug/mL
					MT_S_S2_VH_00002	1 mL	Manganese	0.5001 ug/mL
.MT_S_901S1_VH_00005	03/04/21		VHG Labs, Lot 10037608-30		(Purchased Reagent)		Iron	5004 ug/mL
.MT_S_S2_VH_00002	07/18/20		VHG Labs, Lot 10040609-9		(Purchased Reagent)		Manganese	500.1 ug/mL
MT_IA_ICSA_00017	07/04/20	06/04/20	A 1% HNO3 5% HCL, Lot 62154	1000 mL	MT_S_INF1_SC_00008	40 mL	Al	501.2 ug/mL
							Ca	505.3 ug/mL
							Iron	201.2 ug/mL
							Mg	501.2 ug/mL
					MT_S_INF1_SC_00009	60 mL	Al	501.2 ug/mL
							Ca	505.3 ug/mL
							Iron	201.2 ug/mL
							Mg	501.2 ug/mL
.MT_S_INF1_SC_00008	02/28/21		SCP Science, Lot S200217031		(Purchased Reagent)		Al	5012 ug/mL
							Ca	5053 ug/mL
							Iron	2012 ug/mL
							Mg	5012 ug/mL
.MT_S_INF1_SC_00009	02/28/21		SCP Science, Lot S200217031		(Purchased Reagent)		Al	5012 ug/mL
							Ca	5053 ug/mL
							Iron	2012 ug/mL
							Mg	5012 ug/mL
MT_IA_ICSAB_00016	07/02/20	06/02/20	A 1% HNO3 5% HCL, Lot 062154	1000 mL	MT_S_INF1_SC_00009	100 mL	Al	501.2 ug/mL
							Ca	505.3 ug/mL
							Iron	201.2 ug/mL
							Mg	501.2 ug/mL
					MT_S_LAN13_IV_00003	10 mL	Ag	0.2 ug/mL
							As	0.1 ug/mL
							Ba	0.4997 ug/mL
							Be	0.4998 ug/mL
							Cd	1 ug/mL
							Co	0.5001 ug/mL
							Cr	0.4995 ug/mL
							Cu	0.4997 ug/mL
							Manganese	0.4997 ug/mL
							Ni	1 ug/mL
							Pb	0.5496 ug/mL
							Sb	0.599 ug/mL
							Se	0.5494 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Tl	0.1001 ug/mL
							V	0.4997 ug/mL
							Zn	1 ug/mL
.MT_S_INF1_SC_00009	02/28/21	SCP Science, Lot S200217031			(Purchased Reagent)		Al	5012 ug/mL
							Ca	5053 ug/mL
							Iron	2012 ug/mL
							Mg	5012 ug/mL
.MT_S_LAN13_IV_00003	02/12/21	Inorganic Ventures, Lot P2-MEB687710			(Purchased Reagent)		Ag	20 ug/mL
							As	10 ug/mL
							Ba	49.97 ug/mL
							Be	49.98 ug/mL
							Cd	100 ug/mL
							Co	50.01 ug/mL
							Cr	49.95 ug/mL
							Cu	49.97 ug/mL
							Manganese	49.97 ug/mL
							Ni	100 ug/mL
							Pb	54.96 ug/mL
							Sb	59.9 ug/mL
							Se	54.94 ug/mL
							Tl	10.01 ug/mL
							V	49.97 ug/mL
							Zn	100 ug/mL
MT_IA_ICV_00023	06/25/20	05/26/20	A 1% HNO3 5% HCL, Lot 051219	1000 mL	MT_S_CCV1_HP_00002	6 mL	Iron	30 ug/mL
					MT_S_CCV2_HP_00004	6 mL	Manganese	0.6 ug/mL
.MT_S_CCV1_HP_00002	07/31/20	High-Purity Standards, Lot 1920562			(Purchased Reagent)		Iron	5000 ug/mL
.MT_S_CCV2_HP_00004	03/04/21	High-Purity Standards, Lot 2005715			(Purchased Reagent)		Manganese	100 ug/mL
MT_IA_LLC_00015	06/19/20	05/20/20	A 1% HNO3 5% HCL, Lot 057092	1000 mL	MT_S_LLC_HP_00002	2 mL	Iron	0.2 ug/mL
							Manganese	0.01 ug/mL
.MT_S_LLC_HP_00002	08/31/20	High-Purity Standards, Lot 1922825			(Purchased Reagent)		Iron	100 ug/mL
							Manganese	5 ug/mL
MT_IA_LLC_00016	07/04/20	06/04/20	A 1% HNO3 5% HCL, Lot 62154	1000 mL	MT_S_LLC_HP_00002	2 mL	Iron	0.2 ug/mL
							Manganese	0.01 ug/mL
.MT_S_LLC_HP_00002	08/31/20	High-Purity Standards, Lot 1922825			(Purchased Reagent)		Iron	100 ug/mL
							Manganese	5 ug/mL
MT_IA_LRS2_00023	07/04/20	06/05/20	A 1% HNO3 5% HCL, Lot 078331	500 mL	MT_S_SOL1A_IV_00002	25 mL	Manganese	20 ug/mL
.MT_S_SOL1A_IV_00002	05/20/21	Inorganic Ventures, Lot P2-MEB678440			(Purchased Reagent)		Manganese	400 ug/mL
MT_IA_LRS3_00022	07/05/20	06/05/20	A 1% HNO3 5% HCL, Lot 078331	500 mL	MT_S_SOL1A_IV_00002	12.5 mL	Manganese	10 ug/mL
.MT_S_SOL1A_IV_00002	05/20/21	Inorganic Ventures, Lot P2-MEB678440			(Purchased Reagent)		Manganese	400 ug/mL
MT_IA_LRS4_00019	07/05/20	06/05/20	A 1% HNO3 5% HCL, Lot 078331	500 mL	MT_S_SOL2A_HP_00002	25 mL	Iron	300 ug/mL
.MT_S_SOL2A_HP_00002	10/23/20	High-Purity Standards, Lot 1928901			(Purchased Reagent)		Iron	6000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
MT_IA_LRS5_00019	07/05/20	06/05/20	A 1% HNO3 5% HCL, Lot 078331	500 mL	MT_S_SOL2A_HP_00002	12.5 mL	Iron	150 ug/mL
.MT_S_SOL2A_HP_00002	10/23/20	High-Purity Standards, Lot 1928901			(Purchased Reagent)		Iron	6000 ug/mL
MT_KNiZn_IV_00008	05/15/21	Inorganic Ventures, Lot R2-MEB690016			(Purchased Reagent)		K	500.1 ug/mL
							Ni	199.8 ug/mL
							Zn	39.94 ug/mL
MT_S_HPDS_HP_00002	10/31/20	High-Purity Standards, Lot 1928728			(Purchased Reagent)		Iron	25 ug/mL
							Manganese	3 ug/mL
MT_S_LLC_HP_00003	10/16/20	High-Purity Standards, Lot 1922825			(Purchased Reagent)		Ag	5 ug/mL
							Al	100 ug/mL
							As	15 ug/mL
							B	15 ug/mL
							Ba	2.5 ug/mL
							Be	2.5 ug/mL
							Ca	100 ug/mL
							Cd	2.5 ug/mL
							Co	2.5 ug/mL
							Cr	7.5 ug/mL
							Cu	10 ug/mL
							Iron	100 ug/mL
							K	150 ug/mL
							Li	25 ug/mL
							Manganese	5 ug/mL
							Mg	50 ug/mL
							Mo	5 ug/mL
							Na	500 ug/mL
							Ni	5 ug/mL
							P	50 ug/mL
							Pb	7.5 ug/mL
							Sb	25 ug/mL
							Se	25 ug/mL
							Si	250 ug/mL
							Sn	25 ug/mL
							Sr	2.5 ug/mL
							Sulfur	250 ug/mL
							Ti	5 ug/mL
							Tl	15 ug/mL
							V	5 ug/mL
							W	15 ug/mL
							Zn	10 ug/mL
							Zr	25 ug/mL
OP_EDB_MS_00011	06/28/20	05/28/20	ACETONE, Lot DX594-US	25 mL	OP_EDB_ICVSTK_00004	0.008 mL	1,2,3-Trichloropropane	64 ppb
							1,2-Dibromo-3-Chloropropane	63.84 ppb
							Ethylene Dibromide	64 ppb
.OP_EDB_ICVSTK_00004	02/28/23	Restek, Lot A0135090			(Purchased Reagent)		1,2,3-Trichloropropane	200 ug/mL
							1,2-Dibromo-3-Chloropropane	199.5 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Ethylene Dibromide	200 ug/mL
OP_EDB_SS_00011	06/15/20	06/01/20	ACETONE, Lot DX594-US	100 mL	OP_EDBSS_STK_00001	0.0125 mL	1,1,2,2-Tetrachloroethane	24.65 ppb
.OP_EDBSS_STK_00001	03/15/28		Accustandard, Lot 218031224		(Purchased Reagent)		1,1,2,2-Tetrachloroethane	197.2 ug/mL

Reagent

GCS_EDBcrv_C_00001

125 Market Street
New Haven, CT 06513
USA



AccuStandard®

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: M-504.1-CSS
Description: Method 504.1 - Calibration Stock Solution
Lot: 215111396-01
Solvent: Methanol
Hazards: Refer to SDS for complete safety information

Date Certified: Nov 29, 2018
Expiration: Nov 29, 2021
Sample Size: 1 mL
Components: 3
Storage Condition: Ambient (>5 °C)



Signal Word: Danger

Certified Reference Material



Component	CAS #	Purity % (GC/MS)	Prepared Concentration ² (µg/mL)	Certified Analyte Concentration ¹ (µg/mL)
1,2-Dibromoethane	106-93-4	99.9	200.2	200.0
1,2-Dibromo-3-chloropropane	96-12-8	99.2	200.6	199.0
1,2,3-Trichloropropane	96-18-4	97.5	205.8*	200.7



410-11839

* Weight compensated to 100% purity.

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

² All weights are traceable through NIST, Test No. 822-275872-11

¹ Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is $\pm 2.4\%$. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Certified By:

Larry Decker, Organic QC Manager

Page 1 of 1 - Rev. 1

For use in routine laboratory analysis.

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

QR-ORG/ISO-001
Rev. 5/18

Reagent

MSV_8260_SS_00019



410-25752



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 Bellefonte, PA 16823-8812
 Tel: (800)356-1688
 Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No.: 55671 Lot No.: A0146938
 Description: 8260A Surrogate Mix
8260A Surrogate Mix 2,500µg/mL, P&T Methanol, 1mL/ampul
 Container Size: 2 mL Pkg Amt: > 1 mL
 Expiration Date: March 31, 2022 Storage: 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dibromofluoromethane	2,505.2 µg/mL	+/- 14.5653 µg/mL	Gravimetric
	CAS # 1868-53-7 (Lot 0012016)		+/- 140.4622 µg/mL	Unstressed
	Purity 99%		+/- 143.7488 µg/mL	Stressed
2	1,2-Dichloroethane-d4	2,517.2 µg/mL	+/- 14.6350 µg/mL	Gravimetric
	CAS # 17060-07-0 (Lot PR-26748)		+/- 141.1350 µg/mL	Unstressed
	Purity 99%		+/- 144.4374 µg/mL	Stressed
3	Toluene-d8	2,507.7 µg/mL	+/- 14.5798 µg/mL	Gravimetric
	CAS # 2037-26-5 (Lot PR-27311)		+/- 140.6024 µg/mL	Unstressed
	Purity 99%		+/- 143.8923 µg/mL	Stressed
4	1-Bromo-4-fluorobenzene (BFB)	2,507.7 µg/mL	+/- 14.5798 µg/mL	Gravimetric
	CAS # 460-00-4 (Lot 20401KO)		+/- 140.6024 µg/mL	Unstressed
	Purity 99%		+/- 143.8923 µg/mL	Stressed
Solvent: P&T Methanol				
CAS # 67-56-1				
Purity 99%				

Column:105m x 0.53mm x 3.0µm
Rtx-502 2 (cat.#10910)**Carrier Gas:**

hydrogen-constant pressure 11.0 psi.

Temp. Program:40°C (hold 2 min.) to 240°C
@ 8°C/min., (hold 5 min.)**Inj. Temp:**

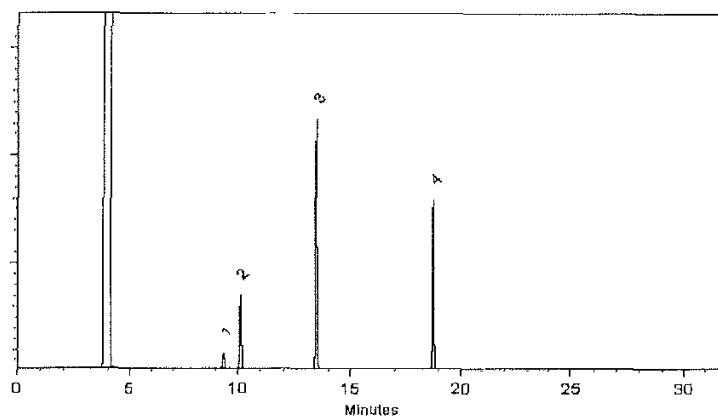
200°C

Det. Temp:

250°C

Det. Type:

FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Maggie Wang
Maggie Wang - Operations Technician I

Date Mixed: 12-Mar-2019

Balance: 1128342314

Jennifer J Pollino
Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 15-Mar-2019

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k \sqrt{U_{gravimetric}^2 + U_{homogeneity}^2 + U_{storage\ stability}^2 + U_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MSV_ACROLEIN_00004



660 Tower Lane • P.O. Box 599 • West Chester, PA 19381-0599
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CERTIFICATE OF ANALYSIS

Acrolein

CATALOG NUMBER	RPN-11030-1G ✓✓
LOT NUMBER	9413200 ✓✓
DATE CERTIFIED	12/06/19 ✓✓
EXPIRATION DATE	12/31/20 ✓✓
CAS NUMBER	107-02-8
MOLECULAR FORMULA	C ₃ H ₄ O
MOLECULAR WEIGHT	56.06
STORAGE	Store under refrigeration.
HANDLING	See Safety Data Sheet
INTENDED USE	For laboratory use only.
NOTES	Contains water and hydroquinone as an inhibitor.

Analytical Test	Value
% PURITY (GC/TCD)	94.3 ✓✓
% WATER (KARL FISCHER)	1.9

Chem Service, Inc. guarantees the purity to be +/- 0.5% deviation prior to the expiration date shown on the label and exclusive of any customer contamination.

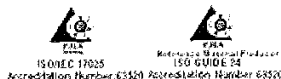
Certified By:

Mary Beth O'Donnell

Mary Beth O'Donnell
 CSM/TC

1-17-20
 LHR 2032

Chem Service, Inc. is accredited to ISO Guide 34:2009, ISO/IEC 17025:2005 and certified to ISO 9001:2009



COA Form
 Revision 3 (3/2015)



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CERTIFICATE OF ANALYSIS

Gas Chromatography / Thermal Conductivity Detector (GC/TCD)

Data file: C:\CHEM32\1\DATA\2019\DATA\1210\SIG2022067.D

Sample name: Acrolein

Instrument: GC 1

Sample type: Sample

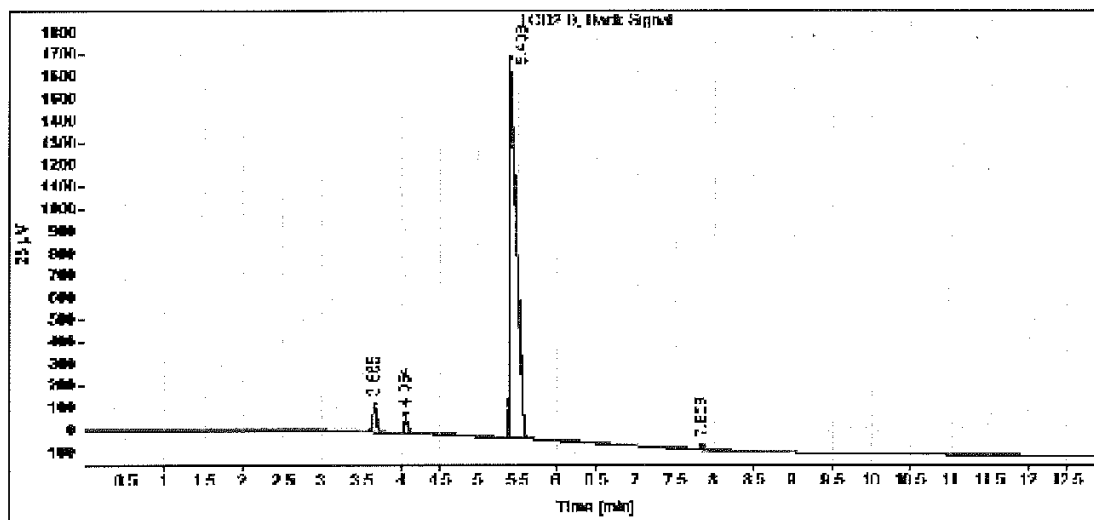
Injection date: 12/8/2019 10:34:12 AM

Location: Vial 11

Acq. method: GASBOMB_TCD.M

Injection volume: 1.0uL

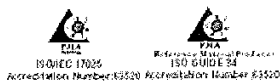
Column name: DB-624 (30m x 0.53mm x 3.0um)



Signal: TCD2 B, Back Signal

RT [min]	Type	Width [min]	Area	Height	Area%
3.65	BB	0.0554	405.7875	114.3327	3.5675
4.06	BB	0.0475	217.2767	71.5037	1.9102
5.40	BV	0.0795	10720.3574	1725.6987	94.2472
7.85	BB	0.1249	31.2858	3.7865	0.2751
Sum			11374.7178		

Chem Service, Inc. is accredited to ISO Guide 34:2009, ISO/IEC 17025:2005 and certified to ISO 9001:2009





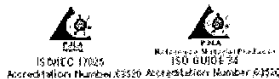
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CERTIFICATE OF ANALYSIS

Analysis Method:

Catalog Number:	RPN-11030-1G
Description:	Acrolein
Lot Number:	9413200
Expiration Date:	12/31/20

Chem Service, Inc. is accredited to ISO Guide 34:2009, ISO/IEC 17025:2005 and certified to ISO 9001:2009



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Page 3 OF 3

Reagent

MSV_Cus826_IS_00020



410-27069



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Tel: (800)356-1688
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www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed

Catalog No.: 558267 Lot No.: A0138205
Description: Custom 8260A IS Mix
Custom 8260A IS Mix 2,500-12,500µg/mL, P&T Methanol, 1mL/ampul
Container Size: 2 mL Pkg Amt: > 1 mL
Expiration Date: May 31, 2021 Storage: 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	tert-Butyl Alcohol-d10	12,613.8 µg/mL	+/-	73.3376	µg/mL Gravimetric
	CAS # 53001-22-2 (Lot PR-29485)		+/-	270.0624	µg/mL Unstressed
	Purity 98%		+/-	277.9136	µg/mL Stressed
2	Fluorobenzene	2,517.8 µg/mL	+/-	14.6387	µg/mL Gravimetric
	CAS # 462-06-6 (Lot BCBK8171V)		+/-	53.9064	µg/mL Unstressed
	Purity 99%		+/-	55.4736	µg/mL Stressed
3	Chlorobenzene-d5	2,518.8 µg/mL	+/-	14.6445	µg/mL Gravimetric
	CAS # 3114-55-4 (Lot PR-22736)		+/-	53.9278	µg/mL Unstressed
	Purity 99%		+/-	55.4956	µg/mL Stressed
4	1,4-Dichlorobenzene-d4	2,511.0 µg/mL	+/-	14.5992	µg/mL Gravimetric
	CAS # 3855-82-1 (Lot PR-18488)		+/-	53.7608	µg/mL Unstressed
	Purity 99%		+/-	55.3237	µg/mL Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:

105m x 0.53mm x 3.0µm
Rtx-502 L (cat #10910)

Carrier Gas:

hydrogen-constant pressure 11.0 psi.

Temp. Program:

40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:

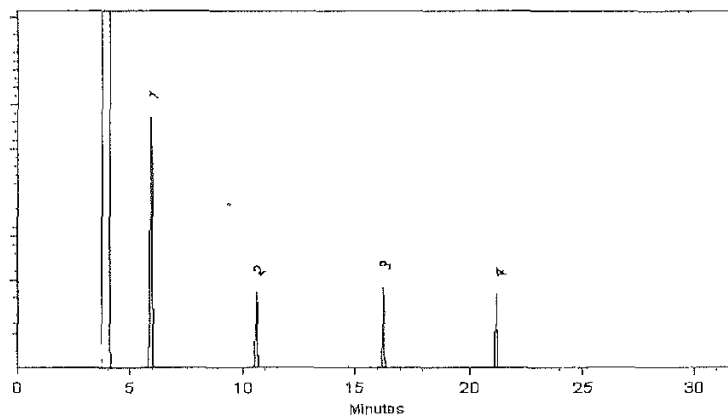
200°C

Det. Temp:

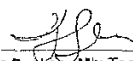
250°C

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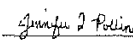
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application


Tom Suckar - Mix Technician

Date Mixed: 21-May-2018 Balance: 112834231-4


Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 23-May-2018

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k \sqrt{U_{gravimetric}^2 + U_{homogeneity}^2 + U_{storage\ stability}^2 + U_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MSV_CYC_00002

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CERTIFICATE OF ANALYSIS

Cyclohexanone

CATALOG NUMBER	N-11531-1G ✓✓✓✓
LOT NUMBER	9219800 ✓✓✓✓
DATE CERTIFIED	05/15/18 ✓✓✓✓
EXPIRATION DATE	05/31/23 ✓✓✓✓
CAS NUMBER	108-94-1
MOLECULAR FORMULA	C ₆ H ₁₀ O
MOLECULAR WEIGHT	98.16
STORAGE	Store in a cool dry place.
HANDLING	See Safety Data Sheet
INTENDED USE	For laboratory use only.

Analytical Test	Value
% PURITY (GC/FID)	99.5 ✓✓
FT-IR SPECTROSCOPY	CONFORMS TO STRUCTURE
PHYSICAL APPEARANCE	COLORLESS LIQUID

Chem Service, Inc. guarantees the purity to be +/- 0.5% deviation prior to the expiration date shown on the label and exclusive of any customer contamination.

Certified By:

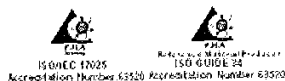
Mary Beth O'Donnell

Mary Beth O'Donnell
 CSM/TC

LHR 2032
 11-23-19

Chem Service, Inc. is accredited to ISO Guide 34:2009, ISO/IEC 17025:2005 and certified to ISO 9001:2008

COA Form
 Revision 3 (3/2015)



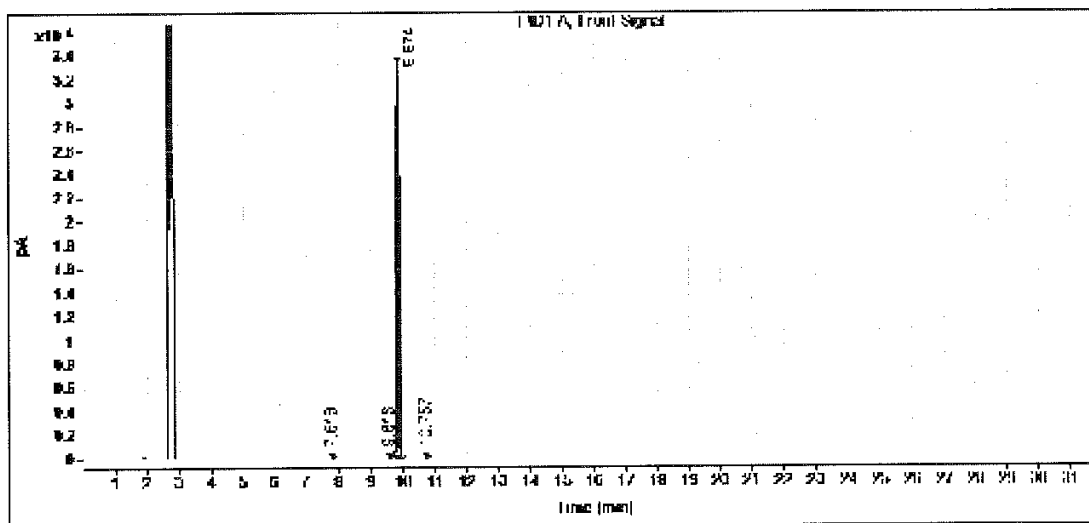


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CERTIFICATE OF ANALYSIS

Gas Chromatography / Flame Ionization Detector (GC/FID)

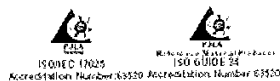
Data file: C:\CHEM32\1\DATA\2018 DATA\0518\SIG1010143.D
 Sample name: N-11531/ACETONE
 Instrument: GC 1
 Injection date: 5/15/2018 8:14:17 AM
 Acq. method: MIX1.M
 Column name: DB-624 (30m x 0.53mm x 3.0um)
 Sample type: Sample
 Location: Vial 1
 Injection volume: 1.0uL



Signal: FID1 A, Front Signal

RT [min]	Type	Width [min]	Area	Height	Area%
7.818	BB	0.0567	12.4787	2.6631	0.0090
8.816	BB	0.0420	22.9558	6.9935	0.0165
9.874	BB S	0.0575	138838.7188	33378.9727	99.9600
10.757	BB	0.0524	20.1641	4.8068	0.0145
Sum:			138894.3173		

Chem Service, Inc. is accredited to ISO Guide 34:2009, ISO/IEC 17025:2005 and certified to ISO 9001:2009



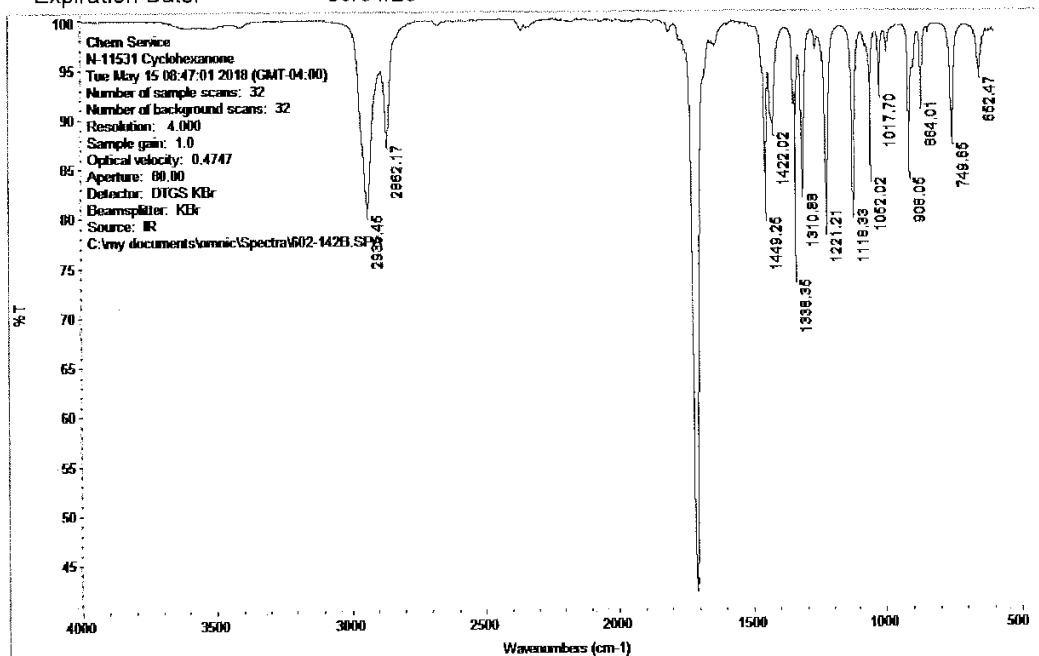


660 Tower Lane • P.O. Box 599 • West Chester, PA 19381-0599
 1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

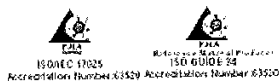
CERTIFICATE OF ANALYSIS

Analysis Method:

Catalog Number: N-11531-1G
 Description: Cyclohexanone
 Lot Number: 9219800
 Expiration Date: 05/31/23



Chem Service, Inc. is accredited to ISO 9001:2009, ISO/IEC 17025:2005 and certified to ISO 9001:2009





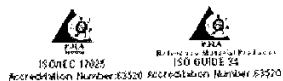
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1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Analysis Method:

Catalog Number:	N-11531-1G
Description:	Cyclohexanone
Lot Number:	9219800
Expiration Date:	05/31/23

Chem Service, Inc. is accredited to ISO 9001:2008, ISO/IEC 17025:2005 and certified to ISO 9001:2008



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Reagent

MSV_Q#1B_00032



110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569936-1.sec Lot No.: A0148625
Description : Custom Revised Q #1B Standard
Custom Revised Q #1B Standard 1,000µg/mL, P&T Methanol,
1mL/ampul
Container Size : 2 mL Pkg Amt: > 1 mL
Expiration Date : April 30, 2022 Storage: 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	1,1-Dichloroethene CAS # 75-35-4.SEC (Lot 5111300) Purity 99%	1,005.5 µg/mL	+/- 7.1750 µg/mL Gravimetric +/- 56.5279 µg/mL Unstressed +/- 57.8435 µg/mL Stressed
2	Methylene chloride (dichloromethane) CAS # 75-09-2.SEC (Lot FGM02) Purity 99%	1,004.5 µg/mL	+/- 7.1682 µg/mL Gravimetric +/- 56.4745 µg/mL Unstressed +/- 57.7888 µg/mL Stressed
3	trans-1,2-Dichloroethene CAS # 156-60-5.SEC (Lot TS5UB) Purity 97%	1,002.8 µg/mL	+/- 7.1558 µg/mL Gravimetric +/- 56.3767 µg/mL Unstressed +/- 57.6888 µg/mL Stressed
4	1,1-Dichloroethane CAS # 75-34-3.SEC (Lot 5379000) Purity 99%	1,006.8 µg/mL	+/- 7.1846 µg/mL Gravimetric +/- 56.6038 µg/mL Unstressed +/- 57.9211 µg/mL Stressed
5	2,2-Dichloropropane CAS # 594-20-7.SEC (Lot I7E8E) Purity 98%	1,003.2 µg/mL	+/- 7.7659 µg/mL Gravimetric +/- 56.4820 µg/mL Unstressed +/- 57.7928 µg/mL Stressed
6	cis-1,2-Dichloroethene CAS # 156-59-2.SEC (Lot HGC01-BLKT) Purity 98%	1,001.2 µg/mL	+/- 7.7507 µg/mL Gravimetric +/- 56.3716 µg/mL Unstressed +/- 57.6799 µg/mL Stressed
7	Chloroform CAS # 67-66-3.SEC (Lot 1297547) Purity 99%	1,004.5 µg/mL	+/- 7.1684 µg/mL Gravimetric +/- 56.4759 µg/mL Unstressed +/- 57.7903 µg/mL Stressed

8	1,1,1-trichloroethane CAS # 71-55-6 * Purity 99%	(Lot B15W12061)	1,000.9 µg/mL	+/- 7.1427 +/- 56.2735 +/- 57.5832	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	1,1-Dichloropropene CAS # 563-58-6.SEC Purity 96%	(Lot 4672600)	1,005.1 µg/mL	+/- 7.7804 +/- 56.5876 +/- 57.9008	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	Carbon tetrachloride CAS # 56-23-5.SEC Purity 99%	(Lot 11466)	1,006.6 µg/mL	+/- 7.1828 +/- 56.5897 +/- 57.9068	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	1,2-Dichloroethane CAS # 107-06-2.SEC Purity 99%	(Lot FO6PK)	1,003.3 µg/mL	+/- 7.1598 +/- 56.4084 +/- 57.7212	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	Benzene CAS # 71-43-2.SEC Purity 99%	(Lot B28Y008)	1,003.5 µg/mL	+/- 7.7683 +/- 56.4996 +/- 57.8109	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	Trichloroethene CAS # 79-01-6.SEC Purity 99%	(Lot H04X050)	1,005.6 µg/mL	+/- 7.1760 +/- 56.5363 +/- 57.8521	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	1,2-Dichloropropane CAS # 78-87-5.SEC Purity 99%	(Lot OGG01)	1,004.3 µg/mL	+/- 7.1666 +/- 56.4618 +/- 57.7759	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	Bromodichloromethane CAS # 75-27-4.SEC Purity 99%	(Lot 10171168)	1,006.2 µg/mL	+/- 7.1801 +/- 56.5686 +/- 57.8852	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	Dibromomethane CAS # 74-95-3.SEC Purity 99%	(Lot FGI01-OICH)	1,006.1 µg/mL	+/- 7.7881 +/- 56.6438 +/- 57.9584	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	cis-1,3-Dichloropropene CAS # 10061-01-5.SEC Purity 99%	(Lot 4870A)	1,001.9 µg/mL	+/- 7.1498 +/- 56.3297 +/- 57.6407	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
18	Toluene CAS # 108-88-3.SEC Purity 99%	(Lot YND2B-BD)	1,004.8 µg/mL	+/- 7.7782 +/- 56.5717 +/- 57.8846	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
19	trans-1,3-Dichloropropene CAS # 10061-02-6.SEC Purity 99%	(Lot ZDMSL)	1,002.6 µg/mL	+/- 7.1548 +/- 56.3691 +/- 57.6810	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
20	1,1,2-Trichloroethane CAS # 79-00-5.SEC Purity 98%	(Lot 3440900)	1,007.8 µg/mL	+/- 7.1920 +/- 56.6618 +/- 57.9805	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
21	1,3-Dichloropropane CAS # 142-28-9.SEC Purity 99%	(Lot AGN01-EFPC)	1,003.8 µg/mL	+/- 7.7708 +/- 56.5177 +/- 57.8293	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
22	Tetrachloroethene CAS # 127-18-4.SEC Purity 99%	(Lot F09W014)	1,004.1 µg/mL	+/- 7.1652 +/- 56.4506 +/- 57.7644	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
23	Dibromochloromethane CAS # 124-48-1.SEC Purity 97%	(Lot 10181507)	1,009.5 µg/mL	+/- 7.2035 +/- 56.7530 +/- 58.0739	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

24	1,2-Dibromoethane (EDB) CAS # 106-93-4.SEC Purity 99%	(Lot 3505900)	1,007.8 µg/mL	+/- 7.8017 +/- 56.7429 +/- 58.0598	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
25	1-Chlorohexane CAS # 544-10-5.SEC Purity 99%	(Lot 8171700)	1,001.0 µg/mL	+/- 5.8744 +/- 56.1308 +/- 57.4439	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	Chlorobenzene CAS # 108-90-7.SEC Purity 99%	(Lot 1161936)	1,004.8 µg/mL	+/- 7.1703 +/- 56.4913 +/- 57.8061	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	1,1,1,2-Tetrachloroethane CAS # 630-20-6.SEC Purity 99%	(Lot GC01)	1,003.4 µg/mL	+/- 7.7677 +/- 56.4951 +/- 57.8063	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	Ethylbenzene CAS # 100-41-4.SEC Purity 99%	(Lot PI4SE)	1,003.4 µg/mL	+/- 7.7677 +/- 56.4951 +/- 57.8063	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	m-Xylene CAS # 108-38-3.SEC Purity 99%	(Lot OUKMG-GB)	1,005.9 µg/mL	+/- 7.7869 +/- 56.6348 +/- 57.9491	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	p-Xylene CAS # 106-42-3.SEC Purity 99%	(Lot GM01)	1,008.3 µg/mL	+/- 7.8054 +/- 56.7699 +/- 58.0874	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	o-Xylene CAS # 95-47-6.SEC Purity 99%	(Lot FGL01)	1,005.8 µg/mL	+/- 7.7862 +/- 56.6303 +/- 57.9445	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	Styrene CAS # 100-42-5.SEC Purity 99%	(Lot QGQ7F)	1,001.1 µg/mL	+/- 7.7497 +/- 56.3645 +/- 57.6726	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	Isopropylbenzene (cumene) CAS # 98-82-8.SEC Purity 99%	(Lot WVREC)	1,004.3 µg/mL	+/- 7.7745 +/- 56.5447 +/- 57.8570	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	Bromoform CAS # 75-25-2.SEC Purity 98%	(Lot 5197400)	1,005.7 µg/mL	+/- 7.1764 +/- 56.5392 +/- 57.8551	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	1,1,1,2-Tetrachloroethane CAS # 79-34-5.SEC Purity 99%	(Lot CFA4D-AQ)	1,006.8 µg/mL	+/- 7.1848 +/- 56.6052 +/- 57.9226	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	1,2,3-Trichloropropane CAS # 96-18-4.SEC Purity 98%	(Lot OGI01)	1,002.4 µg/mL	+/- 7.7598 +/- 56.4378 +/- 57.7477	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	n-Propylbenzene CAS # 103-65-1.SEC Purity 99%	(Lot T2HFC)	1,007.8 µg/mL	+/- 7.8011 +/- 56.7384 +/- 58.0551	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	Bromobenzene CAS # 108-86-1.SEC Purity 99%	(Lot 2FUHG-EM)	1,004.8 µg/mL	+/- 7.7782 +/- 56.5717 +/- 57.8846	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	1,3,5-Trichlorobenzene CAS # 108-70-3.SEC Purity 99%	(Lot I28U021)	1,002.0 µg/mL	+/- 5.8803 +/- 56.1868 +/- 57.5013	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

40	2-Chlorotoluene CAS # 95-49-8.SEC Purity 99%	(Lot SW8QG-AO)	1,008.1 µg/mL	+/- 7.8036 +/- 56.7564 +/- 58.0736	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	4-Chlorotoluene CAS # 106-43-4.SEC Purity 99%	(Lot P4XHJ-AO)	1,002.1 µg/mL	+/- 7.7571 +/- 56.4186 +/- 57.7279	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	tert-Butylbenzene CAS # 98-06-6.SEC Purity 99%	(Lot D6OHC)	1,004.2 µg/mL	+/- 7.7732 +/- 56.5357 +/- 57.8478	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
43	1,2,4-Trimethylbenzene CAS # 95-63-6.SEC Purity 99%	(Lot SC7LO-QA)	1,009.5 µg/mL	+/- 7.8147 +/- 56.8374 +/- 58.1565	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
44	sec-Butylbenzene CAS # 135-98-8.SEC Purity 99%	(Lot O4HRF)	1,006.9 µg/mL	+/- 7.7943 +/- 56.6888 +/- 58.0044	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
45	4-Isopropyltoluene (p-cymene) CAS # 99-87-6.SEC Purity 96%	(Lot 1195000)	1,000.0 µg/mL	+/- 7.7410 +/- 56.3015 +/- 57.6081	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
46	1,3-Dichlorobenzene CAS # 541-73-1.SEC Purity 99%	(Lot FMDFD)	1,003.3 µg/mL	+/- 7.1593 +/- 56.4042 +/- 57.7169	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
47	1,4-Dichlorobenzene CAS # 106-46-7.SEC Purity 99%	(Lot 4Y5DC)	1,008.5 µg/mL	+/- 7.1967 +/- 56.6994 +/- 58.0189	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
48	n-Butylbenzene CAS # 104-51-8.SEC Purity 99%	(Lot MMPGA)	1,005.4 µg/mL	+/- 7.7825 +/- 56.6032 +/- 57.9169	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
49	1,2-Dichlorobenzene CAS # 95-50-1.SEC Purity 99%	(Lot 4NRGF-OT)	1,006.8 µg/mL	+/- 7.1842 +/- 56.6010 +/- 57.9183	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
50	1,2-Dibromo-3-chloropropane CAS # 96-12-8.SEC Purity 98%	(Lot LC00408V)	1,002.7 µg/mL	+/- 7.7616 +/- 56.4511 +/- 57.7612	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
51	1,3,5-Trimethylbenzene CAS # 108-67-8.SEC Purity 99%	(Lot FGH02-CMLN)	1,002.2 µg/mL	+/- 7.7584 +/- 56.4276 +/- 57.7371	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
52	1,2,4-Trichlorobenzene CAS # 120-82-1.SEC Purity 99%	(Lot 3LYYC)	1,007.2 µg/mL	+/- 7.7968 +/- 56.7068 +/- 58.0229	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
53	Hexachlorobutadiene CAS # 87-68-3.SEC Purity 97%	(Lot 5526800)	1,005.8 µg/mL	+/- 7.7857 +/- 56.6265 +/- 57.9407	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
54	Naphthalene CAS # 91-20-3.SEC Purity 99%	(Lot SKZ5N)	1,001.8 µg/mL	+/- 7.7553 +/- 56.4050 +/- 57.7141	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
55	1,2,3-Trichlorobenzene CAS # 87-61-6.SEC Purity 98%	(Lot A0043055)	1,005.9 µg/mL	+/- 7.7865 +/- 56.6321 +/- 57.9464	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:

105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.# 10910)

Carrier Gas:

hydrogen-constant pressure 8.0 psi.

Temp. Program:

40°C (hold 6 min.) to 240°C
@ 6°C/min. (hold 10 min.)

Inj. Temp:

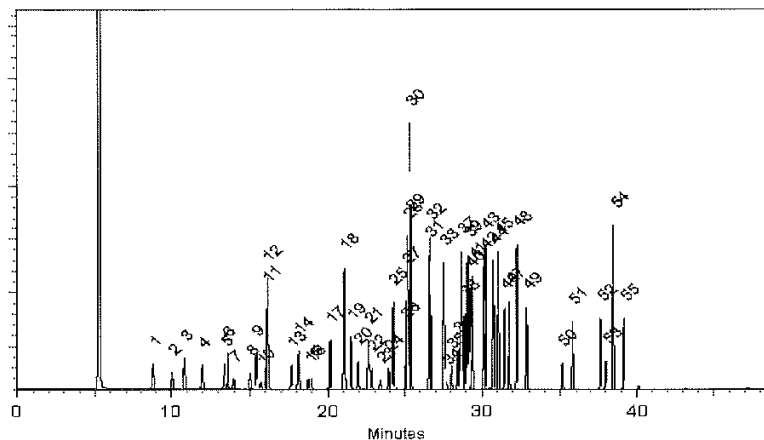
200°C

Det. Temp:

250°C

Det. Type:

FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Michael Mage

Date Mixed: 26-Apr-2019 **Balance:** 1127510105

Jennifer Pollino
Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 30-Apr-2019

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes**Expiration Notes:**

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k \sqrt{U_{gravimetric}^2 + U_{homogeneity}^2 + U_{storage\ stability}^2 + U_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MSV_Q#1B_00040



110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569936-1.sec Lot No.: A0148625
Description : Custom Revised Q #1B Standard
Custom Revised Q #1B Standard 1,000µg/mL, P&T Methanol,
1mL/ampul
Container Size : 2 mL Pkg Amt: > 1 mL
Expiration Date : April 30, 2022 Storage: 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	1,1-Dichloroethene CAS # 75-35-4.SEC (Lot 5111300) Purity 99%	1,005.5 µg/mL	+/- 7.1750 µg/mL Gravimetric +/- 56.5279 µg/mL Unstressed +/- 57.8435 µg/mL Stressed
2	Methylene chloride (dichloromethane) CAS # 75-09-2.SEC (Lot FGM02) Purity 99%	1,004.5 µg/mL	+/- 7.1682 µg/mL Gravimetric +/- 56.4745 µg/mL Unstressed +/- 57.7888 µg/mL Stressed
3	trans-1,2-Dichloroethene CAS # 156-60-5.SEC (Lot TS5UB) Purity 97%	1,002.8 µg/mL	+/- 7.1558 µg/mL Gravimetric +/- 56.3767 µg/mL Unstressed +/- 57.6888 µg/mL Stressed
4	1,1-Dichloroethane CAS # 75-34-3.SEC (Lot 5379000) Purity 99%	1,006.8 µg/mL	+/- 7.1846 µg/mL Gravimetric +/- 56.6038 µg/mL Unstressed +/- 57.9211 µg/mL Stressed
5	2,2-Dichloropropane CAS # 594-20-7.SEC (Lot I7E8E) Purity 98%	1,003.2 µg/mL	+/- 7.7659 µg/mL Gravimetric +/- 56.4820 µg/mL Unstressed +/- 57.7928 µg/mL Stressed
6	cis-1,2-Dichloroethene CAS # 156-59-2.SEC (Lot HGC01-BLKT) Purity 98%	1,001.2 µg/mL	+/- 7.7507 µg/mL Gravimetric +/- 56.3716 µg/mL Unstressed +/- 57.6799 µg/mL Stressed
7	Chloroform CAS # 67-66-3.SEC (Lot 1297547) Purity 99%	1,004.5 µg/mL	+/- 7.1684 µg/mL Gravimetric +/- 56.4759 µg/mL Unstressed +/- 57.7903 µg/mL Stressed

8	1,1,1-trichloroethane CAS # 71-55-6 * Purity 99%	(Lot B15W12061)	1,000.9 µg/mL	+/- 7.1427 +/- 56.2735 +/- 57.5832	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	1,1-Dichloropropene CAS # 563-58-6.SEC Purity 96%	(Lot 4672600)	1,005.1 µg/mL	+/- 7.7804 +/- 56.5876 +/- 57.9008	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	Carbon tetrachloride CAS # 56-23-5.SEC Purity 99%	(Lot 11466)	1,006.6 µg/mL	+/- 7.1828 +/- 56.5897 +/- 57.9068	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	1,2-Dichloroethane CAS # 107-06-2.SEC Purity 99%	(Lot FO6PK)	1,003.3 µg/mL	+/- 7.1598 +/- 56.4084 +/- 57.7212	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	Benzene CAS # 71-43-2.SEC Purity 99%	(Lot B28Y008)	1,003.5 µg/mL	+/- 7.7683 +/- 56.4996 +/- 57.8109	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	Trichloroethene CAS # 79-01-6.SEC Purity 99%	(Lot H04X050)	1,005.6 µg/mL	+/- 7.1760 +/- 56.5363 +/- 57.8521	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	1,2-Dichloropropane CAS # 78-87-5.SEC Purity 99%	(Lot OGG01)	1,004.3 µg/mL	+/- 7.1666 +/- 56.4618 +/- 57.7759	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	Bromodichloromethane CAS # 75-27-4.SEC Purity 99%	(Lot 10171168)	1,006.2 µg/mL	+/- 7.1801 +/- 56.5686 +/- 57.8852	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	Dibromomethane CAS # 74-95-3.SEC Purity 99%	(Lot FGI01-OICH)	1,006.1 µg/mL	+/- 7.7881 +/- 56.6438 +/- 57.9584	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	cis-1,3-Dichloropropene CAS # 10061-01-5.SEC Purity 99%	(Lot 4870A)	1,001.9 µg/mL	+/- 7.1498 +/- 56.3297 +/- 57.6407	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
18	Toluene CAS # 108-88-3.SEC Purity 99%	(Lot YND2B-BD)	1,004.8 µg/mL	+/- 7.7782 +/- 56.5717 +/- 57.8846	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
19	trans-1,3-Dichloropropene CAS # 10061-02-6.SEC Purity 99%	(Lot ZDMSL)	1,002.6 µg/mL	+/- 7.1548 +/- 56.3691 +/- 57.6810	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
20	1,1,2-Trichloroethane CAS # 79-00-5.SEC Purity 98%	(Lot 3440900)	1,007.8 µg/mL	+/- 7.1920 +/- 56.6618 +/- 57.9805	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
21	1,3-Dichloropropane CAS # 142-28-9.SEC Purity 99%	(Lot AGN01-EFPC)	1,003.8 µg/mL	+/- 7.7708 +/- 56.5177 +/- 57.8293	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
22	Tetrachloroethene CAS # 127-18-4.SEC Purity 99%	(Lot F09W014)	1,004.1 µg/mL	+/- 7.1652 +/- 56.4506 +/- 57.7644	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
23	Dibromochloromethane CAS # 124-48-1.SEC Purity 97%	(Lot 10181507)	1,009.5 µg/mL	+/- 7.2035 +/- 56.7530 +/- 58.0739	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

24	1,2-Dibromoethane (EDB) CAS # 106-93-4.SEC Purity 99%	(Lot 3505900)	1,007.8 µg/mL	+/- 7.8017 +/- 56.7429 +/- 58.0598	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
25	1-Chlorohexane CAS # 544-10-5.SEC Purity 99%	(Lot 8171700)	1,001.0 µg/mL	+/- 5.8744 +/- 56.1308 +/- 57.4439	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	Chlorobenzene CAS # 108-90-7.SEC Purity 99%	(Lot 1161936)	1,004.8 µg/mL	+/- 7.1703 +/- 56.4913 +/- 57.8061	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	1,1,1,2-Tetrachloroethane CAS # 630-20-6.SEC Purity 99%	(Lot GC01)	1,003.4 µg/mL	+/- 7.7677 +/- 56.4951 +/- 57.8063	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	Ethylbenzene CAS # 100-41-4.SEC Purity 99%	(Lot PI4SE)	1,003.4 µg/mL	+/- 7.7677 +/- 56.4951 +/- 57.8063	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	m-Xylene CAS # 108-38-3.SEC Purity 99%	(Lot OUKMG-GB)	1,005.9 µg/mL	+/- 7.7869 +/- 56.6348 +/- 57.9491	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	p-Xylene CAS # 106-42-3.SEC Purity 99%	(Lot GM01)	1,008.3 µg/mL	+/- 7.8054 +/- 56.7699 +/- 58.0874	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	o-Xylene CAS # 95-47-6.SEC Purity 99%	(Lot FGL01)	1,005.8 µg/mL	+/- 7.7862 +/- 56.6303 +/- 57.9445	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	Styrene CAS # 100-42-5.SEC Purity 99%	(Lot QGQ7F)	1,001.1 µg/mL	+/- 7.7497 +/- 56.3645 +/- 57.6726	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	Isopropylbenzene (cumene) CAS # 98-82-8.SEC Purity 99%	(Lot WVREC)	1,004.3 µg/mL	+/- 7.7745 +/- 56.5447 +/- 57.8570	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	Bromoform CAS # 75-25-2.SEC Purity 98%	(Lot 5197400)	1,005.7 µg/mL	+/- 7.1764 +/- 56.5392 +/- 57.8551	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	1,1,1,2-Tetrachloroethane CAS # 79-34-5.SEC Purity 99%	(Lot CFA4D-AQ)	1,006.8 µg/mL	+/- 7.1848 +/- 56.6052 +/- 57.9226	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	1,2,3-Trichloropropane CAS # 96-18-4.SEC Purity 98%	(Lot OGI01)	1,002.4 µg/mL	+/- 7.7598 +/- 56.4378 +/- 57.7477	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	n-Propylbenzene CAS # 103-65-1.SEC Purity 99%	(Lot T2HFC)	1,007.8 µg/mL	+/- 7.8011 +/- 56.7384 +/- 58.0551	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	Bromobenzene CAS # 108-86-1.SEC Purity 99%	(Lot 2FUHG-EM)	1,004.8 µg/mL	+/- 7.7782 +/- 56.5717 +/- 57.8846	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	1,3,5-Trichlorobenzene CAS # 108-70-3.SEC Purity 99%	(Lot I28U021)	1,002.0 µg/mL	+/- 5.8803 +/- 56.1868 +/- 57.5013	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

40	2-Chlorotoluene CAS # 95-49-8.SEC Purity 99%	(Lot SW8QG-AO)	1,008.1 µg/mL	+/- 7.8036 +/- 56.7564 +/- 58.0736	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	4-Chlorotoluene CAS # 106-43-4.SEC Purity 99%	(Lot P4XHJ-AO)	1,002.1 µg/mL	+/- 7.7571 +/- 56.4186 +/- 57.7279	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	tert-Butylbenzene CAS # 98-06-6.SEC Purity 99%	(Lot D6OHC)	1,004.2 µg/mL	+/- 7.7732 +/- 56.5357 +/- 57.8478	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
43	1,2,4-Trimethylbenzene CAS # 95-63-6.SEC Purity 99%	(Lot SC7LO-QA)	1,009.5 µg/mL	+/- 7.8147 +/- 56.8374 +/- 58.1565	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
44	sec-Butylbenzene CAS # 135-98-8.SEC Purity 99%	(Lot O4HRF)	1,006.9 µg/mL	+/- 7.7943 +/- 56.6888 +/- 58.0044	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
45	4-Isopropyltoluene (p-cymene) CAS # 99-87-6.SEC Purity 96%	(Lot 1195000)	1,000.0 µg/mL	+/- 7.7410 +/- 56.3015 +/- 57.6081	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
46	1,3-Dichlorobenzene CAS # 541-73-1.SEC Purity 99%	(Lot FMDFD)	1,003.3 µg/mL	+/- 7.1593 +/- 56.4042 +/- 57.7169	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
47	1,4-Dichlorobenzene CAS # 106-46-7.SEC Purity 99%	(Lot 4Y5DC)	1,008.5 µg/mL	+/- 7.1967 +/- 56.6994 +/- 58.0189	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
48	n-Butylbenzene CAS # 104-51-8.SEC Purity 99%	(Lot MMPGA)	1,005.4 µg/mL	+/- 7.7825 +/- 56.6032 +/- 57.9169	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
49	1,2-Dichlorobenzene CAS # 95-50-1.SEC Purity 99%	(Lot 4NRGF-OT)	1,006.8 µg/mL	+/- 7.1842 +/- 56.6010 +/- 57.9183	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
50	1,2-Dibromo-3-chloropropane CAS # 96-12-8.SEC Purity 98%	(Lot LC00408V)	1,002.7 µg/mL	+/- 7.7616 +/- 56.4511 +/- 57.7612	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
51	1,3,5-Trimethylbenzene CAS # 108-67-8.SEC Purity 99%	(Lot FGH02-CMLN)	1,002.2 µg/mL	+/- 7.7584 +/- 56.4276 +/- 57.7371	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
52	1,2,4-Trichlorobenzene CAS # 120-82-1.SEC Purity 99%	(Lot 3LYYC)	1,007.2 µg/mL	+/- 7.7968 +/- 56.7068 +/- 58.0229	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
53	Hexachlorobutadiene CAS # 87-68-3.SEC Purity 97%	(Lot 5526800)	1,005.8 µg/mL	+/- 7.7857 +/- 56.6265 +/- 57.9407	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
54	Naphthalene CAS # 91-20-3.SEC Purity 99%	(Lot SKZ5N)	1,001.8 µg/mL	+/- 7.7553 +/- 56.4050 +/- 57.7141	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
55	1,2,3-Trichlorobenzene CAS # 87-61-6.SEC Purity 98%	(Lot A0043055)	1,005.9 µg/mL	+/- 7.7865 +/- 56.6321 +/- 57.9464	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.# 10910)

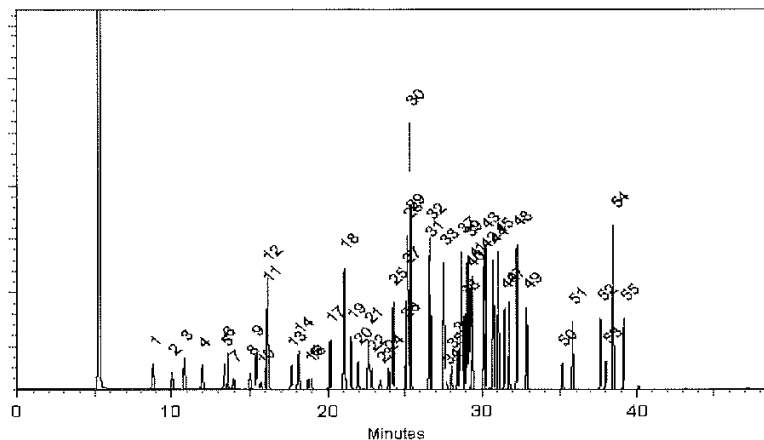
Carrier Gas:
hydrogen-constant pressure 8.0 psi.

Temp. Program:
40°C (hold 6 min.) to 240°C
@ 6°C/min. (hold 10 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Michael Mage

Date Mixed: 26-Apr-2019 **Balance:** 1127510105

Jennifer Pollino
Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 30-Apr-2019

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes**Expiration Notes:**

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k \sqrt{U_{gravimetric}^2 + U_{homogeneity}^2 + U_{storage\ stability}^2 + U_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MSV_V#1B_00073

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110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569936-1 Lot No.: A0158586

Description : Custom Revised V #1B Standard

Custom Revised V #1B Standard 5,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL Pkg Amt: > 1 mL

Expiration Date : March 31, 2023 Storage: 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	1,1-dichloroethene CAS # 75-35-4 (Lot SHBK2437) Purity 99%	5,011.4 µg/mL	+/- 31.9644 µg/mL Gravimetric +/- 281.2901 µg/mL Unstressed +/- 287.8577 µg/mL Stressed
2	Methylene chloride (dichloromethane) CAS # 75-09-2 (Lot SHBL3107) Purity 99%	5,004.6 µg/mL	+/- 31.9213 µg/mL Gravimetric +/- 280.9112 µg/mL Unstressed +/- 287.4700 µg/mL Stressed
3	trans-1,2-Dichloroethene CAS # 156-60-5 (Lot MKBH9850V) Purity 99%	5,017.5 µg/mL	+/- 32.0035 µg/mL Gravimetric +/- 281.6339 µg/mL Unstressed +/- 288.2096 µg/mL Stressed
4	1,1-Dichloroethane CAS # 75-34-3 (Lot 580900) Purity 99%	5,020.4 µg/mL	+/- 32.0218 µg/mL Gravimetric +/- 281.7953 µg/mL Unstressed +/- 288.3747 µg/mL Stressed
5	2,2-Dichloropropane CAS # 594-20-7 (Lot BCBT5124) Purity 99%	5,050.0 µg/mL	+/- 32.0202 µg/mL Gravimetric +/- 283.4366 µg/mL Unstressed +/- 290.0553 µg/mL Stressed
6	cis-1,2-Dichloroethene CAS # 156-59-2 (Lot MKBX5945V) Purity 99%	5,046.5 µg/mL	+/- 31.9980 µg/mL Gravimetric +/- 283.2401 µg/mL Unstressed +/- 289.8543 µg/mL Stressed
7	chloroform CAS # 67-66-3 (Lot SHBJ9076) Purity 99%	5,034.3 µg/mL	+/- 32.1103 µg/mL Gravimetric +/- 282.5741 µg/mL Unstressed +/- 289.1717 µg/mL Stressed

8	1,1,1-trichloroethane CAS # 71-55-6 Purity 98%	(Lot 190123CG)	5,001.3 µg/mL	+/-	31.9002	µg/mL	Gravimetric
				+/-	280.7250	µg/mL	Unstressed
				+/-	287.2795	µg/mL	Stressed
9	1,1-Dichloropropene CAS # 563-58-6 Purity 99%	(Lot 170301JLM)	5,048.9 µg/mL	+/-	32.0131	µg/mL	Gravimetric
				+/-	283.3734	µg/mL	Unstressed
				+/-	289.9907	µg/mL	Stressed
10	carbon tetrachloride CAS # 56-23-5 Purity 99%	(Lot SHBG8938V)	5,022.9 µg/mL	+/-	32.0378	µg/mL	Gravimetric
				+/-	281.9356	µg/mL	Unstressed
				+/-	288.5183	µg/mL	Stressed
11	1,2-Dichloroethane CAS # 107-06-2 Purity 99%	(Lot MKCH9948)	5,007.9 µg/mL	+/-	31.9421	µg/mL	Gravimetric
				+/-	281.0937	µg/mL	Unstressed
				+/-	287.6567	µg/mL	Stressed
12	Benzene CAS # 71-43-2 Purity 99%	(Lot SHBG7317V)	5,042.9 µg/mL	+/-	31.9750	µg/mL	Gravimetric
				+/-	283.0367	µg/mL	Unstressed
				+/-	289.6461	µg/mL	Stressed
13	Trichloroethene CAS # 79-01-6 Purity 99%	(Lot SHBJ4611)	5,012.9 µg/mL	+/-	31.9740	µg/mL	Gravimetric
				+/-	281.3743	µg/mL	Unstressed
				+/-	287.9439	µg/mL	Stressed
14	1,2-Dichloropropane CAS # 78-87-5 Purity 99%	(Lot BCBR0882V)	5,012.6 µg/mL	+/-	31.9724	µg/mL	Gravimetric
				+/-	281.3603	µg/mL	Unstressed
				+/-	287.9295	µg/mL	Stressed
15	bromodichloromethane CAS # 75-27-4 Purity 99%	(Lot MKCJ0238)	5,039.1 µg/mL	+/-	32.1414	µg/mL	Gravimetric
				+/-	282.8477	µg/mL	Unstressed
				+/-	289.4517	µg/mL	Stressed
16	Dibromomethane CAS # 74-95-3 Purity 99%	(Lot 10201030)	5,047.3 µg/mL	+/-	32.0027	µg/mL	Gravimetric
				+/-	283.2822	µg/mL	Unstressed
				+/-	289.8973	µg/mL	Stressed
17	cis-1,3-Dichloropropene CAS # 10061-01-5 Purity 99%	(Lot 200107JLM)	5,015.1 µg/mL	+/-	31.9883	µg/mL	Gravimetric
				+/-	281.5006	µg/mL	Unstressed
				+/-	288.0731	µg/mL	Stressed
18	Toluene CAS # 108-88-3 Purity 99%	(Lot SHBH9895)	5,031.9 µg/mL	+/-	31.9053	µg/mL	Gravimetric
				+/-	282.4193	µg/mL	Unstressed
				+/-	289.0143	µg/mL	Stressed
19	trans-1,3-Dichloropropene CAS # 10061-02-6 Purity 99%	(Lot 19420164-D1219)	5,003.8 µg/mL	+/-	31.9158	µg/mL	Gravimetric
				+/-	280.8621	µg/mL	Unstressed
				+/-	287.4198	µg/mL	Stressed
20	1,1,2-Trichloroethane CAS # 79-00-5 Purity 99%	(Lot FGB01)	5,015.4 µg/mL	+/-	31.9899	µg/mL	Gravimetric
				+/-	281.5146	µg/mL	Unstressed
				+/-	288.0875	µg/mL	Stressed
21	1,3-Dichloropropane CAS # 142-28-9 Purity 99%	(Lot BCBG2162V)	5,042.4 µg/mL	+/-	31.9718	µg/mL	Gravimetric
				+/-	283.0086	µg/mL	Unstressed
				+/-	289.6173	µg/mL	Stressed
22	Tetrachloroethene CAS # 127-18-4 Purity 99%	(Lot SHBJ7422)	5,014.3 µg/mL	+/-	31.9827	µg/mL	Gravimetric
				+/-	281.4515	µg/mL	Unstressed
				+/-	288.0229	µg/mL	Stressed
23	dibromochloromethane CAS # 124-48-1 Purity 99%	(Lot MKCK6472)	5,016.1 µg/mL	+/-	31.9947	µg/mL	Gravimetric
				+/-	281.5567	µg/mL	Unstressed
				+/-	288.1306	µg/mL	Stressed

24	1,2-Dibromoethane (EDB)		5,037.4	µg/mL	+/-	31.9401	µg/mL	Gravimetric
	CAS #	106-93-4	(Lot BCBP2268V)		+/-	282.7280	µg/mL	Unstressed
	Purity	99%			+/-	289.3302	µg/mL	Stressed
25	1-Chlorohexane		5,010.7	µg/mL	+/-	29.3390	µg/mL	Gravimetric
	CAS #	544-10-5	(Lot BCBS3368V)		+/-	280.9687	µg/mL	Unstressed
	Purity	98%			+/-	287.5420	µg/mL	Stressed
26	Chlorobenzene		5,009.0	µg/mL	+/-	31.9493	µg/mL	Gravimetric
	CAS #	108-90-7	(Lot SHBJ0839)		+/-	281.1568	µg/mL	Unstressed
	Purity	99%			+/-	287.7213	µg/mL	Stressed
27	1,1,1,2-Tetrachloroethane		5,038.6	µg/mL	+/-	31.9481	µg/mL	Gravimetric
	CAS #	630-20-6	(Lot MKBS3769V)		+/-	282.7981	µg/mL	Unstressed
	Purity	99%			+/-	289.4020	µg/mL	Stressed
28	Ethylbenzene		5,029.3	µg/mL	+/-	31.8886	µg/mL	Gravimetric
	CAS #	100-41-4	(Lot SHBJ3183)		+/-	282.2719	µg/mL	Unstressed
	Purity	99%			+/-	288.8635	µg/mL	Stressed
29	m-Xylene		5,038.4	µg/mL	+/-	31.9465	µg/mL	Gravimetric
	CAS #	108-38-3	(Lot SHBH8323)		+/-	282.7841	µg/mL	Unstressed
	Purity	99%			+/-	289.3876	µg/mL	Stressed
30	p-Xylene		5,038.0	µg/mL	+/-	31.9441	µg/mL	Gravimetric
	CAS #	106-42-3	(Lot SHBJ0052)		+/-	282.7630	µg/mL	Unstressed
	Purity	99%			+/-	289.3661	µg/mL	Stressed
31	o-Xylene		5,046.4	µg/mL	+/-	31.9972	µg/mL	Gravimetric
	CAS #	95-47-6	(Lot SHBH3432V)		+/-	283.2331	µg/mL	Unstressed
	Purity	99%			+/-	289.8471	µg/mL	Stressed
32	Styrene		5,047.0	µg/mL	+/-	32.0012	µg/mL	Gravimetric
	CAS #	100-42-5	(Lot MKBV4061V)		+/-	283.2682	µg/mL	Unstressed
	Purity	99%			+/-	289.8830	µg/mL	Stressed
33	Isopropylbenzene (cumene)		5,035.3	µg/mL	+/-	31.9267	µg/mL	Gravimetric
	CAS #	98-82-8	(Lot 10185056)		+/-	282.6087	µg/mL	Unstressed
	Purity	99%			+/-	289.2081	µg/mL	Stressed
34	bromoform		5,013.0	µg/mL	+/-	31.9748	µg/mL	Gravimetric
	CAS #	75-25-2	(Lot SHBJ4835)		+/-	281.3813	µg/mL	Unstressed
	Purity	99%			+/-	287.9511	µg/mL	Stressed
35	1,1,2,2-Tetrachloroethane		5,016.0	µg/mL	+/-	31.9939	µg/mL	Gravimetric
	CAS #	79-34-5	(Lot CFA4D)		+/-	281.5497	µg/mL	Unstressed
	Purity	99%			+/-	288.1234	µg/mL	Stressed
36	1,2,3-Trichloropropane		5,033.4	µg/mL	+/-	31.9148	µg/mL	Gravimetric
	CAS #	96-18-4	(Lot BCBH8722V)		+/-	282.5035	µg/mL	Unstressed
	Purity	99%			+/-	289.1004	µg/mL	Stressed
37	n-Propylbenzene		5,032.4	µg/mL	+/-	31.9084	µg/mL	Gravimetric
	CAS #	103-65-1	(Lot MKBJ0332V)		+/-	282.4473	µg/mL	Unstressed
	Purity	99%			+/-	289.0430	µg/mL	Stressed
38	Bromobenzene		5,035.5	µg/mL	+/-	31.9282	µg/mL	Gravimetric
	CAS #	108-86-1	(Lot WXBC5147V)		+/-	282.6227	µg/mL	Unstressed
	Purity	99%			+/-	289.2225	µg/mL	Stressed
39	1,3,5-Trimethylbenzene		5,029.8	µg/mL	+/-	31.8918	µg/mL	Gravimetric
	CAS #	108-67-8	(Lot BCBS7648V)		+/-	282.3000	µg/mL	Unstressed
	Purity	99%			+/-	288.8922	µg/mL	Stressed

40	2-Chlorotoluene CAS # 95-49-8 Purity 99%	(Lot MKBW5554V)	5,037.5 µg/mL	+/-	31.9409	µg/mL	Gravimetric
				+/-	282.7350	µg/mL	Unstressed
				+/-	289.3373	µg/mL	Stressed
41	4-Chlorotoluene CAS # 106-43-4 Purity 99%	(Lot MKBL7753V)	5,039.1 µg/mL	+/-	31.9512	µg/mL	Gravimetric
				+/-	282.8262	µg/mL	Unstressed
				+/-	289.4307	µg/mL	Stressed
42	tert-Butylbenzene CAS # 98-06-6 Purity 99%	(Lot STBD6954V)	5,049.8 µg/mL	+/-	32.0186	µg/mL	Gravimetric
				+/-	283.4225	µg/mL	Unstressed
				+/-	290.0409	µg/mL	Stressed
43	1,2,4-Trimethylbenzene CAS # 95-63-6 Purity 98%	(Lot MKBJ6229V)	5,046.8 µg/mL	+/-	31.9996	µg/mL	Gravimetric
				+/-	283.2544	µg/mL	Unstressed
				+/-	289.8689	µg/mL	Stressed
44	sec-Butylbenzene CAS # 135-98-8 Purity 99%	(Lot MKBR9260V)	5,042.8 µg/mL	+/-	31.9742	µg/mL	Gravimetric
				+/-	283.0296	µg/mL	Unstressed
				+/-	289.6389	µg/mL	Stressed
45	p-Isopropyltoluene (p-Cymene) CAS # 99-87-6 Purity 99%	(Lot MKBV3556V)	5,038.4 µg/mL	+/-	31.9465	µg/mL	Gravimetric
				+/-	282.7841	µg/mL	Unstressed
				+/-	289.3876	µg/mL	Stressed
46	1,3-Dichlorobenzene CAS # 541-73-1 Purity 99%	(Lot BCBQ7100V)	5,017.6 µg/mL	+/-	32.0043	µg/mL	Gravimetric
				+/-	281.6409	µg/mL	Unstressed
				+/-	288.2167	µg/mL	Stressed
47	1,4-Dichlorobenzene CAS # 106-46-7 Purity 99%	(Lot MKBS4401V)	5,023.8 µg/mL	+/-	32.0433	µg/mL	Gravimetric
				+/-	281.9847	µg/mL	Unstressed
				+/-	288.5686	µg/mL	Stressed
48	n-Butylbenzene CAS # 104-51-8 Purity 99%	(Lot 09804AE)	5,024.8 µg/mL	+/-	31.8601	µg/mL	Gravimetric
				+/-	282.0194	µg/mL	Unstressed
				+/-	288.6050	µg/mL	Stressed
49	1,2-Dichlorobenzene CAS # 95-50-1 Purity 99%	(Lot SHBG3111V)	5,024.5 µg/mL	+/-	32.0481	µg/mL	Gravimetric
				+/-	282.0268	µg/mL	Unstressed
				+/-	288.6117	µg/mL	Stressed
50	1,2-Dibromo-3-chloropropane CAS # 96-12-8 Purity 99%	(Lot FBL01)	5,036.4 µg/mL	+/-	31.9338	µg/mL	Gravimetric
				+/-	282.6718	µg/mL	Unstressed
				+/-	289.2727	µg/mL	Stressed
51	1,3,5-Trichlorobenzene CAS # 108-70-3 Purity 99%	(Lot 11319AS)	5,034.0 µg/mL	+/-	29.4752	µg/mL	Gravimetric
				+/-	282.2729	µg/mL	Unstressed
				+/-	288.8768	µg/mL	Stressed
52	1,2,4-Trichlorobenzene CAS # 120-82-1 Purity 99%	(Lot SHBJ0905)	5,036.5 µg/mL	+/-	31.9346	µg/mL	Gravimetric
				+/-	282.6789	µg/mL	Unstressed
				+/-	289.2799	µg/mL	Stressed
53	Hexachlorobutadiene CAS # 87-68-3 Purity 99%	(Lot J31X013)	5,033.6 µg/mL	+/-	31.9164	µg/mL	Gravimetric
				+/-	282.5175	µg/mL	Unstressed
				+/-	289.1148	µg/mL	Stressed
54	Naphthalene CAS # 91-20-3 Purity 99%	(Lot MKBW2603V)	5,033.6 µg/mL	+/-	31.9164	µg/mL	Gravimetric
				+/-	282.5175	µg/mL	Unstressed
				+/-	289.1148	µg/mL	Stressed
55	1,2,3-Trichlorobenzene CAS # 87-61-6 Purity 99%	(Lot MKBS4859V)	5,016.0 µg/mL	+/-	31.8046	µg/mL	Gravimetric
				+/-	281.5283	µg/mL	Unstressed
				+/-	288.1024	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
 105m x 0.53mm x 3.0µm
 Rtx-502.2 (cat.# 10910)

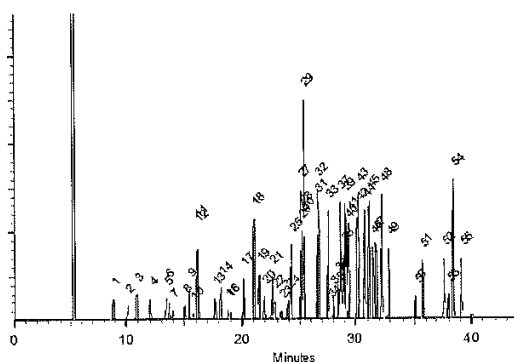
Carrier Gas:
 hydrogen-constant pressure 8.0 psi.

Temp. Program:
 40°C (hold 6 min.) to 240°C
 @ 6°C/min. (hold 10 min.)

Inj. Temp:
 200°C

Det. Temp:
 250°C

Det. Type:
 FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cydnei L. Crust
 Cydnei L. Crust - Mix Technician

Date Mixed: 09-Mar-2020 **Balance:** B251644995

Paul Yan Le - GC Analyst
 Paul Yan Le - GC Analyst

Date Passed: 11-Mar-2020

Manufactured under Restek's ISO 9001:2015
 Registered Quality System
 Certificate #FM 80397

General Certified Reference Material Notes**Expiration Notes:**

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k \sqrt{U_{gravimetric}^2 + U_{homogeneity}^2 + U_{storage\ stability}^2 + U_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MSV_V#2B_00062



110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. :	<u>56734</u>	Lot No.:	<u>A0147800</u>
Description :	<u>Custom V # 2B Standard</u>		
	<u>Custom V #2B Standard 12,500-125,000µg/mL, P&T Methanol, 1mL/ampul</u>		
Container Size :	<u>2 mL</u>	Pkg Amt:	<u>> 1 mL</u>
Expiration Date :	<u>April 30, 2021</u>	Storage:	<u>0°C or colder</u>

Elution Order	Compound	CAS #	Percent Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	2-Propanol (isopropanol)	67-63-0	99%	25,038.8 µg/mL	+/- 146.6077 µg/mL
2	tert-Butanol (TBA)	75-65-0	99%	25,051.6 µg/mL	+/- 146.6826 µg/mL
3	Propionitrile	107-12-0	99%	25,036.8 µg/mL	+/- 146.5960 µg/mL
4	Methacrylonitrile	126-98-7	99%	12,531.6 µg/mL	+/- 73.3753 µg/mL
5	Isobutanol (2-Methyl-1-propanol)	78-83-1	99%	62,524.0 µg/mL	+/- 366.0729 µg/mL
6	1-Butanol	71-36-3	99%	125,066.8 µg/mL	+/- 732.2559 µg/mL
7	1,4-Dioxane	123-91-1	99%	62,523.6 µg/mL	+/- 366.0705 µg/mL
8	trans-1,4-dichloro-2-butene	110-57-6	94%	12,530.6 µg/mL	+/- 73.3693 µg/mL
Solvent:	P&T Methanol	67-56-1	99%		

Specific Reference Material Notes:

This RM (Reference Material) is not a CRM (Certified Reference Material) due to the 1-butanol concentration exceeding the maximum concentration on Restek's ISO Guide 34 scope of accreditation.

Column:

105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

Carrier Gas:

hydrogen-constant pressure 11.0 psi.

Temp. Program:

40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:

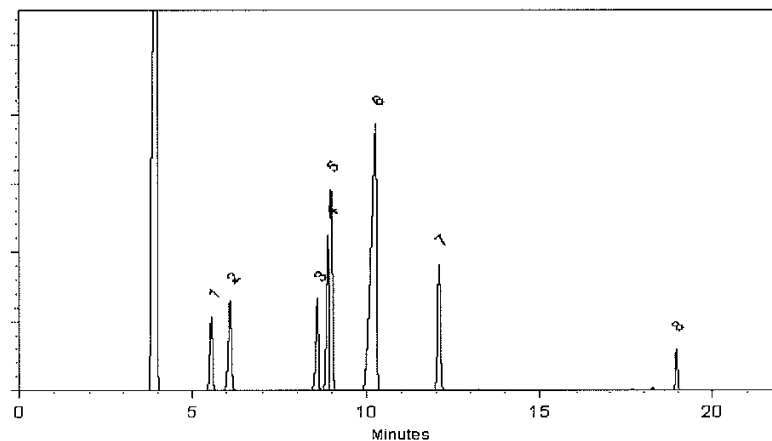
200°C

Det. Temp:

250°C

Det. Type:

FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Clara Winkle
Clara Winkle - Operations Technician I

Date Mixed: 03-Apr-2019

Balance: B251644995

Jennifer Pollino
Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 10-Apr-2019

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Reference Material Notes**Expiration Notes:**

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the RM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/ μ ECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Uncertainty Value Notes:

- Uncertainties are determined using data from balances and glassware, raw material purity, and, when significant, equipment tolerances or calibration results.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MSV_V#2B_00063



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Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. :	<u>56734</u>	Lot No.:	<u>A0147800</u>
Description :	<u>Custom V # 2B Standard</u>		
	<u>Custom V #2B Standard 12,500-125,000µg/mL, P&T Methanol, 1mL/ampul</u>		
Container Size :	<u>2 mL</u>	Pkg Amt:	<u>> 1 mL</u>
Expiration Date :	<u>April 30, 2021</u>	Storage:	<u>0°C or colder</u>

Elution Order	Compound	CAS #	Percent Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	2-Propanol (isopropanol)	67-63-0	99%	25,038.8 µg/mL	+/- 146.6077 µg/mL
2	tert-Butanol (TBA)	75-65-0	99%	25,051.6 µg/mL	+/- 146.6826 µg/mL
3	Propionitrile	107-12-0	99%	25,036.8 µg/mL	+/- 146.5960 µg/mL
4	Methacrylonitrile	126-98-7	99%	12,531.6 µg/mL	+/- 73.3753 µg/mL
5	Isobutanol (2-Methyl-1-propanol)	78-83-1	99%	62,524.0 µg/mL	+/- 366.0729 µg/mL
6	1-Butanol	71-36-3	99%	125,066.8 µg/mL	+/- 732.2559 µg/mL
7	1,4-Dioxane	123-91-1	99%	62,523.6 µg/mL	+/- 366.0705 µg/mL
8	trans-1,4-dichloro-2-butene	110-57-6	94%	12,530.6 µg/mL	+/- 73.3693 µg/mL
Solvent:	P&T Methanol	67-56-1	99%		

Specific Reference Material Notes:

This RM (Reference Material) is not a CRM (Certified Reference Material) due to the 1-butanol concentration exceeding the maximum concentration on Restek's ISO Guide 34 scope of accreditation.

Column:

105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

Carrier Gas:

hydrogen-constant pressure 11.0 psi.

Temp. Program:

40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:

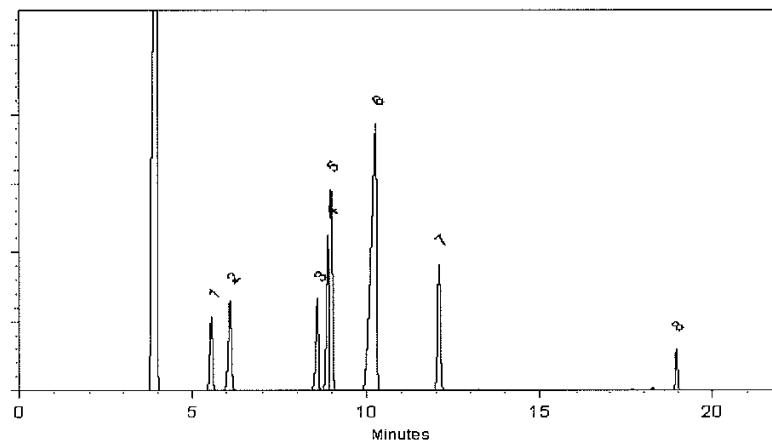
200°C

Det. Temp:

250°C

Det. Type:

FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Clara Winkle
Clara Winkle - Operations Technician I

Date Mixed: 03-Apr-2019

Balance: B251644995

Jennifer Pollino
Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 10-Apr-2019

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Reference Material Notes**Expiration Notes:**

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the RM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/ μ ECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Uncertainty Value Notes:

- Uncertainties are determined using data from balances and glassware, raw material purity, and, when significant, equipment tolerances or calibration results.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MSV_V#6_00014

RESTEK® CERTIFIED REFERENCE MATERIAL

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Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 558268 Lot No.: A0146393
Description : Custom CS#6 Standard
Custom CS#6 Standard 5,000µg/mL, P&T Methanol, 1mL/ampul
Container Size : 2 mL Pkg Amt: > 1 mL
Expiration Date : August 31, 2020 Storage: 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L., K=2)
1	Methyl acetate CAS # 79-20-9 (Lot SHBG4345V) Purity 99%	5,004.0 µg/mL	+/- 29.3663 µg/mL Gravimetric +/- 301.9399 µg/mL Unstressed +/- 302.6566 µg/mL Stressed
2	Allyl chloride (3-chloropropene) CAS # 107-05-1 (Lot WXBB7852V) Purity 99%	5,003.0 µg/mL	+/- 29.3604 µg/mL Gravimetric +/- 301.8795 µg/mL Unstressed +/- 302.5961 µg/mL Stressed
3	Bromochloromethane CAS # 74-97-5 (Lot 00004559) Purity 99%	5,005.0 µg/mL	+/- 29.3721 µg/mL Gravimetric +/- 302.0002 µg/mL Unstressed +/- 302.7171 µg/mL Stressed
4	Methylcyclohexane CAS # 108-87-2 (Lot SHBJ0457) Purity 99%	5,024.0 µg/mL	+/- 29.4836 µg/mL Gravimetric +/- 303.1467 µg/mL Unstressed +/- 303.8663 µg/mL Stressed
5	Pentachloroethane CAS # 76-01-7 (Lot L7GVM) Purity 99%	5,004.0 µg/mL	+/- 29.3663 µg/mL Gravimetric +/- 301.9399 µg/mL Unstressed +/- 302.6566 µg/mL Stressed
6	1,2,3-Trimethylbenzene CAS # 526-73-8 (Lot 877605-12) Purity 98%	5,001.9 µg/mL	+/- 29.3541 µg/mL Gravimetric +/- 301.8144 µg/mL Unstressed +/- 302.5308 µg/mL Stressed
7	1,3-Diethylbenzene CAS # 141-93-5 (Lot BCBT8967) Purity 98%	5,008.8 µg/mL	+/- 29.3943 µg/mL Gravimetric +/- 302.2283 µg/mL Unstressed +/- 302.9457 µg/mL Stressed

8	1,4-Diethylbenzene		5,018.6	µg/mL	+/-	29.4518	µg/mL	Gravimetric
	CAS # 105-05-5	(Lot RLHJK)			+/-	302.8196	µg/mL	Unstressed
	Purity 98%				+/-	303.5385	µg/mL	Stressed
9	1,2-Diethylbenzene		5,033.0	µg/mL	+/-	29.5365	µg/mL	Gravimetric
	CAS # 135-01-3	(Lot ECH2970181)			+/-	303.6897	µg/mL	Unstressed
	Purity 99%				+/-	304.4106	µg/mL	Stressed
10	2-Methylnaphthalene		4,997.8	µg/mL	+/-	29.3297	µg/mL	Gravimetric
	CAS # 91-57-6	(Lot STBG8884)			+/-	301.5634	µg/mL	Unstressed
	Purity 96%				+/-	302.2792	µg/mL	Stressed
Solvent: P&T Methanol								
CAS # 67-56-1								
Purity 99%								

Column:105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)**Carrier Gas:**

hydrogen-constant pressure 11.0 psi.

Temp. Program:40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)**Inj. Temp:**

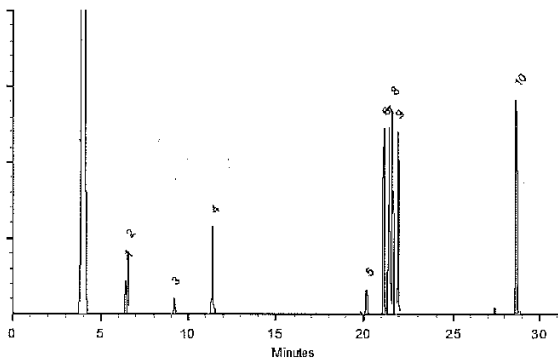
200°C

Det. Temp:

250°C

Det. Type:

FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Date Mixed: 24-Feb-2019

Balance: B707717271

Date Passed: 04-Mar-2019

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k \sqrt{U_{gravimetric}^2 + U_{homogeneity}^2 + U_{storage\ stability}^2 + U_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MSV_V_Gas_00073

Page 113 of 780

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Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 55669 Lot No.: A0150705

Description : Custom 502.2 "V" Gas Mix

Custom 502.2 "V" Gas Mix 2,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL Pkg Amt: > 1 mL

Expiration Date : August 31, 2026 Storage: 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	Dichlorodifluoromethane (CFC-12) CAS # 75-71-8 (Lot 00012554) Purity 99%	2,001.7 µg/mL	+/- 16.1239 µg/mL Gravimetric +/- 112.7879 µg/mL Unstressed +/- 115.4014 µg/mL Stressed
2	Chloromethane (methyl chloride) CAS # 74-87-3 (Lot SHBK6571) Purity 99%	2,000.3 µg/mL	+/- 18.7162 µg/mL Gravimetric +/- 113.1078 µg/mL Unstressed +/- 115.7104 µg/mL Stressed
3	Vinyl chloride CAS # 75-01-4 (Lot 00015559) Purity 99%	2,006.5 µg/mL	+/- 18.3560 µg/mL Gravimetric +/- 113.3921 µg/mL Unstressed +/- 116.0044 µg/mL Stressed
4	Bromomethane (methyl bromide) CAS # 74-83-9 (Lot 101604) Purity 99%	1,999.6 µg/mL	+/- 20.0741 µg/mL Gravimetric +/- 113.3042 µg/mL Unstressed +/- 115.9007 µg/mL Stressed
5	Chloroethane (ethyl chloride) CAS # 75-00-3 (Lot 107-401039114-1) Purity 99%	1,998.5 µg/mL	+/- 16.7167 µg/mL Gravimetric +/- 112.6955 µg/mL Unstressed +/- 115.3027 µg/mL Stressed
6	Trichlorofluoromethane (CFC-11) CAS # 75-69-4 (Lot SHBH4155V) Purity 99%	2,000.0 µg/mL	+/- 14.1138 µg/mL Gravimetric +/- 112.4230 µg/mL Unstressed +/- 115.0403 µg/mL Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:

60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

Carrier Gas:

helium-constant flow 2.0 ml/min.

Temp. Program:

40°C (hold 6 min.) to 100°C
@ 6°C/min.

Inj. Temp:

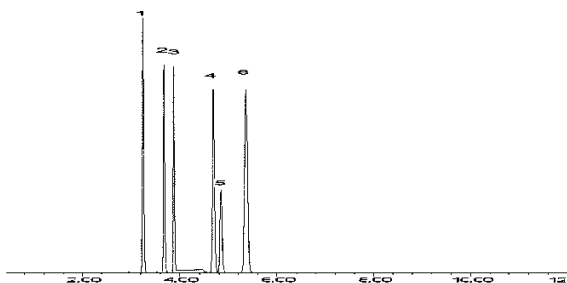
200°C

Det. Temp:

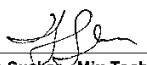
250°C

Det. Type:

MSD

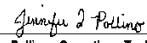


This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


Tom Suckar - Mix Technician

Date Mixed: 10-Jul-2019

Balance: B251644995


Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 16-Jul-2019

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes**Expiration Notes:**

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k \sqrt{U_{gravimetric}^2 + U_{homogeneity}^2 + U_{storage\ stability}^2 + U_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MT_HCl_JT_00003

Hydrochloric Acid, 36.5–38.0%
 BAKER INSTRA-ANALYZED® Reagent
 For Trace Metal Analysis



Material No.: 9530-33
 Batch No.: 0000217157
 Manufactured Date: 2018/11/12
 Retest Date: 2023/11/11
 Revision No: 1

Certificate of Analysis

Test	Specification	Result
ACS – Assay (as HCl) (by acid–base titrn)	36.5 – 38.0 %	37.7
ACS – Color (APHA)	<= 10	5
ACS – Residue after Ignition	<= 3 ppm	< 1
ACS – Specific Gravity at 60°/60°F	1.185 – 1.192	1.191
ACS – Bromide (Br)	<= 0.005 %	< 0.005
ACS – Extractable Organic Substances	<= 5 ppm	< 1
ACS – Free Chlorine (as Cl ₂)	<= 0.5 ppm	< 0.5
Phosphate (PO ₄)	<= 0.05 ppm	< 0.03
Sulfate (SO ₄)	<= 0.5 ppm	< 0.3
Sulfite (SO ₃)	<= 0.8 ppm	0.3
Ammonium (NH ₄)	<= 3 ppm	< 1
Trace Impurities – Arsenic (As)	<= 0.010 ppm	< 0.003
Trace Impurities – Aluminum (Al)	<= 10.0 ppb	0.2
Arsenic and Antimony (as As)	<= 5 ppb	< 3
Trace Impurities – Barium (Ba)	<= 1.0 ppb	< 0.2
Trace Impurities – Beryllium (Be)	<= 1.0 ppb	< 0.2
Trace Impurities – Bismuth (Bi)	<= 10.0 ppb	< 1.0
Trace Impurities – Boron (B)	<= 20.0 ppb	< 5.0
Trace Impurities – Cadmium (Cd)	<= 1.0 ppb	< 0.3
Trace Impurities – Calcium (Ca)	<= 50.0 ppb	12.9
Trace Impurities – Chromium (Cr)	<= 1.0 ppb	< 0.4
Trace Impurities – Cobalt (Co)	<= 1.0 ppb	< 0.3
Trace Impurities – Copper (Cu)	<= 1.0 ppb	< 0.1
Trace Impurities – Gallium (Ga)	<= 1.0 ppb	< 0.2

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700

Avantor Performance Materials, LLC
 100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

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Test	Specification	Result
Trace Impurities – Germanium (Ge)	<= 3.0 ppb	< 2.0
Trace Impurities – Gold (Au)	<= 4.0 ppb	< 0.2
Heavy Metals (as Pb)	<= 100 ppb	< 50
Trace Impurities – Iron (Fe)	<= 15.0 ppb	3.4
Trace Impurities – Lead (Pb)	<= 1.0 ppb	< 0.5
Trace Impurities – Lithium (Li)	<= 1.0 ppb	< 0.2
Trace Impurities – Magnesium (Mg)	<= 10.0 ppb	0.3
Trace Impurities – Manganese (Mn)	<= 1.0 ppb	< 0.4
Trace Impurities – Mercury (Hg)	<= 0.5 ppb	0.1
Trace Impurities – Molybdenum (Mo)	<= 10.0 ppb	< 5.0
Trace Impurities – Nickel (Ni)	<= 4.0 ppb	< 0.3
Trace Impurities – Niobium (Nb)	<= 1.0 ppb	< 0.2
Trace Impurities – Potassium (K)	<= 9.0 ppb	< 2.0
Trace Impurities – Selenium (Se), For Information Only	ppb	1.0
Trace Impurities – Silicon (Si)	<= 100.0 ppb	< 10.0
Trace Impurities – Silver (Ag)	<= 1.0 ppb	< 0.3
Trace Impurities – Sodium (Na)	<= 100.0 ppb	< 5.0
Trace Impurities – Strontium (Sr)	<= 1.0 ppb	< 0.2
Trace Impurities – Tantalum (Ta)	<= 1.0 ppb	< 0.9
Trace Impurities – Thallium (Tl)	<= 5.0 ppb	< 2.0
Trace Impurities – Tin (Sn)	<= 5.0 ppb	< 0.8
Trace Impurities – Titanium (Ti)	<= 1.0 ppb	0.3
Trace Impurities – Vanadium (V)	<= 1.0 ppb	< 0.2
Trace Impurities – Zinc (Zn)	<= 5.0 ppb	0.5
Trace Impurities – Zirconium (Zr)	<= 1.0 ppb	< 0.1

For Laboratory, Research or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC



Phillipsburg, NJ 9001:2015, FSSC22000
 Paris, KY 9001:2008
 Mexico City, Mexico 9001:2008
 Gliwice, Poland 9001:2015, 13485:2012
 Selangor, Malaysia 9001:2008
 Dehradun, India, 9001:2008, 14001:2004, 13485:2003
 Mumbai, India, 9001:2015, 17025:2005
 Panoli, India 9001:2015



Jamie Ethier
 Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700

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Receipt Date in TALs Based off of Product Manufacture Date

Expiration Date in TALs Based off of Manufacture Suggested Retest Date

For Receipt, Open, and Expiration date; refer to individual bottle.

ELLE QA

ELLE Dept. 4022 Management

Reagent

MT_HNO3_JT_00003

Nitric Acid, 69.0–70.0%
BAKER INSTRA–ANALYZED® Reagent
For Trace Metal Analysis



Material No.: 9598–34
Batch No.: 0000234822
Manufactured Date: 2019/06/11
Retest Date: 2024/06/09
Revision No: 1

Certificate of Analysis

Test	Specification	Result
ACS – Assay (HNO ₃)	69.0 – 70.0 %	69.8
Appearance	Passes Test	PT
ACS – Color (APHA)	<= 10	5
ACS – Residue after Ignition	<= 2 ppm	< 1
Chloride (Cl)	<= 0.04 ppm	< 0.03
Phosphate (PO ₄)	<= 0.1 ppm	< 0.01
Sulfate (SO ₄)	<= 0.4 ppm	< 0.2
Trace Impurities – Aluminum (Al)	<= 30.0 ppb	1.0
Arsenic and Antimony (as As)	<= 5 ppb	< 2
Trace Impurities – Barium (Ba)	<= 1.0 ppb	< 0.2
Trace Impurities – Beryllium (Be)	<= 1.0 ppb	< 0.2
Trace Impurities – Bismuth (Bi)	<= 1.0 ppb	< 1.0
Trace Impurities – Boron (B)	<= 4.0 ppb	1.0
Trace Impurities – Cadmium (Cd)	<= 1.0 ppb	< 0.3
Trace Impurities – Calcium (Ca)	<= 50.0 ppb	3.0
Trace Impurities – Chromium (Cr)	<= 10.0 ppb	4.0
Trace Impurities – Cobalt (Co)	<= 1.0 ppb	< 0.3
Trace Impurities – Copper (Cu)	<= 1.0 ppb	< 0.1
Trace Impurities – Gallium (Ga)	<= 20.0 ppb	0.2
Trace Impurities – Germanium (Ge)	<= 4.0 ppb	< 2.0
Trace Impurities – Gold (Au)	<= 4.0 ppb	0.2
Heavy Metals (as Pb)	<= 100 ppb	< 50
Trace Impurities – Iron (Fe)	<= 10.0 ppb	0.7
Trace Impurities – Lead (Pb)	<= 0.5 ppb	< 0.5

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700

Avantor Performance Materials, LLC
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Test	Specification	Result
Trace Impurities – Lithium (Li)	<= 1.0 ppb	< 0.2
Trace Impurities – Magnesium (Mg)	<= 7.0 ppb	0.2
Trace Impurities – Manganese (Mn)	<= 1.0 ppb	< 0.4
Trace Impurities – Mercury (Hg)	<= 0.5 ppb	< 0.1
Trace Impurities – Molybdenum (Mo)	<= 5.0 ppb	< 3.0
Trace Impurities – Nickel (Ni)	<= 1.0 ppb	< 0.3
Trace Impurities – Niobium (Nb)	<= 1.0 ppb	< 0.2
Trace Impurities – Potassium (K)	<= 5.0 ppb	< 2.0
Trace Impurities – Silicon (Si)	<= 20.0 ppb	1.0
Trace Impurities – Silver (Ag)	<= 1.0 ppb	< 0.3
Trace Impurities – Sodium (Na)	<= 200.0 ppb	2.0
Trace Impurities – Strontium (Sr)	<= 1.0 ppb	< 0.2
Trace Impurities – Tantalum (Ta)	<= 2.0 ppb	< 0.9
Trace Impurities – Thallium (Tl)	<= 5.0 ppb	< 2.0
Trace Impurities – Tin (Sn)	<= 5.0 ppb	< 0.8
Trace Impurities – Vanadium (V)	<= 1.0 ppb	< 0.2
Trace Impurities – Zinc (Zn)	<= 5.0 ppb	0.4
Trace Impurities – Zirconium (Zr)	<= 1.0 ppb	0.1

For Laboratory, Research or Manufacturing Use
Meets ACS Specifications

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC


Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700

Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

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Receipt Date in TALs Based off of Product Manufacture Date

Expiration Date in TALs Based off of Manufacture Suggested Retest Date

For Receipt, Open, and Expiration date; refer to individual bottle.

ELLE QA

ELLE Dept. 4022 Management

Reagent

MT_S_901S1_VH_00005



CERTIFICATE OF ANALYSIS



Multi-Element Aqueous CRM

Custom Multi Standard 901-S1

Matrix: 5% HNO₃

Product #: VHG-ZLANLAB901-500

Lot #: 10037608-30

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
Al	5000 ± 25 µg/mL	Fe	5004 ± 25 µg/mL	Mg	5001 ± 25 µg/mL
Ca	5000 ± 25 µg/mL	K	5000 ± 25 µg/mL	Na	5000 ± 25 µg/mL

Intended Use: This solution is intended for use as a certified reference material or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), or alternative techniques for elemental detection, such as flame or furnace atomic absorption spectroscopy (AA or GFAA).

Certification & Traceability: VHG CRMs are manufactured and certified under a quality management system that is accredited to **ISO 9001, ISO Guide 34 and ISO/IEC 17025**. This CRM was prepared to the certified concentrations shown above by gravimetric methods using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to NIST SRMs. This solution was stabilized using high purity nitric acid (HNO₃) and diluted with filtered (0.22µm), 18 M-ohm deionized water. The balances used in the preparation of VHG CRMs are calibrated regularly with traceability to NIST. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined by VHG Labs based upon gravimetric procedures. Secondary verification of the certified concentrations was performed by VHG Labs using ICP-OES that was calibrated and/or referenced against **NIST SRMs** (see reverse side). The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) use a minimum sub-sample size of 500µL, (4) make dilutions using calibrated balances or certified volumetric class A flasks and pipettes, (5) dilute with the same matrix as the original CRM, and (6) never pour used product back into the original container. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or expose to direct sunlight. Minimize exposure to moisture or high humidity.

Period of Validity: VHG ensures the accuracy of this solution for **12 Months** from the Certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

VHG Labs, Inc.

Chuck Goudreau, Certifying Officer

4 March 2020
Certification Date



LGC waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

Page 1 of 2

276 Abby Road, Manchester, NH 03103 USA
(603) 622-7660 Fax: (603) 622-5180 www.vhglabs.com



Reagent

MT _ S _ CCV1 _ HP _ 00002



7221 Investment Drive • North Charleston, SC 29418
843.767.7900 • info@highpuritystandards.com • www.highpuritystandards.com

Certificate of Analysis

Certified Reference Material

Product Description: CCV-1

Product Number: **SM-510-047-500**
Lot Number: **1920562**
Matrix: **5% HNO₃**
Purity: **99.0%-99.9995%**



ISO 17034:2016
(RMP) Accreditation
Certificate Number
AR-1436



ISO/IEC 17025:2005
Accreditation
Certificate Number
AT-1529

Certified Values:

Element	($\mu\text{g/mL}$)	SRM ID	SRM Lot#	Element	($\mu\text{g/mL}$)	SRM ID	SRM Lot#
Al	5000 $\pm$ 30	3101a	140903	Mg	5000 $\pm$ 30	3131a	140110
Ca	5000 $\pm$ 30	3109a	130213	Na	5000 $\pm$ 30	3152a	120715
Fe	5000 $\pm$ 30	3126a	140812	S	5000 $\pm$ 75	*	
K	5000 $\pm$ 50	3141a	140813				

Certified values are based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor k is about 2.

* Refer to Traceability Information, Section 4

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for one year from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date: July 2019
Expiration Date: July 31, 2020
Certificate Issue Date: July 29, 2019

Moven Mututurari

Moven Mututurari, Ph. D, Laboratory Manager

*Rec'd 2 Bottles
Bottles A and B
Expiry 7/31/20
PC392*

Lot Number: **1920562**



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Revision: 0

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Reagent

MT _ S _ CCV2 _ HP _ 00004



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Certificate of Analysis

Certified Reference Material

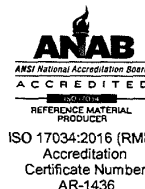
Product Description: CCV2

Product Number: SM-510-034-500

Lot Number: 2005715-500

Matrix: 4% HNO₃ / Tr HF

Purity: 99.92%-99.9999%



Certified Values:

Element	($\mu\text{g/mL}$)	SRM ID	Element	($\mu\text{g/mL}$)	SRM ID
Ag	100 $\pm$ 1	3151	Ni	100 $\pm$ 1	3136
As	100 $\pm$ 1	3103a	P	100 $\pm$ 2	3139a
B	100 $\pm$ 1	3107	Pb	100 $\pm$ 1	3128
Ba	100 $\pm$ 1	3104a	Sb	100 $\pm$ 1	3102a
Be	100 $\pm$ 1	3105a	Se	100 $\pm$ 1	3149
Cd	100 $\pm$ 1	3108	Sn	100 $\pm$ 1	3161a
Co	100 $\pm$ 1	3113	Sr	100 $\pm$ 1	3153a
Cr	100 $\pm$ 1	3112a	Ti	100 $\pm$ 1	3162a
Cu	100 $\pm$ 1	3114	Tl	100 $\pm$ 1	3158
Li	100 $\pm$ 1	3129a	V	100 $\pm$ 1	3165
Mn	100 $\pm$ 2	3132	Zn	100 $\pm$ 1	3168a
Mo	100 $\pm$ 1	3134	Zr	100 $\pm$ 2	3169

Certified values are based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor k is about 2.

* Refer to Traceability Information, Section 4

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for one year from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date: March 2020

Expiration Date: March 31, 2021

Certificate Issue Date: February 28, 2020

Moven Mututurari
Moven Mututurari, Ph. D, Laboratory Manager



410-37719

Lot Number: 2005715-500



Revision: 0

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Reagent

MT _ S _ HPDS _ HP _ 00002



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Certificate of Analysis

Certified Reference Material

Product Description: HPDS

Product Number: **SM-510-044-500**
Lot Number: **1928728**
Matrix: **2% HNO₃ / Tr HF**
Purity: **99.0%-99.9999%**



ISO 17034:2016
(RMP) Accreditation
Certificate Number
AR-1436



ISO/IEC 17025:2005
Accreditation
Certificate Number
AT-1529

Certified Values:

Element	($\mu\text{g/mL}$)	SRM ID	SRM Lot#	Element	($\mu\text{g/mL}$)	SRM ID	SRM Lot#
Ag	1.00 ± 0.01	3151	160729	Mo	10.0 ± 0.1	3134	130418
Al	50.0 ± 0.5	3101a	140903	Na	100 ± 1	3152a	120715
As	25.0 ± 0.3	3103a	100818	Ni	7.50 ± 0.08	3136	120619
B	10.0 ± 0.1	3107	110830	P	50.0 ± 0.8	3139a	060717
Ba	2.50 ± 0.03	3104a	140909	Pb	25.0 ± 0.3	3128	101026
Be	1.00 ± 0.01	3105a	090514	S	50.0 ± 0.8	*	
Ca	50.0 ± 0.5	3109a	130213	Sb	20.0 ± 0.2	3102a	140911
Cd	2.50 ± 0.03	3108	130116	Se	40.0 ± 0.4	3149	100901
Co	5.00 ± 0.05	*		Si	50.0 ± 0.5	3150	130912
Cr	10.0 ± 0.1	3112a	170630	Sn	30.0 ± 0.3	3161a	140917
Cu	25.0 ± 0.3	3114	121207	Sr	1.00 ± 0.01	*	
Fe	25.0 ± 0.3	3126a	140812	Ti	5.00 ± 0.05	3162a	130925
K	100 ± 1	3141a	140813	Tl	50.0 ± 0.5	3158	151215
Li	50.0 ± 0.5	3129a	100714	V	5.00 ± 0.05	3165	160906
Mg	50.0 ± 0.5	3131a	140110	Zn	6.00 ± 0.06	3168a	120629
Mn	3.00 ± 0.05	*		Zr	50.0 ± 0.8	3169	130920

Certified values are based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor k is about 2.

* Refer to Traceability Information, Section 4

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for one year from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date: October 2019
Expiration Date: October 31, 2020
Certificate Issue Date: October 15, 2019

Moven Mututuvvari

Moven Mututuvvari, Ph. D, Laboratory Manager

Lot Number: 1928728



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Revision: 0

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Reagent

MT _ S _ INF1 _ SC _ 00008

SCP SCIENCE

Providing Innovative Solutions to Analytical Chemists

Certificate of Analysis**1.0 DESCRIPTION :** *Plasma CAL – Custom Standard*Catalogue Number : **AQ0-097-715** **INF-1**Lot Number : **S200217031**Matrix: **5.0% HNO₃**Expiration Date (End of month): **February 2021****2.0 CERTIFIED VALUES AND ASSOCIATED UNCERTAINTY:**Method of Analysis: **Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES)**Traceability: **Applicable NIST Standard Reference Materials (see list below):**

3101a	Al	3109a	Ca	3117a	Eu	3126a	Fe	3134	Mo	3142a	Pr	3151	Ag	3159	Th	3167a	Y
3102a	Sb	3110	Ce	3118a	Gd	3127a	La	3135a	Nd	3143	Re	3152a	Na	3160a	Tm	3168a	Zn
3103a	As	3111a	Cs	3119a	Ga	3128	Pb	3136	Ni	3144	Rh	3153a	Sr	3161a	Sn	3169	Zr
3104a	Ba	3112a	Cr	3120a	Ge	3129a	Li	3137	Nb	3145a	Rb	3154	S	3162a	Ti		
3105a	Be	3113	Co	3121	Au	3130a	Lu	3138	Pd	3147a	Sm	3155	Ta	3163	W		
3106	Bi	3114	Cu	3122	Hf	3131a	Mg	3139a	P	3148a	Sc	3156	Te	3164	U		
3107	B	3115a	Dy	3123a	Ho	3132	Mn	3140	Pt	3149	Se	3157a	Tb	3165	V		
3108	Cd	3116a	Er	3124a	In	3133	Hg	3141a	K	3150	Si	3158	Tl	3166a	Yb		

Certified Concentrations:

Al	5 012 ± 43	µg/ml
Ca	5 053 ± 46	µg/ml
Fe	2 012 ± 16	µg/ml
Mg	5 012 ± 44	µg/ml

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Reference Material Producer

CERTIFICATE #2005-02

Note: The uncertainty of the certified value has been calculated from applicable uncertainty contributors (u_i) such as the SRM inherited uncertainty, weighing and dilution errors and instrument variability. The combined uncertainty ($u_c = \sqrt{\sum u_i^2}$) has been multiplied by a coverage factor (k) of 2 to provide a 95% confidence interval.

3.0 REFERENCE VALUES:Density: **1.096 g/ml** @ **22.1 °C****4.0 APPROVAL AND DATE OF CERTIFICATION:**Certification Approval: **Yaling Sui, Chemist**Certification Date: **February 20, 2020***Yaling Sui*

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5.0 INTENDED USE:

- ICP Standards: For the calibration of, including but not limited to: ICP-AES, ICP-MS, FAAS, GFAA, XRF and DCP.
- AA Standards: For the calibration of Flame (FAAS) and Graphite Furnace (GFAA) Atomic Absorption Spectrometers.
- Matrix Modifiers: For the optimization of analytical conditions to provide better Graphite Furnace Atomic Absorption (GFAA) instrument response and improved detection limits.
- pH Standards: For the calibrating pH meters or for other wet chemistry applications.
- Conductivity Standards: For electrolytic conductivity measurement as a calibration standard.
- IC Standards: for calibration of, but not limited to IC, HPLC, TLC, ISE, IR, NMR, MS, UV/VIS or other wet chemistry applications.

For any inquiries, please contact **SCP SCIENCE**.

6.0 INSTRUCTIONS FOR USE:

Handling and Storage: Keep product tightly capped when not in use. The solution should be opened for a minimum amount of time necessary to dispense the amount required. Do not pipet or use directly from container. Do not return unused portions back to container. Store under normal laboratory conditions. Avoid exposure to excessive sources of heat and humidity or direct sunlight.

Stability: This Standard is guaranteed to be stable and accurate to within the specified uncertainty of measurement up to the unopened expiry date, if sealed, or up to the opened expiry date (when indicated), whichever comes first, provided the solution is kept tightly capped and stored under the indicated storage conditions. Purchasers will be notified of any significant changes resulting in re-certification or withdrawal of the product prior to the expiration date.

7.0 HAZARDOUS INFORMATION :

Please refer to the associated Material Safety Data Sheet (MSDS) for information regarding this product (available at www.SCPSCIENCE.com).

8.0 HOMOGENEITY:

This solution has been blended according to an in-house procedure and its homogeneity is guaranteed to be fit for purpose when a sample size sufficient for the intended method of analysis is used.

9.0 TRACEABILITY:

This CRM (Certified Reference Material) is traceable to the NIST SRM (Standard Reference Material) indicated in section 2 through an unbroken chain of comparisons. In addition, balances used are regularly calibrated using weights which are traceable to NIST (National Institute of Standards and Technology) or NRC (National Research Council of Canada) standards. All conductivity meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable Thermometer and standards. All pH meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable thermometer and pH/MV simulator.

10.0 PREPARATION:

For the preparation of these solutions, 18 megohm/cm double deionized water, high-purity acids and glassware calibrated to ASTM Class A specifications are used.

11.0 QUALITY SYSTEM CERTIFICATIONS:

ISO 9001 Certification: This standard was produced in a facility which operates a **registered** ISO 9001 Quality Management System. Please consult our web site for a copy of the most recent revision of our certificate of registration.

ISO 17025 Accreditation: **SCP SCIENCE (Corporate Headquarters)** operates an ISO 17025 **accredited** laboratory. Please consult our web site for a copy of the most recent revision of our certificate and scope of accreditation.

ISO 17034 Accreditation: **SCP SCIENCE (Corporate Headquarters)** is an ISO 17034 accredited Reference Material Producer. Please consult our website for a copy of our most recent certificate and scope of accreditation.



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PC-FRM005-CERT-8.0-B

Reagent

MT _ S _ INF1 _ SC _ 00009

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Providing Innovative Solutions to Analytical Chemists

Certificate of Analysis**1.0 DESCRIPTION :** *Plasma CAL – Custom Standard*Catalogue Number : **AQ0-097-715** **INF-1**Lot Number : **S200217031**Matrix: **5.0% HNO₃**Expiration Date (End of month): **February 2021****2.0 CERTIFIED VALUES AND ASSOCIATED UNCERTAINTY:**Method of Analysis: **Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES)**Traceability: **Applicable NIST Standard Reference Materials (see list below):**

3101a	Al	3109a	Ca	3117a	Eu	3126a	Fe	3134	Mo	3142a	Pr	3151	Ag	3159	Th	3167a	Y
3102a	Sb	3110	Ce	3118a	Gd	3127a	La	3135a	Nd	3143	Re	3152a	Na	3160a	Tm	3168a	Zn
3103a	As	3111a	Cs	3119a	Ga	3128	Pb	3136	Ni	3144	Rh	3153a	Sr	3161a	Sn	3169	Zr
3104a	Ba	3112a	Cr	3120a	Ge	3129a	Li	3137	Nb	3145a	Rb	3154	S	3162a	Ti		
3105a	Be	3113	Co	3121	Au	3130a	Lu	3138	Pd	3147a	Sm	3155	Ta	3163	W		
3106	Bi	3114	Cu	3122	Hf	3131a	Mg	3139a	P	3148a	Sc	3156	Te	3164	U		
3107	B	3115a	Dy	3123a	Ho	3132	Mn	3140	Pt	3149	Se	3157a	Tb	3165	V		
3108	Cd	3116a	Er	3124a	In	3133	Hg	3141a	K	3150	Si	3158	Tl	3166a	Yb		

Certified Concentrations:

Al	5 012 ± 43	µg/ml
Ca	5 053 ± 46	µg/ml
Fe	2 012 ± 16	µg/ml
Mg	5 012 ± 44	µg/ml

ACCREDITED

Reference Material Producer

CERTIFICATE #2005-02

Note: The uncertainty of the certified value has been calculated from applicable uncertainty contributors (u_i) such as the SRM inherited uncertainty, weighing and dilution errors and instrument variability. The combined uncertainty ($u_c = \sqrt{\sum u_i^2}$) has been multiplied by a coverage factor (k) of 2 to provide a 95% confidence interval.

3.0 REFERENCE VALUES:Density: **1.096 g/ml** @ **22.1 °C****4.0 APPROVAL AND DATE OF CERTIFICATION:**Certification Approval: **Yaling Sui, Chemist**Certification Date: **February 20, 2020***Yaling Sui*

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Providing Innovative Solutions to Analytical Chemists

5.0 INTENDED USE:

- ICP Standards: For the calibration of, including but not limited to: ICP-AES, ICP-MS, FAAS, GFAA, XRF and DCP.
- AA Standards: For the calibration of Flame (FAAS) and Graphite Furnace (GFAA) Atomic Absorption Spectrometers.
- Matrix Modifiers: For the optimization of analytical conditions to provide better Graphite Furnace Atomic Absorption (GFAA) instrument response and improved detection limits.
- pH Standards: For the calibrating pH meters or for other wet chemistry applications.
- Conductivity Standards: For electrolytic conductivity measurement as a calibration standard.
- IC Standards: for calibration of, but not limited to IC, HPLC, TLC, ISE, IR, NMR, MS, UV/VIS or other wet chemistry applications.

For any inquiries, please contact **SCP SCIENCE**.

6.0 INSTRUCTIONS FOR USE:

Handling and Storage: Keep product tightly capped when not in use. The solution should be opened for a minimum amount of time necessary to dispense the amount required. Do not pipet or use directly from container. Do not return unused portions back to container. Store under normal laboratory conditions. Avoid exposure to excessive sources of heat and humidity or direct sunlight.

Stability: This Standard is guaranteed to be stable and accurate to within the specified uncertainty of measurement up to the unopened expiry date, if sealed, or up to the opened expiry date (when indicated), whichever comes first, provided the solution is kept tightly capped and stored under the indicated storage conditions. Purchasers will be notified of any significant changes resulting in re-certification or withdrawal of the product prior to the expiration date.

7.0 HAZARDOUS INFORMATION :

Please refer to the associated Material Safety Data Sheet (MSDS) for information regarding this product (available at www.SCPSCIENCE.com).

8.0 HOMOGENEITY:

This solution has been blended according to an in-house procedure and its homogeneity is guaranteed to be fit for purpose when a sample size sufficient for the intended method of analysis is used.

9.0 TRACEABILITY:

This CRM (Certified Reference Material) is traceable to the NIST SRM (Standard Reference Material) indicated in section 2 through an unbroken chain of comparisons. In addition, balances used are regularly calibrated using weights which are traceable to NIST (National Institute of Standards and Technology) or NRC (National Research Council of Canada) standards. All conductivity meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable Thermometer and standards. All pH meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable thermometer and pH/MV simulator.

10.0 PREPARATION:

For the preparation of these solutions, 18 megohm/cm double deionized water, high-purity acids and glassware calibrated to ASTM Class A specifications are used.

11.0 QUALITY SYSTEM CERTIFICATIONS:

ISO 9001 Certification: This standard was produced in a facility which operates a **registered** ISO 9001 Quality Management System. Please consult our web site for a copy of the most recent revision of our certificate of registration.

ISO 17025 Accreditation: **SCP SCIENCE (Corporate Headquarters)** operates an ISO 17025 **accredited** laboratory. Please consult our web site for a copy of the most recent revision of our certificate and scope of accreditation.

ISO 17034 Accreditation: **SCP SCIENCE (Corporate Headquarters)** is an ISO 17034 accredited Reference Material Producer. Please consult our website for a copy of our most recent certificate and scope of accreditation.



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PC-FRM005-CERT-8.0-B

Reagent

MT _ S _ LAN13 _ IV _ 00003



CERTIFICATE OF ANALYSIS

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution

Catalog Number: LANCASTER-13

Lot Number: P2-MEB687710

Matrix: 5% (v/v) HNO₃
tr. HF

Value / Analyte(s):

100 µg/mL ea:			
Cadmium,	Nickel,	Zinc,	
60 µg/mL ea:			
Antimony,			
55 µg/mL ea:			
Selenium,	Lead,		
50 µg/mL ea:			
Vanadium,	Cobalt,	Chromium,	
Copper,	Manganese,	Barium,	
Beryllium,			
20 µg/mL ea:			
Silver,			
10 µg/mL ea:			
Arsenic,	Thallium		



410-19542

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	59.90 ± 0.44 µg/mL	Arsenic, As	10.00 ± 0.07 µg/mL
Barium, Ba	49.97 ± 0.23 µg/mL	Beryllium, Be	49.98 ± 0.24 µg/mL
Cadmium, Cd	100.0 ± 0.4 µg/mL	Chromium, Cr	49.95 ± 0.28 µg/mL
Cobalt, Co	50.01 ± 0.24 µg/mL	Copper, Cu	49.97 ± 0.22 µg/mL
Lead, Pb	54.96 ± 0.25 µg/mL	Manganese, Mn	49.98 ± 0.22 µg/mL
Nickel, Ni	100.0 ± 0.4 µg/mL	Selenium, Se	54.94 ± 0.38 µg/mL
Silver, Ag	19.99 ± 0.14 µg/mL	Thallium, Tl	10.01 ± 0.07 µg/mL
Vanadium, V	49.97 ± 0.22 µg/mL	Zinc, Zn	100.0 ± 0.4 µg/mL

Density: 1.027 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Ag	Calculated		See Sec. 4.2
As	ICP Assay	3103a	100818
As	Calculated		See Sec. 4.2
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Co	EDTA	928	928
Co	ICP Assay	traceable to 3113	M2-CO661665
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Cu	Calculated		See Sec. 4.2
Mn	EDTA	928	928
Mn	ICP Assay	Traceable to 3132	N2-MN665236
Mn	Calculated		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Ni	Calculated		See Sec. 4.2
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Sb	ICP Assay	3102a	140911
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Ti	ICP Assay	3158	151215
Ti	Calculated		See Sec. 4.2
V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance

$$w_i = (1/u_{char\ i})^2 / (\sum(1/(u_{char\ i})^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k(u_{char}^2 + u_{bb}^2 + u_{ts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

u_{char} = $(\sum(w_i)^2(u_{char\ i})^2)^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{ts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a)(u_{char\ a})$$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k(u_{char\ a}^2 + u_{bb}^2 + u_{ts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{ts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL**7.1 Storage and Handling Recommendations**

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

HF Note: This standard should not be prepared or stored in glass.

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION**10.1 ISO 9001 Quality Management System Registration**

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

Page 3 of 4

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone 800.669.6799; 540.585.3030 Fax 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY**11.1 Certification Issue Date**

December 18, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 18, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

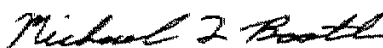
11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

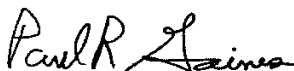
- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**Certificate Approved By:**

Michael Booth
Manager, Quality Control


Certifying Officer:

Paul Gaines
CEO, Senior Technical Director



Reagent

MT _ S _ LLC _ HP _ 00002



7221 Investment Drive • North Charleston, SC 29418
843.767.7900 • info@highpuritystandards.com • www.highpuritystandards.com

Certificate of Analysis

Certified Reference Material

Product Description: Custom Inorganic Standard

Product Number: HPS-510-057-500
Lot Number: 1922825
Matrix: 2% HNO₃ / Tr HF
Purity: 99.0-99.9999%



ISO 17034:2016
(RMP) Accreditation
Certificate Number
AR-1436



ISO/IEC 17025:2005
Accreditation
Certificate Number
AT-1529

Certified Values:

Element	($\mu\text{g/mL}$)	SRM ID	SRM Lot#	Element	($\mu\text{g/mL}$)	SRM ID	SRM Lot#
Ag	5.00 $\pm$ 0.05	3151	160729	Na	500 $\pm$ 5	3152a	120715
Al	100 $\pm$ 1	3101a	140903	Ni	5.00 $\pm$ 0.05	3136	120619
As	15.0 $\pm$ 0.2	3103a	100818	P	50.0 $\pm$ 0.8	3139a	060717
B	15.0 $\pm$ 0.2	3107	110830	Pb	7.50 $\pm$ 0.08	3128	101026
Ba	2.50 $\pm$ 0.03	3104a	140909	S	250 $\pm$ 4	*	
Be	2.50 $\pm$ 0.03	3105a	090514	Sb	25.0 $\pm$ 0.3	3102a	140911
Ca	100 $\pm$ 1	3109a	130213	Se	25.0 $\pm$ 0.3	3149	100901
Cd	2.50 $\pm$ 0.03	3108	130116	Si	250 $\pm$ 3	3150	130912
Co	2.50 $\pm$ 0.03	*		Sn	25.0 $\pm$ 0.3	3161a	140917
Cr	7.50 $\pm$ 0.08	3112a	170630	Sr	2.50 $\pm$ 0.03	*	
Cu	10.0 $\pm$ 0.1	3114	121207	Ti	5.00 $\pm$ 0.05	3162a	130925
Fe	100 $\pm$ 1	3126a	140812	Tl	15.0 $\pm$ 0.2	3158	151215
K	150 $\pm$ 2	3141a	140813	V	5.00 $\pm$ 0.05	3165	160906
Li	25.0 $\pm$ 0.3	3129a	100714	W	15.0 $\pm$ 0.2	3163	140606
Mg	50.0 $\pm$ 0.5	3131a	140110	Zn	10.0 $\pm$ 0.1	3168a	120629
Mn	5.00 $\pm$ 0.08	*		Zr	25.0 $\pm$ 0.4	3169	130920
Mo	5.00 $\pm$ 0.05	3134	130418				

Certified values are based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor k is about 2.

* Refer to Traceability Information, Section 4

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date: August 2019
Expiration Date: August 31, 2020
Certificate Issue Date: August 16, 2019

Moven Mututuvvari

Moven Mututuvvari, Ph. D, Laboratory Manager

Lot Number: 1922825



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Revision: 0

Page 1 of 2

Reagent

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Certificate of Analysis

Certified Reference Material

Product Description: Custom Inorganic Standard

Product Number: HPS-510-057-1L
Lot Number: 1928338
Matrix: 2% HNO₃ / Tr HF
Purity: 99.0%-99.9999%

*Rec'd Shotties
10/16/19
opened 10/27/19
exp. 10/16/20*



ISO 17034:2016
(RMP) Accreditation
Certificate Number
AR-1436



ISO/IEC 17025:2005
Accreditation
Certificate Number
AT-1529

Certified Values:

Element	($\mu\text{g/mL}$)	SRM ID	SRM Lot#	Element	($\mu\text{g/mL}$)	SRM ID	SRM Lot#
Ag	5.00 $\pm$ 0.05	3151	160729	Na	500 $\pm$ 5	3152a	120715
Al	100 $\pm$ 1	3101a	140903	Ni	5.00 $\pm$ 0.05	3136	120619
As	15.0 $\pm$ 0.2	3103a	100818	P	50.0 $\pm$ 0.8	3139a	060717
B	15.0 $\pm$ 0.2	3107	110830	Pb	7.50 $\pm$ 0.08	3128	101026
Ba	2.50 $\pm$ 0.03	3104a	140909	S	250 $\pm$ 4	*	
Be	2.50 $\pm$ 0.03	3105a	090514	Sb	25.0 $\pm$ 0.3	3102a	140911
Ca	100 $\pm$ 1	3109a	130213	Se	25.0 $\pm$ 0.3	3149	100901
Cd	2.50 $\pm$ 0.03	3108	130116	Si	250 $\pm$ 3	3150	130912
Co	2.50 $\pm$ 0.03	*		Sn	25.0 $\pm$ 0.3	3161a	140917
Cr	7.50 $\pm$ 0.08	3112a	170630	Sr	2.50 $\pm$ 0.03	*	
Cu	10.0 $\pm$ 0.1	3114	121207	Ti	5.00 $\pm$ 0.05	3162a	130925
Fe	100 $\pm$ 1	3126a	140812	Tl	15.0 $\pm$ 0.2	3158	151215
K	150 $\pm$ 2	3141a	140813	V	5.00 $\pm$ 0.05	3165	160906
Li	25.0 $\pm$ 0.3	3129a	100714	W	15.0 $\pm$ 0.2	3163	140606
Mg	50.0 $\pm$ 0.5	3131a	140110	Zn	10.0 $\pm$ 0.1	3168a	120629
Mn	5.00 $\pm$ 0.08	*		Zr	25.0 $\pm$ 0.4	3169	130920
Mo	5.00 $\pm$ 0.05	3134	130418				

Certified values are based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor k is about 2.

* Refer to Traceability Information, Section 4

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date: October 2019
Expiration Date: October 31, 2020
Certificate Issue Date: October 11, 2019

Moven Mututuvvari

Moven Mututuvvari, Ph. D, Laboratory Manager

Lot Number: 1928338



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Revision: 0

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Reagent

MT _ S _ S2 _ VH _ 00002



CERTIFICATE OF ANALYSIS



Multi-Element Aqueous CRM

Tracecal #5 Custom S2

Matrix: 5% HNO₃

Product #: VHG-ZLLTRCAL#5-2X250

Rec'd 4 Bottles

C, D, E, F

Expire 7-18-20

PE3472

Lot #: 10040609-9

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
Ag	500.1 ± 2.5 µg/mL	Co	500.1 ± 2.5 µg/mL	Pb	500.2 ± 2.5 µg/mL
As	500.1 ± 2.5 µg/mL	Cu	500.1 ± 2.5 µg/mL	Se	500.0 ± 2.5 µg/mL
B	500.1 ± 2.5 µg/mL	Li	500.1 ± 2.5 µg/mL	Sr	500.2 ± 2.5 µg/mL
Ba	500.1 ± 2.5 µg/mL	Mn	500.1 ± 2.5 µg/mL	Tl	500.2 ± 2.5 µg/mL
Be	500.0 ± 2.5 µg/mL	Ni	500.2 ± 2.5 µg/mL	Zn	500.2 ± 2.5 µg/mL
Cd	500.3 ± 2.5 µg/mL	P	500.0 ± 2.5 µg/mL		

Intended Use: This solution is intended for use as a certified reference material or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), or alternative techniques for elemental detection, such as flame or furnace atomic absorption spectroscopy (AA or GFAA).

Certification & Traceability: VHG CRMs are manufactured and certified under a quality management system that is accredited to **ISO 9001**, **ISO Guide 34** and **ISO/IEC 17025**. This CRM was prepared to the certified concentrations shown above by gravimetric methods using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to NIST SRMs. This solution was stabilized using high purity nitric acid (HNO₃) and diluted with filtered (0.22µm), 18 M-ohm deionized water. The balances used in the preparation of VHG CRMs are calibrated regularly with traceability to NIST. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined by VHG Labs based upon gravimetric procedures. Secondary verification of the certified concentrations was performed by VHG Labs using ICP-OES that was calibrated and/or referenced against **NIST SRMs** (see reverse side). The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) use a minimum sub-sample size of 500µL, (4) make dilutions using calibrated balances or certified volumetric class A flasks and pipettes, (5) dilute with the same matrix as the original CRM, and (6) never pour used product back into the original container. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or expose to direct sunlight. Minimize exposure to moisture or high humidity.

Period of Validity: VHG ensures the accuracy of this solution for **12 Months** from the Certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

VHG Labs, Inc.

Chuck Goudreau, Certifying Officer

18 July 2019

Certification Date

LGC waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.



Page 1 of 2

276 Abby Road, Manchester, NH 03103 USA
 (603) 622-7660 Fax: (603) 622-5180 www.vhglabs.com



Reagent

MT_S_SOL1A_IV_00002



CERTIFICATE OF ANALYSIS

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution

Catalog Number: IV-53950-A

Lot Number: P2-MEB678440

Matrix: 5% (v/v) HNO₃

Value / Analyte(s): 400 µg/mL ea:

Cadmium,
Copper,
Nickel,
Selenium,
Thallium,

Cobalt,
Lithium,
Phosphorus,
Arsenic,
Vanadium,

Chromium,
Manganese,
Lead,
Thorium,

200 µg/mL ea:

Zinc,

100 µg/mL ea:

Boron,

Strontium

Barium,

Beryllium,



410-19486

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Arsenic, As	400.4 ± 2.9 µg/mL	Barium, Ba	100.0 ± 0.4 µg/mL
Beryllium, Be	100.0 ± 0.4 µg/mL	Boron, B	100.0 ± 0.7 µg/mL
Cadmium, Cd	400.1 ± 1.7 µg/mL	Chromium, Cr	400.0 ± 2.3 µg/mL
Cobalt, Co	400.0 ± 1.9 µg/mL	Copper, Cu	400.0 ± 1.6 µg/mL
Lead, Pb	400.0 ± 1.8 µg/mL	Lithium, Li	400.0 ± 1.7 µg/mL
Manganese, Mn	400.0 ± 1.6 µg/mL	Nickel, Ni	399.8 ± 1.8 µg/mL
Phosphorus, P	400.0 ± 2.0 µg/mL	Selenium, Se	399.9 ± 2.5 µg/mL
Strontium, Sr	99.9 ± 0.4 µg/mL	Thallium, Tl	399.9 ± 2.6 µg/mL
Thorium, Th	400.0 ± 2.0 µg/mL	Vanadium, V	399.9 ± 1.7 µg/mL
Zinc, Zn	200.0 ± 0.8 µg/mL		

Density: 1.041 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
As	ICP Assay	3103a	100818
B	ICP Assay	3107	110830
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Co	ICP Assay	3113	000630 Co
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Li	ICP Assay	3129a	100714
Li	Gravimetric		See Sec. 4.2
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Sr	EDTA	928	928
Sr	ICP Assay	Traceable to 3153a	K2-SR650985
Th	EDTA	928	928
Tl	ICP Assay	3158	993012
V	EDTA	928	928
V	ICP Assay	3165	992706
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum (w_i) (X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{char i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance

$$w_i = (1/u_{char i}^2) / (\sum (1/u_{char i}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{ts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char} = [\sum (w_i)^2 (u_{char i})^2]^{1/2}$ where $u_{char i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{ts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) / (u_{char a})$$

X_a = mean of Assay Method A with

$u_{char a}$ = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{ts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{ts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL**7.1 Storage and Handling Recommendations**

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.
- For more information, visit www.inorganicventures.com/TCT

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION**10.1 ISO 9001 Quality Management System Registration**

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 09, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- April 09, 2023

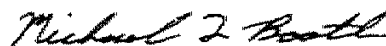
- The date after which this CRM/RM should not be used.
- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____
- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**Certificate Approved By:**

Michael Booth
Supervisor, Quality Control


Certifying Officer:

Paul Gaines
CEO, Senior Technical Director





CERTIFICATE OF ANALYSIS

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution

Catalog Number: IV-53950-A

Lot Number: P2-MEB678440

Matrix: 5% (v/v) HNO₃

Value / Analyte(s): 400 µg/mL ea:

Cadmium,

Copper,

Nickel,

Selenium,

Thallium,

200 µg/mL ea:

Zinc,

100 µg/mL ea:

Boron,

Strontium

Cobalt,

Lithium,

Phosphorus,

Arsenic,

Vanadium,

Chromium,

Manganese,

Lead,

Thorium,

Beryllium,



410-19487

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Arsenic, As	400.4 ± 2.9 µg/mL	Barium, Ba	100.0 ± 0.4 µg/mL
Beryllium, Be	100.0 ± 0.4 µg/mL	Boron, B	100.0 ± 0.7 µg/mL
Cadmium, Cd	400.1 ± 1.7 µg/mL	Chromium, Cr	400.0 ± 2.3 µg/mL
Cobalt, Co	400.0 ± 1.9 µg/mL	Copper, Cu	400.0 ± 1.6 µg/mL
Lead, Pb	400.0 ± 1.8 µg/mL	Lithium, Li	400.0 ± 1.7 µg/mL
Manganese, Mn	400.0 ± 1.6 µg/mL	Nickel, Ni	399.8 ± 1.8 µg/mL
Phosphorus, P	400.0 ± 2.0 µg/mL	Selenium, Se	399.9 ± 2.5 µg/mL
Strontium, Sr	99.9 ± 0.4 µg/mL	Thallium, Tl	399.9 ± 2.6 µg/mL
Thorium, Th	400.0 ± 2.0 µg/mL	Vanadium, V	399.9 ± 1.7 µg/mL
Zinc, Zn	200.0 ± 0.8 µg/mL		

Density: 1.041 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
As	ICP Assay	3103a	100818
B	ICP Assay	3107	110830
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Co	ICP Assay	3113	000630 Co
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Li	ICP Assay	3129a	100714
Li	Gravimetric		See Sec. 4.2
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Sr	EDTA	928	928
Sr	ICP Assay	Traceable to 3153a	K2-SR650985
Th	EDTA	928	928
Tl	ICP Assay	3158	993012
V	EDTA	928	928
V	ICP Assay	3165	992706
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{\text{CRM/RM}}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{\text{CRM/RM}} = \sum (w_i) (X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{\text{char } i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance

$$w_i = (1/u_{\text{char } i})^2 / \sum (1/u_{\text{char } i})^2$$

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char}}^2 + u_{\text{bb}}^2 + u_{\text{ts}}^2 + u_{\text{ls}}^2)^{1/2}$$

k = coverage factor = 2

$u_{\text{char}} = [\sum (w_i)^2 (u_{\text{char } i})^2]^{1/2}$ where $u_{\text{char } i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{ts} = long term stability standard uncertainty (storage)

u_{ls} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{\text{CRM/RM}}$, where one method of characterization is used is the mean of individual results:

$$X_{\text{CRM/RM}} = (X_a) (u_{\text{char } a})$$

X_a = mean of Assay Method A with

$u_{\text{char } a}$ = the standard uncertainty of characterization Method A

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char } a}^2 + u_{\text{bb}}^2 + u_{\text{ts}}^2 + u_{\text{ls}}^2)^{1/2}$$

k = coverage factor = 2

$u_{\text{char } a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{ts} = long term stability standard uncertainty (storage)

u_{ls} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL**7.1 Storage and Handling Recommendations**

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.
- For more information, visit www.inorganicventures.com/TCT

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION**10.1 ISO 9001 Quality Management System Registration**

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA, Telephone: 800.669.6799, 540.585.3030, Fax 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 09, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 09, 2023**

- The date after which this CRM/RM should not be used.
- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____
- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**Certificate Approved By:**

Michael Booth
Supervisor, Quality Control


Certifying Officer:

Paul Gaines
CEO, Senior Technical Director



Reagent

MT _ S _ SOL2A _ HP _ 00002



7221 Investment Drive • North Charleston, SC 29418
843.767.7900 • info@highpuritystandards.com • www.highpuritystandards.com

Certificate of Analysis

Certified Reference Material

Product Description: LRS Solution 2

Product Number: **HPS-510-005-A-500**
Lot Number: **1928901**
Matrix: **10% HNO₃**
Purity: **99.98%-99.9995%**



ISO 17034:2016
(RMP) Accreditation
Certificate Number
AR-1436



ISO/IEC 17025:2005
Accreditation
Certificate Number
AT-1529

Certified Values:

Element	($\mu\text{g/mL}$)	SRM ID	SRM Lot#
Al	10000 $\pm$ 60	3101a	140903
Ca	10000 $\pm$ 60	3109a	130213
Fe	6000 $\pm$ 36	3126a	140812
K	10000 $\pm$ 100	3141a	140813
Mg	10000 $\pm$ 60	3131a	140110
Na	10000 $\pm$ 60	3152a	120715

Certified values are based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor k is about 2.

* Refer to Traceability Information, Section 4

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date: October 2019
Expiration Date: October 31, 2020
Certificate Issue Date: October 17, 2019

Moven Mututurari

Moven Mututurari, Ph. D, Laboratory Manager

Lot Number: 1928901



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Revision: 0

Page 1 of 2

Sample Container Check Report

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB

Job ID: 410-3311-1

Sample Container Checks and Verifications

Lab Sample ID: 410-3311-1

Client Sample ID: GWTS-EFF1-060320

Bottle Code	Check Performed	By Employee	Date	Check Result	Expected Result	Adjusted Date	Reagent Lot #	Reagent Expires	Re-check Result	Re-check Date
F	pH Check, 24hr Adjustment Confirmation Required	PTG7	06/05/2020	<2	N/A	N/A	N/A	N/A	N/A	N/A

Lab Sample ID: 410-3311-2

Client Sample ID: GWTS-EFF1DUP-060320

Bottle Code	Check Performed	By Employee	Date	Check Result	Expected Result	Adjusted Date	Reagent Lot #	Reagent Expires	Re-check Result	Re-check Date
F	pH Check, 24hr Adjustment Confirmation Required	PTG7	06/05/2020	<2	N/A	N/A	N/A	N/A	N/A	N/A

Lab Sample ID: 410-3311-3

Client Sample ID: GWTS-GAC1-060320

Bottle Code	Check Performed	By Employee	Date	Check Result	Expected Result	Adjusted Date	Reagent Lot #	Reagent Expires	Re-check Result	Re-check Date
F	pH Check, 24hr Adjustment Confirmation Required	PTG7	06/05/2020	<2	N/A	N/A	N/A	N/A	N/A	N/A

Lab Sample ID: 410-3311-4

Client Sample ID: GWTS-INF1-060320

Bottle Code	Check Performed	By Employee	Date	Check Result	Expected Result	Adjusted Date	Reagent Lot #	Reagent Expires	Re-check Result	Re-check Date
F	pH Check, 24hr Adjustment Confirmation Required	PTG7	06/05/2020	<2	N/A	N/A	N/A	N/A	N/A	N/A

Lab Sample ID: 410-3311-6

Client Sample ID: GWTS-EFF2-060320

Bottle Code	Check Performed	By Employee	Date	Check Result	Expected Result	Adjusted Date	Reagent Lot #	Reagent Expires	Re-check Result	Re-check Date
F	pH Check, 24hr Adjustment Confirmation Required	PTG7	06/05/2020	<2	N/A	N/A	N/A	N/A	N/A	N/A

Lab Sample ID: 410-3311-7

Client Sample ID: GWTS-GAC2-060320

Bottle Code	Check Performed	By Employee	Date	Check Result	Expected Result	Adjusted Date	Reagent Lot #	Reagent Expires	Re-check Result	Re-check Date
F	pH Check, 24hr Adjustment Confirmation Required	PTG7	06/05/2020	<2	N/A	N/A	N/A	N/A	N/A	N/A

Lab Sample ID: 410-3311-8

Client Sample ID: GWTS-INF2-060320

Bottle Code	Check Performed	By Employee	Date	Check Result	Expected Result	Adjusted Date	Reagent Lot #	Reagent Expires	Re-check Result	Re-check Date
F	pH Check, 24hr Adjustment Confirmation Required	PTG7	06/05/2020	<2	N/A	N/A	N/A	N/A	N/A	N/A

Method 8260C DOD

Volatile Organic Compounds (GC/MS)
by Method 8260C DOD

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FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-3311-1

SDG No.: _____

Matrix: Water Level: Low

GC Column (1): R-624SilMS ID: 0.25 (mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
GWTS-EFF1-060320	410-3311-1	102	101	97	96
GWTS-EFF1DUP-060320	410-3311-2	103	100	96	96
GWTS-GAC1-060320	410-3311-3	102	103	96	96
GWTS-INF1-060320	410-3311-4	103	102	96	96
GWTS-TB01-060320	410-3311-5	101	101	96	96
GWTS-EFF2-060320	410-3311-6	103	103	96	95
GWTS-GAC2-060320	410-3311-7	103	102	96	95
GWTS-INF2-060320	410-3311-8	102	103	97	97
GWTS-FB02-060320	410-3311-9	102	100	96	95
	MB 410-13905/9	103	103	96	96
	LCS 410-13905/5	100	102	99	100
	LCSD 410-13905/7	100	101	99	100
GWTS-EFF2-060320 MS	410-3311-6 MS	101	102	98	100
GWTS-EFF2-060320 MSD	410-3311-6 MSD	100	99	99	101

	<u>QC LIMITS</u>
DBFM = Dibromofluoromethane (Surr)	80-119
DCA = 1,2-Dichloroethane-d4 (Surr)	81-118
TOL = Toluene-d8 (Surr)	89-112
BFB = 4-Bromofluorobenzene (Surr)	85-114

Column to be used to flag recovery values

FORM II 8260C DOD

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-3311-1

SDG No.: _____

Matrix: Water Level: Low Lab File ID: LU17L01.D

Lab ID: LCS 410-13905/5 Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Benzene	20.0	19	97	42-138	
Ethylbenzene	20.0	20	101	79-121	
Toluene	20.0	19	97	80-121	
Xylenes, Total	60.0	62	103	79-121	

Column to be used to flag recovery and RPD values

FORM III 8260C DOD

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-3311-1

SDG No.: _____

Matrix: Water Level: Low Lab File ID: LU17L02.D

Lab ID: LCSD 410-13905/7 Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
Benzene	20.0	19	94	2	20	42-138	
Ethylbenzene	20.0	20	100	1	20	79-121	
Toluene	20.0	19	97	0	20	80-121	
Xylenes, Total	60.0	62	103	0	20	79-121	

Column to be used to flag recovery and RPD values

FORM III 8260C DOD

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-3311-1

SDG No.: _____

Matrix: Water Level: Low Lab File ID: LU17S05.D

Lab ID: 410-3311-6 MS Client ID: GWTS-EFF2-060320 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Benzene	20.0	0.20 U	21	103	42-138	
Ethylbenzene	20.0	0.40 U	21	107	79-121	
Toluene	20.0	0.20 U	21	104	80-121	
Xylenes, Total	60.0	1.4 U	66	110	79-121	

Column to be used to flag recovery and RPD values

FORM III 8260C DOD

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-3311-1

SDG No.: _____

Matrix: Water Level: Low Lab File ID: LU17S06.D

Lab ID: 410-3311-6 MSD Client ID: GWTS-EFF2-060320 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
Benzene	20.0	20	98	5	20	42-138	
Ethylbenzene	20.0	21	104	3	20	79-121	
Toluene	20.0	20	99	4	20	80-121	
Xylenes, Total	60.0	64	107	3	20	79-121	

Column to be used to flag recovery and RPD values

FORM III 8260C DOD

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-3311-1
 SDG No.: _____
 Lab File ID: LU17B01.D Lab Sample ID: MB 410-13905/9
 Matrix: Water Heated Purge: (Y/N) N
 Instrument ID: 9915 Date Analyzed: 06/17/2020 13:32
 GC Column: R-624SilMS 30m ID: 0.25 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 410-13905/5	LU17L01.D	06/17/2020 12:04
	LCSD 410-13905/7	LU17L02.D	06/17/2020 12:48
GWTS-TB01-060320	410-3311-5	LU17S02.D	06/17/2020 14:26
GWTS-FB02-060320	410-3311-9	LU17S03.D	06/17/2020 14:47
GWTS-EFF2-060320	410-3311-6	LU17S04.D	06/17/2020 15:09
GWTS-EFF2-060320 MS	410-3311-6 MS	LU17S05.D	06/17/2020 15:31
GWTS-EFF2-060320 MSD	410-3311-6 MSD	LU17S06.D	06/17/2020 15:53
GWTS-EFF1-060320	410-3311-1	LU17S07.D	06/17/2020 16:15
GWTS-EFF1DUP-060320	410-3311-2	LU17S08.D	06/17/2020 16:37
GWTS-GAC1-060320	410-3311-3	LU17S09.D	06/17/2020 16:59
GWTS-INF1-060320	410-3311-4	LU17S10.D	06/17/2020 17:21
GWTS-GAC2-060320	410-3311-7	LU17S11.D	06/17/2020 17:43
GWTS-INF2-060320	410-3311-8	LU17S12.D	06/17/2020 18:05

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1

SDG No.: _____

Lab File ID: LY04T02.D

BFB Injection Date: 05/04/2020

Instrument ID: 9915

BFB Injection Time: 11:11

Analysis Batch No.: 8012

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	16.1
75	30.0 - 60.0 % of mass 95	45.6
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.9
173	Less than 2.0 % of mass 174	0.6 (0.7) 1
174	50.0 - 120.00 % of mass 95	86.3
175	5.0 - 9.0 % of mass 174	6.1 (7.1) 1
176	95.0 - 101.0 % of mass 174	83.5 (96.7) 1
177	5.0 - 9.0 % of mass 176	5.6 (6.7) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 410-8012/3	LY04I01.D	05/04/2020	12:18
	IC 410-8012/4	LY04I02.D	05/04/2020	12:40
	ICIS 410-8012/5	LY04I03.D	05/04/2020	13:02
	IC 410-8012/6	LY04I04.D	05/04/2020	13:24
	IC 410-8012/7	LY04I05.D	05/04/2020	13:46
	IC 410-8012/8	LY04I06.D	05/04/2020	14:08
	IC 410-8012/9	LY04I07.D	05/04/2020	14:30
	ICV 410-8012/11	LY04V01.D	05/04/2020	14:52

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1

SDG No.: _____

Lab File ID: LU17T03.D

BFB Injection Date: 06/17/2020

Instrument ID: 9915

BFB Injection Time: 10:27

Analysis Batch No.: 13905

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	16.9
75	30.0 - 60.0 % of mass 95	46.3
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.8
173	Less than 2.0 % of mass 174	1.0 (1.1) 1
174	50.0 - 120.00 % of mass 95	86.0
175	5.0 - 9.0 % of mass 174	5.9 (6.8) 1
176	95.0 - 101.0 % of mass 174	83.3 (96.8) 1
177	5.0 - 9.0 % of mass 176	5.2 (6.2) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 410-13905/3	LU17C01.D	06/17/2020	11:20
	LCS 410-13905/5	LU17L01.D	06/17/2020	12:04
	LCSD 410-13905/7	LU17L02.D	06/17/2020	12:48
	MB 410-13905/9	LU17B01.D	06/17/2020	13:32
GWTS-TB01-060320	410-3311-5	LU17S02.D	06/17/2020	14:26
GWTS-FB02-060320	410-3311-9	LU17S03.D	06/17/2020	14:47
GWTS-EFF2-060320	410-3311-6	LU17S04.D	06/17/2020	15:09
GWTS-EFF2-060320 MS	410-3311-6 MS	LU17S05.D	06/17/2020	15:31
GWTS-EFF2-060320 MSD	410-3311-6 MSD	LU17S06.D	06/17/2020	15:53
GWTS-EFF1-060320	410-3311-1	LU17S07.D	06/17/2020	16:15
GWTS-EFF1DUP-060320	410-3311-2	LU17S08.D	06/17/2020	16:37
GWTS-GAC1-060320	410-3311-3	LU17S09.D	06/17/2020	16:59
GWTS-INF1-060320	410-3311-4	LU17S10.D	06/17/2020	17:21
GWTS-GAC2-060320	410-3311-7	LU17S11.D	06/17/2020	17:43
GWTS-INF2-060320	410-3311-8	LU17S12.D	06/17/2020	18:05
	CCVC 410-13905/29	LU17S26.D	06/17/2020	22:29

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Sample No.: ICIS 410-8012/5 Date Analyzed: 05/04/2020 13:02
 Instrument ID: 9915 GC Column: R-624SilMS 30m ID: 0.25 (mm)
 Lab File ID (Standard): LY04I03.D Heated Purge: (Y/N) N
 Calibration ID: 3952

		TBAd10		FB		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		300981	4.49	1328501	7.95	1078598	11.36
UPPER LIMIT		601962	4.99	2657002	8.45	2157196	11.86
LOWER LIMIT		150491	3.99	664251	7.45	539299	10.86
LAB SAMPLE ID		CLIENT SAMPLE ID					
ICV 410-8012/11		284923	4.49	1318430	7.95	1059842	11.35
CCVIS 410-13905/3		260705	4.48	1192030	7.95	972227	11.35
CCVC 410-13905/29		266846	4.49	1188298	7.95	977438	11.35

TBAd10 = t-Butyl alcohol-d10 (IS)

FB = Fluorobenzene (IS)

CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 50%-200% of internal standard area

RT Limit = $\pm$ 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C DOD

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Sample No.: ICIS 410-8012/5 Date Analyzed: 05/04/2020 13:02
 Instrument ID: 9915 GC Column: R-624SilMS 30m ID: 0.25 (mm)
 Lab File ID (Standard): LY04I03.D Heated Purge: (Y/N) N
 Calibration ID: 3952

		DCBd4					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		607580	13.22				
UPPER LIMIT		1215160	13.72				
LOWER LIMIT		303790	12.72				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 410-8012/11		601922	13.22				
CCVIS 410-13905/3		547959	13.22				
CCVC 410-13905/29		548799	13.22				

DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
 RT Limit = $\pm$ 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C DOD

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1

SDG No.: _____

Sample No.: CCVIS 410-13905/3 Date Analyzed: 06/17/2020 11:20

Instrument ID: 9915 GC Column: R-624SilMS 30m ID: 0.25 (mm)

Lab File ID (Standard): LU17C01.D Heated Purge: (Y/N) N

Calibration ID: 3952

		TBAd10		FB		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		260705	4.48	1192030	7.95	972227	11.35
UPPER LIMIT		521410	4.98	2384060	8.45	1944454	11.85
LOWER LIMIT		130353	3.98	596015	7.45	486114	10.85
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 410-13905/5		259052	4.50	1169115	7.95	961764	11.35
LCSD 410-13905/7		254802	4.51	1171816	7.95	953852	11.35
MB 410-13905/9		236295	4.50	1116579	7.95	915808	11.35
410-3311-5	GWTS-TB01-060320	250892	4.49	1154867	7.95	937971	11.35
410-3311-9	GWTS-FB02-060320	234627	4.49	1105739	7.95	895966	11.35
410-3311-6	GWTS-EFF2-060320	229955	4.50	1081497	7.95	886745	11.35
410-3311-6 MS	GWTS-EFF2-060320 MS	243949	4.49	1153316	7.95	951416	11.35
410-3311-6 MSD	GWTS-EFF2-060320 MSD	261724	4.49	1180497	7.95	963450	11.35
410-3311-1	GWTS-EFF1-060320	250954	4.50	1133891	7.95	920724	11.35
410-3311-2	GWTS-EFF1DUP-060320	243278	4.49	1143783	7.95	931710	11.35
410-3311-3	GWTS-GAC1-060320	227953	4.48	1094038	7.95	895759	11.35
410-3311-4	GWTS-INF1-060320	234085	4.50	1095440	7.95	904622	11.35
410-3311-7	GWTS-GAC2-060320	229023	4.50	1099250	7.95	895324	11.35
410-3311-8	GWTS-INF2-060320	234708	4.49	1107876	7.95	925662	11.35
CCVC 410-13905/29		266846	4.49	1188298	7.95	977438	11.35

TBAd10 = t-Butyl alcohol-d10 (IS)

FB = Fluorobenzene (IS)

CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 50%-200% of internal standard area

RT Limit = $\pm$ 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C DOD

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Sample No.: CCVIS 410-13905/3 Date Analyzed: 06/17/2020 11:20
 Instrument ID: 9915 GC Column: R-624SilMS 30m ID: 0.25 (mm)
 Lab File ID (Standard): LU17C01.D Heated Purge: (Y/N) N
 Calibration ID: 3952

		DCBd4					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		547959	13.22				
UPPER LIMIT		1095918	13.72				
LOWER LIMIT		273980	12.72				
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 410-13905/5		533299	13.22				
LCSD 410-13905/7		531639	13.21				
MB 410-13905/9		504344	13.22				
410-3311-5	GWTS-TB01-060320	515845	13.22				
410-3311-9	GWTS-FB02-060320	494767	13.22				
410-3311-6	GWTS-EFF2-060320	487906	13.22				
410-3311-6 MS	GWTS-EFF2-060320 MS	533612	13.21				
410-3311-6 MSD	GWTS-EFF2-060320 MSD	533794	13.22				
410-3311-1	GWTS-EFF1-060320	509900	13.22				
410-3311-2	GWTS-EFF1DUP-060320	510643	13.21				
410-3311-3	GWTS-GAC1-060320	493278	13.21				
410-3311-4	GWTS-INF1-060320	494065	13.22				
410-3311-7	GWTS-GAC2-060320	489033	13.22				
410-3311-8	GWTS-INF2-060320	508733	13.22				
CCVC 410-13905/29		548799	13.22				

DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
 RT Limit = $\pm$ 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C DOD

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Client Sample ID: GWTS-EFF1-060320 Lab Sample ID: 410-3311-1
 Matrix: Water Lab File ID: LU17S07.D
 Analysis Method: 8260C DOD Date Collected: 06/03/2020 09:05
 Sample wt/vol: 5 (mL) Date Analyzed: 06/17/2020 16:15
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 13905 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
71-43-2	Benzene	0.20	U	1.0	0.50	0.20
100-41-4	Ethylbenzene	0.40	U	1.0	0.80	0.40
108-88-3	Toluene	0.20	U	1.0	0.50	0.20
1330-20-7	Xylenes, Total	1.4	U	6.0	2.0	1.4

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		81-118
460-00-4	4-Bromofluorobenzene (Surr)	96		85-114
1868-53-7	Dibromofluoromethane (Surr)	102		80-119
2037-26-5	Toluene-d8 (Surr)	97		89-112

Report Date: 18-Jun-2020 07:24:29

Chrom Revision: 2.3 17-Jun-2020 19:07:08

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S07.D
 Lims ID: 410-3311-C-1
 Client ID: GWTS-EFF1-060320
 Sample Type: Client
 Inject. Date: 17-Jun-2020 16:15:30 ALS Bottle#: 14 Worklist Smp#: 15
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 410-3311-C-1
 Misc. Info.: 410-0003558-015
 Operator ID: clm27445 Instrument ID: 9915
 Method: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\MSVoa_9915a.m
 Limit Group: MSV - 8260C DOD5
 Last Update: 18-Jun-2020 07:23:09 Calib Date: 04-May-2020 14:30:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1002

First Level Reviewer: mellinger

Date: 18-Jun-2020 07:08:27

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 27 t-Butyl alcohol-d10 (IS)	65	4.500	4.493	0.007	0	250954	250.0	M
\$ 49 Dibromofluoromethane (Surr)	113	7.065	7.059	0.006	94	292483	51.0	
\$ 55 1,2-Dichloroethane-d4 (Surr)	102	7.519	7.512	0.007	96	73901	50.5	
56 Benzene	78		7.544				ND	
* 61 Fluorobenzene (IS)	96	7.950	7.946	0.004	99	1133891	50.0	
\$ 77 Toluene-d8 (Surr)	98	9.924	9.924	0.000	93	1135174	48.3	
78 Toluene	92		9.998				ND	
S 90 Xylenes, Total	106		11.245				ND	
* 91 Chlorobenzene-d5 (IS)	117	11.351	11.351	0.000	85	920724	50.0	
95 Ethylbenzene	91		11.457				ND	
96 m-Xylene & p-Xylene	106		11.573				ND	
97 o-Xylene	106		11.898				ND	
\$ 103 4-Bromofluorobenzene (Surr)	95	12.338	12.338	0.000	91	438194	48.2	
* 119 1,4-Dichlorobenzene-d4	152	13.216	13.216	0.000	95	509900	50.0	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MSV_HP23_ISSS_00002

Amount Added: 1.00

Units: uL

Run Reagent

Report Date: 18-Jun-2020 07:24:29

Chrom Revision: 2.3 17-Jun-2020 19:07:08

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S07.D

Injection Date: 17-Jun-2020 16:15:30

Instrument ID: 9915

Operator ID: clm27445

Lims ID: 410-3311-C-1

Lab Sample ID: 410-3311-1

Worklist Smp#: 15

Client ID: GWTS-EFF1-060320

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

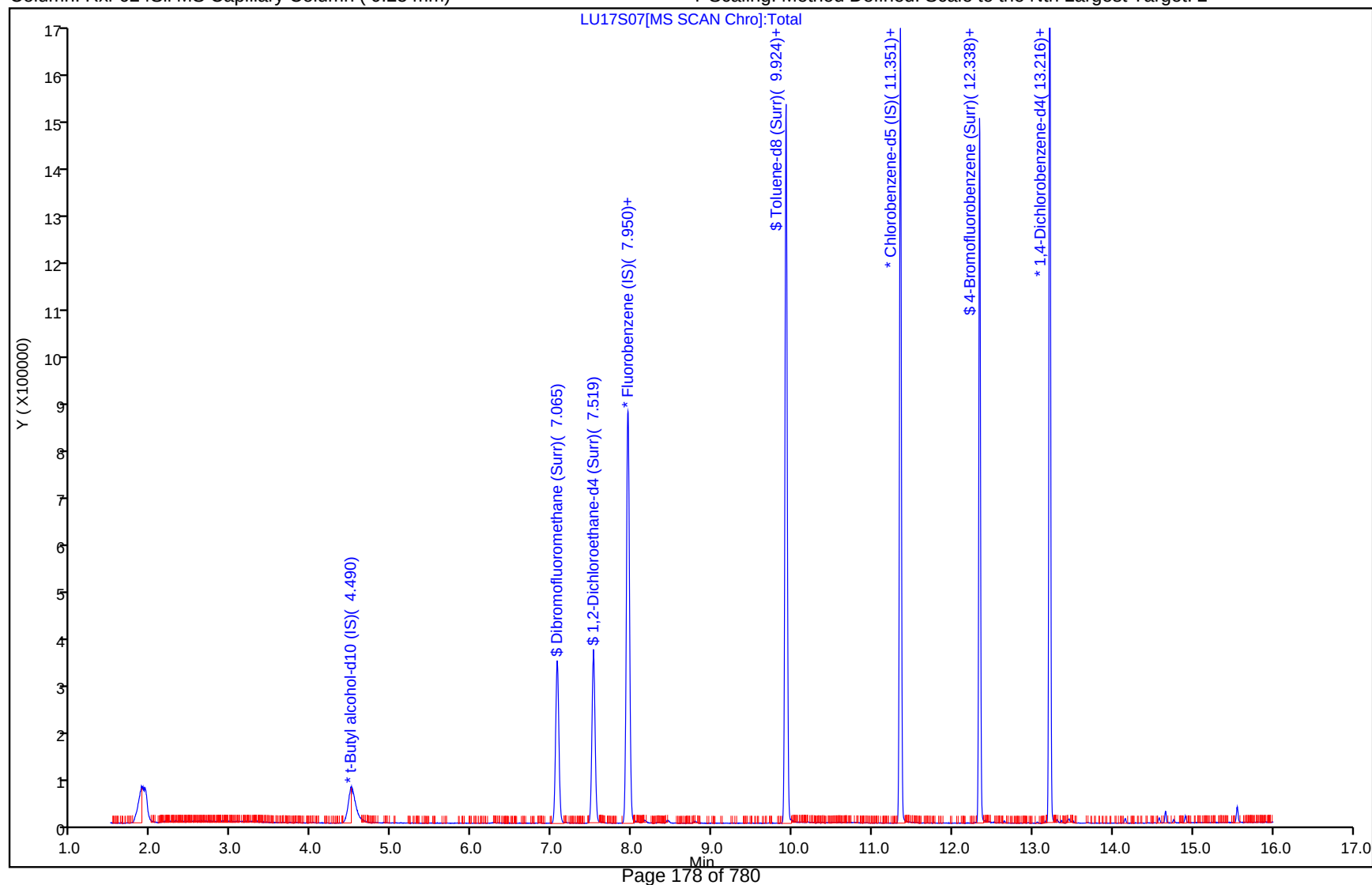
ALS Bottle#: 14

Method: MSVoa_9915a

Limit Group: MSV - 8260C DOD5

Column: Rxi-624Sil MS Capillary Column (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



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Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-178

Report Date: 18-Jun-2020 07:24:29

Chrom Revision: 2.3 17-Jun-2020 19:07:08

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S07.D
 Lims ID: 410-3311-C-1
 Client ID: GWTS-EFF1-060320
 Sample Type: Client
 Inject. Date: 17-Jun-2020 16:15:30 ALS Bottle#: 14 Worklist Smp#: 15
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 410-3311-C-1
 Misc. Info.: 410-0003558-015
 Operator ID: clm27445 Instrument ID: 9915
 Method: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\MSVoa_9915a.m
 Limit Group: MSV - 8260C DOD5
 Last Update: 18-Jun-2020 07:23:09 Calib Date: 04-May-2020 14:30:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1002

First Level Reviewer: mellinger

Date: 18-Jun-2020 07:08:27

Compound	Amount Added	Amount Recovered	% Rec.
\$ 49 Dibromofluoromethane (Surr)	50.0	51.0	101.98
\$ 55 1,2-Dichloroethane-d4 (Surr)	50.0	50.5	100.98
\$ 77 Toluene-d8 (Surr)	50.0	48.3	96.62
\$ 103 4-Bromofluorobenzene (Surr)	50.0	48.2	96.42

Report Date: 18-Jun-2020 07:24:29

Chrom Revision: 2.3 17-Jun-2020 19:07:08
Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

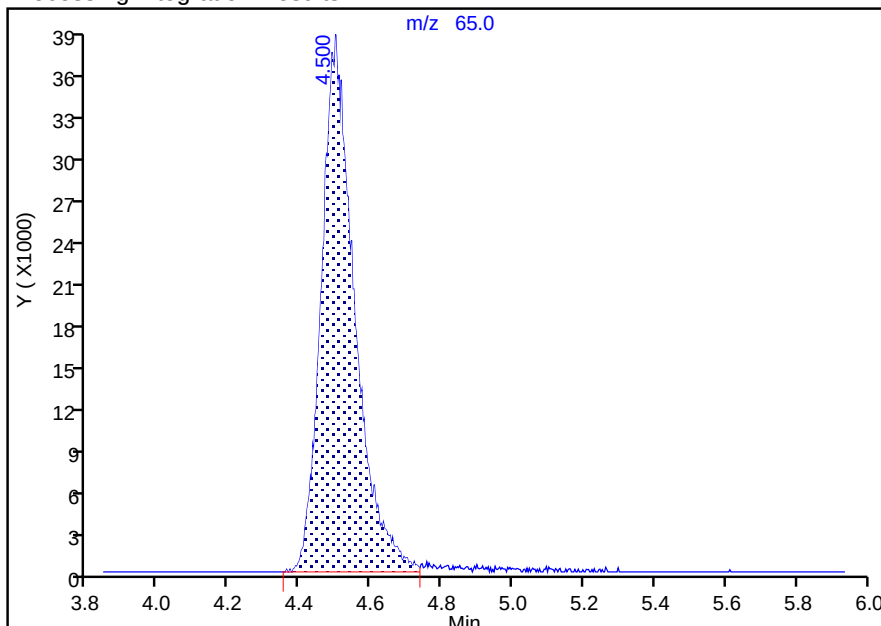
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Injection Date:	17-Jun-2020 16:15:30	Instrument ID:	9915
Lims ID:	410-3311-C-1	Lab Sample ID:	410-3311-1
Client ID:	GWTS-EFF1-060320		
Operator ID:	clm27445	ALS Bottle#:	14
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	MSVoa_9915a	Limit Group:	MSV - 8260C DOD5
Column:	Rxi-624Sil MS Capillary Column (0.25 mm ID) x 30 m	Detector:	MS Quad
		Worklist Smp#:	15

* 27 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

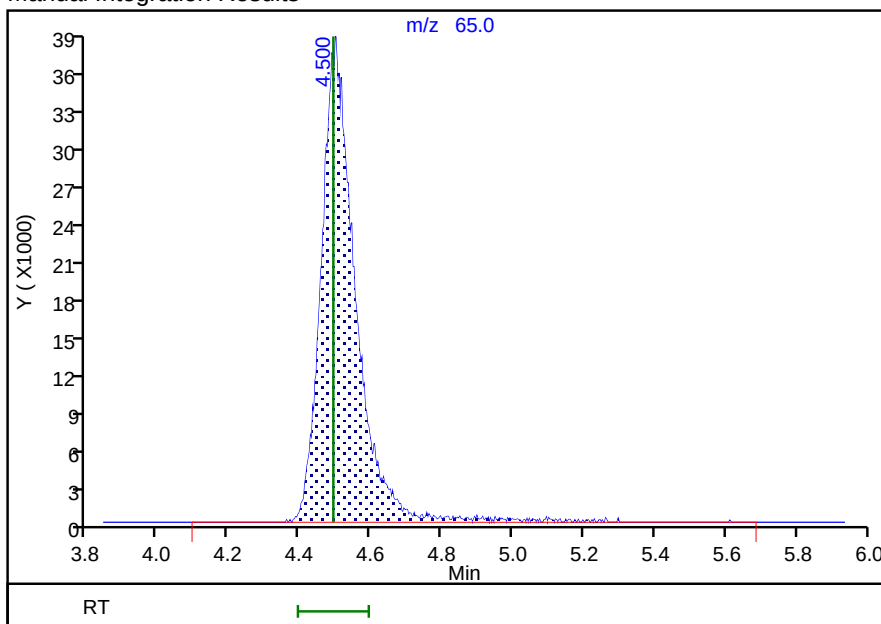
RT: 4.50
Area: 244394
Amount: 250.0000
Amount Units: ug/l

Processing Integration Results



RT: 4.50
Area: 250954
Amount: 250.0000
Amount Units: ug/l

Manual Integration Results



Reviewer: mellinger, 18-Jun-2020 07:08:19

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

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FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Client Sample ID: GWTS-EFF1DUP-060320 Lab Sample ID: 410-3311-2
 Matrix: Water Lab File ID: LU17S08.D
 Analysis Method: 8260C DOD Date Collected: 06/03/2020 09:05
 Sample wt/vol: 5 (mL) Date Analyzed: 06/17/2020 16:37
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 13905 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
71-43-2	Benzene	0.20	U	1.0	0.50	0.20
100-41-4	Ethylbenzene	0.40	U	1.0	0.80	0.40
108-88-3	Toluene	0.20	U	1.0	0.50	0.20
1330-20-7	Xylenes, Total	1.4	U	6.0	2.0	1.4

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	100		81-118
460-00-4	4-Bromofluorobenzene (Surr)	96		85-114
1868-53-7	Dibromofluoromethane (Surr)	103		80-119
2037-26-5	Toluene-d8 (Surr)	96		89-112

Report Date: 18-Jun-2020 07:24:30

Chrom Revision: 2.3 17-Jun-2020 19:07:08

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S08.D
 Lims ID: 410-3311-C-2
 Client ID: GWTS-EFF1DUP-060320
 Sample Type: Client
 Inject. Date: 17-Jun-2020 16:37:30 ALS Bottle#: 15 Worklist Smp#: 16
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 410-3311-C-2
 Misc. Info.: 410-0003558-016
 Operator ID: clm27445 Instrument ID: 9915
 Method: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\MSVoa_9915a.m
 Limit Group: MSV - 8260C DOD5
 Last Update: 18-Jun-2020 07:23:09 Calib Date: 04-May-2020 14:30:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1002

First Level Reviewer: mellinger

Date: 18-Jun-2020 07:09:06

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 27 t-Butyl alcohol-d10 (IS)	65	4.487	4.493	-0.006	0	243278	250.0	M
\$ 49 Dibromofluoromethane (Surr)	113	7.062	7.059	0.003	93	296725	51.3	
\$ 55 1,2-Dichloroethane-d4 (Surr)	102	7.509	7.512	-0.003	96	73723	49.9	
56 Benzene	78		7.544				ND	
* 61 Fluorobenzene (IS)	96	7.946	7.946	0.000	99	1143783	50.0	
\$ 77 Toluene-d8 (Surr)	98	9.924	9.924	0.000	93	1146658	48.2	
78 Toluene	92		9.998				ND	
S 90 Xylenes, Total	106		11.245				ND	
* 91 Chlorobenzene-d5 (IS)	117	11.351	11.351	0.000	85	931710	50.0	
95 Ethylbenzene	91		11.457				ND	
96 m-Xylene & p-Xylene	106		11.573				ND	
97 o-Xylene	106		11.898				ND	
\$ 103 4-Bromofluorobenzene (Surr)	95	12.339	12.338	0.001	91	441240	48.0	
* 119 1,4-Dichlorobenzene-d4	152	13.213	13.216	-0.003	95	510643	50.0	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MSV_HP23_ISSS_00002

Amount Added: 1.00

Units: uL

Run Reagent

Report Date: 18-Jun-2020 07:24:30

Chrom Revision: 2.3 17-Jun-2020 19:07:08

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S08.D

Injection Date: 17-Jun-2020 16:37:30

Instrument ID: 9915

Operator ID: clm27445

Lims ID: 410-3311-C-2

Lab Sample ID: 410-3311-2

Worklist Smp#: 16

Client ID: GWTS-EFF1DUP-060320

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

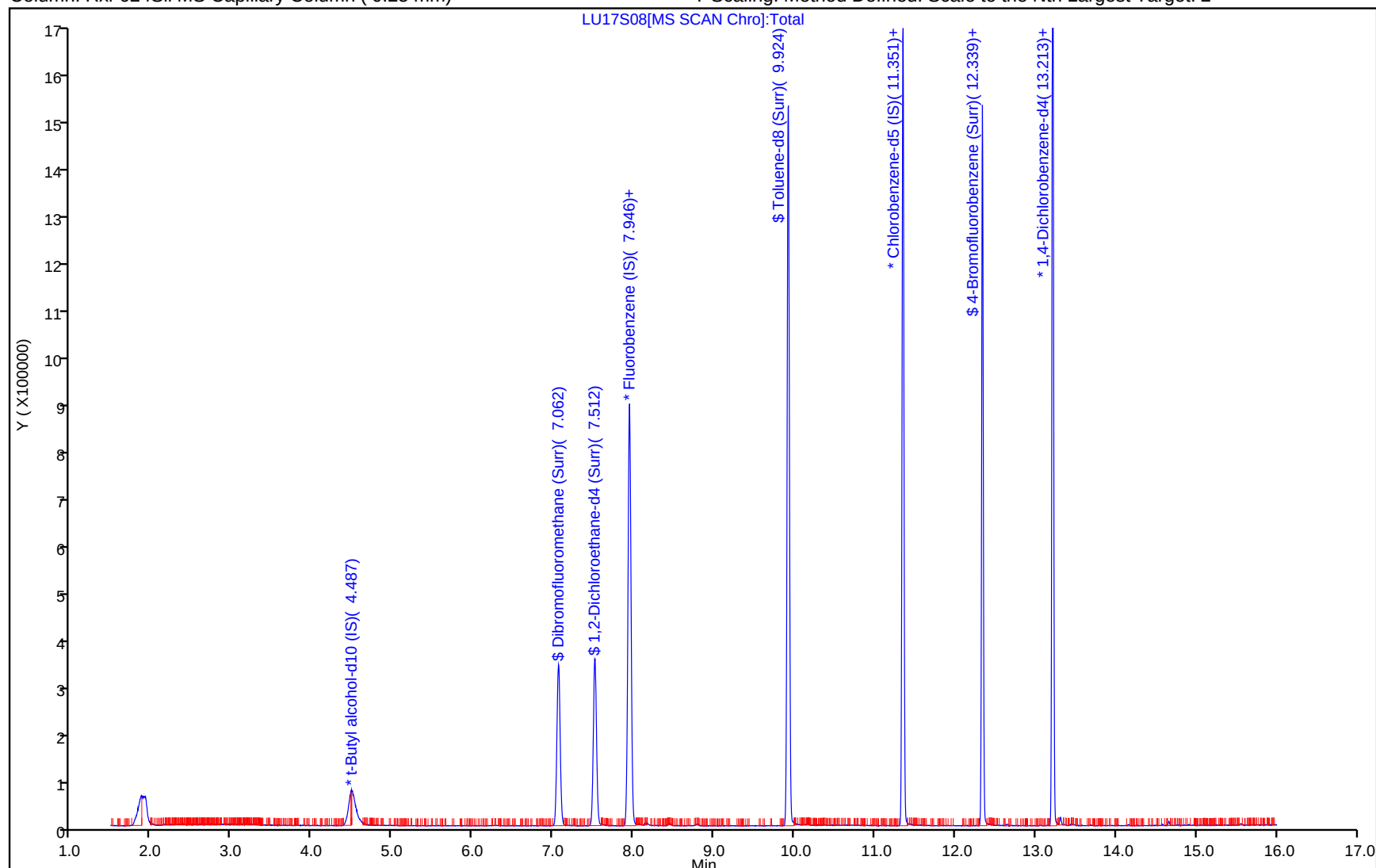
ALS Bottle#: 15

Method: MSVoa_9915a

Limit Group: MSV - 8260C DOD5

Column: Rxi-624Sil MS Capillary Column (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



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Report Date: 18-Jun-2020 07:24:30

Chrom Revision: 2.3 17-Jun-2020 19:07:08

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S08.D
 Lims ID: 410-3311-C-2
 Client ID: GWTS-EFF1DUP-060320
 Sample Type: Client
 Inject. Date: 17-Jun-2020 16:37:30 ALS Bottle#: 15 Worklist Smp#: 16
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 410-3311-C-2
 Misc. Info.: 410-0003558-016
 Operator ID: clm27445 Instrument ID: 9915
 Method: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\MSVoa_9915a.m
 Limit Group: MSV - 8260C DOD5
 Last Update: 18-Jun-2020 07:23:09 Calib Date: 04-May-2020 14:30:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1002

First Level Reviewer: mellinger

Date: 18-Jun-2020 07:09:06

Compound	Amount Added	Amount Recovered	% Rec.
\$ 49 Dibromofluoromethane (Surr)	50.0	51.3	102.56
\$ 55 1,2-Dichloroethane-d4 (Surr)	50.0	49.9	99.86
\$ 77 Toluene-d8 (Surr)	50.0	48.2	96.45
\$ 103 4-Bromofluorobenzene (Surr)	50.0	48.0	95.95

Report Date: 18-Jun-2020 07:24:30

Chrom Revision: 2.3 17-Jun-2020 19:07:08
Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

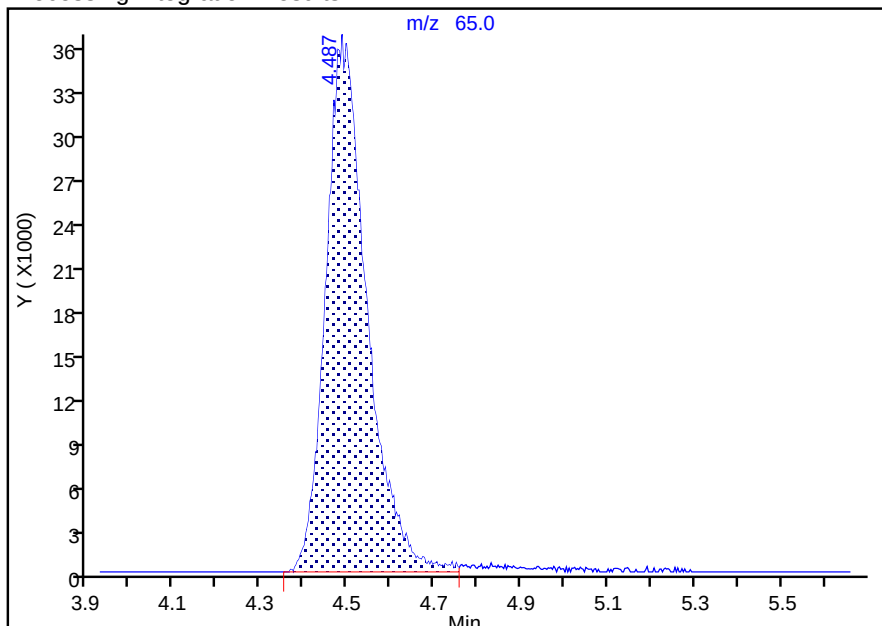
Data File:	\\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S08.D		
Injection Date:	17-Jun-2020 16:37:30	Instrument ID:	9915
Lims ID:	410-3311-C-2	Lab Sample ID:	410-3311-2
Client ID:	GWTS-EFF1DUP-060320		
Operator ID:	clm27445	ALS Bottle#:	15
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	MSVoa_9915a	Limit Group:	MSV - 8260C DOD5
Column:	Rxi-624Sil MS Capillary Column (0.25 mm ID) x 30.0 m	Detector:	MS Quad
		Worklist Smp#:	16

* 27 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

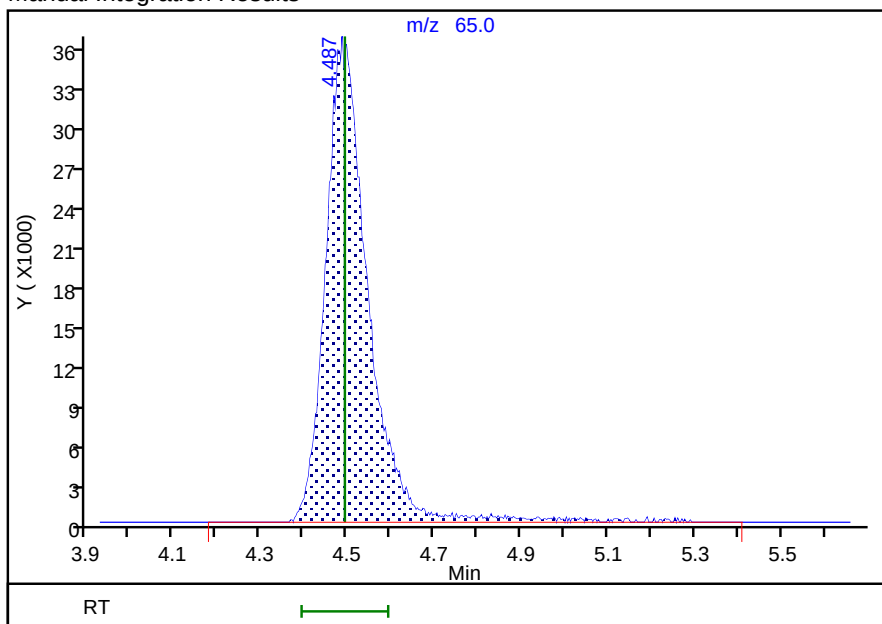
RT: 4.49
Area: 236754
Amount: 250.0000
Amount Units: ug/l

Processing Integration Results



RT: 4.49
Area: 243278
Amount: 250.0000
Amount Units: ug/l

Manual Integration Results



Reviewer: mellinger, 18-Jun-2020 07:08:57

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

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FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Client Sample ID: GWTS-GAC1-060320 Lab Sample ID: 410-3311-3
 Matrix: Water Lab File ID: LU17S09.D
 Analysis Method: 8260C DOD Date Collected: 06/03/2020 09:19
 Sample wt/vol: 5 (mL) Date Analyzed: 06/17/2020 16:59
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 13905 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
71-43-2	Benzene	0.20	U	1.0	0.50	0.20
100-41-4	Ethylbenzene	0.40	U	1.0	0.80	0.40
108-88-3	Toluene	0.20	U	1.0	0.50	0.20
1330-20-7	Xylenes, Total	1.4	U	6.0	2.0	1.4

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		81-118
460-00-4	4-Bromofluorobenzene (Surr)	96		85-114
1868-53-7	Dibromofluoromethane (Surr)	102		80-119
2037-26-5	Toluene-d8 (Surr)	96		89-112

Report Date: 18-Jun-2020 07:24:30

Chrom Revision: 2.3 17-Jun-2020 19:07:08

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S09.D
 Lims ID: 410-3311-C-3
 Client ID: GWTS-GAC1-060320
 Sample Type: Client
 Inject. Date: 17-Jun-2020 16:59:30 ALS Bottle#: 16 Worklist Smp#: 17
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 410-3311-C-3
 Misc. Info.: 410-0003558-017
 Operator ID: clm27445 Instrument ID: 9915
 Method: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\MSVoa_9915a.m
 Limit Group: MSV - 8260C DOD5
 Last Update: 18-Jun-2020 07:23:09 Calib Date: 04-May-2020 14:30:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1002

First Level Reviewer: mellinger

Date: 18-Jun-2020 07:09:35

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 27 t-Butyl alcohol-d10 (IS)	65	4.484	4.493	-0.009	0	227953	250.0	M
\$ 49 Dibromofluoromethane (Surr)	113	7.062	7.059	0.003	94	282041	51.0	
\$ 55 1,2-Dichloroethane-d4 (Surr)	102	7.516	7.512	0.004	96	72395	51.3	
56 Benzene	78		7.544				ND	
* 61 Fluorobenzene (IS)	96	7.946	7.946	0.000	99	1094038	50.0	
\$ 77 Toluene-d8 (Surr)	98	9.921	9.924	-0.003	93	1094382	47.9	
78 Toluene	92		9.998				ND	
S 90 Xylenes, Total	106		11.245				ND	
* 91 Chlorobenzene-d5 (IS)	117	11.348	11.351	-0.003	85	895759	50.0	
95 Ethylbenzene	91		11.457				ND	
96 m-Xylene & p-Xylene	106		11.573				ND	
97 o-Xylene	106		11.898				ND	
\$ 103 4-Bromofluorobenzene (Surr)	95	12.339	12.338	0.001	96	423909	47.9	
* 119 1,4-Dichlorobenzene-d4	152	13.213	13.216	-0.003	95	493278	50.0	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MSV_HP23_ISSS_00002

Amount Added: 1.00

Units: uL

Run Reagent

Report Date: 18-Jun-2020 07:24:30

Chrom Revision: 2.3 17-Jun-2020 19:07:08

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S09.D

Injection Date: 17-Jun-2020 16:59:30

Instrument ID: 9915

Operator ID: clm27445

Lims ID: 410-3311-C-3

Lab Sample ID: 410-3311-3

Worklist Smp#: 17

Client ID: GWTS-GAC1-060320

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

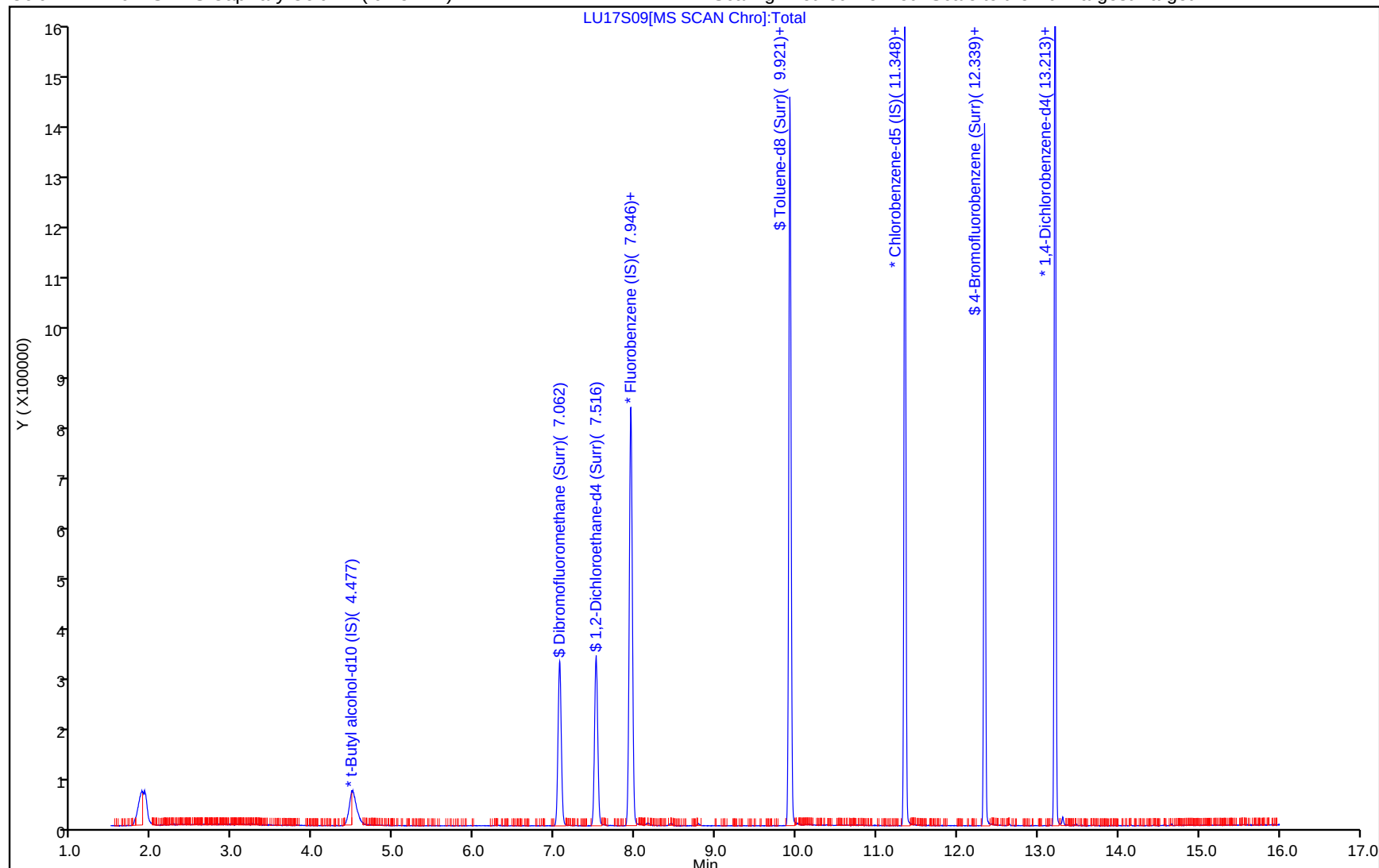
ALS Bottle#: 16

Method: MSVoa_9915a

Limit Group: MSV - 8260C DOD5

Column: Rxi-624Sil MS Capillary Column (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



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Report Date: 18-Jun-2020 07:24:30

Chrom Revision: 2.3 17-Jun-2020 19:07:08

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S09.D
 Lims ID: 410-3311-C-3
 Client ID: GWTS-GAC1-060320
 Sample Type: Client
 Inject. Date: 17-Jun-2020 16:59:30 ALS Bottle#: 16 Worklist Smp#: 17
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 410-3311-C-3
 Misc. Info.: 410-0003558-017
 Operator ID: clm27445 Instrument ID: 9915
 Method: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\MSVoa_9915a.m
 Limit Group: MSV - 8260C DOD5
 Last Update: 18-Jun-2020 07:23:09 Calib Date: 04-May-2020 14:30:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1002

First Level Reviewer: mellinger

Date: 18-Jun-2020 07:09:35

Compound	Amount Added	Amount Recovered	% Rec.
\$ 49 Dibromofluoromethane (Surr)	50.0	51.0	101.92
\$ 55 1,2-Dichloroethane-d4 (Surr)	50.0	51.3	102.52
\$ 77 Toluene-d8 (Surr)	50.0	47.9	95.74
\$ 103 4-Bromofluorobenzene (Surr)	50.0	47.9	95.88

Report Date: 18-Jun-2020 07:24:30

Chrom Revision: 2.3 17-Jun-2020 19:07:08
Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

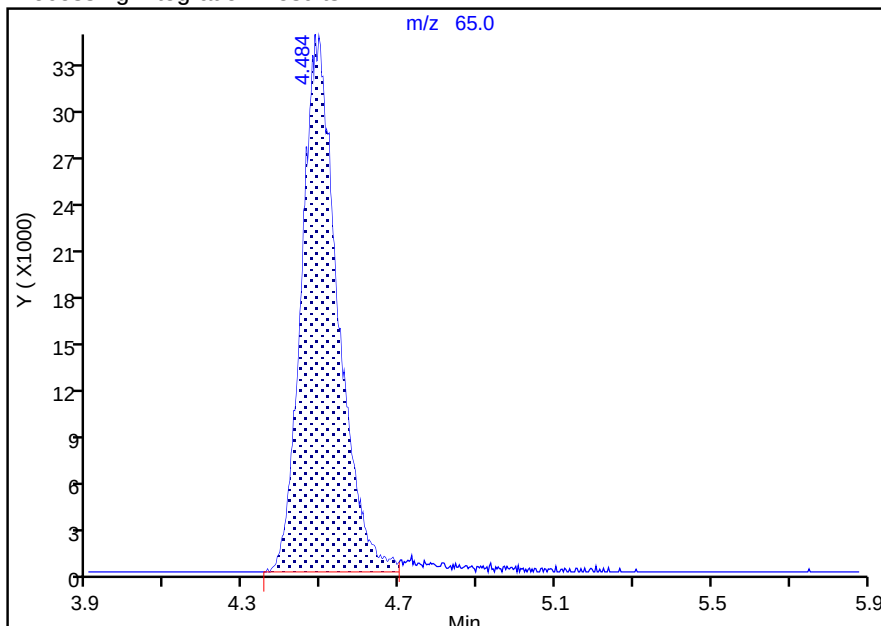
Data File:	\\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S09.D		
Injection Date:	17-Jun-2020 16:59:30	Instrument ID:	9915
Lims ID:	410-3311-C-3	Lab Sample ID:	410-3311-3
Client ID:	GWTS-GAC1-060320		
Operator ID:	clm27445	ALS Bottle#:	16
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	MSVoa_9915a	Limit Group:	MSV - 8260C DOD5
Column:	Rxi-624Sil MS Capillary Column (0.25mm ID)	Detector:	MS Quad
		Worklist Smp#:	17

* 27 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

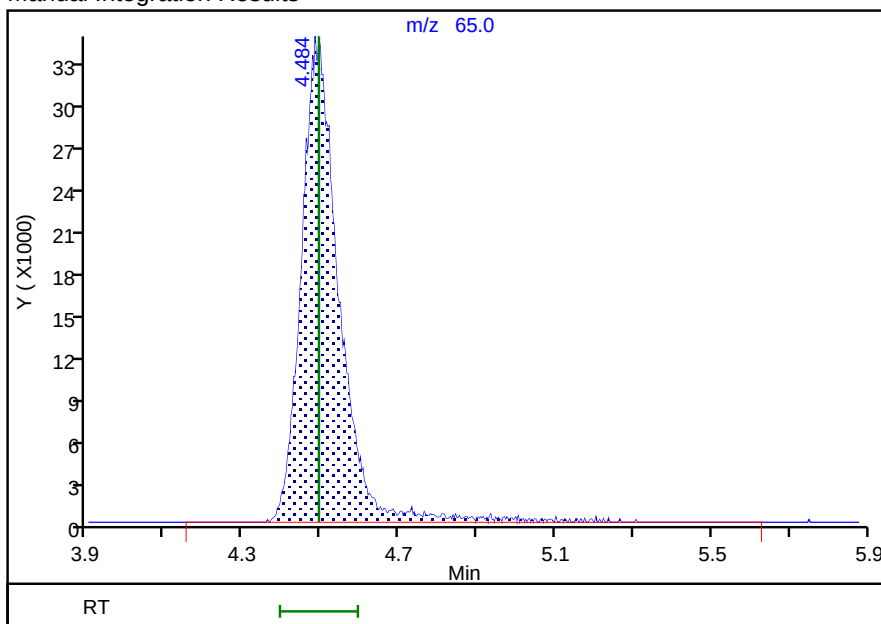
RT: 4.48
Area: 219557
Amount: 250.0000
Amount Units: ug/l

Processing Integration Results



RT: 4.48
Area: 227953
Amount: 250.0000
Amount Units: ug/l

Manual Integration Results



Reviewer: mellinger, 18-Jun-2020 07:09:25

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

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FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Client Sample ID: GWTS-INF1-060320 Lab Sample ID: 410-3311-4
 Matrix: Water Lab File ID: LU17S10.D
 Analysis Method: 8260C DOD Date Collected: 06/03/2020 09:27
 Sample wt/vol: 5 (mL) Date Analyzed: 06/17/2020 17:21
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 13905 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
71-43-2	Benzene	0.20	U	1.0	0.50	0.20
100-41-4	Ethylbenzene	0.40	U	1.0	0.80	0.40
108-88-3	Toluene	0.20	U	1.0	0.50	0.20
1330-20-7	Xylenes, Total	1.4	U	6.0	2.0	1.4

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	102		81-118
460-00-4	4-Bromofluorobenzene (Surr)	96		85-114
1868-53-7	Dibromofluoromethane (Surr)	103		80-119
2037-26-5	Toluene-d8 (Surr)	96		89-112

Report Date: 18-Jun-2020 07:24:31

Chrom Revision: 2.3 17-Jun-2020 19:07:08

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S10.D
 Lims ID: 410-3311-C-4
 Client ID: GWTS-INF1-060320
 Sample Type: Client
 Inject. Date: 17-Jun-2020 17:21:30 ALS Bottle#: 17 Worklist Smp#: 18
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 410-3311-C-4
 Misc. Info.: 410-0003558-018
 Operator ID: clm27445 Instrument ID: 9915
 Method: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\MSVoa_9915a.m
 Limit Group: MSV - 8260C DOD5
 Last Update: 18-Jun-2020 07:23:09 Calib Date: 04-May-2020 14:30:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1002

First Level Reviewer: mellinger

Date: 18-Jun-2020 07:10:08

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 27 t-Butyl alcohol-d10 (IS)	65	4.496	4.493	0.003	0	234085	250.0	M
\$ 49 Dibromofluoromethane (Surr)	113	7.069	7.059	0.010	93	285184	51.5	
\$ 55 1,2-Dichloroethane-d4 (Surr)	102	7.525	7.512	0.013	96	71965	50.9	
56 Benzene	78		7.544				ND	
* 61 Fluorobenzene (IS)	96	7.950	7.946	0.004	99	1095440	50.0	
\$ 77 Toluene-d8 (Surr)	98	9.924	9.924	0.000	93	1108686	48.0	
78 Toluene	92		9.998				ND	
S 90 Xylenes, Total	106		11.245				ND	
* 91 Chlorobenzene-d5 (IS)	117	11.351	11.351	0.000	85	904622	50.0	
95 Ethylbenzene	91		11.457				ND	
96 m-Xylene & p-Xylene	106		11.573				ND	
97 o-Xylene	106		11.898				ND	
\$ 103 4-Bromofluorobenzene (Surr)	95	12.338	12.338	0.000	91	426481	47.8	
* 119 1,4-Dichlorobenzene-d4	152	13.216	13.216	0.000	95	494065	50.0	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MSV_HP23_ISSS_00002

Amount Added: 1.00

Units: uL

Run Reagent

Report Date: 18-Jun-2020 07:24:31

Chrom Revision: 2.3 17-Jun-2020 19:07:08

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S10.D

Injection Date: 17-Jun-2020 17:21:30

Instrument ID: 9915

Operator ID: clm27445

Lims ID: 410-3311-C-4

Lab Sample ID: 410-3311-4

Worklist Smp#: 18

Client ID: GWTS-INF1-060320

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

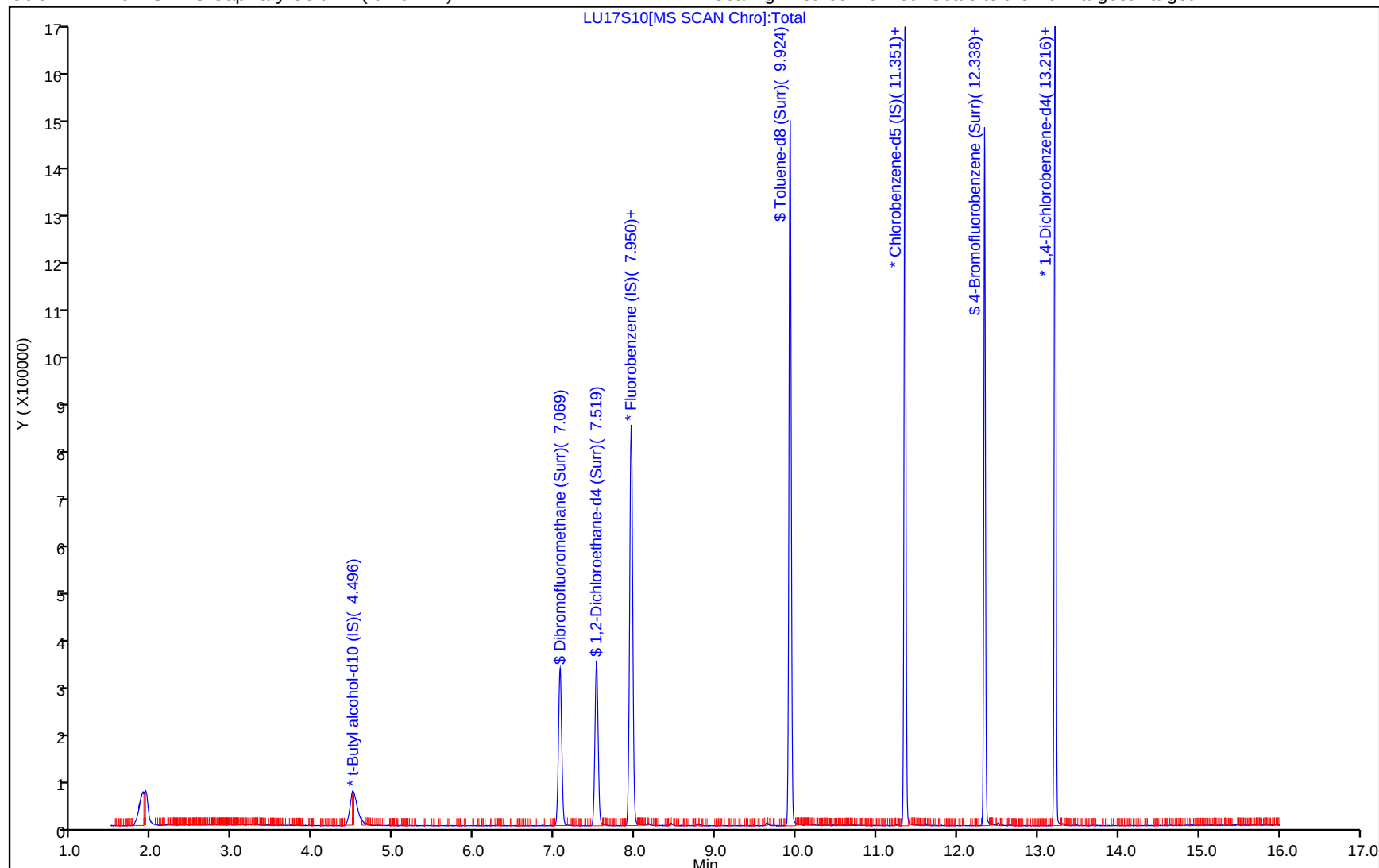
ALS Bottle#: 17

Method: MSVoa_9915a

Limit Group: MSV - 8260C DOD5

Column: Rxi-624Sil MS Capillary Column (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



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Report Date: 18-Jun-2020 07:24:31

Chrom Revision: 2.3 17-Jun-2020 19:07:08

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S10.D
 Lims ID: 410-3311-C-4
 Client ID: GWTS-INF1-060320
 Sample Type: Client
 Inject. Date: 17-Jun-2020 17:21:30 ALS Bottle#: 17 Worklist Smp#: 18
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 410-3311-C-4
 Misc. Info.: 410-0003558-018
 Operator ID: clm27445 Instrument ID: 9915
 Method: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\MSVoa_9915a.m
 Limit Group: MSV - 8260C DOD5
 Last Update: 18-Jun-2020 07:23:09 Calib Date: 04-May-2020 14:30:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1002

First Level Reviewer: mellinger

Date: 18-Jun-2020 07:10:08

Compound	Amount Added	Amount Recovered	% Rec.
\$ 49 Dibromofluoromethane (Surr)	50.0	51.5	102.92
\$ 55 1,2-Dichloroethane-d4 (Surr)	50.0	50.9	101.78
\$ 77 Toluene-d8 (Surr)	50.0	48.0	96.04
\$ 103 4-Bromofluorobenzene (Surr)	50.0	47.8	95.51

Report Date: 18-Jun-2020 07:24:31

Chrom Revision: 2.3 17-Jun-2020 19:07:08
Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

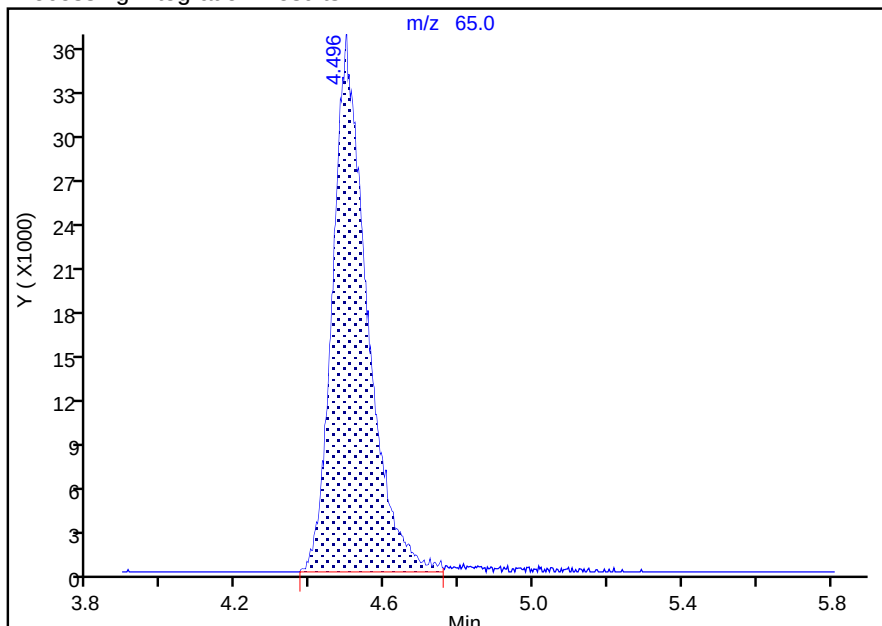
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Injection Date:	17-Jun-2020 17:21:30	Instrument ID:	9915
Lims ID:	410-3311-C-4	Lab Sample ID:	410-3311-4
Client ID:	GWTS-INF1-060320		
Operator ID:	clm27445	ALS Bottle#:	17
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	MSVoa_9915a	Limit Group:	MSV - 8260C DOD5
Column:	Rxi-624Sil MS Capillary Column (0.25mm ID)	Detector:	MS Quad
		Worklist Smp#:	18

* 27 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

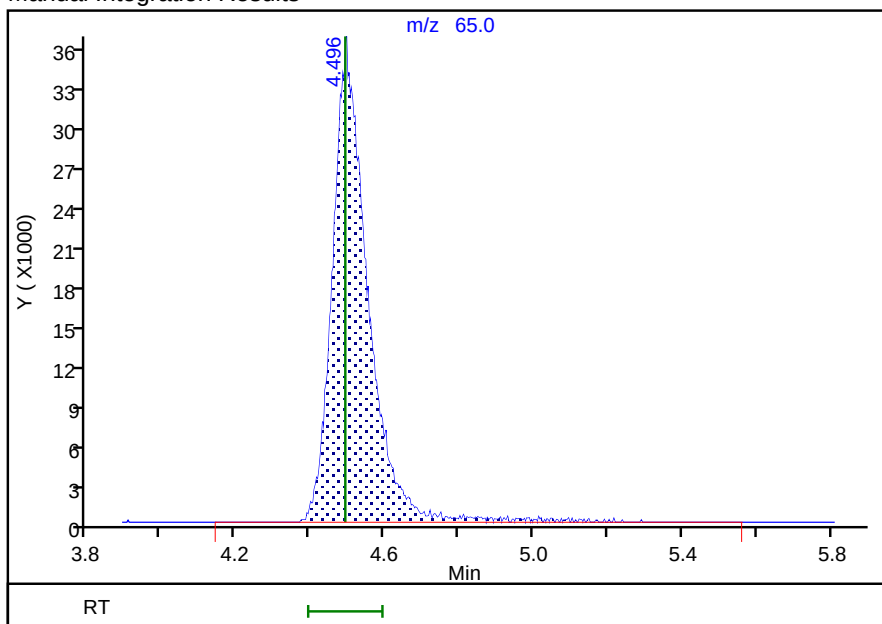
RT: 4.50
Area: 229090
Amount: 250.0000
Amount Units: ug/l

Processing Integration Results



RT: 4.50
Area: 234085
Amount: 250.0000
Amount Units: ug/l

Manual Integration Results



Reviewer: mellinger, 18-Jun-2020 07:09:59

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

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FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Client Sample ID: GWTS-TB01-060320 Lab Sample ID: 410-3311-5
 Matrix: Water Lab File ID: LU17S02.D
 Analysis Method: 8260C DOD Date Collected: 06/03/2020 09:30
 Sample wt/vol: 5 (mL) Date Analyzed: 06/17/2020 14:26
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 13905 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
71-43-2	Benzene	0.20	U	1.0	0.50	0.20
100-41-4	Ethylbenzene	0.40	U	1.0	0.80	0.40
108-88-3	Toluene	0.20	U	1.0	0.50	0.20
1330-20-7	Xylenes, Total	1.4	U	6.0	2.0	1.4

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		81-118
460-00-4	4-Bromofluorobenzene (Surr)	96		85-114
1868-53-7	Dibromofluoromethane (Surr)	101		80-119
2037-26-5	Toluene-d8 (Surr)	96		89-112

Report Date: 18-Jun-2020 07:24:12

Chrom Revision: 2.3 17-Jun-2020 19:07:08

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S02.D
 Lims ID: 410-3311-C-5
 Client ID: GWTS-TB01-060320
 Sample Type: Client
 Inject. Date: 17-Jun-2020 14:26:30 ALS Bottle#: 9 Worklist Smp#: 10
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 410-3311-C-5
 Misc. Info.: 410-0003558-010
 Operator ID: clm27445 Instrument ID: 9915
 Method: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\MSVoa_9915a.m
 Limit Group: MSV - 8260C DOD5
 Last Update: 18-Jun-2020 07:23:09 Calib Date: 04-May-2020 14:30:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1002

First Level Reviewer: mellinger

Date: 18-Jun-2020 06:58:32

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 27 t-Butyl alcohol-d10 (IS)	65	4.490	4.493	-0.003	0	250892	250.0	
\$ 49 Dibromofluoromethane (Surr)	113	7.062	7.059	0.003	94	294397	50.4	
\$ 55 1,2-Dichloroethane-d4 (Surr)	102	7.516	7.512	0.004	96	75405	50.6	
56 Benzene	78		7.544				ND	
* 61 Fluorobenzene (IS)	96	7.946	7.946	0.000	100	1154867	50.0	
\$ 77 Toluene-d8 (Surr)	98	9.924	9.924	0.000	93	1148996	48.0	
78 Toluene	92		9.998				ND	
S 90 Xylenes, Total	106		11.245				ND	
* 91 Chlorobenzene-d5 (IS)	117	11.351	11.351	0.000	85	937971	50.0	
95 Ethylbenzene	91		11.457				ND	
96 m-Xylene & p-Xylene	106		11.573				ND	
97 o-Xylene	106		11.898				ND	
\$ 103 4-Bromofluorobenzene (Surr)	95	12.339	12.338	0.001	95	444209	48.0	
* 119 1,4-Dichlorobenzene-d4	152	13.216	13.216	0.000	95	515845	50.0	

Reagents:

MSV_HP23_ISSS_00002 Amount Added: 1.00 Units: uL Run Reagent

Report Date: 18-Jun-2020 07:24:12

Chrom Revision: 2.3 17-Jun-2020 19:07:08

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S02.D

Injection Date: 17-Jun-2020 14:26:30

Instrument ID: 9915

Operator ID: clm27445

Lims ID: 410-3311-C-5

Lab Sample ID: 410-3311-5

Worklist Smp#: 10

Client ID: GWTS-TB01-060320

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

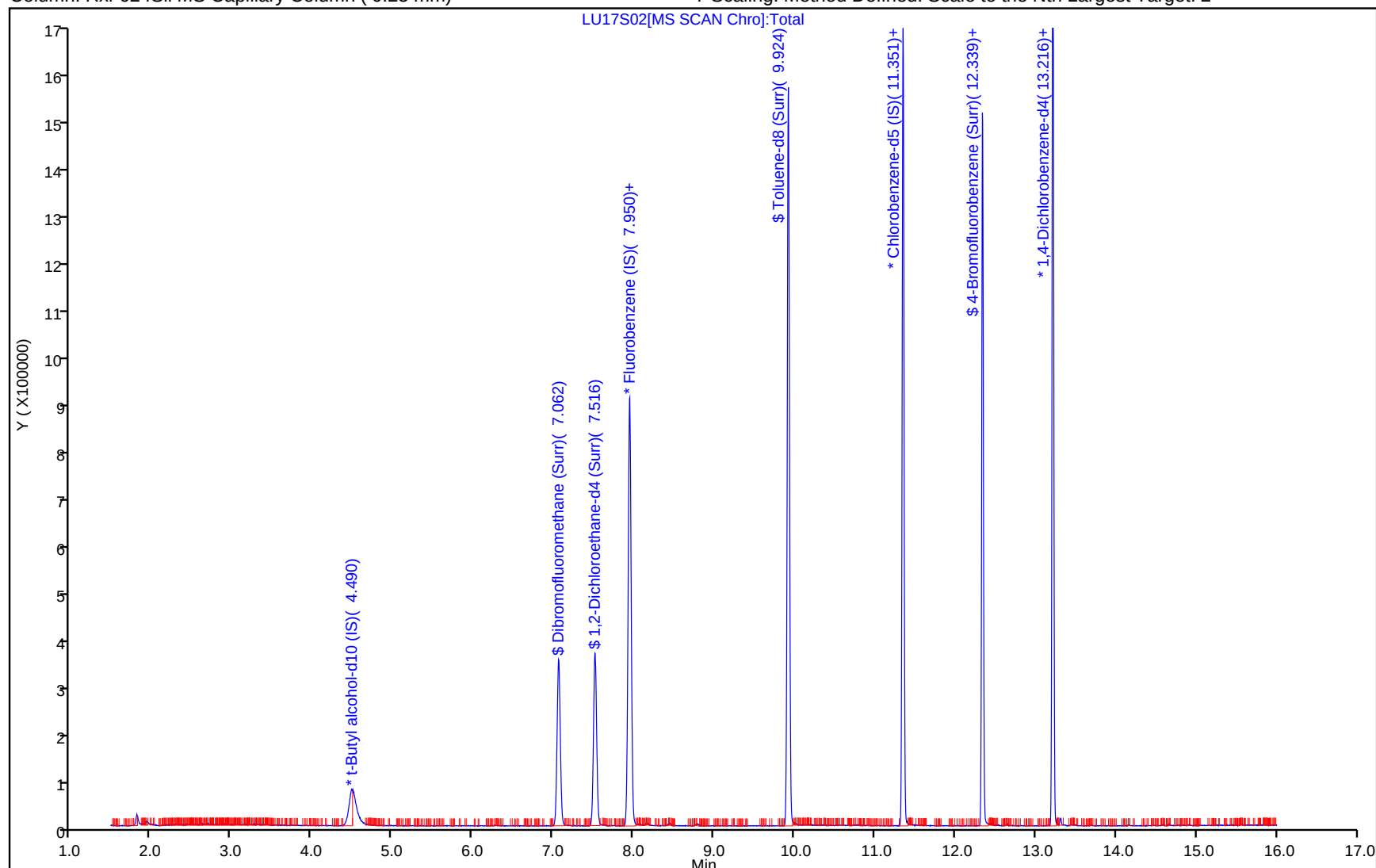
ALS Bottle#: 9

Method: MSVoa_9915a

Limit Group: MSV - 8260C DOD5

Column: Rxi-624Sil MS Capillary Column (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



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Report Date: 18-Jun-2020 07:24:12

Chrom Revision: 2.3 17-Jun-2020 19:07:08

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S02.D
 Lims ID: 410-3311-C-5
 Client ID: GWTS-TB01-060320
 Sample Type: Client
 Inject. Date: 17-Jun-2020 14:26:30 ALS Bottle#: 9 Worklist Smp#: 10
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 410-3311-C-5
 Misc. Info.: 410-0003558-010
 Operator ID: clm27445 Instrument ID: 9915
 Method: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\MSVoa_9915a.m
 Limit Group: MSV - 8260C DOD5
 Last Update: 18-Jun-2020 07:23:09 Calib Date: 04-May-2020 14:30:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1002

First Level Reviewer: mellinger

Date: 18-Jun-2020 06:58:32

Compound	Amount Added	Amount Recovered	% Rec.
\$ 49 Dibromofluoromethane (Surr)	50.0	50.4	100.78
\$ 55 1,2-Dichloroethane-d4 (Surr)	50.0	50.6	101.16
\$ 77 Toluene-d8 (Surr)	50.0	48.0	96.00
\$ 103 4-Bromofluorobenzene (Surr)	50.0	48.0	95.95

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Client Sample ID: GWTS-EFF2-060320 Lab Sample ID: 410-3311-6
 Matrix: Water Lab File ID: LU17S04.D
 Analysis Method: 8260C DOD Date Collected: 06/03/2020 08:24
 Sample wt/vol: 5 (mL) Date Analyzed: 06/17/2020 15:09
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 13905 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
71-43-2	Benzene	0.20	U	1.0	0.50	0.20
100-41-4	Ethylbenzene	0.40	U	1.0	0.80	0.40
108-88-3	Toluene	0.20	U	1.0	0.50	0.20
1330-20-7	Xylenes, Total	1.4	U	6.0	2.0	1.4

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		81-118
460-00-4	4-Bromofluorobenzene (Surr)	95		85-114
1868-53-7	Dibromofluoromethane (Surr)	103		80-119
2037-26-5	Toluene-d8 (Surr)	96		89-112

Report Date: 18-Jun-2020 20:29:41

Chrom Revision: 2.3 17-Jun-2020 19:07:08

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S04.D
 Lims ID: 410-3311-C-6
 Client ID: GWTS-EFF2-060320
 Sample Type: Client
 Inject. Date: 17-Jun-2020 15:09:30 ALS Bottle#: 11 Worklist Smp#: 12
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 410-3311-C-6
 Misc. Info.: 410-0003558-012
 Operator ID: clm27445 Instrument ID: 9915
 Method: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\MSVoa_9915a.m
 Limit Group: MSV - 8260C DOD5
 Last Update: 18-Jun-2020 07:25:39 Calib Date: 04-May-2020 14:30:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1038

First Level Reviewer: mellinger

Date: 18-Jun-2020 06:59:54

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
1 Chlorotrifluoroethene	116		2.043				ND	
2 Dichlorodifluoromethane	85		2.078				ND	
3 Chlorodifluoromethane	51		2.104				ND	
4 Chloromethane	50		2.291				ND	
6 Butadiene	39	2.483	2.406	0.077	1	206	NC	
5 Vinyl chloride	62		2.413				ND	
7 2-Chloro-1,1,1-Trifluoroethane	118		2.487				ND	
8 Bromomethane	94		2.750				ND	
9 Chloroethane	64		2.847				ND	
10 Dichlorofluoromethane	67		3.159				ND	
11 Trichlorofluoromethane	101		3.159				ND	
12 Pentane	43		3.207				ND	
13 Ethanol	45		3.336				ND	
14 Ethyl ether	59		3.429				ND	
15 1,2-Dichloro-1,1,2-trifluoroetha	67		3.519				ND	
16 Acrolein	56		3.619				ND	
17 1,1-Dichloroethene	96		3.757				ND	
18 112TCTFE	101		3.795				ND	
19 Acetone	58		3.799				ND	
20 Iodomethane	142		3.966				ND	
21 Isopropyl alcohol	45		3.992				ND	
22 Carbon disulfide	76		4.072				ND	
23 Acetonitrile	41		4.201				ND	
24 Methyl acetate	43		4.236				ND	
25 3-Chloro-1-propene	41		4.262				ND	
26 Methylene Chloride	84		4.471				ND	
* 27 t-Butyl alcohol-d10 (IS)	65	4.499	4.493	0.006	0	229955	250.0	
28 2-Methyl-2-propanol	59		4.615				ND	
29 Acrylonitrile	53		4.824				ND	
31 Methyl tert-butyl ether	73		4.879				ND	
32 trans-1,2-Dichloroethene	96		4.885				ND	

Report Date: 18-Jun-2020 20:29:41

Chrom Revision: 2.3 17-Jun-2020 19:07:08

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S04.D

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
33 Hexane	57		5.300				ND	
34 Vinyl acetate	43		5.541				ND	
35 1,1-Dichloroethane	63		5.545				ND	
36 Isopropyl ether	45		5.596				ND	
37 2-Chloro-1,3-butadiene	53		5.647				ND	
38 Tert-butyl ethyl ether	59		6.123				ND	
S 39 1,2-Dichloroethene, Total	100		6.155				ND	
40 2-Butanone (MEK)	43		6.345				ND	
41 cis-1,2-Dichloroethene	96		6.371				ND	
42 2,2-Dichloropropane	77		6.384				ND	
43 Ethyl acetate	43		6.403				ND	
44 Propionitrile	54		6.438				ND	
45 Methacrylonitrile	67		6.651				ND	
46 Chlorobromomethane	128		6.699				ND	
47 Tetrahydrofuran	71		6.712				ND	
48 Chloroform	83		6.850				ND	
\$ 49 Dibromofluoromethane (Surr)	113	7.065	7.059	0.006	93	282730	51.7	
50 1,1,1-Trichloroethane	97		7.075				ND	
51 Cyclohexane	56		7.168				ND	
52 Carbon tetrachloride	117		7.274				ND	
53 1,1-Dichloropropene	75		7.281				ND	
54 Isobutyl alcohol	41		7.442				ND	
\$ 55 1,2-Dichloroethane-d4 (Surr)	102	7.522	7.512	0.010	96	71714	51.4	
56 Benzene	78		7.544				ND	
58 1,2-Dichloroethane	62		7.618				ND	
57 Isopropyl acetate	43		7.622				ND	
59 Tert-amyl methyl ether	73		7.728				ND	
60 t-Amyl alcohol	73		7.842				ND	
* 61 Fluorobenzene (IS)	96	7.950	7.946	0.004	99	1081497	50.0	
62 n-Heptane	43		7.950				ND	
63 n-Butanol	56		8.313				ND	
64 Trichloroethene	95		8.419				ND	
65 Methylcyclohexane	83		8.721				ND	
66 2-ethoxy-2-methyl butane	87		8.757				ND	
67 1,2-Dichloropropane	63		8.757				ND	
68 Methyl methacrylate	69		8.834				ND	
69 1,4-Dioxane	88		8.837				ND	
70 Dibromomethane	93		8.866				ND	
71 n-Propyl acetate	61		8.914				ND	
72 Dichlorobromomethane	83		9.101				ND	
73 2-Nitropropane	41		9.368				ND	
74 2-Chloroethyl vinyl ether	63		9.448				ND	
75 cis-1,3-Dichloropropene	75		9.625				ND	
76 4-Methyl-2-pentanone (MIBK)	43		9.795				ND	
\$ 77 Toluene-d8 (Surr)	98	9.924	9.924	0.000	93	1082873	47.8	
78 Toluene	92		9.998				ND	
S 79 1,3-Dichloropropene, Total	100		10.060				ND	
80 trans-1,3-Dichloropropene	75		10.249				ND	
81 Ethyl methacrylate	69		10.300				ND	
82 1,1,2-Trichloroethane	97		10.445				ND	
83 Tetrachloroethene	166		10.528				ND	
84 1,3-Dichloropropane	76		10.609				ND	

Report Date: 18-Jun-2020 20:29:41

Chrom Revision: 2.3 17-Jun-2020 19:07:08

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S04.D

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
85 3,4-Dichloro-1-butene	75		10.647				ND	
86 2-Hexanone	43		10.657				ND	
87 n-Butyl acetate	43		10.770				ND	
88 Chlorodibromomethane	129		10.818				ND	
89 Ethylene Dibromide	107		10.927				ND	
S 90 Xylenes, Total	106		11.245				ND	
* 91 Chlorobenzene-d5 (IS)	117	11.351	11.351	0.000	85	886745	50.0	
92 1-Chlorohexane	91		11.355				ND	U
93 Chlorobenzene	112		11.377				ND	
94 1,1,1,2-Tetrachloroethane	131		11.454				ND	
95 Ethylbenzene	91		11.457				ND	
96 m-Xylene & p-Xylene	106		11.573				ND	
97 o-Xylene	106		11.898				ND	
98 Styrene	104		11.914				ND	
99 Bromoform	173		12.072				ND	
100 Isopropylbenzene	105		12.197				ND	
101 cis-1,4-Dichloro-2-butene	88	12.338	12.248	0.090	0	14090	NC	
102 Cyclohexanone	55		12.274				ND	
\$ 103 4-Bromofluorobenzene (Surr)	95	12.338	12.338	0.000	91	413784	47.3	
104 1,1,2,2-Tetrachloroethane	83		12.441				ND	
105 Bromobenzene	156		12.457				ND	
106 trans-1,4-Dichloro-2-butene	53		12.464				ND	
107 1,2,3-Trichloropropane	110		12.490				ND	
108 N-Propylbenzene	91		12.522				ND	
109 2-Chlorotoluene	126		12.599				ND	
110 1,3,5-Trimethylbenzene	105		12.654				ND	
111 4-Chlorotoluene	126		12.689				ND	
112 2,3,4-Trichlorobutene	109		12.715				ND	
113 tert-Butylbenzene	134		12.898				ND	
114 Pentachloroethane	167		12.930				ND	
115 1,2,4-Trimethylbenzene	105		12.940				ND	
116 sec-Butylbenzene	105		13.059				ND	
117 1,3-Dichlorobenzene	146		13.162				ND	
118 4-Isopropyltoluene	119		13.165				ND	
* 119 1,4-Dichlorobenzene-d4	152	13.216	13.216	0.000	95	487906	50.0	
120 1,4-Dichlorobenzene	146		13.232				ND	
121 1,2,3-Trimethylbenzene	105		13.242				ND	
122 Benzyl chloride	91	13.313	13.310	0.003	1	130	NC	
123 1,3-Diethylbenzene	119		13.364				ND	
127 o-diethylbenzene	119		13.435				ND	
125 n-Butylbenzene	92		13.457				ND	
126 1,2-Dichlorobenzene	146		13.493				ND	
124 p-Diethylbenzene	119		13.509				ND	
128 Hexachloroethane	201		13.560				ND	
129 1,2-Dibromo-3-Chloropropane	75		14.036				ND	
130 1,3,5-Trichlorobenzene	180	14.158	14.155	0.003	1	45	NC	
131 1,2,4-Trichlorobenzene	180		14.580				ND	
132 Hexachlorobutadiene	225		14.660				ND	
133 Naphthalene	128		14.766				ND	
134 1,2,3-Trichlorobenzene	180		14.908				ND	
135 2-Methylnaphthalene	142	15.554	15.554	0.000	1	139	NC	
136 C4-C10	1		0.000				ND	

Report Date: 18-Jun-2020 20:29:41

Chrom Revision: 2.3 17-Jun-2020 19:07:08

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S04.D

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
137 1,3-Dichlorobutene-2(total)	1		0.000				ND	
138 Propene oxide	1		0.000				ND	
139 C4-C12	1		0.000				ND	
140 1-Chlorobutane	1		0.000				ND	
141 1,4-Divinylbenzene	1		0.000				ND	
142 trans-1,2,3-Trichlorobutene-2	1		0.000				ND	
143 1,1-Dichloro-1-fluoroethane	1		0.000				ND	
144 cis-1,2,3-Trichlorobutene-2	1		0.000				ND	
145 2,3-Dichloro-1,3-butadiene	1		0.000				ND	
146 Diethoxymethane	1		0.000				ND	
147 C5-C12	1		0.000				ND	
148 1-Bromo-2-chloroethane	1		0.000				ND	
149 C6-C12	1		0.000				ND	
S 150 Total Diethylbenzene	1		0.000				ND	
151 3-chloro-1-Butene	1		0.000				ND	
152 C6-C10	1		0.000				ND	
153 Methyl acrylate	1		0.000				ND	
154 tert-Butyl Formate	1		0.000				ND	
155 1,3-Divinylbenzene	1		0.000				ND	
156 Ethyl bromide	1		0.000				ND	
157 Chloroacetonitrile	1		0.000				ND	
S 158 divinyl benzene	1		0.000				ND	
159 Methylal	1		0.000				ND	
160 n-Decane	57		0.000				ND	
161 Dodecane	57		0.000				ND	
162 Butane	1		0.000				ND	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

U - Marked Undetected

Reagents:

MSV_HP23_ISSS_00002

Amount Added: 1.00

Units: uL

Run Reagent

Report Date: 18-Jun-2020 20:29:41

Chrom Revision: 2.3 17-Jun-2020 19:07:08

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S04.D

Injection Date: 17-Jun-2020 15:09:30

Instrument ID: 9915

Operator ID: clm27445

Lims ID: 410-3311-C-6

Lab Sample ID: 410-3311-6

Worklist Smp#: 12

Client ID: GWTS-EFF2-060320

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

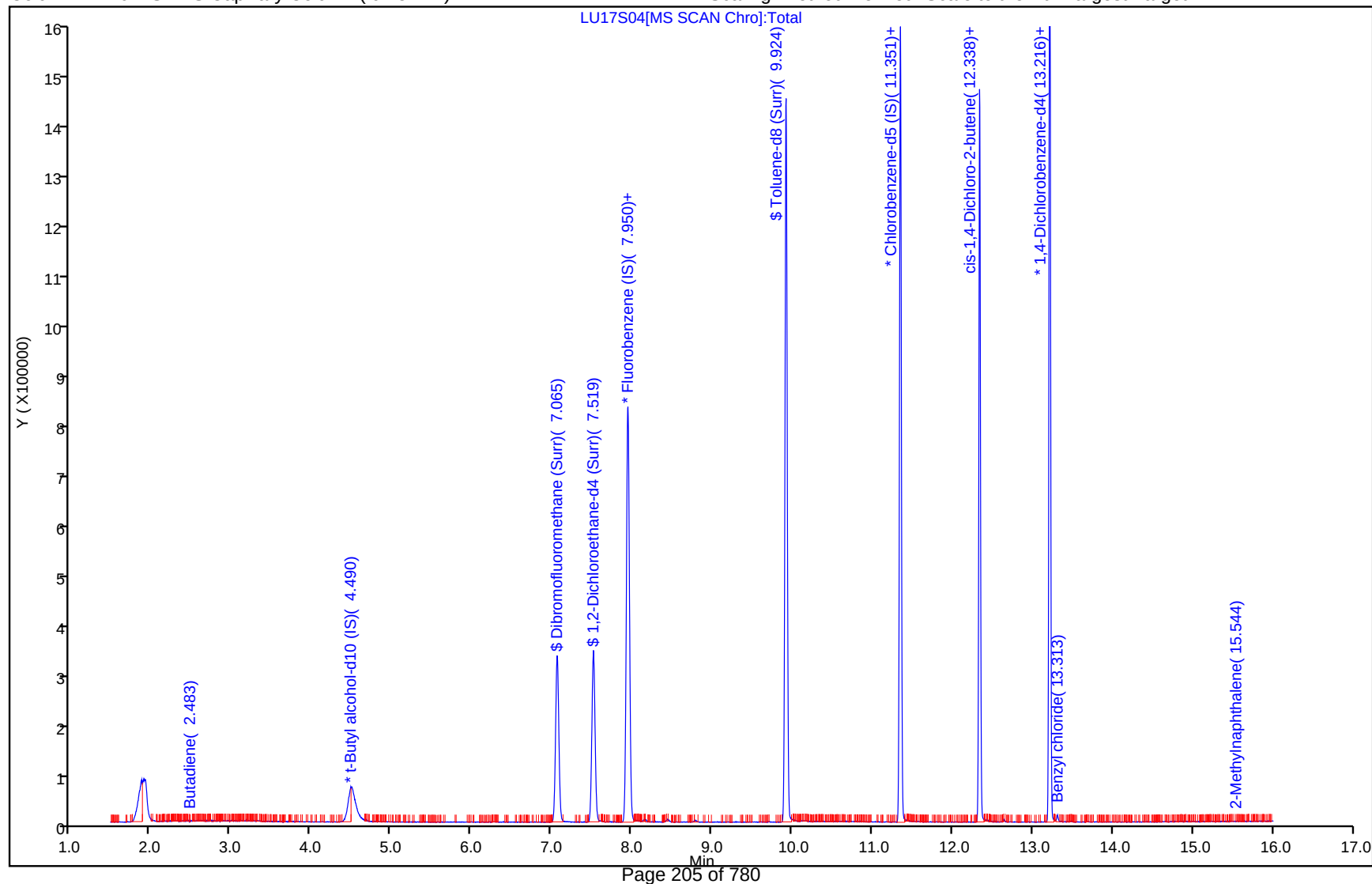
ALS Bottle#: 11

Method: MSVoa_9915a

Limit Group: MSV - 8260C DOD5

Column: Rxi-624Sil MS Capillary Column (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 18-Jun-2020 20:29:41

Chrom Revision: 2.3 17-Jun-2020 19:07:08

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S04.D
 Lims ID: 410-3311-C-6
 Client ID: GWTS-EFF2-060320
 Sample Type: Client
 Inject. Date: 17-Jun-2020 15:09:30 ALS Bottle#: 11 Worklist Smp#: 12
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 410-3311-C-6
 Misc. Info.: 410-0003558-012
 Operator ID: clm27445 Instrument ID: 9915
 Method: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\MSVoa_9915a.m
 Limit Group: MSV - 8260C DOD5
 Last Update: 18-Jun-2020 07:25:39 Calib Date: 04-May-2020 14:30:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1038

First Level Reviewer: mellinger

Date: 18-Jun-2020 06:59:54

Compound	Amount Added	Amount Recovered	% Rec.
\$ 49 Dibromofluoromethane (Surr)	50.0	51.7	103.35
\$ 55 1,2-Dichloroethane-d4 (Surr)	50.0	51.4	102.74
\$ 77 Toluene-d8 (Surr)	50.0	47.8	95.70
\$ 103 4-Bromofluorobenzene (Surr)	50.0	47.3	94.54

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Client Sample ID: GWTS-GAC2-060320 Lab Sample ID: 410-3311-7
 Matrix: Water Lab File ID: LU17S11.D
 Analysis Method: 8260C DOD Date Collected: 06/03/2020 08:43
 Sample wt/vol: 5 (mL) Date Analyzed: 06/17/2020 17:43
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 13905 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
71-43-2	Benzene	0.20	U	1.0	0.50	0.20
100-41-4	Ethylbenzene	0.40	U	1.0	0.80	0.40
108-88-3	Toluene	0.20	U	1.0	0.50	0.20
1330-20-7	Xylenes, Total	1.4	U	6.0	2.0	1.4

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	102		81-118
460-00-4	4-Bromofluorobenzene (Surr)	95		85-114
1868-53-7	Dibromofluoromethane (Surr)	103		80-119
2037-26-5	Toluene-d8 (Surr)	96		89-112

Report Date: 18-Jun-2020 07:24:32

Chrom Revision: 2.3 17-Jun-2020 19:07:08

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S11.D
 Lims ID: 410-3311-C-7
 Client ID: GWTS-GAC2-060320
 Sample Type: Client
 Inject. Date: 17-Jun-2020 17:43:30 ALS Bottle#: 18 Worklist Smp#: 19
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 410-3311-C-7
 Misc. Info.: 410-0003558-019
 Operator ID: clm27445 Instrument ID: 9915
 Method: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\MSVoa_9915a.m
 Limit Group: MSV - 8260C DOD5
 Last Update: 18-Jun-2020 07:23:09 Calib Date: 04-May-2020 14:30:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1002

First Level Reviewer: mellinger

Date: 18-Jun-2020 07:10:36

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 27 t-Butyl alcohol-d10 (IS)	65	4.500	4.493	0.007	0	229023	250.0	M
\$ 49 Dibromofluoromethane (Surr)	113	7.065	7.059	0.006	93	285778	51.4	
\$ 55 1,2-Dichloroethane-d4 (Surr)	102	7.519	7.512	0.007	96	72321	51.0	
56 Benzene	78		7.544				ND	
* 61 Fluorobenzene (IS)	96	7.950	7.946	0.004	99	1099250	50.0	
\$ 77 Toluene-d8 (Surr)	98	9.924	9.924	0.000	93	1100490	48.2	
78 Toluene	92		9.998				ND	
S 90 Xylenes, Total	106		11.245				ND	
* 91 Chlorobenzene-d5 (IS)	117	11.351	11.351	0.000	85	895324	50.0	
95 Ethylbenzene	91		11.457				ND	
96 m-Xylene & p-Xylene	106		11.573				ND	
97 o-Xylene	106		11.898				ND	
\$ 103 4-Bromofluorobenzene (Surr)	95	12.338	12.338	0.000	91	419092	47.4	
* 119 1,4-Dichlorobenzene-d4	152	13.216	13.216	0.000	95	489033	50.0	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MSV_HP23_ISSS_00002

Amount Added: 1.00

Units: uL

Run Reagent

Report Date: 18-Jun-2020 07:24:32

Chrom Revision: 2.3 17-Jun-2020 19:07:08

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S11.D

Injection Date: 17-Jun-2020 17:43:30

Instrument ID: 9915

Operator ID: clm27445

Lims ID: 410-3311-C-7

Lab Sample ID: 410-3311-7

Worklist Smp#: 19

Client ID: GWTS-GAC2-060320

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

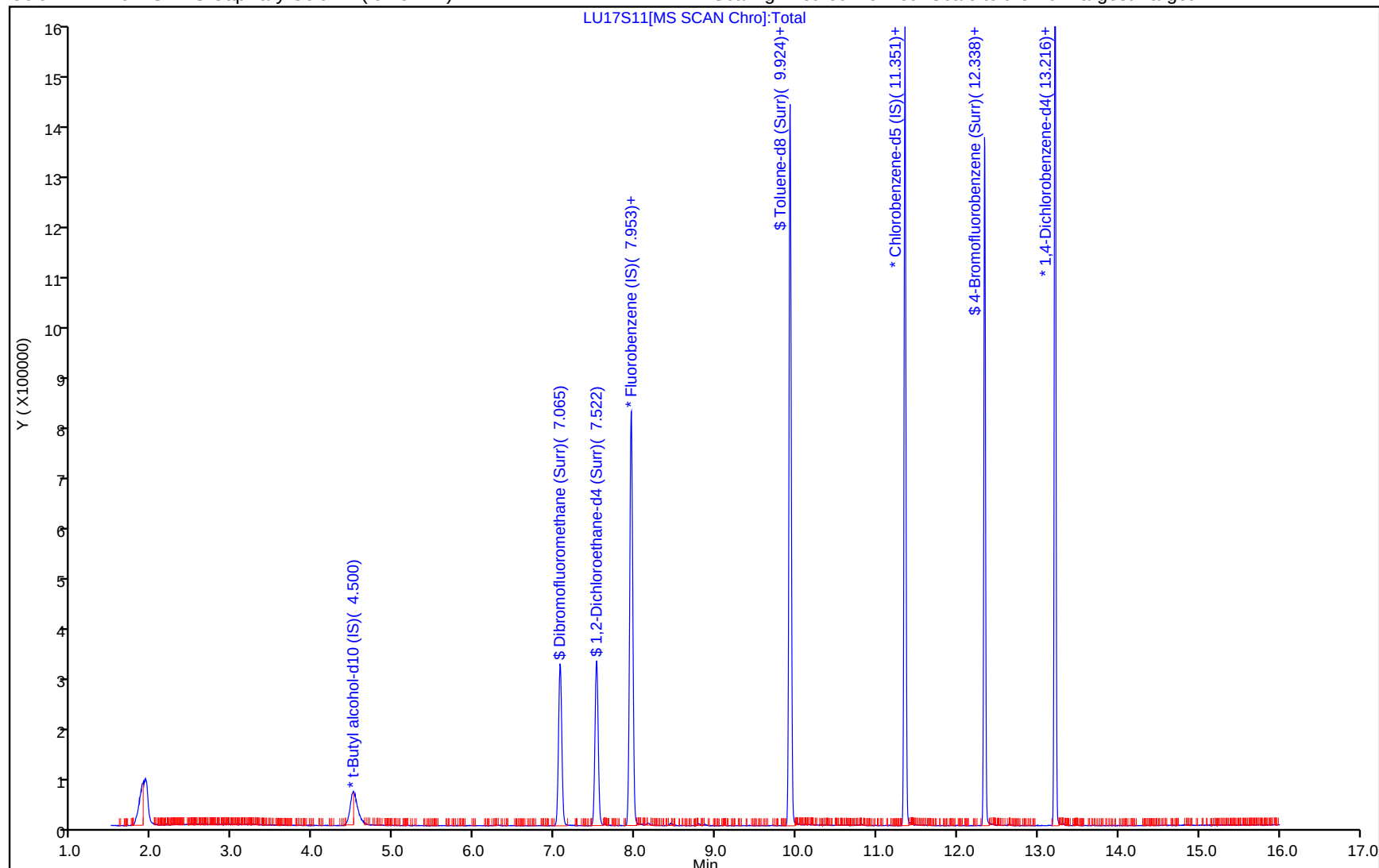
ALS Bottle#: 18

Method: MSVoa_9915a

Limit Group: MSV - 8260C DOD5

Column: Rxi-624Sil MS Capillary Column (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



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Report Date: 18-Jun-2020 07:24:32

Chrom Revision: 2.3 17-Jun-2020 19:07:08

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S11.D
 Lims ID: 410-3311-C-7
 Client ID: GWTS-GAC2-060320
 Sample Type: Client
 Inject. Date: 17-Jun-2020 17:43:30 ALS Bottle#: 18 Worklist Smp#: 19
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 410-3311-C-7
 Misc. Info.: 410-0003558-019
 Operator ID: clm27445 Instrument ID: 9915
 Method: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\MSVoa_9915a.m
 Limit Group: MSV - 8260C DOD5
 Last Update: 18-Jun-2020 07:23:09 Calib Date: 04-May-2020 14:30:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1002

First Level Reviewer: mellinger

Date: 18-Jun-2020 07:10:36

Compound	Amount Added	Amount Recovered	% Rec.
\$ 49 Dibromofluoromethane (Surr)	50.0	51.4	102.78
\$ 55 1,2-Dichloroethane-d4 (Surr)	50.0	51.0	101.93
\$ 77 Toluene-d8 (Surr)	50.0	48.2	96.32
\$ 103 4-Bromofluorobenzene (Surr)	50.0	47.4	94.83

Report Date: 18-Jun-2020 07:24:32

Chrom Revision: 2.3 17-Jun-2020 19:07:08
Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

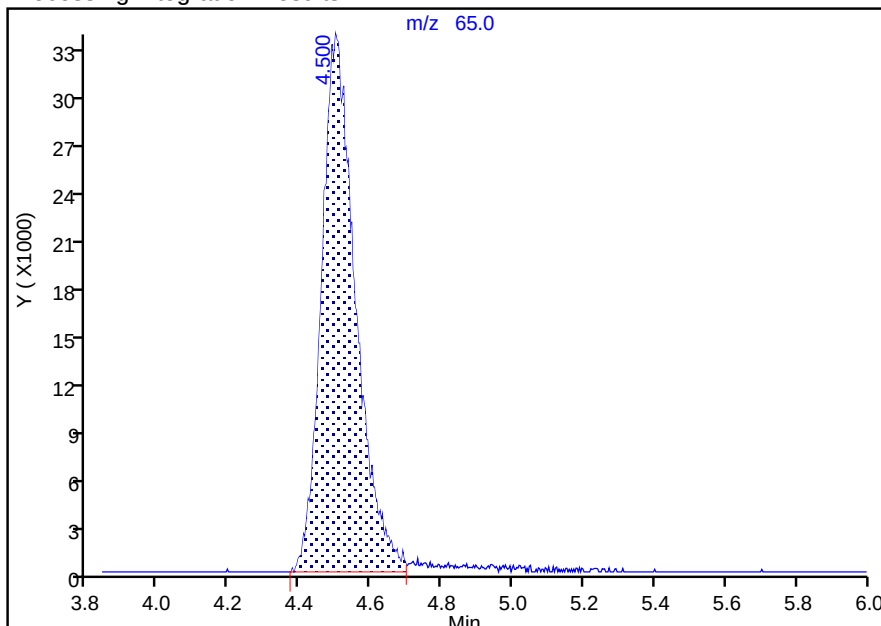
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 Injection Date: 17-Jun-2020 17:43:30 Instrument ID: 9915
 Lims ID: 410-3311-C-7 Lab Sample ID: 410-3311-7
 Client ID: GWTS-GAC2-060320
 Operator ID: clm27445 ALS Bottle#: 18 Worklist Smp#: 19
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVoa_9915a Limit Group: MSV - 8260C DOD5
 Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

* 27 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

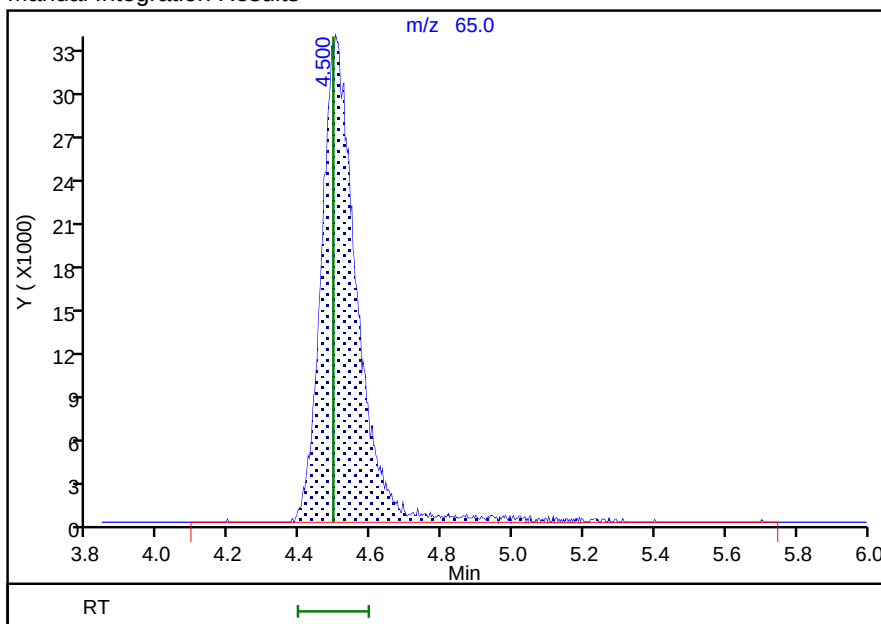
RT: 4.50
 Area: 220255
 Amount: 250.0000
 Amount Units: ug/l

Processing Integration Results



RT: 4.50
 Area: 229023
 Amount: 250.0000
 Amount Units: ug/l

Manual Integration Results



Reviewer: mellinger, 18-Jun-2020 07:10:28

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

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FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Client Sample ID: GWTS-INF2-060320 Lab Sample ID: 410-3311-8
 Matrix: Water Lab File ID: LU17S12.D
 Analysis Method: 8260C DOD Date Collected: 06/03/2020 08:53
 Sample wt/vol: 5 (mL) Date Analyzed: 06/17/2020 18:05
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 13905 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
71-43-2	Benzene	0.20	U	1.0	0.50	0.20
100-41-4	Ethylbenzene	0.40	U	1.0	0.80	0.40
108-88-3	Toluene	0.20	U	1.0	0.50	0.20
1330-20-7	Xylenes, Total	1.4	U	6.0	2.0	1.4

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		81-118
460-00-4	4-Bromofluorobenzene (Surr)	97		85-114
1868-53-7	Dibromofluoromethane (Surr)	102		80-119
2037-26-5	Toluene-d8 (Surr)	97		89-112

Report Date: 18-Jun-2020 07:24:33

Chrom Revision: 2.3 17-Jun-2020 19:07:08

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S12.D
 Lims ID: 410-3311-C-8
 Client ID: GWTS-INF2-060320
 Sample Type: Client
 Inject. Date: 17-Jun-2020 18:05:30 ALS Bottle#: 19 Worklist Smp#: 20
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 410-3311-C-8
 Misc. Info.: 410-0003558-020
 Operator ID: clm27445 Instrument ID: 9915
 Method: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\MSVoa_9915a.m
 Limit Group: MSV - 8260C DOD5
 Last Update: 18-Jun-2020 07:23:09 Calib Date: 04-May-2020 14:30:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1002

First Level Reviewer: mellinger

Date: 18-Jun-2020 07:11:00

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 27 t-Butyl alcohol-d10 (IS)	65	4.490	4.493	-0.003	0	234708	250.0	M
\$ 49 Dibromofluoromethane (Surr)	113	7.065	7.059	0.006	93	286937	51.2	
\$ 55 1,2-Dichloroethane-d4 (Surr)	102	7.515	7.512	0.003	96	73802	51.6	
56 Benzene	78		7.544				ND	
* 61 Fluorobenzene (IS)	96	7.949	7.946	0.003	99	1107876	50.0	
\$ 77 Toluene-d8 (Surr)	98	9.920	9.924	-0.004	93	1143663	48.4	
78 Toluene	92		9.998				ND	
S 90 Xylenes, Total	106		11.245				ND	
* 91 Chlorobenzene-d5 (IS)	117	11.351	11.351	0.000	85	925662	50.0	
95 Ethylbenzene	91		11.457				ND	
96 m-Xylene & p-Xylene	106		11.573				ND	
97 o-Xylene	106		11.898				ND	
\$ 103 4-Bromofluorobenzene (Surr)	95	12.338	12.338	0.000	93	444356	48.6	
* 119 1,4-Dichlorobenzene-d4	152	13.216	13.216	0.000	95	508733	50.0	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MSV_HP23_ISSS_00002

Amount Added: 1.00

Units: uL

Run Reagent

Report Date: 18-Jun-2020 07:24:33

Chrom Revision: 2.3 17-Jun-2020 19:07:08

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S12.D

Injection Date: 17-Jun-2020 18:05:30

Instrument ID: 9915

Operator ID: clm27445

Lims ID: 410-3311-C-8

Lab Sample ID: 410-3311-8

Worklist Smp#: 20

Client ID: GWTS-INF2-060320

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

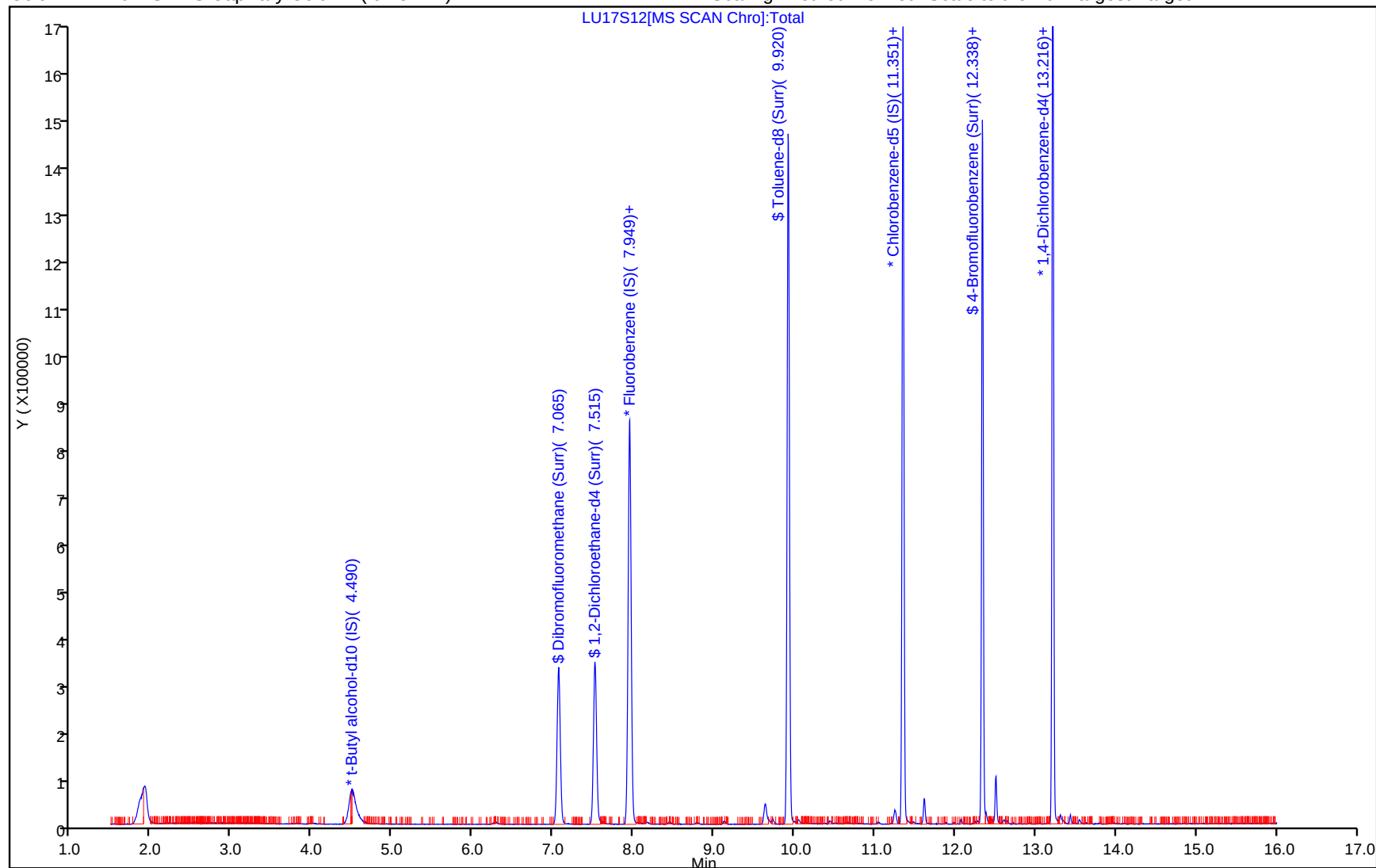
ALS Bottle#: 19

Method: MSVoa_9915a

Limit Group: MSV - 8260C DOD5

Column: Rxi-624Sil MS Capillary Column (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



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Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-214

Report Date: 18-Jun-2020 07:24:33

Chrom Revision: 2.3 17-Jun-2020 19:07:08

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S12.D
 Lims ID: 410-3311-C-8
 Client ID: GWTS-INF2-060320
 Sample Type: Client
 Inject. Date: 17-Jun-2020 18:05:30 ALS Bottle#: 19 Worklist Smp#: 20
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 410-3311-C-8
 Misc. Info.: 410-0003558-020
 Operator ID: clm27445 Instrument ID: 9915
 Method: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\MSVoa_9915a.m
 Limit Group: MSV - 8260C DOD5
 Last Update: 18-Jun-2020 07:23:09 Calib Date: 04-May-2020 14:30:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1002

First Level Reviewer: mellinger

Date: 18-Jun-2020 07:11:00

Compound	Amount Added	Amount Recovered	% Rec.
\$ 49 Dibromofluoromethane (Surr)	50.0	51.2	102.39
\$ 55 1,2-Dichloroethane-d4 (Surr)	50.0	51.6	103.21
\$ 77 Toluene-d8 (Surr)	50.0	48.4	96.82
\$ 103 4-Bromofluorobenzene (Surr)	50.0	48.6	97.26

Report Date: 18-Jun-2020 07:24:33

Chrom Revision: 2.3 17-Jun-2020 19:07:08
Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

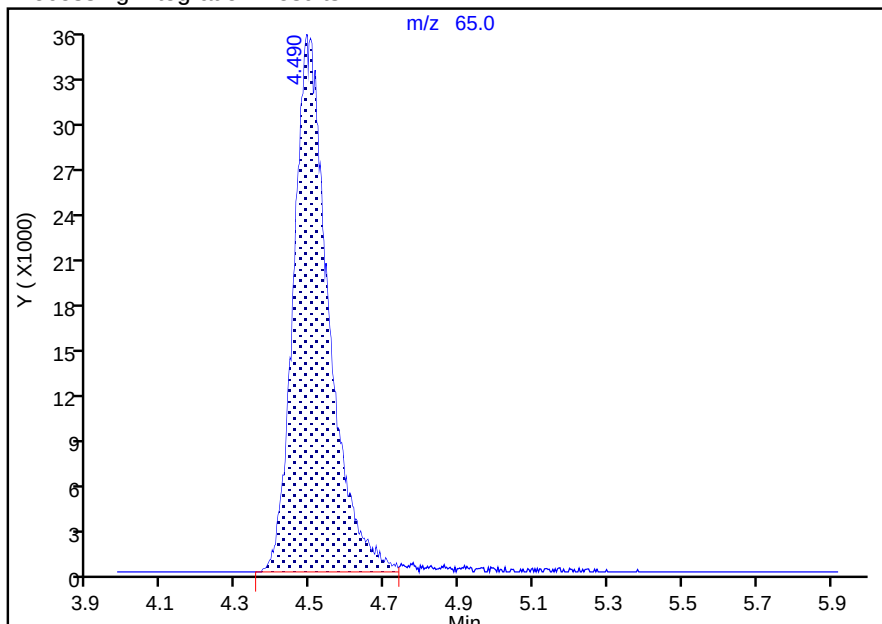
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Injection Date:	17-Jun-2020 18:05:30	Instrument ID:	9915
Lims ID:	410-3311-C-8	Lab Sample ID:	410-3311-8
Client ID:	GWTS-INF2-060320		
Operator ID:	clm27445	ALS Bottle#:	19
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	MSVoa_9915a	Limit Group:	MSV - 8260C DOD5
Column:	Rxi-624Sil MS Capillary Column (0.25mm ID)	Detector:	MS Quad
		Worklist Smp#:	20

* 27 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

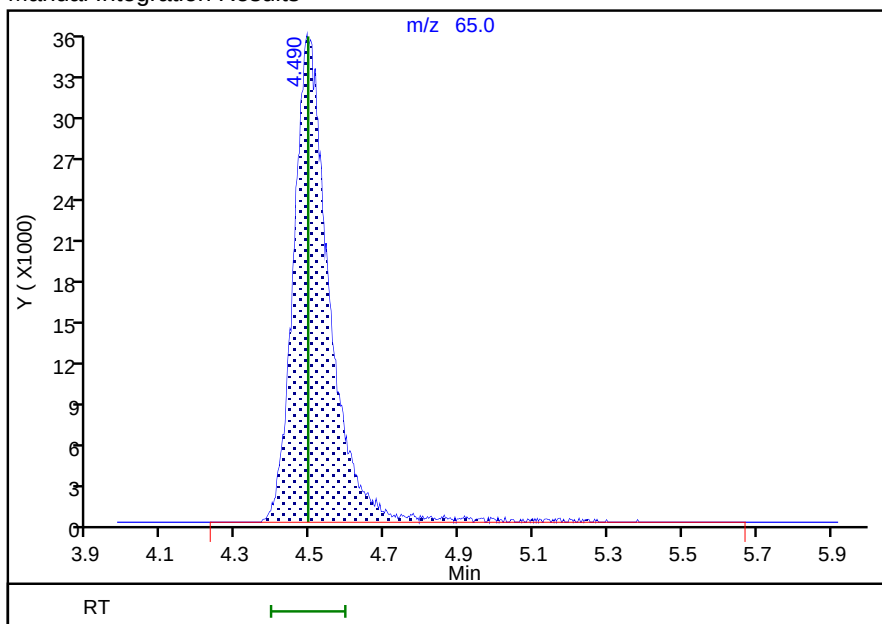
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Area: 229070
Amount: 250.0000
Amount Units: ug/l

Processing Integration Results



RT: 4.49
Area: 234708
Amount: 250.0000
Amount Units: ug/l

Manual Integration Results



Reviewer: mellinger, 18-Jun-2020 07:10:52

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

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FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Client Sample ID: GWTS-FB02-060320 Lab Sample ID: 410-3311-9
 Matrix: Water Lab File ID: LU17S03.D
 Analysis Method: 8260C DOD Date Collected: 06/03/2020 08:24
 Sample wt/vol: 5 (mL) Date Analyzed: 06/17/2020 14:47
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 13905 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
71-43-2	Benzene	0.20	U	1.0	0.50	0.20
100-41-4	Ethylbenzene	0.40	U	1.0	0.80	0.40
108-88-3	Toluene	0.20	U	1.0	0.50	0.20
1330-20-7	Xylenes, Total	1.4	U	6.0	2.0	1.4

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	100		81-118
460-00-4	4-Bromofluorobenzene (Surr)	95		85-114
1868-53-7	Dibromofluoromethane (Surr)	102		80-119
2037-26-5	Toluene-d8 (Surr)	96		89-112

Report Date: 18-Jun-2020 07:24:13

Chrom Revision: 2.3 17-Jun-2020 19:07:08

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S03.D
 Lims ID: 410-3311-C-9
 Client ID: GWTS-FB02-060320
 Sample Type: Client
 Inject. Date: 17-Jun-2020 14:47:30 ALS Bottle#: 10 Worklist Smp#: 11
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 410-3311-C-9
 Misc. Info.: 410-0003558-011
 Operator ID: clm27445 Instrument ID: 9915
 Method: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\MSVoa_9915a.m
 Limit Group: MSV - 8260C DOD5
 Last Update: 18-Jun-2020 07:23:09 Calib Date: 04-May-2020 14:30:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1002

First Level Reviewer: mellinger

Date: 18-Jun-2020 06:58:57

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 27 t-Butyl alcohol-d10 (IS)	65	4.493	4.493	0.000	0	234627	250.0	
\$ 49 Dibromofluoromethane (Surr)	113	7.072	7.059	0.013	94	285559	51.0	
\$ 55 1,2-Dichloroethane-d4 (Surr)	102	7.519	7.512	0.007	96	71632	50.2	
56 Benzene	78		7.544				ND	
* 61 Fluorobenzene (IS)	96	7.950	7.946	0.004	99	1105739	50.0	
\$ 77 Toluene-d8 (Surr)	98	9.924	9.924	0.000	93	1102026	48.2	
78 Toluene	92		9.998				ND	
S 90 Xylenes, Total	106		11.245				ND	
* 91 Chlorobenzene-d5 (IS)	117	11.351	11.351	0.000	85	895966	50.0	
95 Ethylbenzene	91		11.457				ND	
96 m-Xylene & p-Xylene	106		11.573				ND	
97 o-Xylene	106		11.898				ND	
\$ 103 4-Bromofluorobenzene (Surr)	95	12.342	12.338	0.004	93	421765	47.7	
* 119 1,4-Dichlorobenzene-d4	152	13.216	13.216	0.000	95	494767	50.0	

Reagents:

MSV_HP23_ISSS_00002 Amount Added: 1.00 Units: uL Run Reagent

Report Date: 18-Jun-2020 07:24:13

Chrom Revision: 2.3 17-Jun-2020 19:07:08

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S03.D

Injection Date: 17-Jun-2020 14:47:30

Instrument ID: 9915

Operator ID: clm27445

Lims ID: 410-3311-C-9

Lab Sample ID: 410-3311-9

Worklist Smp#: 11

Client ID: GWTS-FB02-060320

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

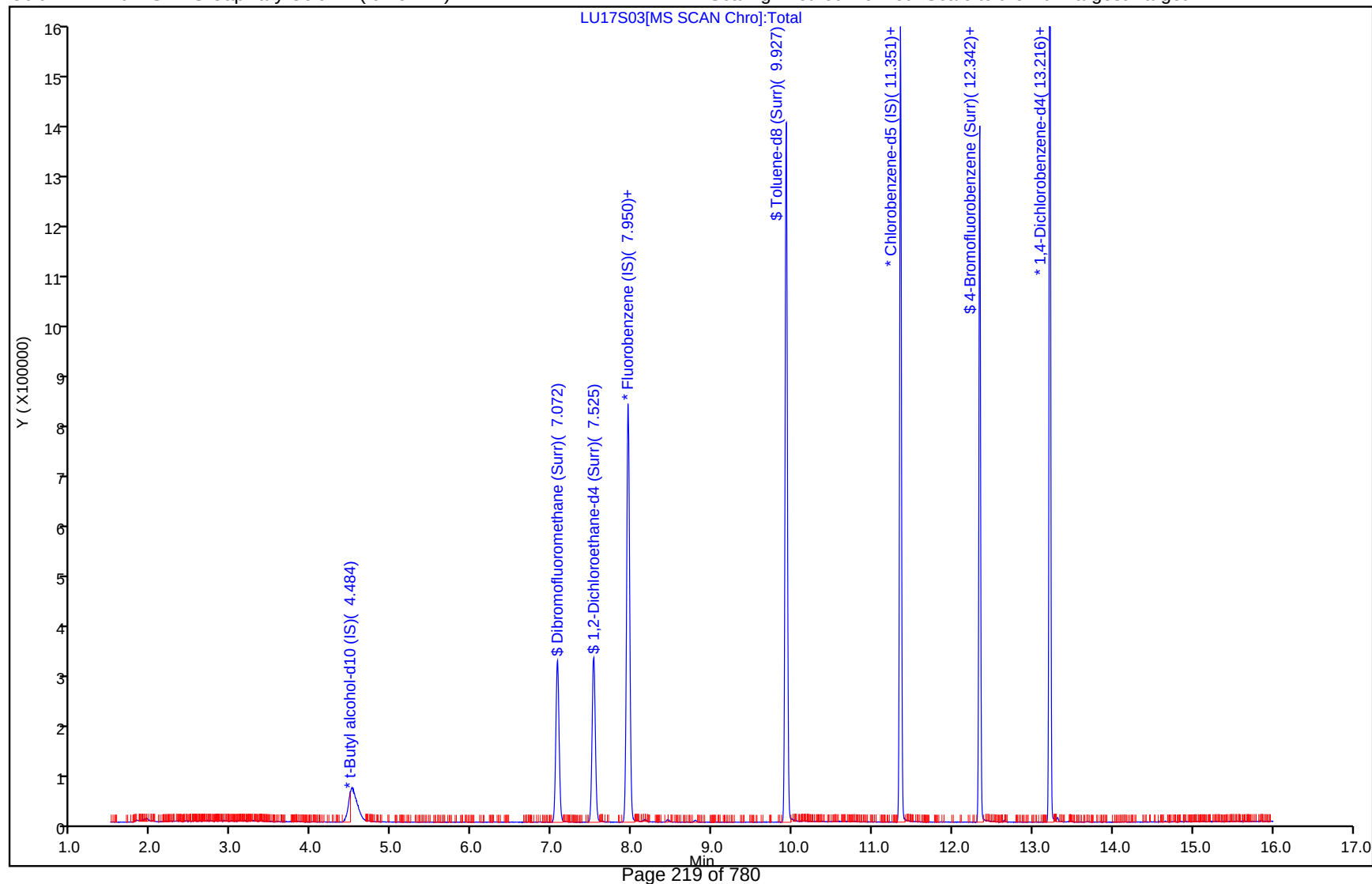
ALS Bottle#: 10

Method: MSVoa_9915a

Limit Group: MSV - 8260C DOD5

Column: Rxi-624Sil MS Capillary Column (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



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Report Date: 18-Jun-2020 07:24:13

Chrom Revision: 2.3 17-Jun-2020 19:07:08

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S03.D
 Lims ID: 410-3311-C-9
 Client ID: GWTS-FB02-060320
 Sample Type: Client
 Inject. Date: 17-Jun-2020 14:47:30 ALS Bottle#: 10 Worklist Smp#: 11
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 410-3311-C-9
 Misc. Info.: 410-0003558-011
 Operator ID: clm27445 Instrument ID: 9915
 Method: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\MSVoa_9915a.m
 Limit Group: MSV - 8260C DOD5
 Last Update: 18-Jun-2020 07:23:09 Calib Date: 04-May-2020 14:30:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1002

First Level Reviewer: mellinger

Date: 18-Jun-2020 06:58:57

Compound	Amount Added	Amount Recovered	% Rec.
\$ 49 Dibromofluoromethane (Surr)	50.0	51.0	102.10
\$ 55 1,2-Dichloroethane-d4 (Surr)	50.0	50.2	100.37
\$ 77 Toluene-d8 (Surr)	50.0	48.2	96.39
\$ 103 4-Bromofluorobenzene (Surr)	50.0	47.7	95.37

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1 Analy Batch No.: 8012

SDG No.: _____

Instrument ID: 9915 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/04/2020 12:18 Calibration End Date: 05/04/2020 14:30 Calibration ID: 3952

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-8012/9	LY04I07.D
Level 2	IC 410-8012/8	LY04I06.D
Level 3	IC 410-8012/7	LY04I05.D
Level 4	IC 410-8012/6	LY04I04.D
Level 5	ICIS 410-8012/5	LY04I03.D
Level 6	IC 410-8012/4	LY04I02.D
Level 7	IC 410-8012/3	LY04I01.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.3058 0.3206	0.3697 0.3563	0.3346	0.3484	0.3316	Ave		0.3381			0.1000	6.4		15.0			
Chloromethane	0.3381 0.2980	0.3921 0.3040	0.3037	0.3105	0.2820	Ave		0.3183			0.1000	11.5		15.0			
Vinyl chloride	0.3329 0.2862	0.3745 0.2928	0.2919	0.3078	0.2856	Ave		0.3102			0.1000	10.6		15.0			
Bromomethane	0.2601 0.1986	0.2795 0.2037	0.2081	0.2157	0.1924	Lin	-0.020	0.2031			0.1000				1.0000		0.9900
Chloroethane	0.2074 0.1486	0.2137 0.1550	0.1629	0.1661	0.1547	Lin	0.0441	0.1542			0.1000				1.0000		0.9900
Dichlorofluoromethane	0.3905 0.3380	0.4490 0.3528	0.3757	0.3574	0.3476	Ave		0.3730			0.1000	10.2		15.0			
Trichlorofluoromethane	0.3249 0.3186	0.3862 0.3449	0.3313	0.3387	0.3311	Ave		0.3394			0.1000	6.6		15.0			
Ethyl ether	0.2087 0.2511	0.2310 0.2449	0.2422	0.2495	0.2474	Ave		0.2393				6.3		15.0			
Acrolein	1.9518 2.0797	1.9521 2.0339	2.3207	2.1641	1.9346	Ave		2.0624				6.8		15.0			
1,1-Dichloroethene	0.2073 0.2114	0.2256 0.2200	0.2162	0.2081	0.2172	Ave		0.2151			0.1000	3.1		15.0			
Freon 113	0.1891 0.2273	0.2324 0.2448	0.2334	0.2051	0.2376	Ave		0.2242			0.1000	8.9		15.0			
Acetone	1.1680 0.9051	0.9377 0.8806	0.9534	0.9337	0.8557	Ave		0.9477			0.1000	10.9		15.0			
Iodomethane	0.3736 0.4193	0.4189 0.4381	0.4148	0.4222	0.4265	Ave		0.4162				4.9		15.0			
Isopropyl alcohol	0.6375 0.5955	0.6009 0.6045	0.5804	0.6165	0.5686	Ave		0.6005				3.8		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1 Analy Batch No.: 8012

SDG No.: _____

Instrument ID: 9915 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/04/2020 12:18 Calibration End Date: 05/04/2020 14:30 Calibration ID: 3952

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Carbon disulfide	0.6332 0.7470	0.7234 0.7798	0.7342	0.7314	0.7576	Ave		0.7295			0.1000	6.4		15.0			
Methyl acetate	0.2823 0.2747	0.2785 0.2762	0.2593	0.2733	0.2687	Ave		0.2733			0.1000	2.7		15.0			
Allyl chloride	0.3094 0.3729	0.3158 0.3709	0.3364	0.3625	0.3576	Ave		0.3465				7.5		15.0			
Methylene Chloride	0.2456 0.2571	0.2632 0.2618	0.2597	0.2591	0.2605	Ave		0.2581			0.1000	2.3		15.0			
tert-Butyl alcohol	0.9895 1.0484	1.0071 1.0198	0.9788	1.0521	0.9821	Ave		1.0111				3.0		15.0			
Acrylonitrile	0.1453 0.1469	0.1445 0.1524	0.1564	0.1578	0.1508	Ave		0.1506				3.5		15.0			
Methyl tert-butyl ether	0.6868 0.7591	0.7239 0.7445	0.7295	0.7797	0.7659	Ave		0.7413			0.1000	4.2		15.0			
trans-1,2-Dichloroethene	0.2342 0.2483	0.2550 0.2535	0.2478	0.2495	0.2519	Ave		0.2486			0.1000	2.8		15.0			
Hexane	++++ 0.3772	0.2996 0.4322	0.3633	0.3162	0.3993	Ave		0.3646				13.7		15.0			
1,1-Dichloroethane	0.3949 0.4353	0.4352 0.4441	0.4354	0.4397	0.4424	Ave		0.4324			0.2000	3.9		15.0			
Diisopropyl ether	0.6302 0.8192	0.7218 0.8079	0.7625	0.8097	0.8218	Ave		0.7676				9.2		15.0			
2-Chloro-1,3-butadiene	0.2525 0.3762	0.3296 0.3942	0.3462	0.3554	0.3813	Ave		0.3479				13.7		15.0			
Ethyl tert-butyl ether	0.5867 0.7593	0.6787 0.7324	0.7097	0.7602	0.7712	Ave		0.7140				9.1		15.0			
2-Butanone	0.1682 0.1833	0.1791 0.1892	0.1914	0.1946	0.1848	Ave		0.1844			0.1000	4.8		15.0			
cis-1,2-Dichloroethene	0.2547 0.2830	0.2739 0.2839	0.2822	0.2871	0.2860	Ave		0.2787			0.1000	4.1		15.0			
2,2-Dichloropropane	0.2907 0.3483	0.3410 0.3573	0.3301	0.3403	0.3554	Ave		0.3376				6.7		15.0			
Propionitrile	1.2711 1.4445	1.3432 1.4476	1.2995	1.4026	1.3025	Ave		1.3587				5.4		15.0			
Methacrylonitrile	0.1331 0.1581	0.1517 0.1577	0.1495	0.1624	0.1575	Ave		0.1528				6.4		15.0			
Bromochloromethane	0.1278 0.1487	0.1469 0.1469	0.1446	0.1483	0.1446	Ave		0.1440				5.1		15.0			
Tetrahydrofuran	1.1017 1.2480	1.2246 1.2645	1.2197	1.2163	1.1346	Ave		1.2014				5.0		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1 Analy Batch No.: 8012

SDG No.: _____

Instrument ID: 9915 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/04/2020 12:18 Calibration End Date: 05/04/2020 14:30 Calibration ID: 3952

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Chloroform	0.3981 0.4308	0.4279 0.4372	0.4194	0.4332	0.4367	Ave		0.4262			0.2000	3.2		15.0			
1,1,1-Trichloroethane	0.3232 0.3718	0.3753 0.3903	0.3591	0.3627	0.3813	Ave		0.3663			0.1000	5.9		15.0			
Cyclohexane	++++ 0.4471	0.3873 0.4832	0.4228	0.3811	0.4677	Ave		0.4315			0.1000	9.7		15.0			
Carbon tetrachloride	0.2401 0.3199	0.3182 0.3373	0.3050	0.2975	0.3282	Ave		0.3066			0.1000	10.5		15.0			
1,1-Dichloropropene	0.2685 0.3467	0.3446 0.3618	0.3384	0.3333	0.3553	Ave		0.3355				9.3		15.0			
Isobutyl alcohol	0.3199 0.3611	0.3390 0.3567	0.3178	0.3466	0.3240	Ave		0.3379				5.3		15.0			
Benzene	0.9371 1.0440	1.0588 1.0474	1.0463	1.0629	1.0631	Ave		1.0371			0.5000	4.3		15.0			
1,2-Dichloroethane	0.3670 0.3382	0.3526 0.3466	0.3340	0.3435	0.3397	Ave		0.3459			0.1000	3.2		15.0			
Tert-amyl methyl ether	0.6275 0.7730	0.6957 0.7249	0.7145	0.7747	0.7865	Ave		0.7281				7.7		15.0			
Heptane	++++ 0.3733	0.2993 0.4326	0.3929	0.3116	0.4197	Ave		0.3716				14.9		15.0			
Trichloroethene	0.2320 0.2646	0.2760 0.2735	0.2588	0.2658	0.2694	Ave		0.2629			0.2000	5.6		15.0			
Methylcyclohexane	++++ 0.4907	0.3801 0.4892	0.4353	0.4286	0.4685	Ave		0.4488			0.1000	9.5		15.0			
1,2-Dichloropropane	0.2501 0.2711	0.2679 0.2632	0.2651	0.2780	0.2770	Ave		0.2675			0.1000	3.5		15.0			
Tert-amyl ethyl ether	0.2703 0.3979	0.3480 0.3859	0.3665	0.3955	0.4014	Ave		0.3665				12.7		15.0			
Methyl methacrylate	0.1769 0.2538	0.2143 0.2583	0.2164	0.2349	0.2470	Ave		0.2288				12.5		15.0			
1,4-Dioxane	0.0711 0.0611	0.0706 0.0584	0.0653	0.0716	0.0747	Ave		0.0675			0.0050	8.9		15.0			
Dibromomethane	0.1575 0.1784	0.1755 0.1808	0.1717	0.1807	0.1798	Ave		0.1749				4.8		15.0			
Bromodichloromethane	0.2663 0.3338	0.2964 0.3493	0.3002	0.3178	0.3304	Ave		0.3135			0.2000	8.9		15.0			
2-Nitropropane	++++ 2.4390	1.9624 2.5528	2.1508	2.2306	2.1721	Ave		2.2513				9.5		15.0			
2-Chloroethyl vinyl ether	++++ 0.2085	0.1456 0.2132	0.1637	0.1950	0.2005	Ave		0.1877				14.4		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1 Analy Batch No.: 8012

SDG No.: _____

Instrument ID: 9915 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/04/2020 12:18 Calibration End Date: 05/04/2020 14:30 Calibration ID: 3952

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
cis-1,3-Dichloropropene	0.3102 0.4513	0.3755 0.4583	0.3954	0.4288	0.4414	Ave		0.4087			0.2000	12.9		15.0			
4-Methyl-2-pentanone	0.2826 0.3828	0.3374 0.3893	0.4254	0.4051	0.3924	Ave		0.3736			0.1000	12.9		15.0			
Toluene	0.7178 0.8218	0.8571 0.8221	0.8180	0.8448	0.8344	Ave		0.8166			0.4000	5.6		15.0			
trans-1,3-Dichloropropene	0.3727 0.5154	0.4210 0.5293	0.4402	0.4817	0.4996	Ave		0.4657			0.1000	12.2		15.0			
Ethyl methacrylate	++++ 0.5491	0.3934 0.5530	0.4374	0.5066	0.5266	Ave		0.4944				13.1		15.0			
1,1,2-Trichloroethane	0.2987 0.3235	0.3184 0.3255	0.3080	0.3228	0.3205	Ave		0.3168			0.1000	3.1		15.0			
Tetrachloroethene	0.2728 0.3571	0.3668 0.3730	0.3557	0.3457	0.3679	Ave		0.3484			0.2000	9.9		15.0			
1,3-Dichloropropane	0.4764 0.5507	0.5200 0.5526	0.5120	0.5478	0.5413	Ave		0.5287				5.3		15.0			
2-Hexanone	++++ 0.3502	0.2953 0.3622	0.4197	0.3640	0.3522	Ave		0.3573			0.1000	11.1		15.0			
Dibromochloromethane	0.2427 0.3668	0.3042 0.3827	0.3118	0.3443	0.3538	Ave		0.3295				14.4		15.0			
1,2-Dibromoethane (EDB)	0.2830 0.3631	0.3243 0.3713	0.3335	0.3548	0.3547	Ave		0.3407			0.1000	8.9		15.0			
1-Chlorohexane	0.3857 0.4305	0.3827 0.4588	0.4199	0.4026	0.4574	Ave		0.4196				7.5		15.0			
Chlorobenzene	0.8380 0.9434	0.9861 0.9237	0.9432	0.9714	0.9521	Ave		0.9368			0.5000	5.1		15.0			
1,1,1,2-Tetrachloroethane	0.2634 0.3341	0.3249 0.3197	0.3142	0.3368	0.3348	Ave		0.3183				8.1		15.0			
Ethylbenzene	1.1946 1.5791	1.5289 1.5205	1.5476	1.5881	1.6124	Ave		1.5102			0.1000	9.5		15.0			
m&p-Xylene	0.4451 0.6237	0.6006 0.5842	0.6194	0.6344	0.6399	Ave		0.5925			0.1000	11.4		15.0			
o-Xylene	0.4123 0.6132	0.5668 0.5786	0.5969	0.6229	0.6236	Ave		0.5735			0.3000	13.0		15.0			
Styrene	++++ 1.0388	0.8795 0.9873	0.9501	1.0223	1.0389	Ave		0.9862			0.3000	6.3		15.0			
Bromoform	++++ 0.2733	0.2109 0.2883	0.2189	0.2488	0.2589	Ave		0.2498			0.1000	12.1		15.0			
Isopropylbenzene	++++ 1.5756	1.3618 1.5858	1.5382	1.5651	1.6595	Ave		1.5477			0.1000	6.4		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1 Analy Batch No.: 8012

SDG No.: _____

Instrument ID: 9915 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/04/2020 12:18 Calibration End Date: 05/04/2020 14:30 Calibration ID: 3952

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Cyclohexanone	0.2521 0.3512	0.3020 0.3119	0.2897	0.3384	0.3267	Ave		0.3103				10.7		15.0			
1,1,2,2-Tetrachloroethane	0.8357 0.9440	0.9248 0.8826	0.8863	0.9604	0.9229	Ave		0.9081			0.3000	4.7		15.0			
Bromobenzene	0.6618 0.7498	0.7748 0.6844	0.7367	0.7645	0.7502	Ave		0.7318				5.8		15.0			
trans-1,4-Dichloro-2-butene	0.2195 0.2862	0.2617 0.2679	0.2643	0.2858	0.2757	Ave		0.2659				8.5		15.0			
1,2,3-Trichloropropane	0.2454 0.2903	0.2885 0.2788	0.2750	0.2899	0.2830	Ave		0.2787				5.7		15.0			
N-Propylbenzene	2.4640 3.3013	3.0383 3.2642	3.2889	3.3358	3.4475	Ave		3.1629				10.5		15.0			
2-Chlorotoluene	0.5385 0.7051	0.6710 0.6998	0.6910	0.7098	0.7206	Ave		0.6765				9.3		15.0			
1,3,5-Trimethylbenzene	++++ 2.4480	2.0850 2.4431	2.3967	2.4903	2.5489	Ave		2.4020				6.8		15.0			
4-Chlorotoluene	0.5609 0.7322	0.6903 0.7162	0.7214	0.7472	0.7332	Ave		0.7002				9.1		15.0			
tert-Butylbenzene	++++ 0.5126	0.4046 0.5263	0.4879	0.4992	0.5384	Ave		0.4948				9.7		15.0			
Pentachloroethane	0.3425 0.4752	0.3823 0.4281	0.4084	0.4454	0.4452	Ave		0.4182				10.7		15.0			
1,2,4-Trimethylbenzene	++++ 2.5598	2.1802 2.4433	2.4914	2.6263	2.6482	Ave		2.4915				6.9		15.0			
sec-Butylbenzene	++++ 3.0044	2.4120 3.0306	3.0354	2.9650	3.2814	Ave		2.9548				9.8		15.0			
1,3-Dichlorobenzene	1.1820 1.4003	1.3939 1.2361	1.4347	1.4874	1.4364	Ave		1.3673			0.6000	8.3		15.0			
4-Isopropyltoluene	++++ 2.6048	2.0937 2.4743	2.6030	2.6310	2.8614	Ave		2.5447				10.0		15.0			
1,4-Dichlorobenzene	1.2940 1.4331	1.4921 1.3034	1.4872	1.5071	1.4693	Ave		1.4266			0.5000	6.3		15.0			
1,2,3-Trimethylbenzene	2.0802 2.6640	2.3766 2.3914	2.5026	2.6312	2.5620	Ave		2.4583				8.1		20.0			
n-Butylbenzene	0.8920 1.2799	1.0862 1.2760	1.3495	1.3040	1.4094	Ave		1.2281				14.5		15.0			
1,2-Dichlorobenzene	1.2198 1.3836	1.4367 1.2684	1.4160	1.4698	1.4162	Ave		1.3729			0.4000	6.8		15.0			
1,2-Dibromo-3-Chloropropane	0.1658 0.2218	0.1955 0.2241	0.1881	0.2088	0.2120	Ave		0.2023			0.0500	10.2		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1 Analy Batch No.: 8012

SDG No.: _____

Instrument ID: 9915 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/04/2020 12:18 Calibration End Date: 05/04/2020 14:30 Calibration ID: 3952

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2,4-Trichlorobenzene	0.8224 1.0202	0.8611 0.9532	0.9779	1.0652	1.0740	Ave		0.9677			0.2000	10.0		15.0			
Hexachlorobutadiene	0.4665 0.4352	0.3766 0.4184	0.4850	0.4506	0.4969	Ave		0.4470				9.2		15.0			
Naphthalene	++++ 3.5192	2.7684 3.1352	3.1520	3.6084	3.5779	Ave		3.2935				10.1		15.0			
1,2,3-Trichlorobenzene	0.8229 0.9869	0.9094 0.8827	0.9959	1.0802	1.0575	Ave		0.9622				9.8		15.0			
Dibromofluoromethane (Surr)	0.2518 0.2526	0.2519 0.2587	0.2478	0.2542	0.2536	Ave		0.2529				1.3		15.0			
1,2-Dichloroethane-d4 (Surr)	0.0643 0.0637	0.0649 0.0646	0.0637	0.0664	0.0641	Ave		0.0645				1.5		15.0			
Toluene-d8 (Surr)	1.2578 1.2833	1.2647 1.3126	1.2742	1.2693	1.2706	Ave		1.2761				1.4		15.0			
4-Bromofluorobenzene (Surr)	0.4895 0.4912	0.4948 0.5089	0.4928	0.4900	0.4880	Ave		0.4936				1.4		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1 Analy Batch No.: 8012

SDG No.: _____

Instrument ID: 9915 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/04/2020 12:18 Calibration End Date: 05/04/2020 14:30 Calibration ID: 3952

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-8012/9	LY04I07.D
Level 2	IC 410-8012/8	LY04I06.D
Level 3	IC 410-8012/7	LY04I05.D
Level 4	IC 410-8012/6	LY04I04.D
Level 5	ICIS 410-8012/5	LY04I03.D
Level 6	IC 410-8012/4	LY04I02.D
Level 7	IC 410-8012/3	LY04I01.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	7922 832988	38132 2834400	86758	177861	440469	1.00 100	4.00 300	10.0	20.0	50.0
Chloromethane	FB	Ave	8760 774350	40439 2417826	78750	158523	374575	1.00 100	4.00 300	10.0	20.0	50.0
Vinyl chloride	FB	Ave	8625 743563	38618 2328660	75694	157154	379393	1.00 100	4.00 300	10.0	20.0	50.0
Bromomethane	FB	Lin	6737 515866	28829 1620472	53956	110141	255582	1.00 100	4.00 300	10.0	20.0	50.0
Chloroethane	FB	Lin	5372 385959	22039 1232807	42245	84796	205532	1.00 100	4.00 300	10.0	20.0	50.0
Dichlorofluoromethane	FB	Ave	10115 878268	46306 2806583	97409	182484	461760	1.00 100	4.00 300	10.0	20.0	50.0
Trichlorofluoromethane	FB	Ave	8417 827838	39832 2743614	85913	172928	439865	1.00 100	4.00 300	10.0	20.0	50.0
Ethyl ether	FB	Ave	5407 652395	23816 1947774	62786	127353	328679	1.000 100.0	4.00 300	10.00	20.0	50.0
Acrolein	TBAd 10	Ave	22819 2194865	88750 6728159	264335	490940	1164542	10.0 1000	40.0 3000	100	200	500
1,1-Dichloroethene	FB	Ave	5369 549319	23271 1749604	56055	106258	288514	1.00 100	4.00 300	10.0	20.0	50.0
Freon 113	FB	Ave	4899 590444	23969 1947555	60524	104698	315628	1.00 100	4.00 300	10.0	20.0	50.0
Acetone	TBAd 10	Ave	2731 191045	8526 582592	21718	42362	103025	2.00 200	8.00 600	20.0	40.0	100
Iodomethane	FB	Ave	9678 1089307	43204 3484987	107564	215574	566645	1.00 100	4.00 300	10.0	20.0	50.0
Isopropyl alcohol	TBAd 10	Ave	14907 314202	54638 999861	66107	139850	171123	20.0 500	80.0 1500	100	200	250
Carbon disulfide	FB	Ave	16404 1940782	74602 6202744	190382	373419	1006496	1.00 100	4.00 300	10.0	20.0	50.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1 Analy Batch No.: 8012

SDG No.: _____

Instrument ID: 9915 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/04/2020 12:18 Calibration End Date: 05/04/2020 14:30 Calibration ID: 3952

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Methyl acetate	FB	Ave	7312 713769	28724 2197223	67229	139544	356970	1.00 100	4.00 300	10.0	20.0	50.0
Allyl chloride	FB	Ave	8014 968846	32573 2950615	87237	185073	475018	1.00 100	4.00 300	10.0	20.0	50.0
Methylene Chloride	FB	Ave	6363 667913	27141 2082169	67337	132280	346134	1.00 100	4.00 300	10.0	20.0	50.0
tert-Butyl alcohol	TBAd 10	Ave	23137 553202	91567 1686744	111482	238670	295584	20.0 500	80.0 1500	100	200	250
Acrylonitrile	FB	Ave	3763 381581	14901 1212044	40560	80539	200353	1.00 100	4.00 300	10.0	20.0	50.0
Methyl tert-butyl ether	FB	Ave	17791 1972116	74655 5922255	189155	398084	1017433	1.00 100	4.00 300	10.0	20.0	50.0
trans-1,2-Dichloroethene	FB	Ave	6066 645151	26303 2016356	64242	127360	334703	1.00 100	4.00 300	10.0	20.0	50.0
Hexane	FB	Ave	+++++ 979906	30895 3437727	94197	161451	530514	+++++ 100	4.00 300	10.0	20.0	50.0
1,1-Dichloroethane	FB	Ave	10231 1130853	44879 3532325	112890	224475	587780	1.00 100	4.00 300	10.0	20.0	50.0
Diisopropyl ether	FB	Ave	16325 2128321	74439 6426595	197716	413372	1091774	1.00 100	4.00 300	10.0	20.0	50.0
2-Chloro-1,3-butadiene	FB	Ave	6541 977438	33993 3135555	89768	181436	506561	1.00 100	4.00 300	10.0	20.0	50.0
Ethyl tert-butyl ether	FB	Ave	15198 1972845	69989 5825693	184021	388116	1024603	1.00 100	4.00 300	10.0	20.0	50.0
2-Butanone	FB	Ave	8714 952673	36933 3009944	99257	198706	491072	2.00 200	8.00 600	20.0	40.0	100
cis-1,2-Dichloroethene	FB	Ave	6599 735203	28250 2258354	73173	146563	379998	1.00 100	4.00 300	10.0	20.0	50.0
2,2-Dichloropropane	FB	Ave	7531 904941	35169 2842210	85583	173758	472163	1.00 100	4.00 300	10.0	20.0	50.0
Propionitrile	TBAd 10	Ave	29722 762196	122129 2394369	148013	318168	392028	20.0 500	80.0 1500	100	200	250
Methacrylonitrile	FB	Ave	34473 1027084	156434 3135141	193845	414486	522965	10.0 250	40.0 750	50.0	100	125
Bromochloromethane	FB	Ave	3311 386288	15149 1168765	37485	75698	192153	1.00 100	4.00 300	10.0	20.0	50.0
Tetrahydrofuran	TBAd 10	Ave	2576 263422	11135 836590	27785	55185	136600	2.00 200	8.00 600	20.0	40.0	100
Chloroform	FB	Ave	10314 1119330	44125 3477905	108760	221146	580202	1.00 100	4.00 300	10.0	20.0	50.0
1,1,1-Trichloroethane	FB	Ave	8372 966003	38705 3104868	93122	185152	506609	1.00 100	4.00 300	10.0	20.0	50.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1 Analy Batch No.: 8012

SDG No.: _____

Instrument ID: 9915 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/04/2020 12:18 Calibration End Date: 05/04/2020 14:30 Calibration ID: 3952

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Cyclohexane	FB	Ave	++++ 1161609	39946 3843623	109623	194548	621335	++++ 100	4.00 300	10.0	20.0	50.0
Carbon tetrachloride	FB	Ave	6219 831118	32820 2682996	79098	151903	436037	1.00 100	4.00 300	10.0	20.0	50.0
1,1-Dichloropropene	FB	Ave	6955 900673	35543 2877788	87745	170163	471966	1.00 100	4.00 300	10.0	20.0	50.0
Isobutyl alcohol	TBAd 10	Ave	18698 476416	77066 1474782	90503	196582	243797	50.0 1250	200 3750	250	500	625
Benzene	FB	Ave	24276 2712456	109197 8331094	271304	542642	1412305	1.00 100	4.00 300	10.0	20.0	50.0
1,2-Dichloroethane	FB	Ave	9508 878650	36361 2756686	86609	175386	451302	1.00 100	4.00 300	10.0	20.0	50.0
Tert-amyl methyl ether	FB	Ave	16256 2008268	71750 5766218	185275	395500	1044827	1.00 100	4.00 300	10.0	20.0	50.0
Heptane	FB	Ave	++++ 969755	30871 3440817	101879	159096	557614	++++ 100	4.00 300	10.0	20.0	50.0
Trichloroethene	FB	Ave	6010 687357	28463 2175604	67103	135722	357869	1.00 100	4.00 300	10.0	20.0	50.0
Methylcyclohexane	FB	Ave	++++ 1274860	39202 3891360	112878	218841	622420	++++ 100	4.00 300	10.0	20.0	50.0
1,2-Dichloropropane	FB	Ave	6480 704318	27627 2093795	68730	141920	367960	1.00 100	4.00 300	10.0	20.0	50.0
Tert-amyl ethyl ether	FB	Ave	7003 1033695	35893 3069594	95041	201926	533231	1.00 100	4.00 300	10.0	20.0	50.0
Methyl methacrylate	FB	Ave	4584 659514	22102 2054969	56118	119936	328090	1.00 100	4.00 300	10.0	20.0	50.0
1,4-Dioxane	TBAd 10	Ave	4156 80606	16044 241569	18596	40592	56207	50.0 1250	200 3750	250	500	625
Dibromomethane	FB	Ave	4080 463601	18097 1438064	44515	92274	238880	1.00 100	4.00 300	10.0	20.0	50.0
Bromodichloromethane	FB	Ave	6898 867281	30571 2778261	77828	162248	438972	1.00 100	4.00 300	10.0	20.0	50.0
2-Nitropropane	TBAd 10	Ave	++++ 514785	17843 1688931	48995	101204	261509	++++ 200	8.00 600	20.0	40.0	100
2-Chloroethyl vinyl ether	FB	Ave	++++ 541647	15020 1695622	42434	99560	266423	++++ 100	4.00 300	10.0	20.0	50.0
cis-1,3-Dichloropropene	FB	Ave	8035 1172555	38720 3645167	102523	218933	586420	1.00 100	4.00 300	10.0	20.0	50.0
4-Methyl-2-pentanone	FB	Ave	14642 1989212	69584 6193709	220609	413672	1042715	2.00 200	8.00 600	20.0	40.0	100
Toluene	CBZd 5	Ave	14967 1713833	71435 5226604	169552	348742	900006	1.00 100	4.00 300	10.0	20.0	50.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1 Analy Batch No.: 8012

SDG No.: _____

Instrument ID: 9915 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/04/2020 12:18 Calibration End Date: 05/04/2020 14:30 Calibration ID: 3952

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
trans-1,3-Dichloropropene	CBZd 5	Ave	7771 1074772	35087 3365132	91247	198841	538839	1.00 100	4.00 300	10.0	20.0	50.0
Ethyl methacrylate	CBZd 5	Ave	++++ 1145143	32791 3515823	90666	209124	568043	++++ 100	4.00 300	10.0	20.0	50.0
1,1,2-Trichloroethane	CBZd 5	Ave	6229 674541	26533 2069058	63841	133266	345720	1.00 100	4.00 300	10.0	20.0	50.0
Tetrachloroethene	CBZd 5	Ave	5689 744658	30571 2371090	73733	142717	396809	1.00 100	4.00 300	10.0	20.0	50.0
1,3-Dichloropropane	CBZd 5	Ave	9933 1148447	43343 3513317	106133	226140	583897	1.00 100	4.00 300	10.0	20.0	50.0
2-Hexanone	CBZd 5	Ave	++++ 1460497	49230 4604784	174001	300544	759684	++++ 200	8.00 600	20.0	40.0	100
Dibromochloromethane	CBZd 5	Ave	5060 764821	25357 2433257	64627	142150	381571	1.00 100	4.00 300	10.0	20.0	50.0
1,2-Dibromoethane (EDB)	CBZd 5	Ave	5900 757296	27033 2360704	69131	146471	382542	1.00 100	4.00 300	10.0	20.0	50.0
1-Chlorohexane	CBZd 5	Ave	8042 897682	31899 2916524	87041	166208	493316	1.00 100	4.00 300	10.0	20.0	50.0
Chlorobenzene	CBZd 5	Ave	17474 1967232	82190 5872583	195501	401018	1026893	1.00 100	4.00 300	10.0	20.0	50.0
1,1,1,2-Tetrachloroethane	CBZd 5	Ave	5492 696717	27080 2032306	65128	139057	361100	1.00 100	4.00 300	10.0	20.0	50.0
Ethylbenzene	CBZd 5	Ave	24909 3292895	127429 9666225	320784	655609	1739104	1.00 100	4.00 300	10.0	20.0	50.0
m&p-Xylene	CBZd 5	Ave	18560 2601156	100108 7428254	256781	523823	1380330	2.00 200	8.00 600	20.0	40.0	100
o-Xylene	CBZd 5	Ave	8598 1278788	47240 3678349	123731	257166	672594	1.00 100	4.00 300	10.0	20.0	50.0
Styrene	CBZd 5	Ave	++++ 2166232	73299 6276894	196942	422041	1120594	++++ 100	4.00 300	10.0	20.0	50.0
Bromoform	CBZd 5	Ave	++++ 569985	17579 1832772	45365	102700	279229	++++ 100	4.00 300	10.0	20.0	50.0
Isopropylbenzene	CBZd 5	Ave	++++ 3285770	113502 10081482	318829	646128	1789973	++++ 100	4.00 300	10.0	20.0	50.0
Cyclohexanone	TBA 10	Ave	14740 463291	68640 1289659	82502	191892	245831	50.0 1250	200 3750	250	500	625
1,1,2,2-Tetrachloroethane	DCBd 4	Ave	9970 1089355	44194 3146913	104141	222213	560716	1.00 100	4.00 300	10.0	20.0	50.0
Bromobenzene	DCBd 4	Ave	7896 865329	37026 2440408	86555	176876	455834	1.00 100	4.00 300	10.0	20.0	50.0
trans-1,4-Dichloro-2-butene	DCBd 4	Ave	26192 825770	125036 2388078	155286	330679	418715	10.0 250	40.0 750	50.0	100	125

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1Analy Batch No.: 8012

SDG No.: _____

Instrument ID: 9915GC Column: R-624SilMS ID: 0.25(mm)Heated Purge: (Y/N) NCalibration Start Date: 05/04/2020 12:18Calibration End Date: 05/04/2020 14:30Calibration ID: 3952

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
1,2,3-Trichloropropane	DCBd 4	Ave	2928 335015	13787 993970	32309	67064	171933	1.00 100	4.00 300	10.0	20.0	50.0
N-Propylbenzene	DCBd 4	Ave	29396 3809781	145190 11638830	386435	771811	2094645	1.00 100	4.00 300	10.0	20.0	50.0
2-Chlorotoluene	DCBd 4	Ave	6424 813746	32065 2495248	81187	164225	437810	1.00 100	4.00 300	10.0	20.0	50.0
1,3,5-Trimethylbenzene	DCBd 4	Ave	++++ 2825029	99633 8711142	281599	576194	1548664	++++ 100	4.00 300	10.0	20.0	50.0
4-Chlorotoluene	DCBd 4	Ave	6692 844982	32987 2553775	84766	172873	445476	1.00 100	4.00 300	10.0	20.0	50.0
tert-Butylbenzene	DCBd 4	Ave	++++ 591590	19333 1876703	57325	115496	327130	++++ 100	4.00 300	10.0	20.0	50.0
Pentachloroethane	DCBd 4	Ave	4086 548433	18269 1526519	47982	103046	270479	1.00 100	4.00 300	10.0	20.0	50.0
1,2,4-Trimethylbenzene	DCBd 4	Ave	++++ 2954084	104183 8711618	292731	607657	1608987	++++ 100	4.00 300	10.0	20.0	50.0
sec-Butylbenzene	DCBd 4	Ave	++++ 3467143	115259 10805978	356651	686024	1993739	++++ 100	4.00 300	10.0	20.0	50.0
1,3-Dichlorobenzene	DCBd 4	Ave	14102 1615925	66610 4407372	168575	344132	872729	1.00 100	4.00 300	10.0	20.0	50.0
4-Isopropyltoluene	DCBd 4	Ave	++++ 3005990	100049 8822451	305843	608740	1738547	++++ 100	4.00 300	10.0	20.0	50.0
1,4-Dichlorobenzene	DCBd 4	Ave	15438 1653833	71304 4647383	174747	348691	892706	1.00 100	4.00 300	10.0	20.0	50.0
1,2,3-Trimethylbenzene	DCBd 4	Ave	24818 3074280	113572 8526577	294051	608796	1556619	1.00 100	4.00 300	10.0	20.0	50.0
n-Butylbenzene	DCBd 4	Ave	10642 1476984	51906 4549585	158566	301701	856313	1.00 100	4.00 300	10.0	20.0	50.0
1,2-Dichlorobenzene	DCBd 4	Ave	14552 1596731	68655 4522522	166381	340061	860477	1.00 100	4.00 300	10.0	20.0	50.0
1,2-Dibromo-3-Chloropropane	DCBd 4	Ave	1978 255984	9340 798910	22101	48311	128807	1.00 100	4.00 300	10.0	20.0	50.0
1,2,4-Trichlorobenzene	DCBd 4	Ave	9812 1177287	41149 3398741	114895	246455	652546	1.00 100	4.00 300	10.0	20.0	50.0
Hexachlorobutadiene	DCBd 4	Ave	5565 502276	17997 1491818	56985	104255	301908	1.00 100	4.00 300	10.0	20.0	50.0
Naphthalene	DCBd 4	Ave	++++ 4061190	132293 11178781	370353	834880	2173877	++++ 100	4.00 300	10.0	20.0	50.0
1,2,3-Trichlorobenzene	DCBd 4	Ave	9817 1138880	43456 3147314	117020	249938	642500	1.00 100	4.00 300	10.0	20.0	50.0
Dibromofluoromethane (Surr)	FB	Ave	326139 328142	324776 342981	321234	324419	336956	50.0 50.0	50.0 50.0	50.0	50.0	50.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1 Analy Batch No.: 8012

SDG No.: _____

Instrument ID: 9915 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/04/2020 12:18 Calibration End Date: 05/04/2020 14:30 Calibration ID: 3952

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
1,2-Dichloroethane-d4 (Surr)	FB	Ave	83334 82768	83660 85663	82584	84786	85182	50.0 50.0	50.0 50.0	50.0	50.0	50.0
Toluene-d8 (Surr)	CBZd 5	Ave	1311334 1338029	1317565 1390783	1320620	1310005	1370429	50.0 50.0	50.0 50.0	50.0	50.0	50.0
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	510305 512161	515470 539196	510717	505665	526388	50.0 50.0	50.0 50.0	50.0	50.0	50.0

Curve Type Legend:

Ave = Average ISTD
Lin = Linear ISTD

Report Date: 19-May-2020 09:49:26

Chrom Revision: 2.3 18-May-2020 21:51:32

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I01.D
 Lims ID: IC level7
 Client ID:
 Sample Type: IC Calib Level: 7
 Inject. Date: 04-May-2020 12:18:30 ALS Bottle#: 2 Worklist Smp#: 3
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: VSTD300;VSTD300;1;1;,,,;
 Misc. Info.: 8260W.SUB;;;5;5;,,,;
 Operator ID: lcp00895 Instrument ID: 9915
 Sublist: chrom-MSVoa_9915a*sub2
 Method: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\MSVoa_9915a.m
 Limit Group: MSV - 8260C DOD5
 Last Update: 19-May-2020 09:49:22 Calib Date: 04-May-2020 14:30:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1023

First Level Reviewer: johnsons

Date: 04-May-2020 20:34:44

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	2.091	2.098	-0.007	99	2834400	300.0	316.1	
4 Chloromethane	50	2.297	2.297	0.000	99	2417826	300.0	286.4	
6 Butadiene	39	2.416	2.413	0.003	91	1647251	NC	NC	
5 Vinyl chloride	62	2.419	2.416	0.003	98	2328660	300.0	283.1	
8 Bromomethane	94	2.757	2.760	-0.003	90	1620472	300.0	301.0	
9 Chloroethane	64	2.847	2.847	0.000	100	1232807	300.0	301.2	
10 Dichlorofluoromethane	67	3.107	3.104	0.003	97	2806583	300.0	283.8	
11 Trichlorofluoromethane	101	3.165	3.169	-0.004	97	2743614	300.0	304.9	
12 Pentane	43	3.214	3.217	-0.003	96	2718494	NC	NC	
14 Ethyl ether	59	3.439	3.445	-0.006	91	1947774	300.0	307.0	
15 1,2-Dichloro-1,1,2-trifluoroetha	67	3.525	3.525	0.000	93	2311517	NC	NC	
16 Acrolein	56	3.622	3.625	-0.003	100	6728159	3000.0	2958.5	
17 1,1-Dichloroethene	96	3.763	3.763	0.000	98	1749604	300.0	306.8	
18 112TCTFE	101	3.799	3.792	0.007	92	1947555	300.0	327.6	
19 Acetone	58	3.805	3.808	-0.003	100	582592	600.0	557.5	
20 Iodomethane	142	3.972	3.972	0.000	98	3484987	300.0	315.8	
21 Isopropyl alcohol	45	3.998	3.992	0.006	99	999861	1500.0	1509.9	
22 Carbon disulfide	76	4.078	4.075	0.003	99	6202744	300.0	320.7	
24 Methyl acetate	43	4.242	4.246	-0.004	98	2197223	300.0	303.2	
25 3-Chloro-1-propene	41	4.271	4.275	-0.004	93	2950615	300.0	321.2	
26 Methylene Chloride	84	4.474	4.477	-0.003	92	2082169	300.0	304.2	
* 27 t-Butyl alcohol-d10 (IS)	65	4.493	4.500	-0.007	0	275669	250.0	250.0	
28 2-Methyl-2-propanol	59	4.631	4.625	0.006	99	1686744	1500.0	1512.9	
29 Acrylonitrile	53	4.831	4.841	-0.010	99	1212044	300.0	303.6	
31 Methyl tert-butyl ether	73	4.885	4.879	0.006	95	5922255	300.0	301.3	
32 trans-1,2-Dichloroethene	96	4.889	4.889	0.000	99	2016356	300.0	305.9	
33 Hexane	57	5.307	5.310	-0.003	92	3437727	300.0	355.6	
35 1,1-Dichloroethane	63	5.551	5.554	-0.003	96	3532325	300.0	308.1	
36 Isopropyl ether	45	5.606	5.603	0.003	93	6426595	300.0	315.8	
37 2-Chloro-1,3-butadiene	53	5.657	5.657	0.000	90	3135555	300.0	339.9	

Report Date: 19-May-2020 09:49:26

Chrom Revision: 2.3 18-May-2020 21:51:32

Data File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I01.D

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
38 Tert-butyl ethyl ether	59	6.136	6.130	0.006	97	5825693	300.0	307.7	
S 39 1,2-Dichloroethene, Total	100				0			611.5	
40 2-Butanone (MEK)	43	6.358	6.358	0.000	99	3009944	600.0	615.7	
41 cis-1,2-Dichloroethene	96	6.377	6.374	0.003	81	2258354	300.0	305.6	
42 2,2-Dichloropropane	77	6.393	6.394	-0.001	92	2842210	300.0	317.5	
44 Propionitrile	54	6.458	6.451	0.007	99	2394369	1500.0	1598.2	
45 Methacrylonitrile	67	6.667	6.660	0.007	93	3135141	750.0	773.6	
46 Chlorobromomethane	128	6.705	6.705	0.000	94	1168765	300.0	306.2	
47 Tetrahydrofuran	71	6.718	6.709	0.009	84	836590	600.0	631.5	
48 Chloroform	83	6.853	6.853	0.000	94	3477905	300.0	307.8	
\$ 49 Dibromofluoromethane (Surr)	113	7.069	7.069	0.000	92	342981	50.0	51.1	
50 1,1,1-Trichloroethane	97	7.078	7.072	0.006	98	3104868	300.0	319.7	
51 Cyclohexane	56	7.172	7.168	0.004	90	3843623	300.0	335.9	
52 Carbon tetrachloride	117	7.284	7.284	0.000	96	2682996	300.0	330.0	
53 1,1-Dichloropropene	75	7.291	7.287	0.004	97	2877788	300.0	323.5	
54 Isobutyl alcohol	41	7.451	7.451	0.000	95	1474782	3750.0	3958.4	
\$ 55 1,2-Dichloroethane-d4 (Surr)	102	7.522	7.519	0.003	97	85663	50.0	50.1	
56 Benzene	78	7.554	7.551	0.003	96	8331094	300.0	303.0	
58 1,2-Dichloroethane	62	7.628	7.625	0.003	97	2756686	300.0	300.5	
59 Tert-amyl methyl ether	73	7.737	7.734	0.003	98	5766218	300.0	298.7	
* 61 Fluorobenzene (IS)	96	7.956	7.950	0.006	55	1325707	50.0	50.0	
62 n-Heptane	43	7.953	7.950	0.003	91	3440817	300.0	349.3	
63 n-Butanol	56	8.323	8.319	0.004	88	2424218	NC	NC	
64 Trichloroethene	95	8.429	8.422	0.007	98	2175604	300.0	312.2	
65 Methylcyclohexane	83	8.728	8.728	0.000	95	3891360	300.0	327.1	
66 2-ethoxy-2-methyl butane	87	8.763	8.760	0.003	92	3069594	300.0	315.9	
67 1,2-Dichloropropane	63	8.763	8.763	0.000	85	2093795	300.0	295.2	
68 Methyl methacrylate	69	8.840	8.834	0.006	95	2054969	300.0	338.7	
69 1,4-Dioxane	88	8.847	8.847	0.000	81	241569	3750.0	3243.6	
70 Dibromomethane	93	8.872	8.869	0.003	96	1438064	300.0	310.1	
72 Dichlorobromomethane	83	9.104	9.104	0.000	100	2778261	300.0	334.3	
73 2-Nitropropane	41	9.380	9.374	0.006	97	1688931	600.0	680.4	
74 2-Chloroethyl vinyl ether	63	9.451	9.448	0.003	92	1695622	300.0	340.6	
75 cis-1,3-Dichloropropene	75	9.631	9.628	0.003	96	3645167	300.0	336.4	
76 4-Methyl-2-pentanone (MIBK)	43	9.798	9.799	-0.001	96	6193709	600.0	625.3	
\$ 77 Toluene-d8 (Surr)	98	9.927	9.924	0.003	93	1390783	50.0	51.4	
78 Toluene	92	10.001	10.001	0.000	98	5226604	300.0	302.0	
S 79 1,3-Dichloropropene, Total	100				0			677.4	
80 trans-1,3-Dichloropropene	75	10.252	10.249	0.003	92	3365132	300.0	341.0	
81 Ethyl methacrylate	69	10.306	10.303	0.003	89	3515823	300.0	335.6	
82 1,1,2-Trichloroethane	97	10.454	10.448	0.006	90	2069058	300.0	308.2	
83 Tetrachloroethene	166	10.535	10.532	0.003	97	2371090	300.0	321.1	
84 1,3-Dichloropropane	76	10.615	10.609	0.006	90	3513317	300.0	313.6	
86 2-Hexanone	43	10.660	10.660	0.000	96	4604784	600.0	608.2	
88 Chlorodibromomethane	129	10.821	10.818	0.003	90	2433257	300.0	348.5	
89 Ethylene Dibromide	107	10.930	10.930	0.000	98	2360704	300.0	327.0	
S 90 Xylenes, Total	106				0			894.3	
* 91 Chlorobenzene-d5 (IS)	117	11.355	11.352	0.003	84	1059568	50.0	50.0	
92 1-Chlorohexane	91	11.358	11.358	0.000	98	2916524	300.0	328.0	
93 Chlorobenzene	112	11.380	11.377	0.003	95	5872583	300.0	295.8	
94 1,1,1,2-Tetrachloroethane	131	11.461	11.458	0.003	96	2032306	300.0	301.3	
95 Ethylbenzene	91	11.464	11.461	0.003	99	9666225	300.0	302.0	

Report Date: 19-May-2020 09:49:26

Chrom Revision: 2.3 18-May-2020 21:51:32

Data File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I01.D

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
96 m-Xylene & p-Xylene	106	11.577	11.573	0.004	99	7428254	600.0	591.7	
97 o-Xylene	106	11.901	11.901	0.000	97	3678349	300.0	302.7	
98 Styrene	104	11.917	11.917	0.000	93	6276894	300.0	300.4	
99 Bromoform	173	12.075	12.072	0.003	97	1832772	300.0	346.2	
100 Isopropylbenzene	105	12.200	12.197	0.003	96	10081482	300.0	307.4	
102 Cyclohexanone	55	12.281	12.281	0.000	92	1289659	3750.1	3769.4	
\$ 103 4-Bromofluorobenzene (Surr)	95	12.342	12.342	0.000	91	539196	50.0	51.5	
104 1,1,2,2-Tetrachloroethane	83	12.445	12.442	0.003	94	3146913	300.0	291.6	
105 Bromobenzene	156	12.461	12.461	0.000	97	2440408	300.0	280.6	
106 trans-1,4-Dichloro-2-butene	53	12.470	12.467	0.003	92	2388078	750.0	755.7	
107 1,2,3-Trichloropropane	110	12.493	12.490	0.003	84	993970	300.0	300.1	
108 N-Propylbenzene	91	12.528	12.522	0.006	98	11638830	300.0	309.6	
109 2-Chlorotoluene	126	12.605	12.602	0.003	97	2495248	300.0	310.3	
110 1,3,5-Trimethylbenzene	105	12.660	12.657	0.003	94	8711142	300.0	305.1	
111 4-Chlorotoluene	126	12.695	12.692	0.003	97	2553775	300.0	306.9	
113 tert-Butylbenzene	134	12.901	12.898	0.003	93	1876703	300.0	319.1	
114 Pentachloroethane	167	12.933	12.933	0.000	93	1526519	300.0	307.2	
115 1,2,4-Trimethylbenzene	105	12.943	12.940	0.003	97	8711618	300.0	294.2	
116 sec-Butylbenzene	105	13.065	13.062	0.003	95	10805978	300.0	307.7	
117 1,3-Dichlorobenzene	146	13.162	13.162	0.000	97	4407372	300.0	271.2	
118 4-Isopropyltoluene	119	13.171	13.168	0.003	97	8822451	300.0	291.7	
* 119 1,4-Dichlorobenzene-d4	152	13.220	13.216	0.004	90	594262	50.0	50.0	
120 1,4-Dichlorobenzene	146	13.236	13.236	0.000	94	4647383	300.0	274.1	
121 1,2,3-Trimethylbenzene	105	13.248	13.245	0.003	99	8526577	300.0	291.8	
122 Benzyl chloride	91	13.313	13.313	0.000	98	7374839	NC	NC	
123 1,3-Diethylbenzene	119	13.367	13.368	-0.001	94	5617827	NC	NC	
124 p-Diethylbenzene	119	13.441	13.438	0.003	95	5729264	NC	NC	
125 n-Butylbenzene	92	13.461	13.458	0.003	98	4549585	300.0	311.7	
126 1,2-Dichlorobenzene	146	13.496	13.496	0.000	97	4522522	300.0	277.2	
127 o-diethylbenzene	119	13.515	13.512	0.003	96	4559010	NC	NC	
129 1,2-Dibromo-3-Chloropropane	75	14.039	14.036	0.003	89	798910	300.0	332.3	
130 1,3,5-Trichlorobenzene	180	14.162	14.158	0.004	98	3665984	NC	NC	
131 1,2,4-Trichlorobenzene	180	14.586	14.583	0.003	95	3398741	300.0	295.5	
132 Hexachlorobutadiene	225	14.666	14.663	0.003	98	1491818	300.0	280.8	
133 Naphthalene	128	14.769	14.769	0.000	97	11178781	300.0	285.6	
134 1,2,3-Trichlorobenzene	180	14.914	14.911	0.003	97	3147314	300.0	275.2	
135 2-Methylnaphthalene	142	15.560	15.560	0.000	92	5806091	NC	NC	
S 150 Total Diethylbenzene	1		0.000					ND	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Report Date: 19-May-2020 09:49:26

Chrom Revision: 2.3 18-May-2020 21:51:32

Reagents:

MSV_VCYC_00002	Amount Added: 30.00	Units: uL	
MSV_V_Gas_00073	Amount Added: 7.50	Units: uL	
MSV_V_EE_00003	Amount Added: 15.00	Units: uL	
MSV_V_2CEVE_00066	Amount Added: 15.00	Units: uL	
MSV_V_VOA1_00054	Amount Added: 15.00	Units: uL	
MSV_V_VOA3_00026	Amount Added: 6.00	Units: uL	
MSV_V_VOA6_00033	Amount Added: 15.00	Units: uL	
MSV_DCFM_00013	Amount Added: 7.50	Units: uL	
MSV_HP23_ISSS_00002	Amount Added: 1.00	Units: uL	Run Reagent

Report Date: 19-May-2020 09:49:26

Chrom Revision: 2.3 18-May-2020 21:51:32

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I01.D

Injection Date: 04-May-2020 12:18:30

Instrument ID: 9915

Operator ID: lcp00895

Lims ID: IC level7

Worklist Smp#: 3

Client ID:

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

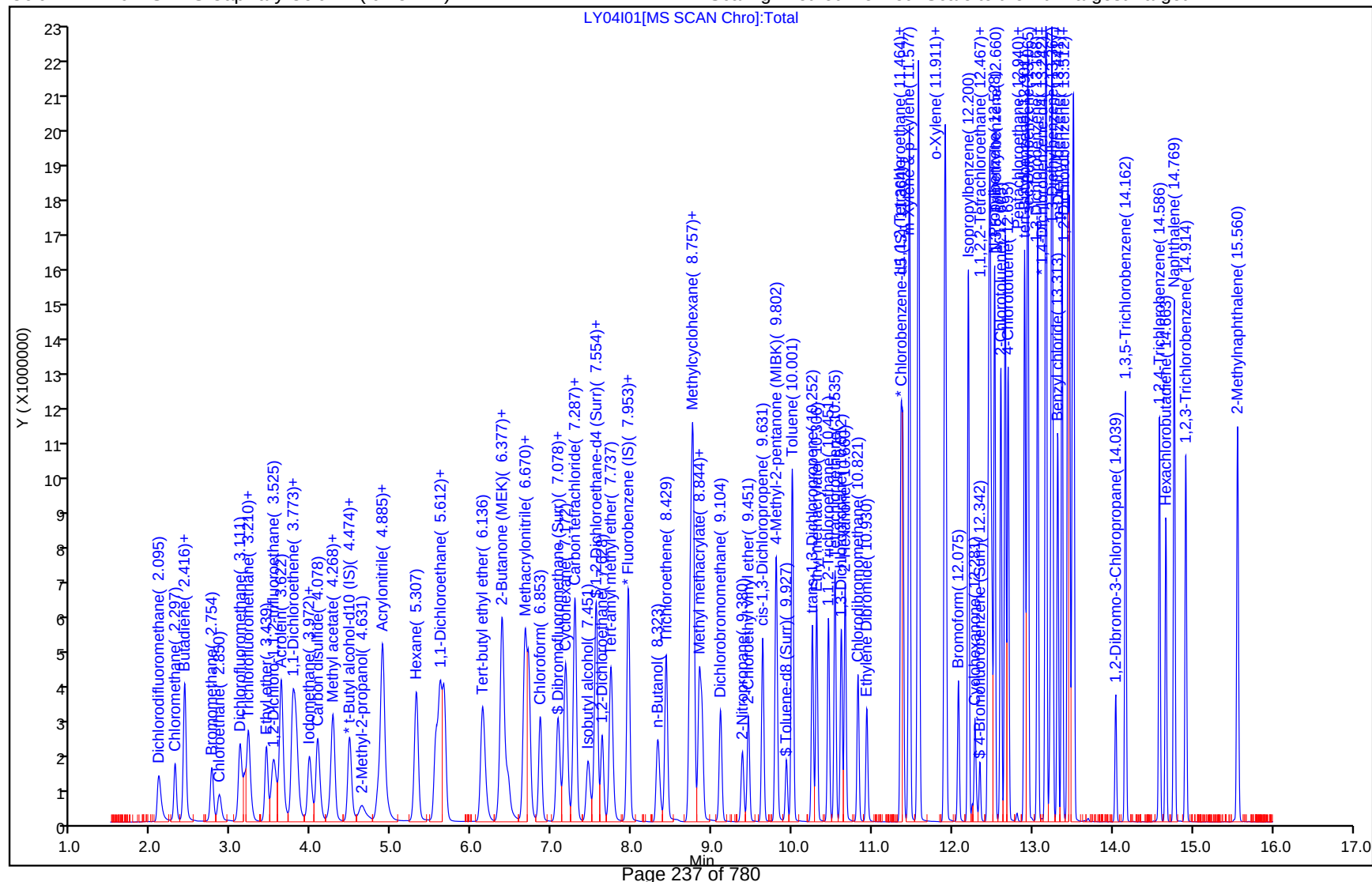
ALS Bottle#: 2

Method: MSVoa_9915a

Limit Group: MSV - 8260C DOD5

Column: Rxi-624Sil MS Capillary Column (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 19-May-2020 09:49:38

Chrom Revision: 2.3 18-May-2020 21:51:32

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I02.D
 Lims ID: IC std6
 Client ID:
 Sample Type: IC Calib Level: 6
 Inject. Date: 04-May-2020 12:40:30 ALS Bottle#: 3 Worklist Smp#: 4
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: VSTD100;VSTD100;1;1;;;
 Misc. Info.: 8260W.SUB;;5;5;;;
 Operator ID: lcp00895 Instrument ID: 9915
 Sublist: chrom-MSVoa_9915a*sub2
 Method: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\MSVoa_9915a.m
 Limit Group: MSV - 8260C DOD5
 Last Update: 19-May-2020 09:49:34 Calib Date: 04-May-2020 14:30:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1023

First Level Reviewer: dalea

Date: 05-May-2020 07:26:40

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	2.088	2.098	-0.010	99	832988	100.0	94.8	
4 Chloromethane	50	2.291	2.297	-0.006	99	774350	100.0	93.6	
6 Butadiene	39	2.410	2.413	-0.003	93	519467	NC	NC	
5 Vinyl chloride	62	2.413	2.416	-0.003	98	743563	100.0	92.2	
8 Bromomethane	94	2.754	2.760	-0.006	90	515866	100.0	97.9	
9 Chloroethane	64	2.844	2.847	-0.003	100	385959	100.0	96.0	
10 Dichlorofluoromethane	67	3.101	3.104	-0.003	97	878268	100.0	90.6	
11 Trichlorofluoromethane	101	3.162	3.169	-0.007	97	827838	100.0	93.9	
12 Pentane	43	3.210	3.217	-0.007	97	818388	NC	NC	
14 Ethyl ether	59	3.432	3.445	-0.013	91	652395	100.0	104.9	
15 1,2-Dichloro-1,1,2-trifluoroetha	67	3.522	3.525	-0.003	94	719676	NC	NC	
16 Acrolein	56	3.619	3.625	-0.006	100	2194865	1000.0	1008.4	
17 1,1-Dichloroethene	96	3.760	3.763	-0.003	98	549319	100.0	98.3	
18 112TCTFE	101	3.795	3.792	0.003	88	590444	100.0	101.3	
19 Acetone	58	3.802	3.808	-0.006	100	191045	200.0	191.0	
20 Iodomethane	142	3.969	3.972	-0.003	98	1089307	100.0	100.7	
21 Isopropyl alcohol	45	3.985	3.992	-0.007	97	314202	500.0	495.8	
22 Carbon disulfide	76	4.072	4.075	-0.003	99	1940782	100.0	102.4	
24 Methyl acetate	43	4.239	4.246	-0.007	98	713769	100.0	100.5	
25 3-Chloro-1-propene	41	4.268	4.275	-0.007	93	968846	100.0	107.6	
26 Methylene Chloride	84	4.471	4.477	-0.006	92	667913	100.0	99.6	
* 27 t-Butyl alcohol-d10 (IS)	65	4.490	4.500	-0.010	0	263835	250.0	250.0	
28 2-Methyl-2-propanol	59	4.622	4.625	-0.003	99	553202	500.0	518.4	
29 Acrylonitrile	53	4.828	4.841	-0.013	99	381581	100.0	97.5	
31 Methyl tert-butyl ether	73	4.876	4.879	-0.003	96	1972116	100.0	102.4	
32 trans-1,2-Dichloroethene	96	4.885	4.889	-0.004	99	645151	100.0	99.9	
33 Hexane	57	5.307	5.310	-0.003	92	979906	100.0	103.4	
35 1,1-Dichloroethane	63	5.548	5.554	-0.006	96	1130853	100.0	100.7	
36 Isopropyl ether	45	5.599	5.603	-0.004	94	2128321	100.0	106.7	
37 2-Chloro-1,3-butadiene	53	5.654	5.657	-0.003	90	977438	100.0	108.1	

Report Date: 19-May-2020 09:49:38

Chrom Revision: 2.3 18-May-2020 21:51:32

Data File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I02.D

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
38 Tert-butyl ethyl ether	59	6.130	6.130	0.000	97	1972845	100.0	106.3	
S 39 1,2-Dichloroethene, Total	100				0			201.4	
40 2-Butanone (MEK)	43	6.348	6.358	-0.010	99	952673	200.0	198.9	
41 cis-1,2-Dichloroethene	96	6.377	6.374	0.003	81	735203	100.0	101.5	
42 2,2-Dichloropropane	77	6.384	6.394	-0.010	87	904941	100.0	103.2	
44 Propionitrile	54	6.448	6.451	-0.003	100	762196	500.0	531.6	
45 Methacrylonitrile	67	6.657	6.660	-0.003	92	1027084	250.0	258.6	
46 Chlorobromomethane	128	6.702	6.705	-0.003	94	386288	100.0	103.3	
47 Tetrahydrofuran	71	6.715	6.709	0.006	83	263422	200.0	207.8	
48 Chloroform	83	6.850	6.853	-0.003	93	1119330	100.0	101.1	
\$ 49 Dibromofluoromethane (Surr)	113	7.069	7.069	0.000	93	328142	50.0	49.9	
50 1,1,1-Trichloroethane	97	7.075	7.072	0.003	98	966003	100.0	101.5	
51 Cyclohexane	56	7.165	7.168	-0.003	90	1161609	100.0	103.6	
52 Carbon tetrachloride	117	7.278	7.284	-0.006	97	831118	100.0	104.3	
53 1,1-Dichloropropene	75	7.287	7.287	0.000	98	900673	100.0	103.3	
54 Isobutyl alcohol	41	7.445	7.451	-0.006	95	476416	1250.0	1336.1	
\$ 55 1,2-Dichloroethane-d4 (Surr)	102	7.522	7.519	0.003	98	82768	50.0	49.4	
56 Benzene	78	7.551	7.551	0.000	96	2712456	100.0	100.7	
58 1,2-Dichloroethane	62	7.625	7.625	0.000	97	878650	100.0	97.8	
59 Tert-amyl methyl ether	73	7.731	7.734	-0.003	99	2008268	100.0	106.2	
* 61 Fluorobenzene (IS)	96	7.950	7.950	0.000	99	1299066	50.0	50.0	
62 n-Heptane	43	7.956	7.950	0.006	94	969755	100.0	100.5	
63 n-Butanol	56	8.316	8.319	-0.003	88	820789	NC	NC	
64 Trichloroethene	95	8.425	8.422	0.003	98	687357	100.0	100.6	
65 Methylcyclohexane	83	8.728	8.728	0.000	91	1274860	100.0	109.3	
66 2-ethoxy-2-methyl butane	87	8.760	8.760	0.000	93	1033695	100.0	108.6	
67 1,2-Dichloropropane	63	8.760	8.763	-0.003	75	704318	100.0	101.3	
68 Methyl methacrylate	69	8.837	8.834	0.003	92	659514	100.0	110.9	
69 1,4-Dioxane	88	8.843	8.847	-0.004	32	80606	1250.0	1130.9	
70 Dibromomethane	93	8.869	8.869	0.000	96	463601	100.0	102.0	
72 Dichlorobromomethane	83	9.101	9.104	-0.003	100	867281	100.0	106.5	
73 2-Nitropropane	41	9.374	9.374	0.000	97	514785	200.0	216.7	
74 2-Chloroethyl vinyl ether	63	9.448	9.448	0.000	91	541647	100.0	111.0	
75 cis-1,3-Dichloropropene	75	9.628	9.628	0.000	96	1172555	100.0	110.4	
76 4-Methyl-2-pentanone (MIBK)	43	9.795	9.799	-0.004	96	1989212	200.0	204.9	
\$ 77 Toluene-d8 (Surr)	98	9.927	9.924	0.003	93	1338029	50.0	50.3	
78 Toluene	92	10.001	10.001	0.000	98	1713833	100.0	100.6	
S 79 1,3-Dichloropropene, Total	100				0			221.1	
80 trans-1,3-Dichloropropene	75	10.249	10.249	-0.001	92	1074772	100.0	110.7	
81 Ethyl methacrylate	69	10.303	10.303	0.000	89	1145143	100.0	111.1	
82 1,1,2-Trichloroethane	97	10.448	10.448	0.000	90	674541	100.0	102.1	
83 Tetrachloroethene	166	10.531	10.532	-0.001	97	744658	100.0	102.5	
84 1,3-Dichloropropane	76	10.612	10.609	0.003	90	1148447	100.0	104.2	
86 2-Hexanone	43	10.660	10.660	0.000	96	1460497	200.0	196.0	
88 Chlorodibromomethane	129	10.821	10.818	0.003	90	764821	100.0	111.3	
89 Ethylene Dibromide	107	10.930	10.930	0.000	98	757296	100.0	106.6	
S 90 Xylenes, Total	106				0			317.5	
* 91 Chlorobenzene-d5 (IS)	117	11.351	11.352	-0.001	85	1042679	50.0	50.0	
92 1-Chlorohexane	91	11.358	11.358	0.000	98	897682	100.0	102.6	
93 Chlorobenzene	112	11.380	11.377	0.003	96	1967232	100.0	100.7	
94 1,1,1,2-Tetrachloroethane	131	11.457	11.458	-0.001	96	696717	100.0	105.0	
95 Ethylbenzene	91	11.461	11.461	0.000	98	3292895	100.0	104.6	

Report Date: 19-May-2020 09:49:38

Chrom Revision: 2.3 18-May-2020 21:51:32

Data File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I02.D

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
96 m-Xylene & p-Xylene	106	11.573	11.573	0.000	100	2601156	200.0	210.5	
97 o-Xylene	106	11.901	11.901	0.000	96	1278788	100.0	106.9	
98 Styrene	104	11.917	11.917	0.000	94	2166232	100.0	105.3	
99 Bromoform	173	12.075	12.072	0.003	97	569985	100.0	109.4	
100 Isopropylbenzene	105	12.197	12.197	0.000	95	3285770	100.0	101.8	
102 Cyclohexanone	55	12.281	12.281	0.000	92	463291	1250.0	1414.8	
\$ 103 4-Bromofluorobenzene (Surr)	95	12.342	12.342	0.000	91	512161	50.0	49.8	
104 1,1,2,2-Tetrachloroethane	83	12.445	12.442	0.003	93	1089355	100.0	103.9	
105 Bromobenzene	156	12.461	12.461	0.000	97	865329	100.0	102.5	
106 trans-1,4-Dichloro-2-butene	53	12.467	12.467	0.000	89	825770	250.0	269.1	
107 1,2,3-Trichloropropane	110	12.490	12.490	0.000	84	335015	100.0	104.2	
108 N-Propylbenzene	91	12.525	12.522	0.003	98	3809781	100.0	104.4	
109 2-Chlorotoluene	126	12.602	12.602	0.000	97	813746	100.0	104.2	
110 1,3,5-Trimethylbenzene	105	12.657	12.657	0.000	95	2825029	100.0	101.9	
111 4-Chlorotoluene	126	12.692	12.692	0.000	97	844982	100.0	104.6	
113 tert-Butylbenzene	134	12.898	12.898	0.000	93	591590	100.0	103.6	
114 Pentachloroethane	167	12.933	12.933	0.000	91	548433	100.0	113.7	
115 1,2,4-Trimethylbenzene	105	12.940	12.940	0.000	97	2954084	100.0	102.7	
116 sec-Butylbenzene	105	13.062	13.062	0.000	94	3467143	100.0	101.7	
117 1,3-Dichlorobenzene	146	13.162	13.162	0.000	98	1615925	100.0	102.4	
118 4-Isopropyltoluene	119	13.168	13.168	0.000	97	3005990	100.0	102.4	
* 119 1,4-Dichlorobenzene-d4	152	13.216	13.216	0.000	94	577011	50.0	50.0	
120 1,4-Dichlorobenzene	146	13.236	13.236	0.000	95	1653833	100.0	100.5	
121 1,2,3-Trimethylbenzene	105	13.245	13.245	0.000	98	3074280	100.0	108.4	
122 Benzyl chloride	91	13.313	13.313	0.000	98	2440978	NC	NC	
123 1,3-Diethylbenzene	119	13.367	13.368	-0.001	95	1960670	NC	NC	
124 p-Diethylbenzene	119	13.438	13.438	0.000	94	2039659	NC	NC	
125 n-Butylbenzene	92	13.457	13.458	-0.001	96	1476984	100.0	104.2	
126 1,2-Dichlorobenzene	146	13.496	13.496	0.000	98	1596731	100.0	100.8	
127 o-diethylbenzene	119	13.512	13.512	0.000	95	1637053	NC	NC	
129 1,2-Dibromo-3-Chloropropane	75	14.036	14.036	0.000	93	255984	100.0	109.7	
130 1,3,5-Trichlorobenzene	180	14.162	14.158	0.004	98	1222624	NC	NC	
131 1,2,4-Trichlorobenzene	180	14.583	14.583	0.000	95	1177287	100.0	105.4	
132 Hexachlorobutadiene	225	14.663	14.663	0.000	98	502276	100.0	97.4	
133 Naphthalene	128	14.769	14.769	0.000	97	4061190	100.0	106.9	
134 1,2,3-Trichlorobenzene	180	14.914	14.911	0.003	96	1138880	100.0	102.6	
135 2-Methylnaphthalene	142	15.560	15.560	0.000	92	2391533	NC	NC	
S 150 Total Diethylbenzene	1		0.000					ND	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Report Date: 19-May-2020 09:49:38

Chrom Revision: 2.3 18-May-2020 21:51:32

Reagents:

MSV_VCYC_00002	Amount Added: 10.00	Units: uL	
MSV_V_Gas_00073	Amount Added: 2.50	Units: uL	
MSV_V_EE_00003	Amount Added: 5.00	Units: uL	
MSV_V_2CEVE_00066	Amount Added: 5.00	Units: uL	
MSV_V_VOA1_00054	Amount Added: 5.00	Units: uL	
MSV_V_VOA3_00026	Amount Added: 2.00	Units: uL	
MSV_V_VOA6_00033	Amount Added: 5.00	Units: uL	
MSV_DCFM_00013	Amount Added: 2.50	Units: uL	
MSV_HP23_ISSS_00002	Amount Added: 1.00	Units: uL	Run Reagent

Report Date: 19-May-2020 09:49:38

Chrom Revision: 2.3 18-May-2020 21:51:32

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I02.D

Injection Date: 04-May-2020 12:40:30

Instrument ID: 9915

Operator ID: lcp00895

Lims ID: IC std6

Worklist Smp#: 4

Client ID:

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

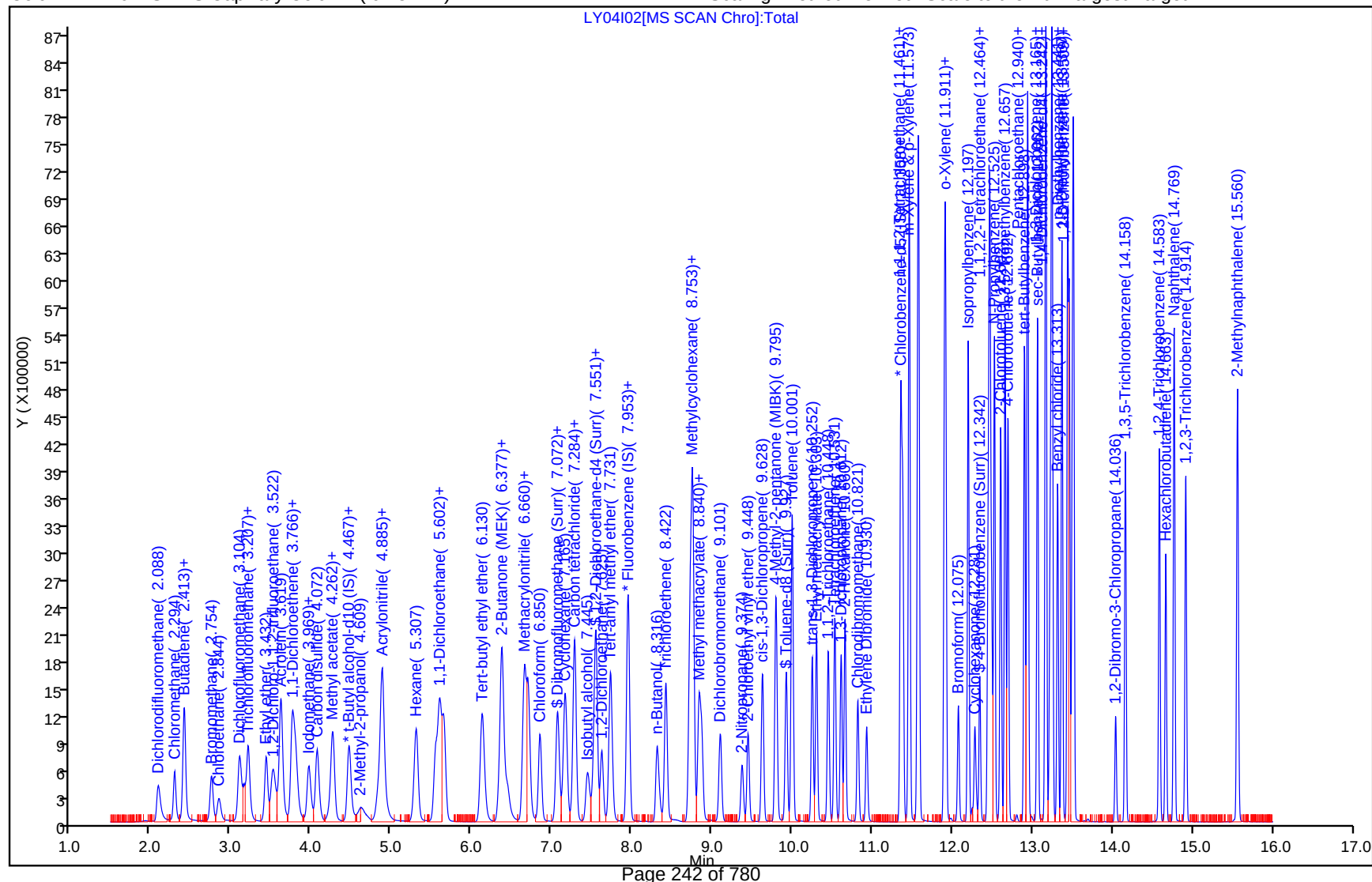
ALS Bottle#: 3

Method: MSVoa_9915a

Limit Group: MSV - 8260C DOD5

Column: Rxi-624Sil MS Capillary Column (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

September 2020

I-5-242

Report Date: 19-May-2020 09:49:53

Chrom Revision: 2.3 18-May-2020 21:51:32

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I03.D
 Lims ID: ICIS
 Client ID:
 Sample Type: ICIS Calib Level: 5
 Inject. Date: 04-May-2020 13:02:30 ALS Bottle#: 4 Worklist Smp#: 5
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: VSTD050;VSTD050;1;1;;;
 Misc. Info.: 8260W.SUB;;5;5;;;
 Operator ID: lcp00895 Instrument ID: 9915
 Sublist: chrom-MSVoa_9915a*sub2
 Method: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\MSVoa_9915a.m
 Limit Group: MSV - 8260C DOD5
 Last Update: 19-May-2020 09:49:49 Calib Date: 04-May-2020 14:30:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1023

First Level Reviewer: dalea

Date: 05-May-2020 07:28:49

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	2.088	2.088	0.000	99	440469	50.0	49.0	
4 Chloromethane	50	2.291	2.291	0.000	99	374575	50.0	44.3	
6 Butadiene	39	2.413	2.413	0.000	94	271932	NC	NC	
5 Vinyl chloride	62	2.416	2.416	0.000	98	379393	50.0	46.0	
8 Bromomethane	94	2.754	2.754	0.000	90	255582	50.0	47.5	
9 Chloroethane	64	2.847	2.847	0.000	100	205532	50.0	49.9	
10 Dichlorofluoromethane	67	3.104	3.104	0.000	97	461760	50.0	46.6	
11 Trichlorofluoromethane	101	3.159	3.159	0.000	97	439865	50.0	48.8	
12 Pentane	43	3.214	3.214	0.000	97	445279	NC	NC	
14 Ethyl ether	59	3.439	3.439	0.000	92	328679	50.0	51.7	
15 1,2-Dichloro-1,1,2-trifluoroetha	67	3.525	3.525	0.000	94	374795	NC	NC	
16 Acrolein	56	3.622	3.622	0.000	99	1164542	500.0	469.0	
17 1,1-Dichloroethene	96	3.760	3.760	0.000	98	288514	50.0	50.5	
18 112TCTFE	101	3.796	3.796	0.000	92	315628	50.0	53.0	
19 Acetone	58	3.799	3.799	0.000	99	103025	100.0	90.3	
20 Iodomethane	142	3.966	3.966	0.000	97	566645	50.0	51.2	
21 Isopropyl alcohol	45	3.988	3.988	0.000	99	171123	250.0	236.7	
22 Carbon disulfide	76	4.072	4.072	0.000	99	1006496	50.0	51.9	
24 Methyl acetate	43	4.239	4.239	0.000	98	356970	50.0	49.2	
25 3-Chloro-1-propene	41	4.271	4.271	0.000	93	475018	50.0	51.6	
26 Methylene Chloride	84	4.471	4.471	0.000	97	346134	50.0	50.5	
* 27 t-Butyl alcohol-d10 (IS)	65	4.487	4.487	0.000	0	300981	250.0	250.0	
28 2-Methyl-2-propanol	59	4.625	4.625	0.000	98	295584	250.0	242.8	
29 Acrylonitrile	53	4.831	4.831	0.000	99	200353	50.0	50.1	
31 Methyl tert-butyl ether	73	4.873	4.873	0.000	96	1017433	50.0	51.7	
32 trans-1,2-Dichloroethene	96	4.889	4.889	0.000	100	334703	50.0	50.7	
33 Hexane	57	5.307	5.307	0.000	91	530514	50.0	54.8	
35 1,1-Dichloroethane	63	5.548	5.548	0.000	96	587780	50.0	51.2	
36 Isopropyl ether	45	5.603	5.603	0.000	96	1091774	50.0	53.5	
37 2-Chloro-1,3-butadiene	53	5.654	5.654	0.000	90	506561	50.0	54.8	

Report Date: 19-May-2020 09:49:53

Chrom Revision: 2.3 18-May-2020 21:51:32

Data File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I03.D

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
38 Tert-butyl ethyl ether	59	6.127	6.127	0.000	98	1024603	50.0	54.0	
40 2-Butanone (MEK)	43	6.358	6.358	0.000	100	491072	100.0	100.2	
41 cis-1,2-Dichloroethene	96	6.374	6.374	0.000	81	379998	50.0	51.3	
42 2,2-Dichloropropane	77	6.387	6.387	0.000	89	472163	50.0	52.6	
44 Propionitrile	54	6.448	6.448	0.000	99	392028	250.0	239.7	
45 Methacrylonitrile	67	6.657	6.657	0.000	92	522965	125.0	128.8	
46 Chlorobromomethane	128	6.705	6.705	0.000	93	192153	50.0	50.2	
47 Tetrahydrofuran	71	6.718	6.718	0.000	89	136600	100.0	94.4	
48 Chloroform	83	6.853	6.853	0.000	93	580202	50.0	51.2	
\$ 49 Dibromofluoromethane (Surr)	113	7.065	7.065	0.000	94	336956	50.0	50.1	
50 1,1,1-Trichloroethane	97	7.078	7.078	0.000	98	506609	50.0	52.1	
51 Cyclohexane	56	7.168	7.168	0.000	90	621335	50.0	54.2	
52 Carbon tetrachloride	117	7.281	7.281	0.000	95	436037	50.0	53.5	
53 1,1-Dichloropropene	75	7.287	7.287	0.000	96	471966	50.0	52.9	
54 Isobutyl alcohol	41	7.451	7.451	0.000	95	243797	625.0	599.3	
\$ 55 1,2-Dichloroethane-d4 (Surr)	102	7.522	7.522	0.000	98	85182	50.0	49.7	
56 Benzene	78	7.551	7.551	0.000	96	1412305	50.0	51.3	
58 1,2-Dichloroethane	62	7.625	7.625	0.000	97	451302	50.0	49.1	
59 Tert-amyl methyl ether	73	7.731	7.731	0.000	99	1044827	50.0	54.0	
* 61 Fluorobenzene (IS)	96	7.950	7.950	0.000	98	1328501	50.0	50.0	
62 n-Heptane	43	7.956	7.956	0.000	90	557614	50.0	56.5	
63 n-Butanol	56	8.316	8.316	0.000	88	418843	NC	NC	
64 Trichloroethene	95	8.422	8.422	0.000	98	357869	50.0	51.2	
65 Methylcyclohexane	83	8.725	8.725	0.000	90	622420	50.0	52.2	
66 2-ethoxy-2-methyl butane	87	8.757	8.757	0.000	94	533231	50.0	54.8	
67 1,2-Dichloropropane	63	8.760	8.760	0.000	86	367960	50.0	51.8	
68 Methyl methacrylate	69	8.837	8.837	0.000	92	328090	50.0	54.0	
69 1,4-Dioxane	88	8.847	8.847	0.000	66	56207	625.0	691.2	
70 Dibromomethane	93	8.869	8.869	0.000	96	238880	50.0	51.4	
72 Dichlorobromomethane	83	9.098	9.098	0.000	100	438972	50.0	52.7	
73 2-Nitropropane	41	9.374	9.374	0.000	98	261509	100.0	96.5	
74 2-Chloroethyl vinyl ether	63	9.448	9.448	0.000	93	266423	50.0	53.4	
75 cis-1,3-Dichloropropene	75	9.628	9.628	0.000	96	586420	50.0	54.0	
76 4-Methyl-2-pentanone (MIBK)	43	9.795	9.795	0.000	96	1042715	100.0	105.0	
\$ 77 Toluene-d8 (Surr)	98	9.924	9.924	0.000	93	1370429	50.0	49.8	
78 Toluene	92	10.001	10.001	0.000	98	900006	50.0	51.1	
80 trans-1,3-Dichloropropene	75	10.249	10.249	0.000	92	538839	50.0	53.6	
81 Ethyl methacrylate	69	10.303	10.303	0.000	90	568043	50.0	53.3	
82 1,1,2-Trichloroethane	97	10.451	10.451	0.000	89	345720	50.0	50.6	
83 Tetrachloroethene	166	10.532	10.532	0.000	97	396809	50.0	52.8	
84 1,3-Dichloropropane	76	10.609	10.609	0.000	91	583897	50.0	51.2	
86 2-Hexanone	43	10.660	10.660	0.000	96	759684	100.0	98.6	
88 Chlorodibromomethane	129	10.818	10.818	0.000	90	381571	50.0	53.7	
89 Ethylene Dibromide	107	10.930	10.930	0.000	99	382542	50.0	52.1	
* 91 Chlorobenzene-d5 (IS)	117	11.355	11.355	0.000	85	1078598	50.0	50.0	
92 1-Chlorohexane	91	11.358	11.358	0.000	97	493316	50.0	54.5	
93 Chlorobenzene	112	11.377	11.377	0.000	96	1026893	50.0	50.8	
94 1,1,1,2-Tetrachloroethane	131	11.458	11.458	0.000	96	361100	50.0	52.6	
95 Ethylbenzene	91	11.461	11.461	0.000	98	1739104	50.0	53.4	
96 m-Xylene & p-Xylene	106	11.573	11.573	0.000	100	1380330	100.0	108.0	
97 o-Xylene	106	11.901	11.901	0.000	96	672594	50.0	54.4	
98 Styrene	104	11.917	11.917	0.000	95	1120594	50.0	52.7	

Report Date: 19-May-2020 09:49:53

Chrom Revision: 2.3 18-May-2020 21:51:32

Data File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I03.D

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
99 Bromoform	173	12.075	12.075	0.000	97	279229	50.0	51.8	
100 Isopropylbenzene	105	12.197	12.197	0.000	95	1789973	50.0	53.6	
102 Cyclohexanone	55	12.281	12.281	0.000	92	245831	625.0	658.1	
\$ 103 4-Bromofluorobenzene (Surr)	95	12.342	12.342	0.000	91	526388	50.0	49.4	
104 1,1,2,2-Tetrachloroethane	83	12.441	12.441	0.000	94	560716	50.0	50.8	
105 Bromobenzene	156	12.461	12.461	0.000	96	455834	50.0	51.3	
106 trans-1,4-Dichloro-2-butene	53	12.467	12.467	0.000	93	418715	125.0	129.6	
107 1,2,3-Trichloropropane	110	12.490	12.490	0.000	84	171933	50.0	50.8	
108 N-Propylbenzene	91	12.522	12.522	0.000	98	2094645	50.0	54.5	
109 2-Chlorotoluene	126	12.602	12.602	0.000	97	437810	50.0	53.3	
110 1,3,5-Trimethylbenzene	105	12.657	12.657	0.000	94	1548664	50.0	53.1	
111 4-Chlorotoluene	126	12.692	12.692	0.000	97	445476	50.0	52.4	
113 tert-Butylbenzene	134	12.898	12.898	0.000	93	327130	50.0	54.4	
114 Pentachloroethane	167	12.933	12.933	0.000	90	270479	50.0	53.2	
115 1,2,4-Trimethylbenzene	105	12.940	12.940	0.000	97	1608987	50.0	53.1	
116 sec-Butylbenzene	105	13.062	13.062	0.000	94	1993739	50.0	55.5	
117 1,3-Dichlorobenzene	146	13.162	13.162	0.000	98	872729	50.0	52.5	
118 4-Isopropyltoluene	119	13.168	13.168	0.000	97	1738547	50.0	56.2	
* 119 1,4-Dichlorobenzene-d4	152	13.216	13.216	0.000	94	607580	50.0	50.0	
120 1,4-Dichlorobenzene	146	13.236	13.236	0.000	95	892706	50.0	51.5	
121 1,2,3-Trimethylbenzene	105	13.245	13.245	0.000	98	1556619	50.0	52.1	
122 Benzyl chloride	91	13.313	13.313	0.000	98	1237807	NC	NC	
123 1,3-Diethylbenzene	119	13.367	13.367	0.000	96	993611	NC	NC	
124 p-Diethylbenzene	119	13.438	13.438	0.000	94	1045840	NC	NC	
125 n-Butylbenzene	92	13.458	13.458	0.000	97	856313	50.0	57.4	
126 1,2-Dichlorobenzene	146	13.496	13.496	0.000	98	860477	50.0	51.6	
127 o-diethylbenzene	119	13.512	13.512	0.000	95	833409	NC	NC	
129 1,2-Dibromo-3-Chloropropane	75	14.036	14.036	0.000	88	128807	50.0	52.4	
130 1,3,5-Trichlorobenzene	180	14.158	14.158	0.000	98	690599	NC	NC	
131 1,2,4-Trichlorobenzene	180	14.583	14.583	0.000	95	652546	50.0	55.5	
132 Hexachlorobutadiene	225	14.663	14.663	0.000	98	301908	50.0	55.6	
133 Naphthalene	128	14.766	14.766	0.000	97	2173877	50.0	54.3	
134 1,2,3-Trichlorobenzene	180	14.911	14.911	0.000	96	642500	50.0	55.0	
135 2-Methylnaphthalene	142	15.560	15.560	0.000	96	1254916	NC	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Report Date: 19-May-2020 09:49:53

Chrom Revision: 2.3 18-May-2020 21:51:32

Reagents:

MSV_VCYC_00002	Amount Added: 10.00	Units: uL	
MSV_V_Gas_00073	Amount Added: 2.50	Units: uL	
MSV_V_2CEVE_00066	Amount Added: 5.00	Units: uL	
MSV_V_VOA1_00054	Amount Added: 5.00	Units: uL	
MSV_V_VOA3_00026	Amount Added: 2.00	Units: uL	
MSV_V_VOA6_00033	Amount Added: 5.00	Units: uL	
MSV_V_EE_00003	Amount Added: 5.00	Units: uL	
MSV_DCFM_00013	Amount Added: 2.50	Units: uL	
MSV_HP23_ISSS_00002	Amount Added: 1.00	Units: uL	Run Reagent

Report Date: 19-May-2020 09:49:53

Chrom Revision: 2.3 18-May-2020 21:51:32

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I03.D

Injection Date: 04-May-2020 13:02:30

Instrument ID: 9915

Operator ID: lcp00895

Lims ID: ICIS

Worklist Smp#: 5

Client ID:

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

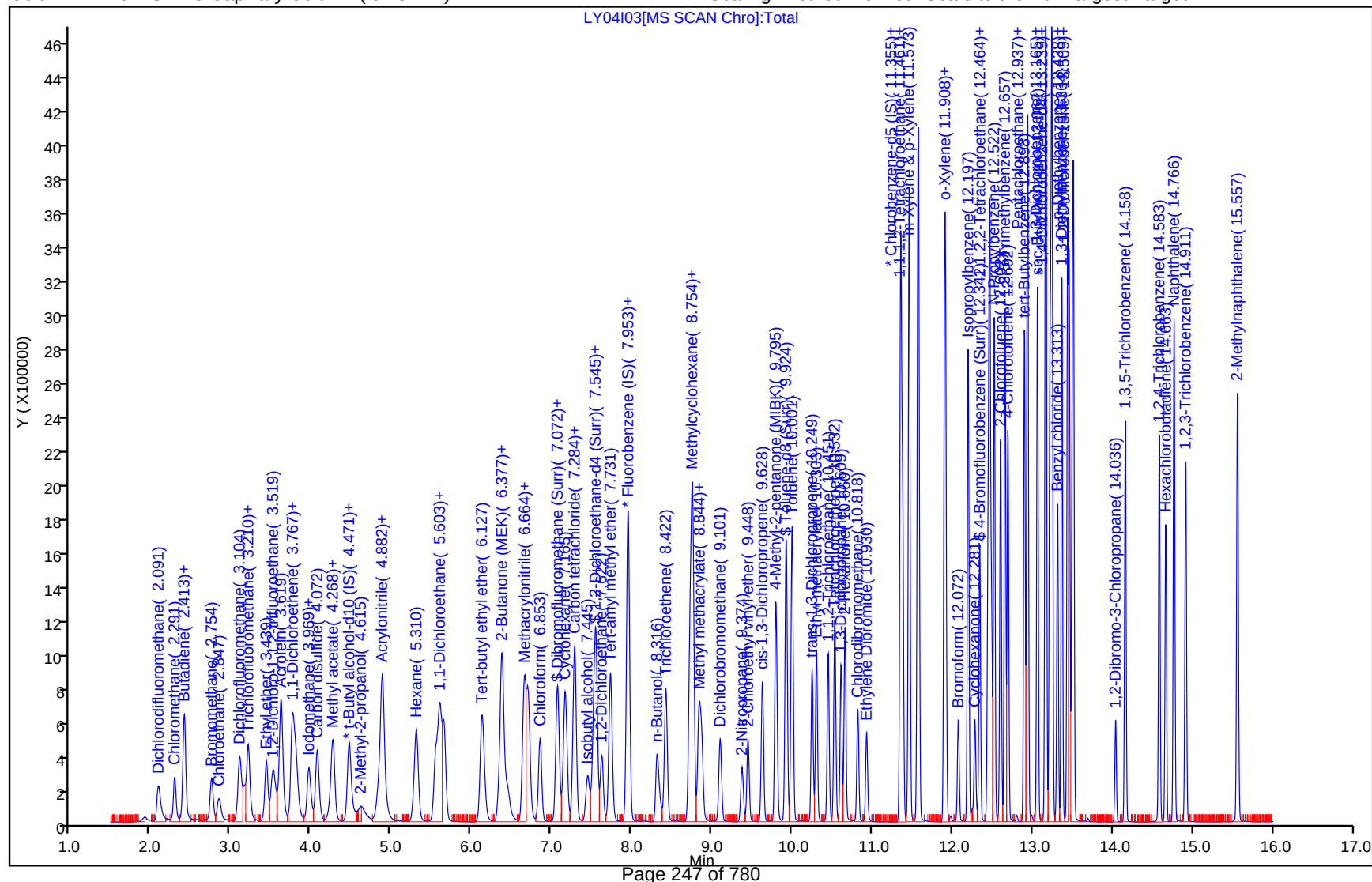
ALS Bottle#: 4

Method: MSVoa_9915a

Limit Group: MSV - 8260C DOD5

Column: Rxi-624Sil MS Capillary Column (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

September 2020

I-5-247

Report Date: 19-May-2020 09:50:04

Chrom Revision: 2.3 18-May-2020 21:51:32

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I04.D
 Lims ID: IC std4
 Client ID:
 Sample Type: IC Calib Level: 4
 Inject. Date: 04-May-2020 13:24:30 ALS Bottle#: 5 Worklist Smp#: 6
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: VSTD020;VSTD020;1;1;;;
 Misc. Info.: 8260W.SUB;;5;5;;;
 Operator ID: lcp00895 Instrument ID: 9915
 Sublist: chrom-MSVoa_9915a*sub2
 Method: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\MSVoa_9915a.m
 Limit Group: MSV - 8260C DOD5
 Last Update: 19-May-2020 09:50:00 Calib Date: 04-May-2020 14:30:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1023

First Level Reviewer: dalea

Date: 05-May-2020 07:33:29

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	2.098	2.098	0.000	99	177861	20.0	20.6	
4 Chloromethane	50	2.297	2.297	0.000	99	158523	20.0	19.5	
6 Butadiene	39	2.413	2.413	0.000	77	98589	NC	NC	
5 Vinyl chloride	62	2.416	2.416	0.000	98	157154	20.0	19.8	
8 Bromomethane	94	2.760	2.760	0.000	90	110141	20.0	21.3	
9 Chloroethane	64	2.847	2.847	0.000	100	84796	20.0	21.3	
10 Dichlorofluoromethane	67	3.104	3.104	0.000	96	182484	20.0	19.2	
11 Trichlorofluoromethane	101	3.169	3.169	0.000	96	172928	20.0	20.0	
12 Pentane	43	3.217	3.217	0.000	97	141395	NC	NC	
14 Ethyl ether	59	3.445	3.445	0.000	91	127353	20.0	20.9	
15 1,2-Dichloro-1,1,2-trifluoroetha	67	3.525	3.525	0.000	92	137860	NC	NC	
16 Acrolein	56	3.625	3.625	0.000	100	490940	200.0	209.9	
17 1,1-Dichloroethene	96	3.763	3.763	0.000	98	106258	20.0	19.4	
18 112TCTFE	101	3.792	3.792	0.000	89	104698	20.0	18.3	
19 Acetone	58	3.808	3.808	0.000	100	42362	40.0	39.4	
20 Iodomethane	142	3.972	3.972	0.000	97	215574	20.0	20.3	
21 Isopropyl alcohol	45	3.992	3.992	0.000	99	139850	200.0	205.3	
22 Carbon disulfide	76	4.075	4.075	0.000	99	373419	20.0	20.1	
24 Methyl acetate	43	4.246	4.246	0.000	98	139544	20.0	20.0	
25 3-Chloro-1-propene	41	4.275	4.275	0.000	93	185073	20.0	20.9	
26 Methylene Chloride	84	4.477	4.477	0.000	93	132280	20.0	20.1	
* 27 t-Butyl alcohol-d10 (IS)	65	4.500	4.500	0.000	0	283561	250.0	250.0	
28 2-Methyl-2-propanol	59	4.625	4.625	0.000	99	238670	200.0	208.1	
29 Acrylonitrile	53	4.841	4.841	0.000	97	80539	20.0	21.0	
31 Methyl tert-butyl ether	73	4.879	4.879	0.000	94	398084	20.0	21.0	
32 trans-1,2-Dichloroethene	96	4.889	4.889	0.000	99	127360	20.0	20.1	
33 Hexane	57	5.310	5.310	0.000	92	161451	20.0	17.3	
35 1,1-Dichloroethane	63	5.554	5.554	0.000	96	224475	20.0	20.3	
36 Isopropyl ether	45	5.603	5.603	0.000	95	413372	20.0	21.1	
37 2-Chloro-1,3-butadiene	53	5.657	5.657	0.000	90	181436	20.0	20.4	

Report Date: 19-May-2020 09:50:04

Chrom Revision: 2.3 18-May-2020 21:51:32

Data File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I04.D

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
38 Tert-butyl ethyl ether	59	6.130	6.130	0.000	97	388116	20.0	21.3	
S 39 1,2-Dichloroethene, Total	100				0			40.7	
40 2-Butanone (MEK)	43	6.358	6.358	0.000	100	198706	40.0	42.2	
41 cis-1,2-Dichloroethene	96	6.374	6.374	0.000	81	146563	20.0	20.6	
42 2,2-Dichloropropane	77	6.394	6.394	0.000	86	173758	20.0	20.2	
44 Propionitrile	54	6.451	6.451	0.000	100	318168	200.0	206.5	
45 Methacrylonitrile	67	6.660	6.660	0.000	91	414486	100.0	106.2	
46 Chlorobromomethane	128	6.705	6.705	0.000	89	75698	20.0	20.6	
47 Tetrahydrofuran	71	6.709	6.709	0.000	80	55185	40.0	40.5	
48 Chloroform	83	6.853	6.853	0.000	93	221146	20.0	20.3	
\$ 49 Dibromofluoromethane (Surr)	113	7.069	7.069	0.000	94	324419	50.0	50.2	
50 1,1,1-Trichloroethane	97	7.072	7.072	0.000	99	185152	20.0	19.8	
51 Cyclohexane	56	7.168	7.168	0.000	89	194548	20.0	17.7	
52 Carbon tetrachloride	117	7.284	7.284	0.000	96	151903	20.0	19.4	
53 1,1-Dichloropropene	75	7.287	7.287	0.000	98	170163	20.0	19.9	
54 Isobutyl alcohol	41	7.451	7.451	0.000	96	196582	500.0	512.9	
\$ 55 1,2-Dichloroethane-d4 (Surr)	102	7.519	7.519	0.000	97	84786	50.0	51.5	M
56 Benzene	78	7.551	7.551	0.000	97	542642	20.0	20.5	
58 1,2-Dichloroethane	62	7.625	7.625	0.000	97	175386	20.0	19.9	
59 Tert-amyl methyl ether	73	7.734	7.734	0.000	98	395500	20.0	21.3	
* 61 Fluorobenzene (IS)	96	7.950	7.950	0.000	98	1276364	50.0	50.0	
62 n-Heptane	43	7.950	7.950	0.000	73	159096	20.0	16.8	
63 n-Butanol	56	8.319	8.319	0.000	89	328059	NC	NC	
64 Trichloroethene	95	8.422	8.422	0.000	97	135722	20.0	20.2	
65 Methylcyclohexane	83	8.728	8.728	0.000	91	218841	20.0	19.1	
66 2-ethoxy-2-methyl butane	87	8.760	8.760	0.000	92	201926	20.0	21.6	
67 1,2-Dichloropropane	63	8.763	8.763	0.000	94	141920	20.0	20.8	
68 Methyl methacrylate	69	8.834	8.834	0.000	93	119936	20.0	20.5	
69 1,4-Dioxane	88	8.847	8.847	0.000	72	40592	500.0	529.9	
70 Dibromomethane	93	8.869	8.869	0.000	96	92274	20.0	20.7	
72 Dichlorobromomethane	83	9.104	9.104	0.000	99	162248	20.0	20.3	
73 2-Nitropropane	41	9.374	9.374	0.000	99	101204	40.0	39.6	
74 2-Chloroethyl vinyl ether	63	9.448	9.448	0.000	91	99560	20.0	20.8	
75 cis-1,3-Dichloropropene	75	9.628	9.628	0.000	96	218933	20.0	21.0	
76 4-Methyl-2-pentanone (MIBK)	43	9.799	9.799	0.000	96	413672	40.0	43.4	
\$ 77 Toluene-d8 (Surr)	98	9.924	9.924	0.000	93	1310005	50.0	49.7	
78 Toluene	92	10.001	10.001	0.000	98	348742	20.0	20.7	
S 79 1,3-Dichloropropene, Total	100				0			41.7	
80 trans-1,3-Dichloropropene	75	10.249	10.249	0.000	92	198841	20.0	20.7	
81 Ethyl methacrylate	69	10.303	10.303	0.000	89	209124	20.0	20.5	
82 1,1,2-Trichloroethane	97	10.448	10.448	0.000	90	133266	20.0	20.4	
83 Tetrachloroethene	166	10.532	10.532	0.000	97	142717	20.0	19.8	
84 1,3-Dichloropropane	76	10.609	10.609	0.000	90	226140	20.0	20.7	
86 2-Hexanone	43	10.660	10.660	0.000	97	300544	40.0	40.8	
88 Chlorodibromomethane	129	10.818	10.818	0.000	89	142150	20.0	20.9	
89 Ethylene Dibromide	107	10.930	10.930	0.000	98	146471	20.0	20.8	
S 90 Xylenes, Total	106				0			64.6	
* 91 Chlorobenzene-d5 (IS)	117	11.352	11.352	0.000	85	1032072	50.0	50.0	
92 1-Chlorohexane	91	11.358	11.358	0.000	97	166208	20.0	19.2	
93 Chlorobenzene	112	11.377	11.377	0.000	96	401018	20.0	20.7	
94 1,1,1,2-Tetrachloroethane	131	11.458	11.458	0.000	96	139057	20.0	21.2	
95 Ethylbenzene	91	11.461	11.461	0.000	98	655609	20.0	21.0	

Report Date: 19-May-2020 09:50:04

Chrom Revision: 2.3 18-May-2020 21:51:32

Data File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I04.D

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
96 m-Xylene & p-Xylene	106	11.573	11.573	0.000	99	523823	40.0	42.8	
97 o-Xylene	106	11.901	11.901	0.000	95	257166	20.0	21.7	
98 Styrene	104	11.917	11.917	0.000	95	422041	20.0	20.7	
99 Bromoform	173	12.072	12.072	0.000	97	102700	20.0	19.9	
100 Isopropylbenzene	105	12.197	12.197	0.000	95	646128	20.0	20.2	
102 Cyclohexanone	55	12.281	12.281	0.000	92	191892	500.0	545.3	
\$ 103 4-Bromofluorobenzene (Surr)	95	12.342	12.342	0.000	92	505665	50.0	49.6	
104 1,1,2,2-Tetrachloroethane	83	12.442	12.442	0.000	93	222213	20.0	21.2	
105 Bromobenzene	156	12.461	12.461	0.000	97	176876	20.0	20.9	
106 trans-1,4-Dichloro-2-butene	53	12.467	12.467	0.000	93	330679	100.0	107.5	
107 1,2,3-Trichloropropane	110	12.490	12.490	0.000	71	67064	20.0	20.8	M
108 N-Propylbenzene	91	12.522	12.522	0.000	99	771811	20.0	21.1	
109 2-Chlorotoluene	126	12.602	12.602	0.000	97	164225	20.0	21.0	
110 1,3,5-Trimethylbenzene	105	12.657	12.657	0.000	94	576194	20.0	20.7	
111 4-Chlorotoluene	126	12.692	12.692	0.000	97	172873	20.0	21.3	
113 tert-Butylbenzene	134	12.898	12.898	0.000	92	115496	20.0	20.2	
114 Pentachloroethane	167	12.933	12.933	0.000	87	103046	20.0	21.3	
115 1,2,4-Trimethylbenzene	105	12.940	12.940	0.000	97	607657	20.0	21.1	
116 sec-Butylbenzene	105	13.062	13.062	0.000	93	686024	20.0	20.1	
117 1,3-Dichlorobenzene	146	13.162	13.162	0.000	98	344132	20.0	21.8	
118 4-Isopropyltoluene	119	13.168	13.168	0.000	98	608740	20.0	20.7	
* 119 1,4-Dichlorobenzene-d4	152	13.216	13.216	0.000	95	578430	50.0	50.0	
120 1,4-Dichlorobenzene	146	13.236	13.236	0.000	96	348691	20.0	21.1	
121 1,2,3-Trimethylbenzene	105	13.245	13.245	0.000	98	608796	20.0	21.4	
122 Benzyl chloride	91	13.313	13.313	0.000	98	467389	NC	NC	
123 1,3-Diethylbenzene	119	13.368	13.368	0.000	96	386088	NC	NC	
124 p-Diethylbenzene	119	13.438	13.438	0.000	94	404528	NC	NC	
125 n-Butylbenzene	92	13.458	13.458	0.000	97	301701	20.0	21.2	
126 1,2-Dichlorobenzene	146	13.496	13.496	0.000	99	340061	20.0	21.4	
127 o-diethylbenzene	119	13.512	13.512	0.000	94	327643	NC	NC	
129 1,2-Dibromo-3-Chloropropane	75	14.036	14.036	0.000	87	48311	20.0	20.6	
130 1,3,5-Trichlorobenzene	180	14.158	14.158	0.000	98	258370	NC	NC	
131 1,2,4-Trichlorobenzene	180	14.583	14.583	0.000	94	246455	20.0	22.0	
132 Hexachlorobutadiene	225	14.663	14.663	0.000	98	104255	20.0	20.2	
133 Naphthalene	128	14.769	14.769	0.000	96	834880	20.0	21.9	
134 1,2,3-Trichlorobenzene	180	14.911	14.911	0.000	96	249938	20.0	22.5	
135 2-Methylnaphthalene	142	15.560	15.560	0.000	93	444958	NC	NC	
S 150 Total Diethylbenzene	1		0.000					ND	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Report Date: 19-May-2020 09:50:04

Chrom Revision: 2.3 18-May-2020 21:51:32

Reagents:

MSV_VCYC_00002	Amount Added: 16.00	Units: uL	
MSV_V_Gas_00073	Amount Added: 2.00	Units: uL	
MSV_V_EE_00003	Amount Added: 4.00	Units: uL	
MSV_V_2CEVE_00066	Amount Added: 4.00	Units: uL	
MSV_V_VOA1_00054	Amount Added: 4.00	Units: uL	
MSV_V_VOA3_00026	Amount Added: 1.60	Units: uL	
MSV_V_VOA6_00033	Amount Added: 4.00	Units: uL	
MSV_V_VOA2_00028	Amount Added: 4.00	Units: uL	
MSV_DCFM_00013	Amount Added: 2.00	Units: uL	
MSV_HP23_ISSS_00002	Amount Added: 1.00	Units: uL	Run Reagent

Report Date: 19-May-2020 09:50:04

Chrom Revision: 2.3 18-May-2020 21:51:32

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I04.D

Injection Date: 04-May-2020 13:24:30

Instrument ID: 9915

Operator ID: lcp00895

Lims ID: IC std4

Worklist Smp#: 6

Client ID:

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

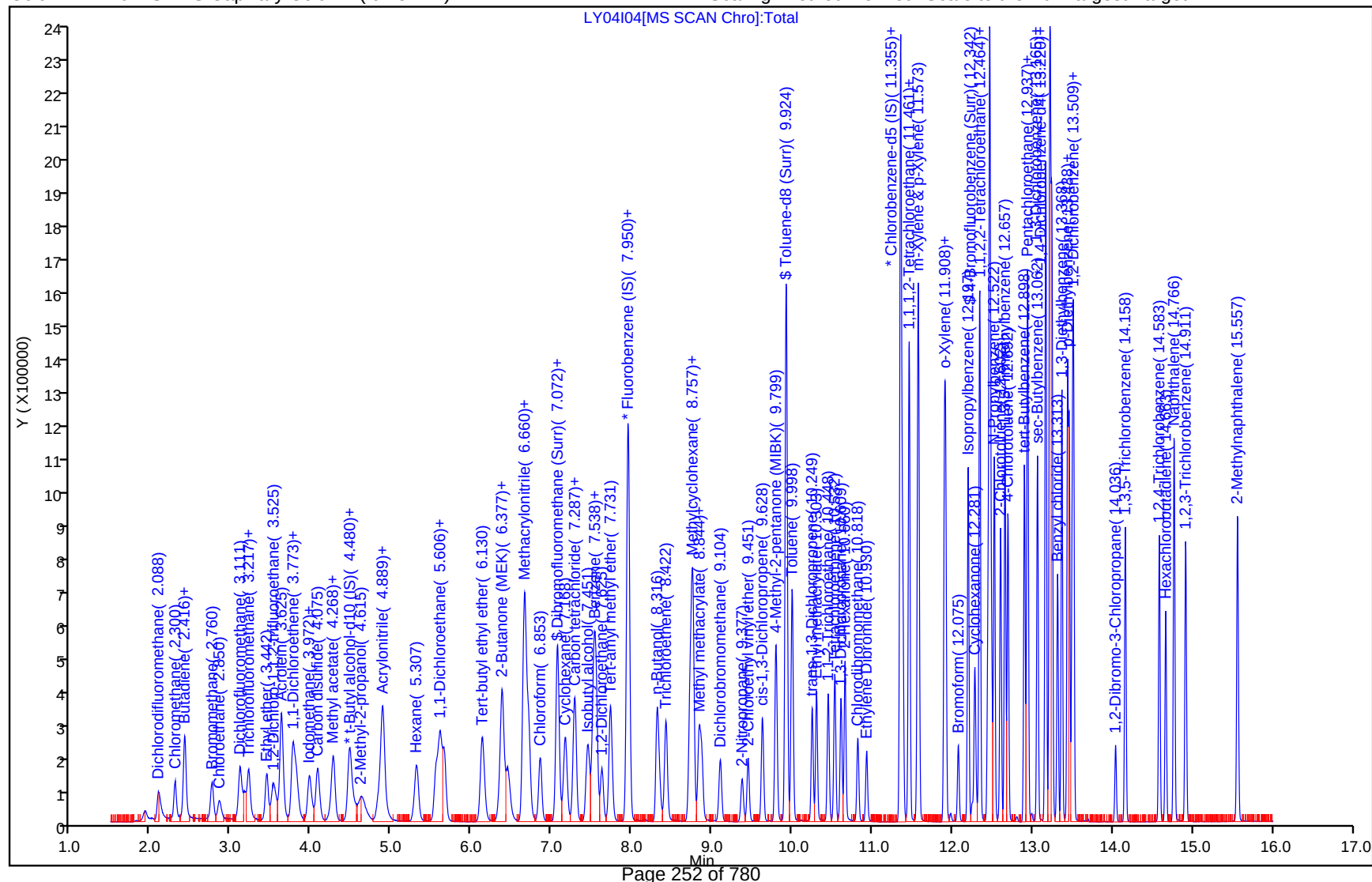
ALS Bottle#: 5

Method: MSVoa_9915a

Limit Group: MSV - 8260C DOD5

Column: Rxi-624Sil MS Capillary Column (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-252

September 2020

Report Date: 19-May-2020 09:50:04

Chrom Revision: 2.3 18-May-2020 21:51:32
Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I04.D

Injection Date: 04-May-2020 13:24:30

Instrument ID: 9915

Lims ID: IC std4

Client ID:

Operator ID: lcp00895

ALS Bottle#:

5

Worklist Smp#: 6

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

Method: MSVoa_9915a

Limit Group: MSV - 8260C DOD5

Column: Rxi-624Sil MS Capillary Column (0.25 mm ID) x 30 m

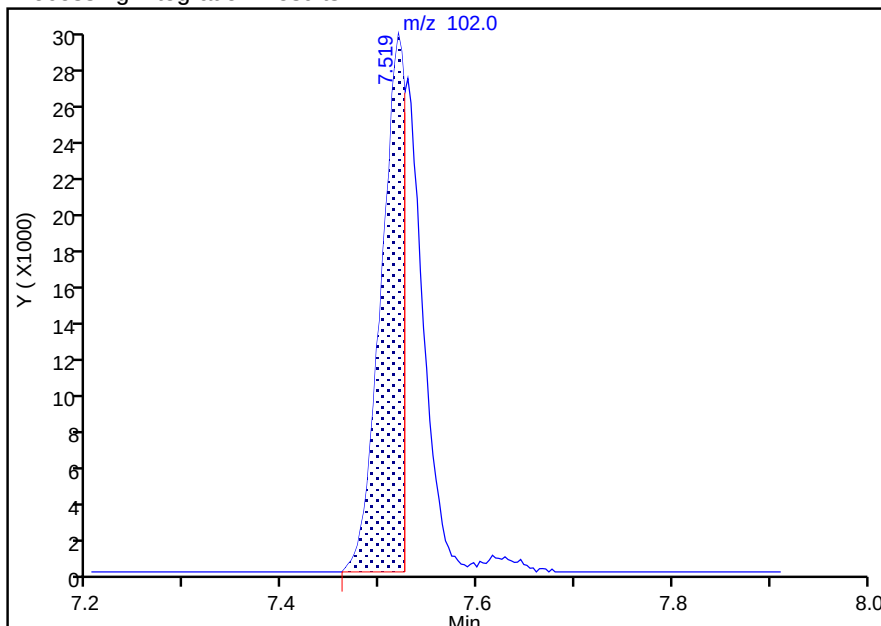
MS Quad

\$ 55 1,2-Dichloroethane-d4 (Surr), CAS: 17060-07-0

Signal: 1

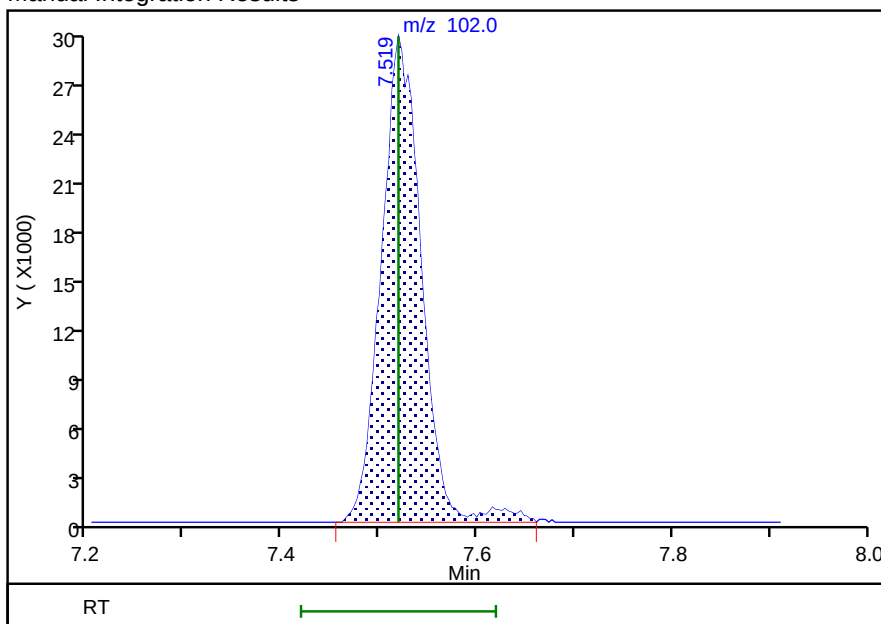
RT: 7.52
Area: 49545
Amount: 36.735235
Amount Units: ug/l

Processing Integration Results



RT: 7.52
Area: 84786
Amount: 51.459193
Amount Units: ug/l

Manual Integration Results



Reviewer: dalea, 06-May-2020 06:55:10

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

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Report Date: 19-May-2020 09:50:04

Chrom Revision: 2.3 18-May-2020 21:51:32
Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I04.D

Injection Date: 04-May-2020 13:24:30

Instrument ID: 9915

Lims ID: IC std4

Client ID:

Operator ID: lcp00895

ALS Bottle#:

5

Worklist Smp#:

6

Purge Vol: 5.000 mL

Dil. Factor:

1.0000

Method: MSVoa_9915a

Limit Group:

MSV - 8260C DOD5

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

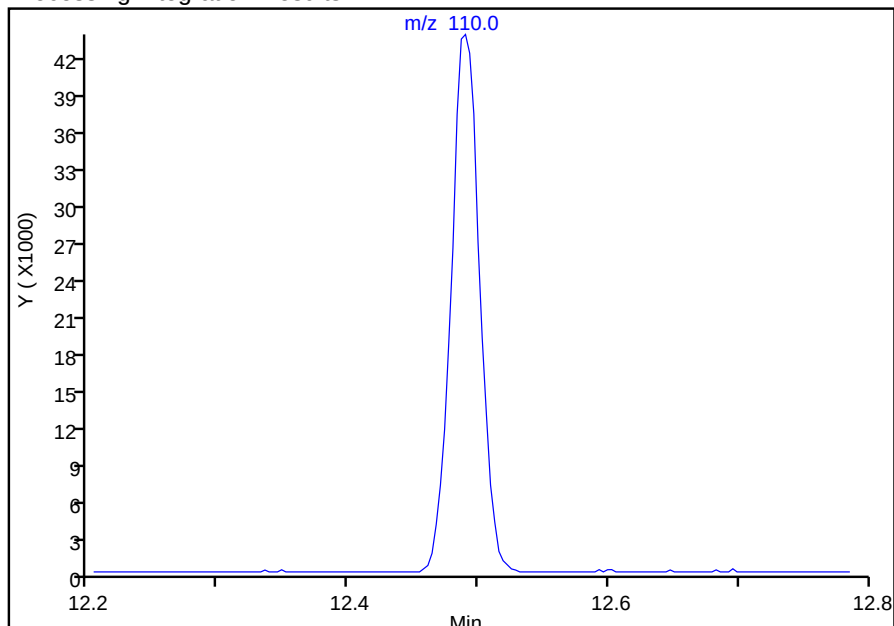
107 1,2,3-Trichloropropane, CAS: 96-18-4

Signal: 1

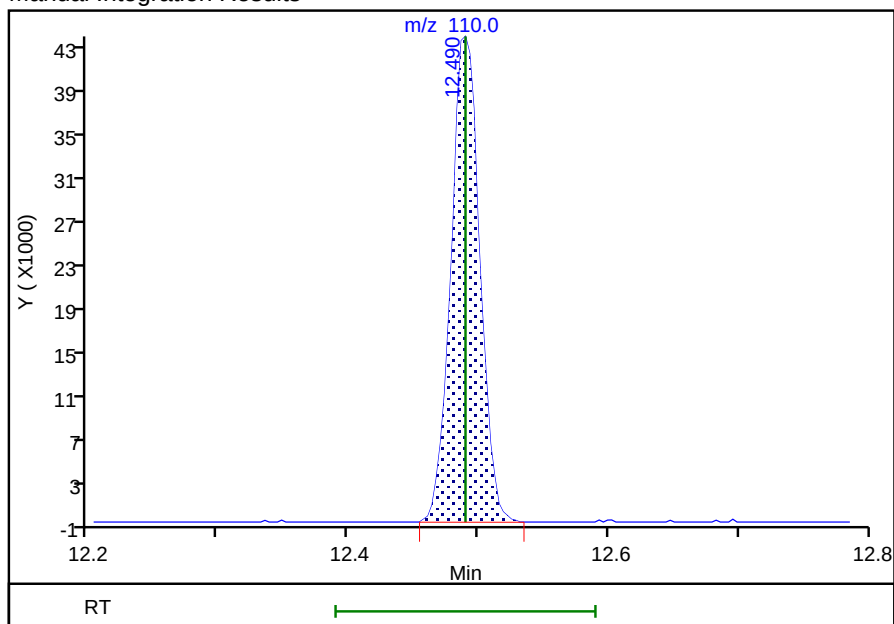
Not Detected

Expected RT: 12.49

Processing Integration Results



Manual Integration Results



Reviewer: dalea, 05-May-2020 07:33:14

Audit Action: Assigned New Baseline

Audit Reason: Missed Peak

Page 254 of 780

Report Date: 19-May-2020 09:50:14

Chrom Revision: 2.3 18-May-2020 21:51:32

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I05.D
 Lims ID: IC std3
 Client ID:
 Sample Type: IC Calib Level: 3
 Inject. Date: 04-May-2020 13:46:30 ALS Bottle#: 6 Worklist Smp#: 7
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: VSTD010;VSTD010;1;1;;;
 Misc. Info.: 8260W.SUB;;5;5;;;
 Operator ID: lcp00895 Instrument ID: 9915
 Sublist: chrom-MSVoa_9915a*sub2
 Method: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\MSVoa_9915a.m
 Limit Group: MSV - 8260C DOD5
 Last Update: 19-May-2020 09:50:10 Calib Date: 04-May-2020 14:30:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1023

First Level Reviewer: dalea

Date: 05-May-2020 07:36:23

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	2.082	2.098	-0.016	99	86758	10.0	9.89	
4 Chloromethane	50	2.284	2.297	-0.013	99	78750	10.0	9.54	
6 Butadiene	39	2.403	2.413	-0.010	81	54734	NC	NC	
5 Vinyl chloride	62	2.406	2.416	-0.010	97	75694	10.0	9.41	
8 Bromomethane	94	2.747	2.760	-0.013	90	53956	10.0	10.3	
9 Chloroethane	64	2.844	2.847	-0.003	99	42245	10.0	10.3	
10 Dichlorofluoromethane	67	3.094	3.104	-0.010	97	97409	10.0	10.1	
11 Trichlorofluoromethane	101	3.149	3.169	-0.020	96	85913	10.0	9.76	
12 Pentane	43	3.201	3.217	-0.016	97	84591	NC	NC	
14 Ethyl ether	59	3.426	3.445	-0.019	90	62786	10.0	10.1	
15 1,2-Dichloro-1,1,2-trifluoroetha	67	3.512	3.525	-0.013	92	71992	NC	NC	
16 Acrolein	56	3.615	3.625	-0.010	100	264335	100.0	112.5	
17 1,1-Dichloroethene	96	3.750	3.763	-0.013	98	56055	10.0	10.0	
18 112TCTFE	101	3.779	3.792	-0.013	90	60524	10.0	10.4	
19 Acetone	58	3.795	3.808	-0.013	99	21718	20.0	20.1	
20 Iodomethane	142	3.956	3.972	-0.016	98	107564	10.0	9.97	
21 Isopropyl alcohol	45	3.979	3.992	-0.013	98	66107	100.0	96.6	
22 Carbon disulfide	76	4.062	4.075	-0.013	99	190382	10.0	10.1	
24 Methyl acetate	43	4.236	4.246	-0.010	97	67229	10.0	9.49	
25 3-Chloro-1-propene	41	4.258	4.275	-0.017	93	87237	10.0	9.71	
26 Methylene Chloride	84	4.461	4.477	-0.016	93	67337	10.0	10.1	
* 27 t-Butyl alcohol-d10 (IS)	65	4.480	4.500	-0.020	0	284748	250.0	250.0	
28 2-Methyl-2-propanol	59	4.615	4.625	-0.010	99	111482	100.0	96.8	
29 Acrylonitrile	53	4.821	4.841	-0.020	96	40560	10.0	10.4	
31 Methyl tert-butyl ether	73	4.866	4.879	-0.013	90	189155	10.0	9.84	
32 trans-1,2-Dichloroethene	96	4.882	4.889	-0.007	99	64242	10.0	9.97	
33 Hexane	57	5.297	5.310	-0.013	93	94197	10.0	9.96	
35 1,1-Dichloroethane	63	5.541	5.554	-0.013	96	112890	10.0	10.1	
36 Isopropyl ether	45	5.593	5.603	-0.010	93	197716	10.0	9.93	
37 2-Chloro-1,3-butadiene	53	5.651	5.657	-0.006	90	89768	10.0	9.95	

Report Date: 19-May-2020 09:50:14

Chrom Revision: 2.3 18-May-2020 21:51:32

Data File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I05.D

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
38 Tert-butyl ethyl ether	59	6.126	6.130	-0.004	98	184021	10.0	9.94	
S 39 1,2-Dichloroethene, Total	100				0			20.1	
40 2-Butanone (MEK)	43	6.345	6.358	-0.013	100	99257	20.0	20.8	
41 cis-1,2-Dichloroethene	96	6.371	6.374	-0.003	81	73173	10.0	10.1	
42 2,2-Dichloropropane	77	6.377	6.394	-0.017	65	85583	10.0	9.78	
44 Propionitrile	54	6.448	6.451	-0.003	99	148013	100.0	95.6	
45 Methacrylonitrile	67	6.654	6.660	-0.006	92	193845	50.0	48.9	
46 Chlorobromomethane	128	6.696	6.705	-0.009	90	37485	10.0	10.0	
47 Tetrahydrofuran	71	6.708	6.709	-0.001	80	27785	20.0	20.3	
48 Chloroform	83	6.850	6.853	-0.003	95	108760	10.0	9.84	
\$ 49 Dibromofluoromethane (Surr)	113	7.062	7.069	-0.007	94	321234	50.0	49.0	
50 1,1,1-Trichloroethane	97	7.069	7.072	-0.003	98	93122	10.0	9.81	
51 Cyclohexane	56	7.162	7.168	-0.006	90	109623	10.0	9.80	
52 Carbon tetrachloride	117	7.278	7.284	-0.006	97	79098	10.0	9.95	
53 1,1-Dichloropropene	75	7.284	7.287	-0.003	97	87745	10.0	10.1	
54 Isobutyl alcohol	41	7.448	7.451	-0.003	96	90503	250.0	235.2	
\$ 55 1,2-Dichloroethane-d4 (Surr)	102	7.512	7.519	-0.007	98	82584	50.0	49.3	
56 Benzene	78	7.544	7.551	-0.007	95	271304	10.0	10.1	
58 1,2-Dichloroethane	62	7.622	7.625	-0.003	97	86609	10.0	9.66	
59 Tert-amyl methyl ether	73	7.724	7.734	-0.010	98	185275	10.0	9.81	
* 61 Fluorobenzene (IS)	96	7.946	7.950	-0.004	99	1296482	50.0	50.0	
62 n-Heptane	43	7.946	7.950	-0.004	83	101879	10.0	10.6	
63 n-Butanol	56	8.313	8.319	-0.006	89	142566	NC	NC	
64 Trichloroethene	95	8.419	8.422	-0.003	97	67103	10.0	9.84	
65 Methylcyclohexane	83	8.724	8.728	-0.004	92	112878	10.0	9.70	
66 2-ethoxy-2-methyl butane	87	8.750	8.760	-0.010	90	95041	10.0	10.0	
67 1,2-Dichloropropane	63	8.750	8.763	-0.013	91	68730	10.0	9.91	
68 Methyl methacrylate	69	8.831	8.834	-0.003	94	56118	10.0	9.46	
69 1,4-Dioxane	88	8.850	8.847	0.003	87	18596	250.0	241.7	
70 Dibromomethane	93	8.863	8.869	-0.006	97	44515	10.0	9.81	
72 Dichlorobromomethane	83	9.101	9.104	-0.003	99	77828	10.0	9.58	
73 2-Nitropropane	41	9.371	9.374	-0.003	99	48995	20.0	19.1	
74 2-Chloroethyl vinyl ether	63	9.445	9.448	-0.003	91	42434	10.0	8.72	
75 cis-1,3-Dichloropropene	75	9.628	9.628	0.000	97	102523	10.0	9.67	
76 4-Methyl-2-pentanone (MIBK)	43	9.795	9.799	-0.004	96	220609	20.0	22.8	
\$ 77 Toluene-d8 (Surr)	98	9.924	9.924	0.000	93	1320620	50.0	49.9	
78 Toluene	92	9.994	10.001	-0.007	98	169552	10.0	10.0	
S 79 1,3-Dichloropropene, Total	100				0			19.1	
80 trans-1,3-Dichloropropene	75	10.248	10.249	-0.001	92	91247	10.0	9.45	
81 Ethyl methacrylate	69	10.300	10.303	-0.003	90	90666	10.0	8.85	
82 1,1,2-Trichloroethane	97	10.451	10.448	0.003	90	63841	10.0	9.72	
83 Tetrachloroethene	166	10.528	10.532	-0.004	97	73733	10.0	10.2	
84 1,3-Dichloropropane	76	10.612	10.609	0.003	90	106133	10.0	9.68	
86 2-Hexanone	43	10.657	10.660	-0.003	97	174001	20.0	23.5	
88 Chlorodibromomethane	129	10.818	10.818	0.000	90	64627	10.0	9.46	
89 Ethylene Dibromide	107	10.930	10.930	0.000	98	69131	10.0	9.79	
S 90 Xylenes, Total	106				0			31.3	
* 91 Chlorobenzene-d5 (IS)	117	11.351	11.352	-0.001	85	1036391	50.0	50.0	
92 1-Chlorohexane	91	11.355	11.358	-0.003	97	87041	10.0	10.0	
93 Chlorobenzene	112	11.377	11.377	0.000	96	195501	10.0	10.1	
94 1,1,1,2-Tetrachloroethane	131	11.457	11.458	-0.001	95	65128	10.0	9.87	
95 Ethylbenzene	91	11.461	11.461	0.000	98	320784	10.0	10.2	

Report Date: 19-May-2020 09:50:14

Chrom Revision: 2.3 18-May-2020 21:51:32

Data File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I05.D

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
96 m-Xylene & p-Xylene	106	11.573	11.573	0.000	100	256781	20.0	20.9	
97 o-Xylene	106	11.901	11.901	0.000	96	123731	10.0	10.4	
98 Styrene	104	11.914	11.917	-0.003	95	196942	10.0	9.63	
99 Bromoform	173	12.072	12.072	0.000	97	45365	10.0	8.76	
100 Isopropylbenzene	105	12.197	12.197	0.000	95	318829	10.0	9.94	
102 Cyclohexanone	55	12.281	12.281	0.000	92	82502	250.0	233.4	
\$ 103 4-Bromofluorobenzene (Surr)	95	12.342	12.342	0.000	92	510717	50.0	49.9	
104 1,1,2,2-Tetrachloroethane	83	12.445	12.442	0.003	93	104141	10.0	9.76	
105 Bromobenzene	156	12.457	12.461	-0.004	96	86555	10.0	10.1	
106 trans-1,4-Dichloro-2-butene	53	12.467	12.467	0.000	92	155286	50.0	49.7	
107 1,2,3-Trichloropropane	110	12.490	12.490	0.000	72	32309	10.0	9.87	M
108 N-Propylbenzene	91	12.522	12.522	0.000	99	386435	10.0	10.4	
109 2-Chlorotoluene	126	12.602	12.602	0.000	97	81187	10.0	10.2	
110 1,3,5-Trimethylbenzene	105	12.657	12.657	0.000	94	281599	10.0	9.98	
111 4-Chlorotoluene	126	12.695	12.692	0.003	97	84766	10.0	10.3	
113 tert-Butylbenzene	134	12.901	12.898	0.003	93	57325	10.0	9.86	
114 Pentachloroethane	167	12.933	12.933	0.000	86	47982	10.0	9.77	
115 1,2,4-Trimethylbenzene	105	12.940	12.940	0.000	97	292731	10.0	10.0	
116 sec-Butylbenzene	105	13.062	13.062	0.000	94	356651	10.0	10.3	
117 1,3-Dichlorobenzene	146	13.162	13.162	0.000	98	168575	10.0	10.5	
118 4-Isopropyltoluene	119	13.168	13.168	0.000	97	305843	10.0	10.2	
* 119 1,4-Dichlorobenzene-d4	152	13.216	13.216	0.000	95	587484	50.0	50.0	
120 1,4-Dichlorobenzene	146	13.236	13.236	0.000	96	174747	10.0	10.4	
121 1,2,3-Trimethylbenzene	105	13.245	13.245	0.000	97	294051	10.0	10.2	
122 Benzyl chloride	91	13.313	13.313	0.000	98	205475	NC	NC	
123 1,3-Diethylbenzene	119	13.367	13.368	-0.001	96	184089	NC	NC	
124 p-Diethylbenzene	119	13.438	13.438	0.000	94	195549	NC	NC	
125 n-Butylbenzene	92	13.457	13.458	-0.001	98	158566	10.0	11.0	
126 1,2-Dichlorobenzene	146	13.499	13.496	0.003	99	166381	10.0	10.3	
127 o-diethylbenzene	119	13.512	13.512	0.000	94	159423	NC	NC	
129 1,2-Dibromo-3-Chloropropane	75	14.039	14.036	0.003	86	22101	10.0	9.30	
130 1,3,5-Trichlorobenzene	180	14.158	14.158	0.000	98	125213	NC	NC	
131 1,2,4-Trichlorobenzene	180	14.583	14.583	0.000	95	114895	10.0	10.1	
132 Hexachlorobutadiene	225	14.663	14.663	0.000	97	56985	10.0	10.8	
133 Naphthalene	128	14.769	14.769	0.000	96	370353	10.0	9.57	
134 1,2,3-Trichlorobenzene	180	14.911	14.911	0.000	96	117020	10.0	10.4	
135 2-Methylnaphthalene	142	15.560	15.560	0.000	93	179351	NC	NC	
S 150 Total Diethylbenzene	1		0.000					ND	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Report Date: 19-May-2020 09:50:14

Chrom Revision: 2.3 18-May-2020 21:51:32

Reagents:

MSV_VCYC_00002	Amount Added: 8.00	Units: uL	
MSV_V_Gas_00073	Amount Added: 1.00	Units: uL	
MSV_V_EE_00003	Amount Added: 2.00	Units: uL	
MSV_V_2CEVE_00066	Amount Added: 2.00	Units: uL	
MSV_V_VOA1_00054	Amount Added: 2.00	Units: uL	
MSV_V_VOA3_00026	Amount Added: 0.80	Units: uL	
MSV_V_VOA6_00033	Amount Added: 2.00	Units: uL	
MSV_V_VOA2_00028	Amount Added: 2.00	Units: uL	
MSV_DCFM_00013	Amount Added: 1.00	Units: uL	
MSV_HP23_ISSS_00002	Amount Added: 1.00	Units: uL	Run Reagent

Report Date: 19-May-2020 09:50:14

Chrom Revision: 2.3 18-May-2020 21:51:32

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I05.D

Injection Date: 04-May-2020 13:46:30

Instrument ID: 9915

Operator ID: lcp00895

Lims ID: IC std3

Worklist Smp#: 7

Client ID:

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

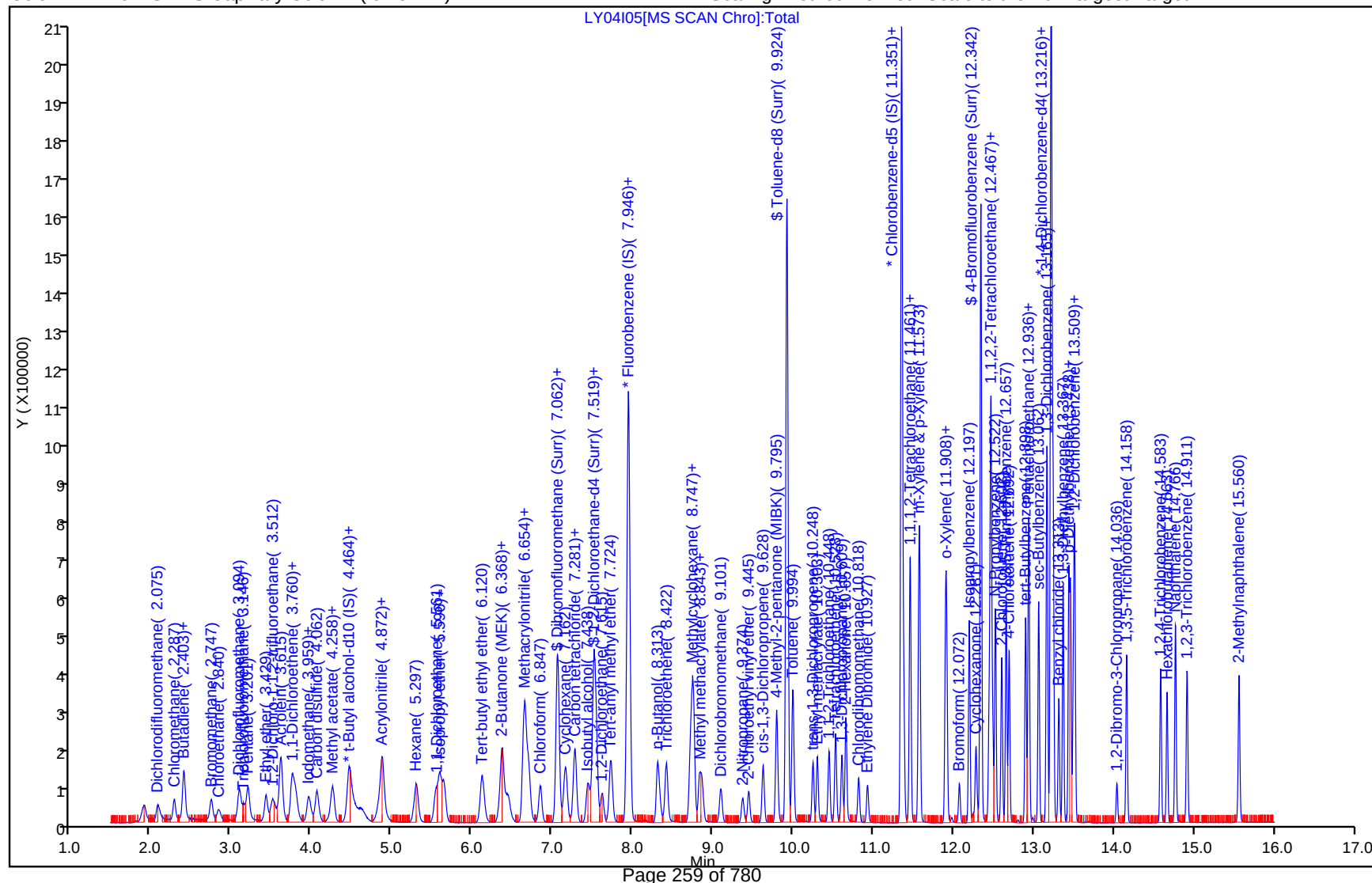
ALS Bottle#: 6

Method: MSVoa_9915a

Limit Group: MSV - 8260C DOD5

Column: Rxi-624Sil MS Capillary Column (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 19-May-2020 09:50:15

Chrom Revision: 2.3 18-May-2020 21:51:32
Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

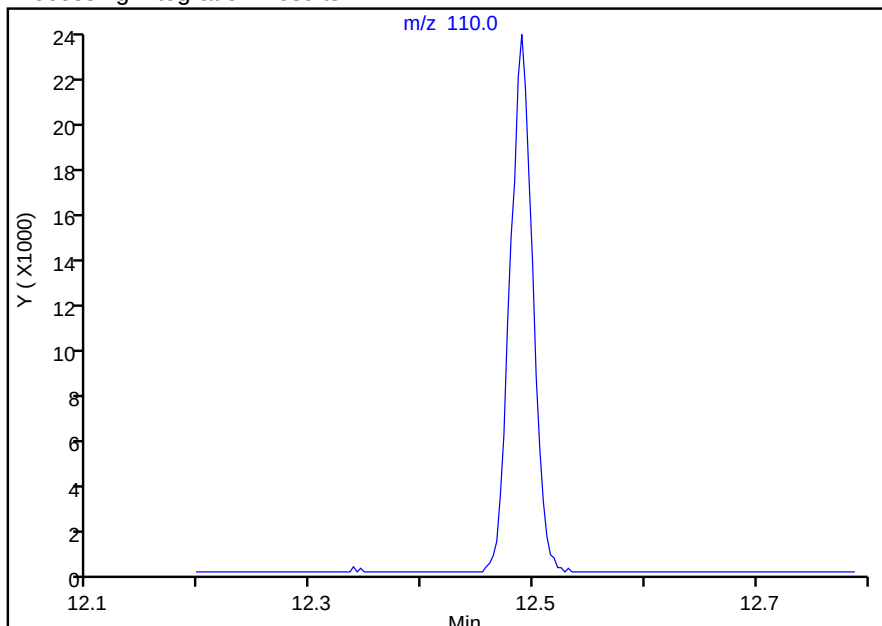
Data File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I05.D
 Injection Date: 04-May-2020 13:46:30 Instrument ID: 9915
 Lims ID: IC std3
 Client ID:
 Operator ID: lcp00895 ALS Bottle#: 6 Worklist Smp#: 7
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVoa_9915a Limit Group: MSV - 8260C DOD5
 Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

107 1,2,3-Trichloropropane, CAS: 96-18-4

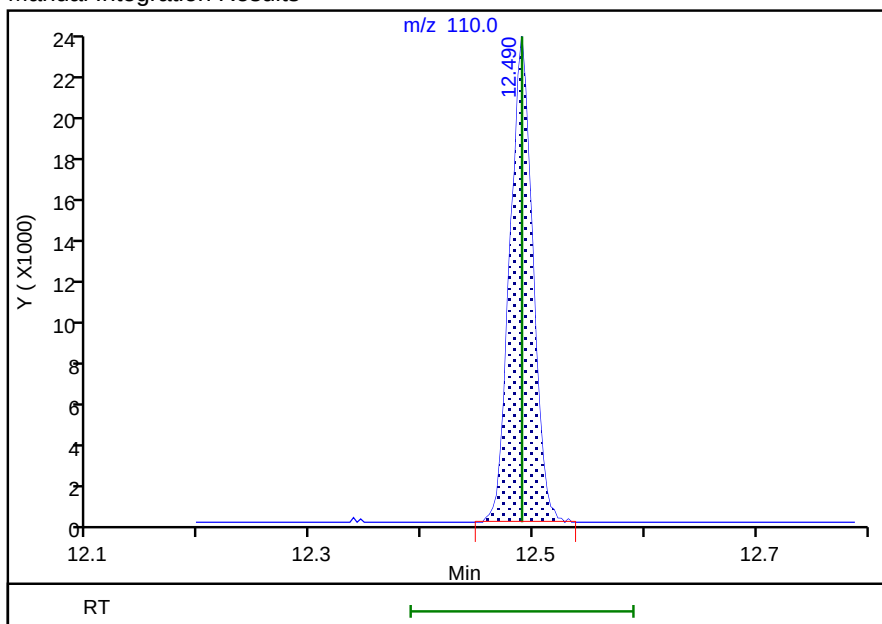
Signal: 1

Not Detected
 Expected RT: 12.49

Processing Integration Results



Manual Integration Results



Reviewer: dalea, 05-May-2020 07:36:01

Audit Action: Manually Integrated

Audit Reason: Missed Peak

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Report Date: 19-May-2020 09:50:24

Chrom Revision: 2.3 18-May-2020 21:51:32

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I06.D
 Lims ID: IC std2
 Client ID:
 Sample Type: IC Calib Level: 2
 Inject. Date: 04-May-2020 14:08:30 ALS Bottle#: 7 Worklist Smp#: 8
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: VSTD004;VSTD004;1;1;;;
 Misc. Info.: 8260W.SUB;;5;5;;;
 Operator ID: lcp00895 Instrument ID: 9915
 Sublist: chrom-MSVoa_9915a*sub2
 Method: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\MSVoa_9915a.m
 Limit Group: MSV - 8260C DOD5
 Last Update: 19-May-2020 09:50:21 Calib Date: 04-May-2020 14:30:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1023

First Level Reviewer: dalea

Date: 05-May-2020 06:49:27

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	2.091	2.098	-0.007	98	38132	4.00	4.37	
4 Chloromethane	50	2.281	2.297	-0.016	99	40439	4.00	4.93	
6 Butadiene	39	2.403	2.413	-0.010	75	25579	NC	NC	
5 Vinyl chloride	62	2.410	2.416	-0.006	98	38618	4.00	4.83	
8 Bromomethane	94	2.747	2.760	-0.013	90	28829	4.00	5.60	
9 Chloroethane	64	2.850	2.847	0.003	99	22039	4.00	5.26	
10 Dichlorofluoromethane	67	3.098	3.104	-0.006	97	46306	4.00	4.82	
11 Trichlorofluoromethane	101	3.149	3.169	-0.020	93	39832	4.00	4.55	
12 Pentane	43	3.207	3.217	-0.010	98	32068	NC	NC	
14 Ethyl ether	59	3.435	3.445	-0.010	90	23816	4.00	3.86	
15 1,2-Dichloro-1,1,2-trifluoroetha	67	3.522	3.525	-0.003	87	29111	NC	NC	
16 Acrolein	56	3.615	3.625	-0.010	99	88750	40.0	37.9	
17 1,1-Dichloroethene	96	3.754	3.763	-0.009	98	23271	4.00	4.20	
18 112TCTFE	101	3.789	3.792	-0.003	90	23969	4.00	4.15	
19 Acetone	58	3.808	3.808	0.000	99	8526	8.00	7.92	
20 Iodomethane	142	3.959	3.972	-0.013	96	43204	4.00	4.03	
21 Isopropyl alcohol	45	3.982	3.992	-0.010	98	54638	80.0	80.0	
22 Carbon disulfide	76	4.065	4.075	-0.010	100	74602	4.00	3.97	
24 Methyl acetate	43	4.239	4.246	-0.007	96	28724	4.00	4.08	
25 3-Chloro-1-propene	41	4.262	4.275	-0.013	93	32573	4.00	3.65	
26 Methylene Chloride	84	4.458	4.477	-0.019	92	27141	4.00	4.08	
* 27 t-Butyl alcohol-d10 (IS)	65	4.490	4.500	-0.010	0	284140	250.0	250.0	
28 2-Methyl-2-propanol	59	4.622	4.625	-0.003	98	91567	80.0	79.7	
29 Acrylonitrile	53	4.821	4.841	-0.020	92	14901	4.00	3.84	
31 Methyl tert-butyl ether	73	4.873	4.879	-0.007	94	74655	4.00	3.91	
32 trans-1,2-Dichloroethene	96	4.879	4.889	-0.010	98	26303	4.00	4.10	
33 Hexane	57	5.307	5.310	-0.003	93	30895	4.00	3.29	
35 1,1-Dichloroethane	63	5.545	5.554	-0.010	96	44879	4.00	4.03	
36 Isopropyl ether	45	5.599	5.603	-0.004	90	74439	4.00	3.76	
37 2-Chloro-1,3-butadiene	53	5.651	5.657	-0.006	89	33993	4.00	3.79	

Report Date: 19-May-2020 09:50:24

Chrom Revision: 2.3 18-May-2020 21:51:32

Data File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I06.D

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
38 Tert-butyl ethyl ether	59	6.130	6.130	0.000	96	69989	4.00	3.80	
S 39 1,2-Dichloroethene, Total	100				0			8.04	
40 2-Butanone (MEK)	43	6.348	6.358	-0.010	100	36933	8.00	7.77	
41 cis-1,2-Dichloroethene	96	6.371	6.374	-0.003	81	28250	4.00	3.93	
42 2,2-Dichloropropane	77	6.380	6.394	-0.014	88	35169	4.00	4.04	
44 Propionitrile	54	6.445	6.451	-0.006	99	122129	80.0	79.1	
45 Methacrylonitrile	67	6.647	6.660	-0.013	92	156434	40.0	39.7	
46 Chlorobromomethane	128	6.702	6.705	-0.003	87	15149	4.00	4.08	
47 Tetrahydrofuran	71	6.702	6.709	-0.007	84	11135	8.00	8.16	
48 Chloroform	83	6.847	6.853	-0.006	92	44125	4.00	4.02	
\$ 49 Dibromofluoromethane (Surr)	113	7.065	7.069	-0.004	94	324776	50.0	49.8	
50 1,1,1-Trichloroethane	97	7.069	7.072	-0.003	71	38705	4.00	4.10	
51 Cyclohexane	56	7.159	7.168	-0.009	90	39946	4.00	3.59	
52 Carbon tetrachloride	117	7.278	7.284	-0.006	96	32820	4.00	4.15	
53 1,1-Dichloropropene	75	7.287	7.287	0.000	95	35543	4.00	4.11	
54 Isobutyl alcohol	41	7.448	7.451	-0.003	94	77066	200.0	200.7	
\$ 55 1,2-Dichloroethane-d4 (Surr)	102	7.515	7.519	-0.004	98	83660	50.0	50.3	
56 Benzene	78	7.544	7.551	-0.007	92	109197	4.00	4.08	
58 1,2-Dichloroethane	62	7.622	7.625	-0.003	97	36361	4.00	4.08	
59 Tert-amyl methyl ether	73	7.731	7.734	-0.003	97	71750	4.00	3.82	
* 61 Fluorobenzene (IS)	96	7.950	7.950	0.000	99	1289117	50.0	50.0	
62 n-Heptane	43	7.946	7.950	-0.004	52	30871	4.00	3.22	
63 n-Butanol	56	8.313	8.319	-0.006	90	116854	NC	NC	
64 Trichloroethene	95	8.422	8.422	0.000	98	28463	4.00	4.20	
65 Methylcyclohexane	83	8.718	8.728	-0.010	94	39202	4.00	3.39	
66 2-ethoxy-2-methyl butane	87	8.757	8.760	-0.003	91	35893	4.00	3.80	
67 1,2-Dichloropropane	63	8.750	8.763	-0.013	72	27627	4.00	4.01	
68 Methyl methacrylate	69	8.837	8.834	0.003	92	22102	4.00	3.75	
69 1,4-Dioxane	88	8.840	8.847	-0.007	60	16044	200.0	209.0	
70 Dibromomethane	93	8.869	8.869	0.000	94	18097	4.00	4.01	
72 Dichlorobromomethane	83	9.101	9.104	-0.003	98	30571	4.00	3.78	
73 2-Nitropropane	41	9.374	9.374	0.000	96	17843	8.00	6.97	
74 2-Chloroethyl vinyl ether	63	9.448	9.448	0.000	92	15020	4.00	3.10	
75 cis-1,3-Dichloropropene	75	9.628	9.628	0.000	96	38720	4.00	3.67	
76 4-Methyl-2-pentanone (MIBK)	43	9.798	9.799	-0.001	97	69584	8.00	7.22	
\$ 77 Toluene-d8 (Surr)	98	9.924	9.924	0.000	93	1317565	50.0	49.6	
78 Toluene	92	9.994	10.001	-0.007	98	71435	4.00	4.20	
S 79 1,3-Dichloropropene, Total	100				0			7.29	
80 trans-1,3-Dichloropropene	75	10.248	10.249	-0.001	92	35087	4.00	3.62	
81 Ethyl methacrylate	69	10.303	10.303	0.000	90	32791	4.00	3.18	
82 1,1,2-Trichloroethane	97	10.451	10.448	0.003	90	26533	4.00	4.02	
83 Tetrachloroethene	166	10.531	10.532	-0.001	97	30571	4.00	4.21	
84 1,3-Dichloropropane	76	10.609	10.609	0.000	90	43343	4.00	3.93	
86 2-Hexanone	43	10.660	10.660	0.000	97	49230	8.00	6.61	
88 Chlorodibromomethane	129	10.821	10.818	0.003	90	25357	4.00	3.69	
89 Ethylene Dibromide	107	10.927	10.930	-0.003	98	27033	4.00	3.81	
S 90 Xylenes, Total	106				0			12.1	
* 91 Chlorobenzene-d5 (IS)	117	11.351	11.352	-0.001	86	1041816	50.0	50.0	
92 1-Chlorohexane	91	11.355	11.358	-0.003	95	31899	4.00	3.65	
93 Chlorobenzene	112	11.377	11.377	0.000	97	82190	4.00	4.21	
94 1,1,1,2-Tetrachloroethane	131	11.457	11.458	-0.001	93	27080	4.00	4.08	
95 Ethylbenzene	91	11.461	11.461	0.000	98	127429	4.00	4.05	

Report Date: 19-May-2020 09:50:24

Chrom Revision: 2.3 18-May-2020 21:51:32

Data File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I06.D

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
96 m-Xylene & p-Xylene	106	11.570	11.573	-0.003	100	100108	8.00	8.11	
97 o-Xylene	106	11.901	11.901	0.000	96	47240	4.00	3.95	
98 Styrene	104	11.917	11.917	0.000	95	73299	4.00	3.57	
99 Bromoform	173	12.075	12.072	0.003	96	17579	4.00	3.38	
100 Isopropylbenzene	105	12.197	12.197	0.000	95	113502	4.00	3.52	
102 Cyclohexanone	55	12.281	12.281	0.000	92	68640	200.0	194.6	
\$ 103 4-Bromofluorobenzene (Surr)	95	12.342	12.342	0.000	91	515470	50.0	50.1	
104 1,1,2,2-Tetrachloroethane	83	12.441	12.442	-0.001	93	44194	4.00	4.07	
105 Bromobenzene	156	12.457	12.461	-0.004	93	37026	4.00	4.24	
106 trans-1,4-Dichloro-2-butene	53	12.467	12.467	0.000	94	125036	40.0	39.4	
107 1,2,3-Trichloropropane	110	12.486	12.490	-0.004	82	13787	4.00	4.14	
108 N-Propylbenzene	91	12.522	12.522	0.000	99	145190	4.00	3.84	
109 2-Chlorotoluene	126	12.602	12.602	0.000	97	32065	4.00	3.97	
110 1,3,5-Trimethylbenzene	105	12.657	12.657	0.000	96	99633	4.00	3.47	
111 4-Chlorotoluene	126	12.692	12.692	0.000	97	32987	4.00	3.94	
113 tert-Butylbenzene	134	12.901	12.898	0.003	92	19333	4.00	3.27	
114 Pentachloroethane	167	12.930	12.933	-0.003	79	18269	4.00	3.66	
115 1,2,4-Trimethylbenzene	105	12.940	12.940	0.000	97	104183	4.00	3.50	
116 sec-Butylbenzene	105	13.062	13.062	0.000	94	115259	4.00	3.27	
117 1,3-Dichlorobenzene	146	13.162	13.162	0.000	98	66610	4.00	4.08	
118 4-Isopropyltoluene	119	13.165	13.168	-0.003	97	100049	4.00	3.29	
* 119 1,4-Dichlorobenzene-d4	152	13.216	13.216	0.000	94	597333	50.0	50.0	
120 1,4-Dichlorobenzene	146	13.232	13.236	-0.004	95	71304	4.00	4.18	
121 1,2,3-Trimethylbenzene	105	13.245	13.245	0.000	98	113572	4.00	3.87	
122 Benzyl chloride	91	13.313	13.313	0.000	98	82907	NC	NC	
123 1,3-Diethylbenzene	119	13.367	13.368	-0.001	92	70223	NC	NC	
124 p-Diethylbenzene	119	13.438	13.438	0.000	94	76528	NC	NC	
125 n-Butylbenzene	92	13.457	13.458	-0.001	97	51906	4.00	3.54	
126 1,2-Dichlorobenzene	146	13.496	13.496	0.000	98	68655	4.00	4.19	
127 o-diethylbenzene	119	13.512	13.512	0.000	94	61808	NC	NC	
129 1,2-Dibromo-3-Chloropropane	75	14.033	14.036	-0.003	86	9340	4.00	3.86	
130 1,3,5-Trichlorobenzene	180	14.162	14.158	0.004	96	44626	NC	NC	
131 1,2,4-Trichlorobenzene	180	14.583	14.583	0.000	94	41149	4.00	3.56	
132 Hexachlorobutadiene	225	14.663	14.663	0.000	97	17997	4.00	3.37	
133 Naphthalene	128	14.766	14.769	-0.003	96	132293	4.00	3.36	
134 1,2,3-Trichlorobenzene	180	14.911	14.911	0.000	97	43456	4.00	3.78	
135 2-Methylnaphthalene	142	15.560	15.560	0.000	93	55412	NC	NC	
S 150 Total Diethylbenzene	1		0.000					ND	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Report Date: 19-May-2020 09:50:24

Chrom Revision: 2.3 18-May-2020 21:51:32

Reagents:

MSV_VCYC_00002	Amount Added: 32.00	Units: uL	
MSV_V_Gas_00073	Amount Added: 2.00	Units: uL	
MSV_V_EE_00003	Amount Added: 4.00	Units: uL	
MSV_V_2CEVE_00066	Amount Added: 4.00	Units: uL	
MSV_V_VOA1_00054	Amount Added: 4.00	Units: uL	
MSV_V_VOA3_00026	Amount Added: 1.60	Units: uL	
MSV_V_VOA6_00033	Amount Added: 4.00	Units: uL	
MSV_V_VOA2_00028	Amount Added: 12.00	Units: uL	
MSV_DCFM_00013	Amount Added: 2.00	Units: uL	
MSV_HP23_ISSS_00002	Amount Added: 1.00	Units: uL	Run Reagent

Report Date: 19-May-2020 09:50:24

Chrom Revision: 2.3 18-May-2020 21:51:32

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I06.D

Injection Date: 04-May-2020 14:08:30

Instrument ID: 9915

Operator ID: lcp00895

Lims ID: IC std2

Worklist Smp#: 8

Client ID:

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

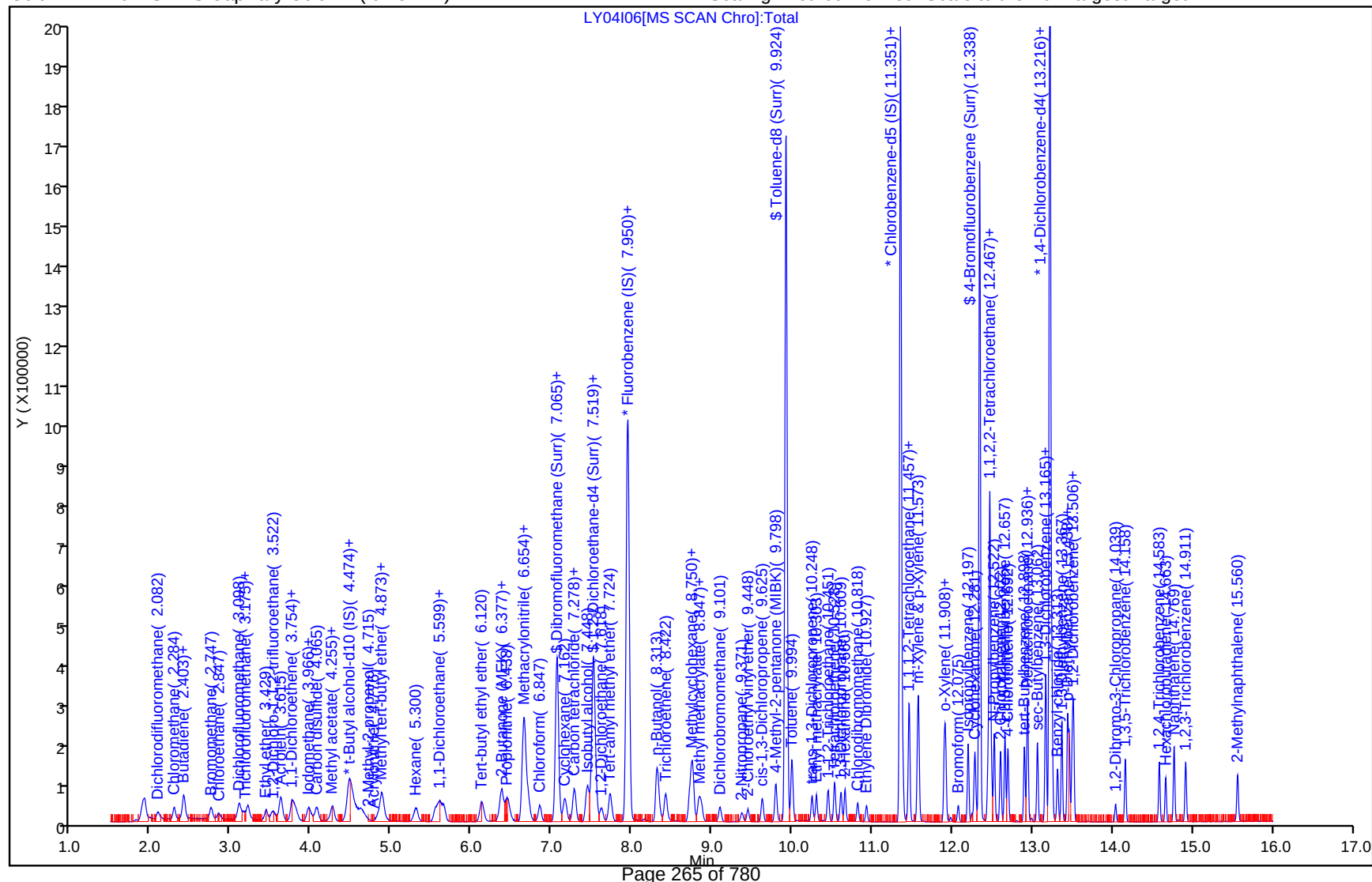
ALS Bottle#: 7

Method: MSVoa_9915a

Limit Group: MSV - 8260C DOD5

Column: Rxi-624Sil MS Capillary Column (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

September 2020

I-5-265

Report Date: 19-May-2020 09:50:33

Chrom Revision: 2.3 18-May-2020 21:51:32

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I07.D
 Lims ID: IC std1
 Client ID:
 Sample Type: IC Calib Level: 1
 Inject. Date: 04-May-2020 14:30:30 ALS Bottle#: 8 Worklist Smp#: 9
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: VSTD001;VSTD001;1;1;;;
 Misc. Info.: 8260W.SUB;;5;5;;;
 Operator ID: lcp00895 Instrument ID: 9915
 Sublist: chrom-MSVoa_9915a*sub2
 Method: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\MSVoa_9915a.m
 Limit Group: MSV - 8260C DOD5
 Last Update: 19-May-2020 09:50:29 Calib Date: 04-May-2020 14:30:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1023

First Level Reviewer: dalea

Date: 05-May-2020 05:41:06

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	2.085	2.098	-0.013	98	7922	1.00	0.9043	
4 Chloromethane	50	2.291	2.297	-0.006	99	8760	1.00	1.06	
6 Butadiene	39	2.406	2.413	-0.007	73	7721	NC	NC	
5 Vinyl chloride	62	2.416	2.416	0.000	97	8625	1.00	1.07	
8 Bromomethane	94	2.747	2.760	-0.013	89	6737	1.00	1.38	
9 Chloroethane	64	2.840	2.847	-0.007	96	5372	1.00	1.06	
10 Dichlorofluoromethane	67	3.094	3.104	-0.010	95	10115	1.00	1.05	
11 Trichlorofluoromethane	101	3.168	3.169	-0.001	40	8417	1.00	0.9573	
12 Pentane	43	3.210	3.217	-0.007	95	7179	NC	NC	
14 Ethyl ether	59	3.432	3.445	-0.013	90	5407	1.00	0.8723	
15 1,2-Dichloro-1,1,2-trifluoroetha	67	3.516	3.525	-0.009	28	6231	NC	NC	
16 Acrolein	56	3.615	3.625	-0.010	97	22819	10.0	9.46	
17 1,1-Dichloroethene	96	3.757	3.763	-0.006	97	5369	1.00	0.9635	
18 112TCTFE	101	3.799	3.792	0.007	38	4899	1.00	0.8433	
19 Acetone	58	3.821	3.808	0.013	81	2731	2.00	2.46	
20 Iodomethane	142	3.969	3.972	-0.003	95	9678	1.00	0.8976	
21 Isopropyl alcohol	45	3.985	3.992	-0.007	84	14907	20.0	21.2	
22 Carbon disulfide	76	4.062	4.075	-0.013	99	16404	1.00	0.8680	
24 Methyl acetate	43	4.252	4.246	0.006	94	7312	1.00	1.03	
25 3-Chloro-1-propene	41	4.271	4.275	-0.004	92	8014	1.00	0.8928	
26 Methylene Chloride	84	4.477	4.477	0.000	94	6363	1.00	0.9515	
* 27 t-Butyl alcohol-d10 (IS)	65	4.487	4.500	-0.013	0	292281	250.0	250.0	
28 2-Methyl-2-propanol	59	4.615	4.625	-0.010	78	23137	20.0	19.6	
29 Acrylonitrile	53	4.834	4.841	-0.007	53	3763	1.00	0.9647	
31 Methyl tert-butyl ether	73	4.876	4.879	-0.003	85	17791	1.00	0.9264	
32 trans-1,2-Dichloroethene	96	4.889	4.889	-0.001	97	6066	1.00	0.9419	
33 Hexane	57	5.310	5.310	0.000	92	6467	1.00	0.6846	
35 1,1-Dichloroethane	63	5.548	5.554	-0.006	95	10231	1.00	0.9133	
36 Isopropyl ether	45	5.596	5.603	-0.007	95	16325	1.00	0.8210	
37 2-Chloro-1,3-butadiene	53	5.660	5.657	0.003	89	6541	1.00	0.7257	

Report Date: 19-May-2020 09:50:33

Chrom Revision: 2.3 18-May-2020 21:51:32

Data File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I07.D

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
38 Tert-butyl ethyl ether	59	6.130	6.130	0.000	94	15198	1.00	0.8216	
S 39 1,2-Dichloroethene, Total	100				0			1.86	
40 2-Butanone (MEK)	43	6.358	6.358	0.000	77	8714	2.00	1.82	
41 cis-1,2-Dichloroethene	96	6.377	6.374	0.003	79	6599	1.00	0.9140	
42 2,2-Dichloropropane	77	6.390	6.394	-0.004	55	7531	1.00	0.8611	M
44 Propionitrile	54	6.448	6.451	-0.003	99	29722	20.0	18.7	
45 Methacrylonitrile	67	6.657	6.660	-0.003	91	34473	10.0	8.71	
46 Chlorobromomethane	128	6.712	6.705	0.007	83	3311	1.00	0.8877	
47 Tetrahydrofuran	71	6.718	6.709	0.009	57	2576	2.00	1.83	
48 Chloroform	83	6.856	6.853	0.003	94	10314	1.00	0.9342	
\$ 49 Dibromofluoromethane (Surr)	113	7.065	7.069	-0.004	94	326139	50.0	49.8	
50 1,1,1-Trichloroethane	97	7.075	7.072	0.003	36	8372	1.00	0.8824	
51 Cyclohexane	56	7.165	7.168	-0.003	87	7115	1.00	0.6365	
52 Carbon tetrachloride	117	7.281	7.284	-0.003	89	6219	1.00	0.7829	
53 1,1-Dichloropropene	75	7.287	7.287	0.000	94	6955	1.00	0.8002	
54 Isobutyl alcohol	41	7.448	7.451	-0.003	91	18698	50.0	47.3	
\$ 55 1,2-Dichloroethane-d4 (Surr)	102	7.515	7.519	-0.004	98	83334	50.0	49.8	
56 Benzene	78	7.548	7.551	-0.003	92	24276	1.00	0.9036	
58 1,2-Dichloroethane	62	7.618	7.625	-0.007	97	9508	1.00	1.06	
59 Tert-amyl methyl ether	73	7.734	7.734	0.000	96	16256	1.00	0.8618	
* 61 Fluorobenzene (IS)	96	7.949	7.950	-0.001	99	1295290	50.0	50.0	
62 n-Heptane	43	7.946	7.950	-0.004	38	7624	1.00	0.7920	
63 n-Butanol	56	8.313	8.319	-0.006	88	25497	NC	NC	
64 Trichloroethene	95	8.425	8.422	0.003	96	6010	1.00	0.8826	
65 Methylcyclohexane	83	8.731	8.728	0.003	89	7536	1.00	0.6482	
66 2-ethoxy-2-methyl butane	87	8.757	8.760	-0.003	89	7003	1.00	0.7376	
67 1,2-Dichloropropane	63	8.757	8.763	-0.006	76	6480	1.00	0.9352	
68 Methyl methacrylate	69	8.840	8.834	0.006	92	4584	1.00	0.7733	
69 1,4-Dioxane	88	8.850	8.847	0.003	62	4156	50.0	52.6	
70 Dibromomethane	93	8.869	8.869	0.000	96	4080	1.00	0.9004	
72 Dichlorobromomethane	83	9.107	9.104	0.003	93	6898	1.00	0.8495	
73 2-Nitropropane	41	9.374	9.374	0.000	98	3882	2.00	1.47	
74 2-Chloroethyl vinyl ether	63	9.451	9.448	0.003	89	3090	1.00	0.6353	
75 cis-1,3-Dichloropropene	75	9.631	9.628	0.003	95	8035	1.00	0.7589	
76 4-Methyl-2-pentanone (MIBK)	43	9.795	9.799	-0.004	97	14642	2.00	1.51	
\$ 77 Toluene-d8 (Surr)	98	9.924	9.924	0.000	93	1311334	50.0	49.3	
78 Toluene	92	9.991	10.001	-0.010	0	14967	1.00	0.8790	M
S 79 1,3-Dichloropropene, Total	100				0			1.56	
80 trans-1,3-Dichloropropene	75	10.248	10.249	-0.001	91	7771	1.00	0.8003	
81 Ethyl methacrylate	69	10.306	10.303	0.003	91	6583	1.00	0.6386	
82 1,1,2-Trichloroethane	97	10.448	10.448	0.000	91	6229	1.00	0.9431	
83 Tetrachloroethene	166	10.531	10.532	-0.001	0	5689	1.00	0.7830	M
84 1,3-Dichloropropane	76	10.609	10.609	0.000	91	9933	1.00	0.9010	
86 2-Hexanone	43	10.657	10.660	-0.003	96	10173	2.00	1.37	
88 Chlorodibromomethane	129	10.818	10.818	0.000	91	5060	1.00	0.7365	
89 Ethylene Dibromide	107	10.924	10.930	-0.006	98	5900	1.00	0.8306	
S 90 Xylenes, Total	106				0			2.22	
* 91 Chlorobenzene-d5 (IS)	117	11.351	11.352	-0.001	85	1042578	50.0	50.0	
92 1-Chlorohexane	91	11.354	11.358	-0.004	33	8042	1.00	0.9191	
93 Chlorobenzene	112	11.377	11.377	0.000	94	17474	1.00	0.8945	
94 1,1,1,2-Tetrachloroethane	131	11.461	11.458	0.003	45	5492	1.00	0.8275	
95 Ethylbenzene	91	11.461	11.461	0.000	98	24909	1.00	0.7910	

Report Date: 19-May-2020 09:50:33

Chrom Revision: 2.3 18-May-2020 21:51:32

Data File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I07.D

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
96 m-Xylene & p-Xylene	106	11.573	11.573	0.000	99	18560	2.00	1.50	
97 o-Xylene	106	11.898	11.901	-0.003	96	8598	1.00	0.7190	
98 Styrene	104	11.917	11.917	0.000	92	12536	1.00	0.6096	
99 Bromoform	173	12.075	12.072	0.003	90	3759	1.00	0.7216	
100 Isopropylbenzene	105	12.197	12.197	0.000	95	19550	1.00	0.6058	
102 Cyclohexanone	55	12.280	12.281	-0.001	91	14740	50.0	40.6	
\$ 103 4-Bromofluorobenzene (Surr)	95	12.338	12.342	-0.004	91	510305	50.0	49.6	
104 1,1,2,2-Tetrachloroethane	83	12.441	12.442	-0.001	93	9970	1.00	0.9203	
105 Bromobenzene	156	12.457	12.461	-0.004	92	7896	1.00	0.9045	
106 trans-1,4-Dichloro-2-butene	53	12.467	12.467	0.000	94	26192	10.0	8.26	
107 1,2,3-Trichloropropane	110	12.493	12.490	0.003	0	2928	1.00	0.8806	M
108 N-Propylbenzene	91	12.525	12.522	0.003	99	29396	1.00	0.7790	
109 2-Chlorotoluene	126	12.599	12.602	-0.003	97	6424	1.00	0.7959	
110 1,3,5-Trimethylbenzene	105	12.653	12.657	-0.004	95	18486	1.00	0.6451	
111 4-Chlorotoluene	126	12.692	12.692	0.000	96	6692	1.00	0.8011	
113 tert-Butylbenzene	134	12.901	12.898	0.003	94	3928	1.00	0.6654	
114 Pentachloroethane	167	12.933	12.933	0.000	85	4086	1.00	0.8191	
115 1,2,4-Trimethylbenzene	105	12.943	12.940	0.003	96	18148	1.00	0.6105	
116 sec-Butylbenzene	105	13.062	13.062	0.000	94	20948	1.00	0.5942	
117 1,3-Dichlorobenzene	146	13.165	13.162	0.003	92	14102	1.00	0.8645	
118 4-Isopropyltoluene	119	13.165	13.168	-0.003	96	17463	1.00	0.5752	
* 119 1,4-Dichlorobenzene-d4	152	13.216	13.216	0.000	94	596515	50.0	50.0	
120 1,4-Dichlorobenzene	146	13.235	13.236	-0.001	93	15438	1.00	0.9071	
121 1,2,3-Trimethylbenzene	105	13.245	13.245	0.000	95	24818	1.00	0.8462	
122 Benzyl chloride	91	13.313	13.313	0.000	98	15922	NC	NC	
123 1,3-Diethylbenzene	119	13.364	13.368	-0.004	97	13893	NC	NC	
124 p-Diethylbenzene	119	13.435	13.438	-0.003	94	13945	NC	NC	
125 n-Butylbenzene	92	13.457	13.458	-0.001	97	10642	1.00	0.7263	
126 1,2-Dichlorobenzene	146	13.493	13.496	-0.003	97	14552	1.00	0.8884	
127 o-diethylbenzene	119	13.512	13.512	0.000	93	12266	NC	NC	
129 1,2-Dibromo-3-Chloropropane	75	14.036	14.036	0.000	89	1978	1.00	0.8196	
130 1,3,5-Trichlorobenzene	180	14.158	14.158	0.000	96	10916	NC	NC	
131 1,2,4-Trichlorobenzene	180	14.579	14.583	-0.004	94	9812	1.00	0.8499	
132 Hexachlorobutadiene	225	14.660	14.663	-0.003	0	5565	1.00	1.04	M
133 Naphthalene	128	14.766	14.769	-0.003	97	25310	1.00	0.6441	
134 1,2,3-Trichlorobenzene	180	14.911	14.911	0.000	95	9817	1.00	0.8552	
135 2-Methylnaphthalene	142	15.557	15.560	-0.003	93	11854	NC	NC	
S 150 Total Diethylbenzene	1		0.000					ND	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

MSV_4ppbEE_00010	Amount Added: 12.50	Units: mL	
MSV_HP23_ISSS_00002	Amount Added: 12.50	Units: mL	
	Amount Added: 1.00	Units: uL	Run Reagent

Report Date: 19-May-2020 09:50:33

Chrom Revision: 2.3 18-May-2020 21:51:32

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I07.D

Injection Date: 04-May-2020 14:30:30

Instrument ID: 9915

Operator ID: lcp00895

Lims ID: IC std1

Worklist Smp#: 9

Client ID:

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

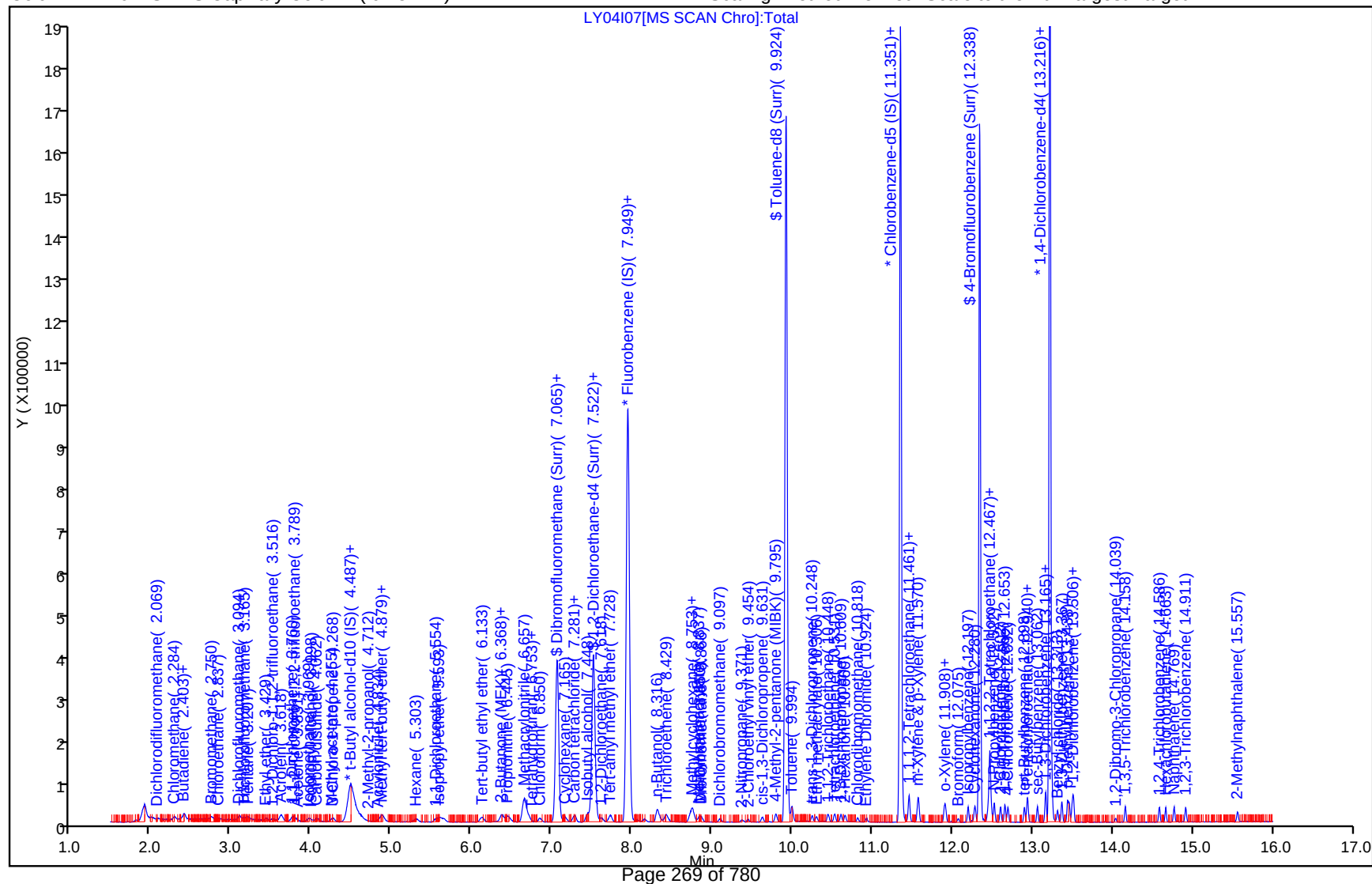
ALS Bottle#: 8

Method: MSVoa_9915a

Limit Group: MSV - 8260C DOD5

Column: Rxi-624Sil MS Capillary Column (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-269

September 2020

Report Date: 19-May-2020 09:50:33

Chrom Revision: 2.3 18-May-2020 21:51:32
Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

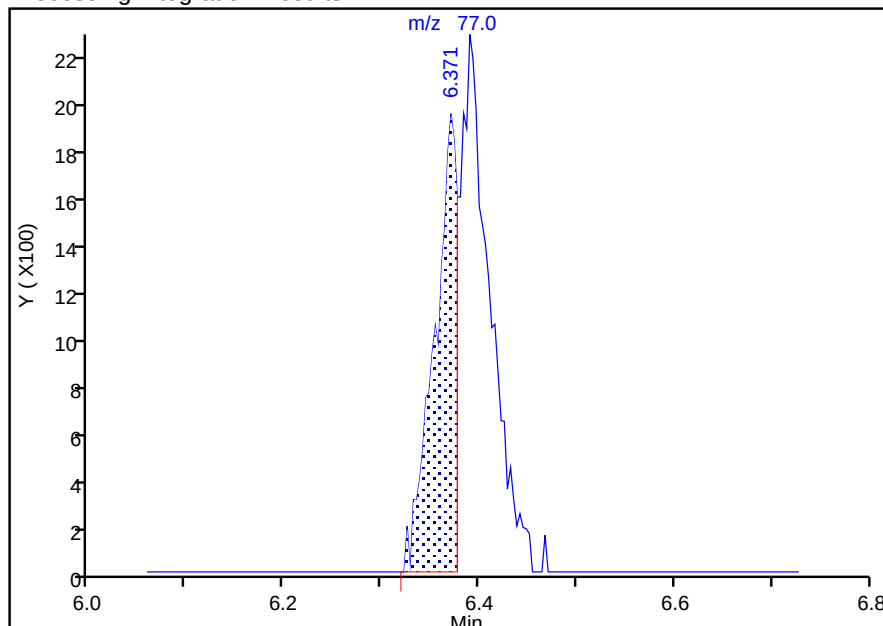
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 Injection Date: 04-May-2020 14:30:30 Instrument ID: 9915
 Lims ID: IC std1
 Client ID:
 Operator ID: lcp00895 ALS Bottle#: 8 Worklist Smp#: 9
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVoa_9915a Limit Group: MSV - 8260C DOD5
 Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

42 2,2-Dichloropropane, CAS: 594-20-7

Signal: 1

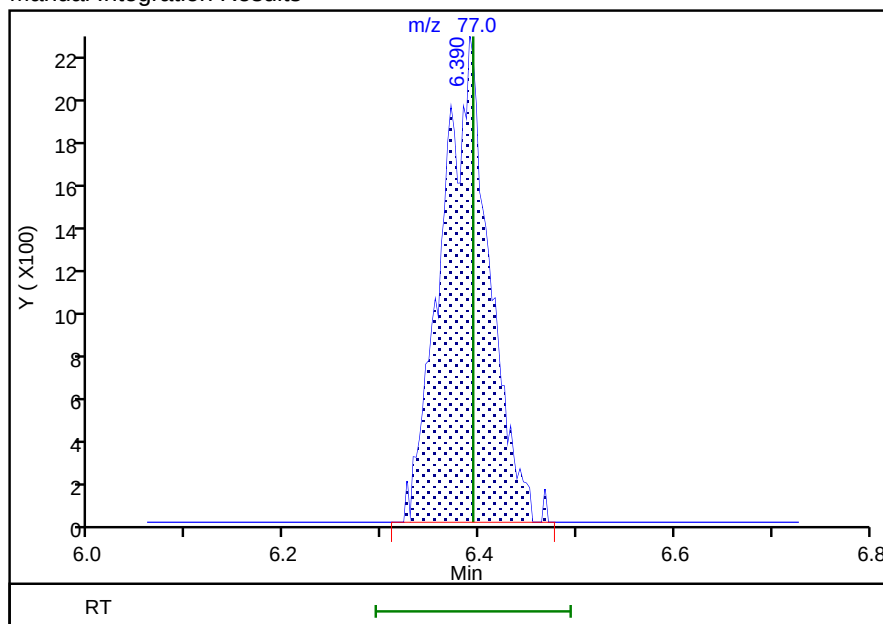
RT: 6.37
 Area: 3022
 Amount: 1.168350
 Amount Units: ug/l

Processing Integration Results



RT: 6.39
 Area: 7531
 Amount: 0.861115
 Amount Units: ug/l

Manual Integration Results



Reviewer: dalea, 05-May-2020 07:40:48

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

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Report Date: 19-May-2020 09:50:33

Chrom Revision: 2.3 18-May-2020 21:51:32
Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

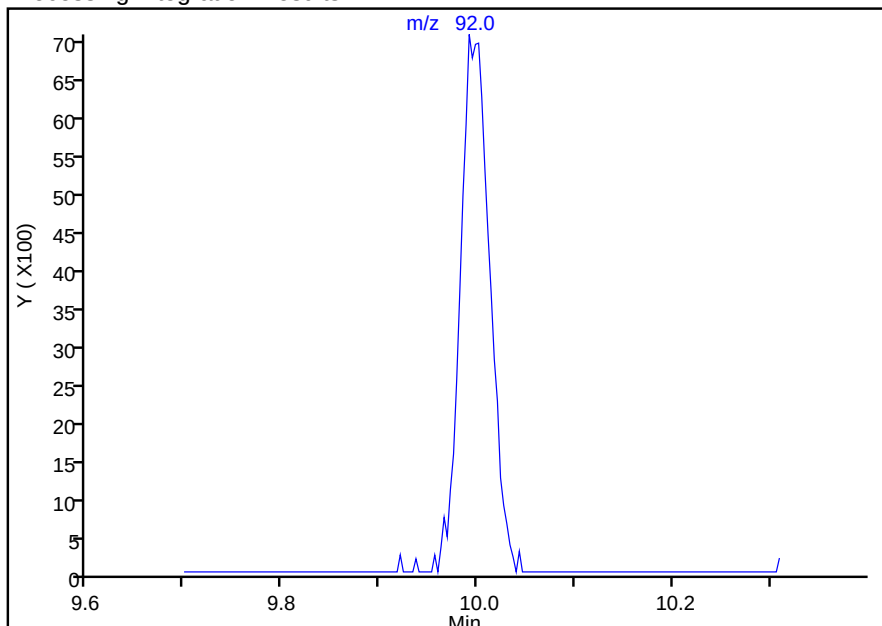
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Injection Date:	04-May-2020 14:30:30	Instrument ID:	9915
Lims ID:	IC std1		
Client ID:			
Operator ID:	lcp00895	ALS Bottle#:	8
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	MSVoa_9915a	Limit Group:	MSV - 8260C DOD5
Column:	Rxi-624Sil MS Capillary Column (0.25 mm ID)	Detector:	MS Quad

78 Toluene, CAS: 108-88-3

Signal: 1

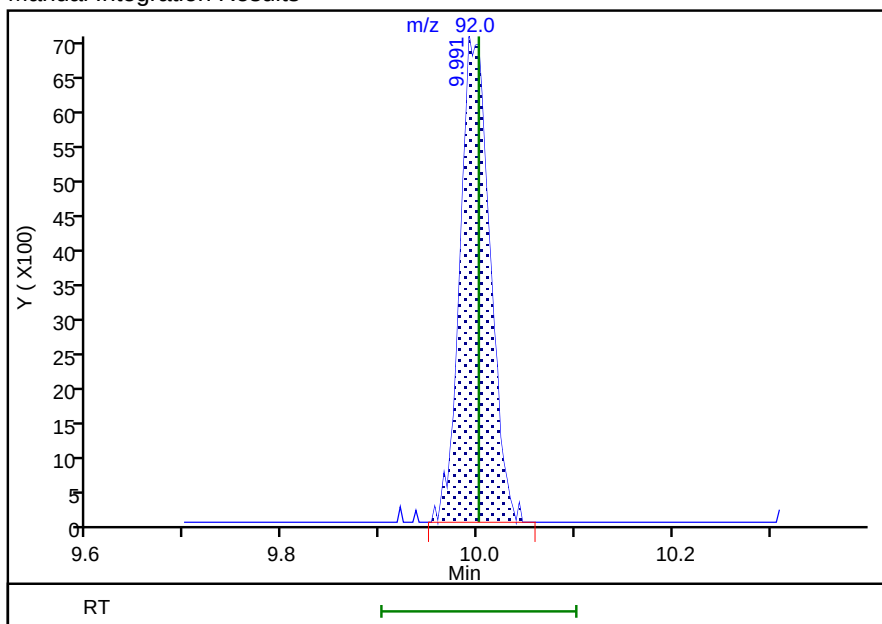
Not Detected
Expected RT: 10.00

Processing Integration Results



Manual Integration Results

RT: 9.99
Area: 14967
Amount: 0.879022
Amount Units: ug/l



Reviewer: dalea, 05-May-2020 07:41:33

Audit Action: Manually Integrated

Audit Reason: Missed Peak

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Report Date: 19-May-2020 09:50:33

Chrom Revision: 2.3 18-May-2020 21:51:32
Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

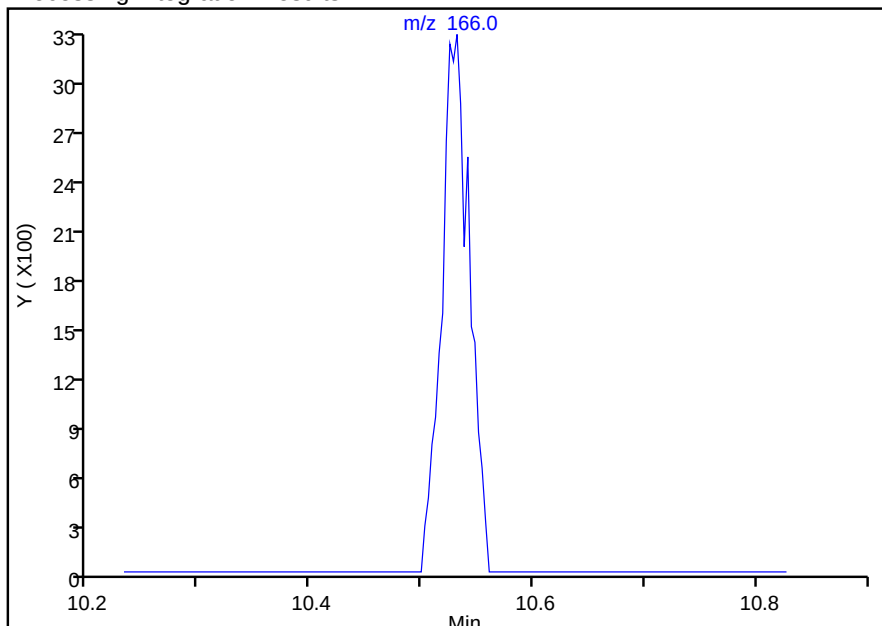
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 Injection Date: 04-May-2020 14:30:30 Instrument ID: 9915
 Lims ID: IC std1
 Client ID:
 Operator ID: lcp00895 ALS Bottle#: 8 Worklist Smp#: 9
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVoa_9915a Limit Group: MSV - 8260C DOD5
 Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

83 Tetrachloroethene, CAS: 127-18-4

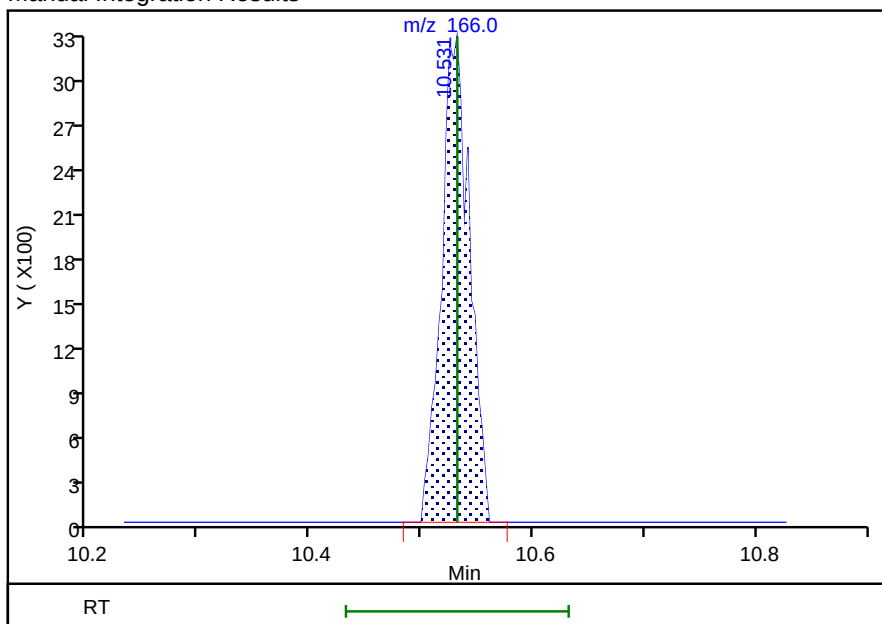
Signal: 1

Not Detected
 Expected RT: 10.53

Processing Integration Results



Manual Integration Results



Reviewer: dalea, 05-May-2020 07:41:51

Audit Action: Manually Integrated

Audit Reason: Missed Peak

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Report Date: 19-May-2020 09:50:33

Chrom Revision: 2.3 18-May-2020 21:51:32
Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I07.D

Injection Date: 04-May-2020 14:30:30

Instrument ID: 9915

Lims ID: IC std1

Client ID:

Operator ID: lcp00895

ALS Bottle#:

8

Worklist Smp#:

9

Purge Vol: 5.000 mL

Dil. Factor:

1.0000

Method: MSVoa_9915a

Limit Group:

MSV - 8260C DOD5

Column: Rxi-624Sil MS Capillary Column (0.25 mm ID)

MS Quad

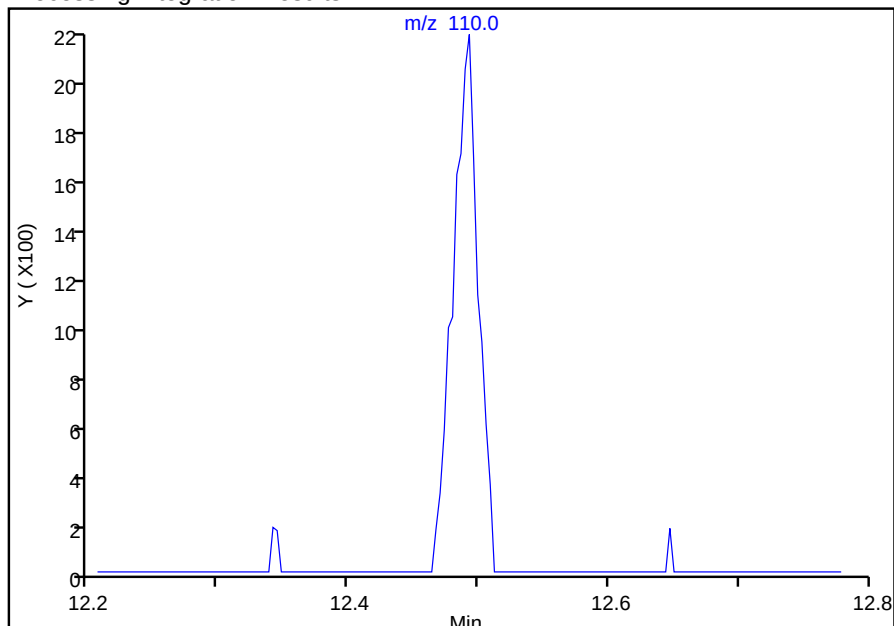
107 1,2,3-Trichloropropane, CAS: 96-18-4

Signal: 1

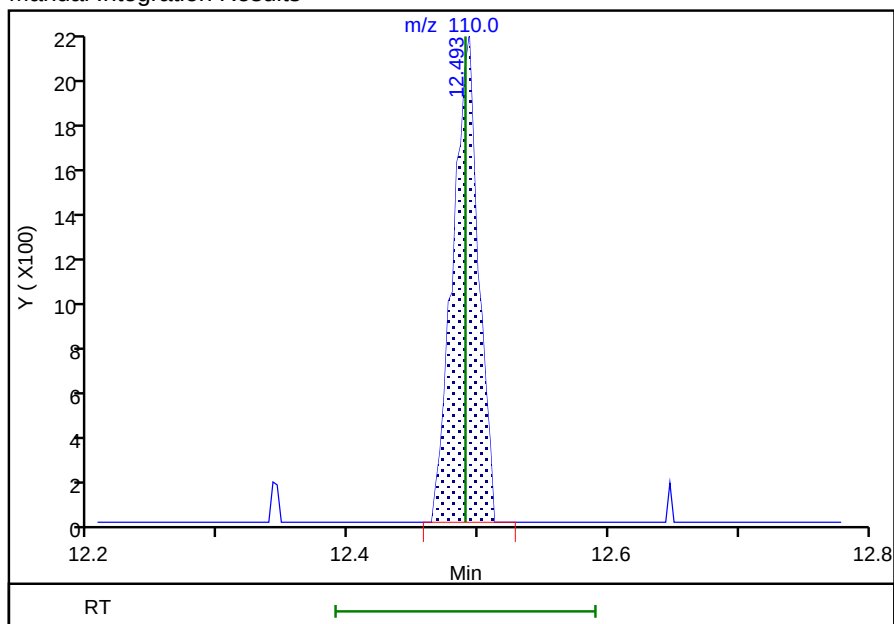
Not Detected

Expected RT: 12.49

Processing Integration Results



Manual Integration Results



Reviewer: dalea, 05-May-2020 07:42:05

Audit Action: Manually Integrated

Audit Reason: Missed Peak

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Report Date: 19-May-2020 09:50:33

Chrom Revision: 2.3 18-May-2020 21:51:32
Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

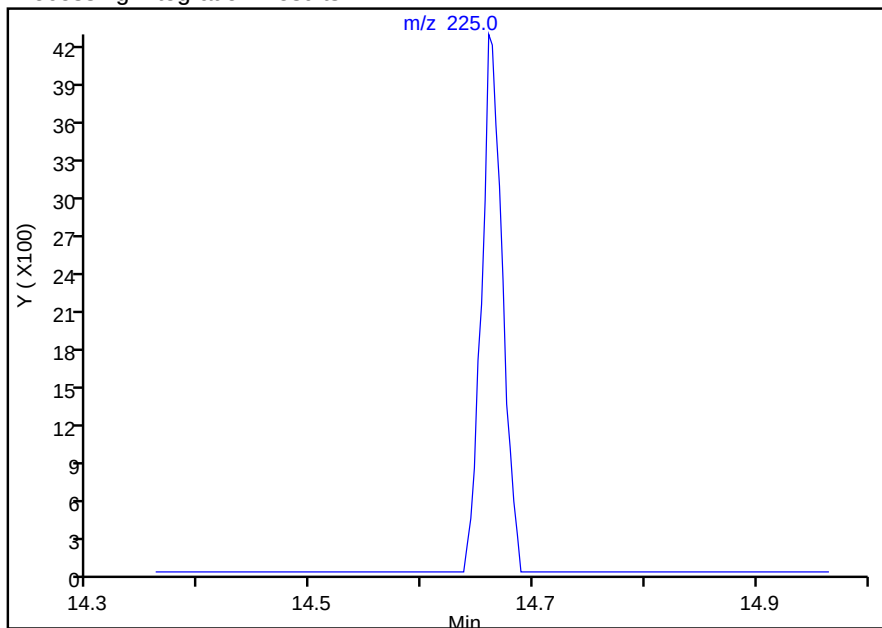
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 Injection Date: 04-May-2020 14:30:30 Instrument ID: 9915
 Lims ID: IC std1
 Client ID:
 Operator ID: lcp00895 ALS Bottle#: 8 Worklist Smp#: 9
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVoa_9915a Limit Group: MSV - 8260C DOD5
 Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

132 Hexachlorobutadiene, CAS: 87-68-3

Signal: 1

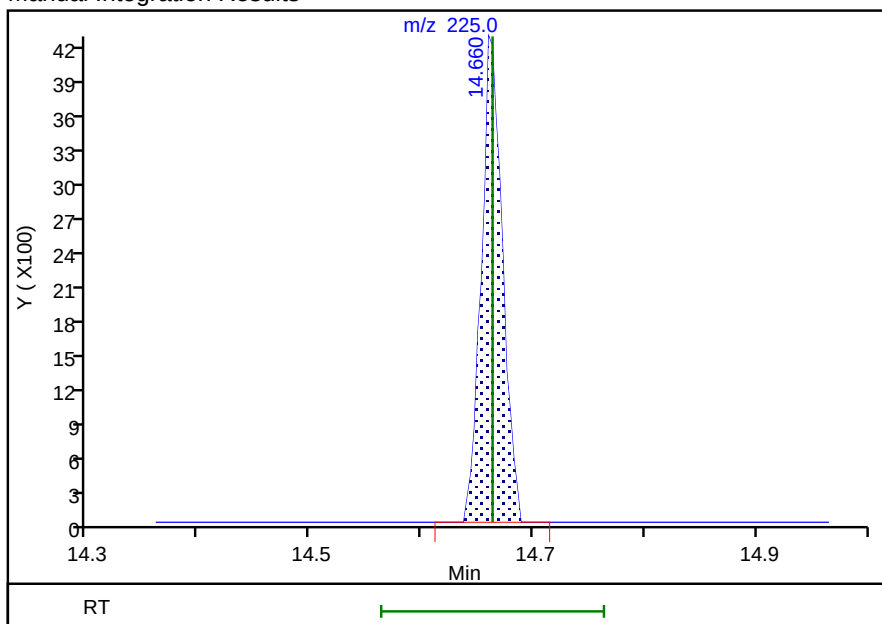
Not Detected
 Expected RT: 14.66

Processing Integration Results



Manual Integration Results

RT: 14.66
 Area: 5565
 Amount: 1.043468
 Amount Units: ug/l



Reviewer: dalea, 05-May-2020 07:42:42

Audit Action: Manually Integrated

Audit Reason: Missed Peak

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FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1
 SDG No.: _____
 Lab Sample ID: ICV 410-8012/11 Calibration Date: 05/04/2020 14:52
 Instrument ID: 9915 Calib Start Date: 05/04/2020 12:18
 GC Column: R-624SilMS 30m ID: 0.25 (mm) Calib End Date: 05/04/2020 14:30
 Lab File ID: LY04V01.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3381	0.3120	0.1000	18.5	20.0	-7.7	20.0
Chloromethane	Ave	0.3183	0.3334	0.1000	20.9	20.0	4.7	20.0
Vinyl chloride	Ave	0.3102	0.3274	0.1000	21.1	20.0	5.5	20.0
Bromomethane	Lin		0.2133	0.1000	21.1	20.0	5.5	20.0
Chloroethane	Lin		0.1690	0.1000	21.6	20.0	8.2	20.0
Dichlorofluoromethane	Ave	0.3730	0.3436		18.4	20.0	-7.9	20.0
Trichlorofluoromethane	Ave	0.3394	0.3822	0.1000	22.5	20.0	12.6	20.0
Ethyl ether	Ave	0.2393	0.2439		20.4	20.0	1.9	20.0
Acrolein	Ave	2.062	1.919		139	150	-7.0	20.0
1,1-Dichloroethene	Ave	0.2151	0.2241	0.1000	20.8	20.0	4.2	20.0
Freon 113	Ave	0.2242	0.2163	0.1000	19.3	20.0	-3.5	20.0
Acetone	Ave	0.9477	1.214	0.1000	192	150	28.1*	20.0
Iodomethane	Ave	0.4162	0.4147		19.9	20.0	-0.4	20.0
Isopropyl alcohol	Ave	0.6005	0.5829		146	150	-2.9	20.0
Carbon disulfide	Ave	0.7295	0.7621	0.1000	20.9	20.0	4.5	20.0
Methyl acetate	Ave	0.2733	0.2624	0.1000	19.2	20.0	-4.0	20.0
Allyl chloride	Ave	0.3465	0.3400		19.6	20.0	-1.9	20.0
Methylene Chloride	Ave	0.2581	0.2649	0.1000	20.5	20.0	2.6	20.0
tert-Butyl alcohol	Ave	1.011	1.027		203	200	1.6	20.0
Acrylonitrile	Ave	0.1506	0.1429		94.9	100	-5.1	20.0
Methyl tert-butyl ether	Ave	0.7413	0.7103	0.1000	19.2	20.0	-4.2	20.0
trans-1,2-Dichloroethene	Ave	0.2486	0.2542	0.1000	20.4	20.0	2.2	20.0
Hexane	Ave	0.3646	0.3643		20.0	20.0	-0.0	20.0
1,1-Dichloroethane	Ave	0.4324	0.4343	0.2000	20.1	20.0	0.4	20.0
Diisopropyl ether	Ave	0.7676	0.7639		19.9	20.0	-0.5	20.0
2-Chloro-1,3-butadiene	Ave	0.3479	0.3550		20.4	20.0	2.0	20.0
Ethyl tert-butyl ether	Ave	0.7140	0.7091		19.9	20.0	-0.7	20.0
2-Butanone	Ave	0.1844	0.2044	0.1000	166	150	10.9	20.0
cis-1,2-Dichloroethene	Ave	0.2787	0.2992	0.1000	21.5	20.0	7.3	20.0
2,2-Dichloropropane	Ave	0.3376	0.3428		20.3	20.0	1.6	20.0
Propionitrile	Ave	1.359	1.354		150	150	-0.3	20.0
Methacrylonitrile	Ave	0.1528	0.1563		153	150	2.3	20.0
Bromochloromethane	Ave	0.1440	0.1401		19.5	20.0	-2.7	20.0
Tetrahydrofuran	Ave	1.201	1.173		97.7	100	-2.3	20.0
Chloroform	Ave	0.4262	0.4305	0.2000	20.2	20.0	1.0	20.0
1,1,1-Trichloroethane	Ave	0.3663	0.3631	0.1000	19.8	20.0	-0.9	20.0
Cyclohexane	Ave	0.4315	0.4382	0.1000	20.3	20.0	1.6	20.0
Carbon tetrachloride	Ave	0.3066	0.3126	0.1000	20.4	20.0	1.9	20.0
1,1-Dichloropropene	Ave	0.3355	0.3417		20.4	20.0	1.8	20.0
Isobutyl alcohol	Ave	0.3379	0.3329		493	500	-1.5	20.0
Benzene	Ave	1.037	1.039	0.5000	20.0	20.0	0.2	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1
 SDG No.: _____
 Lab Sample ID: ICV 410-8012/11 Calibration Date: 05/04/2020 14:52
 Instrument ID: 9915 Calib Start Date: 05/04/2020 12:18
 GC Column: R-624SilMS 30m ID: 0.25 (mm) Calib End Date: 05/04/2020 14:30
 Lab File ID: LY04V01.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichloroethane	Ave	0.3459	0.3329	0.1000	19.2	20.0	-3.8	20.0
Tert-amyl methyl ether	Ave	0.7281	0.7361		20.2	20.0	1.1	20.0
Heptane	Ave	0.3716	0.3644		19.6	20.0	-1.9	20.0
Trichloroethene	Ave	0.2629	0.2632	0.2000	20.0	20.0	0.1	20.0
Methylcyclohexane	Ave	0.4488	0.4370	0.1000	19.5	20.0	-2.6	20.0
1,2-Dichloropropane	Ave	0.2675	0.2719	0.1000	20.3	20.0	1.7	20.0
Tert-amyl ethyl ether	Ave	0.3665	0.3744		20.4	20.0	2.1	20.0
Methyl methacrylate	Ave	0.2288	0.2255		19.7	20.0	-1.5	20.0
1,4-Dioxane	Ave	0.0675	0.0677	0.0050	501	500	0.2	20.0
Dibromomethane	Ave	0.1749	0.1746		20.0	20.0	-0.2	20.0
Bromodichloromethane	Ave	0.3135	0.3106	0.2000	19.8	20.0	-0.9	20.0
2-Nitropropane	Ave	2.251	1.901		16.9	20.0	-15.6	20.0
2-Chloroethyl vinyl ether	Ave	0.1877	0.1815		19.3	20.0	-3.3	20.0
cis-1,3-Dichloropropene	Ave	0.4087	0.4108	0.2000	20.1	20.0	0.5	20.0
4-Methyl-2-pentanone	Ave	0.3736	0.3727	0.1000	99.8	100	-0.2	20.0
Toluene	Ave	0.8166	0.8162	0.4000	20.0	20.0	-0.0	20.0
trans-1,3-Dichloropropene	Ave	0.4657	0.4591	0.1000	19.7	20.0	-1.4	20.0
Ethyl methacrylate	Ave	0.4944	0.4846		19.6	20.0	-2.0	20.0
1,1,2-Trichloroethane	Ave	0.3168	0.3228	0.1000	20.4	20.0	1.9	20.0
Tetrachloroethene	Ave	0.3484	0.3620	0.2000	20.8	20.0	3.9	20.0
1,3-Dichloropropane	Ave	0.5287	0.5241		19.8	20.0	-0.9	20.0
2-Hexanone	Ave	0.3573	0.3635	0.1000	102	100	1.7	20.0
Dibromochloromethane	Ave	0.3295	0.3338		20.3	20.0	1.3	20.0
1,2-Dibromoethane (EDB)	Ave	0.3407	0.3367	0.1000	19.8	20.0	-1.2	20.0
1-Chlorohexane	Ave	0.4196	0.4201		20.0	20.0	0.1	20.0
Chlorobenzene	Ave	0.9368	0.9501	0.5000	20.3	20.0	1.4	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3183	0.3158		19.8	20.0	-0.8	20.0
Ethylbenzene	Ave	1.510	1.562	0.1000	20.7	20.0	3.4	20.0
m&p-Xylene	Ave	0.5925	0.6334	0.1000	42.8	40.0	6.9	20.0
o-Xylene	Ave	0.5735	0.6088	0.3000	21.2	20.0	6.1	20.0
Styrene	Ave	0.9862	0.9945	0.3000	20.2	20.0	0.8	20.0
Bromoform	Ave	0.2498	0.2324	0.1000	18.6	20.0	-7.0	20.0
Isopropylbenzene	Ave	1.548	1.584	0.1000	20.5	20.0	2.4	20.0
1,1,2,2-Tetrachloroethane	Ave	0.9081	0.8979	0.3000	19.8	20.0	-1.1	20.0
Bromobenzene	Ave	0.7318	0.7301		20.0	20.0	-0.2	20.0
trans-1,4-Dichloro-2-butene	Ave	0.2659	0.2714		102	100	2.1	20.0
1,2,3-Trichloropropane	Ave	0.2787	0.2711		19.5	20.0	-2.7	20.0
N-Propylbenzene	Ave	3.163	3.341		21.1	20.0	5.6	20.0
2-Chlorotoluene	Ave	0.6765	0.6925		20.5	20.0	2.4	20.0
1,3,5-Trimethylbenzene	Ave	2.402	2.420		20.2	20.0	0.8	20.0
4-Chlorotoluene	Ave	0.7002	0.7125		20.4	20.0	1.8	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1
 SDG No.: _____
 Lab Sample ID: ICV 410-8012/11 Calibration Date: 05/04/2020 14:52
 Instrument ID: 9915 Calib Start Date: 05/04/2020 12:18
 GC Column: R-624SilMS 30m ID: 0.25 (mm) Calib End Date: 05/04/2020 14:30
 Lab File ID: LY04V01.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
tert-Butylbenzene	Ave	0.4948	0.5003		20.2	20.0	1.1	20.0
Pentachloroethane	Ave	0.4182	0.4291		20.5	20.0	2.6	20.0
1,2,4-Trimethylbenzene	Ave	2.492	2.478		19.9	20.0	-0.5	20.0
sec-Butylbenzene	Ave	2.955	3.018		20.4	20.0	2.1	20.0
1,3-Dichlorobenzene	Ave	1.367	1.419	0.6000	20.8	20.0	3.8	20.0
4-Isopropyltoluene	Ave	2.545	2.655		20.9	20.0	4.3	20.0
1,4-Dichlorobenzene	Ave	1.427	1.458	0.5000	20.4	20.0	2.2	20.0
1,2,3-Trimethylbenzene	Ave	2.458	2.618		21.3	20.0	6.5	30.0
n-Butylbenzene	Ave	1.228	1.294		21.1	20.0	5.4	20.0
1,2-Dichlorobenzene	Ave	1.373	1.388	0.4000	20.2	20.0	1.1	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.2023	0.1881	0.0500	18.6	20.0	-7.0	20.0
1,2,4-Trichlorobenzene	Ave	0.9677	0.9924	0.2000	20.5	20.0	2.6	20.0
Hexachlorobutadiene	Ave	0.4470	0.4251		19.0	20.0	-4.9	20.0
Naphthalene	Ave	3.294	3.247		19.7	20.0	-1.4	20.0
1,2,3-Trichlorobenzene	Ave	0.9622	0.9933		20.6	20.0	3.2	20.0
Dibromofluoromethane (Surr)	Ave	0.2529	0.2499		49.4	50.0	-1.2	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.0645	0.0641		49.7	50.0	-0.7	20.0
Toluene-d8 (Surr)	Ave	1.276	1.277		50.0	50.0	0.0	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4936	0.4919		49.8	50.0	-0.3	20.0

Report Date: 19-May-2020 09:50:43

Chrom Revision: 2.3 18-May-2020 21:51:32

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04V01.D
 Lims ID: ICV
 Client ID:
 Sample Type: ICV
 Inject. Date: 04-May-2020 14:52:30 ALS Bottle#: 9 Worklist Smp#: 11
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: ICVLLG;ICVLLG;1;3;LCS;;;
 Misc. Info.: 8260W.SUB;;;5;5;;;
 Operator ID: lcp00895 Instrument ID: 9915
 Sublist:
 Method: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\MSVoa_9915a.m
 Limit Group: MSV - 8260C DOD5
 Last Update: 19-May-2020 09:50:29 Calib Date: 04-May-2020 14:30:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1023

First Level Reviewer: dalea

Date: 05-May-2020 07:43:41

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	2.091	2.098	-0.007	99	164516	20.0	18.5	
4 Chloromethane	50	2.294	2.297	-0.003	99	175819	20.0	20.9	
6 Butadiene	39	2.410	2.413	-0.003	82	125293	NC	NC	
5 Vinyl chloride	62	2.413	2.416	-0.003	97	172645	20.0	21.1	
8 Bromomethane	94	2.747	2.760	-0.013	90	112464	20.0	21.1	
9 Chloroethane	64	2.837	2.847	-0.010	99	89119	20.0	21.6	
10 Dichlorofluoromethane	67	3.101	3.104	-0.003	98	181222	20.0	18.4	
11 Trichlorofluoromethane	101	3.156	3.169	-0.013	98	201579	20.0	22.5	
12 Pentane	43	3.213	3.217	-0.004	97	152810	NC	NC	
14 Ethyl ether	59	3.435	3.445	-0.010	91	128751	20.0	20.4	
15 1,2-Dichloro-1,1,2-trifluoroetha	67	3.525	3.525	0.000	93	150843	NC	NC	
16 Acrolein	56	3.622	3.625	-0.003	99	327867	149.9	139.5	
17 1,1-Dichloroethene	96	3.760	3.763	-0.003	98	118190	20.0	20.8	
18 112TCTFE	101	3.792	3.792	0.000	87	114090	20.0	19.3	
19 Acetone	58	3.802	3.808	-0.006	100	207607	150.0	192.2	
20 Iodomethane	142	3.966	3.972	-0.006	97	218690	20.0	19.9	
21 Isopropyl alcohol	45	3.985	3.992	-0.007	97	99648	150.0	145.6	
22 Carbon disulfide	76	4.072	4.075	-0.003	99	401902	20.0	20.9	
24 Methyl acetate	43	4.242	4.246	-0.004	98	138376	20.0	19.2	
25 3-Chloro-1-propene	41	4.268	4.275	-0.007	93	179314	20.0	19.6	
26 Methylene Chloride	84	4.467	4.477	-0.010	92	139674	20.0	20.5	
* 27 t-Butyl alcohol-d10 (IS)	65	4.493	4.500	-0.007	0	284923	250.0	250.0	
28 2-Methyl-2-propanol	59	4.622	4.625	-0.003	99	234133	200.0	203.2	
29 Acrylonitrile	53	4.824	4.841	-0.017	99	376798	100.0	94.9	
31 Methyl tert-butyl ether	73	4.879	4.879	0.000	95	374599	20.0	19.2	
32 trans-1,2-Dichloroethene	96	4.889	4.889	0.000	99	134046	20.0	20.4	
33 Hexane	57	5.310	5.310	0.000	91	192131	20.0	20.0	
35 1,1-Dichloroethane	63	5.548	5.554	-0.006	96	229033	20.0	20.1	
36 Isopropyl ether	45	5.602	5.603	-0.001	94	402860	20.0	19.9	
37 2-Chloro-1,3-butadiene	53	5.654	5.657	-0.003	91	187205	20.0	20.4	

Report Date: 19-May-2020 09:50:43

Chrom Revision: 2.3 18-May-2020 21:51:32

Data File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04V01.D

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
38 Tert-butyl ethyl ether	59	6.130	6.130	0.000	97	373949	20.0	19.9	
40 2-Butanone (MEK)	43	6.352	6.358	-0.006	99	808454	150.0	166.3	
41 cis-1,2-Dichloroethene	96	6.377	6.374	0.003	82	157769	20.0	21.5	
42 2,2-Dichloropropane	77	6.387	6.394	-0.007	86	180799	20.0	20.3	
44 Propionitrile	54	6.448	6.451	-0.003	99	231556	150.0	149.5	
45 Methacrylonitrile	67	6.657	6.660	-0.003	92	618345	150.0	153.4	
46 Chlorobromomethane	128	6.705	6.705	0.000	91	73893	20.0	19.5	
47 Tetrahydrofuran	71	6.712	6.709	0.003	83	133701	100.0	97.7	
48 Chloroform	83	6.853	6.853	0.000	93	227027	20.0	20.2	
\$ 49 Dibromofluoromethane (Surr)	113	7.069	7.069	0.000	94	329522	50.0	49.4	
50 1,1,1-Trichloroethane	97	7.072	7.072	0.000	97	191490	20.0	19.8	
51 Cyclohexane	56	7.168	7.168	0.000	91	231109	20.0	20.3	
52 Carbon tetrachloride	117	7.281	7.284	-0.003	97	164842	20.0	20.4	
53 1,1-Dichloropropene	75	7.284	7.287	-0.003	97	180201	20.0	20.4	
54 Isobutyl alcohol	41	7.454	7.451	0.003	96	189674	500.0	492.6	
\$ 55 1,2-Dichloroethane-d4 (Surr)	102	7.519	7.519	0.000	98	84534	50.0	49.7	
56 Benzene	78	7.551	7.551	0.000	96	547792	20.0	20.0	
58 1,2-Dichloroethane	62	7.625	7.625	0.000	97	175567	20.0	19.2	
59 Tert-amyl methyl ether	73	7.734	7.734	0.000	98	388190	20.0	20.2	
* 61 Fluorobenzene (IS)	96	7.950	7.950	0.000	99	1318430	50.0	50.0	
62 n-Heptane	43	7.956	7.950	0.006	87	192175	20.0	19.6	
63 n-Butanol	56	8.313	8.319	-0.006	88	311044	NC	NC	
64 Trichloroethene	95	8.422	8.422	0.000	97	138806	20.0	20.0	
65 Methylcyclohexane	83	8.721	8.728	-0.007	90	230457	20.0	19.5	
66 2-ethoxy-2-methyl butane	87	8.757	8.760	-0.003	91	197431	20.0	20.4	
67 1,2-Dichloropropane	63	8.757	8.763	-0.006	90	143395	20.0	20.3	
68 Methyl methacrylate	69	8.834	8.834	0.000	92	118911	20.0	19.7	
69 1,4-Dioxane	88	8.840	8.847	-0.007	39	38575	500.0	501.1	
70 Dibromomethane	93	8.866	8.869	-0.003	95	92091	20.0	20.0	
72 Dichlorobromomethane	83	9.104	9.104	0.000	100	163813	20.0	19.8	
73 2-Nitropropane	41	9.374	9.374	0.000	98	43331	20.0	16.9	
74 2-Chloroethyl vinyl ether	63	9.451	9.448	0.003	91	95725	20.0	19.3	
75 cis-1,3-Dichloropropene	75	9.628	9.628	0.000	96	216652	20.0	20.1	
76 4-Methyl-2-pentanone (MIBK)	43	9.795	9.799	-0.004	96	982850	100.0	99.8	
\$ 77 Toluene-d8 (Surr)	98	9.924	9.924	0.000	93	1353326	50.0	50.0	
78 Toluene	92	9.998	10.001	-0.003	98	346002	20.0	20.0	
80 trans-1,3-Dichloropropene	75	10.249	10.249	0.000	92	194642	20.0	19.7	
81 Ethyl methacrylate	69	10.303	10.303	0.000	90	205456	20.0	19.6	
82 1,1,2-Trichloroethane	97	10.451	10.448	0.003	90	136852	20.0	20.4	
83 Tetrachloroethene	166	10.528	10.532	-0.004	97	153484	20.0	20.8	
84 1,3-Dichloropropane	76	10.609	10.609	0.000	90	222201	20.0	19.8	
86 2-Hexanone	43	10.660	10.660	0.000	96	770520	100.0	101.7	
88 Chlorodibromomethane	129	10.818	10.818	0.000	90	141526	20.0	20.3	
89 Ethylene Dibromide	107	10.930	10.930	0.000	98	142748	20.0	19.8	
* 91 Chlorobenzene-d5 (IS)	117	11.351	11.352	-0.001	85	1059842	50.0	50.0	
92 1-Chlorohexane	91	11.358	11.358	0.000	97	178080	20.0	20.0	
93 Chlorobenzene	112	11.380	11.377	0.003	97	402762	20.0	20.3	
94 1,1,1,2-Tetrachloroethane	131	11.458	11.458	0.000	96	133898	20.0	19.8	
95 Ethylbenzene	91	11.461	11.461	0.000	98	662231	20.0	20.7	
96 m-Xylene & p-Xylene	106	11.573	11.573	0.000	100	537071	40.0	42.8	
97 o-Xylene	106	11.901	11.901	0.000	95	258073	20.0	21.2	
98 Styrene	104	11.917	11.917	0.000	95	421600	20.0	20.2	

Report Date: 19-May-2020 09:50:43

Chrom Revision: 2.3 18-May-2020 21:51:32

Data File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04V01.D

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
99 Bromoform	173	12.072	12.072	0.000	97	98526	20.0	18.6	
100 Isopropylbenzene	105	12.197	12.197	0.000	95	671616	20.0	20.5	
102 Cyclohexanone	55	12.277	12.281	-0.004	92	171482	499.9	484.9	
\$ 103 4-Bromofluorobenzene (Surr)	95	12.342	12.342	0.000	95	521302	50.0	49.8	
104 1,1,2,2-Tetrachloroethane	83	12.441	12.442	-0.001	93	216197	20.0	19.8	
105 Bromobenzene	156	12.461	12.461	0.000	97	175795	20.0	20.0	
106 trans-1,4-Dichloro-2-butene	53	12.467	12.467	0.000	93	326715	100.0	102.1	
107 1,2,3-Trichloropropane	110	12.490	12.490	0.000	0	65281	20.0	19.5	M
108 N-Propylbenzene	91	12.522	12.522	0.000	98	804490	20.0	21.1	
109 2-Chlorotoluene	126	12.602	12.602	0.000	97	166723	20.0	20.5	
110 1,3,5-Trimethylbenzene	105	12.657	12.657	0.000	94	582725	20.0	20.2	
111 4-Chlorotoluene	126	12.692	12.692	0.000	97	171548	20.0	20.4	
113 tert-Butylbenzene	134	12.898	12.898	0.000	92	120457	20.0	20.2	
114 Pentachloroethane	167	12.933	12.933	0.000	89	103318	20.0	20.5	
115 1,2,4-Trimethylbenzene	105	12.940	12.940	0.000	97	596701	20.0	19.9	
116 sec-Butylbenzene	105	13.062	13.062	0.000	94	726634	20.0	20.4	
117 1,3-Dichlorobenzene	146	13.162	13.162	0.000	98	341652	20.0	20.8	
118 4-Isopropyltoluene	119	13.165	13.168	-0.003	97	639138	20.0	20.9	
* 119 1,4-Dichlorobenzene-d4	152	13.216	13.216	0.000	94	601922	50.0	50.0	
120 1,4-Dichlorobenzene	146	13.236	13.236	0.000	95	350962	20.0	20.4	
121 1,2,3-Trimethylbenzene	105	13.245	13.245	0.000	98	630415	20.0	21.3	
122 Benzyl chloride	91	13.313	13.313	0.000	98	437943	NC	NC	
123 1,3-Diethylbenzene	119	13.367	13.368	-0.001	96	387785	NC	NC	
124 p-Diethylbenzene	119	13.438	13.438	0.000	96	405314	NC	NC	
125 n-Butylbenzene	92	13.457	13.458	-0.001	97	311606	20.0	21.1	
126 1,2-Dichlorobenzene	146	13.496	13.496	0.000	99	334100	20.0	20.2	
127 o-diethylbenzene	119	13.512	13.512	0.000	94	328119	NC	NC	
129 1,2-Dibromo-3-Chloropropane	75	14.036	14.036	0.000	87	45285	20.0	18.6	
130 1,3,5-Trichlorobenzene	180	14.158	14.158	0.000	98	252180	NC	NC	
131 1,2,4-Trichlorobenzene	180	14.583	14.583	0.000	94	238947	20.0	20.5	
132 Hexachlorobutadiene	225	14.663	14.663	0.000	94	102341	20.0	19.0	
133 Naphthalene	128	14.766	14.769	-0.003	96	781719	20.0	19.7	
134 1,2,3-Trichlorobenzene	180	14.911	14.911	0.000	96	239150	20.0	20.6	
135 2-Methylnaphthalene	142	15.560	15.560	0.000	92	394928	NC	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Report Date: 19-May-2020 09:50:43

Chrom Revision: 2.3 18-May-2020 21:51:32

Reagents:

MSV_Q_QVOA1_00027	Amount Added: 50.00	Units: uL	
MSV_QCYC_00003	Amount Added: 50.00	Units: uL	
MSV_Q_EE_00002	Amount Added: 50.00	Units: uL	
MSV_QACR_00010	Amount Added: 2.00	Units: uL	
MSV_DCFM_00013	Amount Added: 1.00	Units: uL	
MSV_Q1B_2CEVE_00034	Amount Added: 2.00	Units: uL	
MSV_QCS#6Std_00019	Amount Added: 2.00	Units: uL	
MSV_502QGas_00048	Amount Added: 1.00	Units: uL	
MSV_HP23_ISSS_00002	Amount Added: 1.00	Units: uL	Run Reagent

Report Date: 19-May-2020 09:50:43

Chrom Revision: 2.3 18-May-2020 21:51:32

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04V01.D

Injection Date: 04-May-2020 14:52:30

Instrument ID: 9915

Operator ID: lcp00895

Lims ID: ICV

Worklist Smp#: 11

Client ID:

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

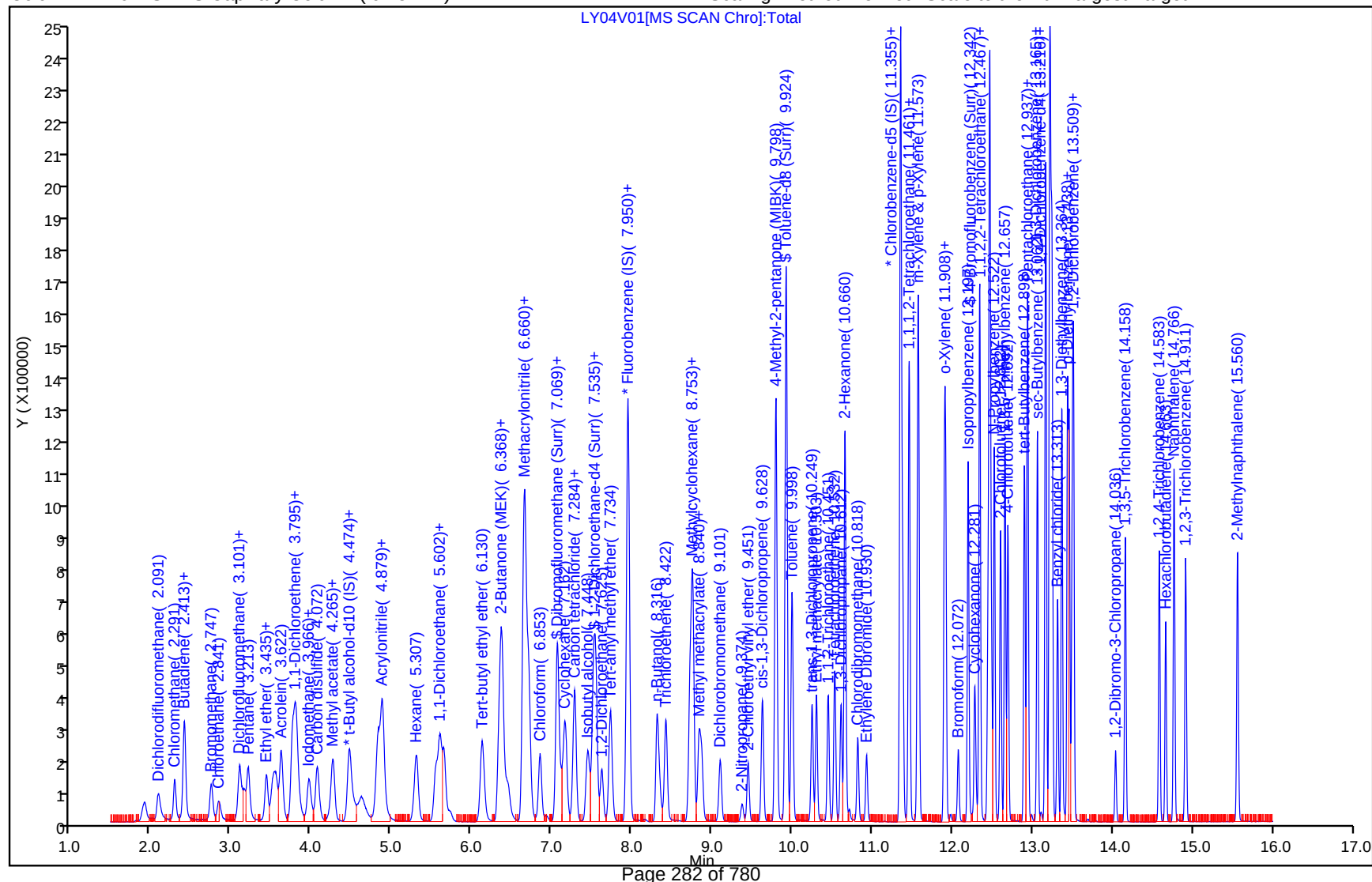
ALS Bottle#: 9

Method: MSVoa_9915a

Limit Group: MSV - 8260C DOD5

Column: Rxi-624Sil MS Capillary Column (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

September 2020

I-5-282

Report Date: 19-May-2020 09:50:43

Chrom Revision: 2.3 18-May-2020 21:51:32
Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

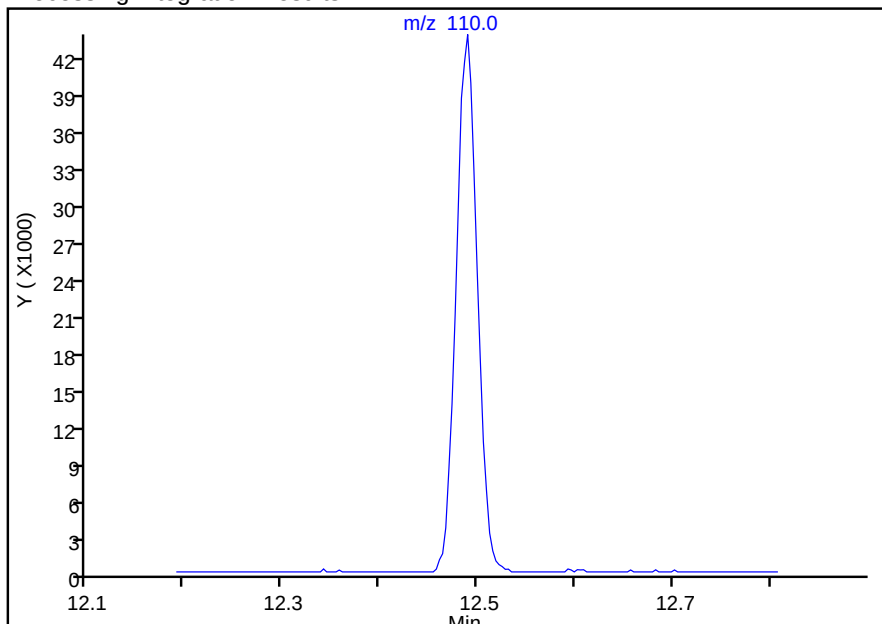
Data File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04V01.D
 Injection Date: 04-May-2020 14:52:30 Instrument ID: 9915
 Lims ID: ICV
 Client ID:
 Operator ID: lcp00895 ALS Bottle#: 9 Worklist Smp#: 11
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVoa_9915a Limit Group: MSV - 8260C DOD5
 Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

107 1,2,3-Trichloropropane, CAS: 96-18-4

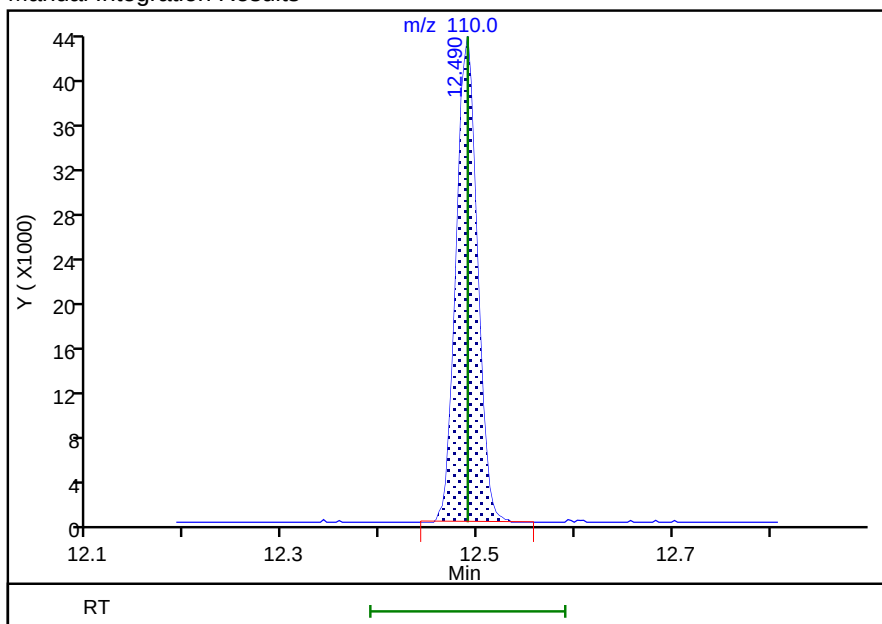
Signal: 1

Not Detected
 Expected RT: 12.49

Processing Integration Results



Manual Integration Results



Reviewer: dalea, 05-May-2020 07:43:26

Audit Action: Manually Integrated

Audit Reason: Missed Peak

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FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1
 SDG No.: _____
 Lab Sample ID: CCVIS 410-13905/3 Calibration Date: 06/17/2020 11:20
 Instrument ID: 9915 Calib Start Date: 05/04/2020 12:18
 GC Column: R-624SilMS 30m ID: 0.25 (mm) Calib End Date: 05/04/2020 14:30
 Lab File ID: LU17C01.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3381	0.3042	0.1000	45.0	50.0	-10.0	20.0
Chloromethane	Ave	0.3183	0.2363	0.1000	37.0	50.0	-25.8*	20.0
Vinyl chloride	Ave	0.3102	0.2500	0.1000	40.0	50.0	-19.4	20.0
Bromomethane	Lin		0.1892	0.1000	47.0	50.0	-6.7	20.0
Chloroethane	Lin		0.1418	0.1000	46.0	50.0	-8.7	20.0
Dichlorofluoromethane	Ave	0.3730	0.2985		40.0	50.0	-20.0	20.0
Trichlorofluoromethane	Ave	0.3394	0.3629	0.1000	53.0	50.0	6.9	20.0
Ethyl ether	Ave	0.2393	0.1599		33.0	50.0	-33.2*	20.0
Acrolein	Ave	2.062	1.656		400	500	-19.7	20.0
1,1-Dichloroethene	Ave	0.2151	0.2072	0.1000	48.0	50.0	-3.7	20.0
Freon 113	Ave	0.2242	0.2290	0.1000	51.0	50.0	2.1	20.0
Acetone	Ave	0.9477	0.7012	0.1000	74.0	100	-26.0*	20.0
Iodomethane	Ave	0.4162	0.4177		50.0	50.0	0.4	20.0
Isopropyl alcohol	Ave	0.6005	0.5685		240	250	-5.3	20.0
Carbon disulfide	Ave	0.7295	0.6869	0.1000	47.0	50.0	-5.8	20.0
Methyl acetate	Ave	0.2733	0.2330	0.1000	43.0	50.0	-14.7	20.0
Allyl chloride	Ave	0.3465	0.2996		43.0	50.0	-13.5	20.0
Methylene Chloride	Ave	0.2581	0.2464	0.1000	48.0	50.0	-4.6	20.0
tert-Butyl alcohol	Ave	1.011	0.9913		250	250	-2.0	20.0
Acrylonitrile	Ave	0.1506	0.1254		42.0	50.0	-16.7	20.0
Methyl tert-butyl ether	Ave	0.7413	0.7189	0.1000	48.0	50.0	-3.0	20.0
trans-1,2-Dichloroethene	Ave	0.2486	0.2440	0.1000	49.0	50.0	-1.9	20.0
Hexane	Ave	0.3646	0.3218		44.0	50.0	-11.7	20.0
1,1-Dichloroethane	Ave	0.4324	0.4074	0.2000	47.0	50.0	-5.8	20.0
Diisopropyl ether	Ave	0.7676	0.6788		44.0	50.0	-11.6	20.0
2-Chloro-1,3-butadiene	Ave	0.3479	0.3659		53.0	50.0	5.2	20.0
Ethyl tert-butyl ether	Ave	0.7140	0.6746		47.0	50.0	-5.5	20.0
2-Butanone	Ave	0.1844	0.1524	0.1000	83.0	100	-17.3	20.0
cis-1,2-Dichloroethene	Ave	0.2787	0.2769	0.1000	50.0	50.0	-0.7	20.0
2,2-Dichloropropane	Ave	0.3376	0.3452		51.0	50.0	2.3	20.0
Propionitrile	Ave	1.359	1.267		230	250	-6.8	20.0
Methacrylonitrile	Ave	0.1528	0.1508		120	125	-1.4	20.0
Bromochloromethane	Ave	0.1440	0.1448		50.0	50.0	0.6	20.0
Tetrahydrofuran	Ave	1.201	1.042		87.0	100	-13.3	20.0
Chloroform	Ave	0.4262	0.4383	0.2000	51.0	50.0	2.8	20.0
1,1,1-Trichloroethane	Ave	0.3663	0.3874	0.1000	53.0	50.0	5.8	20.0
Cyclohexane	Ave	0.4315	0.3862	0.1000	45.0	50.0	-10.5	20.0
Carbon tetrachloride	Ave	0.3066	0.3392	0.1000	55.0	50.0	10.6	20.0
1,1-Dichloropropene	Ave	0.3355	0.3397		51.0	50.0	1.3	20.0
Isobutyl alcohol	Ave	0.3379	0.3280		610	625	-2.9	20.0
Benzene	Ave	1.037	1.008	0.5000	49.0	50.0	-2.8	20.0

FORM VII 8260C DOD

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1
 SDG No.: _____
 Lab Sample ID: CCVIS 410-13905/3 Calibration Date: 06/17/2020 11:20
 Instrument ID: 9915 Calib Start Date: 05/04/2020 12:18
 GC Column: R-624SilMS 30m ID: 0.25 (mm) Calib End Date: 05/04/2020 14:30
 Lab File ID: LU17C01.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichloroethane	Ave	0.3459	0.3632	0.1000	52.0	50.0	5.0	20.0
Tert-amyl methyl ether	Ave	0.7281	0.7052		48.0	50.0	-3.1	20.0
Heptane	Ave	0.3716	0.3196		43.0	50.0	-14.0	20.0
Trichloroethene	Ave	0.2629	0.2714	0.2000	52.0	50.0	3.3	20.0
Methylcyclohexane	Ave	0.4488	0.4272	0.1000	48.0	50.0	-4.8	20.0
Tert-amyl ethyl ether	Ave	0.3665	0.3815		52.0	50.0	4.1	20.0
1,2-Dichloropropane	Ave	0.2675	0.2488	0.1000	47.0	50.0	-7.0	20.0
Methyl methacrylate	Ave	0.2288	0.2401		52.0	50.0	4.9	20.0
1,4-Dioxane	Ave	0.0675	0.1043	0.0050	970	625	54.5*	20.0
Dibromomethane	Ave	0.1749	0.1815		52.0	50.0	3.8	20.0
Bromodichloromethane	Ave	0.3135	0.3301	0.2000	53.0	50.0	5.3	20.0
2-Nitropropane	Ave	2.251	2.168		96.0	100	-3.7	20.0
2-Chloroethyl vinyl ether	Ave	0.1877	0.1886		50.0	50.0	0.4	20.0
cis-1,3-Dichloropropene	Ave	0.4087	0.4185	0.2000	51.0	50.0	2.4	20.0
4-Methyl-2-pentanone	Ave	0.3736	0.3210	0.1000	86.0	100	-14.1	20.0
Toluene	Ave	0.8166	0.8212	0.4000	50.0	50.0	0.6	20.0
trans-1,3-Dichloropropene	Ave	0.4657	0.4827	0.1000	52.0	50.0	3.7	20.0
Ethyl methacrylate	Ave	0.4944	0.5057		51.0	50.0	2.3	20.0
1,1,2-Trichloroethane	Ave	0.3168	0.3197	0.1000	50.0	50.0	0.9	20.0
Tetrachloroethene	Ave	0.3484	0.3671	0.2000	53.0	50.0	5.3	20.0
1,3-Dichloropropane	Ave	0.5287	0.5258		50.0	50.0	-0.6	20.0
2-Hexanone	Ave	0.3573	0.2915	0.1000	82.0	100	-18.4	20.0
Dibromochloromethane	Ave	0.3295	0.3533		54.0	50.0	7.2	20.0
1,2-Dibromoethane (EDB)	Ave	0.3407	0.3543	0.1000	52.0	50.0	4.0	20.0
1-Chlorohexane	Ave	0.4196	0.4225		50.0	50.0	0.7	20.0
Chlorobenzene	Ave	0.9368	0.9463	0.5000	51.0	50.0	1.0	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3183	0.3339		52.0	50.0	4.9	20.0
Ethylbenzene	Ave	1.510	1.587	0.1000	53.0	50.0	5.1	20.0
m&p-Xylene	Ave	0.5925	0.6368	0.1000	110	100	7.5	20.0
o-Xylene	Ave	0.5735	0.6223	0.3000	54.0	50.0	8.5	20.0
Styrene	Ave	0.9862	1.059	0.3000	54.0	50.0	7.4	20.0
Bromoform	Ave	0.2498	0.2558	0.1000	51.0	50.0	2.4	20.0
Isopropylbenzene	Ave	1.548	1.620	0.1000	52.0	50.0	4.7	20.0
Cyclohexanone	Ave	0.3103	0.2448		490	625	-21.1*	20.0
1,1,2,2-Tetrachloroethane	Ave	0.9081	0.8958	0.3000	49.0	50.0	-1.3	20.0
Bromobenzene	Ave	0.7318	0.7560		52.0	50.0	3.3	20.0
trans-1,4-Dichloro-2-butene	Ave	0.2659	0.2739		130	125	3.0	20.0
1,2,3-Trichloropropane	Ave	0.2787	0.2969		53.0	50.0	6.5	20.0
N-Propylbenzene	Ave	3.163	3.326		53.0	50.0	5.2	20.0
2-Chlorotoluene	Ave	0.6765	0.7011		52.0	50.0	3.6	20.0
1,3,5-Trimethylbenzene	Ave	2.402	2.520		52.0	50.0	4.9	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1
 SDG No.: _____
 Lab Sample ID: CCVIS 410-13905/3 Calibration Date: 06/17/2020 11:20
 Instrument ID: 9915 Calib Start Date: 05/04/2020 12:18
 GC Column: R-624SilMS 30m ID: 0.25 (mm) Calib End Date: 05/04/2020 14:30
 Lab File ID: LU17C01.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Chlorotoluene	Ave	0.7002	0.7313		52.0	50.0	4.4	20.0
tert-Butylbenzene	Ave	0.4948	0.5189		52.0	50.0	4.9	20.0
Pentachloroethane	Ave	0.4182	0.4376		52.0	50.0	4.7	20.0
1,2,4-Trimethylbenzene	Ave	2.492	2.623		53.0	50.0	5.3	20.0
sec-Butylbenzene	Ave	2.955	3.096		52.0	50.0	4.8	20.0
1,3-Dichlorobenzene	Ave	1.367	1.439	0.6000	53.0	50.0	5.3	20.0
4-Isopropyltoluene	Ave	2.545	2.732		54.0	50.0	7.4	20.0
1,4-Dichlorobenzene	Ave	1.427	1.472	0.5000	52.0	50.0	3.2	20.0
1,2,3-Trimethylbenzene	Ave	2.458	2.589		53.0	50.0	5.3	20.0
n-Butylbenzene	Ave	1.228	1.304		53.0	50.0	6.2	20.0
1,2-Dichlorobenzene	Ave	1.373	1.425	0.4000	52.0	50.0	3.8	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.2023	0.2093	0.0500	52.0	50.0	3.5	20.0
1,2,4-Trichlorobenzene	Ave	0.9677	0.9646	0.2000	50.0	50.0	-0.3	20.0
Hexachlorobutadiene	Ave	0.4470	0.4261		48.0	50.0	-4.7	20.0
Naphthalene	Ave	3.294	3.252		49.0	50.0	-1.3	20.0
1,2,3-Trichlorobenzene	Ave	0.9622	0.9406		49.0	50.0	-2.2	20.0
Dibromofluoromethane (Surr)	Ave	0.2529	0.2513		50.0	50.0	-0.7	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.0645	0.0637		49.0	50.0	-1.2	20.0
Toluene-d8 (Surr)	Ave	1.276	1.262		49.0	50.0	-1.1	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4936	0.4950		50.0	50.0	0.3	20.0

Report Date: 17-Jun-2020 14:06:28

Chrom Revision: 2.3 13-Jun-2020 09:53:24

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17C01.D
 Lims ID: CCVIS
 Client ID:
 Sample Type: CCVIS
 Inject. Date: 17-Jun-2020 11:20:30 ALS Bottle#: 2 Worklist Smp#: 3
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: CCVIS
 Misc. Info.: 410-0003558-003
 Operator ID: clm27445 Instrument ID: 9915
 Sublist: chrom-MSVoa_9915a*sub2
 Method: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\MSVoa_9915a.m
 Limit Group: MSV - 8260C DOD5
 Last Update: 17-Jun-2020 14:06:24 Calib Date: 04-May-2020 14:30:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1064

First Level Reviewer: mellinger

Date: 17-Jun-2020 12:43:17

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	2.082	2.082	0.000	99	362612	50.0	45.0	
4 Chloromethane	50	2.291	2.291	0.000	100	281673	50.0	37.1	
5 Vinyl chloride	62	2.410	2.410	0.000	97	298035	50.0	40.3	
6 Butadiene	39	2.413	2.413	0.000	86	230897	NC	NC	
8 Bromomethane	94	2.757	2.757	0.000	91	225528	50.0	46.7	
9 Chloroethane	64	2.847	2.847	0.000	100	168966	50.0	45.7	
10 Dichlorofluoromethane	67	3.104	3.104	0.000	97	355826	50.0	40.0	
11 Trichlorofluoromethane	101	3.152	3.152	0.000	97	432635	50.0	53.5	
12 Pentane	43	3.213	3.213	0.000	96	325806	NC	NC	
14 Ethyl ether	59	3.435	3.435	0.000	89	190554	50.0	33.4	
15 1,2-Dichloro-1,1,2-trifluoroetha	67	3.529	3.529	0.000	89	319602	NC	NC	
16 Acrolein	56	3.615	3.615	0.000	99	863685	500.0	401.6	
17 1,1-Dichloroethene	96	3.763	3.763	0.000	98	247000	50.0	48.2	
18 112TCTFE	101	3.786	3.786	0.000	80	272985	50.0	51.1	
19 Acetone	58	3.802	3.802	0.000	99	73121	100.0	74.0	
20 Iodomethane	142	3.969	3.969	0.000	98	497922	50.0	50.2	
21 Isopropyl alcohol	45	3.982	3.982	0.000	99	148221	250.0	236.7	
22 Carbon disulfide	76	4.078	4.078	0.000	99	818761	50.0	47.1	
24 Methyl acetate	43	4.242	4.242	0.000	97	277751	50.0	42.6	
25 3-Chloro-1-propene	41	4.268	4.268	0.000	90	357121	50.0	43.2	
26 Methylene Chloride	84	4.471	4.471	0.000	90	293651	50.0	47.7	
* 27 t-Butyl alcohol-d10 (IS)	65	4.483	4.483	0.000	0	260705	250.0	250.0	M
28 2-Methyl-2-propanol	59	4.612	4.612	0.000	98	258436	250.0	245.1	
29 Acrylonitrile	53	4.821	4.821	0.000	99	149491	50.0	41.6	
31 Methyl tert-butyl ether	73	4.876	4.876	0.000	95	856962	50.0	48.5	
32 trans-1,2-Dichloroethene	96	4.885	4.885	0.000	98	290791	50.0	49.1	
33 Hexane	57	5.307	5.307	0.000	92	383614	50.0	44.1	
35 1,1-Dichloroethane	63	5.545	5.545	0.000	96	485656	50.0	47.1	
36 Isopropyl ether	45	5.596	5.596	0.000	92	809156	50.0	44.2	
37 2-Chloro-1,3-butadiene	53	5.647	5.647	0.000	90	436179	50.0	52.6	

Report Date: 17-Jun-2020 14:06:28

Chrom Revision: 2.3 13-Jun-2020 09:53:24

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17C01.D

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
38 Tert-butyl ethyl ether	59	6.126	6.126	0.000	97	804084	50.0	47.2	
40 2-Butanone (MEK)	43	6.348	6.348	0.000	100	363405	100.0	82.7	
41 cis-1,2-Dichloroethene	96	6.374	6.374	0.000	82	330046	50.0	49.7	
42 2,2-Dichloropropane	77	6.387	6.387	0.000	87	411511	50.0	51.1	a
44 Propionitrile	54	6.445	6.445	0.000	99	330200	250.0	233.0	
45 Methacrylonitrile	67	6.657	6.657	0.000	90	449298	125.0	123.3	
46 Chlorobromomethane	128	6.699	6.699	0.000	87	172581	50.0	50.3	
47 Tetrahydrofuran	71	6.708	6.708	0.000	83	108612	100.0	86.7	
48 Chloroform	83	6.853	6.853	0.000	93	522404	50.0	51.4	
\$ 49 Dibromofluoromethane (Surr)	113	7.062	7.062	0.000	93	299504	50.0	49.7	
50 1,1,1-Trichloroethane	97	7.072	7.072	0.000	98	461795	50.0	52.9	
51 Cyclohexane	56	7.168	7.168	0.000	88	460365	50.0	44.7	
52 Carbon tetrachloride	117	7.281	7.281	0.000	94	404348	50.0	55.3	
53 1,1-Dichloropropene	75	7.284	7.284	0.000	96	404983	50.0	50.6	
54 Isobutyl alcohol	41	7.445	7.445	0.000	93	213784	625.0	606.7	
\$ 55 1,2-Dichloroethane-d4 (Surr)	102	7.522	7.522	0.000	97	75983	50.0	49.4	
56 Benzene	78	7.544	7.544	0.000	96	1201980	50.0	48.6	
58 1,2-Dichloroethane	62	7.622	7.622	0.000	98	432884	50.0	52.5	
59 Tert-amyl methyl ether	73	7.731	7.731	0.000	98	840620	50.0	48.4	
* 61 Fluorobenzene (IS)	96	7.946	7.946	0.000	97	1192030	50.0	50.0	
62 n-Heptane	43	7.950	7.950	0.000	83	381018	50.0	43.0	
63 n-Butanol	56	8.313	8.313	0.000	88	354151	NC	NC	
64 Trichloroethene	95	8.422	8.422	0.000	98	323544	50.0	51.6	
65 Methylcyclohexane	83	8.724	8.724	0.000	91	509269	50.0	47.6	
66 2-ethoxy-2-methyl butane	87	8.753	8.753	0.000	93	454735	50.0	52.0	
67 1,2-Dichloropropane	63	8.757	8.757	0.000	71	296623	50.0	46.5	
68 Methyl methacrylate	69	8.834	8.834	0.000	89	286222	50.0	52.5	
69 1,4-Dioxane	88	8.843	8.843	0.000	84	68007	625.0	965.6	M
70 Dibromomethane	93	8.863	8.863	0.000	95	216375	50.0	51.9	
72 Dichlorobromomethane	83	9.097	9.097	0.000	99	393453	50.0	52.7	
73 2-Nitropropane	41	9.374	9.374	0.000	99	226098	100.0	96.3	
74 2-Chloroethyl vinyl ether	63	9.448	9.448	0.000	92	224790	50.0	50.2	
75 cis-1,3-Dichloropropene	75	9.628	9.628	0.000	96	498889	50.0	51.2	
76 4-Methyl-2-pentanone (MIBK)	43	9.795	9.795	0.000	95	765377	100.0	85.9	
\$ 77 Toluene-d8 (Surr)	98	9.924	9.924	0.000	93	1227187	50.0	49.5	
78 Toluene	92	9.998	9.998	0.000	98	798346	50.0	50.3	
80 trans-1,3-Dichloropropene	75	10.249	10.249	0.000	93	469283	50.0	51.8	
81 Ethyl methacrylate	69	10.300	10.300	0.000	88	491646	50.0	51.1	
82 1,1,2-Trichloroethane	97	10.445	10.445	0.000	91	310782	50.0	50.5	
83 Tetrachloroethene	166	10.528	10.528	0.000	97	356853	50.0	52.7	
84 1,3-Dichloropropane	76	10.605	10.605	0.000	90	511189	50.0	49.7	
86 2-Hexanone	43	10.657	10.657	0.000	95	566756	100.0	81.6	
88 Chlorodibromomethane	129	10.818	10.818	0.000	90	343507	50.0	53.6	
89 Ethylene Dibromide	107	10.927	10.927	0.000	99	344456	50.0	52.0	
* 91 Chlorobenzene-d5 (IS)	117	11.351	11.351	0.000	84	972227	50.0	50.0	
92 1-Chlorohexane	91	11.355	11.355	0.000	96	410790	50.0	50.3	
93 Chlorobenzene	112	11.377	11.377	0.000	96	920033	50.0	50.5	
94 1,1,1,2-Tetrachloroethane	131	11.457	11.457	0.000	96	324665	50.0	52.5	
95 Ethylbenzene	91	11.457	11.457	0.000	98	1542895	50.0	52.5	
96 m-Xylene & p-Xylene	106	11.570	11.570	0.000	100	1238190	100.0	107.5	
97 o-Xylene	106	11.898	11.898	0.000	96	604973	50.0	54.3	
98 Styrene	104	11.914	11.914	0.000	94	1029390	50.0	53.7	

Report Date: 17-Jun-2020 14:06:28

Chrom Revision: 2.3 13-Jun-2020 09:53:24

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17C01.D

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
99 Bromoform	173	12.072	12.072	0.000	97	248698	50.0	51.2	
100 Isopropylbenzene	105	12.194	12.194	0.000	96	1574714	50.0	52.3	
102 Cyclohexanone	55	12.277	12.277	0.000	92	159580	625.0	493.2	
\$ 103 4-Bromofluorobenzene (Surr)	95	12.338	12.338	0.000	91	481213	50.0	50.1	
104 1,1,2,2-Tetrachloroethane	83	12.441	12.441	0.000	94	490882	50.0	49.3	
105 Bromobenzene	156	12.457	12.457	0.000	96	414252	50.0	51.7	
106 trans-1,4-Dichloro-2-butene	53	12.464	12.464	0.000	89	375186	125.0	128.8	
107 1,2,3-Trichloropropane	110	12.490	12.490	0.000	75	162683	50.0	53.3	a
108 N-Propylbenzene	91	12.522	12.522	0.000	98	1822575	50.0	52.6	
109 2-Chlorotoluene	126	12.599	12.599	0.000	97	384157	50.0	51.8	
110 1,3,5-Trimethylbenzene	105	12.657	12.657	0.000	95	1380597	50.0	52.4	
111 4-Chlorotoluene	126	12.692	12.692	0.000	97	400717	50.0	52.2	
113 tert-Butylbenzene	134	12.895	12.895	0.000	93	284310	50.0	52.4	
114 Pentachloroethane	167	12.930	12.930	0.000	88	239793	50.0	52.3	
115 1,2,4-Trimethylbenzene	105	12.940	12.940	0.000	97	1437151	50.0	52.6	
116 sec-Butylbenzene	105	13.059	13.059	0.000	94	1696444	50.0	52.4	
117 1,3-Dichlorobenzene	146	13.158	13.158	0.000	97	788622	50.0	52.6	
118 4-Isopropyltoluene	119	13.165	13.165	0.000	97	1496977	50.0	53.7	
* 119 1,4-Dichlorobenzene-d4	152	13.216	13.216	0.000	95	547959	50.0	50.0	
120 1,4-Dichlorobenzene	146	13.232	13.232	0.000	94	806638	50.0	51.6	
121 1,2,3-Trimethylbenzene	105	13.242	13.242	0.000	98	1418533	50.0	52.7	
122 Benzyl chloride	91	13.309	13.309	0.000	98	1084747	NC	NC	
123 1,3-Diethylbenzene	119	13.364	13.364	0.000	95	885437	NC	NC	
127 o-diethylbenzene	119	13.435	13.435	0.000	88	925490	NC	NC	
125 n-Butylbenzene	92	13.457	13.457	0.000	97	714475	50.0	53.1	
126 1,2-Dichlorobenzene	146	13.496	13.496	0.000	98	780684	50.0	51.9	
124 p-Diethylbenzene	119	13.512	13.512	0.000	86	732358	NC	NC	
129 1,2-Dibromo-3-Chloropropane	75	14.036	14.036	0.000	87	114679	50.0	51.7	
130 1,3,5-Trichlorobenzene	180	14.155	14.155	0.000	98	565246	NC	NC	
131 1,2,4-Trichlorobenzene	180	14.580	14.580	0.000	95	528536	50.0	49.8	
132 Hexachlorobutadiene	225	14.663	14.663	0.000	97	233494	50.0	47.7	
133 Naphthalene	128	14.763	14.763	0.000	96	1781874	50.0	49.4	
134 1,2,3-Trichlorobenzene	180	14.907	14.907	0.000	96	515419	50.0	48.9	
135 2-Methylnaphthalene	142	15.554	15.554	0.000	96	761235	NC	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

a - User Assigned ID

Report Date: 17-Jun-2020 14:06:28

Chrom Revision: 2.3 13-Jun-2020 09:53:24

Reagents:

MSV_VCYC_00002	Amount Added: 10.00	Units: uL	
MSV_V_VOA6_00039	Amount Added: 5.00	Units: uL	
MSV_V_EE_00003	Amount Added: 5.00	Units: uL	
MSV_V_VOA3_00032	Amount Added: 2.00	Units: uL	
MSV_V_VOA1_00066	Amount Added: 5.00	Units: uL	
MSV_V_2CEVE_00078	Amount Added: 5.00	Units: uL	
MSV_V_Gas_00092	Amount Added: 2.50	Units: uL	
MSV_DCFM_00016	Amount Added: 2.50	Units: uL	
MSV_HP23_ISSS_00002	Amount Added: 1.00	Units: uL	Run Reagent

Report Date: 17-Jun-2020 14:06:29

Chrom Revision: 2.3 13-Jun-2020 09:53:24

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17C01.D

Injection Date: 17-Jun-2020 11:20:30

Instrument ID: 9915

Operator ID: clm27445

Lims ID: CCVIS

Worklist Smp#: 3

Client ID:

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

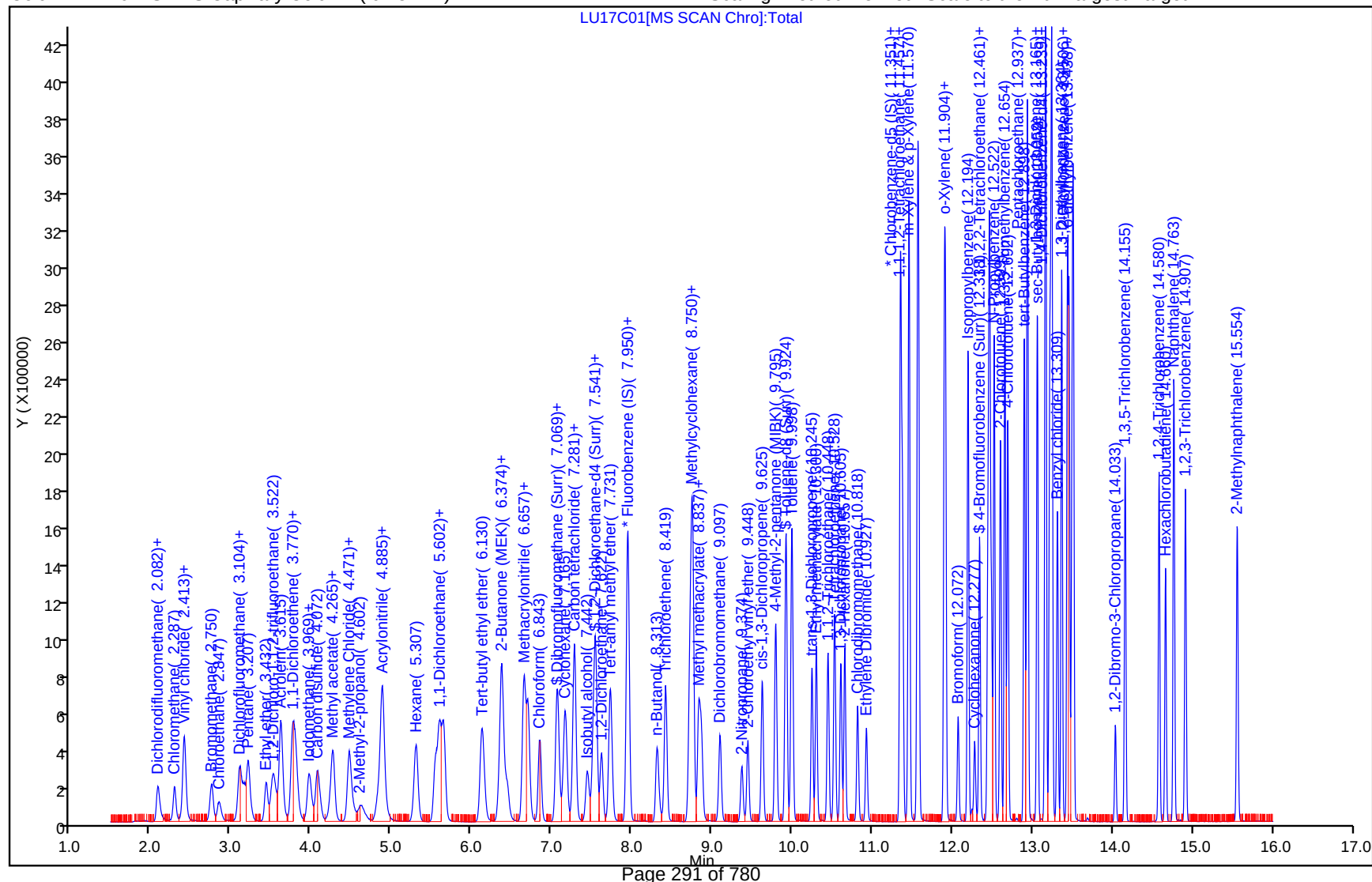
ALS Bottle#: 2

Method: MSVoa_9915a

Limit Group: MSV - 8260C DOD5

Column: Rxi-624Sil MS Capillary Column (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 17-Jun-2020 14:06:29

Chrom Revision: 2.3 13-Jun-2020 09:53:24
Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17C01.D

Injection Date: 17-Jun-2020 11:20:30

Instrument ID: 9915

Lims ID: CCVIS

Client ID:

Operator ID: clm27445

ALS Bottle#:

2

Worklist Smp#: 3

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

Method: MSVoa_9915a

Limit Group: MSV - 8260C DOD5

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

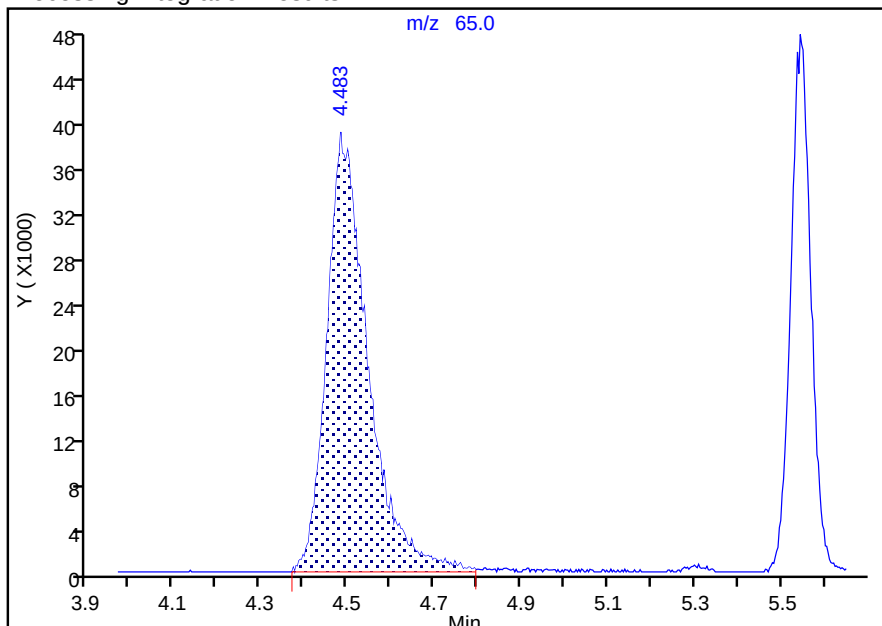
MS Quad

*** 27 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2**

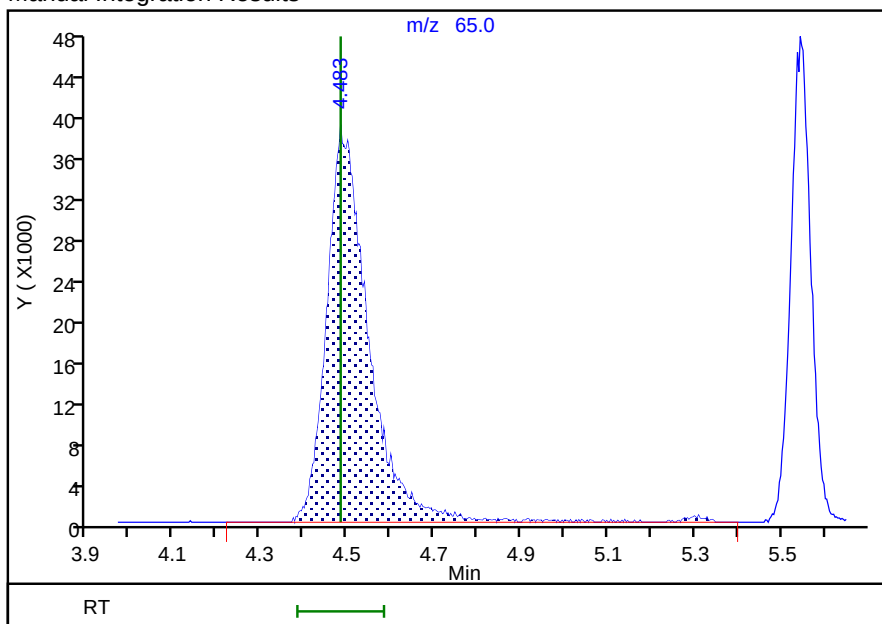
Signal: 1

RT: 4.48
Area: 255763
Amount: 250.0000
Amount Units: ug/l

Processing Integration Results

RT: 4.48
Area: 260705
Amount: 250.0000
Amount Units: ug/l

Manual Integration Results



Reviewer: mellinger, 17-Jun-2020 11:57:28

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

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Report Date: 17-Jun-2020 14:06:29

Chrom Revision: 2.3 13-Jun-2020 09:53:24
Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

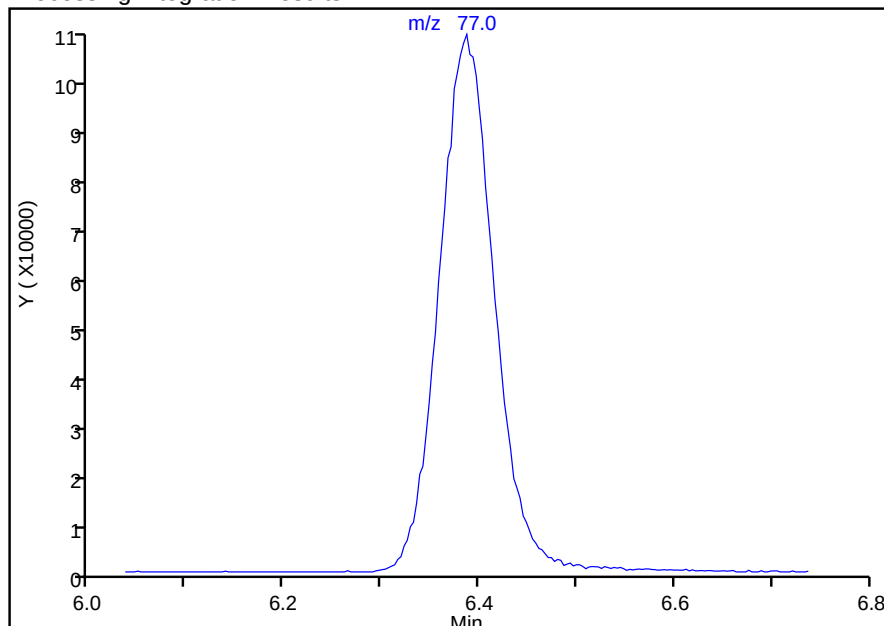
Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17C01.D
Injection Date: 17-Jun-2020 11:20:30 Instrument ID: 9915
Lims ID: CCVIS
Client ID:
Operator ID: clm27445 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVoa_9915a Limit Group: MSV - 8260C DOD5
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

42 2,2-Dichloropropane, CAS: 594-20-7

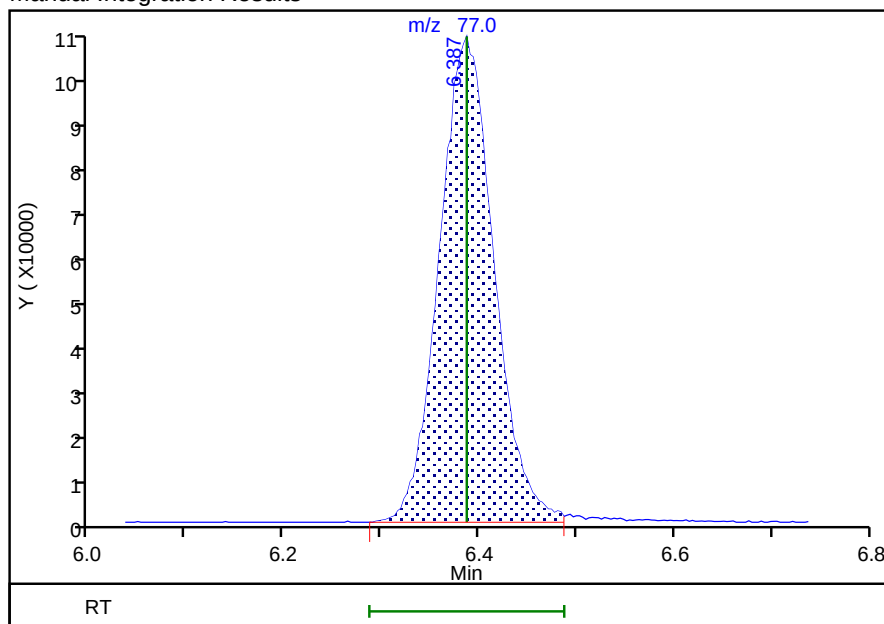
Signal: 1

Not Detected
Expected RT: 6.39

Processing Integration Results



Manual Integration Results



Reviewer: mellinger, 17-Jun-2020 12:00:01

Audit Action: Assigned Compound ID

Audit Reason: Incomplete Integration

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Report Date: 17-Jun-2020 14:06:29

Chrom Revision: 2.3 13-Jun-2020 09:53:24
Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

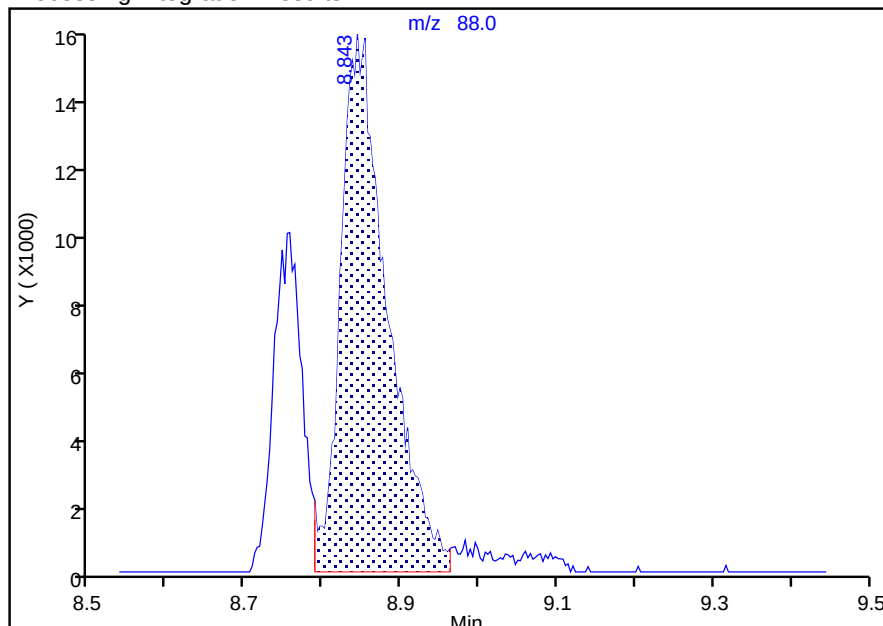
Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17C01.D
 Injection Date: 17-Jun-2020 11:20:30 Instrument ID: 9915
 Lims ID: CCVIS
 Client ID:
 Operator ID: clm27445 ALS Bottle#: 2 Worklist Smp#: 3
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVoa_9915a Limit Group: MSV - 8260C DOD5
 Column: Rxi-624Sil MS Capillary Column (0.25 mm ID) Detector: MS Quad

69 1,4-Dioxane, CAS: 123-91-1

Signal: 1

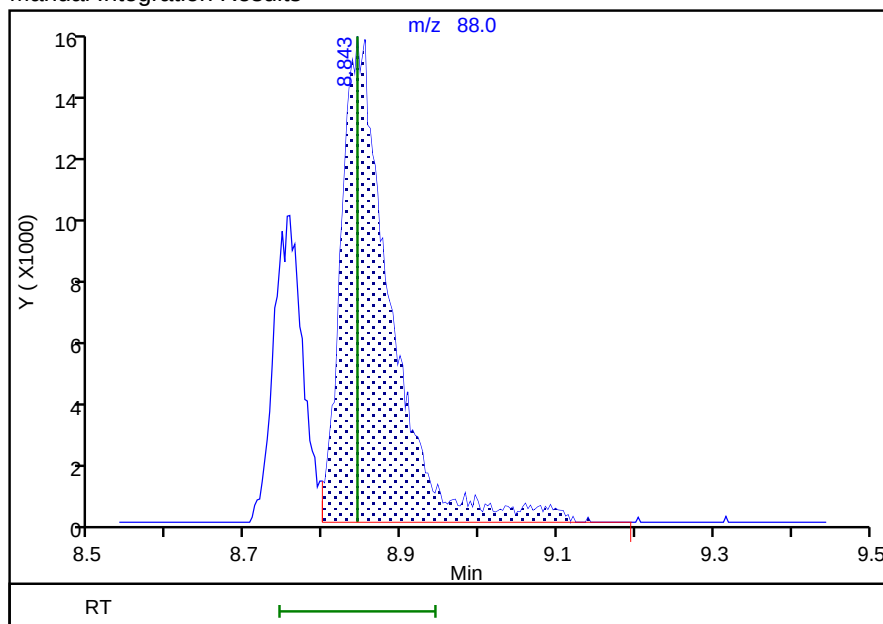
RT: 8.84
 Area: 64551
 Amount: 916.4974
 Amount Units: ug/l

Processing Integration Results



RT: 8.84
 Area: 68007
 Amount: 965.5658
 Amount Units: ug/l

Manual Integration Results



Reviewer: mellinger, 17-Jun-2020 12:00:36

Audit Action: Split an Integrated Peak

Audit Reason: Incomplete Integration

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Report Date: 17-Jun-2020 14:06:29

Chrom Revision: 2.3 13-Jun-2020 09:53:24
Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

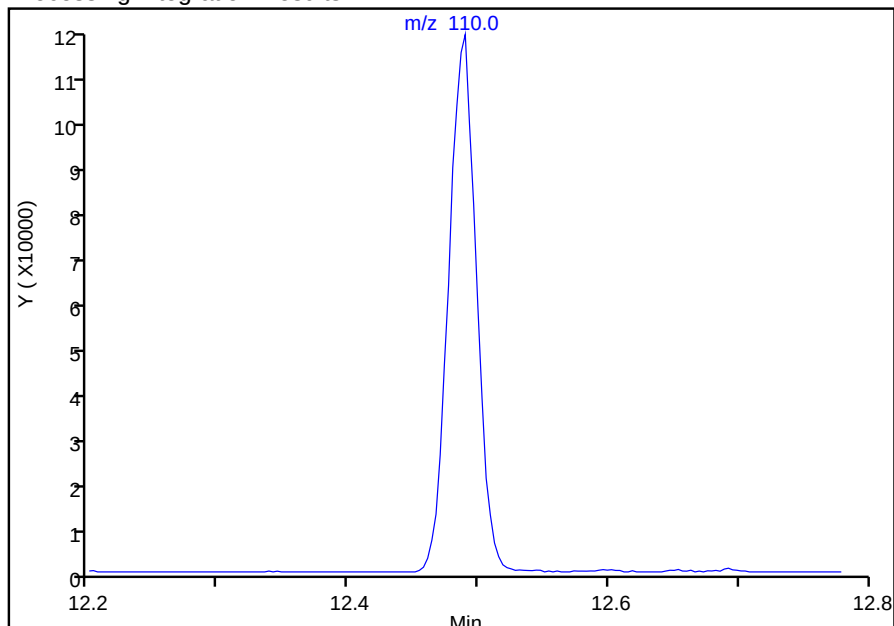
Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17C01.D
 Injection Date: 17-Jun-2020 11:20:30 Instrument ID: 9915
 Lims ID: CCVIS
 Client ID:
 Operator ID: c1m27445 ALS Bottle#: 2 Worklist Smp#: 3
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVoa_9915a Limit Group: MSV - 8260C DOD5
 Column: Rxi-624Sil MS Capillary Column (0.25mm ID) MS Quad

107 1,2,3-Trichloropropane, CAS: 96-18-4

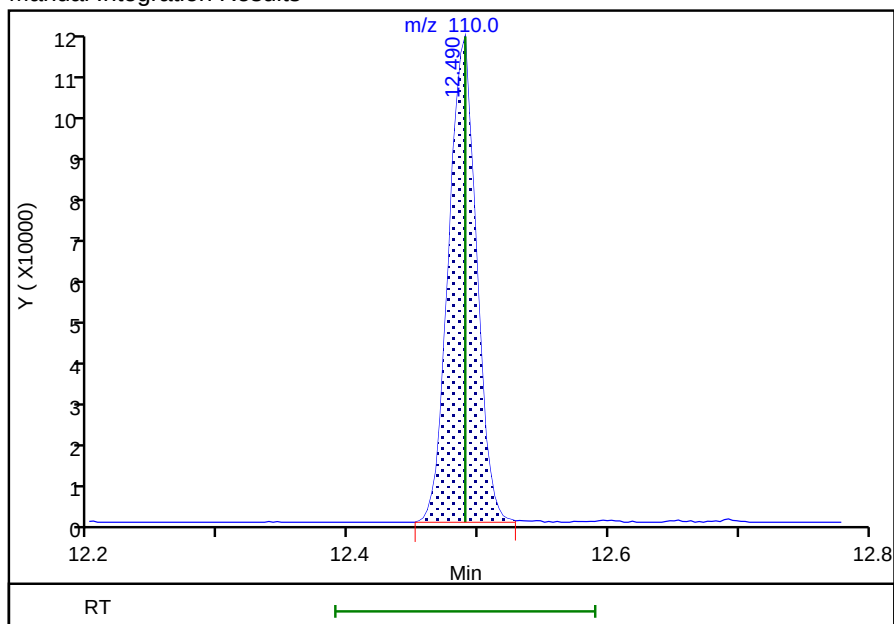
Signal: 1

Not Detected
 Expected RT: 12.49

Processing Integration Results



Manual Integration Results



Reviewer: mellinger, 17-Jun-2020 12:00:58

Audit Action: Assigned Compound ID

Audit Reason: Incomplete Integration

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FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1
 SDG No.: _____
 Lab Sample ID: CCVC 410-13905/29 Calibration Date: 06/17/2020 22:29
 Instrument ID: 9915 Calib Start Date: 05/04/2020 12:18
 GC Column: R-624SilMS 30m ID: 0.25 (mm) Calib End Date: 05/04/2020 14:30
 Lab File ID: LU17S26.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3381	0.3092	0.1000	46.0	50.0	-8.6	50.0
Chloromethane	Ave	0.3183	0.2347	0.1000	37.0	50.0	-26.3	50.0
Vinyl chloride	Ave	0.3102	0.2406	0.1000	39.0	50.0	-22.4	50.0
Bromomethane	Lin		0.1884	0.1000	46.0	50.0	-7.0	50.0
Chloroethane	Lin		0.1375	0.1000	44.0	50.0	-11.4	50.0
Trichlorofluoromethane	Ave	0.3394	0.3437	0.1000	51.0	50.0	1.3	50.0
Ethyl ether	Ave	0.2393	0.1718		36.0	50.0	-28.2	50.0
Acrolein	Ave	2.062	1.598		390	500	-22.5	50.0
1,1-Dichloroethene	Ave	0.2151	0.2148	0.1000	50.0	50.0	-0.1	50.0
Freon 113	Ave	0.2242	0.2309	0.1000	51.0	50.0	3.0	50.0
Acetone	Ave	0.9477	0.7600	0.1000	80.0	100	-19.8	50.0
Iodomethane	Ave	0.4162	0.4281		51.0	50.0	2.8	50.0
Isopropyl alcohol	Ave	0.6005	0.5169		220	250	-13.9	50.0
Carbon disulfide	Ave	0.7295	0.7212	0.1000	49.0	50.0	-1.1	50.0
Methyl acetate	Ave	0.2733	0.2437	0.1000	45.0	50.0	-10.8	50.0
Allyl chloride	Ave	0.3465	0.3198		46.0	50.0	-7.7	50.0
Methylene Chloride	Ave	0.2581	0.2491	0.1000	48.0	50.0	-3.5	50.0
tert-Butyl alcohol	Ave	1.011	0.9135		230	250	-9.7	50.0
Acrylonitrile	Ave	0.1506	0.1307		43.0	50.0	-13.2	50.0
Methyl tert-butyl ether	Ave	0.7413	0.7230	0.1000	49.0	50.0	-2.5	50.0
trans-1,2-Dichloroethene	Ave	0.2486	0.2459	0.1000	49.0	50.0	-1.1	50.0
Hexane	Ave	0.3646	0.3268		45.0	50.0	-10.4	50.0
1,1-Dichloroethane	Ave	0.4324	0.4085	0.2000	47.0	50.0	-5.5	50.0
Diisopropyl ether	Ave	0.7676	0.6870		45.0	50.0	-10.5	50.0
2-Chloro-1,3-butadiene	Ave	0.3479	0.3640		52.0	50.0	4.6	50.0
Ethyl tert-butyl ether	Ave	0.7140	0.6845		48.0	50.0	-4.1	50.0
2-Butanone	Ave	0.1844	0.1599	0.1000	87.0	100	-13.3	50.0
cis-1,2-Dichloroethene	Ave	0.2787	0.2784	0.1000	50.0	50.0	-0.1	50.0
2,2-Dichloropropane	Ave	0.3376	0.3291		49.0	50.0	-2.5	50.0
Propionitrile	Ave	1.359	1.201		220	250	-11.6	50.0
Methacrylonitrile	Ave	0.1528	0.1472		120	125	-3.7	50.0
Bromochloromethane	Ave	0.1440	0.1527		53.0	50.0	6.0	50.0
Tetrahydrofuran	Ave	1.201	1.068		89.0	100	-11.1	50.0
Chloroform	Ave	0.4262	0.4334	0.2000	51.0	50.0	1.7	50.0
1,1,1-Trichloroethane	Ave	0.3663	0.3810	0.1000	52.0	50.0	4.0	50.0
Cyclohexane	Ave	0.4315	0.4003	0.1000	46.0	50.0	-7.2	50.0
Carbon tetrachloride	Ave	0.3066	0.3303	0.1000	54.0	50.0	7.7	50.0
1,1-Dichloropropene	Ave	0.3355	0.3358		50.0	50.0	0.0	50.0
Isobutyl alcohol	Ave	0.3379	0.2921		540	625	-13.6	50.0
Benzene	Ave	1.037	0.999	0.5000	48.0	50.0	-3.7	50.0
1,2-Dichloroethane	Ave	0.3459	0.3590	0.1000	52.0	50.0	3.8	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1
 SDG No.: _____
 Lab Sample ID: CCVC 410-13905/29 Calibration Date: 06/17/2020 22:29
 Instrument ID: 9915 Calib Start Date: 05/04/2020 12:18
 GC Column: R-624SilMS 30m ID: 0.25 (mm) Calib End Date: 05/04/2020 14:30
 Lab File ID: LU17S26.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tert-amyl methyl ether	Ave	0.7281	0.7067		49.0	50.0	-2.9	50.0
Heptane	Ave	0.3716	0.3051		41.0	50.0	-17.9	50.0
Trichloroethene	Ave	0.2629	0.2645	0.2000	50.0	50.0	0.6	50.0
Methylcyclohexane	Ave	0.4488	0.4413	0.1000	49.0	50.0	-1.7	50.0
1,2-Dichloropropane	Ave	0.2675	0.2448	0.1000	46.0	50.0	-8.5	50.0
Tert-amyl ethyl ether	Ave	0.3665	0.3796		52.0	50.0	3.6	50.0
Methyl methacrylate	Ave	0.2288	0.2353		51.0	50.0	2.8	50.0
1,4-Dioxane	Ave	0.0675	0.0895	0.0050	830	625	32.6	50.0
Dibromomethane	Ave	0.1749	0.1772		51.0	50.0	1.3	50.0
Bromodichloromethane	Ave	0.3135	0.3220	0.2000	51.0	50.0	2.7	50.0
2-Nitropropane	Ave	2.251	2.145		95.0	100	-4.7	50.0
2-Chloroethyl vinyl ether	Ave	0.1877	0.1906		51.0	50.0	1.5	50.0
cis-1,3-Dichloropropene	Ave	0.4087	0.4058	0.2000	50.0	50.0	-0.7	50.0
4-Methyl-2-pentanone	Ave	0.3736	0.3374	0.1000	90.0	100	-9.7	50.0
Toluene	Ave	0.8166	0.8000	0.4000	49.0	50.0	-2.0	50.0
trans-1,3-Dichloropropene	Ave	0.4657	0.4581	0.1000	49.0	50.0	-1.6	50.0
Ethyl methacrylate	Ave	0.4944	0.4883		49.0	50.0	-1.2	50.0
1,1,2-Trichloroethane	Ave	0.3168	0.3098	0.1000	49.0	50.0	-2.2	50.0
Tetrachloroethene	Ave	0.3484	0.3656	0.2000	52.0	50.0	4.9	50.0
1,3-Dichloropropane	Ave	0.5287	0.5107		48.0	50.0	-3.4	50.0
2-Hexanone	Ave	0.3573	0.3016	0.1000	84.0	100	-15.6	50.0
Dibromochloromethane	Ave	0.3295	0.3387		51.0	50.0	2.8	50.0
1,2-Dibromoethane (EDB)	Ave	0.3407	0.3473	0.1000	51.0	50.0	1.9	50.0
1-Chlorohexane	Ave	0.4196	0.4109		49.0	50.0	-2.1	50.0
Chlorobenzene	Ave	0.9368	0.9106	0.5000	49.0	50.0	-2.8	50.0
1,1,1,2-Tetrachloroethane	Ave	0.3183	0.3213		50.0	50.0	0.9	50.0
Ethylbenzene	Ave	1.510	1.533	0.1000	51.0	50.0	1.5	50.0
m&p-Xylene	Ave	0.5925	0.6178	0.1000	100	100	4.3	50.0
o-Xylene	Ave	0.5735	0.6022	0.3000	53.0	50.0	5.0	50.0
Styrene	Ave	0.9862	1.013	0.3000	51.0	50.0	2.7	50.0
Bromoform	Ave	0.2498	0.2451	0.1000	49.0	50.0	-1.9	50.0
Isopropylbenzene	Ave	1.548	1.581	0.1000	51.0	50.0	2.1	50.0
Cyclohexanone	Ave	0.3103	0.2694		540	625	-13.2	50.0
1,1,2,2-Tetrachloroethane	Ave	0.9081	0.8506	0.3000	47.0	50.0	-6.3	50.0
Bromobenzene	Ave	0.7318	0.7272		50.0	50.0	-0.6	50.0
trans-1,4-Dichloro-2-butene	Ave	0.2659	0.1996		94.0	125	-24.9	50.0
1,2,3-Trichloropropane	Ave	0.2787	0.2814		50.0	50.0	1.0	50.0
N-Propylbenzene	Ave	3.163	3.218		51.0	50.0	1.7	50.0
2-Chlorotoluene	Ave	0.6765	0.6704		50.0	50.0	-0.9	50.0
1,3,5-Trimethylbenzene	Ave	2.402	2.459		51.0	50.0	2.4	50.0
4-Chlorotoluene	Ave	0.7002	0.7044		50.0	50.0	0.6	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1
 SDG No.: _____
 Lab Sample ID: CCVC 410-13905/29 Calibration Date: 06/17/2020 22:29
 Instrument ID: 9915 Calib Start Date: 05/04/2020 12:18
 GC Column: R-624SilMS 30m ID: 0.25 (mm) Calib End Date: 05/04/2020 14:30
 Lab File ID: LU17S26.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
tert-Butylbenzene	Ave	0.4948	0.5135		52.0	50.0	3.8	50.0
Pentachloroethane	Ave	0.4182	0.4116		49.0	50.0	-1.6	50.0
1,2,4-Trimethylbenzene	Ave	2.492	2.531		51.0	50.0	1.6	50.0
sec-Butylbenzene	Ave	2.955	3.049		52.0	50.0	3.2	50.0
1,3-Dichlorobenzene	Ave	1.367	1.370	0.6000	50.0	50.0	0.2	50.0
4-Isopropyltoluene	Ave	2.545	2.670		52.0	50.0	4.9	50.0
1,4-Dichlorobenzene	Ave	1.427	1.391	0.5000	49.0	50.0	-2.5	50.0
1,2,3-Trimethylbenzene	Ave	2.458	2.594		53.0	50.0	5.5	50.0
n-Butylbenzene	Ave	1.228	1.258		51.0	50.0	2.5	50.0
1,2-Dichlorobenzene	Ave	1.373	1.360	0.4000	50.0	50.0	-1.0	50.0
1,2-Dibromo-3-Chloropropane	Ave	0.2023	0.1973	0.0500	49.0	50.0	-2.5	50.0
1,2,4-Trichlorobenzene	Ave	0.9677	0.9184	0.2000	47.0	50.0	-5.1	50.0
Hexachlorobutadiene	Ave	0.4470	0.4035		45.0	50.0	-9.7	50.0
Naphthalene	Ave	3.294	3.102		47.0	50.0	-5.8	50.0
1,2,3-Trichlorobenzene	Ave	0.9622	0.9048		47.0	50.0	-6.0	50.0
Dibromofluoromethane (Surr)	Ave	0.2529	0.2552		50.0	50.0	0.9	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.0645	0.0649		50.0	50.0	0.5	50.0
Toluene-d8 (Surr)	Ave	1.276	1.259		49.0	50.0	-1.4	50.0
4-Bromofluorobenzene (Surr)	Ave	0.4936	0.4972		50.0	50.0	0.7	50.0

Report Date: 18-Jun-2020 07:24:47

Chrom Revision: 2.3 17-Jun-2020 19:07:08

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S26.D
 Lims ID: CCVC
 Client ID:
 Sample Type: CCVC
 Inject. Date: 17-Jun-2020 22:29:30 ALS Bottle#: 31 Worklist Smp#: 29
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: ccv
 Misc. Info.: 410-0003558-029
 Operator ID: clm27445 Instrument ID: 9915
 Sublist: chrom-MSVoa_9915a*sub15
 Method: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\MSVoa_9915a.m
 Limit Group: MSV - 8260C DOD5
 Last Update: 18-Jun-2020 07:24:44 Calib Date: 04-May-2020 14:30:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1002

First Level Reviewer: johnsons

Date: 17-Jun-2020 22:56:33

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	2.078	2.078	0.000	99	367386	50.0	45.7	
4 Chloromethane	50	2.291	2.291	0.000	99	278829	50.0	36.9	a
6 Butadiene	39	2.406	2.406	0.000	91	320299	NC	NC	
5 Vinyl chloride	62	2.413	2.413	0.000	97	285941	50.0	38.8	
8 Bromomethane	94	2.750	2.750	0.000	92	223887	50.0	46.5	
9 Chloroethane	64	2.847	2.847	0.000	100	163404	50.0	44.3	
11 Trichlorofluoromethane	101	3.159	3.159	0.000	98	408408	50.0	50.6	
12 Pentane	43	3.207	3.207	0.000	96	353180	NC	NC	
14 Ethyl ether	59	3.429	3.429	0.000	91	204168	50.0	35.9	
15 1,2-Dichloro-1,1,2-trifluoroetha	67	3.519	3.519	0.000	90	313215	NC	NC	
16 Acrolein	56	3.619	3.619	0.000	99	853063	500.0	387.5	
17 1,1-Dichloroethene	96	3.757	3.757	0.000	98	255259	50.0	49.9	
18 112TCTFE	101	3.795	3.795	0.000	83	274380	50.0	51.5	
19 Acetone	58	3.799	3.799	0.000	99	81121	100.0	80.2	
20 Iodomethane	142	3.966	3.966	0.000	98	508676	50.0	51.4	
21 Isopropyl alcohol	45	3.992	3.992	0.000	98	137919	250.0	215.2	
22 Carbon disulfide	76	4.072	4.072	0.000	99	857012	50.0	49.4	
24 Methyl acetate	43	4.236	4.236	0.000	97	289590	50.0	44.6	
25 3-Chloro-1-propene	41	4.262	4.262	0.000	89	380011	50.0	46.1	
26 Methylene Chloride	84	4.471	4.471	0.000	90	295966	50.0	48.2	
* 27 t-Butyl alcohol-d10 (IS)	65	4.493	4.493	0.000	0	266846	250.0	250.0	M
28 2-Methyl-2-propanol	59	4.615	4.615	0.000	97	243755	250.0	225.9	
29 Acrylonitrile	53	4.824	4.824	0.000	98	155248	50.0	43.4	
31 Methyl tert-butyl ether	73	4.879	4.879	0.000	94	859121	50.0	48.8	
32 trans-1,2-Dichloroethene	96	4.885	4.885	0.000	99	292150	50.0	49.4	
33 Hexane	57	5.300	5.300	0.000	92	388292	50.0	44.8	
35 1,1-Dichloroethane	63	5.545	5.545	0.000	96	485366	50.0	47.2	
36 Isopropyl ether	45	5.596	5.596	0.000	94	816301	50.0	44.7	
37 2-Chloro-1,3-butadiene	53	5.647	5.647	0.000	90	432527	50.0	52.3	
38 Tert-butyl ethyl ether	59	6.123	6.123	0.000	97	813409	50.0	47.9	

Report Date: 18-Jun-2020 07:24:47

Chrom Revision: 2.3 17-Jun-2020 19:07:08

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S26.D

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
40 2-Butanone (MEK)	43	6.345	6.345	0.000	99	380030	100.0	86.7	
41 cis-1,2-Dichloroethene	96	6.371	6.371	0.000	82	330838	50.0	49.9	
42 2,2-Dichloropropane	77	6.384	6.384	0.000	92	391010	50.0	48.7	
44 Propionitrile	54	6.438	6.438	0.000	99	320383	250.0	220.9	
45 Methacrylonitrile	67	6.651	6.651	0.000	90	437354	125.0	120.4	
46 Chlorobromomethane	128	6.699	6.699	0.000	86	181393	50.0	53.0	
47 Tetrahydrofuran	71	6.712	6.712	0.000	83	113978	100.0	88.9	
48 Chloroform	83	6.850	6.850	0.000	93	515047	50.0	50.8	
\$ 49 Dibromofluoromethane (Surr)	113	7.059	7.059	0.000	94	303259	50.0	50.4	
50 1,1,1-Trichloroethane	97	7.075	7.075	0.000	98	452779	50.0	52.0	
51 Cyclohexane	56	7.168	7.168	0.000	88	475713	50.0	46.4	
52 Carbon tetrachloride	117	7.274	7.274	0.000	83	392445	50.0	53.9	
53 1,1-Dichloropropene	75	7.281	7.281	0.000	95	398969	50.0	50.0	
54 Isobutyl alcohol	41	7.442	7.442	0.000	93	194845	625.0	540.3	
\$ 55 1,2-Dichloroethane-d4 (Surr)	102	7.512	7.512	0.000	97	77089	50.0	50.3	
56 Benzene	78	7.544	7.544	0.000	96	1186630	50.0	48.1	
58 1,2-Dichloroethane	62	7.618	7.618	0.000	98	426590	50.0	51.9	
59 Tert-amyl methyl ether	73	7.728	7.728	0.000	98	839724	50.0	48.5	
* 61 Fluorobenzene (IS)	96	7.946	7.946	0.000	99	1188298	50.0	50.0	
62 n-Heptane	43	7.950	7.950	0.000	91	362491	50.0	41.0	
63 n-Butanol	56	8.313	8.313	0.000	88	328697	NC	NC	
64 Trichloroethene	95	8.419	8.419	0.000	97	314323	50.0	50.3	
65 Methylcyclohexane	83	8.721	8.721	0.000	90	524429	50.0	49.2	
66 2-ethoxy-2-methyl butane	87	8.757	8.757	0.000	93	451130	50.0	51.8	
67 1,2-Dichloropropane	63	8.757	8.757	0.000	70	290898	50.0	45.8	
68 Methyl methacrylate	69	8.834	8.834	0.000	89	279571	50.0	51.4	
69 1,4-Dioxane	88	8.837	8.837	0.000	88	59726	625.0	828.5	M
70 Dibromomethane	93	8.866	8.866	0.000	95	210539	50.0	50.6	
72 Dichlorobromomethane	83	9.101	9.101	0.000	99	382664	50.0	51.4	
73 2-Nitropropane	41	9.368	9.368	0.000	98	228993	100.0	95.3	
74 2-Chloroethyl vinyl ether	63	9.448	9.448	0.000	92	226464	50.0	50.8	
75 cis-1,3-Dichloropropene	75	9.625	9.625	0.000	96	482220	50.0	49.6	
76 4-Methyl-2-pentanone (MIBK)	43	9.795	9.795	0.000	95	801834	100.0	90.3	
\$ 77 Toluene-d8 (Surr)	98	9.924	9.924	0.000	93	1230200	50.0	49.3	
78 Toluene	92	9.998	9.998	0.000	98	781963	50.0	49.0	
80 trans-1,3-Dichloropropene	75	10.249	10.249	0.000	93	447726	50.0	49.2	
81 Ethyl methacrylate	69	10.300	10.300	0.000	88	477233	50.0	49.4	
82 1,1,2-Trichloroethane	97	10.445	10.445	0.000	90	302822	50.0	48.9	
83 Tetrachloroethene	166	10.528	10.528	0.000	97	357335	50.0	52.5	
84 1,3-Dichloropropane	76	10.609	10.609	0.000	90	499206	50.0	48.3	
86 2-Hexanone	43	10.657	10.657	0.000	96	589638	100.0	84.4	
88 Chlorodibromomethane	129	10.818	10.818	0.000	90	331050	50.0	51.4	
89 Ethylene Dibromide	107	10.927	10.927	0.000	99	339415	50.0	51.0	
* 91 Chlorobenzene-d5 (IS)	117	11.351	11.351	0.000	85	977438	50.0	50.0	
92 1-Chlorohexane	91	11.355	11.355	0.000	97	401598	50.0	49.0	
93 Chlorobenzene	112	11.377	11.377	0.000	96	890075	50.0	48.6	
94 1,1,1,2-Tetrachloroethane	131	11.454	11.454	0.000	94	314002	50.0	50.5	
95 Ethylbenzene	91	11.457	11.457	0.000	98	1498129	50.0	50.7	
96 m-Xylene & p-Xylene	106	11.573	11.573	0.000	100	1207615	100.0	104.3	
97 o-Xylene	106	11.898	11.898	0.000	95	588579	50.0	52.5	
98 Styrene	104	11.914	11.914	0.000	94	989968	50.0	51.4	
99 Bromoform	173	12.072	12.072	0.000	98	239582	50.0	49.1	

Report Date: 18-Jun-2020 07:24:47

Chrom Revision: 2.3 17-Jun-2020 19:07:08

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S26.D

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
100 Isopropylbenzene	105	12.197	12.197	0.000	95	1545227	50.0	51.1	
102 Cyclohexanone	55	12.274	12.274	0.000	92	179746	625.0	542.7	
\$ 103 4-Bromofluorobenzene (Surr)	95	12.338	12.338	0.000	91	485998	50.0	50.4	
104 1,1,2,2-Tetrachloroethane	83	12.441	12.441	0.000	95	466791	50.0	46.8	
105 Bromobenzene	156	12.457	12.457	0.000	96	399086	50.0	49.7	
106 trans-1,4-Dichloro-2-butene	53	12.464	12.464	0.000	90	273825	125.0	93.8	
107 1,2,3-Trichloropropane	110	12.490	12.490	0.000	78	154453	50.0	50.5	a
108 N-Propylbenzene	91	12.522	12.522	0.000	98	1765760	50.0	50.9	
109 2-Chlorotoluene	126	12.599	12.599	0.000	97	367922	50.0	49.5	
110 1,3,5-Trimethylbenzene	105	12.654	12.654	0.000	94	1349356	50.0	51.2	
111 4-Chlorotoluene	126	12.689	12.689	0.000	97	386553	50.0	50.3	
113 tert-Butylbenzene	134	12.898	12.898	0.000	93	281805	50.0	51.9	
114 Pentachloroethane	167	12.930	12.930	0.000	88	225862	50.0	49.2	
115 1,2,4-Trimethylbenzene	105	12.940	12.940	0.000	97	1388799	50.0	50.8	
116 sec-Butylbenzene	105	13.059	13.059	0.000	94	1673208	50.0	51.6	
117 1,3-Dichlorobenzene	146	13.162	13.162	0.000	98	751718	50.0	50.1	
118 4-Isopropyltoluene	119	13.165	13.165	0.000	97	1465199	50.0	52.5	
* 119 1,4-Dichlorobenzene-d4	152	13.216	13.216	0.000	95	548799	50.0	50.0	
120 1,4-Dichlorobenzene	146	13.232	13.232	0.000	95	763308	50.0	48.7	
121 1,2,3-Trimethylbenzene	105	13.242	13.242	0.000	98	1423378	50.0	52.8	
122 Benzyl chloride	91	13.310	13.310	0.000	98	945707	NC	NC	
123 1,3-Diethylbenzene	119	13.364	13.364	0.000	95	872842	NC	NC	
127 o-diethylbenzene	119	13.435	13.435	0.000	88	902268	NC	NC	
125 n-Butylbenzene	92	13.457	13.457	0.000	97	690536	50.0	51.2	
126 1,2-Dichlorobenzene	146	13.493	13.493	0.000	98	746100	50.0	49.5	
124 p-Diethylbenzene	119	13.509	13.509	0.000	86	731769	NC	NC	
129 1,2-Dibromo-3-Chloropropane	75	14.036	14.036	0.000	86	108256	50.0	48.8	
130 1,3,5-Trichlorobenzene	180	14.155	14.155	0.000	98	541215	NC	NC	
131 1,2,4-Trichlorobenzene	180	14.580	14.580	0.000	94	504015	50.0	47.5	
132 Hexachlorobutadiene	225	14.660	14.660	0.000	98	221464	50.0	45.1	
133 Naphthalene	128	14.766	14.766	0.000	96	1702320	50.0	47.1	
134 1,2,3-Trichlorobenzene	180	14.908	14.908	0.000	96	496538	50.0	47.0	
135 2-Methylnaphthalene	142	15.554	15.554	0.000	92	741056	NC	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

a - User Assigned ID

Report Date: 18-Jun-2020 07:24:47

Chrom Revision: 2.3 17-Jun-2020 19:07:08

Reagents:

MSV_VCYC_00002	Amount Added: 10.00	Units: uL	
MSV_V_VOA6_00039	Amount Added: 5.00	Units: uL	
MSV_V_EE_00003	Amount Added: 5.00	Units: uL	
MSV_V_VOA3_00032	Amount Added: 2.00	Units: uL	
MSV_V_VOA1_00066	Amount Added: 5.00	Units: uL	
MSV_V_2CEVE_00078	Amount Added: 5.00	Units: uL	
MSV_V_Gas_00092	Amount Added: 2.50	Units: uL	
MSV_HP23_ISSS_00002	Amount Added: 1.00	Units: uL	Run Reagent

Report Date: 18-Jun-2020 07:24:47

Chrom Revision: 2.3 17-Jun-2020 19:07:08

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S26.D

Injection Date: 17-Jun-2020 22:29:30

Instrument ID: 9915

Operator ID: clm27445

Lims ID: CCVC

Worklist Smp#: 29

Client ID:

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

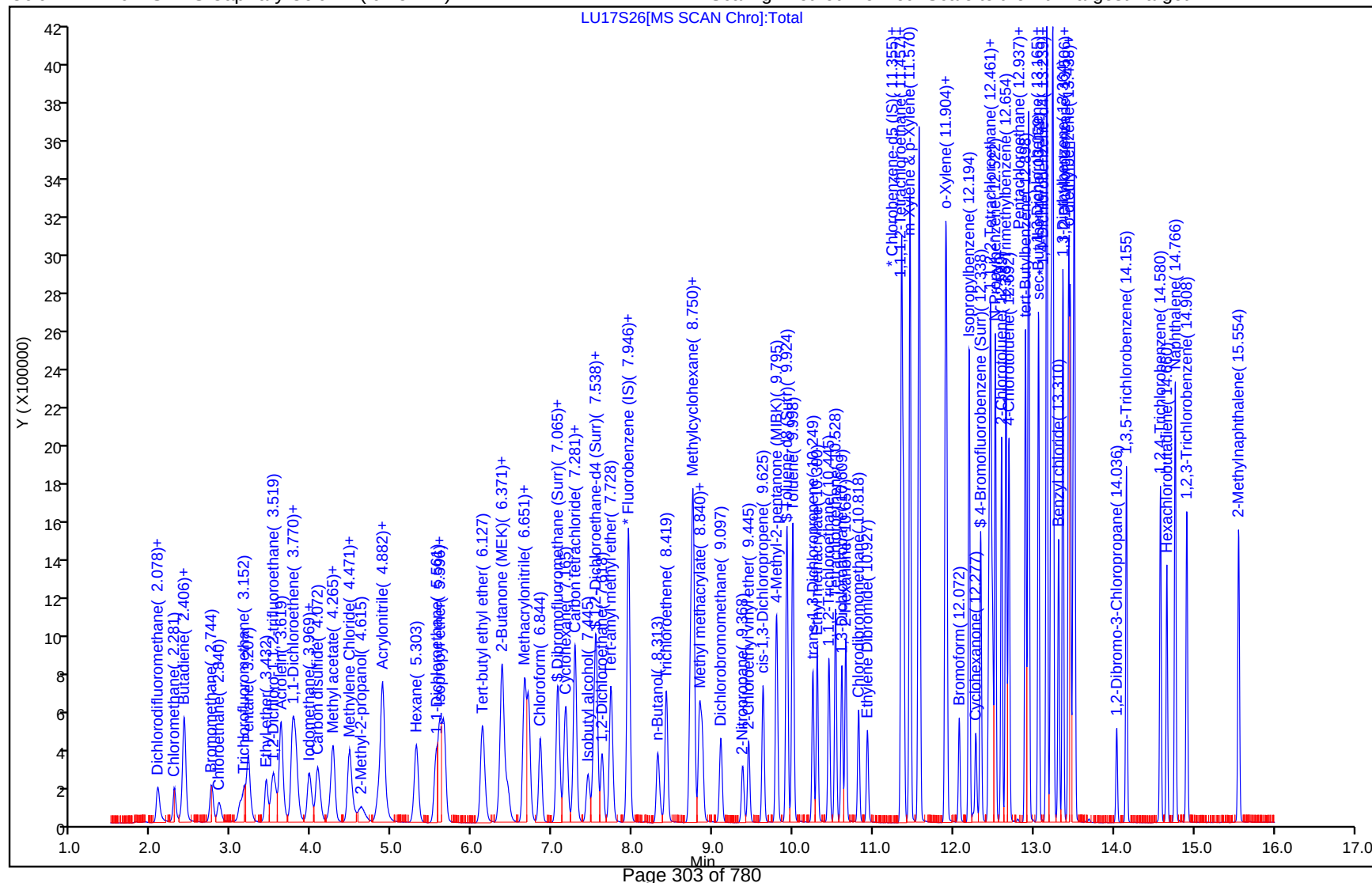
ALS Bottle#: 31

Method: MSVoa_9915a

Limit Group: MSV - 8260C DOD5

Column: Rxi-624Sil MS Capillary Column (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 18-Jun-2020 07:24:48

Chrom Revision: 2.3 17-Jun-2020 19:07:08
Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

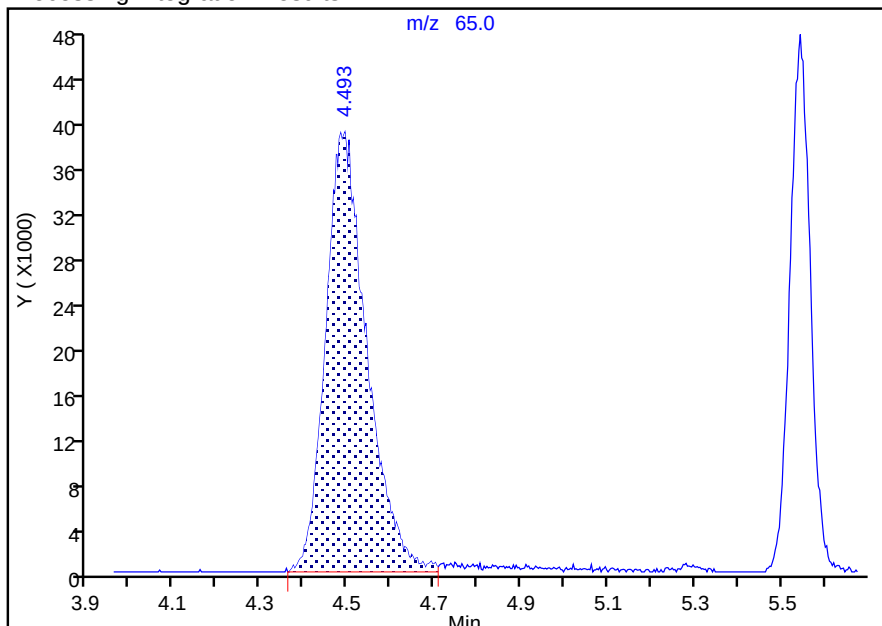
Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S26.D
 Injection Date: 17-Jun-2020 22:29:30 Instrument ID: 9915
 Lims ID: CCVC
 Client ID:
 Operator ID: clm27445 ALS Bottle#: 31 Worklist Smp#: 29
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVoa_9915a Limit Group: MSV - 8260C DOD5
 Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

* 27 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

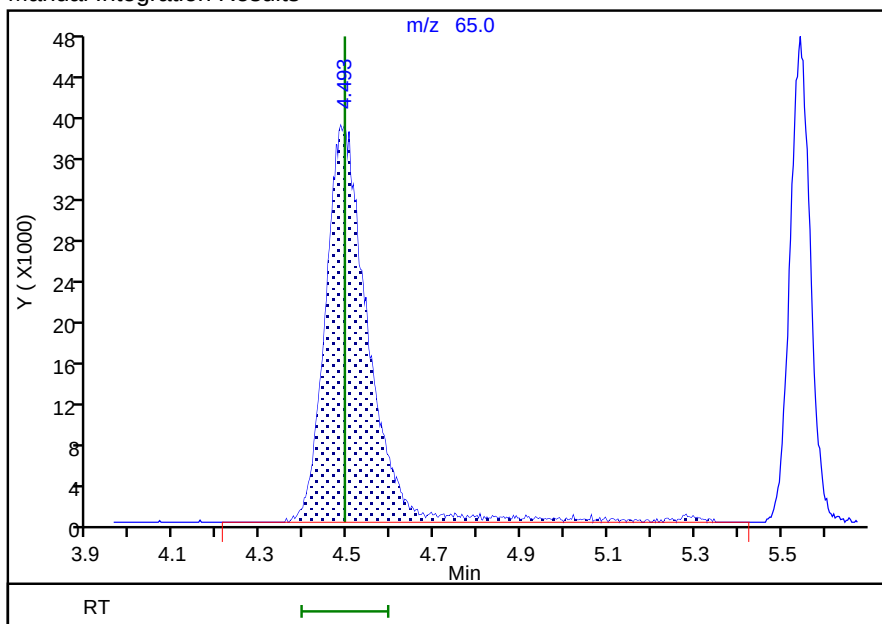
RT: 4.49
 Area: 254193
 Amount: 250.0000
 Amount Units: ug/l

Processing Integration Results



RT: 4.49
 Area: 266846
 Amount: 250.0000
 Amount Units: ug/l

Manual Integration Results



Reviewer: mellinger, 18-Jun-2020 07:19:24

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

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Report Date: 18-Jun-2020 07:24:48

Chrom Revision: 2.3 17-Jun-2020 19:07:08
Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

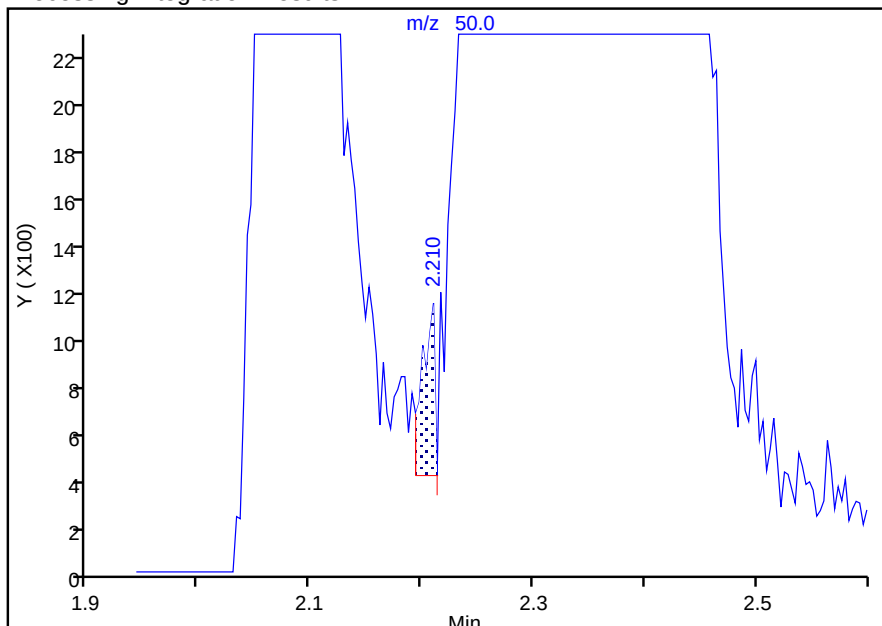
Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S26.D
 Injection Date: 17-Jun-2020 22:29:30 Instrument ID: 9915
 Lims ID: CCVC
 Client ID:
 Operator ID: clm27445 ALS Bottle#: 31 Worklist Smp#: 29
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVoa_9915a Limit Group: MSV - 8260C DOD5
 Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

4 Chloromethane, CAS: 74-87-3

Signal: 1

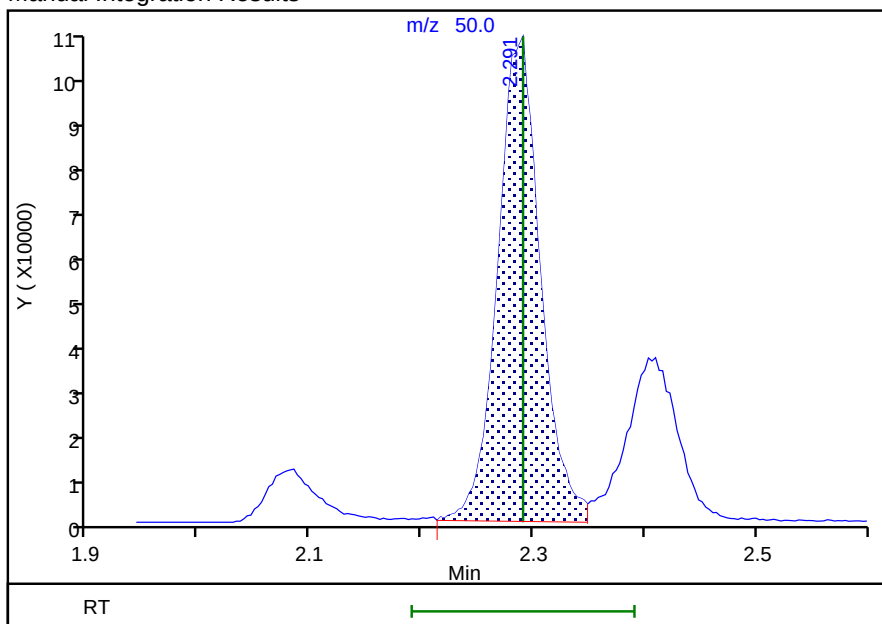
RT: 2.21
 Area: 553
 Amount: 0.073092
 Amount Units: ug/l

Processing Integration Results



RT: 2.29
 Area: 278829
 Amount: 36.853709
 Amount Units: ug/l

Manual Integration Results



Reviewer: johnsons, 17-Jun-2020 22:54:38

Audit Action: Assigned Compound ID

Audit Reason: Peak assignment corrected

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Report Date: 18-Jun-2020 07:24:48

Chrom Revision: 2.3 17-Jun-2020 19:07:08
Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

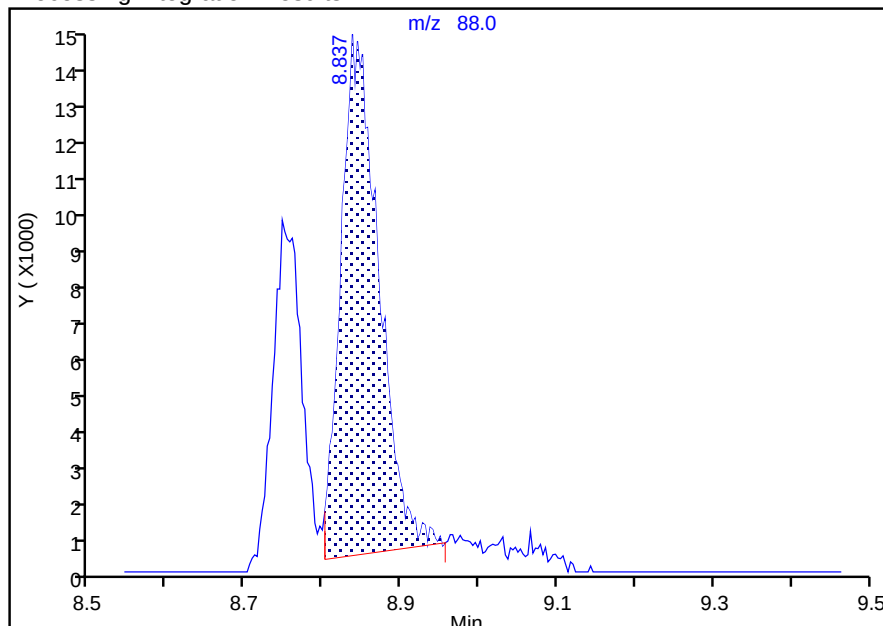
Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S26.D
 Injection Date: 17-Jun-2020 22:29:30 Instrument ID: 9915
 Lims ID: CCVC
 Client ID:
 Operator ID: clm27445 ALS Bottle#: 31 Worklist Smp#: 29
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVoa_9915a Limit Group: MSV - 8260C DOD5
 Column: Rxi-624Sil MS Capillary Column (0.25 mm ID) Detector: MS Quad

69 1,4-Dioxane, CAS: 123-91-1

Signal: 1

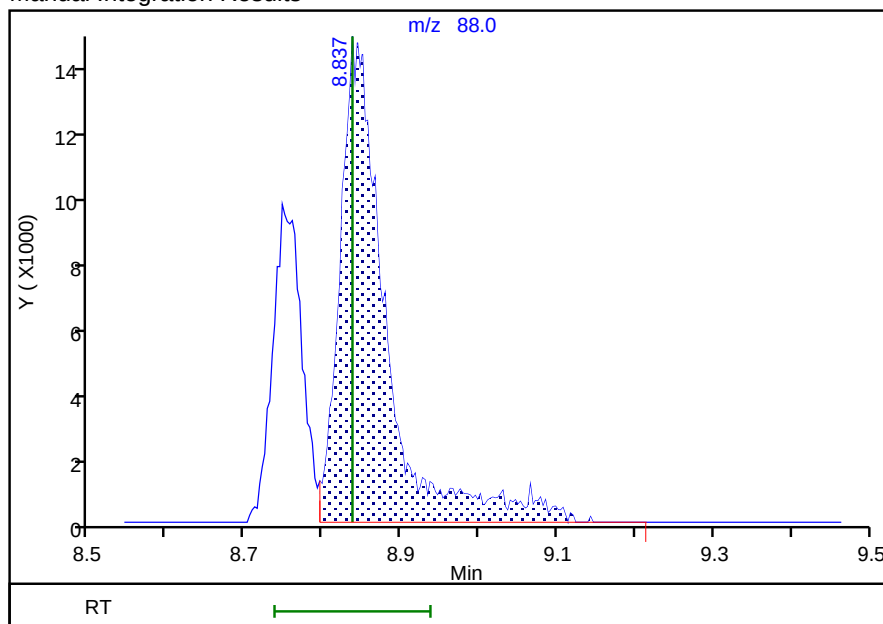
RT: 8.84
 Area: 47640
 Amount: 660.8283
 Amount Units: ug/l

Processing Integration Results



RT: 8.84
 Area: 59726
 Amount: 828.4768
 Amount Units: ug/l

Manual Integration Results



Reviewer: mellinger, 18-Jun-2020 07:20:25

Audit Action: Split an Integrated Peak

Audit Reason: Incomplete Integration

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Report Date: 18-Jun-2020 07:24:48

Chrom Revision: 2.3 17-Jun-2020 19:07:08
Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

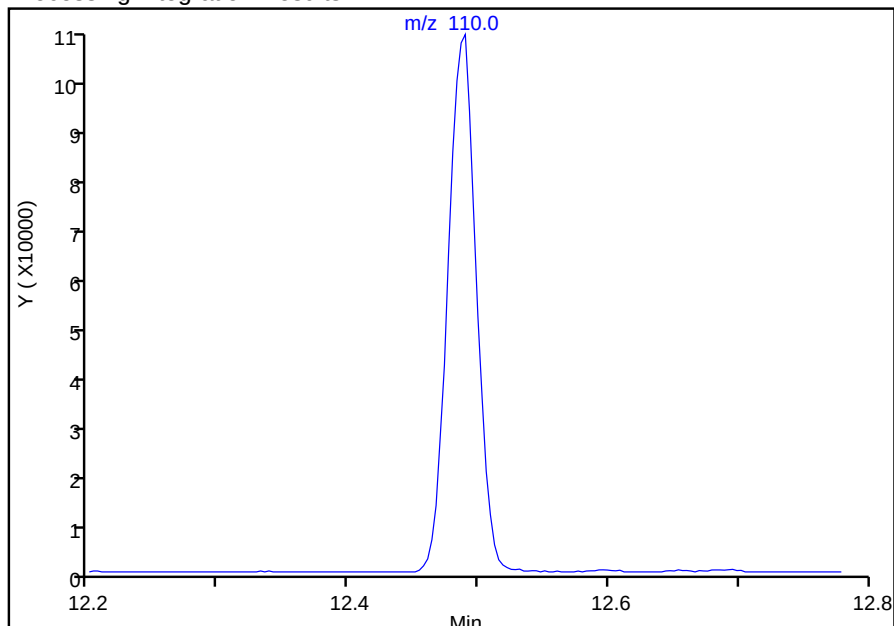
Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S26.D
 Injection Date: 17-Jun-2020 22:29:30 Instrument ID: 9915
 Lims ID: CCVC
 Client ID:
 Operator ID: clm27445 ALS Bottle#: 31 Worklist Smp#: 29
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVoa_9915a Limit Group: MSV - 8260C DOD5
 Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

107 1,2,3-Trichloropropane, CAS: 96-18-4

Signal: 1

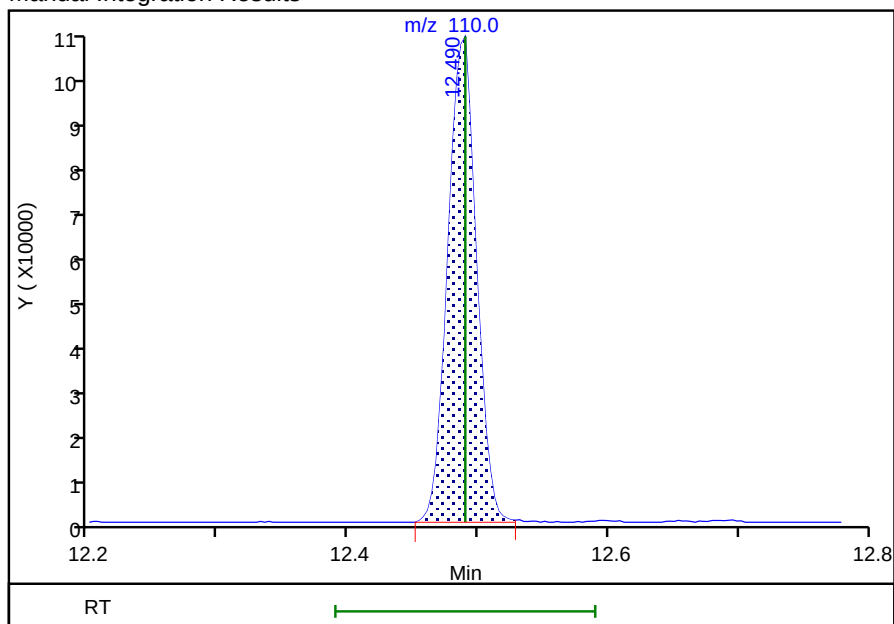
Not Detected
 Expected RT: 12.49

Processing Integration Results



Manual Integration Results

RT: 12.49
 Area: 154453
 Amount: 50.493335
 Amount Units: ug/l



Reviewer: johnsons, 17-Jun-2020 22:55:37

Audit Action: Assigned Compound ID

Audit Reason: Peak assignment corrected

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Report Date: 06-May-2020 07:12:23

Chrom Revision: 2.3 05-May-2020 10:20:52

Eurofins Lancaster Laboratories - PA
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04T02.D
 Lims ID: bfb
 Client ID:
 Sample Type: BFB
 Inject. Date: 04-May-2020 11:11:30 ALS Bottle#: 1 Worklist Smp#: 1
 Injection Vol: 1.0 uL Dil. Factor: 1.0000
 Sample Info: JAN28-2020;50NGBFB;1;3;;;;;
 Misc. Info.: BFB.SUB;;;5;5;;;
 Operator ID: LCP00895 Instrument ID: 9915
 Method: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\MSVoa_9915a.m
 Limit Group: MSV - 8260C DOD5
 Last Update: 06-May-2020 07:12:23 Calib Date: 04-May-2020 14:30:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1012

First Level Reviewer: dalea

Date: 05-May-2020 05:24:03

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 30 BFB	95	4.851	4.851	0.000	0	96230	NC	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

MSV_V_BFB_00002

Amount Added: 1.00

Units: uL

Report Date: 06-May-2020 07:12:23

Chrom Revision: 2.3 05-May-2020 10:20:52
MS Tune Report

Eurofins Lancaster Laboratories - PA

Data File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04T02.D

Injection Date: 04-May-2020 11:11:30

Instrument ID: 9915

Lims ID: bfb

Client ID:

Operator ID: LCP00895

ALS Bottle#: 1

Worklist Smp#: 1

Injection Vol: 1.0 uL

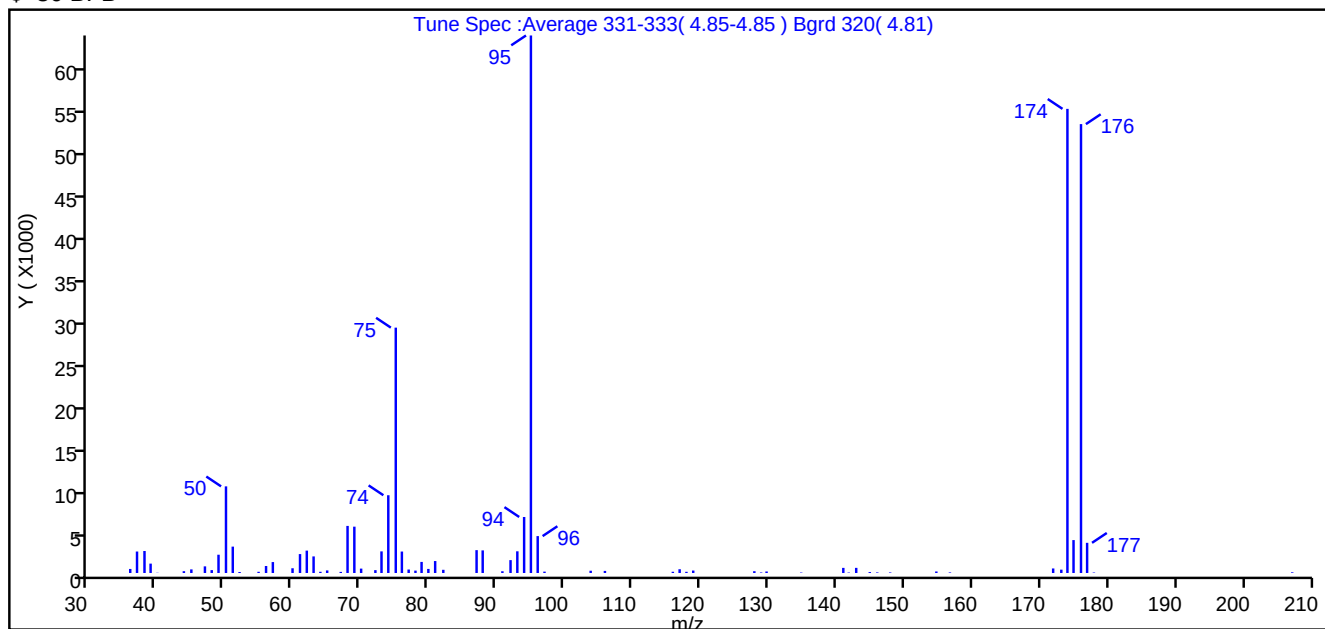
Dil. Factor: 1.0000

Method: MSVoa_9915a

Limit Group: MSV - 8260C DOD5

Tune Method: BFB Method 8260

\$ 30 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	16.1
75	30 to 60% of m/z 95	45.6
96	5 to 9% of m/z 95	6.9
173	Less than 2% of m/z 174	0.6 (0.7)
174	50 to 120% of m/z 95	86.3
175	5 to 9% of m/z 174	6.1 (7.1)
176	Greater than 95% but less than 101% of m/z 174	83.5 (96.7)
177	5 to 9% of m/z 176	5.6 (6.7)

Report Date: 06-May-2020 07:12:23

Chrom Revision: 2.3 05-May-2020 10:20:52

Data File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04T02.D\MSVoa_9915a.rslt\spectra.d
 Injection Date: 04-May-2020 11:11:30
 Spectrum: Tune Spec :Average 331-333(4.85-4.85) Bgrd 320(4.81)
 Base Peak: 95.00
 Minimum % Base Peak: 0
 Number of Points: 72

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	476	62.00	2640	82.00	376	130.00	177
37.00	2534	63.00	1957	87.00	2697	135.00	50
38.00	2595	64.00	142	88.00	2668	141.00	604
39.00	1106	65.00	303	91.00	204	142.00	52
40.00	24	67.00	129	92.00	1519	143.00	605
44.00	212	68.00	5558	93.00	2560	145.00	111
45.00	424	69.00	5470	94.00	6611	146.00	66
47.00	782	70.00	517	95.00	63464	148.00	64
48.00	340	72.00	336	96.00	4356	155.00	179
49.00	2157	73.00	2550	97.00	161	157.00	66
50.00	10227	74.00	9180	104.00	267	172.00	534
51.00	3113	75.00	28968	106.00	245	173.00	394
52.00	116	76.00	2532	116.00	144	174.00	54800
55.00	141	77.00	409	117.00	442	175.00	3885
56.00	824	78.00	281	118.00	140	176.00	53000
57.00	1289	79.00	1307	119.00	290	177.00	3561
60.00	558	80.00	480	128.00	211	178.00	53
61.00	2232	81.00	1409	129.00	61	207.00	80

Report Date: 06-May-2020 07:12:23

Chrom Revision: 2.3 05-May-2020 10:20:52

Eurofins Lancaster Laboratories - PA

Data File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04T02.D

Injection Date: 04-May-2020 11:11:30

Instrument ID: 9915

Operator ID: LCP00895

Lims ID: bfb

Worklist Smp#: 1

Client ID:

Injection Vol: 1.0 uL

Dil. Factor: 1.0000

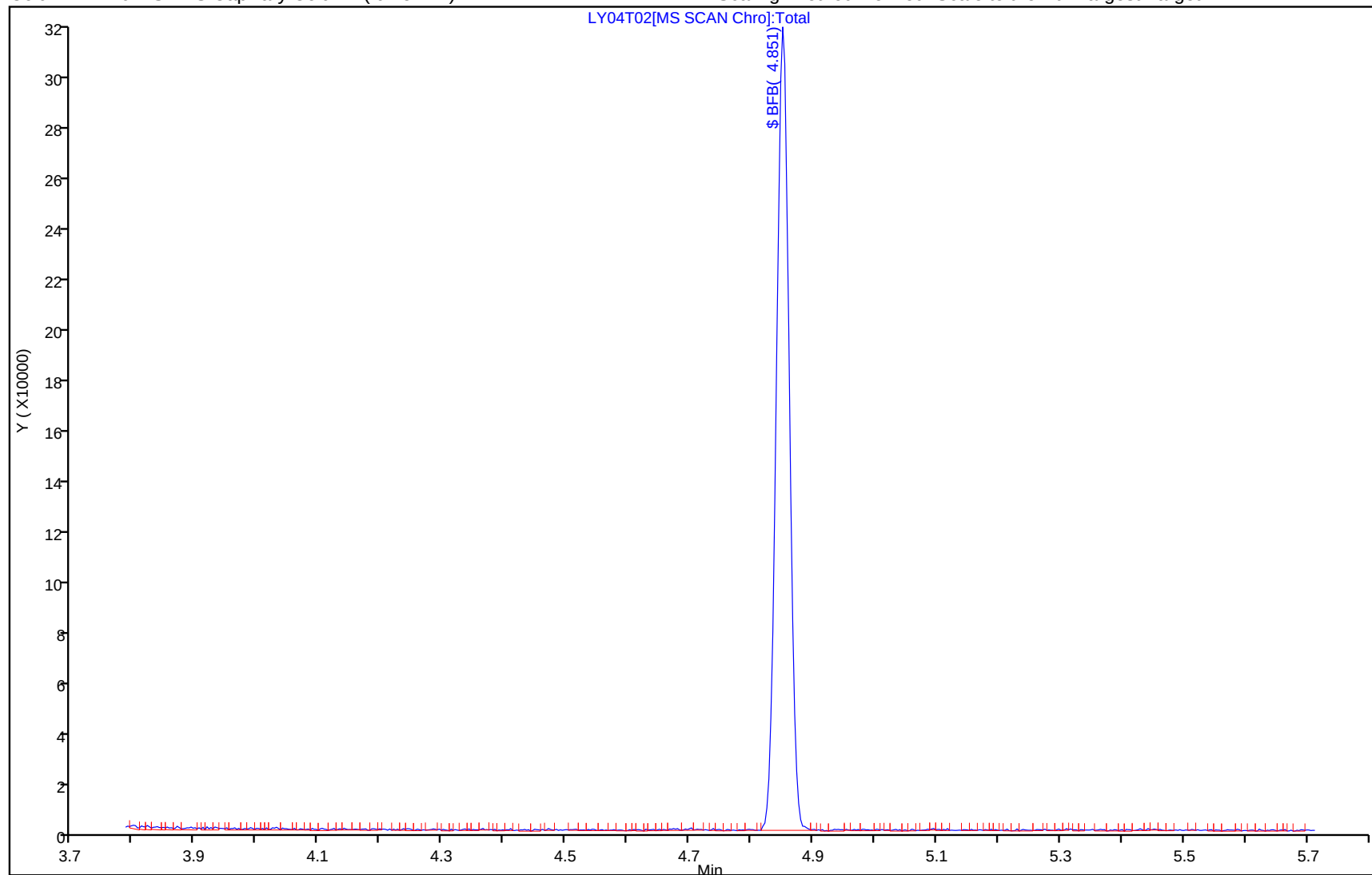
ALS Bottle#: 1

Method: MSVoa_9915a

Limit Group: MSV - 8260C DOD5

Column: Rxi-624Sil MS Capillary Column (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 17-Jun-2020 14:06:23

Chrom Revision: 2.3 13-Jun-2020 09:53:24

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17T03.D
 Lims ID: bfb
 Client ID:
 Sample Type: BFB
 Inject. Date: 17-Jun-2020 10:27:30 ALS Bottle#: 1 Worklist Smp#: 1
 Injection Vol: 1.0 uL Dil. Factor: 1.0000
 Sample Info: bfb
 Misc. Info.: 410-0003558-001
 Operator ID: c1m27445 Instrument ID: 9915
 Method: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\MSVoa_9915a.m
 Limit Group: MSV - 8260C DOD5
 Last Update: 17-Jun-2020 14:06:22 Calib Date: 04-May-2020 14:30:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1064

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 30 BFB	95	4.848	4.848	0.000	0	93315	NC	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

MSV_V_BFB_00002

Amount Added: 1.00

Units: uL

Report Date: 17-Jun-2020 14:06:23

Chrom Revision: 2.3 13-Jun-2020 09:53:24
MS Tune Report

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17T03.D

Injection Date: 17-Jun-2020 10:27:30

Instrument ID: 9915

Lims ID: bfb

Client ID:

Operator ID: c1m27445

ALS Bottle#:

1

Worklist Smp#:

1

Injection Vol: 1.0 uL

Dil. Factor:

1.0000

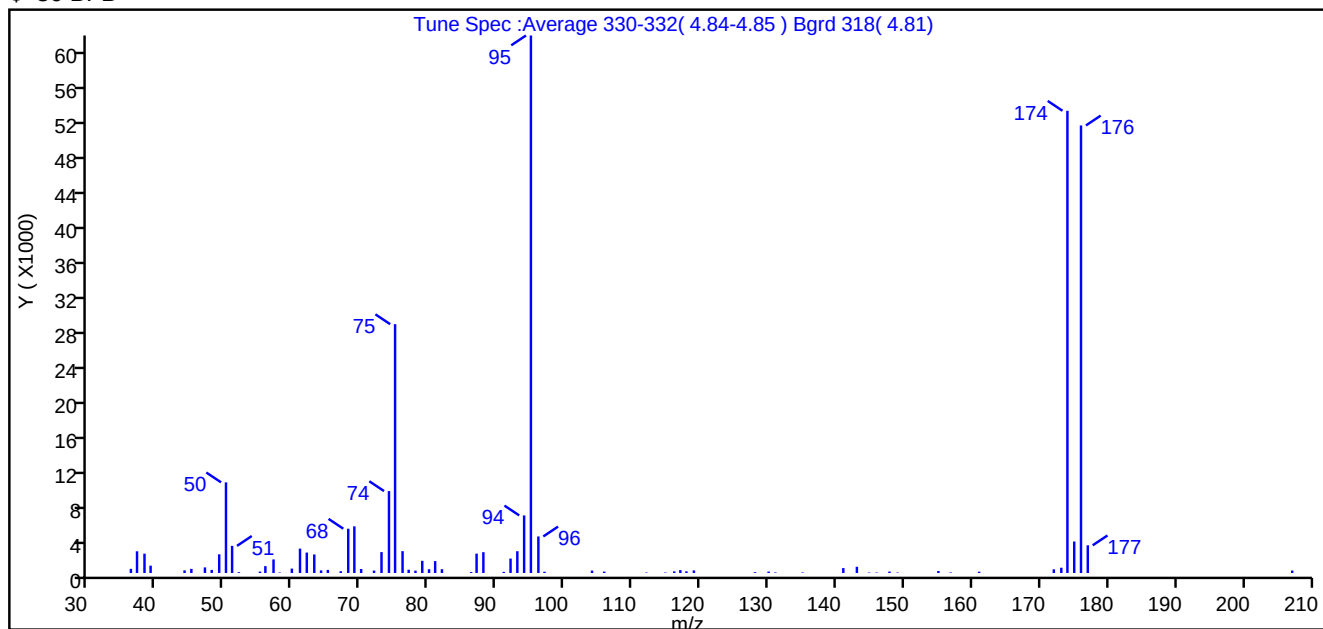
Method: MSVoa_9915a

Limit Group:

MSV - 8260C DOD5

Tune Method: BFB Method 8260

\$ 30 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	16.9
75	30 to 60% of m/z 95	46.3
96	5 to 9% of m/z 95	6.8
173	Less than 2% of m/z 174	1.0 (1.1)
174	50 to 120% of m/z 95	86.0
175	5 to 9% of m/z 174	5.9 (6.8)
176	Greater than 95% but less than 101% of m/z 174	83.3 (96.8)
177	5 to 9% of m/z 176	5.2 (6.2)

Report Date: 17-Jun-2020 14:06:23

Chrom Revision: 2.3 13-Jun-2020 09:53:24

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17T03.D\MSVoa_9915a.rslt\spectra.d
 Injection Date: 17-Jun-2020 10:27:30
 Spectrum: Tune Spec :Average 330-332(4.84-4.85) Bgrd 318(4.81)
 Base Peak: 95.00
 Minimum % Base Peak: 0
 Number of Points: 75

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	476	63.00	2122	87.00	2218	131.00	63
37.00	2486	64.00	298	88.00	2382	135.00	60
38.00	2215	65.00	350	91.00	127	141.00	561
39.00	840	67.00	202	92.00	1652	143.00	712
44.00	297	68.00	5070	93.00	2495	145.00	53
45.00	471	69.00	5342	94.00	6594	146.00	52
47.00	639	70.00	456	95.00	61560	148.00	167
48.00	348	72.00	277	96.00	4185	149.00	51
49.00	2137	73.00	2394	97.00	142	155.00	227
50.00	10380	74.00	9380	104.00	275	157.00	62
51.00	3106	75.00	28496	106.00	162	161.00	149
52.00	93	76.00	2499	112.00	53	172.00	421
55.00	162	77.00	375	115.00	53	173.00	602
56.00	785	78.00	265	116.00	186	174.00	52936
57.00	1554	79.00	1395	117.00	328	175.00	3606
58.00	54	80.00	432	118.00	190	176.00	51256
60.00	502	81.00	1362	119.00	293	177.00	3171
61.00	2791	82.00	435	128.00	91	207.00	280
62.00	2337	86.00	110	130.00	164		

Report Date: 17-Jun-2020 14:06:23

Chrom Revision: 2.3 13-Jun-2020 09:53:24

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17T03.D

Injection Date: 17-Jun-2020 10:27:30

Instrument ID: 9915

Operator ID: clm27445

Lims ID: bfb

Worklist Smp#: 1

Client ID:

Injection Vol: 1.0 uL

Dil. Factor: 1.0000

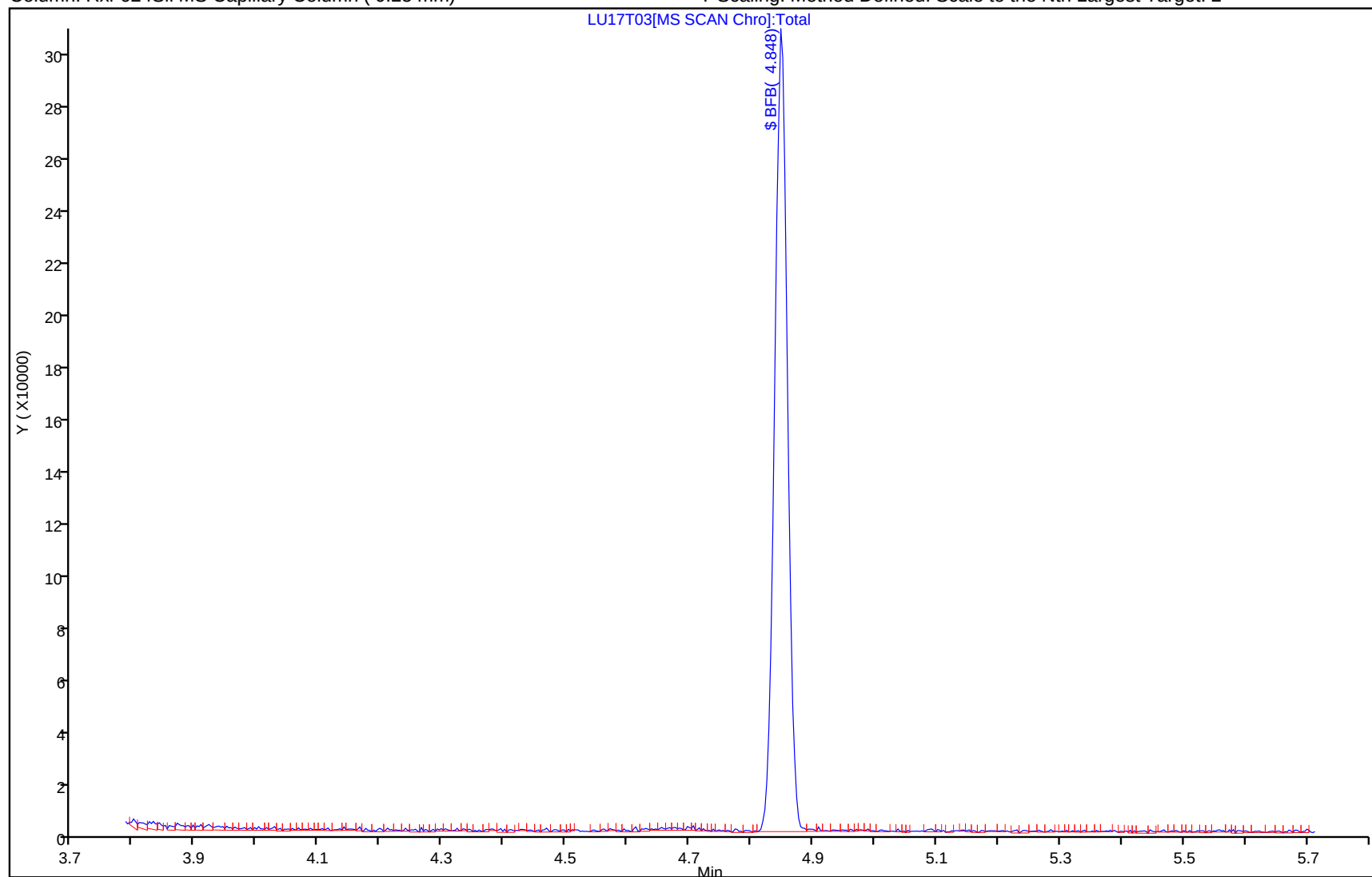
ALS Bottle#: 1

Method: MSVoa_9915a

Limit Group: MSV - 8260C DOD5

Column: Rxi-624Sil MS Capillary Column (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 410-13905/9
 Matrix: Water Lab File ID: LU17B01.D
 Analysis Method: 8260C DOD Date Collected: _____
 Sample wt/vol: 5 (mL) Date Analyzed: 06/17/2020 13:32
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 13905 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
71-43-2	Benzene	0.20	U	1.0	0.50	0.20
100-41-4	Ethylbenzene	0.40	U	1.0	0.80	0.40
108-88-3	Toluene	0.20	U	1.0	0.50	0.20
1330-20-7	Xylenes, Total	1.4	U	6.0	2.0	1.4

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		81-118
460-00-4	4-Bromofluorobenzene (Surr)	96		85-114
1868-53-7	Dibromofluoromethane (Surr)	103		80-119
2037-26-5	Toluene-d8 (Surr)	96		89-112

Report Date: 17-Jun-2020 14:06:58

Chrom Revision: 2.3 13-Jun-2020 09:53:24

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17B01.D
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 17-Jun-2020 13:32:30 ALS Bottle#: 8 Worklist Smp#: 9
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: MB
 Misc. Info.: 410-0003558-009
 Operator ID: c1m27445 Instrument ID: 9915
 Method: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\MSVoa_9915a.m
 Limit Group: MSV - 8260C DOD5
 Last Update: 17-Jun-2020 14:06:24 Calib Date: 04-May-2020 14:30:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1064

First Level Reviewer: mellinger

Date: 17-Jun-2020 14:02:29

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Chlorotrifluoroethene	116		2.043					ND	
2 Dichlorodifluoromethane	85		2.082					ND	
3 Chlorodifluoromethane	51		2.104					ND	
4 Chloromethane	50		2.291					ND	
5 Vinyl chloride	62		2.410					ND	
6 Butadiene	39	2.333	2.413	-0.080	1	227		NC	
7 2-Chloro-1,1,1-Trifluoroethane	118		2.487					ND	
8 Bromomethane	94		2.757					ND	
9 Chloroethane	64		2.847					ND	
10 Dichlorofluoromethane	67		3.104					ND	
11 Trichlorofluoromethane	101		3.152					ND	
12 Pentane	43		3.213					ND	
13 Ethanol	45		3.336					ND	
14 Ethyl ether	59		3.435					ND	
15 1,2-Dichloro-1,1,2-trifluoroethane	67		3.529					ND	
16 Acrolein	56		3.615					ND	
17 1,1-Dichloroethene	96		3.763					ND	
18 1,1,2,2-Tetrafluoroethane	101		3.786					ND	
19 Acetone	58		3.802					ND	
20 Iodomethane	142		3.969					ND	
21 Isopropyl alcohol	45		3.982					ND	
22 Carbon disulfide	76		4.078					ND	
23 Acetonitrile	41		4.201					ND	
24 Methyl acetate	43		4.242					ND	
25 3-Chloro-1-propene	41		4.268					ND	
26 Methylene Chloride	84		4.471					ND	
* 27 t-Butyl alcohol-d10 (IS)	65	4.496	4.483	0.013	0	236295	250.0	250.0	M
28 2-Methyl-2-propanol	59		4.612					ND	
29 Acrylonitrile	53		4.821					ND	
31 Methyl tert-butyl ether	73		4.876					ND	
32 trans-1,2-Dichloroethene	96		4.885					ND	

Report Date: 17-Jun-2020 14:06:58

Chrom Revision: 2.3 13-Jun-2020 09:53:24

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17B01.D

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
33 Hexane	57		5.307					ND	
34 Vinyl acetate	43		5.541					ND	
35 1,1-Dichloroethane	63		5.545					ND	
36 Isopropyl ether	45		5.596					ND	
37 2-Chloro-1,3-butadiene	53		5.647					ND	
38 Tert-butyl ethyl ether	59		6.126					ND	
S 39 1,2-Dichloroethene, Total	100		6.155					ND	
40 2-Butanone (MEK)	43		6.348					ND	
41 cis-1,2-Dichloroethene	96		6.374					ND	
42 2,2-Dichloropropane	77		6.387					ND	
43 Ethyl acetate	43		6.403					ND	
44 Propionitrile	54		6.445					ND	
45 Methacrylonitrile	67		6.657					ND	
46 Chlorobromomethane	128		6.699					ND	
47 Tetrahydrofuran	71		6.708					ND	
48 Chloroform	83		6.853					ND	
\$ 49 Dibromofluoromethane (Surr)	113	7.065	7.062	0.003	94	290215	50.0	51.4	
50 1,1,1-Trichloroethane	97		7.072					ND	
51 Cyclohexane	56		7.168					ND	
52 Carbon tetrachloride	117		7.281					ND	
53 1,1-Dichloropropene	75		7.284					ND	
54 Isobutyl alcohol	41		7.445					ND	
\$ 55 1,2-Dichloroethane-d4 (Surr)	102	7.522	7.522	0.000	96	74269	50.0	51.5	
56 Benzene	78		7.544					ND	
58 1,2-Dichloroethane	62		7.622					ND	
57 Isopropyl acetate	43		7.622					ND	
59 Tert-amyl methyl ether	73		7.731					ND	
60 t-Amyl alcohol	73		7.842					ND	
* 61 Fluorobenzene (IS)	96	7.946	7.946	0.000	99	1116579	50.0	50.0	
62 n-Heptane	43		7.950					ND	
63 n-Butanol	56		8.313					ND	
64 Trichloroethene	95		8.422					ND	
65 Methylcyclohexane	83		8.724					ND	
66 2-ethoxy-2-methyl butane	87		8.753					ND	
67 1,2-Dichloropropane	63		8.757					ND	
68 Methyl methacrylate	69		8.834					ND	
69 1,4-Dioxane	88		8.843					ND	
70 Dibromomethane	93		8.863					ND	
71 n-Propyl acetate	61		8.914					ND	
72 Dichlorobromomethane	83		9.097					ND	
73 2-Nitropropane	41		9.374					ND	
74 2-Chloroethyl vinyl ether	63		9.448					ND	
75 cis-1,3-Dichloropropene	75		9.628					ND	
76 4-Methyl-2-pentanone (MIBK)	43		9.795					ND	
\$ 77 Toluene-d8 (Surr)	98	9.924	9.924	0.000	95	1120023	50.0	47.9	
78 Toluene	92		9.998					ND	
S 79 1,3-Dichloropropene, Total	100		10.060					ND	
80 trans-1,3-Dichloropropene	75		10.249					ND	
81 Ethyl methacrylate	69		10.300					ND	
82 1,1,2-Trichloroethane	97		10.445					ND	
83 Tetrachloroethene	166		10.528					ND	
84 1,3-Dichloropropane	76		10.605					ND	

Report Date: 17-Jun-2020 14:06:58

Chrom Revision: 2.3 13-Jun-2020 09:53:24

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17B01.D

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
85 3,4-Dichloro-1-butene	75		10.647					ND	
86 2-Hexanone	43		10.657					ND	
87 n-Butyl acetate	43		10.770					ND	
88 Chlorodibromomethane	129		10.818					ND	
89 Ethylene Dibromide	107		10.927					ND	
S 90 Xylenes, Total	106		11.245					ND	
* 91 Chlorobenzene-d5 (IS)	117	11.351	11.351	0.000	85	915808	50.0	50.0	
92 1-Chlorohexane	91	11.355	11.355	0.000	14	1099		0.1430	
93 Chlorobenzene	112		11.377					ND	
94 1,1,1,2-Tetrachloroethane	131		11.457					ND	
95 Ethylbenzene	91		11.457					ND	
96 m-Xylene & p-Xylene	106		11.570					ND	
97 o-Xylene	106		11.898					ND	
98 Styrene	104		11.914					ND	
99 Bromoform	173		12.072					ND	
100 Isopropylbenzene	105		12.194					ND	
101 cis-1,4-Dichloro-2-butene	88	12.339	12.248	0.091	0	15286		NC	
102 Cyclohexanone	55		12.277					ND	
\$ 103 4-Bromofluorobenzene (Surr)	95	12.339	12.338	0.001	91	432186	50.0	47.8	
104 1,1,2,2-Tetrachloroethane	83		12.441					ND	
105 Bromobenzene	156		12.457					ND	
106 trans-1,4-Dichloro-2-butene	53		12.464					ND	
107 1,2,3-Trichloropropane	110		12.490					ND	
108 N-Propylbenzene	91		12.522					ND	
109 2-Chlorotoluene	126		12.599					ND	
110 1,3,5-Trimethylbenzene	105		12.657					ND	
111 4-Chlorotoluene	126		12.692					ND	
112 2,3,4-Trichlorobutene	109		12.715					ND	
113 tert-Butylbenzene	134		12.895					ND	
114 Pentachloroethane	167		12.930					ND	
115 1,2,4-Trimethylbenzene	105		12.940					ND	
116 sec-Butylbenzene	105		13.059					ND	
117 1,3-Dichlorobenzene	146		13.158					ND	
118 4-Isopropyltoluene	119		13.165					ND	
* 119 1,4-Dichlorobenzene-d4	152	13.216	13.216	0.000	95	504344	50.0	50.0	
120 1,4-Dichlorobenzene	146		13.232					ND	
121 1,2,3-Trimethylbenzene	105		13.242					ND	
122 Benzyl chloride	91	13.310	13.309	0.001	1	61		NC	
123 1,3-Diethylbenzene	119	13.367	13.364	0.003	1	220		NC	
127 o-diethylbenzene	119	13.438	13.435	0.003	1	440		NC	
125 n-Butylbenzene	92		13.457					ND	
126 1,2-Dichlorobenzene	146		13.496					ND	
124 p-Diethylbenzene	119	13.438	13.512	-0.074	1	440		NC	
128 Hexachloroethane	201		13.560					ND	
129 1,2-Dibromo-3-Chloropropane	75		14.036					ND	
130 1,3,5-Trichlorobenzene	180	14.158	14.155	0.003	1	697		NC	
131 1,2,4-Trichlorobenzene	180		14.580					ND	
132 Hexachlorobutadiene	225		14.663					ND	
133 Naphthalene	128		14.763					ND	
134 1,2,3-Trichlorobenzene	180		14.907					ND	
135 2-Methylnaphthalene	142	15.551	15.554	-0.003	92	1405		NC	
136 C4-C10	1		0.000					ND	

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Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17B01.D

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
137 1,3-Dichlorobutene-2(total)	1		0.000					ND	
138 Propene oxide	1		0.000					ND	
139 C4-C12	1		0.000					ND	
140 1-Chlorobutane	1		0.000					ND	
141 1,4-Divinylbenzene	1		0.000					ND	
142 trans-1,2,3-Trichlorobutene-2	1		0.000					ND	
143 1,1-Dichloro-1-fluoroethane	1		0.000					ND	
144 cis-1,2,3-Trichlorobutene-2	1		0.000					ND	
145 2,3-Dichloro-1,3-butadiene	1		0.000					ND	
146 Diethoxymethane	1		0.000					ND	
147 C5-C12	1		0.000					ND	
148 1-Bromo-2-chloroethane	1		0.000					ND	
149 C6-C12	1		0.000					ND	
S 150 Total Diethylbenzene	1		0.000					ND	
151 3-chloro-1-Butene	1		0.000					ND	
152 C6-C10	1		0.000					ND	
153 Methyl acrylate	1		0.000					ND	
154 tert-Butyl Formate	1		0.000					ND	
155 1,3-Divinylbenzene	1		0.000					ND	
156 Ethyl bromide	1		0.000					ND	
157 Chloroacetonitrile	1		0.000					ND	
S 158 divinyl benzene	1		0.000					ND	
159 Methylal	1		0.000					ND	
160 n-Decane	57		0.000					ND	
161 Dodecane	57		0.000					ND	
162 Butane	1		0.000					ND	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

MSV_HP23_ISSS_00002

Amount Added: 1.00

Units: uL

Run Reagent

Report Date: 17-Jun-2020 14:06:58

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Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17B01.D

Injection Date: 17-Jun-2020 13:32:30

Instrument ID: 9915

Operator ID: clm27445

Lims ID: MB

Worklist Smp#: 9

Client ID:

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

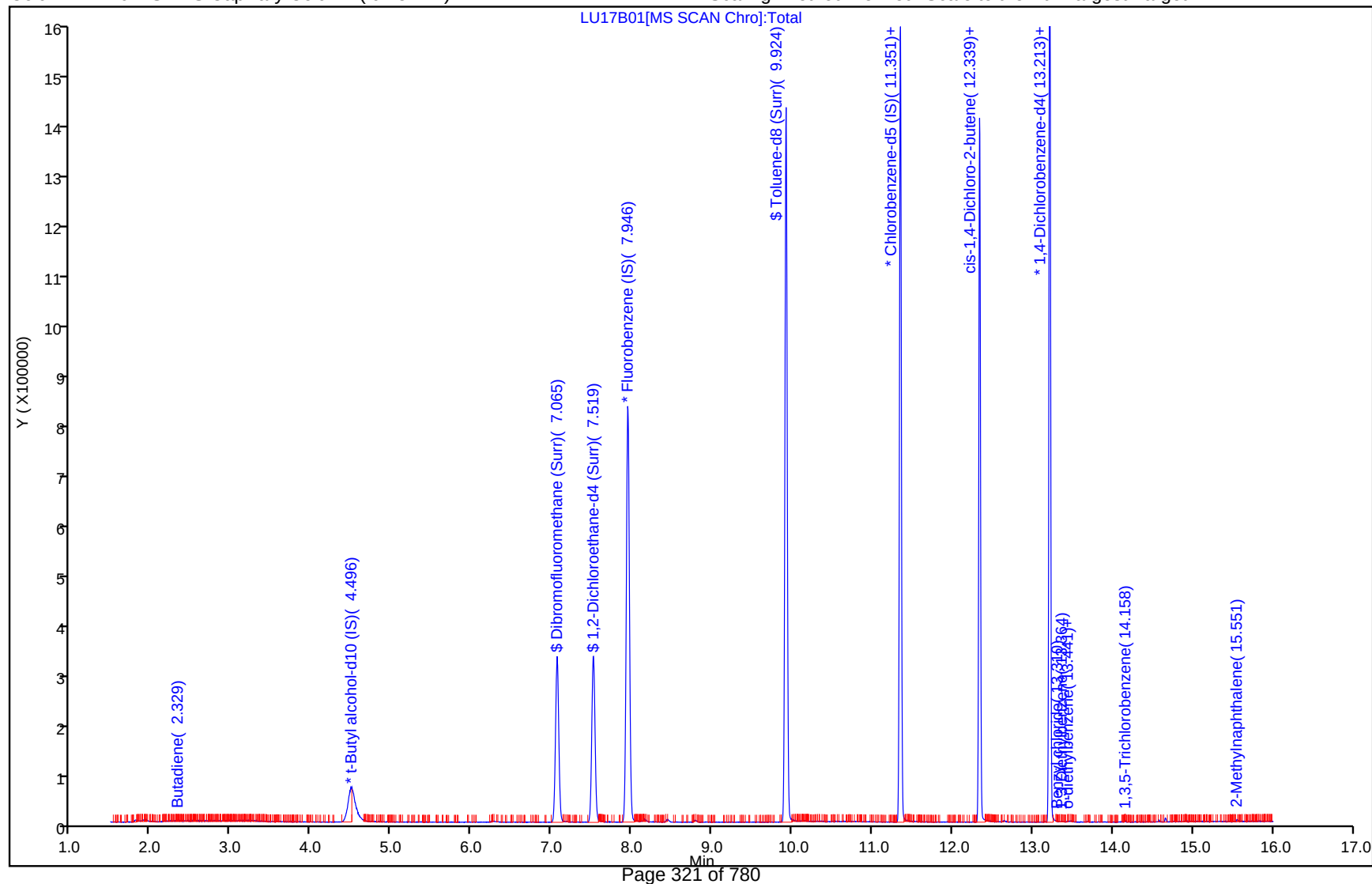
ALS Bottle#: 8

Method: MSVoa_9915a

Limit Group: MSV - 8260C DOD5

Column: Rxi-624Sil MS Capillary Column (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 17-Jun-2020 14:06:58

Chrom Revision: 2.3 13-Jun-2020 09:53:24

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17B01.D
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 17-Jun-2020 13:32:30 ALS Bottle#: 8 Worklist Smp#: 9
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: MB
 Misc. Info.: 410-0003558-009
 Operator ID: clm27445 Instrument ID: 9915
 Method: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\MSVoa_9915a.m
 Limit Group: MSV - 8260C DOD5
 Last Update: 17-Jun-2020 14:06:24 Calib Date: 04-May-2020 14:30:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1064

First Level Reviewer: mellinger

Date: 17-Jun-2020 14:02:29

Compound	Amount Added	Amount Recovered	% Rec.
\$ 49 Dibromofluoromethane (Surr)	50.0	51.4	102.75
\$ 55 1,2-Dichloroethane-d4 (Surr)	50.0	51.5	103.05
\$ 77 Toluene-d8 (Surr)	50.0	47.9	95.84
\$ 103 4-Bromofluorobenzene (Surr)	50.0	47.8	95.61

Report Date: 17-Jun-2020 14:06:58

Chrom Revision: 2.3 13-Jun-2020 09:53:24
Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

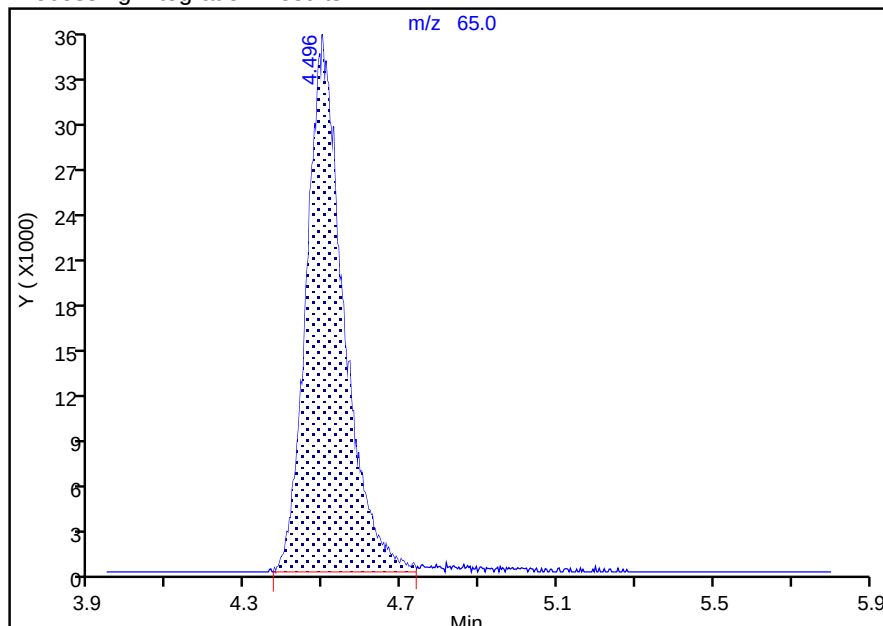
Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17B01.D
 Injection Date: 17-Jun-2020 13:32:30 Instrument ID: 9915
 Lims ID: MB
 Client ID:
 Operator ID: clm27445 ALS Bottle#: 8 Worklist Smp#: 9
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVoa_9915a Limit Group: MSV - 8260C DOD5
 Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

* 27 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

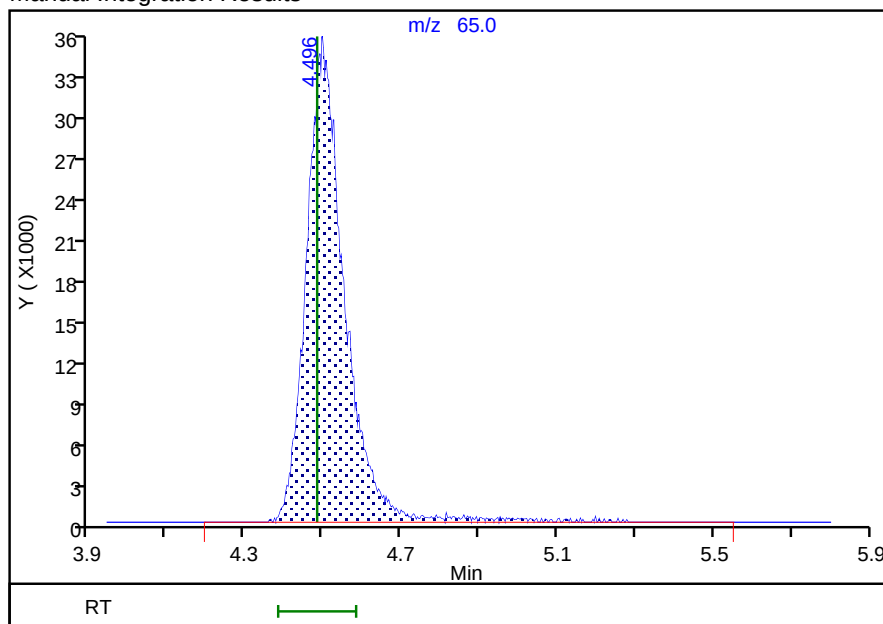
RT: 4.50
 Area: 230584
 Amount: 250.0000
 Amount Units: ug/l

Processing Integration Results



RT: 4.50
 Area: 236295
 Amount: 250.0000
 Amount Units: ug/l

Manual Integration Results



Reviewer: mellinger, 17-Jun-2020 14:01:07

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

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FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 410-13905/5
 Matrix: Water Lab File ID: LU17L01.D
 Analysis Method: 8260C DOD Date Collected: _____
 Sample wt/vol: 5 (mL) Date Analyzed: 06/17/2020 12:04
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 13905 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
71-43-2	Benzene	19		1.0	0.50	0.20
100-41-4	Ethylbenzene	20		1.0	0.80	0.40
108-88-3	Toluene	19		1.0	0.50	0.20
1330-20-7	Xylenes, Total	62		6.0	2.0	1.4

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	102		81-118
460-00-4	4-Bromofluorobenzene (Surr)	100		85-114
1868-53-7	Dibromofluoromethane (Surr)	100		80-119
2037-26-5	Toluene-d8 (Surr)	99		89-112

Report Date: 17-Jun-2020 14:06:38

Chrom Revision: 2.3 13-Jun-2020 09:53:24

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17L01.D
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 17-Jun-2020 12:04:30 ALS Bottle#: 4 Worklist Smp#: 5
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: LCS
 Misc. Info.: 410-0003558-005
 Operator ID: c1m27445 Instrument ID: 9915
 Method: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\MSVoa_9915a.m
 Limit Group: MSV - 8260C DOD5
 Last Update: 17-Jun-2020 14:06:24 Calib Date: 04-May-2020 14:30:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1064

First Level Reviewer: mellinger

Date: 17-Jun-2020 12:45:39

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	2.082	2.082	0.000	99	110806	20.0	14.0	
4 Chloromethane	50	2.287	2.291	-0.004	99	105003	20.0	14.1	
5 Vinyl chloride	62	2.409	2.410	-0.001	97	111707	20.0	15.4	
6 Butadiene	39	2.406	2.413	-0.007	94	118469	NC	NC	
8 Bromomethane	94	2.744	2.757	-0.013	92	72726	20.0	15.4	
9 Chloroethane	64	2.840	2.847	-0.007	100	63703	20.0	17.4	
11 Trichlorofluoromethane	101	3.159	3.152	0.007	98	165965	20.0	20.9	
12 Pentane	43	3.210	3.213	-0.003	96	119152	NC	NC	
14 Ethyl ether	59	3.435	3.435	0.000	89	89930	20.0	16.1	
15 1,2-Dichloro-1,1,2-trifluoroethane	67	3.519	3.529	-0.010	89	124558	NC	NC	
16 Acrolein	56	3.618	3.615	0.003	99	258292	150.0	120.9	
17 1,1-Dichloroethene	96	3.760	3.763	-0.003	98	103976	20.0	20.7	
18 1,1,2,2-Tetrafluoroethane	101	3.779	3.786	-0.007	76	99954	20.0	19.1	
19 Acetone	58	3.802	3.802	0.000	100	178540	150.0	181.8	
20 Iodomethane	142	3.966	3.969	-0.003	98	190363	20.0	19.6	
21 Isopropyl alcohol	45	3.982	3.982	0.000	99	83374	150.0	134.0	
22 Carbon disulfide	76	4.075	4.078	-0.003	99	331816	20.0	19.5	
24 Methyl acetate	43	4.236	4.242	-0.006	97	108890	20.0	17.0	
25 3-Chloro-1-propene	41	4.265	4.268	-0.003	90	138574	20.0	17.1	
26 Methylene Chloride	84	4.470	4.471	-0.001	92	118093	20.0	19.6	
* 27 t-Butyl alcohol-d10 (IS)	65	4.503	4.483	0.020	0	259052	250.0	250.0	M
28 2-Methyl-2-propanol	59	4.628	4.612	0.016	96	196390	200.0	187.4	
29 Acrylonitrile	53	4.821	4.821	0.000	99	299678	100.0	85.1	
31 Methyl tert-butyl ether	73	4.869	4.876	-0.007	89	310467	20.0	17.9	
32 trans-1,2-Dichloroethene	96	4.885	4.885	0.000	99	116653	20.0	20.1	
33 Hexane	57	5.303	5.307	-0.004	92	139040	20.0	16.3	
35 1,1-Dichloroethane	63	5.544	5.545	0.000	96	192829	20.0	19.1	
36 Isopropyl ether	45	5.599	5.596	0.003	95	296730	20.0	16.5	
37 2-Chloro-1,3-butadiene	53	5.647	5.647	0.000	91	161998	20.0	19.9	
38 Tert-butyl ethyl ether	59	6.130	6.126	0.004	97	292672	20.0	17.5	
40 2-Butanone (MEK)	43	6.348	6.348	0.000	99	671233	150.0	155.7	

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Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17L01.D

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
41 cis-1,2-Dichloroethene	96	6.371	6.374	-0.003	80	137138	20.0	21.0	
42 2,2-Dichloropropane	77	6.377	6.387	-0.010	86	164053	20.0	20.8	M
44 Propionitrile	54	6.441	6.445	-0.004	99	185786	150.0	132.0	
45 Methacrylonitrile	67	6.654	6.657	-0.003	90	516310	150.0	144.5	
46 Chlorobromomethane	128	6.702	6.699	0.003	82	65896	20.0	19.6	
47 Tetrahydrofuran	71	6.705	6.708	-0.003	78	114252	100.0	91.8	
48 Chloroform	83	6.850	6.853	-0.003	93	204592	20.0	20.5	
\$ 49 Dibromofluoromethane (Surr)	113	7.062	7.062	0.000	93	296113	50.0	50.1	
50 1,1,1-Trichloroethane	97	7.068	7.072	-0.004	99	177366	20.0	20.7	
51 Cyclohexane	56	7.165	7.168	-0.003	89	170197	20.0	16.9	
52 Carbon tetrachloride	117	7.284	7.281	0.003	79	155240	20.0	21.7	
53 1,1-Dichloropropene	75	7.284	7.284	0.000	95	154562	20.0	19.7	
54 Isobutyl alcohol	41	7.445	7.445	0.000	92	156744	500.0	447.7	
\$ 55 1,2-Dichloroethane-d4 (Surr)	102	7.515	7.522	-0.007	98	77038	50.0	51.0	
56 Benzene	78	7.544	7.544	0.000	96	468187	20.0	19.3	
58 1,2-Dichloroethane	62	7.621	7.622	-0.001	98	168924	20.0	20.9	
59 Tert-amyl methyl ether	73	7.731	7.731	0.000	98	310115	20.0	18.2	
* 61 Fluorobenzene (IS)	96	7.946	7.946	0.000	98	1169115	50.0	50.0	
62 n-Heptane	43	7.946	7.950	-0.004	45	134927	20.0	15.5	
63 n-Butanol	56	8.313	8.313	0.000	90	252666	NC	NC	
64 Trichloroethene	95	8.419	8.422	-0.003	98	124042	20.0	20.2	
65 Methylcyclohexane	83	8.721	8.724	-0.003	90	192885	20.0	18.4	
66 2-ethoxy-2-methyl butane	87	8.753	8.753	0.000	91	165833	20.0	19.4	
67 1,2-Dichloropropane	63	8.756	8.757	-0.001	72	113673	20.0	18.2	
68 Methyl methacrylate	69	8.837	8.834	0.003	88	101762	20.0	19.0	
69 1,4-Dioxane	88	8.843	8.843	0.000	78	47663	500.0	681.0	M
70 Dibromomethane	93	8.866	8.863	0.003	97	81303	20.0	19.9	
72 Dichlorobromomethane	83	9.097	9.097	0.000	99	145833	20.0	19.9	
73 2-Nitropropane	41	9.374	9.374	0.000	98	36811	20.0	15.8	
74 2-Chloroethyl vinyl ether	63	9.448	9.448	0.000	92	78155	20.0	17.8	
75 cis-1,3-Dichloropropene	75	9.628	9.628	0.000	96	179130	20.0	18.7	
76 4-Methyl-2-pentanone (MIBK)	43	9.795	9.795	0.000	96	777654	100.0	89.0	
\$ 77 Toluene-d8 (Surr)	98	9.920	9.924	-0.004	93	1209863	50.0	49.3	
78 Toluene	92	9.998	9.998	0.000	98	304307	20.0	19.4	
80 trans-1,3-Dichloropropene	75	10.248	10.249	0.000	93	166046	20.0	18.5	
81 Ethyl methacrylate	69	10.300	10.300	0.000	89	170811	20.0	18.0	
82 1,1,2-Trichloroethane	97	10.448	10.445	0.003	90	119734	20.0	19.7	
83 Tetrachloroethene	166	10.528	10.528	0.000	97	139003	20.0	20.7	
84 1,3-Dichloropropane	76	10.605	10.605	0.000	90	189499	20.0	18.6	
86 2-Hexanone	43	10.654	10.657	-0.003	95	621612	100.0	90.5	
88 Chlorodibromomethane	129	10.814	10.818	-0.004	89	123660	20.0	19.5	
89 Ethylene Dibromide	107	10.927	10.927	0.000	98	127361	20.0	19.4	
* 91 Chlorobenzene-d5 (IS)	117	11.351	11.351	0.000	85	961764	50.0	50.0	
92 1-Chlorohexane	91	11.358	11.355	0.003	96	151373	20.0	18.8	
93 Chlorobenzene	112	11.377	11.377	0.000	96	354464	20.0	19.7	
94 1,1,1,2-Tetrachloroethane	131	11.454	11.457	-0.003	94	117728	20.0	19.2	
95 Ethylbenzene	91	11.461	11.457	0.004	98	585635	20.0	20.2	
96 m-Xylene & p-Xylene	106	11.573	11.570	0.003	100	476196	40.0	41.8	
97 o-Xylene	106	11.898	11.898	0.000	96	224030	20.0	20.3	
98 Styrene	104	11.914	11.914	0.000	94	376684	20.0	19.9	
99 Bromoform	173	12.071	12.072	-0.001	97	83048	20.0	17.3	
100 Isopropylbenzene	105	12.194	12.194	0.000	95	588622	20.0	19.8	

Report Date: 17-Jun-2020 14:06:38

Chrom Revision: 2.3 13-Jun-2020 09:53:24

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17L01.D

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
102 Cyclohexanone	55	12.280	12.277	0.003	92	157430	499.9	489.7	
\$ 103 4-Bromofluorobenzene (Surr)	95	12.338	12.338	0.000	91	473348	50.0	49.9	
104 1,1,2,2-Tetrachloroethane	83	12.441	12.441	0.000	94	182907	20.0	18.9	
105 Bromobenzene	156	12.457	12.457	0.000	95	158512	20.0	20.3	
106 trans-1,4-Dichloro-2-butene	53	12.464	12.464	0.000	96	276416	100.0	97.5	
107 1,2,3-Trichloropropane	110	12.486	12.490	-0.004	86	61247	20.0	20.6	
108 N-Propylbenzene	91	12.522	12.522	0.000	98	705137	20.0	20.9	
109 2-Chlorotoluene	126	12.602	12.599	0.003	97	146899	20.0	20.4	
110 1,3,5-Trimethylbenzene	105	12.657	12.657	0.000	94	523886	20.0	20.4	
111 4-Chlorotoluene	126	12.692	12.692	0.000	97	151973	20.0	20.3	
113 tert-Butylbenzene	134	12.898	12.895	0.003	92	103467	20.0	19.6	
114 Pentachloroethane	167	12.930	12.930	0.000	84	86803	20.0	19.5	
115 1,2,4-Trimethylbenzene	105	12.936	12.940	-0.004	97	537644	20.0	20.2	
116 sec-Butylbenzene	105	13.059	13.059	0.000	94	638767	20.0	20.3	
117 1,3-Dichlorobenzene	146	13.161	13.158	0.003	98	301526	20.0	20.7	
118 4-Isopropyltoluene	119	13.165	13.165	0.000	97	565580	20.0	20.8	
* 119 1,4-Dichlorobenzene-d4	152	13.216	13.216	0.000	95	533299	50.0	50.0	
120 1,4-Dichlorobenzene	146	13.232	13.232	0.000	95	312829	20.0	20.6	
121 1,2,3-Trimethylbenzene	105	13.242	13.242	0.000	98	569422	20.0	21.7	
122 Benzyl chloride	91	13.309	13.309	0.000	98	372784	NC	NC	
123 1,3-Diethylbenzene	119	13.364	13.364	0.000	96	337789	NC	NC	
127 o-diethylbenzene	119	13.435	13.435	0.000	89	356447	NC	NC	
125 n-Butylbenzene	92	13.454	13.457	-0.003	97	270828	20.0	20.7	
126 1,2-Dichlorobenzene	146	13.493	13.496	-0.003	98	300015	20.0	20.5	
124 p-Diethylbenzene	119	13.509	13.512	-0.003	89	286541	NC	NC	
129 1,2-Dibromo-3-Chloropropane	75	14.036	14.036	0.000	85	38580	20.0	17.9	
130 1,3,5-Trichlorobenzene	180	14.158	14.155	0.003	98	213663	NC	NC	
131 1,2,4-Trichlorobenzene	180	14.579	14.580	-0.001	94	196239	20.0	19.0	
132 Hexachlorobutadiene	225	14.660	14.663	-0.003	98	90356	20.0	19.0	
133 Naphthalene	128	14.763	14.763	0.000	96	626856	20.0	17.8	
134 1,2,3-Trichlorobenzene	180	14.911	14.907	0.004	96	195171	20.0	19.0	
135 2-Methylnaphthalene	142	15.557	15.554	0.003	92	247213	NC	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

MSV_Q_QVOA6_00030	Amount Added: 50.00	Units: uL	
MSV_Q_EE_00002	Amount Added: 50.00	Units: uL	
MSV_QCYC_00003	Amount Added: 50.00	Units: uL	
MSV_Q_QARC_00032	Amount Added: 50.00	Units: uL	
MSV_Q_QVOA1_00033	Amount Added: 50.00	Units: uL	
MSV_Q_QGases_00059	Amount Added: 50.00	Units: uL	
MSV_HP23_ISSS_00002	Amount Added: 1.00	Units: uL	Run Reagent

Report Date: 17-Jun-2020 14:06:38

Chrom Revision: 2.3 13-Jun-2020 09:53:24

Eurofins Lancaster Laboratories Env. LLC

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17L01.D

Injection Date: 17-Jun-2020 12:04:30

Instrument ID: 9915

Operator ID: clm27445

Lims ID: LCS

Worklist Smp#: 5

Client ID:

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

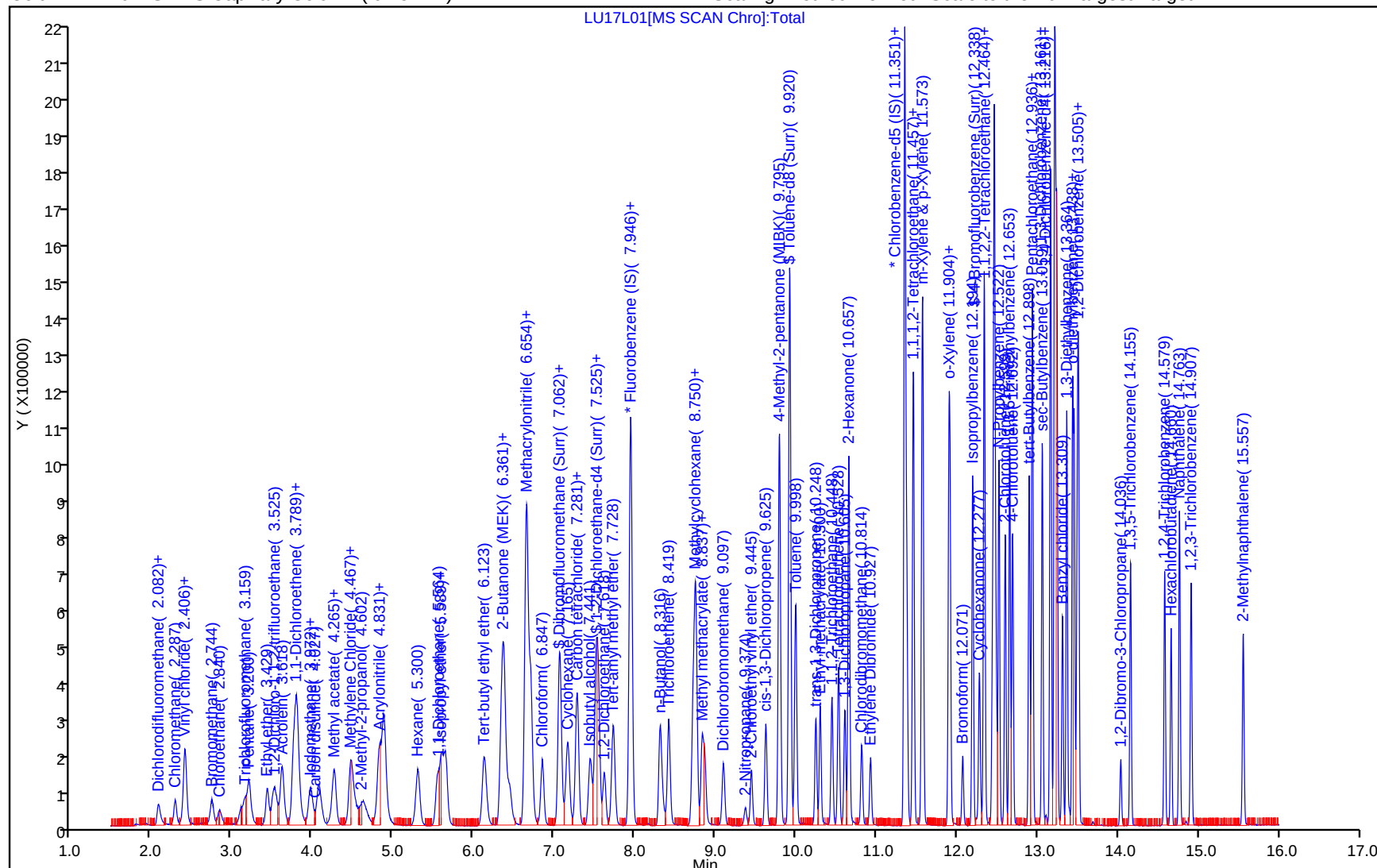
ALS Bottle#: 4

Method: MSVoa 9915a

Limit Group: MSV - 8260C DOD5

Column: Rxi-624Sil MS Capillary Column (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 17-Jun-2020 14:06:38

Chrom Revision: 2.3 13-Jun-2020 09:53:24

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17L01.D
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 17-Jun-2020 12:04:30 ALS Bottle#: 4 Worklist Smp#: 5
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: LCS
 Misc. Info.: 410-0003558-005
 Operator ID: clm27445 Instrument ID: 9915
 Method: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\MSVoa_9915a.m
 Limit Group: MSV - 8260C DOD5
 Last Update: 17-Jun-2020 14:06:24 Calib Date: 04-May-2020 14:30:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1064

First Level Reviewer: mellinger

Date: 17-Jun-2020 12:45:39

Compound	Amount Added	Amount Recovered	% Rec.
\$ 49 Dibromofluoromethane (Surr)	50.0	50.1	100.13
\$ 55 1,2-Dichloroethane-d4 (Surr)	50.0	51.0	102.09
\$ 77 Toluene-d8 (Surr)	50.0	49.3	98.58
\$ 103 4-Bromofluorobenzene (Surr)	50.0	49.9	99.71

Report Date: 17-Jun-2020 14:06:38

Chrom Revision: 2.3 13-Jun-2020 09:53:24
Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

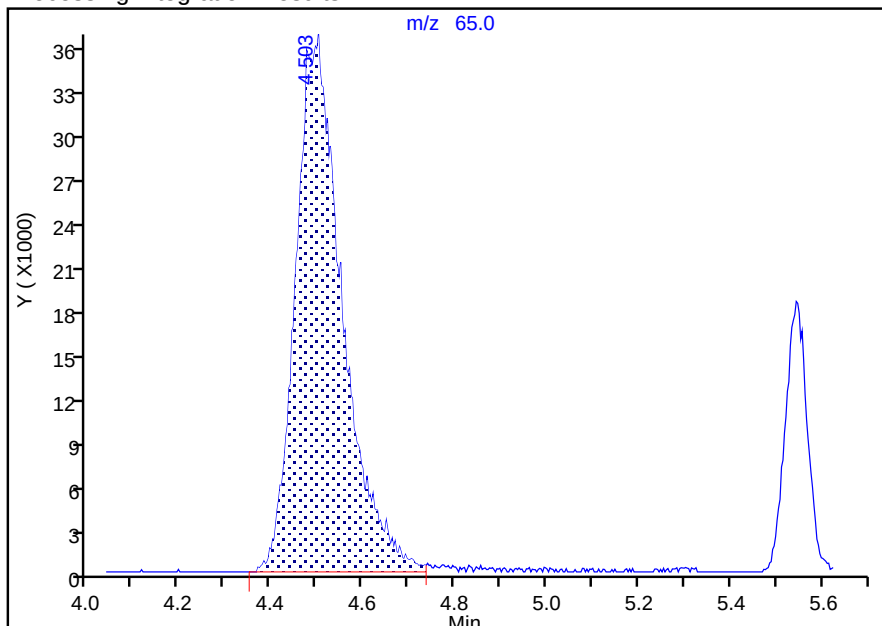
Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17L01.D
 Injection Date: 17-Jun-2020 12:04:30 Instrument ID: 9915
 Lims ID: LCS
 Client ID:
 Operator ID: clm27445 ALS Bottle#: 4 Worklist Smp#: 5
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVoa_9915a Limit Group: MSV - 8260C DOD5
 Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

* 27 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

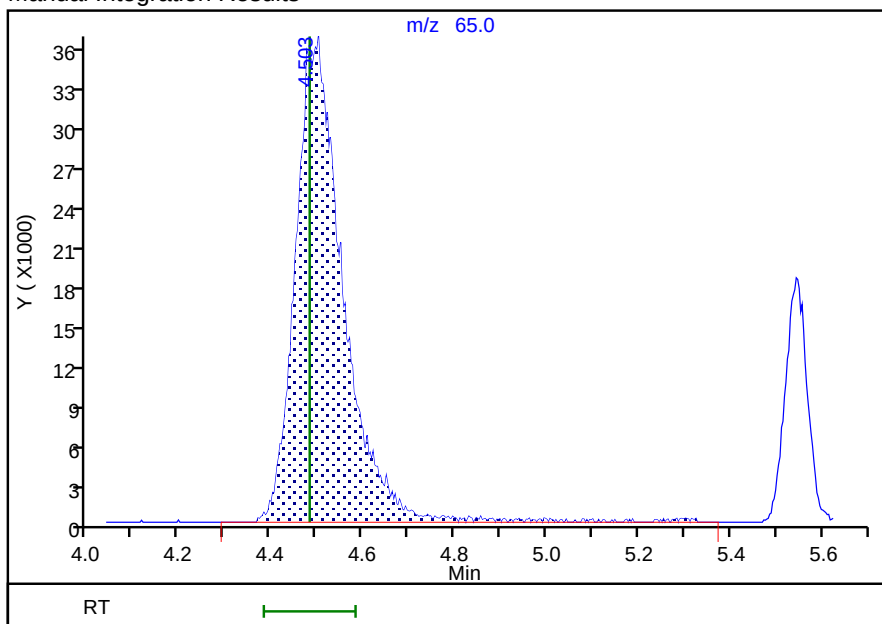
RT: 4.50
 Area: 253594
 Amount: 250.0000
 Amount Units: ug/l

Processing Integration Results



RT: 4.50
 Area: 259052
 Amount: 250.0000
 Amount Units: ug/l

Manual Integration Results



Reviewer: mellinger, 17-Jun-2020 12:43:54

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

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FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCSD 410-13905/7
 Matrix: Water Lab File ID: LU17L02.D
 Analysis Method: 8260C DOD Date Collected: _____
 Sample wt/vol: 5 (mL) Date Analyzed: 06/17/2020 12:48
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 13905 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
71-43-2	Benzene	19		1.0	0.50	0.20
100-41-4	Ethylbenzene	20		1.0	0.80	0.40
108-88-3	Toluene	19		1.0	0.50	0.20
1330-20-7	Xylenes, Total	62		6.0	2.0	1.4

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		81-118
460-00-4	4-Bromofluorobenzene (Surr)	100		85-114
1868-53-7	Dibromofluoromethane (Surr)	100		80-119
2037-26-5	Toluene-d8 (Surr)	99		89-112

Report Date: 17-Jun-2020 14:06:47

Chrom Revision: 2.3 13-Jun-2020 09:53:24

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17L02.D
 Lims ID: LCSD
 Client ID:
 Sample Type: LCSD
 Inject. Date: 17-Jun-2020 12:48:30 ALS Bottle#: 6 Worklist Smp#: 7
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: LCSD
 Misc. Info.: 410-0003558-007
 Operator ID: c1m27445 Instrument ID: 9915
 Method: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\MSVoa_9915a.m
 Limit Group: MSV - 8260C DOD5
 Last Update: 17-Jun-2020 14:06:24 Calib Date: 04-May-2020 14:30:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1064

First Level Reviewer: mellinger

Date: 17-Jun-2020 13:45:40

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	2.085	2.082	0.003	99	107784	20.0	13.6	
4 Chloromethane	50	2.297	2.291	0.006	99	100650	20.0	13.5	
5 Vinyl chloride	62	2.419	2.410	0.009	97	107345	20.0	14.8	
6 Butadiene	39	2.423	2.413	0.010	96	118469	NC	NC	
8 Bromomethane	94	2.751	2.757	-0.006	92	73795	20.0	15.6	
9 Chloroethane	64	2.853	2.847	0.006	99	61123	20.0	16.6	
11 Trichlorofluoromethane	101	3.159	3.152	0.007	96	164467	20.0	20.7	
12 Pentane	43	3.214	3.213	0.001	95	115903	NC	NC	
14 Ethyl ether	59	3.445	3.435	0.010	89	89239	20.0	15.9	
15 1,2-Dichloro-1,1,2-trifluoroethane	67	3.532	3.529	0.003	93	123969	NC	NC	
16 Acrolein	56	3.625	3.615	0.010	99	252480	150.0	120.1	
17 1,1-Dichloroethene	96	3.767	3.763	0.004	98	102205	20.0	20.3	
18 1,1,2,2-Tetrafluoroethane	101	3.802	3.786	0.016	64	97741	20.0	18.6	
19 Acetone	58	3.815	3.802	0.013	100	122016	150.0	126.3	
20 Iodomethane	142	3.979	3.969	0.010	99	188872	20.0	19.4	
21 Isopropyl alcohol	45	4.001	3.982	0.019	56	79778	150.0	130.3	
22 Carbon disulfide	76	4.082	4.078	0.004	99	325238	20.0	19.0	
24 Methyl acetate	43	4.249	4.242	0.007	97	112571	20.0	17.6	
25 3-Chloro-1-propene	41	4.278	4.268	0.010	93	140273	20.0	17.3	
26 Methylene Chloride	84	4.484	4.471	0.013	93	118168	20.0	19.5	
* 27 t-Butyl alcohol-d10 (IS)	65	4.506	4.483	0.023	0	254802	250.0	250.0	M
28 2-Methyl-2-propanol	59	4.641	4.612	0.029	97	187097	200.0	181.6	
29 Acrylonitrile	53	4.834	4.821	0.013	99	297302	100.0	84.3	
31 Methyl tert-butyl ether	73	4.886	4.876	0.010	94	310489	20.0	17.9	
32 trans-1,2-Dichloroethene	96	4.889	4.885	0.004	99	116309	20.0	20.0	
33 Hexane	57	5.313	5.307	0.006	93	137636	20.0	16.1	
35 1,1-Dichloroethane	63	5.551	5.545	0.007	96	189103	20.0	18.7	
36 Isopropyl ether	45	5.609	5.596	0.013	93	294248	20.0	16.4	
37 2-Chloro-1,3-butadiene	53	5.657	5.647	0.010	92	157259	20.0	19.3	
38 Tert-butyl ethyl ether	59	6.139	6.126	0.013	97	291018	20.0	17.4	
40 2-Butanone (MEK)	43	6.352	6.348	0.004	99	564417	150.0	130.6	

Report Date: 17-Jun-2020 14:06:47

Chrom Revision: 2.3 13-Jun-2020 09:53:24

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17L02.D

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
41 cis-1,2-Dichloroethene	96	6.377	6.374	0.003	80	136934	20.0	21.0	
42 2,2-Dichloropropane	77	6.393	6.387	0.006	82	157307	20.0	19.9	a
44 Propionitrile	54	6.445	6.445	0.000	98	184298	150.0	133.1	
45 Methacrylonitrile	67	6.657	6.657	0.000	91	512908	150.0	143.2	
46 Chlorobromomethane	128	6.705	6.699	0.006	85	64655	20.0	19.2	
47 Tetrahydrofuran	71	6.715	6.708	0.007	88	112249	100.0	91.7	
48 Chloroform	83	6.856	6.853	0.003	93	199124	20.0	19.9	
\$ 49 Dibromofluoromethane (Surr)	113	7.065	7.062	0.003	93	295296	50.0	49.8	
50 1,1,1-Trichloroethane	97	7.078	7.072	0.006	75	172533	20.0	20.1	
51 Cyclohexane	56	7.172	7.168	0.004	89	167040	20.0	16.5	
52 Carbon tetrachloride	117	7.284	7.281	0.003	86	149276	20.0	20.8	
53 1,1-Dichloropropene	75	7.291	7.284	0.007	96	153275	20.0	19.5	
54 Isobutyl alcohol	41	7.448	7.445	0.003	92	152956	500.0	444.2	
\$ 55 1,2-Dichloroethane-d4 (Surr)	102	7.522	7.522	0.000	98	76186	50.0	50.4	
56 Benzene	78	7.551	7.544	0.007	97	458346	20.0	18.9	
58 1,2-Dichloroethane	62	7.622	7.622	0.000	98	164252	20.0	20.3	
59 Tert-amyl methyl ether	73	7.731	7.731	0.000	98	309365	20.0	18.1	
* 61 Fluorobenzene (IS)	96	7.950	7.946	0.004	98	1171816	50.0	50.0	
62 n-Heptane	43	7.950	7.950	0.000	45	134213	20.0	15.4	
63 n-Butanol	56	8.319	8.313	0.006	88	246678	NC	NC	
64 Trichloroethene	95	8.422	8.422	0.000	98	122186	20.0	19.8	
65 Methylcyclohexane	83	8.725	8.724	0.001	90	188440	20.0	17.9	
66 2-ethoxy-2-methyl butane	87	8.760	8.753	0.007	92	166348	20.0	19.4	
67 1,2-Dichloropropane	63	8.757	8.757	0.000	71	113617	20.0	18.1	
68 Methyl methacrylate	69	8.831	8.834	-0.003	90	97104	20.0	18.1	
69 1,4-Dioxane	88	8.844	8.843	0.001	35	45436	500.0	660.0	M
70 Dibromomethane	93	8.866	8.863	0.003	94	81443	20.0	19.9	
72 Dichlorobromomethane	83	9.101	9.097	0.004	99	142283	20.0	19.4	
73 2-Nitropropane	41	9.371	9.374	-0.003	99	37349	20.0	16.3	
74 2-Chloroethyl vinyl ether	63	9.448	9.448	0.000	93	77307	20.0	17.6	
75 cis-1,3-Dichloropropene	75	9.631	9.628	0.003	96	178563	20.0	18.6	
76 4-Methyl-2-pentanone (MIBK)	43	9.795	9.795	0.000	95	768307	100.0	87.8	
\$ 77 Toluene-d8 (Surr)	98	9.924	9.924	0.000	93	1206878	50.0	49.6	
78 Toluene	92	9.998	9.998	0.000	99	302146	20.0	19.4	
80 trans-1,3-Dichloropropene	75	10.249	10.249	0.001	92	164093	20.0	18.5	
81 Ethyl methacrylate	69	10.300	10.300	0.000	89	167299	20.0	17.7	
82 1,1,2-Trichloroethane	97	10.448	10.445	0.003	90	119677	20.0	19.8	
83 Tetrachloroethene	166	10.532	10.528	0.004	97	137711	20.0	20.7	
84 1,3-Dichloropropane	76	10.609	10.605	0.004	90	186008	20.0	18.4	
86 2-Hexanone	43	10.657	10.657	0.000	95	575269	100.0	84.4	
88 Chlorodibromomethane	129	10.815	10.818	-0.003	90	122790	20.0	19.5	
89 Ethylene Dibromide	107	10.927	10.927	0.000	97	129077	20.0	19.9	
* 91 Chlorobenzene-d5 (IS)	117	11.351	11.351	0.000	85	953852	50.0	50.0	
92 1-Chlorohexane	91	11.355	11.355	0.000	96	149271	20.0	18.6	
93 Chlorobenzene	112	11.377	11.377	0.000	95	350850	20.0	19.6	
94 1,1,1,2-Tetrachloroethane	131	11.458	11.457	0.001	94	118462	20.0	19.5	
95 Ethylbenzene	91	11.461	11.457	0.004	98	574299	20.0	19.9	
96 m-Xylene & p-Xylene	106	11.573	11.570	0.003	100	469891	40.0	41.6	
97 o-Xylene	106	11.898	11.898	0.000	96	220888	20.0	20.2	
98 Styrene	104	11.914	11.914	0.000	94	371723	20.0	19.8	
99 Bromoform	173	12.068	12.072	-0.004	97	81838	20.0	17.2	
100 Isopropylbenzene	105	12.197	12.194	0.003	95	581272	20.0	19.7	

Report Date: 17-Jun-2020 14:06:47

Chrom Revision: 2.3 13-Jun-2020 09:53:24

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17L02.D

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
102 Cyclohexanone	55	12.281	12.277	0.004	92	137960	499.9	436.3	
\$ 103 4-Bromofluorobenzene (Surr)	95	12.339	12.338	0.001	91	471621	50.0	50.1	
104 1,1,2,2-Tetrachloroethane	83	12.438	12.441	-0.003	94	180887	20.0	18.7	
105 Bromobenzene	156	12.458	12.457	0.001	95	156795	20.0	20.2	
106 trans-1,4-Dichloro-2-butene	53	12.464	12.464	0.000	95	270070	100.0	95.5	
107 1,2,3-Trichloropropane	110	12.490	12.490	0.000	75	60496	20.0	20.4	a
108 N-Propylbenzene	91	12.522	12.522	0.000	98	695613	20.0	20.7	
109 2-Chlorotoluene	126	12.599	12.599	0.000	97	143846	20.0	20.0	
110 1,3,5-Trimethylbenzene	105	12.654	12.657	-0.003	95	512973	20.0	20.1	
111 4-Chlorotoluene	126	12.692	12.692	0.000	97	149913	20.0	20.1	
113 tert-Butylbenzene	134	12.898	12.895	0.003	92	106611	20.0	20.3	
114 Pentachloroethane	167	12.933	12.930	0.003	79	87199	20.0	19.6	
115 1,2,4-Trimethylbenzene	105	12.940	12.940	0.000	96	524290	20.0	19.8	
116 sec-Butylbenzene	105	13.059	13.059	0.000	94	627133	20.0	20.0	
117 1,3-Dichlorobenzene	146	13.158	13.158	0.000	98	298136	20.0	20.5	
118 4-Isopropyltoluene	119	13.165	13.165	0.000	97	555439	20.0	20.5	
* 119 1,4-Dichlorobenzene-d4	152	13.213	13.216	-0.003	95	531639	50.0	50.0	
120 1,4-Dichlorobenzene	146	13.232	13.232	0.000	95	307046	20.0	20.2	
121 1,2,3-Trimethylbenzene	105	13.242	13.242	0.000	98	564984	20.0	21.6	
122 Benzyl chloride	91	13.310	13.309	0.001	98	367988	NC	NC	
123 1,3-Diethylbenzene	119	13.364	13.364	0.000	95	331274	NC	NC	
127 o-diethylbenzene	119	13.435	13.435	0.000	88	352743	NC	NC	
125 n-Butylbenzene	92	13.458	13.457	0.001	97	263665	20.0	20.2	
126 1,2-Dichlorobenzene	146	13.493	13.496	-0.003	98	294500	20.0	20.2	
124 p-Diethylbenzene	119	13.509	13.512	-0.003	87	281487	NC	NC	
129 1,2-Dibromo-3-Chloropropane	75	14.033	14.036	-0.003	85	38969	20.0	18.1	
130 1,3,5-Trichlorobenzene	180	14.155	14.155	0.000	98	209867	NC	NC	
131 1,2,4-Trichlorobenzene	180	14.580	14.580	0.000	95	192843	20.0	18.7	
132 Hexachlorobutadiene	225	14.660	14.663	-0.003	97	87501	20.0	18.4	
133 Naphthalene	128	14.766	14.763	0.003	96	621789	20.0	17.8	
134 1,2,3-Trichlorobenzene	180	14.908	14.907	0.001	96	193966	20.0	19.0	
135 2-Methylnaphthalene	142	15.557	15.554	0.003	92	237387	NC	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

a - User Assigned ID

Report Date: 17-Jun-2020 14:06:47

Chrom Revision: 2.3 13-Jun-2020 09:53:24

Reagents:

MSV_Q_QVOA6_00030	Amount Added: 50.00	Units: uL	
MSV_Q_EE_00002	Amount Added: 50.00	Units: uL	
MSV_QCYC_00003	Amount Added: 50.00	Units: uL	
MSV_Q_QARC_00032	Amount Added: 50.00	Units: uL	
MSV_Q_QVOA1_00033	Amount Added: 50.00	Units: uL	
MSV_Q_QGases_00059	Amount Added: 50.00	Units: uL	
MSV_HP23_ISSS_00002	Amount Added: 1.00	Units: uL	Run Reagent

Report Date: 17-Jun-2020 14:06:47

Chrom Revision: 2.3 13-Jun-2020 09:53:24

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17L02.D

Injection Date: 17-Jun-2020 12:48:30

Instrument ID: 9915

Operator ID: clm27445

Lims ID: LCSD

Worklist Smp#: 7

Client ID:

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

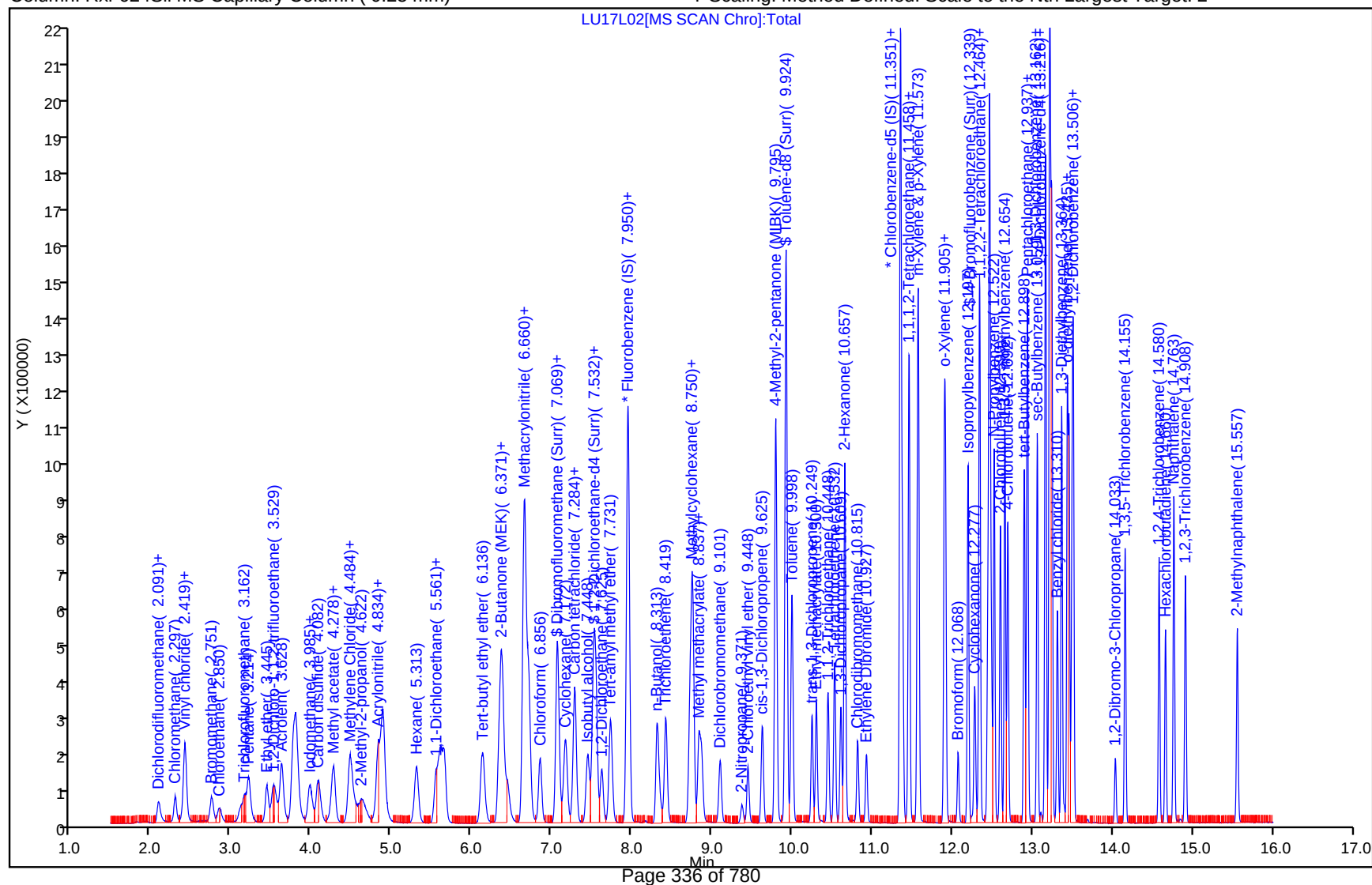
ALS Bottle#: 6

Method: MSVoa_9915a

Limit Group: MSV - 8260C DOD5

Column: Rxi-624Sil MS Capillary Column (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 17-Jun-2020 14:06:47

Chrom Revision: 2.3 13-Jun-2020 09:53:24

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17L02.D
 Lims ID: LCSD
 Client ID:
 Sample Type: LCSD
 Inject. Date: 17-Jun-2020 12:48:30 ALS Bottle#: 6 Worklist Smp#: 7
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: LCSD
 Misc. Info.: 410-0003558-007
 Operator ID: clm27445 Instrument ID: 9915
 Method: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\MSVoa_9915a.m
 Limit Group: MSV - 8260C DOD5
 Last Update: 17-Jun-2020 14:06:24 Calib Date: 04-May-2020 14:30:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1064

First Level Reviewer: mellinger

Date: 17-Jun-2020 13:45:40

Compound	Amount Added	Amount Recovered	% Rec.
\$ 49 Dibromofluoromethane (Surr)	50.0	49.8	99.63
\$ 55 1,2-Dichloroethane-d4 (Surr)	50.0	50.4	100.73
\$ 77 Toluene-d8 (Surr)	50.0	49.6	99.15
\$ 103 4-Bromofluorobenzene (Surr)	50.0	50.1	100.17

Report Date: 17-Jun-2020 14:06:47

Chrom Revision: 2.3 13-Jun-2020 09:53:24
Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

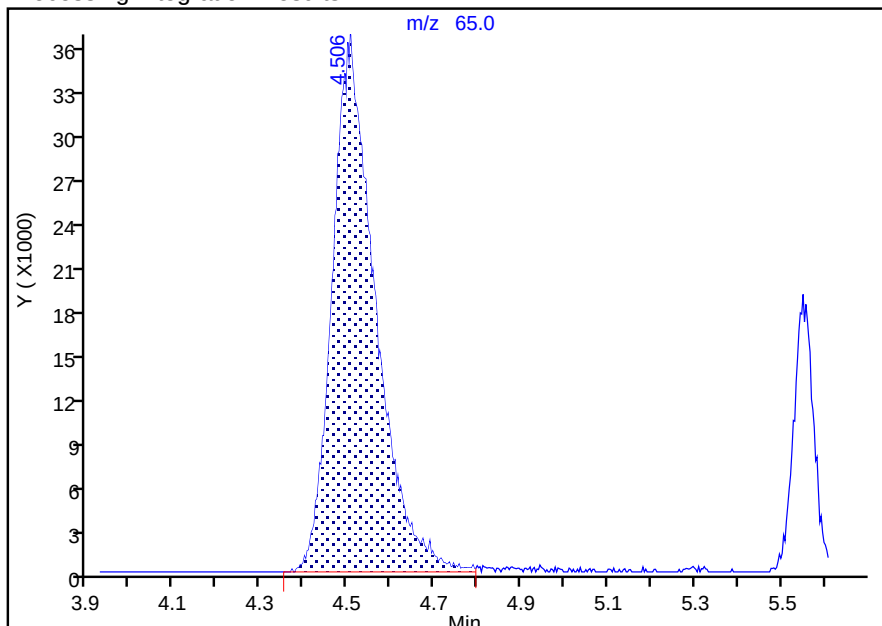
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 Injection Date: 17-Jun-2020 12:48:30 Instrument ID: 9915
 Lims ID: LCSD
 Client ID:
 Operator ID: clm27445 ALS Bottle#: 6 Worklist Smp#: 7
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVoa_9915a Limit Group: MSV - 8260C DOD5
 Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

* 27 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

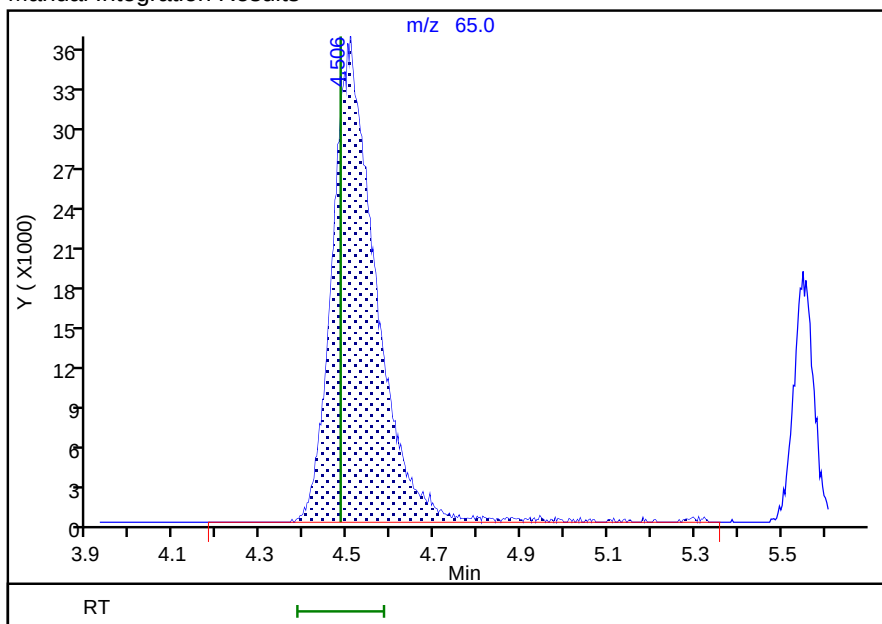
RT: 4.51
 Area: 250617
 Amount: 250.0000
 Amount Units: ug/l

Processing Integration Results



RT: 4.51
 Area: 254802
 Amount: 250.0000
 Amount Units: ug/l

Manual Integration Results



Reviewer: mellinger, 17-Jun-2020 13:43:39

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Page 338 of 780

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Client Sample ID: GWTS-EFF2-060320 MS Lab Sample ID: 410-3311-6 MS
 Matrix: Water Lab File ID: LU17S05.D
 Analysis Method: 8260C DOD Date Collected: 06/03/2020 08:24
 Sample wt/vol: 5 (mL) Date Analyzed: 06/17/2020 15:31
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 13905 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
71-43-2	Benzene	21		1.0	0.50	0.20
100-41-4	Ethylbenzene	21		1.0	0.80	0.40
108-88-3	Toluene	21		1.0	0.50	0.20
1330-20-7	Xylenes, Total	66		6.0	2.0	1.4

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	102		81-118
460-00-4	4-Bromofluorobenzene (Surr)	100		85-114
1868-53-7	Dibromofluoromethane (Surr)	101		80-119
2037-26-5	Toluene-d8 (Surr)	98		89-112

Report Date: 18-Jun-2020 21:49:58

Chrom Revision: 2.3 17-Jun-2020 19:07:08

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S05.D
 Lims ID: 410-3311-C-6 MS
 Client ID: GWTS-EFF2-060320
 Sample Type: MS
 Inject. Date: 17-Jun-2020 15:31:30 ALS Bottle#: 12 Worklist Smp#: 13
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 410-3311-C-6 MS
 Misc. Info.: 410-0003558-013
 Operator ID: clm27445 Instrument ID: 9915
 Method: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\MSVoa_9915a.m
 Limit Group: MSV - 8260C DOD5
 Last Update: 18-Jun-2020 21:49:42 Calib Date: 04-May-2020 14:30:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1038

First Level Reviewer: mellinger

Date: 18-Jun-2020 07:02:13

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	2.085	2.078	0.007	99	123110	20.0	15.8	
4 Chloromethane	50	2.294	2.291	0.003	99	104567	20.0	14.2	
6 Butadiene	39	2.416	2.406	0.010	94	132367	NC	NC	
5 Vinyl chloride	62	2.416	2.413	0.003	97	118569	20.0	16.6	
8 Bromomethane	94	2.757	2.750	0.007	92	75449	20.0	16.2	
9 Chloroethane	64	2.841	2.847	-0.006	99	62026	20.0	17.2	
11 Trichlorofluoromethane	101	3.159	3.159	0.000	98	187547	20.0	24.0	
12 Pentane	43	3.210	3.207	0.003	95	138436	NC	NC	
14 Ethyl ether	59	3.439	3.429	0.010	89	93522	20.0	16.9	
15 1,2-Dichloro-1,1,2-trifluoroethane	67	3.525	3.519	0.006	95	137572	NC	NC	
16 Acrolein	56	3.625	3.619	0.006	99	243533	150.0	121.0	
17 1,1-Dichloroethene	96	3.767	3.757	0.010	97	112842	20.0	22.7	
18 1,1,2,2-Tetrafluoroethane	101	3.795	3.795	0.000	78	110933	20.0	21.4	
19 Acetone	58	3.802	3.799	0.003	100	114696	150.0	124.0	
20 Iodomethane	142	3.976	3.966	0.010	98	199460	20.0	20.8	
21 Isopropyl alcohol	45	3.988	3.992	-0.004	97	81499	150.0	139.1	
22 Carbon disulfide	76	4.078	4.072	0.006	99	355437	20.0	21.1	
24 Methyl acetate	43	4.249	4.236	0.013	97	101916	20.0	16.2	
25 3-Chloro-1-propene	41	4.271	4.262	0.009	88	140565	20.0	17.6	
26 Methylene Chloride	84	4.467	4.471	-0.004	91	125168	20.0	21.0	
* 27 t-Butyl alcohol-d10 (IS)	65	4.493	4.493	0.000	0	243949	250.0	250.0	
28 2-Methyl-2-propanol	59	4.625	4.615	0.010	98	182953	200.0	185.4	
29 Acrylonitrile	53	4.824	4.824	0.000	99	296926	100.0	85.5	
31 Methyl tert-butyl ether	73	4.882	4.879	0.003	92	312775	20.0	18.3	
32 trans-1,2-Dichloroethene	96	4.889	4.885	0.004	99	123333	20.0	21.5	
33 Hexane	57	5.313	5.300	0.013	93	161575	20.0	19.2	
35 1,1-Dichloroethane	63	5.548	5.545	0.003	96	200343	20.0	20.1	
36 Isopropyl ether	45	5.602	5.596	0.006	93	298854	20.0	16.9	
37 2-Chloro-1,3-butadiene	53	5.651	5.647	0.004	91	174717	20.0	21.8	
38 Tert-butyl ethyl ether	59	6.136	6.123	0.013	97	295217	20.0	17.9	
40 2-Butanone (MEK)	43	6.352	6.345	0.007	100	560338	150.0	131.8	

Report Date: 18-Jun-2020 21:49:58

Chrom Revision: 2.3 17-Jun-2020 19:07:08

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S05.D

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
41 cis-1,2-Dichloroethene	96	6.377	6.371	0.006	79	142267	20.0	22.1	
42 2,2-Dichloropropane	77	6.384	6.384	0.000	81	171757	20.0	22.1	
44 Propionitrile	54	6.445	6.438	0.007	98	183066	150.0	138.1	
45 Methacrylonitrile	67	6.654	6.651	0.003	90	519271	150.0	147.3	
46 Chlorobromomethane	128	6.702	6.699	0.003	64	64333	20.0	19.4	
47 Tetrahydrofuran	71	6.712	6.712	0.000	84	113631	100.0	96.9	
48 Chloroform	83	6.853	6.850	0.003	93	211321	20.0	21.5	
\$ 49 Dibromofluoromethane (Surr)	113	7.065	7.059	0.006	94	293210	50.0	50.3	
50 1,1,1-Trichloroethane	97	7.069	7.075	-0.006	97	187324	20.0	22.2	a
51 Cyclohexane	56	7.168	7.168	0.000	89	192277	20.0	19.3	
52 Carbon tetrachloride	117	7.278	7.274	0.004	82	166853	20.0	23.6	
53 1,1-Dichloropropene	75	7.284	7.281	0.003	95	166043	20.0	21.5	
54 Isobutyl alcohol	41	7.445	7.442	0.003	95	156679	500.0	475.2	
\$ 55 1,2-Dichloroethane-d4 (Surr)	102	7.512	7.512	0.000	98	75946	50.0	51.0	
56 Benzene	78	7.548	7.544	0.004	96	494453	20.0	20.7	
58 1,2-Dichloroethane	62	7.622	7.618	0.004	98	170299	20.0	21.3	
59 Tert-amyl methyl ether	73	7.734	7.728	0.006	98	309547	20.0	18.4	
* 61 Fluorobenzene (IS)	96	7.946	7.946	0.000	99	1153316	50.0	50.0	
62 n-Heptane	43	7.946	7.950	-0.004	66	158410	20.0	18.5	
63 n-Butanol	56	8.316	8.313	0.003	88	245551	NC	NC	
64 Trichloroethene	95	8.422	8.419	0.003	97	131920	20.0	21.8	
65 Methylcyclohexane	83	8.725	8.721	0.004	91	209250	20.0	20.2	
66 2-ethoxy-2-methyl butane	87	8.757	8.757	0.000	93	169833	20.0	20.1	
67 1,2-Dichloropropane	63	8.757	8.757	0.000	72	119588	20.0	19.4	
68 Methyl methacrylate	69	8.837	8.834	0.003	89	99696	20.0	18.9	
69 1,4-Dioxane	88	8.840	8.837	0.003	72	48509	500.0	736.0	M
70 Dibromomethane	93	8.866	8.866	0.000	95	84211	20.0	20.9	
72 Dichlorobromomethane	83	9.098	9.101	-0.003	99	148376	20.0	20.5	
73 2-Nitropropane	41	9.371	9.368	0.003	98	36771	20.0	16.7	
74 2-Chloroethyl vinyl ether	63		9.448				20.0	ND	
75 cis-1,3-Dichloropropene	75	9.628	9.625	0.003	95	179357	20.0	19.0	
76 4-Methyl-2-pentanone (MIBK)	43	9.795	9.795	0.000	95	757599	100.0	87.9	
\$ 77 Toluene-d8 (Surr)	98	9.924	9.924	0.000	93	1195088	50.0	49.2	
78 Toluene	92	9.995	9.998	-0.003	98	322535	20.0	20.8	
80 trans-1,3-Dichloropropene	75	10.245	10.249	-0.004	93	167903	20.0	18.9	
81 Ethyl methacrylate	69	10.303	10.300	0.003	88	167387	20.0	17.8	
82 1,1,2-Trichloroethane	97	10.445	10.445	0.000	91	121112	20.0	20.1	
83 Tetrachloroethene	166	10.532	10.528	0.004	97	148371	20.0	22.4	
84 1,3-Dichloropropane	76	10.609	10.609	0.000	91	191174	20.0	19.0	
86 2-Hexanone	43	10.657	10.657	0.000	95	571471	100.0	84.1	
88 Chlorodibromomethane	129	10.818	10.818	0.000	89	126839	20.0	20.2	
89 Ethylene Dibromide	107	10.927	10.927	0.000	98	129601	20.0	20.0	
* 91 Chlorobenzene-d5 (IS)	117	11.351	11.351	0.000	86	951416	50.0	50.0	
92 1-Chlorohexane	91	11.355	11.355	0.000	95	164083	20.0	20.5	
93 Chlorobenzene	112	11.377	11.377	0.000	96	373996	20.0	21.0	
94 1,1,1,2-Tetrachloroethane	131	11.454	11.454	0.000	94	123793	20.0	20.4	
95 Ethylbenzene	91	11.458	11.457	0.001	98	615156	20.0	21.4	
96 m-Xylene & p-Xylene	106	11.573	11.573	0.000	100	503008	40.0	44.6	
97 o-Xylene	106	11.898	11.898	0.000	95	233181	20.0	21.4	
98 Styrene	104	11.914	11.914	0.000	94	389651	20.0	20.8	
99 Bromoform	173	12.072	12.072	0.000	97	84709	20.0	17.8	
100 Isopropylbenzene	105	12.194	12.197	-0.003	95	617961	20.0	21.0	

Report Date: 18-Jun-2020 21:49:58

Chrom Revision: 2.3 17-Jun-2020 19:07:08

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S05.D

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
102 Cyclohexanone	55	12.277	12.274	0.003	92	132114	499.9	436.4	
\$ 103 4-Bromofluorobenzene (Surr)	95	12.339	12.338	0.001	91	469127	50.0	49.9	
104 1,1,2,2-Tetrachloroethane	83	12.441	12.441	0.000	94	183125	20.0	18.9	
105 Bromobenzene	156	12.458	12.457	0.001	96	163079	20.0	20.9	
106 trans-1,4-Dichloro-2-butene	53	12.464	12.464	0.000	92	268113	100.0	94.5	
107 1,2,3-Trichloropropane	110	12.486	12.490	-0.004	86	60905	20.0	20.5	
108 N-Propylbenzene	91	12.522	12.522	0.000	98	744418	20.0	22.1	
109 2-Chlorotoluene	126	12.599	12.599	0.000	97	150880	20.0	20.9	
110 1,3,5-Trimethylbenzene	105	12.654	12.654	0.000	94	550923	20.0	21.5	
111 4-Chlorotoluene	126	12.692	12.689	0.003	97	159280	20.0	21.3	
113 tert-Butylbenzene	134	12.898	12.898	0.000	93	112351	20.0	21.3	
114 Pentachloroethane	167	12.930	12.930	0.000	79	90618	20.0	20.3	
115 1,2,4-Trimethylbenzene	105	12.940	12.940	0.000	97	560304	20.0	21.1	
116 sec-Butylbenzene	105	13.059	13.059	0.000	94	686147	20.0	21.8	
117 1,3-Dichlorobenzene	146	13.162	13.162	0.000	97	314229	20.0	21.5	
118 4-Isopropyltoluene	119	13.165	13.165	0.000	97	600837	20.0	22.1	
* 119 1,4-Dichlorobenzene-d4	152	13.213	13.216	-0.003	95	533612	50.0	50.0	
120 1,4-Dichlorobenzene	146	13.232	13.232	0.000	95	323800	20.0	21.3	
121 1,2,3-Trimethylbenzene	105	13.242	13.242	0.000	98	571365	20.0	21.8	
122 Benzyl chloride	91	13.310	13.310	0.000	98	379162	NC	NC	
123 1,3-Diethylbenzene	119	13.364	13.364	0.000	95	342138	NC	NC	
127 o-diethylbenzene	119	13.435	13.435	0.000	88	366294	NC	NC	
125 n-Butylbenzene	92	13.454	13.457	-0.003	97	290357	20.0	22.2	
126 1,2-Dichlorobenzene	146	13.496	13.493	0.003	98	309171	20.0	21.1	
124 p-Diethylbenzene	119	13.509	13.509	0.000	87	289436	NC	NC	
129 1,2-Dibromo-3-Chloropropane	75	14.036	14.036	0.000	86	38835	20.0	18.0	
130 1,3,5-Trichlorobenzene	180	14.155	14.155	0.000	98	223048	NC	NC	
131 1,2,4-Trichlorobenzene	180	14.580	14.580	0.000	95	199345	20.0	19.3	
132 Hexachlorobutadiene	225	14.660	14.660	0.000	98	95158	20.0	19.9	
133 Naphthalene	128	14.766	14.766	0.000	96	626028	20.0	17.8	
134 1,2,3-Trichlorobenzene	180	14.911	14.908	0.003	96	199814	20.0	19.5	
135 2-Methylnaphthalene	142	15.557	15.554	0.003	92	224455	NC	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

a - User Assigned ID

Report Date: 18-Jun-2020 21:49:58

Chrom Revision: 2.3 17-Jun-2020 19:07:08

Reagents:

MSV_Q_QGases_00059	Amount Added: 21.50	Units: uL	
MSV_Q_QVOA1_00033	Amount Added: 21.50	Units: uL	
MSV_Q_QARC_00032	Amount Added: 21.50	Units: uL	
MSV_QCYC_00003	Amount Added: 21.50	Units: uL	
MSV_Q_EE_00002	Amount Added: 21.50	Units: uL	
MSV_Q_QVOA6_00030	Amount Added: 21.50	Units: uL	
MSV_HP23_ISSS_00002	Amount Added: 1.00	Units: uL	Run Reagent

Report Date: 18-Jun-2020 21:49:58

Chrom Revision: 2.3 17-Jun-2020 19:07:08

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S05.D

Injection Date: 17-Jun-2020 15:31:30

Instrument ID: 9915

Operator ID: clm27445

Lims ID: 410-3311-C-6 MS

Worklist Smp#: 13

Client ID: GWTS-EFF2-060320

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

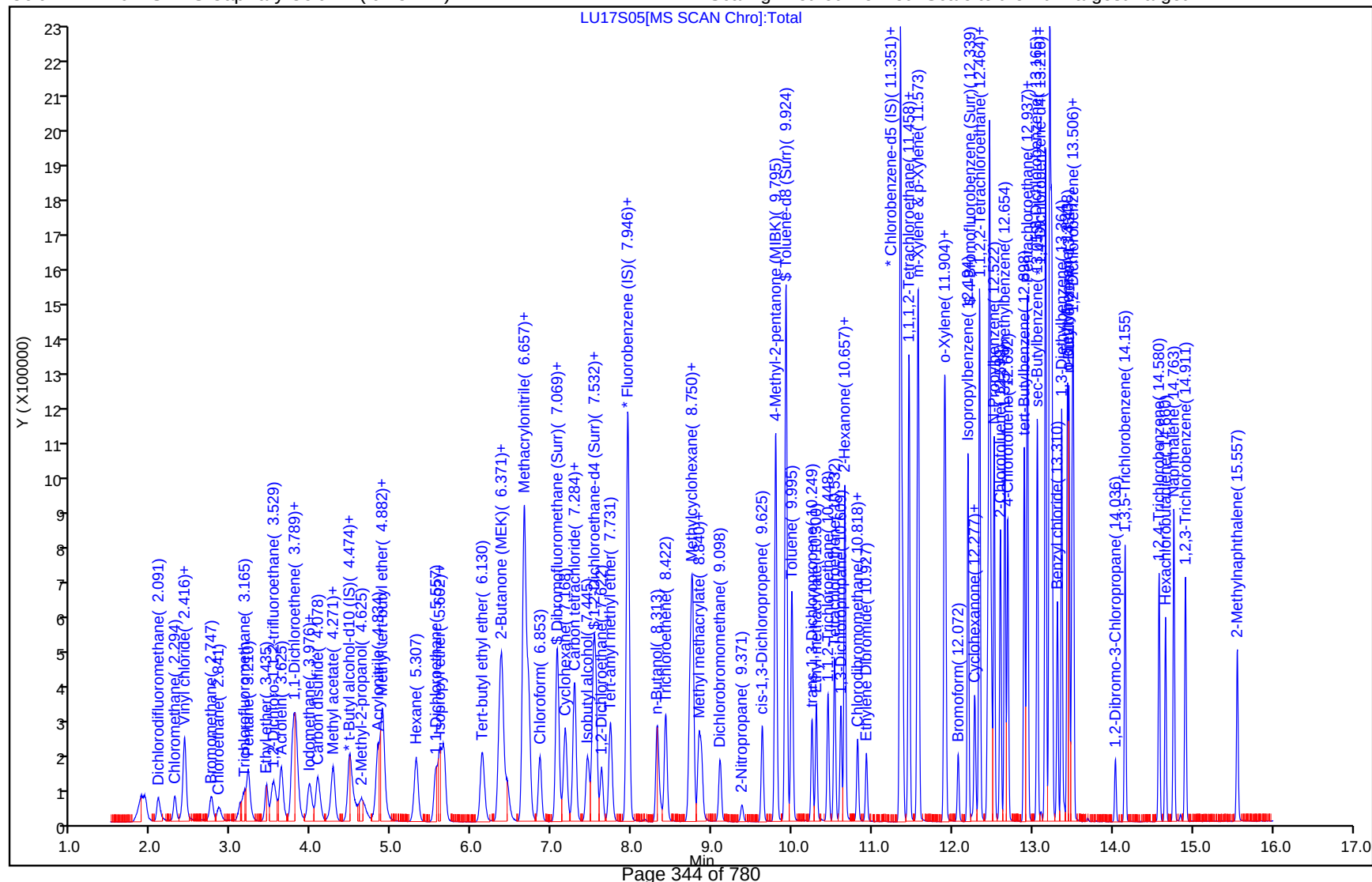
ALS Bottle#: 12

Method: MSVoa_9915a

Limit Group: MSV - 8260C DOD5

Column: Rxi-624Sil MS Capillary Column (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-344

September 2020

Report Date: 18-Jun-2020 21:49:58

Chrom Revision: 2.3 17-Jun-2020 19:07:08

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S05.D
 Lims ID: 410-3311-C-6 MS
 Client ID: GWTS-EFF2-060320
 Sample Type: MS
 Inject. Date: 17-Jun-2020 15:31:30 ALS Bottle#: 12 Worklist Smp#: 13
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 410-3311-C-6 MS
 Misc. Info.: 410-0003558-013
 Operator ID: clm27445 Instrument ID: 9915
 Method: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\MSVoa_9915a.m
 Limit Group: MSV - 8260C DOD5
 Last Update: 18-Jun-2020 21:49:42 Calib Date: 04-May-2020 14:30:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1038

First Level Reviewer: mellinger

Date: 18-Jun-2020 07:02:13

Compound	Amount Added	Amount Recovered	% Rec.
\$ 49 Dibromofluoromethane (Surr)	50.0	50.3	100.51
\$ 55 1,2-Dichloroethane-d4 (Surr)	50.0	51.0	102.02
\$ 77 Toluene-d8 (Surr)	50.0	49.2	98.44
\$ 103 4-Bromofluorobenzene (Surr)	50.0	49.9	99.90

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Client Sample ID: GWTS-EFF2-060320 MSD Lab Sample ID: 410-3311-6 MSD
 Matrix: Water Lab File ID: LU17S06.D
 Analysis Method: 8260C DOD Date Collected: 06/03/2020 08:24
 Sample wt/vol: 5 (mL) Date Analyzed: 06/17/2020 15:53
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 13905 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
71-43-2	Benzene	20		1.0	0.50	0.20
100-41-4	Ethylbenzene	21		1.0	0.80	0.40
108-88-3	Toluene	20		1.0	0.50	0.20
1330-20-7	Xylenes, Total	64		6.0	2.0	1.4

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		81-118
460-00-4	4-Bromofluorobenzene (Surr)	101		85-114
1868-53-7	Dibromofluoromethane (Surr)	100		80-119
2037-26-5	Toluene-d8 (Surr)	99		89-112

Report Date: 18-Jun-2020 21:50:05

Chrom Revision: 2.3 17-Jun-2020 19:07:08

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S06.D
 Lims ID: 410-3311-C-6 MSD
 Client ID: GWTS-EFF2-060320
 Sample Type: MSD
 Inject. Date: 17-Jun-2020 15:53:30 ALS Bottle#: 13 Worklist Smp#: 14
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 410-3311-C-6 MSD
 Misc. Info.: 410-0003558-014
 Operator ID: c1m27445 Instrument ID: 9915
 Method: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\MSVoa_9915a.m
 Limit Group: MSV - 8260C DOD5
 Last Update: 18-Jun-2020 21:49:42 Calib Date: 04-May-2020 14:30:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1038

First Level Reviewer: mellinger

Date: 18-Jun-2020 07:06:16

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	2.082	2.078	0.004	99	124193	20.0	15.6	
4 Chloromethane	50	2.284	2.291	-0.007	99	114529	20.0	15.2	Ma
6 Butadiene	39	2.409	2.406	0.003	93	135609	NC	NC	
5 Vinyl chloride	62	2.413	2.413	0.000	97	121247	20.0	16.6	
8 Bromomethane	94	2.744	2.750	-0.006	92	79437	20.0	16.7	
9 Chloroethane	64	2.840	2.847	-0.007	100	67406	20.0	18.2	
11 Trichlorofluoromethane	101	3.152	3.159	-0.007	98	184636	20.0	23.0	
12 Pentane	43	3.204	3.207	-0.003	95	129158	NC	NC	
14 Ethyl ether	59	3.438	3.429	0.009	90	91675	20.0	16.2	
15 1,2-Dichloro-1,1,2-trifluoroethane	67	3.519	3.519	0.000	91	134478	NC	NC	
16 Acrolein	56	3.612	3.619	-0.007	100	247164	150.0	114.5	
17 1,1-Dichloroethene	96	3.766	3.757	0.009	97	111719	20.0	22.0	
18 1,1,2,2-Tetrafluoroethane	101	3.798	3.795	0.003	77	109525	20.0	20.7	
19 Acetone	58	3.802	3.799	0.003	100	111656	150.0	112.5	
20 Iodomethane	142	3.962	3.966	-0.004	97	195117	20.0	19.9	a
21 Isopropyl alcohol	45	3.991	3.992	-0.001	56	81509	150.0	129.6	
22 Carbon disulfide	76	4.075	4.072	0.003	99	348469	20.0	20.2	
24 Methyl acetate	43	4.236	4.236	0.000	95	104508	20.0	16.2	
25 3-Chloro-1-propene	41	4.271	4.262	0.009	89	148313	20.0	18.1	
26 Methylene Chloride	84	4.474	4.471	0.003	89	121573	20.0	19.9	
* 27 t-Butyl alcohol-d10 (IS)	65	4.490	4.493	-0.003	0	261724	250.0	250.0	M
28 2-Methyl-2-propanol	59	4.622	4.615	0.007	97	187603	200.0	177.2	M
29 Acrylonitrile	53	4.824	4.824	0.000	99	292972	100.0	82.4	
31 Methyl tert-butyl ether	73	4.876	4.879	-0.003	95	308839	20.0	17.6	
32 trans-1,2-Dichloroethene	96	4.882	4.885	-0.003	99	122861	20.0	20.9	
33 Hexane	57	5.303	5.300	0.003	92	157290	20.0	18.3	
35 1,1-Dichloroethane	63	5.544	5.545	-0.001	96	197916	20.0	19.4	
36 Isopropyl ether	45	5.605	5.596	0.009	96	299919	20.0	16.5	
37 2-Chloro-1,3-butadiene	53	5.654	5.647	0.007	90	170628	20.0	20.8	
38 Tert-butyl ethyl ether	59	6.126	6.123	0.003	97	295467	20.0	17.5	
40 2-Butanone (MEK)	43	6.345	6.345	0.000	99	557099	150.0	128.0	

Report Date: 18-Jun-2020 21:50:05

Chrom Revision: 2.3 17-Jun-2020 19:07:08

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S06.D

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
41 cis-1,2-Dichloroethene	96	6.371	6.371	0.000	82	139596	20.0	21.2	
42 2,2-Dichloropropane	77	6.377	6.384	-0.007	85	167723	20.0	21.0	a
44 Propionitrile	54	6.441	6.438	0.003	99	181749	150.0	127.8	
45 Methacrylonitrile	67	6.654	6.651	0.003	90	508940	150.0	141.0	
46 Chlorobromomethane	128	6.699	6.699	0.000	90	67852	20.0	20.0	
47 Tetrahydrofuran	71	6.712	6.712	0.000	84	111046	100.0	88.3	
48 Chloroform	83	6.850	6.850	0.000	93	207005	20.0	20.6	
\$ 49 Dibromofluoromethane (Surr)	113	7.062	7.059	0.003	94	298784	50.0	50.0	
50 1,1,1-Trichloroethane	97	7.075	7.075	0.000	95	185444	20.0	21.4	
51 Cyclohexane	56	7.165	7.168	-0.003	89	187868	20.0	18.4	
52 Carbon tetrachloride	117	7.281	7.274	0.007	95	162052	20.0	22.4	
53 1,1-Dichloropropene	75	7.281	7.281	0.000	95	164408	20.0	20.8	
54 Isobutyl alcohol	41	7.445	7.442	0.003	92	154428	500.0	436.6	
\$ 55 1,2-Dichloroethane-d4 (Surr)	102	7.515	7.512	0.003	98	75099	50.0	49.3	
56 Benzene	78	7.544	7.544	0.000	96	482067	20.0	19.7	
58 1,2-Dichloroethane	62	7.615	7.618	-0.003	98	169852	20.0	20.8	
59 Tert-amyl methyl ether	73	7.731	7.728	0.003	98	310893	20.0	18.1	
* 61 Fluorobenzene (IS)	96	7.946	7.946	0.000	98	1180497	50.0	50.0	
62 n-Heptane	43	7.946	7.950	-0.004	46	157928	20.0	18.0	
63 n-Butanol	56	8.316	8.313	0.003	89	245331	NC	NC	
64 Trichloroethene	95	8.419	8.419	0.000	97	129239	20.0	20.8	
65 Methylcyclohexane	83	8.728	8.721	0.007	92	217222	20.0	20.5	
66 2-ethoxy-2-methyl butane	87	8.753	8.757	-0.004	91	169456	20.0	19.6	
67 1,2-Dichloropropane	63	8.753	8.757	-0.004	72	116488	20.0	18.4	
68 Methyl methacrylate	69	8.834	8.834	0.000	89	101208	20.0	18.7	
69 1,4-Dioxane	88	8.843	8.837	0.006	66	45429	500.0	642.5	M
70 Dibromomethane	93	8.869	8.866	0.003	95	80896	20.0	19.6	
72 Dichlorobromomethane	83	9.101	9.101	0.000	100	146947	20.0	19.9	
73 2-Nitropropane	41	9.374	9.368	0.006	98	36415	20.0	15.5	
74 2-Chloroethyl vinyl ether	63		9.448				20.0	ND	
75 cis-1,3-Dichloropropene	75	9.628	9.625	0.003	96	175289	20.0	18.2	
76 4-Methyl-2-pentanone (MIBK)	43	9.792	9.795	-0.003	95	753291	100.0	85.4	
\$ 77 Toluene-d8 (Surr)	98	9.920	9.924	-0.004	93	1221084	50.0	49.7	
78 Toluene	92	9.994	9.998	-0.004	98	312682	20.0	19.9	
80 trans-1,3-Dichloropropene	75	10.248	10.249	-0.001	94	164385	20.0	18.3	
81 Ethyl methacrylate	69	10.300	10.300	0.000	88	169388	20.0	17.8	
82 1,1,2-Trichloroethane	97	10.445	10.445	0.000	90	120198	20.0	19.7	
83 Tetrachloroethene	166	10.528	10.528	0.000	97	143666	20.0	21.4	
84 1,3-Dichloropropane	76	10.609	10.609	-0.001	90	189258	20.0	18.6	
86 2-Hexanone	43	10.657	10.657	0.000	95	567064	100.0	82.4	
88 Chlorodibromomethane	129	10.818	10.818	0.000	90	122303	20.0	19.3	
89 Ethylene Dibromide	107	10.927	10.927	0.000	99	126877	20.0	19.3	
* 91 Chlorobenzene-d5 (IS)	117	11.351	11.351	0.000	86	963450	50.0	50.0	
92 1-Chlorohexane	91	11.358	11.355	0.003	97	161116	20.0	19.9	
93 Chlorobenzene	112	11.377	11.377	0.000	97	366044	20.0	20.3	
94 1,1,1,2-Tetrachloroethane	131	11.454	11.454	0.000	93	122524	20.0	20.0	
95 Ethylbenzene	91	11.457	11.457	0.000	98	605715	20.0	20.8	
96 m-Xylene & p-Xylene	106	11.570	11.573	-0.003	100	490382	40.0	43.0	
97 o-Xylene	106	11.898	11.898	0.000	96	228145	20.0	20.6	
98 Styrene	104	11.914	11.914	0.000	94	377437	20.0	19.9	
99 Bromoform	173	12.071	12.072	-0.001	97	81835	20.0	17.0	
100 Isopropylbenzene	105	12.194	12.197	-0.003	95	611574	20.0	20.5	

Report Date: 18-Jun-2020 21:50:05

Chrom Revision: 2.3 17-Jun-2020 19:07:08

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S06.D

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
102 Cyclohexanone	55	12.280	12.274	0.006	91	131029	499.9	403.4	
\$ 103 4-Bromofluorobenzene (Surr)	95	12.338	12.338	0.000	90	480851	50.0	50.6	
104 1,1,2,2-Tetrachloroethane	83	12.441	12.441	0.000	94	180742	20.0	18.6	
105 Bromobenzene	156	12.454	12.457	-0.003	95	161386	20.0	20.7	
106 trans-1,4-Dichloro-2-butene	53	12.467	12.464	0.003	95	259274	100.0	91.3	
107 1,2,3-Trichloropropane	110	12.486	12.490	-0.004	86	60999	20.0	20.5	
108 N-Propylbenzene	91	12.522	12.522	0.000	98	731354	20.0	21.7	
109 2-Chlorotoluene	126	12.599	12.599	0.000	97	148897	20.0	20.6	
110 1,3,5-Trimethylbenzene	105	12.653	12.654	-0.001	94	539553	20.0	21.0	
111 4-Chlorotoluene	126	12.692	12.689	0.003	97	155803	20.0	20.8	
113 tert-Butylbenzene	134	12.898	12.898	0.000	92	110375	20.0	20.9	
114 Pentachloroethane	167	12.930	12.930	0.000	79	92224	20.0	20.7	
115 1,2,4-Trimethylbenzene	105	12.940	12.940	0.000	97	548742	20.0	20.6	
116 sec-Butylbenzene	105	13.059	13.059	0.000	94	667282	20.0	21.2	
117 1,3-Dichlorobenzene	146	13.161	13.162	-0.001	98	308483	20.0	21.1	
118 4-Isopropyltoluene	119	13.165	13.165	0.000	97	592250	20.0	21.8	
* 119 1,4-Dichlorobenzene-d4	152	13.216	13.216	0.000	95	533794	50.0	50.0	
120 1,4-Dichlorobenzene	146	13.232	13.232	0.000	95	317195	20.0	20.8	
121 1,2,3-Trimethylbenzene	105	13.242	13.242	0.000	98	588935	20.0	22.4	
122 Benzyl chloride	91	13.313	13.310	0.003	98	375682	NC	NC	
123 1,3-Diethylbenzene	119	13.364	13.364	0.000	96	356102	NC	NC	
127 o-diethylbenzene	119	13.435	13.435	0.000	89	380565	NC	NC	
125 n-Butylbenzene	92	13.454	13.457	-0.003	97	286022	20.0	21.8	
126 1,2-Dichlorobenzene	146	13.496	13.493	0.003	98	302152	20.0	20.6	
124 p-Diethylbenzene	119	13.509	13.509	0.000	87	299538	NC	NC	
129 1,2-Dibromo-3-Chloropropane	75	14.033	14.036	-0.003	84	38641	20.0	17.9	
130 1,3,5-Trichlorobenzene	180	14.158	14.155	0.003	98	218460	NC	NC	
131 1,2,4-Trichlorobenzene	180	14.583	14.580	0.003	95	199648	20.0	19.3	
132 Hexachlorobutadiene	225	14.660	14.660	0.000	97	97568	20.0	20.4	
133 Naphthalene	128	14.766	14.766	0.000	96	628569	20.0	17.9	
134 1,2,3-Trichlorobenzene	180	14.907	14.908	-0.001	97	199710	20.0	19.4	
135 2-Methylnaphthalene	142	15.557	15.554	0.003	92	281871	NC	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

a - User Assigned ID

Report Date: 18-Jun-2020 21:50:05

Chrom Revision: 2.3 17-Jun-2020 19:07:08

Reagents:

MSV_Q_QGases_00059	Amount Added: 21.50	Units: uL	
MSV_Q_QVOA1_00033	Amount Added: 21.50	Units: uL	
MSV_Q_QARC_00032	Amount Added: 21.50	Units: uL	
MSV_QCYC_00003	Amount Added: 21.50	Units: uL	
MSV_Q_EE_00002	Amount Added: 21.50	Units: uL	
MSV_Q_QVOA6_00030	Amount Added: 21.50	Units: uL	
MSV_HP23_ISSS_00002	Amount Added: 1.00	Units: uL	Run Reagent

Report Date: 18-Jun-2020 21:50:05

Chrom Revision: 2.3 17-Jun-2020 19:07:08

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S06.D

Injection Date: 17-Jun-2020 15:53:30

Instrument ID: 9915

Operator ID: clm27445

Lims ID: 410-3311-C-6 MSD

Worklist Smp#: 14

Client ID: GWTS-EFF2-060320

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

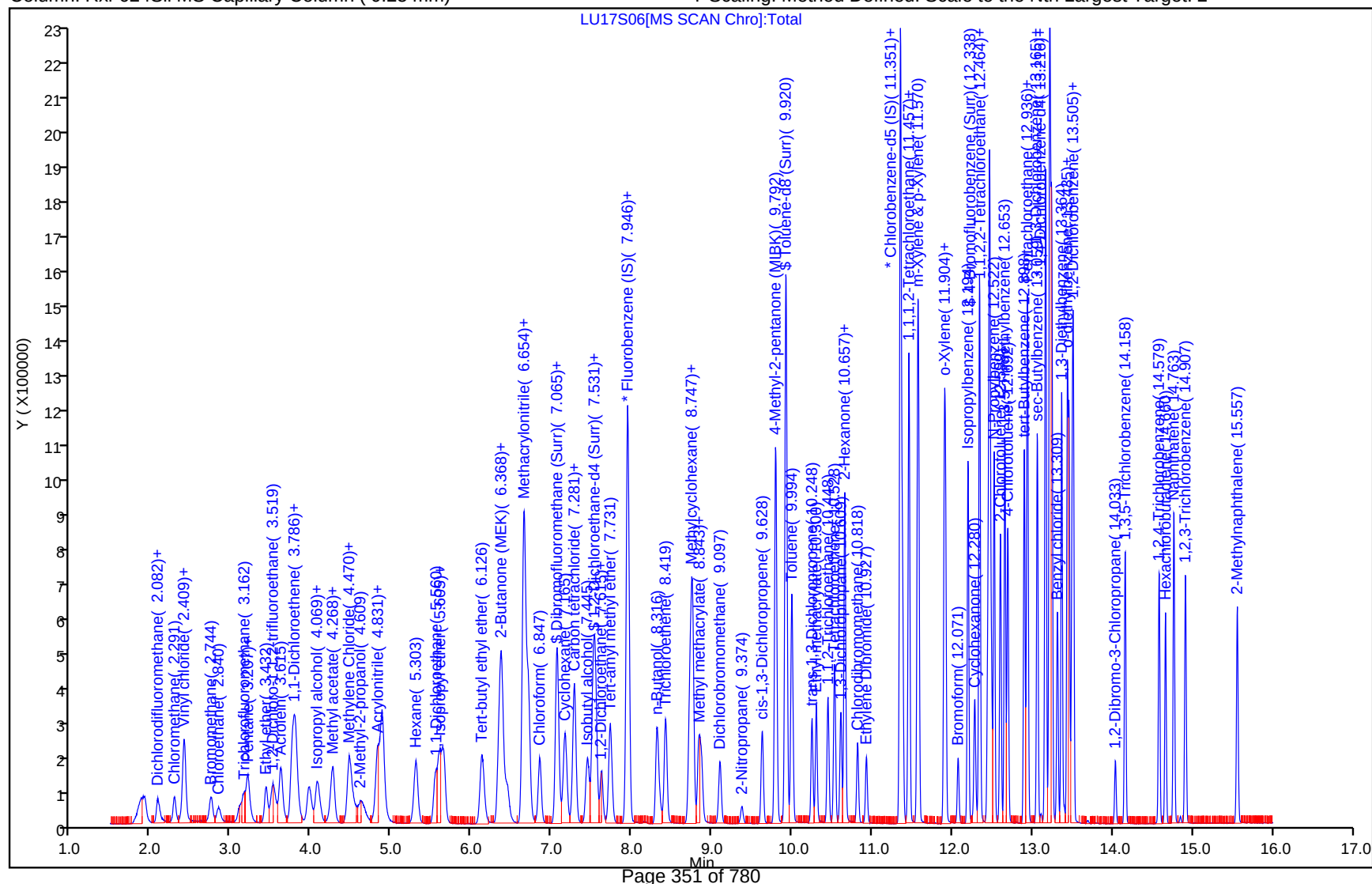
ALS Bottle#: 13

Method: MSVoa_9915a

Limit Group: MSV - 8260C DOD5

Column: Rxi-624Sil MS Capillary Column (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-351

September 2020

Report Date: 18-Jun-2020 21:50:05

Chrom Revision: 2.3 17-Jun-2020 19:07:08

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S06.D
 Lims ID: 410-3311-C-6 MSD
 Client ID: GWTS-EFF2-060320
 Sample Type: MSD
 Inject. Date: 17-Jun-2020 15:53:30 ALS Bottle#: 13 Worklist Smp#: 14
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 410-3311-C-6 MSD
 Misc. Info.: 410-0003558-014
 Operator ID: clm27445 Instrument ID: 9915
 Method: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\MSVoa_9915a.m
 Limit Group: MSV - 8260C DOD5
 Last Update: 18-Jun-2020 21:49:42 Calib Date: 04-May-2020 14:30:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\9915\20200504-2153.b\LY04I07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1038

First Level Reviewer: mellinger

Date: 18-Jun-2020 07:06:16

Compound	Amount Added	Amount Recovered	% Rec.
\$ 49 Dibromofluoromethane (Surr)	50.0	50.0	100.06
\$ 55 1,2-Dichloroethane-d4 (Surr)	50.0	49.3	98.56
\$ 77 Toluene-d8 (Surr)	50.0	49.7	99.32
\$ 103 4-Bromofluorobenzene (Surr)	50.0	50.6	101.12

Report Date: 18-Jun-2020 21:50:05

Chrom Revision: 2.3 17-Jun-2020 19:07:08
Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

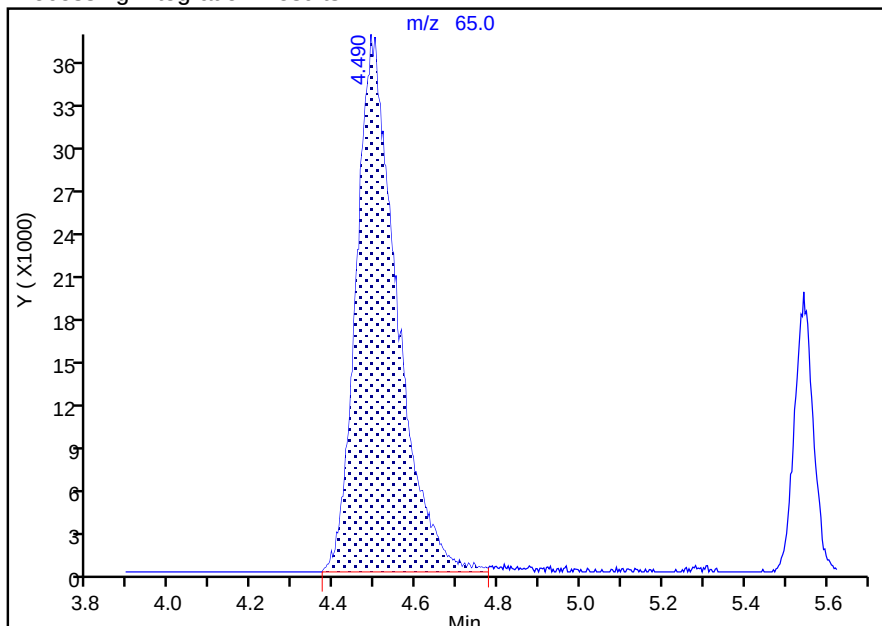
Data File: \\chromfs\Lancaster\ChromData\9915\20200617-3558.b\LU17S06.D
 Injection Date: 17-Jun-2020 15:53:30 Instrument ID: 9915
 Lims ID: 410-3311-C-6 MSD
 Client ID: GWTS-EFF2-060320
 Operator ID: clm27445 ALS Bottle#: 13 Worklist Smp#: 14
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVoa_9915a Limit Group: MSV - 8260C DOD5
 Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

* 27 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

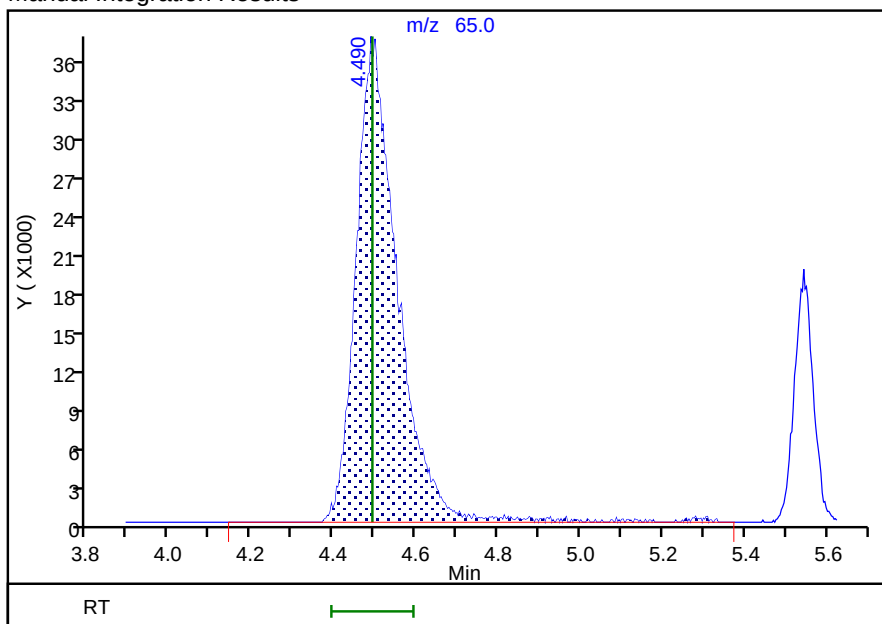
RT: 4.49
 Area: 256860
 Amount: 250.0000
 Amount Units: ug/l

Processing Integration Results



RT: 4.49
 Area: 261724
 Amount: 250.0000
 Amount Units: ug/l

Manual Integration Results



Reviewer: mellinger, 18-Jun-2020 07:02:55

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

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GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1
 SDG No.: _____
 Instrument ID: 9915 Start Date: 05/04/2020 11:11
 Analysis Batch Number: 8012 End Date: 05/04/2020 14:52

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 410-8012/1		05/04/2020 11:11	1	LY04T02.D	R-624SilMS 30m 0.25 (mm)
IC 410-8012/3		05/04/2020 12:18	1	LY04I01.D	R-624SilMS 30m 0.25 (mm)
IC 410-8012/4		05/04/2020 12:40	1	LY04I02.D	R-624SilMS 30m 0.25 (mm)
ICIS 410-8012/5		05/04/2020 13:02	1	LY04I03.D	R-624SilMS 30m 0.25 (mm)
IC 410-8012/6		05/04/2020 13:24	1	LY04I04.D	R-624SilMS 30m 0.25 (mm)
IC 410-8012/7		05/04/2020 13:46	1	LY04I05.D	R-624SilMS 30m 0.25 (mm)
IC 410-8012/8		05/04/2020 14:08	1	LY04I06.D	R-624SilMS 30m 0.25 (mm)
IC 410-8012/9		05/04/2020 14:30	1	LY04I07.D	R-624SilMS 30m 0.25 (mm)
ICV 410-8012/11		05/04/2020 14:52	1	LY04V01.D	R-624SilMS 30m 0.25 (mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1

SDG No.:

Instrument ID: 9915

Start Date: 06/17/2020 10:27

Analysis Batch Number: 13905

End Date: 06/17/2020 22:29

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 410-13905/1		06/17/2020 10:27	1	LU17T03.D	R-624SilMS 30m 0.25 (mm)
CCVIS 410-13905/3		06/17/2020 11:20	1	LU17C01.D	R-624SilMS 30m 0.25 (mm)
LCS 410-13905/5		06/17/2020 12:04	1	LU17L01.D	R-624SilMS 30m 0.25 (mm)
LCSD 410-13905/7		06/17/2020 12:48	1	LU17L02.D	R-624SilMS 30m 0.25 (mm)
ZZZZZ		06/17/2020 13:10	1		R-624SilMS 30m 0.25 (mm)
MB 410-13905/9		06/17/2020 13:32	1	LU17B01.D	R-624SilMS 30m 0.25 (mm)
410-3311-5		06/17/2020 14:26	1	LU17S02.D	R-624SilMS 30m 0.25 (mm)
410-3311-9		06/17/2020 14:47	1	LU17S03.D	R-624SilMS 30m 0.25 (mm)
410-3311-6		06/17/2020 15:09	1	LU17S04.D	R-624SilMS 30m 0.25 (mm)
410-3311-6 MS		06/17/2020 15:31	1	LU17S05.D	R-624SilMS 30m 0.25 (mm)
410-3311-6 MSD		06/17/2020 15:53	1	LU17S06.D	R-624SilMS 30m 0.25 (mm)
410-3311-1		06/17/2020 16:15	1	LU17S07.D	R-624SilMS 30m 0.25 (mm)
410-3311-2		06/17/2020 16:37	1	LU17S08.D	R-624SilMS 30m 0.25 (mm)
410-3311-3		06/17/2020 16:59	1	LU17S09.D	R-624SilMS 30m 0.25 (mm)
410-3311-4		06/17/2020 17:21	1	LU17S10.D	R-624SilMS 30m 0.25 (mm)
410-3311-7		06/17/2020 17:43	1	LU17S11.D	R-624SilMS 30m 0.25 (mm)
410-3311-8		06/17/2020 18:05	1	LU17S12.D	R-624SilMS 30m 0.25 (mm)
CCVC 410-13905/29		06/17/2020 22:29	1	LU17S26.D	R-624SilMS 30m 0.25 (mm)

8260C DOD

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-3311-1

SDG No.: _____

Batch Number: 8012 Batch Start Date: 05/04/20 11:11 Batch Analyst: Dale, Anita M

Batch Method: 8260C DOD Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MSV_4ppbEE 00010	MSV_502QGas 00048	MSV_DCFM 00013	MSV_HP23_ISSS 00002
BFB 410-8012/1		8260C DOD		1 uL	1 uL				
IC 410-8012/3		8260C DOD		5 mL	5 mL			7.5 uL	1 uL
IC 410-8012/4		8260C DOD		5 mL	5 mL			2.5 uL	1 uL
ICIS 410-8012/5		8260C DOD		5 mL	5 mL			2.5 uL	1 uL
IC 410-8012/6		8260C DOD		5 mL	5 mL			2 uL	1 uL
IC 410-8012/7		8260C DOD		5 mL	5 mL			1 uL	1 uL
IC 410-8012/8		8260C DOD		5 mL	5 mL			2 uL	1 uL
IC 410-8012/9		8260C DOD		5 mL	5 mL	12.5 mL			1 uL
ICV 410-8012/11		8260C DOD		5 mL	5 mL		1 uL	1 uL	1 uL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_Q_EE 00002	MSV_Q_QVOA1 00027	MSV_Q1B_2CEVE 00034	MSV_QACR 00010	MSV_QCS#6Std 00019	MSV_QCYC 00003
BFB 410-8012/1		8260C DOD							
IC 410-8012/3		8260C DOD							
IC 410-8012/4		8260C DOD							
ICIS 410-8012/5		8260C DOD							
IC 410-8012/6		8260C DOD							
IC 410-8012/7		8260C DOD							
IC 410-8012/8		8260C DOD							
IC 410-8012/9		8260C DOD							
ICV 410-8012/11		8260C DOD		50 uL	50 uL	2 uL	2 uL	2 uL	50 uL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_V_2CEVE 00066	MSV_V_BFB 00002	MSV_V_EE 00003	MSV_V_Gas 00073	MSV_V_VOA1 00054	MSV_V_VOA2 00028
BFB 410-8012/1		8260C DOD			1 uL				
IC 410-8012/3		8260C DOD		15 uL		15 uL	7.5 uL	15 uL	
IC 410-8012/4		8260C DOD		5 uL		5 uL	2.5 uL	5 uL	
ICIS 410-8012/5		8260C DOD		5 uL		5 uL	2.5 uL	5 uL	
IC 410-8012/6		8260C DOD		4 uL		4 uL	2 uL	4 uL	4 uL
IC 410-8012/7		8260C DOD		2 uL		2 uL	1 uL	2 uL	2 uL
IC 410-8012/8		8260C DOD		4 uL		4 uL	2 uL	4 uL	12 uL

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

8260C DOD

Page 1 of 2

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-3311-1

SDG No.: _____

Batch Number: 8012 Batch Start Date: 05/04/20 11:11 Batch Analyst: Dale, Anita MBatch Method: 8260C DOD Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_V_2CEVE 00066	MSV_V_BFB 00002	MSV_V_EE 00003	MSV_V_Gas 00073	MSV_V_VOA1 00054	MSV_V_VOA2 00028
IC 410-8012/9		8260C DOD							
ICV 410-8012/11		8260C DOD							

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_V_VOA3 00026	MSV_V_VOA6 00033	MSV_VCYC 00002			
BFB 410-8012/1		8260C DOD							
IC 410-8012/3		8260C DOD		6 uL	15 uL	30 uL			
IC 410-8012/4		8260C DOD		2 uL	5 uL	10 uL			
ICIS 410-8012/5		8260C DOD		2 uL	5 uL	10 uL			
IC 410-8012/6		8260C DOD		1.6 uL	4 uL	16 uL			
IC 410-8012/7		8260C DOD		0.8 uL	2 uL	8 uL			
IC 410-8012/8		8260C DOD		1.6 uL	4 uL	32 uL			
IC 410-8012/9		8260C DOD							
ICV 410-8012/11		8260C DOD							

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

8260C DOD

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GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-3311-1

SDG No.:

Batch Number: 13905 Batch Start Date: 06/17/20 10:27 Batch Analyst: Mellinger, Corie M

Batch Method: 8260C DOD Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	ResidualChloChe ck	MSV_DCFM 00016	MSV_HP23_ISSS 00002
BFB 410-13905/1		8260C DOD		1 uL	1 uL				
CCVIS 410-13905/3		8260C DOD		5 mL	5 mL			2.5 uL	1 uL
LCS 410-13905/5		8260C DOD		5 mL	5 mL				1 uL
LCSD 410-13905/7		8260C DOD		5 mL	5 mL				1 uL
MB 410-13905/9		8260C DOD		5 mL	5 mL				1 uL
410-3311-C-5	GWTS-TB01-060320	8260C DOD	T	5 mL	5 mL	<2 SU	N		1 uL
410-3311-C-9	GWTS-FB02-060320	8260C DOD	T	5 mL	5 mL	<2 SU	N		1 uL
410-3311-C-6	GWTS-EFF2-060320	8260C DOD	T	5 mL	5 mL	<2 SU	N		1 uL
410-3311-C-6 MS	GWTS-EFF2-060320	8260C DOD	T	5 mL	5 mL	<2 SU	N		1 uL
410-3311-C-6 MSD	GWTS-EFF2-060320	8260C DOD	T	5 mL	5 mL	<2 SU	N		1 uL
410-3311-C-1	GWTS-EFF1-060320	8260C DOD	T	5 mL	5 mL	<2 SU	N		1 uL
410-3311-C-2	GWTS-EFF1DUP-060 320	8260C DOD	T	5 mL	5 mL	<2 SU	N		1 uL
410-3311-C-3	GWTS-GAC1-060320	8260C DOD	T	5 mL	5 mL	<2 SU	N		1 uL
410-3311-C-4	GWTS-INF1-060320	8260C DOD	T	5 mL	5 mL	<2 SU	N		1 uL
410-3311-C-7	GWTS-GAC2-060320	8260C DOD	T	5 mL	5 mL	<2 SU	N		1 uL
410-3311-C-8	GWTS-INF2-060320	8260C DOD	T	5 mL	5 mL	<2 SU	N		1 uL
CCVC 410-13905/29		8260C DOD		5 mL	5 mL	<2 SU	N		1 uL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_Q_EE 00002	MSV_Q_QARC 00032	MSV_Q_QGases 00059	MSV_Q_QVOA1 00033	MSV_Q_QVOA6 00030	MSV_QCYC 00003
BFB 410-13905/1		8260C DOD							
CCVIS 410-13905/3		8260C DOD							
LCS 410-13905/5		8260C DOD		50 uL	50 uL	50 uL	50 uL	50 uL	50 uL
LCSD 410-13905/7		8260C DOD		50 uL	50 uL	50 uL	50 uL	50 uL	50 uL
MB 410-13905/9		8260C DOD							
410-3311-C-5	GWTS-TB01-060320	8260C DOD	T						
410-3311-C-9	GWTS-FB02-060320	8260C DOD	T						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

8260C DOD

Page 1 of 4

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-3311-1

SDG No.: _____

Batch Number: 13905 Batch Start Date: 06/17/20 10:27 Batch Analyst: Mellinger, Corie MBatch Method: 8260C DOD Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_Q_EE 00002	MSV_Q_QARC 00032	MSV_Q_QGases 00059	MSV_Q_QVOA1 00033	MSV_Q_QVOA6 00030	MSV_QCYC 00003
410-3311-C-6	GWTS-EFF2-060320	8260C DOD	T						
410-3311-C-6 MS	GWTS-EFF2-060320	8260C DOD	T	21.5 uL	21.5 uL	21.5 uL	21.5 uL	21.5 uL	21.5 uL
410-3311-C-6 MSD	GWTS-EFF2-060320	8260C DOD	T	21.5 uL	21.5 uL	21.5 uL	21.5 uL	21.5 uL	21.5 uL
410-3311-C-1	GWTS-EFF1-060320	8260C DOD	T						
410-3311-C-2	GWTS-EFF1DUP-060320	8260C DOD	T						
410-3311-C-3	GWTS-GAC1-060320	8260C DOD	T						
410-3311-C-4	GWTS-INF1-060320	8260C DOD	T						
410-3311-C-7	GWTS-GAC2-060320	8260C DOD	T						
410-3311-C-8	GWTS-INF2-060320	8260C DOD	T						
CCVC 410-13905/29		8260C DOD							

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_V_2CEVE 00078	MSV_V_BFB 00002	MSV_V_EE 00003	MSV_V_Gas 00092	MSV_V_VOA1 00066	MSV_V_VOA3 00032
BFB 410-13905/1		8260C DOD			1 uL				
CCVIS 410-13905/3		8260C DOD		5 uL		5 uL	2.5 uL	5 uL	2 uL
LCS 410-13905/5		8260C DOD							
LCSD 410-13905/7		8260C DOD							
MB 410-13905/9		8260C DOD							
410-3311-C-5	GWTS-TB01-060320	8260C DOD	T						
410-3311-C-9	GWTS-FB02-060320	8260C DOD	T						
410-3311-C-6	GWTS-EFF2-060320	8260C DOD	T						
410-3311-C-6 MS	GWTS-EFF2-060320	8260C DOD	T						
410-3311-C-6 MSD	GWTS-EFF2-060320	8260C DOD	T						
410-3311-C-1	GWTS-EFF1-060320	8260C DOD	T						
410-3311-C-2	GWTS-EFF1DUP-060320	8260C DOD	T						
410-3311-C-3	GWTS-GAC1-060320	8260C DOD	T						
410-3311-C-4	GWTS-INF1-060320	8260C DOD	T						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

8260C DOD

Page 2 of 4

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-3311-1

SDG No.: _____

Batch Number: 13905 Batch Start Date: 06/17/20 10:27 Batch Analyst: Mellinger, Corie MBatch Method: 8260C DOD Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_V_2CEVE 00078	MSV_V_BFB 00002	MSV_V_EE 00003	MSV_V_Gas 00092	MSV_V_VOA1 00066	MSV_V_VOA3 00032
410-3311-C-7	GWTS-GAC2-060320	8260C DOD	T						
410-3311-C-8	GWTS-INF2-060320	8260C DOD	T						
CCVC 410-13905/29		8260C DOD		5 uL		5 uL	2.5 uL	5 uL	2 uL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_V_VOA6 00039	MSV_VCYC 00002				
BFB 410-13905/1		8260C DOD							
CCVIS 410-13905/3		8260C DOD		5 uL	10 uL				
LCS 410-13905/5		8260C DOD							
LCSD 410-13905/7		8260C DOD							
MB 410-13905/9		8260C DOD							
410-3311-C-5	GWTS-TB01-060320	8260C DOD	T						
410-3311-C-9	GWTS-FB02-060320	8260C DOD	T						
410-3311-C-6	GWTS-EFF2-060320	8260C DOD	T						
410-3311-C-6 MS	GWTS-EFF2-060320	8260C DOD	T						
410-3311-C-6 MSD	GWTS-EFF2-060320	8260C DOD	T						
410-3311-C-1	GWTS-EFF1-060320	8260C DOD	T						
410-3311-C-2	GWTS-EFF1DUP-060 320	8260C DOD	T						
410-3311-C-3	GWTS-GAC1-060320	8260C DOD	T						
410-3311-C-4	GWTS-INF1-060320	8260C DOD	T						
410-3311-C-7	GWTS-GAC2-060320	8260C DOD	T						
410-3311-C-8	GWTS-INF2-060320	8260C DOD	T						
CCVC 410-13905/29		8260C DOD		5 uL	10 uL				

Batch Notes	

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

8260C DOD

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GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-3311-1

SDG No.: _____

Batch Number: 13905 Batch Start Date: 06/17/20 10:27 Batch Analyst: Mellinger, Corie MBatch Method: 8260C DOD Batch End Date: _____

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

8260C DOD

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Method 8011 DOD

EDB, DBCP, and 1,2,3-TCP (GC) by
Method 8011 DOD

FORM II
GC SEMI VOA SURROGATE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-3311-1

SDG No.: _____

Matrix: Water Level: Low

GC Column (1): DB CLP1 ID: 0.32 (mm) GC Column (2): DB CLP2 ID: 0.32 (mm)

Client Sample ID	Lab Sample ID	1122TCA1#	1122TCA2#
GWTS-EFF1-060320	410-3311-1	70	76
GWTS-EFF1DUP-060320	410-3311-2	68	76
GWTS-GAC1-060320	410-3311-3	77	80
GWTS-INF1-060320	410-3311-4	73	79
GWTS-TB01-060320	410-3311-5	81	82
GWTS-EFF2-060320	410-3311-6	90	81
GWTS-GAC2-060320	410-3311-7	82	86
GWTS-INF2-060320	410-3311-8	75	93
GWTS-FB02-060320	410-3311-9	80	82
	MB 410-10943/1-A	73	80
	LCS 410-10943/2-A	67	72
	LCSD 410-10943/3-A	74	77
GWTS-EFF2-060320 MS	410-3311-6 MS	87	75
GWTS-EFF2-060320 MSD	410-3311-6 MSD	85	75

1122TCA = 1,1,2,2-Tetrachloroethane

QC LIMITS
46-136

Column to be used to flag recovery values

FORM II 8011

FORM III
GC SEMI VOA LAB CONTROL SAMPLE RECOVERYLab Name: Eurofins Lancaster Laboratories Job No.: 410-3311-1

SDG No.: _____

Matrix: Water Level: Low Lab File ID: 16EDBS20133016.023.DLab ID: LCS 410-10943/2-A Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethylene Dibromide	0.128	0.101	79	60-140	

Column to be used to flag recovery and RPD values

FORM III 8011

FORM III
GC SEMI VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-3311-1

SDG No.: _____

Matrix: Water Level: Low Lab File ID: 16EDBS20133016.024.D

Lab ID: LCSD 410-10943/3-A Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
Ethylene Dibromide	0.128	0.113	89	12	20	60-140	

Column to be used to flag recovery and RPD values

FORM III 8011

FORM III
GC SEMI VOA MATRIX SPIKE RECOVERYLab Name: Eurofins Lancaster Laboratories Job No.: 410-3311-1

SDG No.: _____

Matrix: Water Level: Low Lab File ID: 16EDBS20133016.034.DLab ID: 410-3311-6 MS Client ID: GWTS-EFF2-060320 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Ethylene Dibromide	0.121	0.019 U	0.112	92	60-140	

Column to be used to flag recovery and RPD values

FORM III 8011

FORM III
GC SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-3311-1

SDG No.: _____

Matrix: Water Level: Low Lab File ID: 16EDBS20133016.035.D

Lab ID: 410-3311-6 MSD Client ID: GWTS-EFF2-060320 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
Ethylene Dibromide	0.123	0.0961	78	15	20	60-140	

Column to be used to flag recovery and RPD values

FORM III 8011

FORM IV
GC SEMI VOA METHOD BLANK SUMMARY

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-3311-1
 SDG No.: _____
 Lab Sample ID: MB 410-10943/1-A
 Matrix: Water Date Extracted: 06/06/2020 03:40
 Lab File ID: (1) 16EDBS20133016.022.D Lab File ID: (2) 16EDBS20133016.022.D
 Date Analyzed: (1) 06/08/2020 23:17 Date Analyzed: (2) 06/08/2020 23:17
 Instrument ID: (1) 19853 Instrument ID: (2) 19853
 GC Column: (1) DB CLP1 ID: 0.32 (mm) GC Column: (2) DB CLP2 ID: 0.32 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 410-10943/2-A	06/08/2020 23:34	06/08/2020 23:34
	LCSD 410-10943/3-A	06/08/2020 23:51	06/08/2020 23:51
GWTS-EFF1-060320	410-3311-1	06/09/2020 00:08	06/09/2020 00:08
GWTS-EFF1DUP-060320	410-3311-2	06/09/2020 00:25	06/09/2020 00:25
GWTS-GAC1-060320	410-3311-3	06/09/2020 00:42	06/09/2020 00:42
GWTS-INF1-060320	410-3311-4	06/09/2020 00:59	06/09/2020 00:59
GWTS-TB01-060320	410-3311-5	06/09/2020 01:16	06/09/2020 01:16
GWTS-EFF2-060320	410-3311-6	06/09/2020 02:24	06/09/2020 02:24
GWTS-EFF2-060320 MS	410-3311-6 MS	06/09/2020 02:40	06/09/2020 02:40
GWTS-EFF2-060320 MSD	410-3311-6 MSD	06/09/2020 02:57	06/09/2020 02:57
GWTS-GAC2-060320	410-3311-7	06/09/2020 03:14	06/09/2020 03:14
GWTS-INF2-060320	410-3311-8	06/09/2020 03:31	06/09/2020 03:31
GWTS-FB02-060320	410-3311-9	06/09/2020 03:48	06/09/2020 03:48

FORM VIII
GC SEMI VOA ANALYTICAL SEQUENCE

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Sample No.: ICRT 410-8526/6 Date Analyzed: 05/12/2020 23:32
 Instrument ID: 19853 GC Column: DB CLP1 ID: 0.32 (mm)
 Lab File ID (Standard): 16EDBS20133001.007. Heated Purge: (Y/N) N
 Calibration ID: 4352

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				1122TCA		
				RT #		
INITIAL CALIBRATION SURROGATE				5.31		
UPPER LIMIT				5.34		
LOWER LIMIT				5.28		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
ICRT 410-8526/6		05/12/2020 23:32	16EDBS20133001.007.D	5.31		
ICV 410-8526/11		05/13/2020 00:56	16EDBS20133001.012.D	5.31		

1122TCA = 1,1,2,2-Tetrachloroethane

1122TCA RT Limit = ± 0.03 minutes of surrogate RT

Column used to flag values outside QC limits

FORM VIII 8011

FORM VIII
GC SEMI VOA ANALYTICAL SEQUENCE

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Sample No.: ICRT 410-8526/6 Date Analyzed: 05/12/2020 23:32
 Instrument ID: 19853 GC Column: DB CLP2 ID: 0.32 (mm)
 Lab File ID (Standard): 16EDBS20133001.007. Heated Purge: (Y/N) N
 Calibration ID: 4353

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				1122TCA		
				RT #		
INITIAL CALIBRATION SURROGATE				6.33		
UPPER LIMIT				6.36		
LOWER LIMIT				6.30		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
ICRT 410-8526/6		05/12/2020 23:32	16EDBS20133001.007.D	6.33		
ICV 410-8526/11		05/13/2020 00:56	16EDBS20133001.012.D	6.33		

1122TCA = 1,1,2,2-Tetrachloroethane

1122TCA RT Limit = ± 0.03 minutes of surrogate RT

Column used to flag values outside QC limits

FORM VIII 8011

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1

SDG No.: _____

Client Sample ID: GWTS-GAC1-060320 Lab Sample ID: 410-3311-3

Instrument ID (1): 19853 Instrument ID (2): 19853

Date Analyzed (1): 06/09/2020 00:42 Date Analyzed (2): 06/09/2020 00:42

GC Column (1): DB CLP1 ID: 0.32 (mm) GC Column (2): DB CLP2 ID: 0.32 (mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
Ethylene Dibromide	1		3.81	3.57	4.07	0.010		2.2
	2		4.64	4.40	4.90	0.010		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1

SDG No.: _____

Client Sample ID: GWTS-EFF2-060320 MS Lab Sample ID: 410-3311-6 MS

Instrument ID (1): 19853 Instrument ID (2): 19853

Date Analyzed (1): 06/09/2020 02:40 Date Analyzed (2): 06/09/2020 02:40

GC Column (1): DB CLP1 ID: 0.32 (mm) GC Column (2): DB CLP2 ID: 0.32 (mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
Ethylene Dibromide	1		3.81	3.57	4.07	0.112		10.4
	2		4.64	4.40	4.90	0.124		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1

SDG No.: _____

Client Sample ID: GWTS-EFF2-060320 MSD Lab Sample ID: 410-3311-6 MSD

Instrument ID (1): 19853 Instrument ID (2): 19853

Date Analyzed (1): 06/09/2020 02:57 Date Analyzed (2): 06/09/2020 02:57

GC Column (1): DB CLP1 ID: 0.32 (mm) GC Column (2): DB CLP2 ID: 0.32 (mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
Ethylene Dibromide	1		3.80	3.57	4.07	0.0961		12.5
	2		4.64	4.40	4.90	0.109		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1

SDG No.: _____

Client Sample ID: GWTS-GAC2-060320 Lab Sample ID: 410-3311-7

Instrument ID (1): 19853 Instrument ID (2): 19853

Date Analyzed (1): 06/09/2020 03:14 Date Analyzed (2): 06/09/2020 03:14

GC Column (1): DB CLP1 ID: 0.32 (mm) GC Column (2): DB CLP2 ID: 0.32 (mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
Ethylene Dibromide	1		3.81	3.57	4.07	0.011		10.2
	2		4.64	4.40	4.90	0.0098		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1

SDG No.: _____

Client Sample ID: GWTS-INF2-060320 Lab Sample ID: 410-3311-8

Instrument ID (1): 19853 Instrument ID (2): 19853

Date Analyzed (1): 06/09/2020 03:31 Date Analyzed (2): 06/09/2020 03:31

GC Column (1): DB CLP1 ID: 0.32 (mm) GC Column (2): DB CLP2 ID: 0.32 (mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
Ethylene Dibromide	1		3.81	3.57	4.07	0.037		41.7
	2		4.64	4.40	4.90	0.024		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1

SDG No.: _____

Client Sample ID: _____ Lab Sample ID: LCS 410-10943/2-A

Instrument ID (1): 19853 Instrument ID (2): 19853

Date Analyzed (1): 06/08/2020 23:34 Date Analyzed (2): 06/08/2020 23:34

GC Column (1): DB CLP1 ID: 0.32 (mm) GC Column (2): DB CLP2 ID: 0.32 (mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
Ethylene Dibromide	1		3.80	3.57	4.07	0.101		10.2
	2		4.63	4.40	4.90	0.112		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1

SDG No.: _____

Client Sample ID: _____ Lab Sample ID: LCSD 410-10943/3-A

Instrument ID (1): 19853 Instrument ID (2): 19853

Date Analyzed (1): 06/08/2020 23:51 Date Analyzed (2): 06/08/2020 23:51

GC Column (1): DB CLP1 ID: 0.32 (mm) GC Column (2): DB CLP2 ID: 0.32 (mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
Ethylene Dibromide	1		3.80	3.57	4.07	0.113		8.5
	2		4.63	4.40	4.90	0.123		

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Client Sample ID: GWTS-EFF1-060320 Lab Sample ID: 410-3311-1
 Matrix: Water Lab File ID: 16EDBS20133016.025.D
 Analysis Method: 8011 Date Collected: 06/03/2020 09:05
 Extraction Method: 8011 Date Extracted: 06/06/2020 03:40
 Sample wt/vol: 36.1 (mL) Date Analyzed: 06/09/2020 00:08
 Con. Extract Vol.: 2 (mL) Dilution Factor: 1
 Injection Volume: 1 (uL) GC Column: DB CLP1 ID: 0.32 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 11304 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
106-93-4	Ethylene Dibromide	0.019	U	0.029	0.019	0.0097

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-34-5	1,1,2,2-Tetrachloroethane	70		46-136

Report Date: 09-Jun-2020 16:51:08

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.025.D
 Lims ID: 410-3311-A-1-A
 Client ID: GWTS-EFF1-060320
 Sample Type: Client
 Inject. Date: 09-Jun-2020 00:08:00 ALS Bottle#: 0 Worklist Smp#: 23
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 410-3311-A-1-A AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:04 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

First Level Reviewer: brumbaughj

Date:

09-Jun-2020 16:41:01

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/l	Flags
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1 Ethylene Dibromide

1	3.758	3.824	-0.066	494214H	0.0324
2	4.680	4.648	0.032	499838H	0.0209

RPD = 43.27

\$ 2 1,1,2,2-Tetrachloroethane

1	5.303	5.313	-0.010	18570535H	0.8584
2	6.318	6.325	-0.007	29102901H	0.9343

RPD = 8.47

Report Date: 09-Jun-2020 16:51:08

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.025.D

Injection Date: 09-Jun-2020 00:08:00

Instrument ID: 19853

Operator ID: 2306

Lims ID: 410-3311-A-1-A

Lab Sample ID: 410-3311-1

Worklist Smp#: 23

Client ID: GWTS-EFF1-060320

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

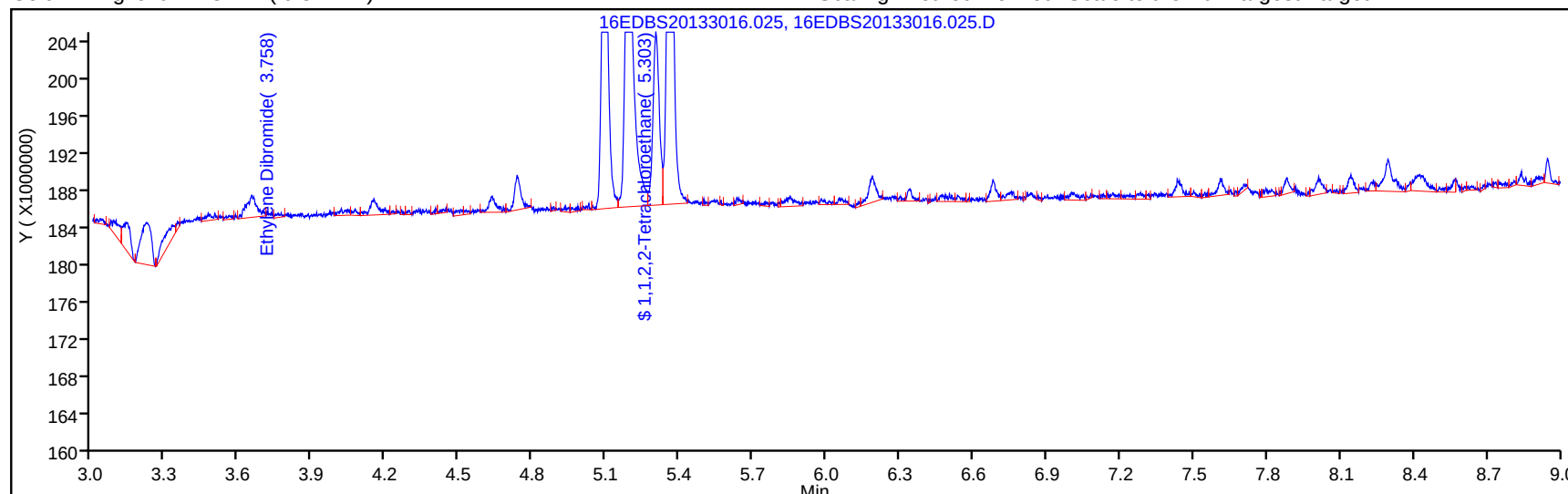
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

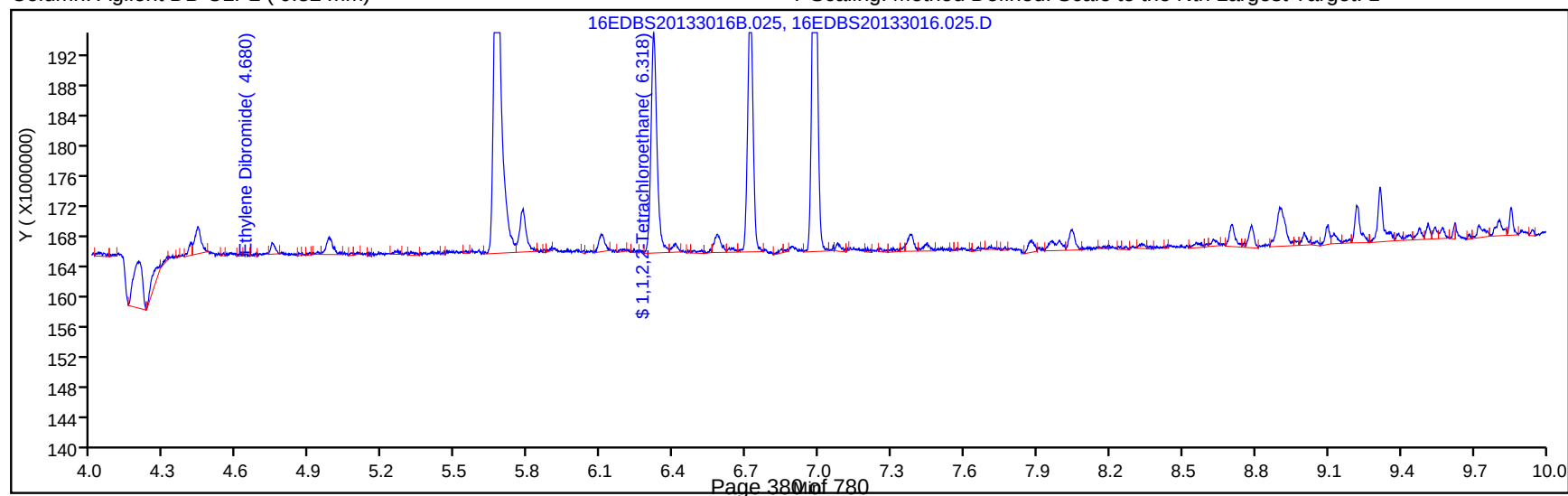
Column: Agilent DB-CLP1 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-380

Report Date: 09-Jun-2020 16:51:08

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.025.D
 Lims ID: 410-3311-A-1-A
 Client ID: GWTS-EFF1-060320
 Sample Type: Client
 Inject. Date: 09-Jun-2020 00:08:00 ALS Bottle#: 0 Worklist Smp#: 23
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 410-3311-A-1-A AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:04 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018
 First Level Reviewer: brumbaughj Date: 09-Jun-2020 16:41:01

Surrogate Recovery, Detector: 1ECDA

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	0.8584	69.65

Surrogate Recovery, Detector: 2ECDB

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	0.9343	75.81

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Client Sample ID: GWTS-EFF1-060320 Lab Sample ID: 410-3311-1
 Matrix: Water Lab File ID: 16EDBS20133016.025.D
 Analysis Method: 8011 Date Collected: 06/03/2020 09:05
 Extraction Method: 8011 Date Extracted: 06/06/2020 03:40
 Sample wt/vol: 36.1 (mL) Date Analyzed: 06/09/2020 00:08
 Con. Extract Vol.: 2 (mL) Dilution Factor: 1
 Injection Volume: 1 (uL) GC Column: DB CLP2 ID: 0.32 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 11304 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-34-5	1,1,2,2-Tetrachloroethane	76		46-136

Report Date: 09-Jun-2020 16:51:09

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.025.D
 Lims ID: 410-3311-A-1-A
 Client ID: GWTS-EFF1-060320
 Sample Type: Client
 Inject. Date: 09-Jun-2020 00:08:00 ALS Bottle#: 0 Worklist Smp#: 23
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 410-3311-A-1-A AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:04 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

First Level Reviewer: brumbaughj

Date:

09-Jun-2020 16:41:01

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/l	Flags
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1 Ethylene Dibromide

1	3.758	3.824	-0.066	494214H	0.0324
2	4.680	4.648	0.032	499838H	0.0209

RPD = 43.27

\$ 2 1,1,2,2-Tetrachloroethane

1	5.303	5.313	-0.010	18570535H	0.8584
2	6.318	6.325	-0.007	29102901H	0.9343

RPD = 8.47

Report Date: 09-Jun-2020 16:51:09

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.025.D

Injection Date: 09-Jun-2020 00:08:00

Instrument ID: 19853

Operator ID: 2306

Lims ID: 410-3311-A-1-A

Lab Sample ID: 410-3311-1

Worklist Smp#: 23

Client ID: GWTS-EFF1-060320

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

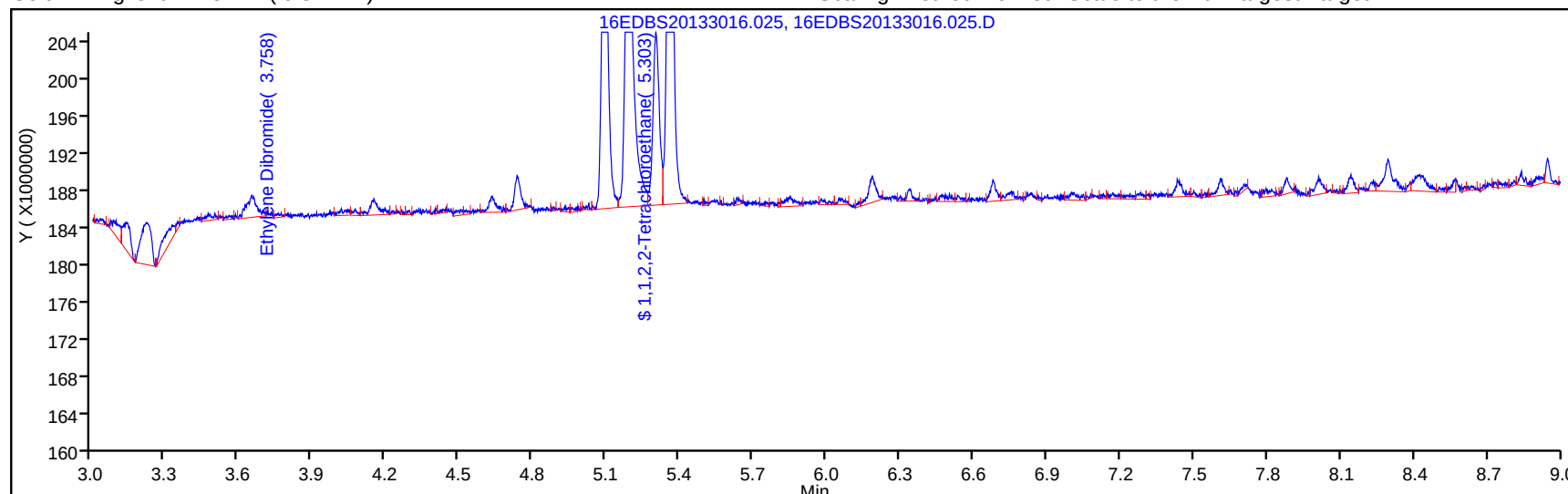
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

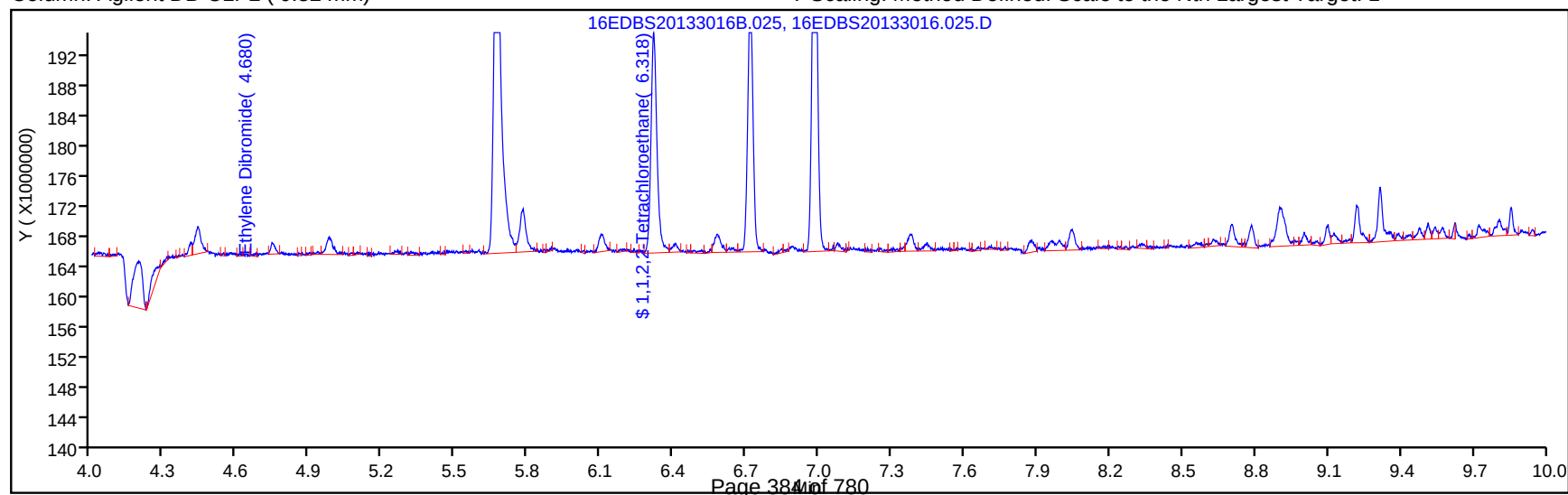
Column: Agilent DB-CLP1 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-384

Report Date: 09-Jun-2020 16:51:09

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.025.D
 Lims ID: 410-3311-A-1-A
 Client ID: GWTS-EFF1-060320
 Sample Type: Client
 Inject. Date: 09-Jun-2020 00:08:00 ALS Bottle#: 0 Worklist Smp#: 23
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 410-3311-A-1-A AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:04 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018
 First Level Reviewer: brumbaughj Date: 09-Jun-2020 16:41:01

Surrogate Recovery, Detector: 1ECDA

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	0.8584	69.65

Surrogate Recovery, Detector: 2ECDB

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	0.9343	75.81

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Client Sample ID: GWTS-EFF1DUP-060320 Lab Sample ID: 410-3311-2
 Matrix: Water Lab File ID: 16EDBS20133016.026.D
 Analysis Method: 8011 Date Collected: 06/03/2020 09:05
 Extraction Method: 8011 Date Extracted: 06/06/2020 03:40
 Sample wt/vol: 36.8 (mL) Date Analyzed: 06/09/2020 00:25
 Con. Extract Vol.: 2 (mL) Dilution Factor: 1
 Injection Volume: 1 (uL) GC Column: DB CLP1 ID: 0.32 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 11304 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
106-93-4	Ethylene Dibromide	0.019	U	0.029	0.019	0.0095

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-34-5	1,1,2,2-Tetrachloroethane	68		46-136

Report Date: 09-Jun-2020 16:51:10

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.026.D
 Lims ID: 410-3311-A-2-A
 Client ID: GWTS-EFF1DUP-060320
 Sample Type: Client
 Inject. Date: 09-Jun-2020 00:25:00 ALS Bottle#: 0 Worklist Smp#: 24
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 410-3311-A-2-A AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:04 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

First Level Reviewer: brumbaughj

Date:

09-Jun-2020 16:41:04

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/l	Flags
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1 Ethylene Dibromide

1	3.848	3.824	0.024	510548H	0.0335
2	4.654	4.648	0.006	430211H	0.0180

RPD = 60.28

\$ 2 1,1,2,2-Tetrachloroethane

1	5.303	5.313	-0.010	18189069H	0.8408
2	6.318	6.325	-0.007	29163201H	0.9362

RPD = 10.74

Report Date: 09-Jun-2020 16:51:10

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.026.D

Injection Date: 09-Jun-2020 00:25:00

Instrument ID: 19853

Operator ID: 2306

Lims ID: 410-3311-A-2-A

Lab Sample ID: 410-3311-2

Worklist Smp#: 24

Client ID: GWTS-EFF1DUP-060320

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

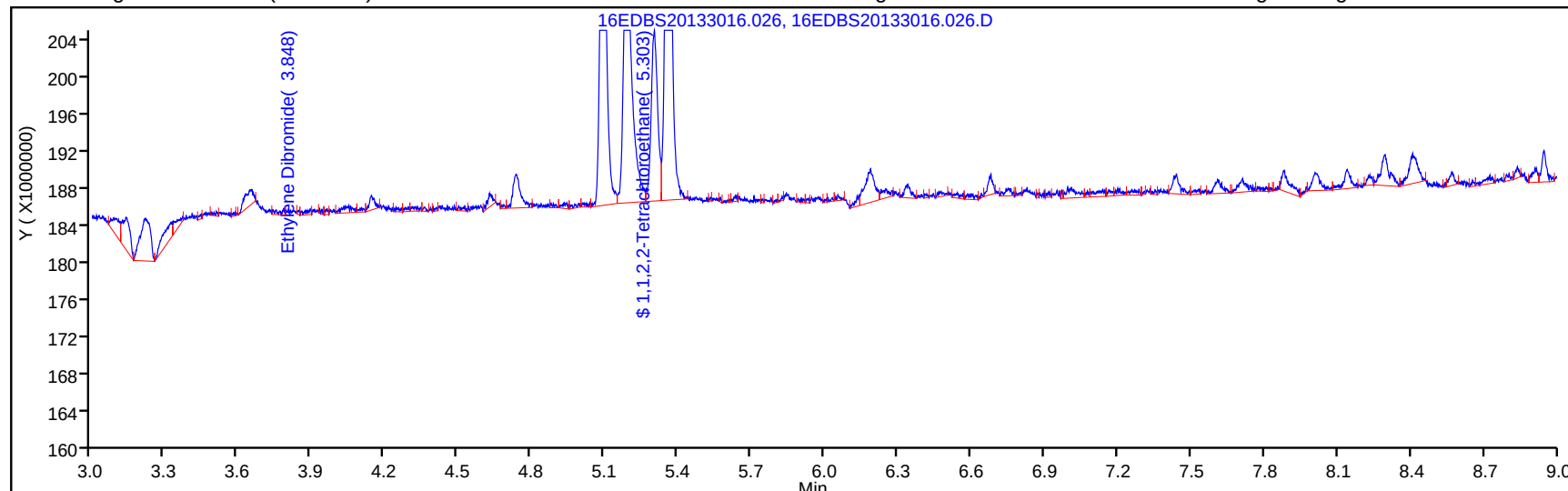
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

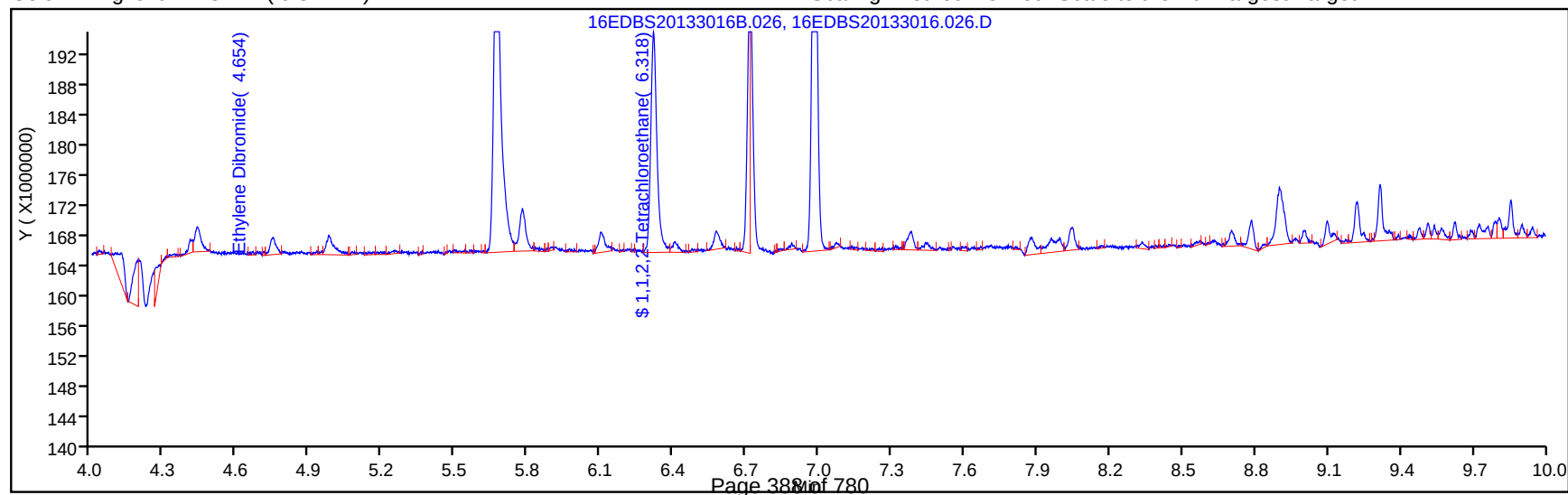
Column: Agilent DB-CLP1 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-388

Report Date: 09-Jun-2020 16:51:10

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.026.D
 Lims ID: 410-3311-A-2-A
 Client ID: GWTS-EFF1DUP-060320
 Sample Type: Client
 Inject. Date: 09-Jun-2020 00:25:00 ALS Bottle#: 0 Worklist Smp#: 24
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 410-3311-A-2-A AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:04 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018
 First Level Reviewer: brumbaughj Date: 09-Jun-2020 16:41:04

Surrogate Recovery, Detector: 1ECDA

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	0.8408	68.22

Surrogate Recovery, Detector: 2ECDB

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	0.9362	75.96

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Client Sample ID: GWTS-EFF1DUP-060320 Lab Sample ID: 410-3311-2
 Matrix: Water Lab File ID: 16EDBS20133016.026.D
 Analysis Method: 8011 Date Collected: 06/03/2020 09:05
 Extraction Method: 8011 Date Extracted: 06/06/2020 03:40
 Sample wt/vol: 36.8 (mL) Date Analyzed: 06/09/2020 00:25
 Con. Extract Vol.: 2 (mL) Dilution Factor: 1
 Injection Volume: 1 (uL) GC Column: DB CLP2 ID: 0.32 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 11304 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-34-5	1,1,2,2-Tetrachloroethane	76		46-136

Report Date: 09-Jun-2020 16:51:10

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.026.D
 Lims ID: 410-3311-A-2-A
 Client ID: GWTS-EFF1DUP-060320
 Sample Type: Client
 Inject. Date: 09-Jun-2020 00:25:00 ALS Bottle#: 0 Worklist Smp#: 24
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 410-3311-A-2-A AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:04 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

First Level Reviewer: brumbaughj

Date:

09-Jun-2020 16:41:04

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/l	Flags
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1 Ethylene Dibromide

1	3.848	3.824	0.024	510548H	0.0335
2	4.654	4.648	0.006	430211H	0.0180

RPD = 60.28

\$ 2 1,1,2,2-Tetrachloroethane

1	5.303	5.313	-0.010	18189069H	0.8408
2	6.318	6.325	-0.007	29163201H	0.9362

RPD = 10.74

Report Date: 09-Jun-2020 16:51:10

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.026.D

Injection Date: 09-Jun-2020 00:25:00

Instrument ID: 19853

Operator ID: 2306

Lims ID: 410-3311-A-2-A

Lab Sample ID: 410-3311-2

Worklist Smp#: 24

Client ID: GWTS-EFF1DUP-060320

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

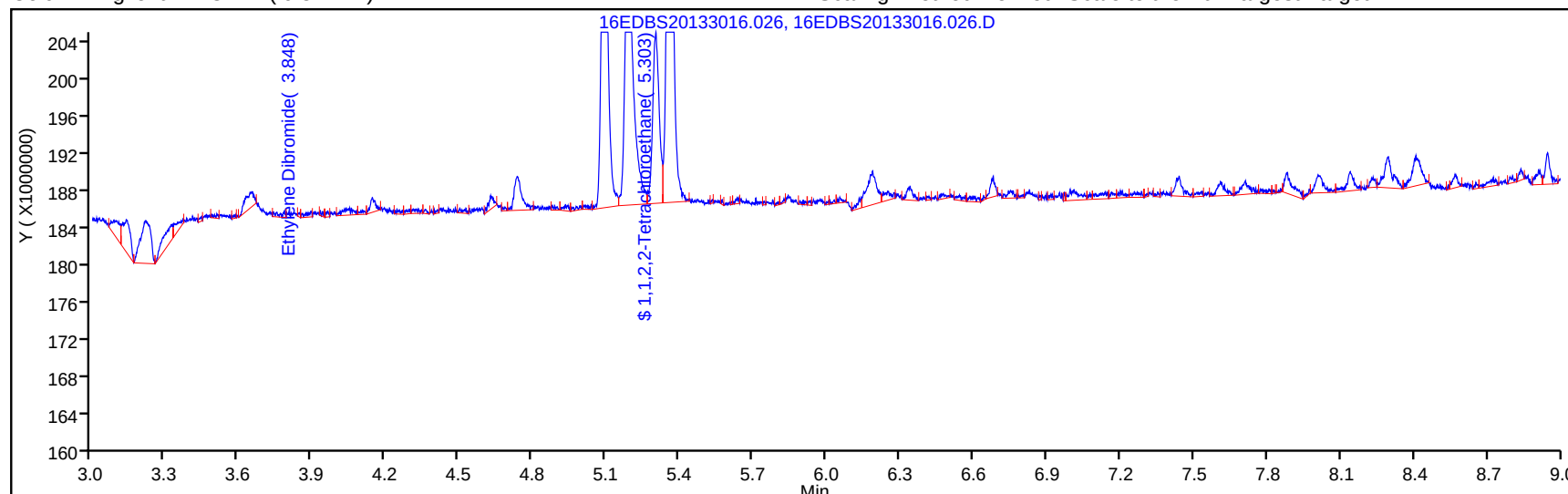
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

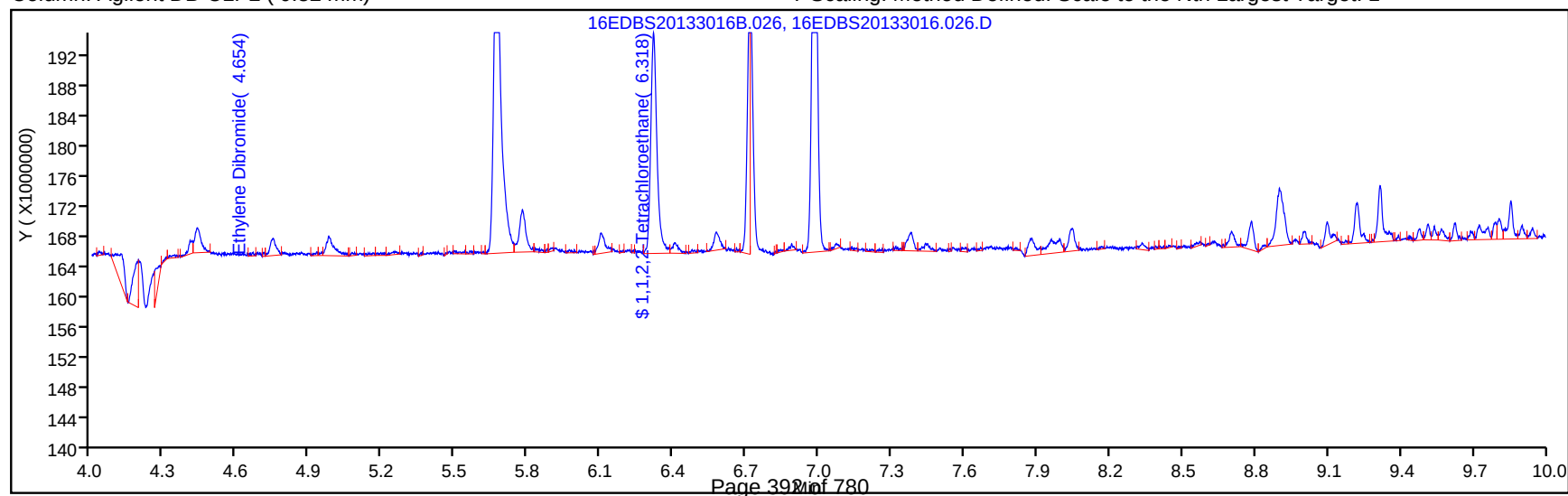
Column: Agilent DB-CLP1 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-392

Report Date: 09-Jun-2020 16:51:10

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.026.D
 Lims ID: 410-3311-A-2-A
 Client ID: GWTS-EFF1DUP-060320
 Sample Type: Client
 Inject. Date: 09-Jun-2020 00:25:00 ALS Bottle#: 0 Worklist Smp#: 24
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 410-3311-A-2-A AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:04 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018
 First Level Reviewer: brumbaughj Date: 09-Jun-2020 16:41:04

Surrogate Recovery, Detector: 1ECDA

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	0.8408	68.22

Surrogate Recovery, Detector: 2ECDB

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	0.9362	75.96

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Client Sample ID: GWTS-GAC1-060320 Lab Sample ID: 410-3311-3
 Matrix: Water Lab File ID: 16EDBS20133016.027.D
 Analysis Method: 8011 Date Collected: 06/03/2020 09:19
 Extraction Method: 8011 Date Extracted: 06/06/2020 03:40
 Sample wt/vol: 36.2 (mL) Date Analyzed: 06/09/2020 00:42
 Con. Extract Vol.: 2 (mL) Dilution Factor: 1
 Injection Volume: 1 (uL) GC Column: DB CLP1 ID: 0.32 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 11304 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
106-93-4	Ethylene Dibromide	0.010	J	0.029	0.019	0.0097

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-34-5	1,1,2,2-Tetrachloroethane	77		46-136

Report Date: 09-Jun-2020 16:51:11

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.027.D
 Lims ID: 410-3311-A-3-A
 Client ID: GWTS-GAC1-060320
 Sample Type: Client
 Inject. Date: 09-Jun-2020 00:42:00 ALS Bottle#: 0 Worklist Smp#: 25
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 410-3311-A-3-A AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:04 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

First Level Reviewer: brumbaughj

Date:

09-Jun-2020 16:41:10

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/l	Flags
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1 Ethylene Dibromide

1	3.813	3.824	-0.011	2867172H	0.1881
2	4.639	4.648	-0.009	4401060H	0.1839

RPD = 2.24

\$ 2 1,1,2,2-Tetrachloroethane

1	5.306	5.313	-0.007	20627881H	0.9535
2	6.321	6.325	-0.004	30667196H	0.9845

RPD = 3.20

Report Date: 09-Jun-2020 16:51:11

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.027.D

Injection Date: 09-Jun-2020 00:42:00

Instrument ID: 19853

Operator ID: 2306

Lims ID: 410-3311-A-3-A

Lab Sample ID: 410-3311-3

Worklist Smp#: 25

Client ID: GWTS-GAC1-060320

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

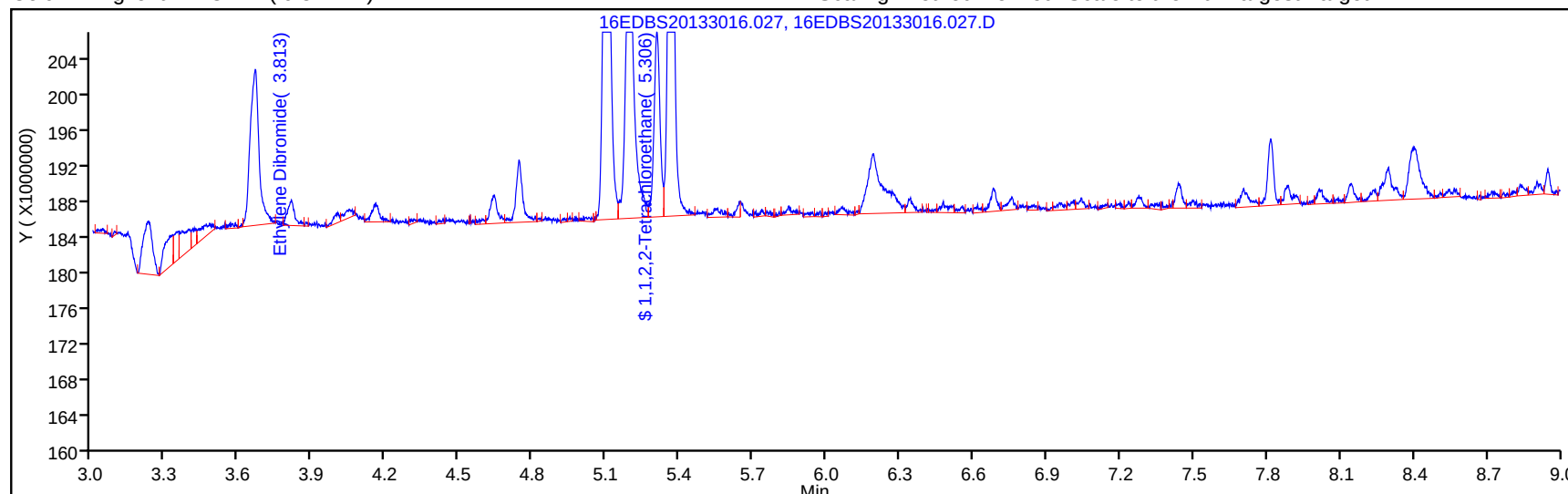
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

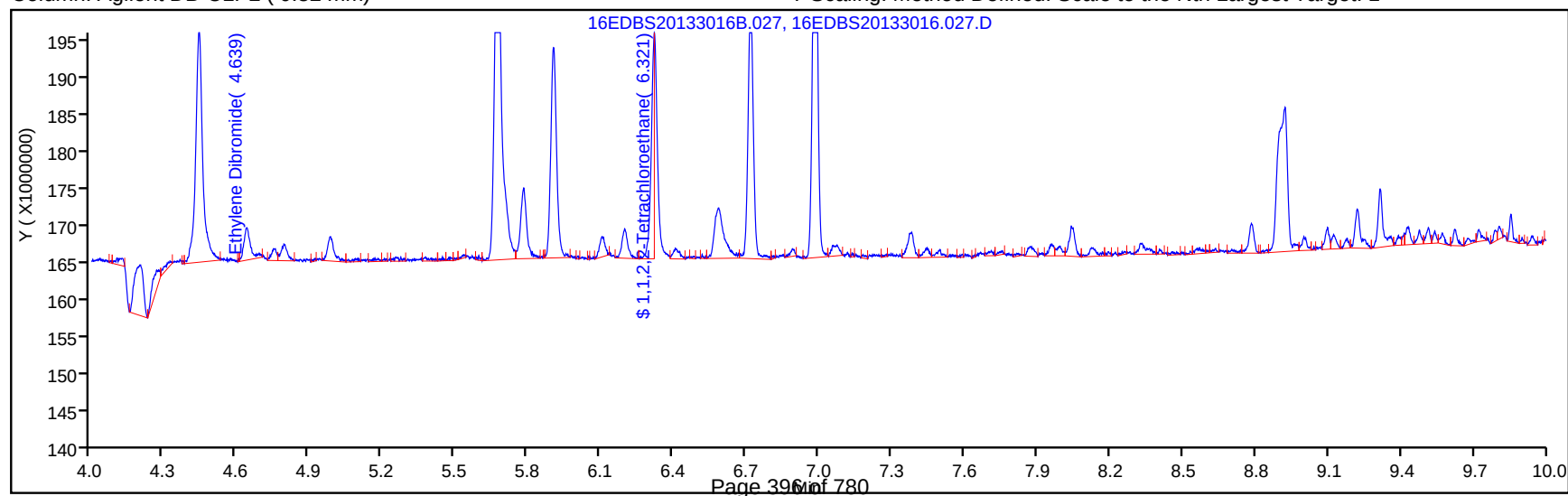
Column: Agilent DB-CLP1 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-396

Report Date: 09-Jun-2020 16:51:11

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.027.D
 Lims ID: 410-3311-A-3-A
 Client ID: GWTS-GAC1-060320
 Sample Type: Client
 Inject. Date: 09-Jun-2020 00:42:00 ALS Bottle#: 0 Worklist Smp#: 25
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 410-3311-A-3-A AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:04 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018
 First Level Reviewer: brumbaughj Date: 09-Jun-2020 16:41:10

Surrogate Recovery, Detector: 1ECDA

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	0.9535	77.36

Surrogate Recovery, Detector: 2ECDB

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	0.9845	79.88

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Client Sample ID: GWTS-GAC1-060320 Lab Sample ID: 410-3311-3
 Matrix: Water Lab File ID: 16EDBS20133016.027.D
 Analysis Method: 8011 Date Collected: 06/03/2020 09:19
 Extraction Method: 8011 Date Extracted: 06/06/2020 03:40
 Sample wt/vol: 36.2 (mL) Date Analyzed: 06/09/2020 00:42
 Con. Extract Vol.: 2 (mL) Dilution Factor: 1
 Injection Volume: 1 (uL) GC Column: DB CLP2 ID: 0.32 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 11304 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-34-5	1,1,2,2-Tetrachloroethane	80		46-136

Report Date: 09-Jun-2020 16:51:11

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.027.D
 Lims ID: 410-3311-A-3-A
 Client ID: GWTS-GAC1-060320
 Sample Type: Client
 Inject. Date: 09-Jun-2020 00:42:00 ALS Bottle#: 0 Worklist Smp#: 25
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 410-3311-A-3-A AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:04 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

First Level Reviewer: brumbaughj

Date:

09-Jun-2020 16:41:10

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/l	Flags
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1 Ethylene Dibromide

1	3.813	3.824	-0.011	2867172H	0.1881
2	4.639	4.648	-0.009	4401060H	0.1839

RPD = 2.24

\$ 2 1,1,2,2-Tetrachloroethane

1	5.306	5.313	-0.007	20627881H	0.9535
2	6.321	6.325	-0.004	30667196H	0.9845

RPD = 3.20

Report Date: 09-Jun-2020 16:51:11

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.027.D

Injection Date: 09-Jun-2020 00:42:00

Instrument ID: 19853

Operator ID: 2306

Lims ID: 410-3311-A-3-A

Lab Sample ID: 410-3311-3

Worklist Smp#: 25

Client ID: GWTS-GAC1-060320

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

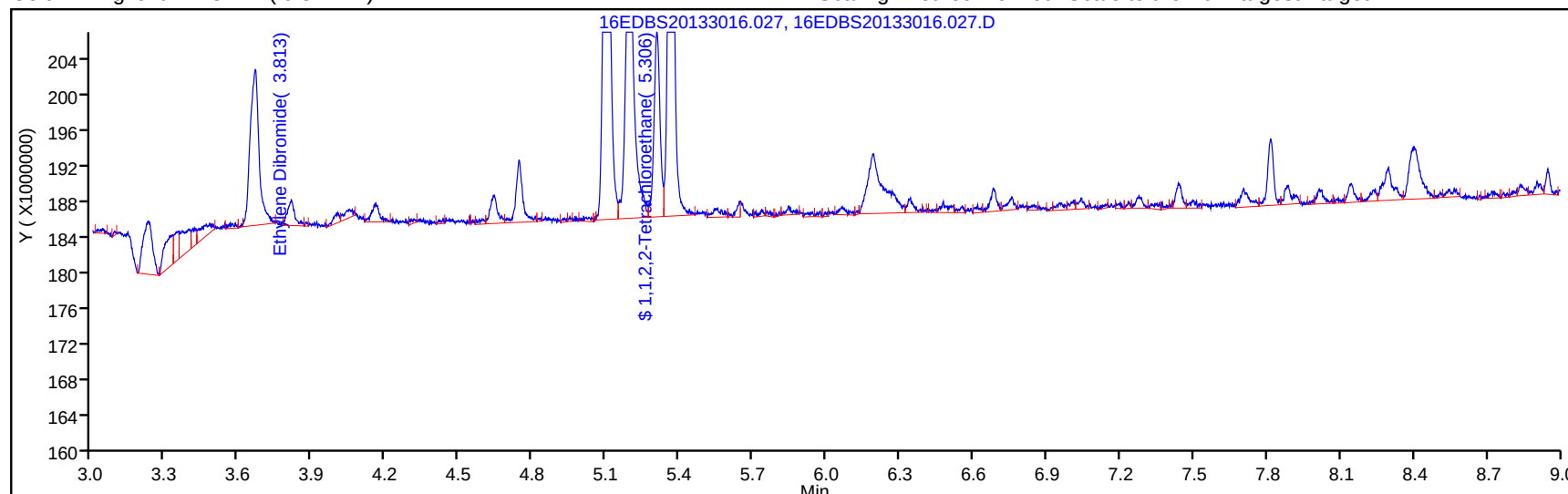
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

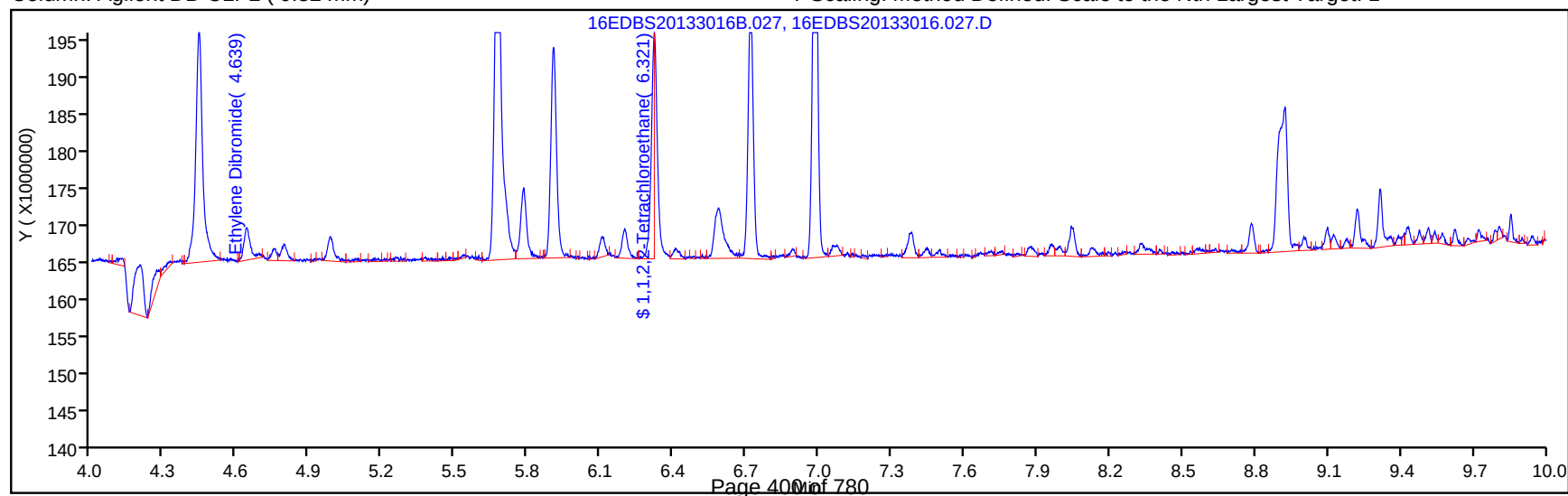
Column: Agilent DB-CLP1 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-400

Report Date: 09-Jun-2020 16:51:11

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.027.D
 Lims ID: 410-3311-A-3-A
 Client ID: GWTS-GAC1-060320
 Sample Type: Client
 Inject. Date: 09-Jun-2020 00:42:00 ALS Bottle#: 0 Worklist Smp#: 25
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 410-3311-A-3-A AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:04 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018
 First Level Reviewer: brumbaughj Date: 09-Jun-2020 16:41:10

Surrogate Recovery, Detector: 1ECDA

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	0.9535	77.36

Surrogate Recovery, Detector: 2ECDB

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	0.9845	79.88

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Client Sample ID: GWTS-INF1-060320 Lab Sample ID: 410-3311-4
 Matrix: Water Lab File ID: 16EDBS20133016.028.D
 Analysis Method: 8011 Date Collected: 06/03/2020 09:27
 Extraction Method: 8011 Date Extracted: 06/06/2020 03:40
 Sample wt/vol: 36.4 (mL) Date Analyzed: 06/09/2020 00:59
 Con. Extract Vol.: 2 (mL) Dilution Factor: 1
 Injection Volume: 1 (uL) GC Column: DB CLP1 ID: 0.32 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 11304 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
106-93-4	Ethylene Dibromide	0.019	U	0.029	0.019	0.0096

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-34-5	1,1,2,2-Tetrachloroethane	73		46-136

Report Date: 09-Jun-2020 16:51:12

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.028.D
 Lims ID: 410-3311-A-4-A
 Client ID: GWTS-INF1-060320
 Sample Type: Client
 Inject. Date: 09-Jun-2020 00:59:00 ALS Bottle#: 0 Worklist Smp#: 26
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 410-3311-A-4-A AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:04 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

First Level Reviewer: brumbaughj

Date:

09-Jun-2020 16:41:24

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/l	Flags
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1 Ethylene Dibromide

1	3.810	3.824	-0.014	2041586H	0.1339
2	4.639	4.648	-0.009	3823598H	0.1598

RPD = 17.61

\$ 2 1,1,2,2-Tetrachloroethane

1	5.306	5.313	-0.007	19492432H	0.9010
2	6.321	6.325	-0.004	30505408H	0.9793

RPD = 8.33

Report Date: 09-Jun-2020 16:51:12

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.028.D

Injection Date: 09-Jun-2020 00:59:00

Instrument ID: 19853

Operator ID: 2306

Lims ID: 410-3311-A-4-A

Lab Sample ID: 410-3311-4

Worklist Smp#: 26

Client ID: GWTS-INF1-060320

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

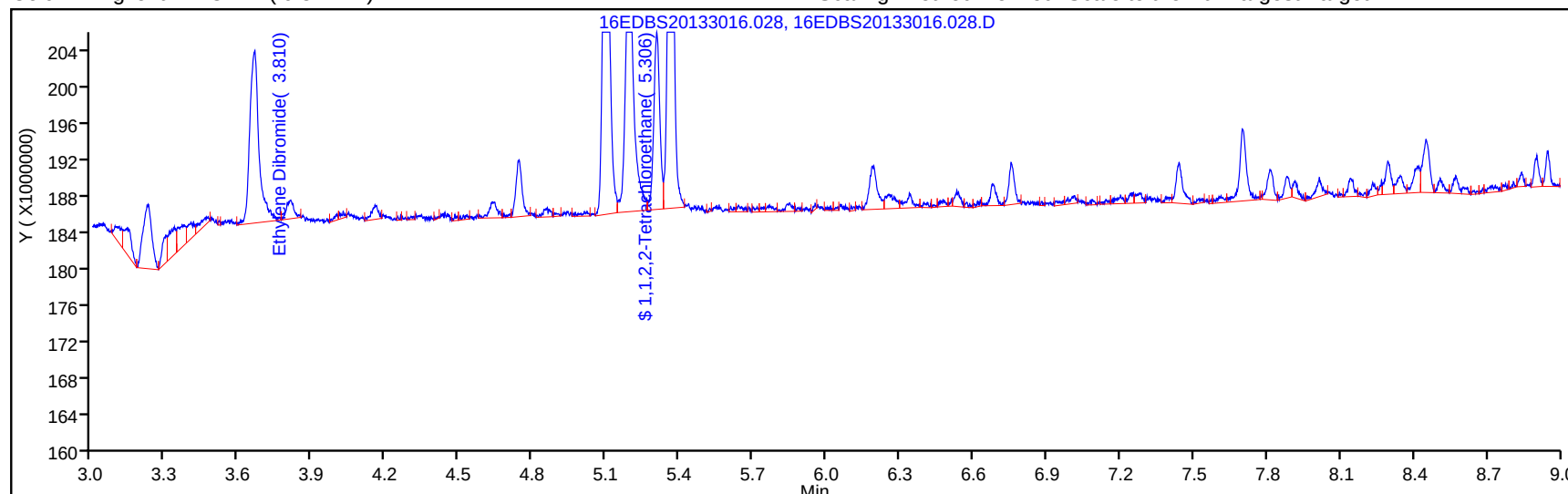
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

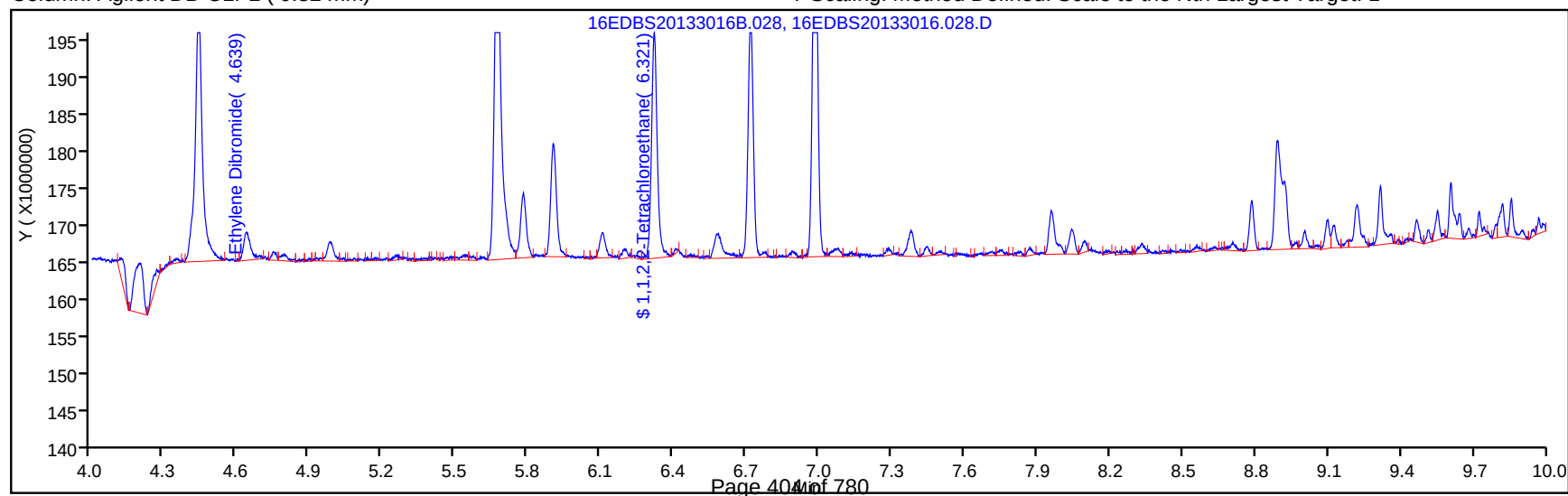
Column: Agilent DB-CLP1 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-404

Report Date: 09-Jun-2020 16:51:12

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.028.D
 Lims ID: 410-3311-A-4-A
 Client ID: GWTS-INF1-060320
 Sample Type: Client
 Inject. Date: 09-Jun-2020 00:59:00 ALS Bottle#: 0 Worklist Smp#: 26
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 410-3311-A-4-A AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:04 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018
 First Level Reviewer: brumbaughj Date: 09-Jun-2020 16:41:24

Surrogate Recovery, Detector: 1ECDA

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	0.9010	73.11

Surrogate Recovery, Detector: 2ECDB

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	0.9793	79.46

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Client Sample ID: GWTS-INF1-060320 Lab Sample ID: 410-3311-4
 Matrix: Water Lab File ID: 16EDBS20133016.028.D
 Analysis Method: 8011 Date Collected: 06/03/2020 09:27
 Extraction Method: 8011 Date Extracted: 06/06/2020 03:40
 Sample wt/vol: 36.4 (mL) Date Analyzed: 06/09/2020 00:59
 Con. Extract Vol.: 2 (mL) Dilution Factor: 1
 Injection Volume: 1 (uL) GC Column: DB CLP2 ID: 0.32 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 11304 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-34-5	1,1,2,2-Tetrachloroethane	79		46-136

Report Date: 09-Jun-2020 16:51:12

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.028.D
 Lims ID: 410-3311-A-4-A
 Client ID: GWTS-INF1-060320
 Sample Type: Client
 Inject. Date: 09-Jun-2020 00:59:00 ALS Bottle#: 0 Worklist Smp#: 26
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 410-3311-A-4-A AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:04 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

First Level Reviewer: brumbaughj

Date:

09-Jun-2020 16:41:24

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/l	Flags
-----	--------------	------------------	------------------	----------	-------------------	-------

1 Ethylene Dibromide

1	3.810	3.824	-0.014	2041586H	0.1339
2	4.639	4.648	-0.009	3823598H	0.1598

RPD = 17.61

\$ 2 1,1,2,2-Tetrachloroethane

1	5.306	5.313	-0.007	19492432H	0.9010
2	6.321	6.325	-0.004	30505408H	0.9793

RPD = 8.33

Report Date: 09-Jun-2020 16:51:12

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.028.D

Injection Date: 09-Jun-2020 00:59:00

Instrument ID: 19853

Operator ID: 2306

Lims ID: 410-3311-A-4-A

Lab Sample ID: 410-3311-4

Worklist Smp#: 26

Client ID: GWTS-INF1-060320

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

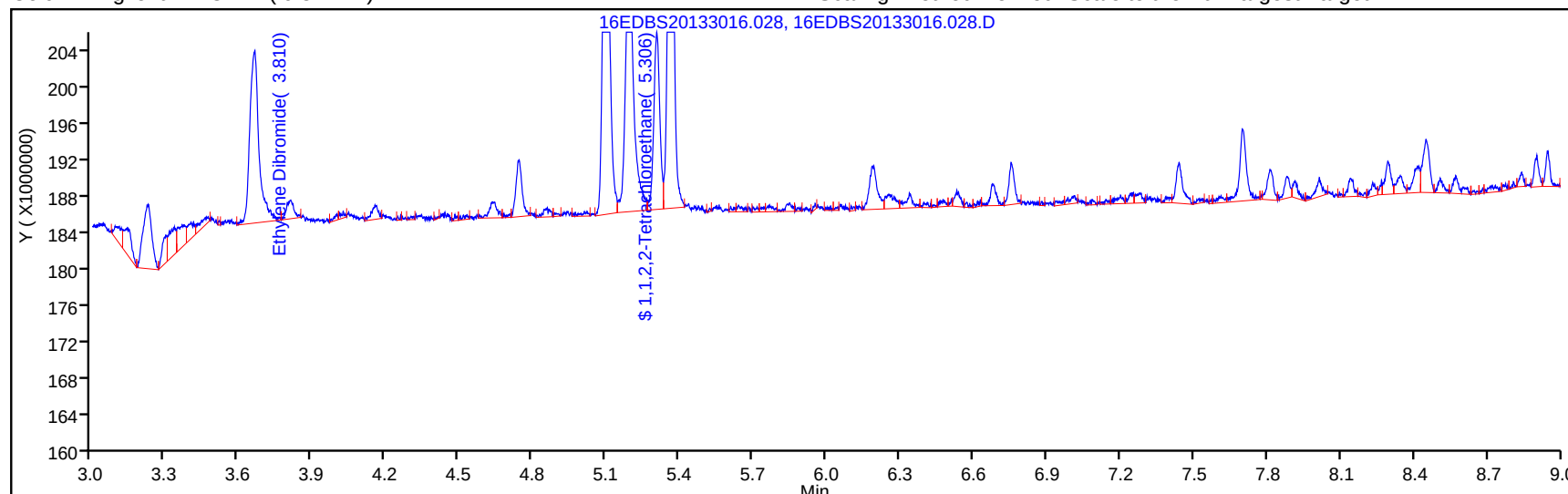
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

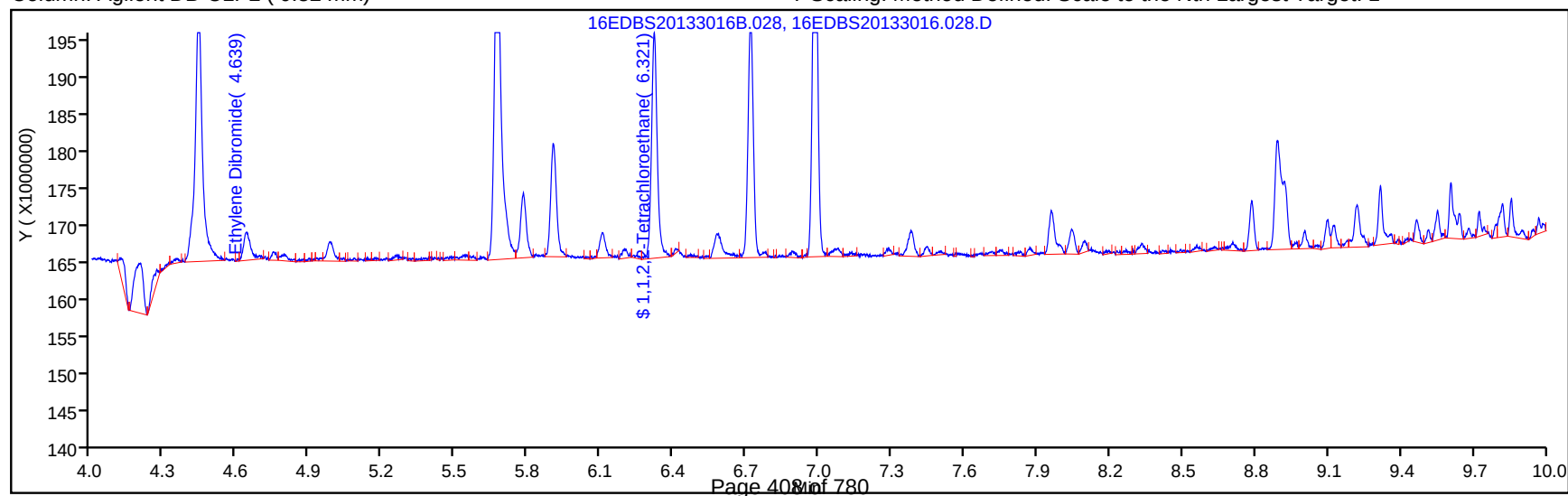
Column: Agilent DB-CLP1 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-408

Report Date: 09-Jun-2020 16:51:12

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.028.D
 Lims ID: 410-3311-A-4-A
 Client ID: GWTS-INF1-060320
 Sample Type: Client
 Inject. Date: 09-Jun-2020 00:59:00 ALS Bottle#: 0 Worklist Smp#: 26
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 410-3311-A-4-A AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:04 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018
 First Level Reviewer: brumbaughj Date: 09-Jun-2020 16:41:24

Surrogate Recovery, Detector: 1ECDA

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	0.9010	73.11

Surrogate Recovery, Detector: 2ECDB

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	0.9793	79.46

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Client Sample ID: GWTS-TB01-060320 Lab Sample ID: 410-3311-5
 Matrix: Water Lab File ID: 16EDBS20133016.029.D
 Analysis Method: 8011 Date Collected: 06/03/2020 09:30
 Extraction Method: 8011 Date Extracted: 06/06/2020 03:40
 Sample wt/vol: 36.6(mL) Date Analyzed: 06/09/2020 01:16
 Con. Extract Vol.: 2(mL) Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: DB CLP1 ID: 0.32 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 11304 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
106-93-4	Ethylene Dibromide	0.019	U	0.029	0.019	0.0096

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-34-5	1,1,2,2-Tetrachloroethane	81		46-136

Report Date: 09-Jun-2020 16:51:13

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.029.D
 Lims ID: 410-3311-A-5-A
 Client ID: GWTS-TB01-060320
 Sample Type: Client
 Inject. Date: 09-Jun-2020 01:16:00 ALS Bottle#: 0 Worklist Smp#: 27
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 410-3311-A-5-A AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:04 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/l	Flags
-----	--------------	------------------	------------------	----------	-------------------	-------

1 Ethylene Dibromide

1	3.839	3.824	0.015	498857H	0.0327	
2	4.644	4.648	-0.004	463017H	0.0193	

RPD = 51.37

\$ 2 1,1,2,2-Tetrachloroethane

1	5.309	5.313	-0.004	21531700H	1.00	
2	6.323	6.325	-0.002	31322506H	1.01	

RPD = 1.03

Report Date: 09-Jun-2020 16:51:13

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.029.D

Injection Date: 09-Jun-2020 01:16:00

Instrument ID: 19853

Operator ID: 2306

Lims ID: 410-3311-A-5-A

Lab Sample ID: 410-3311-5

Worklist Smp#: 27

Client ID: GWTS-TB01-060320

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

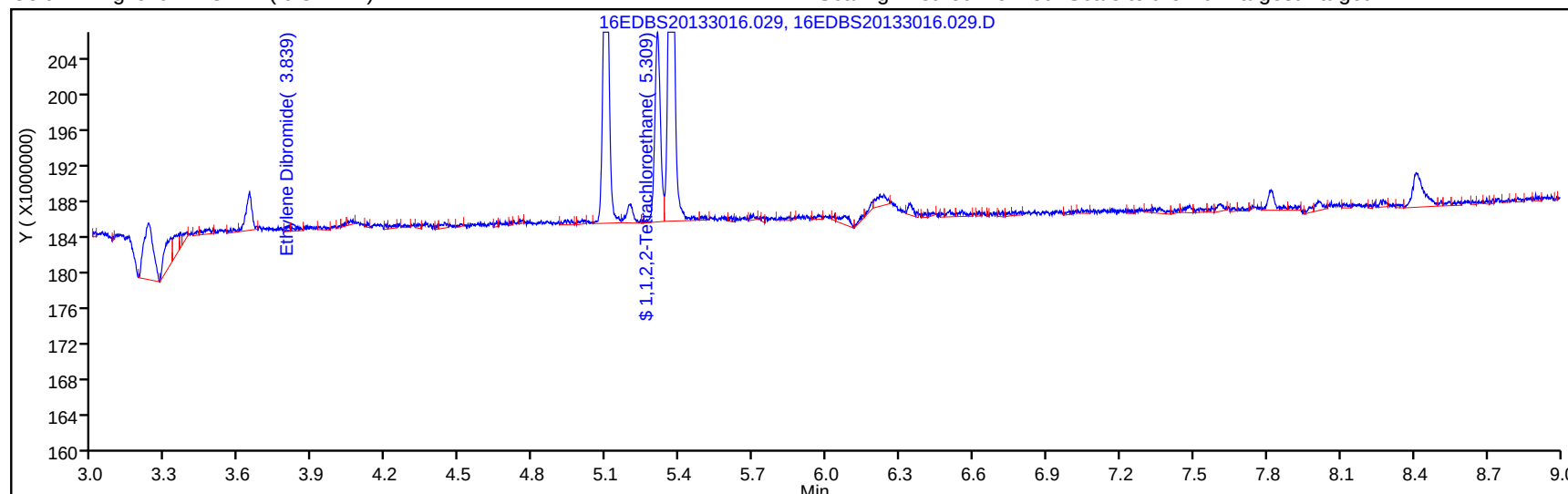
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

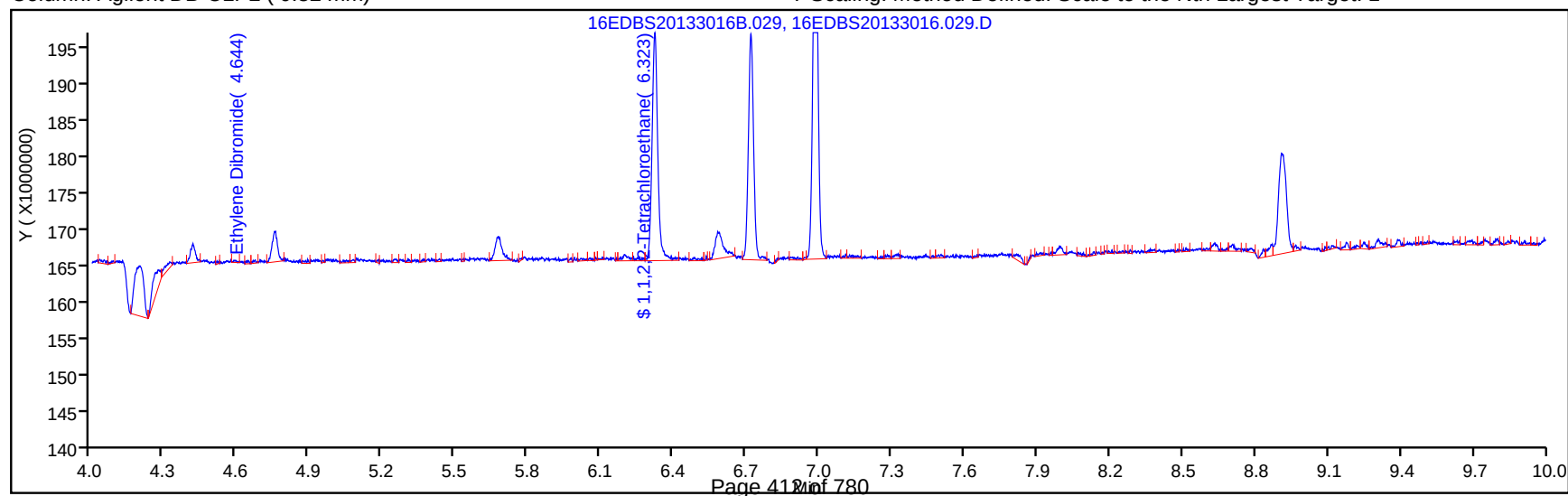
Column: Agilent DB-CLP1 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-412

Report Date: 09-Jun-2020 16:51:13

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.029.D
 Lims ID: 410-3311-A-5-A
 Client ID: GWTS-TB01-060320
 Sample Type: Client
 Inject. Date: 09-Jun-2020 01:16:00 ALS Bottle#: 0 Worklist Smp#: 27
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 410-3311-A-5-A AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:04 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

Surrogate Recovery, Detector: 1ECDA

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	1.00	80.75

Surrogate Recovery, Detector: 2ECDB

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	1.01	81.59

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Client Sample ID: GWTS-TB01-060320 Lab Sample ID: 410-3311-5
 Matrix: Water Lab File ID: 16EDBS20133016.029.D
 Analysis Method: 8011 Date Collected: 06/03/2020 09:30
 Extraction Method: 8011 Date Extracted: 06/06/2020 03:40
 Sample wt/vol: 36.6(mL) Date Analyzed: 06/09/2020 01:16
 Con. Extract Vol.: 2(mL) Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: DB CLP2 ID: 0.32 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 11304 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-34-5	1,1,2,2-Tetrachloroethane	82		46-136

Report Date: 09-Jun-2020 16:51:13

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.029.D
 Lims ID: 410-3311-A-5-A
 Client ID: GWTS-TB01-060320
 Sample Type: Client
 Inject. Date: 09-Jun-2020 01:16:00 ALS Bottle#: 0 Worklist Smp#: 27
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 410-3311-A-5-A AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:04 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECD
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/l	Flags
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1 Ethylene Dibromide

1	3.839	3.824	0.015	498857H	0.0327	
2	4.644	4.648	-0.004	463017H	0.0193	

RPD = 51.37

\$ 2 1,1,2,2-Tetrachloroethane

1	5.309	5.313	-0.004	21531700H	1.00	
2	6.323	6.325	-0.002	31322506H	1.01	

RPD = 1.03

Report Date: 09-Jun-2020 16:51:13

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.029.D

Injection Date: 09-Jun-2020 01:16:00

Instrument ID: 19853

Operator ID: 2306

Lims ID: 410-3311-A-5-A

Lab Sample ID: 410-3311-5

Worklist Smp#: 27

Client ID: GWTS-TB01-060320

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

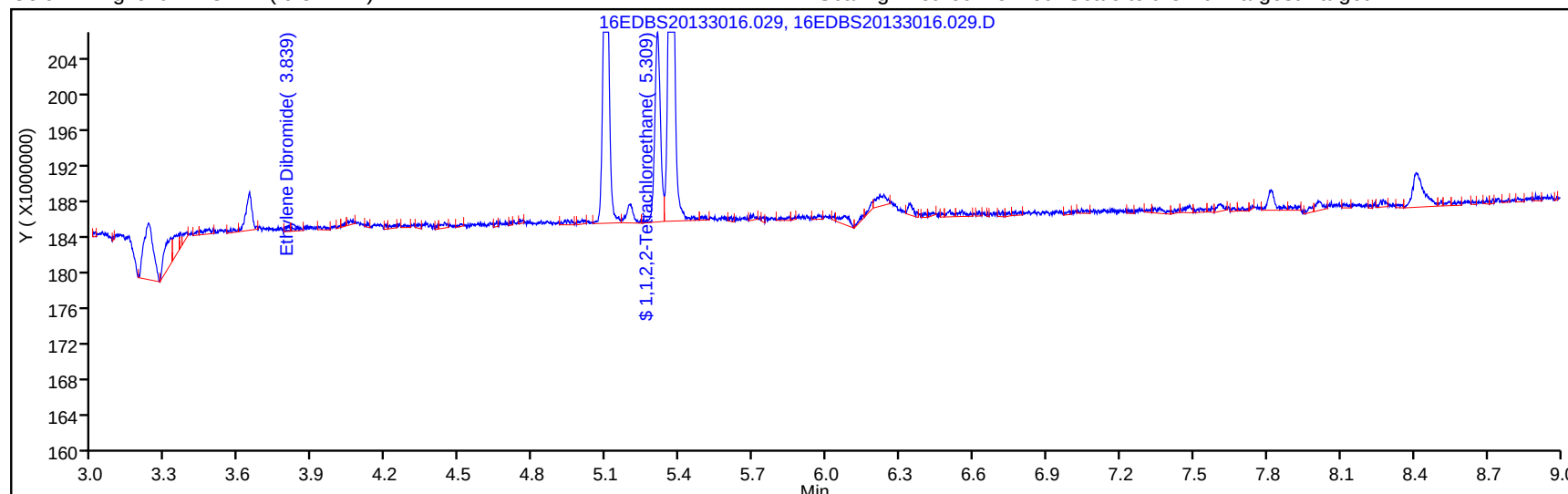
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

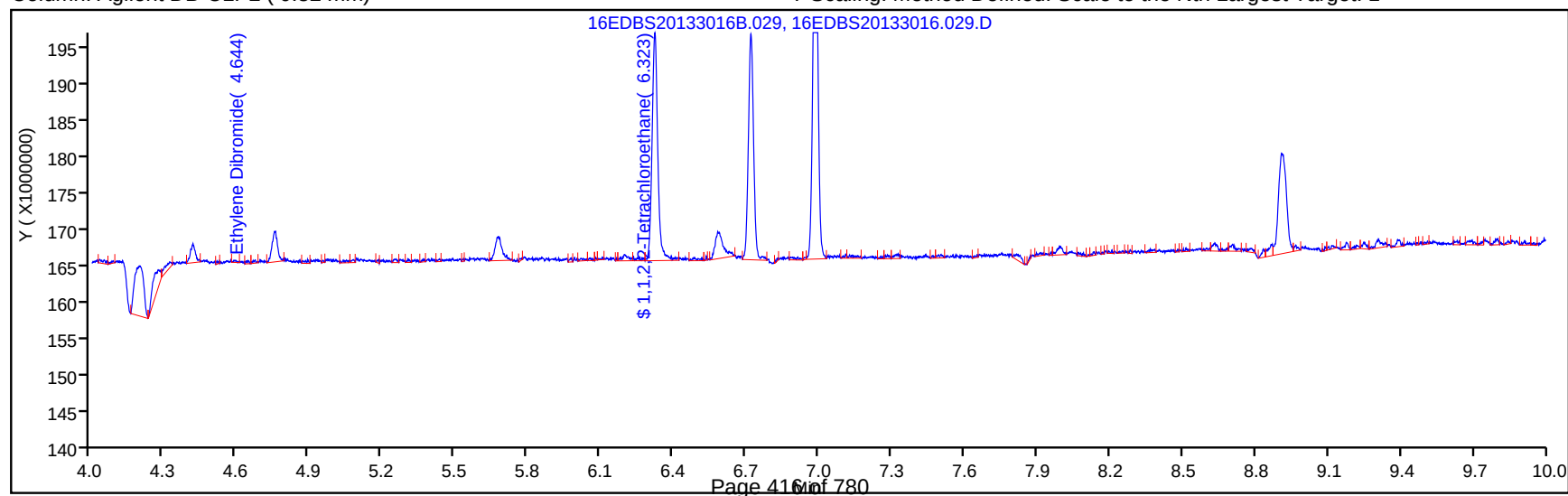
Column: Agilent DB-CLP1 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-416

Report Date: 09-Jun-2020 16:51:13

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.029.D
 Lims ID: 410-3311-A-5-A
 Client ID: GWTS-TB01-060320
 Sample Type: Client
 Inject. Date: 09-Jun-2020 01:16:00 ALS Bottle#: 0 Worklist Smp#: 27
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 410-3311-A-5-A AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:04 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

Surrogate Recovery, Detector: 1ECDA

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	1.00	80.75

Surrogate Recovery, Detector: 2ECDB

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	1.01	81.59

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Client Sample ID: GWTS-EFF2-060320 Lab Sample ID: 410-3311-6
 Matrix: Water Lab File ID: 16EDBS20133016.033.D
 Analysis Method: 8011 Date Collected: 06/03/2020 08:24
 Extraction Method: 8011 Date Extracted: 06/06/2020 03:40
 Sample wt/vol: 36.1 (mL) Date Analyzed: 06/09/2020 02:24
 Con. Extract Vol.: 2 (mL) Dilution Factor: 1
 Injection Volume: 1 (uL) GC Column: DB CLP1 ID: 0.32 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 11304 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
106-93-4	Ethylene Dibromide	0.019	U	0.029	0.019	0.0097

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-34-5	1,1,2,2-Tetrachloroethane	90		46-136

Report Date: 09-Jun-2020 16:51:18

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.033.D
 Lims ID: 410-3311-A-6-C
 Client ID: GWTS-EFF2-060320
 Sample Type: Client
 Inject. Date: 09-Jun-2020 02:24:00 ALS Bottle#: 0 Worklist Smp#: 31
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 410-3311-A-6-C AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:15 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/l	Flags
-----	--------------	------------------	------------------	----------	-------------------	-------

1 Ethylene Dibromide

1	3.815	3.824	-0.009	436650H	0.0286
2	4.633	4.648	-0.015	516642H	0.0216

RPD = 28.09

\$ 2 1,1,2,2-Tetrachloroethane

1	5.308	5.313	-0.005	24021581H	1.11
2	6.322	6.325	-0.003	31207015H	1.00

RPD = 10.28

3 1,2,3-Trichloropropane

1	5.474	5.462	0.012	733345H	NC
2	6.408	6.439	-0.031	1149461H	NC

RPD = 0.00

4 1,2-Dibromo-3-Chloropropane

1	8.236	8.220	0.016	2852150H	0.0738
2	9.059	9.078	-0.019	811851H	0.0121

RPD = 143.73

5 Chlorodibromomethane

1		0.000			ND
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QC Flag Legend

Processing Flags

NC - Not Calibrated

H - Response Measured by Height

Report Date: 09-Jun-2020 16:51:18

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.033.D

Injection Date: 09-Jun-2020 02:24:00

Instrument ID: 19853

Operator ID: 2306

Lims ID: 410-3311-A-6-C

Lab Sample ID: 410-3311-6

Worklist Smp#: 31

Client ID: GWTS-EFF2-060320

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

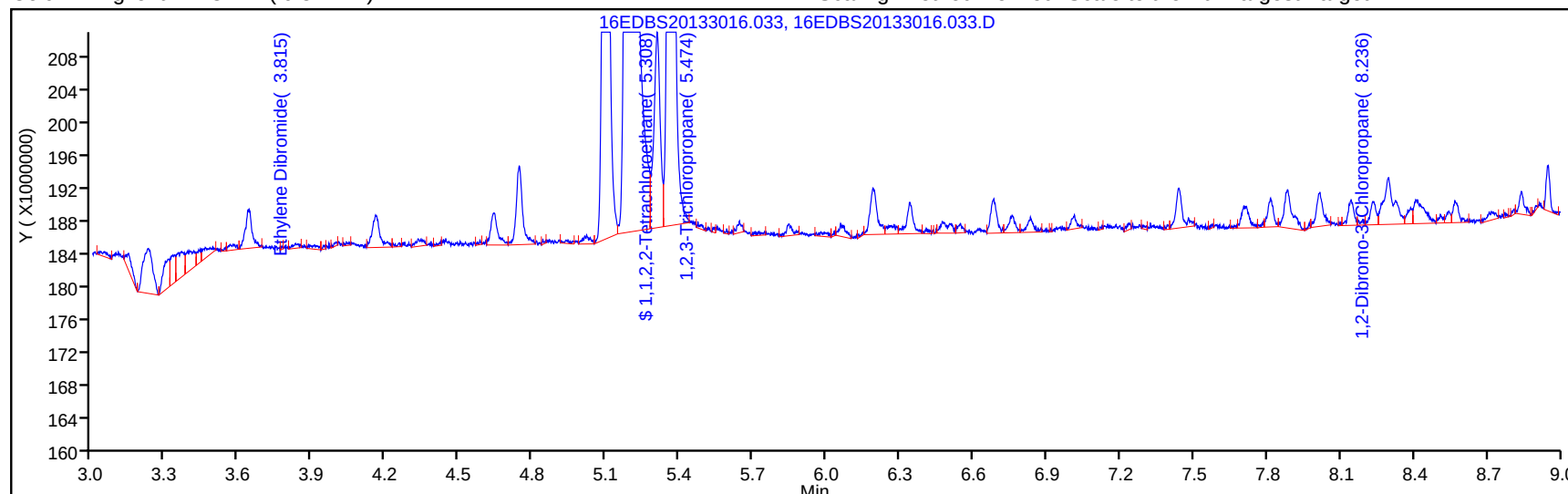
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

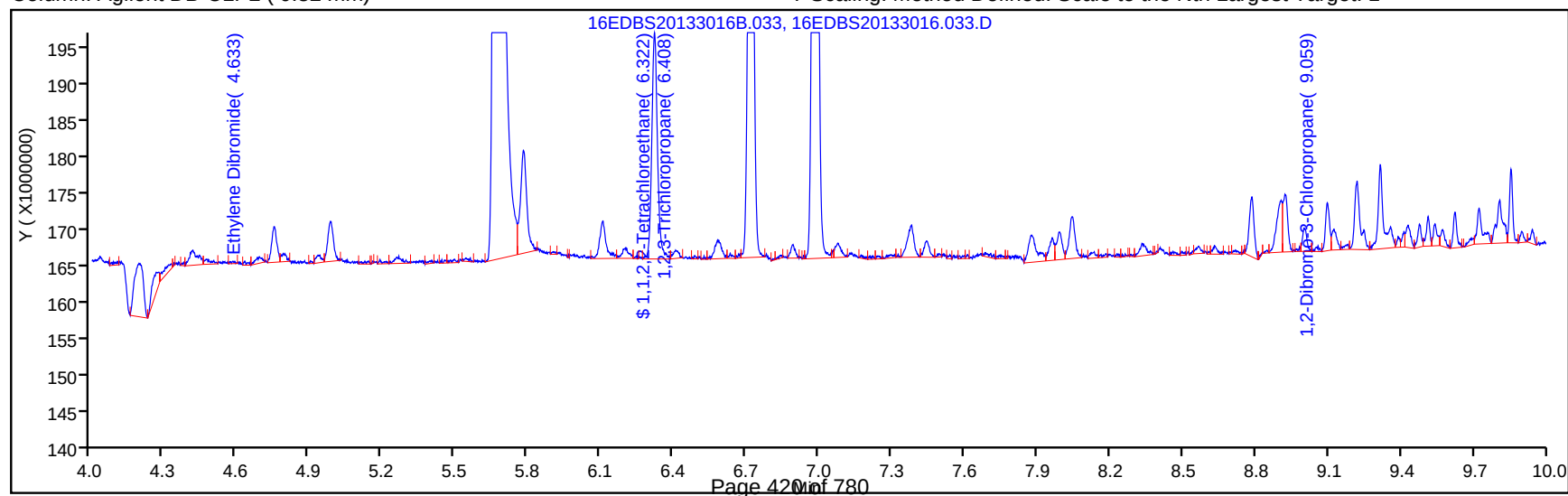
Column: Agilent DB-CLP1 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

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September 2020

I-5-420

Report Date: 09-Jun-2020 16:51:18

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.033.D
 Lims ID: 410-3311-A-6-C
 Client ID: GWTS-EFF2-060320
 Sample Type: Client
 Inject. Date: 09-Jun-2020 02:24:00 ALS Bottle#: 0 Worklist Smp#: 31
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 410-3311-A-6-C AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:15 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

Surrogate Recovery, Detector: 1ECDA

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	1.11	90.09

Surrogate Recovery, Detector: 2ECDB

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	1.00	81.29

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Client Sample ID: GWTS-EFF2-060320 Lab Sample ID: 410-3311-6
 Matrix: Water Lab File ID: 16EDBS20133016.033.D
 Analysis Method: 8011 Date Collected: 06/03/2020 08:24
 Extraction Method: 8011 Date Extracted: 06/06/2020 03:40
 Sample wt/vol: 36.1 (mL) Date Analyzed: 06/09/2020 02:24
 Con. Extract Vol.: 2 (mL) Dilution Factor: 1
 Injection Volume: 1 (uL) GC Column: DB CLP2 ID: 0.32 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 11304 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-34-5	1,1,2,2-Tetrachloroethane	81		46-136

Report Date: 09-Jun-2020 16:51:18

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.033.D
 Lims ID: 410-3311-A-6-C
 Client ID: GWTS-EFF2-060320
 Sample Type: Client
 Inject. Date: 09-Jun-2020 02:24:00 ALS Bottle#: 0 Worklist Smp#: 31
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 410-3311-A-6-C AAPIBLKAA PIBLK201599999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:15 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/l	Flags
-----	--------------	------------------	------------------	----------	-------------------	-------

1 Ethylene Dibromide

1	3.815	3.824	-0.009	436650H	0.0286
2	4.633	4.648	-0.015	516642H	0.0216

RPD = 28.09

\$ 2 1,1,2,2-Tetrachloroethane

1	5.308	5.313	-0.005	24021581H	1.11
2	6.322	6.325	-0.003	31207015H	1.00

RPD = 10.28

3 1,2,3-Trichloropropane

1	5.474	5.462	0.012	733345H	NC
2	6.408	6.439	-0.031	1149461H	NC

RPD = 0.00

4 1,2-Dibromo-3-Chloropropane

1	8.236	8.220	0.016	2852150H	0.0738
2	9.059	9.078	-0.019	811851H	0.0121

RPD = 143.73

5 Chlorodibromomethane

1		0.000			ND
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QC Flag Legend

Processing Flags

NC - Not Calibrated

H - Response Measured by Height

Report Date: 09-Jun-2020 16:51:18

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.033.D

Injection Date: 09-Jun-2020 02:24:00

Instrument ID: 19853

Operator ID: 2306

Lims ID: 410-3311-A-6-C

Lab Sample ID: 410-3311-6

Worklist Smp#: 31

Client ID: GWTS-EFF2-060320

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

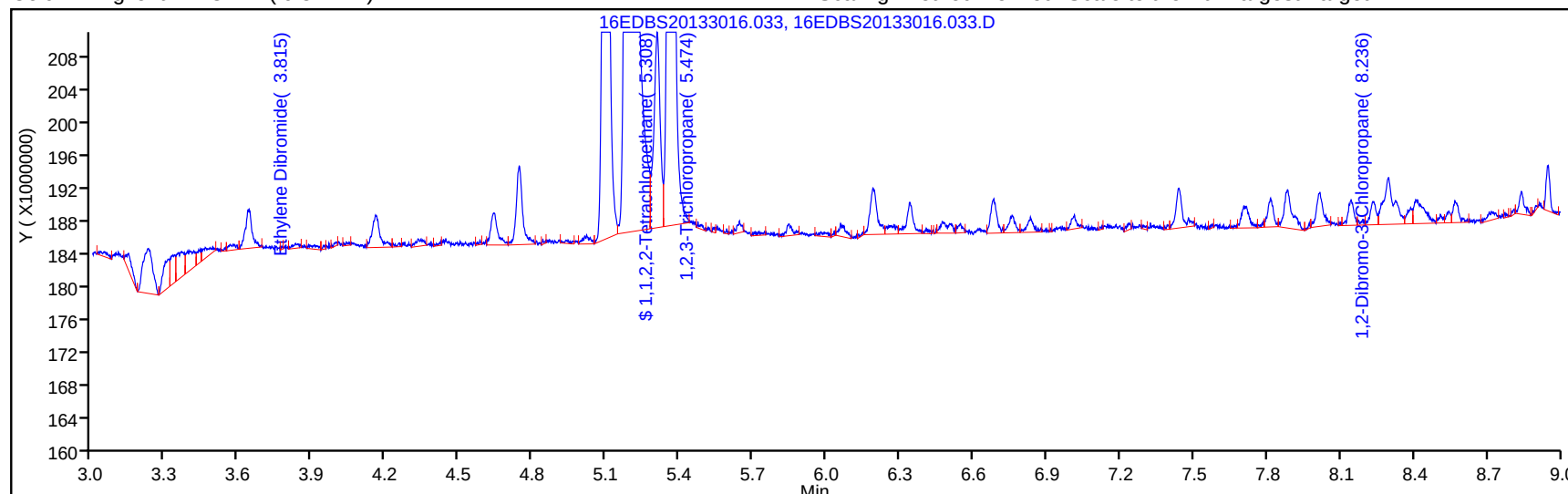
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

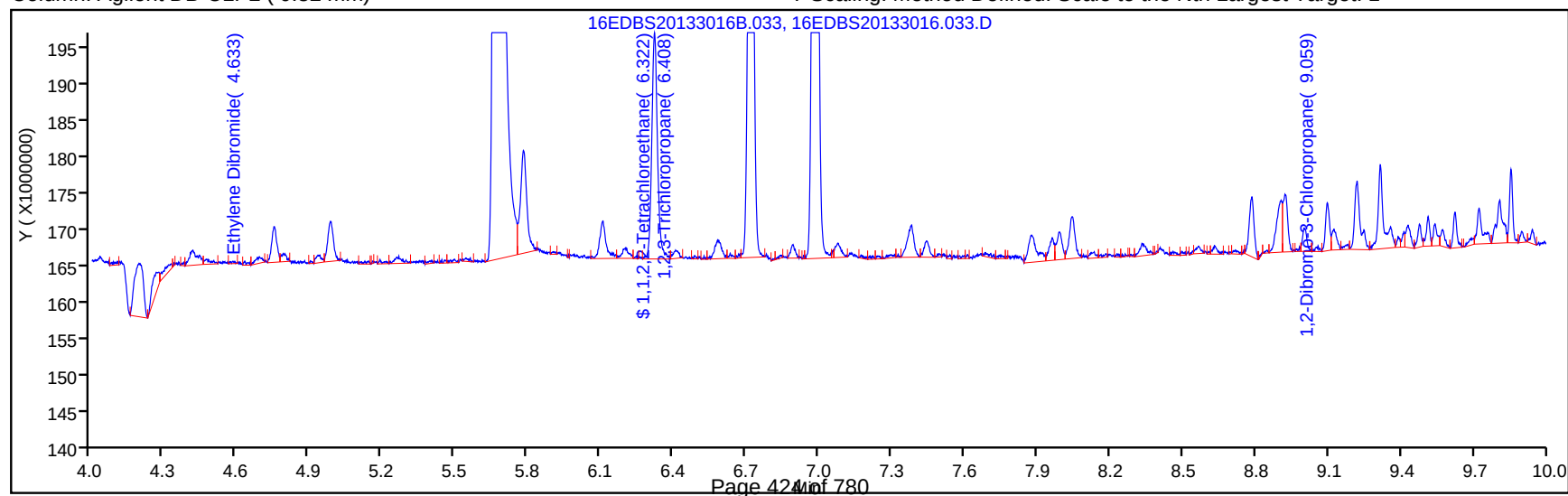
Column: Agilent DB-CLP1 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-424

Report Date: 09-Jun-2020 16:51:18

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.033.D
 Lims ID: 410-3311-A-6-C
 Client ID: GWTS-EFF2-060320
 Sample Type: Client
 Inject. Date: 09-Jun-2020 02:24:00 ALS Bottle#: 0 Worklist Smp#: 31
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 410-3311-A-6-C AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:15 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

Surrogate Recovery, Detector: 1ECDA

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	1.11	90.09

Surrogate Recovery, Detector: 2ECDB

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	1.00	81.29

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Client Sample ID: GWTS-GAC2-060320 Lab Sample ID: 410-3311-7
 Matrix: Water Lab File ID: 16EDBS20133016.036.D
 Analysis Method: 8011 Date Collected: 06/03/2020 08:43
 Extraction Method: 8011 Date Extracted: 06/06/2020 03:40
 Sample wt/vol: 36.3 (mL) Date Analyzed: 06/09/2020 03:14
 Con. Extract Vol.: 2 (mL) Dilution Factor: 1
 Injection Volume: 1 (uL) GC Column: DB CLP1 ID: 0.32 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 11304 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
106-93-4	Ethylene Dibromide	0.011	J	0.029	0.019	0.0096

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-34-5	1,1,2,2-Tetrachloroethane	82		46-136

Report Date: 09-Jun-2020 16:51:56

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.036.D
 Lims ID: 410-3311-A-7-A
 Client ID: GWTS-GAC2-060320
 Sample Type: Client
 Inject. Date: 09-Jun-2020 03:14:00 ALS Bottle#: 0 Worklist Smp#: 34
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 410-3311-A-7-A AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:41 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/l	Flags
-----	--------------	------------------	------------------	----------	-------------------	-------

1 Ethylene Dibromide

1	3.812	3.824	-0.012	3011244H	0.1975	
2	4.639	4.648	-0.009	4270285H	0.1785	

RPD = 10.15

\$ 2 1,1,2,2-Tetrachloroethane

1	5.308	5.313	-0.005	21790096H	1.01	
2	6.322	6.325	-0.003	33140091H	1.06	

RPD = 5.47

Report Date: 09-Jun-2020 16:51:56

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.036.D

Injection Date: 09-Jun-2020 03:14:00

Instrument ID: 19853

Operator ID: 2306

Lims ID: 410-3311-A-7-A

Lab Sample ID: 410-3311-7

Worklist Smp#: 34

Client ID: GWTS-GAC2-060320

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

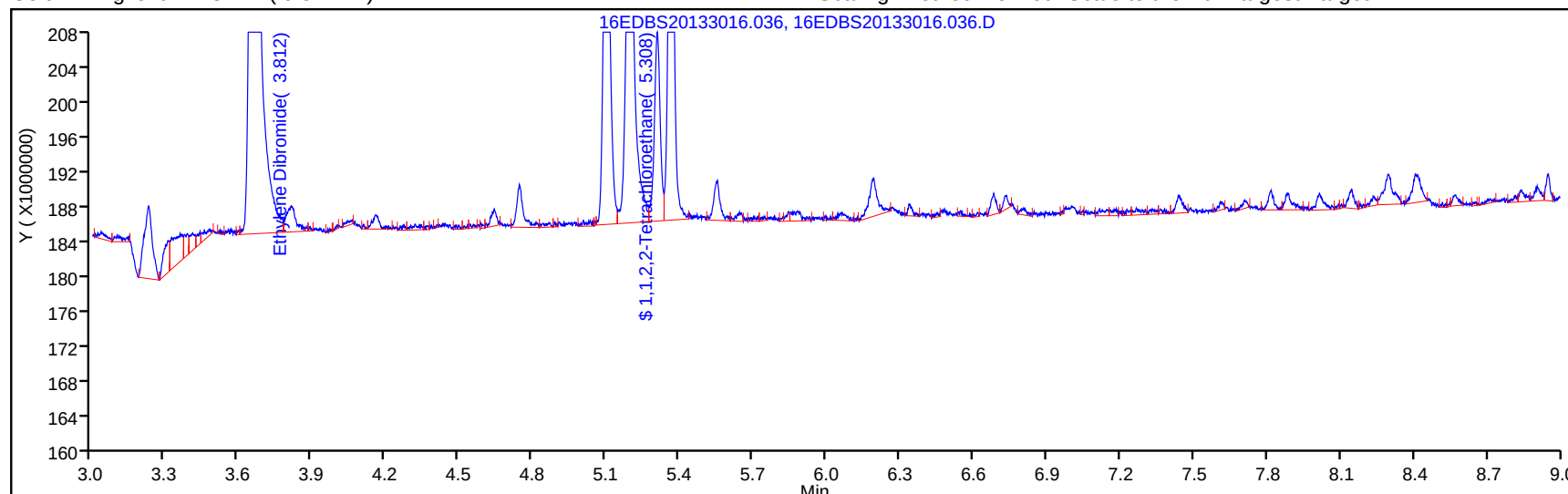
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

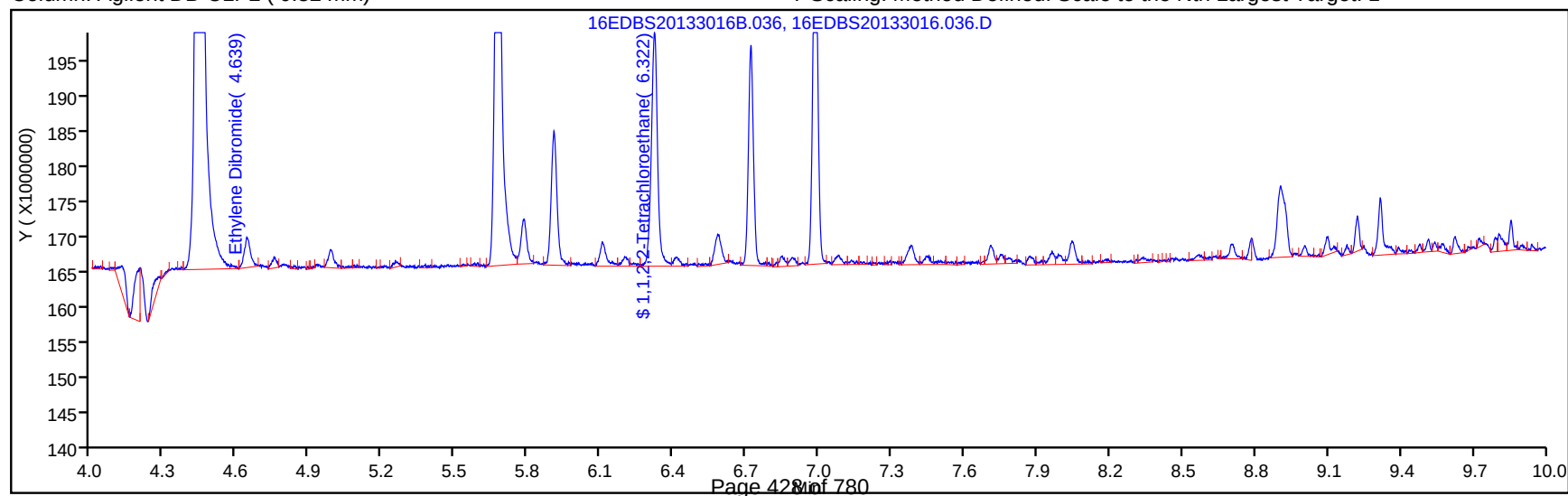
Column: Agilent DB-CLP1 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-428

Report Date: 09-Jun-2020 16:51:56

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.036.D
 Lims ID: 410-3311-A-7-A
 Client ID: GWTS-GAC2-060320
 Sample Type: Client
 Inject. Date: 09-Jun-2020 03:14:00 ALS Bottle#: 0 Worklist Smp#: 34
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 410-3311-A-7-A AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:41 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

Surrogate Recovery, Detector: 1ECDA

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	1.01	81.72

Surrogate Recovery, Detector: 2ECDB

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	1.06	86.32

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Client Sample ID: GWTS-GAC2-060320 Lab Sample ID: 410-3311-7
 Matrix: Water Lab File ID: 16EDBS20133016.036.D
 Analysis Method: 8011 Date Collected: 06/03/2020 08:43
 Extraction Method: 8011 Date Extracted: 06/06/2020 03:40
 Sample wt/vol: 36.3(mL) Date Analyzed: 06/09/2020 03:14
 Con. Extract Vol.: 2(mL) Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: DB CLP2 ID: 0.32 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 11304 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-34-5	1,1,2,2-Tetrachloroethane	86		46-136

Report Date: 09-Jun-2020 16:51:56

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.036.D
 Lims ID: 410-3311-A-7-A
 Client ID: GWTS-GAC2-060320
 Sample Type: Client
 Inject. Date: 09-Jun-2020 03:14:00 ALS Bottle#: 0 Worklist Smp#: 34
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 410-3311-A-7-A AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:41 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/l	Flags
-----	--------------	------------------	------------------	----------	-------------------	-------

1 Ethylene Dibromide

1	3.812	3.824	-0.012	3011244H	0.1975	
2	4.639	4.648	-0.009	4270285H	0.1785	

RPD = 10.15

\$ 2 1,1,2,2-Tetrachloroethane

1	5.308	5.313	-0.005	21790096H	1.01	
2	6.322	6.325	-0.003	33140091H	1.06	

RPD = 5.47

Report Date: 09-Jun-2020 16:51:56

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.036.D

Injection Date: 09-Jun-2020 03:14:00

Instrument ID: 19853

Operator ID: 2306

Lims ID: 410-3311-A-7-A

Lab Sample ID: 410-3311-7

Worklist Smp#: 34

Client ID: GWTS-GAC2-060320

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

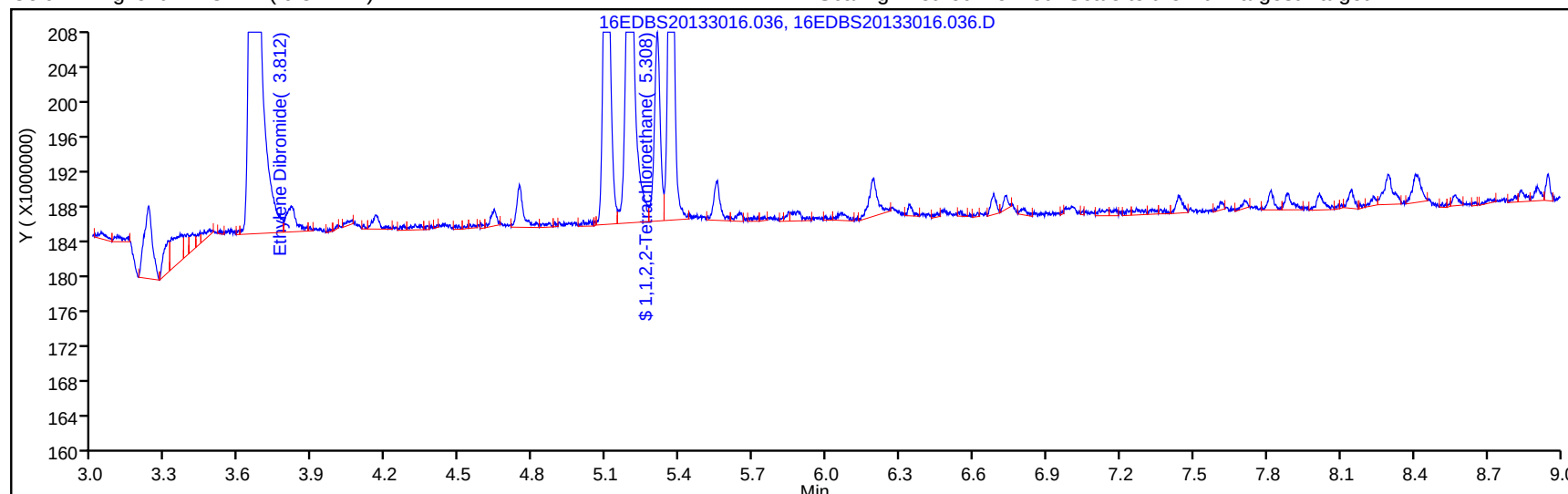
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

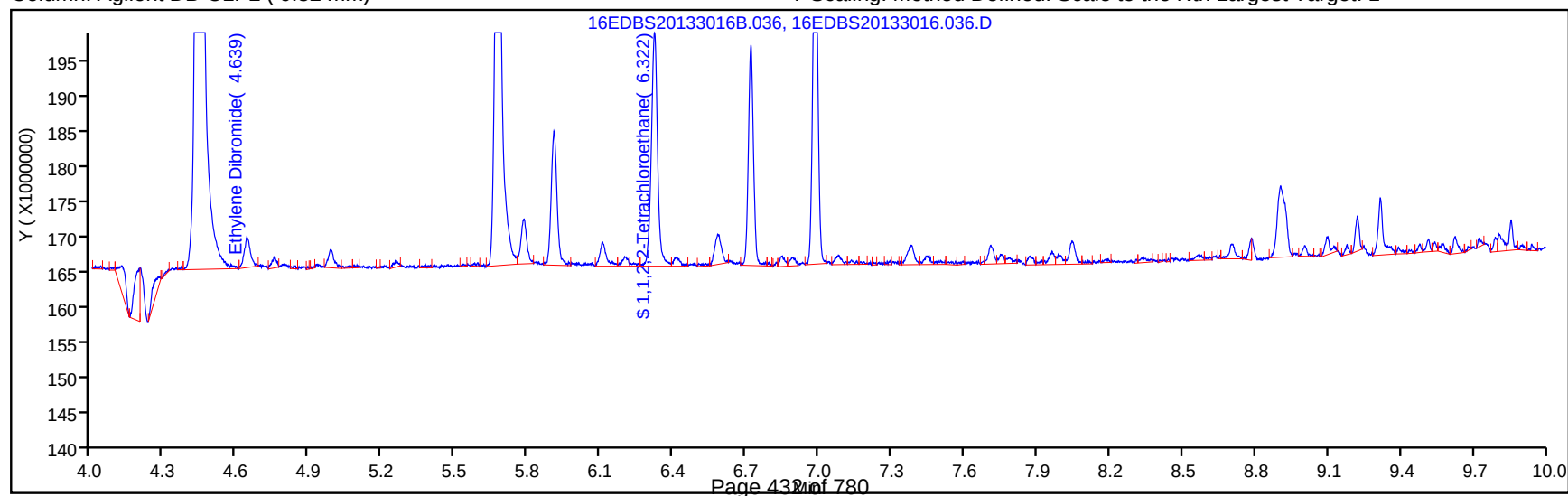
Column: Agilent DB-CLP1 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-432

Report Date: 09-Jun-2020 16:51:56

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.036.D
 Lims ID: 410-3311-A-7-A
 Client ID: GWTS-GAC2-060320
 Sample Type: Client
 Inject. Date: 09-Jun-2020 03:14:00 ALS Bottle#: 0 Worklist Smp#: 34
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 410-3311-A-7-A AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:41 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

Surrogate Recovery, Detector: 1ECDA

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	1.01	81.72

Surrogate Recovery, Detector: 2ECDB

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	1.06	86.32

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Client Sample ID: GWTS-INF2-060320 Lab Sample ID: 410-3311-8
 Matrix: Water Lab File ID: 16EDBS20133016.037.D
 Analysis Method: 8011 Date Collected: 06/03/2020 08:53
 Extraction Method: 8011 Date Extracted: 06/06/2020 03:40
 Sample wt/vol: 36.2 (mL) Date Analyzed: 06/09/2020 03:31
 Con. Extract Vol.: 2 (mL) Dilution Factor: 1
 Injection Volume: 1 (uL) GC Column: DB CLP1 ID: 0.32 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 11304 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-34-5	1,1,2,2-Tetrachloroethane	75		46-136

Report Date: 09-Jun-2020 16:51:22

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.037.D
 Lims ID: 410-3311-A-8-A
 Client ID: GWTS-INF2-060320
 Sample Type: Client
 Inject. Date: 09-Jun-2020 03:31:00 ALS Bottle#: 0 Worklist Smp#: 35
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 410-3311-A-8-A AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:15 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/l	Flags
-----	--------------	------------------	------------------	----------	-------------------	-------

1 Ethylene Dibromide

1	3.813	3.824	-0.011	10082930H	0.6614	
2	4.641	4.648	-0.007	10368763H	0.4333	

RPD = 41.68

\$ 2 1,1,2,2-Tetrachloroethane

1	5.308	5.313	-0.005	19880958H	0.9190	
2	6.324	6.325	-0.001	35832933H	1.15	

RPD = 22.36

Report Date: 09-Jun-2020 16:51:22

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.037.D

Injection Date: 09-Jun-2020 03:31:00

Instrument ID: 19853

Operator ID: 2306

Lims ID: 410-3311-A-8-A

Lab Sample ID: 410-3311-8

Worklist Smp#: 35

Client ID: GWTS-INF2-060320

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

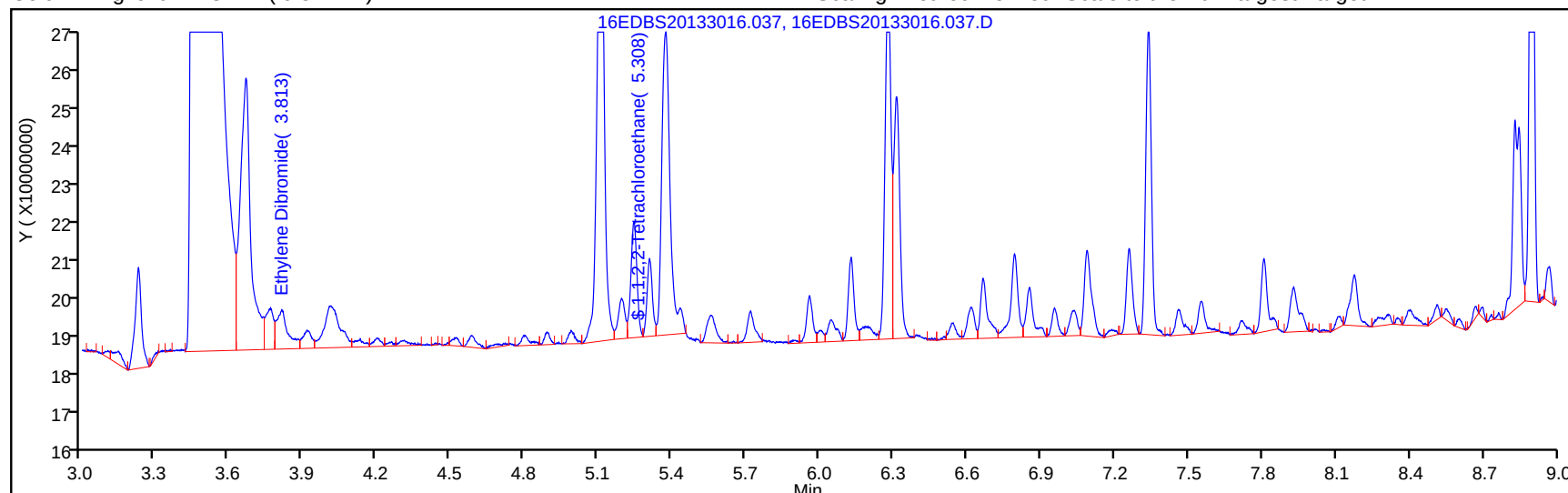
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

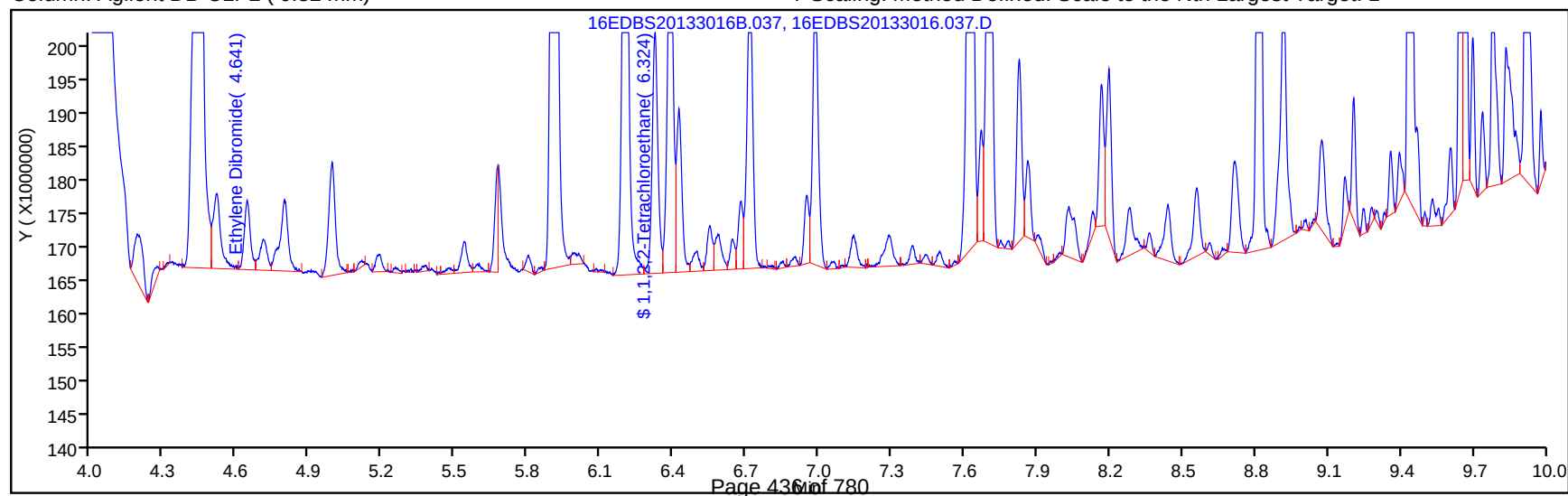
Column: Agilent DB-CLP1 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-436

Report Date: 09-Jun-2020 16:51:22

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.037.D
 Lims ID: 410-3311-A-8-A
 Client ID: GWTS-INF2-060320
 Sample Type: Client
 Inject. Date: 09-Jun-2020 03:31:00 ALS Bottle#: 0 Worklist Smp#: 35
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 410-3311-A-8-A AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:15 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

Surrogate Recovery, Detector: 1ECDA

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	0.9190	74.56

Surrogate Recovery, Detector: 2ECDB

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	1.15	93.34

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Client Sample ID: GWTS-INF2-060320 Lab Sample ID: 410-3311-8
 Matrix: Water Lab File ID: 16EDBS20133016.037.D
 Analysis Method: 8011 Date Collected: 06/03/2020 08:53
 Extraction Method: 8011 Date Extracted: 06/06/2020 03:40
 Sample wt/vol: 36.2 (mL) Date Analyzed: 06/09/2020 03:31
 Con. Extract Vol.: 2 (mL) Dilution Factor: 1
 Injection Volume: 1 (uL) GC Column: DB CLP2 ID: 0.32 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 11304 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
106-93-4	Ethylene Dibromide	0.024	J J1	0.029	0.019	0.0097

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-34-5	1,1,2,2-Tetrachloroethane	93		46-136

Report Date: 09-Jun-2020 16:51:22

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.037.D
 Lims ID: 410-3311-A-8-A
 Client ID: GWTS-INF2-060320
 Sample Type: Client
 Inject. Date: 09-Jun-2020 03:31:00 ALS Bottle#: 0 Worklist Smp#: 35
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 410-3311-A-8-A AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:15 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/l	Flags
-----	--------------	------------------	------------------	----------	-------------------	-------

1 Ethylene Dibromide

1	3.813	3.824	-0.011	10082930H	0.6614	
2	4.641	4.648	-0.007	10368763H	0.4333	

RPD = 41.68

\$ 2 1,1,2,2-Tetrachloroethane

1	5.308	5.313	-0.005	19880958H	0.9190	
2	6.324	6.325	-0.001	35832933H	1.15	

RPD = 22.36

Report Date: 09-Jun-2020 16:51:22

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.037.D

Injection Date: 09-Jun-2020 03:31:00

Instrument ID: 19853

Operator ID: 2306

Lims ID: 410-3311-A-8-A

Lab Sample ID: 410-3311-8

Worklist Smp#: 35

Client ID: GWTS-INF2-060320

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

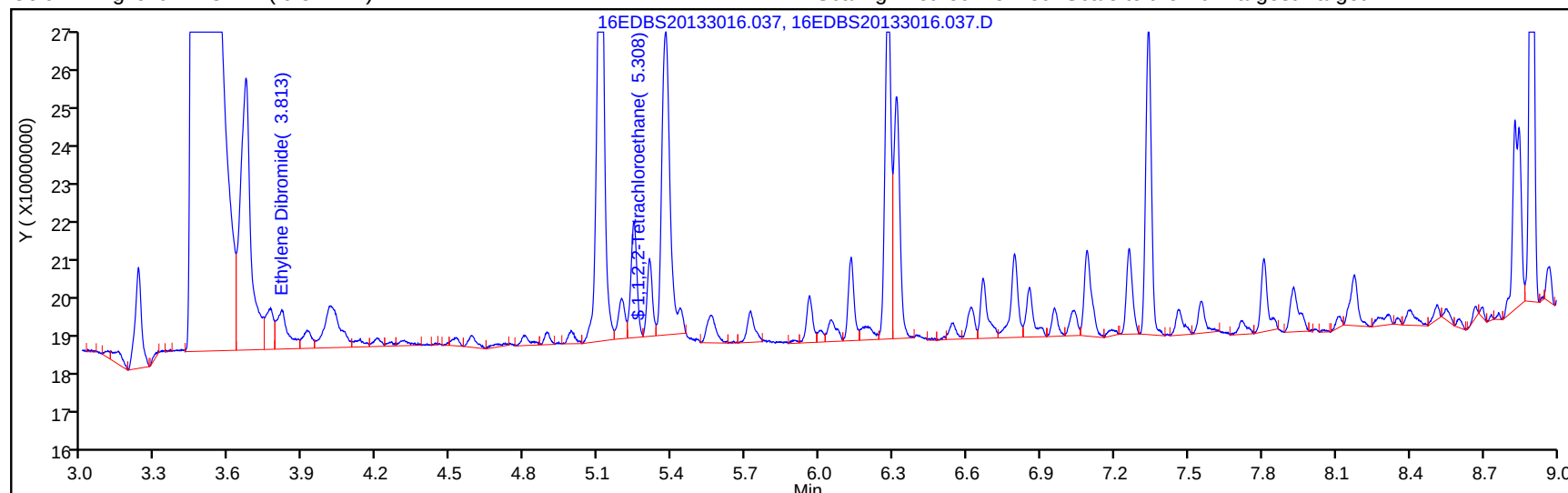
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

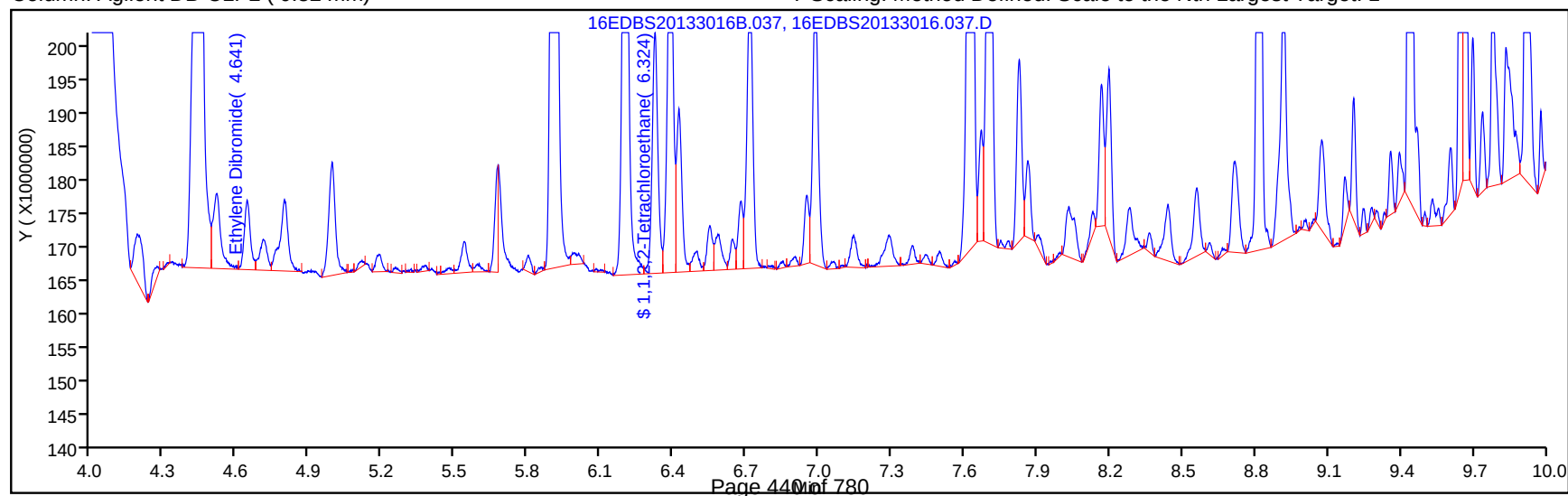
Column: Agilent DB-CLP1 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-440

Report Date: 09-Jun-2020 16:51:22

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.037.D
 Lims ID: 410-3311-A-8-A
 Client ID: GWTS-INF2-060320
 Sample Type: Client
 Inject. Date: 09-Jun-2020 03:31:00 ALS Bottle#: 0 Worklist Smp#: 35
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 410-3311-A-8-A AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:15 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

Surrogate Recovery, Detector: 1ECDA

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	0.9190	74.56

Surrogate Recovery, Detector: 2ECDB

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	1.15	93.34

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Client Sample ID: GWTS-FB02-060320 Lab Sample ID: 410-3311-9
 Matrix: Water Lab File ID: 16EDBS20133016.038.D
 Analysis Method: 8011 Date Collected: 06/03/2020 08:24
 Extraction Method: 8011 Date Extracted: 06/06/2020 03:40
 Sample wt/vol: 36.3 (mL) Date Analyzed: 06/09/2020 03:48
 Con. Extract Vol.: 2 (mL) Dilution Factor: 1
 Injection Volume: 1 (uL) GC Column: DB CLP1 ID: 0.32 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 11304 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
106-93-4	Ethylene Dibromide	0.019	U	0.029	0.019	0.0096

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-34-5	1,1,2,2-Tetrachloroethane	80		46-136

Report Date: 09-Jun-2020 16:51:23

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.038.D
 Lims ID: 410-3311-A-9-A
 Client ID: GWTS-FB02-060320
 Sample Type: Client
 Inject. Date: 09-Jun-2020 03:48:00 ALS Bottle#: 0 Worklist Smp#: 36
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 410-3311-A-9-A AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:15 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/l	Flags
-----	--------------	------------------	------------------	----------	-------------------	-------

1 Ethylene Dibromide

1	3.819	3.824	-0.005	353203H	0.0232	
2	4.656	4.648	0.008	253847H	0.0106	

RPD = 74.38

\$ 2 1,1,2,2-Tetrachloroethane

1	5.309	5.313	-0.004	21394506H	0.9889	
2	6.323	6.325	-0.002	31565971H	1.01	

RPD = 2.44

Report Date: 09-Jun-2020 16:51:23

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.038.D

Injection Date: 09-Jun-2020 03:48:00

Instrument ID: 19853

Operator ID: 2306

Lims ID: 410-3311-A-9-A

Lab Sample ID: 410-3311-9

Worklist Smp#: 36

Client ID: GWTS-FB02-060320

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

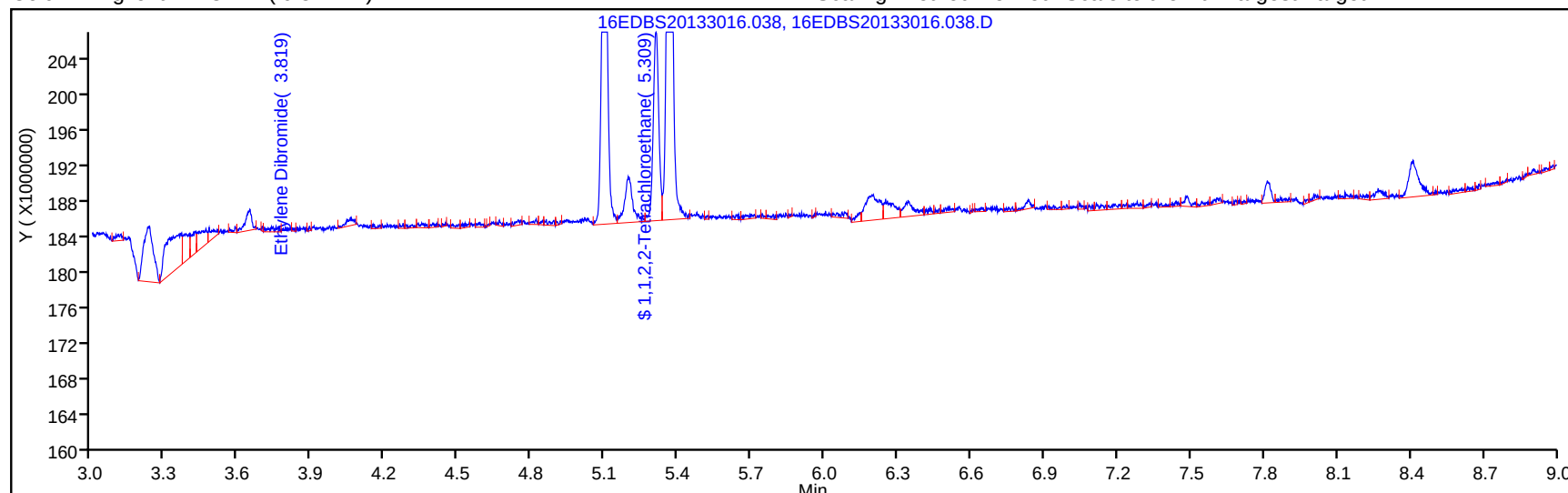
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

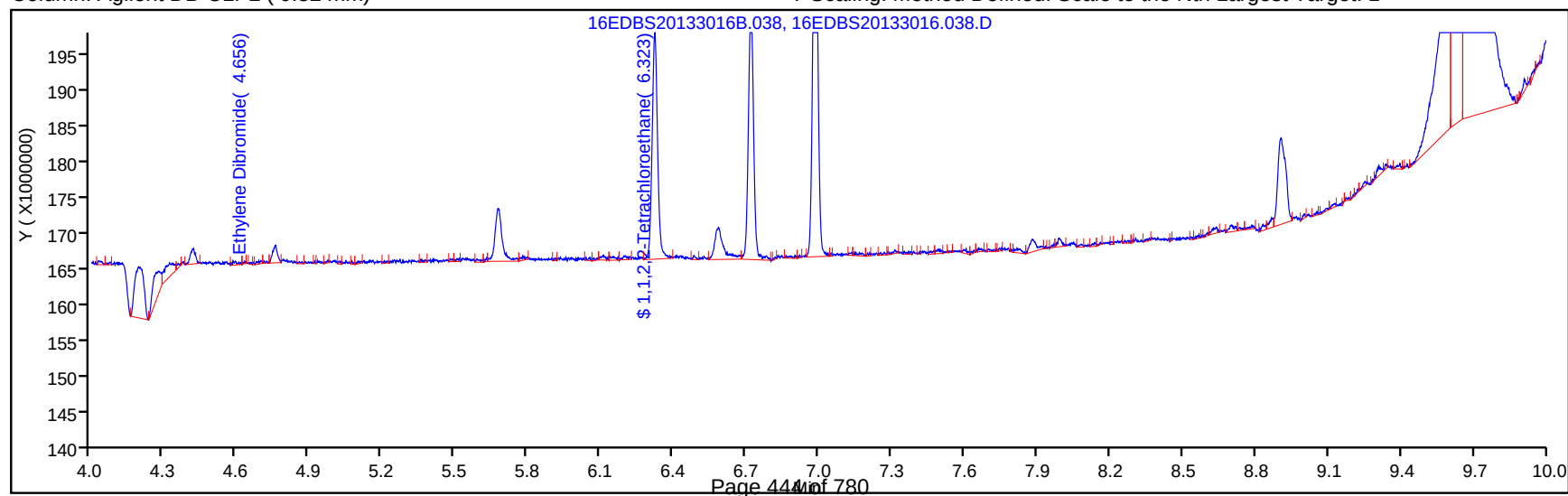
Column: Agilent DB-CLP1 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-444

Report Date: 09-Jun-2020 16:51:23

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.038.D
 Lims ID: 410-3311-A-9-A
 Client ID: GWTS-FB02-060320
 Sample Type: Client
 Inject. Date: 09-Jun-2020 03:48:00 ALS Bottle#: 0 Worklist Smp#: 36
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 410-3311-A-9-A AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:15 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

Surrogate Recovery, Detector: 1ECDA

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	0.9889	80.24

Surrogate Recovery, Detector: 2ECDB

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	1.01	82.22

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Client Sample ID: GWTS-FB02-060320 Lab Sample ID: 410-3311-9
 Matrix: Water Lab File ID: 16EDBS20133016.038.D
 Analysis Method: 8011 Date Collected: 06/03/2020 08:24
 Extraction Method: 8011 Date Extracted: 06/06/2020 03:40
 Sample wt/vol: 36.3(mL) Date Analyzed: 06/09/2020 03:48
 Con. Extract Vol.: 2(mL) Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: DB CLP2 ID: 0.32 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 11304 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-34-5	1,1,2,2-Tetrachloroethane	82		46-136

Report Date: 09-Jun-2020 16:51:23

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.038.D
 Lims ID: 410-3311-A-9-A
 Client ID: GWTS-FB02-060320
 Sample Type: Client
 Inject. Date: 09-Jun-2020 03:48:00 ALS Bottle#: 0 Worklist Smp#: 36
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 410-3311-A-9-A AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:15 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/l	Flags
-----	--------------	------------------	------------------	----------	-------------------	-------

1 Ethylene Dibromide

1	3.819	3.824	-0.005	353203H	0.0232	
2	4.656	4.648	0.008	253847H	0.0106	

RPD = 74.38

\$ 2 1,1,2,2-Tetrachloroethane

1	5.309	5.313	-0.004	21394506H	0.9889	
2	6.323	6.325	-0.002	31565971H	1.01	

RPD = 2.44

Report Date: 09-Jun-2020 16:51:23

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.038.D

Injection Date: 09-Jun-2020 03:48:00

Instrument ID: 19853

Operator ID: 2306

Lims ID: 410-3311-A-9-A

Lab Sample ID: 410-3311-9

Worklist Smp#: 36

Client ID: GWTS-FB02-060320

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

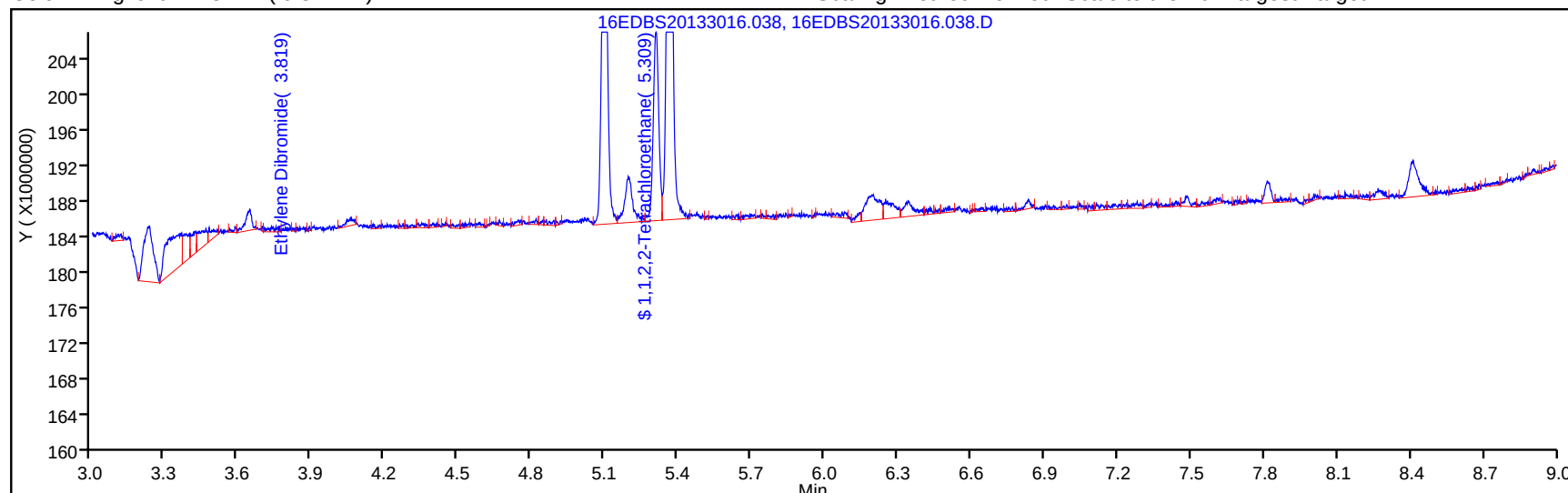
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

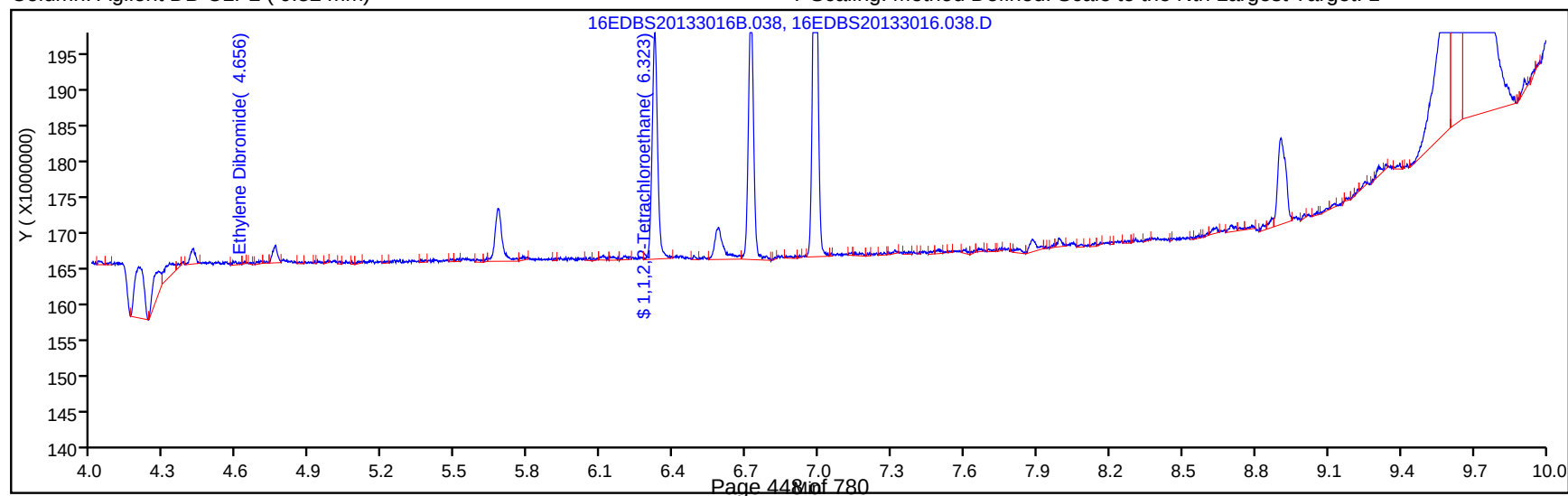
Column: Agilent DB-CLP1 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-448

Report Date: 09-Jun-2020 16:51:23

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.038.D
 Lims ID: 410-3311-A-9-A
 Client ID: GWTS-FB02-060320
 Sample Type: Client
 Inject. Date: 09-Jun-2020 03:48:00 ALS Bottle#: 0 Worklist Smp#: 36
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 410-3311-A-9-A AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:15 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

Surrogate Recovery, Detector: 1ECDA

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	0.9889	80.24

Surrogate Recovery, Detector: 2ECDB

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	1.01	82.22

FORM VI
GC SEMI VOA BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1 Analy Batch No.: 8526

SDG No.: _____

Instrument ID: 19853 GC Column: DB CLP1 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/12/2020 22:42 Calibration End Date: 05/13/2020 00:06 Calibration ID: 4352

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-8526/3	16EDBS20133001.004.D
Level 2	IC 410-8526/4	16EDBS20133001.005.D
Level 3	IC 410-8526/5	16EDBS20133001.006.D
Level 4	ICRT 410-8526/6	16EDBS20133001.007.D
Level 5	IC 410-8526/7	16EDBS20133001.008.D
Level 6	IC 410-8526/8	16EDBS20133001.009.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6					RT WINDOW	AVG RT
Ethylene Dibromide	3.824	3.828	3.823	3.823	3.827	3.820					3.573 - 4.073	3.824
1,2-Dibromo-3-Chloropropane	8.222	8.221	8.220	8.220	8.221	8.220					7.970 - 8.470	8.221
1,1,2,2-Tetrachloroethane	5.313	5.315	5.313	5.313	5.315	5.312					5.063 - 5.563	5.314

FORM VI
GC SEMI VOA BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1 Analy Batch No.: 8526

SDG No.: _____

Instrument ID: 19853 GC Column: DB CLP1 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/12/2020 22:42 Calibration End Date: 05/13/2020 00:06 Calibration ID: 4352

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-8526/3	16EDBS20133001.004.D
Level 2	IC 410-8526/4	16EDBS20133001.005.D
Level 3	IC 410-8526/5	16EDBS20133001.006.D
Level 4	ICRT 410-8526/6	16EDBS20133001.007.D
Level 5	IC 410-8526/7	16EDBS20133001.008.D
Level 6	IC 410-8526/8	16EDBS20133001.009.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3	LVL 4		B	M1	M2								
Ethylene Dibromide	15024972 16441328	14889001 13106190	16806976	15195050	Ave		15243919.5				8.6		10.0			
1,2-Dibromo-3-Chloropropane	41117821 38207519	41568611 33687260	41391131	35872862	Ave		38640867.3				8.6		10.0			
1,1,2,2-Tetrachloroethane	21411313 22670965	20897486 19525031	23804844	21492000	Ave		21633606.5				6.8		10.0			

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
GC SEMI VOA BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1 Analy Batch No.: 8526

SDG No.: _____

Instrument ID: 19853 GC Column: DB CLP1 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/12/2020 22:42 Calibration End Date: 05/13/2020 00:06 Calibration ID: 4352

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-8526/3	16EDBS20133001.004.D
Level 2	IC 410-8526/4	16EDBS20133001.005.D
Level 3	IC 410-8526/5	16EDBS20133001.006.D
Level 4	ICRT 410-8526/6	16EDBS20133001.007.D
Level 5	IC 410-8526/7	16EDBS20133001.008.D
Level 6	IC 410-8526/8	16EDBS20133001.009.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
		LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Ethylene Dibromide	Ave	5263999 81995601	9314931	21029729	38025613	72002740	0.350 6.26	0.626	1.25	2.50	4.38
1,2-Dibromo-3-Chloropropane	Ave	14434411 211177012	26058323	51894131	89951201	167659369	0.351 6.27	0.627	1.25	2.51	4.39
1,1,2,2-Tetrachloroethane	Ave	3694522 60161501	6439038	14669735	26488890	48898438	0.173 3.08	0.308	0.616	1.23	2.16

Curve Type Legend:

Ave = Average by Height

Report Date: 14-May-2020 18:35:57

Chrom Revision: 2.3 12-May-2020 10:44:46

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.004.D
 Lims ID: IC EDB 1
 Client ID:
 Sample Type: IC Calib Level: 1
 Inject. Date: 12-May-2020 22:42:00 ALS Bottle#: 0 Worklist Smp#: 3
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: EDB_12024R AAEDB_1AA ICAL 2013299999 10398 SW-846 8011
 Operator ID: 13378 Instrument ID: 19853
 Sublist: chrom-8011_19853*sub1
 Method: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 14-May-2020 18:35:56 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1020

First Level Reviewer: brumbaughj

Date: 14-May-2020 17:42:13

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
-----	--------------	------------------	------------------	----------	-----------------	-------------------	-------

1 Ethylene Dibromide

1	3.824	3.823	0.001	5263999H	0.3504	0.3453	
2	4.650	4.648	0.002	8184001H	0.3504	0.3420	
RPD = 0.96							

\$ 2 1,1,2,2-Tetrachloroethane

1	5.313	5.313	0.000	3694522H	0.1726	0.1708	
2	6.325	6.325	0.000	5464784H	0.1726	0.1754	
RPD = 2.69							

3 1,2,3-Trichloropropane

1	5.459	5.460	-0.001	1049231H	0.3602	0.3513	
2	6.438	6.439	-0.001	2053461H	0.3602	0.3489	
RPD = 0.67							

4 1,2-Dibromo-3-Chloropropane

1	8.222	8.220	0.002	14434411H	0.3511	0.3736	
2	9.077	9.078	-0.001	23688813H	0.3511	0.3526	
RPD = 5.77							

Reagents:

GCS_EDB1G_00001

Amount Added: 1.00

Units: mL

Report Date: 14-May-2020 18:35:57

Chrom Revision: 2.3 12-May-2020 10:44:46

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.004.D

Injection Date: 12-May-2020 22:42:00

Instrument ID: 19853

Operator ID: 13378

Lims ID: IC EDB 1

Worklist Smp#: 3

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

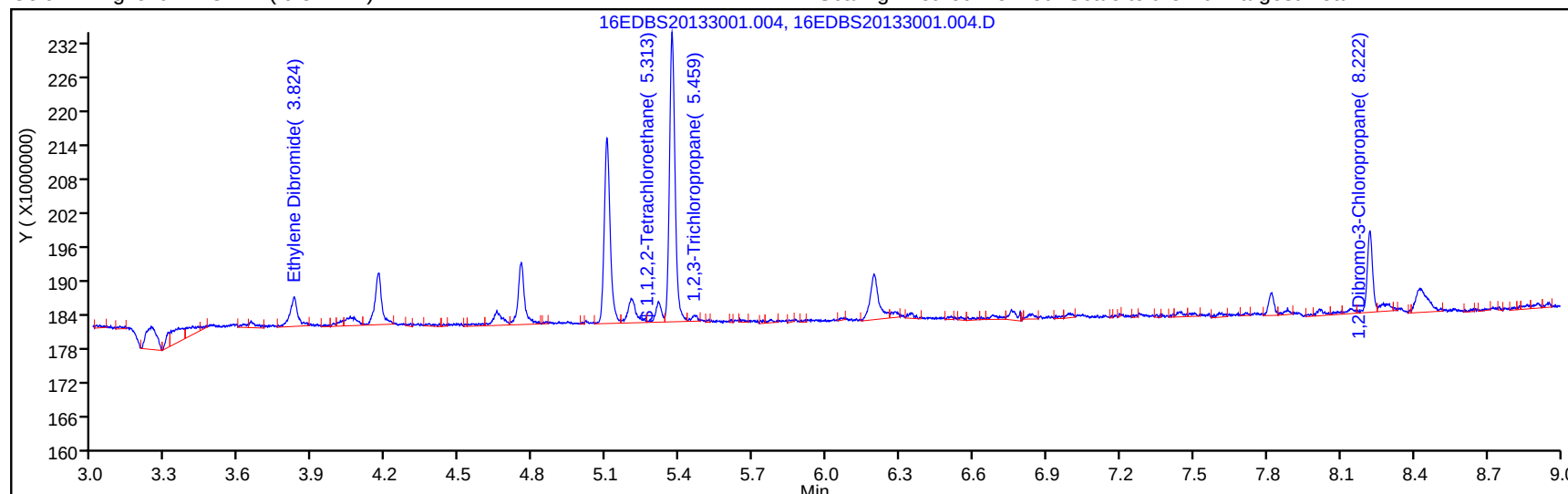
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

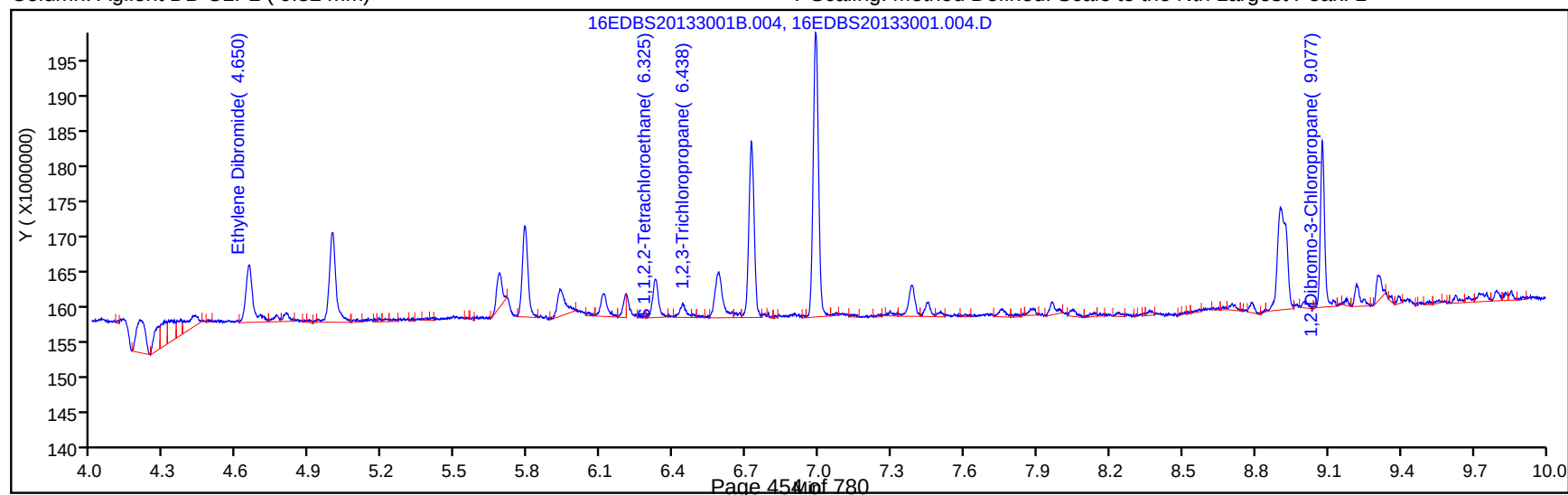
Column: Agilent DB-CLP1 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-454

Report Date: 14-May-2020 18:35:57

Chrom Revision: 2.3 12-May-2020 10:44:46

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.005.D
 Lims ID: IC EDB 2
 Client ID:
 Sample Type: IC Calib Level: 2
 Inject. Date: 12-May-2020 22:59:00 ALS Bottle#: 0 Worklist Smp#: 4
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: EDB_22024R AAEDB_2AA ICAL 2013299999 10398 SW-846 8011
 Operator ID: 13378 Instrument ID: 19853
 Sublist: chrom-8011_19853*sub1
 Method: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 14-May-2020 18:35:57 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1020

First Level Reviewer: brumbaughj

Date: 14-May-2020 17:41:54

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
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1 Ethylene Dibromide

1	3.828	3.823	0.005	9314931H	0.6256	0.6111	
2	4.650	4.648	0.002	14138817H	0.6256	0.5908	
RPD = 3.36							

\$ 2 1,1,2,2-Tetrachloroethane

1	5.315	5.313	0.002	6439038H	0.3081	0.2976	
2	6.326	6.325	0.001	9359243H	0.3081	0.3005	
RPD = 0.95							

3 1,2,3-Trichloropropane

1	5.462	5.460	0.002	1868379H	0.6431	0.6255	
2	6.441	6.439	0.002	2752808H	0.6431	0.5174	
RPD = 18.92							

4 1,2-Dibromo-3-Chloropropane

1	8.221	8.220	0.001	26058323H	0.6269	0.6744	
2	9.078	9.078	0.000	44900999H	0.6269	0.6683	
RPD = 0.90							

Reagents:

GCS_EDB2G_00001

Amount Added: 1.00

Units: mL

Report Date: 14-May-2020 18:35:57

Chrom Revision: 2.3 12-May-2020 10:44:46

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.005.D

Injection Date: 12-May-2020 22:59:00

Instrument ID: 19853

Operator ID: 13378

Lims ID: IC EDB 2

Worklist Smp#: 4

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

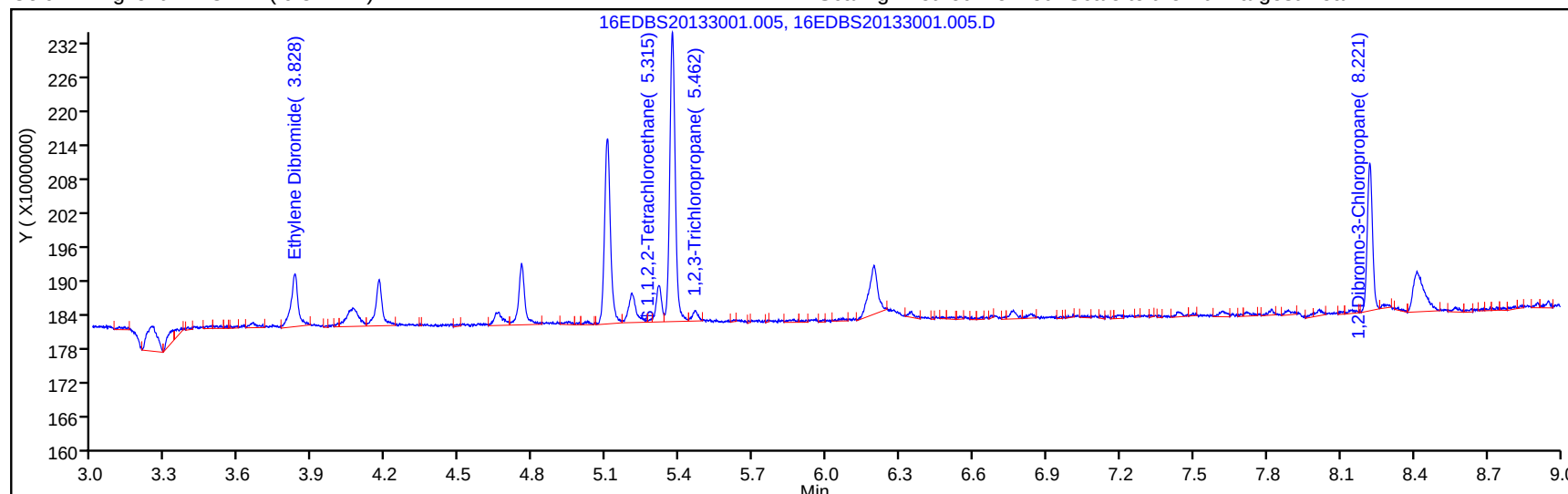
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

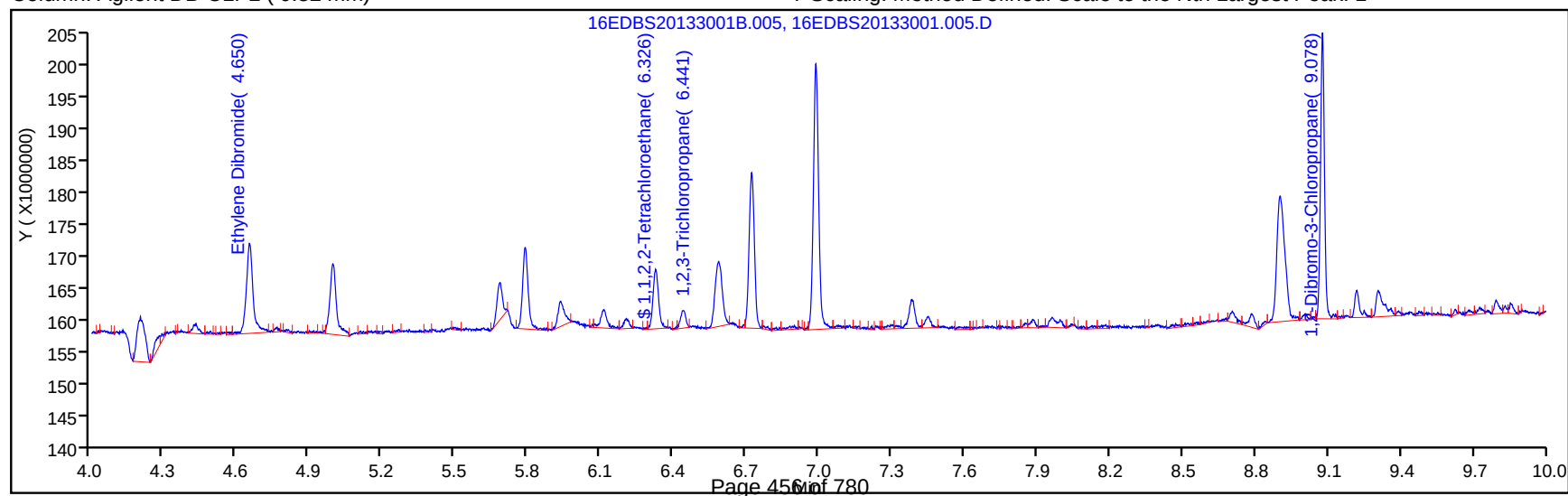
Column: Agilent DB-CLP1 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-456

Report Date: 14-May-2020 18:35:58

Chrom Revision: 2.3 12-May-2020 10:44:46

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.006.D
 Lims ID: IC EDB 3
 Client ID:
 Sample Type: IC Calib Level: 3
 Inject. Date: 12-May-2020 23:16:00 ALS Bottle#: 0 Worklist Smp#: 5
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: EDB_32024AA AAEDB_3AA ICAL 2013299999 10398 SW-846 8011
 Operator ID: 13378 Instrument ID: 19853
 Sublist: chrom-8011_19853*sub1
 Method: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 14-May-2020 18:35:58 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECD
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECD
 Process Host: CTX1020

First Level Reviewer: brumbaughj Date: 14-May-2020 17:41:44

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
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1 Ethylene Dibromide

1	3.823	3.823	0.000	21029729H	1.25	1.38
2	4.648	4.648	0.000	33222480H	1.25	1.39

RPD = 0.64

\$ 2 1,1,2,2-Tetrachloroethane

1	5.313	5.313	0.000	14669735H	0.6163	0.6781
2	6.325	6.325	0.000	20542741H	0.6163	0.6595

RPD = 2.78

3 1,2,3-Trichloropropane

1	5.463	5.460	0.003	4395537H	1.29	1.47
2	6.437	6.439	-0.002	6139670H	1.29	1.33

RPD = 9.86

4 1,2-Dibromo-3-Chloropropane

1	8.220	8.220	0.000	51894131H	1.25	1.34
2	9.078	9.078	0.000	90910622H	1.25	1.35

RPD = 0.75

Reagents:

GCS_EDB3P_00001

Amount Added: 1.00

Units: mL

Report Date: 14-May-2020 18:35:58

Chrom Revision: 2.3 12-May-2020 10:44:46

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.006.D

Injection Date: 12-May-2020 23:16:00

Instrument ID: 19853

Operator ID: 13378

Lims ID: IC EDB 3

Worklist Smp#: 5

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

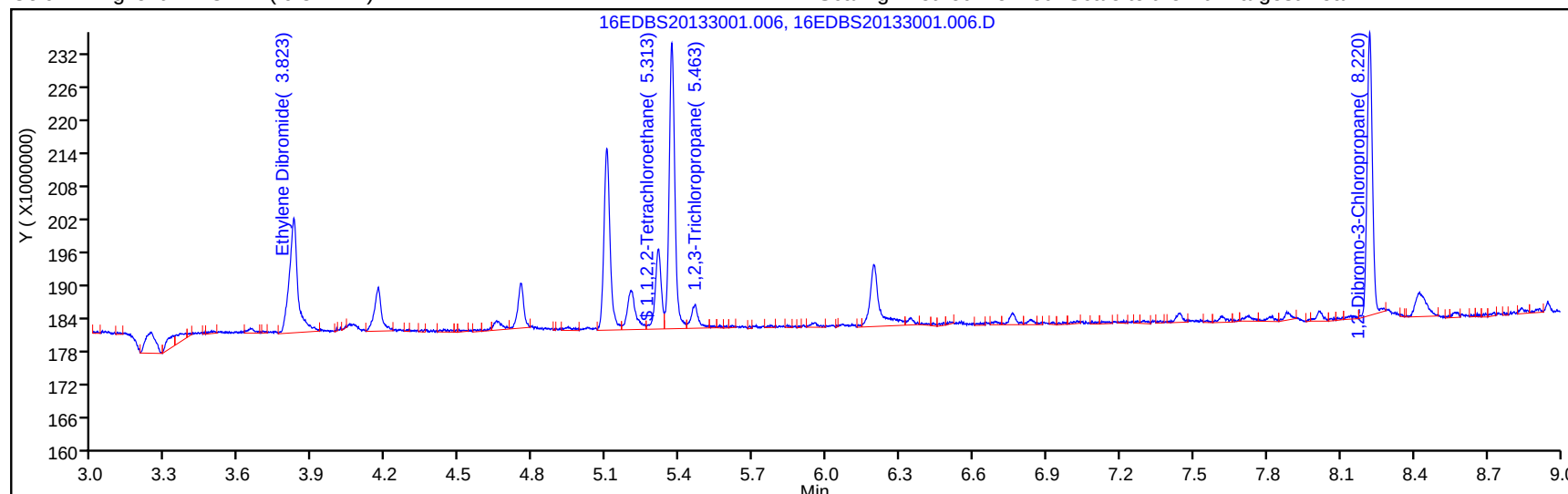
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

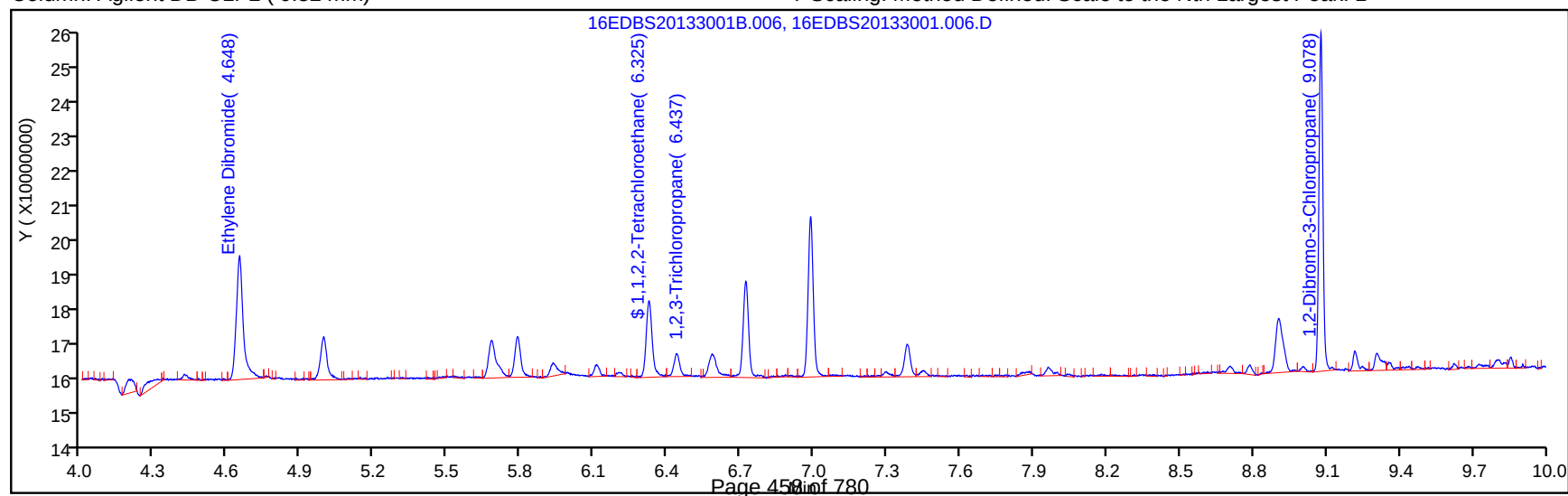
Column: Agilent DB-CLP1 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-458

Report Date: 14-May-2020 18:35:59

Chrom Revision: 2.3 12-May-2020 10:44:46

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.007.D
 Lims ID: ICRT EDB 4
 Client ID:
 Sample Type: ICRT Calib Level: 4
 Inject. Date: 12-May-2020 23:32:00 ALS Bottle#: 0 Worklist Smp#: 6
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: EDB_42024AY AAEDB_4AA ICAL 2013299999 10398 SW-846 8011
 Operator ID: 13378 Instrument ID: 19853
 Sublist: chrom-8011_19853*sub1
 Method: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 14-May-2020 18:35:59 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECD4
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECD4
 Process Host: CTX1020

First Level Reviewer: brumbaughj Date: 14-May-2020 17:41:36

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
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1 Ethylene Dibromide

1	3.823	3.823	0.000	38025613H	2.50	2.49	
2	4.648	4.648	0.000	60855846H	2.50	2.54	

RPD = 1.93

\$ 2 1,1,2,2-Tetrachloroethane

1	5.313	5.313	0.000	26488890H	1.23	1.22	
2	6.325	6.325	0.000	37360596H	1.23	1.20	

RPD = 2.06

3 1,2,3-Trichloropropane

1	5.460	5.460	0.000	7294866H	2.57	2.44	
2	6.439	6.439	0.000	11169978H	2.57	2.54	

RPD = 4.12

4 1,2-Dibromo-3-Chloropropane

1	8.220	8.220	0.000	89951201H	2.51	2.33	
2	9.078	9.078	0.000	162241623H	2.51	2.41	

RPD = 3.67

Reagents:

GCS_EDB4AC_00001

Amount Added: 1.00

Units: mL

Report Date: 14-May-2020 18:35:59

Chrom Revision: 2.3 12-May-2020 10:44:46

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.007.D

Injection Date: 12-May-2020 23:32:00

Instrument ID: 19853

Operator ID: 13378

Lims ID: ICRT EDB 4

Worklist Smp#: 6

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

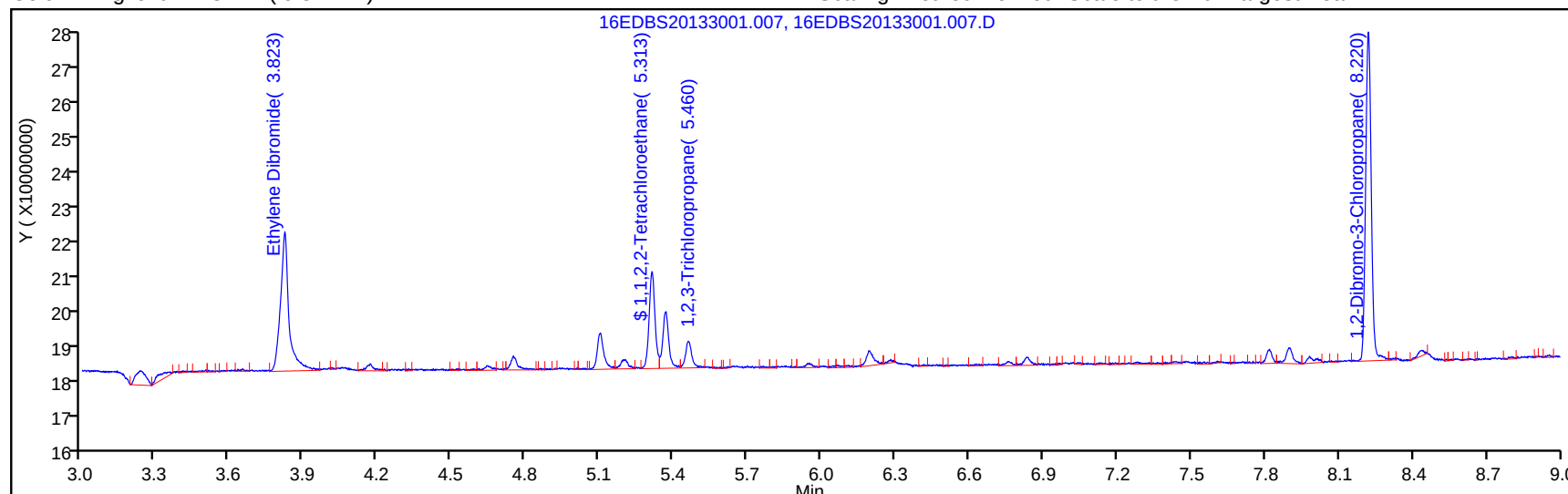
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

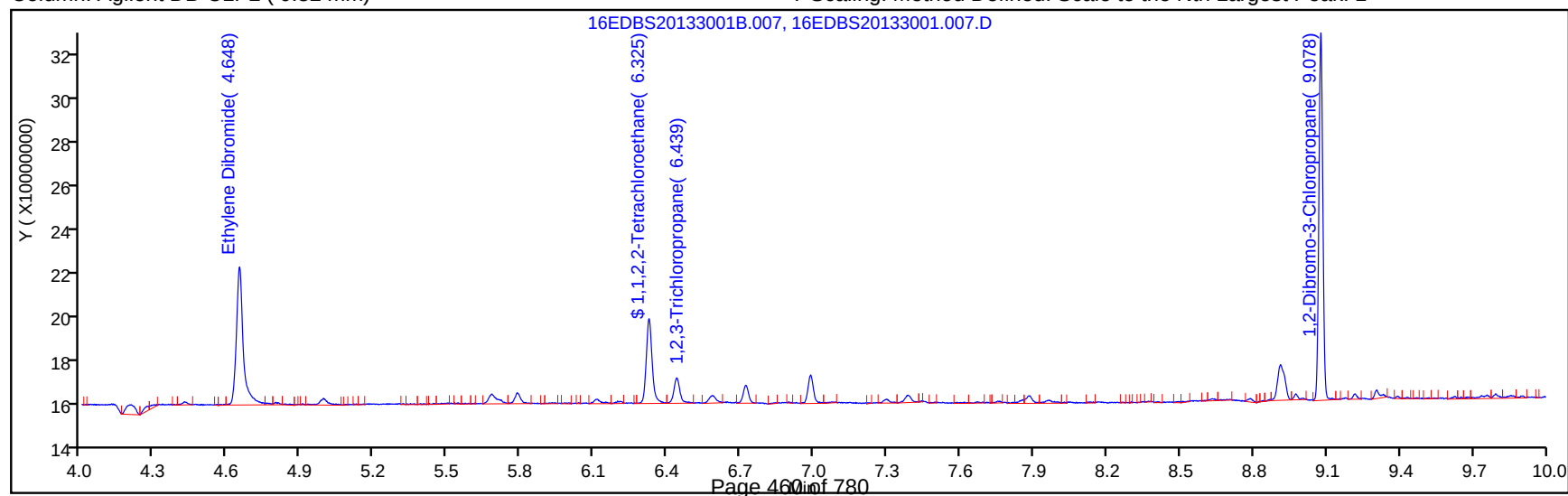
Column: Agilent DB-CLP1 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-460

Report Date: 14-May-2020 18:36:00

Chrom Revision: 2.3 12-May-2020 10:44:46

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.008.D
 Lims ID: IC EDB 5
 Client ID:
 Sample Type: IC Calib Level: 5
 Inject. Date: 12-May-2020 23:49:00 ALS Bottle#: 0 Worklist Smp#: 7
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: EDB_52024R AAEDB_5AA ICAL 2013299999 10398 SW-846 8011
 Operator ID: 13378 Instrument ID: 19853
 Sublist: chrom-8011_19853*sub1
 Method: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 14-May-2020 18:36:00 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1020

First Level Reviewer: brumbaughj

Date: 14-May-2020 17:42:23

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
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1 Ethylene Dibromide

1	3.827	3.823	0.004	72002740H	4.38	4.72	
2	4.651	4.648	0.003	109871998H	4.38	4.59	
RPD = 2.83							

\$ 2 1,1,2,2-Tetrachloroethane

1	5.315	5.313	0.002	48898438H	2.16	2.26	
2	6.327	6.325	0.002	70384579H	2.16	2.26	
RPD = 0.03							

3 1,2,3-Trichloropropane

1	5.463	5.460	0.003	13962704H	4.50	4.67	
2	6.440	6.439	0.001	20715709H	4.50	4.84	
RPD = 3.57							

4 1,2-Dibromo-3-Chloropropane

1	8.221	8.220	0.001	167659369H	4.39	4.34	
2	9.078	9.078	0.000	288744214H	4.39	4.30	
RPD = 0.95							

Reagents:

GCS_EDB5G_00001

Amount Added: 1.00

Units: mL

Report Date: 14-May-2020 18:36:00

Chrom Revision: 2.3 12-May-2020 10:44:46

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.008.D

Injection Date: 12-May-2020 23:49:00

Instrument ID: 19853

Operator ID: 13378

Lims ID: IC EDB 5

Worklist Smp#: 7

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

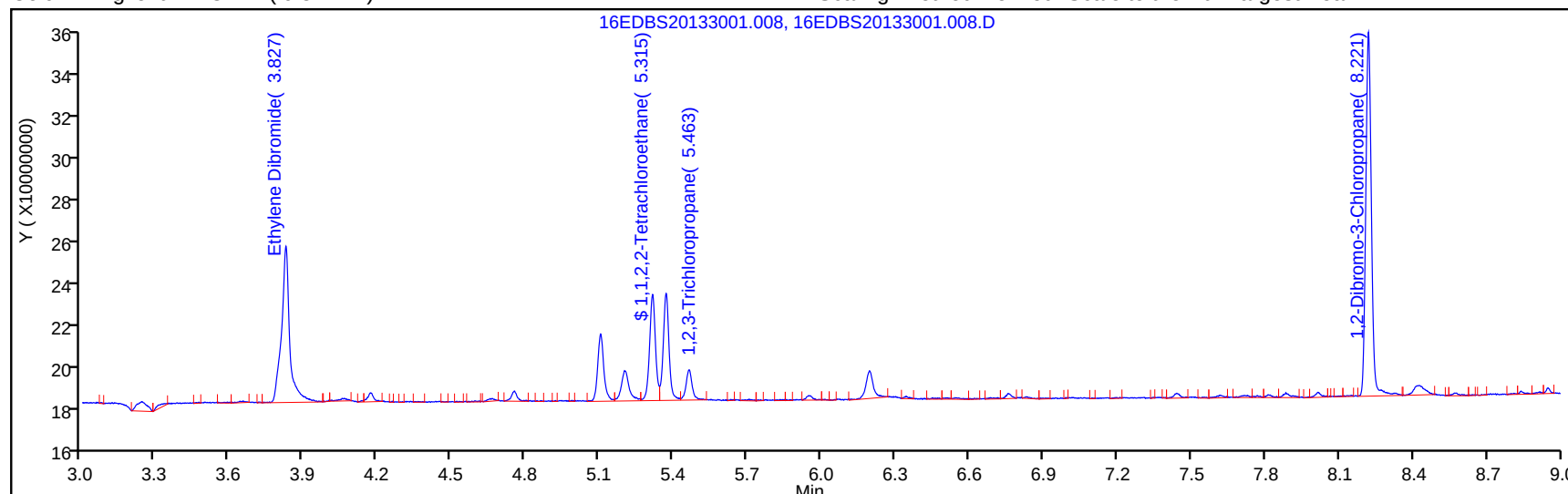
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

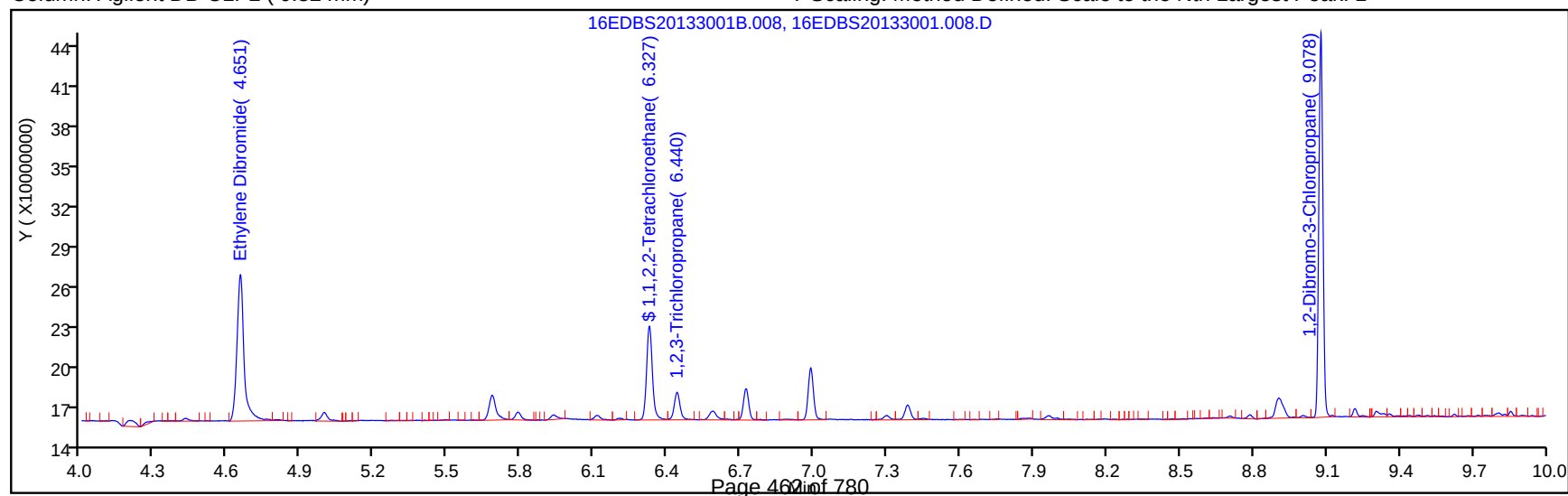
Column: Agilent DB-CLP1 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-462

Report Date: 14-May-2020 18:36:01

Chrom Revision: 2.3 12-May-2020 10:44:46

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Lims ID: IC EDB 6
 Client ID:
 Sample Type: IC Calib Level: 6
 Inject. Date: 13-May-2020 00:06:00 ALS Bottle#: 0 Worklist Smp#: 8
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: EDB_62024R AAEDB_6AA ICAL 2013299999 10398 SW-846 8011
 Operator ID: 13378 Instrument ID: 19853
 Sublist: chrom-8011_19853*sub1
 Method: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 14-May-2020 18:36:01 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1020

First Level Reviewer: brumbaughj

Date: 14-May-2020 17:42:43

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
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1 Ethylene Dibromide

1	3.820	3.823	-0.003	81995601H	6.26	5.38
2	4.646	4.648	-0.002	135517131H	6.26	5.66

RPD = 5.15

\$ 2 1,1,2,2-Tetrachloroethane

1	5.312	5.313	-0.001	60161501H	3.08	2.78
2	6.324	6.325	-0.001	88024468H	3.08	2.83

RPD = 1.60

3 1,2,3-Trichloropropane

1	5.461	5.460	0.001	17682491H	6.43	5.92
2	6.438	6.439	-0.001	26369763H	6.43	6.21

RPD = 4.73

4 1,2-Dibromo-3-Chloropropane

1	8.220	8.220	0.000	211177012H	6.27	5.47
2	9.078	9.078	0.000	382354350H	6.27	5.69

RPD = 4.05

Reagents:

GCS_EDB6G_00001

Amount Added: 1.00

Units: mL

Report Date: 14-May-2020 18:36:01

Chrom Revision: 2.3 12-May-2020 10:44:46

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D

Injection Date: 13-May-2020 00:06:00

Instrument ID: 19853

Operator ID: 13378

Lims ID: IC EDB 6

Worklist Smp#: 8

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

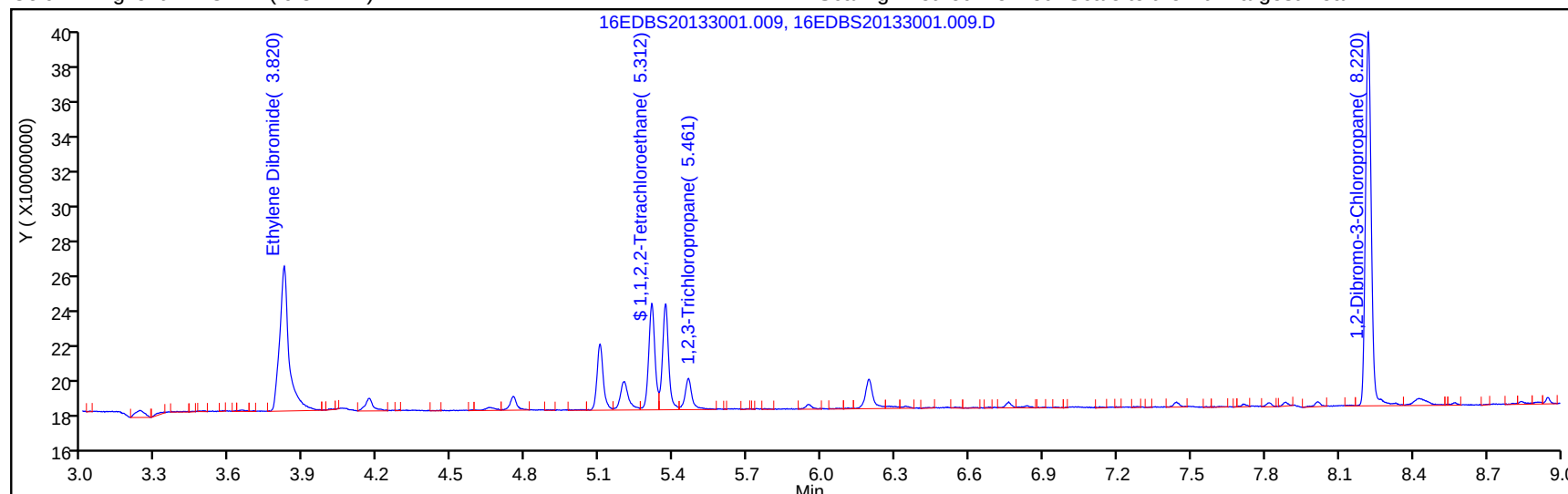
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

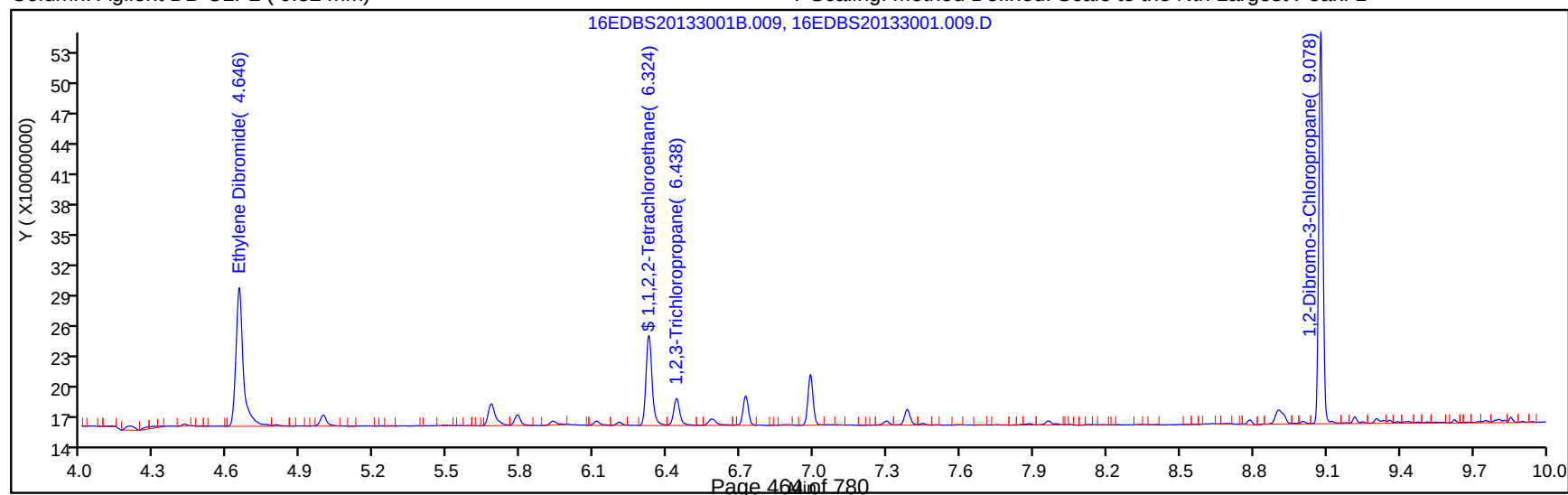
Column: Agilent DB-CLP1 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-464

FORM VI
GC SEMI VOA BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1 Analy Batch No.: 8526

SDG No.: _____

Instrument ID: 19853 GC Column: DB CLP2 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/12/2020 22:42 Calibration End Date: 05/13/2020 00:06 Calibration ID: 4353

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-8526/3	16EDBS20133001.004.D
Level 2	IC 410-8526/4	16EDBS20133001.005.D
Level 3	IC 410-8526/5	16EDBS20133001.006.D
Level 4	ICRT 410-8526/6	16EDBS20133001.007.D
Level 5	IC 410-8526/7	16EDBS20133001.008.D
Level 6	IC 410-8526/8	16EDBS20133001.009.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6					RT WINDOW	AVG RT
Ethylene Dibromide	4.650	4.650	4.648	4.648	4.651	4.646					4.398 - 4.898	4.649
1,2-Dibromo-3-Chloropropane	9.077	9.078	9.078	9.078	9.078	9.078					8.828 - 9.328	9.078
1,1,2,2-Tetrachloroethane	6.325	6.326	6.325	6.325	6.327	6.324					6.075 - 6.575	6.325

FORM VI
GC SEMI VOA BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1 Analy Batch No.: 8526

SDG No.: _____

Instrument ID: 19853 GC Column: DB CLP2 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/12/2020 22:42 Calibration End Date: 05/13/2020 00:06 Calibration ID: 4353

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-8526/3	16EDBS20133001.004.D
Level 2	IC 410-8526/4	16EDBS20133001.005.D
Level 3	IC 410-8526/5	16EDBS20133001.006.D
Level 4	ICRT 410-8526/6	16EDBS20133001.007.D
Level 5	IC 410-8526/7	16EDBS20133001.008.D
Level 6	IC 410-8526/8	16EDBS20133001.009.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3	LVL 4		B	M1	M2								
Ethylene Dibromide	23359500 25088511	22599508 21661080	26551433	24318020	Ave		23929675.3				7.4		10.0			
1,2-Dibromo-3-Chloropropane	67479883 65801274	71626718 60993715	72510965	64702542	Ave		67185849.4				6.5		10.0			
1,1,2,2-Tetrachloroethane	31670727 32632665	30374825 28567779	33335077	30312857	Ave		31148988.2				5.6		10.0			

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
GC SEMI VOA BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1 Analy Batch No.: 8526

SDG No.: _____

Instrument ID: 19853 GC Column: DB CLP2 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/12/2020 22:42 Calibration End Date: 05/13/2020 00:06 Calibration ID: 4353

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-8526/3	16EDBS20133001.004.D
Level 2	IC 410-8526/4	16EDBS20133001.005.D
Level 3	IC 410-8526/5	16EDBS20133001.006.D
Level 4	ICRT 410-8526/6	16EDBS20133001.007.D
Level 5	IC 410-8526/7	16EDBS20133001.008.D
Level 6	IC 410-8526/8	16EDBS20133001.009.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
		LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Ethylene Dibromide	Ave	8184001 135517131	14138817	33222480	60855846	109871998	0.350 6.26	0.626	1.25	2.50	4.38
1,2-Dibromo-3-Chloropropane	Ave	23688813 382354350	44900999	90910622	162241623	288744214	0.351 6.27	0.627	1.25	2.51	4.39
1,1,2,2-Tetrachloroethane	Ave	5464784 88024468	9359243	20542741	37360596	70384579	0.173 3.08	0.308	0.616	1.23	2.16

Curve Type Legend:

Ave = Average by Height

Report Date: 14-May-2020 18:35:57

Chrom Revision: 2.3 12-May-2020 10:44:46

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.004.D
 Lims ID: IC EDB 1
 Client ID:
 Sample Type: IC Calib Level: 1
 Inject. Date: 12-May-2020 22:42:00 ALS Bottle#: 0 Worklist Smp#: 3
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: EDB_12024R AAEDB_1AA ICAL 2013299999 10398 SW-846 8011
 Operator ID: 13378 Instrument ID: 19853
 Sublist: chrom-8011_19853*sub1
 Method: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 14-May-2020 18:35:56 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1020

First Level Reviewer: brumbaughj

Date: 14-May-2020 17:42:13

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
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1 Ethylene Dibromide

1	3.824	3.823	0.001	5263999H	0.3504	0.3453	
2	4.650	4.648	0.002	8184001H	0.3504	0.3420	
RPD = 0.96							

\$ 2 1,1,2,2-Tetrachloroethane

1	5.313	5.313	0.000	3694522H	0.1726	0.1708	
2	6.325	6.325	0.000	5464784H	0.1726	0.1754	
RPD = 2.69							

3 1,2,3-Trichloropropane

1	5.459	5.460	-0.001	1049231H	0.3602	0.3513	
2	6.438	6.439	-0.001	2053461H	0.3602	0.3489	
RPD = 0.67							

4 1,2-Dibromo-3-Chloropropane

1	8.222	8.220	0.002	14434411H	0.3511	0.3736	
2	9.077	9.078	-0.001	23688813H	0.3511	0.3526	
RPD = 5.77							

Reagents:

GCS_EDB1G_00001

Amount Added: 1.00

Units: mL

Report Date: 14-May-2020 18:35:57

Chrom Revision: 2.3 12-May-2020 10:44:46

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.004.D

Injection Date: 12-May-2020 22:42:00

Instrument ID: 19853

Operator ID: 13378

Lims ID: IC EDB 1

Worklist Smp#: 3

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

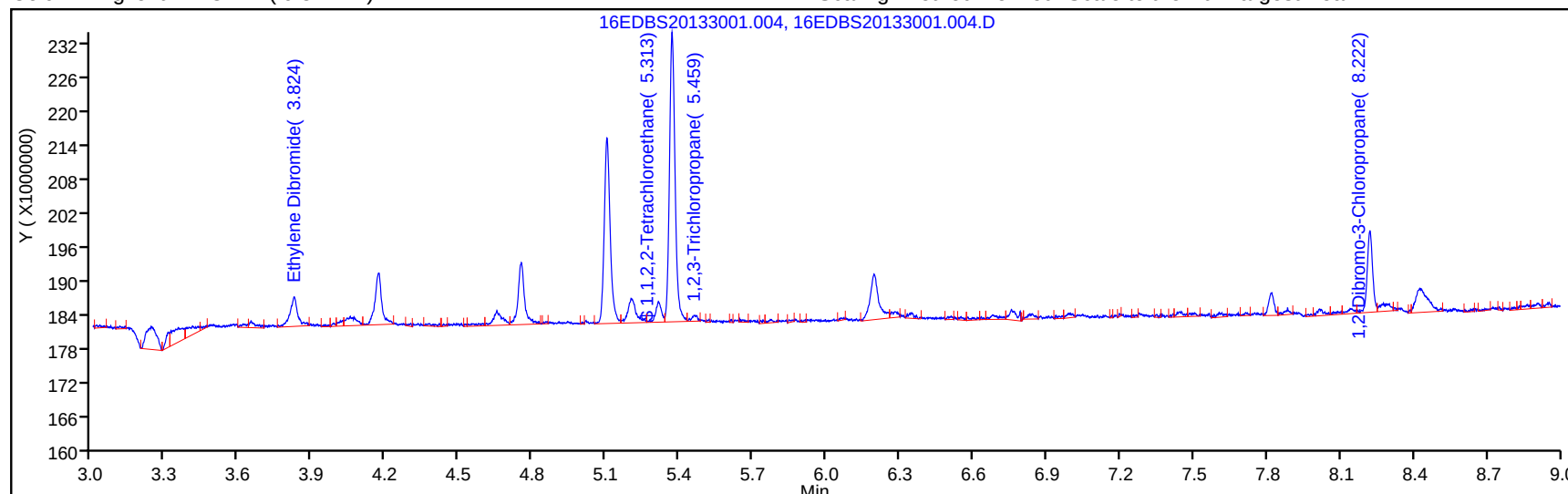
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

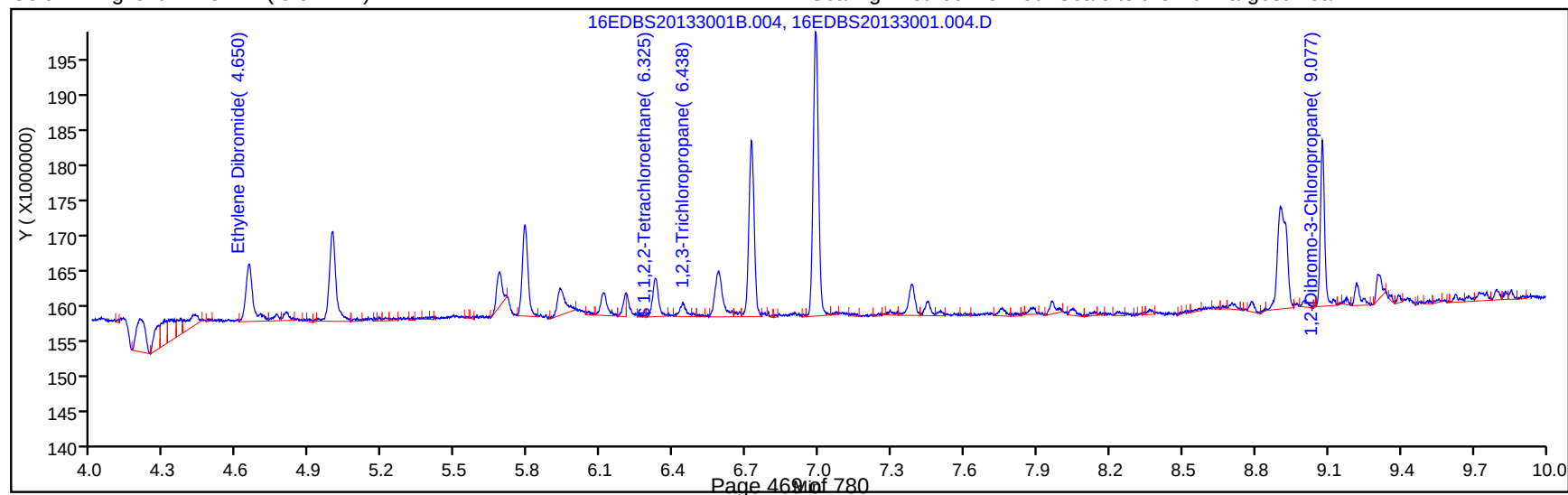
Column: Agilent DB-CLP1 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-469

Report Date: 14-May-2020 18:35:58

Chrom Revision: 2.3 12-May-2020 10:44:46

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.005.D
 Lims ID: IC EDB 2
 Client ID:
 Sample Type: IC Calib Level: 2
 Inject. Date: 12-May-2020 22:59:00 ALS Bottle#: 0 Worklist Smp#: 4
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: EDB_22024R AAEDB_2AA ICAL 2013299999 10398 SW-846 8011
 Operator ID: 13378 Instrument ID: 19853
 Sublist: chrom-8011_19853*sub1
 Method: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 14-May-2020 18:35:57 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1020

First Level Reviewer: brumbaughj

Date: 14-May-2020 17:41:54

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
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1 Ethylene Dibromide

1	3.828	3.823	0.005	9314931H	0.6256	0.6111	
2	4.650	4.648	0.002	14138817H	0.6256	0.5908	
RPD = 3.36							

\$ 2 1,1,2,2-Tetrachloroethane

1	5.315	5.313	0.002	6439038H	0.3081	0.2976	
2	6.326	6.325	0.001	9359243H	0.3081	0.3005	
RPD = 0.95							

3 1,2,3-Trichloropropane

1	5.462	5.460	0.002	1868379H	0.6431	0.6255	
2	6.441	6.439	0.002	2752808H	0.6431	0.5174	
RPD = 18.92							

4 1,2-Dibromo-3-Chloropropane

1	8.221	8.220	0.001	26058323H	0.6269	0.6744	
2	9.078	9.078	0.000	44900999H	0.6269	0.6683	
RPD = 0.90							

Reagents:

GCS_EDB2G_00001

Amount Added: 1.00

Units: mL

Report Date: 14-May-2020 18:35:58

Chrom Revision: 2.3 12-May-2020 10:44:46

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.005.D

Injection Date: 12-May-2020 22:59:00

Instrument ID: 19853

Operator ID: 13378

Lims ID: IC EDB 2

Worklist Smp#: 4

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

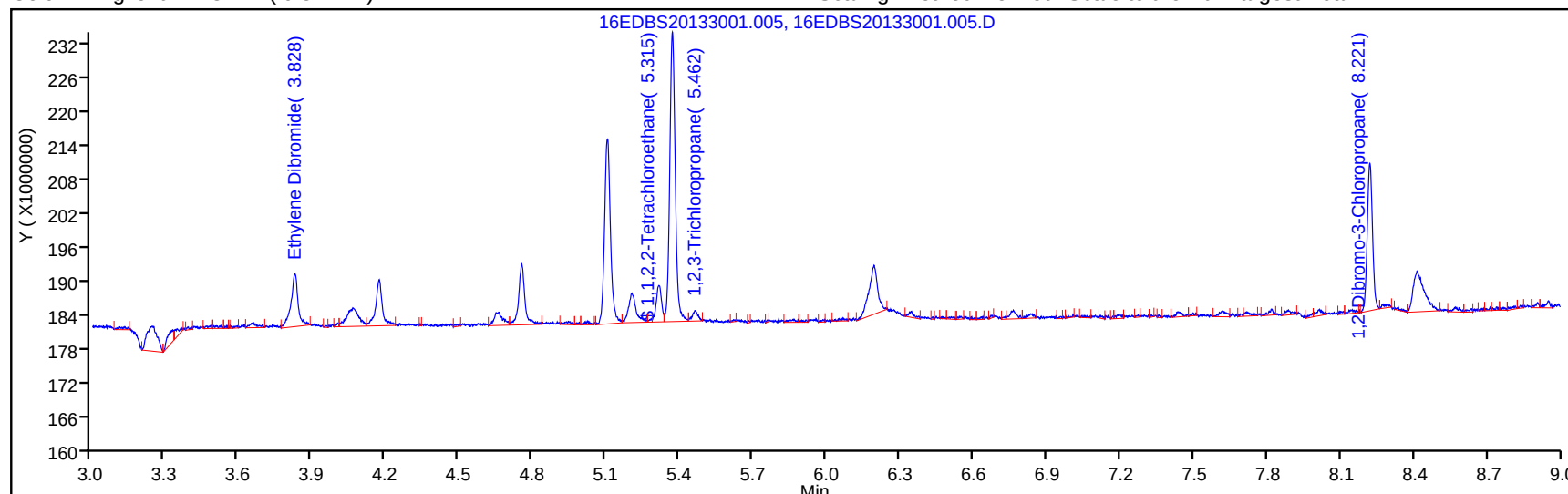
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

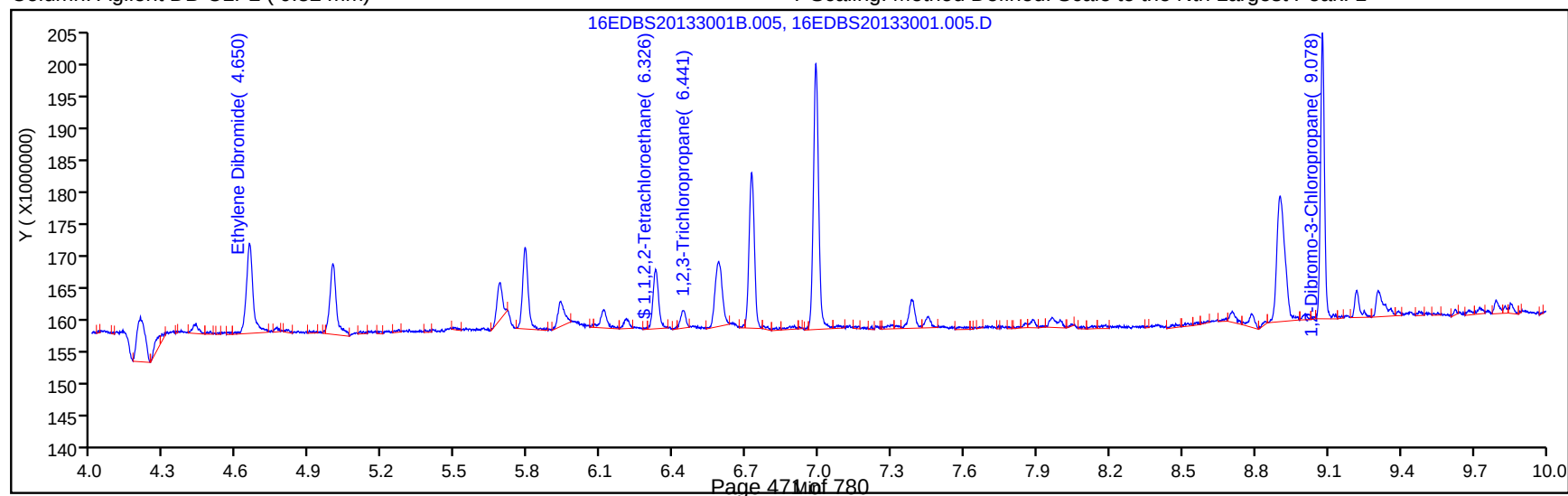
Column: Agilent DB-CLP1 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-471

Report Date: 14-May-2020 18:35:58

Chrom Revision: 2.3 12-May-2020 10:44:46

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.006.D
 Lims ID: IC EDB 3
 Client ID:
 Sample Type: IC Calib Level: 3
 Inject. Date: 12-May-2020 23:16:00 ALS Bottle#: 0 Worklist Smp#: 5
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: EDB_32024AA AAEDB_3AA ICAL 2013299999 10398 SW-846 8011
 Operator ID: 13378 Instrument ID: 19853
 Sublist: chrom-8011_19853*sub1
 Method: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 14-May-2020 18:35:58 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECD
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECD
 Process Host: CTX1020

First Level Reviewer: brumbaughj Date: 14-May-2020 17:41:44

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
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1 Ethylene Dibromide

1	3.823	3.823	0.000	21029729H	1.25	1.38
2	4.648	4.648	0.000	33222480H	1.25	1.39

RPD = 0.64

\$ 2 1,1,2,2-Tetrachloroethane

1	5.313	5.313	0.000	14669735H	0.6163	0.6781
2	6.325	6.325	0.000	20542741H	0.6163	0.6595

RPD = 2.78

3 1,2,3-Trichloropropane

1	5.463	5.460	0.003	4395537H	1.29	1.47
2	6.437	6.439	-0.002	6139670H	1.29	1.33

RPD = 9.86

4 1,2-Dibromo-3-Chloropropane

1	8.220	8.220	0.000	51894131H	1.25	1.34
2	9.078	9.078	0.000	90910622H	1.25	1.35

RPD = 0.75

Reagents:

GCS_EDB3P_00001

Amount Added: 1.00

Units: mL

Report Date: 14-May-2020 18:35:58

Chrom Revision: 2.3 12-May-2020 10:44:46

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.006.D

Injection Date: 12-May-2020 23:16:00

Instrument ID: 19853

Operator ID: 13378

Lims ID: IC EDB 3

Worklist Smp#: 5

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

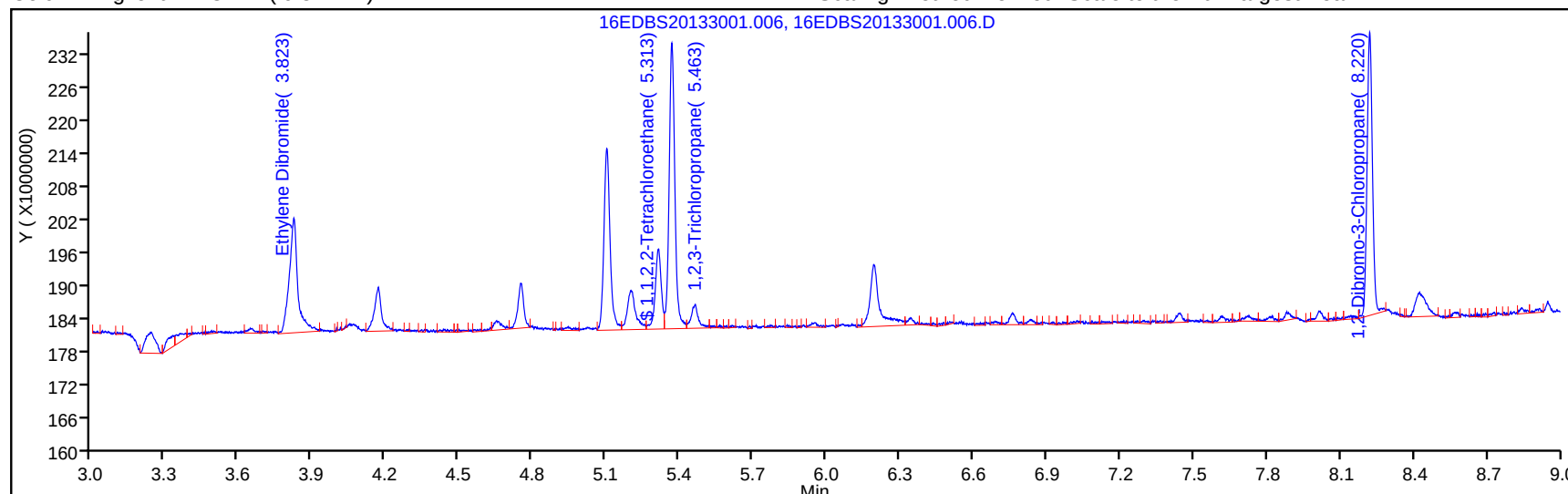
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

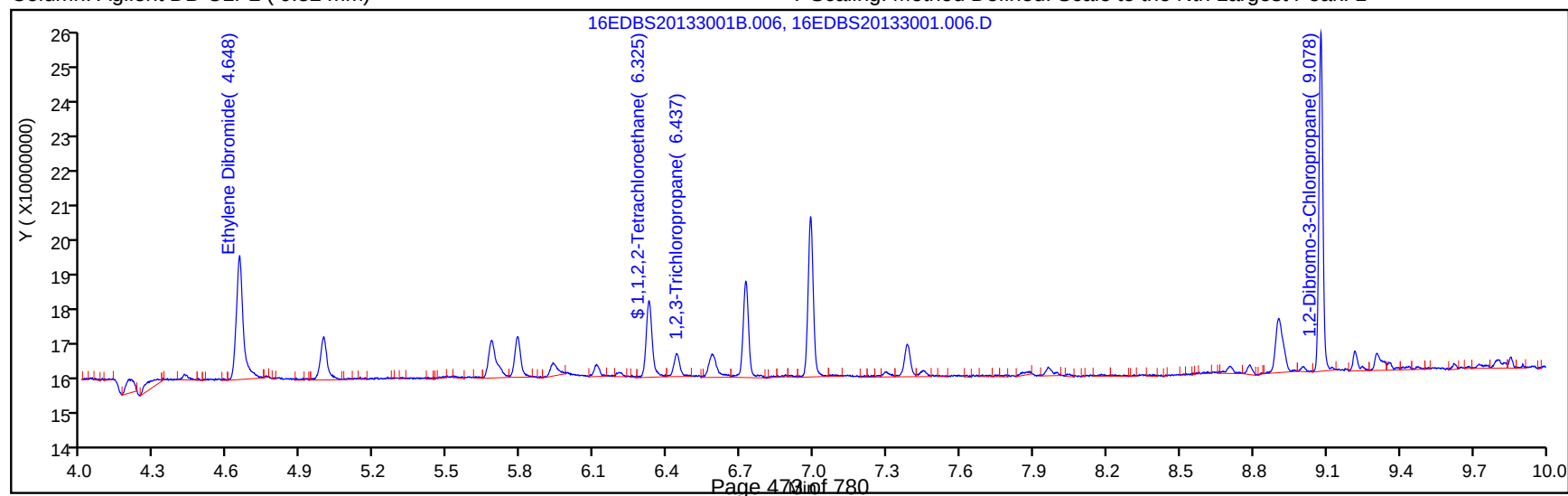
Column: Agilent DB-CLP1 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-473

Report Date: 14-May-2020 18:35:59

Chrom Revision: 2.3 12-May-2020 10:44:46

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.007.D
 Lims ID: ICRT EDB 4
 Client ID:
 Sample Type: ICRT Calib Level: 4
 Inject. Date: 12-May-2020 23:32:00 ALS Bottle#: 0 Worklist Smp#: 6
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: EDB_42024AY AAEDB_4AA ICAL 2013299999 10398 SW-846 8011
 Operator ID: 13378 Instrument ID: 19853
 Sublist: chrom-8011_19853*sub1
 Method: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 14-May-2020 18:35:59 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECD
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECD
 Process Host: CTX1020

First Level Reviewer: brumbaughj Date: 14-May-2020 17:41:36

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
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1 Ethylene Dibromide

1	3.823	3.823	0.000	38025613H	2.50	2.49	
2	4.648	4.648	0.000	60855846H	2.50	2.54	

RPD = 1.93

\$ 2 1,1,2,2-Tetrachloroethane

1	5.313	5.313	0.000	26488890H	1.23	1.22	
2	6.325	6.325	0.000	37360596H	1.23	1.20	

RPD = 2.06

3 1,2,3-Trichloropropane

1	5.460	5.460	0.000	7294866H	2.57	2.44	
2	6.439	6.439	0.000	11169978H	2.57	2.54	

RPD = 4.12

4 1,2-Dibromo-3-Chloropropane

1	8.220	8.220	0.000	89951201H	2.51	2.33	
2	9.078	9.078	0.000	162241623H	2.51	2.41	

RPD = 3.67

Reagents:

GCS_EDB4AC_00001

Amount Added: 1.00

Units: mL

Report Date: 14-May-2020 18:35:59

Chrom Revision: 2.3 12-May-2020 10:44:46

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.007.D

Injection Date: 12-May-2020 23:32:00

Instrument ID: 19853

Operator ID: 13378

Lims ID: ICRT EDB 4

Worklist Smp#: 6

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

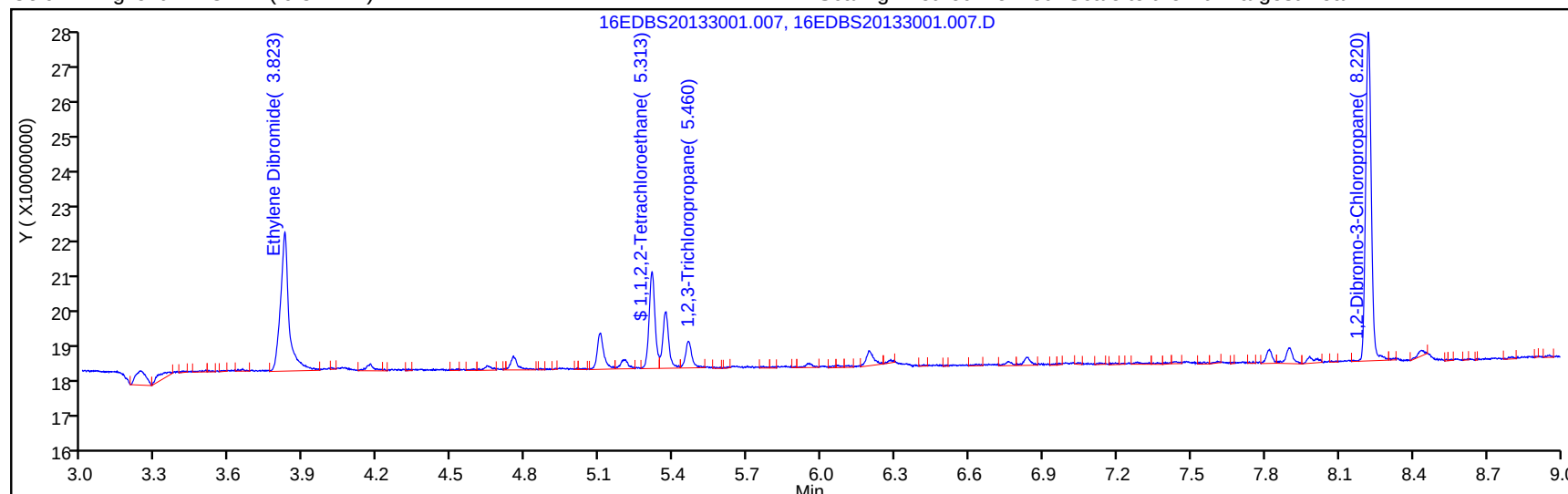
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

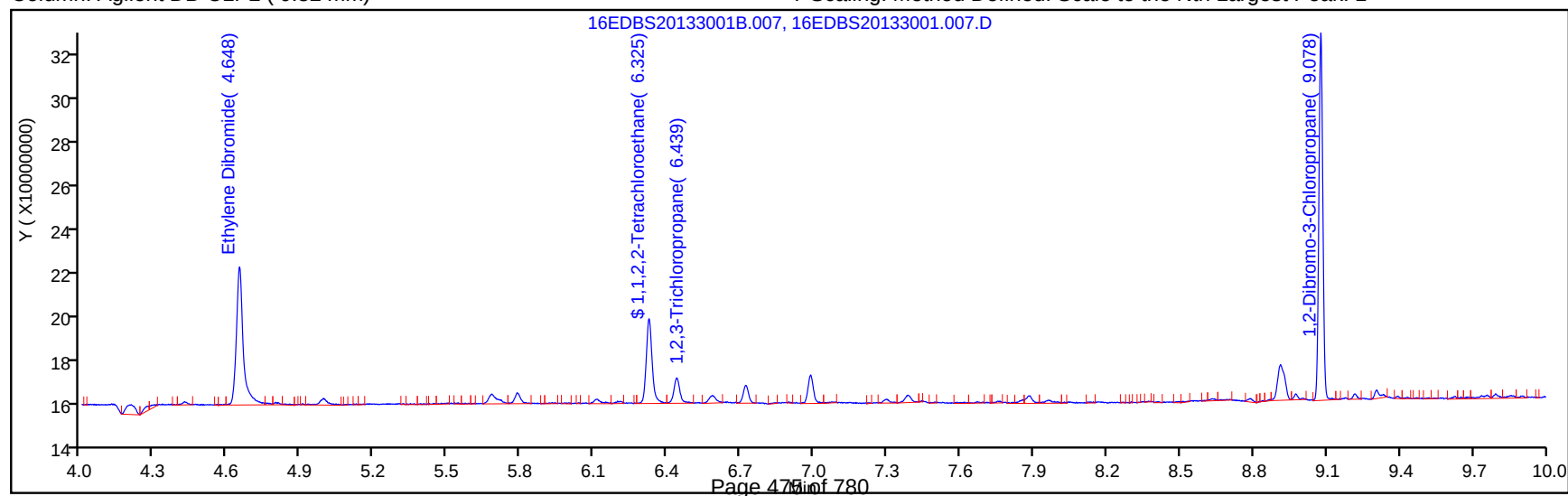
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Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



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Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-475

Report Date: 14-May-2020 18:36:00

Chrom Revision: 2.3 12-May-2020 10:44:46

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.008.D
 Lims ID: IC EDB 5
 Client ID:
 Sample Type: IC Calib Level: 5
 Inject. Date: 12-May-2020 23:49:00 ALS Bottle#: 0 Worklist Smp#: 7
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: EDB_52024R AAEDB_5AA ICAL 2013299999 10398 SW-846 8011
 Operator ID: 13378 Instrument ID: 19853
 Sublist: chrom-8011_19853*sub1
 Method: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 14-May-2020 18:36:00 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1020

First Level Reviewer: brumbaughj

Date: 14-May-2020 17:42:23

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
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1 Ethylene Dibromide

1	3.827	3.823	0.004	72002740H	4.38	4.72
2	4.651	4.648	0.003	109871998H	4.38	4.59

RPD = 2.83

\$ 2 1,1,2,2-Tetrachloroethane

1	5.315	5.313	0.002	48898438H	2.16	2.26
2	6.327	6.325	0.002	70384579H	2.16	2.26

RPD = 0.03

3 1,2,3-Trichloropropane

1	5.463	5.460	0.003	13962704H	4.50	4.67
2	6.440	6.439	0.001	20715709H	4.50	4.84

RPD = 3.57

4 1,2-Dibromo-3-Chloropropane

1	8.221	8.220	0.001	167659369H	4.39	4.34
2	9.078	9.078	0.000	288744214H	4.39	4.30

RPD = 0.95

Reagents:

GCS_EDB5G_00001

Amount Added: 1.00

Units: mL

Report Date: 14-May-2020 18:36:00

Chrom Revision: 2.3 12-May-2020 10:44:46

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.008.D

Injection Date: 12-May-2020 23:49:00

Instrument ID: 19853

Operator ID: 13378

Lims ID: IC EDB 5

Worklist Smp#: 7

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

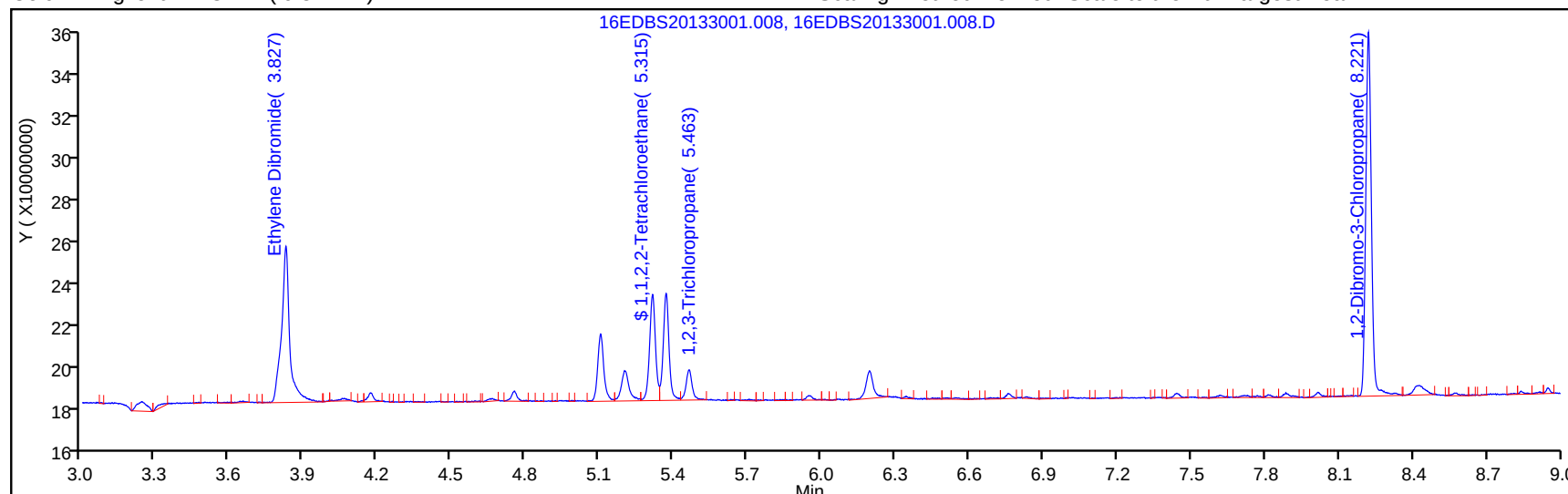
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

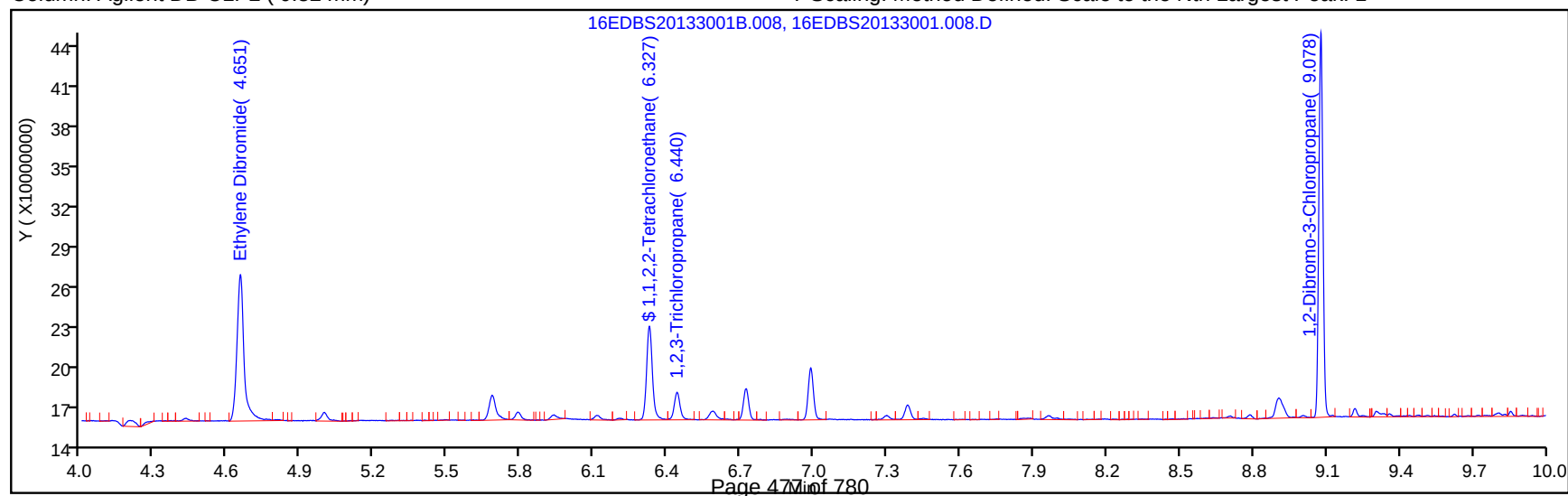
Column: Agilent DB-CLP1 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-477

Report Date: 14-May-2020 18:36:01

Chrom Revision: 2.3 12-May-2020 10:44:46

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Lims ID: IC EDB 6
 Client ID:
 Sample Type: IC Calib Level: 6
 Inject. Date: 13-May-2020 00:06:00 ALS Bottle#: 0 Worklist Smp#: 8
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: EDB_62024R AAEDB_6AA ICAL 2013299999 10398 SW-846 8011
 Operator ID: 13378 Instrument ID: 19853
 Sublist: chrom-8011_19853*sub1
 Method: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 14-May-2020 18:36:01 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1020

First Level Reviewer: brumbaughj

Date: 14-May-2020 17:42:43

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
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1 Ethylene Dibromide

1	3.820	3.823	-0.003	81995601H	6.26	5.38
2	4.646	4.648	-0.002	135517131H	6.26	5.66

RPD = 5.15

\$ 2 1,1,2,2-Tetrachloroethane

1	5.312	5.313	-0.001	60161501H	3.08	2.78
2	6.324	6.325	-0.001	88024468H	3.08	2.83

RPD = 1.60

3 1,2,3-Trichloropropane

1	5.461	5.460	0.001	17682491H	6.43	5.92
2	6.438	6.439	-0.001	26369763H	6.43	6.21

RPD = 4.73

4 1,2-Dibromo-3-Chloropropane

1	8.220	8.220	0.000	211177012H	6.27	5.47
2	9.078	9.078	0.000	382354350H	6.27	5.69

RPD = 4.05

Reagents:

GCS_EDB6G_00001

Amount Added: 1.00

Units: mL

Report Date: 14-May-2020 18:36:01

Chrom Revision: 2.3 12-May-2020 10:44:46

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D

Injection Date: 13-May-2020 00:06:00

Instrument ID: 19853

Operator ID: 13378

Lims ID: IC EDB 6

Worklist Smp#: 8

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

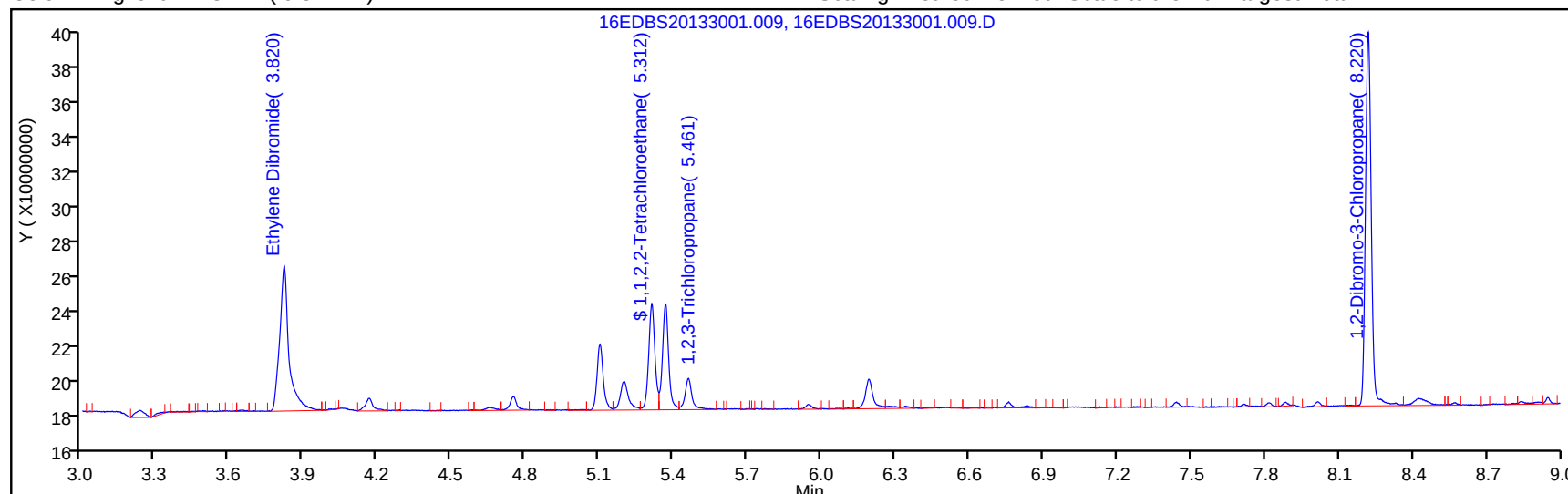
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

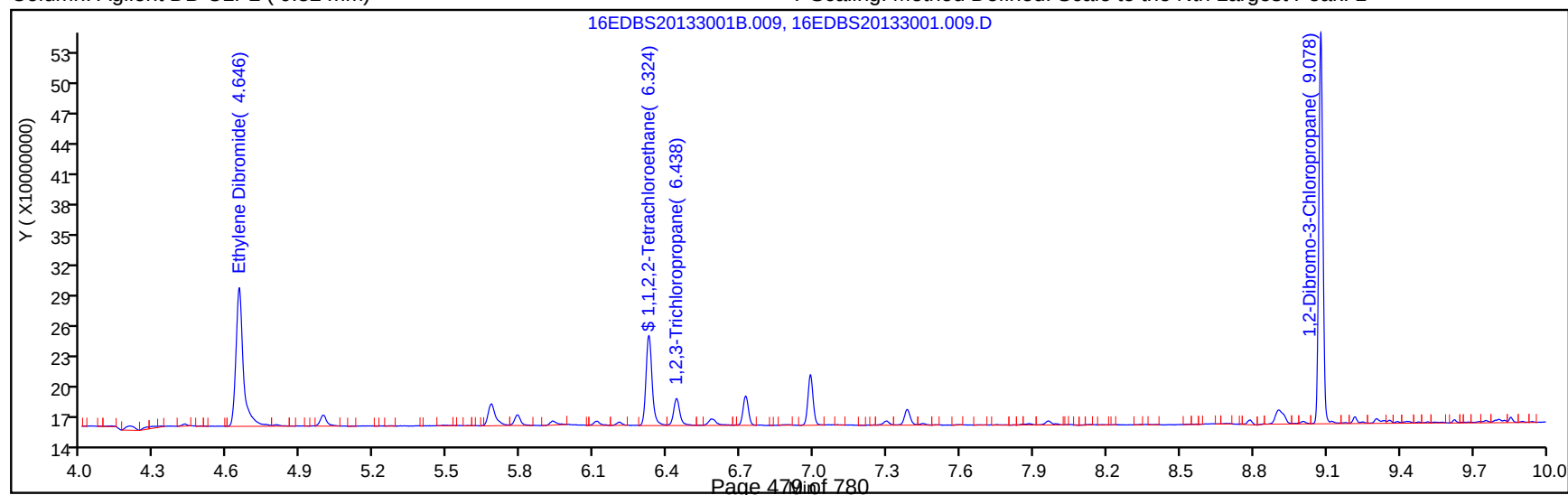
Column: Agilent DB-CLP1 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-479

FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1
 SDG No.: _____
 Lab Sample ID: ICV 410-8526/11 Calibration Date: 05/13/2020 00:56
 Instrument ID: 19853 Calib Start Date: 05/12/2020 22:42
 GC Column: DB CLP1 ID: 0.32 (mm) Calib End Date: 05/13/2020 00:06
 Lab File ID: 16EDBS20133001.012.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethylene Dibromide	Ave	15243919	17228157		1.40	1.25	13.0	40.0
1,2,3-Trichloropropane	Ave	2987084	3632313		1.80	1.29	21.6	
1,2-Dibromo-3-Chloropropane	Ave	38640867	38752350		1.30	1.25	0.3	40.0
1,1,2,2-Tetrachloroethane	Ave	21633606	24587002		0.700	0.616	13.7	40.0

FORM VII
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1
 SDG No.: _____
 Lab Sample ID: ICV 410-8526/11 Calibration Date: 05/13/2020 00:56
 Instrument ID: 19853 Calib Start Date: 05/12/2020 22:42
 GC Column: DB CLP1 ID: 0.32 (mm) Calib End Date: 05/13/2020 00:06
 Lab File ID: 16EDBS20133001.012.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethylene Dibromide	3.82	3.57	4.07
1,2,3-Trichloropropane	5.46	5.21	5.71
1,2-Dibromo-3-Chloropropane	8.22	7.97	8.47
1,1,2,2-Tetrachloroethane	5.31	5.06	5.56

Report Date: 14-May-2020 18:36:39

Chrom Revision: 2.3 12-May-2020 10:44:46

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.012.D
 Lims ID: ICV
 Client ID:
 Sample Type: ICV
 Inject. Date: 13-May-2020 00:56:00 ALS Bottle#: 0 Worklist Smp#: 11
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: ICEBX2024Y AAICEBXAA CCAL 2013299999 10398 SW-846 8011
 Operator ID: 13378 Instrument ID: 19853
 Sublist:

Method: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 14-May-2020 18:36:01 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1020

First Level Reviewer: brumbaughj

Date: 14-May-2020 18:35:56

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
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1 Ethylene Dibromide

1	3.822	3.823	-0.001	21556732H	1.25	1.41
2	4.648	4.648	0.000	33488682H	1.25	1.40

RPD = 1.04

\$ 2 1,1,2,2-Tetrachloroethane

1	5.314	5.313	0.001	15151740H	0.6163	0.7004
2	6.326	6.325	0.001	20823874H	0.6163	0.6685

RPD = 4.65

3 1,2,3-Trichloropropane

1	5.458	5.460	-0.002	4672062H	1.29	1.56
2	6.439	6.439	0.000	6198518H	1.29	1.35

RPD = 14.89

4 1,2-Dibromo-3-Chloropropane

1	8.220	8.220	0.000	48585759H	1.25	1.26
2	9.077	9.078	-0.001	88111988H	1.25	1.31

RPD = 4.21

Reagents:

GCS_EDBICVK_00001

Amount Added: 1.00

Units: mL

Report Date: 14-May-2020 18:36:39

Chrom Revision: 2.3 12-May-2020 10:44:46

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.012.D

Injection Date: 13-May-2020 00:56:00

Instrument ID: 19853

Operator ID: 13378

Lims ID: ICV

Worklist Smp#: 11

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

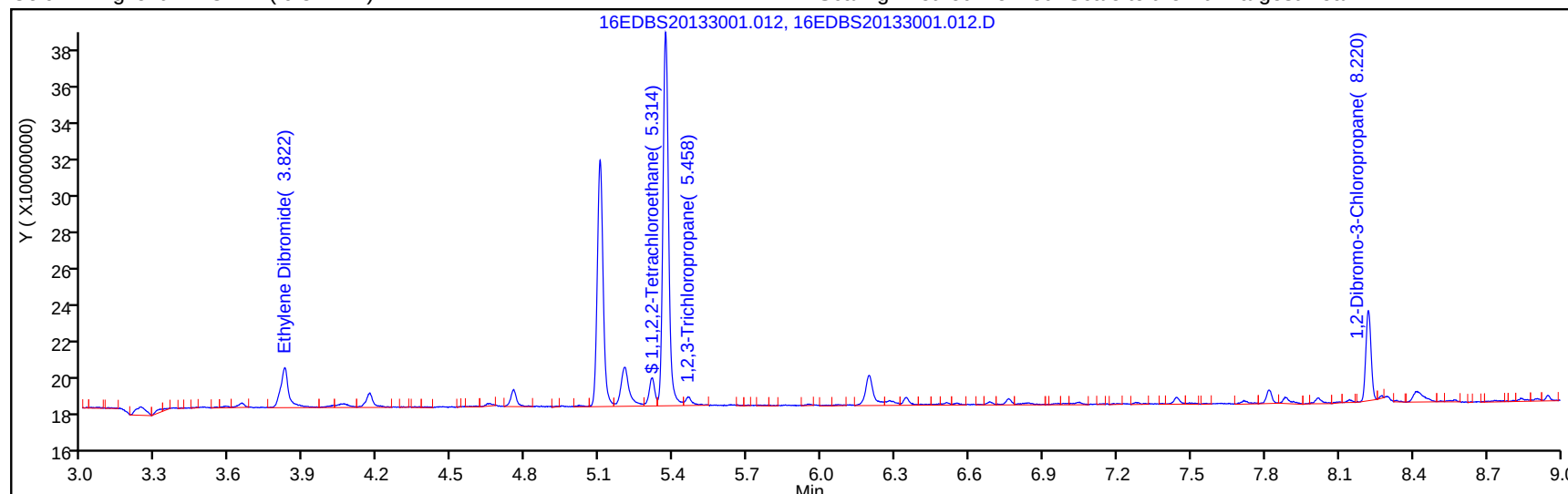
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

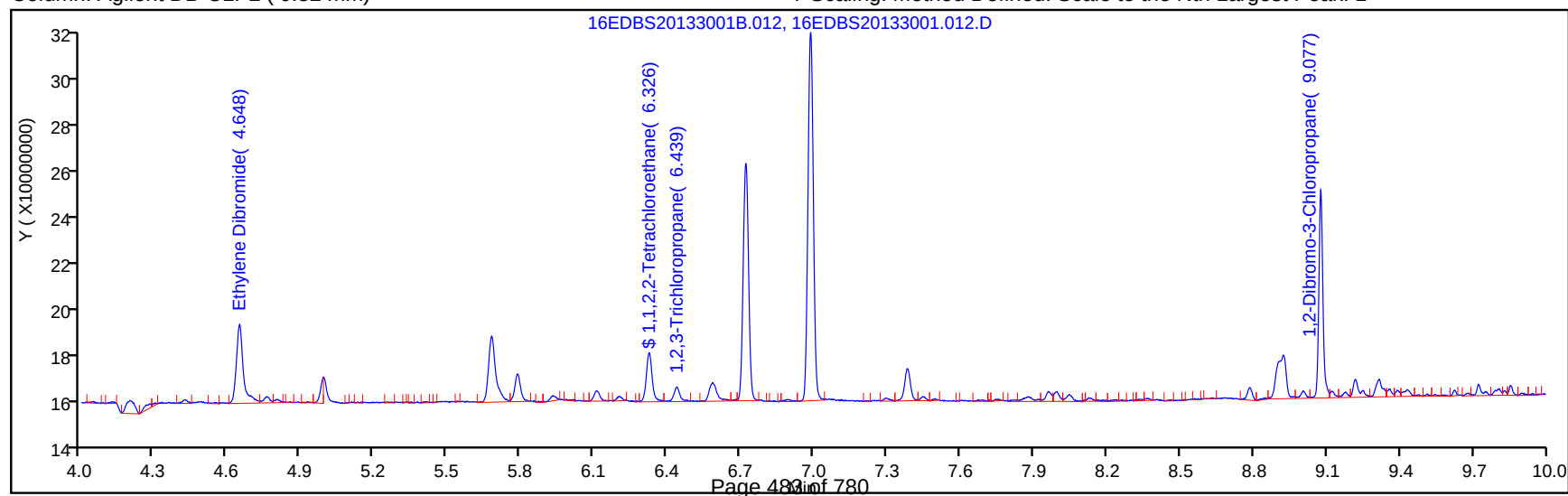
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Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-483

FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1
 SDG No.: _____
 Lab Sample ID: ICV 410-8526/11 Calibration Date: 05/13/2020 00:56
 Instrument ID: 19853 Calib Start Date: 05/12/2020 22:42
 GC Column: DB CLP2 ID: 0.32 (mm) Calib End Date: 05/13/2020 00:06
 Lab File ID: 16EDBS20133001.012.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethylene Dibromide	Ave	23929675	26764181		1.40	1.25	11.8	40.0
1,2,3-Trichloropropane	Lin		4819062		1.80	1.29	4.8	15.0
1,2-Dibromo-3-Chloropropane	Ave	67185849	70278754		1.30	1.25	4.6	40.0
1,1,2,2-Tetrachloroethane	Ave	31148988	33791276		0.670	0.616	8.5	40.0

FORM VII
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1
 SDG No.: _____
 Lab Sample ID: ICV 410-8526/11 Calibration Date: 05/13/2020 00:56
 Instrument ID: 19853 Calib Start Date: 05/12/2020 22:42
 GC Column: DB CLP2 ID: 0.32 (mm) Calib End Date: 05/13/2020 00:06
 Lab File ID: 16EDBS20133001.012.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethylene Dibromide	4.65	4.40	4.90
1,2,3-Trichloropropane	6.44	6.19	6.69
1,2-Dibromo-3-Chloropropane	9.08	8.83	9.33
1,1,2,2-Tetrachloroethane	6.33	6.08	6.58

Report Date: 14-May-2020 18:36:39

Chrom Revision: 2.3 12-May-2020 10:44:46

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.012.D
 Lims ID: ICV
 Client ID:
 Sample Type: ICV
 Inject. Date: 13-May-2020 00:56:00 ALS Bottle#: 0 Worklist Smp#: 11
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: ICEBX2024Y AAICEBXAA CCAL 2013299999 10398 SW-846 8011
 Operator ID: 13378 Instrument ID: 19853
 Sublist:

Method: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 14-May-2020 18:36:01 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1020

First Level Reviewer: brumbaughj Date: 14-May-2020 18:35:56

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
-----	--------------	------------------	------------------	----------	-----------------	-------------------	-------

1 Ethylene Dibromide

1	3.822	3.823	-0.001	21556732H	1.25	1.41
2	4.648	4.648	0.000	33488682H	1.25	1.40

RPD = 1.04

\$ 2 1,1,2,2-Tetrachloroethane

1	5.314	5.313	0.001	15151740H	0.6163	0.7004
2	6.326	6.325	0.001	20823874H	0.6163	0.6685

RPD = 4.65

3 1,2,3-Trichloropropane

1	5.458	5.460	-0.002	4672062H	1.29	1.56
2	6.439	6.439	0.000	6198518H	1.29	1.35

RPD = 14.89

4 1,2-Dibromo-3-Chloropropane

1	8.220	8.220	0.000	48585759H	1.25	1.26
2	9.077	9.078	-0.001	88111988H	1.25	1.31

RPD = 4.21

Reagents:

GCS_EDBICVK_00001

Amount Added: 1.00

Units: mL

Report Date: 14-May-2020 18:36:39

Chrom Revision: 2.3 12-May-2020 10:44:46

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.012.D

Injection Date: 13-May-2020 00:56:00

Instrument ID: 19853

Operator ID: 13378

Lims ID: ICV

Worklist Smp#: 11

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

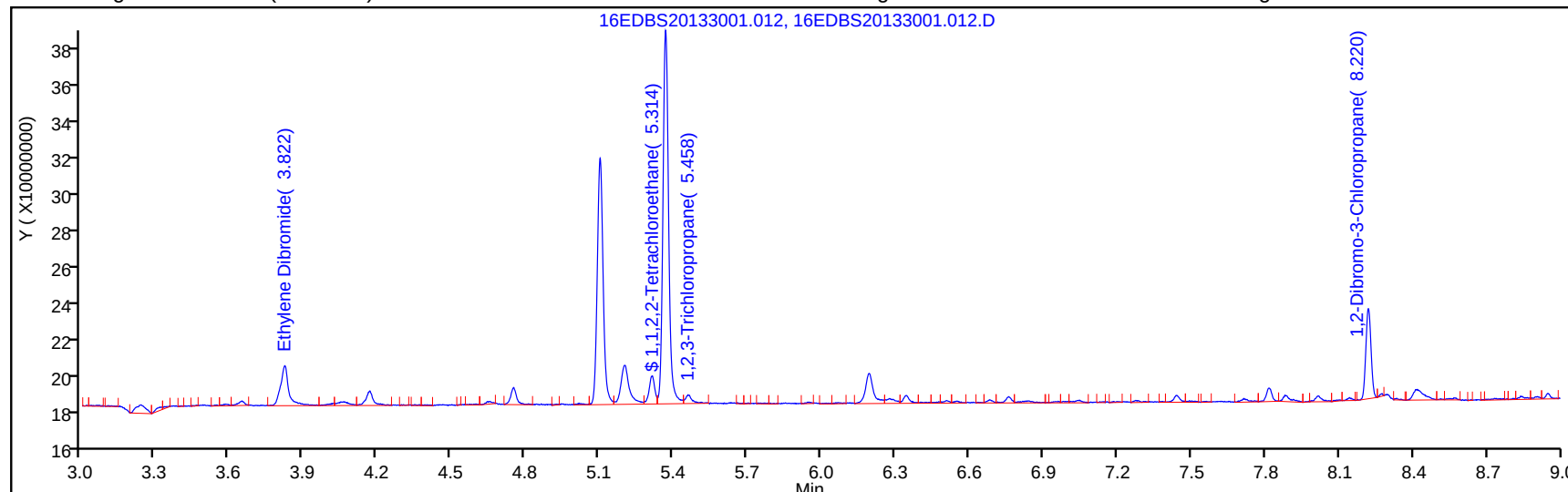
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

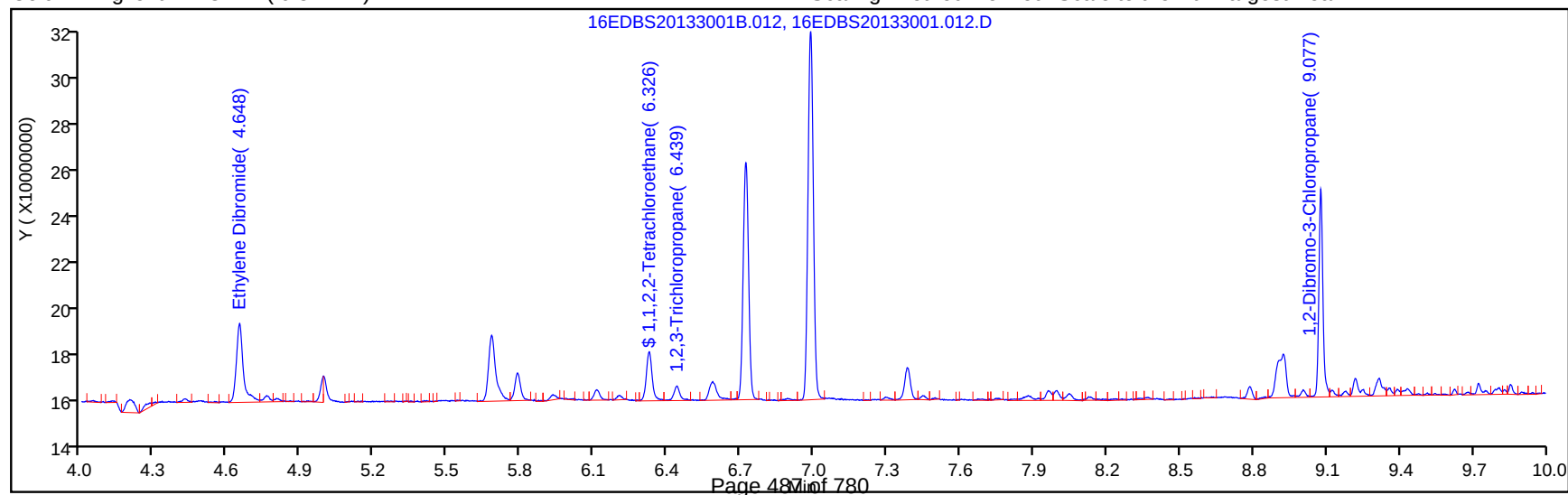
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Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-487

FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1
 SDG No.: _____
 Lab Sample ID: CCV 410-11304/18 Calibration Date: 06/08/2020 22:43
 Instrument ID: 19853 Calib Start Date: 05/12/2020 22:42
 GC Column: DB CLP1 ID: 0.32 (mm) Calib End Date: 05/13/2020 00:06
 Lab File ID: 16EDBS20133016.020.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethylene Dibromide	Ave	15243919	12311043		2.02	2.50	-19.2	40.0
1,2-Dibromo-3-Chloropropane	Ave	38640867	35509293		2.30	2.51	-8.1	40.0
1,1,2,2-Tetrachloroethane	Ave	21633606	19176488		1.09	1.23	-11.4	40.0

FORM VII
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1
SDG No.: _____
Lab Sample ID: CCV 410-11304/18 Calibration Date: 06/08/2020 22:43
Instrument ID: 19853 Calib Start Date: 05/12/2020 22:42
GC Column: DB CLP1 ID: 0.32 (mm) Calib End Date: 05/13/2020 00:06
Lab File ID: 16EDBS20133016.020.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethylene Dibromide	3.80	3.57	4.07
1,2-Dibromo-3-Chloropropane	8.22	7.97	8.47
1,1,2,2-Tetrachloroethane	5.30	5.06	5.56

Report Date: 09-Jun-2020 16:51:04

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.020.D
 Lims ID: CCV 4
 Client ID:
 Sample Type: CCV
 Inject. Date: 08-Jun-2020 22:43:00 ALS Bottle#: 0 Worklist Smp#: 18
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: EDB_42024BI JGEDB_4JG CCAL 2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Sublist: chrom-8011_19853*sub1
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:04 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECD
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECD
 Process Host: CTX1018

First Level Reviewer: brumbaughj Date: 09-Jun-2020 16:40:23

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
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1 Ethylene Dibromide

1	3.803	3.824	-0.021	30808385H	2.50	2.02	
2	4.635	4.648	-0.013	54835563H	2.50	2.29	
RPD = 12.54							

\$ 2 1,1,2,2-Tetrachloroethane

1	5.303	5.313	-0.010	23635022H	1.23	1.09	
2	6.318	6.325	-0.007	35969500H	1.23	1.15	
RPD = 5.54							

3 1,2,3-Trichloropropane

1	5.452	5.462	-0.010	7349686H	NC	NC	
2	6.433	6.439	-0.006	10098060H	NC	NC	
RPD = 0.00							

4 1,2-Dibromo-3-Chloropropane

1	8.218	8.220	-0.002	89039553H	2.51	2.30	
2	9.076	9.078	-0.002	160152251H	2.51	2.38	
RPD = 3.39							

QC Flag Legend

Processing Flags

NC - Not Calibrated

H - Response Measured by Height

Reagents:

GCS_EDB4AM_00001

Amount Added: 1.00

Units: mL

Report Date: 09-Jun-2020 16:51:04

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.020.D

Injection Date: 08-Jun-2020 22:43:00

Instrument ID: 19853

Operator ID: 2306

Lims ID: CCV 4

Worklist Smp#: 18

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

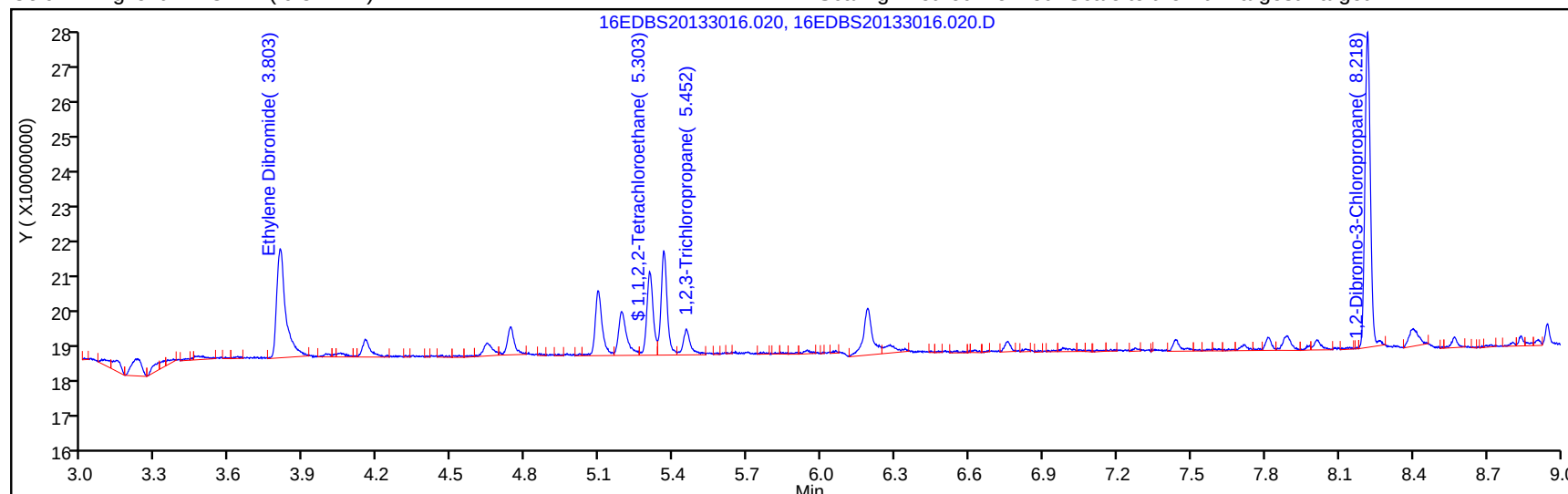
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

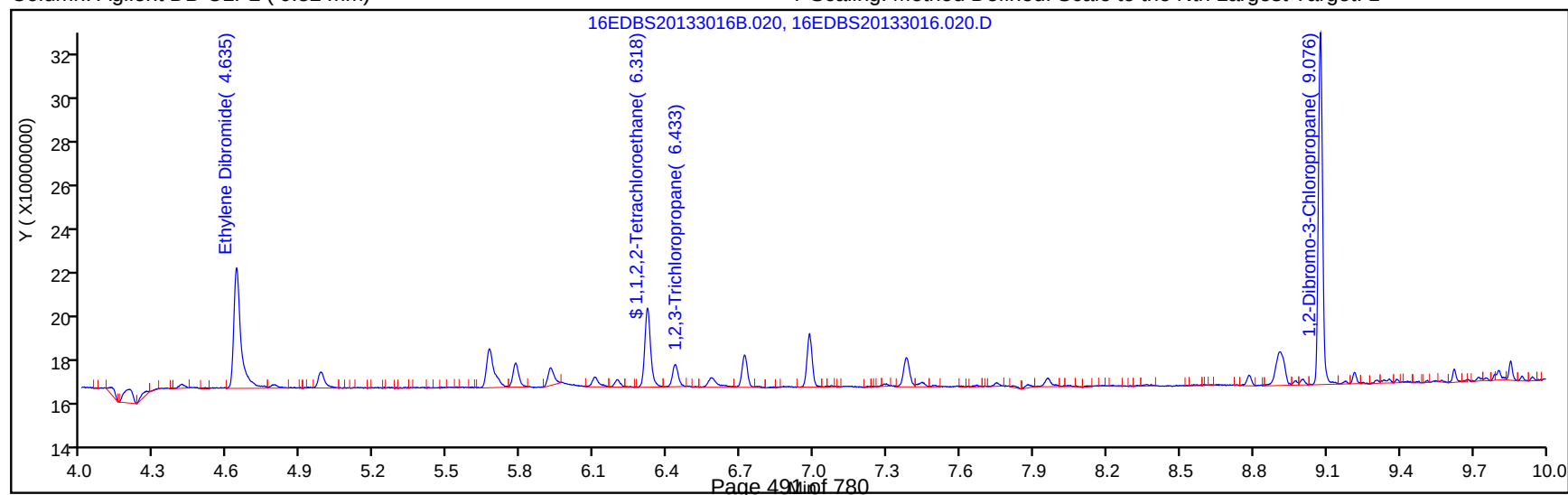
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Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-491

FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1
 SDG No.: _____
 Lab Sample ID: CCV 410-11304/18 Calibration Date: 06/08/2020 22:43
 Instrument ID: 19853 Calib Start Date: 05/12/2020 22:42
 GC Column: DB CLP2 ID: 0.32 (mm) Calib End Date: 05/13/2020 00:06
 Lab File ID: 16EDBS20133016.020.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethylene Dibromide	Ave	23929675	21912313		2.29	2.50	-8.4	40.0
1,2-Dibromo-3-Chloropropane	Ave	67185849	63869293		2.38	2.51	-4.9	40.0
1,1,2,2-Tetrachloroethane	Ave	31148988	29184178		1.15	1.23	-6.3	40.0

FORM VII
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1
 SDG No.: _____
 Lab Sample ID: CCV 410-11304/18 Calibration Date: 06/08/2020 22:43
 Instrument ID: 19853 Calib Start Date: 05/12/2020 22:42
 GC Column: DB CLP2 ID: 0.32 (mm) Calib End Date: 05/13/2020 00:06
 Lab File ID: 16EDBS20133016.020.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethylene Dibromide	4.64	4.40	4.90
1,2-Dibromo-3-Chloropropane	9.08	8.83	9.33
1,1,2,2-Tetrachloroethane	6.32	6.08	6.58

Report Date: 09-Jun-2020 16:51:04

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.020.D
 Lims ID: CCV 4
 Client ID:
 Sample Type: CCV
 Inject. Date: 08-Jun-2020 22:43:00 ALS Bottle#: 0 Worklist Smp#: 18
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: EDB_42024BI JGEDB_4JG CCAL 201599999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Sublist: chrom-8011_19853*sub1
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:04 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECD
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECD
 Process Host: CTX1018

First Level Reviewer: brumbaughj Date: 09-Jun-2020 16:40:23

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
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1 Ethylene Dibromide

1	3.803	3.824	-0.021	30808385H	2.50	2.02	
2	4.635	4.648	-0.013	54835563H	2.50	2.29	
RPD = 12.54							

\$ 2 1,1,2,2-Tetrachloroethane

1	5.303	5.313	-0.010	23635022H	1.23	1.09	
2	6.318	6.325	-0.007	35969500H	1.23	1.15	
RPD = 5.54							

3 1,2,3-Trichloropropane

1	5.452	5.462	-0.010	7349686H	NC	NC	
2	6.433	6.439	-0.006	10098060H	NC	NC	
RPD = 0.00							

4 1,2-Dibromo-3-Chloropropane

1	8.218	8.220	-0.002	89039553H	2.51	2.30	
2	9.076	9.078	-0.002	160152251H	2.51	2.38	
RPD = 3.39							

QC Flag Legend

Processing Flags

NC - Not Calibrated

H - Response Measured by Height

Reagents:

GCS_EDB4AM_00001

Amount Added: 1.00

Units: mL

Report Date: 09-Jun-2020 16:51:04

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.020.D

Injection Date: 08-Jun-2020 22:43:00

Instrument ID: 19853

Operator ID: 2306

Lims ID: CCV 4

Worklist Smp#: 18

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

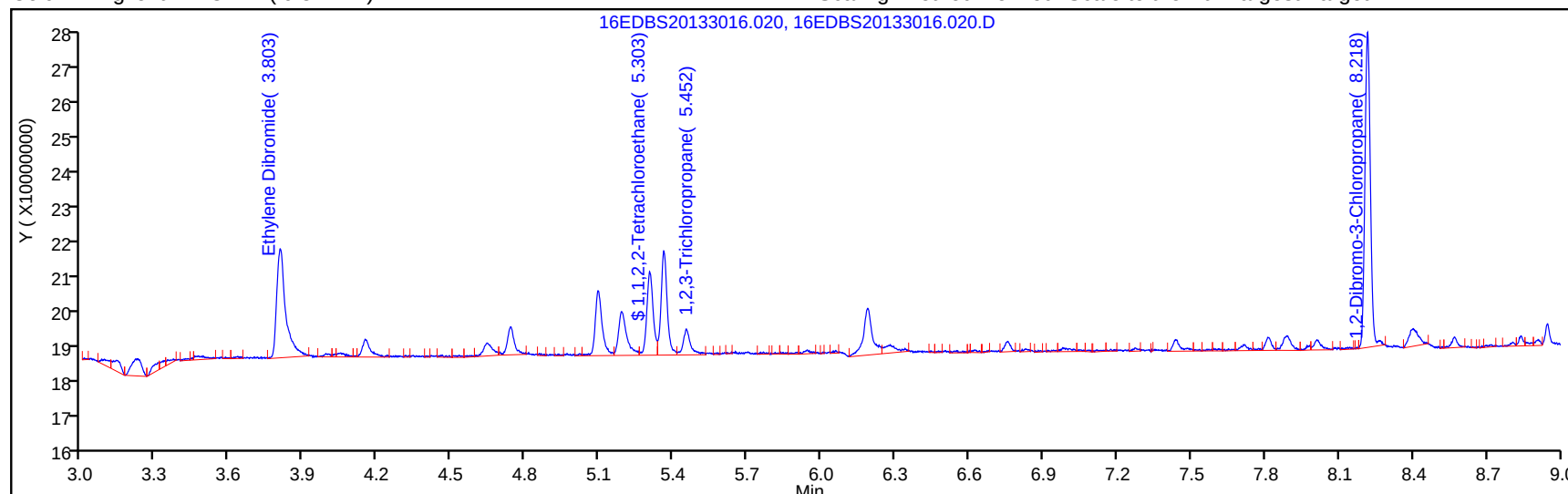
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

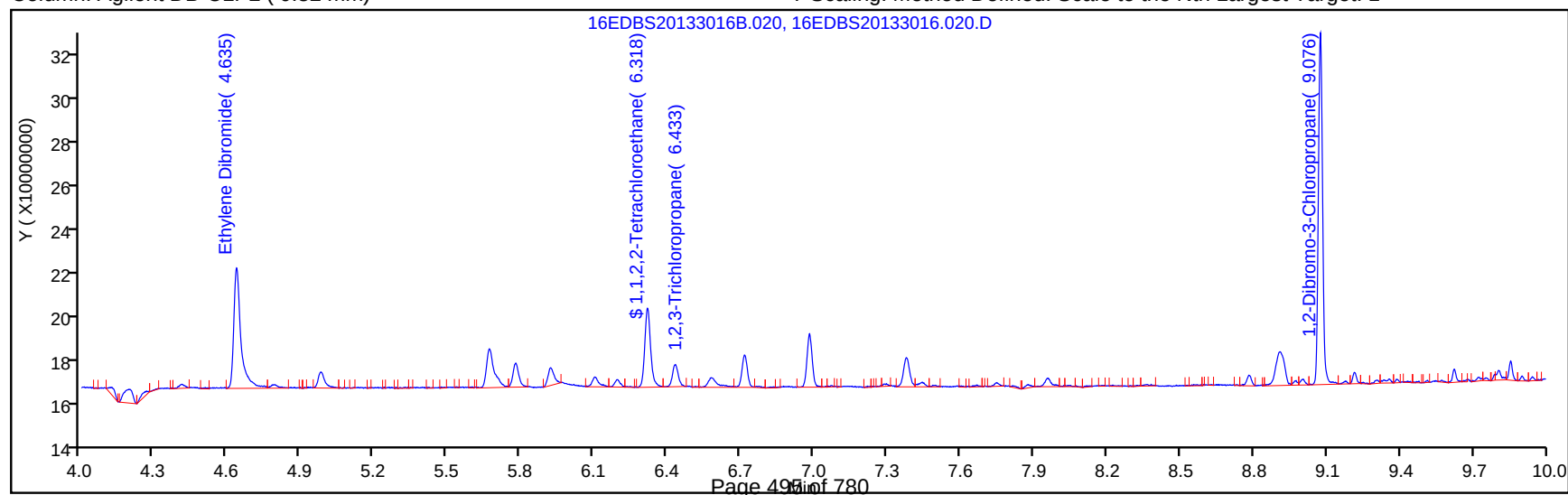
Column: Agilent DB-CLP1 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



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Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-495

FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1
 SDG No.: _____
 Lab Sample ID: CCV 410-11304/29 Calibration Date: 06/09/2020 01:50
 Instrument ID: 19853 Calib Start Date: 05/12/2020 22:42
 GC Column: DB CLP1 ID: 0.32 (mm) Calib End Date: 05/13/2020 00:06
 Lab File ID: 16EDBS20133016.031.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethylene Dibromide	Ave	15243919	12695929		2.08	2.50	-16.7	40.0
1,2-Dibromo-3-Chloropropane	Ave	38640867	36736771		2.38	2.51	-4.9	40.0
1,1,2,2-Tetrachloroethane	Ave	21633606	19727351		1.12	1.23	-8.8	40.0

FORM VII
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1
SDG No.: _____
Lab Sample ID: CCV 410-11304/29 Calibration Date: 06/09/2020 01:50
Instrument ID: 19853 Calib Start Date: 05/12/2020 22:42
GC Column: DB CLP1 ID: 0.32 (mm) Calib End Date: 05/13/2020 00:06
Lab File ID: 16EDBS20133016.031.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethylene Dibromide	3.80	3.57	4.07
1,2-Dibromo-3-Chloropropane	8.22	7.97	8.47
1,1,2,2-Tetrachloroethane	5.30	5.06	5.56

Report Date: 09-Jun-2020 16:51:16

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.031.D
 Lims ID: CCV 4
 Client ID:
 Sample Type: CCV
 Inject. Date: 09-Jun-2020 01:50:00 ALS Bottle#: 0 Worklist Smp#: 29
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: EDB_42024BI JHEDB_4JH CCAL 2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Sublist: chrom-8011_19853*sub1
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:15 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
-----	--------------	------------------	------------------	----------	-----------------	-------------------	-------

1 Ethylene Dibromide

1	3.803	3.824	-0.021	31771562H	2.50	2.08	
2	4.635	4.648	-0.013	55064545H	2.50	2.30	
RPD = 9.89							

\$ 2 1,1,2,2-Tetrachloroethane

1	5.303	5.313	-0.010	24313960H	1.23	1.12	
2	6.318	6.325	-0.007	37088960H	1.23	1.19	
RPD = 5.77							

3 1,2,3-Trichloropropane

1	5.453	5.462	-0.009	7239647H	NC	NC	
2	6.432	6.439	-0.007	10550122H	NC	NC	
RPD = 0.00							

4 1,2-Dibromo-3-Chloropropane

1	8.217	8.220	-0.003	92117453H	2.51	2.38	
2	9.076	9.078	-0.002	159000534H	2.51	2.37	
RPD = 0.73							

QC Flag Legend

Processing Flags

NC - Not Calibrated

H - Response Measured by Height

Reagents:

GCS_EDB4AM_00001

Amount Added: 1.00

Units: mL

Report Date: 09-Jun-2020 16:51:16

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.031.D

Injection Date: 09-Jun-2020 01:50:00

Instrument ID: 19853

Operator ID: 2306

Lims ID: CCV 4

Worklist Smp#: 29

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

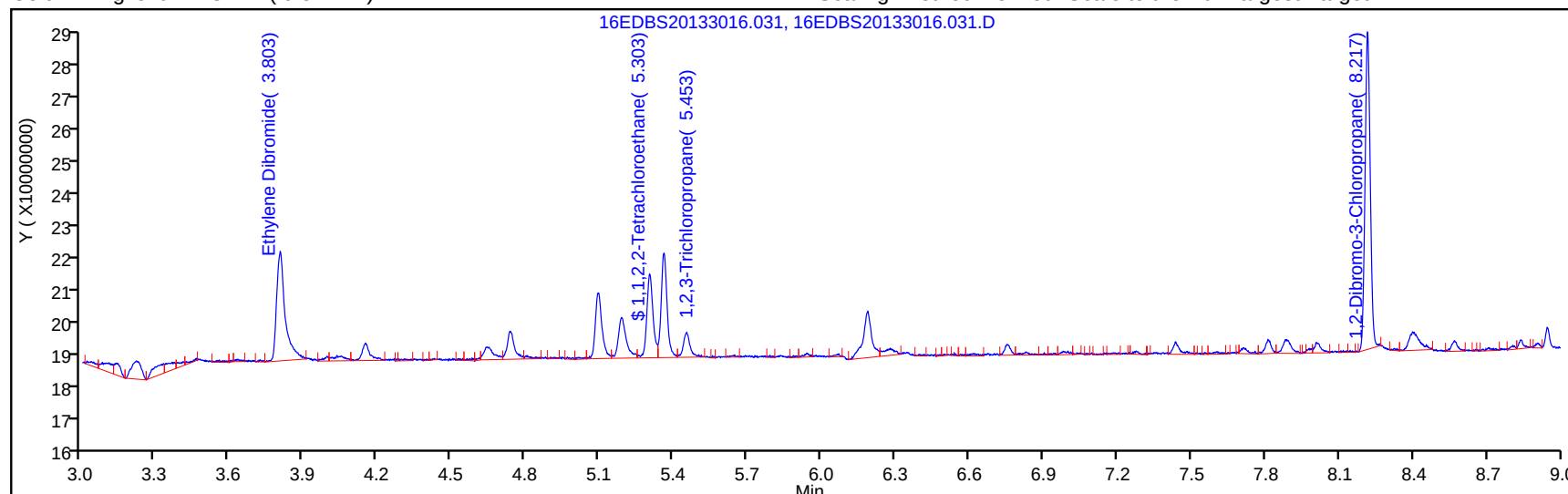
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

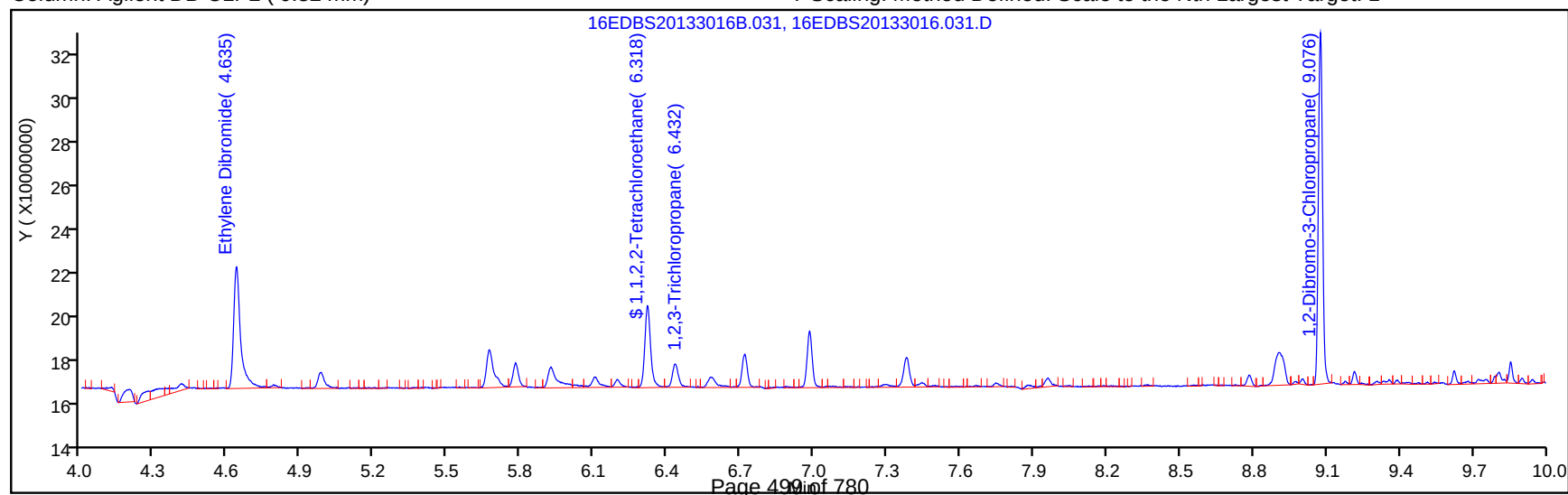
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Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-499

FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1
 SDG No.: _____
 Lab Sample ID: CCV 410-11304/29 Calibration Date: 06/09/2020 01:50
 Instrument ID: 19853 Calib Start Date: 05/12/2020 22:42
 GC Column: DB CLP2 ID: 0.32 (mm) Calib End Date: 05/13/2020 00:06
 Lab File ID: 16EDBS20133016.031.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethylene Dibromide	Ave	23929675	22003814		2.30	2.50	-8.0	40.0
1,2-Dibromo-3-Chloropropane	Ave	67185849	63409984		2.37	2.51	-5.6	40.0
1,1,2,2-Tetrachloroethane	Ave	31148988	30092462		1.19	1.23	-3.4	40.0

FORM VII
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1
SDG No.: _____
Lab Sample ID: CCV 410-11304/29 Calibration Date: 06/09/2020 01:50
Instrument ID: 19853 Calib Start Date: 05/12/2020 22:42
GC Column: DB CLP2 ID: 0.32 (mm) Calib End Date: 05/13/2020 00:06
Lab File ID: 16EDBS20133016.031.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethylene Dibromide	4.64	4.40	4.90
1,2-Dibromo-3-Chloropropane	9.08	8.83	9.33
1,1,2,2-Tetrachloroethane	6.32	6.08	6.58

Report Date: 09-Jun-2020 16:51:16

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.031.D
 Lims ID: CCV 4
 Client ID:
 Sample Type: CCV
 Inject. Date: 09-Jun-2020 01:50:00 ALS Bottle#: 0 Worklist Smp#: 29
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: EDB_42024BI JHEDB_4JH CCAL 2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Sublist: chrom-8011_19853*sub1
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:15 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
-----	--------------	------------------	------------------	----------	-----------------	-------------------	-------

1 Ethylene Dibromide

1	3.803	3.824	-0.021	31771562H	2.50	2.08	
2	4.635	4.648	-0.013	55064545H	2.50	2.30	
RPD = 9.89							

\$ 2 1,1,2,2-Tetrachloroethane

1	5.303	5.313	-0.010	24313960H	1.23	1.12	
2	6.318	6.325	-0.007	37088960H	1.23	1.19	
RPD = 5.77							

3 1,2,3-Trichloropropane

1	5.453	5.462	-0.009	7239647H	NC	NC	
2	6.432	6.439	-0.007	10550122H	NC	NC	
RPD = 0.00							

4 1,2-Dibromo-3-Chloropropane

1	8.217	8.220	-0.003	92117453H	2.51	2.38	
2	9.076	9.078	-0.002	159000534H	2.51	2.37	
RPD = 0.73							

QC Flag Legend

Processing Flags

NC - Not Calibrated

H - Response Measured by Height

Reagents:

GCS_EDB4AM_00001

Amount Added: 1.00

Units: mL

Report Date: 09-Jun-2020 16:51:16

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.031.D

Injection Date: 09-Jun-2020 01:50:00

Instrument ID: 19853

Operator ID: 2306

Lims ID: CCV 4

Worklist Smp#: 29

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

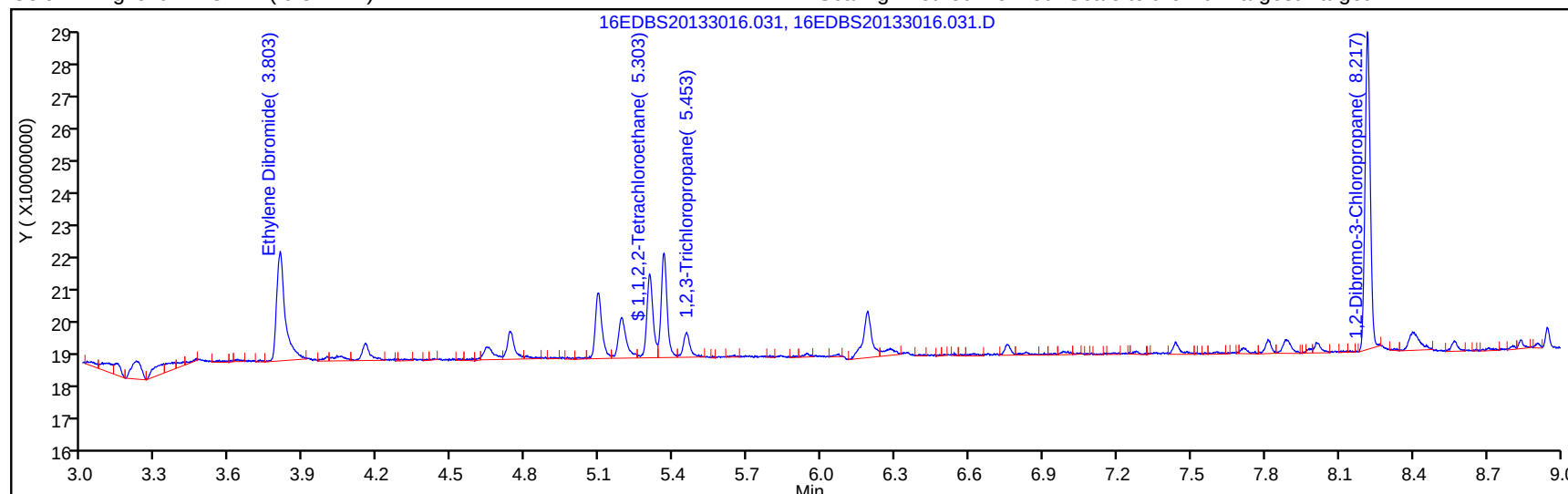
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

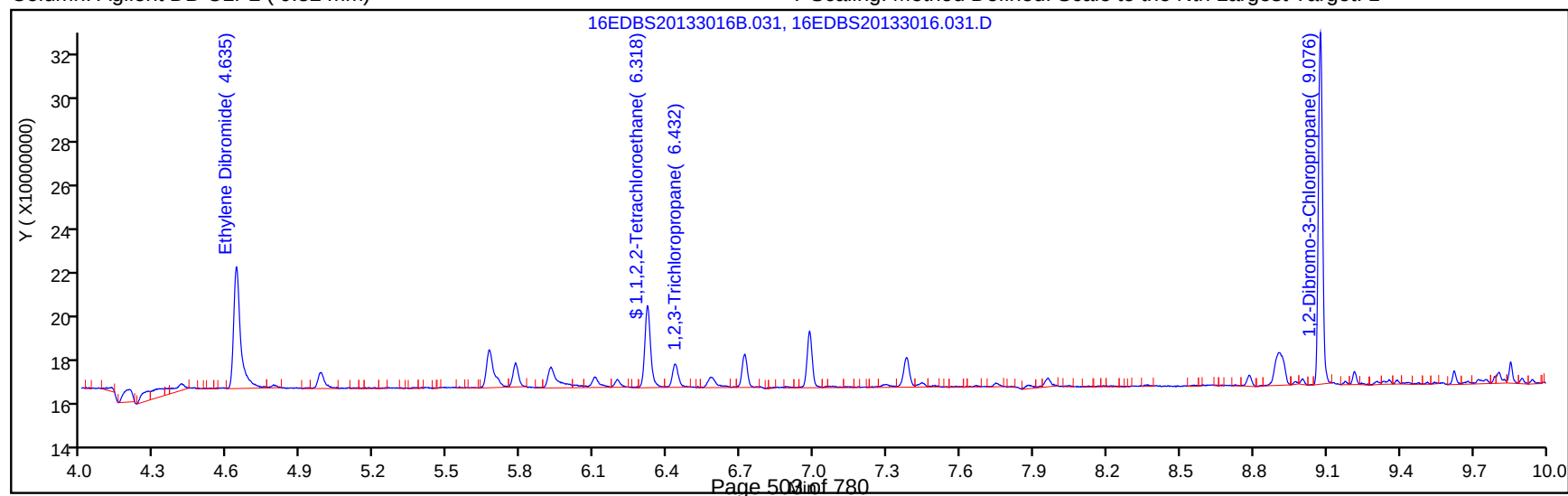
Column: Agilent DB-CLP1 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-503

FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1
 SDG No.: _____
 Lab Sample ID: CCV 410-11304/39 Calibration Date: 06/09/2020 04:22
 Instrument ID: 19853 Calib Start Date: 05/12/2020 22:42
 GC Column: DB CLP1 ID: 0.32 (mm) Calib End Date: 05/13/2020 00:06
 Lab File ID: 16EDBS20133016.040.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethylene Dibromide	Ave	15243919	12105595		1.99	2.50	-20.6	40.0
1,2-Dibromo-3-Chloropropane	Ave	38640867	34695300		2.25	2.51	-10.2	40.0
1,1,2,2-Tetrachloroethane	Ave	21633606	18589301		1.06	1.23	-14.1	40.0

FORM VII
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1
SDG No.: _____
Lab Sample ID: CCV 410-11304/39 Calibration Date: 06/09/2020 04:22
Instrument ID: 19853 Calib Start Date: 05/12/2020 22:42
GC Column: DB CLP1 ID: 0.32 (mm) Calib End Date: 05/13/2020 00:06
Lab File ID: 16EDBS20133016.040.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethylene Dibromide	3.80	3.57	4.07
1,2-Dibromo-3-Chloropropane	8.22	7.97	8.47
1,1,2,2-Tetrachloroethane	5.30	5.06	5.56

Report Date: 09-Jun-2020 16:51:42

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.040.D
 Lims ID: CCV 4
 Client ID:
 Sample Type: CCV
 Inject. Date: 09-Jun-2020 04:22:00 ALS Bottle#: 0 Worklist Smp#: 39
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: EDB_42024BI JIEDB_4JI CCAL 2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Sublist: chrom-8011_19853*sub1
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:41 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
-----	--------------	------------------	------------------	----------	-----------------	-------------------	-------

1 Ethylene Dibromide

1	3.800	3.824	-0.024	30294251H	2.50	1.99	
2	4.634	4.648	-0.014	52457636H	2.50	2.19	
RPD = 9.80							

\$ 2 1,1,2,2-Tetrachloroethane

1	5.303	5.313	-0.010	22911313H	1.23	1.06	
2	6.318	6.325	-0.007	35619767H	1.23	1.14	
RPD = 7.67							

3 1,2,3-Trichloropropane

1	5.452	5.462	-0.010	6853302H	NC	NC	
2	6.433	6.439	-0.006	10123462H	NC	NC	
RPD = 0.00							

4 1,2-Dibromo-3-Chloropropane

1	8.218	8.220	-0.002	86998466H	2.51	2.25	
2	9.076	9.078	-0.002	155519597H	2.51	2.31	
RPD = 2.77							

QC Flag Legend

Processing Flags

NC - Not Calibrated

H - Response Measured by Height

Reagents:

GCS_EDB4AM_00001

Amount Added: 1.00

Units: mL

Report Date: 09-Jun-2020 16:51:42

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.040.D

Injection Date: 09-Jun-2020 04:22:00

Instrument ID: 19853

Operator ID: 2306

Lims ID: CCV 4

Worklist Smp#: 39

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

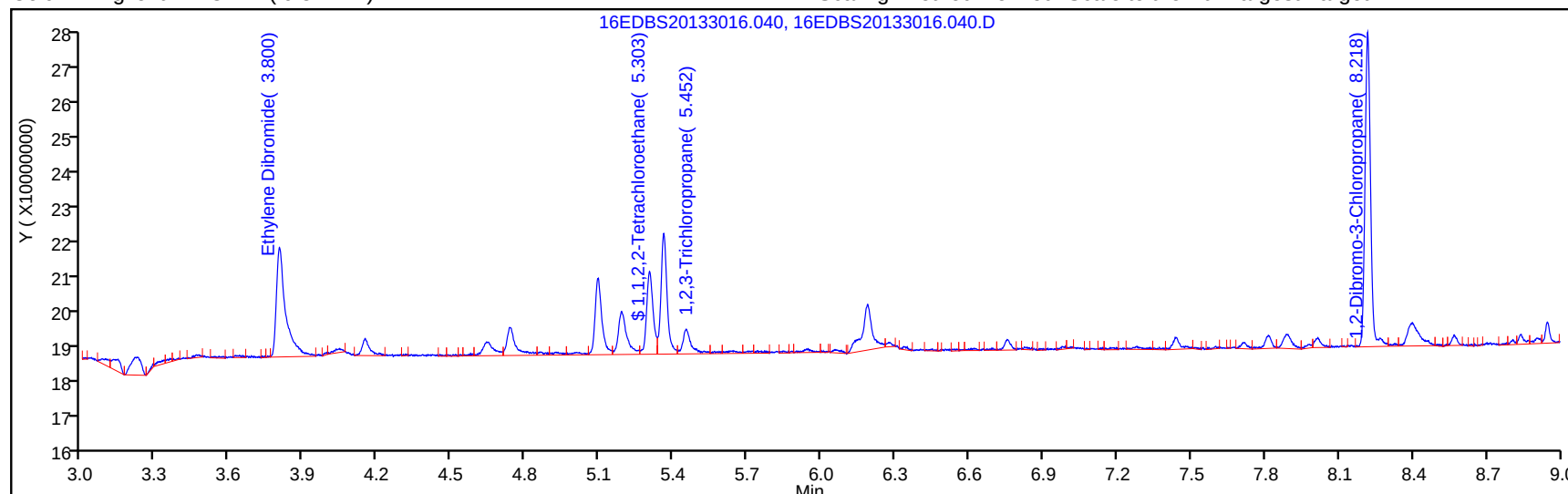
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

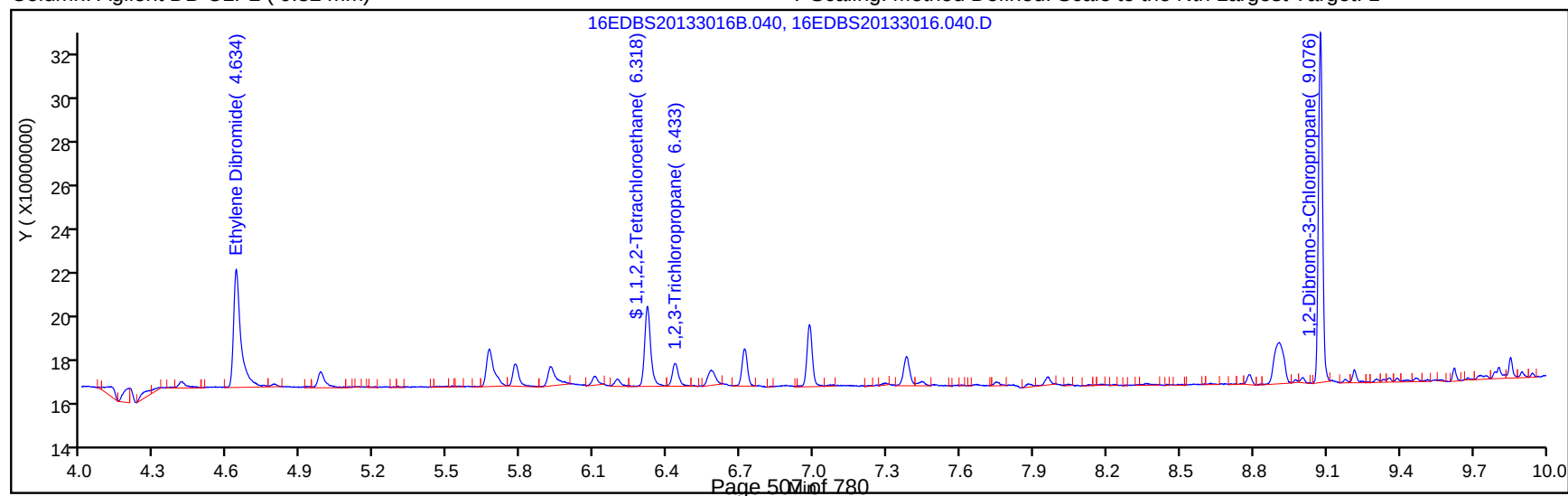
Column: Agilent DB-CLP1 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-507

FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1
 SDG No.: _____
 Lab Sample ID: CCV 410-11304/39 Calibration Date: 06/09/2020 04:22
 Instrument ID: 19853 Calib Start Date: 05/12/2020 22:42
 GC Column: DB CLP2 ID: 0.32 (mm) Calib End Date: 05/13/2020 00:06
 Lab File ID: 16EDBS20133016.040.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethylene Dibromide	Ave	23929675	20962092		2.19	2.50	-12.4	40.0
1,2-Dibromo-3-Chloropropane	Ave	67185849	62021773		2.31	2.51	-7.7	40.0
1,1,2,2-Tetrachloroethane	Ave	31148988	28900419		1.14	1.23	-7.2	40.0

FORM VII
GC SEMI VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1
SDG No.: _____
Lab Sample ID: CCV 410-11304/39 Calibration Date: 06/09/2020 04:22
Instrument ID: 19853 Calib Start Date: 05/12/2020 22:42
GC Column: DB CLP2 ID: 0.32 (mm) Calib End Date: 05/13/2020 00:06
Lab File ID: 16EDBS20133016.040.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethylene Dibromide	4.63	4.40	4.90
1,2-Dibromo-3-Chloropropane	9.08	8.83	9.33
1,1,2,2-Tetrachloroethane	6.32	6.08	6.58

Report Date: 09-Jun-2020 16:51:42

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.040.D
 Lims ID: CCV 4
 Client ID:
 Sample Type: CCV
 Inject. Date: 09-Jun-2020 04:22:00 ALS Bottle#: 0 Worklist Smp#: 39
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: EDB_42024BI JIEDB_4JI CCAL 2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Sublist: chrom-8011_19853*sub1
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:41 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
-----	--------------	------------------	------------------	----------	-----------------	-------------------	-------

1 Ethylene Dibromide

1	3.800	3.824	-0.024	30294251H	2.50	1.99	
2	4.634	4.648	-0.014	52457636H	2.50	2.19	
RPD = 9.80							

\$ 2 1,1,2,2-Tetrachloroethane

1	5.303	5.313	-0.010	22911313H	1.23	1.06	
2	6.318	6.325	-0.007	35619767H	1.23	1.14	
RPD = 7.67							

3 1,2,3-Trichloropropane

1	5.452	5.462	-0.010	6853302H	NC	NC	
2	6.433	6.439	-0.006	10123462H	NC	NC	
RPD = 0.00							

4 1,2-Dibromo-3-Chloropropane

1	8.218	8.220	-0.002	86998466H	2.51	2.25	
2	9.076	9.078	-0.002	155519597H	2.51	2.31	
RPD = 2.77							

QC Flag Legend

Processing Flags

NC - Not Calibrated

H - Response Measured by Height

Reagents:

GCS_EDB4AM_00001

Amount Added: 1.00

Units: mL

Report Date: 09-Jun-2020 16:51:42

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.040.D

Injection Date: 09-Jun-2020 04:22:00

Instrument ID: 19853

Operator ID: 2306

Lims ID: CCV 4

Worklist Smp#: 39

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

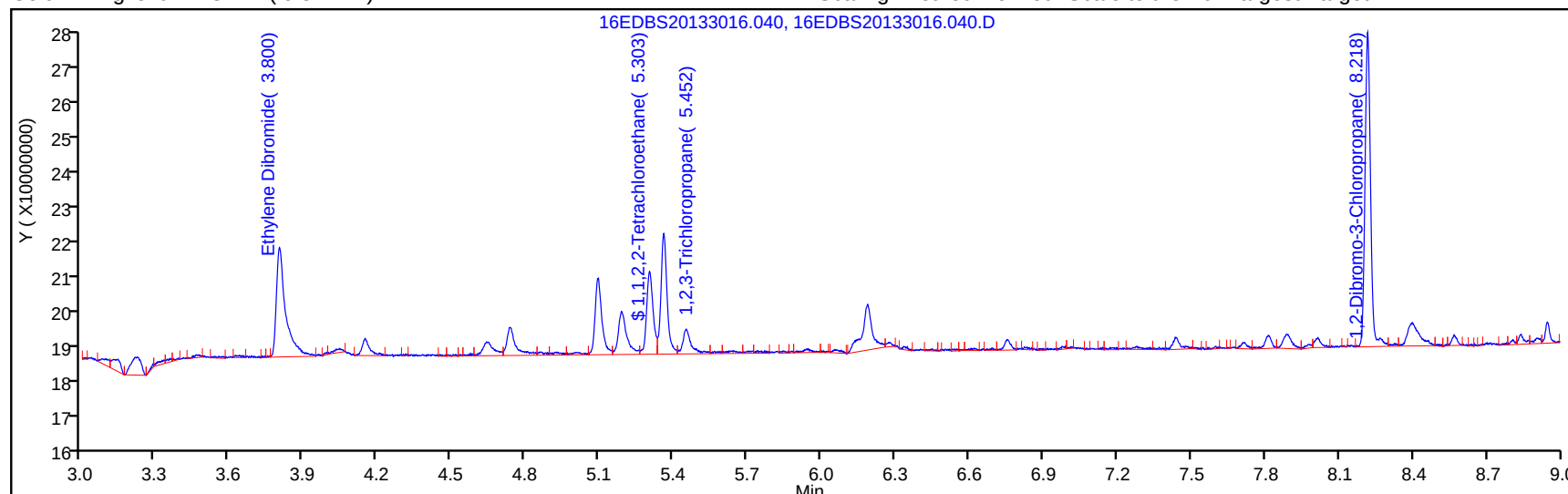
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

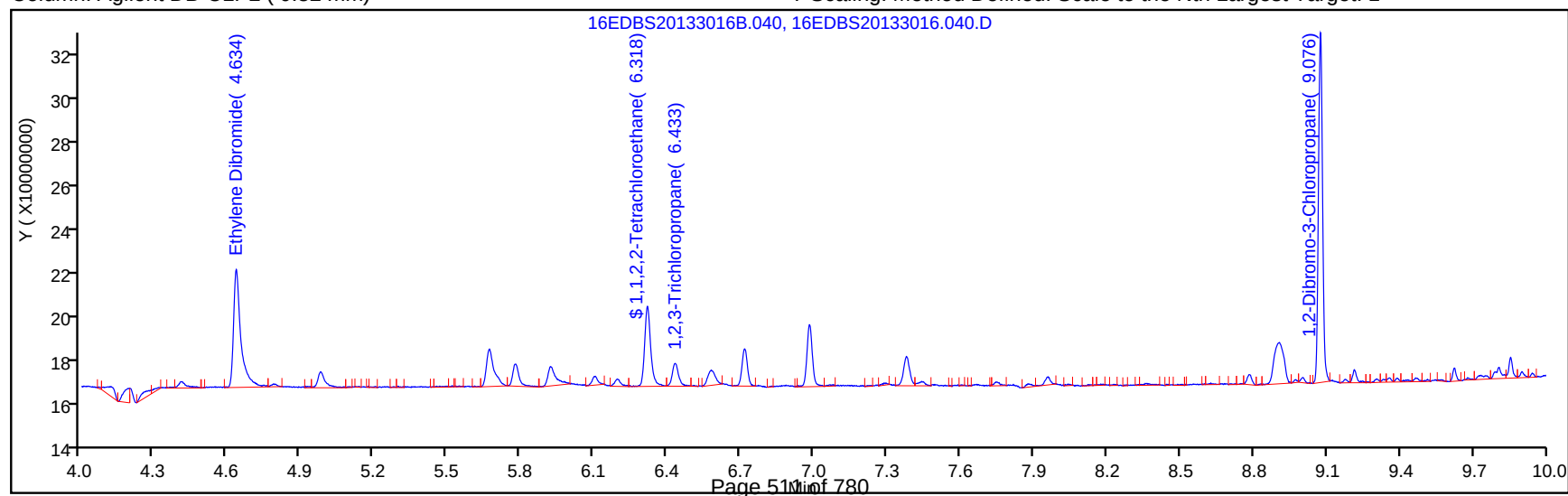
Column: Agilent DB-CLP1 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-511

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 410-10943/1-A
 Matrix: Water Lab File ID: 16EDBS20133016.022.D
 Analysis Method: 8011 Date Collected: _____
 Extraction Method: 8011 Date Extracted: 06/06/2020 03:40
 Sample wt/vol: 35 (mL) Date Analyzed: 06/08/2020 23:17
 Con. Extract Vol.: 2 (mL) Dilution Factor: 1
 Injection Volume: 1 (uL) GC Column: DB CLP1 ID: 0.32 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 11304 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
106-93-4	Ethylene Dibromide	0.020	U	0.030	0.020	0.010

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-34-5	1,1,2,2-Tetrachloroethane	73		46-136

Report Date: 09-Jun-2020 16:51:06

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.022.D
 Lims ID: MB 410-10943/1-A
 Client ID:
 Sample Type: MB
 Inject. Date: 08-Jun-2020 23:17:00 ALS Bottle#: 0 Worklist Smp#: 20
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: MB 410-10943/1-A AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:04 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

First Level Reviewer: brumbaughj

Date: 09-Jun-2020 16:40:35

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
-----	--------------	------------------	------------------	----------	-----------------	-------------------	-------

1 Ethylene Dibromide

1	3.808	3.824	-0.016	448647H		0.0294	
2	4.648	4.648	0.000	491095H		0.0205	
RPD = 35.67							

\$ 2 1,1,2,2-Tetrachloroethane

1	5.304	5.313	-0.009	19564517H	1.23	0.9044	
2	6.319	6.325	-0.006	30752962H	1.23	0.9873	
RPD = 8.77							

3 1,2,3-Trichloropropane

1	5.497	5.462	0.035	351114H		NC	
2	6.478	6.439	0.039	489274H		NC	
RPD = 0.00							

4 1,2-Dibromo-3-Chloropropane

1	8.226	8.220	0.006	414258H		0.0107	
2	9.081	9.078	0.003	479153H		0.007132	
RPD = 40.21							

5 Chlorodibromomethane

1		0.000				ND	
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QC Flag Legend

Processing Flags

NC - Not Calibrated

H - Response Measured by Height

Report Date: 09-Jun-2020 16:51:06

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.022.D

Injection Date: 08-Jun-2020 23:17:00

Instrument ID: 19853

Operator ID: 2306

Lims ID: MB 410-10943/1-A

Worklist Smp#: 20

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

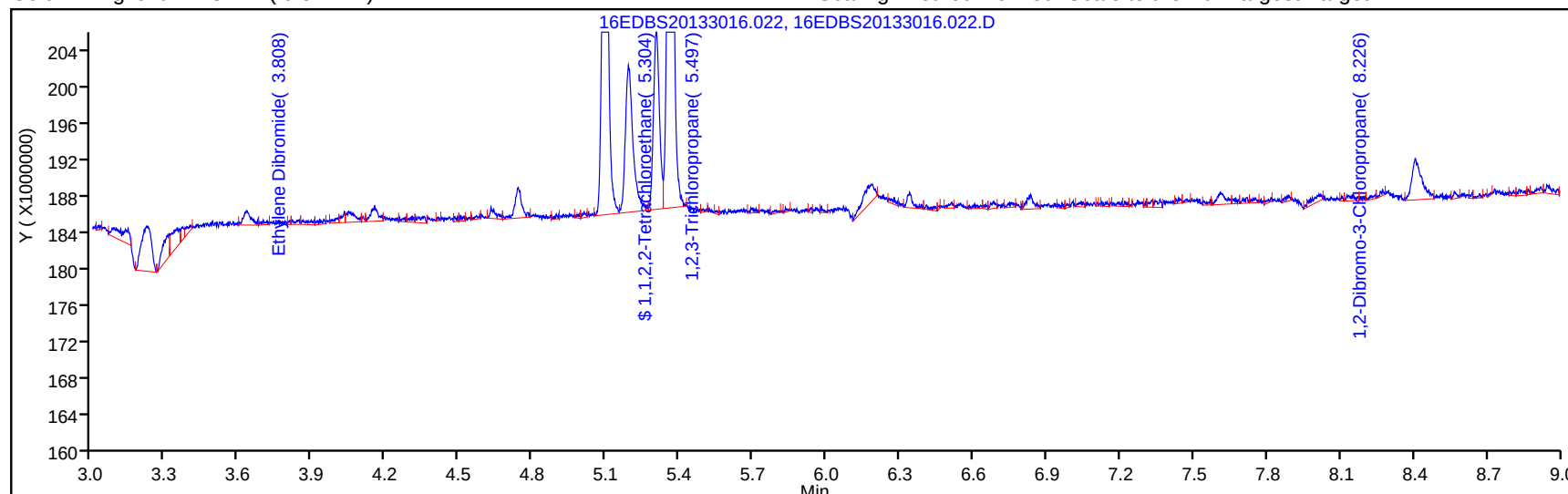
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

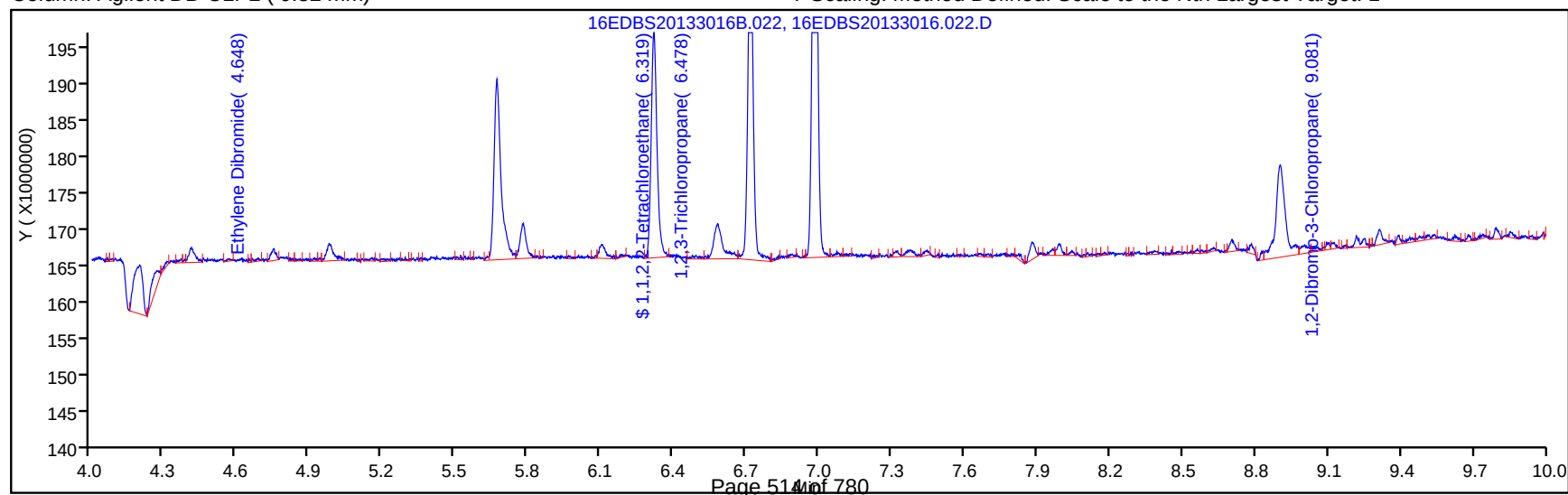
Column: Agilent DB-CLP1 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-514

September 2020

Report Date: 09-Jun-2020 16:51:06

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.022.D
 Lims ID: MB 410-10943/1-A
 Client ID:
 Sample Type: MB
 Inject. Date: 08-Jun-2020 23:17:00 ALS Bottle#: 0 Worklist Smp#: 20
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: MB 410-10943/1-A AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:04 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018
 First Level Reviewer: brumbaughj Date: 09-Jun-2020 16:40:35

Surrogate Recovery, Detector: 1ECDA

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	0.9044	73.38

Surrogate Recovery, Detector: 2ECDB

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	0.9873	80.10

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 410-10943/1-A
 Matrix: Water Lab File ID: 16EDBS20133016.022.D
 Analysis Method: 8011 Date Collected: _____
 Extraction Method: 8011 Date Extracted: 06/06/2020 03:40
 Sample wt/vol: 35 (mL) Date Analyzed: 06/08/2020 23:17
 Con. Extract Vol.: 2 (mL) Dilution Factor: 1
 Injection Volume: 1 (uL) GC Column: DB CLP2 ID: 0.32 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 11304 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-34-5	1,1,2,2-Tetrachloroethane	80		46-136

Report Date: 09-Jun-2020 16:51:06

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.022.D
 Lims ID: MB 410-10943/1-A
 Client ID:
 Sample Type: MB
 Inject. Date: 08-Jun-2020 23:17:00 ALS Bottle#: 0 Worklist Smp#: 20
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: MB 410-10943/1-A AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:04 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

First Level Reviewer: brumbaughj

Date: 09-Jun-2020 16:40:35

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
-----	--------------	------------------	------------------	----------	-----------------	-------------------	-------

1 Ethylene Dibromide

1	3.808	3.824	-0.016	448647H		0.0294	
2	4.648	4.648	0.000	491095H		0.0205	
RPD = 35.67							

\$ 2 1,1,2,2-Tetrachloroethane

1	5.304	5.313	-0.009	19564517H	1.23	0.9044	
2	6.319	6.325	-0.006	30752962H	1.23	0.9873	
RPD = 8.77							

3 1,2,3-Trichloropropane

1	5.497	5.462	0.035	351114H		NC	
2	6.478	6.439	0.039	489274H		NC	
RPD = 0.00							

4 1,2-Dibromo-3-Chloropropane

1	8.226	8.220	0.006	414258H		0.0107	
2	9.081	9.078	0.003	479153H		0.007132	
RPD = 40.21							

5 Chlorodibromomethane

1		0.000				ND	
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QC Flag Legend

Processing Flags

NC - Not Calibrated

H - Response Measured by Height

Report Date: 09-Jun-2020 16:51:06

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.022.D

Injection Date: 08-Jun-2020 23:17:00

Instrument ID: 19853

Operator ID: 2306

Lims ID: MB 410-10943/1-A

Worklist Smp#: 20

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

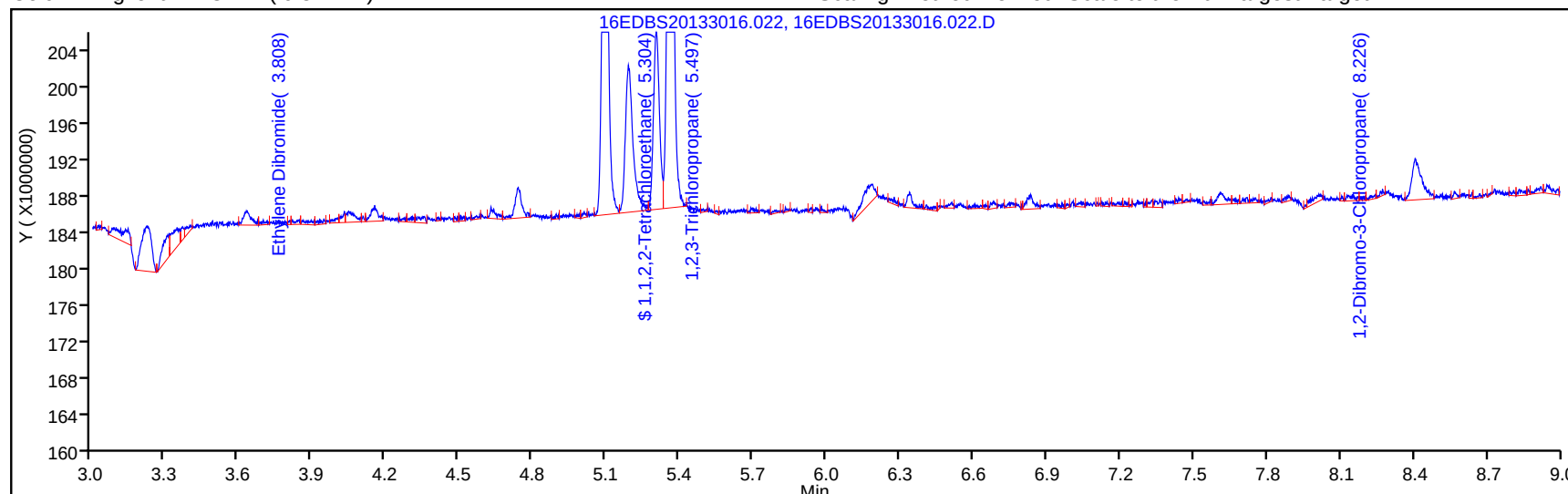
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

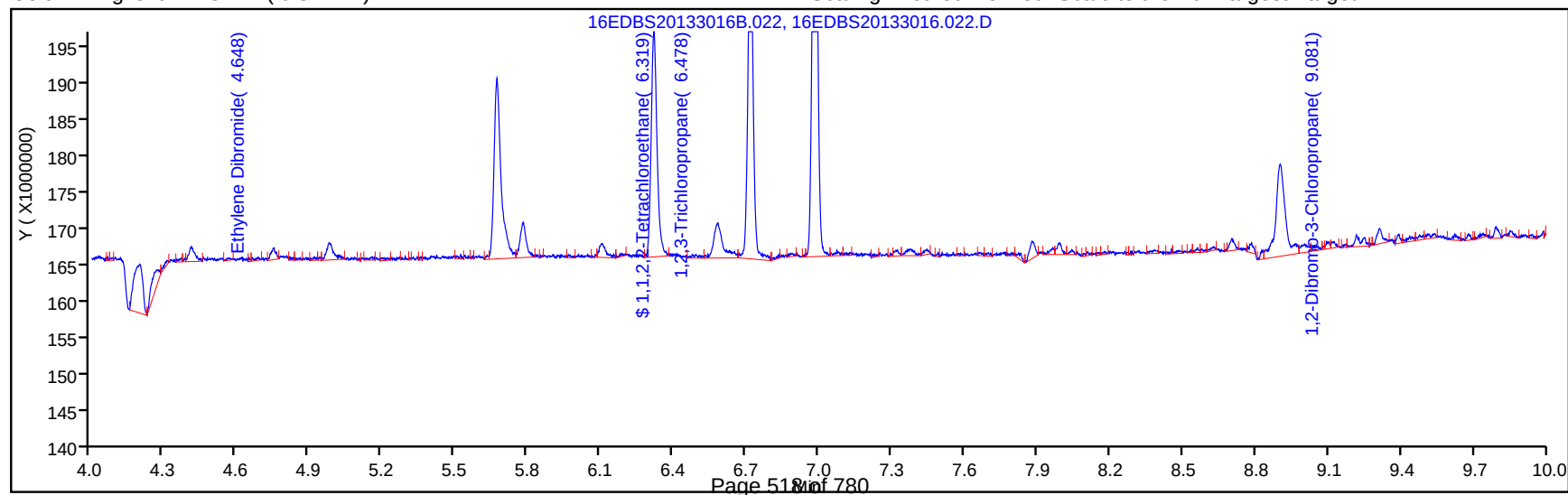
Column: Agilent DB-CLP1 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-518

Report Date: 09-Jun-2020 16:51:06

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.022.D
 Lims ID: MB 410-10943/1-A
 Client ID:
 Sample Type: MB
 Inject. Date: 08-Jun-2020 23:17:00 ALS Bottle#: 0 Worklist Smp#: 20
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: MB 410-10943/1-A AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:04 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018
 First Level Reviewer: brumbaughj Date: 09-Jun-2020 16:40:35

Surrogate Recovery, Detector: 1ECDA

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	0.9044	73.38

Surrogate Recovery, Detector: 2ECDB

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	0.9873	80.10

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: PIBLK 410-11304/19
 Matrix: Water Lab File ID: 16EDBS20133016.021.D
 Analysis Method: 8011 Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 1 (mL) Date Analyzed: 06/08/2020 23:00
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1 (uL) GC Column: DB CLP1 ID: 0.32 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 11304 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
106-93-4	Ethylene Dibromide	0.35	U	0.53	0.35	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-34-5	1,1,2,2-Tetrachloroethane	108		46-136

Report Date: 09-Jun-2020 16:51:05

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.021.D
 Lims ID: PIBLK
 Client ID:
 Sample Type: PIBLK
 Inject. Date: 08-Jun-2020 23:00:00 ALS Bottle#: 0 Worklist Smp#: 19
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: EIBKX2024A GLPIBLKGL PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:04 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

First Level Reviewer: brumbaughj

Date: 09-Jun-2020 16:40:29

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
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1 Ethylene Dibromide

1	3.834	3.824	0.010	362126H		0.0238	
2	4.630	4.648	-0.018	727244H		0.0304	

RPD = 24.51

\$ 2 1,1,2,2-Tetrachloroethane

1	5.306	5.313	-0.007	27597177H	1.18	1.28	
2	6.320	6.325	-0.005	42217621H	1.18	1.36	

RPD = 6.06

3 1,2,3-Trichloropropane

1	5.449	5.462	-0.013	510346H		NC	
2	6.437	6.439	-0.002	1126173H		NC	

RPD = 0.00

4 1,2-Dibromo-3-Chloropropane

1	8.229	8.220	0.009	673353H		0.0174	
2	9.055	9.078	-0.023	1480145H		0.0220	

RPD = 23.34

5 Chlorodibromomethane

1		0.000				ND	
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QC Flag Legend

Processing Flags

NC - Not Calibrated

H - Response Measured by Height

Reagents:

GCS_EIBK_B_00001

Amount Added: 1.00

Units: mL

Report Date: 09-Jun-2020 16:51:05

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.021.D

Injection Date: 08-Jun-2020 23:00:00

Instrument ID: 19853

Operator ID: 2306

Lims ID: PIBLK

Worklist Smp#: 19

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

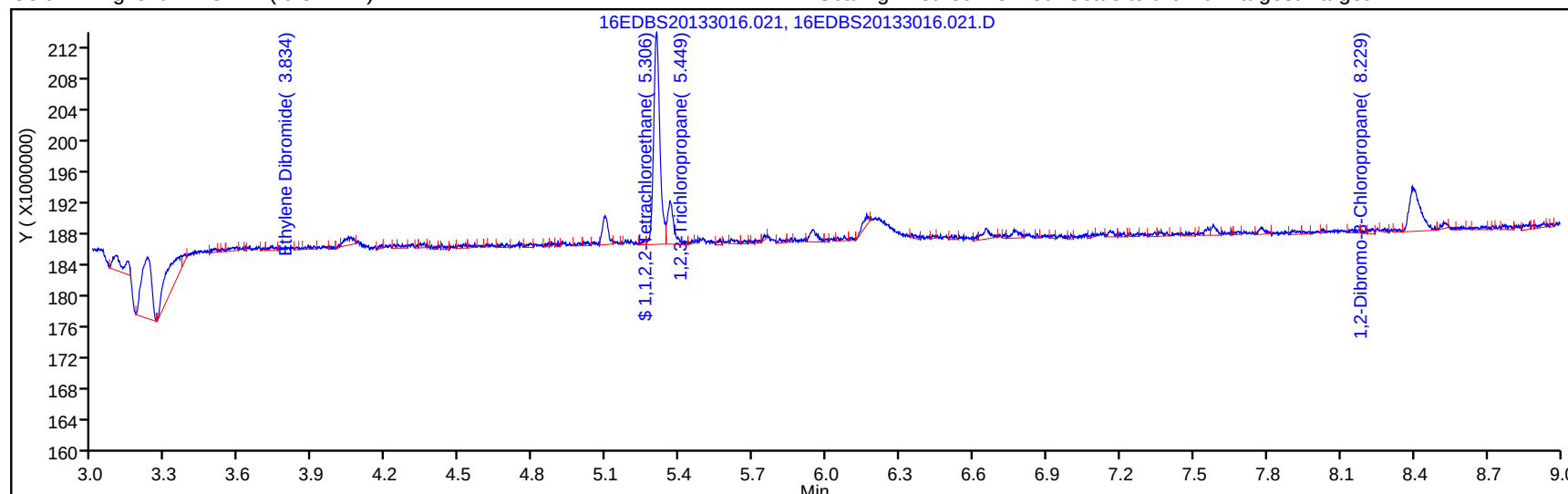
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

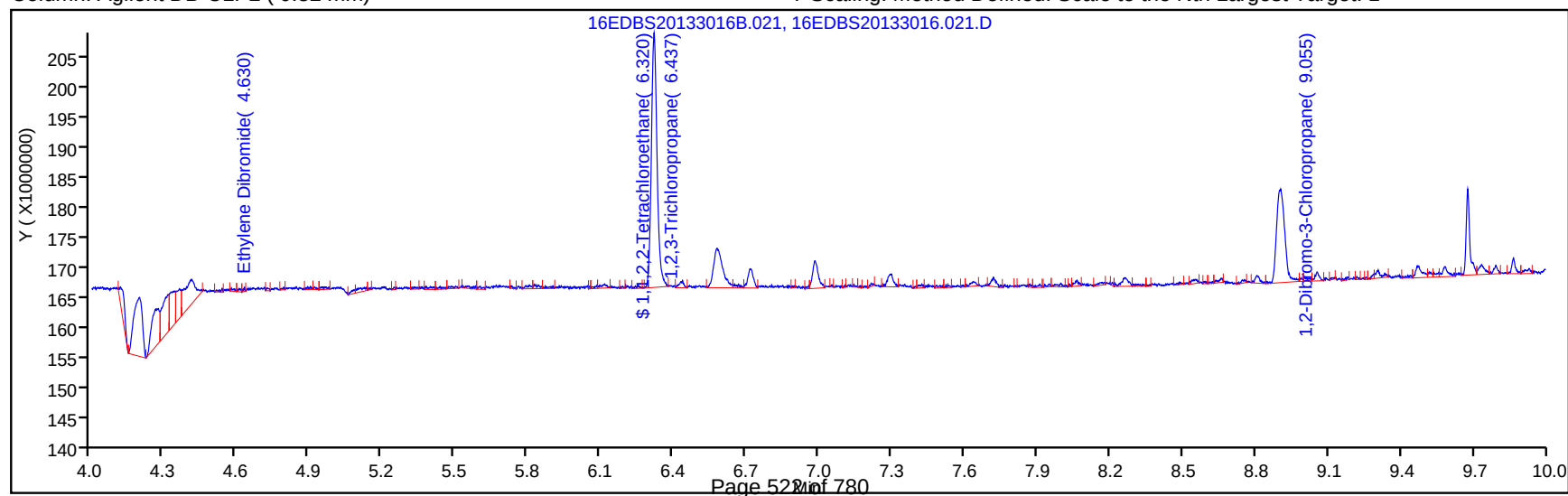
Column: Agilent DB-CLP1 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Page 522 of 780

Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-522

Report Date: 09-Jun-2020 16:51:05

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.021.D
 Lims ID: PIBLK
 Client ID:
 Sample Type: PIBLK
 Inject. Date: 08-Jun-2020 23:00:00 ALS Bottle#: 0 Worklist Smp#: 19
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: EIBKX2024A GLPIBLKGL PIBLK201599999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:04 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018
 First Level Reviewer: brumbaughj Date: 09-Jun-2020 16:40:29

Surrogate Recovery, Detector: 1ECDA

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.18	1.28	107.81

Surrogate Recovery, Detector: 2ECDB

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.18	1.36	114.55

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: PIBLK 410-11304/19
 Matrix: Water Lab File ID: 16EDBS20133016.021.D
 Analysis Method: 8011 Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 1 (mL) Date Analyzed: 06/08/2020 23:00
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1 (uL) GC Column: DB CLP2 ID: 0.32 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 11304 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
106-93-4	Ethylene Dibromide	0.35	U	0.53	0.35	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-34-5	1,1,2,2-Tetrachloroethane	115		46-136

Report Date: 09-Jun-2020 16:51:05

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.021.D
 Lims ID: PIBLK
 Client ID:
 Sample Type: PIBLK
 Inject. Date: 08-Jun-2020 23:00:00 ALS Bottle#: 0 Worklist Smp#: 19
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: EIBKX2024A GLPIBLKGL PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:04 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

First Level Reviewer: brumbaughj

Date: 09-Jun-2020 16:40:29

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
-----	--------------	------------------	------------------	----------	-----------------	-------------------	-------

1 Ethylene Dibromide

1	3.834	3.824	0.010	362126H		0.0238	
2	4.630	4.648	-0.018	727244H		0.0304	

RPD = 24.51

\$ 2 1,1,2,2-Tetrachloroethane

1	5.306	5.313	-0.007	27597177H	1.18	1.28	
2	6.320	6.325	-0.005	42217621H	1.18	1.36	

RPD = 6.06

3 1,2,3-Trichloropropane

1	5.449	5.462	-0.013	510346H		NC	
2	6.437	6.439	-0.002	1126173H		NC	

RPD = 0.00

4 1,2-Dibromo-3-Chloropropane

1	8.229	8.220	0.009	673353H		0.0174	
2	9.055	9.078	-0.023	1480145H		0.0220	

RPD = 23.34

5 Chlorodibromomethane

1		0.000				ND	
---	--	-------	--	--	--	----	--

QC Flag Legend

Processing Flags

NC - Not Calibrated

H - Response Measured by Height

Reagents:

GCS_EIBK_B_00001

Amount Added: 1.00

Units: mL

Report Date: 09-Jun-2020 16:51:05

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.021.D

Injection Date: 08-Jun-2020 23:00:00

Instrument ID: 19853

Operator ID: 2306

Lims ID: PIBLK

Worklist Smp#: 19

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

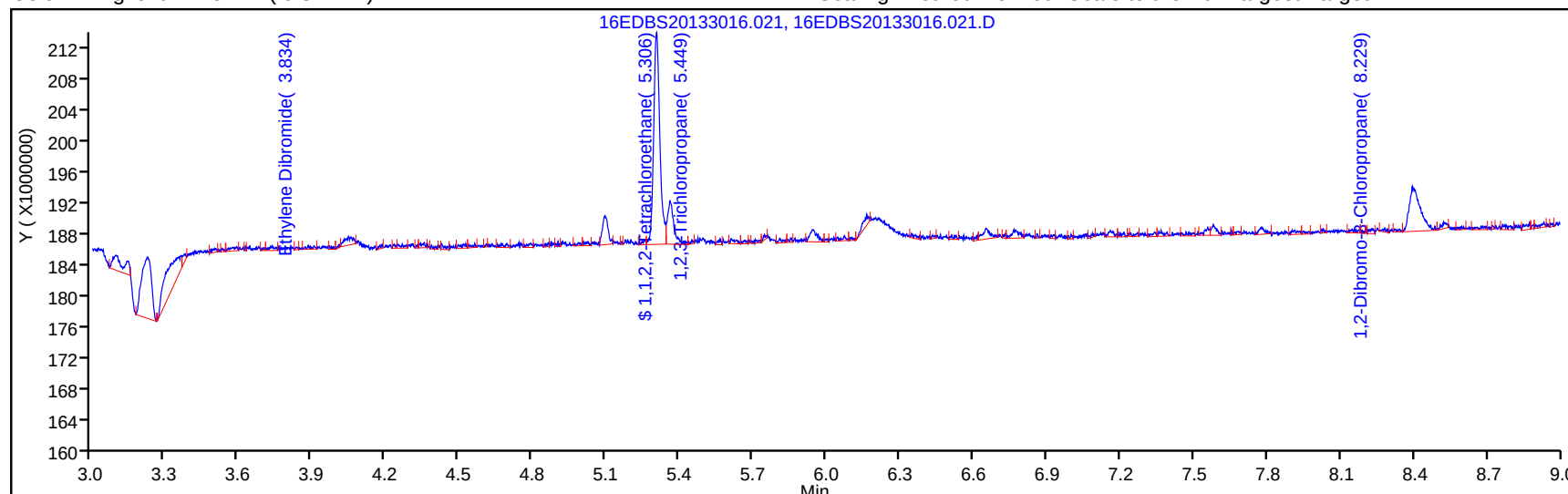
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

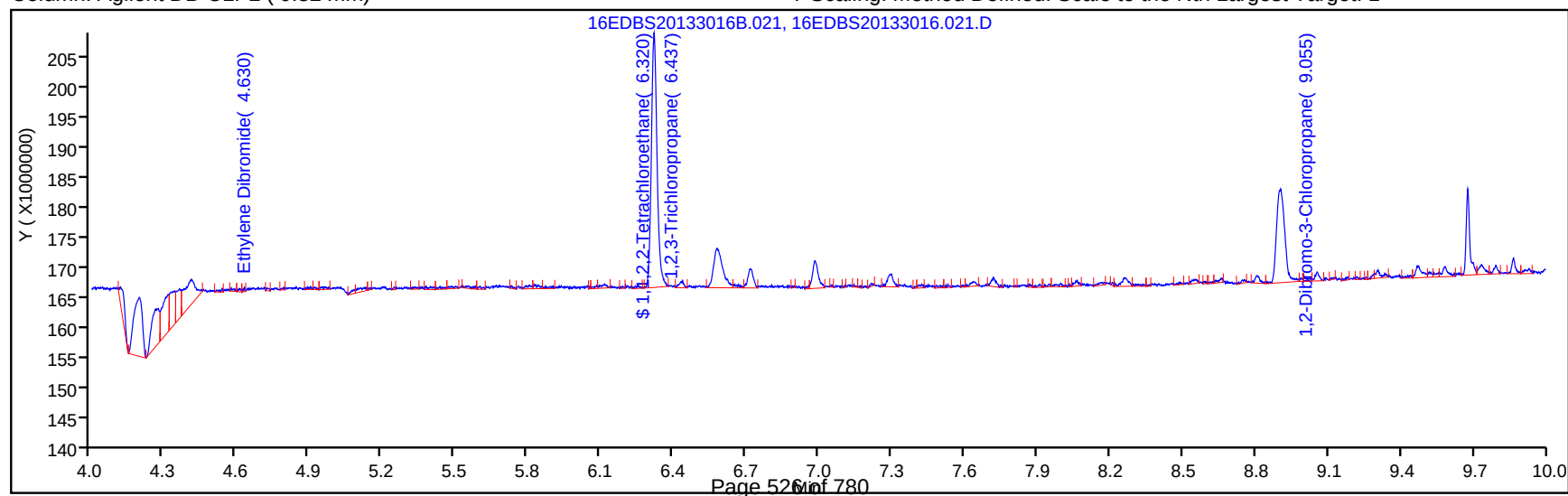
Column: Agilent DB-CLP1 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-526

Report Date: 09-Jun-2020 16:51:05

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.021.D
 Lims ID: PIBLK
 Client ID:
 Sample Type: PIBLK
 Inject. Date: 08-Jun-2020 23:00:00 ALS Bottle#: 0 Worklist Smp#: 19
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: EIBKX2024A GLPIBLKGL PIBLK201599999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:04 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018
 First Level Reviewer: brumbaughj Date: 09-Jun-2020 16:40:29

Surrogate Recovery, Detector: 1ECDA

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.18	1.28	107.81

Surrogate Recovery, Detector: 2ECDB

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.18	1.36	114.55

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: PIBLK 410-11304/30
 Matrix: Water Lab File ID: 16EDBS20133016.032.D
 Analysis Method: 8011 Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 1 (mL) Date Analyzed: 06/09/2020 02:06
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1 (uL) GC Column: DB CLP1 ID: 0.32 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 11304 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
106-93-4	Ethylene Dibromide	0.35	U	0.53	0.35	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-34-5	1,1,2,2-Tetrachloroethane	115		46-136

Report Date: 09-Jun-2020 16:51:17

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.032.D
 Lims ID: PIBLK
 Client ID:
 Sample Type: PIBLK
 Inject. Date: 09-Jun-2020 02:06:00 ALS Bottle#: 0 Worklist Smp#: 30
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: EIBKX2024A GMPIBLKGM PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:15 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1: Agilent DB-CLP1 (0.32 mm) Det: 1ECD
 Column 2: Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
-----	--------------	------------------	------------------	----------	-----------------	-------------------	-------

1 Ethylene Dibromide

1	3.817	3.824	-0.007	455356H		0.0299	
2	4.602	4.648	-0.046	256516H		0.0107	
						RPD = 94.36	

\$ 2 1,1,2,2-Tetrachloroethane

1	5.309	5.313	-0.004	29478430H	1.18	1.36	
2	6.323	6.325	-0.002	44401571H	1.18	1.43	
						RPD = 4.51	

3 1,2,3-Trichloropropane

1	5.509	5.462	0.047	647596H		NC	
2	6.435	6.439	-0.004	2466929H		NC	
						RPD = 0.00	

4 1,2-Dibromo-3-Chloropropane

1	8.201	8.220	-0.019	403392H		0.0104	
2	9.054	9.078	-0.024	1394258H		0.0208	
						RPD = 66.12	

5 Chlorodibromomethane

1		0.000				ND	
---	--	-------	--	--	--	----	--

QC Flag Legend

Processing Flags

NC - Not Calibrated

H - Response Measured by Height

Reagents:

GCS_EIBK_B_00001

Amount Added: 1.00

Units: mL

Report Date: 09-Jun-2020 16:51:17

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.032.D

Injection Date: 09-Jun-2020 02:06:00

Instrument ID: 19853

Operator ID: 2306

Lims ID: PIBLK

Worklist Smp#: 30

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

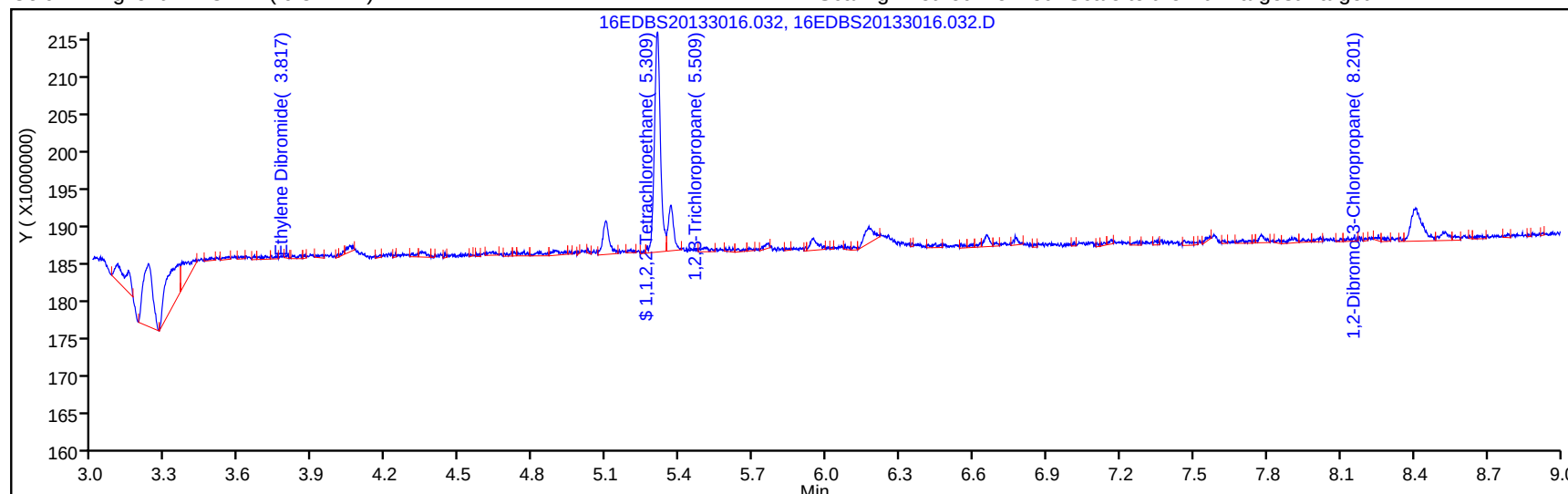
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

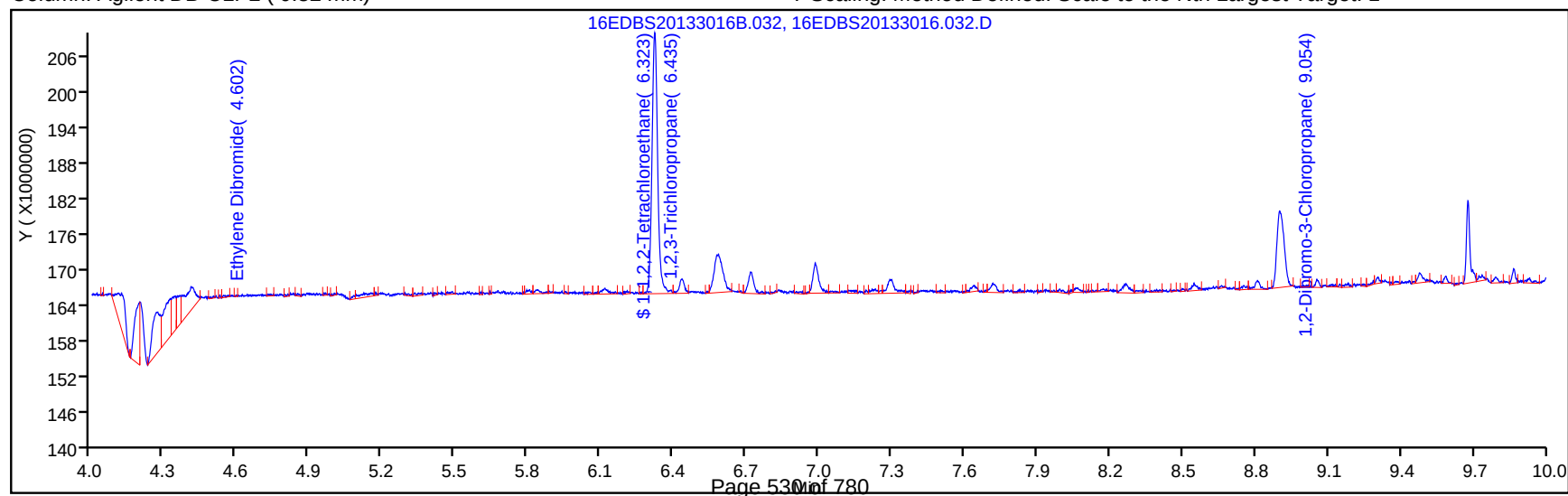
Column: Agilent DB-CLP1 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-530

Report Date: 09-Jun-2020 16:51:17

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.032.D
 Lims ID: PIBLK
 Client ID:
 Sample Type: PIBLK
 Inject. Date: 09-Jun-2020 02:06:00 ALS Bottle#: 0 Worklist Smp#: 30
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: EIBKX2024A GMPIBLKGM PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:15 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

Surrogate Recovery, Detector: 1ECDA

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.18	1.36	115.16

Surrogate Recovery, Detector: 2ECDB

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.18	1.43	120.47

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: PIBLK 410-11304/30
 Matrix: Water Lab File ID: 16EDBS20133016.032.D
 Analysis Method: 8011 Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 1 (mL) Date Analyzed: 06/09/2020 02:06
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1 (uL) GC Column: DB CLP2 ID: 0.32 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 11304 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
106-93-4	Ethylene Dibromide	0.35	U	0.53	0.35	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-34-5	1,1,2,2-Tetrachloroethane	120		46-136

Report Date: 09-Jun-2020 16:51:17

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.032.D
 Lims ID: PIBLK
 Client ID:
 Sample Type: PIBLK
 Inject. Date: 09-Jun-2020 02:06:00 ALS Bottle#: 0 Worklist Smp#: 30
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: EIBKX2024A GMPIBLKGM PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:15 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1: Agilent DB-CLP1 (0.32 mm) Det: 1ECD
 Column 2: Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
-----	--------------	------------------	------------------	----------	-----------------	-------------------	-------

1 Ethylene Dibromide

1	3.817	3.824	-0.007	455356H		0.0299	
2	4.602	4.648	-0.046	256516H		0.0107	
						RPD = 94.36	

\$ 2 1,1,2,2-Tetrachloroethane

1	5.309	5.313	-0.004	29478430H	1.18	1.36	
2	6.323	6.325	-0.002	44401571H	1.18	1.43	
						RPD = 4.51	

3 1,2,3-Trichloropropane

1	5.509	5.462	0.047	647596H		NC	
2	6.435	6.439	-0.004	2466929H		NC	
						RPD = 0.00	

4 1,2-Dibromo-3-Chloropropane

1	8.201	8.220	-0.019	403392H		0.0104	
2	9.054	9.078	-0.024	1394258H		0.0208	
						RPD = 66.12	

5 Chlorodibromomethane

1		0.000				ND	
---	--	-------	--	--	--	----	--

QC Flag Legend

Processing Flags

NC - Not Calibrated

H - Response Measured by Height

Reagents:

GCS_EIBK_B_00001

Amount Added: 1.00

Units: mL

Report Date: 09-Jun-2020 16:51:17

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.032.D

Injection Date: 09-Jun-2020 02:06:00

Instrument ID: 19853

Operator ID: 2306

Lims ID: PIBLK

Worklist Smp#: 30

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

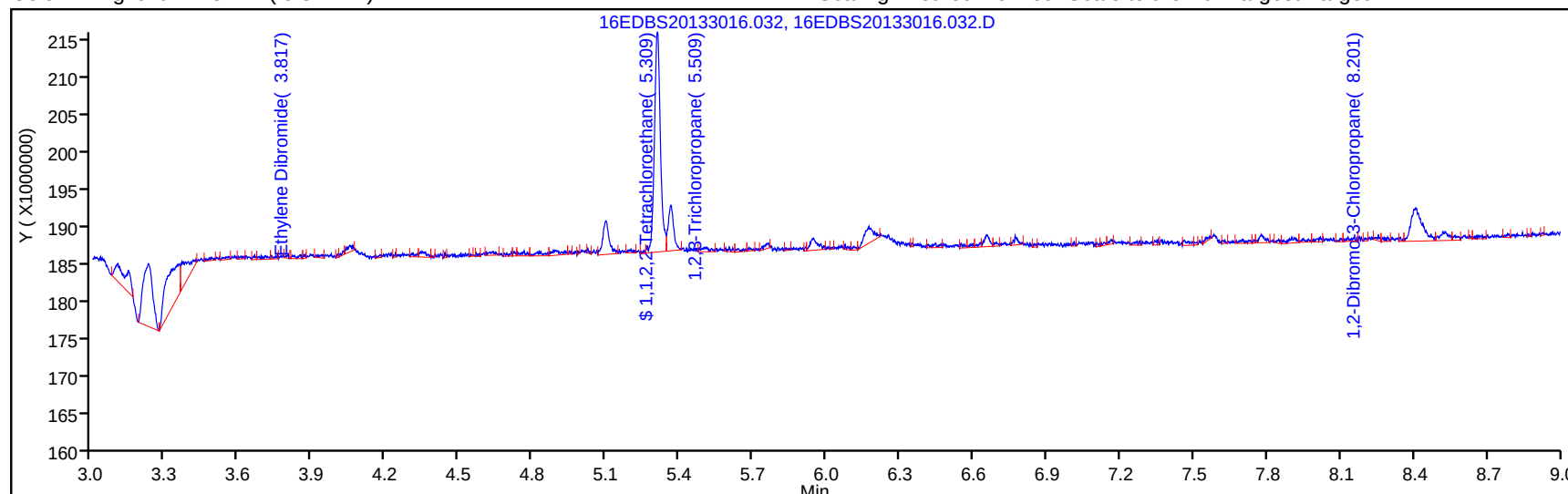
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

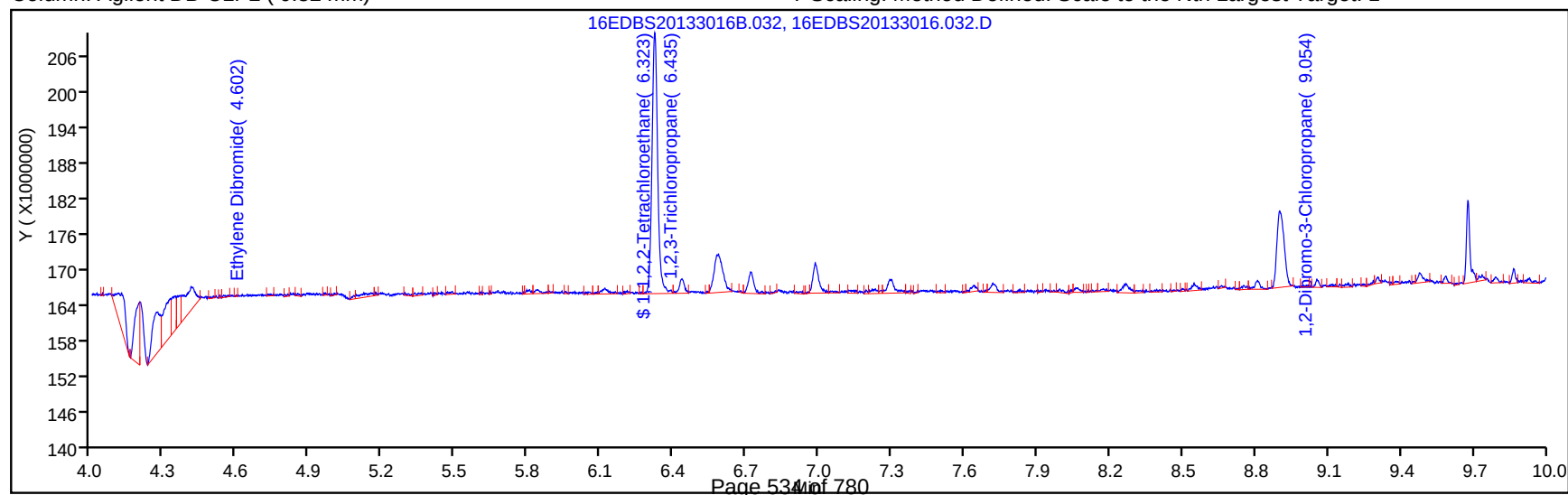
Column: Agilent DB-CLP1 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-534

Report Date: 09-Jun-2020 16:51:17

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.032.D
 Lims ID: PIBLK
 Client ID:
 Sample Type: PIBLK
 Inject. Date: 09-Jun-2020 02:06:00 ALS Bottle#: 0 Worklist Smp#: 30
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: EIBKX2024A GMPIBLKGM PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:15 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

Surrogate Recovery, Detector: 1ECDA

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.18	1.36	115.16

Surrogate Recovery, Detector: 2ECDB

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.18	1.43	120.47

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: PIBLK 410-11304/40
 Matrix: Water Lab File ID: 16EDBS20133016.041.D
 Analysis Method: 8011 Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 1 (mL) Date Analyzed: 06/09/2020 04:39
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1 (uL) GC Column: DB CLP1 ID: 0.32 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 11304 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
106-93-4	Ethylene Dibromide	0.35	U	0.53	0.35	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-34-5	1,1,2,2-Tetrachloroethane	108		46-136

Report Date: 09-Jun-2020 16:51:44

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.041.D
 Lims ID: PIBLK
 Client ID:
 Sample Type: PIBLK
 Inject. Date: 09-Jun-2020 04:39:00 ALS Bottle#: 0 Worklist Smp#: 40
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: EIBKX2024A GNPIBLKGN PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:41 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1: Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2: Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
-----	--------------	------------------	------------------	----------	-----------------	-------------------	-------

1 Ethylene Dibromide

1	3.830	3.824	0.006	501035H		0.0329	
2	4.622	4.648	-0.026	554211H		0.0232	

RPD = 34.65

\$ 2 1,1,2,2-Tetrachloroethane

1	5.306	5.313	-0.007	27654770H	1.18	1.28	
2	6.320	6.325	-0.005	43428497H	1.18	1.39	

RPD = 8.67

3 1,2,3-Trichloropropane

1	5.462	5.462	0.000	529569H		NC	
2	6.438	6.439	-0.001	1075120H		NC	

RPD = 0.00

4 1,2-Dibromo-3-Chloropropane

1	8.258	8.220	0.038	416038H		0.0108	
2	9.098	9.078	0.020	586034H		0.008723	

RPD = 20.98

5 Chlorodibromomethane

1		0.000				ND	
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QC Flag Legend

Processing Flags

NC - Not Calibrated

H - Response Measured by Height

Reagents:

GCS_EIBK_B_00001

Amount Added: 1.00

Units: mL

Report Date: 09-Jun-2020 16:51:44

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.041.D

Injection Date: 09-Jun-2020 04:39:00

Instrument ID: 19853

Operator ID: 2306

Lims ID: PIBLK

Worklist Smp#: 40

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

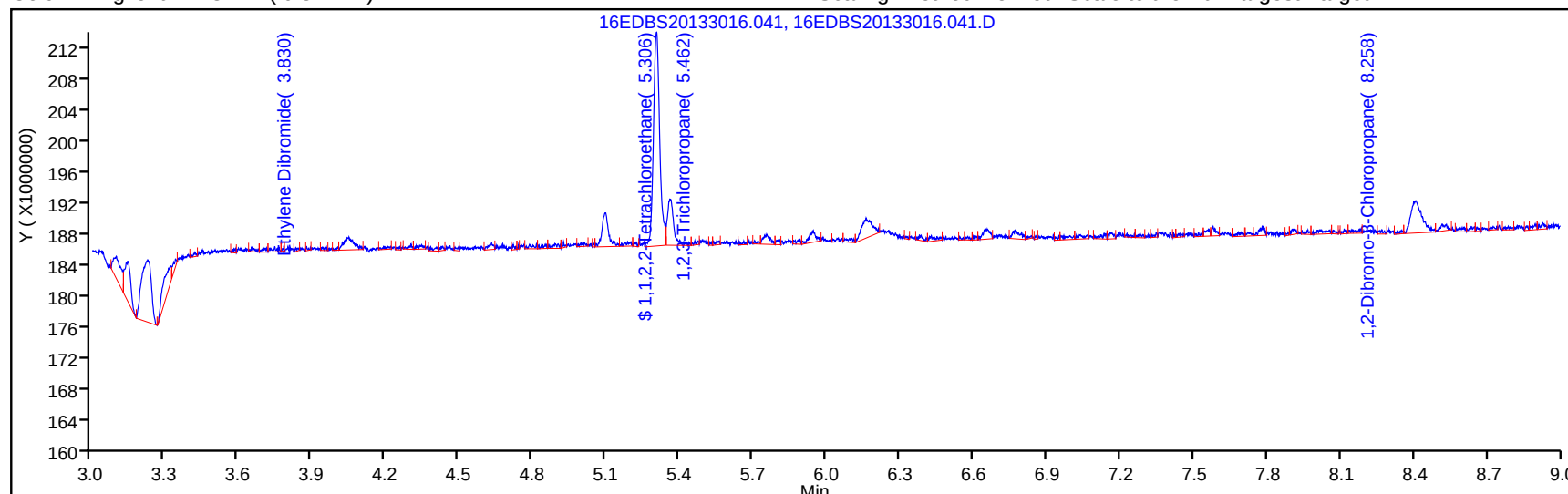
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

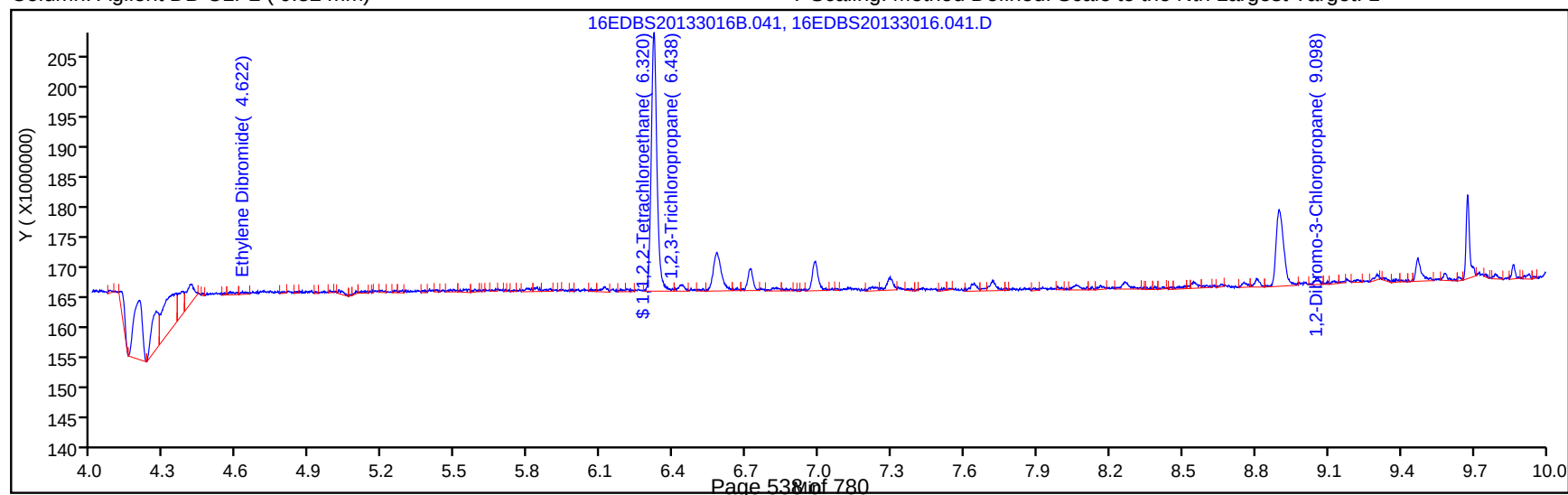
Column: Agilent DB-CLP1 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-538

Report Date: 09-Jun-2020 16:51:44

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.041.D
 Lims ID: PIBLK
 Client ID:
 Sample Type: PIBLK
 Inject. Date: 09-Jun-2020 04:39:00 ALS Bottle#: 0 Worklist Smp#: 40
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: EIBKX2024A GNPIBLKGN PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:41 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

Surrogate Recovery, Detector: 1ECDA

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.18	1.28	108.04

Surrogate Recovery, Detector: 2ECDB

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.18	1.39	117.83

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: PIBLK 410-11304/40
 Matrix: Water Lab File ID: 16EDBS20133016.041.D
 Analysis Method: 8011 Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 1 (mL) Date Analyzed: 06/09/2020 04:39
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1 (uL) GC Column: DB CLP2 ID: 0.32 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 11304 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
106-93-4	Ethylene Dibromide	0.35	U	0.53	0.35	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-34-5	1,1,2,2-Tetrachloroethane	118		46-136

Report Date: 09-Jun-2020 16:51:44

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.041.D
 Lims ID: PIBLK
 Client ID:
 Sample Type: PIBLK
 Inject. Date: 09-Jun-2020 04:39:00 ALS Bottle#: 0 Worklist Smp#: 40
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: EIBKX2024A GNPIBLKGN PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:41 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1: Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2: Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
-----	--------------	------------------	------------------	----------	-----------------	-------------------	-------

1 Ethylene Dibromide

1	3.830	3.824	0.006	501035H		0.0329	
2	4.622	4.648	-0.026	554211H		0.0232	

RPD = 34.65

\$ 2 1,1,2,2-Tetrachloroethane

1	5.306	5.313	-0.007	27654770H	1.18	1.28	
2	6.320	6.325	-0.005	43428497H	1.18	1.39	

RPD = 8.67

3 1,2,3-Trichloropropane

1	5.462	5.462	0.000	529569H		NC	
2	6.438	6.439	-0.001	1075120H		NC	

RPD = 0.00

4 1,2-Dibromo-3-Chloropropane

1	8.258	8.220	0.038	416038H		0.0108	
2	9.098	9.078	0.020	586034H		0.008723	

RPD = 20.98

5 Chlorodibromomethane

1		0.000				ND	
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QC Flag Legend

Processing Flags

NC - Not Calibrated

H - Response Measured by Height

Reagents:

GCS_EIBK_B_00001

Amount Added: 1.00

Units: mL

Report Date: 09-Jun-2020 16:51:44

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.041.D

Injection Date: 09-Jun-2020 04:39:00

Instrument ID: 19853

Operator ID: 2306

Lims ID: PIBLK

Worklist Smp#: 40

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

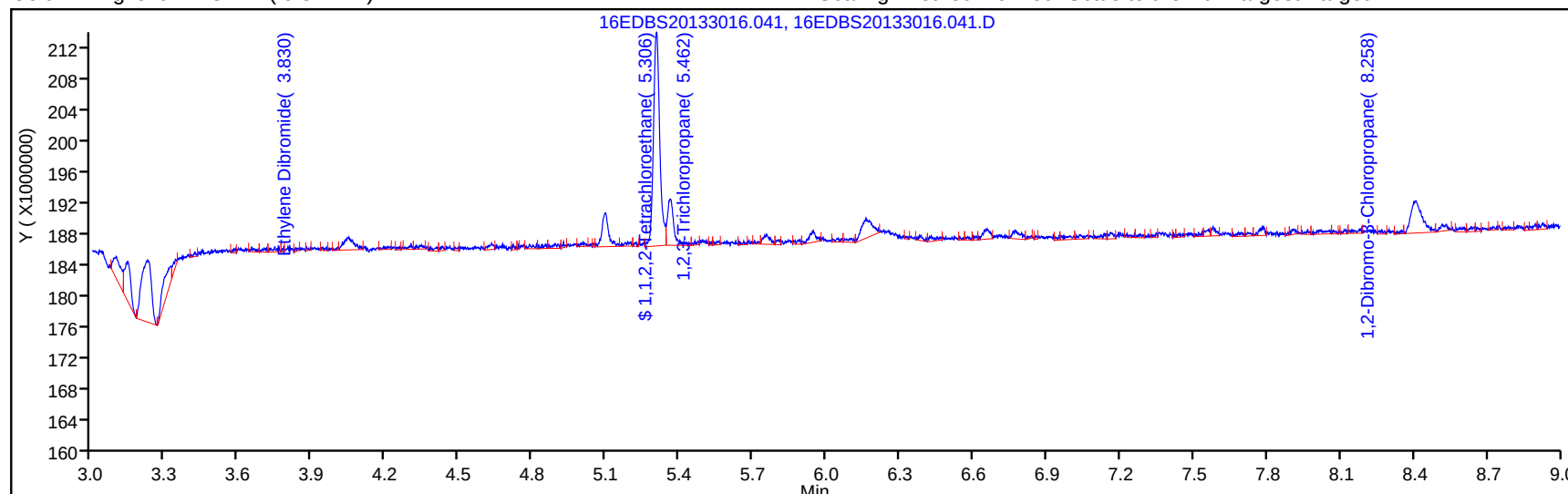
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

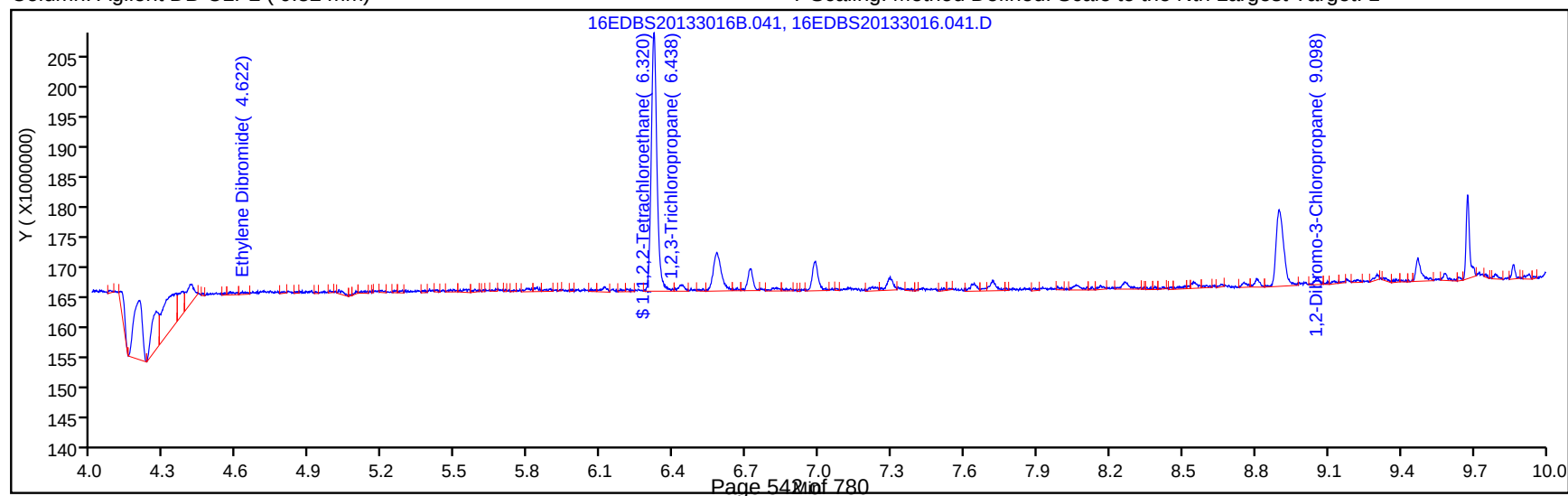
Column: Agilent DB-CLP1 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-542

Report Date: 09-Jun-2020 16:51:44

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.041.D
 Lims ID: PIBLK
 Client ID:
 Sample Type: PIBLK
 Inject. Date: 09-Jun-2020 04:39:00 ALS Bottle#: 0 Worklist Smp#: 40
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: EIBKX2024A GNPIBLKGN PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:41 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

Surrogate Recovery, Detector: 1ECDA

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.18	1.28	108.04

Surrogate Recovery, Detector: 2ECDB

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.18	1.39	117.83

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 410-10943/2-A
 Matrix: Water Lab File ID: 16EDBS20133016.023.D
 Analysis Method: 8011 Date Collected: _____
 Extraction Method: 8011 Date Extracted: 06/06/2020 03:40
 Sample wt/vol: 35 (mL) Date Analyzed: 06/08/2020 23:34
 Con. Extract Vol.: 2 (mL) Dilution Factor: 1
 Injection Volume: 1 (uL) GC Column: DB CLP1 ID: 0.32 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 11304 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
106-93-4	Ethylene Dibromide	0.101		0.030	0.020	0.010

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-34-5	1,1,2,2-Tetrachloroethane	67		46-136

Report Date: 09-Jun-2020 16:51:07

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.023.D
 Lims ID: LCS 410-10943/2-A
 Client ID:
 Sample Type: LCS
 Inject. Date: 08-Jun-2020 23:34:00 ALS Bottle#: 0 Worklist Smp#: 21
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: LCS 410-10943/2-A AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:04 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

First Level Reviewer: brumbaughj

Date: 09-Jun-2020 16:40:44

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
-----	--------------	------------------	------------------	----------	-----------------	-------------------	-------

1 Ethylene Dibromide

1	3.799	3.824	-0.025	26879009H	2.24	1.76	
2	4.633	4.648	-0.015	46733506H	2.24	1.95	
RPD = 10.21							

\$ 2 1,1,2,2-Tetrachloroethane

1	5.301	5.313	-0.012	17890406H	1.23	0.8270	
2	6.317	6.325	-0.008	27520699H	1.23	0.8835	
RPD = 6.61							

3 1,2,3-Trichloropropane

1	5.450	5.462	-0.012	6081647H	NC	NC	
2	6.430	6.439	-0.009	9411108H	NC	NC	
RPD = 0.00							

4 1,2-Dibromo-3-Chloropropane

1	8.216	8.220	-0.004	82823624H	2.23	2.14	
2	9.075	9.078	-0.003	155689363H	2.23	2.32	
RPD = 7.80							

QC Flag Legend

Processing Flags

NC - Not Calibrated

H - Response Measured by Height

Report Date: 09-Jun-2020 16:51:07

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.023.D

Injection Date: 08-Jun-2020 23:34:00

Instrument ID: 19853

Operator ID: 2306

Lims ID: LCS 410-10943/2-A

Worklist Smp#: 21

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

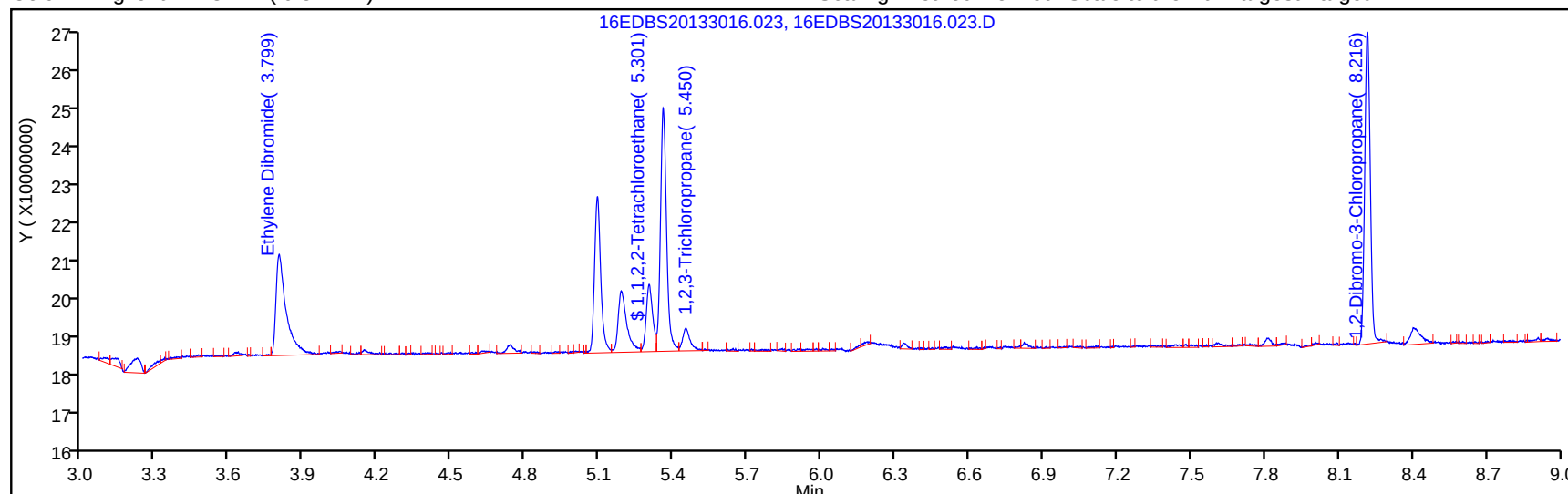
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

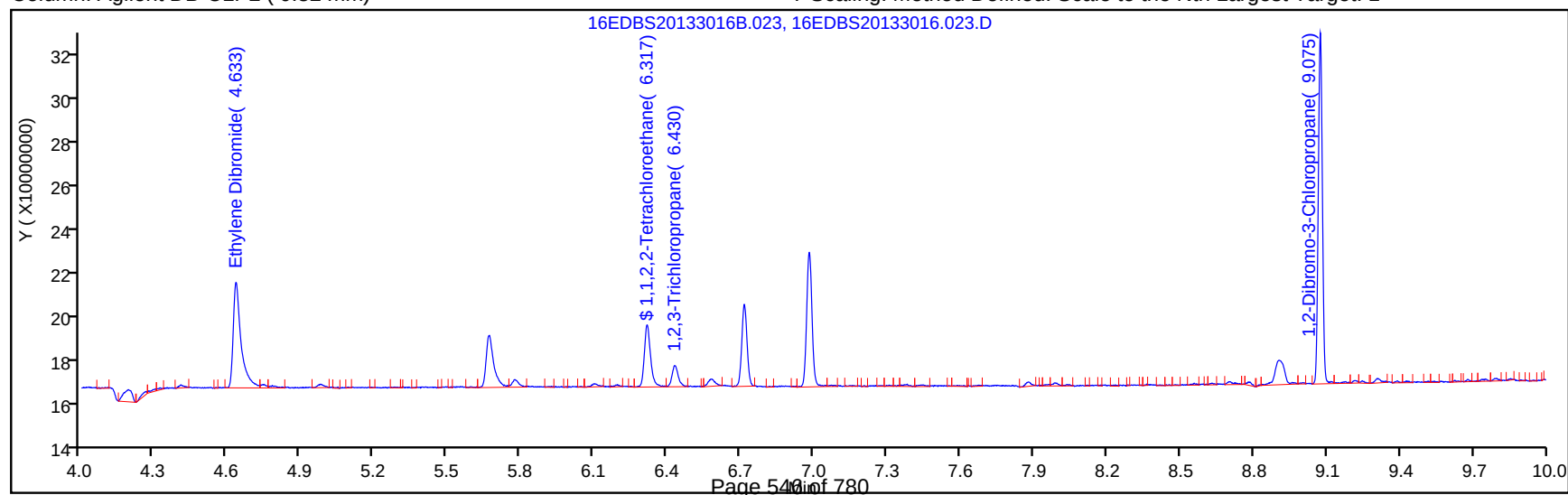
Column: Agilent DB-CLP1 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-546

Report Date: 09-Jun-2020 16:51:07

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.023.D
 Lims ID: LCS 410-10943/2-A
 Client ID:
 Sample Type: LCS
 Inject. Date: 08-Jun-2020 23:34:00 ALS Bottle#: 0 Worklist Smp#: 21
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: LCS 410-10943/2-A AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:04 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018
 First Level Reviewer: brumbaughj Date: 09-Jun-2020 16:40:44

Surrogate Recovery, Detector: 1ECDA

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	0.8270	67.10

Surrogate Recovery, Detector: 2ECDB

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	0.8835	71.69

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 410-10943/2-A
 Matrix: Water Lab File ID: 16EDBS20133016.023.D
 Analysis Method: 8011 Date Collected: _____
 Extraction Method: 8011 Date Extracted: 06/06/2020 03:40
 Sample wt/vol: 35 (mL) Date Analyzed: 06/08/2020 23:34
 Con. Extract Vol.: 2 (mL) Dilution Factor: 1
 Injection Volume: 1 (uL) GC Column: DB CLP2 ID: 0.32 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 11304 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-34-5	1,1,2,2-Tetrachloroethane	72		46-136

Report Date: 09-Jun-2020 16:51:07

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.023.D
 Lims ID: LCS 410-10943/2-A
 Client ID:
 Sample Type: LCS
 Inject. Date: 08-Jun-2020 23:34:00 ALS Bottle#: 0 Worklist Smp#: 21
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: LCS 410-10943/2-A AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:04 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

First Level Reviewer: brumbaughj

Date: 09-Jun-2020 16:40:44

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
-----	--------------	------------------	------------------	----------	-----------------	-------------------	-------

1 Ethylene Dibromide

1	3.799	3.824	-0.025	26879009H	2.24	1.76	
2	4.633	4.648	-0.015	46733506H	2.24	1.95	
RPD = 10.21							

\$ 2 1,1,2,2-Tetrachloroethane

1	5.301	5.313	-0.012	17890406H	1.23	0.8270	
2	6.317	6.325	-0.008	27520699H	1.23	0.8835	
RPD = 6.61							

3 1,2,3-Trichloropropane

1	5.450	5.462	-0.012	6081647H	NC	NC	
2	6.430	6.439	-0.009	9411108H	NC	NC	
RPD = 0.00							

4 1,2-Dibromo-3-Chloropropane

1	8.216	8.220	-0.004	82823624H	2.23	2.14	
2	9.075	9.078	-0.003	155689363H	2.23	2.32	
RPD = 7.80							

QC Flag Legend

Processing Flags

NC - Not Calibrated

H - Response Measured by Height

Report Date: 09-Jun-2020 16:51:07

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.023.D

Injection Date: 08-Jun-2020 23:34:00

Instrument ID: 19853

Operator ID: 2306

Lims ID: LCS 410-10943/2-A

Worklist Smp#: 21

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

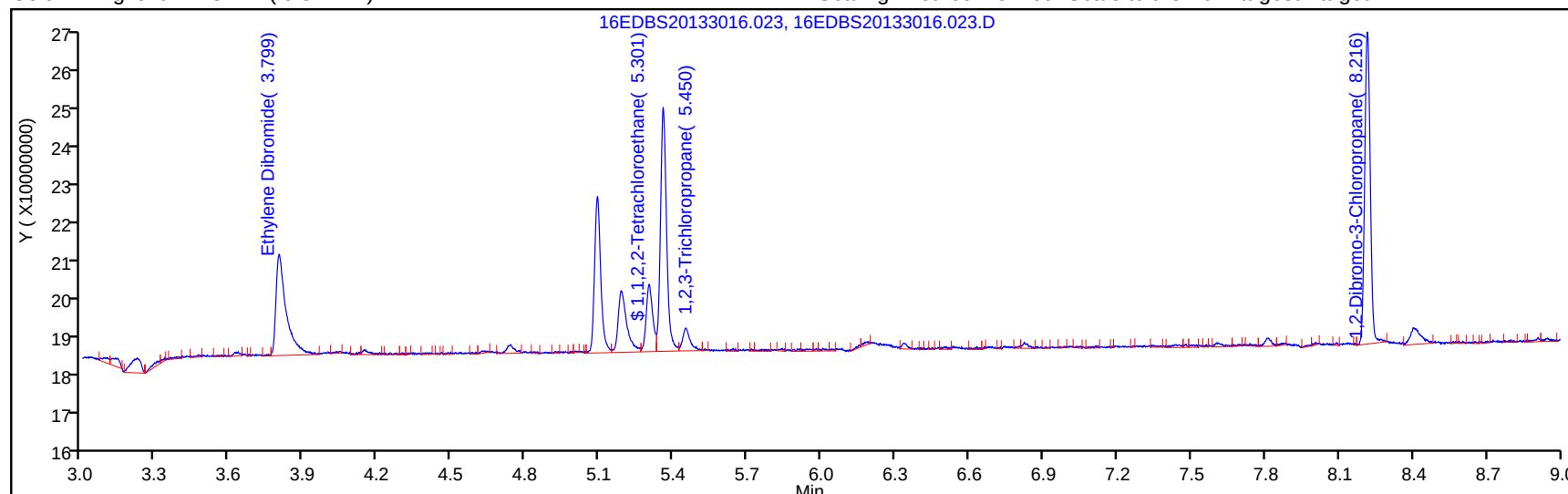
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

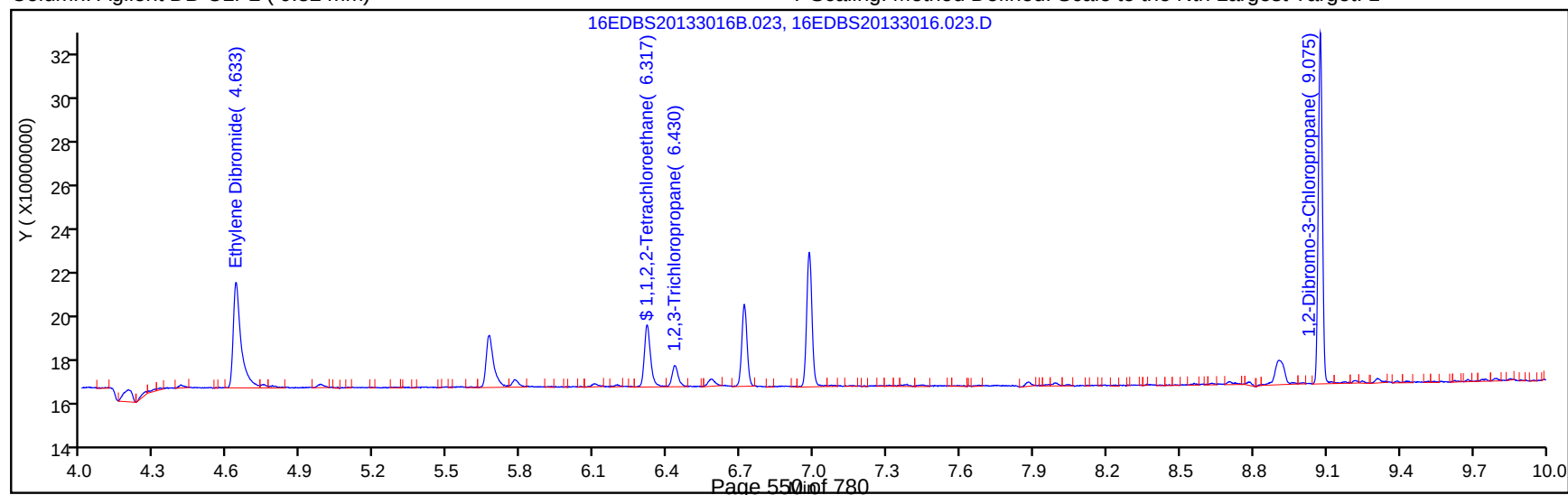
Column: Agilent DB-CLP1 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-550

Report Date: 09-Jun-2020 16:51:07

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.023.D
 Lims ID: LCS 410-10943/2-A
 Client ID:
 Sample Type: LCS
 Inject. Date: 08-Jun-2020 23:34:00 ALS Bottle#: 0 Worklist Smp#: 21
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: LCS 410-10943/2-A AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:04 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018
 First Level Reviewer: brumbaughj Date: 09-Jun-2020 16:40:44

Surrogate Recovery, Detector: 1ECDA

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	0.8270	67.10

Surrogate Recovery, Detector: 2ECDB

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	0.8835	71.69

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCSD 410-10943/3-A
 Matrix: Water Lab File ID: 16EDBS20133016.024.D
 Analysis Method: 8011 Date Collected: _____
 Extraction Method: 8011 Date Extracted: 06/06/2020 03:40
 Sample wt/vol: 35 (mL) Date Analyzed: 06/08/2020 23:51
 Con. Extract Vol.: 2 (mL) Dilution Factor: 1
 Injection Volume: 1 (uL) GC Column: DB CLP1 ID: 0.32 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 11304 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
106-93-4	Ethylene Dibromide	0.113		0.030	0.020	0.010

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-34-5	1,1,2,2-Tetrachloroethane	74		46-136

Report Date: 09-Jun-2020 16:51:07

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.024.D
 Lims ID: LCSD 410-10943/3-A
 Client ID:
 Sample Type: LCSD
 Inject. Date: 08-Jun-2020 23:51:00 ALS Bottle#: 0 Worklist Smp#: 22
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: LCSD 410-10943/3-A AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:04 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

First Level Reviewer: brumbaughj

Date: 09-Jun-2020 16:40:57

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
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1 Ethylene Dibromide

1	3.799	3.824	-0.025	30235761H	2.24	1.98	
2	4.633	4.648	-0.015	51698951H	2.24	2.16	
RPD = 8.54							

\$ 2 1,1,2,2-Tetrachloroethane

1	5.302	5.313	-0.011	19619609H	1.23	0.9069	
2	6.318	6.325	-0.007	29548436H	1.23	0.9486	
RPD = 4.50							

3 1,2,3-Trichloropropane

1	5.453	5.462	-0.009	6099378H	NC	NC	
2	6.431	6.439	-0.008	9855055H	NC	NC	
RPD = 0.00							

4 1,2-Dibromo-3-Chloropropane

1	8.217	8.220	-0.003	86892242H	2.23	2.25	
2	9.076	9.078	-0.002	158734039H	2.23	2.36	
RPD = 4.94							

QC Flag Legend

Processing Flags

NC - Not Calibrated

H - Response Measured by Height

Report Date: 09-Jun-2020 16:51:07

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.024.D

Injection Date: 08-Jun-2020 23:51:00

Instrument ID: 19853

Operator ID: 2306

Lims ID: LCSD 410-10943/3-A

Worklist Smp#: 22

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

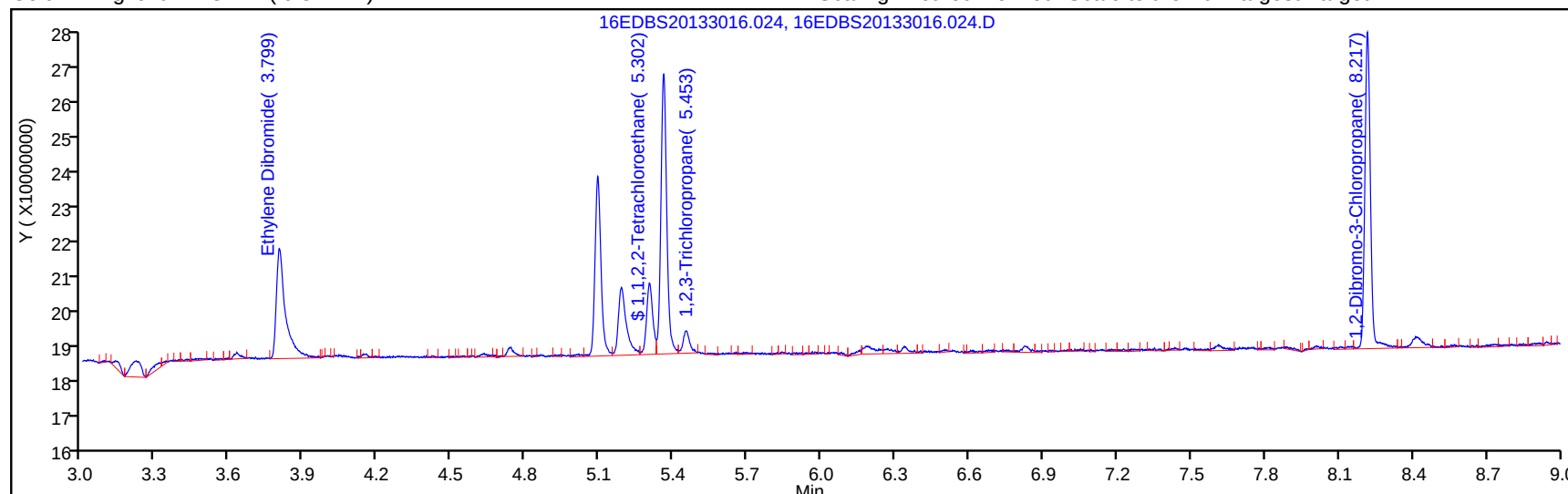
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

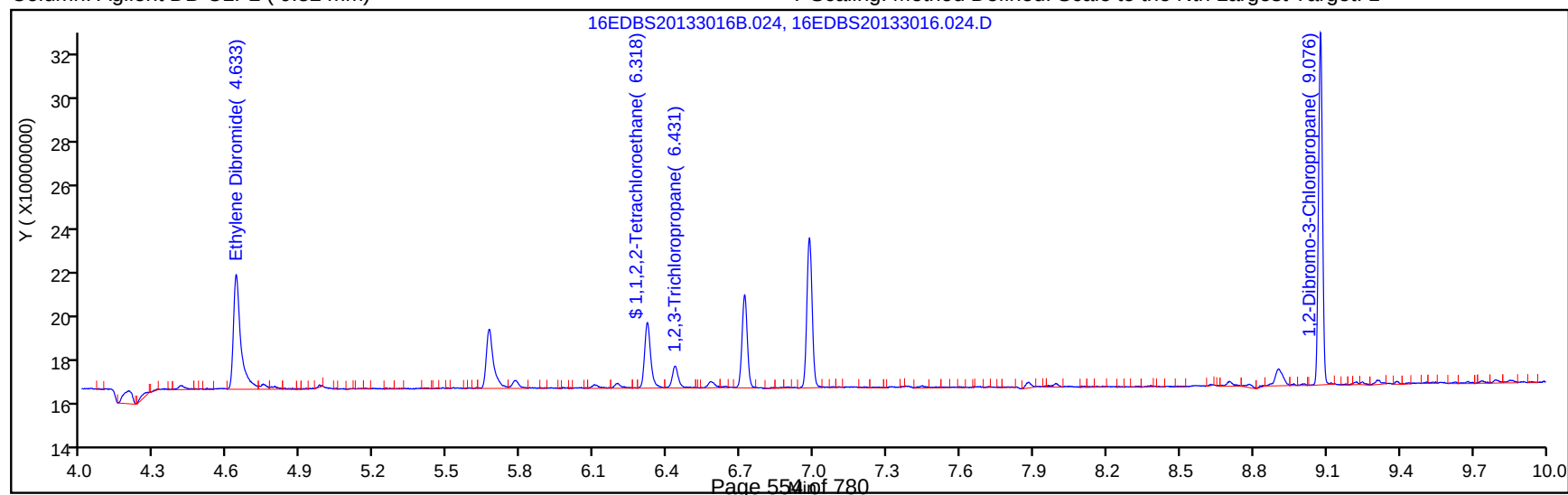
Column: Agilent DB-CLP1 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-554

Report Date: 09-Jun-2020 16:51:07

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.024.D
 Lims ID: LCSD 410-10943/3-A
 Client ID:
 Sample Type: LCSD
 Inject. Date: 08-Jun-2020 23:51:00 ALS Bottle#: 0 Worklist Smp#: 22
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: LCSD 410-10943/3-A AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:04 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018
 First Level Reviewer: brumbaughj Date: 09-Jun-2020 16:40:57

Surrogate Recovery, Detector: 1ECDA

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	0.9069	73.58

Surrogate Recovery, Detector: 2ECDB

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	0.9486	76.97

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCSD 410-10943/3-A
 Matrix: Water Lab File ID: 16EDBS20133016.024.D
 Analysis Method: 8011 Date Collected: _____
 Extraction Method: 8011 Date Extracted: 06/06/2020 03:40
 Sample wt/vol: 35 (mL) Date Analyzed: 06/08/2020 23:51
 Con. Extract Vol.: 2 (mL) Dilution Factor: 1
 Injection Volume: 1 (uL) GC Column: DB CLP2 ID: 0.32 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 11304 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-34-5	1,1,2,2-Tetrachloroethane	77		46-136

Report Date: 09-Jun-2020 16:51:08

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.024.D
 Lims ID: LCSD 410-10943/3-A
 Client ID:
 Sample Type: LCSD
 Inject. Date: 08-Jun-2020 23:51:00 ALS Bottle#: 0 Worklist Smp#: 22
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: LCSD 410-10943/3-A AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:04 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

First Level Reviewer: brumbaughj

Date: 09-Jun-2020 16:40:57

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
-----	--------------	------------------	------------------	----------	-----------------	-------------------	-------

1 Ethylene Dibromide

1	3.799	3.824	-0.025	30235761H	2.24	1.98	
2	4.633	4.648	-0.015	51698951H	2.24	2.16	
RPD = 8.54							

\$ 2 1,1,2,2-Tetrachloroethane

1	5.302	5.313	-0.011	19619609H	1.23	0.9069	
2	6.318	6.325	-0.007	29548436H	1.23	0.9486	
RPD = 4.50							

3 1,2,3-Trichloropropane

1	5.453	5.462	-0.009	6099378H	NC	NC	
2	6.431	6.439	-0.008	9855055H	NC	NC	
RPD = 0.00							

4 1,2-Dibromo-3-Chloropropane

1	8.217	8.220	-0.003	86892242H	2.23	2.25	
2	9.076	9.078	-0.002	158734039H	2.23	2.36	
RPD = 4.94							

QC Flag Legend

Processing Flags

NC - Not Calibrated

H - Response Measured by Height

Report Date: 09-Jun-2020 16:51:08

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.024.D

Injection Date: 08-Jun-2020 23:51:00

Instrument ID: 19853

Operator ID: 2306

Lims ID: LCSD 410-10943/3-A

Worklist Smp#: 22

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

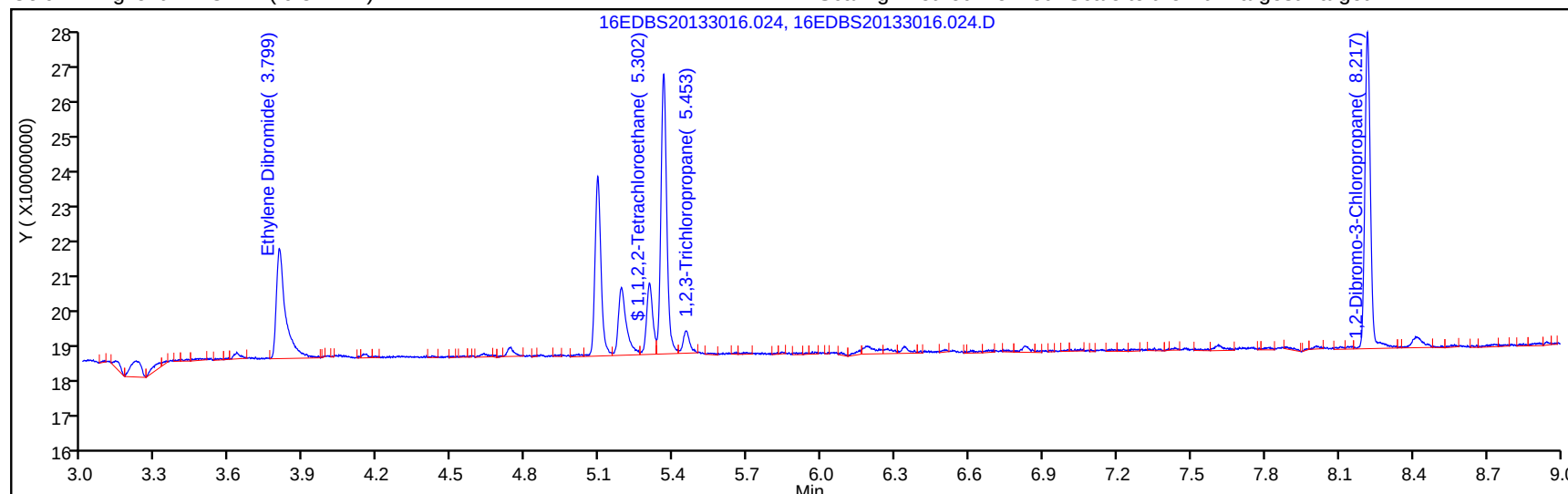
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

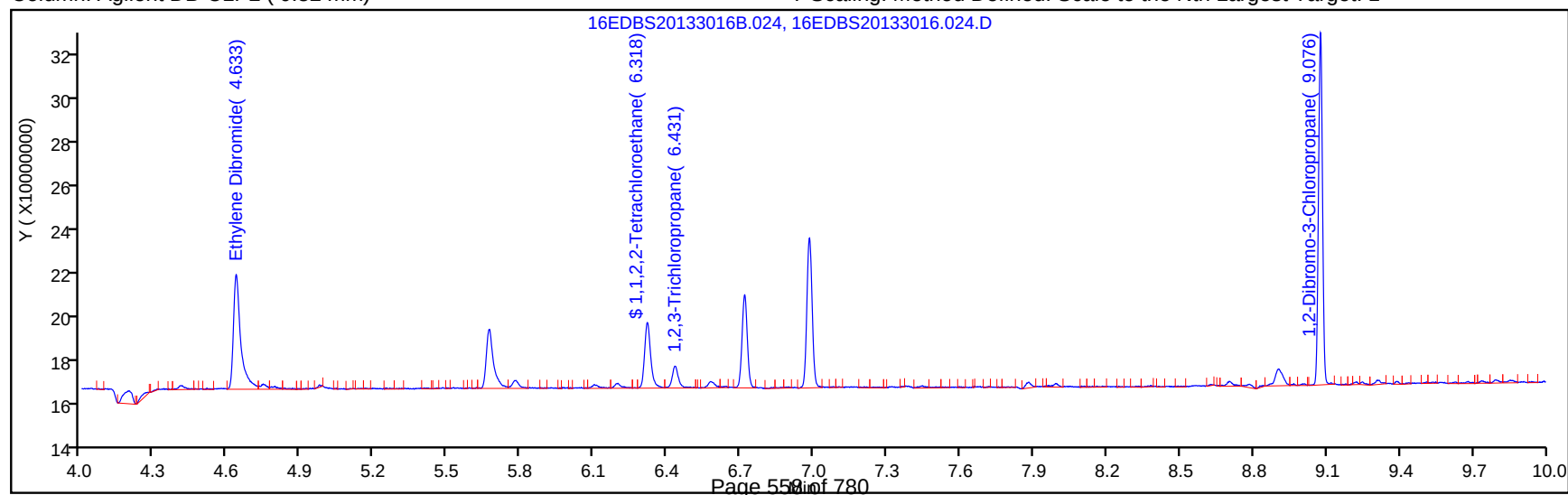
Column: Agilent DB-CLP1 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-558

Report Date: 09-Jun-2020 16:51:08

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.024.D
 Lims ID: LCSD 410-10943/3-A
 Client ID:
 Sample Type: LCSD
 Inject. Date: 08-Jun-2020 23:51:00 ALS Bottle#: 0 Worklist Smp#: 22
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: LCSD 410-10943/3-A AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:04 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018
 First Level Reviewer: brumbaughj Date: 09-Jun-2020 16:40:57

Surrogate Recovery, Detector: 1ECDA

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	0.9069	73.58

Surrogate Recovery, Detector: 2ECDB

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	0.9486	76.97

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Client Sample ID: GWTS-EFF2-060320 MS Lab Sample ID: 410-3311-6 MS
 Matrix: Water Lab File ID: 16EDBS20133016.034.D
 Analysis Method: 8011 Date Collected: 06/03/2020 08:24
 Extraction Method: 8011 Date Extracted: 06/06/2020 03:40
 Sample wt/vol: 36.9 (mL) Date Analyzed: 06/09/2020 02:40
 Con. Extract Vol.: 2 (mL) Dilution Factor: 1
 Injection Volume: 1 (uL) GC Column: DB CLP1 ID: 0.32 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 11304 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
106-93-4	Ethylene Dibromide	0.112		0.028	0.019	0.0095

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-34-5	1,1,2,2-Tetrachloroethane	87		46-136

Report Date: 09-Jun-2020 16:51:20

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.034.D
 Lims ID: 410-3311-A-6-A MS
 Client ID: GWTS-EFF2-060320
 Sample Type: MS
 Inject. Date: 09-Jun-2020 02:40:00 ALS Bottle#: 0 Worklist Smp#: 32
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 410-3311-A-6-A MS AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:15 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
-----	--------------	------------------	------------------	----------	-----------------	-------------------	-------

1 Ethylene Dibromide

1	3.808	3.824	-0.016	31521596H	2.24	2.07	
2	4.638	4.648	-0.010	54934426H	2.24	2.30	
RPD = 10.44							

\$ 2 1,1,2,2-Tetrachloroethane

1	5.305	5.313	-0.008	23265582H	1.23	1.08	
2	6.321	6.325	-0.004	28702473H	1.23	0.9215	
RPD = 15.42							

3 1,2,3-Trichloropropane

1	5.454	5.462	-0.008	7906675H	NC	NC	
2	6.433	6.439	-0.006	9776914H	NC	NC	
RPD = 0.00							

4 1,2-Dibromo-3-Chloropropane

1	8.218	8.220	-0.002	86903264H	2.23	2.25	
2	9.076	9.078	-0.002	156281855H	2.23	2.33	
RPD = 3.37							

5 Chlorodibromomethane

1		0.000				ND	
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QC Flag Legend

Processing Flags

NC - Not Calibrated

H - Response Measured by Height

Report Date: 09-Jun-2020 16:51:20

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.034.D

Injection Date: 09-Jun-2020 02:40:00

Instrument ID: 19853

Operator ID: 2306

Lims ID: 410-3311-A-6-A MS

Worklist Smp#: 32

Client ID: GWTS-EFF2-060320

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

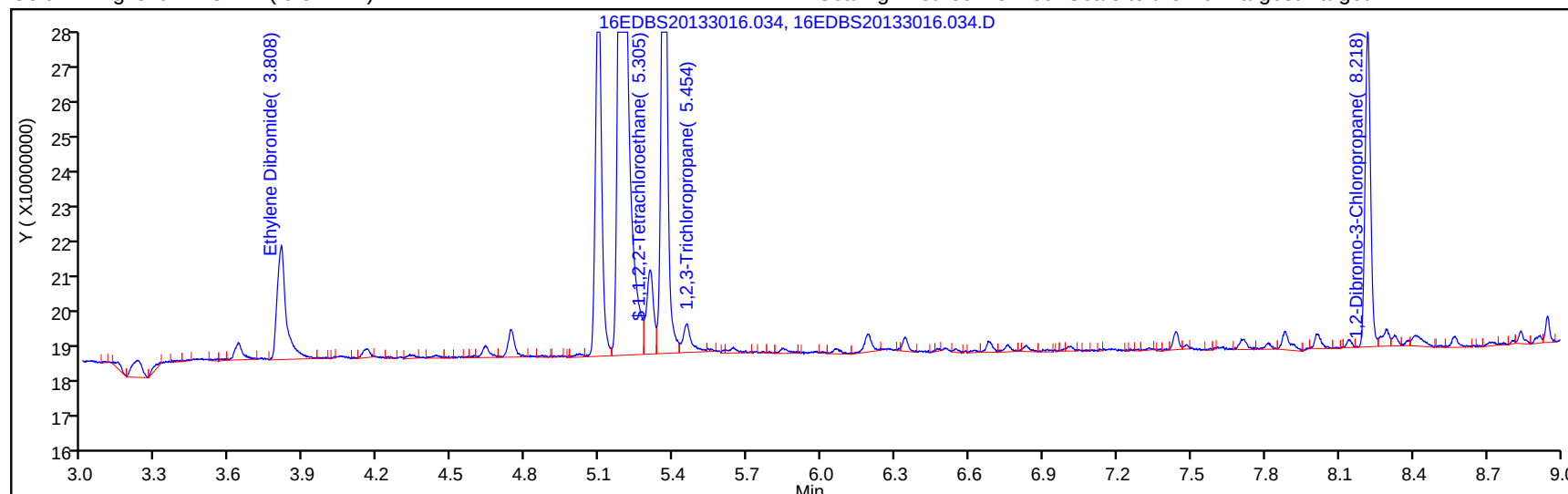
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

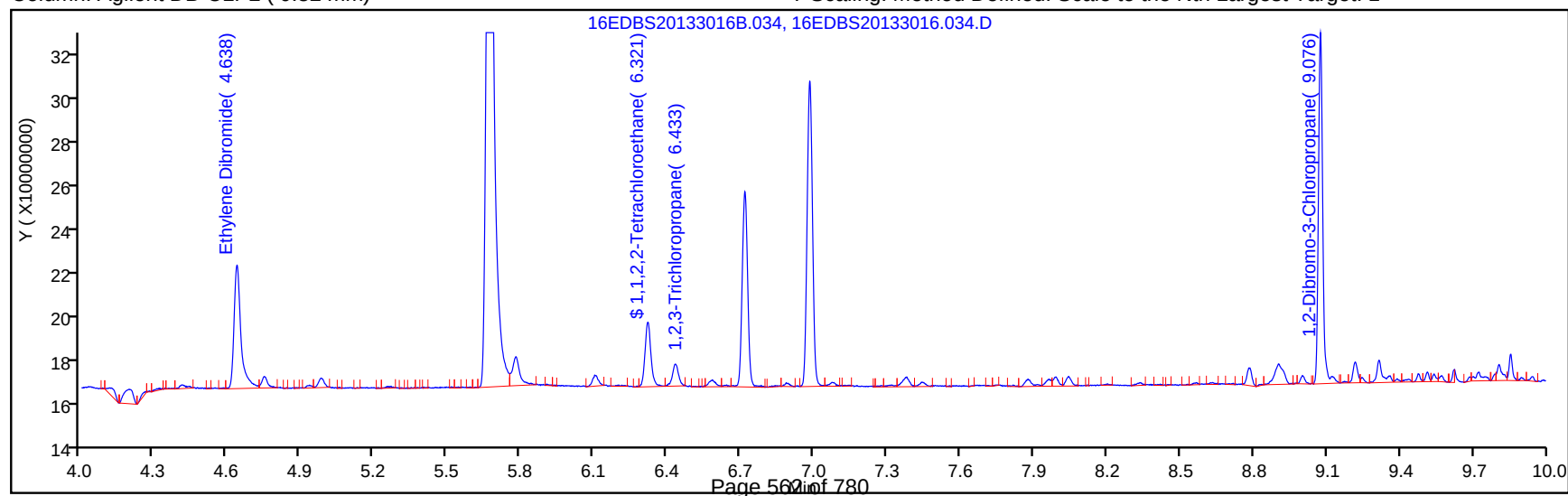
Column: Agilent DB-CLP1 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-562

Report Date: 09-Jun-2020 16:51:20

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.034.D
 Lims ID: 410-3311-A-6-A MS
 Client ID: GWTS-EFF2-060320
 Sample Type: MS
 Inject. Date: 09-Jun-2020 02:40:00 ALS Bottle#: 0 Worklist Smp#: 32
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 410-3311-A-6-A MS AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:15 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

Surrogate Recovery, Detector: 1ECDA

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	1.08	87.26

Surrogate Recovery, Detector: 2ECDB

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	0.9215	74.76

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Client Sample ID: GWTS-EFF2-060320 MS Lab Sample ID: 410-3311-6 MS
 Matrix: Water Lab File ID: 16EDBS20133016.034.D
 Analysis Method: 8011 Date Collected: 06/03/2020 08:24
 Extraction Method: 8011 Date Extracted: 06/06/2020 03:40
 Sample wt/vol: 36.9 (mL) Date Analyzed: 06/09/2020 02:40
 Con. Extract Vol.: 2 (mL) Dilution Factor: 1
 Injection Volume: 1 (uL) GC Column: DB CLP2 ID: 0.32 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 11304 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-34-5	1,1,2,2-Tetrachloroethane	75		46-136

Report Date: 09-Jun-2020 16:51:20

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.034.D
 Lims ID: 410-3311-A-6-A MS
 Client ID: GWTS-EFF2-060320
 Sample Type: MS
 Inject. Date: 09-Jun-2020 02:40:00 ALS Bottle#: 0 Worklist Smp#: 32
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 410-3311-A-6-A MS AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:15 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
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1 Ethylene Dibromide

1	3.808	3.824	-0.016	31521596H	2.24	2.07	
2	4.638	4.648	-0.010	54934426H	2.24	2.30	
RPD = 10.44							

\$ 2 1,1,2,2-Tetrachloroethane

1	5.305	5.313	-0.008	23265582H	1.23	1.08	
2	6.321	6.325	-0.004	28702473H	1.23	0.9215	
RPD = 15.42							

3 1,2,3-Trichloropropane

1	5.454	5.462	-0.008	7906675H	NC	NC	
2	6.433	6.439	-0.006	9776914H	NC	NC	
RPD = 0.00							

4 1,2-Dibromo-3-Chloropropane

1	8.218	8.220	-0.002	86903264H	2.23	2.25	
2	9.076	9.078	-0.002	156281855H	2.23	2.33	
RPD = 3.37							

5 Chlorodibromomethane

1		0.000				ND	
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QC Flag Legend

Processing Flags

NC - Not Calibrated

H - Response Measured by Height

Report Date: 09-Jun-2020 16:51:20

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.034.D

Injection Date: 09-Jun-2020 02:40:00

Instrument ID: 19853

Operator ID: 2306

Lims ID: 410-3311-A-6-A MS

Worklist Smp#: 32

Client ID: GWTS-EFF2-060320

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

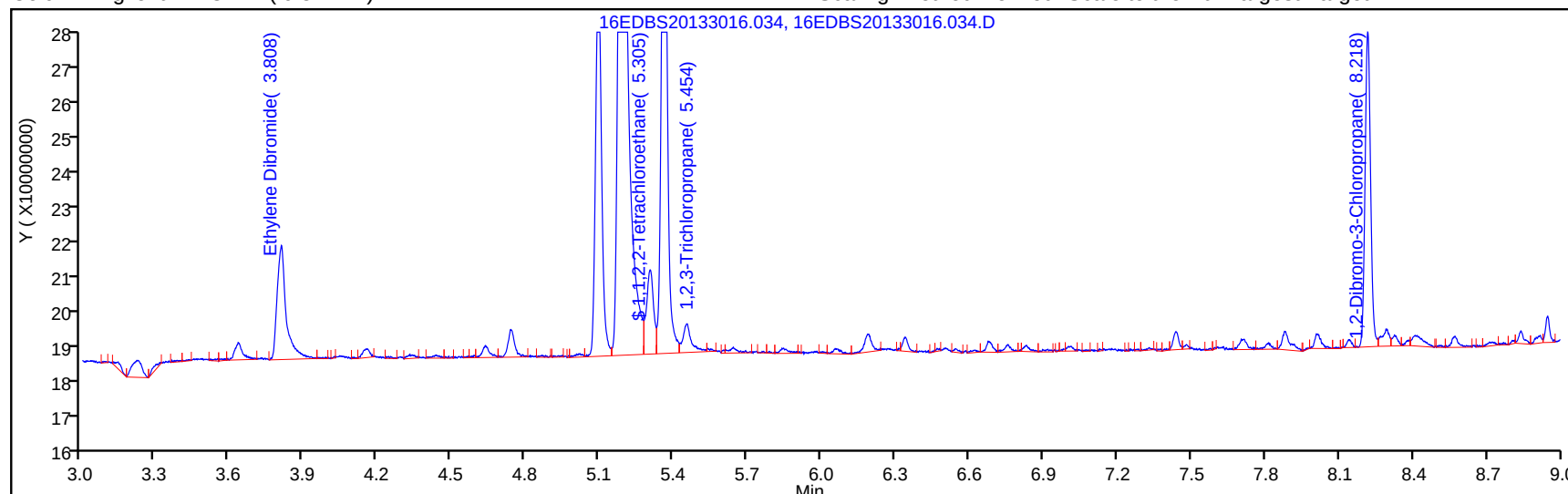
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

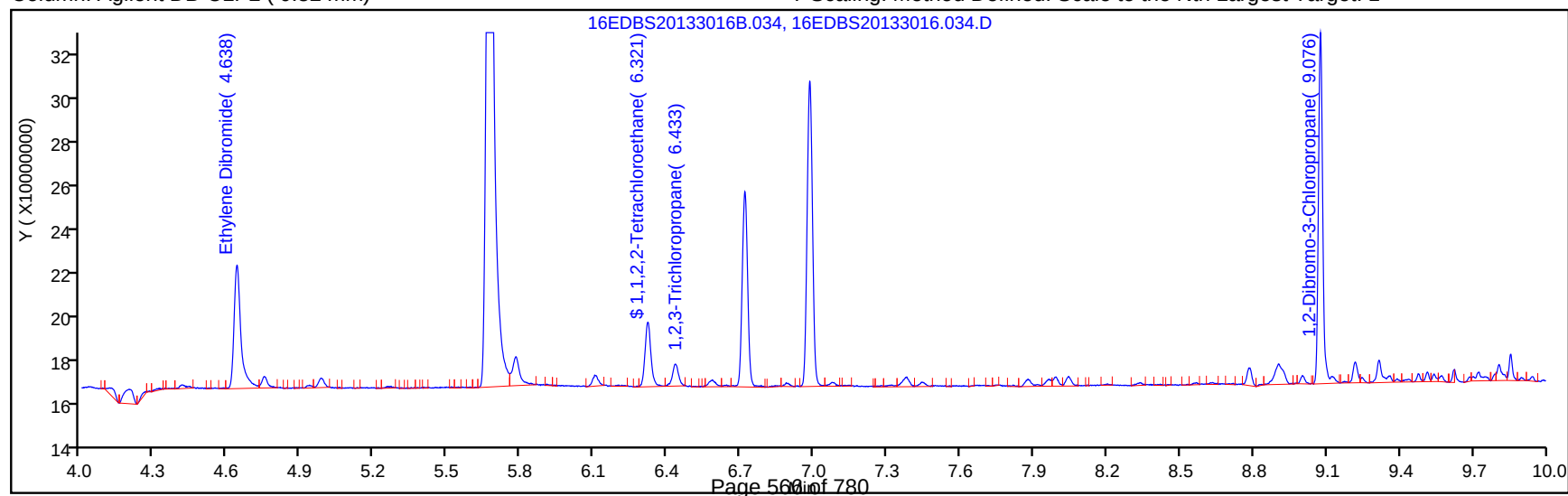
Column: Agilent DB-CLP1 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-566

Report Date: 09-Jun-2020 16:51:20

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.034.D
 Lims ID: 410-3311-A-6-A MS
 Client ID: GWTS-EFF2-060320
 Sample Type: MS
 Inject. Date: 09-Jun-2020 02:40:00 ALS Bottle#: 0 Worklist Smp#: 32
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 410-3311-A-6-A MS AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:15 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

Surrogate Recovery, Detector: 1ECDA

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	1.08	87.26

Surrogate Recovery, Detector: 2ECDB

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	0.9215	74.76

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Client Sample ID: GWTS-EFF2-060320 MSD Lab Sample ID: 410-3311-6 MSD
 Matrix: Water Lab File ID: 16EDBS20133016.035.D
 Analysis Method: 8011 Date Collected: 06/03/2020 08:24
 Extraction Method: 8011 Date Extracted: 06/06/2020 03:40
 Sample wt/vol: 36.5 (mL) Date Analyzed: 06/09/2020 02:57
 Con. Extract Vol.: 2 (mL) Dilution Factor: 1
 Injection Volume: 1 (uL) GC Column: DB CLP1 ID: 0.32 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 11304 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
106-93-4	Ethylene Dibromide	0.0961		0.029	0.019	0.0096

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-34-5	1,1,2,2-Tetrachloroethane	85		46-136

Report Date: 09-Jun-2020 16:51:21

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.035.D
 Lims ID: 410-3311-A-6-B MSD
 Client ID: GWTS-EFF2-060320
 Sample Type: MSD
 Inject. Date: 09-Jun-2020 02:57:00 ALS Bottle#: 0 Worklist Smp#: 33
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 410-3311-A-6-B MSD AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:15 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
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1 Ethylene Dibromide

1	3.803	3.824	-0.021	26737949H	2.24	1.75	
2	4.636	4.648	-0.012	47565373H	2.24	1.99	

RPD = 12.49

\$ 2 1,1,2,2-Tetrachloroethane

1	5.303	5.313	-0.010	22696799H	1.23	1.05	
2	6.319	6.325	-0.006	28632345H	1.23	0.9192	

RPD = 13.20

3 1,2,3-Trichloropropane

1	5.453	5.462	-0.009	6943950H	NC	NC	
2	6.431	6.439	-0.008	9167500H	NC	NC	

RPD = 0.00

4 1,2-Dibromo-3-Chloropropane

1	8.218	8.220	-0.002	83798821H	2.23	2.17	
2	9.076	9.078	-0.002	153309180H	2.23	2.28	

RPD = 5.09

5 Chlorodibromomethane

1		0.000				ND	
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QC Flag Legend

Processing Flags

NC - Not Calibrated

H - Response Measured by Height

Report Date: 09-Jun-2020 16:51:21

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.035.D

Injection Date: 09-Jun-2020 02:57:00

Instrument ID: 19853

Operator ID: 2306

Lims ID: 410-3311-A-6-B MSD

Worklist Smp#: 33

Client ID: GWTS-EFF2-060320

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

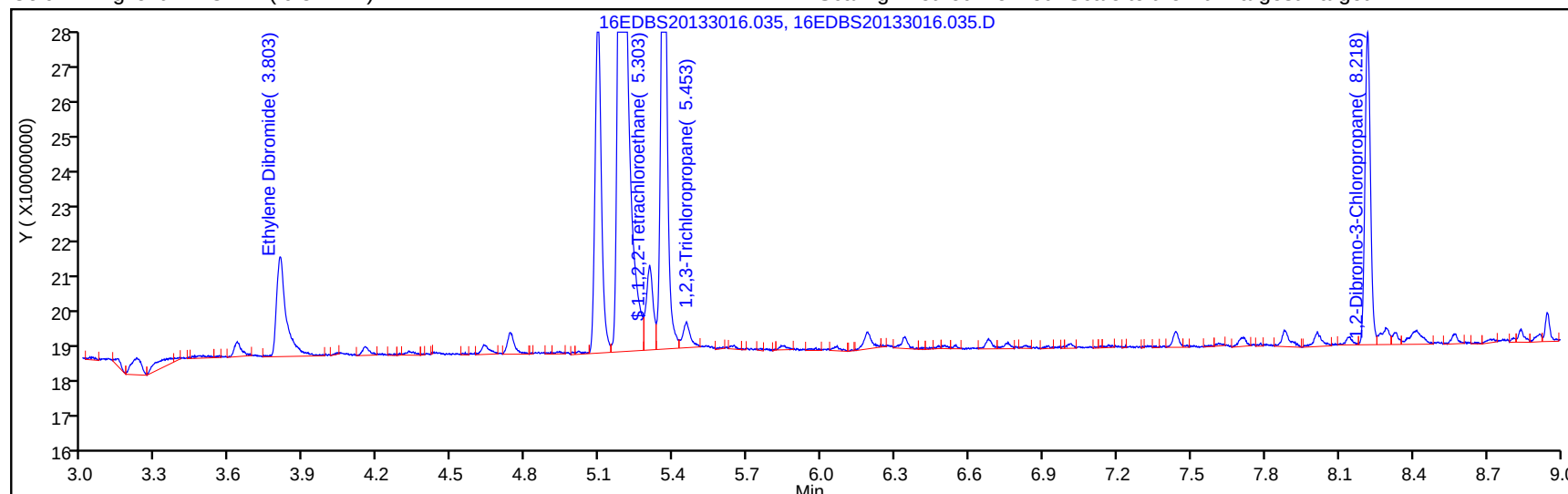
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

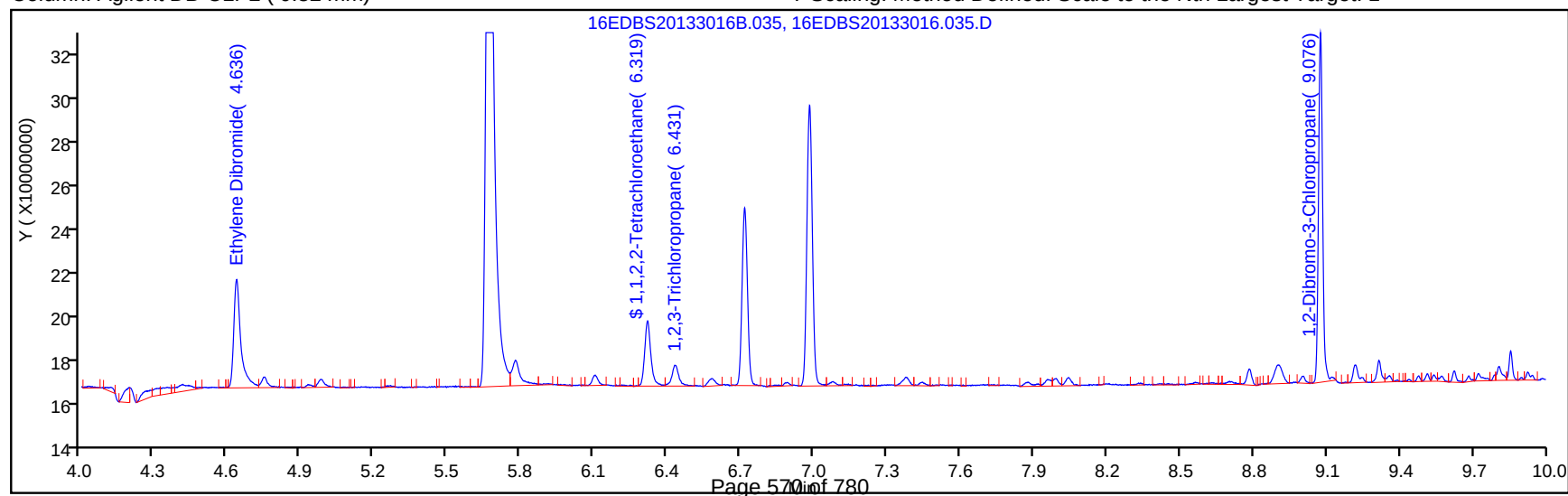
Column: Agilent DB-CLP1 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-570

Report Date: 09-Jun-2020 16:51:21

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.035.D
 Lims ID: 410-3311-A-6-B MSD
 Client ID: GWTS-EFF2-060320
 Sample Type: MSD
 Inject. Date: 09-Jun-2020 02:57:00 ALS Bottle#: 0 Worklist Smp#: 33
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 410-3311-A-6-B MSD AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:15 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

Surrogate Recovery, Detector: 1ECDA

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	1.05	85.12

Surrogate Recovery, Detector: 2ECDB

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	0.9192	74.58

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1
 SDG No.: _____
 Client Sample ID: GWTS-EFF2-060320 MSD Lab Sample ID: 410-3311-6 MSD
 Matrix: Water Lab File ID: 16EDBS20133016.035.D
 Analysis Method: 8011 Date Collected: 06/03/2020 08:24
 Extraction Method: 8011 Date Extracted: 06/06/2020 03:40
 Sample wt/vol: 36.5(mL) Date Analyzed: 06/09/2020 02:57
 Con. Extract Vol.: 2(mL) Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: DB CLP2 ID: 0.32 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 11304 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-34-5	1,1,2,2-Tetrachloroethane	75		46-136

Report Date: 09-Jun-2020 16:51:22

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.035.D
 Lims ID: 410-3311-A-6-B MSD
 Client ID: GWTS-EFF2-060320
 Sample Type: MSD
 Inject. Date: 09-Jun-2020 02:57:00 ALS Bottle#: 0 Worklist Smp#: 33
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 410-3311-A-6-B MSD AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:15 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
-----	--------------	------------------	------------------	----------	-----------------	-------------------	-------

1 Ethylene Dibromide

1	3.803	3.824	-0.021	26737949H	2.24	1.75	
2	4.636	4.648	-0.012	47565373H	2.24	1.99	
RPD = 12.49							

\$ 2 1,1,2,2-Tetrachloroethane

1	5.303	5.313	-0.010	22696799H	1.23	1.05	
2	6.319	6.325	-0.006	28632345H	1.23	0.9192	
RPD = 13.20							

3 1,2,3-Trichloropropane

1	5.453	5.462	-0.009	6943950H	NC	NC	
2	6.431	6.439	-0.008	9167500H	NC	NC	
RPD = 0.00							

4 1,2-Dibromo-3-Chloropropane

1	8.218	8.220	-0.002	83798821H	2.23	2.17	
2	9.076	9.078	-0.002	153309180H	2.23	2.28	
RPD = 5.09							

5 Chlorodibromomethane

1		0.000				ND	
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QC Flag Legend

Processing Flags

NC - Not Calibrated

H - Response Measured by Height

Report Date: 09-Jun-2020 16:51:22

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.035.D

Injection Date: 09-Jun-2020 02:57:00

Instrument ID: 19853

Operator ID: 2306

Lims ID: 410-3311-A-6-B MSD

Worklist Smp#: 33

Client ID: GWTS-EFF2-060320

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

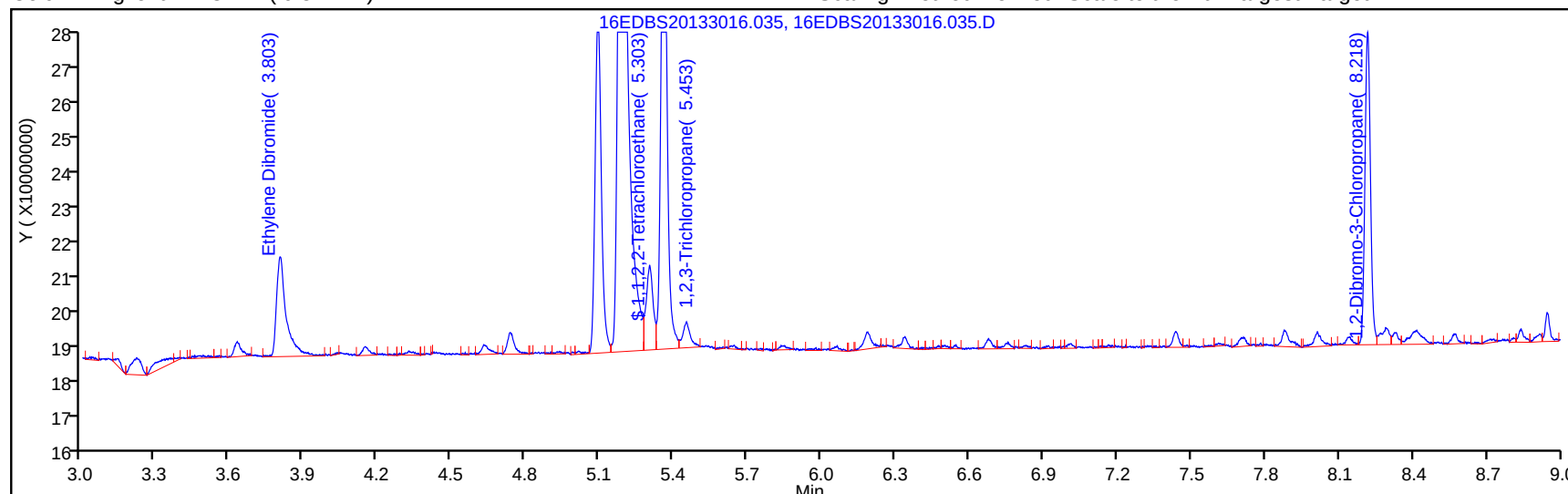
ALS Bottle#: 0

Method: 8011_19853

Limit Group: GCSV - 8011

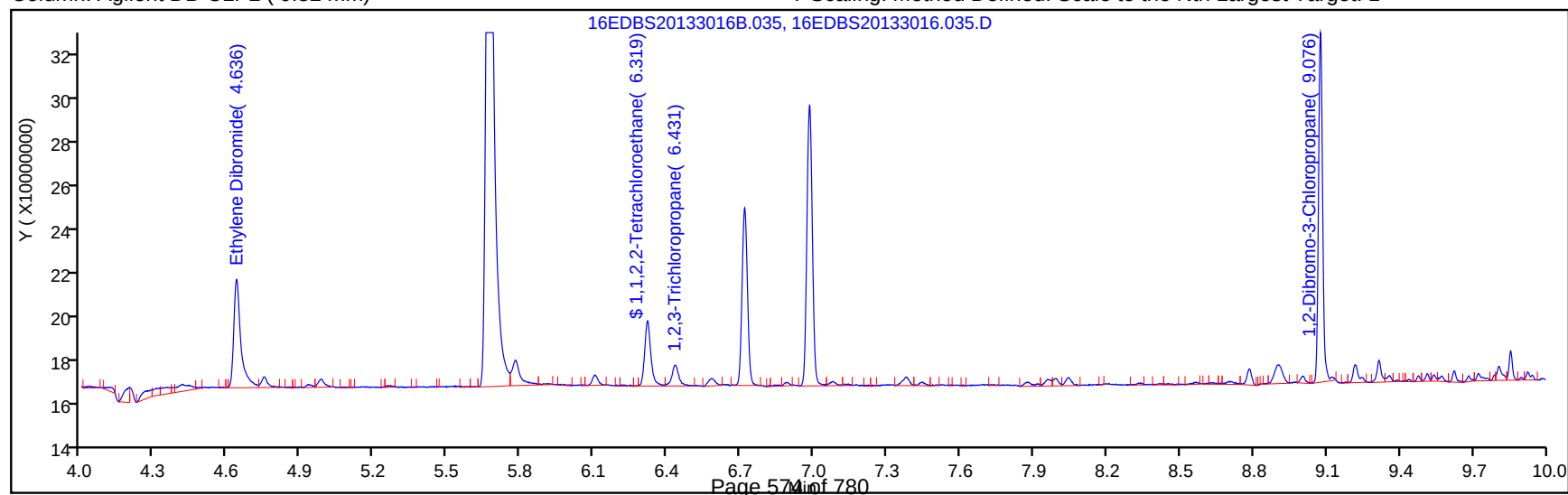
Column: Agilent DB-CLP1 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Column: Agilent DB-CLP2 (0.32 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Kirtland AFB BFF

September 2020

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-574

Report Date: 09-Jun-2020 16:51:22

Chrom Revision: 2.3 03-Jun-2020 23:27:16

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\16EDBS20133016.035.D
 Lims ID: 410-3311-A-6-B MSD
 Client ID: GWTS-EFF2-060320
 Sample Type: MSD
 Inject. Date: 09-Jun-2020 02:57:00 ALS Bottle#: 0 Worklist Smp#: 33
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 410-3311-A-6-B MSD AAPIBLKAA PIBLK2015999999 10398 SW-846 8011
 Operator ID: 2306 Instrument ID: 19853
 Method: \\chromfs\Lancaster\ChromData\19853\20200608-2946.b\8011_19853.m
 Limit Group: GCSV - 8011
 Last Update: 09-Jun-2020 16:51:15 Calib Date: 13-May-2020 00:06:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19853\20200514-2278.b\16EDBS20133001.009.D
 Column 1 : Agilent DB-CLP1 (0.32 mm) Det: 1ECDA
 Column 2 : Agilent DB-CLP2 (0.32 mm) Det: 2ECDB
 Process Host: CTX1018

Surrogate Recovery, Detector: 1ECDA

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	1.05	85.12

Surrogate Recovery, Detector: 2ECDB

Compound	Amount Added	Amount Recovered	% Rec.
\$ 2 1,1,2,2-Tetrachloroethane	1.23	0.9192	74.58

GC SEMI VOA ANALYSIS RUN LOG

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1

SDG No.:

Instrument ID: 19853

Start Date: 05/12/2020 22:09

Analysis Batch Number: 8526

End Date: 05/13/2020 00:56

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		05/12/2020 22:09	1		DB CLP1 0.32 (mm)
ZZZZZ		05/12/2020 22:09	1		DB CLP2 0.32 (mm)
PIBLK 410-8526/2		05/12/2020 22:26	1		DB CLP1 0.32 (mm)
PIBLK 410-8526/2		05/12/2020 22:26	1		DB CLP2 0.32 (mm)
IC 410-8526/3		05/12/2020 22:42	1	16EDBS20133001.004.D	DB CLP1 0.32 (mm)
IC 410-8526/3		05/12/2020 22:42	1	16EDBS20133001.004.D	DB CLP2 0.32 (mm)
IC 410-8526/4		05/12/2020 22:59	1	16EDBS20133001.005.D	DB CLP1 0.32 (mm)
IC 410-8526/4		05/12/2020 22:59	1	16EDBS20133001.005.D	DB CLP2 0.32 (mm)
IC 410-8526/5		05/12/2020 23:16	1	16EDBS20133001.006.D	DB CLP1 0.32 (mm)
IC 410-8526/5		05/12/2020 23:16	1	16EDBS20133001.006.D	DB CLP2 0.32 (mm)
ICRT 410-8526/6		05/12/2020 23:32	1	16EDBS20133001.007.D	DB CLP1 0.32 (mm)
ICRT 410-8526/6		05/12/2020 23:32	1	16EDBS20133001.007.D	DB CLP2 0.32 (mm)
IC 410-8526/7		05/12/2020 23:49	1	16EDBS20133001.008.D	DB CLP1 0.32 (mm)
IC 410-8526/7		05/12/2020 23:49	1	16EDBS20133001.008.D	DB CLP2 0.32 (mm)
IC 410-8526/8		05/13/2020 00:06	1	16EDBS20133001.009.D	DB CLP1 0.32 (mm)
IC 410-8526/8		05/13/2020 00:06	1	16EDBS20133001.009.D	DB CLP2 0.32 (mm)
MDLV 410-8526/9		05/13/2020 00:23	1		DB CLP1 0.32 (mm)
MDLV 410-8526/9		05/13/2020 00:23	1		DB CLP2 0.32 (mm)
ICV 410-8526/11		05/13/2020 00:56	1	16EDBS20133001.012.D	DB CLP1 0.32 (mm)
ICV 410-8526/11		05/13/2020 00:56	1	16EDBS20133001.012.D	DB CLP2 0.32 (mm)

8011

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1

SDG No.:

Instrument ID: 19853

Start Date: 06/08/2020 17:06

Analysis Batch Number: 11304

End Date: 06/09/2020 04:39

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 410-11304/1		06/08/2020 17:06	1		DB CLP1 0.32 (mm)
CCV 410-11304/1		06/08/2020 17:06	1		DB CLP2 0.32 (mm)
PIBLK 410-11304/2		06/08/2020 17:23	1		DB CLP1 0.32 (mm)
PIBLK 410-11304/2		06/08/2020 17:23	1		DB CLP2 0.32 (mm)
ZZZZZ		06/08/2020 18:30	1		DB CLP1 0.32 (mm)
ZZZZZ		06/08/2020 18:30	1		DB CLP2 0.32 (mm)
ZZZZZ		06/08/2020 18:47	1		DB CLP1 0.32 (mm)
ZZZZZ		06/08/2020 18:47	1		DB CLP2 0.32 (mm)
ZZZZZ		06/08/2020 19:04	1		DB CLP1 0.32 (mm)
ZZZZZ		06/08/2020 19:04	1		DB CLP2 0.32 (mm)
ZZZZZ		06/08/2020 19:21	1		DB CLP1 0.32 (mm)
ZZZZZ		06/08/2020 19:21	1		DB CLP2 0.32 (mm)
ZZZZZ		06/08/2020 19:38	1		DB CLP1 0.32 (mm)
ZZZZZ		06/08/2020 19:38	1		DB CLP2 0.32 (mm)
ZZZZZ		06/08/2020 19:54	1		DB CLP1 0.32 (mm)
ZZZZZ		06/08/2020 19:54	1		DB CLP2 0.32 (mm)
ZZZZZ		06/08/2020 20:11	1		DB CLP1 0.32 (mm)
ZZZZZ		06/08/2020 20:11	1		DB CLP2 0.32 (mm)
ZZZZZ		06/08/2020 20:28	1		DB CLP1 0.32 (mm)
ZZZZZ		06/08/2020 20:28	1		DB CLP2 0.32 (mm)
CCV 410-11304/12		06/08/2020 21:02	1		DB CLP1 0.32 (mm)
CCV 410-11304/12		06/08/2020 21:02	1		DB CLP2 0.32 (mm)
PIBLK 410-11304/13		06/08/2020 21:19	1		DB CLP1 0.32 (mm)
PIBLK 410-11304/13		06/08/2020 21:19	1		DB CLP2 0.32 (mm)
ZZZZZ		06/08/2020 21:36	1		DB CLP1 0.32 (mm)
ZZZZZ		06/08/2020 21:36	1		DB CLP2 0.32 (mm)
ZZZZZ		06/08/2020 21:53	1		DB CLP1 0.32 (mm)
ZZZZZ		06/08/2020 21:53	1		DB CLP2 0.32 (mm)
ZZZZZ		06/08/2020 22:10	1		DB CLP1 0.32 (mm)
ZZZZZ		06/08/2020 22:10	1		DB CLP2 0.32 (mm)
ZZZZZ		06/08/2020 22:27	1		DB CLP1 0.32 (mm)
ZZZZZ		06/08/2020 22:27	1		DB CLP2 0.32 (mm)
CCV 410-11304/18		06/08/2020 22:43	1	16EDBS20133016.020.D	DB CLP1 0.32 (mm)
CCV 410-11304/18		06/08/2020 22:43	1	16EDBS20133016.020.D	DB CLP2 0.32 (mm)
PIBLK 410-11304/19		06/08/2020 23:00	1	16EDBS20133016.021.D	DB CLP1 0.32 (mm)
PIBLK 410-11304/19		06/08/2020 23:00	1	16EDBS20133016.021.D	DB CLP2 0.32 (mm)
MB 410-10943/1-A		06/08/2020 23:17	1	16EDBS20133016.022.D	DB CLP1 0.32 (mm)
MB 410-10943/1-A		06/08/2020 23:17	1	16EDBS20133016.022.D	DB CLP2 0.32 (mm)
LCS 410-10943/2-A		06/08/2020 23:34	1	16EDBS20133016.023.D	DB CLP1 0.32 (mm)
LCS 410-10943/2-A		06/08/2020 23:34	1	16EDBS20133016.023.D	DB CLP2 0.32 (mm)
LCSD 410-10943/3-A		06/08/2020 23:51	1	16EDBS20133016.024.D	DB CLP1 0.32 (mm)

8011

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1

SDG No.:

Instrument ID: 19853

Start Date: 06/08/2020 17:06

Analysis Batch Number: 11304

End Date: 06/09/2020 04:39

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
LCSD 410-10943/3-A		06/08/2020 23:51	1	16EDBS20133016.024.D	DB CLP2 0.32 (mm)
410-3311-1		06/09/2020 00:08	1	16EDBS20133016.025.D	DB CLP1 0.32 (mm)
410-3311-1		06/09/2020 00:08	1	16EDBS20133016.025.D	DB CLP2 0.32 (mm)
410-3311-2		06/09/2020 00:25	1	16EDBS20133016.026.D	DB CLP1 0.32 (mm)
410-3311-2		06/09/2020 00:25	1	16EDBS20133016.026.D	DB CLP2 0.32 (mm)
410-3311-3		06/09/2020 00:42	1	16EDBS20133016.027.D	DB CLP1 0.32 (mm)
410-3311-3		06/09/2020 00:42	1	16EDBS20133016.027.D	DB CLP2 0.32 (mm)
410-3311-4		06/09/2020 00:59	1	16EDBS20133016.028.D	DB CLP1 0.32 (mm)
410-3311-4		06/09/2020 00:59	1	16EDBS20133016.028.D	DB CLP2 0.32 (mm)
410-3311-5		06/09/2020 01:16	1	16EDBS20133016.029.D	DB CLP1 0.32 (mm)
410-3311-5		06/09/2020 01:16	1	16EDBS20133016.029.D	DB CLP2 0.32 (mm)
ZZZZZ		06/09/2020 01:33	1		DB CLP1 0.32 (mm)
ZZZZZ		06/09/2020 01:33	1		DB CLP2 0.32 (mm)
CCV 410-11304/29		06/09/2020 01:50	1	16EDBS20133016.031.D	DB CLP1 0.32 (mm)
CCV 410-11304/29		06/09/2020 01:50	1	16EDBS20133016.031.D	DB CLP2 0.32 (mm)
PIBLK 410-11304/30		06/09/2020 02:06	1	16EDBS20133016.032.D	DB CLP1 0.32 (mm)
PIBLK 410-11304/30		06/09/2020 02:06	1	16EDBS20133016.032.D	DB CLP2 0.32 (mm)
410-3311-6		06/09/2020 02:24	1	16EDBS20133016.033.D	DB CLP1 0.32 (mm)
410-3311-6		06/09/2020 02:24	1	16EDBS20133016.033.D	DB CLP2 0.32 (mm)
410-3311-6 MS		06/09/2020 02:40	1	16EDBS20133016.034.D	DB CLP1 0.32 (mm)
410-3311-6 MS		06/09/2020 02:40	1	16EDBS20133016.034.D	DB CLP2 0.32 (mm)
410-3311-6 MSD		06/09/2020 02:57	1	16EDBS20133016.035.D	DB CLP1 0.32 (mm)
410-3311-6 MSD		06/09/2020 02:57	1	16EDBS20133016.035.D	DB CLP2 0.32 (mm)
410-3311-7		06/09/2020 03:14	1	16EDBS20133016.036.D	DB CLP1 0.32 (mm)
410-3311-7		06/09/2020 03:14	1	16EDBS20133016.036.D	DB CLP2 0.32 (mm)
410-3311-8		06/09/2020 03:31	1	16EDBS20133016.037.D	DB CLP1 0.32 (mm)
410-3311-8		06/09/2020 03:31	1	16EDBS20133016.037.D	DB CLP2 0.32 (mm)
410-3311-9		06/09/2020 03:48	1	16EDBS20133016.038.D	DB CLP1 0.32 (mm)
410-3311-9		06/09/2020 03:48	1	16EDBS20133016.038.D	DB CLP2 0.32 (mm)
ZZZZZ		06/09/2020 04:05	1		DB CLP1 0.32 (mm)
ZZZZZ		06/09/2020 04:05	1		DB CLP2 0.32 (mm)
CCV 410-11304/39		06/09/2020 04:22	1	16EDBS20133016.040.D	DB CLP1 0.32 (mm)
CCV 410-11304/39		06/09/2020 04:22	1	16EDBS20133016.040.D	DB CLP2 0.32 (mm)

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GC SEMI VOA ANALYSIS RUN LOG

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1
SDG No.: _____
Instrument ID: 19853 Start Date: 06/08/2020 17:06
Analysis Batch Number: 11304 End Date: 06/09/2020 04:39

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
PIBLK 410-11304/40		06/09/2020 04:39	1	16EDBS20133016. 041.D	DB CLP1 0.32 (mm)
PIBLK 410-11304/40		06/09/2020 04:39	1	16EDBS20133016. 041.D	DB CLP2 0.32 (mm)

GC SEMI VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-3311-1

SDG No.: _____

Batch Number: 10943 Batch Start Date: 06/06/20 03:40 Batch Analyst: Okpo, Mathias OBatch Method: 8011 Batch End Date: 06/06/20 06:06

Lab Sample ID	Client Sample ID	Method Chain	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	ResidualChloChe ck	ReceivedpH
MB 410-10943/1		8011, 8011		60 mL	25 mL	35 mL	2 mL	N	2 SU
LCS 410-10943/2		8011, 8011		60 mL	25 mL	35 mL	2 mL	N	2 SU
LCSD 410-10943/3		8011, 8011		60 mL	25 mL	35 mL	2 mL	N	2 SU
410-3311-A-6 MS	GWTS-EFF2-060320	8011, 8011	T	59.631 mL	22.749 mL	36.9 mL	2 mL	N	2 SU
410-3311-A-6 MSD	GWTS-EFF2-060320	8011, 8011	T	59.847 mL	23.347 mL	36.5 mL	2 mL	N	2 SU
410-3311-A-1	GWTS-EFF1-060320	8011, 8011	T	60.032 mL	23.936 mL	36.1 mL	2 mL	N	2 SU
410-3311-A-2	GWTS-EFF1DUP-060 320	8011, 8011	T	59.642 mL	22.803 mL	36.8 mL	2 mL	N	2 SU
410-3311-A-3	GWTS-GAC1-060320	8011, 8011	T	59.941 mL	23.758 mL	36.2 mL	2 mL	N	2 SU
410-3311-A-4	GWTS-INF1-060320	8011, 8011	T	60.464 mL	24.025 mL	36.4 mL	2 mL	N	2 SU
410-3311-A-5	GWTS-TB01-060320	8011, 8011	T	60.029 mL	23.418 mL	36.6 mL	2 mL	N	2 SU
410-3311-A-6	GWTS-EFF2-060320	8011, 8011	T	59.631 mL	23.538 mL	36.1 mL	2 mL	N	2 SU
410-3311-A-7	GWTS-GAC2-060320	8011, 8011	T	60.153 mL	23.888 mL	36.3 mL	2 mL	N	2 SU
410-3311-A-8	GWTS-INF2-060320	8011, 8011	T	60.099 mL	23.896 mL	36.2 mL	2 mL	N	2 SU
410-3311-A-9	GWTS-FB02-060320	8011, 8011	T	59.626 mL	23.336 mL	36.3 mL	2 mL	N	2 SU

Lab Sample ID	Client Sample ID	Method Chain	Basis	OP_EDB_MS 00011	OP_EDB_SS 00011	AnalysisComment			
MB 410-10943/1		8011, 8011			0.1 mL	DI H2O			
LCS 410-10943/2		8011, 8011		0.07 mL	0.1 mL	DI H2O			
LCSD 410-10943/3		8011, 8011		0.07 mL	0.1 mL	DI H2O			
410-3311-A-6 MS	GWTS-EFF2-060320	8011, 8011	T	0.07 mL	0.1 mL	clear			
410-3311-A-6 MSD	GWTS-EFF2-060320	8011, 8011	T	0.07 mL	0.1 mL	clear			
410-3311-A-1	GWTS-EFF1-060320	8011, 8011	T		0.1 mL	clear			
410-3311-A-2	GWTS-EFF1DUP-060 320	8011, 8011	T		0.1 mL	clear			
410-3311-A-3	GWTS-GAC1-060320	8011, 8011	T		0.1 mL	clear			
410-3311-A-4	GWTS-INF1-060320	8011, 8011	T		0.1 mL	clear			
410-3311-A-5	GWTS-TB01-060320	8011, 8011	T		0.1 mL	clear			
410-3311-A-6	GWTS-EFF2-060320	8011, 8011	T		0.1 mL	clear			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

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Page 1 of 2

GC SEMI VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-3311-1

SDG No.: _____

Batch Number: 10943 Batch Start Date: 06/06/20 03:40 Batch Analyst: Okpo, Mathias OBatch Method: 8011 Batch End Date: 06/06/20 06:06

Lab Sample ID	Client Sample ID	Method Chain	Basis	OP_EDB_MS 00011	OP_EDB_SS 00011	AnalysisComment			
410-3311-A-7	GWTS-GAC2-060320	8011, 8011	T		0.1 mL	clear			
410-3311-A-8	GWTS-INF2-060320	8011, 8011	T		0.1 mL	clear			
410-3311-A-9	GWTS-FB02-060320	8011, 8011	T		0.1 mL	clear			

Batch Notes	
Balance ID	9330
Analyst ID - Extraction	13836
Na2SO4 ID	20148A
NaCl ID	20128A
Pipette/Syringe/Dispenser ID	1
Prep Solvent ID	Hexane - 200226
Analyst ID - Spike Analyst	13836
Vial Lot Number	0303101F

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

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Page 2 of 2

METALS

COVER PAGE
METALSLab Name: Eurofins Lancaster LaboratoriesJob Number: 410-3311-1

SDG No.: _____

Project: Kirtland AFB

Client Sample ID

GWTS-EFF1-060320GWTS-EFF1DUP-060320GWTS-GAC1-060320GWTS-INF1-060320GWTS-EFF2-060320GWTS-GAC2-060320GWTS-INF2-060320

Lab Sample ID

410-3311-1410-3311-2410-3311-3410-3311-4410-3311-6410-3311-7410-3311-8Comments:

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: GWTS-EFF1-060320 Lab Sample ID: 410-3311-1
Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1
SDG ID.:
Matrix: Water Date Sampled: 06/03/2020 09:05
Reporting Basis: WET Date Received: 06/04/2020 10:47

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Iron	100	210	100	41	ug/L	U		1	6010C
Manganese	5.2	10	5.2	3.1	ug/L	U		1	6010C

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: GWTS-EFF1DUP-060320

Lab Sample ID: 410-3311-2

Lab Name: Eurofins Lancaster Laboratories Env

Job No.: 410-3311-1

SDG ID.:

Matrix: Water

Date Sampled: 06/03/2020 09:05

Reporting Basis: WET

Date Received: 06/04/2020 10:47

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Iron	100	210	100	41	ug/L	U		1	6010C
Manganese	5.2	10	5.2	3.1	ug/L	U		1	6010C

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: GWTS-GAC1-060320 Lab Sample ID: 410-3311-3
Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1
SDG ID.:
Matrix: Water Date Sampled: 06/03/2020 09:19
Reporting Basis: WET Date Received: 06/04/2020 10:47

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Iron	100	210	100	41	ug/L	U		1	6010C
Manganese	5.2	10	5.2	3.1	ug/L	U		1	6010C

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: GWTS-INF1-060320 Lab Sample ID: 410-3311-4
Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1
SDG ID.:
Matrix: Water Date Sampled: 06/03/2020 09:27
Reporting Basis: WET Date Received: 06/04/2020 10:47

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Iron	100	210	100	41	ug/L	U		1	6010C
Manganese	12	10	5.2	3.1	ug/L			1	6010C

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: GWTS-EFF2-060320 Lab Sample ID: 410-3311-6
Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1
SDG ID.:
Matrix: Water Date Sampled: 06/03/2020 08:24
Reporting Basis: WET Date Received: 06/04/2020 10:47

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Iron	100	210	100	41	ug/L	U		1	6010C
Manganese	5.2	10	5.2	3.1	ug/L	U		1	6010C

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: GWTS-GAC2-060320 Lab Sample ID: 410-3311-7
Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1
SDG ID.:
Matrix: Water Date Sampled: 06/03/2020 08:43
Reporting Basis: WET Date Received: 06/04/2020 10:47

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Iron	100	210	100	41	ug/L	U		1	6010C
Manganese	5.2	10	5.2	3.1	ug/L	U		1	6010C

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: GWTS-INF2-060320 Lab Sample ID: 410-3311-8
Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1
SDG ID.:
Matrix: Water Date Sampled: 06/03/2020 08:53
Reporting Basis: WET Date Received: 06/04/2020 10:47

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Iron	100	210	100	41	ug/L	U		1	6010C
Manganese	4.2	10	5.2	3.1	ug/L	J		1	6010C

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: Eurofins Lancaster Laboratories En Job No.: 410-3311-1

SDG No.: _____

ICV Source: MT_IA_ICV_00023 Concentration Units: ug/L

CCV Source: MT_IA_CCV_00043

Analyte	ICV 410-12678/6 06/12/2020 09:02				ICV 410-12678/7 06/12/2020 09:05				CCV 410-12678/12 06/12/2020 09:21			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	29000		30000	97	28900		30000	96	24600		25000	98
Manganese	581		600	97	580		600	97	491		500	98

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: Eurofins Lancaster Laboratories En Job No.: 410-3311-1

SDG No.: _____

ICV Source: MT_IA_ICV_00023 Concentration Units: ug/L

CCV Source: MT_IA_CCV_00043

Analyte	CCV 410-12678/18 06/12/2020 09:41				CCV 410-12678/30 06/12/2020 10:23				CCV 410-12678/42 06/12/2020 11:02			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	24700		25000	99	24200		25000	97	24200		25000	97
Manganese	499		500	100	492		500	98	497		500	99

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: Eurofins Lancaster Laboratories En Job No.: 410-3311-1

SDG No.: _____

ICV Source: MT_IA_ICV_00023 Concentration Units: ug/L

CCV Source: MT_IA_CCV_00043

Analyte	CCV 410-12678/51 06/12/2020 11:30											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	24000		25000	96								
Manganese	484		500	97								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: Eurofins Lancaster Laboratories En Job No.: 410-3311-1

SDG No.: _____

ICV Source: MT_IA_ICV_00023 Concentration Units: ug/L

CCV Source: MT_IA_CCV_00043

Analyte	ICV 410-12730/6 06/12/2020 10:15				ICV 410-12730/7 06/12/2020 10:18				CCV 410-12730/12 06/12/2020 10:34			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	29100		30000	97	28800		30000	96	24900		25000	99
Manganese	588		600	98	587		600	98	494		500	99

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: Eurofins Lancaster Laboratories En Job No.: 410-3311-1

SDG No.: _____

ICV Source: MT_IA_ICV_00023 Concentration Units: ug/L

CCV Source: MT_IA_CCV_00043

Analyte	CCV 410-12730/18 06/12/2020 10:55				CCV 410-12730/30 06/12/2020 11:40							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	24900		25000	99	24600		25000	98				
Manganese	486		500	97	489		500	98				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1
SDG No.: _____
Method: 6010C Instrument ID: T74 - 23745
Lab Sample ID: CRI 410-12678/9 Concentration Units: ug/L
CRQL Check Standard Source: MT_IA_LLC_00016

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Iron	200	210		105	80-120
Manganese	10.0	10.4		104	80-120

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1
SDG No.: _____
Method: 6010C Instrument ID: T75 - 27278
Lab Sample ID: CRI 410-12730/9 Concentration Units: ug/L
CRQL Check Standard Source: MT_IA_LLC_00015

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Iron	200	203		102	80-120
Manganese	10.0	10.3		103	80-120

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1

SDG No.: _____

Concentration Units: ug/L

Analyte	RL	ICB 410-12678/8 06/12/2020 09:08		CCB 410-12678/13 06/12/2020 09:24		CCB 410-12678/19 06/12/2020 09:44		CCB 410-12678/31 06/12/2020 10:26	
		Found	C	Found	C	Found	C	Found	C
Iron	200	100	U	100	U	100	U	100	U
Manganese	10	5.0	U	5.0	U	5.0	U	5.0	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1

SDG No.: _____

Concentration Units: ug/L

Analyte	RL	CCB 410-12678/43 06/12/2020 11:05		CCB 410-12678/52 06/12/2020 11:33					
		Found	C	Found	C	Found	C	Found	C
Iron	200	100	U	100	U				
Manganese	10	5.0	U	5.0	U				

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1

SDG No.: _____

Concentration Units: ug/L

Analyte	RL	ICB 410-12730/8 06/12/2020 10:21		CCB 410-12730/13 06/12/2020 10:37		CCB 410-12730/19 06/12/2020 10:58		CCB 410-12730/31 06/12/2020 11:43	
		Found	C	Found	C	Found	C	Found	C
Iron	200	100	U	100	U	100	U	100	U
Manganese	10	5.0	U	5.0	U	5.0	U	5.0	U

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-3311-1
SDG No.: _____
Concentration Units: ug/L Lab Sample ID: MB 410-11456/1-A
Instrument Code: T74 - 23745 Batch No.: 12678

CAS No.	Analyte	Concentration	C	Q	Method
7439-89-6	Iron	100	U		6010C_DOD5
7439-96-5	Manganese	5.2	U		6010C_DOD5

3-IN
METHOD BLANK
METALS

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-3311-1
SDG No.: _____
Concentration Units: ug/L Lab Sample ID: MB 410-11156/1-A
Instrument Code: T75 - 27278 Batch No.: 12730

CAS No.	Analyte	Concentration	C	Q	Method
7439-89-6	Iron	100	U		6010C_DOD5
7439-96-5	Manganese	5.2	U		6010C_DOD5

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Lancaster LaboratoriesJob No.: 410-3311-1

SDG No.: _____

Lab Sample ID: ICSA 410-12678/10Instrument ID: T74 - 23745Lab File ID: T2016401T74.ascICS Source: MT IA ICSA 00017Concentration Units: ug/L

Analyte	True	Found	Percent Recovery
	Solution A	Solution A	
Iron	201000	201800	100
Manganese		0.290	
Aluminum	501000	504100	101
Antimony		2.30	
Arsenic		19.5	
Barium		2.00	
Beryllium		-0.250	
Boron		-3.60	
Cadmium		2.30	
Calcium	505000	503600	100
Chromium		-2.50	
Cobalt		3.20	
Copper		-1.40	
Lead		-2.60	
Lithium		9.50	
Magnesium	501000	530900	106
Molybdenum		-1.00	
Nickel		-0.500	
Phosphorus		1.40	
Potassium		-104	
Selenium		3.90	
Silicon		36.5	
Silver		0.200	
Sodium		73.6	
Strontium		-8.80	
Sulfur		-99.8	
Thallium		18.9	
Thorium		122	
Tin		-10.0	
Titanium		-3.20	
Vanadium		-1.60	
W		2.10	
Zinc		12.7	
Zirconium		6.20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Lancaster LaboratoriesJob No.: 410-3311-1

SDG No.: _____

Lab Sample ID: ICSAB 410-12678/11Instrument ID: T74 - 23745Lab File ID: T2016401T74.ascICS Source: MT_IA_ICSAB_00016Concentration Units: ug/L

Analyte	True	Found	Percent Recovery
	Solution AB	Solution AB	
Iron	201000	206100	102
Manganese	500	475	95
<i>Aluminum</i>	<i>501000</i>	<i>522000</i>	<i>104</i>
<i>Antimony</i>	<i>599</i>	<i>633</i>	<i>106</i>
<i>Arsenic</i>	<i>100</i>	<i>98.8</i>	<i>99</i>
<i>Barium</i>	<i>500</i>	<i>507</i>	<i>102</i>
<i>Beryllium</i>	<i>500</i>	<i>494</i>	<i>99</i>
<i>Boron</i>		<i>-4.30</i>	
<i>Cadmium</i>	<i>1000</i>	<i>923</i>	<i>92</i>
<i>Calcium</i>	<i>505000</i>	<i>514700</i>	<i>102</i>
<i>Chromium</i>	<i>500</i>	<i>487</i>	<i>97</i>
<i>Cobalt</i>	<i>500</i>	<i>465</i>	<i>93</i>
<i>Copper</i>	<i>500</i>	<i>543</i>	<i>109</i>
<i>Lead</i>	<i>550</i>	<i>499</i>	<i>91</i>
<i>Lithium</i>		<i>10.3</i>	
<i>Magnesium</i>	<i>501000</i>	<i>535700</i>	<i>107</i>
<i>Molybdenum</i>		<i>-2.00</i>	
<i>Nickel</i>	<i>1000</i>	<i>900</i>	<i>90</i>
<i>Phosphorus</i>		<i>-14.1</i>	
<i>Potassium</i>		<i>-184</i>	
<i>Selenium</i>	<i>549</i>	<i>526</i>	<i>96</i>
<i>Silicon</i>		<i>-0.750</i>	
<i>Silver</i>	<i>200</i>	<i>212</i>	<i>106</i>
<i>Sodium</i>		<i>94.2</i>	
<i>Strontium</i>		<i>-9.00</i>	
<i>Sulfur</i>		<i>-151</i>	
<i>Thallium</i>	<i>100</i>	<i>100</i>	<i>100</i>
<i>Thorium</i>		<i>103</i>	
<i>Tin</i>		<i>1.20</i>	
<i>Titanium</i>		<i>-2.40</i>	
<i>Vanadium</i>	<i>500</i>	<i>510</i>	<i>102</i>
<i>W</i>		<i>-0.900</i>	
<i>Zinc</i>	<i>1000</i>	<i>1004</i>	<i>100</i>
<i>Zirconium</i>		<i>5.60</i>	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Lancaster LaboratoriesJob No.: 410-3311-1

SDG No.: _____

Lab Sample ID: ICSA 410-12730/10Instrument ID: T75 - 27278Lab File ID: T2016401T75.ascICS Source: MT IA ICSA_00017Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Iron	201000	187000	93
Manganese		0.890	
Aluminum	501000	476100	95
Antimony		-3.50	
Arsenic		9.90	
Barium		2.00	
Beryllium		-0.300	
Boron		-29.9	
Cadmium		-0.200	
Calcium	505000	482900	96
Chromium		1.80	
Cobalt		1.20	
Copper		-5.10	
Lead		-4.10	
Lithium		11.7	
Magnesium	501000	442500	88
Molybdenum		1.70	
Nickel		2.80	
Phosphorus		5.40	
Potassium		9.80	
Selenium		9.40	
Silicon		19.8	
Silver		1.10	
Sodium		57.2	
Strontium		4.40	
Sulfur		-7.00	
Thallium		10.7	
Thorium		125	
Tin		6.10	
Titanium		-7.60	
Vanadium		-4.20	
W		0.800	
Zinc		-17.3	
Zirconium		-4.60	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Lancaster LaboratoriesJob No.: 410-3311-1

SDG No.: _____

Lab Sample ID: ICSAB 410-12730/11Instrument ID: T75 - 27278Lab File ID: T2016401T75.ascICS Source: MT_IA_ICSAB_00016Concentration Units: ug/L

Analyte	True	Found	Percent Recovery
	Solution AB	Solution AB	
Iron	201000	193300	96
Manganese	500	483	97
Aluminum	501000	490700	98
Antimony	599	622	104
Arsenic	100	107	107
Barium	500	506	101
Beryllium	500	490	98
Boron		-34.3	
Cadmium	1000	904	90
Calcium	505000	500400	99
Chromium	500	477	95
Cobalt	500	456	91
Copper	500	528	106
Lead	550	501	91
Lithium		10.8	
Magnesium	501000	459600	92
Molybdenum		1.80	
Nickel	1000	904	90
Phosphorus		10.0	
Potassium		6.90	
Selenium	549	506	92
Silicon		15.4	
Silver	200	213	107
Sodium		69.2	
Strontium		4.50	
Sulfur		-13.1	
Thallium	100	90.2	90
Thorium		139	
Tin		8.00	
Titanium		-7.60	
Vanadium	500	501	100
W		-1.00	
Zinc	1000	938	94
Zirconium		-6.80	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - DISSOLVED

Client ID: GWTS-EFF2-060320 MSLab ID: 410-3311-6 MSLab Name: Eurofins Lancaster Laboratories EJob No.: 410-3311-1

SDG No.: _____

Matrix: WaterConcentration Units: ug/L

% Solids: _____

Analyte	SSR C	Sample Result (SR) C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Iron	429	100 U	400	107	75-125		6010C
Manganese	21.1	5.2 U	20.0	106	75-125		6010C

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - DISSOLVED

Client ID: GWTS-EFF2-060320 MSDLab ID: 410-3311-6 MSDLab Name: Eurofins Lancaster Laboratories EJob No.: 410-3311-1

SDG No.: _____

Matrix: WaterConcentration Units: ug/L

% Solids: _____

Analyte	(SDR) C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Iron	439	400	110	75-125	2	20		6010C
Manganese	21.0	20.0	105	75-125	0	20		6010C

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5B-IN
POST DIGESTION SPIKE SAMPLE RECOVERY
METALS - DISSOLVED

Client ID: GWTS-EFF2-060320 PDSLab ID: 410-3311-6 PDSLab Name: Eurofins Lancaster Laboratories EJob No.: 410-3311-1

SDG No.: _____

Matrix: WaterConcentration Units: ug/L

Analyte	SSR C	Sample Result (SR) C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Iron	525	100 U	515	102	80-120		6010C
Manganese	61.3	5.2 U	61.8	99	80-120		6010C

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VB - IN

6-IN
 DUPLICATES
 METALS - DISSOLVED

Client ID: GWTS-EFF2-060320 DU Lab ID: 410-3311-6 DU
 Lab Name: Eurofins Lancaster Laboratories Job No.: 410-3311-1
 SDG No.: _____
 % Solids for Sample: _____ % Solids for Duplicate: _____
 Matrix: Water Concentration Units: ug/L

Analyte	Control Limit	Sample (S) C		Duplicate (D) C		RPD	Q	Method
Iron	210	100	U	100	U	NC		6010C
Manganese	10	5.2	U	5.2	U	NC		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

LINEAR RANGE CHECK STANDARD
METALS -

Lab ID: LRC 410-12678/14

Lab Name: Eurofins Lancaster Laboratories E

Job No.: 410-3311-1

Sample Matrix: Water

LCS Source:

Analyte	Water (ug/L)							
	True	Found	C	%R	Limits		Q	Method
Iron		100	U					6010C
Manganese	20000	18300		92	90	110		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

LINEAR RANGE CHECK STANDARD
METALS -

Lab ID: LRC 410-12678/15

Lab Name: Eurofins Lancaster Laboratories E

Job No.: 410-3311-1

Sample Matrix: Water

LCS Source: MT_IA_LRS4_00019

Analyte	Water (ug/L)							
	True	Found	C	%R	Limits		Q	Method
Iron	300000	327000		109	90	110		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

LINEAR RANGE CHECK STANDARD
METALS -

Lab ID: LRC 410-12678/16

Lab Name: Eurofins Lancaster Laboratories E

Job No.: 410-3311-1

Sample Matrix: Water

LCS Source:

Analyte	Water (ug/L)							
	True	Found	C	%R	Limits		Q	Method
Iron		55.6	J					6010C
Manganese	10000	9800		98	90	110		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

LINEAR RANGE CHECK STANDARD
METALS -

Lab ID: LRC 410-12678/17

Lab Name: Eurofins Lancaster Laboratories E

Job No.: 410-3311-1

Sample Matrix: Water

LCS Source: MT_IA_LRS5_00019

Analyte	Water (ug/L)							
	True	Found	C	%R	Limits		Q	Method
Iron	150000	152000		101	90	110		6010C
Manganese		5.0	U					6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 410-11456/2-A

Lab Name: Eurofins Lancaster Laboratories E

Job No.: 410-3311-1

Sample Matrix: Water

LCS Source: MT_S_LLC_HP_00003

Analyte	Water (ug/L)							
	True	Found	C	%R	Limits		Q	Method
Iron	400	424		106	87	115		6010C
Manganese	20.0	20.9		104	90	114		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

LINEAR RANGE CHECK STANDARD
METALS -

Lab ID: LRC 410-12730/14

Lab Name: Eurofins Lancaster Laboratories E

Job No.: 410-3311-1

Sample Matrix: Water

LCS Source:

Analyte	Water (ug/L)							
	True	Found	C	%R	Limits		Q	Method
Iron		100	U					6010C
Manganese	20000	18600		93	90	110		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

LINEAR RANGE CHECK STANDARD
METALS -Lab ID: LRC 410-12730/15Lab Name: Eurofins Lancaster Laboratories EJob No.: 410-3311-1Sample Matrix: WaterLCS Source: MT_IA_LRS4_00019

Analyte	Water (ug/L)							
	True	Found	C	%R	Limits		Q	Method
Iron	300000	300000		100	90	110		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

LINEAR RANGE CHECK STANDARD
METALS -

Lab ID: LRC 410-12730/16

Lab Name: Eurofins Lancaster Laboratories E

Job No.: 410-3311-1

Sample Matrix: Water

LCS Source:

Analyte	Water (ug/L)							
	True	Found	C	%R	Limits		Q	Method
Iron		100	U					6010C
Manganese	10000	9840		98	90	110		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

LINEAR RANGE CHECK STANDARD
METALS -Lab ID: LRC 410-12730/17Lab Name: Eurofins Lancaster Laboratories EJob No.: 410-3311-1Sample Matrix: WaterLCS Source: MT_IA_LRS5_00019

Analyte	Water (ug/L)							
	True	Found	C	%R	Limits		Q	Method
Iron	150000	149000		100	90	110		6010C
Manganese		5.0	U					6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 410-11156/2-A

Lab Name: Eurofins Lancaster Laboratories E

Job No.: 410-3311-1

Sample Matrix: Water

LCS Source: MT_S_LLC_HP_00003

Analyte	Water (ug/L)							
	True	Found	C	%R	Limits		Q	Method
Iron	400	411		103	87	115		6010C
Manganese	20.0	20.8		104	90	114		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - DISSOLVED

Lab ID: 410-3311-6

SDG No: _____

Lab Name: Eurofins Lancaster Laboratories

Job No: 410-3311-1

Matrix: Water

Concentration Units: ug/L

Analyte	Initial Sample Result (I) C		Serial Dilution Result (S) C		% Difference	Q	Method
Iron	100	U	520	U	NC		6010C
Manganese	5.2	U	26	U	NC		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

9-IN
DETECTION LIMITS
METALS - DISSOLVED

Lab Name: Eurofins Lancaster Laboratories Job Number: 410-3311-1
SDG Number: _____
Matrix: Water Instrument ID: T74 - 23745
Method: 6010C DL Date: 09/13/2019 10:57
Prep Method: Non-Digest Prep

Analyte	Wavelength/ Mass	LOQ (ug/L)	DL (ug/L)
Iron	261.19	200	40
Manganese	257.61	10	3

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - DISSOLVED

Lab Name: Eurofins Lancaster Laboratories Job Number: 410-3311-1
SDG Number: _____
Matrix: Water Instrument ID: T74 - 23745
Method: 6010C XMDL Date: 09/13/2019 10:35

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Iron	261.19	200	40
Manganese	257.61	10	3

9-IN
DETECTION LIMITS
METALS - DISSOLVED

Lab Name: Eurofins Lancaster Laboratories Job Number: 410-3311-1
SDG Number: _____
Matrix: Water Instrument ID: T75 - 27278
Method: 6010C DL Date: 09/13/2019 10:57
Prep Method: Non-Digest Prep

Analyte	Wavelength/ Mass	LOQ (ug/L)	DL (ug/L)
Iron	261.19	200	40
Manganese	257.61	10	3

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - DISSOLVED

Lab Name: Eurofins Lancaster Laboratories Job Number: 410-3311-1
SDG Number: _____
Matrix: Water Instrument ID: T75 - 27278
Method: 6010C XMDL Date: 09/13/2019 10:35

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Iron	261.19	200	40
Manganese	257.61	10	3

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: Eurofins Lancaster Laboratories Job Number: 410-3311-1

SDG No.: _____

ICP-AES Instrument ID: T74 - 23745 Date: 01/08/2020

Analyte	Wave Length	Ag	Al	As	B	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Li
Aluminum	308.215				0.024099	0.016785									
Antimony	206.833										0.017637				
Arsenic	189.042										-0.004905			0.000040	0.000485
Barium	455.403														
Beryllium	313.042														
Boron	249.773										-0.00223		0.000728		
Cadmium	226.502									0.000117	0.000124		0.000095		
Calcium	317.933								0.005851						
Chromium	267.716														
Cobalt	228.616											0.000159			
Copper	327.396							0.000024							
Iron	261.187														
Lead	220.353		0.000197									0.000373	0.000027		
Lithium	670.784							0.000042							
Magnesium	285.213														
Manganese	257.610														
Molybdenum	202.030														
Nickel	231.604									-0.000745					
Phosphorus	177.495											0.004347			
Potassium	766.49														
Selenium	196.090												-0.000094		
Silicon	251.611														
Silver	328.068														
Sodium	589.592														
Strontium	421.552							0.000027							
Sulfur	182.034														
Thallium	190.856									0.001473					
Thorium	283.730														
Tin	189.989														
Titanium	334.941														

X-IN

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: Eurofins Lancaster Laboratories Job Number: 410-3311-1

SDG No.: _____

ICP-AES Instrument ID: T74 - 23745 Date: 01/08/2020

Analyte	Wave Length	Ag	Al	As	B	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Li
Tungsten	207.911														
Vanadium	292.402												0.000019		
Zinc	213.856											0.001043	0.000121		
Zirconium	339.198														

X-IN

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: Eurofins Lancaster Laboratories Job Number: 410-3311-1

SDG No.: _____

ICP-AES Instrument ID: T74 - 23745 Date: 01/08/2020

Analyte	Wave Length	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Sc	Se	Si	Sn	Sr
Aluminum	308.215			.026633											
Antimony	206.833			-0.001754											
Arsenic	189.042		0.000530	0.001055							0.000884			0.000478	0.002938
Barium	455.403														
Beryllium	313.042														
Boron	249.773												-0.000312		
Cadmium	226.502														
Calcium	317.933														
Chromium	267.716														
Cobalt	228.616					0.000134									
Copper	327.396														
Iron	261.187														
Lead	220.353			-0.001858									0.000063		
Lithium	670.784														
Magnesium	285.213		0.002687												
Manganese	257.610														
Molybdenum	202.030														
Nickel	231.604												-0.000048		
Phosphorus	177.495														
Potassium	766.49	0.000545													
Selenium	196.090														
Silicon	251.611			0.011875										0.014330	
Silver	328.068														
Sodium	589.592														
Strontium	421.552														
Sulfur	182.034			-0.010119	-0.002016										
Thallium	190.856		0.001165												
Thorium	283.730														
Tin	189.989														
Titanium	334.941														

X-IN

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: Eurofins Lancaster Laboratories Job Number: 410-3311-1

SDG No.: _____

ICP-AES Instrument ID: T74 - 23745 Date: 01/08/2020

Analyte	Wave Length	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Sc	Se	Si	Sn	Sr
Tungsten	207.911														
Vanadium	292.402			-0.016024											
Zinc	213.856					0.005186									
Zirconium	339.198														

X-IN

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: Eurofins Lancaster Laboratories Job Number: 410-3311-1

SDG No.: _____

ICP-AES Instrument ID: T74 - 23745 Date: 01/08/2020

Analyte	Wave Length	Th	Ti	Tl	V	W	Zn	Zr						
Aluminum	308.215	.107534			.028727			-0.005677						
Antimony	206.833							-0.001366						
Arsenic	189.042			0.000848		0.000895	0.001588	0.000532						
Barium	455.403													
Beryllium	313.042	-0.000228			0.000107									
Boron	249.773					-0.022677								
Cadmium	226.502													
Calcium	317.933													
Chromium	267.716													
Cobalt	228.616		0.002357											
Copper	327.396	0.032572	-0.02243					-0.001641						
Iron	261.187													
Lead	220.353													
Lithium	670.784													
Magnesium	285.213													
Manganese	257.610													
Molybdenum	202.030					-0.000585								
Nickel	231.604													
Phosphorus	177.495													
Potassium	766.49													
Selenium	196.090					0.010913								
Silicon	251.611													
Silver	328.068	-0.0201650						.004126						
Sodium	589.592													
Strontium	421.552													
Sulfur	182.034					-0.073834								
Thallium	190.856		-0.025391		-0.001320									
Thorium	283.730													
Tin	189.989													
Titanium	334.941													

X-IN

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: Eurofins Lancaster Laboratories Job Number: 410-3311-1

SDG No.: _____

ICP-AES Instrument ID: T74 - 23745 Date: 01/08/2020

Analyte	Wave Length	Th	Ti	Tl	V	W	Zn	Zr							
Tungsten	207.911						0.012033								
Vanadium	292.402		0.000623												
Zinc	213.856														
Zirconium	339.198	0.060218													

X-IN

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: Eurofins Lancaster Laboratories Job Number: 410-3311-1

SDG No.: _____

ICP-AES Instrument ID: T75 - 27278 Date: 03/31/2020

Analyte	Wave Length	Ag	Al	As	Au	B	Ba	Be	Cd	Co	Cr	Cu	Fe	K	Li
Aluminum	308.321 ₅														
Antimony	206.833										0.016818				
Arsenic	189.042										-0.009233				
Barium	455.403														
Beryllium	313.042														
Boron	249.773												0.001921		
Cadmium	226.502												0.000125		
Calcium	317.933														
Chromium	267.716														
Cobalt	228.616														
Copper	327.396												-0.000115		
Gold	242.795														
Iron	261.187														
Lead	220.353		0.000122							-0.000672					
Lithium	670.784														
Magnesium	285.213														
Manganese	257.610														
Molybdenum	202.030														
Nickel	231.604												-0.000033		
Phosphorus	177.495														
Potassium	766.490														
Selenium	196.090												-0.000090		
Silicon	251.611														
Silver	328.068		0												
Sodium	589.592														
Strontium	421.552														
Sulfur	182.034														
Thallium	190.856									0.001608					
Thorium	283.730														

X-IN

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: Eurofins Lancaster Laboratories Job Number: 410-3311-1

SDG No.: _____

ICP-AES Instrument ID: T75 - 27278 Date: 03/31/2020

Analyte	Wave Length	Ag	Al	As	Au	B	Ba	Be	Cd	Co	Cr	Cu	Fe	K	Li
Tin	189.989														
Titanium	334.941														
Tungsten	207.911														
Uranium															
Vanadium	292.402														
Zinc	213.856											0.000959	0.000084		
Zirconium	339.198														

X-IN

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: Eurofins Lancaster Laboratories Job Number: 410-3311-1

SDG No.: _____

ICP-AES Instrument ID: T75 - 27278 Date: 03/31/2020

Analyte	Wave Length	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Se	Si	Sn	Sr	Th
Aluminum	308.321 ₅			0.010490											0.069460
Antimony	206.833			-0.003026											
Arsenic	189.042														
Barium	455.403														
Beryllium	313.042														
Boron	249.773														
Cadmium	226.502														
Calcium	317.933														-0.033088
Chromium	267.716														
Cobalt	228.616														
Copper	327.396														0.012132
Gold	242.795														
Iron	261.187														
Lead	220.353			-0.002426								0.000196			
Lithium	670.784														
Magnesium	285.213														
Manganese	257.610														
Molybdenum	202.030														
Nickel	231.604			0.000301											
Phosphorus	177.495														
Potassium	766.490														
Selenium	196.090														
Silicon	251.611			0.007245											
Silver	328.068														-0.006219
Sodium	589.592														
Strontium	421.552														
Sulfur	182.034		0.004754												
Thallium	190.856		0.000955												
Thorium	283.730														

X-IN

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: Eurofins Lancaster Laboratories Job Number: 410-3311-1

SDG No.: _____

ICP-AES Instrument ID: T75 - 27278 Date: 03/31/2020

Analyte	Wave Length	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Se	Si	Sn	Sr	Th
Tin	189.989														
Titanium	334.941														
Tungsten	207.911														
Uranium															
Vanadium	292.402			-0.003599											0.000884
Zinc	213.856					0.005373									
Zirconium	339.198														0.067628

X-IN

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: Eurofins Lancaster Laboratories Job Number: 410-3311-1

SDG No.: _____

ICP-AES Instrument ID: T75 - 27278 Date: 03/31/2020

Analyte	Wave Length	Ti	Tl	U	V	W	Zn	Zr							
Aluminum	308.321 ₅				0.043905										
Antimony	206.833							-0.001471							
Arsenic	189.042					0.002008									
Barium	455.403														
Beryllium	313.042														
Boron	249.773														
Cadmium	226.502	0.000161				0.000124									
Calcium	317.933														
Chromium	267.716														
Cobalt	228.616	0.002036													
Copper	327.396	-0.004094			-0.000480										
Gold	242.795														
Iron	261.187														
Lead	220.353														
Lithium	670.784														
Magnesium	285.213														
Manganese	257.610				-0.000268	0.000332									
Molybdenum	202.030				-0.000386	-0.000674									
Nickel	231.604														
Phosphorus	177.495					0.002527									
Potassium	766.490														
Selenium	196.090					0.009424									
Silicon	251.611					0.014497									
Silver	328.068							0.003769							
Sodium	589.592														
Strontium	421.552														
Sulfur	182.034					-0.028741									
Thallium	190.856	-0.004051			-0.028761										
Thorium	283.730														

X-IN

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: Eurofins Lancaster Laboratories Job Number: 410-3311-1

SDG No.: _____

ICP-AES Instrument ID: T75 - 27278 Date: 03/31/2020

Analyte	Wave Length	Ti	Tl	U	V	W	Zn	Zr							
Tin	189.989														
Titanium	334.941														
Tungsten	207.911						0.007036								
Uranium															
Vanadium	292.402		0.000813												
Zinc	213.856														
Zirconium	339.198														

X-IN

11-IN
LINEAR RANGES
METALSLab Name: Eurofins Lancaster LaboratorieJob No: 410-3311-1

SDG No.: _____

Instrument ID: T74 - 23745Date: 12/18/2018 10:11

Analyte	Integ. Time (Sec.)	Concentration (mg/L)	Method
Iron		270	6010C
Manganese		18	6010C

11-IN
LINEAR RANGES
METALSLab Name: Eurofins Lancaster LaboratorieJob No: 410-3311-1

SDG No.: _____

Instrument ID: T75 - 27278Date: 12/18/2018 10:10

Analyte	Integ. Time (Sec.)	Concentration (mg/L)	Method
Iron		270	6010C
Manganese		18	6010C

12-IN
PREPARATION LOG
METALS

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-3311-1

SDG No.: _____

Prep Method: Non-Digest Prep

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 410-11156/1-A	06/08/2020 10:15	11156		50	51.5
LCS 410-11156/2-A	06/08/2020 10:15	11156		50	50
410-3311-6	06/08/2020 10:15	11156		50	51.5
410-3311-6 DU	06/08/2020 10:15	11156		50	51.5
410-3311-6 MS	06/08/2020 10:15	11156		50	52.2
410-3311-6 MSD	06/08/2020 10:15	11156		50	52.2

12-IN
PREPARATION LOG
METALS

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-3311-1

SDG No.: _____

Prep Method: Non-Digest Prep

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 410-11456/1-A	06/09/2020 09:25	11456		50	51.5
LCS 410-11456/2-A	06/09/2020 09:25	11456		50	50
410-3311-1	06/09/2020 09:25	11456		50	51.5
410-3311-2	06/09/2020 09:25	11456		50	51.5
410-3311-3	06/09/2020 09:25	11456		50	51.5
410-3311-4	06/09/2020 09:25	11456		50	51.5
410-3311-7	06/09/2020 09:25	11456		50	51.5
410-3311-8	06/09/2020 09:25	11456		50	51.5

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1

SDG No.: _____

Instrument ID: T74 - 23745

Analysis Method: 6010C

Start Date: 06/12/2020 08:46

End Date: 06/12/2020 11:33

Lab Sample Id	D/F	T y p e	Time	Analytes																	
				F	M																
ZZZZZZ			08:46																		
ICIS 410-12678/2	1		08:49	X	X																
STD1 410-12678/3 IC			08:52	X	X																
STD2 410-12678/4 IC			08:55	X	X																
STD3 410-12678/5 IC			08:59	X	X																
ICV 410-12678/6	1		09:02	X	X																
ICV 410-12678/7	1		09:05	X	X																
ICB 410-12678/8	1		09:08	X	X																
CRI 410-12678/9	1		09:11	X	X																
ICSA 410-12678/10	1		09:14	X	X																
ICSAB 410-12678/11	1		09:18	X	X																
CCV 410-12678/12	1		09:21	X	X																
CCB 410-12678/13	1		09:24	X	X																
LRC 410-12678/14	1		09:27	X	X																
LRC 410-12678/15	1		09:31	X																	
LRC 410-12678/16	1		09:34	X	X																
LRC 410-12678/17	1		09:38	X	X																
CCV 410-12678/18	1		09:41	X	X																
CCB 410-12678/19	1		09:44	X	X																
MB 410-11456/1-A	1	T	09:50	X	X																
LCS 410-11456/2-A	1	T	09:53	X	X																
ZZZZZZ			09:56																		
ZZZZZZ			10:00																		
ZZZZZZ			10:03																		
ZZZZZZ			10:06																		
ZZZZZZ			10:10																		
ZZZZZZ			10:13																		
ZZZZZZ			10:16																		
ZZZZZZ			10:20																		
CCV 410-12678/30	1		10:23	X	X																
CCB 410-12678/31	1		10:26	X	X																
ZZZZZZ			10:29																		
ZZZZZZ			10:32																		
ZZZZZZ			10:36																		
ZZZZZZ			10:39																		
ZZZZZZ			10:42																		
ZZZZZZ			10:45																		
ZZZZZZ			10:48																		
ZZZZZZ			10:52																		
ZZZZZZ			10:55																		
410-3311-1	1	D	10:59	X	X																
CCV 410-12678/42	1		11:02	X	X																

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1
 SDG No.: _____
 Instrument ID: T74 - 23745 Analysis Method: 6010C
 Start Date: 06/12/2020 08:46 End Date: 06/12/2020 11:33

Lab Sample Id	D/F	T y p e	Time	Analytes																	
				F	M																
CCB 410-12678/43	1		11:05	X	X																
410-3311-2	1	D	11:08	X	X																
410-3311-3	1	D	11:11	X	X																
410-3311-4	1	D	11:14	X	X																
410-3311-7	1	D	11:17	X	X																
410-3311-8	1	D	11:21	X	X																
ZZZZZZ			11:24																		
ZZZZZZ			11:27																		
CCV 410-12678/51	1		11:30	X	X																
CCB 410-12678/52	1		11:33	X	X																

Prep Types:

D = Dissolved

T = Total/NA

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1

SDG No.: _____

Instrument ID: T75 - 27278

Analysis Method: 6010C

Start Date: 06/12/2020 09:59

End Date: 06/12/2020 12:52

Lab Sample Id	D/F	T y p e	Time	Analytes																	
				F	M																
ZZZZZZ			09:59																		
ICIS 410-12730/2	1		10:02	X	X																
STD1 410-12730/3 IC			10:05	X	X																
STD2 410-12730/4 IC			10:08	X	X																
STD3 410-12730/5 IC			10:12	X	X																
ICV 410-12730/6	1		10:15	X	X																
ICV 410-12730/7	1		10:18	X	X																
ICB 410-12730/8	1		10:21	X	X																
CRI 410-12730/9	1		10:24	X	X																
ICSA 410-12730/10	1		10:27	X	X																
ICSAB 410-12730/11	1		10:31	X	X																
CCV 410-12730/12	1		10:34	X	X																
CCB 410-12730/13	1		10:37	X	X																
LRC 410-12730/14	1		10:41	X	X																
LRC 410-12730/15	1		10:44	X																	
LRC 410-12730/16	1		10:48	X	X																
LRC 410-12730/17	1		10:51	X	X																
CCV 410-12730/18	1		10:55	X	X																
CCB 410-12730/19	1		10:58	X	X																
MB 410-11156/1-A	1	T	11:09	X	X																
LCS 410-11156/2-A	1	T	11:12	X	X																
410-3311-6	1	D	11:15	X	X																
410-3311-6 PDS	1	D	11:18	X	X																
410-3311-6 DU	1	D	11:21	X	X																
410-3311-6 MS	1	D	11:24	X	X																
410-3311-6 MSD	1	D	11:27	X	X																
410-3311-6 SD	5	D	11:30	X	X																
ZZZZZZ			11:33																		
ZZZZZZ			11:37																		
CCV 410-12730/30	1		11:40	X	X																
CCB 410-12730/31	1		11:43	X	X																
ZZZZZZ			11:46																		
ZZZZZZ			11:50																		
ZZZZZZ			11:53																		
ZZZZZZ			11:56																		
ZZZZZZ			12:00																		
ZZZZZZ			12:03																		
ZZZZZZ			12:06																		
ZZZZZZ			12:10																		
ZZZZZZ			12:13																		
ZZZZZZ			12:17																		
CCV 410-12730/42			12:20																		

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-3311-1
 SDG No.: _____
 Instrument ID: T75 - 27278 Analysis Method: 6010C
 Start Date: 06/12/2020 09:59 End Date: 06/12/2020 12:52

Lab Sample Id	D/F	T y p e	Time	Analytes																	
				F	M																
CCB 410-12730/43			12:23																		
ZZZZZZ			12:26																		
ZZZZZZ			12:29																		
ZZZZZZ			12:32																		
ZZZZZZ			12:36																		
ZZZZZZ			12:39																		
ZZZZZZ			12:42																		
ZZZZZZ			12:46																		
CCV 410-12730/51			12:49																		
CCB 410-12730/52			12:52																		

Prep Types: _____

D = Dissolved

T = Total/NA

15-IN
ICP INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1

SDG No.: _____

ICP Instrument ID: T74 - 23745 Start Date: 06/12/2020 End Date: 06/12/2020

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Y/0 224.306	Q	Element Y/0 371.030	Q	Element Y/1 371.030	Q	Element	Q	Element	Q
ICIS 410-12678/2	08:49										
ICV 410-12678/6	09:02	96		96		99					
ICV 410-12678/7	09:05	97		97		100					
ICB 410-12678/8	09:08	99		99		99					
CRI 410-12678/9	09:11	100		100		100					
ICSA 410-12678/10	09:14	88		88		94					
ICSAB 410-12678/11	09:18	88		88		97					
CCV 410-12678/12	09:21	97		98		101					
CCB 410-12678/13	09:24	98		99		99					
LRC 410-12678/14	09:27	93		100		102					
LRC 410-12678/15	09:31	82		83		93					
LRC 410-12678/16	09:34	94		99		101					
LRC 410-12678/17	09:38	89		88		96					
CCV 410-12678/18	09:41	97		98		101					
CCB 410-12678/19	09:44	99		101		103					
MB 410-11456/1-A	09:50	101		102		103					
LCS 410-11456/2-A	09:53	101		102		103					
CCV 410-12678/30	10:23	96		97		100					
CCB 410-12678/31	10:26	99		100		100					
410-3311-1	10:59	98		99		100					
CCV 410-12678/42	11:02	96		98		100					
CCB 410-12678/43	11:05	99		101		101					
410-3311-2	11:08	98		99		100					
410-3311-3	11:11	98		99		101					
410-3311-4	11:14	98		100		101					
410-3311-7	11:17	99		100		101					
410-3311-8	11:21	98		98		102					
CCV 410-12678/51	11:30	97		100		99					
CCB 410-12678/52	11:33	99		101		100					

15-IN
ICP INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-3311-1

SDG No.: _____

ICP Instrument ID: T75 - 27278 Start Date: 06/12/2020 End Date: 06/12/2020

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Y/0 224.306	Q	Element Y/0 371.030	Q	Element Y/1 371.030	Q	Element	Q	Element	Q
ICIS 410-12730/2	10:02										
ICV 410-12730/6	10:15	97		98		100					
ICV 410-12730/7	10:18	98		98		101					
ICB 410-12730/8	10:21	101		102		100					
CRI 410-12730/9	10:24	101		102		101					
ICSA 410-12730/10	10:27	90		89		97					
ICSAB 410-12730/11	10:31	90		88		96					
CCV 410-12730/12	10:34	100		98		100					
CCB 410-12730/13	10:37	101		101		100					
LRC 410-12730/14	10:41	98		99		101					
LRC 410-12730/15	10:44	87		86		96					
LRC 410-12730/16	10:48	97		99		101					
LRC 410-12730/17	10:51	92		90		97					
CCV 410-12730/18	10:55	99		99		101					
CCB 410-12730/19	10:58	101		102		101					
MB 410-11156/1-A	11:09	103		105		105					
LCS 410-11156/2-A	11:12	103		104		104					
410-3311-6	11:15	101		102		103					
410-3311-6 PDS	11:18	101		102		105					
410-3311-6 DU	11:21	102		102		104					
410-3311-6 MS	11:24	102		101		103					
410-3311-6 MSD	11:27	101		102		103					
410-3311-6 SD	11:30	102		102		102					
CCV 410-12730/30	11:40	99		99		101					
CCB 410-12730/31	11:43	101		102		102					

METALS BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-3311-1

SDG No.: _____

Batch Number: 11156 Batch Start Date: 06/08/20 10:15 Batch Analyst: Kuhns, Annamaria MBatch Method: Non-Digest Prep Batch End Date: 06/08/20 10:20

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MP_1:1HCl 00004	MP_1:1HNO3 00003	MT_KNiZn_IV 00008	MT_S_LLC_HP 00003
MB 410-11156/1		Non-Digest Prep, 6010C		50 mL	51.5 mL	0.5 mL	1 mL		
LCS 410-11156/2		Non-Digest Prep, 6010C		50 mL	50 mL	0.5 mL	1 mL	0.5 mL	0.2 mL
410-3311-G-6	GWTS-EFF2-060320	Non-Digest Prep, 6010C	D	50 mL	51.5 mL	0.5 mL	1 mL		
410-3311-G-6 DU	GWTS-EFF2-060320	Non-Digest Prep, 6010C	D	50 mL	51.5 mL	0.5 mL	1 mL		
410-3311-G-6 MS	GWTS-EFF2-060320	Non-Digest Prep, 6010C	D	50 mL	52.2 mL	0.5 mL	1 mL	0.5 mL	0.2 mL
410-3311-G-6 MSD	GWTS-EFF2-060320	Non-Digest Prep, 6010C	D	50 mL	52.2 mL	0.5 mL	1 mL	0.5 mL	0.2 mL

Batch Notes	
Digestion Tubes ID	2001329
Pipette/Syringe/Dispenser ID	0111/200, S/500

Basis	Basis Description
D	Dissolved

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

6010C

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METALS BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-3311-1

SDG No.: _____

Batch Number: 11456 Batch Start Date: 06/09/20 09:30 Batch Analyst: Kuhns, Annamaria MBatch Method: Non-Digest Prep Batch End Date: 06/09/20 09:40

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MP_1:1HCl 00004	MP_1:1HNO3 00003	MT_KNiZn_IV 00008	MT_S_LLC_HP 00003
MB 410-11456/1		Non-Digest Prep, 6010C		50 mL	51.5 mL	0.5 mL	1 mL		
LCS 410-11456/2		Non-Digest Prep, 6010C		50 mL	50 mL	0.5 mL	1 mL	0.5 mL	0.2 mL
410-3311-G-1	GWTS-EFF1-060320	Non-Digest Prep, 6010C	D	50 mL	51.5 mL	0.5 mL	1 mL		
410-3311-G-2	GWTS-EFF1DUP-060 320	Non-Digest Prep, 6010C	D	50 mL	51.5 mL	0.5 mL	1 mL		
410-3311-G-3	GWTS-GAC1-060320	Non-Digest Prep, 6010C	D	50 mL	51.5 mL	0.5 mL	1 mL		
410-3311-G-4	GWTS-INF1-060320	Non-Digest Prep, 6010C	D	50 mL	51.5 mL	0.5 mL	1 mL		
410-3311-G-7	GWTS-GAC2-060320	Non-Digest Prep, 6010C	D	50 mL	51.5 mL	0.5 mL	1 mL		
410-3311-G-8	GWTS-INF2-060320	Non-Digest Prep, 6010C	D	50 mL	51.5 mL	0.5 mL	1 mL		

Batch Notes	
Digestion Tubes ID	2001329
Pipette/Syringe/Dispenser ID	0111/200, S/500

Basis	Basis Description
D	Dissolved

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

6010C

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T2016401T74

[Sample Header]
 Method=New TRACE Fast w axial Al(v227)
 SampleName=Matrix_Rinse
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 8:46:24
 Sample Type=QC
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]
 Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, -.0008,.0009,117.8, .0003, -.0013, -.0013,None,,
 Al,308.215 {109},Y2R,ppm, -.0952,.0962,101.1, -.1891, -.0996, .0032,None,,
 Al ax,308.215 {109}2,Y2A,ppm, -.0036,.0023,63.94, -.0058, -.0013, -.0036,None,,
 As,189.042 {478},Y1,ppm, -.0022,.0110,508.6, -.0144, .0070, .0009,None,,
 B,249.773 {135},Y2A,ppm, -.0003,.0009,293.3, -.0013, .0001, .0003,None,,
 Ba,455.403 { 74},Y2A,ppm, .0000,.0000,196.9, .0000, .0000, -.0000,None,,
 Be,313.042 {108},Y2A,ppm, .00024,.00001,4.1629, .00025, .00023, .00025,None,,
 Ca,317.933 {106},Y2R,ppm, -.0115,.0120,104.2, .0013, -.0134, -.0226,None,,
 Cd,226.502 {449},Y1,ppm, .0002,.0002,87.15, .0002, .0001, .0005,None,,
 Co,228.616 {447},Y1,ppm, -.0007,.0003,53.27, -.0010, -.0006, -.0003,None,,
 Cr,267.716 {126},Y2A,ppm, -.0003,.0009,255.9, .0007, -.0008, -.0009,None,,
 Cu,327.396 {103},Y2A,ppm, -.0001,.0021,2970., -.0015, -.0011, .0024,None,,
 Fe,261.187 {129},Y2R,ppm, .0310,.0096,30.99, .0239, .0420, .0272,None,,
 K,766.490 { 44},Y2R,ppm, .3185,.0382,12.01, .2752, .3323, .3478,None,,
 Li,670.784 { 50},Y2R,ppm, .0116,.0018,15.30, .0136, .0107, .0104,None,,
 Mg,285.213 {118},Y2R,ppm, .0055,.0054,98.43, .0067, -.0004, .0102,None,,
 Mn,257.610 {131},Y2A,ppm, .00003,.00024,702.30, .00001, .00028, -.00019,None,,
 Mo,202.030 {467},Y1,ppm, .0003,.0000,17.48, .0003, .0002, .0003,None,,
 Na,589.592 { 57},Y2R,ppm, .0195,.0074,37.95, .0136, .0278, .0171,None,,
 Ni,231.604 {445},Y1,ppm, .0002,.0011,553.0, .0010, .0005, -.0010,None,,
 P,177.495 {490},Y1,ppm, -.0063,.0089,141.3, .0019, -.0051, -.0157,None,,
 Pb,220.353 {453},Y1,ppm, -.0002,.0033,1512., .0032, -.0005, -.0034,None,,
 S,182.034 {485},Y1,ppm, -.0078,.0297,378.7, .0106, -.0421, .0080,None,,
 Sb,206.833 {463},Y1,ppm, -.0029,.0082,284.3, -.0100, -.0047, .0061,None,,
 Se,196.090 {472},Y1,ppm, -.0058,.0153,266.3, -.0234, .0036, .0026,None,,
 Si,251.611 {134},Y2R,ppm, .01124,.02972,264.47, .00389, .04395, -.01412,None,,
 Sn,189.989 {477},Y1,ppm, -.0043,.0059,138.8, -.0043, -.0102, .0017,None,,
 Sr,421.552 { 80},Y2A,ppm, .0000,.0000,95.64, .0000, .0000, -.0000,None,,
 Th,283.730 {119},Y2R,ppm, -.0080,.0376,469.3, .0069, .0198, -.0508,None,,
 Ti,334.941 {101},Y2A,ppm, .0003,.0001,37.35, .0004, .0002, .0003,None,,
 Tl,190.856 {477},Y1,ppm, .0057,.0017,30.14, .0075, .0054, .0041,None,,
 V,292.402 {115},Y2A,ppm, .0005,.0003,66.51, .0002, .0009, .0005,None,,
 W,207.911 {462},Y1,ppm, .0016,.0012,78.66, .0030, .0008, .0009,None,,
 Zn,213.856 {458},Y1,ppm, .0004,.0005,111.8, .0009, -.0001, .0005,None,,
 Zr,339.198 { 99},Y2R,ppm, .0019,.0073,373.5, -.0062, .0077, .0044,None,,

[Internal Standards]
 Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Y1,224.306 {450},Cts/S, 3026.4,3.9875,.13176,3027.2,3022.0,3029.9
 Y2A,371.030 { 91}2,Cts/S, 141180.,1142.8,.80941,142500.,140560.,140490.
 Y2R,371.030 { 91}3,Cts/S, 3899.1,18.008,.46185,3905.3,3878.8,3913.1

[Sample Header]
 Method=New TRACE Fast w axial Al(v227)
 SampleName=S0
 Username=dept 22

T2016401T74

Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 8:49:33
 Sample Type=ReSlope
 Mode=IR
 CorrFactor=1.000
 Repeats=3

[Results]

Elem	WL	ISRef	Units	Avg	Stddev	RSD	Rep1	Rep2	Rep3
Ag	328.068	{103}	Y2A,Cts/S	-.0016	.0011	67.47	-.0026	-.0005	-.0017
Al	308.215	{109}	Y2R,Cts/S	.0307	.0029	9.574	.0303	.0280	.0338
Al	ax,308.215	{109}2	Y2A,Cts/S	.0072	.0017	24.28	.0052	.0082	.0082
As	189.042	{478}	Y1,Cts/S	.0020	.0113	572.8	-.0105	.0115	.0049
B	249.773	{135}	Y2A,Cts/S	.0000	.0000	93.61	.0000	.0000	.0000
Ba	455.403	{74}	Y2A,Cts/S	.0007	.0001	13.12	.0008	.0006	.0007
Be	313.042	{108}	Y2A,Cts/S	.01214	.00487	40.145	.00814	.01071	.01756
Ca	317.933	{106}	Y2R,Cts/S	.0019	.0005	25.47	.0020	.0013	.0023
Cd	226.502	{449}	Y1,Cts/S	-.0479	.0256	53.51	-.0246	-.0754	-.0438
Co	228.616	{447}	Y1,Cts/S	.0277	.0092	33.21	.0190	.0268	.0374
Cr	267.716	{126}	Y2A,Cts/S	.0001	.0000	20.13	.0001	.0001	.0001
Cu	327.396	{103}	Y2A,Cts/S	.0018	.0009	50.43	.0008	.0026	.0021
Fe	261.187	{129}	Y2R,Cts/S	-.0002	.0003	168.6	-.0001	-.0005	.0001
K	766.490	{44}	Y2R,Cts/S	.6474	.0912	14.08	.5436	.7144	.6844
Li	670.784	{50}	Y2R,Cts/S	.0029	.0002	5.865	.0031	.0029	.0028
Mg	285.213	{118}	Y2R,Cts/S	.0003	.0004	150.0	.0005	.0006	-.0002
Mn	257.610	{131}	Y2A,Cts/S	-.00068	.00108	157.89	-.00088	-.00165	.00048
Mo	202.030	{467}	Y1,Cts/S	-.0048	.0181	377.7	.0114	-.0244	-.0014
Na	589.592	{57}	Y2R,Cts/S	.0359	.0038	10.71	.0392	.0368	.0317
Ni	231.604	{445}	Y1,Cts/S	.0317	.0188	59.25	.0448	.0102	.0402
P	177.495	{490}	Y1,Cts/S	.0008	.0001	13.63	.0008	.0008	.0006
Pb	220.353	{453}	Y1,Cts/S	.0035	.0116	334.3	.0093	-.0099	.0109
S	182.034	{485}	Y1,Cts/S	.0012	.0001	12.45	.0010	.0013	.0012
Sb	206.833	{463}	Y1,Cts/S	.0000	.0005	1258.	.0005	-.0005	.0001
Se	196.090	{472}	Y1,Cts/S	.0065	.0104	161.7	-.0036	.0058	.0172
Si	251.611	{134}	Y2R,Cts/S	.00002	.00021	1035.3	.00022	-.00020	.00004
Sn	189.989	{477}	Y1,Cts/S	.0208	.0009	4.088	.0218	.0204	.0203
Sr	421.552	{80}	Y2A,Cts/S	-.0003	.0001	20.45	-.0003	-.0003	-.0004
Th	283.730	{119}	Y2R,Cts/S	-.0001	.0008	973.0	-.0000	-.0009	.0007
Ti	334.941	{101}	Y2A,Cts/S	.0027	.0022	80.99	.0045	.0003	.0033
Tl	190.856	{477}	Y1,Cts/S	.0058	.0066	115.0	-.0013	.0067	.0118
V	292.402	{115}	Y2A,Cts/S	-.0052	.0031	59.00	-.0070	-.0069	-.0017
W	207.911	{462}	Y1,Cts/S	.0001	.0002	126.8	-.0000	.0001	.0003
Zn	213.856	{458}	Y1,Cts/S	.0276	.0296	107.2	.0338	.0537	-.0046
Zr	339.198	{99}	Y2R,Cts/S	.0001	.0009	667.6	.0009	-.0008	.0003

[Internal Standards]

Elem	WL	Units	Avg	Stddev	RSD	Rep1	Rep2	Rep3	
Y1	224.306	{450}	Cts/S	3046.0	2.9147	.09569	3046.1	3043.0	3048.8
Y2A	371.030	{91}2	Cts/S	141800.	1072.5	.75636	142100.	142680.	140600.
Y2R	371.030	{91}3	Cts/S	3910.1	29.428	.75262	3877.1	3933.5	3919.7

[Sample Header]

Method=New TRACE Fast w axial Al(v227)
 SampleName=S1
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 8:52:41

T2016401T74

Sample Type=Reslope
 Mode=IR
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Al,308.215 {109},Y2R,Cts/S, 14.09,.0746,.5298, 14.14, 14.00, 14.12
 Al ax,308.215 {109}2,Y2A,Cts/S, 20.04,.0257,.1282, 20.05, 20.06, 20.01
 Ca,317.933 {106},Y2R,Cts/S, 3.286,.0139,.4227, 3.293, 3.270, 3.295
 Fe,261.187 {129},Y2R,Cts/S, .9428,.0024,.2506, .9411, .9419, .9455
 K,766.490 { 44},Y2R,Cts/S, 230.0,.1725,.0750, 230.2, 230.0, 229.8
 Mg,285.213 {118},Y2R,Cts/S, 4.312,.0142,.3286, 4.310, 4.298, 4.327
 Na,589.592 { 57},Y2R,Cts/S, 11.11,.0314,.2830, 11.10, 11.08, 11.15
 S,182.034 {485},Y1,Cts/S, .7338,.0019,.2608, .7317, .7344, .7353
 Si,251.611 {134},Y2R,Cts/S, .66179,.00225,.34020, .66438, .66030, .66070

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Y1,224.306 {450},Cts/S, 2899.3,5.5395,.19107,2904.0,2900.6,2893.2
 Y2A,371.030 { 91}2,Cts/S, 135630.,1103.9,.81395,134830.,135170.,136890.
 Y2R,371.030 { 91}3,Cts/S, 3872.5,17.016,.43939,3855.5,3872.6,3889.5

[Sample Header]

Method=New TRACE Fast w axial Al(v227)
 SampleName=S2
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 8:55:46
 Sample Type=Reslope
 Mode=IR
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Ag,328.068 {103},Y2A,Cts/S, 4.381,.0139,.3164, 4.367, 4.381, 4.394
 As,189.042 {478},Y1,Cts/S, 1.082,.0015,.1404, 1.080, 1.083, 1.083
 B,249.773 {135},Y2A,Cts/S, .0404,.0002,.6027, .0403, .0403, .0407
 Ba,455.403 { 74},Y2A,Cts/S, 3.672,.0095,.2589, 3.677, 3.679, 3.661
 Be,313.042 {108},Y2A,Cts/S, 105.66,.97510,.92283, 104.54, 106.17, 106.28
 Cd,226.502 {449},Y1,Cts/S, 117.1,.0621,.0531, 117.2, 117.1, 117.1
 Co,228.616 {447},Y1,Cts/S, 28.22,.0484,.1716, 28.27, 28.21, 28.18
 Cu,327.396 {103},Y2A,Cts/S, 2.233,.0081,.3649, 2.230, 2.227, 2.243
 Li,670.784 { 50},Y2R,Cts/S, 1.578,.0072,.4560, 1.581, 1.583, 1.570
 Mn,257.610 {131},Y2A,Cts/S, 16.689,.03523,.21108, 16.654, 16.689, 16.724
 Ni,231.604 {445},Y1,Cts/S, 14.34,.0508,.3542, 14.37, 14.37, 14.28
 P,177.495 {490},Y1,Cts/S, .0434,.0005,1.248, .0437, .0427, .0436
 Pb,220.353 {453},Y1,Cts/S, 8.777,.0245,.2795, 8.763, 8.763, 8.806
 Se,196.090 {472},Y1,Cts/S, 1.309,.0038,.2894, 1.306, 1.309, 1.313
 Sr,421.552 { 80},Y2A,Cts/S, 3.753,.0453,1.206, 3.704, 3.761, 3.794
 Th,283.730 {119},Y2R,Cts/S, .0114,.0011,9.384, .0126, .0111, .0106
 Tl,190.856 {477},Y1,Cts/S, 2.779,.0202,.7274, 2.787, 2.793, 2.756
 W,207.911 {462},Y1,Cts/S, .1179,.0005,.3883, .1181, .1174, .1182
 Zn,213.856 {458},Y1,Cts/S, 66.50,.1001,.1505, 66.49, 66.41, 66.61

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Y1,224.306 {450},Cts/S, 2940.0,7.7729,.26439,2938.8,2948.3,2932.8
 Y2A,371.030 { 91}2,Cts/S, 136460.,902.75,.66155,137490.,135800.,136090.

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Y2R,371.030 { 91}3,Cts/S, 3867.3,42.418,1.0968,3841.7,3843.9,3916.2

[Sample Header]

Method=New TRACE Fast w axial A1(v227)

SampleName=S3

Username=dept 22

Comment=

Custom ID1=

Custom ID2=

Custom ID3=

Run Time=6/12/2020 8:59:09

Sample Type=ReSlope

Mode=IR

CorrFactor=1.000

Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3

Cr,267.716 {126},Y2A,Cts/S, .0442,.0001,.2047, .0441, .0443, .0442

Mo,202.030 {467},Y1,Cts/S, 15.60,.0880,.5643, 15.70, 15.56, 15.54

Sb,206.833 {463},Y1,Cts/S, .0617,.0001,.2026, .0618, .0615, .0617

Sn,189.989 {477},Y1,Cts/S, 2.128,.0049,.2291, 2.129, 2.123, 2.132

Ti,334.941 {101},Y2A,Cts/S, 14.26,.0506,.3544, 14.21, 14.29, 14.30

V,292.402 {115},Y2A,Cts/S, 2.886,.0064,.2221, 2.889, 2.890, 2.878

Zr,339.198 { 99},Y2R,Cts/S, .1177,.0006,.5008, .1179, .1171, .1182

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3

Y1,224.306 {450},Cts/S, 3050.4,7.1590,.23469,3042.9,3057.2,3051.1

Y2A,371.030 { 91}2,Cts/S, 143790.,1090.8,.75861,145050.,143170.,143160.

Y2R,371.030 { 91}3,Cts/S, 3966.8,12.519,.31560,3960.2,3959.1,3981.3

[Sample Header]

Method=New TRACE Fast w axial A1(v227)

SampleName=ICV 62173

Username=dept 22

Comment=

Custom ID1=

Custom ID2=

Custom ID3=

Run Time=6/12/2020 9:02:16

Sample Type=QC

Mode=CONC

CorrFactor=1.000

Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High

Ag,328.068 {103},Y2A,ppm, .5885,.0023,.3976, .5879, .5865, .5911,Chk Pass,,

Al,308.215 {109},Y2R,ppm, 29.67,.3402,1.146, 29.77, 29.95, 29.30,Chk Pass,,

Al ax,308.215 {109}2,Y2A,ppm, 29.21,.0172,.0589, 29.19, 29.21, 29.22,Chk Pass,,

As,189.042 {478},Y1,ppm, .5879,.0200,3.404, .5854, .5692, .6090,Chk Pass,,

B,249.773 {135},Y2A,ppm, .5963,.0028,.4648, .5937, .5962, .5992,Chk Pass,,

Ba,455.403 { 74},Y2A,ppm, .5994,.0106,1.762, .5895, .6105, .5981,Chk Pass,,

Be,313.042 {108},Y2A,ppm, .57419,.00122,.21214, .57326, .57374, .57557,Chk Pass,,

Ca,317.933 {106},Y2R,ppm, 29.18,.1973,.6762, 29.15, 29.39, 29.00,Chk Pass,,

Cd,226.502 {449},Y1,ppm, .5908,.0010,.1772, .5918, .5909, .5897,Chk Pass,,

Co,228.616 {447},Y1,ppm, .5890,.0014,.2316, .5874, .5899, .5895,Chk Pass,,

Cr,267.716 {126},Y2A,ppm, .5877,.0008,.1344, .5874, .5871, .5886,Chk Pass,,

Cu,327.396 {103},Y2A,ppm, .6027,.0007,.1117, .6035, .6022, .6025,Chk Pass,,

Fe,261.187 {129},Y2R,ppm, 28.98,.1126,.3887, 28.98, 29.09, 28.87,Chk Pass,,

K,766.490 { 44},Y2R,ppm, 29.57,.1360,.4600, 29.67, 29.63, 29.42,Chk Pass,,

Li,670.784 { 50},Y2R,ppm, .6154,.0024,.3914, .6127, .6160, .6174,Chk Pass,,

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Mg,285.213 {118},Y2R,ppm, 29.29,.2022,.6904, 29.28, 29.51, 29.10,Chk Pass,,
 Mn,257.610 {131},Y2A,ppm, .58142,.00140,.24105, .58091, .58034, .58300,Chk Pass,,
 Mo,202.030 {467},Y1,ppm, .5999,.0012,.1986, .5986, .6010, .6002,Chk Pass,,
 Na,589.592 { 57},Y2R,ppm, 28.75,.0912,.3173, 28.74, 28.84, 28.66,Chk Pass,,
 Ni,231.604 {445},Y1,ppm, .5877,.0038,.6472, .5834, .5891, .5907,Chk Pass,,
 P,177.495 {490},Y1,ppm, .6009,.0018,.3010, .5991, .6027, .6009,Chk Pass,,
 Pb,220.353 {453},Y1,ppm, .5828,.0048,.8205, .5779, .5831, .5874,Chk Pass,,
 S,182.034 {485},Y1,ppm, 29.68,.0397,.1338, 29.71, 29.63, 29.68,Chk Pass,,
 Sb,206.833 {463},Y1,ppm, .6192,.0021,.3400, .6169, .6210, .6196,Chk Pass,,
 Se,196.090 {472},Y1,ppm, .5893,.0062,1.056, .5965, .5854, .5860,Chk Pass,,
 Si,251.611 {134},Y2R,ppm, 29.901,.13270,.44378, 29.963, 29.991, 29.749,None,,
 Sn,189.989 {477},Y1,ppm, .5778,.0030,.5213, .5780, .5806, .5746,Chk Pass,,
 Sr,421.552 { 80},Y2A,ppm, .6000,.0020,.3358, .5988, .6023, .5988,Chk Pass,,
 Th,283.730 {119},Y2R,ppm, .6057,.0456,7.532, .5542, .6219, .6410,Chk Pass,,
 Ti,334.941 {101},Y2A,ppm, .6089,.0008,.1386, .6081, .6090, .6098,Chk Pass,,
 Tl,190.856 {477},Y1,ppm, .5929,.0055,.9308, .5868, .5976, .5944,Chk Pass,,
 V,292.402 {115},Y2A,ppm, .6035,.0012,.2022, .6021, .6038, .6045,Chk Pass,,
 W,207.911 {462},Y1,ppm, .5951,.0019,.3138, .5951, .5932, .5969,Chk Pass,,
 Zn,213.856 {458},Y1,ppm, .5835,.0012,.2110, .5846, .5836, .5822,Chk Pass,,
 Zr,339.198 { 99},Y2R,ppm, .6021,.0067,1.108, .6070, .5945, .6047,Chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3

Y1,224.306 {450},Cts/S, 2939.0,.72750,.02475,2939.0,2939.8,2938.3

Y2A,371.030 { 91}2,Cts/S, 136500,.414.28,.30349,136940.,136450.,136120.

Y2R,371.030 { 91}3,Cts/S, 3858.3,24.586,.63722,3863.2,3831.7,3880.1

[Sample Header]

Method=New TRACE Fast w axial Al(v227)

SampleName=ICV 62173

Username=dept 22

Comment=

Custom ID1=

Custom ID2=

Custom ID3=

Run Time=6/12/2020 9:05:28

Sample Type=QC

Mode=CONC

CorrFactor=1.000

Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High

Ag,328.068 {103},Y2A,ppm, .5877,.0024,.4086, .5881, .5899, .5851,Chk Pass,,

Al,308.215 {109},Y2R,ppm, 29.31,.0664,.2266, 29.36, 29.34, 29.24,Chk Pass,,

Al ax,308.215 {109}2,Y2A,ppm, 29.19,.1564,.5357, 29.23, 29.32, 29.01,Chk Pass,,

As,189.042 {478},Y1,ppm, .6004,.0039,.6437, .6036, .6014, .5961,Chk Pass,,

B,249.773 {135},Y2A,ppm, .5981,.0031,.5252, .5951, .6013, .5979,Chk Pass,,

Ba,455.403 { 74},Y2A,ppm, .5982,.0089,1.493, .6084, .5920, .5942,Chk Pass,,

Be,313.042 {108},Y2A,ppm, .57437,.00226,.39406, .57498, .57627, .57187,Chk Pass,,

Ca,317.933 {106},Y2R,ppm, 29.12,.0632,.2169, 29.07, 29.09, 29.19,Chk Pass,,

Cd,226.502 {449},Y1,ppm, .5916,.0010,.1678, .5914, .5908, .5927,Chk Pass,,

Co,228.616 {447},Y1,ppm, .5892,.0009,.1568, .5889, .5885, .5903,Chk Pass,,

Cr,267.716 {126},Y2A,ppm, .5895,.0019,.3250, .5885, .5917, .5883,Chk Pass,,

Cu,327.396 {103},Y2A,ppm, .6080,.0032,.5318, .6046, .6111, .6084,Chk Pass,,

Fe,261.187 {129},Y2R,ppm, 28.86,.1440,.4990, 28.91, 28.70, 28.97,Chk Pass,,

K,766.490 { 44},Y2R,ppm, 29.26,.0754,.2578, 29.33, 29.28, 29.18,Chk Pass,,

Li,670.784 { 50},Y2R,ppm, .6165,.0028,.4545, .6159, .6141, .6196,Chk Pass,,

Mg,285.213 {118},Y2R,ppm, 29.13,.0147,.0504, 29.15, 29.12, 29.14,Chk Pass,,

Mn,257.610 {131},Y2A,ppm, .58017,.00220,.37860, .58083, .58196, .57772,Chk Pass,,

Mo,202.030 {467},Y1,ppm, .6002,.0027,.4428, .6031, .5979, .5995,Chk Pass,,

Na,589.592 { 57},Y2R,ppm, 28.64,.0139,.0486, 28.63, 28.65, 28.65,Chk Pass,,

Ni,231.604 {445},Y1,ppm, .5871,.0009,.1612, .5882, .5866, .5865,Chk Pass,,

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P,177.495 {490},Y1,ppm, .6043,.0039,.6387, .6042, .6081, .6004,Chk Pass,,
 Pb,220.353 {453},Y1,ppm, .5808,.0036,.6272, .5789, .5784, .5850,Chk Pass,,
 S,182.034 {485},Y1,ppm, 29.80,.0587,.1969, 29.75, 29.78, 29.86,Chk Pass,,
 Sb,206.833 {463},Y1,ppm, .6171,.0054,.8764, .6211, .6193, .6110,Chk Pass,,
 Se,196.090 {472},Y1,ppm, .5811,.0068,1.169, .5877, .5814, .5741,Chk Pass,,
 Si,251.611 {134},Y2R,ppm, 29.921,.19756,.66027, 30.013, 29.694, 30.056,None,,
 Sn,189.989 {477},Y1,ppm, .5853,.0046,.7824, .5805, .5896, .5859,Chk Pass,,
 Sr,421.552 { 80},Y2A,ppm, .5964,.0031,.5165, .6000, .5945, .5948,Chk Pass,,
 Th,283.730 {119},Y2R,ppm, .5856,.0393,6.711, .5558, .6302, .5709,Chk Pass,,
 Ti,334.941 {101},Y2A,ppm, .6091,.0017,.2859, .6087, .6110, .6076,Chk Pass,,
 Tl,190.856 {477},Y1,ppm, .5975,.0048,.8001, .6009, .5920, .5995,Chk Pass,,
 V,292.402 {115},Y2A,ppm, .6058,.0014,.2363, .6065, .6067, .6041,Chk Pass,,
 W,207.911 {462},Y1,ppm, .5909,.0021,.3602, .5909, .5889, .5931,Chk Pass,,
 Zn,213.856 {458},Y1,ppm, .5865,.0018,.3127, .5846, .5866, .5882,Chk Pass,,
 Zr,339.198 { 99},Y2R,ppm, .6010,.0065,1.082, .6036, .6058, .5936,Chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3

Y1,224.306 {450},Cts/S, 2945.5,3.4750,.11798,2945.4,2949.0,2942.0

Y2A,371.030 { 91}2,Cts/S, 137410.,320.97,.23359,137060.,137690.,137470.

Y2R,371.030 { 91}3,Cts/S, 3918.7,18.519,.47259,3922.9,3898.5,3934.8

[Sample Header]

Method=New TRACE Fast w axial Al(v227)

SampleName=ICB 078331

Username=dept 22

Comment=

Custom ID1=

Custom ID2=

Custom ID3=

Run Time=6/12/2020 9:08:40

Sample Type=QC

Mode=CONC

CorrFactor=1.000

Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High

Ag,328.068 {103},Y2A,ppm, -.0006,.0011,191.3, -.0017, .0004, -.0004,Chk Pass,,

Al,308.215 {109},Y2R,ppm, -.0316,.1110,351.4, -.0289, -.1438, .0780,Chk Pass,,

Al ax,308.215 {109}2,Y2A,ppm, .0221,.0107,48.39, .0340, .0191, .0132,Chk Pass,,

As,189.042 {478},Y1,ppm, .0027,.0071,259.8, -.0033, .0009, .0105,Chk Pass,,

B,249.773 {135},Y2A,ppm, .0015,.0006,36.39, .0009, .0018, .0019,Chk Pass,,

Ba,455.403 { 74},Y2A,ppm, .0004,.0001,27.29, .0006, .0004, .0003,Chk Pass,,

Be,313.042 {108},Y2A,ppm, .00068,.00010,14.054, .00077, .00068, .00058,Chk Pass,,

Ca,317.933 {106},Y2R,ppm, -.0065,.0233,360.9, -.0314, -.0029, .0149,Chk Pass,,

Cd,226.502 {449},Y1,ppm, .0002,.0001,47.88, .0003, .0001, .0001,Chk Pass,,

Co,228.616 {447},Y1,ppm, .0006,.0007,123.0, .0001, .0014, .0002,Chk Pass,,

Cr,267.716 {126},Y2A,ppm, -.0001,.0005,377.6, -.0007, .0001, .0002,Chk Pass,,

Cu,327.396 {103},Y2A,ppm, .0009,.0016,168.8, .0027, -.0003, .0004,Chk Pass,,

Fe,261.187 {129},Y2R,ppm, .0122,.0210,172.7, .0004, -.0003, .0364,Chk Pass,,

K,766.490 { 44},Y2R,ppm,F .2539,.0365,14.37, .2282, .2956, .2377,Chk

Fail, .2500, -.2500

Li,670.784 { 50},Y2R,ppm,W .0224,.0008,3.748, .0216, .0225, .0233,Chk

Warn,.0188, -.0188

Mg,285.213 {118},Y2R,ppm, .0004,.0098,2358., -.0009, -.0087, .0108,Chk Pass,,

Mn,257.610 {131},Y2A,ppm, .00039,.00013,32.940, .00051, .00042, .00025,Chk Pass,,

Mo,202.030 {467},Y1,ppm, .0007,.0003,40.93, .0009, .0009, .0004,Chk Pass,,

Na,589.592 { 57},Y2R,ppm, .0284,.0179,62.94, .0279, .0108, .0465,Chk Pass,,

Ni,231.604 {445},Y1,ppm, .0011,.0007,62.93, .0003, .0014, .0015,Chk Pass,,

P,177.495 {490},Y1,ppm, -.0026,.0044,171.0, -.0046, .0025, -.0057,Chk Pass,,

Pb,220.353 {453},Y1,ppm, .0004,.0016,430.2, .0022, -.0005, -.0006,Chk Pass,,

S,182.034 {485},Y1,ppm, .0293,.0074,25.34, .0356, .0211, .0312,Chk Pass,,

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sb,206.833 {463},Y1,ppm, -.0005,.0029,609.2, -.0029, .0027, -.0013,Chk Pass,,
 se,196.090 {472},Y1,ppm, .0024,.0072,306.9, -.0055, .0087, .0039,Chk Pass,,
 si,251.611 {134},Y2R,ppm, .02276,.05146,226.05, -.03571, .04287, .06112,Chk Pass,,
 sn,189.989 {477},Y1,ppm, -.0060,.0056,93.13, -.0103, .0003, -.0080,Chk Pass,,
 sr,421.552 { 80},Y2A,ppm, .0004,.0001,24.21, .0005, .0004, .0003,Chk Pass,,
 th,283.730 {119},Y2R,ppm, -.0317,.0516,162.6, -.0894, -.0157, .0099,Chk Pass,,
 ti,334.941 {101},Y2A,ppm, .0003,.0003,101.1, .0006, .0003, -.0000,Chk Pass,,
 tl,190.856 {477},Y1,ppm, .0091,.0016,17.11, .0108, .0088, .0078,Chk Pass,,
 v,292.402 {115},Y2A,ppm, .0007,.0006,94.07, .0013, .0005, .0001,Chk Pass,,
 w,207.911 {462},Y1,ppm, -.0000,.0010,5274., -.0011, .0010, .0000,Chk Pass,,
 zn,213.856 {458},Y1,ppm, .0007,.0002,29.67, .0006, .0006, .0009,Chk Pass,,
 zr,339.198 { 99},Y2R,ppm, .0038,.0088,230.1, .0118, .0054, -.0057,Chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Y1,224.306 {450},Cts/S, 3003.0,8.9491,.29801,2997.1,2998.5,3013.3
 Y2A,371.030 { 91}2,Cts/S, 140510.,456.79,.32509,140710.,140840.,139990.
 Y2R,371.030 { 91}3,Cts/S, 3881.2,22.635,.58320,3907.2,3870.2,3866.1

[Sample Header]

Method=New TRACE Fast w axial Al(v227)
 SampleName=CRI 078291
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 9:11:50
 Sample Type=QC
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, .0095,.0009,9.842, .0087, .0092, .0105,Chk Pass,,
 Al,308.215 {109},Y2R,ppm, .2183,.0613,28.09, .2892, .1831, .1828,Chk Pass,,
 Al ax,308.215 {109}2,Y2A,ppm, .2033,.0101,4.945, .2018, .2141, .1941,Chk Pass,,
 As,189.042 {478},Y1,ppm,w .0384,.0086,22.41, .0350, .0321, .0482,Chk
 warn,.0300,20.00%
 B,249.773 {135},Y2A,ppm, .0294,.0011,3.815, .0307, .0292, .0285,Chk Pass,,
 Ba,455.403 { 74},Y2A,ppm, .0053,.0000,.4768, .0053, .0053, .0054,Chk Pass,,
 Be,313.042 {108},Y2A,ppm, .00527,.00004,.81195, .00528, .00530, .00522,Chk Pass,,
 Ca,317.933 {106},Y2R,ppm, .2029,.0012,.6009, .2039, .2016, .2033,Chk Pass,,
 Cd,226.502 {449},Y1,ppm, .0055,.0001,2.011, .0054, .0056, .0054,Chk Pass,,
 Co,228.616 {447},Y1,ppm, .0057,.0005,8.072, .0062, .0053, .0058,Chk Pass,,
 Cr,267.716 {126},Y2A,ppm, .0145,.0003,2.400, .0148, .0141, .0147,Chk Pass,,
 Cu,327.396 {103},Y2A,ppm,w .0123,.0015,12.20, .0132, .0132, .0106,Chk
 warn,.0200,-20.00%
 Fe,261.187 {129},Y2R,ppm, .2104,.0075,3.570, .2118, .2172, .2023,Chk Pass,,
 K,766.490 { 44},Y2R,ppm,F .5749,.0281,4.882, .5837, .5975, .5435,Chk
 Fail,.3000,50.00%
 Li,670.784 { 50},Y2R,ppm,w .0715,.0019,2.652, .0727, .0724, .0693,Chk
 warn,.0500,20.00%
 Mg,285.213 {118},Y2R,ppm, .0972,.0100,10.30, .0979, .1069, .0869,Chk Pass,,
 Mn,257.610 {131},Y2A,ppm, .01036,.00001,.12604, .01036, .01037, .01034,Chk Pass,,
 Mo,202.030 {467},Y1,ppm, .0104,.0002,1.662, .0103, .0106, .0104,Chk Pass,,
 Na,589.592 { 57},Y2R,ppm, .9965,.0155,1.553, .9791, 1.009, 1.002,Chk Pass,,
 Ni,231.604 {445},Y1,ppm,w .0127,.0008,6.019, .0130, .0132, .0118,Chk
 warn,.0100,20.00%
 P,177.495 {490},Y1,ppm, .0994,.0032,3.235, .0976, .1031, .0975,Chk Pass,,
 Pb,220.353 {453},Y1,ppm, .0158,.0019,12.07, .0149, .0146, .0180,Chk Pass,,
 S,182.034 {485},Y1,ppm, .5182,.0174,3.356, .5383, .5092, .5072,Chk Pass,,

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Sb,206.833 {463},Y1,ppm, .0522,.0013,2.406, .0508, .0526, .0533,Chk Pass,,
 Se,196.090 {472},Y1,ppm, .0468,.0056,11.95, .0493, .0507, .0404,Chk Pass,,
 Si,251.611 {134},Y2R,ppm, .51042,.00265,.51957, .51346, .50859, .50921,Chk Pass,,
 Sn,189.989 {477},Y1,ppm, .0444,.0041,9.152, .0409, .0488, .0434,Chk Pass,,
 Sr,421.552 { 80},Y2A,ppm, .0053,.0000,.5363, .0052, .0053, .0053,Chk Pass,,
 Th,283.730 {119},Y2R,ppm, .4575,.0658,14.38, .4389, .4030, .5305,Chk Pass,,
 Ti,334.941 {101},Y2A,ppm, .0102,.0000,.1631, .0102, .0102, .0102,Chk Pass,,
 Tl,190.856 {477},Y1,ppm,w .0386,.0005,1.368, .0381, .0392, .0384,Chk
 Warn,.0300,20.00%
 V,292.402 {115},Y2A,ppm, .0113,.0003,2.510, .0113, .0110, .0116,Chk Pass,,
 W,207.911 {462},Y1,ppm, .0301,.0011,3.561, .0309, .0288, .0304,Chk Pass,,
 Zn,213.856 {458},Y1,ppm, .0229,.0000,.1934, .0229, .0230, .0230,Chk Pass,,
 Zr,339.198 { 99},Y2R,ppm, .0526,.0018,3.426, .0516, .0547, .0516,Chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Y1,224.306 {450},Cts/S, 3035.2,7.9004,.26029,3041.3,3026.3,3038.1
 Y2A,371.030 { 91}2,Cts/S, 142060.,388.19,.27326,141660.,142090.,142430.
 Y2R,371.030 { 91}3,Cts/S, 3901.3,44.011,1.1281,3952.1,3874.3,3877.6

[Sample Header]

Method=New TRACE Fast w axial A1(v227)
 SampleName=ICSA 078287
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 9:14:58
 Sample Type=QC
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, .0002,.0012,480.2, .0007, -.0011, .0012,Chk Pass,,
 Al,308.215 {109},Y2R,ppm, 504.1,6.261,1.242, 510.1, 504.7, 497.6,Chk Pass,,
 Al ax,308.215 {109}2,Y2A,ppm, 513.6,8.396,1.635, 507.5, 510.1, 523.2,Chk Pass,,
 As,189.042 {478},Y1,ppm, .0195,.0046,23.67, .0231, .0211, .0143,Chk Pass,,
 B,249.773 {135},Y2A,ppm, -.0036,.0021,58.30, -.0055, -.0042, -.0013,Chk Pass,,
 Ba,455.403 { 74},Y2A,ppm, .0020,.0000,.2738, .0020, .0020, .0020,Chk Pass,,
 Be,313.042 {108},Y2A,ppm, -.00025,.00006,24.685, -.00030, -.00026, -.00018,Chk
 Pass,,
 Ca,317.933 {106},Y2R,ppm, 503.6,5.458,1.084, 509.7, 501.5, 499.4,Chk Pass,,
 Cd,226.502 {449},Y1,ppm, .0023,.0001,4.786, .0024, .0022, .0022,Chk Pass,,
 Co,228.616 {447},Y1,ppm, .0032,.0006,17.04, .0034, .0026, .0037,Chk Pass,,
 Cr,267.716 {126},Y2A,ppm, -.0025,.0007,28.19, -.0032, -.0024, -.0018,Chk Pass,,
 Cu,327.396 {103},Y2A,ppm, -.0014,.0023,167.2, -.0017, .0011, -.0035,Chk Pass,,
 Fe,261.187 {129},Y2R,ppm, 201.8,2.223,1.101, 204.4, 200.8, 200.2,Chk Pass,,
 K,766.490 { 44},Y2R,ppm, -.1035,.0227,21.90, -.1138, -.0775, -.1191,Chk Pass,,
 Li,670.784 { 50},Y2R,ppm, .0095,.0006,6.659, .0098, .0100, .0088,Chk Pass,,
 Mg,285.213 {118},Y2R,ppm, 530.9,12.92,2.433, 544.1, 530.3, 518.3,Chk Pass,,
 Mn,257.610 {131},Y2A,ppm, .00029,.00023,81.189, .00005, .00030, .00051,Chk Pass,,
 Mo,202.030 {467},Y1,ppm, -.0010,.0002,22.49, -.0008, -.0012, -.0010,Chk Pass,,
 Na,589.592 { 57},Y2R,ppm, .0736,.0042,5.692, .0731, .0780, .0696,Chk Pass,,
 Ni,231.604 {445},Y1,ppm, -.0005,.0009,170.8, -.0014, -.0007, .0005,Chk Pass,,
 P,177.495 {490},Y1,ppm, .0014,.0014,95.19, .0015, .0001, .0028,Chk Pass,,
 Pb,220.353 {453},Y1,ppm, -.0026,.0008,30.26, -.0019, -.0035, -.0025,Chk Pass,,
 S,182.034 {485},Y1,ppm, -.0998,.0252,25.21, -.0733, -.1029, -.1233,Chk Pass,,
 Sb,206.833 {463},Y1,ppm, .0023,.0038,169.5, .0041, .0048, -.0021,Chk Pass,,
 Se,196.090 {472},Y1,ppm, .0039,.0029,75.12, .0005, .0056, .0055,Chk Pass,,
 Si,251.611 {134},Y2R,ppm, .03654,.03270,89.477, .00750, .03017, .07196,Chk Pass,,

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Sn,189.989 {477},Y1,ppm, -.0100,.0053,52.65, -.0156, -.0052, -.0091,Chk Pass,,
 Sr,421.552 { 80},Y2A,ppm,w -.0088,.0001,1.516, -.0090, -.0088, -.0087,Chk
 Warn,.0050,-.0050
 Th,283.730 {119},Y2R,ppm, .1216,.0575,47.29, .1125, .0692, .1831,Chk Pass,,
 Ti,334.941 {101},Y2A,ppm, -.0032,.0002,7.227, -.0030, -.0032, -.0034,Chk Pass,,
 Tl,190.856 {477},Y1,ppm, .0189,.0027,14.38, .0169, .0179, .0220,Chk Pass,,
 V,292.402 {115},Y2A,ppm, -.0016,.0012,73.21, -.0021, -.0003, -.0025,Chk Pass,,
 W,207.911 {462},Y1,ppm, .0021,.0050,240.9, -.0029, .0071, .0020,Chk Pass,,
 Zn,213.856 {458},Y1,ppm, .0127,.0008,6.084, .0123, .0122, .0136,Chk Pass,,
 Zr,339.198 { 99},Y2R,ppm, .0062,.0007,11.13, .0055, .0062, .0069,Chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Y1,224.306 {450},Cts/S, 2687.4,9.6117,.35765,2686.5,2697.4,2678.3
 Y2A,371.030 { 91}2,Cts/S, 125120.,1318.9,1.0541,124480.,126640.,124240.
 Y2R,371.030 { 91}3,Cts/S, 3690.0,43.184,1.1703,3646.0,3691.6,3732.3

[Sample Header]

Method=New TRACE Fast w axial A1(v227)
 SampleName=ICSAB 070731
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 9:18:12
 Sample Type=QC
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, .2117,.0016,.7535, .2107, .2107, .2135,Chk Pass,,
 Al,308.215 {109},Y2R,ppm, 522.0,1.920,.3678, 522.1, 520.0, 523.8,Chk Pass,,
 Al ax,308.215 {109}2,Y2A,ppm, 529.8,3.345,.6313, 526.9, 529.2, 533.5,Chk Pass,,
 As,189.042 {478},Y1,ppm, .0988,.0071,7.175, .0920, .1061, .0983,Chk Pass,,
 B,249.773 {135},Y2A,ppm, -.0043,.0003,6.151, -.0045, -.0043, -.0040,Chk Pass,,
 Ba,455.403 { 74},Y2A,ppm, .5072,.0056,1.102, .5119, .5010, .5085,Chk Pass,,
 Be,313.042 {108},Y2A,ppm, .49370,.00071,.14433, .49288, .49419, .49402,Chk Pass,,
 Ca,317.933 {106},Y2R,ppm, 514.7,2.603,.5058, 512.1, 514.7, 517.3,Chk Pass,,
 Cd,226.502 {449},Y1,ppm, .9227,.0040,.4319, .9255, .9244, .9181,Chk Pass,,
 Co,228.616 {447},Y1,ppm, .4647,.0036,.7668, .4682, .4646, .4611,Chk Pass,,
 Cr,267.716 {126},Y2A,ppm, .4866,.0013,.2615, .4856, .4862, .4880,Chk Pass,,
 Cu,327.396 {103},Y2A,ppm, .5425,.0018,.3265, .5443, .5426, .5407,Chk Pass,,
 Fe,261.187 {129},Y2R,ppm, 206.1,1.250,.6068, 204.8, 206.1, 207.3,Chk Pass,,
 K,766.490 { 44},Y2R,ppm, -.1839,.0472,25.65, -.1753, -.1417, -.2348,Chk Pass,,
 Li,670.784 { 50},Y2R,ppm, .0103,.0033,31.84, .0076, .0092, .0139,Chk Pass,,
 Mg,285.213 {118},Y2R,ppm, 535.7,3.057,.5707, 534.5, 533.4, 539.1,Chk Pass,,
 Mn,257.610 {131},Y2A,ppm, .47530,.00145,.30531, .47367, .47574, .47647,Chk Pass,,
 Mo,202.030 {467},Y1,ppm, -.0020,.0011,57.75, -.0015, -.0032, -.0011,Chk Pass,,
 Na,589.592 { 57},Y2R,ppm, .0942,.0293,31.17, .0604, .1140, .1080,Chk Pass,,
 Ni,231.604 {445},Y1,ppm,w .9000,.0022,.2399, .9016, .8975, .9008,Chk
 Warn,1.100,.9000
 P,177.495 {490},Y1,ppm, -.0141,.0128,90.87, -.0281, -.0032, -.0108,Chk Pass,,
 Pb,220.353 {453},Y1,ppm, .4990,.0054,1.077, .5003, .5036, .4931,Chk Pass,,
 S,182.034 {485},Y1,ppm, -.1513,.0230,15.22, -.1772, -.1435, -.1331,Chk Pass,,
 Sb,206.833 {463},Y1,ppm, .6332,.0071,1.118, .6348, .6393, .6254,Chk Pass,,
 Se,196.090 {472},Y1,ppm, .5263,.0077,1.459, .5214, .5352, .5225,Chk Pass,,
 Si,251.611 {134},Y2R,ppm,F -.00075,.01489,1981.9, .01478, -.01490, -.00213,Chk
 Fail,1.0000,1.0000
 Sn,189.989 {477},Y1,ppm, .0012,.0062,496.5, -.0029, -.0017, .0083,Chk Pass,,
 Sr,421.552 { 80},Y2A,ppm,w -.0090,.0001,.8006, -.0089, -.0091, -.0091,Chk

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warn,.0050,-.0050
 Th,283.730 {119},Y2R,ppm, .1028,.0146,14.24, .0886, .1020, .1178,Chk Pass,,
 Ti,334.941 {101},Y2A,ppm, -.0024,.0002,8.804, -.0022, -.0025, -.0026,Chk Pass,,
 Tl,190.856 {477},Y1,ppm, .1002,.0069,6.854, .1081, .0965, .0960,Chk Pass,,
 V,292.402 {115},Y2A,ppm, .5098,.0018,.3626, .5110, .5076, .5107,Chk Pass,,
 W,207.911 {462},Y1,ppm,F -.0009,.0043,477.8, .0011, -.0058, .0020,chk
 Fail,-.0600,-.0600
 Zn,213.856 {458},Y1,ppm, 1.004,.0040,.4013, 1.008, 1.004, .9999,Chk Pass,,
 Zr,339.198 { 99},Y2R,ppm, .0056,.0103,185.0, .0093, .0135, -.0061,Chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Y1,224.306 {450},Cts/S, 2682.9,3.4842,.12986,2683.0,2686.4,2679.4
 Y2A,371.030 { 91}2,Cts/S, 125390.,251.73,.20076,125660.,125350.,125160.
 Y2R,371.030 { 91}3,Cts/S, 3786.2,37.872,1.0003,3825.8,3782.3,3750.4

[Sample Header]

Method=New TRACE Fast w axial Al(v227)
 SampleName=CCV 095153
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 9:21:26
 Sample Type=QC
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, .4928,.0024,.4819, .4936, .4901, .4946,Chk Pass,,
 Al,308.215 {109},Y2R,ppm, 25.12,.0997,.3969, 25.19, 25.01, 25.17,Chk Pass,,
 Al ax,308.215 {109}2,Y2A,ppm, 24.82,.0510,.2057, 24.76, 24.86, 24.83,Chk Pass,,
 As,189.042 {478},Y1,ppm, .5026,.0091,1.813, .5125, .4946, .5007,Chk Pass,,
 B,249.773 {135},Y2A,ppm, .4848,.0039,.7978, .4808, .4851, .4885,Chk Pass,,
 Ba,455.403 { 74},Y2A,ppm, .5085,.0018,.3466, .5065, .5098, .5093,Chk Pass,,
 Be,313.042 {108},Y2A,ppm, .48938,.00057,.11560, .48908, .48902, .49003,Chk Pass,,
 Ca,317.933 {106},Y2R,ppm, 24.72,.0666,.2693, 24.67, 24.80, 24.69,Chk Pass,,
 Cd,226.502 {449},Y1,ppm, .5039,.0012,.2436, .5051, .5041, .5026,Chk Pass,,
 Co,228.616 {447},Y1,ppm, .5002,.0003,.0680, .5001, .4999, .5006,Chk Pass,,
 Cr,267.716 {126},Y2A,ppm, .4980,.0039,.7890, .4944, .4973, .5022,Chk Pass,,
 Cu,327.396 {103},Y2A,ppm, .5176,.0054,1.052, .5142, .5147, .5238,Chk Pass,,
 Fe,261.187 {129},Y2R,ppm, 24.57,.0807,.3285, 24.49, 24.57, 24.65,Chk Pass,,
 K,766.490 { 44},Y2R,ppm, 25.01,.0218,.0873, 25.01, 25.04, 24.99,Chk Pass,,
 Li,670.784 { 50},Y2R,ppm, .5144,.0031,.5938, .5118, .5177, .5136,Chk Pass,,
 Mg,285.213 {118},Y2R,ppm, 24.70,.1566,.6339, 24.88, 24.66, 24.57,Chk Pass,,
 Mn,257.610 {131},Y2A,ppm, .49067,.00200,.40757, .48941, .48963, .49298,Chk Pass,,
 Mo,202.030 {467},Y1,ppm, .5010,.0013,.2678, .5025, .5005, .5000,Chk Pass,,
 Na,589.592 { 57},Y2R,ppm, 24.73,.1999,.8084, 24.96, 24.64, 24.59,Chk Pass,,
 Ni,231.604 {445},Y1,ppm, .4996,.0006,.1282, .4999, .5001, .4989,Chk Pass,,
 P,177.495 {490},Y1,ppm, .5036,.0071,1.414, .5116, .4981, .5011,Chk Pass,,
 Pb,220.353 {453},Y1,ppm, .4970,.0030,.6014, .4935, .4986, .4988,Chk Pass,,
 S,182.034 {485},Y1,ppm, 24.82,.0548,.2208, 24.84, 24.86, 24.76,Chk Pass,,
 Sb,206.833 {463},Y1,ppm, .5061,.0041,.8048, .5078, .5090, .5014,Chk Pass,,
 Se,196.090 {472},Y1,ppm, .5069,.0031,.6130, .5039, .5101, .5067,Chk Pass,,
 Si,251.611 {134},Y2R,ppm, 24.859,.09787,.39371, 24.939, 24.750, 24.889,Chk Pass,,
 Sn,189.989 {477},Y1,ppm, .4922,.0088,1.788, .4926, .4832, .5008,Chk Pass,,
 Sr,421.552 { 80},Y2A,ppm, .5057,.0018,.3508, .5037, .5072, .5063,Chk Pass,,
 Th,283.730 {119},Y2R,ppm,W .4560,.0668,14.65, .5246, .3912, .4523,chk
 warn,.5000,-8.000%
 Ti,334.941 {101},Y2A,ppm, .5127,.0010,.1917, .5131, .5116, .5134,Chk Pass,,

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Tl,190.856 {477},Y1,ppm, .5131,.0046,.8966, .5077, .5157, .5157,Chk Pass,,
 V,292.402 {115},Y2A,ppm, .5107,.0024,.4780, .5081, .5110, .5129,Chk Pass,,
 W,207.911 {462},Y1,ppm, .4995,.0030,.5974, .5029, .4984, .4972,Chk Pass,,
 Zn,213.856 {458},Y1,ppm, .5085,.0007,.1308, .5087, .5077, .5090,Chk Pass,,
 Zr,339.198 { 99},Y2R,ppm, .5218,.0053,1.012, .5262, .5159, .5232,Chk Pass,,

[Internal standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Y1,224.306 {450},Cts/S, 2964.9,10.945,.36916,2965.1,2953.9,2975.8
 Y2A,371.030 { 91}2,Cts/S, 139130.,1119.7,.80479,140410.,138340.,138630.
 Y2R,371.030 { 91}3,Cts/S, 3964.7,44.142,1.1134,3958.4,3924.1,4011.7

[Sample Header]

Method=New TRACE Fast w axial Al(v227)
 SampleName=CCB 078331
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 9:24:39
 Sample Type=QC
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, .0001,.0011,1052., .0004, -.0011, .0011,Chk Pass,,
 Al,308.215 {109},Y2R,ppm, .0086,.0857,990.9, .0690, .0464, -.0894,Chk Pass,,
 Al ax,308.215 {109}2,Y2A,ppm, .0288,.0005,1.747, .0293, .0283, .0289,Chk Pass,,
 As,189.042 {478},Y1,ppm, .0050,.0049,97.28, .0098, .0053, .0000,Chk Pass,,
 B,249.773 {135},Y2A,ppm, .0011,.0008,71.59, .0008, .0005, .0020,Chk Pass,,
 Ba,455.403 { 74},Y2A,ppm, .0001,.0000,37.41, .0000, .0001, .0001,Chk Pass,,
 Be,313.042 {108},Y2A,ppm, .00038,.00001,3.3752, .00037, .00037, .00039,Chk Pass,,
 Ca,317.933 {106},Y2R,ppm, .0133,.0093,69.82, .0241, .0083, .0076,Chk Pass,,
 Cd,226.502 {449},Y1,ppm, .0002,.0000,6.901, .0003, .0002, .0002,Chk Pass,,
 Co,228.616 {447},Y1,ppm, .0005,.0002,35.21, .0006, .0003, .0006,Chk Pass,,
 Cr,267.716 {126},Y2A,ppm, -.0002,.0003,116.9, -.0004, -.0003, .0001,Chk Pass,,
 Cu,327.396 {103},Y2A,ppm, -.0009,.0016,174.8, -.0026, .0005, -.0006,Chk Pass,,
 Fe,261.187 {129},Y2R,ppm, .0137,.0113,82.60, .0151, .0243, .0018,Chk Pass,,
 K,766.490 { 44},Y2R,ppm,F .2909,.0449,15.43, .3422, .2712, .2592,Chk
 Fail,.2500,-.2500
 Li,670.784 { 50},Y2R,ppm,w .0208,.0015,7.417, .0203, .0195, .0225,Chk
 warn,.0188,-.0188
 Mg,285.213 {118},Y2R,ppm, .0251,.0048,18.99, .0232, .0305, .0216,Chk Pass,,
 Mn,257.610 {131},Y2A,ppm, .00011,.00011,97.754, .00023, .00003, .00007,Chk Pass,,
 Mo,202.030 {467},Y1,ppm, .0002,.0006,288.6, .0009, -.0000, -.0003,Chk Pass,,
 Na,589.592 { 57},Y2R,ppm, .0131,.0028,21.06, .0159, .0131, .0104,Chk Pass,,
 Ni,231.604 {445},Y1,ppm, .0017,.0016,94.90, .0002, .0014, .0034,Chk Pass,,
 P,177.495 {490},Y1,ppm, -.0009,.0027,296.1, .0015, -.0038, -.0004,Chk Pass,,
 Pb,220.353 {453},Y1,ppm, -.0016,.0010,62.58, -.0009, -.0028, -.0012,Chk Pass,,
 S,182.034 {485},Y1,ppm, .0225,.0064,28.28, .0296, .0173, .0208,Chk Pass,,
 Sb,206.833 {463},Y1,ppm, -.0016,.0045,278.3, .0004, .0015, -.0068,Chk Pass,,
 Se,196.090 {472},Y1,ppm, .0039,.0048,122.3, .0048, .0081, -.0013,Chk Pass,,
 Si,251.611 {134},Y2R,ppm, .00535,.01980,370.20, .00748, -.01543, .02399,Chk Pass,,
 Sn,189.989 {477},Y1,ppm, -.0108,.0056,51.81, -.0127, -.0152, -.0045,Chk Pass,,
 Sr,421.552 { 80},Y2A,ppm, .0001,.0000,12.29, .0001, .0001, .0001,Chk Pass,,
 Th,283.730 {119},Y2R,ppm, .0300,.0286,95.13, .0592, .0022, .0286,Chk Pass,,
 Ti,334.941 {101},Y2A,ppm, .0002,.0002,76.32, .0001, .0001, .0004,Chk Pass,,
 Tl,190.856 {477},Y1,ppm, .0072,.0026,35.98, .0094, .0077, .0044,Chk Pass,,
 V,292.402 {115},Y2A,ppm, -.0001,.0002,113.8, -.0003, -.0001, -.0000,Chk Pass,,
 W,207.911 {462},Y1,ppm, .0014,.0008,55.35, .0005, .0021, .0016,Chk Pass,,

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Zn,213.856 {458},Y1,ppm, .0005,.0003,73.87, .0007, .0001, .0005,Chk Pass,,
 Zr,339.198 { 99},Y2R,ppm, .0027,.0054,200.5, -.0003, .0089, -.0006,Chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Y1,224.306 {450},Cts/S, 2992.1,5.4871,.18339,2994.5,2985.8,2996.0
 Y2A,371.030 { 91}2,Cts/S, 140530.,1544.8,1.0993,141620.,141200.,138760.
 Y2R,371.030 { 91}3,Cts/S, 3887.6,42.731,1.0992,3850.0,3878.6,3934.1

[Sample Header]

Method=New TRACE Fast w axial Al(v227)
 SampleName=LRC 083291
 Username=dept 22
 Comment=LRS2
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 9:27:48
 Sample Type=QC
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, 2.472,.0397,1.607, 2.435, 2.467, 2.514,None,,
 Al,308.215 {109},Y2R,ppm, 1.907,.1189,6.238, 2.026, 1.789, 1.905,None,,
 Al ax,308.215 {109}2,Y2A,ppm, 2.145,.0038,.1760, 2.144, 2.149, 2.141,None,,
 As,189.042 {478},Y1,ppm, 20.03,.0449,.2243, 20.08, 20.02, 19.99,None,,
 B,249.773 {135},Y2A,ppm, 4.637,.0264,.5701, 4.614, 4.631, 4.666,None,,
 Ba,455.403 { 74},Y2A,ppm, 4.707,.0388,.8242, 4.678, 4.751, 4.692,None,,
 Be,313.042 {108},Y2A,ppm, 4.6924,.03689,.78623, 4.6519, 4.7012, 4.7241,None,,
 Ca,317.933 {106},Y2R,ppm, -.1110,.0118,10.67, -.1197, -.1157, -.0975,None,,
 Cd,226.502 {449},Y1,ppm, 20.01,.0776,.3878, 20.09, 19.98, 19.95,None,,
 Co,228.616 {447},Y1,ppm, 20.86,.0921,.4417, 20.97, 20.83, 20.79,None,,
 Cr,267.716 {126},Y2A,ppm, 20.01,.0495,.2474, 19.96, 20.05, 20.01,None,,
 Cu,327.396 {103},Y2A,ppm, 20.82,.0156,.0748, 20.83, 20.80, 20.83,None,,
 Fe,261.187 {129},Y2R,ppm, .0093,.0066,71.30, .0170, .0051, .0058,None,,
 K,766.490 { 44},Y2R,ppm, .2105,.0065,3.100, .2167, .2037, .2112,None,,
 Li,670.784 { 50},Y2R,ppm, 19.10,.0732,.3832, 19.18, 19.05, 19.06,None,,
 Mg,285.213 {118},Y2R,ppm, -.0199,.0019,9.653, -.0217, -.0200, -.0179,None,,
 Mn,257.610 {131},Y2A,ppm, 18.302,.12138,.66320, 18.182, 18.425, 18.297,None,,
 Mo,202.030 {467},Y1,ppm, 20.80,.0950,.4569, 20.91, 20.75, 20.75,None,,
 Na,589.592 { 57},Y2R,ppm, .0459,.0234,50.94, .0729, .0307, .0342,None,,
 Ni,231.604 {445},Y1,ppm, 20.72,.0730,.3521, 20.80, 20.68, 20.67,None,,
 P,177.495 {490},Y1,ppm, 20.24,.0784,.3875, 20.32, 20.21, 20.17,None,,
 Pb,220.353 {453},Y1,ppm, 20.56,.0733,.3567, 20.64, 20.50, 20.54,None,,
 S,182.034 {485},Y1,ppm, .4443,.0113,2.553, .4344, .4418, .4567,None,,
 Sb,206.833 {463},Y1,ppm, 21.60,.0394,.1823, 21.63, 21.61, 21.56,None,,
 Se,196.090 {472},Y1,ppm, 20.33,.0835,.4109, 20.41, 20.24, 20.34,None,,
 Si,251.611 {134},Y2R,ppm, 1.1355,.10479,9.2279, 1.0373, 1.1235, 1.2458,None,,
 Sn,189.989 {477},Y1,ppm, 20.49,.0315,.1539, 20.52, 20.50, 20.46,None,,
 Sr,421.552 { 80},Y2A,ppm, 4.674,.0651,1.393, 4.648, 4.749, 4.627,None,,
 Th,283.730 {119},Y2R,ppm, 2.363,.0674,2.854, 2.395, 2.285, 2.407,None,,
 Ti,334.941 {101},Y2A,ppm, 19.61,.1397,.7124, 19.69, 19.69, 19.45,None,,
 Tl,190.856 {477},Y1,ppm, 20.60,.0331,.1606, 20.56, 20.61, 20.63,None,,
 V,292.402 {115},Y2A,ppm, 20.08,.0554,.2761, 20.03, 20.06, 20.14,None,,
 W,207.911 {462},Y1,ppm, 20.73,.0917,.4423, 20.84, 20.70, 20.66,None,,
 Zn,213.856 {458},Y1,ppm, 9.819,.0279,.2839, 9.851, 9.807, 9.799,None,,
 Zr,339.198 { 99},Y2R,ppm, 19.85,.1379,.6950, 20.00, 19.82, 19.73,None,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3

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Y1,224.306 {450},Cts/S, 2838.9,4.2025,.14803,2839.1,2843.1,2834.7
 Y2A,371.030 { 91}2,Cts/S, 141160.,567.73,.40218,141730.,140600.,141160.
 Y2R,371.030 { 91}3,Cts/S, 3981.1,68.732,1.7265,3902.3,4012.3,4028.6

[Sample Header]

Method=New TRACE Fast w axial Al(v227)
 SampleName=LRC 083294
 Username=dept 22
 Comment=LRS4
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 9:31:16
 Sample Type=QC
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem	WL	ISRef	Units	Avg	Stddev	RSD	Rep1	Rep2	Rep3	chk_Pass/Fail	chk_Low	chk_High
Ag	328.068	{103}	Y2A,ppm	.0699	.0017	2.368	.0712	.0704	.0680	None,,		
Al	308.215	{109}	Y2R,ppm	521.3	5.914	1.134	528.0	517.0	518.8	None,,		
Al	ax,308.215	{109}2	Y2A,ppm	537.0	4.178	.7780	537.2	541.1	532.8	None,,		
As	189.042	{478}	Y1,ppm	-.0011	.0088	816.1	.0087	-.0082	-.0037	None,,		
B	249.773	{135}	Y2A,ppm	-.0163	.0018	11.10	-.0184	-.0156	-.0150	None,,		
Ba	455.403	{ 74}	Y2A,ppm	.0028	.0000	1.540	.0029	.0028	.0028	None,,		
Be	313.042	{108}	Y2A,ppm	.00101	.00003	2.8492	.00104	.00101	.00098	None,,		
Ca	317.933	{106}	Y2R,ppm	511.0	6.363	1.245	518.1	505.8	509.1	None,,		
Cd	226.502	{449}	Y1,ppm	.0053	.0009	17.48	.0054	.0063	.0044	None,,		
Co	228.616	{447}	Y1,ppm	.0078	.0009	11.24	.0081	.0084	.0068	None,,		
Cr	267.716	{126}	Y2A,ppm	-.0019	.0012	66.71	-.0014	-.0009	-.0033	None,,		
Cu	327.396	{103}	Y2A,ppm	-.0676	.0012	1.815	-.0684	-.0662	-.0681	None,,		
Fe	261.187	{129}	Y2R,ppm	327.3	4.468	1.365	332.3	324.0	325.4	None,,		
K	766.490	{ 44}	Y2R,ppm	496.9	6.996	1.408	505.0	493.3	492.5	None,,		
Li	670.784	{ 50}	Y2R,ppm	.0211	.0002	.7769	.0209	.0211	.0213	None,,		
Mg	285.213	{118}	Y2R,ppm	505.1	11.92	2.360	518.8	497.7	498.8	None,,		
Mn	257.610	{131}	Y2A,ppm	-.01250	.00039	3.1238	-.01282	-.01206	-.01260	None,,		
Mo	202.030	{467}	Y1,ppm	.0022	.0005	21.99	.0017	.0026	.0024	None,,		
Na	589.592	{ 57}	Y2R,ppm	466.1	14.53	3.118	482.9	457.6	457.8	None,,		
Ni	231.604	{445}	Y1,ppm	.0037	.0006	15.92	.0034	.0044	.0033	None,,		
P	177.495	{490}	Y1,ppm	.0012	.0140	1212.	-.0094	.0171	-.0042	None,,		
Pb	220.353	{453}	Y1,ppm	-.0173	.0021	12.25	-.0149	-.0178	-.0191	None,,		
S	182.034	{485}	Y1,ppm	207.5	.9437	.4547	208.5	207.5	206.6	None,,		
Sb	206.833	{463}	Y1,ppm	.0164	.0063	38.48	.0098	.0169	.0224	None,,		
Se	196.090	{472}	Y1,ppm	.0157	.0091	57.80	.0152	.0069	.0250	None,,		
Si	251.611	{134}	Y2R,ppm	195.71	1.6912	.86413	197.66	194.75	194.71	None,,		
Sn	189.989	{477}	Y1,ppm	-.0100	.0024	23.77	-.0086	-.0127	-.0087	None,,		
Sr	421.552	{ 80}	Y2A,ppm	.0013	.0001	10.99	.0011	.0014	.0013	None,,		
Th	283.730	{119}	Y2R,ppm	4.096	.0404	.9860	4.134	4.101	4.054	None,,		
Ti	334.941	{101}	Y2A,ppm	.0188	.0002	1.189	.0188	.0190	.0186	None,,		
Tl	190.856	{477}	Y1,ppm	.0313	.0057	18.19	.0247	.0344	.0348	None,,		
V	292.402	{115}	Y2A,ppm	.0058	.0012	21.31	.0063	.0066	.0044	None,,		
W	207.911	{462}	Y1,ppm	.0044	.0035	78.72	.0081	.0040	.0012	None,,		
Zn	213.856	{458}	Y1,ppm	-.0096	.0006	5.963	-.0101	-.0090	-.0098	None,,		
Zr	339.198	{ 99}	Y2R,ppm	-.0052	.0037	71.58	-.0081	-.0010	-.0064	None,,		

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Y1,224.306 {450},Cts/S, 2509.6,3.8511,.15345,2505.5,2510.3,2513.1
 Y2A,371.030 { 91}2,Cts/S, 118080.,468.90,.39711,118450.,117550.,118230.
 Y2R,371.030 { 91}3,Cts/S, 3654.5,48.604,1.3300,3600.2,3694.0,3669.2

[Sample Header]

T2016401T74

Method=New TRACE Fast w axial Al(v227)
 SampleName=LRC 083293
 Username=dept 22
 Comment=LRS3
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 9:34:35
 Sample Type=QC
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem	WL	ISRef	Units	Avg	Stddev	RSD	Rep1	Rep2	Rep3	chk_Pass/Fail	chk_Low	chk_High
Ag	328.068	{103}	Y2A,ppm	2.470	.0033	.1352	2.470	2.474	2.467	None,,		
Al	308.215	{109}	Y2R,ppm	.9914	.1085	10.94	.8886	1.105	.9808	None,,		
Al ax	308.215	{109}2	Y2A,ppm	.5759	.0277	4.811	.5827	.5996	.5454	None,,		
As	189.042	{478}	Y1,ppm	10.20	.0171	.1681	10.22	10.20	10.18	None,,		
B	249.773	{135}	Y2A,ppm	2.381	.0067	.2834	2.377	2.389	2.377	None,,		
Ba	455.403	{74}	Y2A,ppm	2.497	.0182	.7275	2.517	2.490	2.483	None,,		
Be	313.042	{108}	Y2A,ppm	2.4314	.00812	.33413	2.4400	2.4304	2.4238	None,,		
Ca	317.933	{106}	Y2R,ppm	-.0297	.0073	24.45	-.0312	-.0360	-.0218	None,,		
Cd	226.502	{449}	Y1,ppm	10.34	.0348	.3368	10.38	10.31	10.34	None,,		
Co	228.616	{447}	Y1,ppm	10.64	.0487	.4573	10.69	10.60	10.64	None,,		
Cr	267.716	{126}	Y2A,ppm	10.19	.0248	.2435	10.21	10.20	10.17	None,,		
Cu	327.396	{103}	Y2A,ppm	10.35	.0212	.2049	10.37	10.37	10.33	None,,		
Fe	261.187	{129}	Y2R,ppm	.0556	.0228	40.96	.0293	.0688	.0688	None,,		
K	766.490	{44}	Y2R,ppm	.5848	.0282	4.830	.6147	.5810	.5586	None,,		
Li	670.784	{50}	Y2R,ppm	9.765	.0888	.9095	9.829	9.802	9.663	None,,		
Mg	285.213	{118}	Y2R,ppm	.0561	.0043	7.723	.0605	.0519	.0560	None,,		
Mn	257.610	{131}	Y2A,ppm	9.8005	.02927	.29866	9.7735	9.8316	9.7964	None,,		
Mo	202.030	{467}	Y1,ppm	10.55	.0924	.8759	10.64	10.46	10.53	None,,		
Na	589.592	{57}	Y2R,ppm	.1573	.0101	6.448	.1682	.1552	.1483	None,,		
Ni	231.604	{445}	Y1,ppm	10.63	.0733	.6890	10.71	10.56	10.63	None,,		
P	177.495	{490}	Y1,ppm	10.23	.0104	.1021	10.22	10.24	10.23	None,,		
Pb	220.353	{453}	Y1,ppm	10.51	.0236	.2242	10.53	10.48	10.50	None,,		
S	182.034	{485}	Y1,ppm	.2296	.0230	10.04	.2441	.2417	.2031	None,,		
Sb	206.833	{463}	Y1,ppm	10.75	.0186	.1727	10.77	10.73	10.74	None,,		
Se	196.090	{472}	Y1,ppm	10.41	.0538	.5162	10.48	10.38	10.38	None,,		
Si	251.611	{134}	Y2R,ppm	1.0389	.05227	5.0314	.98213	1.0495	1.0850	None,,		
Sn	189.989	{477}	Y1,ppm	10.31	.0343	.3330	10.35	10.30	10.28	None,,		
Sr	421.552	{80}	Y2A,ppm	2.514	.0174	.6908	2.510	2.533	2.499	None,,		
Th	283.730	{119}	Y2R,ppm	8.711	.0695	.7976	8.665	8.791	8.677	None,,		
Ti	334.941	{101}	Y2A,ppm	10.03	.0675	.6724	9.967	10.10	10.03	None,,		
Tl	190.856	{477}	Y1,ppm	10.62	.0425	.3999	10.64	10.58	10.65	None,,		
V	292.402	{115}	Y2A,ppm	10.19	.0300	.2948	10.19	10.21	10.15	None,,		
W	207.911	{462}	Y1,ppm	10.48	.0430	.4104	10.53	10.45	10.46	None,,		
Zn	213.856	{458}	Y1,ppm	5.064	.0037	.0728	5.068	5.061	5.062	None,,		
Zr	339.198	{99}	Y2R,ppm	10.04	.0818	.8153	10.05	10.11	9.952	None,,		

[Internal Standards]

Elem	WL	Units	Avg	Stddev	RSD	Rep1	Rep2	Rep3
Y1	224.306	{450}	Cts/S	2863.6	17.843	.62311	2852.3	2884.2
Y2A	371.030	{91}2	Cts/S	140360.	540.14	.38483	140200.	139920.
Y2R	371.030	{91}3	Cts/S	3962.6	41.570	1.0491	3944.1	3933.5

[Sample Header]

Method=New TRACE Fast w axial Al(v227)
 SampleName=LRC 083311
 Username=dept 22
 Comment=LRS5
 Custom ID1=

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Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 9:38:03
 Sample Type=QC
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem	WL	ISRef	Units	Avg	Stddev	RSD	Rep1	Rep2	Rep3	chk_Pass/Fail	chk_Low	chk_High
Ag	328.068	{103}	Y2A,ppm	.0092	.0015	16.23	.0107	.0077	.0091	None,,		
Al	308.215	{109}	Y2R,ppm	257.5	1.452	.5640	258.7	255.9	257.7	None,,		
Al ax	308.215	{109}2	Y2A,ppm	262.2	2.406	.9177	260.5	265.0	261.2	None,,		
As	189.042	{478}	Y1,ppm	.0007	.0081	1197.	.0072	.0032	-.0084	None,,		
B	249.773	{135}	Y2A,ppm	.0050	.0024	47.49	.0022	.0063	.0064	None,,		
Ba	455.403	{ 74}	Y2A,ppm	.0018	.0000	2.405	.0018	.0018	.0019	None,,		
Be	313.042	{108}	Y2A,ppm	.00099	.00006	6.3137	.00095	.00096	.00106	None,,		
Ca	317.933	{106}	Y2R,ppm	248.5	2.396	.9641	250.7	245.9	249.0	None,,		
Cd	226.502	{449}	Y1,ppm	.0062	.0003	4.138	.0059	.0064	.0063	None,,		
Co	228.616	{447}	Y1,ppm	.0072	.0009	12.23	.0071	.0063	.0080	None,,		
Cr	267.716	{126}	Y2A,ppm	.0012	.0004	33.92	.0017	.0011	.0009	None,,		
Cu	327.396	{103}	Y2A,ppm	.0017	.0013	77.56	.0007	.0012	.0031	None,,		
Fe	261.187	{129}	Y2R,ppm	152.1	1.390	.9142	153.6	151.0	151.6	None,,		
K	766.490	{ 44}	Y2R,ppm	249.2	2.127	.8536	251.5	247.3	248.7	None,,		
Li	670.784	{ 50}	Y2R,ppm	.0299	.0022	7.520	.0275	.0302	.0320	None,,		
Mg	285.213	{118}	Y2R,ppm	253.1	1.494	.5902	253.6	251.4	254.2	None,,		
Mn	257.610	{131}	Y2A,ppm	-.00232	.00045	19.402	-.00284	-.00211	-.00202	None,,		
Mo	202.030	{467}	Y1,ppm	.0042	.0003	7.545	.0044	.0043	.0038	None,,		
Na	589.592	{ 57}	Y2R,ppm	244.7	1.746	.7135	246.5	243.0	244.5	None,,		
Ni	231.604	{445}	Y1,ppm	.0056	.0009	16.23	.0059	.0064	.0046	None,,		
P	177.495	{490}	Y1,ppm	.0032	.0058	182.8	.0085	.0039	-.0029	None,,		
Pb	220.353	{453}	Y1,ppm	-.0016	.0043	261.3	-.0058	.0027	-.0018	None,,		
S	182.034	{485}	Y1,ppm	104.4	.2212	.2120	104.5	104.4	104.1	None,,		
Sb	206.833	{463}	Y1,ppm	.0110	.0015	13.55	.0115	.0122	.0093	None,,		
Se	196.090	{472}	Y1,ppm	.0096	.0072	74.96	.0174	.0080	.0033	None,,		
Si	251.611	{134}	Y2R,ppm	101.53	.45325	.44643	101.99	101.08	101.51	None,,		
Sn	189.989	{477}	Y1,ppm	-.0013	.0037	274.7	-.0052	-.0010	.0022	None,,		
Sr	421.552	{ 80}	Y2A,ppm	.0016	.0001	7.555	.0015	.0017	.0017	None,,		
Th	283.730	{119}	Y2R,ppm	.1846	.0680	36.82	.2631	.1483	.1426	None,,		
Ti	334.941	{101}	Y2A,ppm	.0141	.0003	2.248	.0140	.0139	.0145	None,,		
Tl	190.856	{477}	Y1,ppm	.0257	.0003	1.171	.0259	.0259	.0254	None,,		
V	292.402	{115}	Y2A,ppm	.0038	.0003	7.740	.0040	.0035	.0040	None,,		
W	207.911	{462}	Y1,ppm	.0054	.0036	66.19	.0062	.0015	.0084	None,,		
Zn	213.856	{458}	Y1,ppm	-.0003	.0002	64.07	-.0006	-.0001	-.0003	None,,		
Zr	339.198	{ 99}	Y2R,ppm	.0111	.0080	72.34	.0049	.0202	.0082	None,,		

[Internal Standards]

Elem	WL	Units	Avg	Stddev	RSD	Rep1	Rep2	Rep3	
Y1	224.306	{450}	Cts/S	2710.3	6.6384	.24493	2715.2	2702.8	2713.1
Y2A	371.030	{ 91}2	Cts/S	125330	.362.89	.28954	124930	125620	125450
Y2R	371.030	{ 91}3	Cts/S	3753.9	16.594	.44204	3757.8	3768.2	3735.7

[Sample Header]

Method=New TRACE Fast w axial Al(v227)
 SampleName=CCV 095153
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 9:41:15
 Sample Type=QC
 Mode=CONC

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CorrFactor=1.000

Repeats=3

[Results]

Elem	WL	ISRef	Units	Avg	Stddev	RSD	Rep1	Rep2	Rep3	chk_Pass/Fail	chk_Low	chk_High
Ag	328.068	{103}	Y2A,ppm	.5030	.0022	.4408	.5051	.5031	.5007	chk Pass,,		
Al	308.215	{109}	Y2R,ppm	24.99	.0608	.2433	25.01	24.92	25.03	chk Pass,,		
Al	ax,308.215	{109}2	Y2A,ppm	24.88	.0727	.2924	24.95	24.87	24.81	chk Pass,,		
As	189.042	{478}	Y1,ppm	.5149	.0050	.9753	.5177	.5178	.5091	chk Pass,,		
B	249.773	{135}	Y2A,ppm	.4961	.0061	1.220	.5010	.4893	.4979	chk Pass,,		
Ba	455.403	{ 74}	Y2A,ppm	.5077	.0051	1.003	.5128	.5075	.5027	chk Pass,,		
Be	313.042	{108}	Y2A,ppm	.49035	.00207	.42156	.49271	.48885	.48950	chk Pass,,		
Ca	317.933	{106}	Y2R,ppm	24.90	.1329	.5336	24.86	25.05	24.79	chk Pass,,		
Cd	226.502	{449}	Y1,ppm	.5042	.0021	.4126	.5066	.5030	.5030	chk Pass,,		
Co	228.616	{447}	Y1,ppm	.5020	.0014	.2736	.5035	.5015	.5009	chk Pass,,		
Cr	267.716	{126}	Y2A,ppm	.5032	.0076	1.505	.5106	.4955	.5035	chk Pass,,		
Cu	327.396	{103}	Y2A,ppm	.5205	.0039	.7559	.5239	.5162	.5214	chk Pass,,		
Fe	261.187	{129}	Y2R,ppm	24.66	.2247	.9113	24.55	24.91	24.50	chk Pass,,		
K	766.490	{ 44}	Y2R,ppm	25.35	.0928	.3659	25.34	25.45	25.26	chk Pass,,		
Li	670.784	{ 50}	Y2R,ppm	.5248	.0021	.4063	.5250	.5267	.5225	chk Pass,,		
Mg	285.213	{118}	Y2R,ppm	24.90	.1082	.4345	24.94	24.99	24.78	chk Pass,,		
Mn	257.610	{131}	Y2A,ppm	.49859	.00342	.68676	.50254	.49673	.49650	chk Pass,,		
Mo	202.030	{467}	Y1,ppm	.5085	.0015	.2951	.5083	.5101	.5071	chk Pass,,		
Na	589.592	{ 57}	Y2R,ppm	24.84	.0887	.3571	24.88	24.90	24.74	chk Pass,,		
Ni	231.604	{445}	Y1,ppm	.5034	.0023	.4532	.5057	.5032	.5012	chk Pass,,		
P	177.495	{490}	Y1,ppm	.5029	.0099	1.965	.5136	.4941	.5011	chk Pass,,		
Pb	220.353	{453}	Y1,ppm	.5004	.0061	1.215	.5063	.5005	.4942	chk Pass,,		
S	182.034	{485}	Y1,ppm	25.01	.1126	.4503	25.14	24.97	24.92	chk Pass,,		
Sb	206.833	{463}	Y1,ppm	.5048	.0032	.6438	.5060	.5011	.5073	chk Pass,,		
Se	196.090	{472}	Y1,ppm	.5134	.0042	.8143	.5182	.5108	.5112	chk Pass,,		
Si	251.611	{134}	Y2R,ppm	24.928	.08040	.32253	24.869	25.020	24.895	chk Pass,,		
Sn	189.989	{477}	Y1,ppm	.4836	.0044	.9166	.4816	.4806	.4887	chk Pass,,		
Sr	421.552	{ 80}	Y2A,ppm	.5054	.0039	.7633	.5098	.5036	.5028	chk Pass,,		
Th	283.730	{119}	Y2R,ppm	.4713	.0608	12.89	.4486	.5401	.4251	chk Pass,,		
Ti	334.941	{101}	Y2A,ppm	.5170	.0015	.2968	.5184	.5154	.5171	chk Pass,,		
Tl	190.856	{477}	Y1,ppm	.5183	.0021	.3978	.5206	.5176	.5166	chk Pass,,		
V	292.402	{115}	Y2A,ppm	.5175	.0049	.9428	.5213	.5120	.5193	chk Pass,,		
W	207.911	{462}	Y1,ppm	.5045	.0012	.2457	.5056	.5049	.5032	chk Pass,,		
Zn	213.856	{458}	Y1,ppm	.5072	.0027	.5319	.5101	.5049	.5065	chk Pass,,		
Zr	339.198	{ 99}	Y2R,ppm	.5137	.0059	1.151	.5168	.5069	.5175	chk Pass,,		

[Internal Standards]

Elem	WL	Units	Avg	Stddev	RSD	Rep1	Rep2	Rep3
Y1	224.306	{450}	Cts/S	2961.2	1.1026	.03724	2962.4	2960.4
Y2A	371.030	{ 91}2	Cts/S	138540.	.754.22	.54442	137670.	138880.
Y2R	371.030	{ 91}3	Cts/S	3951.3	28.277	.71563	3944.7	3926.9

[Sample Header]

Method=New TRACE Fast w axial Al(v227)
 SampleName=CCB 078331
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 9:44:29
 Sample Type=QC
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem	WL	ISRef	Units	Avg	Stddev	RSD	Rep1	Rep2	Rep3	chk_Pass/Fail	chk_Low	chk_High
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Ag,328.068 {103},Y2A,ppm,F .0052,.0022,42.97, .0061, .0026, .0068,Chk
 Fail,.0050,-.0050
 Al,308.215 {109},Y2R,ppm, .0012,.0750,6216., -.0798, .0682, .0152,Chk Pass,,
 Al ax,308.215 {109}2,Y2A,ppm, .0169,.0074,43.71, .0161, .0246, .0099,Chk Pass,,
 As,189.042 {478},Y1,ppm, -.0015,.0115,770.3, .0117, -.0070, -.0092,Chk Pass,,
 B,249.773 {135},Y2A,ppm, .0037,.0006,16.36, .0031, .0043, .0038,Chk Pass,,
 Ba,455.403 { 74},Y2A,ppm, .0001,.0000,17.28, .0001, .0001, .0002,Chk Pass,,
 Be,313.042 {108},Y2A,ppm, .00046,.00000,1.0393, .00046, .00046, .00047,Chk Pass,,
 Ca,317.933 {106},Y2R,ppm, .0101,.0124,122.8, .0140, .0201, -.0038,Chk Pass,,
 Cd,226.502 {449},Y1,ppm, .0006,.0000,6.194, .0007, .0006, .0006,Chk Pass,,
 Co,228.616 {447},Y1,ppm, .0008,.0009,112.9, .0001, .0017, .0005,Chk Pass,,
 Cr,267.716 {126},Y2A,ppm, -.0006,.0009,165.6, -.0014, -.0007, .0004,Chk Pass,,
 Cu,327.396 {103},Y2A,ppm, -.0011,.0035,329.8, -.0027, .0030, -.0034,Chk Pass,,
 Fe,261.187 {129},Y2R,ppm, -.0023,.0132,585.7, .0084, .0019, -.0170,Chk Pass,,
 K,766.490 { 44},Y2R,ppm,F .5065,.0547,10.80, .5641, .4553, .5000,Chk
 Fail,.2500,-.2500
 Li,670.784 { 50},Y2R,ppm,F .0251,.0021,8.252, .0265, .0261, .0228,Chk
 Fail,.0250,-.0250
 Mg,285.213 {118},Y2R,ppm, .0188,.0082,43.30, .0237, .0234, .0094,Chk Pass,,
 Mn,257.610 {131},Y2A,ppm, .00042,.00007,16.762, .00038, .00050, .00037,Chk Pass,,
 Mo,202.030 {467},Y1,ppm, .0015,.0005,31.16, .0013, .0011, .0020,Chk Pass,,
 Na,589.592 { 57},Y2R,ppm, .0257,.0189,73.66, .0468, .0202, .0101,Chk Pass,,
 Ni,231.604 {445},Y1,ppm, .0011,.0006,55.50, .0016, .0004, .0012,Chk Pass,,
 P,177.495 {490},Y1,ppm, -.0043,.0073,168.0, .0016, -.0021, -.0125,Chk Pass,,
 Pb,220.353 {453},Y1,ppm, .0020,.0024,122.1, .0018, .0045, -.0003,Chk Pass,,
 S,182.034 {485},Y1,ppm, .0298,.0126,42.42, .0216, .0235, .0444,Chk Pass,,
 Sb,206.833 {463},Y1,ppm, .0045,.0038,85.89, .0000, .0065, .0068,Chk Pass,,
 Se,196.090 {472},Y1,ppm, .0043,.0064,147.5, -.0021, .0106, .0044,Chk Pass,,
 Si,251.611 {134},Y2R,ppm, .01960,.03434,175.24, .04074, .03808, -.02003,Chk Pass,,
 Sn,189.989 {477},Y1,ppm, -.0040,.0021,53.54, -.0031, -.0024, -.0064,Chk Pass,,
 Sr,421.552 { 80},Y2A,ppm, .0002,.0000,15.92, .0002, .0001, .0002,Chk Pass,,
 Th,283.730 {119},Y2R,ppm, .0394,.0940,238.4, .0599, -.0631, .1214,Chk Pass,,
 Ti,334.941 {101},Y2A,ppm, .0004,.0001,22.69, .0003, .0004, .0004,Chk Pass,,
 Tl,190.856 {477},Y1,ppm, .0085,.0037,43.80, .0072, .0057, .0128,Chk Pass,,
 V,292.402 {115},Y2A,ppm, .0013,.0004,29.84, .0018, .0012, .0011,Chk Pass,,
 W,207.911 {462},Y1,ppm, .0025,.0015,57.61, .0027, .0039, .0010,Chk Pass,,
 Zn,213.856 {458},Y1,ppm, .0007,.0001,7.952, .0007, .0006, .0008,Chk Pass,,
 Zr,339.198 { 99},Y2R,ppm, .0082,.0120,147.2, .0046, .0216, -.0016,Chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Y1,224.306 {450},Cts/S, 3016.5,3.7276,.12357,3020.7,3015.2,3013.6
 Y2A,371.030 { 91}2,Cts/S, 142620.,408.80,.28664,142700.,142980.,142170.
 Y2R,371.030 { 91}3,Cts/S, 4019.1,44.659,1.1112,3980.7,4008.6,4068.1

[Sample Header]

Method=New TRACE Fast w axial Al(v227)
 SampleName=MB 410-11456/1-A
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 9:50:28
 Sample Type=Unk
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, .0001179,.0013805,1170.828, -.000766, -.000589,
 .0017087,Chk Pass,,

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Al,308.215 {109},Y2R,ppm, -.044217,.1949560,440.9042, -.265667, .1015476,
 .0314677,Chk Pass,,
 Al ax,308.215 {109}2,Y2A,ppm, .0065138,.0085316,130.9761, .0139174, .0084405,
 -.002816,Chk Pass,,
 As,189.042 {478},Y1,ppm, .0085453,.0073261,85.73215, .0042895, .0170047,
 .0043418,Chk Pass,,
 B,249.773 {135},Y2A,ppm, .0018325,.0004450,24.28033, .0021852, .0019798,
 .0013326,Chk Pass,,
 Ba,455.403 { 74},Y2A,ppm, .0000487,.0000158,32.39187, .0000537, .0000614,
 .0000311,Chk Pass,,
 Be,313.042 {108},Y2A,ppm, .0003712,.0000227,6.106483, .0003811, .0003873,
 .0003453,Chk Pass,,
 Ca,317.933 {106},Y2R,ppm, .0006653,.0051765,778.0965, .0049872, .0020803,
 -.005072,Chk Pass,,
 Cd,226.502 {449},Y1,ppm, .0004865,.0001650,33.90650, .0006123, .0002998,
 .0005475,Chk Pass,,
 Co,228.616 {447},Y1,ppm, .0009585,.0003352,34.97015, .0013365, .0008412,
 .0006977,Chk Pass,,
 Cr,267.716 {126},Y2A,ppm, -.000169,.0007789,459.6396, .0000515, .0004751,
 -.001035,Chk Pass,,
 Cu,327.396 {103},Y2A,ppm, -.002158,.0008556,39.64301, -.001433, -.001940,
 -.003102,Chk Pass,,
 Fe,261.187 {129},Y2R,ppm, -.003143,.0450198,1432.576, -.003286, -.048090,
 .0419490,Chk Pass,,
 K,766.490 { 44},Y2R,ppm, .4298432,.0330990,7.700257, .4559905, .3926286,
 .4409104,Chk Pass,,
 Li,670.784 { 50},Y2R,ppm, .0221613,.0015298,6.903143, .0238442, .0208548,
 .0217849,Chk Pass,,
 Mg,285.213 {118},Y2R,ppm, -.000269,.0039739,1479.539, -.003034, -.002057,
 .0042854,Chk Pass,,
 Mn,257.610 {131},Y2A,ppm, .0002398,.0000367,15.32673, .0002737, .0002449,
 .0002007,Chk Pass,,
 Mo,202.030 {467},Y1,ppm, .0016528,.0000350,2.119888, .0016243, .0016919,
 .0016422,Chk Pass,,
 Na,589.592 { 57},Y2R,ppm, .0032325,.0233965,723.7991, .0230544, -.022576,
 .0092186,Chk Pass,,
 Ni,231.604 {445},Y1,ppm, .0011362,.0005379,47.33936, .0017432, .0009465,
 .0007189,Chk Pass,,
 P,177.495 {490},Y1,ppm, -.010420,.0011255,10.80072, -.010794, -.011311, -.009155,Chk
 Pass,,
 Pb,220.353 {453},Y1,ppm, .0004121,.0030919,750.3379, .0038626, -.002107,
 -.000520,Chk Pass,,
 S,182.034 {485},Y1,ppm, .0200980,.0135918,67.62778, .0053579, .0228007, .0321354,Chk
 Pass,,
 Sb,206.833 {463},Y1,ppm, .0015528,.0068639,442.0414, -.005518, .0081886,
 .0019882,Chk Pass,,
 Se,196.090 {472},Y1,ppm, .0000411,.0069883,17010.49, .0063824, -.007451,
 .0011920,Chk Pass,,
 Si,251.611 {134},Y2R,ppm, -.046965,.0199272,42.43009, -.025180, -.064274,
 -.051440,Chk Pass,,
 Sn,189.989 {477},Y1,ppm, -.005777,.0046541,80.56569, -.000618, -.007051,
 -.009661,Chk Pass,,
 Sr,421.552 { 80},Y2A,ppm, .0000678,.0000132,19.44016, .0000800, .0000696,
 .0000539,Chk Pass,,
 Th,283.730 {119},Y2R,ppm, .0315597,.0615951,195.1703, -.027746, .0272119,
 .0952135,Chk Pass,,
 Ti,334.941 {101},Y2A,ppm, .0002152,.0001143,53.10687, .0001178, .0003410,
 .0001867,Chk Pass,,
 Tl,190.856 {477},Y1,ppm, .0059284,.0015543,26.21770, .0055044, .0046301,
 .0076507,Chk Pass,,
 V,292.402 {115},Y2A,ppm, .0005005,.0005141,102.7093, .0008689, .0007194,
 -.000087,Chk Pass,,
 W,207.911 {462},Y1,ppm, .0013988,.0034927,249.6953, .0013639, .0049088, -.002076,Chk

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Pass,,
 Zn,213.856 {458},Y1,ppm, -.000701,.0002650,37.77664, -.001007, -.000552,
 -.000545,Chk Pass,,
 Zr,339.198 { 99},Y2R,ppm, .0011699,.0105249,899.6689, .0133229, -.004871,
 -.004943,Chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Y1,224.306 {450},Cts/S, 3088.256,7.965616,.2579325,3095.590,3089.396,3079.782
 Y2A,371.030 { 91}2,Cts/S, 144720.1,679.4580,.4694979,144817.9,143997.1,145345.4
 Y2R,371.030 { 91}3,Cts/S, 4007.950,18.09477,.4514719,3993.925,4028.375,4001.550

[Sample Header]

Method=New TRACE Fast w axial Al(v227)
 SampleName=LCS 410-11456/2-A
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 9:53:39
 Sample Type=Unk
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, .0200677,.0021125,10.52679, .0187099, .0189917,
 .0225016,Chk Pass,,
 Al,308.215 {109},Y2R,ppm, .3035400,.1199429,39.51467, .2146986, .4399753,
 .2559461,Chk Pass,,
 Al ax,308.215 {109}2,Y2A,ppm, .4151470,.0123942,2.985507, .4263502, .4172580,
 .4018328,Chk Pass,,
 As,189.042 {478},Y1,ppm, .0615695,.0098702,16.03092, .0704684, .0509535,
 .0632867,Chk Pass,,
 B,249.773 {135},Y2A,ppm, .0592061,.0002480,.4188533, .0593967, .0589257,
 .0592959,Chk Pass,,
 Ba,455.403 { 74},Y2A,ppm, .0105100,.0001719,1.635294, .0106943, .0103541,
 .0104817,Chk Pass,,
 Be,313.042 {108},Y2A,ppm, .0099813,.0000208,.2083544, .0100017, .0099601,
 .0099821,Chk Pass,,
 Ca,317.933 {106},Y2R,ppm, .3905957,.0053836,1.378302, .3888206, .3966426,
 .3863237,Chk Pass,,
 Cd,226.502 {449},Y1,ppm, .0104094,.0000720,.6920934, .0103651, .0103705,
 .0104925,Chk Pass,,
 Co,228.616 {447},Y1,ppm, .0110307,.0008509,7.713966, .0100526, .0114386,
 .0116008,Chk Pass,,
 Cr,267.716 {126},Y2A,ppm, .0304564,.0002080,.6830970, .0304255, .0306782,
 .0302655,Chk Pass,,
 Cu,327.396 {103},Y2A,ppm, .0422894,.0044677,10.56453, .0467526, .0422983,
 .0378172,Chk Pass,,
 Fe,261.187 {129},Y2R,ppm, .4240584,.0358071,8.443903, .4177022, .4626180,
 .3918551,Chk Pass,,
 K,766.490 { 44},Y2R,ppm, 5.957610,.1085075,1.821325, 5.995780, 5.835175,
 6.041874,Chk Pass,,
 Li,670.784 { 50},Y2R,ppm, .1228597,.0021978,1.788868, .1253755, .1218902,
 .1213133,Chk Pass,,
 Mg,285.213 {118},Y2R,ppm, .1910201,.0055279,2.893886, .1956544, .1925043,
 .1849016,Chk Pass,,
 Mn,257.610 {131},Y2A,ppm, .0208626,.0000392,.1880957, .0208924, .0208181,
 .0208771,Chk Pass,,
 Mo,202.030 {467},Y1,ppm, .0210939,.0009861,4.674815, .0220202, .0200573,

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.0212042,Chk Pass,,
 Na,589.592 { 57},Y2R,ppm, 1.987976,.0203336,1.022829, 1.984050, 2.009987,
 1.969892,Chk Pass,,
 Ni,231.604 {445},Y1,ppm, 2.109793,.0069684,.3302904, 2.114062, 2.113565,
 2.101752,Chk Pass,,
 P,177.495 {490},Y1,ppm, .2070739,.0053284,2.573166, .2118926, .2079777, .2013515,Chk
 Pass,,
 Pb,220.353 {453},Y1,ppm, .0312544,.0008491,2.716714, .0309400, .0322159,
 .0306074,Chk Pass,,
 S,182.034 {485},Y1,ppm, .9854677,.0325391,3.301897, 1.012632, .9494052, .9943658,Chk
 Pass,,
 Sb,206.833 {463},Y1,ppm, .1025268,.0043665,4.258873, .0976414, .1060491,
 .1038900,Chk Pass,,
 Se,196.090 {472},Y1,ppm, .0988757,.0033662,3.404424, .0988870, .1022363,
 .0955040,Chk Pass,,
 Si,251.611 {134},Y2R,ppm, 1.002199,.0273592,2.729918, 1.032847, .9935135,
 .9802375,Chk Pass,,
 Sn,189.989 {477},Y1,ppm, .0967617,.0046065,4.760639, .1013950, .0967076,
 .0921826,Chk Pass,,
 Sr,421.552 { 80},Y2A,ppm, .0104387,.0001258,1.204806, .0105839, .0103670,
 .0103652,Chk Pass,,
 Th,283.730 {119},Y2R,ppm, .0073975,.1130046,1527.612, -.092359, -.015571,
 .1301218,Chk Pass,,
 Ti,334.941 {101},Y2A,ppm, .0208683,.0001514,.7253965, .0210132, .0208803,
 .0207112,Chk Pass,,
 Tl,190.856 {477},Y1,ppm, .0730335,.0069089,9.459942, .0698541, .0809597,
 .0682866,Chk Pass,,
 V,292.402 {115},Y2A,ppm, .0215582,.0007192,3.335972, .0208876, .0214693,
 .0223177,Chk Pass,,
 W,207.911 {462},Y1,ppm, .0590871,.0019841,3.357903, .0581926, .0613609, .0577077,Chk
 Pass,,
 Zn,213.856 {458},Y1,ppm, .4529837,.0017066,.3767416, .4542192, .4536955,
 .4510364,Chk Pass,,
 Zr,339.198 { 99},Y2R,ppm, .1028457,.0124216,12.07795, .1027881, .1152960,
 .0904529,Chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Y1,224.306 {450},Cts/S, 3074.413,2.999154,.0975521,3074.288,3071.478,3077.472
 Y2A,371.030 { 91}2,Cts/S, 144232.8,459.7019,.3187222,144331.8,144634.8,143731.6
 Y2R,371.030 { 91}3,Cts/S, 4033.633,8.828234,.2188655,4041.775,4034.875,4024.250

[Sample Header]

Method=New TRACE Fast w axial Al(v227)
 SampleName=410-3240-B-17-A
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 9:56:46
 Sample Type=Unk
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, -.000270,.0007008,259.6041, -.000512, -.000817,
 .0005199,Chk Pass,,
 Al,308.215 {109},Y2R,ppm, -.088238,.1190438,134.9122, .0130891, -.058459,
 -.219344,Chk Pass,,
 Al ax,308.215 {109}2,Y2A,ppm, .0032057,.0107766,336.1719, .0031047, .0140324,

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-.007520,Chk Pass,,
 As,189.042 {478},Y1,ppm, .0010066,.0150303,1493.218, -.005320, -.009826,
 .0181659,Chk Pass,,
 B,249.773 {135},Y2A,ppm, .6510519,.0021182,.3253472, .6526222, .6486428,
 .6518907,Chk Pass,,
 Ba,455.403 { 74},Y2A,ppm, .0270913,.0001632,.6024246, .0272175, .0271494,
 .0269070,Chk Pass,,
 Be,313.042 {108},Y2A,ppm, .0002837,.0000158,5.578919, .0002955, .0002657,
 .0002899,Chk Pass,,
 Ca,317.933 {106},Y2R,ppm, 70.08340,.2583765,.3686700, 69.81957, 70.09469,
 70.33595,Chk Pass,,
 Cd,226.502 {449},Y1,ppm, .0002989,.0001699,56.82164, .0004139, .0001038,
 .0003791,Chk Pass,,
 Co,228.616 {447},Y1,ppm, .0044358,.0003316,7.474998, .0041422, .0043697,
 .0047954,Chk Pass,,
 Cr,267.716 {126},Y2A,ppm, .0005647,.0003683,65.22187, .0005266, .0009506,
 .0002169,Chk Pass,,
 Cu,327.396 {103},Y2A,ppm, .0031508,.0027779,88.16328, .0032369, .0058847,
 .0003309,Chk Pass,,
 Fe,261.187 {129},Y2R,ppm, .0210663,.0013543,6.428950, .0225754, .0199564,
 .0206672,Chk Pass,,
 K,766.490 { 44},Y2R,ppm, 59.42142,.1880519,.3164715, 59.25475, 59.38422,
 59.62529,Chk Pass,,
 Li,670.784 { 50},Y2R,ppm, .0527560,.0015263,2.893051, .0544724, .0522440,
 .0515516,Chk Pass,,
 Mg,285.213 {118},Y2R,ppm, 177.3010,.4605801,.2597730, 177.0829, 176.9900,
 177.8301,Chk Pass,,
 Mn,257.610 {131},Y2A,ppm, .2709619,.0002209,.0815063, .2709518, .2707463,
 .2711877,Chk Pass,,
 Mo,202.030 {467},Y1,ppm, .0029404,.0002961,10.07117, .0030139, .0031929,
 .0026144,Chk Pass,,
 Na,589.592 { 57},Y2R,ppm,F 1115.339,14.77825,1.325001, 1131.618, 1111.631,
 1102.768,Chk Fail,450.0000,-1.00000
 Ni,231.604 {445},Y1,ppm, .0059553,.0012974,21.78612, .0048029, .0057024,
 .0073605,Chk Pass,,
 P,177.495 {490},Y1,ppm, .0649263,.0082539,12.71265, .0676398, .0556573, .0714818,Chk
 Pass,,
 Pb,220.353 {453},Y1,ppm, .0017749,.0014697,82.80728, .0034621, .0010900,
 .0007726,Chk Pass,,
 S,182.034 {485},Y1,ppm, 143.9465,.3421979,.2377257, 144.1140, 144.1727, 143.5529,Chk
 Pass,,
 Sb,206.833 {463},Y1,ppm, .0042017,.0045752,108.8904, .0045073, -.000519,
 .0086164,Chk Pass,,
 Se,196.090 {472},Y1,ppm, .0030043,.0085303,283.9332, .0089199, -.006774,
 .0068671,Chk Pass,,
 Si,251.611 {134},Y2R,ppm, 1.586353,.0348682,2.198010, 1.620163, 1.550515,
 1.588379,Chk Pass,,
 Sn,189.989 {477},Y1,ppm, -.002311,.0094786,410.2239, -.007970, .0086322,
 -.007594,Chk Pass,,
 Sr,421.552 { 80},Y2A,ppm, 1.110618,.0024824,.2235190, 1.109126, 1.113483,
 1.109243,Chk Pass,,
 Th,283.730 {119},Y2R,ppm, .0031027,.0389741,1256.142, -.008217, -.028959,
 .0464836,Chk Pass,,
 Ti,334.941 {101},Y2A,ppm, .0025676,.0001459,5.681080, .0024494, .0025226,
 .0027306,Chk Pass,,
 Tl,190.856 {477},Y1,ppm, .0096320,.0029904,31.04604, .0110066, .0062015,
 .0116880,Chk Pass,,
 V,292.402 {115},Y2A,ppm, -.000287,.0007827,272.2882, .0005701, -.000469,
 -.000963,Chk Pass,,
 W,207.911 {462},Y1,ppm, -.000959,.0016241,169.4136, -.000296, -.002809, .0002292,Chk
 Pass,,
 Zn,213.856 {458},Y1,ppm, .0038784,.0002915,7.516740, .0040166, .0035435,
 .0040752,Chk Pass,,

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Zr,339.198 { 99},Y2R,ppm, .0082422,.0002795,3.391530, .0082999, .0079383,
 .0084884,Chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3

Y1,224.306 {450},Cts/S, 2585.638,6.944658,.2685859,2591.671,2587.196,2578.046

Y2A,371.030 { 91}2,Cts/S, 119610.1,120.2295,.1005179,119591.8,119500.1,119738.5

Y2R,371.030 { 91}3,Cts/S, 3783.062,21.47529,.5676695,3807.054,3776.495,3765.637

[Sample Header]

Method=New TRACE Fast w axial Al(v227)

SampleName=410-3240-B-17-A

Username=dept 22

Comment=UP

Custom ID1=

Custom ID2=

Custom ID3=

Run Time=6/12/2020 10:00:12

Sample Type=Unk

Mode=CONC

CorrFactor=1.000

Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High

Ag,328.068 {103},Y2A,ppm, .0193681,.0012309,6.355477, .0179509, .0199829,

.0201706,Chk Pass,,

Al,308.215 {109},Y2R,ppm, .9171836,.1942086,21.17445, .7776246, 1.138981,

.8349453,Chk Pass,,

Al ax,308.215 {109}2,Y2A,ppm, 1.056179,.0197839,1.873155, 1.071233, 1.033771,

1.063532,Chk Pass,,

As,189.042 {478},Y1,ppm, .5651761,.0063952,1.131544, .5589425, .5648642,

.5717215,Chk Pass,,

B,249.773 {135},Y2A,ppm, .8311302,.0091753,1.103956, .8417250, .8258267,

.8258390,Chk Pass,,

Ba,455.403 { 74},Y2A,ppm, .0753086,.0001523,.2021999, .0751774, .0752728,

.0754756,Chk Pass,,

Be,313.042 {108},Y2A,ppm, .0202992,.0002075,1.021972, .0205387, .0201765,

.0201824,Chk Pass,,

Ca,317.933 {106},Y2R,ppm, 69.59946,.2205235,.3168466, 69.35337, 69.77916,

69.66585,Chk Pass,,

Cd,226.502 {449},Y1,ppm, .0494639,.0002782,.5623226, .0496513, .0495961,

.0491443,Chk Pass,,

Co,228.616 {447},Y1,ppm, .1022516,.0014678,1.435474, .1024920, .1006784,

.1035843,Chk Pass,,

Cr,267.716 {126},Y2A,ppm, .2045360,.0019255,.9413939, .2067324, .2037371,

.2031386,Chk Pass,,

Cu,327.396 {103},Y2A,ppm, .5461706,.0048381,.8858128, .5517086, .5427655,

.5440376,Chk Pass,,

Fe,261.187 {129},Y2R,ppm, .5705541,.0272952,4.783986, .5425762, .5719749,

.5971112,Chk Pass,,

K,766.490 { 44},Y2R,ppm, 60.70614,.3197061,.5266454, 60.48462, 60.56115,

61.07265,Chk Pass,,

Li,670.784 { 50},Y2R,ppm, 1.108022,.0012689,.1145208, 1.108324, 1.106629,

1.109112,Chk Pass,,

Mg,285.213 {118},Y2R,ppm, 173.3268,1.034664,.5969442, 172.6765, 174.5199,

172.7839,Chk Pass,,

Mn,257.610 {131},Y2A,ppm, .3218176,.0025329,.7870661, .3244249, .3216614,

.3193663,Chk Pass,,

Mo,202.030 {467},Y1,ppm, .2105975,.0000493,.0234167, .2106370, .2105422,

.2106132,Chk Pass,,

Na,589.592 { 57},Y2R,ppm,F 1061.470,17.38255,1.637593, 1076.059, 1066.114,

1042.237,Chk Fail,450.0000,-1.00000

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Ni,231.604 {445},Y1,ppm, .1510398,.0002446,.1619202, .1508558, .1513173,
 .1509462,Chk Pass,,
 P,177.495 {490},Y1,ppm, 1.225910,.0129902,1.059634, 1.236565, 1.211439, 1.229726,Chk
 Pass,,
 Pb,220.353 {453},Y1,ppm, .4753341,.0011769,.2475882, .4740385, .4756267,
 .4763370,Chk Pass,,
 S,182.034 {485},Y1,ppm, 141.4001,.3288139,.2325415, 141.5685, 141.0212, 141.6106,Chk
 Pass,,
 Sb,206.833 {463},Y1,ppm, .4417477,.0021835,.4942911, .4426888, .4433029,
 .4392514,Chk Pass,,
 Se,196.090 {472},Y1,ppm, .8184505,.0091724,1.120706, .8197429, .8087004,
 .8269081,Chk Pass,,
 Si,251.611 {134},Y2R,ppm, 2.623821,.0364363,1.388675, 2.627483, 2.658288,
 2.585692,Chk Pass,,
 Sn,189.989 {477},Y1,ppm, .5831787,.0056565,.9699415, .5844341, .5770000,
 .5881020,Chk Pass,,
 Sr,421.552 { 80},Y2A,ppm, 1.096394,.0112104,1.022482, 1.106091, 1.084119,
 1.098972,Chk Pass,,
 Th,283.730 {119},Y2R,ppm, -.055888,.0692092,123.8365, -.134703, -.005035,
 -.027925,Chk Pass,,
 Ti,334.941 {101},Y2A,ppm, .1094056,.0007177,.6559949, .1102252, .1091016,
 .1088899,Chk Pass,,
 Tl,190.856 {477},Y1,ppm, .8848126,.0060798,.6871227, .8901377, .8861118,
 .8781883,Chk Pass,,
 V,292.402 {115},Y2A,ppm, .1064998,.0008383,.7871311, .1074033, .1057472,
 .1063489,Chk Pass,,
 W,207.911 {462},Y1,ppm, .0025092,.0011596,46.21354, .0030641, .0011764, .0032871,Chk
 Pass,,
 Zn,213.856 {458},Y1,ppm, .1361162,.0005816,.4272864, .1367445, .1355967,
 .1360074,Chk Pass,,
 Zr,339.198 { 99},Y2R,ppm, 1.045654,.0134125,1.282690, 1.061034, 1.036387,
 1.039541,Chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Y1,224.306 {450},Cts/S, 2603.064,9.219204,.3541675,2608.829,2607.931,2592.431
 Y2A,371.030 { 91}2,Cts/S, 121784.4,1483.161,1.217858,120295.9,121795.0,123262.2
 Y2R,371.030 { 91}3,Cts/S, 3778.078,24.20854,.6407635,3805.796,3761.087,3767.350

[Sample Header]

Method=New TRACE Fast w axial Al(v227)
 SampleName=410-3240-B-17-B DU
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 10:03:33
 Sample Type=Unk
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, -.000088,.0009886,1125.654, .0007789, -.001165,
 .0001222,Chk Pass,,
 Al,308.215 {109},Y2R,ppm, -.066301,.1508826,227.5728, .0865959, -.215085,
 -.070413,Chk Pass,,
 Al ax,308.215 {109}2,Y2A,ppm, .0055325,.0027364,49.46012, .0068568, .0073548,
 .0023859,Chk Pass,,
 As,189.042 {478},Y1,ppm, -.003822,.0065074,170.2534, .0024140, -.003310,
 -.010570,Chk Pass,,

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B,249.773 {135},Y2A,ppm, .6444289,.0020611,.3198368, .6423865, .6443918,
 .6465083,Chk Pass,,
 Ba,455.403 { 74},Y2A,ppm, .0270017,.0001048,.3879483, .0270991, .0270152,
 .0268909,Chk Pass,,
 Be,313.042 {108},Y2A,ppm, .0002721,.0000185,6.792789, .0002836, .0002508,
 .0002820,Chk Pass,,
 Ca,317.933 {106},Y2R,ppm, 69.27796,.4173890,.6024846, 69.25852, 68.87063,
 69.70473,Chk Pass,,
 Cd,226.502 {449},Y1,ppm, .0001434,.0002360,164.5289, .0004084, .0000658,
 -.000044,Chk Pass,,
 Co,228.616 {447},Y1,ppm, .0043001,.0010699,24.87976, .0031941, .0043764,
 .0053297,Chk Pass,,
 Cr,267.716 {126},Y2A,ppm, .0007031,.0007065,100.4791, .0002129, .0003836,
 .0015130,Chk Pass,,
 Cu,327.396 {103},Y2A,ppm, .0023663,.0008553,36.14680, .0021481, .0033096,
 .0016411,Chk Pass,,
 Fe,261.187 {129},Y2R,ppm, .0158032,.0094580,59.84880, .0103348, .0267244,
 .0103505,Chk Pass,,
 K,766.490 { 44},Y2R,ppm, 59.65817,.2628873,.4406560, 59.48515, 59.52869,
 59.96069,Chk Pass,,
 Li,670.784 { 50},Y2R,ppm, .0524031,.0043121,8.228638, .0477493, .0531968,
 .0562631,Chk Pass,,
 Mg,285.213 {118},Y2R,ppm, 172.4754,1.712442,.9928618, 172.8303, 170.6133,
 173.9825,Chk Pass,,
 Mn,257.610 {131},Y2A,ppm, .2656296,.0008450,.3181326, .2662902, .2646774,
 .2659213,Chk Pass,,
 Mo,202.030 {467},Y1,ppm, .0029921,.0002979,9.956081, .0028987, .0027522,
 .0033255,Chk Pass,,
 Na,589.592 { 57},Y2R,ppm,F 1066.644,9.285042,.8704916, 1076.609, 1058.235,
 1065.087,Chk Fail,450.0000,-1.00000
 Ni,231.604 {445},Y1,ppm, .0041061,.0009752,23.75107, .0032878, .0038452,
 .0051852,Chk Pass,,
 P,177.495 {490},Y1,ppm, .0608877,.0037380,6.139161, .0601125, .0575981, .0649525,Chk
 Pass,,
 Pb,220.353 {453},Y1,ppm, .0018008,.0030870,171.4180, .0039328, -.001739,
 .0032088,Chk Pass,,
 S,182.034 {485},Y1,ppm, 143.3358,.4314931,.3010366, 143.1730, 143.8250, 143.0094,Chk
 Pass,,
 Sb,206.833 {463},Y1,ppm, .0015759,.0013226,83.93008, .0001336, .0018619,
 .0027320,Chk Pass,,
 Se,196.090 {472},Y1,ppm, .0054865,.0034950,63.70213, .0015714, .0082920,
 .0065962,Chk Pass,,
 Si,251.611 {134},Y2R,ppm, 1.592610,.0179516,1.127180, 1.607984, 1.572881,
 1.596964,Chk Pass,,
 Sn,189.989 {477},Y1,ppm, -.006544,.0042937,65.61009, -.008155, -.009800,
 -.001678,Chk Pass,,
 Sr,421.552 { 80},Y2A,ppm, 1.108664,.0033573,.3028287, 1.108083, 1.112273,
 1.105634,Chk Pass,,
 Th,283.730 {119},Y2R,ppm, .0105103,.0252534,240.2736, .0221456, -.018463,
 .0278486,Chk Pass,,
 Ti,334.941 {101},Y2A,ppm, .0024155,.0000442,1.832129, .0024609, .0023725,
 .0024131,Chk Pass,,
 Tl,190.856 {477},Y1,ppm, .0071464,.0011150,15.60203, .0058591, .0078062,
 .0077740,Chk Pass,,
 V,292.402 {115},Y2A,ppm, .0003427,.0010196,297.5305, .0010665, -.000823,
 .0007850,Chk Pass,,
 W,207.911 {462},Y1,ppm, .0005942,.0009577,161.1775, .0002679, -.000158, .0016723,Chk
 Pass,,
 Zn,213.856 {458},Y1,ppm, .0035160,.0003159,8.985526, .0035919, .0031691,
 .0037871,Chk Pass,,
 Zr,339.198 { 99},Y2R,ppm, .0072253,.0044709,61.87829, .0119430, .0066821,
 .0030508,Chk Pass,,

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[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3

Y1,224.306 {450},Cts/S, 2576.383,15.34121,.5954554,2594.091,2567.948,2567.109
 Y2A,371.030 { 91}2,Cts/S, 121377.5,461.6306,.3803263,121821.3,121411.4,120899.9
 Y2R,371.030 { 91}3,Cts/S, 3888.004,47.22879,1.214731,3886.742,3935.851,3841.419

[Sample Header]

Method=New TRACE Fast w axial Al(v227)

SampleName=410-3240-B-17-C MS

Username=dept 22

Comment=

Custom ID1=

Custom ID2=

Custom ID3=

Run Time=6/12/2020 10:06:57

Sample Type=Unk

Mode=CONC

CorrFactor=1.000

Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High

Ag,328.068 {103},Y2A,ppm, .0193609,.0025239,13.03620, .0207714, .0208643,
 .0164470,Chk Pass,,
 Al,308.215 {109},Y2R,ppm, .3384065,.1010678,29.86581, .2919685, .2689036,
 .4543473,Chk Pass,,
 Al ax,308.215 {109}2,Y2A,ppm, .3954342,.0090288,2.283274, .3893859, .3911041,
 .4058125,Chk Pass,,
 As,189.042 {478},Y1,ppm, .0633371,.0182482,28.81117, .0836328, .0482843,
 .0580942,Chk Pass,,
 B,249.773 {135},Y2A,ppm, .6915486,.0016622,.2403602, .6924252, .6925891,
 .6896316,Chk Pass,,
 Ba,455.403 { 74},Y2A,ppm, .0358514,.0000887,.2474828, .0357522, .0359231,
 .0358790,Chk Pass,,
 Be,313.042 {108},Y2A,ppm, .0096903,.0000965,.9955753, .0097842, .0096953,
 .0095914,Chk Pass,,
 Ca,317.933 {106},Y2R,ppm, 68.31221,.8506737,1.245273, 69.08555, 68.45004,
 67.40103,Chk Pass,,
 Cd,226.502 {449},Y1,ppm, .0092659,.0002369,2.556985, .0095371, .0091620,
 .0090987,Chk Pass,,
 Co,228.616 {447},Y1,ppm, .0130742,.0005333,4.078747, .0134714, .0124681,
 .0132830,Chk Pass,,
 Cr,267.716 {126},Y2A,ppm, .0286384,.0006008,2.097838, .0291133, .0288390,
 .0279630,Chk Pass,,
 Cu,327.396 {103},Y2A,ppm, .0440516,.0047681,10.82381, .0400111, .0428331,
 .0493107,Chk Pass,,
 Fe,261.187 {129},Y2R,ppm, .4458537,.0101165,2.269017, .4344154, .4536266,
 .4495192,Chk Pass,,
 K,766.490 { 44},Y2R,ppm, 63.78978,.7358893,1.153616, 64.52066, 63.79972,
 63.04898,Chk Pass,,
 Li,670.784 { 50},Y2R,ppm, .1484246,.0011159,.7518260, .1473017, .1484387,
 .1495334,Chk Pass,,
 Mg,285.213 {118},Y2R,ppm, 169.6148,1.198052,.7063367, 170.9930, 168.8216,
 169.0299,Chk Pass,,
 Mn,257.610 {131},Y2A,ppm, .2800207,.0008687,.3102273, .2797472, .2793217,
 .2809933,Chk Pass,,
 Mo,202.030 {467},Y1,ppm, .0230970,.0014541,6.295697, .0214217, .0238372,
 .0240321,Chk Pass,,
 Na,589.592 { 57},Y2R,ppm,F 1048.898,21.85793,2.083895, 1073.077, 1043.077,
 1030.540,Chk Fail,450.0000,-1.00000
 Ni,231.604 {445},Y1,ppm, 1.821007,.0002858,.0156943, 1.820861, 1.820824,
 1.821337,Chk Pass,,
 P,177.495 {490},Y1,ppm, .2828006,.0075341,2.664117, .2913523, .2771412, .2799083,Chk

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Pass,,
 Pb,220.353 {453},Y1,ppm, .0303687,.0038199,12.57836, .0295011, .0345477,
 .0270572,Chk Pass,,
 S,182.034 {485},Y1,ppm, 142.6588,.1670591,.1171040, 142.7267, 142.4684, 142.7812,Chk
 Pass,,
 Sb,206.833 {463},Y1,ppm, .1104070,.0081523,7.383888, .1067965, .1046833,
 .1197411,Chk Pass,,
 Se,196.090 {472},Y1,ppm, .1071696,.0120823,11.27399, .0995312, .1210994,
 .1008783,Chk Pass,,
 Si,251.611 {134},Y2R,ppm, 2.515961,.0554512,2.203979, 2.527765, 2.564559,
 2.455558,Chk Pass,,
 Sn,189.989 {477},Y1,ppm, .0844072,.0100738,11.93472, .0746772, .0837517,
 .0947927,Chk Pass,,
 Sr,421.552 { 80},Y2A,ppm, 1.089902,.0148169,1.359471, 1.095194, 1.073165,
 1.101346,Chk Pass,,
 Th,283.730 {119},Y2R,ppm, -.014425,.1063941,737.5905, .0470929, .0469113,
 -.137278,Chk Pass,,
 Ti,334.941 {101},Y2A,ppm, .0223767,.0000708,.3164012, .0223411, .0223308,
 .0224582,Chk Pass,,
 Tl,190.856 {477},Y1,ppm, .0568199,.0088742,15.61801, .0551419, .0664133,
 .0489046,Chk Pass,,
 V,292.402 {115},Y2A,ppm, .0200134,.0005925,2.960648, .0206069, .0194218,
 .0200114,Chk Pass,,
 W,207.911 {462},Y1,ppm, .0580444,.0031594,5.443004, .0576792, .0613705, .0550836,Chk
 Pass,,
 Zn,213.856 {458},Y1,ppm, .4475298,.0008350,.1865720, .4484623, .4468513,
 .4472758,Chk Pass,,
 Zr,339.198 { 99},Y2R,ppm, .1080729,.0144352,13.35691, .1039829, .0961241,
 .1241119,Chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Y1,224.306 {450},Cts/S, 2602.073,7.034326,.2703354,2609.119,2602.050,2595.051
 Y2A,371.030 { 91}2,Cts/S, 123336.9,1062.255,.8612626,122448.7,124513.6,123048.5
 Y2R,371.030 { 91}3,Cts/S, 3842.581,23.45333,.6103536,3817.636,3845.923,3864.184

[Sample Header]

Method=New TRACE Fast w axial Al(v227)
 SampleName=410-3240-B-17-D MSD
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 10:10:18
 Sample Type=Unk
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, .0216364,.0002117,.9783344, .0214084, .0218267,
 .0216741,Chk Pass,,
 Al,308.215 {109},Y2R,ppm, .3319487,.1423716,42.88963, .2154245, .2897804,
 .4906411,Chk Pass,,
 Al ax,308.215 {109}2,Y2A,ppm, .3863018,.0029885,.7736215, .3897516, .3846516,
 .3845023,Chk Pass,,
 As,189.042 {478},Y1,ppm, .0695941,.0178507,25.64966, .0798779, .0799226,
 .0489820,Chk Pass,,
 B,249.773 {135},Y2A,ppm, .6962091,.0023832,.3423174, .6952922, .6944205,
 .6989146,Chk Pass,,
 Ba,455.403 { 74},Y2A,ppm, .0359120,.0000711,.1979394, .0359933, .0358618,

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.0358809,Chk Pass,,
 Be,313.042 {108},Y2A,ppm, .0098084,.0000640,.6524518, .0097617, .0097822,
 .0098813,Chk Pass,,
 Ca,317.933 {106},Y2R,ppm, 68.31425,.1486712,.2176283, 68.44803, 68.15419,
 68.34054,Chk Pass,,
 Cd,226.502 {449},Y1,ppm, .0094260,.0001644,1.743923, .0093095, .0093544,
 .0096140,Chk Pass,,
 Co,228.616 {447},Y1,ppm, .0135945,.0003570,2.625748, .0139516, .0135940,
 .0132377,Chk Pass,,
 Cr,267.716 {126},Y2A,ppm, .0288462,.0004884,1.693270, .0285415, .0294095,
 .0285875,Chk Pass,,
 Cu,327.396 {103},Y2A,ppm, .0429953,.0008011,1.863277, .0439165, .0426072,
 .0424621,Chk Pass,,
 Fe,261.187 {129},Y2R,ppm, .4374580,.0387100,8.848855, .4821459, .4142693,
 .4159589,Chk Pass,,
 K,766.490 { 44},Y2R,ppm, 64.09739,.2337192,.3646314, 64.22000, 63.82787,
 64.24428,Chk Pass,,
 Li,670.784 { 50},Y2R,ppm, .1500442,.0009615,.6407938, .1500316, .1510120,
 .1490891,Chk Pass,,
 Mg,285.213 {118},Y2R,ppm, 167.7109,.5221237,.3113236, 167.7947, 168.1860,
 167.1519,Chk Pass,,
 Mn,257.610 {131},Y2A,ppm, .2822642,.0025784,.9134782, .2795193, .2826378,
 .2846354,Chk Pass,,
 Mo,202.030 {467},Y1,ppm, .0227450,.0012270,5.394469, .0213283, .0234683,
 .0234385,Chk Pass,,
 Na,589.592 { 57},Y2R,ppm,F 1044.987,7.320085,.7004957, 1053.064, 1043.105,
 1038.791,Chk Fail,450.0000,-1.00000
 Ni,231.604 {445},Y1,ppm, 1.852484,.0043110,.2327159, 1.853435, 1.847777,
 1.856240,Chk Pass,,
 P,177.495 {490},Y1,ppm, .2898827,.0072273,2.493192, .2912949, .2962997, .2820535,Chk
 Pass,,
 Pb,220.353 {453},Y1,ppm, .0283134,.0052440,18.52115, .0222712, .0316788,
 .0309900,Chk Pass,,
 S,182.034 {485},Y1,ppm, 143.5679,.2787063,.1941286, 143.8541, 143.2973, 143.5522,Chk
 Pass,,
 Sb,206.833 {463},Y1,ppm, .1118575,.0061242,5.475013, .1131554, .1172288,
 .1051884,Chk Pass,,
 Se,196.090 {472},Y1,ppm, .1020903,.0067317,6.593893, .1006707, .1094187,
 .0961816,Chk Pass,,
 Si,251.611 {134},Y2R,ppm, 2.556477,.0159170,.6226157, 2.573994, 2.552539,
 2.542899,Chk Pass,,
 Sn,189.989 {477},Y1,ppm, .0871042,.0023717,2.722879, .0879146, .0844334,
 .0889645,Chk Pass,,
 Sr,421.552 { 80},Y2A,ppm, 1.106090,.0043343,.3918615, 1.102568, 1.104771,
 1.110930,Chk Pass,,
 Th,283.730 {119},Y2R,ppm, .0395001,.0155029,39.24783, .0553659, .0387468,
 .0243875,Chk Pass,,
 Ti,334.941 {101},Y2A,ppm, .0230027,.0002777,1.207077, .0227772, .0229182,
 .0233128,Chk Pass,,
 Tl,190.856 {477},Y1,ppm, .0596363,.0045516,7.632199, .0587932, .0555653,
 .0645505,Chk Pass,,
 V,292.402 {115},Y2A,ppm, .0206124,.0006912,3.353228, .0198143, .0210095,
 .0210134,Chk Pass,,
 W,207.911 {462},Y1,ppm, .0592435,.0035184,5.938830, .0631878, .0564281, .0581147,Chk
 Pass,,
 Zn,213.856 {458},Y1,ppm, .4520444,.0003055,.0675874, .4523917, .4519246,
 .4518170,Chk Pass,,
 Zr,339.198 { 99},Y2R,ppm, .1012108,.0011177,1.104349, .1008540, .1024633,
 .1003150,Chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3

Y1,224.306 {450},Cts/S, 2583.868,12.88667,.4987357,2598.035,2580.727,2572.843

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Y2A,371.030 { 91}2,Cts/S, 121071.3,715.9685,.5913610,121895.1,120599.2,120719.6
 Y2R,371.030 { 91}3,Cts/S, 3887.858,5.568263,.1432219,3884.822,3894.285,3884.467

[Sample Header]

Method=New TRACE Fast w axial Al(v227)

SampleName=410-3240-B-17-A

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Comment=UL

Custom ID1=

Custom ID2=

Custom ID3=

Run Time=6/12/2020 10:13:41

Sample Type=Unk

Mode=CONC

CorrFactor=1.000

Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, .0011409,.0013445,117.8377, -.000370, .0015885,
 .0022045,Chk Pass,,
 Al,308.215 {109},Y2R,ppm, .0245623,.1305727,531.5972, -.039104, .1747558,
 -.061965,Chk Pass,,
 Al ax,308.215 {109}2,Y2A,ppm, .0100258,.0053389,53.25114, .0147005, .0042079,
 .0111690,Chk Pass,,
 As,189.042 {478},Y1,ppm, .0056948,.0061355,107.7379, .0009050, .0126105,
 .0035690,Chk Pass,,
 B,249.773 {135},Y2A,ppm, .1328836,.0013252,.9972522, .1315839, .1342329,
 .1328340,Chk Pass,,
 Ba,455.403 { 74},Y2A,ppm, .0057251,.0000345,.6020164, .0057378, .0057515,
 .0056861,Chk Pass,,
 Be,313.042 {108},Y2A,ppm, .0002794,.0000111,3.982566, .0002889, .0002821,
 .0002672,Chk Pass,,
 Ca,317.933 {106},Y2R,ppm, 14.01158,.0219087,.1563614, 13.99294, 14.03571,
 14.00608,Chk Pass,,
 Cd,226.502 {449},Y1,ppm, .0000197,.0001732,880.8995, -.000089, -.000072,
 .0002194,Chk Pass,,
 Co,228.616 {447},Y1,ppm, .0014271,.0008455,59.24545, .0023550, .0007004,
 .0012258,Chk Pass,,
 Cr,267.716 {126},Y2A,ppm, -.001156,.0001540,13.32066, -.001008, -.001315,
 -.001144,Chk Pass,,
 Cu,327.396 {103},Y2A,ppm, .0023157,.0014969,64.64081, .0039871, .0010987,
 .0018613,Chk Pass,,
 Fe,261.187 {129},Y2R,ppm, .0018943,.0277025,1462.392, .0262305, -.028253,
 .0077052,Chk Pass,,
 K,766.490 { 44},Y2R,ppm, 12.09098,.0346579,.2866430, 12.07773, 12.13030,
 12.06490,Chk Pass,,
 Li,670.784 { 50},Y2R,ppm, .0318267,.0020602,6.473235, .0333955, .0325910,
 .0294936,Chk Pass,,
 Mg,285.213 {118},Y2R,ppm, 35.34459,.3123738,.8837953, 35.48302, 35.56382,
 34.98692,Chk Pass,,
 Mn,257.610 {131},Y2A,ppm, .0543218,.0004409,.8116651, .0545619, .0545907,
 .0538130,Chk Pass,,
 Mo,202.030 {467},Y1,ppm, .0011160,.0007375,66.07873, .0002894, .0013524,
 .0017063,Chk Pass,,
 Na,589.592 { 57},Y2R,ppm, 268.2875,3.393416,1.264843, 272.1582, 266.8795,
 265.8247,Chk Pass,,
 Ni,231.604 {445},Y1,ppm, .0023042,.0005107,22.16454, .0017340, .0024587,
 .0027197,Chk Pass,,
 P,177.495 {490},Y1,ppm, .0073994,.0040600,54.86883, .0055829, .0045649, .0120505,Chk
 Pass,,
 Pb,220.353 {453},Y1,ppm, .0047555,.0031228,65.66572, .0067851, .0011596,
 .0063219,Chk Pass,,

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s,182.034 {485},Y1,ppm, 27.50791,.0574414,.2088177, 27.56705, 27.50435, 27.45233,Chk Pass,,
 Sb,206.833 {463},Y1,ppm, .0028654,.0092988,324.5145, -.006622, .0119633,
 .0032551,Chk Pass,,
 Se,196.090 {472},Y1,ppm, -.000451,.0097206,2155.134, .0053015, .0050196,
 -.011674,Chk Pass,,
 Si,251.611 {134},Y2R,ppm, .3515139,.0518408,14.74786, .3025715, .3461365,
 .4058339,Chk Pass,,
 Sn,189.989 {477},Y1,ppm, -.005107,.0063782,124.9007, -.006278, .0017761,
 -.010818,Chk Pass,,
 Sr,421.552 { 80},Y2A,ppm, .2286977,.0005306,.2320029, .2292074, .2287373,
 .2281485,Chk Pass,,
 Th,283.730 {119},Y2R,ppm, -.015710,.0256356,163.1762, -.044190, .0055191,
 -.008460,Chk Pass,,
 Ti,334.941 {101},Y2A,ppm, .0013823,.0000707,5.118193, .0013026, .0014064,
 .0014378,Chk Pass,,
 Tl,190.856 {477},Y1,ppm, .0070612,.0042145,59.68450, .0106333, .0024130,
 .0081374,Chk Pass,,
 V,292.402 {115},Y2A,ppm, -.000472,.0007010,148.4670, -.001191, .0002095,
 -.000435,Chk Pass,,
 W,207.911 {462},Y1,ppm, -.002454,.0036861,150.1997, .0001335, -.000821, -.006675,Chk Pass,,
 Zn,213.856 {458},Y1,ppm, .0017570,.0002799,15.93146, .0017377, .0014873,
 .0020461,Chk Pass,,
 Zr,339.198 { 99},Y2R,ppm, .0093870,.0085985,91.59984, .0092755, .0008448,
 .0180406,Chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3

Y1,224.306 {450},Cts/S, 2823.124,3.076937,.1089905,2822.808,2826.347,2820.218

Y2A,371.030 { 91}2,Cts/S, 131810.7,203.9398,.1547217,132017.0,131806.0,131609.2

Y2R,371.030 { 91}3,Cts/S, 3906.870,38.42408,.9835005,3894.112,3876.447,3950.050

[Sample Header]

Method=New TRACE Fast w axial Al(v227)

SampleName=410-3348-C-18-A

Username=dept 22

Comment=

Custom ID1=

Custom ID2=

Custom ID3=

Run Time=6/12/2020 10:16:57

Sample Type=Unk

Mode=CONC

CorrFactor=1.000

Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High

Ag,328.068 {103},Y2A,ppm, .0008962,.0005489,61.24561, .0013217, .0010901,

.0002767,Chk Pass,,

Al,308.215 {109},Y2R,ppm, -.063058,.0980640,155.5136, .0229006, -.169872,

-.042203,Chk Pass,,

Al ax,308.215 {109}2,Y2A,ppm, .0042924,.0045172,105.2351, .0037445, .0000743,

.0090586,Chk Pass,,

As,189.042 {478},Y1,ppm, -.008808,.0144656,164.2278, -.023798, -.007696,

.0050690,Chk Pass,,

B,249.773 {135},Y2A,ppm, .0296437,.0002102,.7089714, .0296969, .0294121,

.0298222,Chk Pass,,

Ba,455.403 { 74},Y2A,ppm, .0592483,.0002485,.4194642, .0594071, .0589619,

.0593760,Chk Pass,,

Be,313.042 {108},Y2A,ppm, .0003790,.0000070,1.837782, .0003848, .0003713,

.0003809,Chk Pass,,

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Ca,317.933 {106},Y2R,ppm, 22.36084,.1116854,.4994688, 22.39043, 22.23734,
 22.45475,Chk Pass,,
 Cd,226.502 {449},Y1,ppm, .0004671,.0001849,39.58633, .0005990, .0002558,
 .0005466,Chk Pass,,
 Co,228.616 {447},Y1,ppm, .0003749,.0003356,89.51689, .0000011, .0006502,
 .0004733,Chk Pass,,
 Cr,267.716 {126},Y2A,ppm, .0005125,.0006493,126.6769, .0002297, .0000526,
 .0012553,Chk Pass,,
 Cu,327.396 {103},Y2A,ppm, .0021813,.0012648,57.98192, .0007835, .0025139,
 .0032466,Chk Pass,,
 Fe,261.187 {129},Y2R,ppm, -.004267,.0270028,632.8029, -.035338, .0135279,
 .0090086,Chk Pass,,
 K,766.490 { 44},Y2R,ppm, 3.761932,.0382551,1.016901, 3.761150, 3.800573,
 3.724074,Chk Pass,,
 Li,670.784 { 50},Y2R,ppm, .0254195,.0018430,7.250283, .0237100, .0251766,
 .0273719,Chk Pass,,
 Mg,285.213 {118},Y2R,ppm, 15.18217,.1112404,.7327040, 15.09530, 15.14366,
 15.30755,Chk Pass,,
 Mn,257.610 {131},Y2A,ppm, .0349765,.0000417,.1192787, .0349323, .0349819,
 .0350152,Chk Pass,,
 Mo,202.030 {467},Y1,ppm, .0006178,.0003863,62.52816, .0001747, .0008841,
 .0007945,Chk Pass,,
 Na,589.592 { 57},Y2R,ppm, 28.09091,.1078221,.3838326, 28.13295, 27.96840,
 28.17137,Chk Pass,,
 Ni,231.604 {445},Y1,ppm, .0121098,.0011117,9.180357, .0132142, .0121241,
 .0109909,Chk Pass,,
 P,177.495 {490},Y1,ppm, .0006836,.0036049,527.3325, .0047654, -.000651, -.002064,Chk
 Pass,,
 Pb,220.353 {453},Y1,ppm, .0026612,.0027816,104.5259, .0057674, .0004004,
 .0018157,Chk Pass,,
 S,182.034 {485},Y1,ppm, 23.93574,.0220521,.0921305, 23.95251, 23.94394, 23.91076,Chk
 Pass,,
 Sb,206.833 {463},Y1,ppm, .0054714,.0073439,134.2219, .0099128, -.003005,
 .0095068,Chk Pass,,
 Se,196.090 {472},Y1,ppm, -.003786,.0098066,258.9897, .0042168, -.014726,
 -.000851,Chk Pass,,
 Si,251.611 {134},Y2R,ppm, 5.205363,.0471754,.9062841, 5.235877, 5.151027,
 5.229185,Chk Pass,,
 Sn,189.989 {477},Y1,ppm, -.010792,.0031920,29.57723, -.011878, -.007199,
 -.013300,Chk Pass,,
 Sr,421.552 { 80},Y2A,ppm, .1753417,.0004705,.2683341, .1758788, .1750022,
 .1751440,Chk Pass,,
 Th,283.730 {119},Y2R,ppm, .0440554,.0262492,59.58236, .0688012, .0165248,
 .0468403,Chk Pass,,
 Ti,334.941 {101},Y2A,ppm, .0017986,.0000844,4.691996, .0018854, .0017933,
 .0017169,Chk Pass,,
 Tl,190.856 {477},Y1,ppm, .0089165,.0033708,37.80412, .0061118, .0079816,
 .0126560,Chk Pass,,
 V,292.402 {115},Y2A,ppm, .0000337,.0000714,211.7934, .0000633, .0000854,
 -.000048,Chk Pass,,
 W,207.911 {462},Y1,ppm, -.000361,.0007177,199.0734, -.000723, .0004661, -.000825,Chk
 Pass,,
 Zn,213.856 {458},Y1,ppm, .0200110,.0002751,1.374916, .0199209, .0197922,
 .0203199,Chk Pass,,
 Zr,339.198 { 99},Y2R,ppm, -.003582,.0082536,230.3959, -.012988, .0024501,
 -.000209,Chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Y1,224.306 {450},Cts/S, 2992.254,3.947093,.1319104,2987.756,2995.141,2993.866
 Y2A,371.030 { 91}2,Cts/S, 141006.3,428.9748,.3042239,141214.7,140512.9,141291.2
 Y2R,371.030 { 91}3,Cts/S, 3979.451,18.13161,.4556310,3961.365,3997.628,3979.358

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[Sample Header]

Method=New TRACE Fast w axial Al(v227)

SampleName=410-3348-C-15-A

Username=dept 22

Comment=

Custom ID1=

Custom ID2=

Custom ID3=

Run Time=6/12/2020 10:20:06

Sample Type=Unk

Mode=CONC

CorrFactor=1.000

Repeats=3

[Results]

Elem	WL	ISRef	Units	Avg	Stddev	RSD	Rep1	Rep2	Rep3	chk_Pass/Fail	chk_Low	chk_High
Ag	328.068	{103}	Y2A,ppm	-.001076	.0012771	118.7123	-.000574	-.002528	-.000126	Chk Pass,,		
Al	308.215	{109}	Y2R,ppm	.0319692	.1400235	437.9947	.0525423	.1605680	-.117203	Chk Pass,,		
Al	ax,308.215	{109}	2,Y2A,ppm	.0611717	.0137331	22.45002	.0519633	.0769562	.0545954	Chk Pass,,		
As	189.042	{478}	Y1,ppm	.0049403	.0062429	126.3682	-.001735	.0059201	.0106354	Chk Pass,,		
B	249.773	{135}	Y2A,ppm	.0057605	.0000705	1.223388	.0056919	.0057568	.0058327	Chk Pass,,		
Ba	455.403	{74}	Y2A,ppm	.0223402	.0000793	.3548066	.0224045	.0222516	.0223643	Chk Pass,,		
Be	313.042	{108}	Y2A,ppm	.0007641	.0000253	3.309030	.0007852	.0007361	.0007709	Chk Pass,,		
Ca	317.933	{106}	Y2R,ppm	6.393326	.0184607	.2887490	6.373459	6.396570	6.409950	Chk Pass,,		
Cd	226.502	{449}	Y1,ppm	.0002993	.0001251	41.78066	.0002353	.0002193	.0004435	Chk Pass,,		
Co	228.616	{447}	Y1,ppm	.0501947	.0009057	1.804311	.0505486	.0508700	.0491655	Chk Pass,,		
Cr	267.716	{126}	Y2A,ppm	.0008052	.0006952	86.34158	.0000169	.0013305	.0010681	Chk Pass,,		
Cu	327.396	{103}	Y2A,ppm	.0063034	.0013823	21.92947	.0048364	.0075816	.0064924	Chk Pass,,		
Fe	261.187	{129}	Y2R,ppm	.1816399	.0171561	9.445127	.1804062	.1993796	.1651340	Chk Pass,,		
K	766.490	{44}	Y2R,ppm	1.553675	.0319874	2.058821	1.525526	1.547038	1.588460	Chk Pass,,		
Li	670.784	{50}	Y2R,ppm	.0269675	.0012504	4.636591	.0272196	.0256103	.0280726	Chk Pass,,		
Mg	285.213	{118}	Y2R,ppm	2.478094	.0127747	.5155067	2.485788	2.485146	2.463347	Chk Pass,,		
Mn	257.610	{131}	Y2A,ppm	.2401656	.0013028	.5424542	.2416654	.2393144	.2395170	Chk Pass,,		
Mo	202.030	{467}	Y1,ppm	.0023383	.0014504	62.02744	.0040087	.0016086	.0013977	Chk Pass,,		
Na	589.592	{57}	Y2R,ppm	10.37449	.0639181	.6161086	10.40932	10.41344	10.30073	Chk Pass,,		
Ni	231.604	{445}	Y1,ppm	.0236106	.0012191	5.163195	.0232738	.0225955	.0249627	Chk Pass,,		
P	177.495	{490}	Y1,ppm	.0196458	.0036879	18.77191	.0156267	.0228742	.0204366	Chk Pass,,		
Pb	220.353	{453}	Y1,ppm	.0032584	.0038267	117.4432	-.000274	.0073239	.0027247	Chk Pass,,		
S	182.034	{485}	Y1,ppm	.8294864	.0110709	1.334670	.8176344	.8395613	.8312634	Chk Pass,,		
Sb	206.833	{463}	Y1,ppm	.0006330	.0077454	1223.670	.0070306	.0028465				

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-.007978,Chk Pass,,
 Se,196.090 {472},Y1,ppm, -.003054,.0032752,107.2529, -.006766, -.001822,
 -.000573,Chk Pass,,
 Si,251.611 {134},Y2R,ppm, 3.966680,.0367546,.9265825, 3.982067, 3.924733,
 3.993241,Chk Pass,,
 Sn,189.989 {477},Y1,ppm, -.009034,.0049994,55.34234, -.014713, -.005297,
 -.007091,Chk Pass,,
 Sr,421.552 { 80},Y2A,ppm, .0288646,.0000202,.0700631, .0288452, .0288855,
 .0288632,Chk Pass,,
 Th,283.730 {119},Y2R,ppm, -.056891,.0728264,128.0110, -.002657, -.139665,
 -.028351,Chk Pass,,
 Ti,334.941 {101},Y2A,ppm, .0014674,.0000520,3.540572, .0015180, .0014142,
 .0014700,Chk Pass,,
 Tl,190.856 {477},Y1,ppm, .0059089,.0064329,108.8680, -.000521, .0123443,
 .0059039,Chk Pass,,
 V,292.402 {115},Y2A,ppm, .0012232,.0006232,50.94528, .0011336, .0018864,
 .0006497,Chk Pass,,
 W,207.911 {462},Y1,ppm, .0014666,.0017521,119.4659, -.000345, .0015926, .0031524,Chk
 Pass,,
 Zn,213.856 {458},Y1,ppm, .0658294,.0005485,.8331490, .0663259, .0652407,
 .0659215,Chk Pass,,
 Zr,339.198 { 99},Y2R,ppm, .0083940,.0099297,118.2951, .0062698, -.000302,
 .0192140,Chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Y1,224.306 {450},Cts/S, 3049.058,2.812957,.0922566,3051.640,3046.060,3049.475
 Y2A,371.030 { 91}2,Cts/S, 145394.7,493.3706,.3393318,145743.4,145610.5,144830.2
 Y2R,371.030 { 91}3,Cts/S, 4032.136,10.59366,.2627308,4043.685,4022.870,4029.853

[Sample Header]

Method=New TRACE Fast w axial Al(v227)
 SampleName=CCV 095153
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 10:23:13
 Sample Type=QC
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, .4952,.0010,.1961, .4963, .4944, .4950,Chk Pass,,
 Al,308.215 {109},Y2R,ppm, 25.06,.1964,.7839, 24.93, 24.97, 25.29,Chk Pass,,
 Al ax,308.215 {109}2,Y2A,ppm, 24.85,.1191,.4794, 24.98, 24.81, 24.76,Chk Pass,,
 As,189.042 {478},Y1,ppm, .4894,.0132,2.698, .4949, .4989, .4743,Chk Pass,,
 B,249.773 {135},Y2A,ppm, .4827,.0020,.4224, .4849, .4809, .4824,Chk Pass,,
 Ba,455.403 { 74},Y2A,ppm, .5138,.0071,1.390, .5211, .5133, .5068,Chk Pass,,
 Be,313.042 {108},Y2A,ppm, .48945,.00178,.36394, .49150, .48840, .48844,Chk Pass,,
 Ca,317.933 {106},Y2R,ppm, 24.49,.0677,.2765, 24.57, 24.45, 24.45,Chk Pass,,
 Cd,226.502 {449},Y1,ppm, .5023,.0014,.2706, .5032, .5029, .5007,Chk Pass,,
 Co,228.616 {447},Y1,ppm, .4997,.0008,.1522, .5006, .4994, .4992,Chk Pass,,
 Cr,267.716 {126},Y2A,ppm, .4928,.0018,.3591, .4942, .4908, .4934,Chk Pass,,
 Cu,327.396 {103},Y2A,ppm, .5120,.0029,.5569, .5146, .5089, .5125,Chk Pass,,
 Fe,261.187 {129},Y2R,ppm, 24.16,.1292,.5348, 24.31, 24.07, 24.10,Chk Pass,,
 K,766.490 { 44},Y2R,ppm, 25.17,.1101,.4374, 25.29, 25.07, 25.16,Chk Pass,,
 Li,670.784 { 50},Y2R,ppm, .5188,.0007,.1357, .5189, .5180, .5194,Chk Pass,,
 Mg,285.213 {118},Y2R,ppm, 24.50,.1839,.7505, 24.71, 24.43, 24.36,Chk Pass,,
 Mn,257.610 {131},Y2A,ppm, .49188,.00168,.34115, .49327, .49002, .49236,Chk Pass,,

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Mo,202.030 {467},Y1,ppm, .5008,.0041,.8098, .5053, .4995, .4975,Chk Pass,,
Na,589.592 { 57},Y2R,ppm, 24.62,.1780,.7231, 24.82, 24.55, 24.49,Chk Pass,,
Ni,231.604 {445},Y1,ppm, .4970,.0010,.2062, .4966, .4982, .4962,Chk Pass,,
P,177.495 {490},Y1,ppm, .5074,.0084,1.648, .5110, .4978, .5133,Chk Pass,,
Pb,220.353 {453},Y1,ppm, .5004,.0008,.1583, .5011, .4996, .5007,Chk Pass,,
S,182.034 {485},Y1,ppm, 24.90,.0828,.3326, 24.99, 24.82, 24.89,Chk Pass,,
Sb,206.833 {463},Y1,ppm, .5057,.0030,.5942, .5050, .5090, .5031,Chk Pass,,
Se,196.090 {472},Y1,ppm, .4995,.0089,1.785, .5095, .4967, .4923,Chk Pass,,
Si,251.611 {134},Y2R,ppm, 24.552,.17293,.70437, 24.748, 24.421, 24.487,Chk Pass,,
Sn,189.989 {477},Y1,ppm, .4869,.0086,1.760, .4956, .4785, .4864,Chk Pass,,
Sr,421.552 { 80},Y2A,ppm, .5057,.0029,.5663, .5064, .5026, .5082,Chk Pass,,
Th,283.730 {119},Y2R,ppm,F .4333,.0487,11.25, .4328, .4823, .3848,Chk
Fail, .5000, -10.00%
Ti,334.941 {101},Y2A,ppm, .5137,.0021,.4139, .5160, .5119, .5130,Chk Pass,,
Tl,190.856 {477},Y1,ppm, .5126,.0016,.3133, .5126, .5142, .5110,Chk Pass,,
V,292.402 {115},Y2A,ppm, .5063,.0012,.2388, .5077, .5056, .5055,Chk Pass,,
W,207.911 {462},Y1,ppm, .5018,.0017,.3457, .5036, .5016, .5001,Chk Pass,,
Zn,213.856 {458},Y1,ppm, .5083,.0008,.1497, .5092, .5077, .5081,Chk Pass,,
Zr,339.198 { 99},Y2R,ppm, .5095,.0120,2.363, .5141, .4959, .5186,Chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3

Y1,224.306 {450},Cts/S, 2929.0,4.0987,.13993,2925.0,2928.9,2933.2

Y2A,371.030 { 91}2,Cts/S, 137410.,540.13,.39307,136850.,137920.,137470.

Y2R,371.030 { 91}3,Cts/S, 3908.1,32.698,.83668,3872.3,3915.7,3936.3

[Sample Header]

Method=New TRACE Fast w axial Al(v227)

SampleName=CCB 078331

Username=dept 22

Comment=

Custom ID1=

Custom ID2=

Custom ID3=

Run Time=6/12/2020 10:26:27

Sample Type=QC

Mode=CONC

CorrFactor=1.000

Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High

Ag,328.068 {103},Y2A,ppm, .0005,.0019,367.3, .0014, .0018, -.0016,Chk Pass,,

Al,308.215 {109},Y2R,ppm, -.0402,.2249,559.2, .2131, -.1171, -.2167,Chk Pass,,

Al ax,308.215 {109}2,Y2A,ppm, .0145,.0071,48.74, .0084, .0128, .0222,Chk Pass,,

As,189.042 {478},Y1,ppm, .0097,.0027,27.62, .0068, .0120, .0104,Chk Pass,,

B,249.773 {135},Y2A,ppm, .0020,.0003,15.03, .0017, .0023, .0019,Chk Pass,,

Ba,455.403 { 74},Y2A,ppm, .0001,.0000,44.05, .0001, .0001, .0000,Chk Pass,,

Be,313.042 {108},Y2A,ppm, .00032,.00002,6.0763, .00031, .00034, .00031,Chk Pass,,

Ca,317.933 {106},Y2R,ppm, -.0044,.0154,348.0, -.0212, .0089, -.0009,Chk Pass,,

Cd,226.502 {449},Y1,ppm, .0004,.0001,14.80, .0004, .0005, .0004,Chk Pass,,

Co,228.616 {447},Y1,ppm, .0004,.0008,211.2, -.0004, .0003, .0012,Chk Pass,,

Cr,267.716 {126},Y2A,ppm, -.0010,.0007,70.91, -.0009, -.0003, -.0017,Chk Pass,,

Cu,327.396 {103},Y2A,ppm, .0019,.0028,144.2, .0003, .0003, .0051,Chk Pass,,

Fe,261.187 {129},Y2R,ppm, .0097,.0154,158.5, -.0023, .0270, .0044,Chk Pass,,

K,766.490 { 44},Y2R,ppm,F .3440,.0138,4.016, .3473, .3560, .3289,Chk

Fail, .2500, -.2500

Li,670.784 { 50},Y2R,ppm,W .0236,.0019,8.098, .0230, .0220, .0257,chk

Warn, .0188, -.0188

Mg,285.213 {118},Y2R,ppm, .0032,.0057,181.3, .0098, -.0003, -.0000,Chk Pass,,

Mn,257.610 {131},Y2A,ppm, .00014,.00008,53.745, .00015, .00022, .00006,Chk Pass,,

Mo,202.030 {467},Y1,ppm, .0012,.0005,42.03, .0007, .0012, .0017,Chk Pass,,

Na,589.592 { 57},Y2R,ppm, .1173,.0162,13.80, .0997, .1315, .1208,Chk Pass,,

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Ni,231.604 {445},Y1,ppm, .0020,.0006,29.93, .0014, .0020, .0026,Chk Pass,,
 P,177.495 {490},Y1,ppm, -.0033,.0071,217.4, -.0102, .0040, -.0036,Chk Pass,,
 Pb,220.353 {453},Y1,ppm, .0014,.0014,101.9, .0027, .0015, -.0001,Chk Pass,,
 S,182.034 {485},Y1,ppm, .0287,.0179,62.55, .0120, .0477, .0264,Chk Pass,,
 Sb,206.833 {463},Y1,ppm, .0014,.0060,436.5, .0065, .0030, -.0053,Chk Pass,,
 Se,196.090 {472},Y1,ppm, .0040,.0087,217.1, .0117, .0059, -.0055,Chk Pass,,
 Si,251.611 {134},Y2R,ppm, -.01771,.03296,186.16, -.00519, .00716, -.05510,Chk Pass,,
 Sn,189.989 {477},Y1,ppm, -.0078,.0109,140.9, -.0173, .0041, -.0101,Chk Pass,,
 Sr,421.552 {80},Y2A,ppm, .0001,.0000,4.893, .0001, .0001, .0001,Chk Pass,,
 Th,283.730 {119},Y2R,ppm, -.0567,.0822,144.9, -.0346, .0122, -.1476,Chk Pass,,
 Ti,334.941 {101},Y2A,ppm, -.0002,.0001,55.69, -.0002, -.0001, -.0002,Chk Pass,,
 Tl,190.856 {477},Y1,ppm, .0074,.0040,54.26, .0042, .0061, .0119,Chk Pass,,
 V,292.402 {115},Y2A,ppm, -.0002,.0009,502.2, .0008, -.0010, -.0003,Chk Pass,,
 W,207.911 {462},Y1,ppm, -.0013,.0008,62.67, -.0004, -.0016, -.0019,Chk Pass,,
 Zn,213.856 {458},Y1,ppm, .0003,.0003,82.28, .0006, .0001, .0002,Chk Pass,,
 Zr,339.198 {99},Y2R,ppm, .0038,.0114,304.9, .0033, -.0074, .0154,Chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Y1,224.306 {450},Cts/S, 3020.5,9.8810,.32713,3024.8,3027.5,3009.2
 Y2A,371.030 {91}2,Cts/S, 142340.,746.04,.52413,143130.,142250.,141640.
 Y2R,371.030 {91}3,Cts/S, 3897.7,36.790,.94387,3871.6,3881.8,3939.8

[Sample Header]

Method=New TRACE Fast w axial Al(v227)
 SampleName=410-3241-C-1-A
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 10:29:38
 Sample Type=Unk
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, .0000057,.0003917,6865.067, -.000316, -.000109,
 .0004418,Chk Pass,,
 Al,308.215 {109},Y2R,ppm, -.042505,.0299234,70.39971, -.050928, -.067314,
 -.009273,Chk Pass,,
 Al ax,308.215 {109}2,Y2A,ppm, .0061301,.0047127,76.87926, .0104640, .0068131,
 .0011131,Chk Pass,,
 As,189.042 {478},Y1,ppm, .0023487,.0075203,320.1835, .0015472, -.004739,
 .0102376,Chk Pass,,
 B,249.773 {135},Y2A,ppm, .0862232,.0003188,.3697790, .0864399, .0858571,
 .0863726,Chk Pass,,
 Ba,455.403 {74},Y2A,ppm, .0541809,.0001943,.3585993, .0543481, .0542267,
 .0539678,Chk Pass,,
 Be,313.042 {108},Y2A,ppm, .0000767,.0000143,18.57788, .0000788, .0000899,
 .0000616,Chk Pass,,
 Ca,317.933 {106},Y2R,ppm, 190.6209,.3553398,.1864118, 190.8315, 190.2106,
 190.8205,Chk Pass,,
 Cd,226.502 {449},Y1,ppm, -.000084,.0001660,198.6164, .0000585, -.000266,
 -.000043,Chk Pass,,
 Co,228.616 {447},Y1,ppm, .0013672,.0001345,9.838780, .0014319, .0014571,
 .0012125,Chk Pass,,
 Cr,267.716 {126},Y2A,ppm, .0045744,.0002421,5.293133, .0047095, .0042949,
 .0047188,Chk Pass,,
 Cu,327.396 {103},Y2A,ppm, .0039186,.0013426,34.26275, .0031362, .0054689,
 .0031507,Chk Pass,,

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Fe,261.187 {129},Y2R,ppm, .0118787,.0364185,306.5869, -.006152, -.012007,
 .0537950,Chk Pass,,
 K,766.490 { 44},Y2R,ppm, 25.28465,.0315855,.1249195, 25.29577, 25.24900,
 25.30916,Chk Pass,,
 Li,670.784 { 50},Y2R,ppm, .0306890,.0010460,3.408298, .0304413, .0297891,
 .0318366,Chk Pass,,
 Mg,285.213 {118},Y2R,ppm, 22.89369,.0588900,.2572326, 22.87608, 22.84562,
 22.95938,Chk Pass,,
 Mn,257.610 {131},Y2A,ppm, .0003515,.0000739,21.01142, .0003250, .0004349,
 .0002945,Chk Pass,,
 Mo,202.030 {467},Y1,ppm, .0403273,.0008115,2.012200, .0394044, .0409290,
 .0406486,Chk Pass,,
 Na,589.592 { 57},Y2R,ppm, 220.2962,.7474111,.3392755, 220.8755, 219.4526,
 220.5606,Chk Pass,,
 Ni,231.604 {445},Y1,ppm, .0047190,.0015813,33.51020, .0065427, .0038855,
 .0037288,Chk Pass,,
 P,177.495 {490},Y1,ppm, .0522341,.0027202,5.207689, .0496386, .0519997, .0550639,Chk
 Pass,,
 Pb,220.353 {453},Y1,ppm, .0022214,.0049704,223.7560, -.002179, .0076126,
 .0012305,Chk Pass,,
 S,182.034 {485},Y1,ppm, 136.3105,.2600918,.1908083, 136.3554, 136.5453, 136.0309,Chk
 Pass,,
 Sb,206.833 {463},Y1,ppm, .0040285,.0096323,239.1078, .0123832, .0062096,
 -.006507,Chk Pass,,
 Se,196.090 {472},Y1,ppm, .0057206,.0069210,120.9843, .0050624, .0129471,
 -.000848,Chk Pass,,
 Si,251.611 {134},Y2R,ppm, 5.350832,.0641678,1.199213, 5.416189, 5.287923,
 5.348383,Chk Pass,,
 Sn,189.989 {477},Y1,ppm, -.006404,.0030801,48.09742, -.003063, -.009131,
 -.007017,Chk Pass,,
 Sr,421.552 { 80},Y2A,ppm, .9027925,.0026212,.2903454, .9056917, .9005900,
 .9020958,Chk Pass,,
 Th,283.730 {119},Y2R,ppm, .0223326,.0339003,151.7971, .0121923, -.005340,
 .0601459,Chk Pass,,
 Ti,334.941 {101},Y2A,ppm, .0013148,.0001389,10.56293, .0012823, .0014670,
 .0011950,Chk Pass,,
 Tl,190.856 {477},Y1,ppm, .0090591,.0034759,38.36910, .0116871, .0103724,
 .0051179,Chk Pass,,
 V,292.402 {115},Y2A,ppm, .0011938,.0001646,13.78893, .0013655, .0010373,
 .0011786,Chk Pass,,
 W,207.911 {462},Y1,ppm, .0001138,.0011428,1004.069, -.000597, .0014320, -.000493,Chk
 Pass,,
 Zn,213.856 {458},Y1,ppm, .0127524,.0004417,3.463679, .0126089, .0132480,
 .0124002,Chk Pass,,
 Zr,339.198 { 99},Y2R,ppm, .0027550,.0096117,348.8786, -.002289, -.003284,
 .0138388,Chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Y1,224.306 {450},Cts/S, 2808.662,4.845961,.1725363,2814.219,2806.459,2805.309
 Y2A,371.030 { 91}2,Cts/S, 133225.8,46.86888,.0351800,133172.0,133247.1,133258.2
 Y2R,371.030 { 91}3,Cts/S, 3894.868,36.05364,.9256704,3907.639,3922.797,3854.167

[Sample Header]

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 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 10:32:54
 Sample Type=Unk

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Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, -.000959,.0009633,100.4298, -.001042, .0000430,
 -.001878,Chk Pass,,
 Al,308.215 {109},Y2R,ppm, -.056170,.1232743,219.4670, -.175769, .0704771,
 -.063217,Chk Pass,,
 Al ax,308.215 {109}2,Y2A,ppm, .0078016,.0076518,98.07921, .0115550, -.001002,
 .0128519,Chk Pass,,
 As,189.042 {478},Y1,ppm, .0061788,.0122956,198.9955, -.005483, .0049973,
 .0190225,Chk Pass,,
 B,249.773 {135},Y2A,ppm, .0055093,.0003950,7.170060, .0059082, .0055016,
 .0051182,Chk Pass,,
 Ba,455.403 { 74},Y2A,ppm, .0042702,.0000745,1.744560, .0043562, .0042285,
 .0042258,Chk Pass,,
 Be,313.042 {108},Y2A,ppm, .0004602,.0000105,2.289281, .0004718, .0004513,
 .0004575,Chk Pass,,
 Ca,317.933 {106},Y2R,ppm, 1.143793,.0060560,.5294666, 1.141380, 1.150684,
 1.139316,Chk Pass,,
 Cd,226.502 {449},Y1,ppm, .0003057,.0002877,94.13363, -.000024, .0005037,
 .0004378,Chk Pass,,
 Co,228.616 {447},Y1,ppm, .0055911,.0014455,25.85347, .0055116, .0041870,
 .0070747,Chk Pass,,
 Cr,267.716 {126},Y2A,ppm, .0010575,.0003178,30.05069, .0007779, .0014031,
 .0009915,Chk Pass,,
 Cu,327.396 {103},Y2A,ppm, .0081265,.0014496,17.83769, .0072604, .0073191,
 .0098000,Chk Pass,,
 Fe,261.187 {129},Y2R,ppm, .0850689,.0170404,20.03127, .0866983, .1012359,
 .0672723,Chk Pass,,
 K,766.490 { 44},Y2R,ppm, 1.382248,.0164501,1.190098, 1.400382, 1.368284,
 1.378078,Chk Pass,,
 Li,670.784 { 50},Y2R,ppm, .0265527,.0024633,9.276967, .0237453, .0275602,
 .0283524,Chk Pass,,
 Mg,285.213 {118},Y2R,ppm, .4744956,.0063097,1.329772, .4750679, .4804996,
 .4679192,Chk Pass,,
 Mn,257.610 {131},Y2A,ppm, .0258677,.0002474,.9564090, .0258878, .0256108,
 .0261044,Chk Pass,,
 Mo,202.030 {467},Y1,ppm, .0009712,.0002948,30.36066, .0008050, .0007969,
 .0013116,Chk Pass,,
 Na,589.592 { 57},Y2R,ppm, 10.14136,.0362638,.3575830, 10.14580, 10.17519,
 10.10308,Chk Pass,,
 Ni,231.604 {445},Y1,ppm, .0126284,.0003125,2.474962, .0123207, .0129455,
 .0126189,Chk Pass,,
 P,177.495 {490},Y1,ppm, .0061395,.0005408,8.808744, .0059420, .0067513, .0057252,Chk
 Pass,,
 Pb,220.353 {453},Y1,ppm, -.000504,.0030053,595.7856, .0008074, -.003943,
 .0016219,Chk Pass,,
 S,182.034 {485},Y1,ppm, 1.725822,.0227811,1.320017, 1.750449, 1.721515, 1.705501,Chk
 Pass,,
 Sb,206.833 {463},Y1,ppm, .0010549,.0050621,479.8774, .0051949, .0025583,
 -.004589,Chk Pass,,
 Se,196.090 {472},Y1,ppm, .0013390,.0043593,325.5736, -.003483, .0050001,
 .0025002,Chk Pass,,
 Si,251.611 {134},Y2R,ppm, 3.355449,.0398227,1.186808, 3.395188, 3.355616,
 3.315544,Chk Pass,,
 Sn,189.989 {477},Y1,ppm, -.010136,.0101030,99.67672, -.020005, -.010588,
 .0001859,Chk Pass,,
 Sr,421.552 { 80},Y2A,ppm, .0118552,.0000153,.1286251, .0118383, .0118681,
 .0118591,Chk Pass,,
 Th,283.730 {119},Y2R,ppm, -.010647,.0291884,274.1424, -.003573, .0143539,

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-.042723,Chk Pass,,
 Ti,334.941 {101},Y2A,ppm, .0000230,.0000384,167.1321, .0000004, .0000674,
 .0000012,Chk Pass,,
 Tl,190.856 {477},Y1,ppm, .0074842,.0024038,32.11895, .0095175, .0048312,
 .0081038,Chk Pass,,
 V,292.402 {115},Y2A,ppm, .0006038,.0003229,53.48455, .0003185, .0005385,
 .0009544,Chk Pass,,
 W,207.911 {462},Y1,ppm, -.000955,.0009699,101.6142, -.000078, -.000790, -.001996,Chk
 Pass,,
 Zn,213.856 {458},Y1,ppm, .0352590,.0002391,.6779852, .0351122, .0355349,
 .0351300,Chk Pass,,
 Zr,339.198 { 99},Y2R,ppm, .0051460,.0054387,105.6893, .0103143, .0056516,
 -.000528,Chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Y1,224.306 {450},Cts/S, 3067.390,6.567095,.2140939,3073.498,3068.228,3060.444
 Y2A,371.030 { 91}2,Cts/S, 146649.5,623.0882,.4248826,146342.3,147366.5,146239.6
 Y2R,371.030 { 91}3,Cts/S, 4072.687,19.10991,.4692211,4091.207,4053.037,4073.817

[Sample Header]

Method=New TRACE Fast w axial Al(v227)
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 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 10:36:04
 Sample Type=Unk
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, -.000283,.0007593,268.1420, -.001157, .0002136,
 .0000941,Chk Pass,,
 Al,308.215 {109},Y2R,ppm, 3.902026,.0378232,.9693218, 3.871820, 3.944448,
 3.889811,Chk Pass,,
 Al ax,308.215 {109}2,Y2A,ppm, 4.080800,.0064957,.1591767, 4.074029, 4.086980,
 4.081393,Chk Pass,,
 As,189.042 {478},Y1,ppm, .0110640,.0056972,51.49262, .0056049, .0169726,
 .0106147,Chk Pass,,
 B,249.773 {135},Y2A,ppm, .0196202,.0003622,1.846264, .0194056, .0200384,
 .0194166,Chk Pass,,
 Ba,455.403 { 74},Y2A,ppm, .0492139,.0002104,.4274991, .0489853, .0492570,
 .0493995,Chk Pass,,
 Be,313.042 {108},Y2A,ppm, .0048948,.0000240,.4907298, .0048677, .0049031,
 .0049136,Chk Pass,,
 Ca,317.933 {106},Y2R,ppm, 19.95529,.1632933,.8182955, 19.98927, 20.09893,
 19.77769,Chk Pass,,
 Cd,226.502 {449},Y1,ppm, .0004405,.0000743,16.87228, .0003607, .0005077,
 .0004532,Chk Pass,,
 Co,228.616 {447},Y1,ppm, .0819205,.0006814,.8318144, .0812242, .0825860,
 .0819513,Chk Pass,,
 Cr,267.716 {126},Y2A,ppm, .0031547,.0001503,4.764496, .0033179, .0031245,
 .0030219,Chk Pass,,
 Cu,327.396 {103},Y2A,ppm, .0787486,.0008110,1.029856, .0796850, .0782773,
 .0782834,Chk Pass,,
 Fe,261.187 {129},Y2R,ppm, 1.187685,.0236940,1.994971, 1.174960, 1.215022,
 1.173071,Chk Pass,,
 K,766.490 { 44},Y2R,ppm, 3.052498,.0439653,1.440306, 3.056476, 3.094339,

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3.006679,Chk Pass,,
 Li,670.784 { 50},Y2R,ppm, .0482262,.0015834,3.283296, .0495353, .0486769,
 .0464662,Chk Pass,,
 Mg,285.213 {118},Y2R,ppm, 35.77086,.4102263,1.146817, 35.79311, 36.16951,
 35.34996,Chk Pass,,
 Mn,257.610 {131},Y2A,ppm, 2.521551,.0130712,.5183771, 2.515690, 2.512437,
 2.536527,Chk Pass,,
 Mo,202.030 {467},Y1,ppm, .0009978,.0006105,61.17911, .0015484, .0011038,
 .0003413,Chk Pass,,
 Na,589.592 { 57},Y2R,ppm, 114.1375,.8092653,.7090267, 113.8561, 115.0499,
 113.5065,Chk Pass,,
 Ni,231.604 {445},Y1,ppm, .0849232,.0013107,1.543353, .0835567, .0861697,
 .0850433,Chk Pass,,
 P,177.495 {490},Y1,ppm, -.011509,.0033854,29.41407, -.009769, -.015411, -.009348,Chk
 Pass,,
 Pb,220.353 {453},Y1,ppm, .0065819,.0018050,27.42366, .0086648, .0056050,
 .0054759,Chk Pass,,
 S,182.034 {485},Y1,ppm, 24.56846,.0672645,.2737841, 24.49884, 24.63309, 24.57345,Chk
 Pass,,
 Sb,206.833 {463},Y1,ppm, -.002388,.0088730,371.5554, -.009739, -.004893,
 .0074683,Chk Pass,,
 Se,196.090 {472},Y1,ppm, .0054319,.0049921,91.90357, .0030709, .0020582,
 .0111665,Chk Pass,,
 Si,251.611 {134},Y2R,ppm, 15.92724,.1761904,1.106221, 15.89827, 16.11612,
 15.76733,Chk Pass,,
 Sn,189.989 {477},Y1,ppm, -.008139,.0043670,53.65155, -.005373, -.013174,
 -.005871,Chk Pass,,
 Sr,421.552 { 80},Y2A,ppm, .2037034,.0006867,.3371072, .2031816, .2034471,
 .2044813,Chk Pass,,
 Th,283.730 {119},Y2R,ppm, -.006964,.0190886,274.1184, -.027450, -.003763,
 .0103221,Chk Pass,,
 Ti,334.941 {101},Y2A,ppm, .0030309,.0000731,2.411274, .0030845, .0029476,
 .0030605,Chk Pass,,
 Tl,190.856 {477},Y1,ppm, .0065137,.0015088,23.16437, .0067390, .0049048,
 .0078972,Chk Pass,,
 V,292.402 {115},Y2A,ppm, .0003337,.0005825,174.5405, -.000140, .0001576,
 .0009840,Chk Pass,,
 W,207.911 {462},Y1,ppm, .0011216,.0012735,113.5386, .0025058, -.000000, .0008592,Chk
 Pass,,
 Zn,213.856 {458},Y1,ppm, .1941826,.0008760,.4511445, .1938208, .1951816,
 .1935455,Chk Pass,,
 Zr,339.198 { 99},Y2R,ppm, .0022936,.0046587,203.1218, .0071919, -.002081,
 .0017702,Chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Y1,224.306 {450},Cts/S, 3190.081,11.21408,.3515297,3202.720,3181.322,3186.201
 Y2A,371.030 { 91}2,Cts/S, 151014.7,1355.217,.8974078,152182.7,151332.6,149528.8
 Y2R,371.030 { 91}3,Cts/S, 4322.056,30.85438,.7138821,4329.294,4288.226,4348.647

[Sample Header]

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 Custom ID2=
 Custom ID3=
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 Sample Type=Unk
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

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[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, -.000741,.0008033,108.3377, -.001623, -.000052,
 -.000549,Chk Pass,,
 Al,308.215 {109},Y2R,ppm, -.062033,.1945425,313.6099, -.055662, .1292451,
 -.259683,Chk Pass,,
 Al ax,308.215 {109}2,Y2A,ppm, .0118627,.0054694,46.10595, .0180873, .0096750,
 .0078257,Chk Pass,,
 As,189.042 {478},Y1,ppm, -.006988,.0098252,140.5993, -.011554, -.013700,
 .0042892,Chk Pass,,
 B,249.773 {135},Y2A,ppm, .0011440,.0005423,47.40365, .0011854, .0016644,
 .0005822,Chk Pass,,
 Ba,455.403 { 74},Y2A,ppm, .0000043,.0000312,731.6166, .0000243, .0000201,
 -.000032,Chk Pass,,
 Be,313.042 {108},Y2A,ppm, .0002918,.0000138,4.719536, .0002866, .0003074,
 .0002813,Chk Pass,,
 Ca,317.933 {106},Y2R,ppm, -.005036,.0145579,289.0618, .0094452, -.004885,
 -.019669,Chk Pass,,
 Cd,226.502 {449},Y1,ppm, .0002295,.0001303,56.75273, .0000823, .0003297,
 .0002766,Chk Pass,,
 Co,228.616 {447},Y1,ppm, .0002575,.0003578,138.9352, -.000126, .0005829,
 .0003152,Chk Pass,,
 Cr,267.716 {126},Y2A,ppm, -.000714,.0009902,138.7477, -.000638, -.001739,
 .0002366,Chk Pass,,
 Cu,327.396 {103},Y2A,ppm, -.000876,.0015613,178.2222, .0003568, -.002632,
 -.000353,Chk Pass,,
 Fe,261.187 {129},Y2R,ppm, .0014210,.0111978,788.0162, -.010558, .0031964,
 .0116251,Chk Pass,,
 K,766.490 { 44},Y2R,ppm, .3819362,.0312666,8.186351, .4150635, .3778040,
 .3529412,Chk Pass,,
 Li,670.784 { 50},Y2R,ppm, .0221219,.0036578,16.53494, .0223273, .0183656,
 .0256726,Chk Pass,,
 Mg,285.213 {118},Y2R,ppm, -.001007,.0057071,566.9935, -.007581, .0018911,
 .0026704,Chk Pass,,
 Mn,257.610 {131},Y2A,ppm, .0005918,.0001023,17.28788, .0006249, .0004770,
 .0006734,Chk Pass,,
 Mo,202.030 {467},Y1,ppm, .0006531,.0004980,76.24488, .0012281, .0003668,
 .0003644,Chk Pass,,
 Na,589.592 { 57},Y2R,ppm, .1038136,.0090276,8.695930, .0999492, .0973616,
 .1141302,Chk Pass,,
 Ni,231.604 {445},Y1,ppm, .0007353,.0006864,93.35521, -.000055, .0010763,
 .0011843,Chk Pass,,
 P,177.495 {490},Y1,ppm, -.003736,.0045340,121.3477, -.006785, .0014739, -.005898,Chk
 Pass,,
 Pb,220.353 {453},Y1,ppm, -.000820,.0018776,228.9361, .0003936, .0001287,
 -.002983,Chk Pass,,
 S,182.034 {485},Y1,ppm, .0373627,.0144899,38.78180, .0513990, .0224581, .0382311,Chk
 Pass,,
 Sb,206.833 {463},Y1,ppm, .0023086,.0007287,31.56530, .0023660, .0015528,
 .0030069,Chk Pass,,
 Se,196.090 {472},Y1,ppm, -.001900,.0006053,31.86195, -.001695, -.001424,
 -.002581,Chk Pass,,
 Si,251.611 {134},Y2R,ppm, .0133408,.0099471,74.56118, .0033249, .0232175,
 .0134799,Chk Pass,,
 Sn,189.989 {477},Y1,ppm, -.011302,.0040257,35.61884, -.006691, -.014114,
 -.013102,Chk Pass,,
 Sr,421.552 { 80},Y2A,ppm, .0000647,.0000105,16.16310, .0000560, .0000617,
 .0000763,Chk Pass,,
 Th,283.730 {119},Y2R,ppm, -.007091,.0453620,639.6806, -.057462, .0305369,
 .0056508,Chk Pass,,
 Ti,334.941 {101},Y2A,ppm, -.000070,.0000792,113.3707, -.000102, -.000128,
 .0000203,Chk Pass,,

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Tl,190.856 {477},Y1,ppm, .0068079,.0017661,25.94178, .0088255, .0055425,
 .0060556,Chk Pass,,
 V,292.402 {115},Y2A,ppm, .0002326,.0001834,78.82945, .0003574, .0003185,
 .0000221,Chk Pass,,
 W,207.911 {462},Y1,ppm, .0003038,.0005803,191.0109, .0006043, -.000365, .0006723,Chk
 Pass,,
 Zn,213.856 {458},Y1,ppm, .0000181,.0000365,201.4959, .0000467, -.000023,
 .0000306,Chk Pass,,
 Zr,339.198 { 99},Y2R,ppm, .0075763,.0083265,109.9022, .0130677, -.002004,
 .0116652,Chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Y1,224.306 {450},Cts/S, 3034.503,3.965314,.1306742,3038.231,3034.942,3030.337
 Y2A,371.030 { 91}2,Cts/S, 143760.0,919.6895,.6397394,143969.7,142753.6,144556.8
 Y2R,371.030 { 91}3,Cts/S, 3971.900,26.70177,.6722669,3962.525,4002.025,3951.150

[Sample Header]

Method=New TRACE Fast w axial Al(v227)
 SampleName=410-3348-C-19-A
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 10:42:19
 Sample Type=Unk
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, -.001075,.0005447,50.68491, -.000762, -.001704,
 -.000759,Chk Pass,,
 Al,308.215 {109},Y2R,ppm, .0391838,.1620940,413.6755, .2080810, -.115120,
 .0245908,Chk Pass,,
 Al ax,308.215 {109}2,Y2A,ppm, .0079954,.0052398,65.53567, .0107386, .0112941,
 .0019535,Chk Pass,,
 As,189.042 {478},Y1,ppm, -.001440,.0012704,88.21007, -.002710, -.000169,
 -.001442,Chk Pass,,
 B,249.773 {135},Y2A,ppm, .0227211,.0011660,5.131586, .0235976, .0231679,
 .0213979,Chk Pass,,
 Ba,455.403 { 74},Y2A,ppm, .0317532,.0002201,.6930325, .0315741, .0316865,
 .0319988,Chk Pass,,
 Be,313.042 {108},Y2A,ppm, .0002740,.0000099,3.627050, .0002636, .0002834,
 .0002748,Chk Pass,,
 Ca,317.933 {106},Y2R,ppm, 19.33508,.0614072,.3175945, 19.37147, 19.26419,
 19.36960,Chk Pass,,
 Cd,226.502 {449},Y1,ppm, .0001799,.0000697,38.73010, .0002192, .0002209,
 .0000994,Chk Pass,,
 Co,228.616 {447},Y1,ppm, .0033974,.0001712,5.039022, .0034196, .0032162,
 .0035564,Chk Pass,,
 Cr,267.716 {126},Y2A,ppm, .0008518,.0002335,27.41235, .0009811, .0005823,
 .0009921,Chk Pass,,
 Cu,327.396 {103},Y2A,ppm, .0016708,.0002662,15.93051, .0015681, .0019730,
 .0014712,Chk Pass,,
 Fe,261.187 {129},Y2R,ppm, .0565179,.0056271,9.956370, .0616010, .0574815,
 .0504712,Chk Pass,,
 K,766.490 { 44},Y2R,ppm, 3.472077,.0163524,.4709682, 3.453197, 3.481241,
 3.481791,Chk Pass,,
 Li,670.784 { 50},Y2R,ppm, .0263245,.0014668,5.572100, .0252201, .0257645,
 .0279888,Chk Pass,,

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Mg,285.213 {118},Y2R,ppm, 19.46288,.1697808,.8723313, 19.35134, 19.37904,
 19.65828,Chk Pass,,
 Mn,257.610 {131},Y2A,ppm, 1.757997,.0080190,.4561420, 1.763619, 1.748814,
 1.761558,Chk Pass,,
 Mo,202.030 {467},Y1,ppm, .0001961,.0009870,503.3915, .0013042, -.000127,
 -.000589,Chk Pass,,
 Na,589.592 { 57},Y2R,ppm, 97.16120,.4407258,.4536027, 96.66018, 97.33439,
 97.48902,Chk Pass,,
 Ni,231.604 {445},Y1,ppm, .0054890,.0006511,11.86100, .0050499, .0062370,
 .0051801,Chk Pass,,
 P,177.495 {490},Y1,ppm, -.008910,.0060147,67.50795, -.008917, -.014921, -.002891,Chk
 Pass,,
 Pb,220.353 {453},Y1,ppm, .0030232,.0036083,119.3534, .0019906, .0000438,
 .0070352,Chk Pass,,
 S,182.034 {485},Y1,ppm, 54.29798,.0563367,.1037547, 54.35278, 54.24023, 54.30094,Chk
 Pass,,
 Sb,206.833 {463},Y1,ppm, .0007792,.0049615,636.7624, .0065073, -.002171,
 -.001999,Chk Pass,,
 Se,196.090 {472},Y1,ppm, -.000268,.0051832,1932.607, -.001863, .0055250,
 -.004467,Chk Pass,,
 Si,251.611 {134},Y2R,ppm, 7.881149,.0669560,.8495710, 7.860989, 7.826590,
 7.955869,Chk Pass,,
 Sn,189.989 {477},Y1,ppm, -.009787,.0058763,60.04348, -.003448, -.010859,
 -.015053,Chk Pass,,
 Sr,421.552 { 80},Y2A,ppm, .1450951,.0001621,.1117457, .1449173, .1451334,
 .1452347,Chk Pass,,
 Th,283.730 {119},Y2R,ppm, -.031149,.0278654,89.45823, -.000970, -.036574,
 -.055903,Chk Pass,,
 Ti,334.941 {101},Y2A,ppm, .0016652,.0000608,3.650247, .0015957, .0017085,
 .0016915,Chk Pass,,
 Tl,190.856 {477},Y1,ppm, .0030593,.0048113,157.2710, -.000987, .0017859,
 .0083792,Chk Pass,,
 V,292.402 {115},Y2A,ppm, .0008943,.0002991,33.44638, .0007880, .0006629,
 .0012320,Chk Pass,,
 W,207.911 {462},Y1,ppm, .0009158,.0014967,163.4170, .0020981, .0014164, -.000767,Chk
 Pass,,
 Zn,213.856 {458},Y1,ppm, .0041824,.0001207,2.886826, .0040488, .0042147,
 .0042838,Chk Pass,,
 Zr,339.198 { 99},Y2R,ppm, .0040043,.0069245,172.9279, .0096424, -.003725,
 .0060951,Chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Y1,224.306 {450},Cts/S, 2943.949,1.486091,.0504795,2945.371,2944.071,2942.406
 Y2A,371.030 { 91}2,Cts/S, 137456.4,781.0746,.5682344,137052.0,138356.8,136960.5
 Y2R,371.030 { 91}3,Cts/S, 3892.303,29.07082,.7468796,3922.087,3890.819,3864.002

[Sample Header]

Method=New TRACE Fast w axial Al(v227)
 SampleName=410-3348-C-16-A
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 10:45:26
 Sample Type=Unk
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
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Ag,328.068 {103},Y2A,ppm, -.000705,.0012498,177.3086, -.001042, -.001751,
 .0006790,Chk Pass,,
 Al,308.215 {109},Y2R,ppm, -.080539,.1658191,205.8861, -.242329, -.088324,
 .0890352,Chk Pass,,
 Al ax,308.215 {109}2,Y2A,ppm, -.013620,.0147903,108.5945, .0001476, -.011751,
 -.029256,Chk Pass,,
 As,189.042 {478},Y1,ppm, -.007664,.0023142,30.19638, -.005191, -.008023,
 -.009777,Chk Pass,,
 B,249.773 {135},Y2A,ppm, .3882285,.0007806,.2010683, .3879337, .3891135,
 .3876382,Chk Pass,,
 Ba,455.403 { 74},Y2A,ppm, 1.021772,.0079674,.7797660, 1.029497, 1.013582,
 1.022237,Chk Pass,,
 Be,313.042 {108},Y2A,ppm, -.000086,.0000064,7.439649, -.000091, -.000079,
 -.000089,Chk Pass,,
 Ca,317.933 {106},Y2R,ppm, 371.0901,2.438498,.6571176, 368.5546, 373.4184,
 371.2973,Chk Pass,,
 Cd,226.502 {449},Y1,ppm, .0018864,.0001630,8.638665, .0018321, .0020696,
 .0017575,Chk Pass,,
 Co,228.616 {447},Y1,ppm, .0297591,.0002294,.7709062, .0300034, .0295482,
 .0297258,Chk Pass,,
 Cr,267.716 {126},Y2A,ppm, -.001394,.0007499,53.79862, -.001202, -.000759,
 -.002221,Chk Pass,,
 Cu,327.396 {103},Y2A,ppm, .0042152,.0024582,58.31711, .0053869, .0058684,
 .0013904,Chk Pass,,
 Fe,261.187 {129},Y2R,ppm, 67.61264,.0730006,.1079689, 67.52934, 67.64314,
 67.66545,Chk Pass,,
 K,766.490 { 44},Y2R,ppm, 46.29800,.2039070,.4404230, 46.06255, 46.41432,
 46.41711,Chk Pass,,
 Li,670.784 { 50},Y2R,ppm, .0521492,.0006069,1.163774, .0517109, .0518948,
 .0528419,Chk Pass,,
 Mg,285.213 {118},Y2R,ppm, 195.7884,1.496091,.7641368, 194.1527, 197.0876,
 196.1247,Chk Pass,,
 Mn,257.610 {131},Y2A,ppm, 3.937704,.0106898,.2714738, 3.931743, 3.950045,
 3.931324,Chk Pass,,
 Mo,202.030 {467},Y1,ppm, -.000171,.0021997,1284.627, .0013887, .0007847,
 -.002687,Chk Pass,,
 Na,589.592 { 57},Y2R,ppm,F 1353.029,18.89167,1.396250, 1359.865, 1367.551,
 1331.671,Chk Fail,450.0000,-1.00000
 Ni,231.604 {445},Y1,ppm, .0177327,.0010453,5.894684, .0187244, .0166410,
 .0178325,Chk Pass,,
 P,177.495 {490},Y1,ppm, .1733163,.0053959,3.113321, .1685886, .1721656, .1791947,Chk
 Pass,,
 Pb,220.353 {453},Y1,ppm, -.007195,.0037450,52.04908, -.003684, -.011137,
 -.006765,Chk Pass,,
 S,182.034 {485},Y1,ppm, 54.36715,.2172241,.3995503, 54.43084, 54.54540, 54.12520,Chk
 Pass,,
 Sb,206.833 {463},Y1,ppm, .0020564,.0036160,175.8444, .0059743, -.001153,
 .0013475,Chk Pass,,
 Se,196.090 {472},Y1,ppm, .0067502,.0051959,76.97417, .0124497, .0022773,
 .0055237,Chk Pass,,
 Si,251.611 {134},Y2R,ppm, 19.54366,.0935704,.4787764, 19.43630, 19.60783,
 19.58686,Chk Pass,,
 Sn,189.989 {477},Y1,ppm, -.011003,.0046035,41.83877, -.009601, -.007263,
 -.016144,Chk Pass,,
 Sr,421.552 { 80},Y2A,ppm, 2.534512,.0091825,.3622997, 2.542612, 2.524537,
 2.536386,Chk Pass,,
 Th,283.730 {119},Y2R,ppm, .0204838,.0498216,243.2248, -.000276, -.015601,
 .0773284,Chk Pass,,
 Ti,334.941 {101},Y2A,ppm, -.001436,.0000991,6.899827, -.001361, -.001399,
 -.001548,Chk Pass,,
 Tl,190.856 {477},Y1,ppm, .0066606,.0028884,43.36600, .0079479, .0086816,
 .0033523,Chk Pass,,
 V,292.402 {115},Y2A,ppm, -.000330,.0006628,200.6740, -.000579, -.000832,

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.0004210,Chk Pass,,
 W,207.911 {462},Y1,ppm, .0002714,.0021895,806.7145, -.000305, .0026914, -.001573,Chk
 Pass,,
 Zn,213.856 {458},Y1,ppm, .4660420,.0008534,.1831194, .4664387, .4666249,
 .4650625,Chk Pass,,
 Zr,339.198 { 99},Y2R,ppm, .0023911,.0099978,418.1230, -.001328, .0137153,
 -.005214,Chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Y1,224.306 {450},Cts/S, 2436.876,8.273049,.3394940,2445.331,2436.501,2428.797
 Y2A,371.030 { 91}2,Cts/S, 115366.8,423.7166,.3672776,115160.0,115854.3,115086.3
 Y2R,371.030 { 91}3,Cts/S, 3763.887,40.12566,1.066070,3807.011,3727.652,3756.997

[Sample Header]

Method=New TRACE Fast w axial Al(v227)
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 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 10:48:56
 Sample Type=Unk
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, -.000838,.0004173,49.78308, -.000553, -.001317,
 -.000645,Chk Pass,,
 Al,308.215 {109},Y2R,ppm, -.104725,.0651564,62.21643, -.071421, -.062952,
 -.179802,Chk Pass,,
 Al ax,308.215 {109}2,Y2A,ppm, -.022119,.0036139,16.33852, -.025997, -.018845,
 -.021515,Chk Pass,,
 As,189.042 {478},Y1,ppm, -.008358,.0148146,177.2530, -.025464, .0001749,
 .0002158,Chk Pass,,
 B,249.773 {135},Y2A,ppm, 1.576321,.0082006,.5202339, 1.577036, 1.584141,
 1.567787,Chk Pass,,
 Ba,455.403 { 74},Y2A,ppm, .1134952,.0004119,.3629441, .1130329, .1138231,
 .1136298,Chk Pass,,
 Be,313.042 {108},Y2A,ppm, .0001678,.0000144,8.556713, .0001802, .0001712,
 .0001521,Chk Pass,,
 Ca,317.933 {106},Y2R,ppm, 176.2307,1.081802,.6138556, 175.5989, 177.4798,
 175.6133,Chk Pass,,
 Cd,226.502 {449},Y1,ppm, -.000100,.0001160,115.7854, -.000081, -.000225,
 .0000049,Chk Pass,,
 Co,228.616 {447},Y1,ppm, .0048988,.0003606,7.360110, .0053151, .0046924,
 .0046888,Chk Pass,,
 Cr,267.716 {126},Y2A,ppm, .0003145,.0004073,129.5010, .0002715, .0007415,
 -.000070,Chk Pass,,
 Cu,327.396 {103},Y2A,ppm, .0031346,.0011203,35.74077, .0024133, .0044253,
 .0025652,Chk Pass,,
 Fe,261.187 {129},Y2R,ppm, .0657099,.0386067,58.75318, .0865970, .0893731,
 .0211596,Chk Pass,,
 K,766.490 { 44},Y2R,ppm, 147.4667,.6947807,.4711442, 146.8932, 148.2393,
 147.2676,Chk Pass,,
 Li,670.784 { 50},Y2R,ppm, .0788939,.0015333,1.943542, .0771566, .0794667,
 .0800583,Chk Pass,,
 Mg,285.213 {118},Y2R,ppm, 406.8133,4.915655,1.208332, 404.3944, 412.4697,
 403.5758,Chk Pass,,
 Mn,257.610 {131},Y2A,ppm, .1526607,.0014472,.9479853, .1528623, .1539966,

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.1511233,Chk Pass,,
 Mo,202.030 {467},Y1,ppm, .0009641,.0009386,97.35148, .0019254, .0000500,
 .0009169,Chk Pass,,
 Na,589.592 { 57},Y2R,ppm,F 1615.854,39.84051,2.465602, 1641.579, 1636.020,
 1569.962,Chk Fail,450.0000,-1.00000
 Ni,231.604 {445},Y1,ppm, .0033475,.0006850,20.46234, .0041110, .0031449,
 .0027867,Chk Pass,,
 P,177.495 {490},Y1,ppm, .8113346,.0112062,1.381201, .8218103, .7995185, .8126750,Chk
 Pass,,
 Pb,220.353 {453},Y1,ppm, .0040789,.0018749,45.96545, .0039949, .0059944,
 .0022474,Chk Pass,,
 S,182.034 {485},Y1,ppm,F 379.2162,1.998906,.5271153, 381.2708, 379.0997,
 377.2781,Chk Fail,180.0000,-.500000
 Sb,206.833 {463},Y1,ppm, .0086005,.0050801,59.06814, .0092372, .0032320,
 .0133322,Chk Pass,,
 Se,196.090 {472},Y1,ppm, .0324592,.0201337,62.02779, .0137842, .0298049,
 .0537883,Chk Pass,,
 Si,251.611 {134},Y2R,ppm, 2.632050,.0015231,.0578683, 2.633351, 2.630375,
 2.632424,Chk Pass,,
 Sn,189.989 {477},Y1,ppm, -.007043,.0031723,45.04201, -.003688, -.007448,
 -.009994,Chk Pass,,
 Sr,421.552 { 80},Y2A,ppm, 2.812505,.0240126,.8537811, 2.800674, 2.840137,
 2.796703,Chk Pass,,
 Th,283.730 {119},Y2R,ppm, -.019520,.0237029,121.4313, .0073528, -.037454,
 -.028458,Chk Pass,,
 Ti,334.941 {101},Y2A,ppm, .0016397,.0002467,15.04637, .0016490, .0013885,
 .0018817,Chk Pass,,
 Tl,190.856 {477},Y1,ppm, .0054784,.0039123,71.41385, .0099475, .0038156,
 .0026721,Chk Pass,,
 V,292.402 {115},Y2A,ppm, -.000103,.0008209,793.2065, -.000396, .0008236,
 -.000738,Chk Pass,,
 W,207.911 {462},Y1,ppm, .0002092,.0010331,493.6979, .0010027, .0005840, -.000959,Chk
 Pass,,
 Zn,213.856 {458},Y1,ppm, .0006358,.0001891,29.74343, .0005441, .0008533,
 .0005100,Chk Pass,,
 Zr,339.198 { 99},Y2R,ppm, -.000573,.0048968,854.3961, .0021826, .0023249,
 -.006227,Chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Y1,224.306 {450},Cts/S, 2332.864,4.768372,.2043999,2330.990,2329.317,2338.285
 Y2A,371.030 { 91}2,Cts/S, 109255.1,1262.587,1.155632,109040.3,108113.7,110611.3
 Y2R,371.030 { 91}3,Cts/S, 3596.505,32.91601,.9152223,3623.752,3559.932,3605.829

[Sample Header]

Method=New TRACE Fast w axial Al(v227)
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 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 10:52:21
 Sample Type=Unk
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, -.000602,.0008014,133.2384, -.000925, -.001191,
 .0003111,Chk Pass,,
 Al,308.215 {109},Y2R,ppm, -.093395,.0500390,53.57789, -.150374, -.073206,

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-.056604,Chk Pass,,
 Al,308.215 {109},Y2A,ppm, .0003804,.0044659,1173.968, -.002986, .0054467,
 -.001320,Chk Pass,,
 As,189.042 {478},Y1,ppm, -.000020,.0159851,79860.96, .0121415, .0059241,
 -.018126,Chk Pass,,
 B,249.773 {135},Y2A,ppm, .6591063,.0024045,.3648085, .6608735, .6563682,
 .6600772,Chk Pass,,
 Ba,455.403 { 74},Y2A,ppm, .0272144,.0001721,.6323028, .0271707, .0270684,
 .0274041,Chk Pass,,
 Be,313.042 {108},Y2A,ppm, .0002718,.0000036,1.315246, .0002759, .0002703,
 .0002692,Chk Pass,,
 Ca,317.933 {106},Y2R,ppm, 70.49025,.5624041,.7978466, 70.27925, 70.06386,
 71.12764,Chk Pass,,
 Cd,226.502 {449},Y1,ppm, -.000063,.0001602,252.2630, -.000246, .0000003,
 .0000549,Chk Pass,,
 Co,228.616 {447},Y1,ppm, .0033539,.0006182,18.43299, .0026617, .0038511,
 .0035488,Chk Pass,,
 Cr,267.716 {126},Y2A,ppm, -.000260,.0006757,260.2248, -.001037, .0001844,
 .0000739,Chk Pass,,
 Cu,327.396 {103},Y2A,ppm, .0040706,.0025097,61.65385, .0041771, .0065253,
 .0015094,Chk Pass,,
 Fe,261.187 {129},Y2R,ppm, .0510593,.0178062,34.87365, .0584129, .0640109,
 .0307540,Chk Pass,,
 K,766.490 { 44},Y2R,ppm, 61.14106,.2926459,.4786406, 60.92097, 61.02903,
 61.47316,Chk Pass,,
 Li,670.784 { 50},Y2R,ppm, .0488141,.0022460,4.601184, .0469839, .0513206,
 .0481379,Chk Pass,,
 Mg,285.213 {118},Y2R,ppm, 172.7364,2.420239,1.401117, 171.6109, 171.0840,
 175.5145,Chk Pass,,
 Mn,257.610 {131},Y2A,ppm, .2756540,.0011848,.4298138, .2767822, .2744198,
 .2757601,Chk Pass,,
 Mo,202.030 {467},Y1,ppm, .0034831,.0008320,23.88704, .0042514, .0025994,
 .0035986,Chk Pass,,
 Na,589.592 { 57},Y2R,ppm,F 1042.471,8.136893,.7805393, 1050.108, 1033.913,
 1043.391,Chk Fail,450.0000,-1.00000
 Ni,231.604 {445},Y1,ppm, .0029330,.0021758,74.18231, .0033576, .0005763,
 .0048653,Chk Pass,,
 P,177.495 {490},Y1,ppm, .0710210,.0043843,6.173284, .0662414, .0719656, .0748560,Chk
 Pass,,
 Pb,220.353 {453},Y1,ppm, .0004225,.0013245,313.4718, -.000265, .0019495,
 -.000417,Chk Pass,,
 S,182.034 {485},Y1,ppm, 144.7896,.5851310,.4041250, 144.4645, 145.4651, 144.4392,Chk
 Pass,,
 Sb,206.833 {463},Y1,ppm, .0024985,.0016457,65.86596, .0006064, .0032921,
 .0035969,Chk Pass,,
 Se,196.090 {472},Y1,ppm, .0116967,.0088481,75.64659, .0165106, .0170942,
 .0014853,Chk Pass,,
 Si,251.611 {134},Y2R,ppm, 1.578015,.0298022,1.888592, 1.545057, 1.585918,
 1.603069,Chk Pass,,
 Sn,189.989 {477},Y1,ppm, -.007863,.0060518,76.96920, -.007132, -.014247,
 -.002209,Chk Pass,,
 Sr,421.552 { 80},Y2A,ppm, 1.115372,.0031527,.2826616, 1.118414, 1.112119,
 1.115585,Chk Pass,,
 Th,283.730 {119},Y2R,ppm, -.028391,.0378335,133.2571, -.029077, -.065877,
 .0097804,Chk Pass,,
 Ti,334.941 {101},Y2A,ppm, .0023982,.0002088,8.707717, .0024769, .0021615,
 .0025563,Chk Pass,,
 Tl,190.856 {477},Y1,ppm, .0054091,.0037651,69.60747, .0011711, .0066879,
 .0083682,Chk Pass,,
 V,292.402 {115},Y2A,ppm, .0003118,.0006447,206.7815, .0001731, -.000252,
 .0010145,Chk Pass,,
 W,207.911 {462},Y1,ppm, .0013227,.0009707,73.38484, .0002122, .0020094, .0017464,Chk
 Pass,,

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Zn,213.856 {458},Y1,ppm, .0029472,.0001080,3.664732, .0028241, .0030260,
 .0029916,Chk Pass,,
 Zr,339.198 { 99},Y2R,ppm, .0064276,.0067805,105.4905, .0096590, .0109881,
 -.001364,Chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3

Y1,224.306 {450},Cts/S, 2567.580,9.608774,.3742347,2578.607,2561.004,2563.129
 Y2A,371.030 { 91}2,Cts/S, 119274.0,199.9879,.1676711,119276.5,119472.6,119072.7
 Y2R,371.030 { 91}3,Cts/S, 3731.374,49.64215,1.330399,3763.664,3756.245,3674.212

[Sample Header]

Method=New TRACE Fast w axial Al(v227)

SampleName=410-3241-C-9-A

Username=dept 22

Comment=

Custom ID1=

Custom ID2=

Custom ID3=

Run Time=6/12/2020 10:55:44

Sample Type=Unk

Mode=CONC

CorrFactor=1.000

Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High

Ag,328.068 {103},Y2A,ppm, -.000901,.0004204,46.64346, -.001383, -.000607,
 -.000714,Chk Pass,,

Al,308.215 {109},Y2R,ppm, -.059311,.0155827,26.27293, -.069707, -.041394,
 -.066832,Chk Pass,,

Al ax,308.215 {109}2,Y2A,ppm, .0046450,.0017684,38.07145, .0050676, .0027036,
 .0061639,Chk Pass,,

As,189.042 {478},Y1,ppm, .0017448,.0115480,661.8557, -.009195, .0138172,
 .0006125,Chk Pass,,

B,249.773 {135},Y2A,ppm, .5183078,.0039520,.7624851, .5226072, .5148334,
 .5174827,Chk Pass,,

Ba,455.403 { 74},Y2A,ppm, .0622938,.0002758,.4427102, .0625944, .0622347,
 .0620524,Chk Pass,,

Be,313.042 {108},Y2A,ppm, .0002615,.0000178,6.800534, .0002418, .0002664,
 .0002763,Chk Pass,,

Ca,317.933 {106},Y2R,ppm, 91.41214,.0972829,.1064223, 91.42778, 91.30798,
 91.50065,Chk Pass,,

Cd,226.502 {449},Y1,ppm, -.000066,.0002383,362.1362, -.000004, -.000329,
 .0001356,Chk Pass,,

Co,228.616 {447},Y1,ppm, .0032376,.0007732,23.88248, .0038275, .0023622,
 .0035230,Chk Pass,,

Cr,267.716 {126},Y2A,ppm, .0006392,.0004525,70.79437, .0001667, .0006822,
 .0010687,Chk Pass,,

Cu,327.396 {103},Y2A,ppm, .0056180,.0010133,18.03694, .0067009, .0046928,
 .0054604,Chk Pass,,

Fe,261.187 {129},Y2R,ppm, .0168499,.0229478,136.1893, .0332579, .0266649,
 -.009373,Chk Pass,,

K,766.490 { 44},Y2R,ppm, 45.51658,.1401603,.3079325, 45.40441, 45.67370,
 45.47163,Chk Pass,,

Li,670.784 { 50},Y2R,ppm, .0411467,.0021725,5.279815, .0387533, .0429940,
 .0416928,Chk Pass,,

Mg,285.213 {118},Y2R,ppm, 132.0519,.7957029,.6025685, 132.1838, 131.1984,
 132.7733,Chk Pass,,

Mn,257.610 {131},Y2A,ppm, .0475896,.0004776,1.003550, .0480008, .0470658,
 .0477022,Chk Pass,,

Mo,202.030 {467},Y1,ppm, .0045316,.0012285,27.10901, .0058409, .0034044,
 .0043494,Chk Pass,,

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Na,589.592 { 57},Y2R,ppm,F 852.9289,5.980013,.7011150, 856.8883, 855.8485,
 846.0499,Chk Fail,450.0000,-1.00000
 Ni,231.604 {445},Y1,ppm, .0041995,.0024728,58.88345, .0048366, .0014705,
 .0062914,Chk Pass,,
 P,177.495 {490},Y1,ppm, .0809977,.0030435,3.757485, .0845110, .0791697, .0793123,Chk
 Pass,,
 Pb,220.353 {453},Y1,ppm, -.000528,.0029235,553.2198, -.000441, -.003495,
 .0023505,Chk Pass,,
 S,182.034 {485},Y1,ppm, 124.5899,.4393999,.3526770, 125.0162, 124.6151, 124.1384,Chk
 Pass,,
 Sb,206.833 {463},Y1,ppm, .0064947,.0036635,56.40667, .0077122, .0023775,
 .0093944,Chk Pass,,
 Se,196.090 {472},Y1,ppm, .0020368,.0041762,205.0389, .0057553, .0028364,
 -.002481,Chk Pass,,
 Si,251.611 {134},Y2R,ppm, 2.589647,.0112972,.4362451, 2.583461, 2.602686,
 2.582792,Chk Pass,,
 Sn,189.989 {477},Y1,ppm, -.006570,.0045806,69.71959, -.006160, -.011342,
 -.002208,Chk Pass,,
 Sr,421.552 { 80},Y2A,ppm, .8845685,.0049047,.5544732, .8897136, .8799460,
 .8840459,Chk Pass,,
 Th,283.730 {119},Y2R,ppm, -.024742,.0138044,55.79387, -.040666, -.016174,
 -.017385,Chk Pass,,
 Ti,334.941 {101},Y2A,ppm, .0023814,.0001373,5.766724, .0022414, .0023870,
 .0025159,Chk Pass,,
 Tl,190.856 {477},Y1,ppm, .0062884,.0008954,14.23874, .0059600, .0056036,
 .0073016,Chk Pass,,
 V,292.402 {115},Y2A,ppm, .0005567,.0003247,58.32446, .0008551, .0002109,
 .0006040,Chk Pass,,
 W,207.911 {462},Y1,ppm, -.001365,.0024062,176.3302, -.003825, .0009834, -.001252,Chk
 Pass,,
 Zn,213.856 {458},Y1,ppm, .0043032,.0002310,5.367235, .0045693, .0041558,
 .0041843,Chk Pass,,
 Zr,339.198 { 99},Y2R,ppm, .0093303,.0010998,11.78741, .0089726, .0084538,
 .0105644,Chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Y1,224.306 {450},Cts/S, 2616.538,9.323101,.3563143,2606.299,2618.778,2624.537
 Y2A,371.030 { 91}2,Cts/S, 121961.8,612.9772,.5025976,121977.1,122567.0,121341.3
 Y2R,371.030 { 91}3,Cts/S, 3804.923,20.38427,.5357342,3826.262,3802.858,3785.650

[Sample Header]

Method=New TRACE Fast w axial Al(v227)
 SampleName=410-3311-G-1-A
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 10:59:07
 Sample Type=Unk
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, -.001221,.0004742,38.84872, -.001145, -.000789,
 -.001728,Chk Pass,,
 Al,308.215 {109},Y2R,ppm, .0171712,.0613329,357.1849, .0872312, -.008892,
 -.026826,Chk Pass,,
 Al ax,308.215 {109}2,Y2A,ppm, .0047116,.0061561,130.6585, .0102779, -.001900,
 .0057574,Chk Pass,,

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As,189.042 {478},Y1,ppm, .0032473,.0112479,346.3810, .0005918, .0155853,
 -.006435,Chk Pass,,
 B,249.773 {135},Y2A,ppm, .0497190,.0001459,.2933985, .0495650, .0498551,
 .0497368,Chk Pass,,
 Ba,455.403 { 74},Y2A,ppm, .0939263,.0006949,.7398412, .0932620, .0946482,
 .0938688,Chk Pass,,
 Be,313.042 {108},Y2A,ppm, .0002347,.0000116,4.927995, .0002269, .0002292,
 .0002480,Chk Pass,,
 Ca,317.933 {106},Y2R,ppm, 51.33612,.3289325,.6407428, 51.14336, 51.14907,
 51.71592,Chk Pass,,
 Cd,226.502 {449},Y1,ppm, .0002135,.0001576,73.80846, .0001584, .0000908,
 .0003912,Chk Pass,,
 Co,228.616 {447},Y1,ppm, -.000387,.0001753,45.33234, -.000557, -.000395,
 -.000207,Chk Pass,,
 Cr,267.716 {126},Y2A,ppm, .0009761,.0003533,36.19589, .0006752, .0013651,
 .0008879,Chk Pass,,
 Cu,327.396 {103},Y2A,ppm, .0019130,.0004453,23.27849, .0022011, .0014001,
 .0021378,Chk Pass,,
 Fe,261.187 {129},Y2R,ppm, -.007276,.0005368,7.377246, -.006681, -.007424,
 -.007723,Chk Pass,,
 K,766.490 { 44},Y2R,ppm, 3.209825,.0492485,1.534305, 3.153151, 3.242226,
 3.234097,Chk Pass,,
 Li,670.784 { 50},Y2R,ppm, .0377886,.0018686,4.944884, .0386568, .0356438,
 .0390651,Chk Pass,,
 Mg,285.213 {118},Y2R,ppm, 7.161275,.0427790,.5973662, 7.127368, 7.147119,
 7.209338,Chk Pass,,
 Mn,257.610 {131},Y2A,ppm, .0002088,.0000339,16.23375, .0001707, .0002203,
 .0002355,Chk Pass,,
 Mo,202.030 {467},Y1,ppm, .0033193,.0008173,24.62286, .0031367, .0042124,
 .0026087,Chk Pass,,
 Na,589.592 { 57},Y2R,ppm, 26.26925,.3047170,1.159976, 25.97169, 26.25542,
 26.58065,Chk Pass,,
 Ni,231.604 {445},Y1,ppm, .0018890,.0009448,50.01317, .0018362, .0009718,
 .0028591,Chk Pass,,
 P,177.495 {490},Y1,ppm, .0025237,.0049134,194.6871, .0061693, .0044658, -.003064,Chk
 Pass,,
 Pb,220.353 {453},Y1,ppm, .0024947,.0025626,102.7215, .0038318, -.000460,
 .0041121,Chk Pass,,
 S,182.034 {485},Y1,ppm, 20.84046,.0917115,.4400645, 20.91833, 20.86366, 20.73937,Chk
 Pass,,
 Sb,206.833 {463},Y1,ppm, .0044779,.0036406,81.30114, .0004605, .0054147,
 .0075586,Chk Pass,,
 Se,196.090 {472},Y1,ppm, .0068371,.0036102,52.80343, .0096378, .0081108,
 .0027627,Chk Pass,,
 Si,251.611 {134},Y2R,ppm, 14.26226,.0989831,.6940214, 14.14803, 14.32284,
 14.31590,Chk Pass,,
 Sn,189.989 {477},Y1,ppm, -.006797,.0015476,22.77055, -.006717, -.008382,
 -.005290,Chk Pass,,
 Sr,421.552 { 80},Y2A,ppm, .3368009,.0014774,.4386615, .3351136, .3374261,
 .3378629,Chk Pass,,
 Th,283.730 {119},Y2R,ppm, -.031193,.0150448,48.23070, -.036893, -.014131,
 -.042555,Chk Pass,,
 Ti,334.941 {101},Y2A,ppm, .0023227,.0001189,5.117439, .0024584, .0022372,
 .0022724,Chk Pass,,
 Tl,190.856 {477},Y1,ppm, .0100988,.0018684,18.50160, .0082761, .0120098,
 .0100105,Chk Pass,,
 V,292.402 {115},Y2A,ppm, .0056466,.0007215,12.77674, .0060323, .0060933,
 .0048143,Chk Pass,,
 W,207.911 {462},Y1,ppm, .0013090,.0006498,49.64113, .0019525, .0006531, .0013214,Chk
 Pass,,
 Zn,213.856 {458},Y1,ppm, .0062132,.0001646,2.650044, .0062321, .0063676,
 .0060399,Chk Pass,,
 Zr,339.198 { 99},Y2R,ppm, .0088372,.0017035,19.27675, .0079823, .0077304,

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.0107989,Chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3

Y1,224.306 {450},Cts/S, 2988.130,2.528059,.0846034,2989.021,2985.276,2990.091

Y2A,371.030 { 91}2,Cts/S, 140362.3,1231.688,.8775064,141375.0,140720.7,138991.2

Y2R,371.030 { 91}3,Cts/S, 3905.599,46.17170,1.182193,3944.871,3917.190,3854.737

[Sample Header]

Method=New TRACE Fast w axial Al(v227)

SampleName=CCV 095153

Username=dept 22

Comment=

Custom ID1=

Custom ID2=

Custom ID3=

Run Time=6/12/2020 11:02:14

Sample Type=QC

Mode=CONC

CorrFactor=1.000

Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High

Ag,328.068 {103},Y2A,ppm, .4979,.0013,.2690, .4964, .4990, .4982,Chk Pass,,

Al,308.215 {109},Y2R,ppm, 24.85,.2164,.8709, 24.85, 25.06, 24.63,Chk Pass,,

Al ax,308.215 {109}2,Y2A,ppm, 24.74,.0985,.3980, 24.68, 24.68, 24.85,Chk Pass,,

As,189.042 {478},Y1,ppm, .5091,.0098,1.924, .5199, .5065, .5009,Chk Pass,,

B,249.773 {135},Y2A,ppm, .4862,.0009,.1851, .4854, .4860, .4872,Chk Pass,,

Ba,455.403 { 74},Y2A,ppm, .5085,.0016,.3205, .5071, .5082, .5103,Chk Pass,,

Be,313.042 {108},Y2A,ppm, .48981,.00089,.18128, .48919, .48942, .49083,Chk Pass,,

Ca,317.933 {106},Y2R,ppm, 24.65,.1633,.6625, 24.58, 24.53, 24.84,Chk Pass,,

Cd,226.502 {449},Y1,ppm, .5028,.0010,.1997, .5039, .5024, .5020,Chk Pass,,

Co,228.616 {447},Y1,ppm, .5018,.0018,.3501, .5033, .5021, .4999,Chk Pass,,

Cr,267.716 {126},Y2A,ppm, .4968,.0020,.4035, .4946, .4972, .4986,Chk Pass,,

Cu,327.396 {103},Y2A,ppm, .5134,.0013,.2500, .5145, .5120, .5137,Chk Pass,,

Fe,261.187 {129},Y2R,ppm, 24.20,.1033,.4270, 24.21, 24.09, 24.30,Chk Pass,,

K,766.490 { 44},Y2R,ppm, 25.64,.1410,.5497, 25.63, 25.51, 25.79,Chk Pass,,

Li,670.784 { 50},Y2R,ppm, .5317,.0054,1.023, .5341, .5255, .5355,Chk Pass,,

Mg,285.213 {118},Y2R,ppm, 24.87,.1566,.6299, 24.69, 24.97, 24.95,Chk Pass,,

Mn,257.610 {131},Y2A,ppm, .49748,.00131,.26403, .49737, .49623, .49885,Chk Pass,,

Mo,202.030 {467},Y1,ppm, .5062,.0034,.6696, .5101, .5038, .5047,Chk Pass,,

Na,589.592 { 57},Y2R,ppm, 25.04,.1480,.5908, 24.91, 25.21, 25.02,Chk Pass,,

Ni,231.604 {445},Y1,ppm, .5036,.0015,.2972, .5040, .5049, .5019,Chk Pass,,

P,177.495 {490},Y1,ppm, .5070,.0021,.4091, .5067, .5092, .5051,Chk Pass,,

Pb,220.353 {453},Y1,ppm, .4960,.0047,.9504, .4931, .4934, .5014,Chk Pass,,

S,182.034 {485},Y1,ppm, 24.99,.1154,.4619, 25.12, 24.90, 24.96,Chk Pass,,

Sb,206.833 {463},Y1,ppm, .5058,.0031,.6074, .5071, .5023, .5080,Chk Pass,,

Se,196.090 {472},Y1,ppm, .5089,.0053,1.033, .5116, .5029, .5123,Chk Pass,,

Si,251.611 {134},Y2R,ppm, 24.313,.08343,.34315, 24.269, 24.261, 24.409,Chk Pass,,

Sn,189.989 {477},Y1,ppm, .4894,.0036,.7276, .4898, .4927, .4856,Chk Pass,,

Sr,421.552 { 80},Y2A,ppm, .5033,.0028,.5516, .5064, .5010, .5026,Chk Pass,,

Th,283.730 {119},Y2R,ppm, .4654,.0242,5.191, .4433, .4912, .4617,Chk Pass,,

Ti,334.941 {101},Y2A,ppm, .5157,.0010,.1966, .5158, .5147, .5167,Chk Pass,,

Tl,190.856 {477},Y1,ppm, .5086,.0028,.5445, .5105, .5054, .5098,Chk Pass,,

V,292.402 {115},Y2A,ppm, .5112,.0019,.3770, .5090, .5121, .5125,Chk Pass,,

W,207.911 {462},Y1,ppm, .5040,.0013,.2518, .5044, .5026, .5051,Chk Pass,,

Zn,213.856 {458},Y1,ppm, .5041,.0009,.1868, .5039, .5033, .5051,Chk Pass,,

Zr,339.198 { 99},Y2R,ppm, .5169,.0082,1.586, .5194, .5077, .5235,Chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3

Y1,224.306 {450},Cts/S, 2927.6,6.2224,.21255,2925.0,2934.6,2923.0

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Y2A,371.030 { 91}2,Cts/S, 138560.,292.12,.21083,138860.,138540.,138280.
 Y2R,371.030 { 91}3,Cts/S, 3912.8,28.102,.71820,3913.1,3940.7,3884.5

[Sample Header]

Method=New TRACE Fast w axial Al(v227)
 SampleName=CCB 078331
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 11:05:28
 Sample Type=QC
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, .0012,.0007,58.72, .0010, .0020, .0006,Chk Pass,,
 Al,308.215 {109},Y2R,ppm, -.0495,.0840,169.9, .0189, -.1433, -.0240,Chk Pass,,
 Al ax,308.215 {109}2,Y2A,ppm, .0083,.0045,54.22, .0033, .0121, .0094,Chk Pass,,
 As,189.042 {478},Y1,ppm, -.0012,.0038,317.1, -.0009, -.0051, .0025,Chk Pass,,
 B,249.773 {135},Y2A,ppm, .0022,.0004,18.24, .0023, .0026, .0018,Chk Pass,,
 Ba,455.403 { 74},Y2A,ppm, .0003,.0002,70.33, .0001, .0005, .0002,Chk Pass,,
 Be,313.042 {108},Y2A,ppm, .00051,.00016,31.573, .00035, .00067, .00050,Chk Pass,,
 Ca,317.933 {106},Y2R,ppm, .0064,.0097,152.0, -.0041, .0150, .0083,Chk Pass,,
 Cd,226.502 {449},Y1,ppm, .0003,.0001,18.16, .0004, .0003, .0003,Chk Pass,,
 Co,228.616 {447},Y1,ppm, .0005,.0005,92.84, .0002, .0011, .0003,Chk Pass,,
 Cr,267.716 {126},Y2A,ppm, -.0004,.0004,103.8, -.0004, .0000, -.0007,Chk Pass,,
 Cu,327.396 {103},Y2A,ppm, -.0000,.0008,2199., .0000, -.0008, .0007,Chk Pass,,
 Fe,261.187 {129},Y2R,ppm, .0197,.0231,116.8, .0398, -.0054, .0248,Chk Pass,,
 K,766.490 { 44},Y2R,ppm,F .3681,.0476,12.94, .3478, .4225, .3340,Chk
 Fail,.2500,-.2500
 Li,670.784 { 50},Y2R,ppm,F .0256,.0035,13.64, .0224, .0250, .0293,Chk
 Fail,.0250,-.0250
 Mg,285.213 {118},Y2R,ppm, .0054,.0047,88.42, .0028, .0108, .0024,Chk Pass,,
 Mn,257.610 {131},Y2A,ppm, .00032,.00015,48.101, .00017, .00048, .00030,Chk Pass,,
 Mo,202.030 {467},Y1,ppm, .0010,.0001,7.456, .0010, .0009, .0009,Chk Pass,,
 Na,589.592 { 57},Y2R,ppm, .2632,.0076,2.906, .2565, .2715, .2615,Chk Pass,,
 Ni,231.604 {445},Y1,ppm, .0011,.0007,68.45, .0019, .0009, .0005,Chk Pass,,
 P,177.495 {490},Y1,ppm, -.0022,.0023,100.8, -.0005, -.0048, -.0014,Chk Pass,,
 Pb,220.353 {453},Y1,ppm, .0025,.0013,53.24, .0040, .0015, .0019,Chk Pass,,
 S,182.034 {485},Y1,ppm, .0576,.0142,24.72, .0614, .0419, .0696,Chk Pass,,
 Sb,206.833 {463},Y1,ppm, .0036,.0022,62.69, .0041, .0011, .0055,Chk Pass,,
 Se,196.090 {472},Y1,ppm, .0011,.0023,203.8, -.0012, .0013, .0033,Chk Pass,,
 Si,251.611 {134},Y2R,ppm, .00173,.02293,1324.4, .02296, .00482, -.02259,Chk Pass,,
 Sn,189.989 {477},Y1,ppm, -.0072,.0032,43.81, -.0036, -.0084, -.0097,Chk Pass,,
 Sr,421.552 { 80},Y2A,ppm, .0004,.0002,45.79, .0002, .0005, .0003,Chk Pass,,
 Th,283.730 {119},Y2R,ppm, .0064,.0221,347.9, -.0174, .0264, .0100,Chk Pass,,
 Ti,334.941 {101},Y2A,ppm, .0001,.0002,114.2, .0001, .0003, .0000,Chk Pass,,
 Tl,190.856 {477},Y1,ppm, .0073,.0022,30.09, .0080, .0049, .0091,Chk Pass,,
 V,292.402 {115},Y2A,ppm, .0007,.0002,29.27, .0009, .0008, .0005,Chk Pass,,
 W,207.911 {462},Y1,ppm, -.0002,.0007,287.7, -.0009, .0005, -.0003,Chk Pass,,
 Zn,213.856 {458},Y1,ppm, .0004,.0002,47.74, .0006, .0003, .0002,Chk Pass,,
 Zr,339.198 { 99},Y2R,ppm, .0047,.0064,136.1, .0016, .0004, .0122,Chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Y1,224.306 {450},Cts/S, 3003.9,2.8532,.09498,3000.9,3006.6,3004.2
 Y2A,371.030 { 91}2,Cts/S, 142770.,916.51,.64194,142720.,143720.,141890.
 Y2R,371.030 { 91}3,Cts/S, 3933.9,10.410,.26462,3941.0,3938.8,3922.0

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[Sample Header]

Method=New TRACE Fast w axial Al(v227)

SampleName=410-3311-G-2-A

Username=dept 22

Comment=

Custom ID1=

Custom ID2=

Custom ID3=

Run Time=6/12/2020 11:08:37

Sample Type=Unk

Mode=CONC

CorrFactor=1.000

Repeats=3

[Results]

Elem	WL	ISRef	Units	Avg	Stddev	RSD	Rep1	Rep2	Rep3	chk_Pass/Fail	chk_Low	chk_High
Ag	328.068	{103}	Y2A,ppm	.0001845	.0010267	556.5471	-.000644	-.000136				
	.0013332		Chk Pass,,									
Al	308.215	{109}	Y2R,ppm	-.029953	.1614059	538.8647	-.040972	.1366802				
	-.185567		Chk Pass,,									
Al	ax,308.215	{109}	2,Y2A,ppm	-.000304	.0106852	3513.654	-.007376	.0119877				
	-.005524		Chk Pass,,									
As	189.042	{478}	Y1,ppm	.0060974	.0149438	245.0841	-.007809	.0042030				
	.0218981		Chk Pass,,									
B	249.773	{135}	Y2A,ppm	.0486113	.0005372	1.105168	.0488966	.0479916				
	.0489456		Chk Pass,,									
Ba	455.403	{74}	Y2A,ppm	.0936603	.0002889	.3084026	.0939128	.0937228				
	.0933454		Chk Pass,,									
Be	313.042	{108}	Y2A,ppm	.0002585	.0000180	6.951799	.0002629	.0002388				
	.0002739		Chk Pass,,									
Ca	317.933	{106}	Y2R,ppm	50.71813	.1400704	.2761743	50.80407	50.55650				
	50.79383		Chk Pass,,									
Cd	226.502	{449}	Y1,ppm	.0002127	.0000771	36.25490	.0002831	.0002248				
	.0001303		Chk Pass,,									
Co	228.616	{447}	Y1,ppm	.0002443	.0003903	159.7484	-.000147	.0002455				
	.0006340		Chk Pass,,									
Cr	267.716	{126}	Y2A,ppm	.0007581	.0008447	111.4317	.0003530	.0017290				
	.0001921		Chk Pass,,									
Cu	327.396	{103}	Y2A,ppm	-.000422	.0004221	100.0507	-.000061	-.000886				
	-.000319		Chk Pass,,									
Fe	261.187	{129}	Y2R,ppm	.0151663	.0107271	70.73007	.0235450	.0188774				
	.0030764		Chk Pass,,									
K	766.490	{44}	Y2R,ppm	3.095031	.0433064	1.399222	3.143402	3.059861				
	3.081831		Chk Pass,,									
Li	670.784	{50}	Y2R,ppm	.0371106	.0008677	2.338109	.0377861	.0361320				
	.0374138		Chk Pass,,									
Mg	285.213	{118}	Y2R,ppm	7.063866	.0350495	.4961801	7.030325	7.061022				
	7.100251		Chk Pass,,									
Mn	257.610	{131}	Y2A,ppm	.0001260	.0000288	22.85816	.0001148	.0001045				
	.0001587		Chk Pass,,									
Mo	202.030	{467}	Y1,ppm	.0029016	.0004540	15.64689	.0033327	.0029445				
	.0024277		Chk Pass,,									
Na	589.592	{57}	Y2R,ppm	26.21965	.0783881	.2989669	26.13659	26.23001				
	26.29234		Chk Pass,,									
Ni	231.604	{445}	Y1,ppm	.0011303	.0017033	150.6965	.0010447	-.000529				
	.0028748		Chk Pass,,									
P	177.495	{490}	Y1,ppm	.0036716	.0035276	96.07613	.0076143	.0008142	.0025864	Chk		
	Pass,,											
Pb	220.353	{453}	Y1,ppm	.0001695	.0006821	402.5402	-.000200	.0009566				
	-.000248		Chk Pass,,									
S	182.034	{485}	Y1,ppm	20.56164	.0359452	.1748169	20.54818	20.60237	20.53437	Chk		
	Pass,,											
Sb	206.833	{463}	Y1,ppm	.0032668	.0016861	51.61414	.0048108	.0035219				

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.0014676,Chk Pass,,
 Se,196.090 {472},Y1,ppm, .0012817,.0109590,854.9992, -.010193, .0023991,
 .0116392,Chk Pass,,
 Si,251.611 {134},Y2R,ppm, 14.22071,.0504245,.3545853, 14.16710, 14.26720,
 14.22781,Chk Pass,,
 Sn,189.989 {477},Y1,ppm, -.005556,.0049365,88.85132, -.002824, -.002590,
 -.011254,Chk Pass,,
 Sr,421.552 { 80},Y2A,ppm, .3354181,.0002136,.0636697, .3354401, .3351944,
 .3356198,Chk Pass,,
 Th,283.730 {119},Y2R,ppm, .0297914,.0219741,73.75987, .0154978, .0187824,
 .0550939,Chk Pass,,
 Ti,334.941 {101},Y2A,ppm, .0022073,.0001361,6.167213, .0023643, .0021355,
 .0021220,Chk Pass,,
 Tl,190.856 {477},Y1,ppm, .0050866,.0010809,21.24953, .0040474, .0062048,
 .0050076,Chk Pass,,
 V,292.402 {115},Y2A,ppm, .0057470,.0004113,7.156139, .0053994, .0056407,
 .0062010,Chk Pass,,
 W,207.911 {462},Y1,ppm, -.000613,.0000367,5.996061, -.000622, -.000572, -.000644,Chk
 Pass,,
 Zn,213.856 {458},Y1,ppm, .0061431,.0000845,1.374875, .0062268, .0060579,
 .0061445,Chk Pass,,
 Zr,339.198 { 99},Y2R,ppm, .0002980,.0043451,1458.267, -.000533, .0049985,
 -.003572,Chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Y1,224.306 {450},Cts/S, 2979.150,15.59097,.5233361,2987.216,2989.056,2961.179
 Y2A,371.030 { 91}2,Cts/S, 140866.6,480.3088,.3409671,141031.1,141243.0,140325.6
 Y2R,371.030 { 91}3,Cts/S, 3910.923,7.043285,.1800927,3902.964,3913.454,3916.350

[Sample Header]

Method=New TRACE Fast w axial Al(v227)
 SampleName=410-3311-G-3-A
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 11:11:43
 Sample Type=Unk
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, .0004388,.0010557,240.6258, -.000673, .0005620,
 .0014274,Chk Pass,,
 Al,308.215 {109},Y2R,ppm, -.014055,.1156541,822.8626, -.132729, -.007758,
 .0983217,Chk Pass,,
 Al ax,308.215 {109}2,Y2A,ppm, .0025155,.0055105,219.0579, .0074841, .0034737,
 -.003411,Chk Pass,,
 As,189.042 {478},Y1,ppm, .0042654,.0136144,319.1786, -.009750, .0174398,
 .0051065,Chk Pass,,
 B,249.773 {135},Y2A,ppm, .0495691,.0011032,2.225534, .0482967, .0502571,
 .0501535,Chk Pass,,
 Ba,455.403 { 74},Y2A,ppm, .0992224,.0002213,.2229994, .0992209, .0990019,
 .0994444,Chk Pass,,
 Be,313.042 {108},Y2A,ppm, .0002553,.0000430,16.82532, .0002484, .0002163,
 .0003014,Chk Pass,,
 Ca,317.933 {106},Y2R,ppm, 51.31529,.4109664,.8008654, 51.09448, 51.06194,
 51.78946,Chk Pass,,
 Cd,226.502 {449},Y1,ppm, .0001504,.0001481,98.45719, -.000020, .0002408,

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.0002309,Chk Pass,,
Co,228.616 {447},Y1,ppm, .0010437,.0007887,75.56902, .0008941, .0018965,
.0003405,Chk Pass,,
Cr,267.716 {126},Y2A,ppm, .0007131,.0002887,40.48349, .0008714, .0003799,
.0008881,Chk Pass,,
Cu,327.396 {103},Y2A,ppm, -.000087,.0009955,1147.537, .0009881, -.000977,
-.000271,Chk Pass,,
Fe,261.187 {129},Y2R,ppm, .0033012,.0167939,508.7256, .0226891, -.006053,
-.006732,Chk Pass,,
K,766.490 { 44},Y2R,ppm, 3.091372,.0089985,.2910858, 3.084855, 3.101640,
3.087623,Chk Pass,,
Li,670.784 { 50},Y2R,ppm, .0360132,.0013608,3.778687, .0363416, .0345183,
.0371799,Chk Pass,,
Mg,285.213 {118},Y2R,ppm, 7.136007,.0385293,.5399278, 7.180189, 7.118438,
7.109394,Chk Pass,,
Mn,257.610 {131},Y2A,ppm, .0001601,.0000193,12.01917, .0001402, .0001615,
.0001787,Chk Pass,,
Mo,202.030 {467},Y1,ppm, .0032095,.0007464,23.25446, .0029433, .0026328,
.0040525,Chk Pass,,
Na,589.592 { 57},Y2R,ppm, 26.20714,.0381612,.1456139, 26.17052, 26.20423,
26.24667,Chk Pass,,
Ni,231.604 {445},Y1,ppm, .0019863,.0013902,69.99027, .0017933, .0007027,
.0034629,Chk Pass,,
P,177.495 {490},Y1,ppm, .0049446,.0039228,79.33442, .0087493, .0051708, .0009136,Chk
Pass,,
Pb,220.353 {453},Y1,ppm, .0016535,.0013044,78.88846, .0002928, .0028932,
.0017745,Chk Pass,,
S,182.034 {485},Y1,ppm, 20.68825,.0135019,.0652636, 20.68829, 20.70173, 20.67473,Chk
Pass,,
Sb,206.833 {463},Y1,ppm, .0015796,.0054782,346.8173, .0005091, -.003284,
.0075140,Chk Pass,,
Se,196.090 {472},Y1,ppm, .0011906,.0037661,316.3173, -.003028, .0023849,
.0042148,Chk Pass,,
Si,251.611 {134},Y2R,ppm, 14.10507,.0440814,.3125213, 14.15126, 14.06345,
14.10051,Chk Pass,,
Sn,189.989 {477},Y1,ppm, -.007302,.0046980,64.34205, -.011892, -.007509,
-.002503,Chk Pass,,
Sr,421.552 { 80},Y2A,ppm, .3394228,.0002896,.0853178, .3394408, .3397030,
.3391246,Chk Pass,,
Th,283.730 {119},Y2R,ppm, .0242997,.0447188,184.0303, -.013888, .0132924,
.0734944,Chk Pass,,
Ti,334.941 {101},Y2A,ppm, .0023885,.0000657,2.750072, .0023291, .0024590,
.0023773,Chk Pass,,
Tl,190.856 {477},Y1,ppm, .0087096,.0050788,58.31237, .0028800, .0110709,
.0121778,Chk Pass,,
V,292.402 {115},Y2A,ppm, .0056513,.0003051,5.398843, .0053110, .0057425,
.0059004,Chk Pass,,
W,207.911 {462},Y1,ppm, -.000061,.0012142,1984.967, -.001370, .0010293, .0001567,Chk
Pass,,
Zn,213.856 {458},Y1,ppm, .0139358,.0001299,.9323581, .0139073, .0140776,
.0138225,Chk Pass,,
Zr,339.198 { 99},Y2R,ppm, .0026262,.0037225,141.7459, -.000607, .0066960,
.0017892,Chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3

Y1,224.306 {450},Cts/S, 2979.574,11.98145,.4021197,2965.743,2986.801,2986.176
Y2A,371.030 { 91}2,Cts/S, 140974.0,193.0189,.1369181,141191.6,140907.1,140823.4
Y2R,371.030 { 91}3,Cts/S, 3943.908,20.79312,.5272213,3966.557,3939.484,3925.682

[Sample Header]

Method=New TRACE Fast w axial Al(v227)

SampleName=410-3311-G-4-A

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Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 11:14:50
 Sample Type=Unk
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, -.000219,.0008220,375.6036, .0005883, -.000190,
 -.001055,Chk Pass,,
 Al,308.215 {109},Y2R,ppm, -.077011,.1329469,172.6327, .0748787, -.172242,
 -.133671,Chk Pass,,
 Al ax,308.215 {109}2,Y2A,ppm, -.002622,.0056545,215.6232, -.007940, -.003245,
 .0033176,Chk Pass,,
 As,189.042 {478},Y1,ppm, -.001165,.0274474,2356.348, -.000507, .0259480,
 -.028935,Chk Pass,,
 B,249.773 {135},Y2A,ppm, .0500914,.0018287,3.650647, .0520780, .0497180,
 .0484783,Chk Pass,,
 Ba,455.403 { 74},Y2A,ppm, .1158344,.0006174,.5330152, .1155631, .1165410,
 .1153991,Chk Pass,,
 Be,313.042 {108},Y2A,ppm, .0002267,.0000307,13.52507, .0002619, .0002123,
 .0002059,Chk Pass,,
 Ca,317.933 {106},Y2R,ppm, 50.83786,.2753517,.5416271, 50.72499, 50.63689,
 51.15172,Chk Pass,,
 Cd,226.502 {449},Y1,ppm, .0002011,.0000827,41.14757, .0001333, .0001767,
 .0002933,Chk Pass,,
 Co,228.616 {447},Y1,ppm, -.000226,.0007676,339.1121, -.000835, -.000480,
 .0006360,Chk Pass,,
 Cr,267.716 {126},Y2A,ppm, .0009373,.0006367,67.92775, .0002555, .0010400,
 .0015164,Chk Pass,,
 Cu,327.396 {103},Y2A,ppm, .0004466,.0009740,218.1232, -.000576, .0013635,
 .0005522,Chk Pass,,
 Fe,261.187 {129},Y2R,ppm, .0335421,.0102184,30.46448, .0360747, .0422560,
 .0222955,Chk Pass,,
 K,766.490 { 44},Y2R,ppm, 3.029406,.0524271,1.730606, 3.016474, 2.984654,
 3.087088,Chk Pass,,
 Li,670.784 { 50},Y2R,ppm, .0364297,.0013141,3.607283, .0379112, .0359732,
 .0354047,Chk Pass,,
 Mg,285.213 {118},Y2R,ppm, 7.000120,.0456446,.6520550, 7.003263, 6.952985,
 7.044111,Chk Pass,,
 Mn,257.610 {131},Y2A,ppm, .0120876,.0001855,1.534700, .0122575, .0121157,
 .0118897,Chk Pass,,
 Mo,202.030 {467},Y1,ppm, .0029609,.0003622,12.23311, .0028046, .0033750,
 .0027031,Chk Pass,,
 Na,589.592 { 57},Y2R,ppm, 25.84533,.1738700,.6727328, 25.69276, 25.80860,
 26.03463,Chk Pass,,
 Ni,231.604 {445},Y1,ppm, .0016447,.0009717,59.07744, .0023365, .0005338,
 .0020639,Chk Pass,,
 P,177.495 {490},Y1,ppm, .0055027,.0039412,71.62342, .0039917, .0099758, .0025406,Chk
 Pass,,
 Pb,220.353 {453},Y1,ppm, .0034855,.0030787,88.32804, .0052745, -.000069,
 .0052514,Chk Pass,,
 S,182.034 {485},Y1,ppm, 20.60164,.0175589,.0852306, 20.61135, 20.61219, 20.58137,Chk
 Pass,,
 Sb,206.833 {463},Y1,ppm, .0043377,.0031439,72.47661, .0042928, .0012166,
 .0075038,Chk Pass,,
 Se,196.090 {472},Y1,ppm, .0056468,.0052835,93.56761, .0006774, .0111965,
 .0050664,Chk Pass,,

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Si,251.611 {134},Y2R,ppm, 14.13560,.0561123,.3969574, 14.08865, 14.12041,
 14.19774,Chk Pass,,
 Sn,189.989 {477},Y1,ppm, -.006919,.0077401,111.8626, -.015434, -.000309,
 -.005015,Chk Pass,,
 Sr,421.552 { 80},Y2A,ppm, .3389177,.0009799,.2891227, .3390106, .3398479,
 .3378947,Chk Pass,,
 Th,283.730 {119},Y2R,ppm, .0041719,.0404201,968.8719, .0477077, -.003027,
 -.032165,Chk Pass,,
 Ti,334.941 {101},Y2A,ppm, .0021212,.0001829,8.619922, .0019501, .0020997,
 .0023139,Chk Pass,,
 Tl,190.856 {477},Y1,ppm, .0073877,.0036499,49.40558, .0112376, .0039777,
 .0069477,Chk Pass,,
 V,292.402 {115},Y2A,ppm, .0053991,.0004724,8.748675, .0055104, .0058059,
 .0048810,Chk Pass,,
 W,207.911 {462},Y1,ppm, -.000046,.0012106,2614.140, .0013141, -.001005, -.000448,Chk
 Pass,,
 Zn,213.856 {458},Y1,ppm, .0129208,.0001455,1.125846, .0127534, .0130165,
 .0129924,Chk Pass,,
 Zr,339.198 { 99},Y2R,ppm, .0039866,.0079838,200.2660, -.004206, .0044225,
 .0117435,Chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Y1,224.306 {450},Cts/S, 2986.785,16.66893,.5580896,2997.180,2995.615,2967.558
 Y2A,371.030 { 91}2,Cts/S, 141709.0,861.3997,.6078650,141562.0,140930.6,142634.5
 Y2R,371.030 { 91}3,Cts/S, 3948.320,58.59352,1.484011,4001.796,3957.477,3885.687

[Sample Header]

Method=New TRACE Fast w axial Al(v227)
 SampleName=410-3311-G-7-A
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 11:17:57
 Sample Type=Unk
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, -.001218,.0022017,180.7109, -.002615, .0013197,
 -.002360,Chk Pass,,
 Al,308.215 {109},Y2R,ppm, .0988983,.1230806,124.4517, .0861924, .2278389,
 -.017337,Chk Pass,,
 Al ax,308.215 {109}2,Y2A,ppm, .0018220,.0165224,906.8145, .0129960, -.017157,
 .0096270,Chk Pass,,
 As,189.042 {478},Y1,ppm, .0029042,.0155079,533.9808, .0109819, -.014975,
 .0127058,Chk Pass,,
 B,249.773 {135},Y2A,ppm, .0494892,.0007031,1.420719, .0487899, .0501960,
 .0494815,Chk Pass,,
 Ba,455.403 { 74},Y2A,ppm, .1034572,.0004203,.4062770, .1038473, .1030121,
 .1035123,Chk Pass,,
 Be,313.042 {108},Y2A,ppm, .0002091,.0000148,7.069631, .0002128, .0002217,
 .0001928,Chk Pass,,
 Ca,317.933 {106},Y2R,ppm, 37.49046,.2142881,.5715804, 37.73688, 37.34784,
 37.38667,Chk Pass,,
 Cd,226.502 {449},Y1,ppm, .0002292,.0001255,54.77214, .0001271, .0003693,
 .0001912,Chk Pass,,
 Co,228.616 {447},Y1,ppm, .0000848,.0004893,577.0691, -.000414, .0005641,
 .0001042,Chk Pass,,

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Cr,267.716 {126},Y2A,ppm, .0009362,.0007291,77.87918, .0000943, .0013615,
 .0013528,Chk Pass,,
 Cu,327.396 {103},Y2A,ppm, .0010536,.0029394,278.9930, .0030199, -.002325,
 .0024663,Chk Pass,,
 Fe,261.187 {129},Y2R,ppm, .0093435,.0453728,485.6068, .0024661, .0577624,
 -.032198,Chk Pass,,
 K,766.490 { 44},Y2R,ppm, 2.585592,.0550822,2.130351, 2.636384, 2.527042,
 2.593349,Chk Pass,,
 Li,670.784 { 50},Y2R,ppm, .0337011,.0013637,4.046298, .0350557, .0323286,
 .0337192,Chk Pass,,
 Mg,285.213 {118},Y2R,ppm, 5.328328,.0595147,1.116949, 5.397025, 5.292414,
 5.295544,Chk Pass,,
 Mn,257.610 {131},Y2A,ppm, .0000842,.0000649,77.02842, .0000121, .0001026,
 .0001379,Chk Pass,,
 Mo,202.030 {467},Y1,ppm, .0041097,.0011972,29.13003, .0031214, .0037669,
 .0054409,Chk Pass,,
 Na,589.592 { 57},Y2R,ppm, 24.27441,.1550032,.6385457, 24.45093, 24.16053,
 24.21179,Chk Pass,,
 Ni,231.604 {445},Y1,ppm, .0014882,.0006375,42.84031, .0008938, .0014093,
 .0021615,Chk Pass,,
 P,177.495 {490},Y1,ppm, .0084432,.0129142,152.9544, .0219250, .0072211, -.003817,Chk
 Pass,,
 Pb,220.353 {453},Y1,ppm, -.003057,.0002573,8.415666, -.003184, -.003227,
 -.002761,Chk Pass,,
 S,182.034 {485},Y1,ppm, 11.38429,.0223547,.1963642, 11.35848, 11.39722, 11.39717,Chk
 Pass,,
 Sb,206.833 {463},Y1,ppm, .0008496,.0038005,447.3200, .0048320, -.002738,
 .0004551,Chk Pass,,
 Se,196.090 {472},Y1,ppm, .0019752,.0039611,200.5416, .0065340, -.000625,
 .0000169,Chk Pass,,
 Si,251.611 {134},Y2R,ppm, 13.73442,.1122058,.8169679, 13.78792, 13.60548,
 13.80986,Chk Pass,,
 Sn,189.989 {477},Y1,ppm, -.006796,.0045339,66.71447, -.003373, -.005077,
 -.011938,Chk Pass,,
 Sr,421.552 { 80},Y2A,ppm, .2556675,.0005303,.2074102, .2557575, .2550980,
 .2561470,Chk Pass,,
 Th,283.730 {119},Y2R,ppm, -.027234,.0934387,343.1014, -.110090, .0740436,
 -.045654,Chk Pass,,
 Ti,334.941 {101},Y2A,ppm, .0020115,.0002098,10.43107, .0020167, .0017991,
 .0022187,Chk Pass,,
 Tl,190.856 {477},Y1,ppm, .0092939,.0084883,91.33255, .0077811, .0016636,
 .0184369,Chk Pass,,
 V,292.402 {115},Y2A,ppm, .0056563,.0005151,9.107044, .0055679, .0051911,
 .0062099,Chk Pass,,
 W,207.911 {462},Y1,ppm, .0006515,.0013329,204.6035, .0016602, .0011538, -.000860,Chk
 Pass,,
 Zn,213.856 {458},Y1,ppm, .0146309,.0003169,2.166161, .0143091, .0146409,
 .0149427,Chk Pass,,
 Zr,339.198 { 99},Y2R,ppm, .0129431,.0071539,55.27181, .0172385, .0046847,
 .0169059,Chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3

Y1,224.306 {450},Cts/S, 3013.854,7.747909,.2570765,3020.703,3005.445,3015.413

Y2A,371.030 { 91}2,Cts/S, 141868.4,565.4629,.3985828,142133.6,141219.1,142252.5

Y2R,371.030 { 91}3,Cts/S, 3951.582,12.88144,.3259819,3944.039,3966.456,3944.250

[Sample Header]

Method=New TRACE Fast w axial Al(v227)

SampleName=410-3144-L-5-A

Username=dept 22

Comment=

Custom ID1=

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Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 11:21:05
 Sample Type=Unk
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem	WL	ISRef	Units	Avg	Stddev	RSD	Rep1	Rep2	Rep3	chk_Pass/Fail	chk_Low	chk_High
Ag	328.068	{103}	Y2A,ppm	-.000729	.0003717	50.99366	-.000866	-.001013	-.000308	Chk Pass,,		
Al	308.215	{109}	Y2R,ppm	-.102474	.0894466	87.28676	-.193563	-.014766	-.099095	Chk Pass,,		
Al	ax,308.215	{109}2	Y2A,ppm	.0065258	.0028558	43.76162	.0071395	.0090250	.0034131	Chk Pass,,		
As	189.042	{478}	Y1,ppm	.0140399	.0118776	84.59920	.0261514	.0135574	.0024109	Chk Pass,,		
B	249.773	{135}	Y2A,ppm	.0508188	.0031952	6.287457	.0486647	.0544899	.0493018	Chk Pass,,		
Ba	455.403	{ 74}	Y2A,ppm	.1207227	.0082583	6.840713	.1161361	.1302563	.1157758	Chk Pass,,		
Be	313.042	{108}	Y2A,ppm	.0002275	.0000161	7.053914	.0002399	.0002332	.0002094	Chk Pass,,		
Ca	317.933	{106}	Y2R,ppm	37.12817	.2058061	.5543126	37.35213	36.94736	37.08501	Chk Pass,,		
Cd	226.502	{449}	Y1,ppm	.0001258	.0000336	26.69031	.0001619	.0001199	.0000956	Chk Pass,,		
Co	228.616	{447}	Y1,ppm	-.000237	.0005645	238.6439	-.000716	-.000379	.0003855	Chk Pass,,		
Cr	267.716	{126}	Y2A,ppm	.0011286	.0003759	33.30963	.0013570	.0006947	.0013341	Chk Pass,,		
Cu	327.396	{103}	Y2A,ppm	.0007737	.0005537	71.56896	.0004317	.0014125	.0004769	Chk Pass,,		
Fe	261.187	{129}	Y2R,ppm	.0094000	.0354985	377.6443	.0012701	.0482582	-.021328	Chk Pass,,		
K	766.490	{ 44}	Y2R,ppm	2.560986	.0132632	.5178943	2.554954	2.576193	2.551811	Chk Pass,,		
Li	670.784	{ 50}	Y2R,ppm	.0353392	.0020459	5.789354	.0371936	.0356796	.0331445	Chk Pass,,		
Mg	285.213	{118}	Y2R,ppm	5.267838	.0649959	1.233825	5.303454	5.192819	5.307241	Chk Pass,,		
Mn	257.610	{131}	Y2A,ppm	.0041111	.0002314	5.628274	.0039926	.0043778	.0039631	Chk Pass,,		
Mo	202.030	{467}	Y1,ppm	.0040823	.0006703	16.41856	.0039656	.0034781	.0048033	Chk Pass,,		
Na	589.592	{ 57}	Y2R,ppm	24.03087	.1571750	.6540548	24.15120	23.85304	24.08836	Chk Pass,,		
Ni	231.604	{445}	Y1,ppm	.0021905	.0000761	3.474782	.0022186	.0021043	.0022486	Chk Pass,,		
P	177.495	{490}	Y1,ppm	.0064581	.0027820	43.07787	.0033450	.0087010	.0073284	Chk Pass,,		
Pb	220.353	{453}	Y1,ppm	.0011361	.0034835	306.6126	.0034918	.0027819	-.002865	Chk Pass,,		
S	182.034	{485}	Y1,ppm	11.31450	.0478139	.4225892	11.29701	11.36860	11.27790	Chk Pass,,		
Sb	206.833	{463}	Y1,ppm	.0066065	.0048548	73.48526	.0040334	.0122062	.0035798	Chk Pass,,		
Se	196.090	{472}	Y1,ppm	.0068788	.0067098	97.54283	-.000848	.0112382	.0102459	Chk Pass,,		
Si	251.611	{134}	Y2R,ppm	13.75504	.1056681	.7682134	13.81393	13.63305	13.81815	Chk Pass,,		
Sn	189.989	{477}	Y1,ppm	-.007194	.0047565	66.11779	-.011401	-.002033				

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-.008148,Chk Pass,,
 Sr,421.552 { 80},Y2A,ppm, .2648773,.0180018,6.796288, .2550356, .2856544,
 .2539419,Chk Pass,,
 Th,283.730 {119},Y2R,ppm, -.009641,.0147928,153.4350, -.003927, -.026439,
 .0014428,Chk Pass,,
 Ti,334.941 {101},Y2A,ppm, .0022280,.0001078,4.836708, .0021334, .0023453,
 .0022052,Chk Pass,,
 Tl,190.856 {477},Y1,ppm, .0081743,.0012808,15.66889, .0067353, .0091894,
 .0085984,Chk Pass,,
 V,292.402 {115},Y2A,ppm, .0058395,.0002730,4.675602, .0056505, .0061525,
 .0057155,Chk Pass,,
 W,207.911 {462},Y1,ppm, .0007254,.0027236,375.4615, -.000398, -.001257, .0038310,Chk
 Pass,,
 Zn,213.856 {458},Y1,ppm, .0059193,.0002430,4.105476, .0061821, .0058730,
 .0057028,Chk Pass,,
 Zr,339.198 { 99},Y2R,ppm, .0095615,.0063967,66.90044, .0091925, .0161348,
 .0033573,Chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3

Y1,224.306 {450},Cts/S, 2989.748,2.597977,.0868962,2987.981,2988.531,2992.731
 Y2A,371.030 { 91}2,Cts/S, 139096.6,7280.657,5.234243,143885.7,130718.3,142686.0
 Y2R,371.030 { 91}3,Cts/S, 3998.348,7.691795,.1923743,3993.374,4007.208,3994.463

[Sample Header]

Method=New TRACE Fast w axial Al(v227)

SampleName=410-3144-L-5-A

Username=dept 22

Comment=

Custom ID1=

Custom ID2=

Custom ID3=

Run Time=6/12/2020 11:24:13

Sample Type=Unk

Mode=CONC

CorrFactor=1.000

Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High

Ag,328.068 {103},Y2A,ppm, -.000641,.0004987,77.76741, -.001148, -.000626,

-.000151,Chk Pass,,

Al,308.215 {109},Y2R,ppm, -.124137,.1605405,129.3256, -.302666, -.078100,

.0083562,Chk Pass,,

Al ax,308.215 {109}2,Y2A,ppm, .0034503,.0058394,169.2428, .0083604, .0049973,

-.003007,Chk Pass,,

As,189.042 {478},Y1,ppm, -.001841,.0071927,390.6699, .0026168, .0019988,

-.010139,Chk Pass,,

B,249.773 {135},Y2A,ppm, .0229511,.0000788,.3434156, .0229841, .0230081,

.0228612,Chk Pass,,

Ba,455.403 { 74},Y2A,ppm, .1394611,.0004228,.3031946, .1398459, .1395289,

.1390084,Chk Pass,,

Be,313.042 {108},Y2A,ppm, .0002095,.0000381,18.19375, .0001657, .0002348,

.0002280,Chk Pass,,

Ca,317.933 {106},Y2R,ppm, 38.78204,.0532653,.1373453, 38.78940, 38.83124,

38.72548,Chk Pass,,

Cd,226.502 {449},Y1,ppm, .0000040,.0001762,4363.063, -.000199, .0001177,

.0000933,Chk Pass,,

Co,228.616 {447},Y1,ppm, .0006558,.0003971,60.55162, .0001975, .0008726,

.0008973,Chk Pass,,

Cr,267.716 {126},Y2A,ppm, .0018033,.0005085,28.19763, .0016045, .0023812,

.0014243,Chk Pass,,

Cu,327.396 {103},Y2A,ppm, .0008639,.0003357,38.86047, .0009608, .0004904,

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.0011405,Chk Pass,,
 Fe,261.187 {129},Y2R,ppm, -.010554,.0108543,102.8463, -.018008, .0018992,
 -.015553,Chk Pass,,
 K,766.490 { 44},Y2R,ppm, 2.583602,.0187940,.7274355, 2.572688, 2.605304,
 2.572815,Chk Pass,,
 Li,670.784 { 50},Y2R,ppm, .0357563,.0022166,6.199264, .0334950, .0379254,
 .0358485,Chk Pass,,
 Mg,285.213 {118},Y2R,ppm, 5.186355,.0354004,.6825674, 5.225880, 5.157564,
 5.175621,Chk Pass,,
 Mn,257.610 {131},Y2A,ppm, .0000858,.0000620,72.28225, .0001178, .0001254,
 .0000143,Chk Pass,,
 Mo,202.030 {467},Y1,ppm, .0007870,.0002306,29.30147, .0005209, .0009278,
 .0009123,Chk Pass,,
 Na,589.592 { 57},Y2R,ppm, 21.51082,.1853402,.8616138, 21.71711, 21.35834,
 21.45701,Chk Pass,,
 Ni,231.604 {445},Y1,ppm, .0004239,.0009085,214.3205, .0010023, .0008926,
 -.000623,Chk Pass,,
 P,177.495 {490},Y1,ppm, .0129508,.0095363,73.63454, .0138332, .0030040, .0220153,Chk
 Pass,,
 Pb,220.353 {453},Y1,ppm, -.000129,.0002915,225.7058, -.000187, .0001869,
 -.000388,Chk Pass,,
 S,182.034 {485},Y1,ppm, 10.20773,.0592235,.5801833, 10.24333, 10.24049, 10.13936,Chk
 Pass,,
 Sb,206.833 {463},Y1,ppm, .0040040,.0090762,226.6817, .0041166, .0130233,
 -.005128,Chk Pass,,
 Se,196.090 {472},Y1,ppm, .0072080,.0140576,195.0287, .0071074, .0213156,
 -.006799,Chk Pass,,
 Si,251.611 {134},Y2R,ppm, 11.56965,.0468087,.4045813, 11.62282, 11.53467,
 11.55146,Chk Pass,,
 Sn,189.989 {477},Y1,ppm, -.008718,.0090694,104.0302, -.017950, .0001801,
 -.008385,Chk Pass,,
 Sr,421.552 { 80},Y2A,ppm, .2364192,.0002399,.1014626, .2362329, .2366899,
 .2363347,Chk Pass,,
 Th,283.730 {119},Y2R,ppm, -.013571,.0340939,251.2213, -.051119, -.005044,
 .0154499,Chk Pass,,
 Ti,334.941 {101},Y2A,ppm, .0021531,.0000550,2.554668, .0022039, .0020947,
 .0021606,Chk Pass,,
 Tl,190.856 {477},Y1,ppm, .0102964,.0016815,16.33084, .0083724, .0110323,
 .0114846,Chk Pass,,
 V,292.402 {115},Y2A,ppm, .0062774,.0001333,2.122990, .0062765, .0061446,
 .0064111,Chk Pass,,
 W,207.911 {462},Y1,ppm, .0000867,.0023659,2728.298, .0023218, .0003296, -.002391,Chk
 Pass,,
 Zn,213.856 {458},Y1,ppm, .0005188,.0001140,21.97822, .0003925, .0005499,
 .0006140,Chk Pass,,
 Zr,339.198 { 99},Y2R,ppm, .0068333,.0075132,109.9499, .0152891, .0042854,
 .0009253,Chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Y1,224.306 {450},Cts/S, 2995.019,7.471990,.2494806,3003.595,2991.551,2989.911
 Y2A,371.030 { 91}2,Cts/S, 143443.9,304.2018,.2120703,143454.3,143134.6,143742.7
 Y2R,371.030 { 91}3,Cts/S, 3992.046,12.69252,.3179453,4006.656,3983.737,3985.746

[Sample Header]

Method=New TRACE Fast w axial Al(v227)
 SampleName=410-3144-L-4-A
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 11:27:21

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Sample Type=Unk
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, .0002458,.0013831,562.6806, -.000417, .0018356,
 -.000681,Chk Pass,,
 Al,308.215 {109},Y2R,ppm, .0036939,.0713944,1932.780, -.074555, .0203469,
 .0652899,Chk Pass,,
 Al ax,308.215 {109}2,Y2A,ppm, -.003955,.0053381,134.9782, -.000676, -.010114,
 -.001074,Chk Pass,,
 As,189.042 {478},Y1,ppm, .0243083,.0077730,31.97664, .0247761, .0318369,
 .0163120,Chk Pass,,
 B,249.773 {135},Y2A,ppm, .1154981,.0015143,1.311095, .1138266, .1167783,
 .1158896,Chk Pass,,
 Ba,455.403 { 74},Y2A,ppm, .1550127,.0003613,.2331007, .1546232, .1550777,
 .1553370,Chk Pass,,
 Be,313.042 {108},Y2A,ppm, .0002274,.0000154,6.751614, .0002444, .0002234,
 .0002145,Chk Pass,,
 Ca,317.933 {106},Y2R,ppm, 43.16178,.0427098,.0989529, 43.18639, 43.11246,
 43.18647,Chk Pass,,
 Cd,226.502 {449},Y1,ppm, .0001259,.0001253,99.45881, .0000048, .0001180,
 .0002550,Chk Pass,,
 Co,228.616 {447},Y1,ppm, .0004066,.0006021,148.0610, .0003395, .0010395,
 -.000159,Chk Pass,,
 Cr,267.716 {126},Y2A,ppm, -.000187,.0008360,447.4282, -.000423, .0007418,
 -.000880,Chk Pass,,
 Cu,327.396 {103},Y2A,ppm, -.000826,.0034084,412.4538, -.000141, -.004526,
 .0021870,Chk Pass,,
 Fe,261.187 {129},Y2R,ppm, .0219907,.0720037,327.4280, .0892112, .0307548,
 -.053994,Chk Pass,,
 K,766.490 { 44},Y2R,ppm, 3.839165,.0314853,.8201088, 3.852216, 3.803253,
 3.862026,Chk Pass,,
 Li,670.784 { 50},Y2R,ppm, .0578002,.0016042,2.775420, .0595187, .0575399,
 .0563421,Chk Pass,,
 Mg,285.213 {118},Y2R,ppm, 5.005213,.0278175,.5557710, 5.032712, 4.977087,
 5.005839,Chk Pass,,
 Mn,257.610 {131},Y2A,ppm, .0062278,.0000521,.8362054, .0062116, .0061858,
 .0062861,Chk Pass,,
 Mo,202.030 {467},Y1,ppm, .0067306,.0005352,7.951774, .0070138, .0061133,
 .0070648,Chk Pass,,
 Na,589.592 { 57},Y2R,ppm, 26.90828,.1109053,.4121603, 26.98303, 26.78085,
 26.96095,Chk Pass,,
 Ni,231.604 {445},Y1,ppm, .0020754,.0008785,42.33175, .0016236, .0015147,
 .0030879,Chk Pass,,
 P,177.495 {490},Y1,ppm, .0029939,.0045534,152.0905, .0000165, .0082355, .0007296,Chk
 Pass,,
 Pb,220.353 {453},Y1,ppm, .0014528,.0036986,254.5738, -.002748, .0042196,
 .0028869,Chk Pass,,
 S,182.034 {485},Y1,ppm, 10.59495,.0640397,.6044362, 10.66868, 10.55324, 10.56292,Chk
 Pass,,
 Sb,206.833 {463},Y1,ppm, .0024582,.0082756,336.6496, .0112711, -.005147,
 .0012510,Chk Pass,,
 Se,196.090 {472},Y1,ppm, .0019703,.0071428,362.5173, .0030205, -.005639,
 .0085299,Chk Pass,,
 Si,251.611 {134},Y2R,ppm, 17.83851,.0310148,.1738645, 17.80988, 17.87146,
 17.83419,Chk Pass,,
 Sn,189.989 {477},Y1,ppm, -.013237,.0037911,28.64031, -.015501, -.015350,
 -.008860,Chk Pass,,
 Sr,421.552 { 80},Y2A,ppm, .4919470,.0043733,.8889673, .4965107, .4877930,
 .4915372,Chk Pass,,

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Th,283.730 {119},Y2R,ppm, .0282540,.0564326,199.7329, -.001698, .0933478,
 -.006888,Chk Pass,,
 Ti,334.941 {101},Y2A,ppm, .0021939,.0000691,3.150394, .0021234, .0022615,
 .0021969,Chk Pass,,
 Tl,190.856 {477},Y1,ppm, .0039208,.0035497,90.53506, -.000165, .0062426,
 .0056852,Chk Pass,,
 V,292.402 {115},Y2A,ppm, .0000861,.0003251,377.4691, .0004316, -.000214,
 .0000408,Chk Pass,,
 W,207.911 {462},Y1,ppm, -.001960,.0016079,82.04550, -.001006, -.001057, -.003816,Chk
 Pass,,
 Zn,213.856 {458},Y1,ppm, .0053680,.0002672,4.977666, .0051122, .0056453,
 .0053465,Chk Pass,,
 Zr,339.198 { 99},Y2R,ppm, -.000115,.0026352,2282.062, .0018304, .0009375,
 -.003114,Chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Y1,224.306 {450},Cts/S, 2997.265,7.741194,.2582753,3003.600,2999.560,2988.636
 Y2A,371.030 { 91}2,Cts/S, 144057.8,238.9568,.1658756,143867.8,144326.1,143979.6
 Y2R,371.030 { 91}3,Cts/S, 4040.208,18.83418,.4661686,4021.840,4039.309,4059.476

[Sample Header]

Method=New TRACE Fast w axial Al(v227)
 SampleName=CCV 095153
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 11:30:37
 Sample Type=QC
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, .4891,.0012,.2404, .4879, .4903, .4892,Chk Pass,,
 Al,308.215 {109},Y2R,ppm, 24.94,.1988,.7971, 25.12, 24.97, 24.73,Chk Pass,,
 Al ax,308.215 {109}2,Y2A,ppm, 24.50,.0690,.2815, 24.50, 24.57, 24.43,Chk Pass,,
 As,189.042 {478},Y1,ppm, .5065,.0119,2.340, .5153, .5111, .4930,Chk Pass,,
 B,249.773 {135},Y2A,ppm, .4726,.0023,.4926, .4717, .4753, .4709,Chk Pass,,
 Ba,455.403 { 74},Y2A,ppm, .5046,.0014,.2753, .5060, .5032, .5045,Chk Pass,,
 Be,313.042 {108},Y2A,ppm, .48630,.00227,.46768, .48530, .48890, .48470,Chk Pass,,
 Ca,317.933 {106},Y2R,ppm, 24.03,.1078,.4488, 23.92, 24.13, 24.03,Chk Pass,,
 Cd,226.502 {449},Y1,ppm, .5047,.0009,.1811, .5043, .5041, .5058,Chk Pass,,
 Co,228.616 {447},Y1,ppm, .4998,.0001,.0282, .4997, .4999, .4997,Chk Pass,,
 Cr,267.716 {126},Y2A,ppm, .4896,.0030,.6187, .4891, .4929, .4869,Chk Pass,,
 Cu,327.396 {103},Y2A,ppm, .5121,.0033,.6478, .5121, .5155, .5088,Chk Pass,,
 Fe,261.187 {129},Y2R,ppm, 24.02,.0859,.3577, 23.93, 24.11, 24.03,Chk Pass,,
 K,766.490 { 44},Y2R,ppm, 25.71,.1847,.7185, 25.53, 25.89, 25.71,Chk Pass,,
 Li,670.784 { 50},Y2R,ppm, .5275,.0004,.0772, .5272, .5274, .5280,Chk Pass,,
 Mg,285.213 {118},Y2R,ppm, 24.43,.0567,.2320, 24.49, 24.38, 24.41,Chk Pass,,
 Mn,257.610 {131},Y2A,ppm, .48364,.00386,.79762, .48174, .48808, .48110,Chk Pass,,
 Mo,202.030 {467},Y1,ppm, .5033,.0012,.2438, .5034, .5020, .5044,Chk Pass,,
 Na,589.592 { 57},Y2R,ppm, 25.15,.0669,.2659, 25.20, 25.07, 25.16,Chk Pass,,
 Ni,231.604 {445},Y1,ppm, .4987,.0033,.6519, .5022, .4958, .4981,Chk Pass,,
 P,177.495 {490},Y1,ppm, .5114,.0040,.7879, .5153, .5073, .5116,Chk Pass,,
 Pb,220.353 {453},Y1,ppm, .5017,.0079,1.568, .5071, .4927, .5053,Chk Pass,,
 S,182.034 {485},Y1,ppm, 25.01,.1013,.4050, 25.12, 25.00, 24.92,Chk Pass,,
 Sb,206.833 {463},Y1,ppm, .5116,.0003,.0562, .5117, .5118, .5113,Chk Pass,,
 Se,196.090 {472},Y1,ppm, .5017,.0104,2.064, .5088, .5065, .4899,Chk Pass,,
 Si,251.611 {134},Y2R,ppm, 24.423,.05264,.21553, 24.453, 24.454, 24.362,Chk Pass,,

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Sn,189.989 {477},Y1,ppm, .4909,.0027,.5489, .4904, .4939, .4885,Chk Pass,,
 Sr,421.552 { 80},Y2A,ppm, .5080,.0061,1.210, .5056, .5150, .5035,Chk Pass,,
 Th,283.730 {119},Y2R,ppm, .5180,.0101,1.952, .5279, .5077, .5184,Chk Pass,,
 Ti,334.941 {101},Y2A,ppm, .5121,.0029,.5602, .5110, .5153, .5099,Chk Pass,,
 Tl,190.856 {477},Y1,ppm, .5170,.0056,1.085, .5224, .5112, .5173,Chk Pass,,
 V,292.402 {115},Y2A,ppm, .5011,.0028,.5571, .4996, .5043, .4994,Chk Pass,,
 W,207.911 {462},Y1,ppm, .4989,.0019,.3899, .4999, .4966, .5001,Chk Pass,,
 Zn,213.856 {458},Y1,ppm, .5142,.0007,.1340, .5138, .5150, .5138,Chk Pass,,
 Zr,339.198 { 99},Y2R,ppm, .5017,.0046,.9216, .5026, .4967, .5058,Chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Y1,224.306 {450},Cts/S, 2952.7,15.763,.53386,2965.3,2957.8,2935.1
 Y2A,371.030 { 91}2,Cts/S, 142270.,996.12,.70017,143040.,141140.,142630.
 Y2R,371.030 { 91}3,Cts/S, 3883.8,26.409,.67999,3913.4,3862.7,3875.2

[Sample Header]

Method=New TRACE Fast w axial Al(v227)
 SampleName=CCB 078331
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 11:33:51
 Sample Type=QC
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, .0011,.0014,135.6, .0017, .0021, -.0006,Chk Pass,,
 Al,308.215 {109},Y2R,ppm, -.0113,.0057,50.55, -.0067, -.0094, -.0177,Chk Pass,,
 Al ax,308.215 {109}2,Y2A,ppm, .0064,.0055,85.41, .0031, .0034, .0128,Chk Pass,,
 As,189.042 {478},Y1,ppm, .0017,.0064,366.6, -.0036, -.0000, .0088,Chk Pass,,
 B,249.773 {135},Y2A,ppm, .0013,.0005,34.68, .0014, .0018, .0009,Chk Pass,,
 Ba,455.403 { 74},Y2A,ppm, .0001,.0000,42.07, .0001, .0001, .0000,Chk Pass,,
 Be,313.042 {108},Y2A,ppm, .00034,.00001,3.6735, .00036, .00034, .00033,Chk Pass,,
 Ca,317.933 {106},Y2R,ppm, -.0115,.0063,54.32, -.0102, -.0183, -.0060,Chk Pass,,
 Cd,226.502 {449},Y1,ppm, .0004,.0001,14.65, .0003, .0004, .0004,Chk Pass,,
 Co,228.616 {447},Y1,ppm, .0001,.0004,261.8, -.0001, -.0000, .0006,Chk Pass,,
 Cr,267.716 {126},Y2A,ppm, -.0006,.0001,13.45, -.0005, -.0006, -.0005,Chk Pass,,
 Cu,327.396 {103},Y2A,ppm, -.0004,.0019,437.3, -.0026, .0001, .0012,Chk Pass,,
 Fe,261.187 {129},Y2R,ppm, .0163,.0031,18.80, .0196, .0156, .0136,Chk Pass,,
 K,766.490 { 44},Y2R,ppm,F .3380,.0453,13.41, .3688, .3593, .2859,Chk
 Fail,.2500,-.2500
 Li,670.784 { 50},Y2R,ppm,W .0242,.0023,9.622, .0218, .0244, .0265,Chk
 warn,.0188,-.0188
 Mg,285.213 {118},Y2R,ppm, -.0029,.0061,211.0, .0032, -.0029, -.0089,Chk Pass,,
 Mn,257.610 {131},Y2A,ppm, .00013,.00004,32.099, .00016, .00015, .00008,Chk Pass,,
 Mo,202.030 {467},Y1,ppm, .0009,.0012,135.3, -.0005, .0018, .0013,Chk Pass,,
 Na,589.592 { 57},Y2R,ppm, .0825,.0127,15.38, .0812, .0958, .0705,Chk Pass,,
 Ni,231.604 {445},Y1,ppm, .0011,.0011,100.6, .0013, .0022, -.0001,Chk Pass,,
 P,177.495 {490},Y1,ppm, .0002,.0038,2245., .0045, -.0026, -.0014,Chk Pass,,
 Pb,220.353 {453},Y1,ppm, -.0006,.0012,198.7, .0008, -.0014, -.0013,Chk Pass,,
 S,182.034 {485},Y1,ppm, .0204,.0053,25.82, .0263, .0161, .0189,Chk Pass,,
 Sb,206.833 {463},Y1,ppm, .0002,.0019,1089., -.0011, .0024, -.0007,Chk Pass,,
 Se,196.090 {472},Y1,ppm, .0010,.0059,568.1, .0055, .0032, -.0057,Chk Pass,,
 Si,251.611 {134},Y2R,ppm, -.00787,.02280,289.89, .01268, -.00388, -.03240,Chk Pass,,
 Sn,189.989 {477},Y1,ppm, -.0071,.0025,35.00, -.0082, -.0043, -.0090,Chk Pass,,
 Sr,421.552 { 80},Y2A,ppm, .0001,.0000,8.841, .0001, .0001, .0001,Chk Pass,,
 Th,283.730 {119},Y2R,ppm, .0265,.0460,173.5, .0676, .0351, -.0232,Chk Pass,,

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Ti,334.941 {101},Y2A,ppm, -.0001,.0001,85.40, -.0002, -.0002, -.0000,Chk Pass,,
 Tl,190.856 {477},Y1,ppm, .0043,.0014,32.36, .0055, .0046, .0028,Chk Pass,,
 V,292.402 {115},Y2A,ppm, -.0000,.0003,698.1, .0002, -.0004, .0001,Chk Pass,,
 W,207.911 {462},Y1,ppm, .0004,.0005,129.0, -.0002, .0008, .0006,Chk Pass,,
 Zn,213.856 {458},Y1,ppm, .0003,.0001,34.88, .0003, .0003, .0002,Chk Pass,,
 Zr,339.198 { 99},Y2R,ppm, .0042,.0080,189.6, .0032, -.0032, .0127,Chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3

Y1,224.306 {450},Cts/S, 3016.5,10.080,.33415,3021.8,3004.9,3023.0

Y2A,371.030 { 91}2,Cts/S, 143210.,583.35,.40734,142550.,143460.,143630.

Y2R,371.030 { 91}3,Cts/S, 3913.2,30.658,.78347,3890.7,3948.1,3900.7

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[Sample Header]
 Method=New TRACE Fast(v1493)
 SampleName=Matrix_Rinse
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 9:59:30
 Sample Type=QC
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem	WL	ISRef	Units	Avg	Stddev	RSD	Rep1	Rep2	Rep3	chk_Pass/Fail	chk_Low	chk_High
Ag	328.068	{103}	Y2A, ppm	-4.590	.0000	.0004	-4.590	-4.590	-4.590	None,,		
Al	308.215	{109}	Y2A, ppm	18.95	.0002	.0011	18.95	18.95	18.95	None,,		
Al	308.215	{109}	Y2R, ppm	20.77	.0002	.0010	20.77	20.77	20.77	None,,		
As	189.042	{478}	Y1, ppm	2.899	.0000	.0001	2.899	2.899	2.899	None,,		
B	249.773	{135}	Y2A, ppm	-0.0005	.0000	.00089	-0.0005	-0.0005	-0.0005	None,,		
Ba	455.403	{74}	Y2A, ppm	-0.5188	.0000	.0000	-0.5188	-0.5188	-0.5188	None,,		
Be	313.042	{108}	Y2A, ppm	-0.82678	.00000	.00000	-0.82678	-0.82678	-0.82678	None,,		
Ca	317.933	{106}	Y2R, ppm	-8.760	.0001	.0011	-8.760	-8.760	-8.760	None,,		
Cd	226.502	{449}	Y1, ppm	-0.2333	.0000	.0001	-0.2333	-0.2333	-0.2333	None,,		
Co	228.616	{447}	Y1, ppm	-1.638	.0000	.0001	-1.638	-1.638	-1.638	None,,		
Cr	267.716	{126}	Y2A, ppm	-4.411	.0000	.0000	-4.411	-4.411	-4.411	None,,		
Cu	327.396	{103}	Y2A, ppm	3.239	.0000	.0011	3.239	3.239	3.239	None,,		
Fe	261.187	{129}	Y2R, ppm	.1669	.0000	.0029	.1669	.1669	.1669	None,,		
K	766.490	{44}	Y2R, ppm	1.796	.0000	.0003	1.796	1.796	1.796	None,,		
Li	670.784	{50}	Y2R, ppm	.0003	.0000	.1523	.0003	.0003	.0003	None,,		
Mg	285.213	{118}	Y2R, ppm	.0690	.0000	.0018	.0690	.0690	.0690	None,,		
Mn	257.610	{131}	Y2A, ppm	-0.00267	.00000	.00017	-0.00267	-0.00267	-0.00267	None,,		
Mo	202.030	{467}	Y1, ppm	.0009	.0000	.1079	.0009	.0009	.0009	None,,		
Na	589.592	{57}	Y2R, ppm	.4865	.0000	.0033	.4865	.4865	.4865	None,,		
Ni	231.604	{445}	Y1, ppm	-0.0024	.0000	.0071	-0.0024	-0.0024	-0.0024	None,,		
P	177.495	{490}	Y1, ppm	.0077	.0000	.0280	.0077	.0077	.0077	None,,		
Pb	220.353	{453}	Y1, ppm	-13.76	.0000	.0003	-13.76	-13.76	-13.76	None,,		
S	182.034	{485}	Y1, ppm	-7.164	.0000	.0001	-7.164	-7.164	-7.164	None,,		
Sb	206.833	{463}	Y1, ppm	-8.130	.0000	.0002	-8.130	-8.130	-8.130	None,,		
Se	196.090	{472}	Y1, ppm	-0.0141	.0000	.0161	-0.0141	-0.0141	-0.0140	None,,		
Si	251.611	{134}	Y2R, ppm	.34535	.00001	.00409	.34533	.34536	.34535	None,,		
Sn	189.989	{477}	Y1, ppm	.0036	.0000	.0480	.0036	.0036	.0036	None,,		
Sr	421.552	{80}	Y2A, ppm	-0.9645	.0000	.0000	-0.9645	-0.9645	-0.9645	None,,		
Th	283.730	{119}	Y2R, ppm	-267.4	.0029	.0011	-267.4	-267.4	-267.4	None,,		
Ti	334.941	{101}	Y2A, ppm	-0.0003	.0000	.0119	-0.0003	-0.0003	-0.0003	None,,		
Tl	190.856	{477}	Y1, ppm	-0.2737	.0000	.0015	-0.2737	-0.2737	-0.2737	None,,		
V	292.402	{115}	Y2A, ppm	-9.841	.0000	.0000	-9.841	-9.841	-9.841	None,,		
W	207.911	{462}	Y1, ppm	-0.0084	.0000	.0094	-0.0084	-0.0084	-0.0084	None,,		
Zn	213.856	{458}	Y1, ppm	1.048	.0000	.0000	1.048	1.048	1.048	None,,		
Zr	339.198	{99}	Y2R, ppm	18.06	.0002	.0011	18.06	18.06	18.06	None,,		

[Internal Standards]

Elem	WL	Units	Avg	Stddev	RSD	Rep1	Rep2	Rep3
Y1	224.306	{450}	Cts/S	8524.7	15.462	.18138	8507.1	8536.1
Y2A	371.030	{91}	2,Cts/S	263560.	1971.6	.74806	263430.	265600.
Y2R	371.030	{91}	3,Cts/S	17715.	93.119	.52566	17621.	17717.

[Sample Header]
 Method=New TRACE Fast(v1493)
 SampleName=S0
 Username=dept 22

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Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 10:02:38
 Sample Type=ReSlope
 Mode=IR
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Ag,328.068 {103},Y2A,Cts/S, -.0035,.0008,23.69, -.0025, -.0037, -.0041
 Al,308.215 {109},Y2A,Cts/S, .0685,.0016,2.396, .0669, .0701, .0684
 Al,308.215 {109}2,Y2R,Cts/S, .0510,.0125,24.47, .0373, .0538, .0617
 As,189.042 {478},Y1,Cts/S, .0032,.0025,78.23, .0015, .0061, .0021
 B,249.773 {135},Y2A,Cts/S, .0001,.0000,14.55, .0001, .0001, .0001
 Ba,455.403 {74},Y2A,Cts/S, -.0002,.0000,17.87, -.0002, -.0002, -.0003
 Be,313.042 {108},Y2A,Cts/S, -.02506,.00043,1.7102, -.02487, -.02555, -.02475
 Ca,317.933 {106},Y2R,Cts/S, .0048,.0005,9.427, .0045, .0046, .0053
 Cd,226.502 {449},Y1,Cts/S, -.0056,.0077,137.2, -.0024, -.0145, -.0001
 Co,228.616 {447},Y1,Cts/S, .0016,.0109,670.1, .0094, .0064, -.0109
 Cr,267.716 {126},Y2A,Cts/S, -.0000,.0000,24.52, -.0000, -.0000, -.0000
 Cu,327.396 {103},Y2A,Cts/S, .0067,.0011,16.78, .0054, .0071, .0075
 Fe,261.187 {129},Y2R,Cts/S, .0001,.0001,69.23, .0001, .0003, .0001
 K,766.490 {44},Y2R,Cts/S, .1571,.0253,16.13, .1854, .1365, .1494
 Li,670.784 {50},Y2R,Cts/S, .0006,.0004,57.95, .0007, .0002, .0010
 Mg,285.213 {118},Y2R,Cts/S, .0004,.0002,53.58, .0005, .0002, .0006
 Mn,257.610 {131},Y2A,Cts/S, .00128,.00045,34.966, .00138, .00079, .00167
 Mo,202.030 {467},Y1,Cts/S, .0139,.0017,12.47, .0158, .0127, .0130
 Na,589.592 {57},Y2R,Cts/S, .0017,.0004,21.57, .0016, .0013, .0020
 Ni,231.604 {445},Y1,Cts/S, .0244,.0070,28.77, .0182, .0321, .0230
 P,177.495 {490},Y1,Cts/S, -.0000,.0001,404.9, .0001, -.0001, -.0001
 Pb,220.353 {453},Y1,Cts/S, -.0223,.0105,47.00, -.0304, -.0259, -.0105
 S,182.034 {485},Y1,Cts/S, -.0001,.0001,176.1, .0000, -.0000, -.0002
 Sb,206.833 {463},Y1,Cts/S, -.0001,.0001,55.04, -.0001, -.0001, -.0002
 Se,196.090 {472},Y1,Cts/S, .0064,.0033,52.21, .0062, .0098, .0031
 Si,251.611 {134},Y2R,Cts/S, .00030,.00010,31.987, .00019, .00035, .00037
 Sn,189.989 {477},Y1,Cts/S, .0070,.0027,38.14, .0085, .0085, .0039
 Sr,421.552 {80},Y2A,Cts/S, -.0005,.0000,8.789, -.0006, -.0005, -.0005
 Th,283.730 {119},Y2R,Cts/S, -.0001,.0001,100.4, -.0001, -.0000, -.0002
 Ti,334.941 {101},Y2A,Cts/S, .0088,.0007,8.414, .0082, .0086, .0096
 Tl,190.856 {477},Y1,Cts/S, -.0027,.0042,158.1, .0021, -.0041, -.0060
 V,292.402 {115},Y2A,Cts/S, -.0066,.0011,17.04, -.0066, -.0054, -.0076
 W,207.911 {462},Y1,Cts/S, .0001,.0001,86.68, .0002, .0001, .0000
 Zn,213.856 {458},Y1,Cts/S, .0594,.0101,16.98, .0680, .0619, .0483
 Zr,339.198 {99},Y2R,Cts/S, .0002,.0002,72.48, .0002, .0004, .0001

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Y1,224.306 {450},Cts/S, 8576.6,7.9305,.09247,8577.2,8568.3,8584.2
 Y2A,371.030 {91}2,Cts/S, 263400.,1220.8,.46348,263580.,264510.,262090.
 Y2R,371.030 {91}3,Cts/S, 17907.,57.571,.32149,17852.,17967.,17903.

[Sample Header]

Method=New TRACE Fast(v1493)
 SampleName=S1
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 10:05:46

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Sample Type=ReSlope
 Mode=IR
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Alum Ax,308.215 {109},Y2A,Cts/S, 29.19,.0291,.0997, 29.16, 29.22, 29.18
 Al,308.215 {109}2,Y2R,Cts/S, 24.48,.0852,.3480, 24.57, 24.46, 24.41
 Ca,317.933 {106},Y2R,Cts/S, 3.758,.0225,.5998, 3.784, 3.745, 3.745
 Fe,261.187 {129},Y2R,Cts/S, .8812,.0016,.1789, .8825, .8818, .8794
 K,766.490 { 44},Y2R,Cts/S, 67.01,.4564,.6811, 67.54, 66.75, 66.74
 Mg,285.213 {118},Y2R,Cts/S, 6.818,.0487,.7138, 6.874, 6.786, 6.793
 Na,589.592 { 57},Y2R,Cts/S, 3.913,.0041,.1048, 3.911, 3.917, 3.910
 S,182.034 {485},Y1,Cts/S, .8330,.0012,.1470, .8329, .8342, .8318
 Si,251.611 {134},Y2R,Cts/S, .72148,.00368,.50967, .72572, .71930, .71940

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Y1,224.306 {450},Cts/S, 8311.0,15.922,.19158,8329.1,8299.5,8304.2
 Y2A,371.030 { 91}2,Cts/S, 255800.,650.54,.25432,255740.,255190.,256480.
 Y2R,371.030 { 91}3,Cts/S, 17904.,33.549,.18738,17865.,17926.,17921.

[Sample Header]

Method=New TRACE Fast(v1493)
 SampleName=S2
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 10:08:50
 Sample Type=ReSlope
 Mode=IR
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Ag,328.068 {103},Y2A,Cts/S, 3.585,.0042,.1176, 3.590, 3.581, 3.585
 As,189.042 {478},Y1,Cts/S, 1.534,.0095,.6182, 1.542, 1.536, 1.524
 B,249.773 {135},Y2A,Cts/S, .0352,.0000,.1187, .0352, .0352, .0352
 Ba,455.403 { 74},Y2A,Cts/S, 3.236,.0132,.4072, 3.221, 3.241, 3.246
 Be,313.042 {108},Y2A,Cts/S, 86.838,.25406,.29257, 87.108, 86.802, 86.604
 Cd,226.502 {449},Y1,Cts/S, 57.70,.3502,.6069, 58.02, 57.75, 57.33
 Co,228.616 {447},Y1,Cts/S, 33.95,.2678,.7888, 34.11, 34.10, 33.64
 Cu,327.396 {103},Y2A,Cts/S, 3.095,.0041,.1339, 3.094, 3.099, 3.091
 Li,670.784 { 50},Y2R,Cts/S, .4994,.0010,.2102, .4985, .4991, .5005
 Mn,257.610 {131},Y2A,Cts/S, 12.226,.00387,.03165, 12.229, 12.227, 12.221
 Ni,231.604 {445},Y1,Cts/S, 21.85,.1603,.7339, 21.99, 21.88, 21.67
 P,177.495 {490},Y1,Cts/S, .0307,.0001,.4044, .0308, .0306, .0306
 Pb,220.353 {453},Y1,Cts/S, 4.889,.0517,1.059, 4.909, 4.927, 4.830
 Se,196.090 {472},Y1,Cts/S, 1.214,.0074,.6083, 1.215, 1.221, 1.207
 Sr,421.552 { 80},Y2A,Cts/S, 3.545,.0040,.1133, 3.548, 3.540, 3.546
 Th,283.730 {119},Y2R,Cts/S, .0098,.0001,.6478, .0098, .0099, .0099
 Tl,190.856 {477},Y1,Cts/S, 1.631,.0301,1.844, 1.650, 1.647, 1.597
 W,207.911 {462},Y1,Cts/S, .1116,.0010,.8548, .1125, .1118, .1106
 Zn,213.856 {458},Y1,Cts/S, 39.95,.2590,.6484, 40.21, 39.95, 39.70

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Y1,224.306 {450},Cts/S, 8453.4,9.4327,.11159,8459.7,8442.5,8457.9
 Y2A,371.030 { 91}2,Cts/S, 258990.,607.55,.23458,259670.,258800.,258500.

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Y2R,371.030 { 91}3,Cts/S, 17913.,31.030,.17323,17877.,17926.,17935.

[Sample Header]

Method=New TRACE Fast(v1493)
 SampleName=S3
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 10:12:10
 Sample Type=ReSlope
 Mode=IR
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Cr,267.716 {126},Y2A,Cts/S, .0464,.0000,.0621, .0464, .0465, .0464
 Mo,202.030 {467},Y1,Cts/S, 11.50,.0608,.5288, 11.57, 11.48, 11.45
 Sb,206.833 {463},Y1,Cts/S, .0519,.0001,.2284, .0520, .0520, .0518
 Sn,189.989 {477},Y1,Cts/S, 4.094,.0170,.4160, 4.110, 4.096, 4.076
 Ti,334.941 {101},Y2A,Cts/S, 11.55,.0539,.4667, 11.61, 11.54, 11.51
 V,292.402 {115},Y2A,Cts/S, 3.144,.0095,.3014, 3.135, 3.154, 3.144
 Zr,339.198 { 99},Y2R,Cts/S, .1985,.0013,.6658, .2000, .1982, .1974

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Y1,224.306 {450},Cts/S, 8622.9,9.2364,.10712,8616.0,8633.4,8619.3
 Y2A,371.030 { 91}2,Cts/S, 265370.,948.39,.35739,264810.,266460.,264830.
 Y2R,371.030 { 91}3,Cts/S, 17941.,62.017,.34568,17955.,17994.,17873.

[Sample Header]

Method=New TRACE Fast(v1493)
 SampleName=ICV 62173
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 10:15:15
 Sample Type=QC
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, .5900,.0027,.4515, .5888, .5882, .5931,Chk Pass,,
 Al,308.215 {109},Y2A,ppm, 29.19,.0299,.1023, 29.19, 29.22, 29.16,Chk Pass,,
 Al,308.215 {109}2,Y2R,ppm, 29.43,.1553,.5278, 29.53, 29.25, 29.50,Chk Pass,,
 As,189.042 {478},Y1,ppm, .6043,.0030,.4948, .6073, .6044, .6013,Chk Pass,,
 B,249.773 {135},Y2A,ppm, .5950,.0012,.1967, .5937, .5955, .5959,Chk Pass,,
 Ba,455.403 { 74},Y2A,ppm, .5948,.0049,.8193, .5899, .5996, .5950,Chk Pass,,
 Be,313.042 {108},Y2A,ppm, .57831,.00239,.41241, .57556, .57954, .57984,Chk Pass,,
 Ca,317.933 {106},Y2R,ppm, 29.38,.0718,.2444, 29.43, 29.29, 29.41,Chk Pass,,
 Cd,226.502 {449},Y1,ppm, .5947,.0014,.2292, .5957, .5953, .5932,Chk Pass,,
 Co,228.616 {447},Y1,ppm, .5946,.0019,.3135, .5966, .5943, .5929,Chk Pass,,
 Cr,267.716 {126},Y2A,ppm, .5858,.0014,.2388, .5846, .5873, .5855,Chk Pass,,
 Cu,327.396 {103},Y2A,ppm, .6017,.0026,.4398, .5990, .6018, .6043,Chk Pass,,
 Fe,261.187 {129},Y2R,ppm, 29.13,.0595,.2041, 29.12, 29.07, 29.19,Chk Pass,,
 K,766.490 { 44},Y2R,ppm, 29.47,.1217,.4128, 29.60, 29.37, 29.44,Chk Pass,,
 Li,670.784 { 50},Y2R,ppm, .6006,.0024,.3961, .6031, .5983, .6003,Chk Pass,,

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Mg,285.213 {118},Y2R,ppm, 29.32,.0691,.2358, 29.40, 29.26, 29.32,Chk Pass,,
 Mn,257.610 {131},Y2A,ppm, .58835,.00436,.74148, .58331, .59104, .59068,Chk Pass,,
 Mo,202.030 {467},Y1,ppm, .6163,.0032,.5252, .6193, .6167, .6129,Chk Pass,,
 Na,589.592 { 57},Y2R,ppm, 28.63,.0949,.3313, 28.67, 28.53, 28.70,Chk Pass,,
 Ni,231.604 {445},Y1,ppm, .5946,.0016,.2694, .5952, .5958, .5928,Chk Pass,,
 P,177.495 {490},Y1,ppm, .6141,.0025,.4092, .6161, .6113, .6150,Chk Pass,,
 Pb,220.353 {453},Y1,ppm, .5902,.0038,.6450, .5931, .5916, .5859,Chk Pass,,
 S,182.034 {485},Y1,ppm, 29.95,.0772,.2577, 30.03, 29.88, 29.93,Chk Pass,,
 Sb,206.833 {463},Y1,ppm, .6220,.0035,.5610, .6238, .6180, .6242,Chk Pass,,
 Se,196.090 {472},Y1,ppm, .5955,.0057,.9579, .6006, .5966, .5894,Chk Pass,,
 Si,251.611 {134},Y2R,ppm, 29.889,.05152,.17237, 29.933, 29.832, 29.902,None,,
 Sn,189.989 {477},Y1,ppm, .5901,.0012,.1971, .5914, .5897, .5892,Chk Pass,,
 Sr,421.552 { 80},Y2A,ppm, .5958,.0014,.2424, .5942, .5971, .5960,Chk Pass,,
 Th,283.730 {119},Y2R,ppm,W .6424,.0063,.9802, .6385, .6390, .6496,Chk
 Warn,.6000,5.000%
 Ti,334.941 {101},Y2A,ppm, .6036,.0031,.5187, .6000, .6055, .6053,Chk Pass,,
 Tl,190.856 {477},Y1,ppm, .5853,.0065,1.104, .5923, .5840, .5796,Chk Pass,,
 V,292.402 {115},Y2A,ppm, .5972,.0007,.1159, .5965, .5972, .5979,Chk Pass,,
 W,207.911 {462},Y1,ppm, .6084,.0027,.4486, .6113, .6080, .6058,Chk Pass,,
 Zn,213.856 {458},Y1,ppm, .5862,.0006,.1098, .5869, .5857, .5861,Chk Pass,,
 Zr,339.198 { 99},Y2R,ppm,F .6657,.0090,1.355, .6572, .6649, .6751,Chk
 Fail,.6000,10.00%

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3

Y1,224.306 {450},Cts/S, 8337.6,17.428,.20903,8339.1,8354.3,8319.5

Y2A,371.030 { 91}2,Cts/S, 257230.,1693.5,.65838,259050.,255710.,256920.

Y2R,371.030 { 91}3,Cts/S, 17880.,71.212,.39827,17901.,17939.,17801.

[Sample Header]

Method=New TRACE Fast(v1493)

SampleName=ICV 62173

Username=dept 22

Comment=

Custom ID1=

Custom ID2=

Custom ID3=

Run Time=6/12/2020 10:18:23

Sample Type=QC

Mode=CONC

CorrFactor=1.000

Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High

Ag,328.068 {103},Y2A,ppm, .5924,.0020,.3292, .5947, .5914, .5912,Chk Pass,,

Alum Ax,308.215 {109},Y2A,ppm, 29.10,.0607,.2085, 29.06, 29.07, 29.17,Chk Pass,,

Al,308.215 {109}2,Y2R,ppm, 29.12,.3468,1.191, 29.29, 29.36, 28.73,Chk Pass,,

As,189.042 {478},Y1,ppm, .6009,.0039,.6493, .5995, .6053, .5979,Chk Pass,,

B,249.773 {135},Y2A,ppm, .5944,.0003,.0479, .5942, .5947, .5942,Chk Pass,,

Ba,455.403 { 74},Y2A,ppm, .5950,.0029,.4923, .5930, .5984, .5936,Chk Pass,,

Be,313.042 {108},Y2A,ppm, .57822,.00195,.33696, .57624, .58014, .57828,Chk Pass,,

Ca,317.933 {106},Y2R,ppm, 29.07,.3915,1.347, 29.29, 29.29, 28.62,Chk Pass,,

Cd,226.502 {449},Y1,ppm, .5920,.0006,.0959, .5922, .5924, .5914,Chk Pass,,

Co,228.616 {447},Y1,ppm, .5927,.0023,.3917, .5946, .5932, .5901,Chk Pass,,

Cr,267.716 {126},Y2A,ppm, .5847,.0021,.3609, .5825, .5849, .5867,Chk Pass,,

Cu,327.396 {103},Y2A,ppm, .5998,.0035,.5872, .5958, .6011, .6024,Chk Pass,,

Fe,261.187 {129},Y2R,ppm, 28.83,.2654,.9207, 29.05, 28.90, 28.53,Chk Pass,,

K,766.490 { 44},Y2R,ppm, 29.10,.2959,1.017, 29.23, 29.30, 28.76,Chk Pass,,

Li,670.784 { 50},Y2R,ppm, .5966,.0051,.8524, .5992, .5998, .5907,Chk Pass,,

Mg,285.213 {118},Y2R,ppm, 28.94,.2855,.9865, 29.13, 29.07, 28.61,Chk Pass,,

Mn,257.610 {131},Y2A,ppm, .58670,.00433,.73815, .58229, .59094, .58687,Chk Pass,,

Mo,202.030 {467},Y1,ppm, .6092,.0039,.6388, .6124, .6105, .6049,Chk Pass,,

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Na,589.592 { 57},Y2R,ppm,w 28.38,.4049,1.427, 28.62, 28.60, 27.91,Chk
 Warn,30.00,-5.000%
 Ni,231.604 {445},Y1,ppm, .5910,.0018,.2979, .5927, .5909, .5892,Chk Pass,,
 P,177.495 {490},Y1,ppm, .6069,.0014,.2275, .6077, .6078, .6053,Chk Pass,,
 Pb,220.353 {453},Y1,ppm, .5873,.0025,.4298, .5860, .5902, .5857,Chk Pass,,
 S,182.034 {485},Y1,ppm, 29.72,.0782,.2630, 29.73, 29.79, 29.64,Chk Pass,,
 Sb,206.833 {463},Y1,ppm, .6172,.0027,.4449, .6154, .6204, .6158,Chk Pass,,
 Se,196.090 {472},Y1,ppm, .5921,.0082,1.384, .5938, .5994, .5832,Chk Pass,,
 Si,251.611 {134},Y2R,ppm, 29.636,.39281,1.3255, 29.847, 29.878, 29.182,None,,
 Sn,189.989 {477},Y1,ppm, .5891,.0033,.5621, .5904, .5915, .5853,Chk Pass,,
 Sr,421.552 { 80},Y2A,ppm, .5972,.0047,.7852, .5935, .5957, .6025,Chk Pass,,
 Th,283.730 {119},Y2R,ppm, .6183,.0074,1.191, .6167, .6119, .6264,Chk Pass,,
 Ti,334.941 {101},Y2A,ppm, .6008,.0033,.5574, .5970, .6033, .6020,Chk Pass,,
 Tl,190.856 {477},Y1,ppm, .5779,.0072,1.252, .5858, .5760, .5717,Chk Pass,,
 V,292.402 {115},Y2A,ppm, .5989,.0010,.1655, .5994, .5977, .5994,Chk Pass,,
 W,207.911 {462},Y1,ppm, .6065,.0026,.4257, .6092, .6061, .6041,Chk Pass,,
 Zn,213.856 {458},Y1,ppm, .5829,.0007,.1159, .5833, .5833, .5821,Chk Pass,,
 Zr,339.198 { 99},Y2R,ppm, .6107,.0118,1.925, .6209, .6134, .5979,Chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Y1,224.306 {450},Cts/S, 8392.9,14.773,.17602,8408.3,8378.9,8391.6
 Y2A,371.030 { 91}2,Cts/S, 257740.,1608.1,.62391,259550.,256470.,257210.
 Y2R,371.030 { 91}3,Cts/S, 18092.,134.00,.74067,17994.,18037.,18245.

[Sample Header]

Method=New TRACE Fast(v1493)
 SampleName=ICB 078331
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 10:21:32
 Sample Type=QC
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, .0004,.0003,90.93, -.0000, .0005, .0006,Chk Pass,,
 Al,308.215 {109},Y2A,ppm, -.0089,.0009,10.61, -.0079, -.0092, -.0097,Chk Pass,,
 Al,308.215 {109}2,Y2R,ppm, -.0395,.0110,27.87, -.0426, -.0273, -.0486,Chk Pass,,
 As,189.042 {478},Y1,ppm, .0081,.0025,31.44, .0065, .0110, .0067,Chk Pass,,
 B,249.773 {135},Y2A,ppm, .0009,.0008,93.75, .0015, .0012, -.0001,Chk Pass,,
 Ba,455.403 { 74},Y2A,ppm, .0001,.0000,22.86, .0001, .0001, .0001,Chk Pass,,
 Be,313.042 {108},Y2A,ppm, -.00010,.00001,13.021, -.00012, -.00009, -.00010,Chk
 Pass,,
 Ca,317.933 {106},Y2R,ppm, .0061,.0044,71.41, .0026, .0110, .0048,Chk Pass,,
 Cd,226.502 {449},Y1,ppm, .0004,.0001,28.47, .0005, .0004, .0003,Chk Pass,,
 Co,228.616 {447},Y1,ppm, .0003,.0000,13.71, .0003, .0004, .0003,Chk Pass,,
 Cr,267.716 {126},Y2A,ppm, -.0002,.0002,100.8, -.0003, -.0000, -.0001,Chk Pass,,
 Cu,327.396 {103},Y2A,ppm, -.0007,.0001,14.67, -.0007, -.0006, -.0008,Chk Pass,,
 Fe,261.187 {129},Y2R,ppm, .0083,.0034,40.47, .0122, .0064, .0063,Chk Pass,,
 K,766.490 { 44},Y2R,ppm, -.0034,.0352,1048., .0007, -.0404, .0297,Chk Pass,,
 Li,670.784 { 50},Y2R,ppm, -.0003,.0010,286.5, -.0009, .0008, -.0009,Chk Pass,,
 Mg,285.213 {118},Y2R,ppm, -.0022,.0017,76.09, -.0004, -.0025, -.0037,Chk Pass,,
 Mn,257.610 {131},Y2A,ppm, .00016,.00004,25.131, .00015, .00021, .00013,Chk Pass,,
 Mo,202.030 {467},Y1,ppm, .0023,.0004,19.02, .0024, .0027, .0018,Chk Pass,,
 Na,589.592 { 57},Y2R,ppm, -.0026,.0061,237.8, -.0093, .0025, -.0009,Chk Pass,,
 Ni,231.604 {445},Y1,ppm, .0003,.0006,191.9, -.0003, .0009, .0004,Chk Pass,,
 P,177.495 {490},Y1,ppm, -.0005,.0016,296.6, .0007, -.0024, .0000,Chk Pass,,

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Pb,220.353 {453},Y1,ppm, -.0001,.0022,3552., -.0023, -.0001, .0022,chk Pass,,
 S,182.034 {485},Y1,ppm, .0051,.0034,65.35, .0064, .0076, .0013,chk Pass,,
 Sb,206.833 {463},Y1,ppm, -.0002,.0006,269.9, .0004, -.0008, -.0003,chk Pass,,
 Se,196.090 {472},Y1,ppm, -.0002,.0030,1545., .0006, .0024, -.0035,chk Pass,,
 Si,251.611 {134},Y2R,ppm, .00566,.00198,34.912, .00544, .00774, .00381,chk Pass,,
 Sn,189.989 {477},Y1,ppm, .0012,.0009,78.72, .0019, .0001, .0014,chk Pass,,
 Sr,421.552 { 80},Y2A,ppm, .0000,.0000,50.92, .0001, .0000, .0000,chk Pass,,
 Th,283.730 {119},Y2R,ppm, .0179,.0186,104.1, .0242, .0325, -.0031,chk Pass,,
 Ti,334.941 {101},Y2A,ppm, -.0001,.0001,129.6, -.0001, .0000, -.0001,chk Pass,,
 Tl,190.856 {477},Y1,ppm, .0011,.0026,246.0, .0036, -.0016, .0011,chk Pass,,
 V,292.402 {115},Y2A,ppm, -.0013,.0002,18.07, -.0010, -.0013, -.0015,chk Pass,,
 W,207.911 {462},Y1,ppm, .0003,.0005,147.9, -.0002, .0007, .0006,chk Pass,,
 Zn,213.856 {458},Y1,ppm, .0008,.0001,17.24, .0007, .0009, .0007,chk Pass,,
 Zr,339.198 { 99},Y2R,ppm, -.0017,.0019,109.1, -.0011, -.0038, -.0002,chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3

Y1,224.306 {450},Cts/S, 8641.0,7.2872,.08433,8647.4,8633.1,8642.6

Y2A,371.030 { 91}2,Cts/S, 267540.,3533.0,1.3205,267150.,264220.,271250.

Y2R,371.030 { 91}3,Cts/S, 17986.,110.51,.61439,18113.,17910.,17936.

[Sample Header]

Method=New TRACE Fast(v1493)

SampleName=CRI 058707

Username=dept 22

Comment=

Custom ID1=

Custom ID2=

Custom ID3=

Run Time=6/12/2020 10:24:41

Sample Type=QC

Mode=CONC

CorrFactor=1.000

Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, .0098,.0002,2.122, .0100, .0097, .0097,chk Pass,,
 Al,308.215 {109},Y2A,ppm, .1819,.0048,2.649, .1764, .1854, .1838,chk Pass,,
 Al,308.215 {109}2,Y2R,ppm, .1822,.0106,5.844, .1809, .1934, .1723,chk Pass,,
 As,189.042 {478},Y1,ppm, .0359,.0016,4.372, .0358, .0376, .0344,chk Pass,,
 B,249.773 {135},Y2A,ppm, .0294,.0008,2.751, .0284, .0297, .0299,chk Pass,,
 Ba,455.403 { 74},Y2A,ppm, .0052,.0001,1.904, .0051, .0052, .0052,chk Pass,,
 Be,313.042 {108},Y2A,ppm, .00491,.00007,1.4764, .00483, .00496, .00495,chk Pass,,
 Ca,317.933 {106},Y2R,ppm, .2043,.0044,2.137, .2089, .2003, .2036,chk Pass,,
 Cd,226.502 {449},Y1,ppm, .0056,.0001,2.149, .0056, .0054, .0057,chk Pass,,
 Co,228.616 {447},Y1,ppm, .0057,.0005,8.862, .0056, .0052, .0062,chk Pass,,
 Cr,267.716 {126},Y2A,ppm, .0151,.0002,1.282, .0149, .0153, .0150,chk Pass,,
 Cu,327.396 {103},Y2A,ppm, .0223,.0006,2.547, .0216, .0225, .0227,chk Pass,,
 Fe,261.187 {129},Y2R,ppm, .2034,.0052,2.550, .1979, .2082, .2042,chk Pass,,
 K,766.490 { 44},Y2R,ppm, .3202,.0423,13.20, .3459, .3432, .2714,chk Pass,,
 Li,670.784 { 50},Y2R,ppm, .0492,.0018,3.708, .0513, .0480, .0484,chk Pass,,
 Mg,285.213 {118},Y2R,ppm, .1004,.0014,1.395, .1020, .0999, .0993,chk Pass,,
 Mn,257.610 {131},Y2A,ppm, .01027,.00016,1.5280, .01010, .01041, .01030,chk Pass,,
 Mo,202.030 {467},Y1,ppm, .0108,.0004,3.318, .0108, .0105, .0112,chk Pass,,
 Na,589.592 { 57},Y2R,ppm, .9968,.0005,.0527, .9971, .9970, .9962,chk Pass,,
 Ni,231.604 {445},Y1,ppm, .0106,.0004,3.387, .0109, .0107, .0102,chk Pass,,
 P,177.495 {490},Y1,ppm, .0985,.0030,3.084, .0971, .1020, .0964,chk Pass,,
 Pb,220.353 {453},Y1,ppm, .0137,.0018,13.00, .0117, .0141, .0152,chk Pass,,
 S,182.034 {485},Y1,ppm, .5003,.0069,1.385, .4931, .5010, .5069,chk Pass,,
 Sb,206.833 {463},Y1,ppm, .0523,.0014,2.603, .0511, .0538, .0519,chk Pass,,
 Se,196.090 {472},Y1,ppm, .0524,.0013,2.566, .0539, .0520, .0513,chk Pass,,
 Si,251.611 {134},Y2R,ppm, .50670,.00899,1.7739, .51594, .49798, .50617,chk Pass,,

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Sn,189.989 {477},Y1,ppm, .0500,.0016,3.107, .0516, .0485, .0498,Chk Pass,,
 Sr,421.552 { 80},Y2A,ppm, .0052,.0001,1.427, .0051, .0052, .0052,Chk Pass,,
 Th,283.730 {119},Y2R,ppm, .4875,.0105,2.159, .4766, .4884, .4976,Chk Pass,,
 Ti,334.941 {101},Y2A,ppm, .0100,.0003,2.511, .0098, .0102, .0099,Chk Pass,,
 Tl,190.856 {477},Y1,ppm, .0325,.0013,3.989, .0325, .0312, .0338,Chk Pass,,
 V,292.402 {115},Y2A,ppm, .0098,.0004,3.787, .0099, .0093, .0100,Chk Pass,,
 W,207.911 {462},Y1,ppm, .0312,.0005,1.713, .0318, .0309, .0310,Chk Pass,,
 Zn,213.856 {458},Y1,ppm, .0202,.0001,.4781, .0202, .0203, .0201,Chk Pass,,
 Zr,339.198 { 99},Y2R,ppm,W .0269,.0020,7.596, .0292, .0263, .0253,Chk
 Warn,.0500,-20.00%

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Y1,224.306 {450},Cts/S, 8654.4,11.540,.13335,8643.6,8653.1,8666.6
 Y2A,371.030 { 91}2,Cts/S, 267750.,3440.4,1.2849,271660.,266390.,265200.
 Y2R,371.030 { 91}3,Cts/S, 18050.,32.051,.17757,18021.,18044.,18085.

[Sample Header]

Method=New TRACE Fast(v1493)
 SampleName=ICSA 078287
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 10:27:48
 Sample Type=QC
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, .0011,.0011,95.12, .0022, .0011, .0001,Chk Pass,,
 Al,308.215 {109},Y2A,ppm, 468.2,1.571,.3356, 469.2, 469.1, 466.4,Chk Pass,,
 Al,308.215 {109}2,Y2R,ppm, 476.1,.2273,.0477, 476.2, 475.9, 476.3,Chk Pass,,
 As,189.042 {478},Y1,ppm, .0099,.0043,43.75, .0091, .0145, .0060,Chk Pass,,
 B,249.773 {135},Y2A,ppm, -.0299,.0010,3.413, -.0293, -.0294, -.0311,Chk Pass,,
 Ba,455.403 { 74},Y2A,ppm, .0020,.0000,.5872, .0020, .0020, .0020,Chk Pass,,
 Be,313.042 {108},Y2A,ppm, -.00030,.00001,4.5491, -.00029, -.00032, -.00030,Chk
 Pass,,
 Ca,317.933 {106},Y2R,ppm, 482.9,1.393,.2886, 482.9, 481.4, 484.2,Chk Pass,,
 Cd,226.502 {449},Y1,ppm, -.0002,.0005,234.1, .0003, -.0007, -.0002,Chk Pass,,
 Co,228.616 {447},Y1,ppm, .0012,.0010,76.68, .0023, .0006, .0008,Chk Pass,,
 Cr,267.716 {126},Y2A,ppm, .0018,.0002,13.21, .0015, .0019, .0020,Chk Pass,,
 Cu,327.396 {103},Y2A,ppm, -.0051,.0004,7.293, -.0056, -.0048, -.0050,Chk Pass,,
 Fe,261.187 {129},Y2R,ppm, 187.0,.2020,.1080, 186.8, 187.2, 186.9,Chk Pass,,
 K,766.490 { 44},Y2R,ppm, .0098,.0741,753.6, .0153, -.0669, .0811,Chk Pass,,
 Li,670.784 { 50},Y2R,ppm, .0117,.0013,10.73, .0114, .0130, .0105,Chk Pass,,
 Mg,285.213 {118},Y2R,ppm,W 442.5,1.677,.3790, 440.9, 442.3, 444.3,Chk
 Warn,550.0,450.0
 Mn,257.610 {131},Y2A,ppm, .00089,.00023,25.424, .00114, .00082, .00071,Chk Pass,,
 Mo,202.030 {467},Y1,ppm, .0017,.0010,57.98, .0027, .0008, .0015,Chk Pass,,
 Na,589.592 { 57},Y2R,ppm, .0572,.0119,20.73, .0537, .0704, .0475,Chk Pass,,
 Ni,231.604 {445},Y1,ppm, .0028,.0013,46.91, .0043, .0017, .0024,Chk Pass,,
 P,177.495 {490},Y1,ppm, .0054,.0039,72.35, .0014, .0092, .0057,Chk Pass,,
 Pb,220.353 {453},Y1,ppm, -.0041,.0045,108.7, -.0033, -.0001, -.0090,Chk Pass,,
 S,182.034 {485},Y1,ppm, -.0070,.0116,165.8, .0061, -.0110, -.0161,Chk Pass,,
 Sb,206.833 {463},Y1,ppm, -.0035,.0011,30.55, -.0023, -.0044, -.0037,Chk Pass,,
 Se,196.090 {472},Y1,ppm, .0094,.0021,22.15, .0103, .0070, .0108,Chk Pass,,
 Si,251.611 {134},Y2R,ppm, .01982,.00634,31.959, .01681, .02710, .01556,Chk Pass,,
 Sn,189.989 {477},Y1,ppm, .0061,.0006,10.20, .0054, .0065, .0065,Chk Pass,,
 Sr,421.552 { 80},Y2A,ppm, .0044,.0000,.2140, .0044, .0044, .0044,Chk Pass,,

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Th,283.730 {119},Y2R,ppm, .1254,.0083,6.580, .1313, .1290, .1160,Chk Pass,,
 Ti,334.941 {101},Y2A,ppm, -.0076,.0003,3.879, -.0074, -.0080, -.0075,Chk Pass,,
 Tl,190.856 {477},Y1,ppm, .0107,.0019,17.56, .0116, .0085, .0118,Chk Pass,,
 V,292.402 {115},Y2A,ppm, -.0042,.0002,5.548, -.0044, -.0041, -.0040,Chk Pass,,
 W,207.911 {462},Y1,ppm, .0008,.0014,169.8, .0023, .0006, -.0005,Chk Pass,,
 Zn,213.856 {458},Y1,ppm, -.0173,.0007,4.232, -.0166, -.0174, -.0180,Chk Pass,,
 Zr,339.198 { 99},Y2R,ppm, -.0046,.0010,20.76, -.0052, -.0051, -.0035,Chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Y1,224.306 {450},Cts/S, 7742.2,33.061,.42702,7757.1,7704.3,7765.2
 Y2A,371.030 { 91}2,Cts/S, 233650.,374.21,.16016,233810.,233220.,233920.
 Y2R,371.030 { 91}3,Cts/S, 17448.,111.77,.64059,17577.,17383.,17384.

[Sample Header]

Method=New TRACE Fast(v1493)
 SampleName=ICSAB 070731
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 10:31:19
 Sample Type=QC
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, .2132,.0006,.2832, .2134, .2137, .2126,Chk Pass,,
 Al,308.215 {109},Y2A,ppm, 481.3,2.612,.5428, 484.3, 479.5, 480.0,Chk Pass,,
 Al,308.215 {109}2,Y2R,ppm, 490.7,1.313,.2675, 492.2, 489.9, 490.0,Chk Pass,,
 As,189.042 {478},Y1,ppm, .1071,.0045,4.207, .1105, .1088, .1020,Chk Pass,,
 B,249.773 {135},Y2A,ppm, -.0343,.0015,4.260, -.0348, -.0355, -.0327,Chk Pass,,
 Ba,455.403 { 74},Y2A,ppm, .5058,.0010,.2060, .5062, .5046, .5066,Chk Pass,,
 Be,313.042 {108},Y2A,ppm, .48982,.00263,.53593, .49253, .48964, .48729,Chk Pass,,
 Ca,317.933 {106},Y2R,ppm, 500.4,5.707,1.141, 506.5, 495.2, 499.4,Chk Pass,,
 Cd,226.502 {449},Y1,ppm, .9041,.0102,1.130, .9125, .9069, .8927,Chk Pass,,
 Co,228.616 {447},Y1,ppm, .4563,.0044,.9576, .4592, .4585, .4513,Chk Pass,,
 Cr,267.716 {126},Y2A,ppm, .4770,.0019,.4022, .4783, .4779, .4748,Chk Pass,,
 Cu,327.396 {103},Y2A,ppm, .5279,.0032,.6143, .5314, .5272, .5251,Chk Pass,,
 Fe,261.187 {129},Y2R,ppm, 193.3,5.978,3.092, 194.0, 192.9, 193.1,Chk Pass,,
 K,766.490 { 44},Y2R,ppm, .0069,.0311,452.8, .0279, .0215, -.0288,Chk Pass,,
 Li,670.784 { 50},Y2R,ppm, .0108,.0007,6.774, .0105, .0102, .0116,Chk Pass,,
 Mg,285.213 {118},Y2R,ppm, 459.6,5.506,1.198, 465.5, 454.6, 458.7,Chk Pass,,
 Mn,257.610 {131},Y2A,ppm, .48265,.00307,.63647, .48609, .48164, .48020,Chk Pass,,
 Mo,202.030 {467},Y1,ppm, .0018,.0008,47.60, .0024, .0008, .0020,Chk Pass,,
 Na,589.592 { 57},Y2R,ppm, .0692,.0130,18.83, .0843, .0610, .0625,Chk Pass,,
 Ni,231.604 {445},Y1,ppm, .9041,.0076,.8438, .9103, .9065, .8956,Chk Pass,,
 P,177.495 {490},Y1,ppm, .0100,.0028,28.01, .0128, .0072, .0100,Chk Pass,,
 Pb,220.353 {453},Y1,ppm, .5014,.0067,1.338, .5052, .5053, .4936,Chk Pass,,
 S,182.034 {485},Y1,ppm, -.0131,.0082,63.03, -.0221, -.0060, -.0111,Chk Pass,,
 Sb,206.833 {463},Y1,ppm, .6223,.0060,.9633, .6212, .6288, .6170,Chk Pass,,
 Se,196.090 {472},Y1,ppm, .5057,.0026,.5237, .5043, .5088, .5042,Chk Pass,,
 Si,251.611 {134},Y2R,ppm, F .01544,.00213,13.763, .01452, .01787, .01394,Chk
 Fail,1.0000,1.0000
 Sn,189.989 {477},Y1,ppm, .0080,.0012,15.28, .0075, .0094, .0071,Chk Pass,,
 Sr,421.552 { 80},Y2A,ppm, .0045,.0000,.5889, .0046, .0045, .0045,Chk Pass,,
 Th,283.730 {119},Y2R,ppm, .1390,.0087,6.255, .1289, .1441, .1439,Chk Pass,,
 Ti,334.941 {101},Y2A,ppm, -.0076,.0001,1.278, -.0075, -.0077, -.0077,Chk Pass,,
 Tl,190.856 {477},Y1,ppm, .0902,.0085,9.380, .0999, .0865, .0842,Chk Pass,,
 V,292.402 {115},Y2A,ppm, .5012,.0017,.3421, .5018, .5025, .4992,Chk Pass,,

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w,207.911 {462},Y1,ppm,F -.0010,.0009,90.42, -.0004, -.0006, -.0021,chk
Fail,-.0600,-.0600
Zn,213.856 {458},Y1,ppm, .9375,.0113,1.207, .9457, .9422, .9246,chk Pass,,
Zr,339.198 { 99},Y2R,ppm, -.0068,.0018,26.88, -.0048, -.0084, -.0072,chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
Y1,224.306 {450},Cts/s, 7715.2,31.682,.41065,7697.9,7696.0,7751.8
Y2A,371.030 { 91}2,Cts/s, 232860.,746.51,.32058,232000.,233330.,233250.
Y2R,371.030 { 91}3,Cts/s, 17163.,76.029,.44298,17075.,17211.,17203.

[Sample Header]

Method=New TRACE Fast(v1493)
SampleName=CCV 095153
Username=dept 22
Comment=
Custom ID1=
Custom ID2=
Custom ID3=
Run Time=6/12/2020 10:34:48
Sample Type=QC
Mode=CONC
CorrFactor=1.000
Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
Ag,328.068 {103},Y2A,ppm, .4946,.0011,.2262, .4941, .4958, .4937,chk Pass,,
Alum Ax,308.215 {109},Y2A,ppm, 24.42,.0696,.2850, 24.47, 24.34, 24.45,chk Pass,,
Al,308.215 {109}2,Y2R,ppm, 24.75,.0502,.2026, 24.72, 24.81, 24.72,chk Pass,,
As,189.042 {478},Y1,ppm, .4964,.0046,.9185, .4993, .4987, .4911,chk Pass,,
B,249.773 {135},Y2A,ppm, .4805,.0008,.1687, .4814, .4800, .4800,chk Pass,,
Ba,455.403 { 74},Y2A,ppm, .4977,.0034,.6765, .5015, .4951, .4965,chk Pass,,
Be,313.042 {108},Y2A,ppm, .48685,.00086,.17677, .48682, .48600, .48772,chk Pass,,
Ca,317.933 {106},Y2R,ppm, 24.92,.1368,.5490, 24.79, 25.06, 24.91,chk Pass,,
Cd,226.502 {449},Y1,ppm, .4934,.0061,1.233, .4977, .4960, .4864,chk Pass,,
Co,228.616 {447},Y1,ppm, .4941,.0062,1.255, .4985, .4967, .4870,chk Pass,,
Cr,267.716 {126},Y2A,ppm, .4881,.0005,.0995, .4887, .4879, .4879,chk Pass,,
Cu,327.396 {103},Y2A,ppm, .5017,.0025,.4921, .5016, .4992, .5042,chk Pass,,
Fe,261.187 {129},Y2R,ppm, 24.87,.0510,.2051, 24.90, 24.91, 24.82,chk Pass,,
K,766.490 { 44},Y2R,ppm, 24.94,.1585,.6358, 24.81, 25.11, 24.88,chk Pass,,
Li,670.784 { 50},Y2R,ppm, .4961,.0040,.8036, .4918, .4996, .4969,chk Pass,,
Mg,285.213 {118},Y2R,ppm, 24.70,.0994,.4024, 24.65, 24.82, 24.64,chk Pass,,
Mn,257.610 {131},Y2A,ppm, .49437,.00219,.44239, .49612, .49192, .49508,chk Pass,,
Mo,202.030 {467},Y1,ppm, .4975,.0074,1.486, .5037, .4994, .4893,chk Pass,,
Na,589.592 { 57},Y2R,ppm, 24.57,.0321,.1307, 24.53, 24.60, 24.57,chk Pass,,
Ni,231.604 {445},Y1,ppm, .4936,.0051,1.032, .4972, .4957, .4877,chk Pass,,
P,177.495 {490},Y1,ppm, .4942,.0075,1.520, .4978, .4992, .4856,chk Pass,,
Pb,220.353 {453},Y1,ppm, .4916,.0078,1.592, .4993, .4917, .4837,chk Pass,,
S,182.034 {485},Y1,ppm, 23.97,.2608,1.088, 24.14, 24.10, 23.67,chk Pass,,
Sb,206.833 {463},Y1,ppm, .4900,.0065,1.319, .4920, .4952, .4827,chk Pass,,
Se,196.090 {472},Y1,ppm, .4946,.0061,1.230, .4951, .5004, .4883,chk Pass,,
Si,251.611 {134},Y2R,ppm, 24.789,.06528,.26335, 24.737, 24.862, 24.767,chk Pass,,
Sn,189.989 {477},Y1,ppm, .4868,.0055,1.134, .4886, .4913, .4807,chk Pass,,
Sr,421.552 { 80},Y2A,ppm, .5011,.0022,.4432, .5037, .4998, .4998,chk Pass,,
Th,283.730 {119},Y2R,ppm, .5372,.0058,1.074, .5335, .5439, .5343,chk Pass,,
Ti,334.941 {101},Y2A,ppm, .5028,.0019,.3685, .5034, .5007, .5042,chk Pass,,
Tl,190.856 {477},Y1,ppm, .4888,.0113,2.315, .4976, .4928, .4760,chk Pass,,
V,292.402 {115},Y2A,ppm, .5019,.0009,.1808, .5009, .5027, .5021,chk Pass,,
w,207.911 {462},Y1,ppm, .5021,.0068,1.363, .5057, .5064, .4942,chk Pass,,
Zn,213.856 {458},Y1,ppm, .4854,.0056,1.153, .4890, .4882, .4789,chk Pass,,
Zr,339.198 { 99},Y2R,ppm, .5186,.0028,.5318, .5210, .5156, .5191,chk Pass,,

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[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Y1,224.306 {450},Cts/S, 8591.4,71.220,.82896,8543.5,8557.5,8673.3
 Y2A,371.030 { 91}2,Cts/S, 259070.,363.54,.14032,258650.,259320.,259240.
 Y2R,371.030 { 91}3,Cts/S, 17916.,49.227,.27476,17962.,17864.,17922.

[Sample Header]

Method=New TRACE Fast(v1493)
 SampleName=CCB 078331
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 10:37:57
 Sample Type=QC
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, .0005,.0006,113.4, .0007, -.0001, .0011,Chk Pass,,
 Al,308.215 {109},Y2A,ppm, -.0047,.0013,27.42, -.0041, -.0061, -.0037,Chk Pass,,
 Al,308.215 {109}2,Y2R,ppm, -.0389,.0105,26.87, -.0510, -.0334, -.0324,Chk Pass,,
 As,189.042 {478},Y1,ppm, .0042,.0003,7.704, .0038, .0044, .0043,Chk Pass,,
 B,249.773 {135},Y2A,ppm, .0001,.0003,294.3, -.0002, .0003, .0002,Chk Pass,,
 Ba,455.403 { 74},Y2A,ppm, .0000,.0000,11.71, .0001, .0000, .0000,Chk Pass,,
 Be,313.042 {108},Y2A,ppm, -.00011,.00001,5.6078, -.00010, -.00011, -.00011,Chk
 Pass,,
 Ca,317.933 {106},Y2R,ppm, .0122,.0033,26.86, .0087, .0153, .0127,Chk Pass,,
 Cd,226.502 {449},Y1,ppm, .0002,.0001,60.69, .0003, .0001, .0002,Chk Pass,,
 Co,228.616 {447},Y1,ppm, .0002,.0005,204.0, .0004, -.0003, .0006,Chk Pass,,
 Cr,267.716 {126},Y2A,ppm, .0001,.0003,578.5, -.0001, .0004, -.0002,Chk Pass,,
 Cu,327.396 {103},Y2A,ppm, -.0004,.0003,64.65, -.0001, -.0006, -.0006,Chk Pass,,
 Fe,261.187 {129},Y2R,ppm, .0045,.0051,113.4, -.0014, .0072, .0078,Chk Pass,,
 K,766.490 { 44},Y2R,ppm, -.0143,.0155,108.2, -.0296, .0015, -.0149,Chk Pass,,
 Li,670.784 { 50},Y2R,ppm, .0001,.0013,897.9, .0017, -.0007, -.0005,Chk Pass,,
 Mg,285.213 {118},Y2R,ppm, .0016,.0004,28.00, .0015, .0020, .0012,Chk Pass,,
 Mn,257.610 {131},Y2A,ppm, .00011,.00002,22.778, .00013, .00011, .00008,Chk Pass,,
 Mo,202.030 {467},Y1,ppm, .0021,.0001,7.152, .0021, .0022, .0019,Chk Pass,,
 Na,589.592 { 57},Y2R,ppm, .0039,.0058,147.2, .0104, .0023, -.0009,Chk Pass,,
 Ni,231.604 {445},Y1,ppm, -.0000,.0004,1552., .0004, -.0002, -.0003,Chk Pass,,
 P,177.495 {490},Y1,ppm, -.0012,.0034,295.0, -.0050, .0014, .0002,Chk Pass,,
 Pb,220.353 {453},Y1,ppm, -.0001,.0008,572.5, -.0011, .0004, .0002,Chk Pass,,
 S,182.034 {485},Y1,ppm, .0000,.0028,12460., .0028, -.0027, .0000,Chk Pass,,
 Sb,206.833 {463},Y1,ppm, .0008,.0026,345.4, -.0014, .0000, .0037,Chk Pass,,
 Se,196.090 {472},Y1,ppm, -.0001,.0043,4125., .0027, .0021, -.0050,Chk Pass,,
 Si,251.611 {134},Y2R,ppm, -.00689,.00090,13.131, -.00682, -.00602, -.00783,Chk
 Pass,,
 Sn,189.989 {477},Y1,ppm, .0011,.0005,49.83, .0014, .0005, .0013,Chk Pass,,
 Sr,421.552 { 80},Y2A,ppm, .0000,.0000,56.95, .0001, .0000, .0000,Chk Pass,,
 Th,283.730 {119},Y2R,ppm, .0095,.0134,140.2, -.0048, .0117, .0217,Chk Pass,,
 Ti,334.941 {101},Y2A,ppm, .0000,.0001,236.6, .0001, .0000, -.0000,Chk Pass,,
 Tl,190.856 {477},Y1,ppm, .0030,.0017,54.40, .0049, .0017, .0026,Chk Pass,,
 V,292.402 {115},Y2A,ppm, -.0014,.0003,19.74, -.0017, -.0013, -.0011,Chk Pass,,
 W,207.911 {462},Y1,ppm, .0001,.0003,296.8, .0004, -.0002, .0001,Chk Pass,,
 Zn,213.856 {458},Y1,ppm, .0007,.0002,24.89, .0007, .0008, .0005,Chk Pass,,
 Zr,339.198 { 99},Y2R,ppm, -.0012,.0005,43.58, -.0014, -.0006, -.0016,Chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Y1,224.306 {450},Cts/S, 8657.3,18.406,.21260,8673.9,8637.5,8660.4

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Y2A,371.030 { 91}2,Cts/S, 267070.,2452.9,.91847,269030.,267850.,264320.
 Y2R,371.030 { 91}3,Cts/S, 17979.,134.74,.74941,17898.,18134.,17904.

[Sample Header]

Method=New TRACE Fast(v1493)
 SampleName=LRC 083291
 Username=dept 22
 Comment=LRS2
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 10:41:06
 Sample Type=QC
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm,F 2.689,.0048,.1798, 2.683, 2.690, 2.693,chk
 Fail,5.000,-10.00%
 Al,308.215 {109},Y2A,ppm,.0385,.0086,22.39,.0408,.0290,.0458,None,,
 Al,308.215 {109}2,Y2R,ppm,.2269,.0135,5.965,.2296,.2123,.2389,None,,
 As,189.042 {478},Y1,ppm,18.88,.5868,3.107, 19.29, 19.14, 18.21,chk Pass,,
 B,249.773 {135},Y2A,ppm,4.776,.0157,.3294, 4.758, 4.785, 4.786,chk Pass,,
 Ba,455.403 { 74},Y2A,ppm,4.746,.0131,.2762, 4.745, 4.734, 4.760,chk Pass,,
 Be,313.042 {108},Y2A,ppm,4.6954,.02735,.58246, 4.6887, 4.6720, 4.7255,chk Pass,,
 Ca,317.933 {106},Y2R,ppm,.0618,.0013,2.142,.0622,.0604,.0629,None,,
 Cd,226.502 {449},Y1,ppm,19.13,.6286,3.286, 19.58, 19.40, 18.41,chk Pass,,
 Co,228.616 {447},Y1,ppm,20.19,.6689,3.313, 20.68, 20.46, 19.42,chk Pass,,
 Cr,267.716 {126},Y2A,ppm,19.46,.0279,.1434, 19.44, 19.44, 19.49,chk Pass,,
 Cu,327.396 {103},Y2A,ppm,20.18,.0879,.4355, 20.13, 20.13, 20.29,chk Pass,,
 Fe,261.187 {129},Y2R,ppm,-.0646,.0063,9.723,-.0688,-.0677,-.0574,None,,
 K,766.490 { 44},Y2R,ppm,.0045,.0091,202.4,-.0057,.0076,.0117,None,,
 Li,670.784 { 50},Y2R,ppm,19.95,.0883,.4427, 19.88, 19.91, 20.05,chk Pass,,
 Mg,285.213 {118},Y2R,ppm,-.0076,.0009,11.80,-.0086,-.0068,-.0075,None,,
 Mn,257.610 {131},Y2A,ppm,18.577,.12392,.66704, 18.458, 18.569, 18.705,chk Pass,,
 Mo,202.030 {467},Y1,ppm,19.99,.6941,3.473, 20.52, 20.24, 19.20,chk Pass,,
 Na,589.592 { 57},Y2R,ppm,.0866,.0101,11.66,.0802,.0983,.0814,None,,
 Ni,231.604 {445},Y1,ppm,20.04,.6737,3.362, 20.52, 20.32, 19.27,chk Pass,,
 P,177.495 {490},Y1,ppm,19.14,.6079,3.176, 19.60, 19.37, 18.45,chk Pass,,
 Pb,220.353 {453},Y1,ppm,20.12,.5852,2.908, 20.54, 20.37, 19.45,chk Pass,,
 S,182.034 {485},Y1,ppm,.2022,.0210,10.38,.2210,.2060,.1795,None,,
 Sb,206.833 {463},Y1,ppm,20.48,.6379,3.115, 20.93, 20.75, 19.75,chk Pass,,
 Se,196.090 {472},Y1,ppm,19.12,.5597,2.928, 19.51, 19.36, 18.47,chk Pass,,
 Si,251.611 {134},Y2R,ppm,1.3906,.13878,9.9800, 1.2403, 1.4176, 1.5139,None,,
 Sn,189.989 {477},Y1,ppm,19.59,.6504,3.319, 20.08, 19.85, 18.85,chk Pass,,
 Sr,421.552 { 80},Y2A,ppm,4.622,.0371,.8021, 4.605, 4.597, 4.665,chk Pass,,
 Th,283.730 {119},Y2R,ppm,F 2.468,.0210,.8512, 2.482, 2.444, 2.477,chk
 Fail,20.00,-10.00%
 Ti,334.941 {101},Y2A,ppm,19.36,.1625,.8393, 19.35, 19.20, 19.52,chk Pass,,
 Tl,190.856 {477},Y1,ppm,20.18,.5284,2.618, 20.55, 20.43, 19.58,chk Pass,,
 V,292.402 {115},Y2A,ppm,20.37,.0343,.1684, 20.33, 20.39, 20.40,chk Pass,,
 W,207.911 {462},Y1,ppm,20.22,.6862,3.394, 20.73, 20.49, 19.44,chk Pass,,
 Zn,213.856 {458},Y1,ppm,9.069,.3002,3.311, 9.282, 9.198, 8.725,chk Pass,,
 Zr,339.198 { 99},Y2R,ppm,21.84,.0445,.2036, 21.80, 21.88, 21.83,chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Y1,224.306 {450},Cts/S, 8377.7,174.84,2.0869,8266.8,8287.1,8579.3
 Y2A,371.030 { 91}2,Cts/S, 260090.,1843.4,.70875,261150.,261150.,257960.
 Y2R,371.030 { 91}3,Cts/S, 18087.,106.51,.58886,18193.,18089.,17980.

T2016401T75

[Sample Header]
 Method=New TRACE Fast(v1493)
 SampleName=LRC 083294
 Username=dept 22
 Comment=LRS4
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 10:44:42
 Sample Type=QC
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem	WL	ISRef	Units	Avg	Stddev	RSD	Rep1	Rep2	Rep3	chk_Pass/Fail	chk_Low	chk_High
Ag	328.068	{103}	Y2A,ppm	.0085	.0068	80.35	.0049	.0042	.0163	None,,		
Alum Ax	308.215	{109}	Y2A,ppm	493.9	5.338	1.081	496.2	497.7	487.8	Chk Pass,,		
Al	308.215	{109}2	Y2R,ppm	500.8	.9646	.1926	500.4	501.8	500.0	Chk Pass,,		
As	189.042	{478}	Y1,ppm	.0108	.0053	48.85	.0103	.0162	.0058	None,,		
B	249.773	{135}	Y2A,ppm	-.0435	.0023	5.319	-.0408	-.0448	-.0448	None,,		
Ba	455.403	{74}	Y2A,ppm	.0020	.0000	1.713	.0021	.0020	.0020	None,,		
Be	313.042	{108}	Y2A,ppm	-.00017	.00002	12.637	-.00015	-.00017	-.00020	None,,		
Ca	317.933	{106}	Y2R,ppm	492.4	5.051	1.026	487.7	497.7	491.8	Chk Pass,,		
Cd	226.502	{449}	Y1,ppm	-.0000	.0011	256300.	.0009	.0003	-.0013	None,,		
Co	228.616	{447}	Y1,ppm	.0011	.0003	29.05	.0012	.0008	.0015	None,,		
Cr	267.716	{126}	Y2A,ppm	.0005	.0005	105.1	-.0000	.0005	.0010	None,,		
Cu	327.396	{103}	Y2A,ppm	-.0130	.0010	8.042	-.0126	-.0122	-.0142	None,,		
Fe	261.187	{129}	Y2R,ppm	299.6	.9254	.3089	299.7	300.4	298.6	Chk Pass,,		
K	766.490	{44}	Y2R,ppm	507.8	2.675	.5267	508.7	510.0	504.8	Chk Pass,,		
Li	670.784	{50}	Y2R,ppm	.0158	.0008	4.815	.0165	.0150	.0159	None,,		
Mg	285.213	{118}	Y2R,ppm	F 438.9	5.804	1.322	432.6	444.0	440.1	Chk		
Fail	500.0									-10.00%		
Mn	257.610	{131}	Y2A,ppm	-.01380	.00012	.84089	-.01371	-.01393	-.01376	None,,		
Mo	202.030	{467}	Y1,ppm	.1193	.0012	1.005	.1207	.1184	.1189	None,,		
Na	589.592	{57}	Y2R,ppm	479.7	5.988	1.248	477.3	486.5	475.2	Chk Pass,,		
Ni	231.604	{445}	Y1,ppm	-.0001	.0006	822.8	-.0007	.0003	.0002	None,,		
P	177.495	{490}	Y1,ppm	.0094	.0062	66.03	.0023	.0138	.0122	None,,		
Pb	220.353	{453}	Y1,ppm	.0030	.0006	19.97	.0036	.0031	.0024	None,,		
S	182.034	{485}	Y1,ppm	198.2	5.064	2.555	201.9	200.3	192.4	Chk Pass,,		
Sb	206.833	{463}	Y1,ppm	.0025	.0047	187.0	-.0007	.0079	.0003	None,,		
Se	196.090	{472}	Y1,ppm	.0101	.0072	71.51	.0166	.0113	.0024	None,,		
Si	251.611	{134}	Y2R,ppm	191.38	.72735	.38006	190.79	192.19	191.15	Chk Pass,,		
Sn	189.989	{477}	Y1,ppm	.0127	.0013	10.10	.0134	.0135	.0112	None,,		
Sr	421.552	{80}	Y2A,ppm	.0138	.0001	.6950	.0139	.0137	.0138	None,,		
Th	283.730	{119}	Y2R,ppm	.2206	.0131	5.937	.2062	.2237	.2318	None,,		
Ti	334.941	{101}	Y2A,ppm	.0118	.0003	2.311	.0121	.0118	.0115	None,,		
Tl	190.856	{477}	Y1,ppm	.0084	.0032	38.47	.0113	.0089	.0049	None,,		
V	292.402	{115}	Y2A,ppm	-.0036	.0006	15.61	-.0041	-.0030	-.0037	None,,		
W	207.911	{462}	Y1,ppm	.0438	.0011	2.475	.0427	.0449	.0439	None,,		
Zn	213.856	{458}	Y1,ppm	-.0553	.0011	2.046	-.0544	-.0550	-.0566	None,,		
Zr	339.198	{99}	Y2R,ppm	.0092	.0038	40.91	.0061	.0082	.0134	None,,		

[Internal Standards]

Elem	WL	Units	Avg	Stddev	RSD	Rep1	Rep2	Rep3
Y1	224.306	{450}	Cts/S	7494.0	123.70	1.6506	7436.1	7409.9
Y2A	371.030	{91}2	Cts/S	226040.	1004.2	.44427	225180.	225800.
Y2R	371.030	{91}3	Cts/S	17105.	161.15	.94212	17269.	16947.

[Sample Header]
 Method=New TRACE Fast(v1493)
 SampleName=LRC 083293
 Username=dept 22

T2016401T75

Comment=LRS3
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 10:48:19
 Sample Type=QC
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem	WL	ISRef	Units	Avg	Stddev	RSD	Rep1	Rep2	Rep3	chk_Pass/Fail	chk_Low	chk_High
Ag	328.068	{103}	Y2A, ppm	2.491	.0066	.2638	2.499	2.487	2.487	Chk Pass,,		
Al	308.215	{109}	Y2A, ppm	.0224	.0049	21.87	.0169	.0241	.0263	None,,		
Al	308.215	{109}	Y2R, ppm	.2027	.0321	15.84	.2350	.1708	.2023	None,,		
As	189.042	{478}	Y1, ppm	9.719	.1096	1.127	9.832	9.712	9.613	Chk Pass,,		
B	249.773	{135}	Y2A, ppm	2.395	.0078	.3262	2.404	2.389	2.394	Chk Pass,,		
Ba	455.403	{74}	Y2A, ppm	2.477	.0136	.5475	2.484	2.461	2.485	Chk Pass,,		
Be	313.042	{108}	Y2A, ppm	2.4387	.00206	.08458	2.4394	2.4364	2.4403	Chk Pass,,		
Ca	317.933	{106}	Y2R, ppm	.1064	.0031	2.941	.1099	.1056	.1038	None,,		
Cd	226.502	{449}	Y1, ppm	10.04	.1350	1.345	10.17	10.04	9.899	Chk Pass,,		
Co	228.616	{447}	Y1, ppm	10.47	.1399	1.337	10.60	10.47	10.32	Chk Pass,,		
Cr	267.716	{126}	Y2A, ppm	9.852	.0555	.5630	9.915	9.811	9.829	Chk Pass,,		
Cu	327.396	{103}	Y2A, ppm	10.20	.0476	.4666	10.25	10.15	10.19	Chk Pass,,		
Fe	261.187	{129}	Y2R, ppm	-.0047	.0051	108.6	-.0097	.0005	-.0050	None,,		
K	766.490	{44}	Y2R, ppm	.2765	.0144	5.204	.2835	.2860	.2599	None,,		
Li	670.784	{50}	Y2R, ppm	9.945	.0275	.2761	9.949	9.916	9.971	Chk Pass,,		
Mg	285.213	{118}	Y2R, ppm	-.0079	.0016	20.07	-.0092	-.0061	-.0083	None,,		
Mn	257.610	{131}	Y2A, ppm	9.8408	.06383	.64866	9.9130	9.8180	9.7916	Chk Pass,,		
Mo	202.030	{467}	Y1, ppm	10.18	.1617	1.588	10.34	10.18	10.01	Chk Pass,,		
Na	589.592	{57}	Y2R, ppm	.1856	.0148	7.995	.2027	.1776	.1765	None,,		
Ni	231.604	{445}	Y1, ppm	10.38	.1461	1.407	10.53	10.39	10.24	Chk Pass,,		
P	177.495	{490}	Y1, ppm	9.891	.1387	1.402	10.03	9.897	9.750	Chk Pass,,		
Pb	220.353	{453}	Y1, ppm	10.43	.1138	1.090	10.54	10.44	10.32	Chk Pass,,		
S	182.034	{485}	Y1, ppm	.1125	.0016	1.433	.1132	.1135	.1106	None,,		
Sb	206.833	{463}	Y1, ppm	10.44	.1537	1.472	10.60	10.45	10.29	Chk Pass,,		
Se	196.090	{472}	Y1, ppm	10.04	.1338	1.333	10.18	10.01	9.914	Chk Pass,,		
Si	251.611	{134}	Y2R, ppm	1.3734	.05657	4.1189	1.3261	1.3581	1.4361	None,,		
Sn	189.989	{477}	Y1, ppm	10.14	.1513	1.491	10.29	10.15	9.991	Chk Pass,,		
Sr	421.552	{80}	Y2A, ppm	2.413	.0046	.1895	2.408	2.416	2.414	Chk Pass,,		
Th	283.730	{119}	Y2R, ppm	8.892	.0393	.4422	8.934	8.855	8.889	Chk		
Fail	10.00			-10.00%								
Ti	334.941	{101}	Y2A, ppm	9.883	.0537	.5436	9.876	9.833	9.940	Chk Pass,,		
Tl	190.856	{477}	Y1, ppm	10.51	.1037	.9868	10.62	10.51	10.41	Chk Pass,,		
V	292.402	{115}	Y2A, ppm	10.25	.0425	.4143	10.30	10.23	10.23	Chk Pass,,		
W	207.911	{462}	Y1, ppm	10.22	.1491	1.458	10.37	10.23	10.07	Chk Pass,,		
Zn	213.856	{458}	Y1, ppm	4.830	.0658	1.362	4.894	4.835	4.763	Chk Pass,,		
Zr	339.198	{99}	Y2R, ppm	10.59	.0160	.1515	10.59	10.58	10.61	Chk Pass,,		

[Internal Standards]

Elem	WL	Units	Avg	Stddev	RSD	Rep1	Rep2	Rep3
Y1	224.306	{450}, Cts/S	8336.7	38.510	.46193	8294.9	8344.2	8370.8
Y2A	371.030	{91}2, Cts/S	261290.	785.67	.30069	260890.	262200.	260790.
Y2R	371.030	{91}3, Cts/S	18043.	68.475	.37952	18065.	18097.	17966.

[Sample Header]

Method=New TRACE Fast(v1493)
 SampleName=LRC 083311
 Username=dept 22
 Comment=LRS5
 Custom ID1=
 Custom ID2=
 Custom ID3=

T2016401T75

Run Time=6/12/2020 10:51:46

Sample Type=QC

Mode=CONC

CorrFactor=1.000

Repeats=3

[Results]

Elem	WL	ISRef	Units	Avg	Stddev	RSD	Rep1	Rep2	Rep3	chk_Pass/Fail	chk_Low	chk_High
Ag	328.068	{103}	Y2A, ppm	.0015	.0005	33.87	.0010	.0020	.0013	None,,		
Alum Ax	308.215	{109}	Y2A, ppm	256.7	1.997	.7781	254.9	258.8	256.3	Chk Pass,,		
Al	308.215	{109}2	Y2R, ppm	252.6	.8075	.3197	251.7	253.1	253.0	Chk Pass,,		
As	189.042	{478}	Y1, ppm	.0110	.0025	22.97	.0113	.0083	.0133	None,,		
B	249.773	{135}	Y2A, ppm	-.0109	.0012	11.13	-.0115	-.0095	-.0116	None,,		
Ba	455.403	{74}	Y2A, ppm	.0009	.0000	1.119	.0009	.0010	.0009	None,,		
Be	313.042	{108}	Y2A, ppm	-.00020	.00002	11.935	-.00017	-.00020	-.00021	None,,		
Ca	317.933	{106}	Y2R, ppm	248.9	.8948	.3595	248.0	249.0	249.8	Chk Pass,,		
Cd	226.502	{449}	Y1, ppm	-.0002	.0005	221.6	.0004	-.0005	-.0006	None,,		
Co	228.616	{447}	Y1, ppm	.0005	.0004	80.25	.0002	.0009	.0003	None,,		
Cr	267.716	{126}	Y2A, ppm	.0003	.0003	136.9	.0000	.0007	.0001	None,,		
Cu	327.396	{103}	Y2A, ppm	-.0063	.0002	2.442	-.0062	-.0062	-.0065	None,,		
Fe	261.187	{129}	Y2R, ppm	149.4	.6078	.4068	148.7	149.7	149.8	Chk Pass,,		
K	766.490	{44}	Y2R, ppm	254.7	1.163	.4565	253.5	254.9	255.8	Chk Pass,,		
Li	670.784	{50}	Y2R, ppm	.0089	.0013	14.16	.0098	.0093	.0074	None,,		
Mg	285.213	{118}	Y2R, ppm	241.2	1.655	.6862	239.8	240.8	243.1	Chk Pass,,		
Mn	257.610	{131}	Y2A, ppm	-.00668	.00008	1.2061	-.00660	-.00667	-.00676	None,,		
Mo	202.030	{467}	Y1, ppm	.0855	.0021	2.448	.0880	.0842	.0845	None,,		
Na	589.592	{57}	Y2R, ppm	240.3	.3687	.1534	239.9	240.6	240.5	Chk Pass,,		
Ni	231.604	{445}	Y1, ppm	-.0011	.0009	78.31	-.0018	-.0001	-.0014	None,,		
P	177.495	{490}	Y1, ppm	.0040	.0035	88.17	.0027	.0080	.0013	None,,		
Pb	220.353	{453}	Y1, ppm	-.0014	.0021	149.1	-.0006	.0002	-.0038	None,,		
S	182.034	{485}	Y1, ppm	100.8	1.203	1.194	102.1	99.92	100.2	Chk Pass,,		
Sb	206.833	{463}	Y1, ppm	.0065	.0022	34.72	.0062	.0088	.0044	None,,		
Se	196.090	{472}	Y1, ppm	.0104	.0027	25.53	.0086	.0092	.0135	None,,		
Si	251.611	{134}	Y2R, ppm	100.87	.35417	.35113	100.46	101.00	101.13	Chk Pass,,		
Sn	189.989	{477}	Y1, ppm	.0067	.0013	19.24	.0079	.0068	.0053	None,,		
Sr	421.552	{80}	Y2A, ppm	.0070	.0000	.2949	.0070	.0070	.0070	None,,		
Th	283.730	{119}	Y2R, ppm	.1306	.0057	4.386	.1293	.1368	.1256	None,,		
Ti	334.941	{101}	Y2A, ppm	.0080	.0003	4.083	.0077	.0083	.0078	None,,		
Tl	190.856	{477}	Y1, ppm	.0026	.0037	141.2	.0031	.0061	-.0013	None,,		
V	292.402	{115}	Y2A, ppm	-.0034	.0002	7.179	-.0037	-.0033	-.0033	None,,		
W	207.911	{462}	Y1, ppm	.0378	.0006	1.536	.0383	.0379	.0371	None,,		
Zn	213.856	{458}	Y1, ppm	-.0295	.0007	2.463	-.0287	-.0300	-.0298	None,,		
Zr	339.198	{99}	Y2R, ppm	.0143	.0035	24.66	.0120	.0125	.0184	None,,		

[Internal Standards]

Elem	WL	Units	Avg	Stddev	RSD	Rep1	Rep2	Rep3
Y1	224.306	{450}	Cts/S	7877.6	50.838	.64535	7834.7	7933.8
Y2A	371.030	{91}2	Cts/S	236200.	1478.3	.62588	236280.	234680.
Y2R	371.030	{91}3	Cts/S	17443.	104.10	.59681	17562.	17371.

[Sample Header]

Method=New TRACE Fast(v1493)

SampleName=CCV 095153

Username=dept 22

Comment=

Custom ID1=

Custom ID2=

Custom ID3=

Run Time=6/12/2020 10:55:15

Sample Type=QC

Mode=CONC

CorrFactor=1.000

Repeats=3

T2016401T75

[Results]

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Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
Ag,328.068 {103},Y2A,ppm, .4919,.0012,.2422, .4905, .4925, .4926,Chk Pass,,
Alum Ax,308.215 {109},Y2A,ppm, 24.30,.0362,.1489, 24.30, 24.27, 24.34,Chk Pass,,
Al,308.215 {109}2,Y2R,ppm, 24.77,.0589,.2378, 24.73, 24.84, 24.73,Chk Pass,,
As,189.042 {478},Y1,ppm, .5021,.0020,.3926, .5043, .5007, .5011,Chk Pass,,
B,249.773 {135},Y2A,ppm, .4772,.0017,.3535, .4768, .4758, .4791,Chk Pass,,
Ba,455.403 { 74},Y2A,ppm, .4903,.0016,.3338, .4885, .4917, .4906,Chk Pass,,
Be,313.042 {108},Y2A,ppm, .47939,.00150,.31346, .47960, .47780, .48079,Chk Pass,,
Ca,317.933 {106},Y2R,ppm, 24.63,.0567,.2303, 24.58, 24.69, 24.61,Chk Pass,,
Cd,226.502 {449},Y1,ppm, .4911,.0015,.3027, .4928, .4902, .4903,Chk Pass,,
Co,228.616 {447},Y1,ppm, .4947,.0026,.5176, .4966, .4956, .4918,Chk Pass,,
Cr,267.716 {126},Y2A,ppm, .4815,.0020,.4180, .4797, .4811, .4837,Chk Pass,,
Cu,327.396 {103},Y2A,ppm, .4938,.0038,.7658, .4932, .4903, .4978,Chk Pass,,
Fe,261.187 {129},Y2R,ppm, 24.89,.0334,.1343, 24.89, 24.92, 24.85,Chk Pass,,
K,766.490 { 44},Y2R,ppm, 24.87,.0899,.3614, 24.76, 24.93, 24.90,Chk Pass,,
Li,670.784 { 50},Y2R,ppm, .4926,.0025,.5092, .4909, .4914, .4955,Chk Pass,,
Mg,285.213 {118},Y2R,ppm, 24.72,.0851,.3444, 24.62, 24.79, 24.74,Chk Pass,,
Mn,257.610 {131},Y2A,ppm, .48554,.00284,.58487, .48679, .48229, .48753,Chk Pass,,
Mo,202.030 {467},Y1,ppm, .5065,.0030,.5866, .5092, .5071, .5033,Chk Pass,,
Na,589.592 { 57},Y2R,ppm, 24.20,.0307,.1268, 24.22, 24.21, 24.16,Chk Pass,,
Ni,231.604 {445},Y1,ppm, .4938,.0017,.3410, .4957, .4924, .4933,Chk Pass,,
P,177.495 {490},Y1,ppm, .4899,.0012,.2488, .4885, .4907, .4904,Chk Pass,,
Pb,220.353 {453},Y1,ppm, .4979,.0034,.6761, .4979, .5013, .4945,Chk Pass,,
S,182.034 {485},Y1,ppm, 23.89,.0162,.0680, 23.89, 23.91, 23.88,Chk Pass,,
Sb,206.833 {463},Y1,ppm, .4906,.0015,.3027, .4890, .4910, .4919,Chk Pass,,
Se,196.090 {472},Y1,ppm, .4945,.0037,.7529, .4956, .4975, .4903,Chk Pass,,
Si,251.611 {134},Y2R,ppm, 24.659,.04792,.19435, 24.608, 24.703, 24.666,Chk Pass,,
Sn,189.989 {477},Y1,ppm, .4874,.0022,.4461, .4889, .4849, .4883,Chk Pass,,
Sr,421.552 { 80},Y2A,ppm, .4878,.0026,.5269, .4894, .4892, .4849,Chk Pass,,
Th,283.730 {119},Y2R,ppm, .5216,.0180,3.446, .5415, .5169, .5065,Chk Pass,,
Ti,334.941 {101},Y2A,ppm, .4939,.0034,.6980, .4945, .4902, .4970,Chk Pass,,
Tl,190.856 {477},Y1,ppm, .4876,.0070,1.444, .4925, .4908, .4795,Chk Pass,,
V,292.402 {115},Y2A,ppm, .4966,.0024,.4808, .4944, .4992, .4963,Chk Pass,,
W,207.911 {462},Y1,ppm, .5038,.0029,.5752, .5065, .5008, .5040,Chk Pass,,
Zn,213.856 {458},Y1,ppm, .4840,.0003,.0681, .4844, .4839, .4838,Chk Pass,,
Zr,339.198 { 99},Y2R,ppm, .5050,.0026,.5106, .5065, .5065, .5020,Chk Pass,,

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[Internal Standards]

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Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
Y1,224.306 {450},Cts/S, 8530.0,22.707,.26620,8544.9,8541.1,8503.8
Y2A,371.030 { 91}2,Cts/S, 260500,.776.16,.29795,260550,.261240,.259700.
Y2R,371.030 { 91}3,Cts/S, 18032.,68.640,.38067,18093.,17958.,18044.

```

[Sample Header]

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Method=New TRACE Fast(v1493)
SampleName=CCB 078331

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Username=dept 22
Comment=
Custom ID1=
Custom ID2=
Custom ID3=
Run Time=6/12/2020 10:58:23
Sample Type=QC
Mode=CONC
CorrFactor=1.000
Repeats=3

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[Results]

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Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
Ag,328.068 {103},Y2A,ppm, .0004,.0002,54.48, .0002, .0007, .0004,Chk Pass,,

```

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Alum Ax,308.215 {109},Y2A,ppm, -.0082,.0056,67.86, -.0146, -.0042, -.0059,Chk Pass,,
 Al,308.215 {109}2,Y2R,ppm, -.0036,.0188,518.0, .0009, .0125, -.0243,Chk Pass,,
 As,189.042 {478},Y1,ppm, .0063,.0044,69.93, .0012, .0092, .0085,Chk Pass,,
 B,249.773 {135},Y2A,ppm, .0026,.0002,8.613, .0028, .0025, .0024,Chk Pass,,
 Ba,455.403 { 74},Y2A,ppm, .0001,.0000,36.20, .0000, .0001, .0001,Chk Pass,,
 Be,313.042 {108},Y2A,ppm, -.00009,.00004,44.924, -.00011, -.00004, -.00011,Chk
 Pass,,
 Ca,317.933 {106},Y2R,ppm, .0064,.0029,45.99, .0074, .0031, .0086,Chk Pass,,
 Cd,226.502 {449},Y1,ppm, .0004,.0001,33.43, .0005, .0003, .0004,Chk Pass,,
 Co,228.616 {447},Y1,ppm, .0000,.0001,1315., -.0001, -.0000, .0002,Chk Pass,,
 Cr,267.716 {126},Y2A,ppm, .0000,.0004,3004., -.0001, .0004, -.0003,Chk Pass,,
 Cu,327.396 {103},Y2A,ppm, -.0002,.0005,239.7, .0003, -.0005, -.0004,Chk Pass,,
 Fe,261.187 {129},Y2R,ppm, .0115,.0065,56.70, .0109, .0183, .0053,Chk Pass,,
 K,766.490 { 44},Y2R,ppm, .1345,.0148,10.98, .1196, .1491, .1347,Chk Pass,,
 Li,670.784 { 50},Y2R,ppm, .0011,.0020,179.7, .0021, .0025, -.0012,Chk Pass,,
 Mg,285.213 {118},Y2R,ppm, -.0023,.0006,23.84, -.0019, -.0022, -.0030,Chk Pass,,
 Mn,257.610 {131},Y2A,ppm, .00019,.00006,32.722, .00017, .00025, .00013,Chk Pass,,
 Mo,202.030 {467},Y1,ppm,F .0060,.0010,16.28, .0049, .0067, .0065,chk
 Fail,.0050,-.0050
 Na,589.592 { 57},Y2R,ppm, .0437,.0100,22.78, .0551, .0387, .0372,Chk Pass,,
 Ni,231.604 {445},Y1,ppm, .0003,.0004,140.8, .0005, .0006, -.0002,Chk Pass,,
 P,177.495 {490},Y1,ppm, .0018,.0018,97.55, .0012, .0039, .0005,Chk Pass,,
 Pb,220.353 {453},Y1,ppm, -.0010,.0031,305.7, -.0042, -.0008, .0019,Chk Pass,,
 S,182.034 {485},Y1,ppm, .0058,.0038,64.44, .0047, .0100, .0028,Chk Pass,,
 Sb,206.833 {463},Y1,ppm, .0010,.0013,125.6, .0019, .0016, -.0004,Chk Pass,,
 Se,196.090 {472},Y1,ppm, -.0034,.0010,29.38, -.0044, -.0036, -.0024,Chk Pass,,
 Si,251.611 {134},Y2R,ppm, .02578,.00763,29.594, .03351, .02556, .01826,Chk Pass,,
 Sn,189.989 {477},Y1,ppm, .0009,.0009,92.03, .0017, .0011, -.0000,Chk Pass,,
 Sr,421.552 { 80},Y2A,ppm, .0000,.0000,63.82, .0000, .0001, .0000,Chk Pass,,
 Th,283.730 {119},Y2R,ppm, .0302,.0146,48.31, .0283, .0456, .0166,Chk Pass,,
 Ti,334.941 {101},Y2A,ppm, .0001,.0001,193.6, -.0000, .0002, .0000,Chk Pass,,
 Tl,190.856 {477},Y1,ppm, .0018,.0005,27.87, .0014, .0024, .0016,Chk Pass,,
 V,292.402 {115},Y2A,ppm, -.0012,.0002,13.35, -.0014, -.0010, -.0012,Chk Pass,,
 W,207.911 {462},Y1,ppm, .0032,.0012,37.28, .0021, .0045, .0031,Chk Pass,,
 Zn,213.856 {458},Y1,ppm, .0007,.0002,28.53, .0008, .0005, .0008,Chk Pass,,
 Zr,339.198 { 99},Y2R,ppm, -.0023,.0013,54.91, -.0009, -.0029, -.0032,Chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Y1,224.306 {450},Cts/S, 8629.7,12.779,.14809,8632.9,8640.5,8615.6
 Y2A,371.030 { 91}2,Cts/S, 268500.,992.39,.36960,267350.,269060.,269080.
 Y2R,371.030 { 91}3,Cts/S, 18142.,120.79,.66583,18035.,18273.,18117.

[Sample Header]

Method=New TRACE Fast(v1493)
 SampleName=MB 410-11156/1-A
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 11:09:04
 Sample Type=Unk
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, .0007477,.0003211,42.94855, .0003778, .0009097,
 .0009555,None,,
 Alum Ax,308.215 {109},Y2A,ppm, -.009262,.0018782,20.27799, -.008980, -.011266,
 -.007541,None,,

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Al, 308.215 {109}2, Y2R, ppm, -.032890, .0085941, 26.12980, -.032337, -.024586,
 -.041748, None,,
 As, 189.042 {478}, Y1, ppm, .0098320, .0002674, 2.719344, .0095284, .0100326,
 .0099348, None,,
 B, 249.773 {135}, Y2A, ppm, .0006296, .0001277, 20.27586, .0006908, .0007151,
 .0004828, None,,
 Ba, 455.403 { 74}, Y2A, ppm, .0000174, .0000105, 60.12061, .0000172, .0000280,
 .0000071, None,,
 Be, 313.042 {108}, Y2A, ppm, -.000107, .0000050, 4.694076, -.000106, -.000103,
 -.000113, None,,
 Ca, 317.933 {106}, Y2R, ppm, -.006744, .0023473, 34.80723, -.008076, -.008122,
 -.004033, None,,
 Cd, 226.502 {449}, Y1, ppm, .0003724, .0001675, 44.97119, .0003324, .0002286,
 .0005563, None,,
 Co, 228.616 {447}, Y1, ppm, .0002650, .0003074, 116.0060, .0000464, .0001321,
 .0006165, None,,
 Cr, 267.716 {126}, Y2A, ppm, -.000183, .0001117, 61.08077, -.000076, -.000299,
 -.000174, None,,
 Cu, 327.396 {103}, Y2A, ppm, -.000446, .0005105, 114.5630, -.000252, -.001025,
 -.000060, None,,
 Fe, 261.187 {129}, Y2R, ppm, .0071039, .0051583, 72.61171, .0090329, .0012591,
 .0110197, None,,
 K, 766.490 { 44}, Y2R, ppm, .0166209, .0128771, 77.47536, .0197650, .0024629,
 .0276348, None,,
 Li, 670.784 { 50}, Y2R, ppm, -.001264, .0009382, 74.21153, -.000182, -.001768,
 -.001844, None,,
 Mg, 285.213 {118}, Y2R, ppm, -.002989, .0004167, 13.93885, -.002527, -.003336,
 -.003105, None,,
 Mn, 257.610 {131}, Y2A, ppm, -.000034, .0000425, 126.8464, -.000064, .0000151,
 -.000052, None,,
 Mo, 202.030 {467}, Y1, ppm, .0057735, .0005273, 9.133355, .0051731, .0059861,
 .0061613, None,,
 Na, 589.592 { 57}, Y2R, ppm, .0005711, .0048313, 846.0220, .0051770, .0009940,
 -.004458, None,,
 Ni, 231.604 {445}, Y1, ppm, .0000483, .0002963, 613.1696, .0000000, .0003658,
 -.000221, None,,
 P, 177.495 {490}, Y1, ppm, .0004501, .0009785, 217.3870, .0010538, -.000679,
 .0009754, None,,
 Pb, 220.353 {453}, Y1, ppm, .0000966, .0013173, 1364.030, .0015590, -.000997,
 -.000272, None,,
 S, 182.034 {485}, Y1, ppm, .0019702, .0029793, 151.2192, .0038166, .0035608,
 -.001467, None,,
 Sb, 206.833 {463}, Y1, ppm, .0026716, .0007448, 27.87739, .0030731, .0031296,
 .0018123, None,,
 Se, 196.090 {472}, Y1, ppm, .0012378, .0040348, 325.9565, -.002498, .0055162,
 .0006957, None,,
 Si, 251.611 {134}, Y2R, ppm, -.006124, .0049752, 81.24422, -.001584, -.005345,
 -.011443, None,,
 Sn, 189.989 {477}, Y1, ppm, .0010847, .0006029, 55.58063, .0004419, .0016376,
 .0011747, None,,
 Sr, 421.552 { 80}, Y2A, ppm, .0000047, .0000169, 361.7103, .0000242, -.000005,
 -.000006, None,,
 Th, 283.730 {119}, Y2R, ppm, .0193106, .0135584, 70.21207, .0335090, .0064987,
 .0179243, None,,
 Ti, 334.941 {101}, Y2A, ppm, -.000057, .0000875, 153.7996, -.000002, -.000158,
 -.000011, None,,
 Tl, 190.856 {477}, Y1, ppm, .0019908, .0021786, 109.4341, -.000493, .0035793,
 .0028859, None,,
 V, 292.402 {115}, Y2A, ppm, -.001219, .0001102, 9.038059, -.001104, -.001323,
 -.001231, None,,
 W, 207.911 {462}, Y1, ppm, .0033233, .0010217, 30.74411, .0024640, .0030529,
 .0044531, None,,
 Zn, 213.856 {458}, Y1, ppm, -.000313, .0000798, 25.45626, -.000399, -.000300,

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-.000241,None,,
 Zr,339.198 { 99},Y2R,ppm, -.000950,.0014285,150.3525, -.002429, -.000844,
 .0004226,None,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Y1,224.306 {450},Cts/S, 8863.800,21.61239,.2438276,8880.744,8839.461,8871.196,None,,
 Y2A,371.030 { 91}2,Cts/S,
 277301.6,894.2367,.3224780,278059.8,277529.6,276315.5,None,,
 Y2R,371.030 { 91}3,Cts/S,
 18735.38,131.2000,.7002793,18765.40,18848.97,18591.77,None,,

[Sample Header]

Method=New TRACE Fast(v1493)
 SampleName=LCS 410-11156/2-A
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 11:12:15
 Sample Type=Unk
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, .0141042,.0002575,1.825773, .0139549, .0144016,
 .0139562,None,,
 Al,308.215 {109},Y2A,ppm, .3756050,.0048671,1.295808, .3803870, .3757711,
 .3706570,None,,
 Al,308.215 {109}2,Y2R,ppm, .3707629,.0027178,.7330326, .3691237, .3692649,
 .3739001,None,,
 As,189.042 {478},Y1,ppm, .0690078,.0036096,5.230701, .0687656, .0727325,
 .0655255,None,,
 B,249.773 {135},Y2A,ppm, .0578858,.0009058,1.564745, .0581117, .0586572,
 .0568885,None,,
 Ba,455.403 { 74},Y2A,ppm, .0103561,.0000603,.5820264, .0103538, .0104175,
 .0102970,None,,
 Be,313.042 {108},Y2A,ppm, .0098031,.0000659,.6721479, .0097662, .0098791,
 .0097638,None,,
 Ca,317.933 {106},Y2R,ppm, .4059277,.0069688,1.716756, .4014690, .4023558,
 .4139582,None,,
 Cd,226.502 {449},Y1,ppm, .0107536,.0001164,1.082001, .0106943, .0108876,
 .0106788,None,,
 Co,228.616 {447},Y1,ppm, .0110476,.0003205,2.900591, .0113392, .0107046,
 .0110992,None,,
 Cr,267.716 {126},Y2A,ppm, .0303733,.0005350,1.761295, .0297897, .0304900,
 .0308403,None,,
 Cu,327.396 {103},Y2A,ppm, .0405323,.0004072,1.004512, .0404384, .0409782,
 .0401803,None,,
 Fe,261.187 {129},Y2R,ppm, .4110344,.0059316,1.443102, .4158198, .4128854,
 .4043980,None,,
 K,766.490 { 44},Y2R,ppm, 5.699813,.0212629,.3730447, 5.700269, 5.720845,
 5.678326,None,,
 Li,670.784 { 50},Y2R,ppm, .1032737,.0014445,1.398674, .1016240, .1043116,
 .1038855,None,,
 Mg,285.213 {118},Y2R,ppm, .2047577,.0019398,.9473679, .2055807, .2025420,
 .2061503,None,,
 Mn,257.610 {131},Y2A,ppm, .0207718,.0002287,1.100772, .0207437, .0210132,
 .0205585,None,,
 Mo,202.030 {467},Y1,ppm, .0189658,.0003577,1.885820, .0193219, .0189690,

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.0186066,None,,
Na,589.592 { 57},Y2R,ppm, 2.000468,.0089692,.4483558, 1.990323, 2.003737,
2.007344,None,,
Ni,231.604 {445},Y1,ppm, 2.125799,.0051413,.2418517, 2.128734, 2.128801,
2.119863,None,,
P,177.495 {490},Y1,ppm, .2047557,.0023593,1.152249, .2032196, .2074723,
.2035753,None,,
Pb,220.353 {453},Y1,ppm, .0312429,.0040327,12.90756, .0294911, .0283824,
.0358552,None,,
S,182.034 {485},Y1,ppm, 1.019716,.0125308,1.228852, 1.017675, 1.033142,
1.008332,None,,
Sb,206.833 {463},Y1,ppm, .0980763,.0020921,2.133134, .0967691, .0969706,
.1004893,None,,
Se,196.090 {472},Y1,ppm, .1022161,.0016456,1.609881, .1006129, .1039010,
.1021345,None,,
Si,251.611 {134},Y2R,ppm, 1.040715,.0112505,1.081037, 1.036127, 1.053534,
1.032483,None,,
Sn,189.989 {477},Y1,ppm, .1017395,.0008199,.8058401, .1024933, .1008666,
.1018586,None,,
Sr,421.552 { 80},Y2A,ppm, .0103290,.0000696,.6734655, .0102981, .0104086,
.0102802,None,,
Th,283.730 {119},Y2R,ppm, .0330349,.0139450,42.21285, .0174163, .0374520,
.0442364,None,,
Ti,334.941 {101},Y2A,ppm, .0203953,.0001089,.5341423, .0203253, .0205208,
.0203397,None,,
Tl,190.856 {477},Y1,ppm, .0654589,.0024737,3.779015, .0657323, .0677846,
.0628599,None,,
V,292.402 {115},Y2A,ppm, .0194968,.0000500,.2567190, .0194876, .0194519,
.0195508,None,,
W,207.911 {462},Y1,ppm, .0576160,.0008625,1.496966, .0567759, .0584992,
.0575729,None,,
Zn,213.856 {458},Y1,ppm, .4564586,.0021188,.4641902, .4560819, .4587405,
.4545534,None,,
Zr,339.198 { 99},Y2R,ppm, .0849652,.0037254,4.384614, .0882845, .0856752,
.0809359,None,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
Y1,224.306 {450},Cts/S, 8823.091,7.280414,.0825155,8829.720,8815.299,8824.253,None,,
Y2A,371.030 { 91}2,Cts/S,
274085.1,1719.457,.6273442,275830.3,272392.6,274032.4,None,,
Y2R,371.030 { 91}3,Cts/S,
18658.07,99.05581,.5309007,18637.47,18765.80,18570.93,None,,

[Sample Header]

Method=New TRACE Fast(v1493)
SampleName=410-3311-G-6-A
Username=dept 22
Comment=
Custom ID1=
Custom ID2=
Custom ID3=
Run Time=6/12/2020 11:15:21
Sample Type=Unk
Mode=CONC
CorrFactor=1.000
Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
Ag,328.068 {103},Y2A,ppm, -.000066,.0006429,978.1051, -.000723, .0005613,
-.000035,None,,
Alum Ax,308.215 {109},Y2A,ppm, -.006544,.0013813,21.10675, -.008120, -.005544,

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-.005968, None,,
 Al, 308.215 {109}2, Y2R, ppm, -.038299, .0237862, 62.10631, -.029464, -.020195,
 -.065239, None,,
 As, 189.042 {478}, Y1, ppm, .0075053, .0034000, 45.30178, .0074935, .0041112,
 .0109112, None,,
 B, 249.773 {135}, Y2A, ppm, .0505436, .0002390, .4727853, .0505150, .0503203,
 .0507956, None,,
 Ba, 455.403 {74}, Y2A, ppm, .0966024, .0002612, .2704115, .0968949, .0965198,
 .0963925, None,,
 Be, 313.042 {108}, Y2A, ppm, -.000135, .0000027, 1.989279, -.000136, -.000132,
 -.000136, None,,
 Ca, 317.933 {106}, Y2R, ppm, 37.72372, .2015585, .5343018, 37.66053, 37.94930,
 37.56133, None,,
 Cd, 226.502 {449}, Y1, ppm, .0003228, .0001474, 45.65756, .0004644, .0001702,
 .0003337, None,,
 Co, 228.616 {447}, Y1, ppm, .0000722, .0003431, 475.0693, -.000242, .0000206,
 .0004382, None,,
 Cr, 267.716 {126}, Y2A, ppm, .0009338, .0003241, 34.71195, .0005938, .0009681,
 .0012393, None,,
 Cu, 327.396 {103}, Y2A, ppm, .0010707, .0006455, 60.29071, .0016555, .0003780,
 .0011786, None,,
 Fe, 261.187 {129}, Y2R, ppm, .0216029, .0070203, 32.49719, .0294835, .0193081,
 .0160171, None,,
 K, 766.490 {44}, Y2R, ppm, 2.151780, .0295066, 1.371267, 2.139796, 2.185393,
 2.130150, None,,
 Li, 670.784 {50}, Y2R, ppm, .0113346, .0015362, 13.55317, .0118279, .0125636,
 .0096123, None,,
 Mg, 285.213 {118}, Y2R, ppm, 5.369110, .0282078, .5253717, 5.341595, 5.397963,
 5.367771, None,,
 Mn, 257.610 {131}, Y2A, ppm, .0002485, .0000450, 18.10866, .0001966, .0002728,
 .0002762, None,,
 Mo, 202.030 {467}, Y1, ppm, .0032351, .0000652, 2.014222, .0031889, .0032069,
 .0033096, None,,
 Na, 589.592 {57}, Y2R, ppm, 23.45333, .0592149, .2524796, 23.42019, 23.52169,
 23.41811, None,,
 Ni, 231.604 {445}, Y1, ppm, -.000372, .0005533, 148.6225, -.000089, -.001010,
 -.000018, None,,
 P, 177.495 {490}, Y1, ppm, .0062949, .0016453, 26.13664, .0043953, .0072692,
 .0072203, None,,
 Pb, 220.353 {453}, Y1, ppm, -.001284, .0012021, 93.64664, -.000513, -.000669,
 -.002669, None,,
 S, 182.034 {485}, Y1, ppm, 10.96580, .0108678, .0991062, 10.95364, 10.96920,
 10.97456, None,,
 Sb, 206.833 {463}, Y1, ppm, .0023053, .0024864, 107.8550, .0040874, .0033636,
 -.000535, None,,
 Se, 196.090 {472}, Y1, ppm, .0009295, .0041212, 443.3936, -.002727, .0001208,
 .0053951, None,,
 Si, 251.611 {134}, Y2R, ppm, 13.91661, .0534597, .3841432, 13.87441, 13.97672,
 13.89869, None,,
 Sn, 189.989 {477}, Y1, ppm, .0010211, .0006411, 62.78362, .0003031, .0015362,
 .0012239, None,,
 Sr, 421.552 {80}, Y2A, ppm, .2456179, .0003796, .1545684, .2460094, .2452514,
 .2455929, None,,
 Th, 283.730 {119}, Y2R, ppm, .0173168, .0099387, 57.39344, .0115870, .0115704,
 .0287930, None,,
 Ti, 334.941 {101}, Y2A, ppm, .0015654, .0001714, 10.94835, .0017589, .0015047,
 .0014327, None,,
 Tl, 190.856 {477}, Y1, ppm, -.000291, .0042468, 1460.258, .0014133, .0028392,
 -.005125, None,,
 V, 292.402 {115}, Y2A, ppm, .0045763, .0005733, 12.52671, .0039671, .0046567,
 .0051052, None,,
 W, 207.911 {462}, Y1, ppm, .0014506, .0010401, 71.70011, .0005304, .0025791,
 .0012423, None,,

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Zn,213.856 {458},Y1,ppm, .0068300,.0001492,2.184615, .0068660, .0069579,
 .0066660,None,,
 Zr,339.198 { 99},Y2R,ppm, -.001490,.0012927,86.77035, -.000559, -.000944,
 -.002966,None,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Y1,224.306 {450},Cts/S, 8694.868,21.84850,.2512804,8705.166,8709.664,8669.773,None,,
 Y2A,371.030 { 91}2,Cts/S,
 267816.0,711.3928,.2656274,268534.3,267802.1,267111.7,None,,
 Y2R,371.030 { 91}3,Cts/S,
 18523.11,235.7724,1.272855,18660.45,18250.87,18658.02,None,,

[Sample Header]

Method=New TRACE Fast(v1493)
 SampleName=410-3311-G-6-A pds
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 11:18:30
 Sample Type=Unk
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, .0194653,.0001692,.8690116, .0193378, .0194009,
 .0196572,None,,
 Al,308.215 {109},Y2A,ppm, .9474630,.0043414,.4582136, .9478692, .9429328,
 .9515870,None,,
 Al,308.215 {109}2,Y2R,ppm, .9538567,.0164722,1.726900, .9726682, .9468857,
 .9420163,None,,
 As,189.042 {478},Y1,ppm, .5054318,.0036417,.7205132, .5018494, .5053161,
 .5091300,None,,
 B,249.773 {135},Y2A,ppm, .2396066,.0006674,.2785346, .2390437, .2394322,
 .2403439,None,,
 Ba,455.403 { 74},Y2A,ppm, .1455657,.0012667,.8701612, .1454857, .1443410,
 .1468705,None,,
 Be,313.042 {108},Y2A,ppm, .0190918,.0000825,.4320625, .0191187, .0189993,
 .0191576,None,,
 Ca,317.933 {106},Y2R,ppm, 37.81171,.0698140,.1846358, 37.87735, 37.81943,
 37.73836,None,,
 Cd,226.502 {449},Y1,ppm, .0496933,.0000783,.1576311, .0497735, .0496894,
 .0496170,None,,
 Co,228.616 {447},Y1,ppm, .0995512,.0004242,.4261461, .0994509, .1000166,
 .0991862,None,,
 Cr,267.716 {126},Y2A,ppm, .1933961,.0015662,.8098589, .1917788, .1935038,
 .1949057,None,,
 Cu,327.396 {103},Y2A,ppm, .4962763,.0039543,.7967943, .4972234, .4919345,
 .4996712,None,,
 Fe,261.187 {129},Y2R,ppm, .5100141,.0122532,2.402526, .5090194, .5227343,
 .4982885,None,,
 K,766.490 { 44},Y2R,ppm, 4.086004,.0510925,1.250428, 4.143403, 4.045495,
 4.069113,None,,
 Li,670.784 { 50},Y2R,ppm, .9989452,.0013273,.1328748, 1.000470, .9980469,
 .9983188,None,,
 Mg,285.213 {118},Y2R,ppm, 6.225575,.0157131,.2523961, 6.242965, 6.221363,
 6.212397,None,,
 Mn,257.610 {131},Y2A,ppm, .0594822,.0004462,.7500908, .0593901, .0590893,
 .0599672,None,,

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Mo,202.030 {467},Y1,ppm, .1916967,.0022185,1.157309, .1941978, .1909259,
 .1899664,None,,
 Na,589.592 { 57},Y2R,ppm, 24.81293,.0257454,.1037579, 24.82776, 24.82783,
 24.78320,None,,
 Ni,231.604 {445},Y1,ppm, .1492601,.0011469,.7684002, .1497556, .1500760,
 .1479488,None,,
 P,177.495 {490},Y1,ppm, 1.017012,.0019479,.1915303, 1.014768, 1.017998,
 1.018270,None,,
 Pb,220.353 {453},Y1,ppm, .4892419,.0039364,.8045980, .4932910, .4890058,
 .4854288,None,,
 S,182.034 {485},Y1,ppm, 11.80508,.0374535,.3172659, 11.83323, 11.81942,
 11.76257,None,,
 Sb,206.833 {463},Y1,ppm, .3986415,.0043005,1.078787, .4012031, .4010448,
 .3936765,None,,
 Se,196.090 {472},Y1,ppm, .7831301,.0060366,.7708298, .7783569, .7899159,
 .7811174,None,,
 Si,251.611 {134},Y2R,ppm, 14.58328,.0304736,.2089626, 14.61845, 14.56479,
 14.56659,None,,
 Sn,189.989 {477},Y1,ppm, .5912800,.0010792,.1825190, .5901109, .5914911,
 .5922381,None,,
 Sr,421.552 { 80},Y2A,ppm, .2599828,.0025422,.9778510, .2580224, .2590707,
 .2628552,None,,
 Th,283.730 {119},Y2R,ppm, .0188628,.0064769,34.33684, .0227329, .0224700,
 .0113855,None,,
 Ti,334.941 {101},Y2A,ppm, .1006721,.0006306,.6264072, .1006112, .1000741,
 .1013309,None,,
 Tl,190.856 {477},Y1,ppm, 1.016690,.0036837,.3623205, 1.020719, 1.013494,
 1.015857,None,,
 V,292.402 {115},Y2A,ppm, .1037259,.0004578,.4413875, .1042178, .1033122,
 .1036477,None,,
 W,207.911 {462},Y1,ppm, -.000012,.0008960,7352.269, .0001592, .0007857,
 -.000981,None,,
 Zn,213.856 {458},Y1,ppm, .1340216,.0001290,.0962565, .1341334, .1338804,
 .1340508,None,,
 Zr,339.198 { 99},Y2R,ppm, .9884384,.0094703,.9581037, .9992163, .9846510,
 .9814481,None,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Y1,224.306 {450},Cts/S, 8692.725,21.79942,.2507777,8716.356,8673.399,8688.420,None,,
 Y2A,371.030 { 91}2,Cts/S,
 268557.9,1987.279,.7399815,270027.1,269349.9,266296.8,None,,
 Y2R,371.030 { 91}3,Cts/S,
 18721.37,18.14963,.0969460,18719.93,18740.20,18703.99,None,,

[Sample Header]

Method=New TRACE Fast(v1493)
 SampleName=410-3311-G-6-B DU
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 11:21:33
 Sample Type=Unk
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, .0000949,.0001783,187.8766, .0000453, .0002927,
 -.000053,None,,

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Al, 308.215 {109}, Y2A, ppm, -.006138, .0045917, 74.80800, -.010771, -.006054,
 -.001589, None,,
 Al, 308.215 {109}2, Y2R, ppm, -.018394, .0258866, 140.7371, -.036872, .0111932,
 -.029502, None,,
 As, 189.042 {478}, Y1, ppm, .0081560, .0021942, 26.90324, .0099171, .0088529,
 .0056979, None,,
 B, 249.773 {135}, Y2A, ppm, .0509646, .0009300, 1.824876, .0500200, .0518794,
 .0509944, None,,
 Ba, 455.403 {74}, Y2A, ppm, .0970071, .0004289, .4421509, .0967247, .0967960,
 .0975007, None,,
 Be, 313.042 {108}, Y2A, ppm, -.000128, .0000025, 1.958361, -.000126, -.000131,
 -.000127, None,,
 Ca, 317.933 {106}, Y2R, ppm, 37.62074, .0908959, .2416112, 37.70628, 37.52530,
 37.63065, None,,
 Cd, 226.502 {449}, Y1, ppm, .0004858, .0001127, 23.18936, .0006145, .0004379,
 .0004050, None,,
 Co, 228.616 {447}, Y1, ppm, .0003035, .0002944, 97.00838, .0005937, .0003116,
 .0000051, None,,
 Cr, 267.716 {126}, Y2A, ppm, .0008684, .0001622, 18.67771, .0009418, .0006825,
 .0009809, None,,
 Cu, 327.396 {103}, Y2A, ppm, .0015064, .0004537, 30.11720, .0016499, .0018709,
 .0009983, None,,
 Fe, 261.187 {129}, Y2R, ppm, .0211164, .0041823, 19.80582, .0190997, .0259249,
 .0183246, None,,
 K, 766.490 {44}, Y2R, ppm, 2.142048, .0345840, 1.614527, 2.181223, 2.115747,
 2.129175, None,,
 Li, 670.784 {50}, Y2R, ppm, .0123868, .0026629, 21.49785, .0153262, .0116987,
 .0101355, None,,
 Mg, 285.213 {118}, Y2R, ppm, 5.334058, .0242211, .4540835, 5.348786, 5.306104,
 5.347286, None,,
 Mn, 257.610 {131}, Y2A, ppm, .0003494, .0000389, 11.12019, .0003942, .0003249,
 .0003290, None,,
 Mo, 202.030 {467}, Y1, ppm, .0054807, .0006076, 11.08571, .0052685, .0061658,
 .0050076, None,,
 Na, 589.592 {57}, Y2R, ppm, 23.44987, .0068289, .0291211, 23.45479, 23.45274,
 23.44207, None,,
 Ni, 231.604 {445}, Y1, ppm, -.000489, .0004609, 94.23127, -.000353, -.000112,
 -.001003, None,,
 P, 177.495 {490}, Y1, ppm, .0048938, .0020959, 42.82743, .0030754, .0071860,
 .0044199, None,,
 Pb, 220.353 {453}, Y1, ppm, -.000227, .0016368, 721.0904, -.001816, .0014539,
 -.000319, None,,
 S, 182.034 {485}, Y1, ppm, 10.94274, .0387000, .3536593, 10.90067, 10.97681,
 10.95075, None,,
 Sb, 206.833 {463}, Y1, ppm, .0016816, .0035905, 213.5170, .0057823, -.000898,
 .0001601, None,,
 Se, 196.090 {472}, Y1, ppm, -.001411, .0013567, 96.13620, -.001597, .0000289,
 -.002665, None,,
 Si, 251.611 {134}, Y2R, ppm, 13.91623, .0213336, .1532999, 13.91903, 13.89363,
 13.93602, None,,
 Sn, 189.989 {477}, Y1, ppm, .0014913, .0003700, 24.81190, .0016718, .0010657,
 .0017365, None,,
 Sr, 421.552 {80}, Y2A, ppm, .2469240, .0010320, .4179571, .2462024, .2464635,
 .2481061, None,,
 Th, 283.730 {119}, Y2R, ppm, .0144306, .0078025, 54.06926, .0221802, .0145355,
 .0065762, None,,
 Ti, 334.941 {101}, Y2A, ppm, .0013144, .0000231, 1.753675, .0013387, .0012929,
 .0013117, None,,
 Tl, 190.856 {477}, Y1, ppm, -.000690, .0028675, 415.4634, -.000102, -.003806,
 .0018379, None,,
 V, 292.402 {115}, Y2A, ppm, .0044293, .0003587, 8.098271, .0048271, .0043299,
 .0041307, None,,
 W, 207.911 {462}, Y1, ppm, -.000599, .0009136, 152.4816, -.001373, -.000833,

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.0004086,None,,
 Zn,213.856 {458},Y1,ppm, .0068027,.0001157,1.700948, .0069028, .0066760,
 .0068294,None,,
 Zr,339.198 { 99},Y2R,ppm, -.000502,.0008181,162.9883, -.000277, .0001799,
 -.001409,None,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Y1,224.306 {450},Cts/S, 8737.195,13.76901,.1575907,8751.792,8724.439,8735.356,None,,
 Y2A,371.030 { 91}2,Cts/S,
 268057.1,1017.939,.3797470,268910.7,268330.0,266930.5,None,,
 Y2R,371.030 { 91}3,Cts/S,
 18656.10,6.187822,.0331678,18663.15,18651.59,18653.54,None,,

[Sample Header]

Method=New TRACE Fast(v1493)
 SampleName=410-3311-G-6-C MS
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 11:24:39
 Sample Type=Unk
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, .0136168,.0004926,3.617374, .0135932, .0131364,
 .0141207,None,,
 Alum Ax,308.215 {109},Y2A,ppm, .3755330,.0006909,.1839829, .3747623, .3760970,
 .3757397,None,,
 Al,308.215 {109}2,Y2R,ppm, .3653544,.0163037,4.462441, .3583468, .3839904,
 .3537261,None,,
 As,189.042 {478},Y1,ppm, .0682161,.0008739,1.281041, .0692245, .0676802,
 .0677436,None,,
 B,249.773 {135},Y2A,ppm, .1073951,.0007396,.6886668, .1065681, .1076242,
 .1079931,None,,
 Ba,455.403 { 74},Y2A,ppm, .1061253,.0003831,.3609569, .1063736, .1056841,
 .1063182,None,,
 Be,313.042 {108},Y2A,ppm, .0096963,.0000356,.3669533, .0096976, .0096601,
 .0097312,None,,
 Ca,317.933 {106},Y2R,ppm, 37.72533,.0665476,.1764003, 37.72443, 37.79232,
 37.65924,None,,
 Cd,226.502 {449},Y1,ppm, .0102810,.0000401,.3898351, .0103232, .0102765,
 .0102434,None,,
 Co,228.616 {447},Y1,ppm, .0104038,.0001889,1.816044, .0106212, .0103116,
 .0102787,None,,
 Cr,267.716 {126},Y2A,ppm, .0304357,.0000925,.3040377, .0303978, .0303680,
 .0305411,None,,
 Cu,327.396 {103},Y2A,ppm, .0416326,.0002571,.6175513, .0417171, .0418369,
 .0413439,None,,
 Fe,261.187 {129},Y2R,ppm, .4107520,.0097712,2.378854, .4193489, .4127817,
 .4001254,None,,
 K,766.490 { 44},Y2R,ppm, 7.640934,.0246552,.3226731, 7.664629, 7.642753,
 7.615419,None,,
 Li,670.784 { 50},Y2R,ppm, .1115267,.0008932,.8008603, .1114597, .1124514,
 .1106689,None,,
 Mg,285.213 {118},Y2R,ppm, 5.478291,.0298092,.5441331, 5.510054, 5.473895,
 5.450923,None,,
 Mn,257.610 {131},Y2A,ppm, .0202285,.0001391,.6878847, .0203183, .0200682,

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.0202990, None,,
 Mo, 202.030 {467}, Y1, ppm, .0231343, .0007141, 3.086968, .0229790, .0239133,
 .0225105, None,,
 Na, 589.592 {57}, Y2R, ppm, 25.07318, .0512596, .2044398, 25.05903, 25.13003,
 25.03048, None,,
 Ni, 231.604 {445}, Y1, ppm, 2.014596, .0020769, .1030910, 2.016581, 2.012438,
 2.014770, None,,
 P, 177.495 {490}, Y1, ppm, .2092897, .0015541, .7425795, .2085961, .2110699,
 .2082031, None,,
 Pb, 220.353 {453}, Y1, ppm, .0311772, .0015587, 4.999569, .0294036, .0323290,
 .0317991, None,,
 S, 182.034 {485}, Y1, ppm, 11.82360, .0084526, .0714893, 11.82663, 11.83011,
 11.81405, None,,
 Sb, 206.833 {463}, Y1, ppm, .1010187, .0032715, 3.238522, .1029001, .0972410,
 .1029148, None,,
 Se, 196.090 {472}, Y1, ppm, .0993941, .0010674, 1.073885, .1005506, .0991850,
 .0984468, None,,
 Si, 251.611 {134}, Y2R, ppm, 14.75740, .0289720, .1963219, 14.74682, 14.79017,
 14.73520, None,,
 Sn, 189.989 {477}, Y1, ppm, .0992486, .0006825, .6876391, .0985822, .0999461,
 .0992176, None,,
 Sr, 421.552 {80}, Y2A, ppm, .2539690, .0008184, .3222465, .2547020, .2530859,
 .2541191, None,,
 Th, 283.730 {119}, Y2R, ppm, .0297456, .0171482, 57.64940, .0128015, .0293446,
 .0470907, None,,
 Ti, 334.941 {101}, Y2A, ppm, .0217738, .0001358, .6238661, .0218357, .0216180,
 .0218676, None,,
 Tl, 190.856 {477}, Y1, ppm, .0618129, .0025228, 4.081382, .0597702, .0646329,
 .0610356, None,,
 V, 292.402 {115}, Y2A, ppm, .0249241, .0009200, 3.691030, .0243116, .0259820,
 .0244786, None,,
 W, 207.911 {462}, Y1, ppm, .0587500, .0007539, 1.283179, .0584436, .0581976,
 .0596088, None,,
 Zn, 213.856 {458}, Y1, ppm, .4431401, .0006197, .1398456, .4437701, .4425312,
 .4431188, None,,
 Zr, 339.198 {99}, Y2R, ppm, .1048677, .0014300, 1.363639, .1064495, .1044871,
 .1036665, None,,

[Internal Standards]

Elem, WL, Units, Avg, Stddev, RSD, Rep1, Rep2, Rep3, chk_Pass/Fail, chk_Low, chk_High
 Y1, 224.306 {450}, Cts/S, 8711.715, 21.02469, .2413381, 8725.152, 8722.508, 8687.486, None,,
 Y2A, 371.030 {91}2, Cts/S,
 266434.1, 2148.665, .8064528, 267687.0, 267662.2, 263953.1, None,,
 Y2R, 371.030 {91}3, Cts/S,
 18461.50, 56.91149, .3082711, 18468.77, 18514.44, 18401.31, None,,

[Sample Header]

Method=New TRACE Fast(v1493)
 SampleName=410-3311-G-6-D MSD
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 11:27:42
 Sample Type=Unk
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem, WL, ISRef, Units, Avg, Stddev, RSD, Rep1, Rep2, Rep3, chk_Pass/Fail, chk_Low, chk_High
 Ag, 328.068 {103}, Y2A, ppm, .0137014, .0000863, .6299972, .0136177, .0136964,

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.0137901,None,,
 Alum Ax,308.215 {109},Y2A,ppm, .3792828,.0027186,.7167623, .3765761, .3820130,
 .3792594,None,,
 Al,308.215 {109}2,Y2R,ppm, .3571837,.0111053,3.109121, .3668079, .3597105,
 .3450328,None,,
 As,189.042 {478},Y1,ppm, .0690785,.0018026,2.609480, .0669972, .0700982,
 .0701401,None,,
 B,249.773 {135},Y2A,ppm, .1076076,.0006346,.5897061, .1075274, .1082785,
 .1070170,None,,
 Ba,455.403 {74},Y2A,ppm, .1051439,.0002367,.2251104, .1051422, .1049081,
 .1053815,None,,
 Be,313.042 {108},Y2A,ppm, .0096010,.0000199,.2068293, .0095781, .0096140,
 .0096108,None,,
 Ca,317.933 {106},Y2R,ppm, 37.78897,.3296359,.8723071, 38.15605, 37.51827,
 37.69258,None,,
 Cd,226.502 {449},Y1,ppm, .0104862,.0000880,.8391463, .0104310, .0104398,
 .0105876,None,,
 Co,228.616 {447},Y1,ppm, .0106651,.0002870,2.690716, .0109951, .0104742,
 .0105261,None,,
 Cr,267.716 {126},Y2A,ppm, .0303715,.0002908,.9574713, .0301571, .0302549,
 .0307025,None,,
 Cu,327.396 {103},Y2A,ppm, .0409856,.0004469,1.090346, .0409770, .0405431,
 .0414368,None,,
 Fe,261.187 {129},Y2R,ppm, .4209619,.0041340,.9820333, .4175596, .4197634,
 .4255627,None,,
 K,766.490 {44},Y2R,ppm, 7.669819,.0486112,.6337989, 7.725610, 7.636578,
 7.647270,None,,
 Li,670.784 {50},Y2R,ppm, .1145664,.0018764,1.637819, .1167267, .1136296,
 .1133429,None,,
 Mg,285.213 {118},Y2R,ppm, 5.468817,.0510012,.9325813, 5.525452, 5.426519,
 5.454479,None,,
 Mn,257.610 {131},Y2A,ppm, .0201310,.0000369,.1833102, .0201324, .0200934,
 .0201671,None,,
 Mo,202.030 {467},Y1,ppm, .0228752,.0001353,.5916411, .0230143, .0228674,
 .0227440,None,,
 Na,589.592 {57},Y2R,ppm, 25.12494,.2093488,.8332311, 25.36640, 24.99418,
 25.01425,None,,
 Ni,231.604 {445},Y1,ppm, 2.019521,.0040891,.2024773, 2.024224, 2.016814,
 2.017523,None,,
 P,177.495 {490},Y1,ppm, .2115168,.0032306,1.527328, .2089493, .2104570,
 .2151441,None,,
 Pb,220.353 {453},Y1,ppm, .0279548,.0024768,8.860038, .0255554, .0278065,
 .0305024,None,,
 S,182.034 {485},Y1,ppm, 11.83440,.0376013,.3177289, 11.86962, 11.83879,
 11.79480,None,,
 Sb,206.833 {463},Y1,ppm, .0988666,.0012533,1.267628, .0989476, .1000774,
 .0975748,None,,
 Se,196.090 {472},Y1,ppm, .0988523,.0029617,2.996040, .1009937, .0954725,
 .1000908,None,,
 Si,251.611 {134},Y2R,ppm, 14.75620,.1154513,.7823917, 14.88768, 14.67140,
 14.70952,None,,
 Sn,189.989 {477},Y1,ppm, .0991083,.0007378,.7444655, .0996300, .0994307,
 .0982641,None,,
 Sr,421.552 {80},Y2A,ppm, .2525290,.0003668,.1452673, .2523113, .2523232,
 .2529526,None,,
 Th,283.730 {119},Y2R,ppm, .0122006,.0082095,67.28768, .0029537, .0150165,
 .0186316,None,,
 Ti,334.941 {101},Y2A,ppm, .0214430,.0001857,.8660515, .0215294, .0212299,
 .0215698,None,,
 Tl,190.856 {477},Y1,ppm, .0638414,.0011839,1.854446, .0627893, .0651234,
 .0636115,None,,
 V,292.402 {115},Y2A,ppm, .0247977,.0002458,.9911363, .0249906, .0245210,
 .0248814,None,,

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W,207.911 {462},Y1,ppm, .0585640,.0005963,1.018131, .0591741, .0579826,
 .0585352,None,,
 Zn,213.856 {458},Y1,ppm, .4457318,.0006336,.1421497, .4460240, .4450048,
 .4461666,None,,
 Zr,339.198 { 99},Y2R,ppm, .1054941,.0004958,.4699901, .1059346, .1055905,
 .1049571,None,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Y1,224.306 {450},Cts/S, 8701.787,8.907554,.1023647,8711.147,8700.799,8693.414,None,,
 Y2A,371.030 { 91}2,Cts/S,
 268464.9,877.5908,.3268922,269458.1,268142.2,267794.3,None,,
 Y2R,371.030 { 91}3,Cts/S,
 18444.94,168.0020,.9108299,18319.63,18635.84,18379.34,None,,

[Sample Header]

Method=New TRACE Fast(v1493)
 SampleName=410-3311-G-6-A sd@5
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 11:30:47
 Sample Type=Unk
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, .0004271,.0004145,97.05554, .0007990, -.000020,
 .0005019,None,,
 Al,308.215 {109},Y2A,ppm, -.010661,.0020552,19.27775, -.011298, -.012322,
 -.008363,None,,
 Al,308.215 {109}2,Y2R,ppm, -.030143,.0348485,115.6116, .0010289, -.023691,
 -.067766,None,,
 As,189.042 {478},Y1,ppm, .0087750,.0032720,37.28837, .0124082, .0060606,
 .0078560,None,,
 B,249.773 {135},Y2A,ppm, .0100948,.0004507,4.464547, .0095746, .0103695,
 .0103402,None,,
 Ba,455.403 { 74},Y2A,ppm, .0190434,.0001071,.5623776, .0189366, .0191508,
 .0190427,None,,
 Be,313.042 {108},Y2A,ppm, -.000114,.0000112,9.791467, -.000117, -.000123,
 -.000101,None,,
 Ca,317.933 {106},Y2R,ppm, 7.387282,.0108213,.1464857, 7.377427, 7.385557,
 7.398862,None,,
 Cd,226.502 {449},Y1,ppm, .0002557,.0000514,20.08150, .0001965, .0002876,
 .0002831,None,,
 Co,228.616 {447},Y1,ppm, .0001372,.0002396,174.6460, .0003987, .0000847,
 -.000072,None,,
 Cr,267.716 {126},Y2A,ppm, -.000124,.0001714,137.8752, -.000322, -.000012,
 -.000040,None,,
 Cu,327.396 {103},Y2A,ppm, -.000552,.0001921,34.80574, -.000429, -.000773,
 -.000453,None,,
 Fe,261.187 {129},Y2R,ppm, .0120107,.0017611,14.66261, .0132245, .0128168,
 .0099909,None,,
 K,766.490 { 44},Y2R,ppm, .4584881,.0186660,4.071208, .4369983, .4677968,
 .4706691,None,,
 Li,670.784 { 50},Y2R,ppm, .0032675,.0010852,33.21178, .0043613, .0032500,
 .0021912,None,,
 Mg,285.213 {118},Y2R,ppm, 1.043508,.0060158,.5764953, 1.050064, 1.038242,
 1.042217,None,,

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Mn,257.610 {131},Y2A,ppm, .0000062,.0000260,418.7827, .0000305, -.000021,
 .0000093,None,,
 Mo,202.030 {467},Y1,ppm, .0009493,.0003031,31.93238, .0008849, .0012794,
 .0006835,None,,
 Na,589.592 { 57},Y2R,ppm, 4.547708,.0233538,.5135281, 4.565998, 4.521402,
 4.555725,None,,
 Ni,231.604 {445},Y1,ppm, .0003507,.0001563,44.57712, .0003525, .0001935,
 .0005061,None,,
 P,177.495 {490},Y1,ppm, .0015997,.0018876,117.9949, .0002772, .0037613,
 .0007606,None,,
 Pb,220.353 {453},Y1,ppm, -.000847,.0012073,142.5261, -.001482, .0005452,
 -.001604,None,,
 S,182.034 {485},Y1,ppm, 2.132937,.0047140,.2210119, 2.136262, 2.135008,
 2.127542,None,,
 Sb,206.833 {463},Y1,ppm, .0013995,.0037856,270.4956, .0006561, .0055017,
 -.001959,None,,
 Se,196.090 {472},Y1,ppm, -.001425,.0034428,241.6131, -.003234, .0025453,
 -.003586,None,,
 Si,251.611 {134},Y2R,ppm, 2.686906,.0161249,.6001280, 2.668472, 2.693853,
 2.698393,None,,
 Sn,189.989 {477},Y1,ppm, .0005493,.0006445,117.3308, .0010556, .0007684,
 -.000176,None,,
 Sr,421.552 { 80},Y2A,ppm, .0478514,.0003123,.6527128, .0476770, .0482120,
 .0476653,None,,
 Th,283.730 {119},Y2R,ppm, .0192456,.0171562,89.14386, .0390322, .0085141,
 .0101904,None,,
 Ti,334.941 {101},Y2A,ppm, .0005855,.0001114,19.02658, .0007141, .0005181,
 .0005243,None,,
 Tl,190.856 {477},Y1,ppm, -.000072,.0035669,4980.411, -.002797, .0039653,
 -.001383,None,,
 V,292.402 {115},Y2A,ppm, .0000923,.0004924,533.2291, .0006598, -.000222,
 -.000161,None,,
 W,207.911 {462},Y1,ppm, .0005650,.0005125,90.71355, .0002201, .0003209,
 .0011539,None,,
 Zn,213.856 {458},Y1,ppm, .0029286,.0000969,3.309576, .0030390, .0028895,
 .0028574,None,,
 Zr,339.198 { 99},Y2R,ppm, -.000996,.0012024,120.7122, -.001985, .0003423,
 -.001345,None,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Y1,224.306 {450},Cts/S, 8708.212,12.59490,.1446325,8721.663,8696.698,8706.273,None,,
 Y2A,371.030 { 91}2,Cts/S,
 269663.8,1633.363,.6057034,271324.5,268059.2,269607.7,None,,
 Y2R,371.030 { 91}3,Cts/S,
 18354.10,127.0512,.6922224,18345.93,18485.04,18231.34,None,,

[Sample Header]

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 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 11:33:56
 Sample Type=Unk
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High

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Ag, 328.068 {103}, Y2A, ppm, .0002713, .0003948, 145.5188, .0003954, -.000171,
 .0005892, None,,
 Al, 308.215 {109}, Y2A, ppm, -.009237, .0007094, 7.679644, -.008557, -.009972,
 -.009182, None,,
 Al, 308.215 {109}2, Y2R, ppm, -.021870, .0085552, 39.11884, -.031741, -.016612,
 -.017256, None,,
 As, 189.042 {478}, Y1, ppm, .0050521, .0008283, 16.39534, .0049797, .0059142,
 .0042624, None,,
 B, 249.773 {135}, Y2A, ppm, .0014373, .0001286, 8.949374, .0015158, .0015072,
 .0012888, None,,
 Ba, 455.403 { 74}, Y2A, ppm, .0001204, .0000248, 20.55591, .0001285, .0001402,
 .0000927, None,,
 Be, 313.042 {108}, Y2A, ppm, -.000118, .0000076, 6.471608, -.000112, -.000116,
 -.000127, None,,
 Ca, 317.933 {106}, Y2R, ppm, -.001992, .0015580, 78.22382, -.001637, -.003696,
 -.000641, None,,
 Cd, 226.502 {449}, Y1, ppm, .0002168, .0000764, 35.25919, .0002989, .0001477,
 .0002038, None,,
 Co, 228.616 {447}, Y1, ppm, .0004020, .0002285, 56.83112, .0003275, .0006585,
 .0002201, None,,
 Cr, 267.716 {126}, Y2A, ppm, -.000037, .0001085, 297.1889, -.000139, -.000047,
 .0000770, None,,
 Cu, 327.396 {103}, Y2A, ppm, -.000512, .0002223, 43.37714, -.000440, -.000762,
 -.000335, None,,
 Fe, 261.187 {129}, Y2R, ppm, .0069807, .0076153, 109.0896, .0153002, .0052871,
 .0003548, None,,
 K, 766.490 { 44}, Y2R, ppm, .0157108, .0347832, 221.3970, -.022798, .0250808,
 .0448493, None,,
 Li, 670.784 { 50}, Y2R, ppm, -.000791, .0010968, 138.5770, -.002055, -.000230,
 -.000089, None,,
 Mg, 285.213 {118}, Y2R, ppm, -.002981, .0002177, 7.301953, -.002734, -.003144,
 -.003065, None,,
 Mn, 257.610 {131}, Y2A, ppm, .0000658, .0000367, 55.73105, .0000275, .0001005,
 .0000694, None,,
 Mo, 202.030 {467}, Y1, ppm, -.000150, .0001811, 120.6710, -.000324, -.000164,
 .0000375, None,,
 Na, 589.592 { 57}, Y2R, ppm, .0056408, .0049529, 87.80503, .0038750, .0018128,
 .0112347, None,,
 Ni, 231.604 {445}, Y1, ppm, -.000219, .0006551, 298.8563, -.000975, .0001834,
 .0001341, None,,
 P, 177.495 {490}, Y1, ppm, .0014299, .0021941, 153.4418, .0005107, -.000155,
 .0039341, None,,
 Pb, 220.353 {453}, Y1, ppm, -.001342, .0013150, 97.97796, -.002851, -.000734,
 -.000441, None,,
 S, 182.034 {485}, Y1, ppm, .0084530, .0038754, 45.84639, .0115579, .0041098,
 .0096913, None,,
 Sb, 206.833 {463}, Y1, ppm, -.000406, .0026682, 656.9272, .0026400, -.002330,
 -.001529, None,,
 Se, 196.090 {472}, Y1, ppm, -.001568, .0036441, 232.4305, -.002791, .0025305,
 -.004443, None,,
 Si, 251.611 {134}, Y2R, ppm, .0157137, .0065647, 41.77684, .0117124, .0121388,
 .0232900, None,,
 Sn, 189.989 {477}, Y1, ppm, -.000066, .0011834, 1780.636, .0009608, -.001360,
 .0002003, None,,
 Sr, 421.552 { 80}, Y2A, ppm, .0000128, .0000125, 97.69824, .0000202, .0000198,
 -.000002, None,,
 Th, 283.730 {119}, Y2R, ppm, .0211877, .0031830, 15.02290, .0242869, .0179271,
 .0213492, None,,
 Ti, 334.941 {101}, Y2A, ppm, -.000035, .0002611, 738.5742, .0002526, -.000257,
 -.000102, None,,
 Tl, 190.856 {477}, Y1, ppm, .0015499, .0020876, 134.6909, .0039588, .0004242,
 .0002668, None,,
 V, 292.402 {115}, Y2A, ppm, -.001134, .0003124, 27.54844, -.000997, -.001492,

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-.000914,None,,
 W,207.911 {462},Y1,ppm, .0000704,.0007650,1085.987, -.000278, .0009476,
 -.000459,None,,
 Zn,213.856 {458},Y1,ppm, -.000145,.0000138,9.508900, -.000145, -.000159,
 -.000131,None,,
 Zr,339.198 { 99},Y2R,ppm, -.001917,.0008097,42.24897, -.002850, -.001500,
 -.001400,None,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Y1,224.306 {450},Cts/S, 8872.714,20.52746,.2313549,8894.276,8870.459,8853.407,None,,
 Y2A,371.030 { 91}2,Cts/S,
 274260.9,564.4430,.2058052,273739.7,274860.4,274182.5,None,,
 Y2R,371.030 { 91}3,Cts/S,
 18557.51,55.03921,.2965872,18536.40,18619.98,18516.15,None,,

[Sample Header]

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 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 11:37:06
 Sample Type=Unk
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, .0006319,.0002564,40.57167, .0006397, .0008843,
 .0003718,None,,
 Alum Ax,308.215 {109},Y2A,ppm, .0403774,.0003995,.9894085, .0399518, .0407443,
 .0404361,None,,
 Al,308.215 {109}2,Y2R,ppm, .0357602,.0273184,76.39322, .0615115, .0071065,
 .0386626,None,,
 As,189.042 {478},Y1,ppm, .0189728,.0009699,5.112115, .0194362, .0178581,
 .0196240,None,,
 B,249.773 {135},Y2A,ppm, .0570444,.0004046,.7092469, .0565780, .0572543,
 .0573009,None,,
 Ba,455.403 { 74},Y2A,ppm, .0157717,.0000098,.0620868, .0157639, .0157686,
 .0157827,None,,
 Be,313.042 {108},Y2A,ppm, .0000042,.0000191,458.6800, .0000212, .0000078,
 -.000017,None,,
 Ca,317.933 {106},Y2R,ppm, 81.05567,.3043843,.3755251, 80.83650, 81.40321,
 80.92730,None,,
 Cd,226.502 {449},Y1,ppm, .0002953,.0001217,41.20031, .0003176, .0001641,
 .0004043,None,,
 Co,228.616 {447},Y1,ppm, -.000818,.0005345,65.34499, -.000584, -.001430,
 -.000440,None,,
 Cr,267.716 {126},Y2A,ppm, 11.44702,.0353996,.3092473, 11.47704, 11.40798,
 11.45603,None,,
 Cu,327.396 {103},Y2A,ppm, .0050799,.0006616,13.02329, .0048602, .0045562,
 .0058234,None,,
 Fe,261.187 {129},Y2R,ppm, .0022153,.0008889,40.12518, .0024143, .0012437,
 .0029877,None,,
 K,766.490 { 44},Y2R,ppm, 7.894697,.0166593,.2110186, 7.881527, 7.889139,
 7.913425,None,,
 Li,670.784 { 50},Y2R,ppm, .0086896,.0017264,19.86799, .0073769, .0080465,
 .0106452,None,,
 Mg,285.213 {118},Y2R,ppm, 60.02519,.2720765,.4532705, 59.90374, 60.33684,

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59.83500,None,,
Mn,257.610 {131},Y2A,ppm, .0030531,.0000739,2.422105, .0030537, .0029788,
.0031267,None,,
Mo,202.030 {467},Y1,ppm, .0061571,.0003645,5.920078, .0064964, .0057718,
.0062031,None,,
Na,589.592 { 57},Y2R,ppm, 36.07344,.0381816,.1058442, 36.06206, 36.11602,
36.04225,None,,
Ni,231.604 {445},Y1,ppm, .0056001,.0001660,2.963338, .0054964, .0057915,
.0055123,None,,
P,177.495 {490},Y1,ppm, .0257610,.0017102,6.638704, .0247783, .0277357,
.0247688,None,,
Pb,220.353 {453},Y1,ppm, -.002738,.0023685,86.50281, -.000981, -.005432,
-.001801,None,,
S,182.034 {485},Y1,ppm, 28.29812,.0737233,.2605237, 28.21466, 28.32532,
28.35437,None,,
Sb,206.833 {463},Y1,ppm, -.120521,.0018610,1.544154, -.121959, -.121185,
-.118419,None,,
Se,196.090 {472},Y1,ppm, .0013059,.0039942,305.8635, -.000543, .0058895,
-.001429,None,,
Si,251.611 {134},Y2R,ppm, 4.867927,.0282847,.5810416, 4.844821, 4.899470,
4.859490,None,,
Sn,189.989 {477},Y1,ppm, -.000062,.0008536,1377.233, .0004763, -.001046,
.0003840,None,,
Sr,421.552 { 80},Y2A,ppm, .2415434,.0005048,.2089725, .2416225, .2410038,
.2420039,None,,
Th,283.730 {119},Y2R,ppm, .0170870,.0154135,90.20629, -.000487, .0234350,
.0283127,None,,
Ti,334.941 {101},Y2A,ppm, .0035653,.0001737,4.871811, .0033991, .0035513,
.0037456,None,,
Tl,190.856 {477},Y1,ppm, .0044623,.0007549,16.91684, .0047873, .0035994,
.0050003,None,,
V,292.402 {115},Y2A,ppm, -.000493,.0003779,76.64414, -.000882, -.000127,
-.000470,None,,
W,207.911 {462},Y1,ppm, -.000507,.0016576,327.0490, -.002326, -.000113,
.0009183,None,,
Zn,213.856 {458},Y1,ppm, .0012735,.0002620,20.57490, .0012630, .0015407,
.0010169,None,,
Zr,339.198 { 99},Y2R,ppm, -.004774,.0014927,31.26648, -.003699, -.004145,
-.006478,None,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
Y1,224.306 {450},Cts/S, 8333.539,20.82635,.2499100,8347.673,8343.322,8309.622,None,,
Y2A,371.030 { 91}2,Cts/S,
261161.8,542.4993,.2077254,261669.3,261226.1,260590.0,None,,
Y2R,371.030 { 91}3,Cts/S,
18230.51,120.5274,.6611303,18359.59,18211.01,18120.92,None,,

[Sample Header]

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SampleName=CCV 095153
Username=dept 22
Comment=
Custom ID1=
Custom ID2=
Custom ID3=
Run Time=6/12/2020 11:40:11
Sample Type=QC
Mode=CONC
CorrFactor=1.000
Repeats=3

[Results]

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Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
Ag,328.068 {103},Y2A,ppm, .4844,.0012,.2503, .4854, .4848, .4831,Chk Pass,,
Alum Ax,308.215 {109},Y2A,ppm, 24.12,.0751,.3115, 24.09, 24.06, 24.20,Chk Pass,,
Al,308.215 {109}2,Y2R,ppm, 24.46,.0105,.0428, 24.47, 24.45, 24.45,Chk Pass,,
As,189.042 {478},Y1,ppm, .5013,.0055,1.097, .5071, .5008, .4961,Chk Pass,,
B,249.773 {135},Y2A,ppm, .4740,.0011,.2408, .4736, .4753, .4731,Chk Pass,,
Ba,455.403 { 74},Y2A,ppm, .4922,.0030,.6078, .4888, .4932, .4946,Chk Pass,,
Be,313.042 {108},Y2A,ppm, .48005,.00204,.42473, .47832, .48230, .47953,Chk Pass,,
Ca,317.933 {106},Y2R,ppm, 24.50,.0487,.1987, 24.48, 24.56, 24.47,Chk Pass,,
Cd,226.502 {449},Y1,ppm, .4897,.0012,.2534, .4900, .4906, .4883,Chk Pass,,
Co,228.616 {447},Y1,ppm, .4926,.0024,.4973, .4951, .4926, .4902,Chk Pass,,
Cr,267.716 {126},Y2A,ppm, .4818,.0010,.2171, .4809, .4816, .4830,Chk Pass,,
Cu,327.396 {103},Y2A,ppm, .4954,.0032,.6528, .4916, .4975, .4969,Chk Pass,,
Fe,261.187 {129},Y2R,ppm, 24.60,.0517,.2102, 24.65, 24.60, 24.55,Chk Pass,,
K,766.490 { 44},Y2R,ppm, 24.56,.1125,.4581, 24.48, 24.69, 24.51,Chk Pass,,
Li,670.784 { 50},Y2R,ppm, .4874,.0014,.2833, .4878, .4885, .4858,Chk Pass,,
Mg,285.213 {118},Y2R,ppm, 24.43,.0549,.2249, 24.39, 24.49, 24.41,Chk Pass,,
Mn,257.610 {131},Y2A,ppm, .48932,.00357,.72958, .48538, .49235, .49022,Chk Pass,,
Mo,202.030 {467},Y1,ppm, .4961,.0044,.8892, .4997, .4973, .4912,Chk Pass,,
Na,589.592 { 57},Y2R,ppm, 24.11,.0323,.1339, 24.14, 24.08, 24.11,Chk Pass,,
Ni,231.604 {445},Y1,ppm, .4916,.0025,.5082, .4929, .4932, .4888,Chk Pass,,
P,177.495 {490},Y1,ppm, .4951,.0026,.5265, .4957, .4922, .4972,Chk Pass,,
Pb,220.353 {453},Y1,ppm, .4932,.0018,.3603, .4944, .4941, .4912,Chk Pass,,
S,182.034 {485},Y1,ppm, 24.24,.0816,.3365, 24.28, 24.29, 24.15,Chk Pass,,
Sb,206.833 {463},Y1,ppm, .4892,.0022,.4532, .4907, .4901, .4866,Chk Pass,,
Se,196.090 {472},Y1,ppm, .4987,.0032,.6423, .5019, .4955, .4987,Chk Pass,,
Si,251.611 {134},Y2R,ppm, 24.393,.03106,.12731, 24.358, 24.406, 24.415,Chk Pass,,
Sn,189.989 {477},Y1,ppm, .4876,.0041,.8357, .4917, .4876, .4835,Chk Pass,,
Sr,421.552 { 80},Y2A,ppm, .4929,.0037,.7460, .4895, .4924, .4968,Chk Pass,,
Th,283.730 {119},Y2R,ppm, .5376,.0159,2.960, .5486, .5448, .5194,Chk Pass,,
Ti,334.941 {101},Y2A,ppm, .4972,.0034,.6762, .4935, .4999, .4982,Chk Pass,,
Tl,190.856 {477},Y1,ppm, .4907,.0092,1.876, .4927, .4986, .4806,Chk Pass,,
V,292.402 {115},Y2A,ppm, .4912,.0021,.4199, .4929, .4918, .4889,Chk Pass,,
W,207.911 {462},Y1,ppm, .4996,.0047,.9445, .5031, .5015, .4942,Chk Pass,,
Zn,213.856 {458},Y1,ppm, .4872,.0018,.3644, .4871, .4890, .4854,Chk Pass,,
Zr,339.198 { 99},Y2R,ppm,F .5688,.0077,1.352, .5617, .5677, .5769,Chk
Fail,.5000,10.00%

```

[Internal Standards]

```

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
Y1,224.306 {450},Cts/S, 8519.0,15.505,.18201,8517.3,8504.5,8535.4
Y2A,371.030 { 91}2,Cts/S, 260060.,1070.2,.41151,261240.,259160.,259770.
Y2R,371.030 { 91}3,Cts/S, 18103.,21.360,.11799,18095.,18087.,18127.

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[Sample Header]

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Method=New TRACE Fast(v1493)
SampleName=CCB 078331

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Username=dept 22
Comment=
Custom ID1=
Custom ID2=
Custom ID3=
Run Time=6/12/2020 11:43:20
Sample Type=QC
Mode=CONC
CorrFactor=1.000
Repeats=3

```

[Results]

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Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
Ag,328.068 {103},Y2A,ppm, .0007,.0003,37.18, .0010, .0004, .0008,Chk Pass,,
Alum Ax,308.215 {109},Y2A,ppm, -.0098,.0027,27.45, -.0102, -.0124, -.0070,Chk Pass,,

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Al,308.215 {109}2,Y2R,ppm, -.0339,.0218,64.32, -.0093, -.0415, -.0508,Chk Pass,,
 As,189.042 {478},Y1,ppm, .0065,.0004,5.903, .0064, .0062, .0069,Chk Pass,,
 B,249.773 {135},Y2A,ppm, .0007,.0003,48.27, .0007, .0010, .0003,Chk Pass,,
 Ba,455.403 {74},Y2A,ppm, .0000,.0000,78.63, .0000, .0000, .0001,Chk Pass,,
 Be,313.042 {108},Y2A,ppm, -.00011,.00002,15.933, -.00009, -.00012, -.00011,Chk
 Pass,,
 Ca,317.933 {106},Y2R,ppm, .0025,.0021,83.96, .0048, .0005, .0023,Chk Pass,,
 Cd,226.502 {449},Y1,ppm, .0002,.0001,29.42, .0002, .0001, .0003,Chk Pass,,
 Co,228.616 {447},Y1,ppm, .0001,.0003,331.3, -.0000, .0004, -.0001,Chk Pass,,
 Cr,267.716 {126},Y2A,ppm, .0001,.0002,149.7, -.0000, .0004, .0001,Chk Pass,,
 Cu,327.396 {103},Y2A,ppm, -.0004,.0007,169.9, -.0011, -.0003, .0002,Chk Pass,,
 Fe,261.187 {129},Y2R,ppm, .0056,.0070,124.1, .0010, .0136, .0023,Chk Pass,,
 K,766.490 {44},Y2R,ppm, .0223,.0206,92.37, .0066, .0456, .0147,Chk Pass,,
 Li,670.784 {50},Y2R,ppm, .0003,.0003,81.08, .0006, .0003, .0001,Chk Pass,,
 Mg,285.213 {118},Y2R,ppm, -.0022,.0012,51.95, -.0026, -.0009, -.0032,Chk Pass,,
 Mn,257.610 {131},Y2A,ppm, .00013,.00004,30.598, .00012, .00009, .00017,Chk Pass,,
 Mo,202.030 {467},Y1,ppm, .0018,.0004,19.61, .0014, .0021, .0018,Chk Pass,,
 Na,589.592 {57},Y2R,ppm, .0024,.0120,505.5, .0153, -.0084, .0002,Chk Pass,,
 Ni,231.604 {445},Y1,ppm, -.0001,.0001,105.0, .0000, -.0001, -.0001,Chk Pass,,
 P,177.495 {490},Y1,ppm, -.0007,.0025,340.7, .0018, -.0032, -.0008,Chk Pass,,
 Pb,220.353 {453},Y1,ppm, -.0020,.0026,130.2, .0001, -.0012, -.0049,Chk Pass,,
 S,182.034 {485},Y1,ppm, .0028,.0023,83.74, .0006, .0026, .0052,Chk Pass,,
 Sb,206.833 {463},Y1,ppm, -.0000,.0007,1908., -.0007, .0006, -.0001,Chk Pass,,
 Se,196.090 {472},Y1,ppm, -.0008,.0015,186.0, -.0014, .0009, -.0019,Chk Pass,,
 Si,251.611 {134},Y2R,ppm, .00047,.00302,639.00, .00323, -.00275, .00094,Chk Pass,,
 Sn,189.989 {477},Y1,ppm, .0010,.0004,36.03, .0009, .0014, .0007,Chk Pass,,
 Sr,421.552 {80},Y2A,ppm, .0000,.0000,7.021, .0000, .0000, .0000,Chk Pass,,
 Th,283.730 {119},Y2R,ppm, .0187,.0114,61.05, .0213, .0286, .0062,Chk Pass,,
 Ti,334.941 {101},Y2A,ppm, -.0002,.0001,82.03, -.0001, -.0001, -.0003,Chk Pass,,
 Tl,190.856 {477},Y1,ppm, .0021,.0018,87.18, .0009, .0042, .0012,Chk Pass,,
 V,292.402 {115},Y2A,ppm, -.0013,.0003,20.32, -.0011, -.0016, -.0011,Chk Pass,,
 W,207.911 {462},Y1,ppm, .0006,.0015,247.9, .0018, .0010, -.0010,Chk Pass,,
 Zn,213.856 {458},Y1,ppm, .0003,.0002,66.48, .0004, .0001, .0004,Chk Pass,,
 Zr,339.198 {99},Y2R,ppm, -.0019,.0012,60.06, -.0013, -.0012, -.0032,Chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Y1,224.306 {450},Cts/S, 8702.4,20.580,.23648,8721.4,8680.6,8705.3
 Y2A,371.030 {91}2,Cts/S, 268700.,1056.8,.39331,269610.,267540.,268960.
 Y2R,371.030 {91}3,Cts/S, 18197.,143.09,.78633,18193.,18055.,18341.

[Sample Header]

Method=New TRACE Fast(v1493)
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 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 11:46:30
 Sample Type=Unk
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, .0004599,.0004218,91.71735, .0003473, .0001058,
 .0009266,None,,
 Alum Ax,308.215 {109},Y2A,ppm, .0450382,.0018604,4.130654, .0471709, .0437492,
 .0441943,None,,
 Al,308.215 {109}2,Y2R,ppm, -.016189,.0307091,189.6929, -.019672, .0161134,
 -.045008,None,,

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As,189.042 {478},Y1,ppm, .0098522,.0021872,22.20025, .0123170, .0090966,
 .0081430,None,,
 B,249.773 {135},Y2A,ppm, .5482373,.0017828,.3251831, .5466120, .5479560,
 .5501441,None,,
 Ba,455.403 { 74},Y2A,ppm, .0209107,.0001270,.6074655, .0208149, .0210548,
 .0208624,None,,
 Be,313.042 {108},Y2A,ppm, -.000139,.0000292,21.02120, -.000158, -.000105,
 -.000153,None,,
 Ca,317.933 {106},Y2R,ppm, 95.91611,.2362053,.2462623, 95.81021, 96.18673,
 95.75139,None,,
 Cd,226.502 {449},Y1,ppm, .0003297,.0001038,31.49484, .0003830, .0003960,
 .0002100,None,,
 Co,228.616 {447},Y1,ppm, .0005712,.0000830,14.52254, .0006422, .0005915,
 .0004800,None,,
 Cr,267.716 {126},Y2A,ppm, .0137755,.0001279,.9287181, .0136307, .0138225,
 .0138734,None,,
 Cu,327.396 {103},Y2A,ppm, .0019570,.0010541,53.86136, .0026015, .0025290,
 .0007406,None,,
 Fe,261.187 {129},Y2R,ppm, .0363255,.0037641,10.36211, .0398149, .0323366,
 .0368250,None,,
 K,766.490 { 44},Y2R,ppm, 38.22874,.1658009,.4337074, 38.11164, 38.41846,
 38.15611,None,,
 Li,670.784 { 50},Y2R,ppm, .0243883,.0012366,5.070544, .0230352, .0254598,
 .0246699,None,,
 Mg,285.213 {118},Y2R,ppm, 126.7912,.4855287,.3829356, 127.2046, 126.9125,
 126.2565,None,,
 Mn,257.610 {131},Y2A,ppm, .1978152,.0006399,.3234808, .1974998, .1985515,
 .1973941,None,,
 Mo,202.030 {467},Y1,ppm, .0002498,.0003840,153.7327, .0002876, -.000152,
 .0006135,None,,
 Na,589.592 { 57},Y2R,ppm, 801.3169,6.155496,.7681725, 807.8627, 800.4427,
 795.6452,None,,
 Ni,231.604 {445},Y1,ppm, .0003058,.0004641,151.7613, .0008172, .0001890,
 -.000089,None,,
 P,177.495 {490},Y1,ppm, .3105988,.0010940,.3522324, .3118598, .3100337,
 .3099029,None,,
 Pb,220.353 {453},Y1,ppm, -.001176,.0015512,131.8652, -.002950, -.000073,
 -.000507,None,,
 S,182.034 {485},Y1,ppm, 97.02792,.2931981,.3021792, 97.06338, 97.30177,
 96.71860,None,,
 Sb,206.833 {463},Y1,ppm, -.000888,.0044113,496.6704, .0034978, -.000838,
 -.005324,None,,
 Se,196.090 {472},Y1,ppm, .0372399,.0022939,6.159927, .0394557, .0348751,
 .0373889,None,,
 Si,251.611 {134},Y2R,ppm, 3.993590,.0258769,.6479607, 3.967566, 4.019318,
 3.993886,None,,
 Sn,189.989 {477},Y1,ppm, .0006846,.0014327,209.2955, .0008562, -.000826,
 .0020237,None,,
 Sr,421.552 { 80},Y2A,ppm, .8132121,.0032387,.3982627, .8131509, .8164810,
 .8100044,None,,
 Th,283.730 {119},Y2R,ppm, .0250842,.0263847,105.1843, -.003111, .0291864,
 .0491776,None,,
 Ti,334.941 {101},Y2A,ppm, .0034173,.0001046,3.060247, .0032979, .0034618,
 .0034924,None,,
 Tl,190.856 {477},Y1,ppm, -.000664,.0004850,72.98838, -.000198, -.000630,
 -.001166,None,,
 V,292.402 {115},Y2A,ppm, .0103903,.0001034,.9952166, .0102790, .0104082,
 .0104835,None,,
 W,207.911 {462},Y1,ppm, -.000064,.0004454,691.1925, .0003656, -.000035,
 -.000524,None,,
 Zn,213.856 {458},Y1,ppm, -.000191,.0000688,35.92992, -.000238, -.000113,
 -.000224,None,,
 Zr,339.198 { 99},Y2R,ppm, -.000075,.0020800,2779.165, .0014781, .0007354,

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-.002438,None,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Y1,224.306 {450},Cts/S, 7941.943,21.50999,.2708405,7966.703,7927.869,7931.256,None,,
 Y2A,371.030 { 91}2,Cts/S,
 240558.8,610.7004,.2538674,241106.9,239900.5,240669.1,None,,
 Y2R,371.030 { 91}3,Cts/S,
 17816.48,83.07527,.4662833,17909.80,17750.58,17789.07,None,,

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 Custom ID1=
 Custom ID2=
 Custom ID3=
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 Sample Type=Unk
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, .0000838,.0003121,372.4835, .0000006, .0004291,
 -.000178,None,,
 Al,308.215 {109},Y2A,ppm, -.003388,.0024168,71.33957, -.002266, -.001736,
 -.006162,None,,
 Al,308.215 {109}2,Y2R,ppm, -.026377,.0193193,73.24306, -.028419, -.006118,
 -.044594,None,,
 As,189.042 {478},Y1,ppm, .0152722,.0044117,28.88694, .0102468, .0185070,
 .0170630,None,,
 B,249.773 {135},Y2A,ppm, .0603668,.0008597,1.424169, .0607704, .0593795,
 .0609504,None,,
 Ba,455.403 { 74},Y2A,ppm, .0154912,.0001036,.6689383, .0154533, .0154118,
 .0156084,None,,
 Be,313.042 {108},Y2A,ppm, -.000150,.0000070,4.690222, -.000158, -.000144,
 -.000149,None,,
 Ca,317.933 {106},Y2R,ppm, 101.1602,.5076198,.5017978, 101.4385, 100.5743,
 101.4679,None,,
 Cd,226.502 {449},Y1,ppm, .0002424,.0000967,39.90523, .0001840, .0003540,
 .0001890,None,,
 Co,228.616 {447},Y1,ppm, -.005284,.0002599,4.919013, -.005269, -.005032,
 -.005552,None,,
 Cr,267.716 {126},Y2A,ppm, 44.79018,.1249073,.2788720, 44.75980, 44.68327,
 44.92748,None,,
 Cu,327.396 {103},Y2A,ppm, .0029875,.0004014,13.43774, .0027518, .0027597,
 .0034510,None,,
 Fe,261.187 {129},Y2R,ppm, -.003775,.0075591,200.2319, -.007517, -.008733,
 .0049250,None,,
 K,766.490 { 44},Y2R,ppm, 8.044904,.0412187,.5123581, 8.047440, 8.002475,
 8.084796,None,,
 Li,670.784 { 50},Y2R,ppm, .0089282,.0010478,11.73567, .0079082, .0100017,
 .0088746,None,,
 Mg,285.213 {118},Y2R,ppm, 56.12785,.2901489,.5169428, 56.12057, 55.84141,
 56.42157,None,,
 Mn,257.610 {131},Y2A,ppm, .0016620,.0000092,.5550843, .0016717, .0016612,
 .0016533,None,,
 Mo,202.030 {467},Y1,ppm, .0064132,.0001874,2.921420, .0066275, .0063318,
 .0062804,None,,
 Na,589.592 { 57},Y2R,ppm, 41.80423,.0924655,.2211870, 41.90626, 41.72598,

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41.78044, None,,
 Ni, 231.604 {445}, Y1, ppm, .0000950, .0005795, 610.0988, .0003263, -.000564,
 .0005231, None,,
 P, 177.495 {490}, Y1, ppm, .0458774, .0018584, 4.050777, .0439350, .0460588,
 .0476385, None,,
 Pb, 220.353 {453}, Y1, ppm, -.002488, .0023183, 93.18773, -.000870, -.001449,
 -.005144, None,,
 S, 182.034 {485}, Y1, ppm, 59.81995, .1963041, .3281583, 59.99500, 59.85715,
 59.60771, None,,
 Sb, 206.833 {463}, Y1, ppm, -.496392, .0049075, .9886403, -.492034, -.495434,
 -.501708, None,,
 Se, 196.090 {472}, Y1, ppm, .0093803, .0001641, 1.749087, .0094719, .0094781,
 .0091909, None,,
 Si, 251.611 {134}, Y2R, ppm, 5.472809, .0146175, .2670927, 5.489656, 5.463494,
 5.465276, None,,
 Sn, 189.989 {477}, Y1, ppm, -.004606, .0002510, 5.449206, -.004529, -.004886,
 -.004402, None,,
 Sr, 421.552 { 80}, Y2A, ppm, .3434067, .0005112, .1488721, .3428202, .3436422,
 .3437578, None,,
 Th, 283.730 {119}, Y2R, ppm, -.003930, .0159651, 406.2499, -.016689, -.009074,
 .0139732, None,,
 Ti, 334.941 {101}, Y2A, ppm, .0100293, .0000899, .8966639, .0101222, .0099426,
 .0100230, None,,
 Tl, 190.856 {477}, Y1, ppm, .0146307, .0025809, 17.64006, .0145712, .0172408,
 .0120801, None,,
 V, 292.402 {115}, Y2A, ppm, -.002142, .0003746, 17.48905, -.002179, -.001750,
 -.002496, None,,
 W, 207.911 {462}, Y1, ppm, -.000503, .0009158, 182.0270, -.001558, .0000872,
 -.000038, None,,
 Zn, 213.856 {458}, Y1, ppm, .0003563, .0002074, 58.20087, .0004140, .0001262,
 .0005288, None,,
 Zr, 339.198 { 99}, Y2R, ppm, -.026260, .0000585, .2228716, -.026319, -.026259,
 -.026202, None,,

[Internal Standards]

Elem, WL, Units, Avg, Stddev, RSD, Rep1, Rep2, Rep3, chk_Pass/Fail, chk_Low, chk_High
 Y1, 224.306 {450}, Cts/S, 7792.978, 7.121405, .0913823, 7796.016, 7798.077, 7784.842, None,,
 Y2A, 371.030 { 91}2, Cts/S,
 260956.0, 1437.936, .5510261, 261540.1, 262010.0, 259318.0, None,,
 Y2R, 371.030 { 91}3, Cts/S,
 18351.73, 140.7325, .7668624, 18333.27, 18500.77, 18221.13, None,,

[Sample Header]

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 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 11:53:25
 Sample Type=Unk
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem, WL, ISRef, Units, Avg, Stddev, RSD, Rep1, Rep2, Rep3, chk_Pass/Fail, chk_Low, chk_High
 Ag, 328.068 {103}, Y2A, ppm, .0000263, .0004249, 1616.835, -.000420, .0000729,
 .0004260, None,,
 Alum Ax, 308.215 {109}, Y2A, ppm, .0598023, .0025212, 4.215901, .0573086, .0623501,
 .0597481, None,,
 Al, 308.215 {109}2, Y2R, ppm, .0233646, .0229752, 98.33328, .0216414, .0012995,

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.0471528,None,,
As,189.042 {478},Y1,ppm, .0112542,.0023651,21.01535, .0136609, .0111686,
.0089330,None,,
B,249.773 {135},Y2A,ppm, 1.020114,.0015384,.1508080, 1.021676, 1.020067,
1.018600,None,,
Ba,455.403 { 74},Y2A,ppm, .1145597,.0003594,.3137575, .1149501, .1144865,
.1142425,None,,
Be,313.042 {108},Y2A,ppm, -.000186,.0000026,1.370398, -.000188, -.000183,
-.000187,None,,
Ca,317.933 {106},Y2R,ppm, 71.04608,.3006483,.4231736, 71.33626, 71.06602,
70.73596,None,,
Cd,226.502 {449},Y1,ppm, .0004033,.0001234,30.59447, .0003145, .0005442,
.0003513,None,,
Co,228.616 {447},Y1,ppm, .0015199,.0002095,13.78207, .0015413, .0017179,
.0013006,None,,
Cr,267.716 {126},Y2A,ppm, .0042274,.0007263,17.17977, .0043895, .0034338,
.0048589,None,,
Cu,327.396 {103},Y2A,ppm, .0000803,.0004758,592.4308, .0005403, -.000410,
.0001105,None,,
Fe,261.187 {129},Y2R,ppm, 8.668086,.0014234,.0164212, 8.668410, 8.669319,
8.666528,None,,
K,766.490 { 44},Y2R,ppm, 80.37384,.2042062,.2540704, 80.56697, 80.39443,
80.16012,None,,
Li,670.784 { 50},Y2R,ppm, .0173777,.0011376,6.546140, .0165056, .0169631,
.0186644,None,,
Mg,285.213 {118},Y2R,ppm, 222.4634,1.512114,.6797137, 223.7704, 222.8124,
220.8073,None,,
Mn,257.610 {131},Y2A,ppm, .9526939,.0072006,.7558120, .9609648, .9492951,
.9478218,None,,
Mo,202.030 {467},Y1,ppm, .0010119,.0000823,8.135843, .0009434, .0011032,
.0009891,None,,
Na,589.592 { 57},Y2R,ppm, 1563.750,20.56139,1.314877, 1586.746, 1557.369,
1547.136,None,,
Ni,231.604 {445},Y1,ppm, .0004278,.0000988,23.10711, .0003398, .0004088,
.0005347,None,,
P,177.495 {490},Y1,ppm, 2.356257,.0167091,.7091367, 2.373111, 2.355963,
2.339697,None,,
Pb,220.353 {453},Y1,ppm, -.000015,.0028128,19204.82, .0031887, -.001152,
-.002081,None,,
S,182.034 {485},Y1,ppm, .7411908,.0106759,1.440371, .7355569, .7535036,
.7345121,None,,
Sb,206.833 {463},Y1,ppm, .0024050,.0038033,158.1409, -.001891, .0053443,
.0037612,None,,
Se,196.090 {472},Y1,ppm, .0078298,.0065959,84.24069, .0029918, .0153430,
.0051546,None,,
Si,251.611 {134},Y2R,ppm, 9.785372,.0429139,.4385518, 9.825040, 9.791257,
9.739820,None,,
Sn,189.989 {477},Y1,ppm, .0017435,.0017878,102.5381, .0013371, .0001940,
.0036995,None,,
Sr,421.552 { 80},Y2A,ppm, 1.259496,.0055934,.4441004, 1.265820, 1.257472,
1.255196,None,,
Th,283.730 {119},Y2R,ppm, .0179129,.0148070,82.66141, .0340166, .0148361,
.0048860,None,,
Ti,334.941 {101},Y2A,ppm, .0028045,.0001514,5.398270, .0029178, .0026326,
.0028632,None,,
Tl,190.856 {477},Y1,ppm, .0065002,.0008158,12.55065, .0074092, .0062597,
.0058316,None,,
V,292.402 {115},Y2A,ppm, -.002799,.0004865,17.38377, -.002326, -.003298,
-.002772,None,,
W,207.911 {462},Y1,ppm, -.001169,.0015710,134.3608, -.002711, -.001227,
.0004296,None,,
Zn,213.856 {458},Y1,ppm, -.000165,.0001339,81.17515, -.000152, -.000038,
-.000305,None,,

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Zr,339.198 { 99},Y2R,ppm, .0008186,.0013435,164.1250, -.000056, .0001466,
 .0023656,None,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Y1,224.306 {450},Cts/S, 7593.354,2.067044,.0272217,7593.177,7595.504,7591.381,None,,
 Y2A,371.030 { 91}2,Cts/S,
 227065.2,974.6987,.4292595,225940.6,227587.6,227667.3,None,,
 Y2R,371.030 { 91}3,Cts/S,
 17551.53,75.48509,.4300770,17505.17,17510.79,17638.63,None,,

[Sample Header]

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 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 11:56:57
 Sample Type=Unk
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, .0005655,.0002207,39.02546, .0007702, .0005947,
 .0003317,None,,
 Alum Ax,308.215 {109},Y2A,ppm, -.000497,.0018128,364.5384, -.001540, -.001548,
 .0015960,None,,
 Al,308.215 {109}2,Y2R,ppm, -.018903,.0079648,42.13594, -.022501, -.024433,
 -.009774,None,,
 As,189.042 {478},Y1,ppm, .0073883,.0015329,20.74715, .0084800, .0056359,
 .0080491,None,,
 B,249.773 {135},Y2A,ppm, .0022930,.0001488,6.489150, .0023234, .0021314,
 .0024243,None,,
 Ba,455.403 { 74},Y2A,ppm, .0011898,.0000347,2.917342, .0011872, .0011565,
 .0012258,None,,
 Be,313.042 {108},Y2A,ppm, -.000122,.0000110,8.987241, -.000135, -.000115,
 -.000116,None,,
 Ca,317.933 {106},Y2R,ppm, .0953343,.0013306,1.395749, .0945622, .0968707,
 .0945699,None,,
 Cd,226.502 {449},Y1,ppm, .0003017,.0001137,37.67182, .0002485, .0004322,
 .0002243,None,,
 Co,228.616 {447},Y1,ppm, .0004291,.0003673,85.60594, .0000086, .0006876,
 .0005910,None,,
 Cr,267.716 {126},Y2A,ppm, .0004130,.0003163,76.59116, .0000525, .0005424,
 .0006440,None,,
 Cu,327.396 {103},Y2A,ppm, .0019299,.0002362,12.24103, .0021457, .0016775,
 .0019666,None,,
 Fe,261.187 {129},Y2R,ppm, .0137620,.0078975,57.38626, .0132794, .0061169,
 .0218898,None,,
 K,766.490 { 44},Y2R,ppm, .1892070,.0254847,13.46924, .2082232, .1991478,
 .1602500,None,,
 Li,670.784 { 50},Y2R,ppm, -.001007,.0002139,21.24594, -.001252, -.000909,
 -.000859,None,,
 Mg,285.213 {118},Y2R,ppm, .0201629,.0016509,8.187961, .0220471, .0194721,
 .0189697,None,,
 Mn,257.610 {131},Y2A,ppm, .0005868,.0000778,13.24947, .0005653, .0005221,
 .0006730,None,,
 Mo,202.030 {467},Y1,ppm, -.000054,.0002524,464.6005, .0001256, -.000343,
 .0000542,None,,

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Na,589.592 { 57},Y2R,ppm, .6864369,.0560517,8.165603, .7458352, .6790014,
 .6344740,None,,
 Ni,231.604 {445},Y1,ppm, .0000785,.0003394,432.5839, .0002516, -.000313,
 .0002964,None,,
 P,177.495 {490},Y1,ppm, .0231319,.0021249,9.185809, .0225217, .0213788,
 .0254950,None,,
 Pb,220.353 {453},Y1,ppm, -.002872,.0014854,51.71410, -.004496, -.002538,
 -.001583,None,,
 S,182.034 {485},Y1,ppm, .0807530,.0021282,2.635433, .0828777, .0786214,
 .0807599,None,,
 Sb,206.833 {463},Y1,ppm, .0005563,.0013933,250.4696, .0021404, -.000479,
 .0000077,None,,
 Se,196.090 {472},Y1,ppm, .0057912,.0007841,13.53963, .0066380, .0050903,
 .0056454,None,,
 Si,251.611 {134},Y2R,ppm, .0253419,.0018200,7.181717, .0252690, .0271972,
 .0235594,None,,
 Sn,189.989 {477},Y1,ppm, .0010202,.0014762,144.7012, .0022403, -.000621,
 .0014410,None,,
 Sr,421.552 { 80},Y2A,ppm, .0009160,.0000057,.6259887, .0009144, .0009112,
 .0009224,None,,
 Th,283.730 {119},Y2R,ppm, .0224308,.0104722,46.68642, .0227294, .0327505,
 .0118126,None,,
 Ti,334.941 {101},Y2A,ppm, -.000074,.0000257,34.95585, -.000072, -.000048,
 -.000100,None,,
 Tl,190.856 {477},Y1,ppm, .0026102,.0020960,80.29934, .0021017, .0049136,
 .0008153,None,,
 V,292.402 {115},Y2A,ppm, -.001074,.0002788,25.95102, -.001013, -.001379,
 -.000832,None,,
 W,207.911 {462},Y1,ppm, -.000764,.0011121,145.6508, -.001996, .0001649,
 -.000459,None,,
 Zn,213.856 {458},Y1,ppm, .0077504,.0000961,1.239813, .0078288, .0077792,
 .0076432,None,,
 Zr,339.198 { 99},Y2R,ppm, -.000791,.0013416,169.6679, -.000944, -.002049,
 .0006208,None,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Y1,224.306 {450},Cts/S, 8787.479,13.67289,.1555951,8797.702,8792.787,8771.948,None,,
 Y2A,371.030 { 91}2,Cts/S,
 276190.8,985.3021,.3567469,275344.3,277272.4,275955.6,None,,
 Y2R,371.030 { 91}3,Cts/S,
 18655.68,56.97048,.3053787,18703.51,18670.89,18592.65,None,,

[Sample Header]

Method=New TRACE Fast(v1493)
 SampleName=410-3257-E-1-A
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 12:00:07
 Sample Type=Unk
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, .0005135,.0002715,52.86195, .0007594, .0002222,
 .0005590,None,,
 Alum Ax,308.215 {109},Y2A,ppm, -.002977,.0040124,134.7808, -.007526, -.001461,
 .0000569,None,,

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Al, 308.215 {109}2, Y2R, ppm, -.030855, .0084184, 27.28411, -.021186, -.036563,
 -.034814, None,,
 As, 189.042 {478}, Y1, ppm, .0078034, .0032561, 41.72631, .0113269, .0049056,
 .0071776, None,,
 B, 249.773 {135}, Y2A, ppm, .0059744, .0001645, 2.754198, .0058407, .0059244,
 .0061582, None,,
 Ba, 455.403 { 74}, Y2A, ppm, .1015608, .0000601, .0591561, .1016249, .1015059,
 .1015515, None,,
 Be, 313.042 {108}, Y2A, ppm, -.000146, .0000076, 5.254915, -.000137, -.000149,
 -.000151, None,,
 Ca, 317.933 {106}, Y2R, ppm, 89.65150, .1304515, .1455096, 89.79069, 89.63177,
 89.53203, None,,
 Cd, 226.502 {449}, Y1, ppm, .0002976, .0000978, 32.86041, .0003715, .0003345,
 .0001867, None,,
 Co, 228.616 {447}, Y1, ppm, .0014213, .0002429, 17.09284, .0016977, .0013246,
 .0012416, None,,
 Cr, 267.716 {126}, Y2A, ppm, .0008428, .0002085, 24.73338, .0007430, .0007030,
 .0010824, None,,
 Cu, 327.396 {103}, Y2A, ppm, .0015594, .0006500, 41.68583, .0008888, .0016027,
 .0021867, None,,
 Fe, 261.187 {129}, Y2R, ppm, .0087167, .0016025, 18.38366, .0103400, .0071359,
 .0086743, None,,
 K, 766.490 { 44}, Y2R, ppm, 1.608344, .0294648, 1.831994, 1.621277, 1.629130,
 1.574624, None,,
 Li, 670.784 { 50}, Y2R, ppm, .0194663, .0026967, 13.85325, .0180099, .0225781,
 .0178109, None,,
 Mg, 285.213 {118}, Y2R, ppm, 20.92977, .0534651, .2554498, 20.96792, 20.95272,
 20.86866, None,,
 Mn, 257.610 {131}, Y2A, ppm, .8128767, .0022971, .2825856, .8144120, .8102359,
 .8139823, None,,
 Mo, 202.030 {467}, Y1, ppm, .0003134, .0000769, 24.53440, .0003225, .0002324,
 .0003853, None,,
 Na, 589.592 { 57}, Y2R, ppm, 19.47456, .0195938, .1006123, 19.45290, 19.47974,
 19.49104, None,,
 Ni, 231.604 {445}, Y1, ppm, -.000250, .0001965, 78.59348, -.000134, -.000140,
 -.000477, None,,
 P, 177.495 {490}, Y1, ppm, .1579105, .0021995, 1.392886, .1561320, .1572294,
 .1603700, None,,
 Pb, 220.353 {453}, Y1, ppm, -.001745, .0008213, 47.05591, -.000882, -.002517,
 -.001837, None,,
 S, 182.034 {485}, Y1, ppm, 1.245835, .0040444, .3246336, 1.242476, 1.250324,
 1.244706, None,,
 Sb, 206.833 {463}, Y1, ppm, .0001577, .0009596, 608.6815, .0004307, .0009511,
 -.000909, None,,
 Se, 196.090 {472}, Y1, ppm, .0019300, .0003471, 17.98545, .0021012, .0021582,
 .0015305, None,,
 Si, 251.611 {134}, Y2R, ppm, 16.16702, .0261458, .1617230, 16.18142, 16.18279,
 16.13683, None,,
 Sn, 189.989 {477}, Y1, ppm, .0006764, .0013144, 194.3250, -.000203, .0000444,
 .0021874, None,,
 Sr, 421.552 { 80}, Y2A, ppm, .7720772, .0020993, .2719091, .7696896, .7729081,
 .7736340, None,,
 Th, 283.730 {119}, Y2R, ppm, .0146517, .0173426, 118.3658, .0309094, -.003603,
 .0166486, None,,
 Ti, 334.941 {101}, Y2A, ppm, .0009130, .0000694, 7.595547, .0009918, .0008612,
 .0008860, None,,
 Tl, 190.856 {477}, Y1, ppm, .0012399, .0031677, 255.4911, -.001875, .0011375,
 .0044575, None,,
 V, 292.402 {115}, Y2A, ppm, -.000594, .0001645, 27.71402, -.000577, -.000766,
 -.000438, None,,
 W, 207.911 {462}, Y1, ppm, -.000081, .0003863, 476.1411, .0003277, -.000440,
 -.000131, None,,
 Zn, 213.856 {458}, Y1, ppm, .0003544, .0000816, 23.01257, .0002929, .0004469,

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.0003233,None,,
 Zr,339.198 { 99},Y2R,ppm, -.000653,.0011883,181.8765, .0004221, -.000453,
 -.001929,None,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Y1,224.306 {450},Cts/S, 8522.350,17.09987,.2006474,8541.863,8515.205,8509.981,None,,
 Y2A,371.030 { 91}2,Cts/S,
 267088.5,858.2758,.3213451,267135.2,267922.5,266207.9,None,,
 Y2R,371.030 { 91}3,Cts/S,
 18697.25,5.960605,.0318796,18700.13,18701.22,18690.39,None,,

[Sample Header]

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 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 12:03:22
 Sample Type=Unk
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, .0004831,.0001768,36.59835, .0005522, .0006149,
 .0002822,None,,
 Al,308.215 {109},Y2A,ppm, .0238596,.0030676,12.85671, .0208003, .0238431,
 .0269354,None,,
 Al,308.215 {109}2,Y2R,ppm, .0139721,.0298373,213.5484, .0046818, -.010115,
 .0473494,None,,
 As,189.042 {478},Y1,ppm, .0058612,.0020144,34.36819, .0079761, .0039652,
 .0056422,None,,
 B,249.773 {135},Y2A,ppm, .0028209,.0005023,17.80707, .0030161, .0031963,
 .0022503,None,,
 Ba,455.403 { 74},Y2A,ppm, .1078709,.0005351,.4960369, .1084676, .1077116,
 .1074336,None,,
 Be,313.042 {108},Y2A,ppm, .0002770,.0000070,2.507300, .0002698, .0002837,
 .0002775,None,,
 Ca,317.933 {106},Y2R,ppm, 11.13122,.0451669,.4057675, 11.17633, 11.08600,
 11.13134,None,,
 Cd,226.502 {449},Y1,ppm, .0003588,.0001952,54.40390, .0005835, .0002623,
 .0002307,None,,
 Co,228.616 {447},Y1,ppm, .0081478,.0001091,1.338532, .0080347, .0082523,
 .0081562,None,,
 Cr,267.716 {126},Y2A,ppm, .0015428,.0000983,6.373872, .0014850, .0014872,
 .0016564,None,,
 Cu,327.396 {103},Y2A,ppm, .0005456,.0001538,28.19144, .0006239, .0003684,
 .0006445,None,,
 Fe,261.187 {129},Y2R,ppm, .0046755,.0064822,138.6428, .0103448, .0060732,
 -.002392,None,,
 K,766.490 { 44},Y2R,ppm, .7824269,.0162626,2.078475, .7691276, .8005577,
 .7775954,None,,
 Li,670.784 { 50},Y2R,ppm, .0037643,.0012120,32.19767, .0050561, .0026522,
 .0035846,None,,
 Mg,285.213 {118},Y2R,ppm, .4007208,.0019521,.4871582, .4029737, .3996614,
 .3995274,None,,
 Mn,257.610 {131},Y2A,ppm, .0097848,.0000700,.7158952, .0098074, .0098407,
 .0097062,None,,
 Mo,202.030 {467},Y1,ppm, -.000397,.0001266,31.87630, -.000457, -.000252,

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-.000483,None,,
 Na,589.592 { 57},Y2R,ppm, 9.773524,.0136898,.1400701, 9.764496, 9.789275,
 9.766800,None,,
 Ni,231.604 {445},Y1,ppm, .0040593,.0003094,7.621308, .0037022, .0042296,
 .0042462,None,,
 P,177.495 {490},Y1,ppm, .0109580,.0008357,7.626782, .0106661, .0103074,
 .0119006,None,,
 Pb,220.353 {453},Y1,ppm, .0012729,.0019454,152.8303, .0008004, -.000393,
 .0034110,None,,
 S,182.034 {485},Y1,ppm, .5816298,.0079872,1.373245, .5745379, .5902820,
 .5800695,None,,
 Sb,206.833 {463},Y1,ppm, -.001231,.0012252,99.49540, -.002585, -.000198,
 -.000911,None,,
 Se,196.090 {472},Y1,ppm, .0042771,.0033860,79.16633, .0080031, .0034401,
 .0013880,None,,
 Si,251.611 {134},Y2R,ppm, 8.876636,.0324566,.3656405, 8.908062, 8.878607,
 8.843239,None,,
 Sn,189.989 {477},Y1,ppm, .0002221,.0008284,372.9669, .0011787, -.000250,
 -.000263,None,,
 Sr,421.552 { 80},Y2A,ppm, .1550287,.0005702,.3678110, .1556740, .1548191,
 .1545929,None,,
 Th,283.730 {119},Y2R,ppm, .0193497,.0111487,57.61700, .0303819, .0195792,
 .0080880,None,,
 Ti,334.941 {101},Y2A,ppm, .0008465,.0000156,1.839762, .0008359, .0008643,
 .0008391,None,,
 Tl,190.856 {477},Y1,ppm, .0015534,.0005299,34.11079, .0018748, .0018436,
 .0009418,None,,
 V,292.402 {115},Y2A,ppm, -.000858,.0000807,9.406604, -.000942, -.000853,
 -.000781,None,,
 W,207.911 {462},Y1,ppm, -.000664,.0009613,144.7590, -.000060, -.001773,
 -.000160,None,,
 Zn,213.856 {458},Y1,ppm, .0124464,.0001856,1.491308, .0126605, .0123307,
 .0123481,None,,
 Zr,339.198 { 99},Y2R,ppm, -.001305,.0012481,95.61683, -.002642, -.000170,
 -.001104,None,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Y1,224.306 {450},Cts/S, 8827.032,27.68671,.3136582,8857.927,8818.701,8804.467,None,,
 Y2A,371.030 { 91}2,Cts/S,
 273697.8,1039.094,.3796501,272672.3,274750.0,273671.1,None,,
 Y2R,371.030 { 91}3,Cts/S,
 18678.71,70.39793,.3768886,18680.20,18748.35,18607.58,None,,

[Sample Header]

Method=New TRACE Fast(v1493)
 SampleName=410-3240-B-37-A
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 12:06:30
 Sample Type=Unk
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, .0006392,.0004226,66.12093, .0003306, .0004661,
 .0011209,None,,
 Alum Ax,308.215 {109},Y2A,ppm, .0197442,.0010545,5.340959, .0205263, .0185449,

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.0201613, None,,
Al, 308.215 {109}2, Y2R, ppm, -.019118, .0062999, 32.95327, -.026381, -.015834,
-.015138, None,,
As, 189.042 {478}, Y1, ppm, .0091536, .0025923, 28.32005, .0092843, .0064985,
.0116782, None,,
B, 249.773 {135}, Y2A, ppm, .6152715, .0002765, .0449426, .6155755, .6150348,
.6152043, None,,
Ba, 455.403 {74}, Y2A, ppm, .0277770, .0001422, .5120738, .0277859, .0276305,
.0279146, None,,
Be, 313.042 {108}, Y2A, ppm, -.000201, .0000163, 8.100711, -.000205, -.000215,
-.000183, None,,
Ca, 317.933 {106}, Y2R, ppm, 68.77328, .3638701, .5290864, 68.72044, 69.16068,
68.43871, None,,
Cd, 226.502 {449}, Y1, ppm, .0003003, .0001153, 38.40263, .0001676, .0003765,
.0003568, None,,
Co, 228.616 {447}, Y1, ppm, .0009620, .0002962, 30.79380, .0008622, .0007286,
.0012953, None,,
Cr, 267.716 {126}, Y2A, ppm, .0005771, .0002608, 45.19928, .0003685, .0004932,
.0008695, None,,
Cu, 327.396 {103}, Y2A, ppm, .0029477, .0006549, 22.21750, .0033719, .0032778,
.0021934, None,,
Fe, 261.187 {129}, Y2R, ppm, .0410578, .0038529, 9.384083, .0444473, .0368674,
.0418586, None,,
K, 766.490 {44}, Y2R, ppm, 54.27580, .2541126, .4681877, 54.09159, 54.56570,
54.17011, None,,
Li, 670.784 {50}, Y2R, ppm, .0272687, .0002292, .8405403, .0274916, .0270337,
.0272809, None,,
Mg, 285.213 {118}, Y2R, ppm, 164.8858, 1.102511, .6686514, 163.6854, 165.8530,
165.1191, None,,
Mn, 257.610 {131}, Y2A, ppm, .2448090, .0012915, .5275578, .2451727, .2433747,
.2458797, None,,
Mo, 202.030 {467}, Y1, ppm, .0014825, .0001673, 11.28551, .0012982, .0015244,
.0016249, None,,
Na, 589.592 {57}, Y2R, ppm, 1210.655, 17.20691, 1.421289, 1224.619, 1215.914,
1191.433, None,,
Ni, 231.604 {445}, Y1, ppm, .0011229, .0004806, 42.79779, .0009767, .0016596,
.0007324, None,,
P, 177.495 {490}, Y1, ppm, .0794219, .0022913, 2.884966, .0786245, .0820053,
.0776358, None,,
Pb, 220.353 {453}, Y1, ppm, -.000721, .0028056, 389.2957, -.003923, .0013059,
.0004549, None,,
S, 182.034 {485}, Y1, ppm, 129.1817, 1.068092, .8268140, 130.1256, 129.3973,
128.0223, None,,
Sb, 206.833 {463}, Y1, ppm, -.002310, .0049260, 213.2406, -.004080, -.006107,
.0032563, None,,
Se, 196.090 {472}, Y1, ppm, .0005081, .0038282, 753.4166, -.003563, .0010515,
.0040357, None,,
Si, 251.611 {134}, Y2R, ppm, 1.703057, .0094063, .5523176, 1.706259, 1.710444,
1.692468, None,,
Sn, 189.989 {477}, Y1, ppm, .0007937, .0003731, 47.00175, .0011831, .0004394,
.0007586, None,,
Sr, 421.552 {80}, Y2A, ppm, 1.033178, .0077437, .7495056, 1.041393, 1.026012,
1.032129, None,,
Th, 283.730 {119}, Y2R, ppm, .0002113, .0125515, 5938.656, -.014277, .0077888,
.0071220, None,,
Ti, 334.941 {101}, Y2A, ppm, .0013375, .0000650, 4.857833, .0012661, .0013931,
.0013534, None,,
Tl, 190.856 {477}, Y1, ppm, .0016841, .0032573, 193.4121, .0028877, -.002004,
.0041684, None,,
V, 292.402 {115}, Y2A, ppm, -.002384, .0003157, 13.23966, -.002410, -.002056,
-.002686, None,,
W, 207.911 {462}, Y1, ppm, -.000299, .0004647, 155.6104, -.000129, -.000824,
.0000573, None,,

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Zn,213.856 {458},Y1,ppm, .0040955,.0000988,2.412621, .0041121, .0041850,
 .0039895,None,,
 Zr,339.198 { 99},Y2R,ppm, .0011363,.0010859,95.56898, .0019600, .0015431,
 -.000094,None,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Y1,224.306 {450},Cts/S, 7765.182,20.11508,.2590419,7749.575,7758.089,7787.883,None,,
 Y2A,371.030 { 91}2,Cts/S,
 232604.0,857.5167,.3686595,232380.1,233551.3,231880.6,None,,
 Y2R,371.030 { 91}3,Cts/S,
 17592.81,64.59975,.3671940,17611.21,17521.01,17646.22,None,,

[Sample Header]

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 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 12:10:01
 Sample Type=Unk
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, .0005641,.0001459,25.85553, .0004999, .0004614,
 .0007311,None,,
 Al,308.215 {109},Y2A,ppm, .0176512,.0029592,16.76499, .0142702, .0189132,
 .0197702,None,,
 Al,308.215 {109}2,Y2R,ppm, -.014792,.0338127,228.5899, .0056873, -.053819,
 .0037566,None,,
 As,189.042 {478},Y1,ppm, .0065321,.0023102,35.36736, .0089592, .0043600,
 .0062769,None,,
 B,249.773 {135},Y2A,ppm, .7105987,.0016671,.2346001, .7098192, .7094641,
 .7125127,None,,
 Ba,455.403 { 74},Y2A,ppm, .0262667,.0000356,.1355297, .0262257, .0262896,
 .0262848,None,,
 Be,313.042 {108},Y2A,ppm, -.000183,.0000124,6.767114, -.000176, -.000198,
 -.000177,None,,
 Ca,317.933 {106},Y2R,ppm, 74.48731,.1254203,.1683780, 74.34726, 74.58928,
 74.52540,None,,
 Cd,226.502 {449},Y1,ppm, .0004250,.0000658,15.47967, .0003493, .0004569,
 .0004686,None,,
 Co,228.616 {447},Y1,ppm, .0014378,.0002381,16.56228, .0016829, .0012074,
 .0014230,None,,
 Cr,267.716 {126},Y2A,ppm, .0006085,.0002508,41.21458, .0004052, .0005316,
 .0008888,None,,
 Cu,327.396 {103},Y2A,ppm, .0017831,.0003572,20.03234, .0014081, .0018217,
 .0021194,None,,
 Fe,261.187 {129},Y2R,ppm, .0401169,.0037614,9.376232, .0413699, .0358888,
 .0430919,None,,
 K,766.490 { 44},Y2R,ppm, 62.40154,.1918702,.3074767, 62.19562, 62.43369,
 62.57530,None,,
 Li,670.784 { 50},Y2R,ppm, .0305036,.0017107,5.608296, .0307117, .0321008,
 .0286983,None,,
 Mg,285.213 {118},Y2R,ppm, 185.6166,1.371071,.7386573, 184.1310, 186.8332,
 185.8857,None,,
 Mn,257.610 {131},Y2A,ppm, .2587720,.0008599,.3322985, .2578434, .2589318,
 .2595408,None,,

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Mo,202.030 {467},Y1,ppm, .0016856,.0002296,13.62247, .0018000, .0018356,
 .0014213,None,,
 Na,589.592 { 57},Y2R,ppm, 1302.131,19.91437,1.529368, 1323.710, 1298.222,
 1284.462,None,,
 Ni,231.604 {445},Y1,ppm, .0010633,.0006023,56.65002, .0015811, .0004022,
 .0012064,None,,
 P,177.495 {490},Y1,ppm, .0666832,.0025954,3.892136, .0636863, .0681976,
 .0681657,None,,
 Pb,220.353 {453},Y1,ppm, -.000865,.0032918,380.7527, .0024607, -.000932,
 -.004122,None,,
 S,182.034 {485},Y1,ppm, 147.6777,.4676925,.3166981, 148.1750, 147.6114,
 147.2467,None,,
 Sb,206.833 {463},Y1,ppm, -.000667,.0018569,278.4542, -.000585, -.002563,
 .0011477,None,,
 Se,196.090 {472},Y1,ppm, .0008112,.0060908,750.8234, .0022850, .0060299,
 -.005881,None,,
 Si,251.611 {134},Y2R,ppm, 1.504684,.0163673,1.087755, 1.523137, 1.491920,
 1.498997,None,,
 Sn,189.989 {477},Y1,ppm, -.001160,.0016004,137.9233, .0006875, -.002100,
 -.002069,None,,
 Sr,421.552 { 80},Y2A,ppm, 1.176954,.0046667,.3965112, 1.172518, 1.181822,
 1.176520,None,,
 Th,283.730 {119},Y2R,ppm, .0210773,.0098765,46.85854, .0199770, .0117970,
 .0314579,None,,
 Ti,334.941 {101},Y2A,ppm, .0012571,.0000314,2.498482, .0012871, .0012245,
 .0012596,None,,
 Tl,190.856 {477},Y1,ppm, .0010861,.0043759,402.9217, .0056763, -.003038,
 .0006201,None,,
 V,292.402 {115},Y2A,ppm, -.002423,.0002632,10.86414, -.002282, -.002727,
 -.002260,None,,
 W,207.911 {462},Y1,ppm, .0001857,.0017458,940.0528, -.001645, .0018326,
 .0003691,None,,
 Zn,213.856 {458},Y1,ppm, .0023130,.0001543,6.671677, .0024319, .0023685,
 .0021386,None,,
 Zr,339.198 { 99},Y2R,ppm, -.001771,.0023343,131.7713, .0008595, -.002580,
 -.003594,None,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Y1,224.306 {450},Cts/S, 7739.977,19.53782,.2524274,7762.304,7731.615,7726.011,None,,
 Y2A,371.030 { 91}2,Cts/S,
 229198.5,519.0100,.2264457,229793.8,228840.9,228960.8,None,,
 Y2R,371.030 { 91}3,Cts/S,
 17620.73,56.67886,.3216602,17686.00,17592.23,17583.96,None,,

[Sample Header]

Method=New TRACE Fast(v1493)
 SampleName=410-3240-B-44-A
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 12:13:33
 Sample Type=Unk
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, .0004462,.0003066,68.71424, .0007550, .0001419,
 .0004416,None,,

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Al, 308.215 {109}, Y2A, ppm, .0174526, .0014460, 8.285357, .0157875, .0183921,
 .0181783, None,,
 Al, 308.215 {109}2, Y2R, ppm, -.009902, .0052230, 52.74752, -.008724, -.015613,
 -.005368, None,,
 As, 189.042 {478}, Y1, ppm, .0083932, .0020921, 24.92604, .0099342, .0092339,
 .0060115, None,,
 B, 249.773 {135}, Y2A, ppm, .7262704, .0020579, .2833515, .7286111, .7254547,
 .7247455, None,,
 Ba, 455.403 {74}, Y2A, ppm, .0262845, .0001891, .7195046, .0263727, .0260674,
 .0264134, None,,
 Be, 313.042 {108}, Y2A, ppm, -.000176, .0000073, 4.144824, -.000182, -.000168,
 -.000180, None,,
 Ca, 317.933 {106}, Y2R, ppm, 75.93549, .2978756, .3922746, 76.00300, 76.19381,
 75.60965, None,,
 Cd, 226.502 {449}, Y1, ppm, .0003825, .0000703, 18.37273, .0003019, .0004144,
 .0004312, None,,
 Co, 228.616 {447}, Y1, ppm, .0007043, .0001385, 19.65891, .0005930, .0008594,
 .0006605, None,,
 Cr, 267.716 {126}, Y2A, ppm, .0004735, .0002969, 62.71418, .0001668, .0007596,
 .0004940, None,,
 Cu, 327.396 {103}, Y2A, ppm, .0025077, .0002996, 11.94736, .0021621, .0026672,
 .0026939, None,,
 Fe, 261.187 {129}, Y2R, ppm, .0279210, .0105512, 37.78952, .0218924, .0401043,
 .0217664, None,,
 K, 766.490 {44}, Y2R, ppm, 63.72165, .2753080, .4320477, 63.86512, 63.89560,
 63.40424, None,,
 Li, 670.784 {50}, Y2R, ppm, .0318731, .0011400, 3.576532, .0329779, .0319402,
 .0307010, None,,
 Mg, 285.213 {118}, Y2R, ppm, 188.5558, 1.532915, .8129766, 186.9400, 188.7378,
 189.9896, None,,
 Mn, 257.610 {131}, Y2A, ppm, .2707630, .0013832, .5108530, .2718239, .2691986,
 .2712665, None,,
 Mo, 202.030 {467}, Y1, ppm, .0017958, .0008567, 47.70838, .0010289, .0027204,
 .0016381, None,,
 Na, 589.592 {57}, Y2R, ppm, 1302.835, 8.688162, .6668659, 1308.981, 1306.630,
 1292.895, None,,
 Ni, 231.604 {445}, Y1, ppm, .0014180, .0005447, 38.40992, .0020443, .0010554,
 .0011543, None,,
 P, 177.495 {490}, Y1, ppm, .0417932, .0030710, 7.348172, .0443227, .0426809,
 .0383762, None,,
 Pb, 220.353 {453}, Y1, ppm, -.001267, .0016855, 133.0795, -.001397, .0004805,
 -.002883, None,,
 S, 182.034 {485}, Y1, ppm, 153.6840, 1.438187, .9358080, 155.0313, 153.8512,
 152.1695, None,,
 Sb, 206.833 {463}, Y1, ppm, -.000330, .0023307, 707.1664, .0022668, -.001014,
 -.002241, None,,
 Se, 196.090 {472}, Y1, ppm, .0021964, .0028343, 129.0432, .0027264, .0047281,
 -.000866, None,,
 Si, 251.611 {134}, Y2R, ppm, 1.475485, .0102879, .6972551, 1.487364, 1.469473,
 1.469618, None,,
 Sn, 189.989 {477}, Y1, ppm, .0000508, .0011673, 2297.857, -.001195, .0011189,
 .0002289, None,,
 Sr, 421.552 {80}, Y2A, ppm, 1.198506, .0063238, .5276373, 1.205712, 1.193881,
 1.195925, None,,
 Th, 283.730 {119}, Y2R, ppm, .0193678, .0207926, 107.3565, .0375332, -.003311,
 .0238809, None,,
 Ti, 334.941 {101}, Y2A, ppm, .0011624, .0000326, 2.807938, .0011269, .0011692,
 .0011911, None,,
 Tl, 190.856 {477}, Y1, ppm, -.000120, .0023412, 1951.118, -.001947, .0025192,
 -.000933, None,,
 V, 292.402 {115}, Y2A, ppm, -.002099, .0001525, 7.265459, -.002115, -.002244,
 -.001940, None,,
 W, 207.911 {462}, Y1, ppm, -.000638, .0005570, 87.35870, -.001268, -.000431,

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-.000213,None,,
 Zn,213.856 {458},Y1,ppm, .0019257,.0003329,17.28558, .0021156, .0015413,
 .0021201,None,,
 Zr,339.198 { 99},Y2R,ppm, -.001451,.0025011,172.3513, -.004173, -.000928,
 .0007468,None,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Y1,224.306 {450},Cts/S, 7697.897,14.83043,.1926556,7681.151,7703.172,7709.370,None,,
 Y2A,371.030 { 91}2,Cts/S,
 229912.9,422.8066,.1838986,229814.4,230376.3,229548.0,None,,
 Y2R,371.030 { 91}3,Cts/S,
 17651.00,60.90331,.3450417,17720.43,17625.97,17606.60,None,,

[Sample Header]

Method=New TRACE Fast(v1493)
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 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 12:17:04
 Sample Type=Unk
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, .0004795,.0002339,48.78334, .0007407, .0002893,
 .0004086,None,,
 Alum Ax,308.215 {109},Y2A,ppm, -.008681,.0021745,25.04957, -.008236, -.006763,
 -.011043,None,,
 Al,308.215 {109}2,Y2R,ppm, -.042408,.0232548,54.83567, -.045191, -.064146,
 -.017887,None,,
 As,189.042 {478},Y1,ppm, .0076270,.0023870,31.29715, .0055249, .0071341,
 .0102220,None,,
 B,249.773 {135},Y2A,ppm, .0008952,.0008126,90.76866, -.000040, .0012950,
 .0014305,None,,
 Ba,455.403 { 74},Y2A,ppm, .0000404,.0000023,5.794883, .0000390, .0000431,
 .0000392,None,,
 Be,313.042 {108},Y2A,ppm, -.000125,.0000185,14.80132, -.000146, -.000116,
 -.000113,None,,
 Ca,317.933 {106},Y2R,ppm, .0017765,.0042248,237.8166, .0066110, -.000076,
 -.001206,None,,
 Cd,226.502 {449},Y1,ppm, .0002083,.0000836,40.11844, .0003032, .0001460,
 .0001756,None,,
 Co,228.616 {447},Y1,ppm, .0002597,.0002527,97.30449, .0000061, .0005115,
 .0002615,None,,
 Cr,267.716 {126},Y2A,ppm, .0000041,.0002063,5064.790, .0001966, .0000292,
 -.000214,None,,
 Cu,327.396 {103},Y2A,ppm, -.000063,.0006809,1077.734, .0001243, -.000818,
 .0005043,None,,
 Fe,261.187 {129},Y2R,ppm, .0000575,.0040128,6976.225, -.000369, .0042663,
 -.003725,None,,
 K,766.490 { 44},Y2R,ppm, .1335330,.0239731,17.95295, .1492267, .1454343,
 .1059379,None,,
 Li,670.784 { 50},Y2R,ppm, .0008867,.0009643,108.7460, .0016111, -.000208,
 .0012569,None,,
 Mg,285.213 {118},Y2R,ppm, .0013629,.0004402,32.29690, .0016522, .0015801,
 .0008563,None,,
 Mn,257.610 {131},Y2A,ppm, .0000415,.0000168,40.40855, .0000479, .0000541,

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.0000225, None,,
 Mo, 202.030 {467}, Y1, ppm, .0000540, .0004390, 812.9020, .0001530, -.000426,
 .0004351, None,,
 Na, 589.592 { 57}, Y2R, ppm, .6663798, .0556422, 8.349926, .7277703, .6521000,
 .6192692, None,,
 Ni, 231.604 {445}, Y1, ppm, -.000138, .0001391, 100.5653, -.000100, -.000293,
 -.000023, None,,
 P, 177.495 {490}, Y1, ppm, .0002126, .0011888, 559.0223, .0007649, .0010249,
 -.001152, None,,
 Pb, 220.353 {453}, Y1, ppm, -.000742, .0017790, 239.6704, -.002741, .0006662,
 -.000151, None,,
 S, 182.034 {485}, Y1, ppm, .0192244, .0027325, 14.21356, .0181658, .0171795,
 .0223278, None,,
 Sb, 206.833 {463}, Y1, ppm, -.000228, .0014959, 655.9848, .0013444, -.000395,
 -.001633, None,,
 Se, 196.090 {472}, Y1, ppm, .0000987, .0028121, 2848.044, -.001254, .0033315,
 -.001781, None,,
 Si, 251.611 {134}, Y2R, ppm, -.004533, .0065394, 144.2695, -.001085, -.000439,
 -.012075, None,,
 Sn, 189.989 {477}, Y1, ppm, -.000663, .0010382, 156.6741, -.001705, .0003715,
 -.000655, None,,
 Sr, 421.552 { 80}, Y2A, ppm, .0000799, .0000225, 28.08872, .0001037, .0000590,
 .0000772, None,,
 Th, 283.730 {119}, Y2R, ppm, .0144233, .0175185, 121.4596, -.000353, .0337756,
 .0098475, None,,
 Ti, 334.941 {101}, Y2A, ppm, -.000130, .0000659, 50.85533, -.000141, -.000189,
 -.000059, None,,
 Tl, 190.856 {477}, Y1, ppm, -.000204, .0032687, 1606.185, -.003978, .0016665,
 .0017008, None,,
 V, 292.402 {115}, Y2A, ppm, -.001346, .0004322, 32.09616, -.000848, -.001575,
 -.001617, None,,
 W, 207.911 {462}, Y1, ppm, -.000016, .0003036, 1871.841, .0001421, -.000366,
 .0001755, None,,
 Zn, 213.856 {458}, Y1, ppm, .0000167, .0001174, 704.5410, -.000021, -.000078,
 .0001482, None,,
 Zr, 339.198 { 99}, Y2R, ppm, -.000703, .0014350, 203.9948, -.000621, -.002178,
 .0006885, None,,

[Internal Standards]

Elem, WL, Units, Avg, Stddev, RSD, Rep1, Rep2, Rep3, chk_Pass/Fail, chk_Low, chk_High
 Y1, 224.306 {450}, Cts/S, 8823.654, 10.04859, .1138824, 8815.854, 8820.115, 8834.994, None,,
 Y2A, 371.030 { 91}2, Cts/S,
 274444.0, 995.9266, .3628888, 275573.9, 273693.6, 274064.5, None,,
 Y2R, 371.030 { 91}3, Cts/S,
 18666.79, 166.4572, .8917292, 18774.42, 18750.90, 18475.06, None,,

[Sample Header]

Method=New TRACE Fast(v1493)
 SampleName=CCV 095153
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 12:20:12
 Sample Type=QC
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem, WL, ISRef, Units, Avg, Stddev, RSD, Rep1, Rep2, Rep3, chk_Pass/Fail, chk_Low, chk_High
 Ag, 328.068 {103}, Y2A, ppm, .4893, .0002, .0482, .4895, .4893, .4890, Chk Pass,,

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Al,um Ax,308.215 {109},Y2A,ppm, 23.95,.0434,.1814, 23.98, 23.96, 23.90,Chk Pass,,
 Al,308.215 {109}2,Y2R,ppm, 24.21,.0737,.3042, 24.23, 24.13, 24.28,Chk Pass,,
 As,189.042 {478},Y1,ppm, .4976,.0060,1.200, .4928, .4958, .5043,Chk Pass,,
 B,249.773 {135},Y2A,ppm, .4733,.0009,.1941, .4741, .4723, .4735,Chk Pass,,
 Ba,455.403 { 74},Y2A,ppm, .4894,.0034,.6887, .4933, .4879, .4871,Chk Pass,,
 Be,313.042 {108},Y2A,ppm, .47563,.00131,.27546, .47698, .47437, .47555,Chk Pass,,
 Ca,317.933 {106},Y2R,ppm, 24.34,.0631,.2592, 24.31, 24.41, 24.30,Chk Pass,,
 Cd,226.502 {449},Y1,ppm, .4913,.0009,.1732, .4909, .4923, .4907,Chk Pass,,
 Co,228.616 {447},Y1,ppm, .4881,.0020,.4104, .4902, .4880, .4862,Chk Pass,,
 Cr,267.716 {126},Y2A,ppm, .4767,.0021,.4363, .4780, .4743, .4778,Chk Pass,,
 Cu,327.396 {103},Y2A,ppm, .4906,.0032,.6450, .4942, .4892, .4883,Chk Pass,,
 Fe,261.187 {129},Y2R,ppm, 24.25,.0520,.2143, 24.30, 24.24, 24.20,Chk Pass,,
 K,766.490 { 44},Y2R,ppm, 24.30,.0582,.2394, 24.24, 24.35, 24.31,Chk Pass,,
 Li,670.784 { 50},Y2R,ppm, .4898,.0010,.2005, .4908, .4898, .4889,Chk Pass,,
 Mg,285.213 {118},Y2R,ppm, 24.00,.0152,.0633, 24.01, 24.00, 23.98,Chk Pass,,
 Mn,257.610 {131},Y2A,ppm, .48099,.00168,.34908, .48281, .47950, .48065,Chk Pass,,
 Mo,202.030 {467},Y1,ppm, .4922,.0019,.3810, .4931, .4934, .4900,Chk Pass,,
 Na,589.592 { 57},Y2R,ppm, 23.66,.0458,.1934, 23.61, 23.70, 23.68,Chk Pass,,
 Ni,231.604 {445},Y1,ppm, .4894,.0006,.1263, .4895, .4899, .4887,Chk Pass,,
 P,177.495 {490},Y1,ppm, .4973,.0033,.6626, .4971, .5007, .4941,Chk Pass,,
 Pb,220.353 {453},Y1,ppm, .4921,.0017,.3403, .4939, .4906, .4917,Chk Pass,,
 S,182.034 {485},Y1,ppm, 24.27,.0051,.0208, 24.28, 24.27, 24.27,Chk Pass,,
 Sb,206.833 {463},Y1,ppm, .4941,.0010,.2089, .4930, .4945, .4950,Chk Pass,,
 Se,196.090 {472},Y1,ppm, .5018,.0047,.9318, .4965, .5035, .5054,Chk Pass,,
 Si,251.611 {134},Y2R,ppm, 24.150,.06273,.25975, 24.112, 24.223, 24.116,Chk Pass,,
 Sn,189.989 {477},Y1,ppm, .4846,.0007,.1518, .4845, .4839, .4854,Chk Pass,,
 Sr,421.552 { 80},Y2A,ppm, .4918,.0033,.6684, .4956, .4899, .4898,Chk Pass,,
 Th,283.730 {119},Y2R,ppm, .5189,.0213,4.115, .5094, .5039, .5433,Chk Pass,,
 Ti,334.941 {101},Y2A,ppm, .4904,.0017,.3477, .4923, .4891, .4897,Chk Pass,,
 Tl,190.856 {477},Y1,ppm, .4817,.0114,2.364, .4922, .4834, .4696,Chk Pass,,
 V,292.402 {115},Y2A,ppm, .4926,.0013,.2663, .4920, .4941, .4916,Chk Pass,,
 W,207.911 {462},Y1,ppm, .4972,.0011,.2230, .4977, .4980, .4960,Chk Pass,,
 Zn,213.856 {458},Y1,ppm, .4899,.0007,.1495, .4904, .4903, .4890,Chk Pass,,
 Zr,339.198 { 99},Y2R,ppm, .5112,.0026,.5145, .5119, .5083, .5134,Chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Y1,224.306 {450},Cts/S, 8496.7,13.970,.16442,8507.9,8501.1,8481.0
 Y2A,371.030 { 91}2,Cts/S, 263410.,528.78,.20075,262820.,263850.,263550.
 Y2R,371.030 { 91}3,Cts/S, 18367.,74.789,.40720,18449.,18302.,18350.

[Sample Header]

Method=New TRACE Fast(v1493)
 SampleName=CCB 078331

Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 12:23:20
 Sample Type=QC
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, .0001,.0004,526.7, -.0003, .0002, .0004,Chk Pass,,
 Al,um Ax,308.215 {109},Y2A,ppm, -.0089,.0021,23.00, -.0110, -.0090, -.0069,Chk Pass,,
 Al,308.215 {109}2,Y2R,ppm, -.0414,.0092,22.27, -.0504, -.0421, -.0319,Chk Pass,,
 As,189.042 {478},Y1,ppm, .0074,.0028,38.32, .0088, .0092, .0041,Chk Pass,,
 B,249.773 {135},Y2A,ppm, .0015,.0002,10.55, .0015, .0017, .0013,Chk Pass,,

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Ba,455.403 { 74},Y2A,ppm, .0000,.0000,19.50, .0000, .0000, .0000,Chk Pass,,
 Be,313.042 {108},Y2A,ppm, -.00013,.00001,10.348, -.00013, -.00012, -.00014,Chk
 Pass,,
 Ca,317.933 {106},Y2R,ppm, .0033,.0032,95.98, .0025, .0068, .0006,Chk Pass,,
 Cd,226.502 {449},Y1,ppm, .0004,.0001,16.43, .0004, .0003, .0003,Chk Pass,,
 Co,228.616 {447},Y1,ppm, .0002,.0004,149.8, .0003, .0006, -.0001,Chk Pass,,
 Cr,267.716 {126},Y2A,ppm, -.0002,.0002,114.3, .0000, -.0002, -.0004,Chk Pass,,
 Cu,327.396 {103},Y2A,ppm, -.0004,.0003,69.34, -.0006, -.0001, -.0006,Chk Pass,,
 Fe,261.187 {129},Y2R,ppm, -.0005,.0033,692.1, -.0041, .0004, .0023,Chk Pass,,
 K,766.490 { 44},Y2R,ppm, .0723,.0196,27.13, .0657, .0569, .0944,Chk Pass,,
 Li,670.784 { 50},Y2R,ppm, .0011,.0014,125.7, .0017, .0021, -.0005,Chk Pass,,
 Mg,285.213 {118},Y2R,ppm, -.0008,.0016,201.1, -.0016, -.0019, .0011,Chk Pass,,
 Mn,257.610 {131},Y2A,ppm, .00011,.00003,28.348, .00013, .00012, .00007,Chk Pass,,
 Mo,202.030 {467},Y1,ppm, .0019,.0001,7.084, .0018, .0019, .0020,Chk Pass,,
 Na,589.592 { 57},Y2R,ppm, .3075,.0098,3.195, .3088, .2971, .3167,Chk Pass,,
 Ni,231.604 {445},Y1,ppm, .0001,.0003,511.1, .0003, -.0003, .0003,Chk Pass,,
 P,177.495 {490},Y1,ppm, .0023,.0023,100.1, .0038, -.0004, .0036,Chk Pass,,
 Pb,220.353 {453},Y1,ppm, -.0021,.0010,49.72, -.0011, -.0020, -.0032,Chk Pass,,
 S,182.034 {485},Y1,ppm, .0107,.0050,46.69, .0158, .0058, .0106,Chk Pass,,
 Sb,206.833 {463},Y1,ppm, .0019,.0011,55.25, .0020, .0009, .0030,Chk Pass,,
 Se,196.090 {472},Y1,ppm, -.0010,.0018,180.2, .0001, -.0032, -.0000,Chk Pass,,
 Si,251.611 {134},Y2R,ppm, -.00004,.00319,7091.2, .00337, -.00295, -.00055,Chk Pass,,
 Sn,189.989 {477},Y1,ppm, .0011,.0013,110.3, .0011, .0024, -.0001,Chk Pass,,
 Sr,421.552 { 80},Y2A,ppm, .0000,.0000,46.57, .0000, .0000, .0000,Chk Pass,,
 Th,283.730 {119},Y2R,ppm, .0232,.0139,59.83, .0386, .0117, .0193,Chk Pass,,
 Ti,334.941 {101},Y2A,ppm, -.0001,.0001,93.97, -.0002, .0000, -.0002,Chk Pass,,
 Tl,190.856 {477},Y1,ppm, .0022,.0023,104.6, .0028, .0041, -.0004,Chk Pass,,
 V,292.402 {115},Y2A,ppm, -.0010,.0001,13.31, -.0010, -.0012, -.0009,Chk Pass,,
 W,207.911 {462},Y1,ppm, .0002,.0005,281.5, .0001, -.0003, .0007,Chk Pass,,
 Zn,213.856 {458},Y1,ppm, .0005,.0001,27.68, .0005, .0003, .0006,Chk Pass,,
 Zr,339.198 { 99},Y2R,ppm, -.0031,.0025,80.35, -.0059, -.0009, -.0026,Chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Y1,224.306 {450},Cts/S, 8701.0,9.0933,.10451,8695.1,8696.3,8711.4
 Y2A,371.030 { 91}2,Cts/S, 268750.,1399.6,.52078,269940.,267210.,269110.
 Y2R,371.030 { 91}3,Cts/S, 18200.,240.24,1.3200,18214.,18433.,17953.

[Sample Header]

Method=New TRACE Fast(v1493)
 SampleName=410-3240-B-46-A
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 12:26:29
 Sample Type=Unk
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, .0004020,.0000687,17.08349, .0004813, .0003636,
 .0003611,None,,
 Al,308.215 {109},Y2A,ppm, -.008425,.0044329,52.61542, -.012361, -.009291,
 -.003623,None,,
 Al,308.215 {109}2,Y2R,ppm, -.034942,.0124478,35.62467, -.049292, -.027061,
 -.028471,None,,
 As,189.042 {478},Y1,ppm, .0079997,.0014828,18.53540, .0093433, .0064089,
 .0082471,None,,
 B,249.773 {135},Y2A,ppm, .0006503,.0005371,82.59246, .0000655, .0007640,

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.0011216, None,,
Ba, 455.403 { 74}, Y2A, ppm, .0000377, .0000173, 45.82663, .0000308, .0000573,
.0000249, None,,
Be, 313.042 {108}, Y2A, ppm, -.000131, .0000231, 17.67234, -.000154, -.000108,
-.000129, None,,
Ca, 317.933 {106}, Y2R, ppm, -.000050, .0027621, 5539.153, -.003091, .0023024,
.0006392, None,,
Cd, 226.502 {449}, Y1, ppm, .0003138, .0000661, 21.07790, .0003901, .0002787,
.0002726, None,,
Co, 228.616 {447}, Y1, ppm, .0004111, .0000768, 18.69147, .0003233, .0004440,
.0004661, None,,
Cr, 267.716 {126}, Y2A, ppm, -.000172, .0002758, 160.3599, -.000360, .0001446,
-.000300, None,,
Cu, 327.396 {103}, Y2A, ppm, .0000113, .0008885, 7870.842, -.001002, .0006577,
.0003781, None,,
Fe, 261.187 {129}, Y2R, ppm, .0044575, .0015702, 35.22599, .0031686, .0062062,
.0039976, None,,
K, 766.490 { 44}, Y2R, ppm, .0107761, .0207223, 192.2983, .0334869, -.007104,
.0059458, None,,
Li, 670.784 { 50}, Y2R, ppm, -.002222, .0003839, 17.28056, -.001913, -.002652,
-.002101, None,,
Mg, 285.213 {118}, Y2R, ppm, .0035477, .0010445, 29.44089, .0028083, .0030922,
.0047426, None,,
Mn, 257.610 {131}, Y2A, ppm, .0001250, .0000432, 34.55344, .0000753, .0001467,
.0001531, None,,
Mo, 202.030 {467}, Y1, ppm, -.000000, .0001976, 57380.89, -.000157, -.000066,
.0002218, None,,
Na, 589.592 { 57}, Y2R, ppm, .2348384, .0238410, 10.15209, .2611998, .2285282,
.2147873, None,,
Ni, 231.604 {445}, Y1, ppm, .0001029, .0000927, 90.08878, .0001089, .0000073,
.0001925, None,,
P, 177.495 {490}, Y1, ppm, .0144532, .0000525, .3632124, .0144425, .0145103,
.0144069, None,,
Pb, 220.353 {453}, Y1, ppm, -.000597, .0037988, 636.7094, .0003795, .0026189,
-.004788, None,,
S, 182.034 {485}, Y1, ppm, .0128069, .0037854, 29.55721, .0157118, .0085260,
.0141829, None,,
Sb, 206.833 {463}, Y1, ppm, .0016894, .0019955, 118.1160, .0036288, -.000358,
.0017972, None,,
Se, 196.090 {472}, Y1, ppm, .0028479, .0015827, 55.57427, .0033190, .0010832,
.0041416, None,,
Si, 251.611 {134}, Y2R, ppm, -.008328, .0032049, 38.48274, -.011042, -.009151,
-.004792, None,,
Sn, 189.989 {477}, Y1, ppm, -.000507, .0003349, 66.10669, -.000644, -.000125,
-.000751, None,,
Sr, 421.552 { 80}, Y2A, ppm, .0000903, .0000099, 10.99902, .0001017, .0000860,
.0000833, None,,
Th, 283.730 {119}, Y2R, ppm, .0200366, .0298622, 149.0384, .0505378, .0187144,
-.009143, None,,
Ti, 334.941 {101}, Y2A, ppm, -.000100, .0000602, 60.08500, -.000156, -.000108,
-.000037, None,,
Tl, 190.856 {477}, Y1, ppm, .0006591, .0019517, 296.1060, .0022693, .0012195,
-.001511, None,,
V, 292.402 {115}, Y2A, ppm, -.001270, .0002499, 19.67270, -.001046, -.001540,
-.001225, None,,
W, 207.911 {462}, Y1, ppm, -.000107, .0000674, 62.85420, -.000045, -.000179,
-.000098, None,,
Zn, 213.856 {458}, Y1, ppm, .0001122, .0001693, 150.9156, .0002303, .0001881,
-.000082, None,,
Zr, 339.198 { 99}, Y2R, ppm, -.002377, .0034086, 143.3900, -.005490, -.002906,
.0012651, None,,

[Internal Standards]

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Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Y1,224.306 {450},Cts/S, 8859.956,25.96037,.2930079,8858.603,8886.567,8834.699,None,,
 Y2A,371.030 { 91}2,Cts/S,
 273633.5,1436.965,.5251423,273503.3,275131.1,272266.1,None,,
 Y2R,371.030 { 91}3,Cts/S,
 18627.70,65.83764,.3534395,18590.32,18589.06,18703.72,None,,

[Sample Header]
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 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 12:29:38
 Sample Type=Unk
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]
 Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, .0002865,.0004903,171.1092, .0006419, .0004906,
 -.000273,None,,
 Al,308.215 {109},Y2A,ppm, -.010341,.0040353,39.02371, -.013721, -.011428,
 -.005873,None,,
 Al,308.215 {109}2,Y2R,ppm, -.062291,.0368537,59.16337, -.066631, -.023460,
 -.096783,None,,
 As,189.042 {478},Y1,ppm, .0058727,.0015946,27.15341, .0048390, .0050699,
 .0077091,None,,
 B,249.773 {135},Y2A,ppm, -.000302,.0003078,101.7987, -.000545, .0000437,
 -.000405,None,,
 Ba,455.403 { 74},Y2A,ppm, .0000744,.0000158,21.28125, .0000909, .0000593,
 .0000729,None,,
 Be,313.042 {108},Y2A,ppm, -.000122,.0000194,15.86515, -.000130, -.000137,
 -.000100,None,,
 Ca,317.933 {106},Y2R,ppm, .0127142,.0023274,18.30570, .0148672, .0130308,
 .0102447,None,,
 Cd,226.502 {449},Y1,ppm, .0002849,.0000866,30.39793, .0003793, .0002091,
 .0002664,None,,
 Co,228.616 {447},Y1,ppm, .0003758,.0000762,20.27239, .0003201, .0003448,
 .0004627,None,,
 Cr,267.716 {126},Y2A,ppm, -.000108,.0000857,79.29382, -.000014, -.000128,
 -.000182,None,,
 Cu,327.396 {103},Y2A,ppm, .0000242,.0005582,2302.682, -.000132, -.000439,
 .0006438,None,,
 Fe,261.187 {129},Y2R,ppm, .0032136,.0009164,28.51493, .0039875, .0034516,
 .0022017,None,,
 K,766.490 { 44},Y2R,ppm, .0185954,.0215396,115.8334, .0397789, -.003284,
 .0192907,None,,
 Li,670.784 { 50},Y2R,ppm, -.000493,.0015365,311.8447, -.001812, -.000860,
 .0011942,None,,
 Mg,285.213 {118},Y2R,ppm, .0049076,.0007376,15.02951, .0041758, .0048960,
 .0056508,None,,
 Mn,257.610 {131},Y2A,ppm, .0000775,.0000836,107.9176, .0001282, .0001232,
 -.000019,None,,
 Mo,202.030 {467},Y1,ppm, -.000425,.0002920,68.75730, -.000089, -.000621,
 -.000565,None,,
 Na,589.592 { 57},Y2R,ppm, .2105362,.0066533,3.160155, .2176484, .2094957,
 .2044644,None,,
 Ni,231.604 {445},Y1,ppm, -.000170,.0003091,182.1102, -.000472, -.000183,
 .0001456,None,,

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P,177.495 {490},Y1,ppm, .0147659,.0033594,22.75107, .0135183, .0122089,
 .0185707,None,,
 Pb,220.353 {453},Y1,ppm, .0009362,.0005645,60.29436, .0006312, .0015876,
 .0005898,None,,
 S,182.034 {485},Y1,ppm, .0140011,.0044759,31.96797, .0141924, .0094326,
 .0183782,None,,
 Sb,206.833 {463},Y1,ppm, .0000662,.0008342,1260.725, .0000392, .0009135,
 -.000754,None,,
 Se,196.090 {472},Y1,ppm, .0028304,.0041861,147.9002, -.001283, .0026894,
 .0070852,None,,
 Si,251.611 {134},Y2R,ppm, -.007000,.0015999,22.85550, -.006391, -.008815,
 -.005794,None,,
 Sn,189.989 {477},Y1,ppm, .0001805,.0008968,496.7523, -.000507, .0011950,
 -.000147,None,,
 Sr,421.552 { 80},Y2A,ppm, .0001293,.0000065,5.037386, .0001284, .0001362,
 .0001232,None,,
 Th,283.730 {119},Y2R,ppm, .0039331,.0167695,426.3680, .0077319, .0184774,
 -.014410,None,,
 Ti,334.941 {101},Y2A,ppm, -.000145,.0000520,35.76641, -.000201, -.000098,
 -.000137,None,,
 Tl,190.856 {477},Y1,ppm, .0011090,.0034919,314.8616, .0040724, -.002741,
 .0019953,None,,
 V,292.402 {115},Y2A,ppm, -.001058,.0003349,31.66274, -.000781, -.001430,
 -.000962,None,,
 W,207.911 {462},Y1,ppm, -.001350,.0003620,26.81890, -.000933, -.001538,
 -.001579,None,,
 Zn,213.856 {458},Y1,ppm, .0001180,.0001255,106.3544, .0001624, .0002152,
 -.000024,None,,
 Zr,339.198 { 99},Y2R,ppm, -.000712,.0015943,223.9620, .0010888, -.001944,
 -.001280,None,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Y1,224.306 {450},Cts/S, 8876.647,14.05615,.1583498,8872.672,8892.263,8865.006,None,,
 Y2A,371.030 { 91}2,Cts/S,
 276349.5,1032.249,.3735304,277540.6,275714.5,275793.5,None,,
 Y2R,371.030 { 91}3,Cts/S,
 18706.18,46.35450,.2478032,18723.39,18653.68,18741.46,None,,

[Sample Header]

Method=New TRACE Fast(v1493)
 SampleName=410-3298-G-3-A
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 12:32:47
 Sample Type=Unk
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, .0004565,.0000086,1.877472, .0004659, .0004492,
 .0004545,None,,
 Alum Ax,308.215 {109},Y2A,ppm, .0062565,.0021329,34.09064, .0042561, .0085009,
 .0060124,None,,
 Al,308.215 {109}2,Y2R,ppm, -.014846,.0147484,99.34390, -.015814, -.029086,
 .0003630,None,,
 As,189.042 {478},Y1,ppm, .0602776,.0036262,6.015760, .0625186, .0560940,
 .0622202,None,,

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B,249.773 {135},Y2A,ppm, .1943332,.0017564,.9037914, .1962083, .1940647,
 .1927265,None,,
 Ba,455.403 { 74},Y2A,ppm, 1.786653,.0068116,.3812520, 1.787658, 1.792907,
 1.779395,None,,
 Be,313.042 {108},Y2A,ppm, -.000216,.0000181,8.380641, -.000231, -.000196,
 -.000222,None,,
 Ca,317.933 {106},Y2R,ppm, 299.4340,4.525873,1.511476, 303.9231, 294.8723,
 299.5065,None,,
 Cd,226.502 {449},Y1,ppm, .0005952,.0000714,11.98925, .0006340, .0006388,
 .0005129,None,,
 Co,228.616 {447},Y1,ppm, .0007922,.0004434,55.96927, .0012629, .0007312,
 .0003825,None,,
 Cr,267.716 {126},Y2A,ppm, .0013798,.0001030,7.467443, .0013964, .0012695,
 .0014736,None,,
 Cu,327.396 {103},Y2A,ppm, .0006910,.0002612,37.79177, .0007984, .0008814,
 .0003933,None,,
 Fe,261.187 {129},Y2R,ppm, 60.44761,.1501249,.2483554, 60.61900, 60.33939,
 60.38445,None,,
 K,766.490 { 44},Y2R,ppm, 9.400608,.0075911,.0807506, 9.408928, 9.394059,
 9.398838,None,,
 Li,670.784 { 50},Y2R,ppm, .0147046,.0012500,8.500860, .0152632, .0132727,
 .0155779,None,,
 Mg,285.213 {118},Y2R,ppm, 36.84444,.1484426,.4028901, 37.01385, 36.78237,
 36.73711,None,,
 Mn,257.610 {131},Y2A,ppm, 1.100357,.0083012,.7544064, 1.107333, 1.102563,
 1.091176,None,,
 Mo,202.030 {467},Y1,ppm, .0078320,.0004379,5.590877, .0083153, .0077191,
 .0074616,None,,
 Na,589.592 { 57},Y2R,ppm, 772.0389,6.130261,.7940353, 779.1165, 768.6010,
 768.3990,None,,
 Ni,231.604 {445},Y1,ppm, -.000807,.0009066,112.3267, .0002355, -.001410,
 -.001247,None,,
 P,177.495 {490},Y1,ppm, .1241946,.0060769,4.893046, .1271295, .1282470,
 .1172073,None,,
 Pb,220.353 {453},Y1,ppm, .0054075,.0045432,84.01575, .0106420, .0024899,
 .0030906,None,,
 S,182.034 {485},Y1,ppm, .4637291,.0212249,4.577000, .4862456, .4608525,
 .4440893,None,,
 Sb,206.833 {463},Y1,ppm, .0041530,.0040285,97.00169, .0067982, .0061441,
 -.000483,None,,
 Se,196.090 {472},Y1,ppm, .0037591,.0014605,38.85210, .0038031, .0051971,
 .0022771,None,,
 Si,251.611 {134},Y2R,ppm, 13.71962,.0209325,.1525736, 13.74379, 13.70739,
 13.70768,None,,
 Sn,189.989 {477},Y1,ppm, .0023575,.0004528,19.20849, .0020649, .0028791,
 .0021285,None,,
 Sr,421.552 { 80},Y2A,ppm, 1.315428,.0076155,.5789372, 1.323797, 1.313583,
 1.308905,None,,
 Th,283.730 {119},Y2R,ppm, .0675411,.0164505,24.35623, .0827378, .0698125,
 .0500729,None,,
 Ti,334.941 {101},Y2A,ppm, -.003526,.0001030,2.919718, -.003629, -.003526,
 -.003423,None,,
 Tl,190.856 {477},Y1,ppm, .0021626,.0026819,124.0140, .0037927, -.000933,
 .0036277,None,,
 V,292.402 {115},Y2A,ppm, -.001879,.0003999,21.28326, -.001572, -.002331,
 -.001734,None,,
 W,207.911 {462},Y1,ppm, .0005183,.0002252,43.44781, .0002590, .0006647,
 .0006313,None,,
 Zn,213.856 {458},Y1,ppm, -.010902,.0001970,1.807387, -.010874, -.010720,
 -.011111,None,,
 Zr,339.198 { 99},Y2R,ppm, -.003514,.0016719,47.57509, -.005150, -.001808,
 -.003584,None,,

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[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Y1,224.306 {450},Cts/S, 7926.182,94.36667,1.190569,7877.857,7865.766,8034.924,None,,
 Y2A,371.030 { 91}2,Cts/S,
 239310.0,958.8366,.4006671,238437.7,239155.8,240336.6,None,,
 Y2R,371.030 { 91}3,Cts/S,
 17993.69,97.96671,.5444505,17950.97,18105.76,17924.33,None,,

[Sample Header]

Method=New TRACE Fast(v1493)
 SampleName=410-3298-H-4-A
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 12:36:27
 Sample Type=Unk
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, .0002619,.0004001,152.7816, .0005631, .0004147,
 -.000192,None,,
 Alum Ax,308.215 {109},Y2A,ppm, .0182951,.0011453,6.260372, .0170441, .0185491,
 .0192921,None,,
 Al,308.215 {109}2,Y2R,ppm, -.006582,.0224810,341.5610, .0136519, -.030782,
 -.002615,None,,
 As,189.042 {478},Y1,ppm, .0078164,.0005325,6.812984, .0072310, .0082721,
 .0079460,None,,
 B,249.773 {135},Y2A,ppm, .0756188,.0005731,.7578304, .0753000, .0762803,
 .0752760,None,,
 Ba,455.403 { 74},Y2A,ppm, .1108109,.0000752,.0678694, .1107347, .1108129,
 .1108851,None,,
 Be,313.042 {108},Y2A,ppm, -.000163,.0000047,2.856549, -.000166, -.000157,
 -.000165,None,,
 Ca,317.933 {106},Y2R,ppm, 116.4579,.5663791,.4863382, 115.8039, 116.7792,
 116.7905,None,,
 Cd,226.502 {449},Y1,ppm, .0002761,.0001227,44.43703, .0002289, .0004153,
 .0001840,None,,
 Co,228.616 {447},Y1,ppm, .0005102,.0000683,13.38481, .0005577, .0005410,
 .0004319,None,,
 Cr,267.716 {126},Y2A,ppm, .0010084,.0002235,22.16767, .0009706, .0012484,
 .0008061,None,,
 Cu,327.396 {103},Y2A,ppm, .0059424,.0001386,2.332162, .0060993, .0058914,
 .0058366,None,,
 Fe,261.187 {129},Y2R,ppm, .0256132,.0031470,12.28662, .0221316, .0282553,
 .0264525,None,,
 K,766.490 { 44},Y2R,ppm, 3.748381,.0443379,1.182856, 3.698677, 3.762603,
 3.783863,None,,
 Li,670.784 { 50},Y2R,ppm, .0140999,.0012798,9.076474, .0128097, .0153690,
 .0141209,None,,
 Mg,285.213 {118},Y2R,ppm, 37.07165,.1219459,.3289466, 36.93581, 37.10745,
 37.17169,None,,
 Mn,257.610 {131},Y2A,ppm, .0761086,.0001461,.1919630, .0760897, .0759728,
 .0762632,None,,
 Mo,202.030 {467},Y1,ppm, .0008526,.0005274,61.86117, .0002878, .0009377,
 .0013324,None,,
 Na,589.592 { 57},Y2R,ppm, 137.0474,1.171744,.8549917, 135.6947, 137.6985,
 137.7490,None,,
 Ni,231.604 {445},Y1,ppm, .0003207,.0000676,21.06705, .0003736, .0003438,

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.0002446,None,,
P,177.495 {490},Y1,ppm, .0117163,.0015207,12.97969, .0123468, .0128203,
.0099817,None,,
Pb,220.353 {453},Y1,ppm, -.001861,.0019631,105.4861, -.002910, -.003077,
.0004037,None,,
S,182.034 {485},Y1,ppm, 29.60595,.0372960,.1259748, 29.64457, 29.60316,
29.57013,None,,
Sb,206.833 {463},Y1,ppm, .0020279,.0016594,81.82875, .0013200, .0039238,
.0008398,None,,
Se,196.090 {472},Y1,ppm, .0003426,.0026083,761.3244, -.001829, .0032355,
-.000378,None,,
Si,251.611 {134},Y2R,ppm, 5.698672,.0354904,.6227839, 5.657691, 5.719049,
5.719275,None,,
Sn,189.989 {477},Y1,ppm, .0005953,.0005311,89.21508, .0003356, .0012063,
.0002441,None,,
Sr,421.552 { 80},Y2A,ppm, .2380342,.0002181,.0916165, .2377865, .2381184,
.2381975,None,,
Th,283.730 {119},Y2R,ppm, .0163391,.0072980,44.66568, .0216213, .0193843,
.0080117,None,,
Ti,334.941 {101},Y2A,ppm, .0003142,.0000427,13.59236, .0002650, .0003364,
.0003413,None,,
Tl,190.856 {477},Y1,ppm, .0004440,.0018420,414.9028, -.001108, -.000040,
.0024797,None,,
V,292.402 {115},Y2A,ppm, -.001715,.0005363,31.27445, -.002279, -.001212,
-.001652,None,,
W,207.911 {462},Y1,ppm, -.000572,.0011937,208.5831, .0001368, -.001951,
.0000968,None,,
Zn,213.856 {458},Y1,ppm, .0001562,.0001144,73.24700, .0001987, .0002432,
.0000266,None,,
Zr,339.198 { 99},Y2R,ppm, -.000511,.0012609,246.5816, -.000659, -.001692,
.0008170,None,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
Y1,224.306 {450},Cts/S, 8340.679,7.281338,.0872991,8332.957,8347.420,8341.662,None,,
Y2A,371.030 { 91}2,Cts/S,
257727.5,738.7801,.2866516,258216.4,258088.5,256877.7,None,,
Y2R,371.030 { 91}3,Cts/S,
18339.19,154.1071,.8403159,18514.01,18280.53,18223.03,None,,

[Sample Header]

Method=New TRACE Fast(v1493)
SampleName=410-3298-H-5-A
Username=dept 22
Comment=
Custom ID1=
Custom ID2=
Custom ID3=
Run Time=6/12/2020 12:39:32
Sample Type=Unk
Mode=CONC
CorrFactor=1.000
Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
Ag,328.068 {103},Y2A,ppm, .0004434,.0001455,32.80461, .0002855, .0004729,
.0005719,None,,
Alum Ax,308.215 {109},Y2A,ppm, .0035076,.0016237,46.29138, .0052377, .0020169,
.0032681,None,,
Al,308.215 {109}2,Y2R,ppm, -.026141,.0016177,6.188243, -.025621, -.024848,
-.027955,None,,
As,189.042 {478},Y1,ppm, .0141959,.0039362,27.72749, .0183729, .0105557,

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.0136591,None,,
 B,249.773 {135},Y2A,ppm, .1242131,.0007797,.6276835, .1250067, .1241843,
 .1234482,None,,
 Ba,455.403 {74},Y2A,ppm, .2697544,.0007125,.2641220, .2703302, .2699753,
 .2689576,None,,
 Be,313.042 {108},Y2A,ppm, -.000151,.0000086,5.689747, -.000150, -.000160,
 -.000143,None,,
 Ca,317.933 {106},Y2R,ppm, 101.4700,.3333057,.3284770, 101.5474, 101.7578,
 101.1048,None,,
 Cd,226.502 {449},Y1,ppm, .0002835,.0001466,51.70271, .0004506, .0001766,
 .0002233,None,,
 Co,228.616 {447},Y1,ppm, .0002703,.0002219,82.07105, .0001170, .0005248,
 .0001693,None,,
 Cr,267.716 {126},Y2A,ppm, .0007858,.0001529,19.46338, .0007962, .0006279,
 .0009333,None,,
 Cu,327.396 {103},Y2A,ppm, .0008835,.0003123,35.35143, .0012299, .0006232,
 .0007975,None,,
 Fe,261.187 {129},Y2R,ppm, 14.68450,.0370492,.2523013, 14.64172, 14.70587,
 14.70591,None,,
 K,766.490 {44},Y2R,ppm, 2.457291,.0247753,1.008235, 2.444840, 2.441210,
 2.485822,None,,
 Li,670.784 {50},Y2R,ppm, .0074510,.0018370,24.65503, .0082745, .0053463,
 .0087321,None,,
 Mg,285.213 {118},Y2R,ppm, 11.74087,.0387536,.3300746, 11.69970, 11.77664,
 11.74627,None,,
 Mn,257.610 {131},Y2A,ppm, .1630981,.0006679,.4095112, .1635895, .1633671,
 .1623376,None,,
 Mo,202.030 {467},Y1,ppm, .0001446,.0001432,99.05229, .0001109, .0000212,
 .0003016,None,,
 Na,589.592 {57},Y2R,ppm, 262.9495,2.548991,.9693842, 264.9877, 263.7695,
 260.0915,None,,
 Ni,231.604 {445},Y1,ppm, .0001558,.0001910,122.5331, -.000063, .0002853,
 .0002456,None,,
 P,177.495 {490},Y1,ppm, .0115820,.0004497,3.882480, .0113472, .0121005,
 .0112985,None,,
 Pb,220.353 {453},Y1,ppm, .0000808,.0023878,2954.107, .0004364, -.002465,
 .0022709,None,,
 S,182.034 {485},Y1,ppm, .4370690,.0040336,.9228777, .4351422, .4417046,
 .4343600,None,,
 Sb,206.833 {463},Y1,ppm, .0008572,.0023056,268.9502, -.001800, .0020478,
 .0023242,None,,
 Se,196.090 {472},Y1,ppm, .0042001,.0024171,57.55040, .0029009, .0069890,
 .0027103,None,,
 Si,251.611 {134},Y2R,ppm, 10.21546,.0709677,.6947093, 10.26463, 10.24764,
 10.13410,None,,
 Sn,189.989 {477},Y1,ppm, .0001929,.0006353,329.3307, -.000372, .0000696,
 .0008809,None,,
 Sr,421.552 {80},Y2A,ppm, .3991190,.0003263,.0817525, .3994957, .3989220,
 .3989394,None,,
 Th,283.730 {119},Y2R,ppm, .0314373,.0061924,19.69761, .0253352, .0377163,
 .0312605,None,,
 Ti,334.941 {101},Y2A,ppm, .0008345,.0000994,11.90987, .0008513, .0007278,
 .0009244,None,,
 Tl,190.856 {477},Y1,ppm, .0038291,.0017761,46.38324, .0057340, .0022185,
 .0035349,None,,
 V,292.402 {115},Y2A,ppm, -.000537,.0002542,47.36542, -.000645, -.000246,
 -.000718,None,,
 W,207.911 {462},Y1,ppm, .0001525,.0001179,77.26076, .0000764, .0002883,
 .0000930,None,,
 Zn,213.856 {458},Y1,ppm, .0036823,.0002295,6.231915, .0039187, .0036677,
 .0034604,None,,
 Zr,339.198 {99},Y2R,ppm, -.001402,.0003168,22.58981, -.001768, -.001233,
 -.001206,None,,

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[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Y1,224.306 {450},Cts/S, 8328.875,11.84085,.1421663,8342.093,8325.294,8319.238,None,,
 Y2A,371.030 { 91}2,Cts/S,
 255215.7,744.3627,.2916603,255287.4,254438.0,255921.5,None,,
 Y2R,371.030 { 91}3,Cts/S,
 18328.98,22.88887,.1248780,18354.04,18323.73,18309.17,None,,

[Sample Header]

Method=New TRACE Fast(v1493)
 SampleName=410-3257-E-3-A
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 12:42:54
 Sample Type=Unk
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, .0005834,.0004581,78.52725, .0009176, .0007714,
 .0000612,None,,
 Al,308.215 {109},Y2A,ppm, -.002274,.0031666,139.2422, -.005830, -.001235,
 .0002424,None,,
 Al,308.215 {109}2,Y2R,ppm, -.011578,.0037100,32.04460, -.012174, -.014954,
 -.007606,None,,
 As,189.042 {478},Y1,ppm, .0070899,.0010262,14.47482, .0067676, .0082385,
 .0062634,None,,
 B,249.773 {135},Y2A,ppm, .1762823,.0009077,.5149320, .1755970, .1773118,
 .1759381,None,,
 Ba,455.403 { 74},Y2A,ppm, .0434249,.0001444,.3326331, .0435697, .0432808,
 .0434242,None,,
 Be,313.042 {108},Y2A,ppm, -.000120,.0000081,6.767172, -.000129, -.000120,
 -.000112,None,,
 Ca,317.933 {106},Y2R,ppm, 18.52774,.1652521,.8919172, 18.64879, 18.59494,
 18.33947,None,,
 Cd,226.502 {449},Y1,ppm, .0003529,.0000486,13.76020, .0003019, .0003986,
 .0003581,None,,
 Co,228.616 {447},Y1,ppm, .0043619,.0001472,3.373743, .0045090, .0043618,
 .0042147,None,,
 Cr,267.716 {126},Y2A,ppm, .0007427,.0002397,32.26796, .0007633, .0004934,
 .0009713,None,,
 Cu,327.396 {103},Y2A,ppm, .0003237,.0003816,117.8812, -.000113, .0004938,
 .0005908,None,,
 Fe,261.187 {129},Y2R,ppm, .6266768,.0029053,.4636112, .6299640, .6244530,
 .6256133,None,,
 K,766.490 { 44},Y2R,ppm, 11.55179,.1419750,1.229031, 11.59173, 11.66951,
 11.39412,None,,
 Li,670.784 { 50},Y2R,ppm, .0012054,.0015656,129.8786, .0005922, .0000392,
 .0029847,None,,
 Mg,285.213 {118},Y2R,ppm, 8.705616,.0835971,.9602661, 8.771234, 8.734119,
 8.611495,None,,
 Mn,257.610 {131},Y2A,ppm, 2.981307,.0094619,.3173749, 2.988705, 2.970645,
 2.984570,None,,
 Mo,202.030 {467},Y1,ppm, .0001840,.0000470,25.52116, .0001427, .0001742,
 .0002351,None,,
 Na,589.592 { 57},Y2R,ppm, 8.013328,.0281893,.3517799, 7.999279, 8.045781,
 7.994924,None,,

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Ni,231.604 {445},Y1,ppm, .0012463,.0004433,35.56722, .0007472, .0013976,
 .0015940,None,,
 P,177.495 {490},Y1,ppm, .0136361,.0011585,8.495711, .0143605, .0142478,
 .0123000,None,,
 Pb,220.353 {453},Y1,ppm, -.001620,.0009551,58.94336, -.000553, -.001915,
 -.002394,None,,
 S,182.034 {485},Y1,ppm, 2.427790,.0029774,.1226378, 2.431181, 2.426584,
 2.425604,None,,
 Sb,206.833 {463},Y1,ppm, .0005313,.0040472,761.7409, .0011744, -.003799,
 .0042185,None,,
 Se,196.090 {472},Y1,ppm, .0028306,.0033549,118.5228, .0063508, -.000330,
 .0024709,None,,
 Si,251.611 {134},Y2R,ppm, 3.488882,.0328261,.9408759, 3.526763, 3.468789,
 3.471094,None,,
 Sn,189.989 {477},Y1,ppm, .0000741,.0006990,942.9591, -.000602, .0007942,
 .0000299,None,,
 Sr,421.552 { 80},Y2A,ppm, .1370115,.0004144,.3024240, .1374472, .1366224,
 .1369648,None,,
 Th,283.730 {119},Y2R,ppm, .0148221,.0136508,92.09763, .0128941, .0293343,
 .0022378,None,,
 Ti,334.941 {101},Y2A,ppm, .0011106,.0001460,13.14463, .0010071, .0010472,
 .0012776,None,,
 Tl,190.856 {477},Y1,ppm, .0038546,.0040778,105.7879, .0053241, .0069940,
 -.000754,None,,
 V,292.402 {115},Y2A,ppm, -.001438,.0001675,11.64731, -.001632, -.001340,
 -.001343,None,,
 W,207.911 {462},Y1,ppm, -.000859,.0009255,107.7274, .0000365, -.000802,
 -.001812,None,,
 Zn,213.856 {458},Y1,ppm, .0017032,.0001671,9.810741, .0017803, .0018178,
 .0015115,None,,
 Zr,339.198 { 99},Y2R,ppm, -.001941,.0017912,92.28331, -.001052, -.004003,
 -.000769,None,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Y1,224.306 {450},Cts/S, 8741.516,12.98289,.1485199,8742.994,8753.696,8727.857,None,,
 Y2A,371.030 { 91}2,Cts/S,
 270863.9,1003.643,.3705341,271158.6,271687.1,269745.8,None,,
 Y2R,371.030 { 91}3,Cts/S,
 18647.50,117.0016,.6274384,18589.22,18571.09,18782.20,None,,

[Sample Header]

Method=New TRACE Fast(v1493)
 SampleName=410-3257-E-2-A

Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 12:46:00
 Sample Type=Unk
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, .0007205,.0006179,85.75949, .0006051, .0001685,
 .0013881,None,,
 Alum Ax,308.215 {109},Y2A,ppm, .0056804,.0098089,172.6786, .0016085, .0168695,
 -.001437,None,,

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Al, 308.215 {109}2, Y2R, ppm, -.018501, .0260284, 140.6869, -.002775, -.048545,
 -.004183, None,,
 As, 189.042 {478}, Y1, ppm, .0094811, .0016468, 17.36935, .0113072, .0090275,
 .0081087, None,,
 B, 249.773 {135}, Y2A, ppm, .0078451, .0010665, 13.59475, .0068721, .0089853,
 .0076779, None,,
 Ba, 455.403 { 74}, Y2A, ppm, .2111881, .0006630, .3139437, .2111263, .2118799,
 .2105582, None,,
 Be, 313.042 {108}, Y2A, ppm, -.000069, .0001498, 218.6381, -.000142, .0001039,
 -.000167, None,,
 Ca, 317.933 {106}, Y2R, ppm, 123.2097, .6949218, .5640155, 123.6156, 123.6062,
 122.4073, None,,
 Cd, 226.502 {449}, Y1, ppm, .0002826, .0000901, 31.87439, .0002580, .0002073,
 .0003824, None,,
 Co, 228.616 {447}, Y1, ppm, .0000657, .0002385, 363.2696, .0002397, -.000206,
 .0001634, None,,
 Cr, 267.716 {126}, Y2A, ppm, .0028687, .0033624, 117.2100, .0014476, .0067082,
 .0004502, None,,
 Cu, 327.396 {103}, Y2A, ppm, .0026895, .0002729, 10.14579, .0026416, .0024438,
 .0029832, None,,
 Fe, 261.187 {129}, Y2R, ppm, -.001759, .0013904, 79.04189, -.001442, -.003281,
 -.000555, None,,
 K, 766.490 { 44}, Y2R, ppm, 1.927942, .0272579, 1.413836, 1.902760, 1.924179,
 1.956885, None,,
 Li, 670.784 { 50}, Y2R, ppm, .0176811, .0008495, 4.804772, .0184081, .0167472,
 .0178881, None,,
 Mg, 285.213 {118}, Y2R, ppm, 29.75690, .1216865, .4089353, 29.82528, 29.82901,
 29.61641, None,,
 Mn, 257.610 {131}, Y2A, ppm, .0031452, .0022241, 70.71344, .0018634, .0057133,
 .0018589, None,,
 Mo, 202.030 {467}, Y1, ppm, .0001008, .0002853, 283.0955, -.000122, .0004222,
 .0000024, None,,
 Na, 589.592 { 57}, Y2R, ppm, 24.36037, .0107930, .0443056, 24.34977, 24.37135,
 24.35999, None,,
 Ni, 231.604 {445}, Y1, ppm, -.000711, .0001446, 20.32755, -.000864, -.000694,
 -.000576, None,,
 P, 177.495 {490}, Y1, ppm, .0318439, .0014332, 4.500737, .0330918, .0321613,
 .0302786, None,,
 Pb, 220.353 {453}, Y1, ppm, -.000609, .0029901, 491.2261, .0025582, -.003383,
 -.001001, None,,
 S, 182.034 {485}, Y1, ppm, .8694408, .0048357, .5561827, .8689854, .8648489,
 .8744881, None,,
 Sb, 206.833 {463}, Y1, ppm, .0022201, .0021019, 94.67596, .0009306, .0046456,
 .0010842, None,,
 Se, 196.090 {472}, Y1, ppm, -.000402, .0024473, 609.4245, .0024229, -.001737,
 -.001890, None,,
 Si, 251.611 {134}, Y2R, ppm, 14.27599, .0654082, .4581691, 14.31057, 14.31685,
 14.20055, None,,
 Sn, 189.989 {477}, Y1, ppm, .0015191, .0008790, 57.86390, .0018362, .0005255,
 .0021956, None,,
 Sr, 421.552 { 80}, Y2A, ppm, 1.171858, .0032808, .2799653, 1.172476, 1.168312,
 1.174786, None,,
 Th, 283.730 {119}, Y2R, ppm, .0132400, .0168346, 127.1498, .0055506, .0016231,
 .0325462, None,,
 Ti, 334.941 {101}, Y2A, ppm, .0004323, .0003601, 83.29782, .0003883, .0008124,
 .0000963, None,,
 Tl, 190.856 {477}, Y1, ppm, .0022611, .0015830, 70.00889, .0020209, .0008120,
 .0039505, None,,
 V, 292.402 {115}, Y2A, ppm, -.001605, .0003361, 20.94320, -.001935, -.001263,
 -.001616, None,,
 W, 207.911 {462}, Y1, ppm, -.000668, .0003104, 46.44705, -.000434, -.001020,
 -.000551, None,,
 Zn, 213.856 {458}, Y1, ppm, .0021001, .0001945, 9.260300, .0022913, .0021065,

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.0019025,None,,
 Zr,339.198 { 99},Y2R,ppm, -.001506,.0008786,58.35247, -.002510, -.000882,
 -.001124,None,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Y1,224.306 {450},Cts/S, 8478.751,16.75660,.1976305,8481.687,8493.845,8460.720,None,,
 Y2A,371.030 { 91}2,Cts/S,
 265307.4,1198.447,.4517200,266127.3,265862.9,263932.0,None,,
 Y2R,371.030 { 91}3,Cts/S,
 18486.52,20.96961,.1134319,18474.57,18474.25,18510.73,None,,

[Sample Header]

Method=New TRACE Fast(v1493)
 SampleName=CCV 095153
 Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 12:49:14
 Sample Type=QC
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, .4848,.0010,.1997, .4858, .4839, .4846,Chk Pass,,
 Al,308.215 {109},Y2A,ppm, 23.61,.1305,.5526, 23.54, 23.54, 23.77,Chk Pass,,
 Al,308.215 {109}2,Y2R,ppm, 23.96,.1483,.6187, 24.06, 24.02, 23.79,Chk Pass,,
 As,189.042 {478},Y1,ppm, .5098,.0272,5.337, .4930, .5412, .4953,Chk Pass,,
 B,249.773 {135},Y2A,ppm, .4667,.0020,.4354, .4658, .4653, .4690,Chk Pass,,
 Ba,455.403 { 74},Y2A,ppm, .4753,.0028,.5811, .4760, .4723, .4777,Chk Pass,,
 Be,313.042 {108},Y2A,ppm, .46856,.00347,.74030, .46777, .46555, .47235,Chk Pass,,
 Ca,317.933 {106},Y2R,ppm, 23.87,.2331,.9766, 23.90, 24.08, 23.62,Chk Pass,,
 Cd,226.502 {449},Y1,ppm, .5026,.0280,5.567, .4855, .5348, .4874,Chk Pass,,
 Co,228.616 {447},Y1,ppm, .5013,.0281,5.602, .4862, .5337, .4839,Chk Pass,,
 Cr,267.716 {126},Y2A,ppm, .4718,.0040,.8389, .4711, .4682, .4760,Chk Pass,,
 Cu,327.396 {103},Y2A,ppm, .4828,.0047,.9634, .4819, .4786, .4878,Chk Pass,,
 Fe,261.187 {129},Y2R,ppm, 23.95,.1427,.5957, 24.06, 24.00, 23.79,Chk Pass,,
 K,766.490 { 44},Y2R,ppm, 23.90,.2509,1.050, 23.89, 24.16, 23.66,Chk Pass,,
 Li,670.784 { 50},Y2R,ppm, .4801,.0035,.7302, .4815, .4828, .4762,Chk Pass,,
 Mg,285.213 {118},Y2R,ppm, 23.63,.2107,.8916, 23.71, 23.79, 23.39,Chk Pass,,
 Mn,257.610 {131},Y2A,ppm, .47247,.00457,.96677, .47084, .46895, .47763,Chk Pass,,
 Mo,202.030 {467},Y1,ppm, .5054,.0271,5.358, .4921, .5365, .4875,Chk Pass,,
 Na,589.592 { 57},Y2R,ppm, 23.75,.1344,.5660, 23.81, 23.84, 23.59,Chk Pass,,
 Ni,231.604 {445},Y1,ppm, .5031,.0281,5.595, .4874, .5356, .4864,Chk Pass,,
 P,177.495 {490},Y1,ppm, .5038,.0239,4.754, .4897, .5314, .4902,Chk Pass,,
 Pb,220.353 {453},Y1,ppm, .5012,.0281,5.611, .4843, .5336, .4856,Chk Pass,,
 S,182.034 {485},Y1,ppm, 24.65,1.305,5.295, 23.94, 26.15, 23.85,Chk Pass,,
 Sb,206.833 {463},Y1,ppm, .5000,.0294,5.874, .4866, .5337, .4798,Chk Pass,,
 Se,196.090 {472},Y1,ppm, .5051,.0278,5.502, .4901, .5371, .4880,Chk Pass,,
 Si,251.611 {134},Y2R,ppm, 23.744,.17324,.72963, 23.829, 23.858, 23.544,Chk Pass,,
 Sn,189.989 {477},Y1,ppm, .4973,.0266,5.347, .4821, .5280, .4818,Chk Pass,,
 Sr,421.552 { 80},Y2A,ppm, .4778,.0021,.4473, .4801, .4758, .4776,Chk Pass,,
 Th,283.730 {119},Y2R,ppm, .5246,.0165,3.144, .5196, .5430, .5112,Chk Pass,,
 Ti,334.941 {101},Y2A,ppm, .4815,.0050,1.042, .4792, .4780, .4872,Chk Pass,,
 Tl,190.856 {477},Y1,ppm, .4984,.0298,5.978, .4804, .5328, .4820,Chk Pass,,
 V,292.402 {115},Y2A,ppm, .4895,.0011,.2306, .4906, .4883, .4896,Chk Pass,,
 W,207.911 {462},Y1,ppm, .5094,.0284,5.575, .4933, .5422, .4928,Chk Pass,,
 Zn,213.856 {458},Y1,ppm, .5016,.0270,5.391, .4867, .5329, .4854,Chk Pass,,
 Zr,339.198 { 99},Y2R,ppm, .4974,.0010,.1964, .4970, .4985, .4966,Chk Pass,,

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[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3
 Y1,224.306 {450},Cts/S, 8283.7,365.91,4.4172,8503.2,7861.3,8486.6
 Y2A,371.030 { 91}2,Cts/S, 264130.,1528.4.,.57864,264840.,265180.,262380.
 Y2R,371.030 { 91}3,Cts/S, 18303.,162.22,.88634,18347.,18123.,18438.

[Sample Header]

Method=New TRACE Fast(v1493)
 SampleName=CCB 078331

Username=dept 22
 Comment=
 Custom ID1=
 Custom ID2=
 Custom ID3=
 Run Time=6/12/2020 12:52:22
 Sample Type=QC
 Mode=CONC
 CorrFactor=1.000
 Repeats=3

[Results]

Elem,WL,ISRef,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3,chk_Pass/Fail,chk_Low,chk_High
 Ag,328.068 {103},Y2A,ppm, .0002,.0002,99.26, .0004, .0004, -.0000,Chk Pass,,
 Al,308.215 {109},Y2A,ppm, -.0079,.0017,21.41, -.0063, -.0078, -.0096,Chk Pass,,
 Al,308.215 {109}2,Y2R,ppm, -.0264,.0352,133.3, -.0605, .0099, -.0287,Chk Pass,,
 As,189.042 {478},Y1,ppm, .0052,.0020,38.14, .0052, .0033, .0072,Chk Pass,,
 B,249.773 {135},Y2A,ppm, .0007,.0007,105.4, .0016, .0002, .0004,Chk Pass,,
 Ba,455.403 { 74},Y2A,ppm, .0001,.0000,42.25, .0000, .0001, .0001,Chk Pass,,
 Be,313.042 {108},Y2A,ppm, -.00011,.00001,5.4677, -.00011, -.00011, -.00012,Chk
 Pass,,
 Ca,317.933 {106},Y2R,ppm, -.0000,.0027,14880., .0006, .0023, -.0030,Chk Pass,,
 Cd,226.502 {449},Y1,ppm, .0003,.0001,52.21, .0001, .0004, .0003,Chk Pass,,
 Co,228.616 {447},Y1,ppm, .0003,.0001,24.41, .0003, .0002, .0003,Chk Pass,,
 Cr,267.716 {126},Y2A,ppm, -.0001,.0005,391.7, .0000, -.0006, .0003,Chk Pass,,
 Cu,327.396 {103},Y2A,ppm, -.0005,.0002,40.28, -.0007, -.0005, -.0003,Chk Pass,,
 Fe,261.187 {129},Y2R,ppm, .0004,.0038,921.4, -.0040, .0020, .0032,Chk Pass,,
 K,766.490 { 44},Y2R,ppm, .0245,.0154,63.00, .0093, .0402, .0240,Chk Pass,,
 Li,670.784 { 50},Y2R,ppm, .0015,.0014,96.86, .0030, .0012, .0002,Chk Pass,,
 Mg,285.213 {118},Y2R,ppm, -.0018,.0010,54.88, -.0029, -.0011, -.0014,Chk Pass,,
 Mn,257.610 {131},Y2A,ppm, .00005,.00013,245.28, -.00000, .00020, -.00004,Chk Pass,,
 Mo,202.030 {467},Y1,ppm, .0017,.0005,27.33, .0017, .0012, .0021,Chk Pass,,
 Na,589.592 { 57},Y2R,ppm, .1392,.0087,6.282, .1483, .1308, .1386,Chk Pass,,
 Ni,231.604 {445},Y1,ppm, .0001,.0002,108.2, -.0000, .0003, .0002,Chk Pass,,
 P,177.495 {490},Y1,ppm, -.0018,.0025,140.6, -.0022, -.0041, .0009,Chk Pass,,
 Pb,220.353 {453},Y1,ppm, -.0004,.0024,542.8, -.0010, .0022, -.0025,Chk Pass,,
 S,182.034 {485},Y1,ppm, .0034,.0024,68.70, .0018, .0024, .0061,Chk Pass,,
 Sb,206.833 {463},Y1,ppm, -.0005,.0001,15.42, -.0005, -.0005, -.0004,Chk Pass,,
 Se,196.090 {472},Y1,ppm, .0042,.0009,22.04, .0035, .0052, .0037,Chk Pass,,
 Si,251.611 {134},Y2R,ppm, -.00066,.00122,185.53, -.00065, .00056, -.00189,Chk Pass,,
 Sn,189.989 {477},Y1,ppm, .0002,.0006,256.9, .0007, .0003, -.0004,Chk Pass,,
 Sr,421.552 { 80},Y2A,ppm, .0000,.0000,41.67, .0000, .0000, .0000,Chk Pass,,
 Th,283.730 {119},Y2R,ppm, .0143,.0198,138.6, -.0008, .0069, .0366,Chk Pass,,
 Ti,334.941 {101},Y2A,ppm, -.0001,.0001,68.55, -.0000, -.0001, -.0001,Chk Pass,,
 Tl,190.856 {477},Y1,ppm, .0024,.0006,24.98, .0022, .0020, .0031,Chk Pass,,
 V,292.402 {115},Y2A,ppm, -.0012,.0001,6.813, -.0013, -.0011, -.0012,Chk Pass,,
 W,207.911 {462},Y1,ppm, .0008,.0010,134.8, -.0003, .0008, .0017,Chk Pass,,
 Zn,213.856 {458},Y1,ppm, .0003,.0001,23.63, .0003, .0004, .0003,Chk Pass,,
 Zr,339.198 { 99},Y2R,ppm, -.0014,.0020,142.0, .0007, -.0017, -.0031,Chk Pass,,

[Internal Standards]

Elem,WL,Units,Avg,Stddev,RSD,Rep1,Rep2,Rep3

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Y1,224.306 {450},Cts/S, 8660.7,6.7365,.07778,8668.5,8656.2,8657.4
Y2A,371.030 { 91}2,Cts/S, 269200.,1833.9,.68123,268500.,267830.,271290.
Y2R,371.030 { 91}3,Cts/S, 18204.,89.152,.48975,18118.,18197.,18296.

Shipping and Receiving Documents

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410-3311 Chain of Custody

EA		225 Schuling Circle Suite 400 Hunt Valley MD Tel No. (410) 584-7000 Fax No. (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-GWTS1-060320		
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				YEAR: 2020				
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258								QUARTER: Q2				
				ANALYSIS REQUIRED (Specify number of bottles)												
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8260C)	BTEX (8260C)	BTEXN (8260C)	EDB (8011)	Total As, Pb, Cd, K, Na, Mg (6020A/6010C)	Dissolved Fe, Mn (6020A/6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Ammonia (SM4500NH3)	Sulfide (SM4500SCF)	Alkalinity (SM2320B)	COMMENTS
1	GWTS-EFF1-060320	06/03/2020	0905	6	--	3	--	2	--	1*	--	--	--	--	--	
2	GWTS-EFF1DUP-060320	06/03/2020	0905	6	--	3	--	2	--	1*	--	--	--	--	--	
3	GWTS-GAC1-060320	06/03/2020	0919	6	--	3	--	2	--	1*	--	--	--	--	--	
4	GWTS-INF1-060320	06/03/2020	0927	6	--	3	--	2	--	1*	--	--	--	--	--	
5	GWTS-TB01-060320	06/03/2020	0930	4	--	2	--	2	--	--	--	--	--	--	--	
6																
COMMENTS: *Dissolved Fe, Mn aliquot was field filtered.																
SAMPLER(S): J. Livingston				COURIER AND SHIPPING NUMBER: Fedex: 8160 9541 3907												
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME		
Printed Name and Signature: J. Livingston				6/3/2020		1030		Printed Name and Signature: Kristin Zeigler				6/4/20		1047		
Printed Name and Signature:								Printed Name and Signature:								
Printed Name and Signature:								Printed Name and Signature:								
Printed Name and Signature:								Printed Name and Signature:								

 225 Schling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1025		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-GWTS2-060320											
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				YEAR: 2020 QUARTER: Q2											
PROJECT SITE AND PHASE: ST106/SS111				LAB PO NUMBER: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258																	
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)												COMMENTS							
				Total Number of Bottles	VOCs (8280C)	BTEX (8280C)	BTEXN (8280C)	EDB (8011)	Total As, Pb, Cd, K, Na, Mg (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Ammonia (SM4500NH3)	Sulfide (SM4500SCF)	Alkalinity (SM4232B)								
1	GWTS-EFF2-060320	06/03/2020	0824 18	--	9	--	6	--	3*	--	--	--	--	--	Additional Volume Provided for MSMSD								
2	GWTS-GAC2-060320	06/03/2020	0843 6	--	3	--	2	--	1*	--	--	--	--	--									
3	GWTS-INF2-060320	06/03/2020	0853 6	--	3	--	2	--	1*	--	--	--	--	--									
4	GWTS-FB02-060320	06/03/2020	0824 5	--	3	--	2	--	--	--	--	--	--	--	Collected simultaneously with GWTS-EFF2-060320								
5																							
6																							
COMMENTS: *Dissolved Fe, Mn aliquot was field filtered.																							
SAMPLER(S): J Livingston				COURIER AND SHIPPING NUMBER: Fedex: 8160 9541 3907																			
RELINQUISHED BY:				DATE				TIME				RECEIVED BY:				DATE				TIME			
Printed Name and Signature: J Livingston				6/3/2020				1030				Printed Name and Signature:											
Printed Name and Signature:												Printed Name and Signature:											
Printed Name and Signature:												Printed Name and Signature:											
Printed Name and Signature:												Printed Name and Signature:											
Printed Name and Signature:												Printed Name and Signature:											
Printed Name and Signature:												Printed Name and Signature:											

Login Sample Receipt Checklist

Client: EA Engineering, Science, and Technology

Job Number: 410-3311-1

Login Number: 3311

List Number: 1

Creator: Jeremiah, Cory T

List Source: Eurofins Lancaster Laboratories Env

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Is the Field Sampler's name present on COC?	True	
Sample Preservation Verified.	N/A	
Residual Chlorine Checked.	N/A	
Sample custody seals are intact.	True	



Environment Testing
America

ANALYTICAL REPORT

Job Number: 440-267742-1

Job Description: Kirtland AFB Well Disinfection Sampling

Contract Number: CIDIQ09096

For:

EA Engineering, Science, and Technology

7995 E. Prentice Ave, Suite 206E

Greenwood Village, CO 80111

Attention: Pamela J Moss

Approved for release.
Sheri M Fama
Project Manager I
6/29/2020 10:43 AM

Sheri M Fama, Project Manager I
17461 Derian Ave, Irvine, CA, 92614-5817
(949)260-3274
sherifama@testamericainc.com
06/29/2020

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Calscience Project Manager.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Eurofins Calscience Irvine

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Tel (949) 261-1022 Fax (949) 260-3297 www.EurofinsUS.com



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Definitions/Glossary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Well Disinfection Sampling

Job ID: 440-267742-1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job Narrative
440-267742-1**Comments**

No additional comments.

Receipt

The sample was received on 6/20/2020 10:35 AM; the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.1° C.

HPLC/IC

Method 300.1B: The following sample was diluted for the bromate analyte due to the nature of the sample matrix: GW239-202-PreDis (440-267742-1). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

LCMS

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Lab Admin

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Well Disinfection Sampling

Job ID: 440-267742-1

Client Sample ID: GW239-202-PreDis

Lab Sample ID: 440-267742-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perchlorate	0.15		0.10	0.016	ug/L	1		331.0	Dissolved

This Detection Summary does not include radiochemical test results.

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Client Sample Results

Client: EA Engineering, Science, and Technology
 Project/Site: Kirtland AFB Well Disinfection Sampling

Job ID: 440-267742-1

Client Sample ID: GW239-202-PreDis

Lab Sample ID: 440-267742-1

Date Collected: 06/19/20 08:00

Matrix: Water

Date Received: 06/20/20 10:35

Method: 300.1B - Disinfection By-Products, (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		25	5.0	ug/L	—		06/22/20 23:14	5
Chlorite	ND		20	4.0	ug/L			06/22/20 23:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dichloroacetic acid(Surr)	110		90 - 115					06/22/20 23:14	5
Dichloroacetic acid(Surr)	106		90 - 115					06/22/20 23:50	1

Method: 331.0 - Perchlorate (LC/MS/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	0.15		0.10	0.016	ug/L	—		06/25/20 22:38	1

Default Detection Limits

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Well Disinfection Sampling

Job ID: 440-267742-1

Method: 300.1B - Disinfection By-Products, (IC)

Analyte	RL	MDL	Units
Bromate	5.0	1.0	ug/L
Chlorite	20	4.0	ug/L

Method: 331.0 - Perchlorate (LC/MS/MS) - Dissolved

Analyte	RL	MDL	Units
Perchlorate	0.10	0.016	ug/L

Surrogate Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Well Disinfection Sampling

Job ID: 440-267742-1

Method: 300.1B - Disinfection By-Products, (IC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	DCAA (90-115)	DCAA (90-115)
440-267742-1	GW239-202-PreDis	110	110
440-267742-1	GW239-202-PreDis	106	106
550-143620-A-1 MS	Matrix Spike	104	104
550-143620-A-1 MSD	Matrix Spike Duplicate	103	103
LCS 440-613692/4	Lab Control Sample	108	108
LCS 440-613694/4	Lab Control Sample	108	108
MB 440-613692/5	Method Blank	110	110
MB 440-613694/5	Method Blank	110	110
MRL 440-613692/3	Lab Control Sample	113	113
MRL 440-613694/3	Lab Control Sample	113	113

Surrogate Legend

DCAA = Dichloroacetic acid(Surr)

QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Well Disinfection Sampling

Job ID: 440-267742-1

Method: 300.1B - Disinfection By-Products, (IC)

Lab Sample ID: MB 440-613692/5

Matrix: Water

Analysis Batch: 613692

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		5.0	1.0	ug/L	-		06/22/20 09:58	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dichloroacetic acid(Surr)	110		90 - 115					06/22/20 09:58	1

Lab Sample ID: LCS 440-613692/4

Matrix: Water

Analysis Batch: 613692

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Bromate	25.0	25.8		ug/L	-	103	75 - 125		
Surrogate	LCS %Recovery	LCS Qualifier	Limits						
Dichloroacetic acid(Surr)	108		90 - 115						

Lab Sample ID: MRL 440-613692/3

Matrix: Water

Analysis Batch: 613692

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits		
Bromate	5.00	4.82	J	ug/L	-	96	50 - 150		
Surrogate	MRL %Recovery	MRL Qualifier	Limits						
Dichloroacetic acid(Surr)	113		90 - 115						

Lab Sample ID: MB 440-613694/5

Matrix: Water

Analysis Batch: 613694

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorite	ND		20	4.0	ug/L	-		06/22/20 09:58	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dichloroacetic acid(Surr)	110		90 - 115					06/22/20 09:58	1

Lab Sample ID: LCS 440-613694/4

Matrix: Water

Analysis Batch: 613694

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chlorite	100	97.2		ug/L	-	97	85 - 115		
Surrogate	LCS %Recovery	LCS Qualifier	Limits						
Dichloroacetic acid(Surr)	108		90 - 115						

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Well Disinfection Sampling

Job ID: 440-267742-1

Method: 300.1B - Disinfection By-Products, (IC) (Continued)

Lab Sample ID: MRL 440-613694/3

Matrix: Water

Analysis Batch: 613694

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chlorite	20.0	21.8		ug/L		109	10 - 200
Surrogate	MRL %Recovery	MRL Qualifier	Limits				
Dichloroacetic acid(Surr)	113		90 - 115				

Method: 331.0 - Perchlorate (LC/MS/MS)

Lab Sample ID: MB 570-77753/15

Matrix: Water

Analysis Batch: 77753

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.10	0.016	ug/L			06/25/20 17:05	1

Lab Sample ID: LCS 570-77753/16

Matrix: Water

Analysis Batch: 77753

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perchlorate	10.0	10.2		ug/L		102	85 - 115

Lab Sample ID: LCSD 570-77753/17

Matrix: Water

Analysis Batch: 77753

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perchlorate	10.0	10.5		ug/L		105	85 - 115	2	15

Lab Sample ID: 440-267742-1 MS

Matrix: Water

Analysis Batch: 77753

Client Sample ID: GW239-202-PreDis

Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Perchlorate	0.15		10.0	10.2		ug/L		101	80 - 120

Lab Sample ID: 440-267742-1 MSD

Matrix: Water

Analysis Batch: 77753

Client Sample ID: GW239-202-PreDis

Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perchlorate	0.15		10.0	10.3		ug/L		101	80 - 120	0	15

Lab Sample ID: INF 570-77753/14

Matrix: Water

Analysis Batch: 77753

Client Sample ID: Lab Control Sample

Analyte	Spike Added	INF Result	INF Qualifier	Unit	D	%Rec	%Rec. Limits
Perchlorate	0.500	0.493		ug/L		99	80 - 120

Eurofins Calscience Irvine

QC Association Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Well Disinfection Sampling

Job ID: 440-267742-1

HPLC/IC

Analysis Batch: 613692

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-267742-1	GW239-202-PreDis	Total/NA	Water	300.1B	
MB 440-613692/5	Method Blank	Total/NA	Water	300.1B	
LCS 440-613692/4	Lab Control Sample	Total/NA	Water	300.1B	
MRL 440-613692/3	Lab Control Sample	Total/NA	Water	300.1B	

Analysis Batch: 613694

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-267742-1	GW239-202-PreDis	Total/NA	Water	300.1B	
MB 440-613694/5	Method Blank	Total/NA	Water	300.1B	
LCS 440-613694/4	Lab Control Sample	Total/NA	Water	300.1B	
MRL 440-613694/3	Lab Control Sample	Total/NA	Water	300.1B	

LCMS

Analysis Batch: 77753

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-267742-1	GW239-202-PreDis	Dissolved	Water	331.0	
MB 570-77753/15	Method Blank	Total/NA	Water	331.0	
INF 570-77753/14	Lab Control Sample		Water	331.0	
LCS 570-77753/16	Lab Control Sample	Total/NA	Water	331.0	
LCSD 570-77753/17	Lab Control Sample Dup	Total/NA	Water	331.0	
440-267742-1 MS	GW239-202-PreDis	Dissolved	Water	331.0	
440-267742-1 MSD	GW239-202-PreDis	Dissolved	Water	331.0	

Lab Chronicle

Client: EA Engineering, Science, and Technology
 Project/Site: Kirtland AFB Well Disinfection Sampling

Job ID: 440-267742-1

Client Sample ID: GW239-202-PreDis

Lab Sample ID: 440-267742-1

Date Collected: 06/19/20 08:00

Matrix: Water

Date Received: 06/20/20 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.1B		5	613692	06/22/20 23:14	YZ	TAL IRV
Total/NA	Analysis	300.1B		1	613694	06/22/20 23:50	YZ	TAL IRV
Dissolved	Analysis	331.0		1	77753	06/25/20 22:38	M5Z3	ECL 1

Laboratory References:

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Eurofins Calscience Irvine

Accreditation/Certification Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Well Disinfection Sampling

Job ID: 440-267742-1

Laboratory: Eurofins Calscience Irvine

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2706	06-30-20
Oregon	NELAP	4028 - 008	01-29-21

Laboratory: Eurofins Calscience LLC

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	CA300001	01-29-21

Eurofins Calscience Irvine

Method Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Well Disinfection Sampling

Job ID: 440-267742-1

Method	Method Description	Protocol	Laboratory
300.1B	Disinfection By-Products, (IC)	EPA	TAL IRV
331.0	Perchlorate (LC/MS/MS)	EPA	ECL 1

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Eurofins Calscience Irvine

Sample Summary

Client: EA Engineering, Science, and Technology
Project/Site: Kirtland AFB Well Disinfection Sampling

Job ID: 440-267742-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
440-267742-1	GW239-202-PreDis	Water	06/19/20 08:00	06/20/20 10:35	

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-267742-1

SDG No.: _____

Instrument ID: IC-8 Analysis Batch Number: 609717Lab Sample ID: STD2 440-609717/6 IC Client Sample ID: _____Date Analyzed: 05/22/20 10:29 Lab File ID: 440-0133563-006.d GC Column: AS9-HC ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromate	8.58	Baseline Smoothing	zakhrabov y	05/23/20 06:27

Lab Sample ID: STD3 440-609717/7 IC Client Sample ID: _____Date Analyzed: 05/22/20 11:05 Lab File ID: 440-0133563-007.d GC Column: AS9-HC ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromate	8.60	Baseline Smoothing	zakhrabov y	05/23/20 06:27

Lab Sample ID: STD4 440-609717/8 IC Client Sample ID: _____Date Analyzed: 05/22/20 11:41 Lab File ID: 440-0133563-008.d GC Column: AS9-HC ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromate	8.60	Baseline Smoothing	zakhrabov y	05/23/20 06:28
Bromide	16.88	Split Peak	zakhrabov y	05/23/20 06:31
Chlorate	18.50	Split Peak	zakhrabov y	05/23/20 06:31

Lab Sample ID: STD5 440-609717/9 IC Client Sample ID: _____Date Analyzed: 05/22/20 12:17 Lab File ID: 440-0133563-009.d GC Column: AS9-HC ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromate	8.59	Baseline Smoothing	zakhrabov y	05/23/20 06:28

300.1B

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-267742-1

SDG No.: _____

Instrument ID: IC-8 Analysis Batch Number: 609718Lab Sample ID: STD4 440-609718/8 IC Client Sample ID: _____Date Analyzed: 05/22/20 11:41 Lab File ID: 440-0133563-008.d GC Column: AS9-HC ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chlorite	7.47	Baseline Smoothing	zakhrabov y	05/23/20 06:28

Lab Sample ID: STD5 440-609718/9 IC Client Sample ID: _____Date Analyzed: 05/22/20 12:17 Lab File ID: 440-0133563-009.d GC Column: AS9-HC ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chlorite	7.47	Baseline Smoothing	zakhrabov y	05/23/20 06:28

Lab Sample ID: ICB 440-609718/11 Client Sample ID: _____Date Analyzed: 05/22/20 13:29 Lab File ID: 440-0133563-011.d GC Column: AS9-HC ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chlorite		Unspecified		

300.1B

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-267742-1

SDG No.: _____

Instrument ID: IC-8 Analysis Batch Number: 613692Lab Sample ID: CCV 440-613692/1 Client Sample ID: _____Date Analyzed: 06/22/20 07:34 Lab File ID: 440-0134572-001440-013457 GC Column: AS9-HC ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromide	15.86	Peak assignment corrected	zakhrabov y	06/22/20 08:12
Chlorate	17.09	Peak assignment corrected	zakhrabov y	06/22/20 08:12

Lab Sample ID: CCB 440-613692/2 Client Sample ID: _____Date Analyzed: 06/22/20 08:10 Lab File ID: 440-0134572-002440-013457 GC Column: AS9-HC ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichloroacetic acid(Surr)	13.53	Peak assignment corrected	zakhrabov y	06/22/20 08:47

Lab Sample ID: LCS 440-613692/4 Client Sample ID: _____Date Analyzed: 06/22/20 09:22 Lab File ID: 440-0134572-004440-013457 GC Column: AS9-HC ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromate	8.35	Baseline Smoothing	zakhrabov y	06/22/20 10:15

Lab Sample ID: 550-143620-A-1 MS Client Sample ID: _____Date Analyzed: 06/22/20 13:34 Lab File ID: 440-0134572-011440-013457 GC Column: AS9-HC ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromate	8.38	Baseline Smoothing	zakhrabov y	06/23/20 04:50

300.1B

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-267742-1

SDG No.: _____

Instrument ID: IC-8 Analysis Batch Number: 613692Lab Sample ID: 550-143620-A-1 MSD Client Sample ID: _____Date Analyzed: 06/22/20 14:10 Lab File ID: 440-0134572-012440-013457 GC Column: AS9-HC ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromate	8.38	Baseline Smoothing	zakhrabov y	06/23/20 04:50

Lab Sample ID: CCV 440-613692/13 Client Sample ID: _____Date Analyzed: 06/22/20 14:47 Lab File ID: 440-0134572-013440-013457 GC Column: AS9-HC ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromide	15.98	Peak assignment corrected	zakhrabov y	06/23/20 03:55
Chlorate	17.25	Peak assignment corrected	zakhrabov y	06/23/20 03:55

Lab Sample ID: CCV 440-613692/25 Client Sample ID: _____Date Analyzed: 06/22/20 22:02 Lab File ID: 440-0134572-025440-013457 GC Column: AS9-HC ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromate	8.40	Baseline Smoothing	zakhrabov y	06/23/20 04:01
Bromide	16.04	Baseline Smoothing	zakhrabov y	06/23/20 04:02
Chlorate	17.36	Baseline Smoothing	zakhrabov y	06/23/20 04:02

300.1B

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-267742-1

SDG No.: _____

Instrument ID: IC-8 Analysis Batch Number: 613692Lab Sample ID: CCV 440-613692/37 Client Sample ID: _____Date Analyzed: 06/23/20 05:27 Lab File ID: 440-0134572-037440-013457 GC Column: AS9-HC ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromate	8.44	Baseline Smoothing	zakhrabov y	06/23/20 06:16
Bromide	16.30	Peak assignment corrected	zakhrabov y	06/23/20 06:16
Chlorate	17.62	Peak assignment corrected	zakhrabov y	06/23/20 06:16

300.1B

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-267742-1

SDG No.: _____

Instrument ID: IC-8 Analysis Batch Number: 613694Lab Sample ID: CCB 440-613694/2 Client Sample ID: _____Date Analyzed: 06/22/20 08:10 Lab File ID: 440-0134572-002440-013457 GC Column: AS9-HC ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichloroacetic acid(Surr)	13.53	Peak assignment corrected	zakhrabov y	06/22/20 08:47

Lab Sample ID: CCV 440-613694/37 Client Sample ID: _____Date Analyzed: 06/23/20 05:27 Lab File ID: 440-0134572-037440-013457 GC Column: AS9-HC ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chlorite	7.38	Baseline Smoothing	zakhrabov y	06/23/20 06:16

LCMS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Calscience Job No.: 440-267742-1

SDG No.: _____

Instrument ID: LCTQ2 Analysis Batch Number: 77753Lab Sample ID: STD1 570-77753/3 IC Client Sample ID: _____Date Analyzed: 06/25/20 14:11 Lab File ID: 200625003.d GC Column: Dion-A521 ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate	6.36	Baseline	taiw	06/26/20 14:55

Lab Sample ID: STD2 570-77753/4 IC Client Sample ID: _____Date Analyzed: 06/25/20 14:25 Lab File ID: 200625004.d GC Column: Dion-A521 ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate	6.40	Baseline	taiw	06/26/20 14:42

Lab Sample ID: STD4 570-77753/6 ICIS Client Sample ID: _____Date Analyzed: 06/25/20 14:55 Lab File ID: 200625006.d GC Column: Dion-A521 ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate	6.39	Baseline	taiw	06/26/20 14:48

Lab Sample ID: STD6 570-77753/8 IC Client Sample ID: _____Date Analyzed: 06/25/20 15:24 Lab File ID: 200625008.d GC Column: Dion-A521 ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate	6.43	Baseline	taiw	06/26/20 14:48

Lab Sample ID: CCVL 570-77753/11 Client Sample ID: _____Date Analyzed: 06/25/20 16:07 Lab File ID: 200625011.d GC Column: Dion-A521 ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate	6.40	Peak assignment corrected	taiw	06/26/20 12:35

331.0

LCMS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Calscience Job No.: 440-267742-1

SDG No.: _____

Instrument ID: LCTQ2 Analysis Batch Number: 77753Lab Sample ID: CCVIS 570-77753/12 Client Sample ID: _____Date Analyzed: 06/25/20 16:22 Lab File ID: 200625012.d GC Column: Dion-A521 ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate	6.40	Baseline	taiw	06/26/20 14:48

331.0

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-267742-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
WC3001ICV_00051	08/31/20	04/29/20	Di Water, Lot 20200429	100 mL	WC2BROMATE 00011	0.1 mL	Bromate	1 mg/L
					WC2CHLORITE 00024	0.4 mL	Chlorite	4 mg/L
.WC2BROMATE 00011	05/31/22		Agilent, Lot CS-1688		(Purchased Reagent)		Bromate	1000 mg/L
.WC2CHLORITE 00024	08/31/20		Agilent, Lot 0006514036		(Purchased Reagent)		Chlorite	1000 mg/L
WC3001LCS_00089	10/29/20	04/29/20	Di Water, Lot 20200429	100 mL	WC1BROMATE 00010	0.1 mL	Bromate	1 mg/L
					WC1CHLORATE 00011	0.4 mL	Chlorate	4 mg/L
					WC1CHLORITE 00010	0.4 mL	Chlorite	4 mg/L
					wcbromide 00018	0.1 mL	Bromide	10 mg/L
.WC1BROMATE 00010	09/30/21		O2Si, Lot 1017506-1		(Purchased Reagent)		Bromate	1000 mg/L
.WC1CHLORATE 00011	09/30/21		O2Si, Lot 1016226-5		(Purchased Reagent)		Chlorate	1000 mg/L
.WC1CHLORITE 00010	11/22/20		O2Si smart solutions, Lot 1011868-1		(Purchased Reagent)		Chlorite	1000 mg/L
.wcbromide 00018	01/31/21		Hgh Purity Standards, Lot 1916127		(Purchased Reagent)		Bromide	10000 ug/mL
WC3001LCS_00090	11/22/20	06/07/20	Di Water, Lot 20200607	100 mL	WC1BROMATE 00010	0.1 mL	Bromate	1 mg/L
					WC1CHLORITE 00010	0.4 mL	Chlorite	4 mg/L
.WC1BROMATE 00010	09/30/21		O2Si, Lot 1017506-1		(Purchased Reagent)		Bromate	1000 mg/L
.WC1CHLORITE 00010	11/22/20		O2Si smart solutions, Lot 1011868-1		(Purchased Reagent)		Chlorite	1000 mg/L
WCKDCA_00081	07/29/20	04/29/20	Di Water, Lot 20200429	100 mL	WCKDCA 00004	0.065 g	Dichloroacetic acid(Surr)	496.855 mg/L
.WCKDCA 00004	08/30/24		Aldrich, Lot 0000058905		(Purchased Reagent)		Dichloroacetic acid(Surr)	0.764393 g/g

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Calscience

Job No.: 440-267742-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
IC_QCS_C104_00002	09/10/22		INORGANIC VENTURES, Lot N2-CLOX670211		(Purchased Reagent)		Perchlorate	1000 ug/mL
LCMS_CCV_10_00004	12/01/20	06/01/20	Zero-Water, Lot H20	100 mL	LCMS LCS S 00004	100 uL	Perchlorate	10 ug/L
..LCMS LCS S 00004	12/01/20	06/01/20	DI Water, Lot H20	100 mL	IC LCS C104 00006	1 mL	Perchlorate	10 ug/mL
...IC LCS C104 00006	04/21/22		ERA, Lot 390420m		(Purchased Reagent)		Perchlorate	1000 mg/L
LCMS_CCV_5_00003	12/01/20	06/01/20	Zero-Water, Lot H20	100 mL	LCMS LCS S 00004	50 uL	Perchlorate	5 ug/L
..LCMS LCS S 00004	12/01/20	06/01/20	DI Water, Lot H20	100 mL	IC LCS C104 00006	1 mL	Perchlorate	10 ug/mL
...IC LCS C104 00006	04/21/22		ERA, Lot 390420m		(Purchased Reagent)		Perchlorate	1000 mg/L
LCMS_CCV_50_00003	12/01/20	06/01/20	Zero-Water, Lot H20	100 mL	LCMS LCS S 00004	500 uL	Perchlorate	50 ug/L
..LCMS LCS S 00004	12/01/20	06/01/20	DI Water, Lot H20	100 mL	IC LCS C104 00006	1 mL	Perchlorate	10 ug/mL
...IC LCS C104 00006	04/21/22		ERA, Lot 390420m		(Purchased Reagent)		Perchlorate	1000 mg/L
LCMS_CCVL_00005	12/01/20	06/01/20	Zero-Water, Lot H20	100 mL	LCMS_CCV_10_00004	1 mL	Perchlorate	0.1 ug/L
..LCMS_CCV_10_00004	12/01/20	06/01/20	Zero-Water, Lot H20	100 mL	LCMS LCS S 00004	100 uL	Perchlorate	10 ug/L
...LCMS LCS S 00004	12/01/20	06/01/20	DI Water, Lot H20	100 mL	IC LCS C104 00006	1 mL	Perchlorate	10 ug/mL
...IC LCS C104 00006	04/21/22		ERA, Lot 390420m		(Purchased Reagent)		Perchlorate	1000 mg/L
LCMS_INF_00006	09/24/20	06/01/20	Zero-Water, Lot H20	100 mL	LCMS_CCV_50_00003	1 mL	Perchlorate	0.5 ug/L
..LCMS_CCV_50_00003	12/01/20	06/01/20	Zero-Water, Lot H20	100 mL	LCMS LCS S 00004	500 uL	Perchlorate	50 ug/L
...LCMS LCS S 00004	12/01/20	06/01/20	DI Water, Lot H20	100 mL	IC LCS C104 00006	1 mL	Perchlorate	10 ug/mL
...IC LCS C104 00006	04/21/22		ERA, Lot 390420m		(Purchased Reagent)		Perchlorate	1000 mg/L
LCMS_ISTD_00002	08/28/20	02/28/20	Zero-Water, Lot na	100 mL	IC_C104_ISTD_00002	385 uL	18-O Perchlorate	385 ppb
..IC_C104_ISTD_00002	12/05/28		Cambridge Isotope Lab, Lot SDIH-016		(Purchased Reagent)		18-O Perchlorate	100 mg/L
LCMS_LCS_S_00004	12/01/20	06/01/20	DI Water, Lot H20	100 mL	IC LCS_C104_00006	1 mL	Perchlorate	10 ug/mL
..IC LCS_C104_00006	04/21/22		ERA, Lot 390420m		(Purchased Reagent)		Perchlorate	1000 mg/L

Reagent

WC1BROMATE_00010



REPORT OF ANALYSIS

Ion Chromatography RM

Bromate (BrO_3^-) – 1000 $\mu\text{g/mL}$

Product #: 062015-01-01

Matrix: H_2O

Lot #: 1017506-1

Ion	Certified Concentration
BrO_3^-	1000 $\mu\text{g/mL}$

Intended Use: This solution is intended for use as a reference material (RM) or calibration standard for ion chromatography (IC) or techniques using other modes of aqueous ion detection.

Certification & Traceability: This RM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO Guide 34**, and **ISO/IEC 17025**. This RM was prepared to a nominal concentration of 1000 $\mu\text{g/mL}$ by gravimetric methods using 99.5% sodium bromate (NaBrO_3) dissolved and diluted with filtered (0.22 μm), 18 M-ohm deionized water. The balances used in the preparation of this RM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration was determined based upon gravimetric procedures. Secondary verification of the certified concentration was performed using ion chromatography (IC) or inductively coupled plasma optical emission spectroscopy (ICP-OES), which was calibrated and/or referenced against **NIST SRM 3184**. The uncertainty associated with the certified concentration is $\pm 0.5\%$ relative, which is the sum of the estimated errors due to the purity of the raw materials, the gravimetric preparation of the solution, and transpiration through the container. This represents the expanded uncertainty at the 95% confidence level using a coverage factor of $k=2$.

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the RM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 μL , and (6) dilute with the same matrix as the original RM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: O2Si ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau, Certifying Officer

March 27, 2020

Certification Date

O2Si waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

6162192
ID: WC1BROMATE_000110
Exp: 09/30/21 Pp: 12 Op: 04/01/20
300 1-Standard Bromate 1

Rec'd 3/31/20
opened 4/1/20

Reagent

WC1CHLORATE_00011



REPORT OF ANALYSIS

Ion Chromatography RM

Chlorate (ClO_3^-) – 1000 $\mu\text{g/mL}$

Product #: 062014-01-01

Matrix: H_2O

Lot #: 1016226-5

Ion	Certified Concentration
ClO_3^-	1000 $\mu\text{g/mL}$

Intended Use: This solution is intended for use as a reference material (RM) or calibration standard for ion chromatography (IC) or techniques using other modes of aqueous ion detection.

Certification & Traceability: This RM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO Guide 34**, and **ISO/IEC 17025**. This RM was prepared to a nominal concentration of 1000 $\mu\text{g/mL}$ by gravimetric methods using 99% pure sodium chlorate (NaClO_3) dissolved and diluted with filtered (0.22 μm), 18 M-ohm deionized water. The balances used in the preparation of this RM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration was determined based upon gravimetric procedures. Secondary verification of the certified concentration was performed using ion chromatography (IC) or inductively coupled plasma optical emission spectroscopy (ICP-OES), which was calibrated and/or referenced against NIST SRM when available. The uncertainty associated with the certified concentration is $\pm 0.5\%$ relative, which is the sum of the estimated errors due to the purity of the raw materials, the gravimetric preparation of the solution, and transpiration through the container. This represents the expanded uncertainty at the 95% confidence level using a coverage factor of $k=2$.

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the RM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 μL , and (6) dilute with the same matrix as the original RM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: O2Si ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau, Certifying Officer

March 27, 2020

Certification Date

O2Si waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.



6162191

ID: WC1CHLORATE_00011
Exp: 09/30/21 Prod YZ: 04/01/20
300 1 - Standard Chlorate

Rec'd 3/31/20
opened 4/1/20

Reagent

WC1CHLORITE_00010



REPORT OF ANALYSIS

Ion Chromatography RM

Chlorite (ClO_2^-) – 1000 $\mu\text{g/mL}$

Matrix: H_2O



5607161
ID: WC1CHLORITE_00010
Exp 11/30/20 Pypd V2 Opn 05/31/19
300 1- Standard Chlorite

Product #: 062016-01-01

Lot #: 1011868-1

Ion	Certified Concentration
ClO_2^-	1000 $\mu\text{g/mL}$

Intended Use: This solution is intended for use as a reference material (RM) or calibration standard for ion chromatography (IC) or techniques using other modes of aqueous ion detection.

Certification & Traceability: This RM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO Guide 34**, and **ISO/IEC 17025**. This RM was prepared to a nominal concentration of 1000 $\mu\text{g/mL}$ by gravimetric methods using sodium chlorite (NaClO_2) dissolved and diluted with filtered (0.22 μm), 18 M-ohm deionized water. The balances used in the preparation of this RM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration was determined based upon gravimetric procedures. Secondary verification of the certified concentration was performed using ion chromatography (IC) or inductively coupled plasma optical emission spectroscopy (ICP-OES), which was calibrated and/or referenced against NIST SRM when available. The uncertainty associated with the certified concentration is $\pm 0.5\%$ relative, which is the sum of the estimated errors due to the purity of the raw materials, the gravimetric preparation of the solution, and transpiration through the container. This represents the expanded uncertainty at the 95% confidence level using a coverage factor of $k=2$.

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the RM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 μL , and (6) dilute with the same matrix as the original RM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: O2Si ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau, Certifying Officer

May 22, 2019
Certification Date

Rec'd 5/30/19

O2Si waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

Reagent

WC2BROMATE_00011



Certificate of Analysis

ISO Guide 34 Reference Material

Product Number: ICC-010
Lot Number: CS-1688

Lot Issue Date: 06-Apr 2018
Expiration Date: 31-May 2022

Product Name: Bromate Standard

Description:

This Reference Material (RM) was gravimetrically prepared in accordance with ISO Guide 34 and under ULTRA Scientific's ISO 9001 registered quality system. The neat materials used for this product have been verified by ULTRA's ISO 17025 laboratory and under ULTRA's ISO Guide 34 accreditation. The analyte concentrations were verified by ULTRA's ISO 17025 accredited laboratory. For each analyte, the true value, with its uncertainty value calculated at the 95% confidence level, is reported below.

Analyte	Starting Material	Lot Number	Purity (%)	Analyte Concentration	Traceability & Method
bromate	potassium bromate	RM09039	99.8	1000 ± 5 µg/mL	NIST SRM 3141; IC/ICP-OES

Solvent: water (low TOC, <50 ppb)

Storage: Store at Room Temperature (15° to 30°C).

Traceability:

Traceability has been established through an unbroken chain of comparisons, each having stated uncertainties. Comparisons are based on appropriate physical or chemical measurements, including gravimetric or volumetric dilution, where the mass or volume of a solution before and after dilution is measured. The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1, ISO 9001, ISO 17025, and ISO Guide 34. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 819.

Estimation of Uncertainties:

The true value is reported, with its uncertainty value calculated at the 95% confidence level.

Homogeneity:

This RM was formulated and unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:

This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods and continuing calibration verification.

Instructions for Use:

Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening and should be processed without delay for the true value to be valid within the stated uncertainties. Do not pipet from the bottle. Do not return any material removed for pipetting to the bottle. Tightly cap the bottle after removing any material and store according to the instructions noted above.

Hazards:

Refer to the Safety Data Sheet for information regarding this RM.

Expiration of Certification:

The certification of this RM is valid, within the measurement uncertainty specified, until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.



6156364
 ID: WC2BROMATE_00011
 Exp: 05/31/22 Prod V2.0/Rev 03/29/20
 300 1 - Standard Bromate 2

Rec'd 3/27/20
 o/c used 3/27/20

ISO 9001 Registered Quality System – TUV USA

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06/29/2020

250 Smith Street North Kingstown, Rhode Island 02852 www.agilent.com/quality

Kirtland AFB BFF
 Quarterly Report - April-June 2020
 SWMUs ST-106/SS-111

I-5-814

September 2020

Reagent

WC2CHLORITE_00024



Certificate of Analysis

Product Name: Chlorite Standard

Product Number: ICC-012

Lot Issue Date: 22-Jan-2020

Lot Number: 0006514036

Expiration Date: 31-Aug-2020

Description:

This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system, and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration $\pm$ Uncertainty
sodium chlorite (as chlorite)	007758-19-2	RM13607	1001 $\pm$ 5 μ g/mL

Matrix: water (low TOC, < 50 ppb)

Storage Conditions: Store Refrigerated (2° - 8°C).

Traceability:

The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:

This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:

This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Instructions for Use:

Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Hazards:

Refer to the Safety Data Sheet on www.agilent.com for information regarding this RM.

Expiration of Certification:

The certification of this RM is valid until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

Maintenance of Certification:

If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

*Rec'd 3/27/20
opened 3/27/20*



6158363

ID: WC2CHLORITE_00024
Exp: 08/31/20 Prep: YZ Opn: 03/27/20
300 1- Standard Chlorite

Sample lot approver:

mpBourgeois

Monica Bourgeois
QMS Representative



ISO 17034 Cert No.
AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

Page: 1 of 1

www.agilent.com/quality/
CSD-QA-015.1



ISO 17025 Cert
No. AT-1937

Reagent

wcbromide_00018



7221 Investment Drive • North Charleston, SC 29418
843.767.7900 • info@highpuritystandards.com • www.highpuritystandards.com



4/09/2020

IC-Br Bromide - 10000
Exp 01/31/2021 Exp 12/31/2021
Bromide - 1000000000000000

Certificate of Analysis

rec'd 7/26/19

Certified Reference Material

Product Description:

Product Number: **IC-BR-10M-100**
Lot Number: **1916127**
Matrix: **H2O**



ISO 17034:2016
(RMP) Accreditation
Certificate Number
AR-1436



ISO/IEC 17025:2005
Accreditation
Certificate Number
AT-1529

Certified Value:

Element	µg/mL	SRM ID	SRM Lot#
Bromide	10000 ± 50	3184	151130

The Certified value is based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via ion chromatography (IC) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor k is about 2.

* Refer to Traceability Information, Section 4

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for eighteen months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date: July 2019
Expiration Date: January 31, 2021
Certificate Issue Date: June 12, 2019

Moven Mututuvuri

Moven Mututuvuri, Ph. D, Laboratory Manager

Lot Number: 1916127



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Revision: 0
Page 1 of 2

06/29/2020

Method 300.1

Disinfection By-Products (IC) by Method 300.1

FORM II
HPLC/IC SURROGATE RECOVERY

Lab Name: Eurofins Irvine Job No.: 440-267742-1

SDG No.: _____

Matrix: Water Level: Low

GC Column (1): AS9-HC ID: 4 (mm)

Client Sample ID	Lab Sample ID	DCAA #
GW239-202-PreDis	440-267742-1	110
GW239-202-PreDis	440-267742-1	106
	MB 440-613692/5	110
	MB 440-613694/5	110
	LCS 440-613692/4	108
	LCS 440-613694/4	108
	MRL 440-613692/3	113
	MRL 440-613694/3	113
	550-143620-A-1 MS	104
	550-143620-A-1 MS	104
	550-143620-A-1 MSD	103
	550-143620-A-1 MSD	103

DCAA = Dichloroacetic acid(Surr)

QC LIMITS
90-115

Column to be used to flag recovery values

FORM II 300.1B

FORM III
HPLC/IC LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Irvine Job No.: 440-267742-1
SDG No.: _____
Matrix: Water Level: Low Lab File ID: 440-0134572-004440-0134572-00
Lab ID: LCS 440-613692/4 Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Bromate	25.0	25.8	103	75-125	

Column to be used to flag recovery and RPD values

FORM III 300.1B

FORM III
HPLC/IC LAB CONTROL SAMPLE RECOVERYLab Name: Eurofins Irvine Job No.: 440-267742-1

SDG No.: _____

Matrix: Water Level: Low Lab File ID: 440-0134572-004440-0134572-00Lab ID: LCS 440-613694/4 Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Chlorite	100	97.2	97	85-115	

Column to be used to flag recovery and RPD values

FORM III 300.1B

FORM III
HPLC/IC METHOD REPORTING LIMIT CHECK RECOVERY

Lab Name: Eurofins Irvine Job No.: 440-267742-1
SDG No.: _____
Matrix: Water Level: Low Lab File ID: 440-0134572-003440-0134572-00
Lab ID: MRL 440-613692/3 Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	MRL CONCENTRATION (ug/L)	MRL % REC	QC LIMITS REC	#
Bromate	5.00	4.82 J	96	50-150	

Column to be used to flag recovery and RPD values

FORM III 300.1B

FORM III
HPLC/IC METHOD REPORTING LIMIT CHECK RECOVERY

Lab Name: Eurofins Irvine Job No.: 440-267742-1
SDG No.: _____
Matrix: Water Level: Low Lab File ID: 440-0134572-003440-0134572-00
Lab ID: MRL 440-613694/3 Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	MRL CONCENTRATION (ug/L)	MRL % REC	QC LIMITS REC	#
Chlorite	20.0	21.8	109	10-200	

Column to be used to flag recovery and RPD values

FORM III 300.1B

FORM III
HPLC/IC MATRIX SPIKE RECOVERY

Lab Name: Eurofins Irvine Job No.: 440-267742-1
SDG No.: _____
Matrix: Water Level: Low Lab File ID: 440-0134572-011440-0134572-01
Lab ID: 550-143620-A-1 MS Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Bromate	50.0	ND	56.3	113	75-125	

Column to be used to flag recovery and RPD values

FORM III 300.1B

FORM III
HPLC/IC MATRIX SPIKE RECOVERY

Lab Name: Eurofins Irvine Job No.: 440-267742-1
 SDG No.: _____
 Matrix: Water Level: Low Lab File ID: 440-0134572-011440-0134572-01
 Lab ID: 550-143620-A-1 MS Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Chlorite	200	30 J	242	106	75-125	

Column to be used to flag recovery and RPD values

FORM III 300.1B

FORM III
HPLC/IC MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins Irvine Job No.: 440-267742-1
 SDG No.: _____
 Matrix: Water Level: Low Lab File ID: 440-0134572-012440-0134572-01
 Lab ID: 550-143620-A-1 MSD Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
Bromate	50.0	60.8	122	8	25	75-125	

Column to be used to flag recovery and RPD values

FORM III 300.1B

FORM III
HPLC/IC MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins Irvine Job No.: 440-267742-1

SDG No.: _____

Matrix: Water Level: Low Lab File ID: 440-0134572-012440-0134572-01

Lab ID: 550-143620-A-1 MSD Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
Chlorite	200	247	109	2	25	75-125	

Column to be used to flag recovery and RPD values

FORM III 300.1B

FORM IV
HPLC/IC METHOD BLANK SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-267742-1
 SDG No.: _____
 Lab File ID: 440-0134572-005440-0134572-00 Lab Sample ID: MB 440-613692/5
 Matrix: Water Date Extracted: _____
 Instrument ID: IC-8 Date Analyzed: 06/22/2020 09:58
 Level: (Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	CCB 440-613692/2	440-0134572 -002440-013 4572-002.d	06/22/2020 08:10
	LCS 440-613692/4	440-0134572 -004440-013 4572-004.d	06/22/2020 09:22
	550-143620-A-1 MS	440-0134572 -011440-013 4572-011.d	06/22/2020 13:34
	550-143620-A-1 MSD	440-0134572 -012440-013 4572-012.d	06/22/2020 14:10
	CCB 440-613692/14	440-0134572 -014440-013 4572-014.d	06/22/2020 15:23
	CCB 440-613692/26	440-0134572 -026440-013 4572-026.d	06/22/2020 22:38
GW239-202-PreDis	440-267742-1	440-0134572 -027440-013 4572-027.d	06/22/2020 23:14
	CCB 440-613692/38	440-0134572 -038440-013 4572-038.d	06/23/2020 06:03

FORM IV
HPLC/IC METHOD BLANK SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-267742-1
 SDG No.: _____
 Lab File ID: 440-0134572-005440-0134572-00 Lab Sample ID: MB 440-613694/5
 Matrix: Water Date Extracted: _____
 Instrument ID: IC-8 Date Analyzed: 06/22/2020 09:58
 Level: (Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	CCB 440-613694/2	440-0134572 -002440-013 4572-002.d	06/22/2020 08:10
	LCS 440-613694/4	440-0134572 -004440-013 4572-004.d	06/22/2020 09:22
	550-143620-A-1 MS	440-0134572 -011440-013 4572-011.d	06/22/2020 13:34
	550-143620-A-1 MSD	440-0134572 -012440-013 4572-012.d	06/22/2020 14:10
	CCB 440-613694/14	440-0134572 -014440-013 4572-014.d	06/22/2020 15:23
	CCB 440-613694/26	440-0134572 -026440-013 4572-026.d	06/22/2020 22:38
GW239-202-PreDis	440-267742-1	440-0134572 -028440-013 4572-028.d	06/22/2020 23:50
	CCB 440-613694/38	440-0134572 -038440-013 4572-038.d	06/23/2020 06:03

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-267742-1
 SDG No.: _____
 Client Sample ID: GW239-202-PreDis Lab Sample ID: 440-267742-1
 Matrix: Water Lab File ID: 440-0134572-028440-0134572-028
 Analysis Method: 300.1B Date Collected: 06/19/2020 08:00
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 06/22/2020 23:50
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 613694 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14998-27-7	Chlorite	ND		20	4.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	106		90-115

Report Date: 23-Jun-2020 04:21:44

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-028440-0134572-028.d
 Lims ID: 440-267742-B-1
 Client ID: GW239-2020-PreDis
 Sample Type: Client
 Inject. Date: 22-Jun-2020 23:50:00 ALS Bottle#: 0 Worklist Smp#: 28
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0134572-028
 Misc. Info.: 19160 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 23-Jun-2020 04:21:41 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1049

First Level Reviewer: zakhrabov

Date: 23-Jun-2020 04:03:35

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/l	Flags
----------	--------------	------------------	------------------	----------	-------------------	-------

\$ 6 Dichloroacetic acid(Surr) 13.650 13.709 -0.059 86064477 1053.6

Reagents:

WCDCA_00081 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 23-Jun-2020 04:21:44

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-028440-0134572-028.d

Injection Date: 22-Jun-2020 23:50:00

Instrument ID: IC-8

Operator ID:

Lims ID: 440-267742-B-1

Lab Sample ID: 440-267742-1

Worklist Smp#: 28

Client ID: GW239-2020-PreDis

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

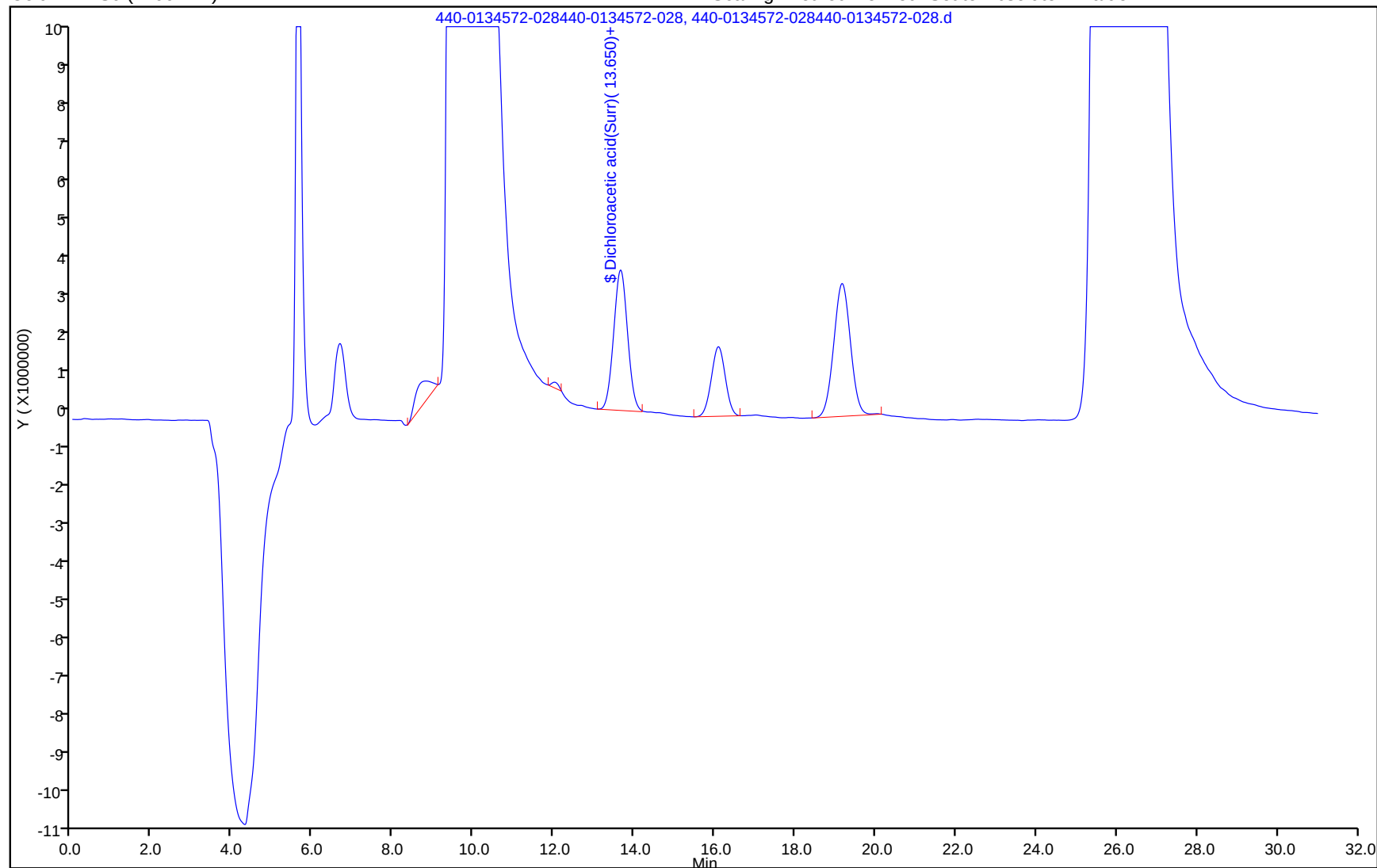
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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06/29/2020

September 2020

Report Date: 23-Jun-2020 04:21:44

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-028440-0134572-028.d
 Lims ID: 440-267742-B-1
 Client ID: GW239-2020-PreDis
 Sample Type: Client
 Inject. Date: 22-Jun-2020 23:50:00 ALS Bottle#: 0 Worklist Smp#: 28
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0134572-028
 Misc. Info.: 19160 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 23-Jun-2020 04:21:41 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1049

First Level Reviewer: zakhrabov

Date: 23-Jun-2020 04:03:35

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1053.6	106.02

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-267742-1
 SDG No.: _____
 Client Sample ID: GW239-202-PreDis Lab Sample ID: 440-267742-1
 Matrix: Water Lab File ID: 440-0134572-027440-0134572-027
 Analysis Method: 300.1B Date Collected: 06/19/2020 08:00
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 06/22/2020 23:14
 Con. Extract Vol.: _____ Dilution Factor: 5
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 613692 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
15541-45-4	Bromate	ND		25	5.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	110		90-115

Report Date: 23-Jun-2020 04:21:43

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-027440-0134572-027.d
 Lims ID: 440-267742-B-1
 Client ID: GW239-2020-PreDis
 Sample Type: Client
 Inject. Date: 22-Jun-2020 23:14:00 ALS Bottle#: 0 Worklist Smp#: 27
 Injection Vol: 1.0 ul Dil. Factor: 5.0000
 Sample Info: 440-0134572-027
 Misc. Info.: 4466 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 23-Jun-2020 04:21:41 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1049

First Level Reviewer: zakhrabov

Date: 23-Jun-2020 04:03:22

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/l	Flags
----------	--------------	------------------	------------------	----------	-------------------	-------

\$ 6 Dichloroacetic acid(Surr) 13.709 13.709 0.000 89004329 1089.5

Reagents:

WCDCA_00081 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 23-Jun-2020 04:21:43

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-027440-0134572-027.d

Injection Date: 22-Jun-2020 23:14:00

Instrument ID: IC-8

Operator ID:

Lims ID: 440-267742-B-1

Lab Sample ID: 440-267742-1

Worklist Smp#: 27

Client ID: GW239-2020-PreDis

Injection Vol: 1.0 ul

Dil. Factor: 5.0000

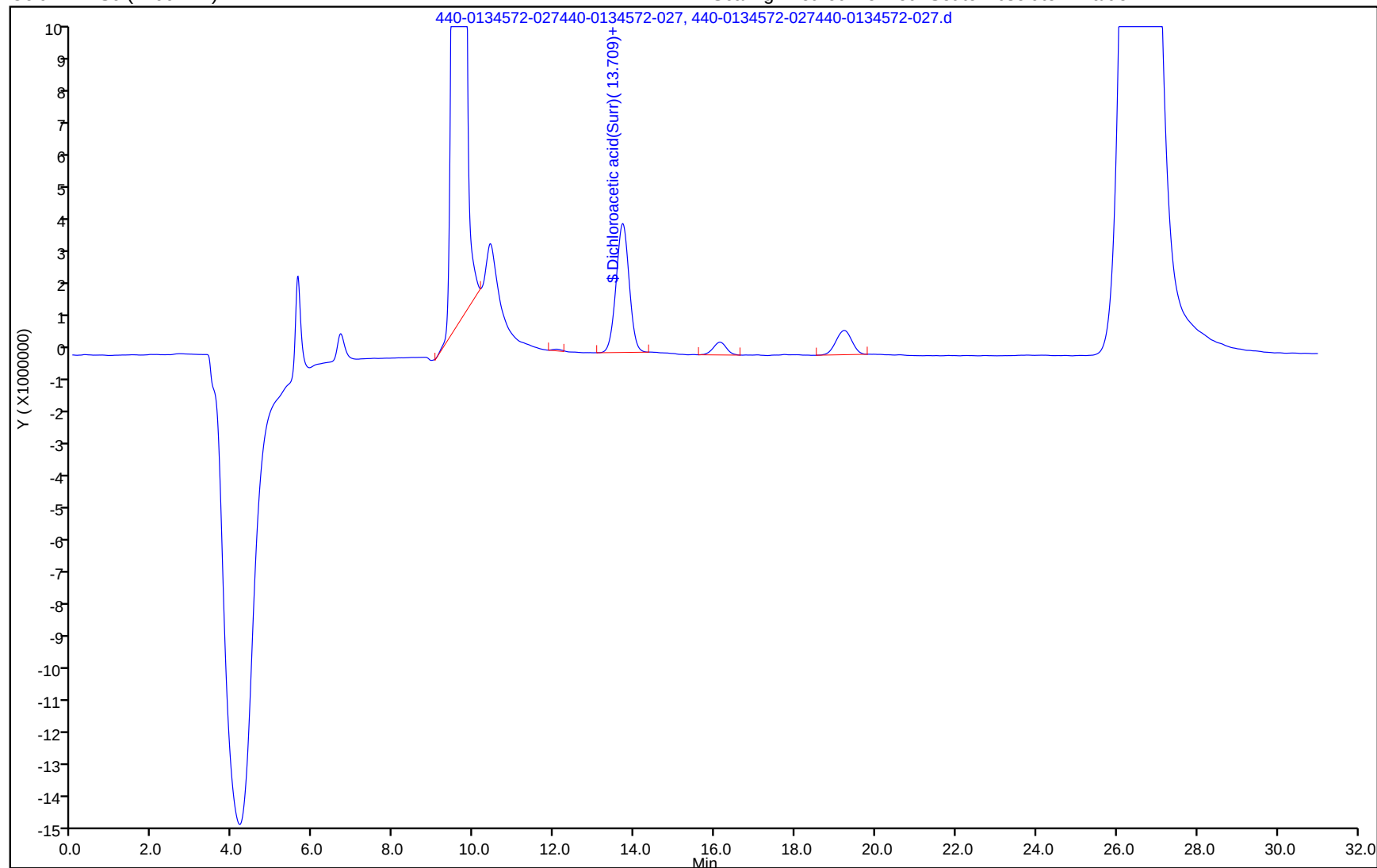
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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Report Date: 23-Jun-2020 04:21:43

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-027440-0134572-027.d
 Lims ID: 440-267742-B-1
 Client ID: GW239-2020-PreDis
 Sample Type: Client
 Inject. Date: 22-Jun-2020 23:14:00 ALS Bottle#: 0 Worklist Smp#: 27
 Injection Vol: 1.0 ul Dil. Factor: 5.0000
 Sample Info: 440-0134572-027
 Misc. Info.: 4466 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 23-Jun-2020 04:21:41 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1049

First Level Reviewer: zakhrabov

Date: 23-Jun-2020 04:03:22

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1089.5	548.22

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-267742-1 Analy Batch No.: 609717
 SDG No.: _____
 Instrument ID: IC-8 GC Column: AS9-HC ID: 4 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 05/22/2020 09:16 Calibration End Date: 05/22/2020 12:17 Calibration ID: 23746

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD0 440-609717/4	440-0133563-004.d
Level 2	STD1 440-609717/5	440-0133563-005.d
Level 3	STD2 440-609717/6	440-0133563-006.d
Level 4	STD3 440-609717/7	440-0133563-007.d
Level 5	STD4 440-609717/8	440-0133563-008.d
Level 6	STD5 440-609717/9	440-0133563-009.d

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6					RT WINDOW	AVG RT
Bromate		8.609	8.575	8.600	8.600	8.592					0.000 - 0.000	8.595
Bromide		16.917	16.859	16.884	16.875	16.884					0.000 - 0.000	16.884
Chlorate		18.517	18.475	18.517	18.500	18.509					0.000 - 0.000	18.504
Dichloroacetic acid(Surr)	14.367	14.392	14.375	14.392	14.392	14.375					13.385 - 15.399	14.382

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Irvine Job No.: 440-267742-1 Analy Batch No.: 609717

SDG No.: _____

Instrument ID: IC-8 GC Column: AS9-HC ID: 4 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/22/2020 09:16 Calibration End Date: 05/22/2020 12:17 Calibration ID: 23746

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD0 440-609717/4	440-0133563-004.d
Level 2	STD1 440-609717/5	440-0133563-005.d
Level 3	STD2 440-609717/6	440-0133563-006.d
Level 4	STD3 440-609717/7	440-0133563-007.d
Level 5	STD4 440-609717/8	440-0133563-008.d
Level 6	STD5 440-609717/9	440-0133563-009.d

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3	LVL 4		B	M1	M2								
Bromate	89010	74229 86599	73408	88396	Lin	-40560.796	87544.6586							0.9990		0.9950
Bromide	153010	143419 157859	152654	151412	Lin	-902648.20	157862.755							1.0000		0.9950
Chlorate	142273	147986 146987	131947	133801	Lin	-528756.78	147219.576							0.9990		0.9950
Dichloroacetic acid(Surr)	81472 82873	79911 82419	82160	81302	Ave		81689.4523				1.3		15.0			

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Irvine Job No.: 440-267742-1 Analy Batch No.: 609717

SDG No.: _____

Instrument ID: IC-8 GC Column: AS9-HC ID: 4 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/22/2020 09:16 Calibration End Date: 05/22/2020 12:17 Calibration ID: 23746

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD0 440-609717/4	440-0133563-004.d
Level 2	STD1 440-609717/5	440-0133563-005.d
Level 3	STD2 440-609717/6	440-0133563-006.d
Level 4	STD3 440-609717/7	440-0133563-007.d
Level 5	STD4 440-609717/8	440-0133563-008.d
Level 6	STD5 440-609717/9	440-0133563-009.d

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
		LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Bromate	Lin	8659858	371147	917598	2209892	4450487	0.000000 100	5.00	12.5	25.0	50.0
Bromide	Lin	157858867	7170938	19081776	37853087	76505247	0.000000 1000	50.0	125	250	500
Chlorate	Lin	58794780	2959710	6597329	13380104	28454610	0.000000 400	20.0	50.0	100	200
Dichloroacetic acid(Surr)	Ave	80960103 81900670	79408704	81642881	80790497	82351340	994 994	994	994	994	994

Curve Type Legend:

Ave = Average
Lin = Linear

Report Date: 23-May-2020 06:32:07

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-004.d
 Lims ID: STD0
 Client ID:
 Sample Type: IC Calib Level: 0
 Inject. Date: 22-May-2020 09:16:00 ALS Bottle#: 0 Worklist Smp#: 4
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0133563-004
 Misc. Info.: 4 EB
 Operator ID: Instrument ID: IC-8
 Sublist: chrom-300.1_C8*sub2
 Method: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 23-May-2020 06:32:07 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1019

First Level Reviewer: zakhrabov

Date: 22-May-2020 09:59:03

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
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\$ 6 Dichloroacetic acid(Surr) 14.367 14.392 -0.025 80960103 993.7 991.1

Reagents:

WC3001LCS_00089

Amount Added: 0.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 23-May-2020 06:32:07

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-004.d

Injection Date: 22-May-2020 09:16:00

Instrument ID: IC-8

Operator ID:

Lims ID: STD0

Worklist Smp#: 4

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

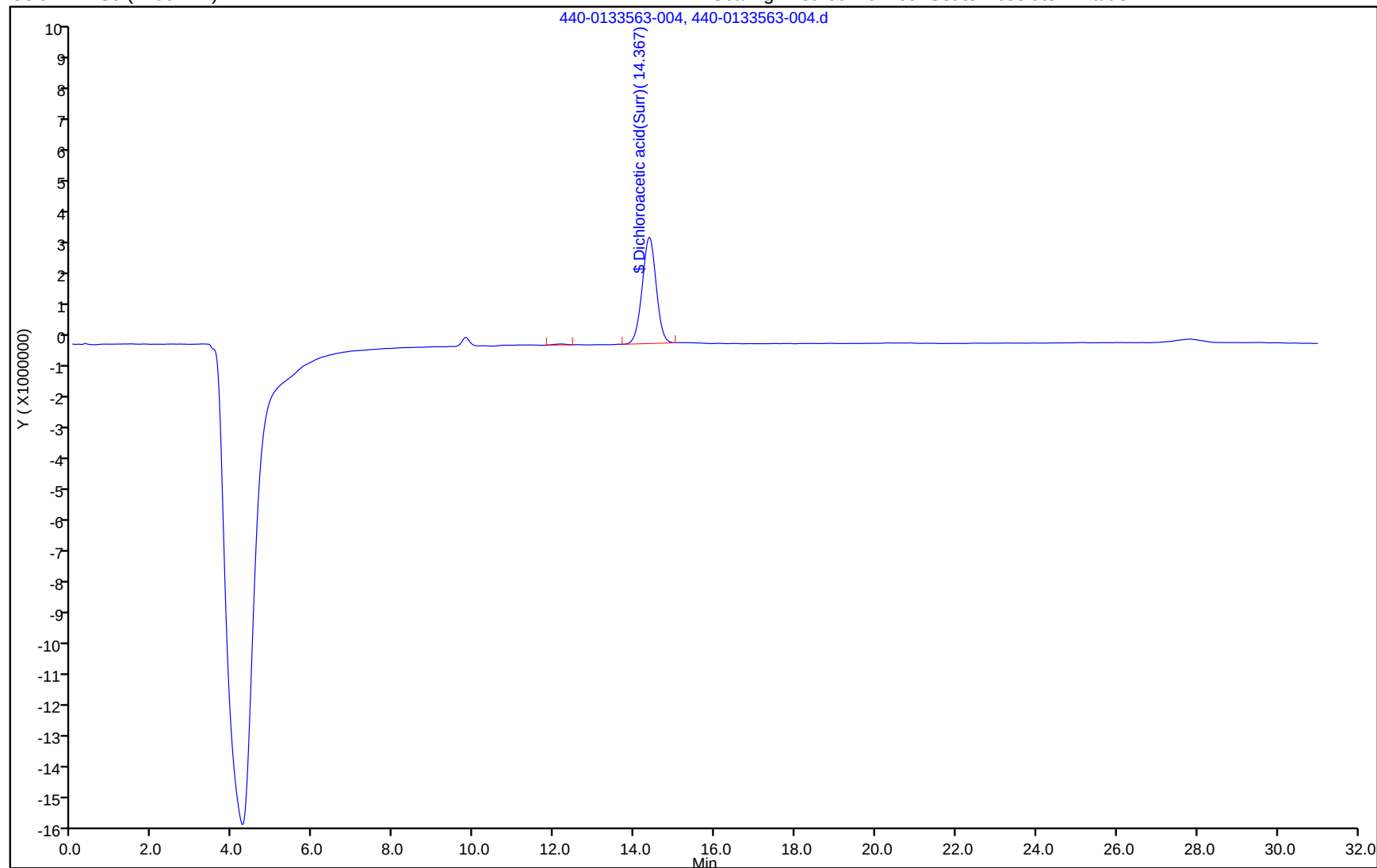
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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September 2020

Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-843

Report Date: 23-May-2020 06:32:07

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-005.d
 Lims ID: STD1
 Client ID:
 Sample Type: IC Calib Level: 1
 Inject. Date: 22-May-2020 09:52:00 ALS Bottle#: 0 Worklist Smp#: 5
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0133563-005
 Misc. Info.: 5 EB
 Operator ID: Instrument ID: IC-8
 Sublist: chrom-300.1_C8*sub2
 Method: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 23-May-2020 06:32:07 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1019

First Level Reviewer: zakhrabov

Date: 22-May-2020 10:41:13

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.467	7.467	0.000	2946805	NC	NC	
3 Bromate	8.609	8.609	0.000	371147	5.00	4.70	
\$ 6 Dichloroacetic acid(Surr)	14.392	14.392	0.000	79408704	993.7	972.1	
4 Bromide	16.917	16.917	0.000	7170938	50.0	51.1	
2 Chlorate	18.517	18.517	0.000	2959710	20.0	23.7	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WC3001LCS_00089

Amount Added: 25.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 23-May-2020 06:32:07

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-005.d

Injection Date: 22-May-2020 09:52:00

Instrument ID: IC-8

Operator ID:

Lims ID: STD1

Worklist Smp#: 5

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

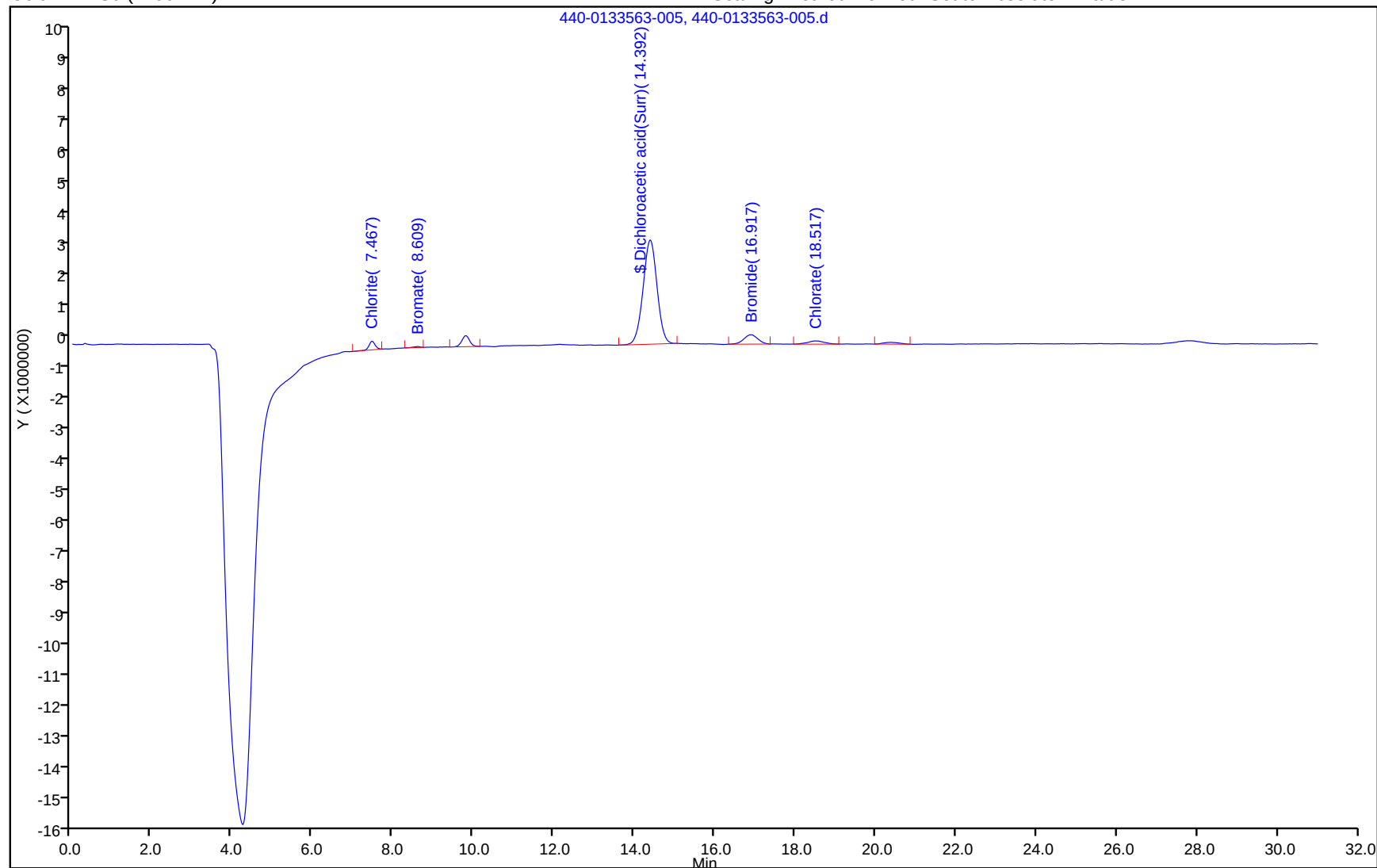
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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September 2020

Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-845

Report Date: 23-May-2020 06:32:08

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-006.d
 Lims ID: STD2
 Client ID:
 Sample Type: IC Calib Level: 2
 Inject. Date: 22-May-2020 10:29:00 ALS Bottle#: 0 Worklist Smp#: 6
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0133563-006
 Misc. Info.: 6 EB
 Operator ID: Instrument ID: IC-8
 Sublist: chrom-300.1_C8*sub2
 Method: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 23-May-2020 06:32:08 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1019

First Level Reviewer: zakhrabov

Date: 22-May-2020 11:17:30

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.450	7.467	-0.017	8247146	NC	NC	
3 Bromate	8.575	8.609	-0.034	917598	12.5	10.9	M
\$ 6 Dichloroacetic acid(Surr)	14.375	14.392	-0.017	81642881	993.7	999.4	
4 Bromide	16.859	16.917	-0.058	19081776	125.0	126.6	
2 Chlorate	18.475	18.517	-0.042	6597329	50.0	48.4	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

WC3001LCS_00089 Amount Added: 62.50 Units: uL
 WCDCA_00081 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 23-May-2020 06:32:08

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-006.d

Injection Date: 22-May-2020 10:29:00

Instrument ID: IC-8

Operator ID:

Lims ID: STD2

Worklist Smp#: 6

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

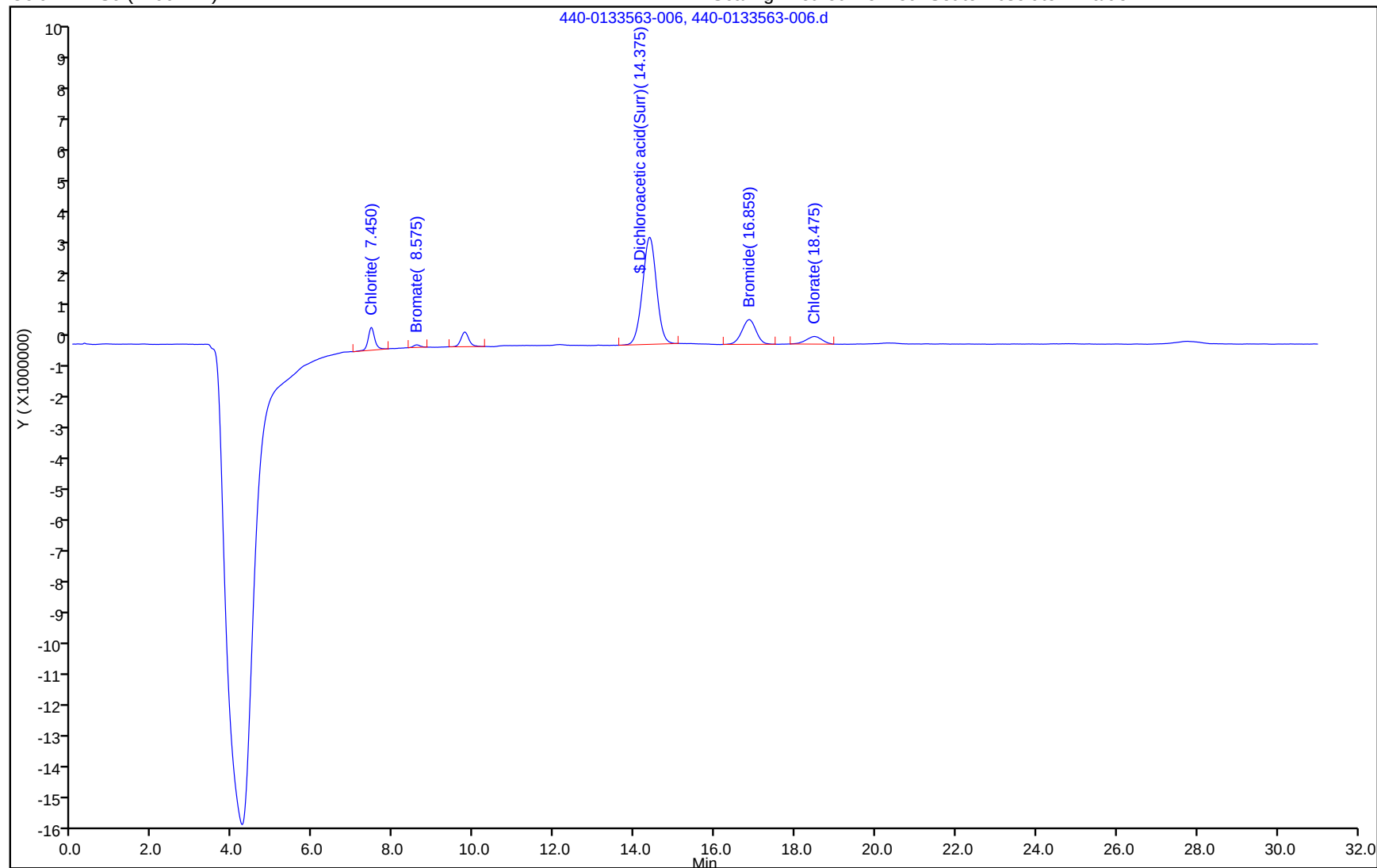
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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September 2020

Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-847

Report Date: 23-May-2020 06:32:08

Chrom Revision: 2.3 05-May-2020 17:48:18
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-006.d

Injection Date: 22-May-2020 10:29:00

Instrument ID: IC-8

Lims ID: STD2

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#: 6

Injection Vol: 1.0 ul

Dil. Factor:

1.0000

Method: 300.1_C8

Limit Group:

IC-300.1_28D

Column: AS9 (4.00 mm)

Detector

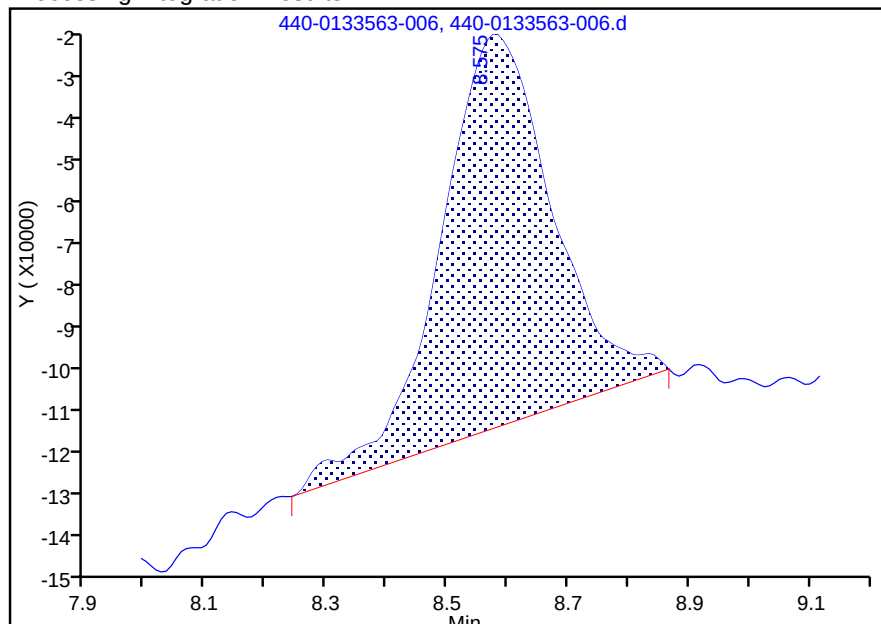
Ch-A-20110816009

3 Bromate, CAS: 15541-45-4

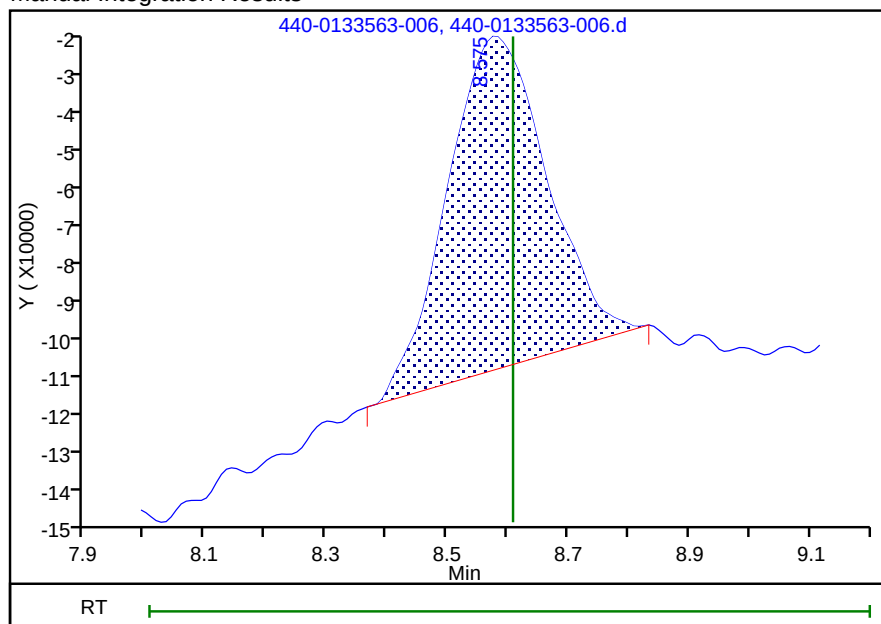
Signal: 1

RT: 8.58
Area: 1101515
Amount: 12.020824
Amount Units: ug/l

Processing Integration Results

RT: 8.58
Area: 917598
Amount: 10.944800
Amount Units: ug/l

Manual Integration Results



Reviewer: zakhrabov, 23-May-2020 06:27:26

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

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September 2020

Report Date: 23-May-2020 06:32:08

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-007.d
 Lims ID: STD3
 Client ID:
 Sample Type: IC Calib Level: 3
 Inject. Date: 22-May-2020 11:05:00 ALS Bottle#: 0 Worklist Smp#: 7
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0133563-007
 Misc. Info.: 7 EB
 Operator ID: Instrument ID: IC-8
 Sublist: chrom-300.1_C8*sub2
 Method: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 23-May-2020 06:32:08 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1019

First Level Reviewer: zakhrabov

Date: 22-May-2020 11:48:43

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.475	7.467	0.008	15786602	NC	NC	
3 Bromate	8.600	8.609	-0.009	2209892	25.0	25.7	M
\$ 6 Dichloroacetic acid(Surr)	14.392	14.392	0.000	80790497	993.7	989.0	
4 Bromide	16.884	16.917	-0.033	37853087	250.0	245.5	
2 Chlorate	18.517	18.517	0.000	13380104	100.0	94.5	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

WC3001LCS_00089

Amount Added: 125.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 23-May-2020 06:32:08

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-007.d

Injection Date: 22-May-2020 11:05:00

Instrument ID: IC-8

Operator ID:

Lims ID: STD3

Worklist Smp#: 7

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

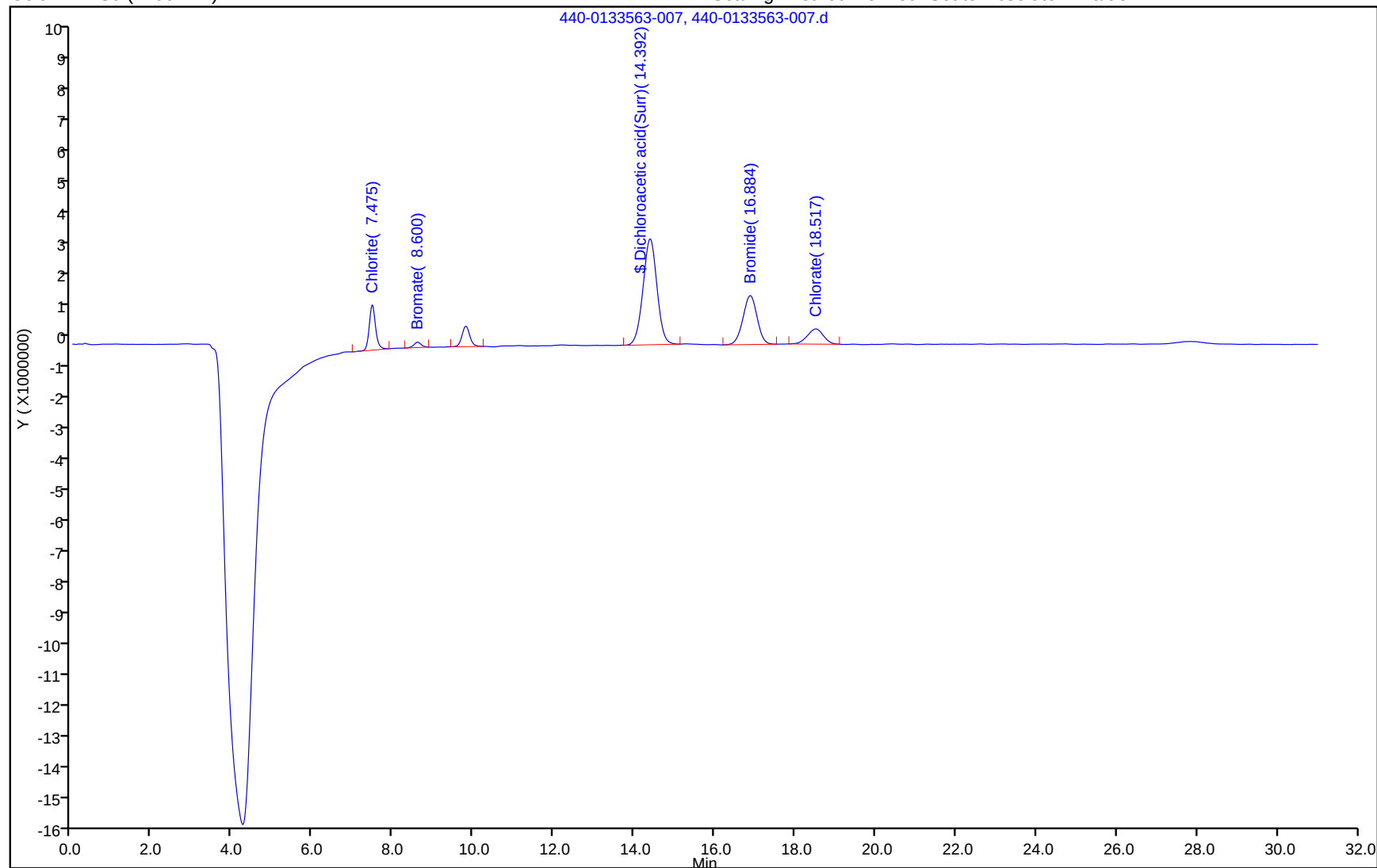
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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September 2020

Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-850

Report Date: 23-May-2020 06:32:08

Chrom Revision: 2.3 05-May-2020 17:48:18
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-007.d

Injection Date: 22-May-2020 11:05:00

Instrument ID: IC-8

Lims ID: STD3

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#: 7

Injection Vol: 1.0 ul

Dil. Factor:

1.0000

Method: 300.1_C8

Limit Group:

IC-300.1_28D

Column: AS9 (4.00 mm)

Detector

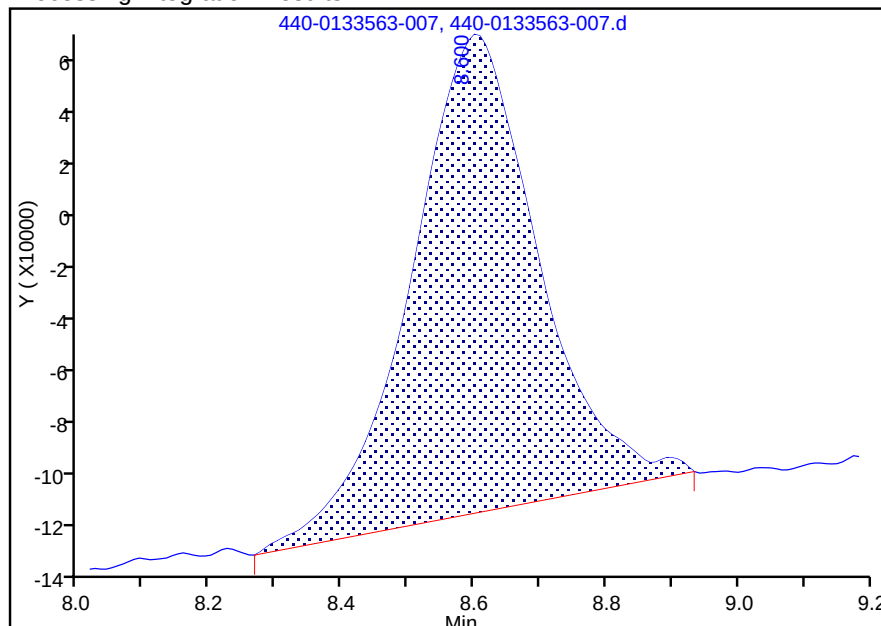
Ch-A-20110816009

3 Bromate, CAS: 15541-45-4

Signal: 1

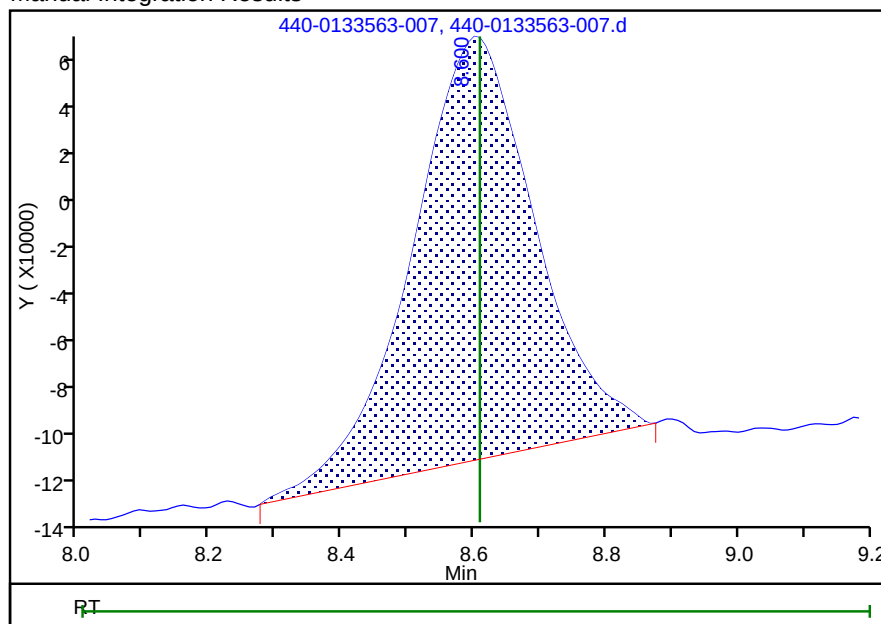
RT: 8.60
 Area: 2348925
 Amount: 26.468669
 Amount Units: ug/l

Processing Integration Results



RT: 8.60
 Area: 2209892
 Amount: 25.706340
 Amount Units: ug/l

Manual Integration Results



Reviewer: zakhrabov, 23-May-2020 06:27:45

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

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September 2020

Report Date: 23-May-2020 06:32:09

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-008.d
 Lims ID: STD4
 Client ID:
 Sample Type: IC Calib Level: 4
 Inject. Date: 22-May-2020 11:41:00 ALS Bottle#: 0 Worklist Smp#: 8
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0133563-008
 Misc. Info.: 8 EB
 Operator ID: Instrument ID: IC-8
 Sublist: chrom-300.1_C8*sub2
 Method: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 23-May-2020 06:32:09 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1019

First Level Reviewer: zakhrabov

Date: 22-May-2020 12:20:16

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.467	7.467	0.000	31329502	NC	NC	M
3 Bromate	8.600	8.609	-0.009	4450487	50.0	51.3	M
\$ 6 Dichloroacetic acid(Surr)	14.392	14.392	0.000	82351340	993.7	1008.1	
4 Bromide	16.875	16.917	-0.042	76505247	500.0	490.3	Ma
2 Chlorate	18.500	18.517	-0.017	28454610	200.0	196.9	M

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

WC3001LCS_00089

Amount Added: 250.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 23-May-2020 06:32:09

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-008.d

Injection Date: 22-May-2020 11:41:00

Instrument ID: IC-8

Operator ID:

Lims ID: STD4

Worklist Smp#: 8

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

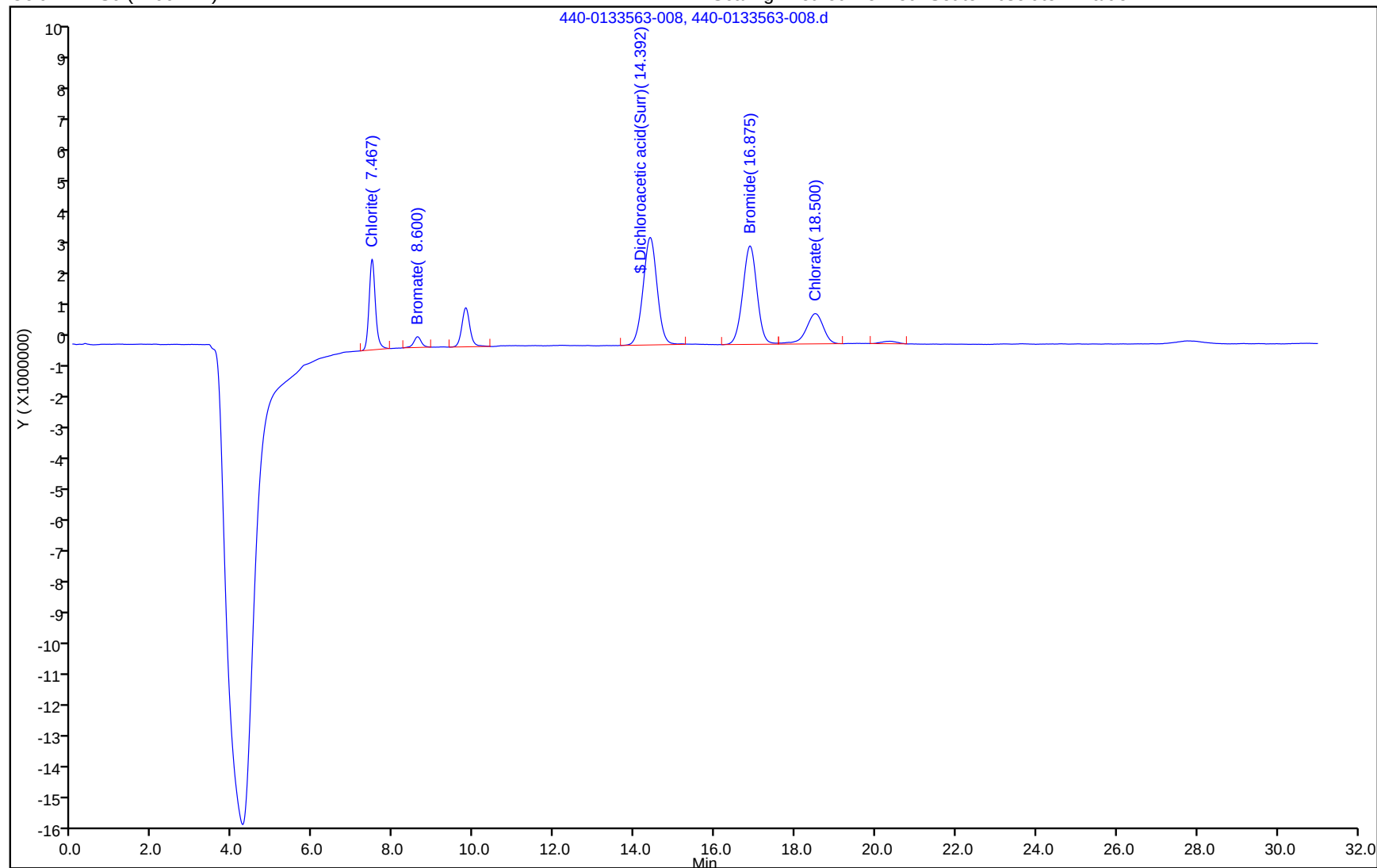
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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06/29/2020

September 2020

Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-853

Report Date: 23-May-2020 06:32:09

Chrom Revision: 2.3 05-May-2020 17:48:18
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-008.d

Injection Date: 22-May-2020 11:41:00

Instrument ID: IC-8

Lims ID: STD4

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#: 8

Injection Vol: 1.0 ul

Dil. Factor:

1.0000

Method: 300.1_C8

Limit Group:

IC-300.1_28D

Column: AS9 (4.00 mm)

Detector

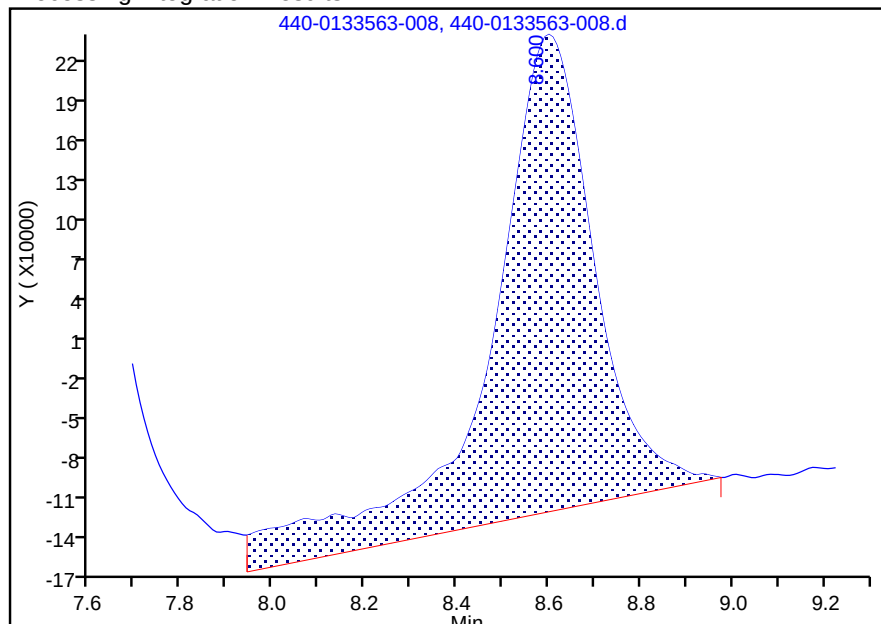
Ch-A-20110816009

3 Bromate, CAS: 15541-45-4

Signal: 1

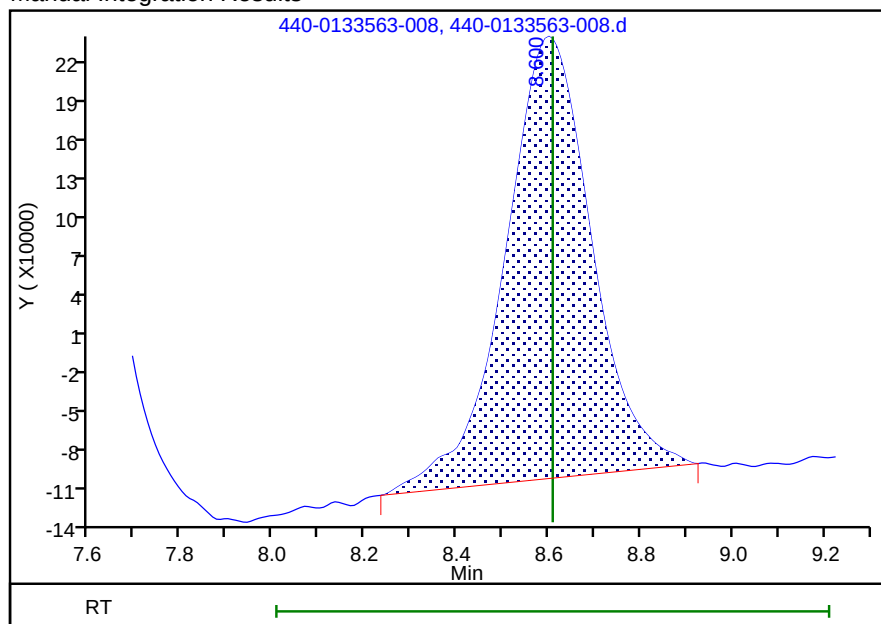
RT: 8.60
 Area: 5651059
 Amount: 64.714893
 Amount Units: ug/l

Processing Integration Results



RT: 8.60
 Area: 4450487
 Amount: 51.300078
 Amount Units: ug/l

Manual Integration Results



Reviewer: zakhrabov, 23-May-2020 06:28:02

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

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September 2020

Report Date: 23-May-2020 06:32:09

Chrom Revision: 2.3 05-May-2020 17:48:18
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-008.d
 Injection Date: 22-May-2020 11:41:00 Instrument ID: IC-8
 Lims ID: STD4
 Client ID:
 Operator ID:
 Injection Vol: 1.0 ul
 Method: 300.1_C8
 Column: AS9 (4.00 mm)

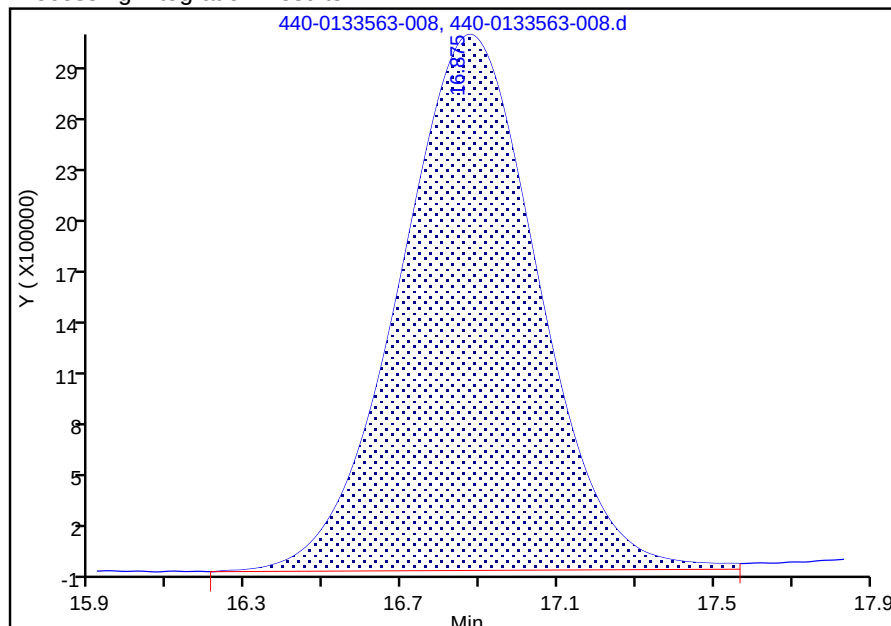
ALS Bottle#: 0 Worklist Smp#: 8
 Dil. Factor: 1.0000
 Limit Group: IC-300.1_28D
 Detector: Ch-A-20110816009

4 Bromide, CAS: 24959-67-9

Signal: 1

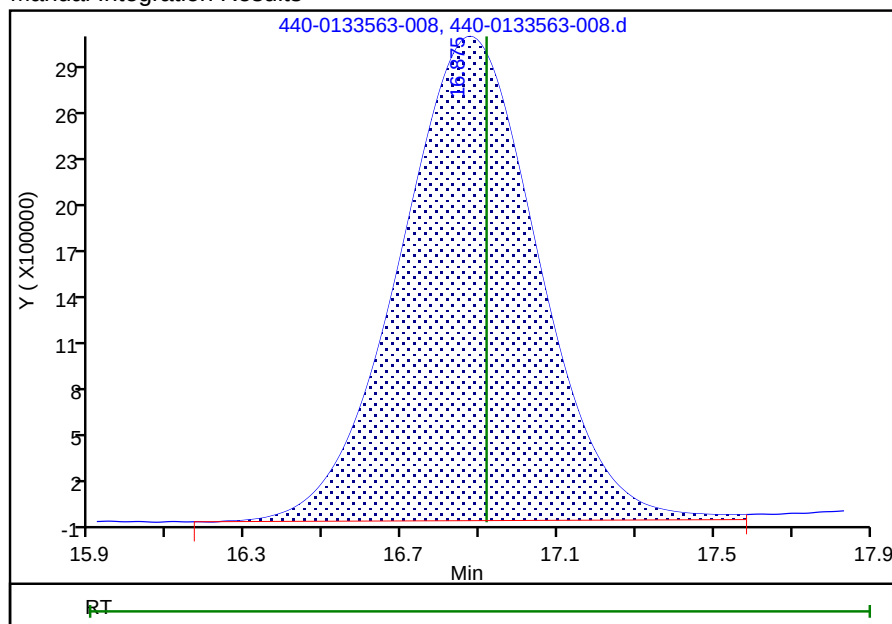
RT: 16.88
 Area: 76615106
 Amount: 490.8995
 Amount Units: ug/l

Processing Integration Results



RT: 16.88
 Area: 76505247
 Amount: 490.3493
 Amount Units: ug/l

Manual Integration Results



Reviewer: zakhrabov, 23-May-2020 06:31:04

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Report Date: 23-May-2020 06:32:09

Chrom Revision: 2.3 05-May-2020 17:48:18
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-008.d
 Injection Date: 22-May-2020 11:41:00 Instrument ID: IC-8
 Lims ID: STD4
 Client ID:
 Operator ID:
 Injection Vol: 1.0 ul
 Method: 300.1_C8
 Column: AS9 (4.00 mm)

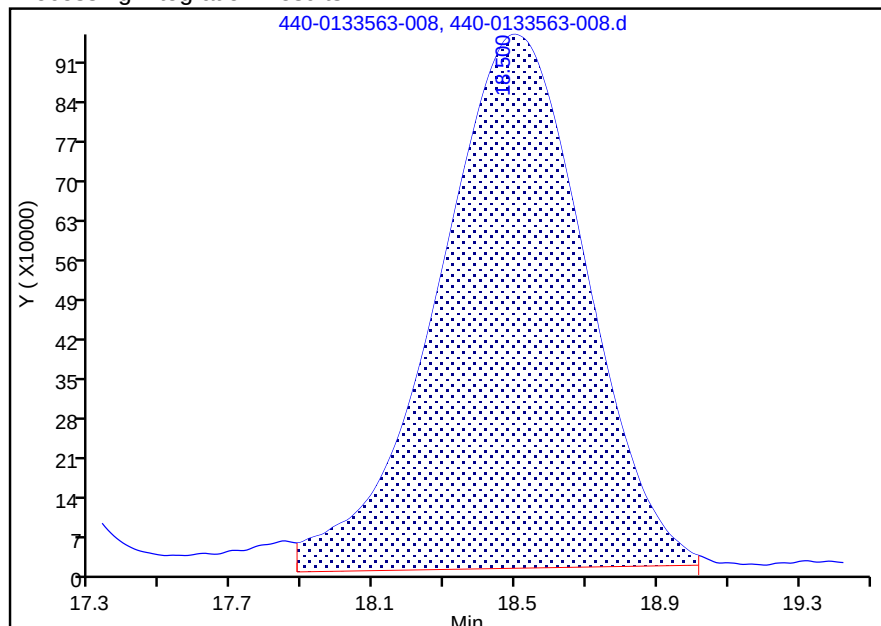
ALS Bottle#: 0 Worklist Smp#: 8
 Dil. Factor: 1.0000
 Limit Group: IC-300.1_28D
 Detector: Ch-A-20110816009

2 Chlorate, CAS: 7790-93-4

Signal: 1

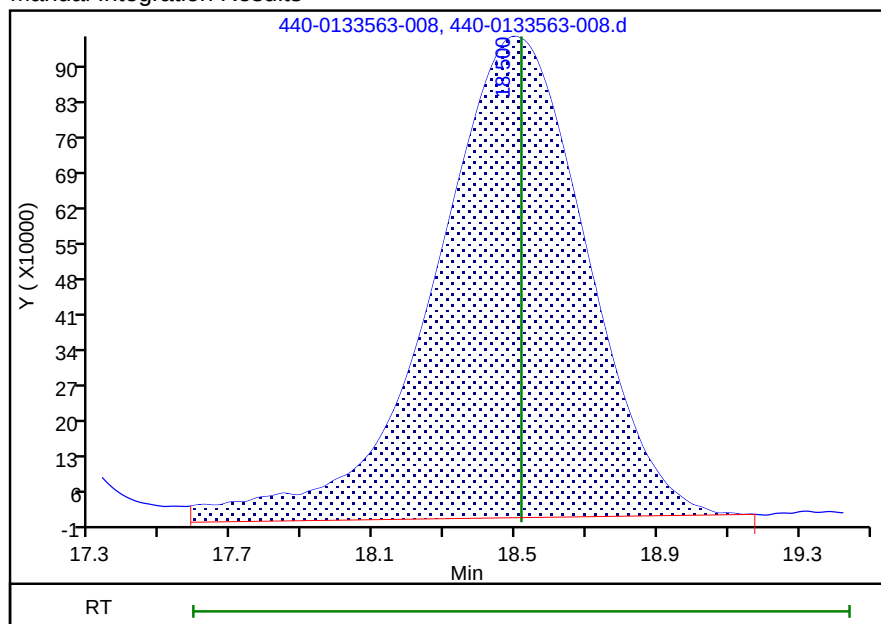
RT: 18.50
 Area: 27679256
 Amount: 192.6958
 Amount Units: ug/l

Processing Integration Results



RT: 18.50
 Area: 28454610
 Amount: 196.8717
 Amount Units: ug/l

Manual Integration Results



Reviewer: zakhrabov, 23-May-2020 06:31:00

Audit Action: Split an Integrated Peak

Audit Reason: Split Peak

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September 2020

Report Date: 23-May-2020 06:32:09

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Lims ID: STD5
 Client ID:
 Sample Type: IC Calib Level: 5
 Inject. Date: 22-May-2020 12:17:00 ALS Bottle#: 0 Worklist Smp#: 9
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0133563-009
 Misc. Info.: 9 EB
 Operator ID: Instrument ID: IC-8
 Sublist: chrom-300.1_C8*sub2
 Method: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 23-May-2020 06:32:09 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1019

First Level Reviewer: zakhrabov

Date: 23-May-2020 06:14:22

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.467	7.467	0.000	64534331	NC	NC	M
3 Bromate	8.592	8.609	-0.017	8659858	100.0	99.4	M
\$ 6 Dichloroacetic acid(Surr)	14.375	14.392	-0.017	81900670	993.7	1002.6	
4 Bromide	16.884	16.917	-0.033	157858867	1000.0	1005.7	
2 Chlorate	18.509	18.517	-0.008	58794780	400.0	403.0	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

WC3001LCS_00089

Amount Added: 500.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 23-May-2020 06:32:09

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d

Injection Date: 22-May-2020 12:17:00

Instrument ID: IC-8

Operator ID:

Lims ID: STD5

Worklist Smp#: 9

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

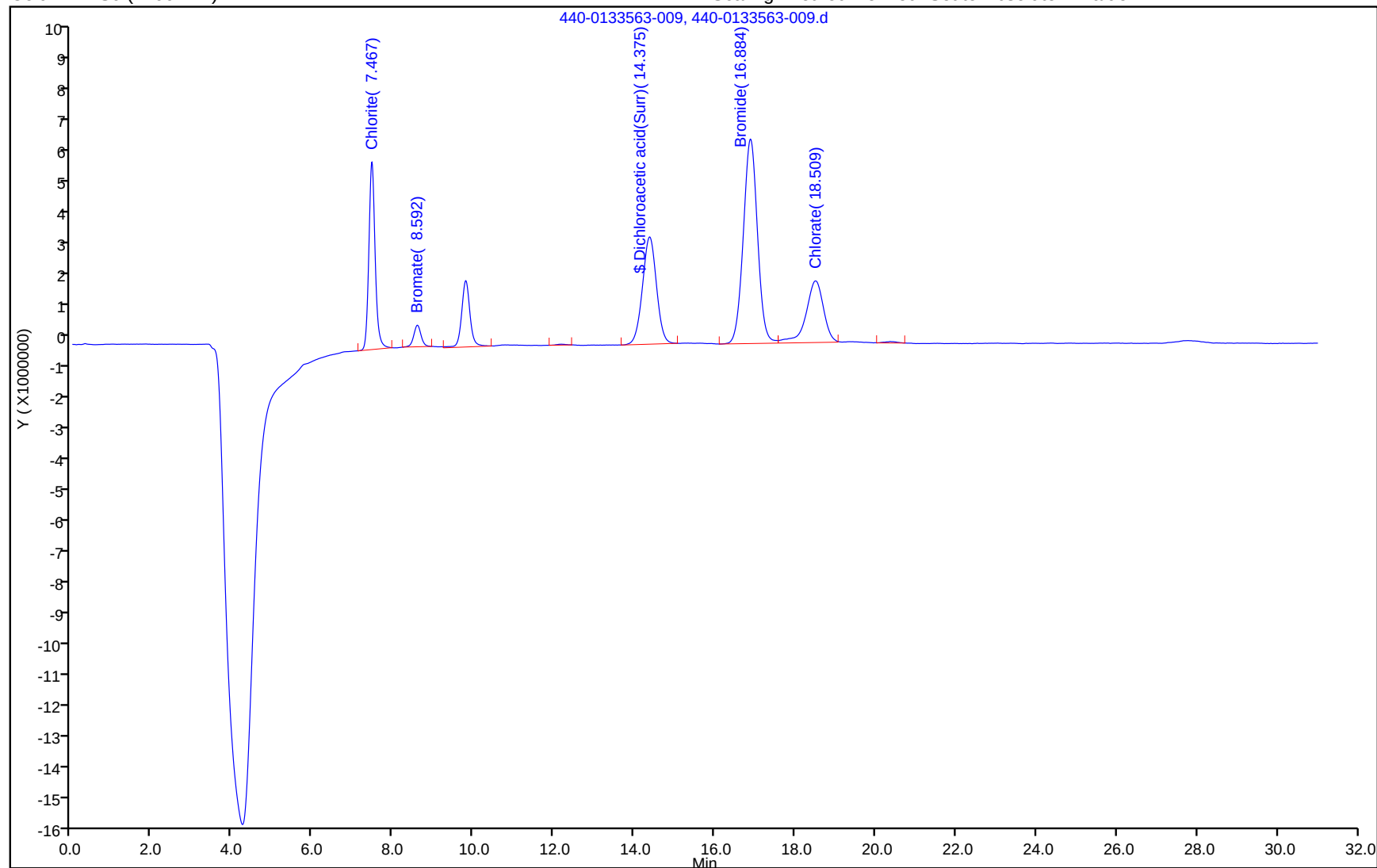
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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Report Date: 23-May-2020 06:32:09

Chrom Revision: 2.3 05-May-2020 17:48:18
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Injection Date: 22-May-2020 12:17:00 Instrument ID: IC-8
 Lims ID: STD5
 Client ID:
 Operator ID:
 Injection Vol: 1.0 ul
 Method: 300.1_C8
 Column: AS9 (4.00 mm)

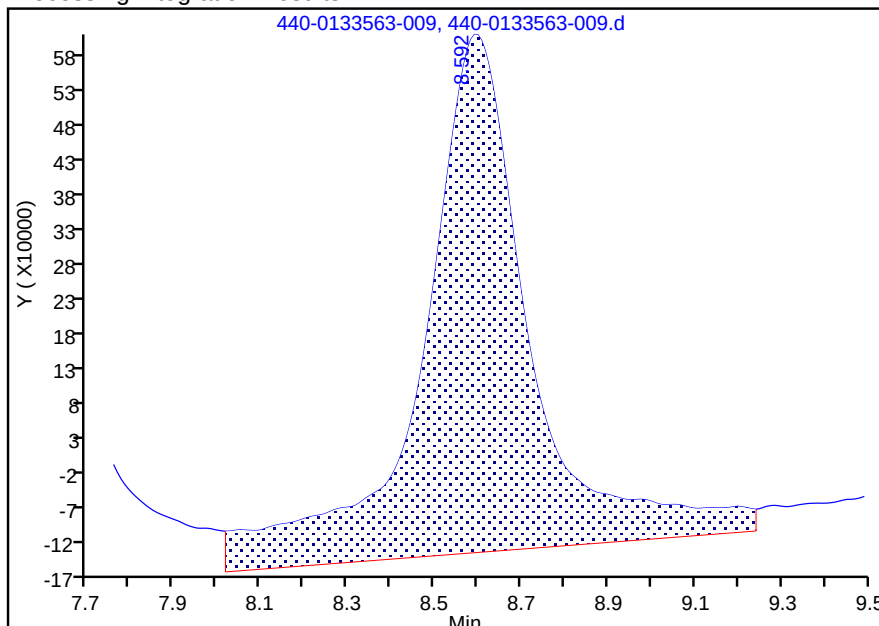
ALS Bottle#: 0 Worklist Smp#: 9
 Dil. Factor: 1.0000
 Limit Group: IC-300.1_28D
 Detector: Ch-A-20110816009

3 Bromate, CAS: 15541-45-4

Signal: 1

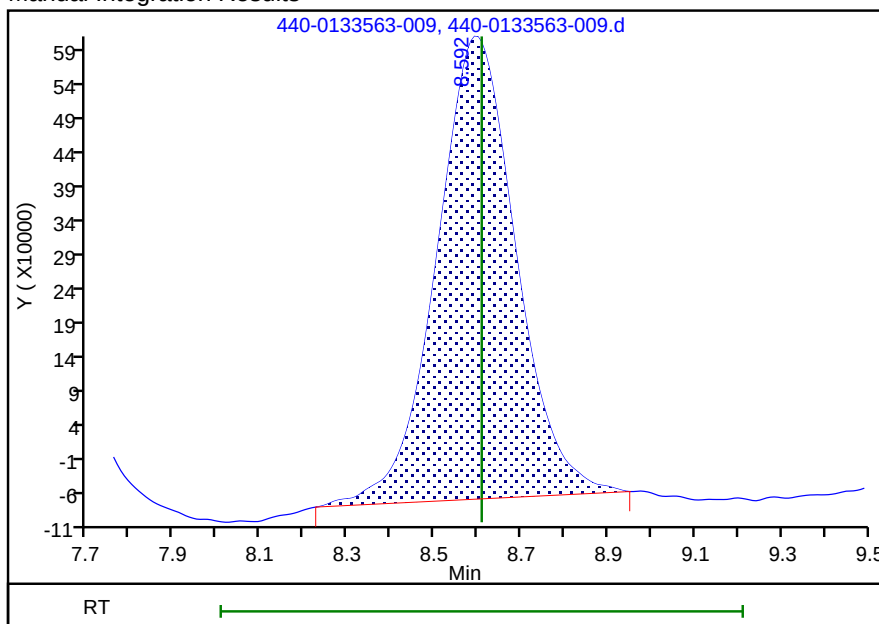
RT: 8.59
 Area: 13001916
 Amount: 149.8545
 Amount Units: ug/l

Processing Integration Results



RT: 8.59
 Area: 8659858
 Amount: 99.382634
 Amount Units: ug/l

Manual Integration Results



Reviewer: zakhrabov, 23-May-2020 06:28:26

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

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06/29/2020

September 2020

Calibration

Curve Type: Linear
Weighting: None
Origin: None
Dependency: Response
Calib Mode: ESTD
Response Base: AREA
RF Rounding: 0

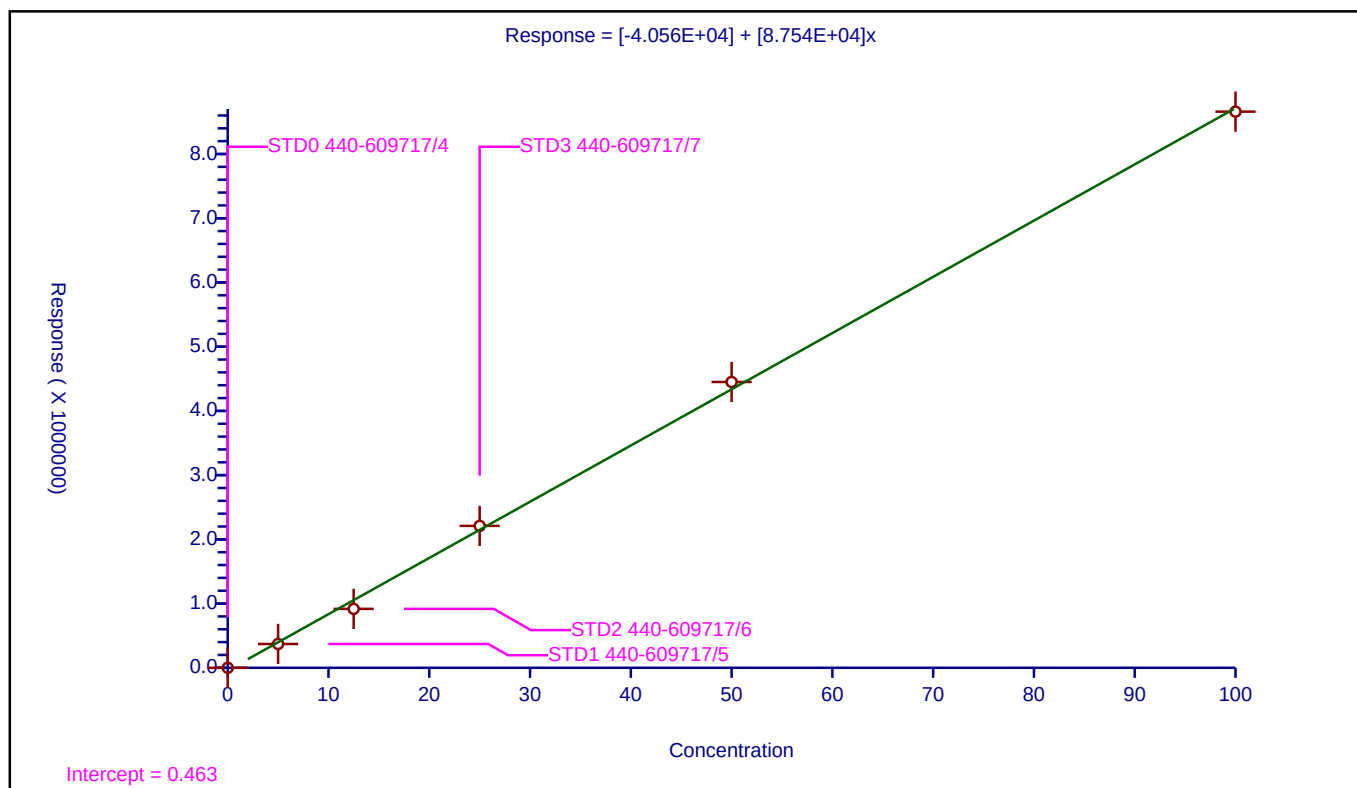
Curve Coefficients

Intercept: -4.056E+04
Slope: 8.754E+04

Error Coefficients

Standard Error: 101000
Relative Standard Error: 8.3
Correlation Coefficient: 1.000
Coefficient of Determination (Adjusted): 0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	STD0 440-609717/4	0.0	0.0			NaN	Y
2	STD1 440-609717/5	5.0	371147.0			74229.4	Y
3	STD2 440-609717/6	12.5	917598.0			73407.84	Y
4	STD3 440-609717/7	25.0	2209892.0			88395.68	Y
5	STD4 440-609717/8	50.0	4450487.0			89009.74	Y
6	STD5 440-609717/9	100.0	8659858.0			86598.58	Y



Calibration

/ Dichloroacetic acid(Surr)

Curve Type: Average
Weighting: Conc_Sq
Origin: Force
Dependency: Response
Calib Mode: ESTD
Response Base: AREA
RF Rounding: 0

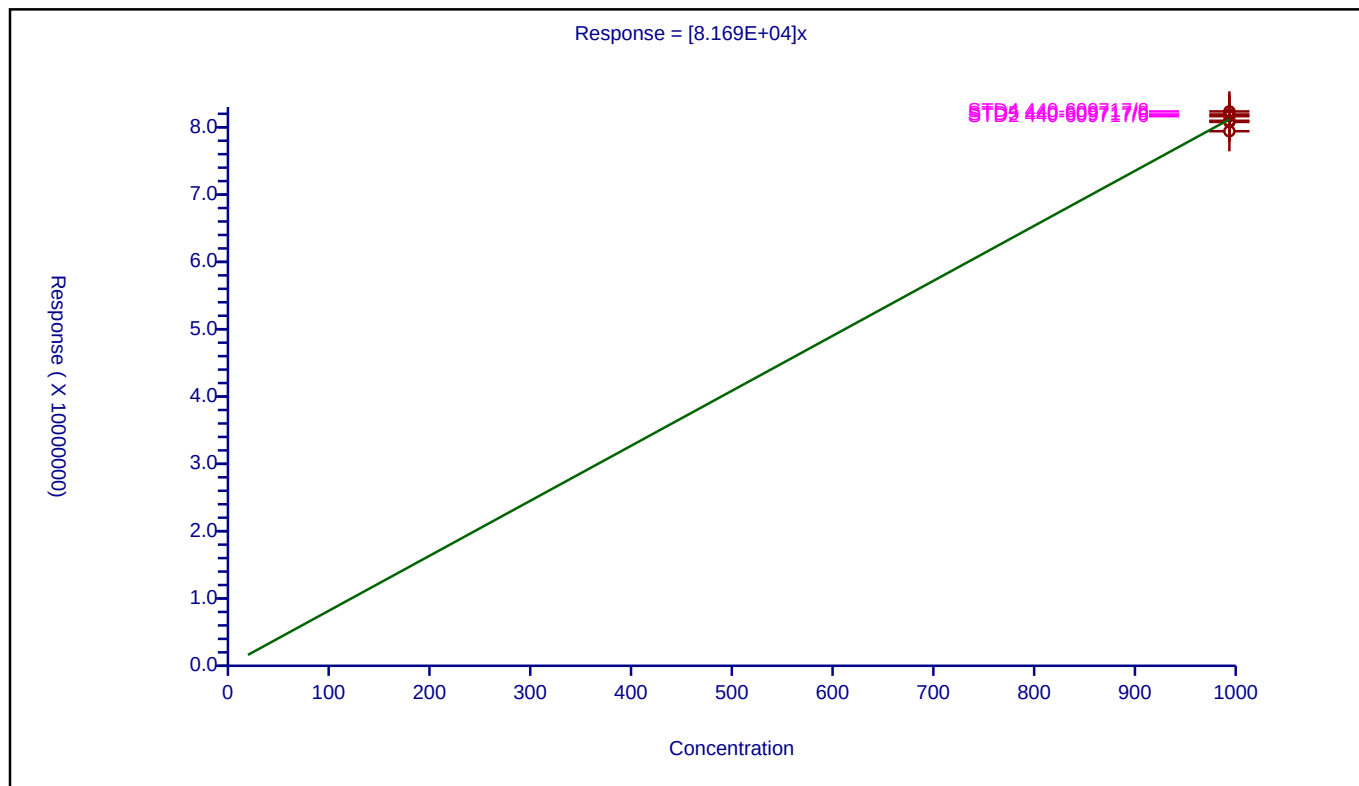
Curve Coefficients

Intercept: 0
Slope: 8.169E+04

Error Coefficients

Standard Error: 1040000
Relative Standard Error: 1.3
Correlation Coefficient: NA
Coefficient of Determination (Adjusted): 0

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	STD0 440-609717/4	993.7109	80960103.0			81472.491647	Y
2	STD1 440-609717/5	993.7109	79408704.0			79911.273993	Y
3	STD2 440-609717/6	993.7109	81642881.0			82159.590883	Y
4	STD3 440-609717/7	993.7109	80790497.0			81301.812227	Y
5	STD4 440-609717/8	993.7109	82351340.0			82872.533651	Y
6	STD5 440-609717/9	993.7109	81900670.0			82419.011405	Y



Calibration

Curve Type: Linear
Weighting: None
Origin: None
Dependency: Response
Calib Mode: ESTD
Response Base: AREA
RF Rounding: 0

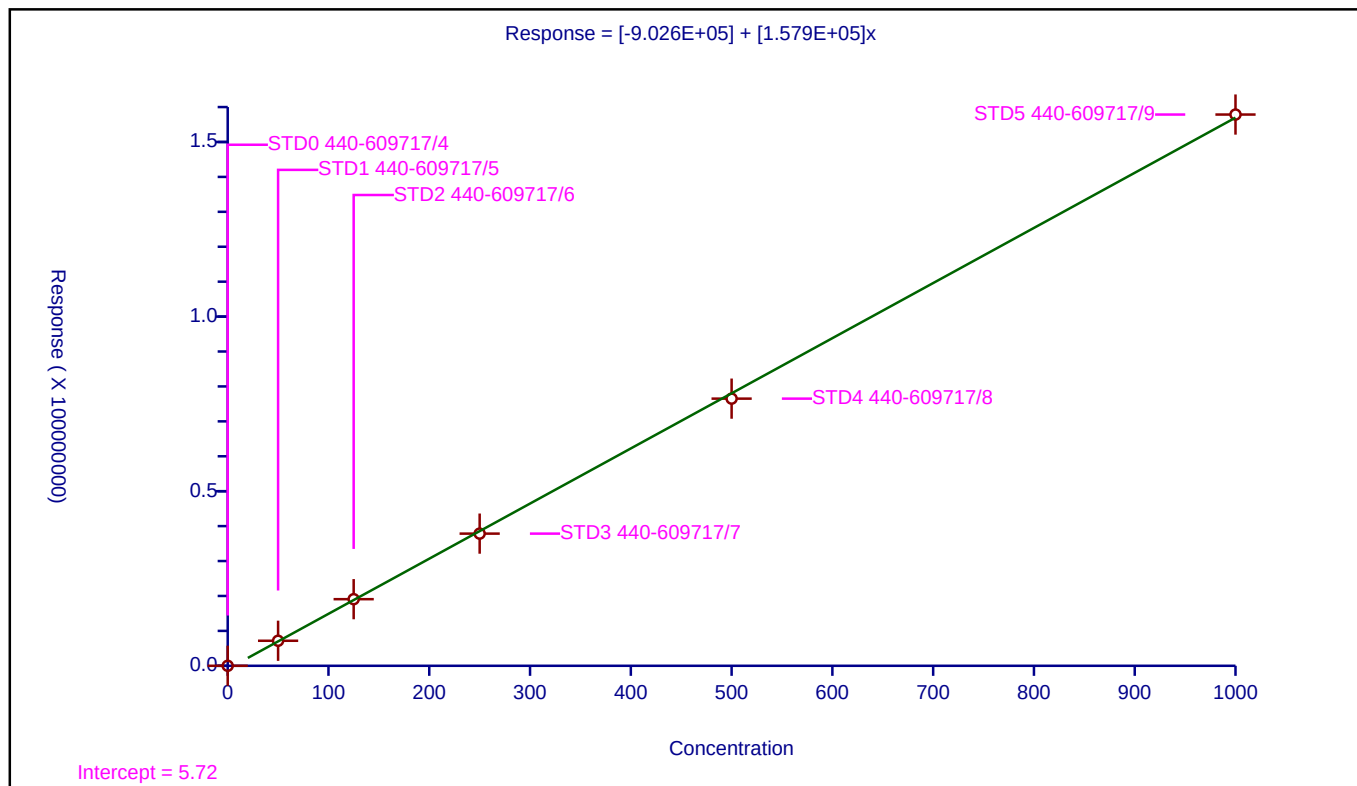
Curve Coefficients

Intercept: -9.026E+05
Slope: 1.579E+05

Error Coefficients

Standard Error: 1070000
Relative Standard Error: 2.2
Correlation Coefficient: 1.000
Coefficient of Determination (Adjusted): 1.000

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	STD0 440-609717/4	0.0	0.0			NaN	Y
2	STD1 440-609717/5	50.0	7170938.0			143418.76	Y
3	STD2 440-609717/6	125.0	19081776.0			152654.208	Y
4	STD3 440-609717/7	250.0	37853087.0			151412.348	Y
5	STD4 440-609717/8	500.0	76505247.0			153010.494	Y
6	STD5 440-609717/9	1000.0	157858867.0			157858.867	Y



Calibration

Curve Type: Linear
Weighting: None
Origin: None
Dependency: Response
Calib Mode: ESTD
Response Base: AREA
RF Rounding: 0

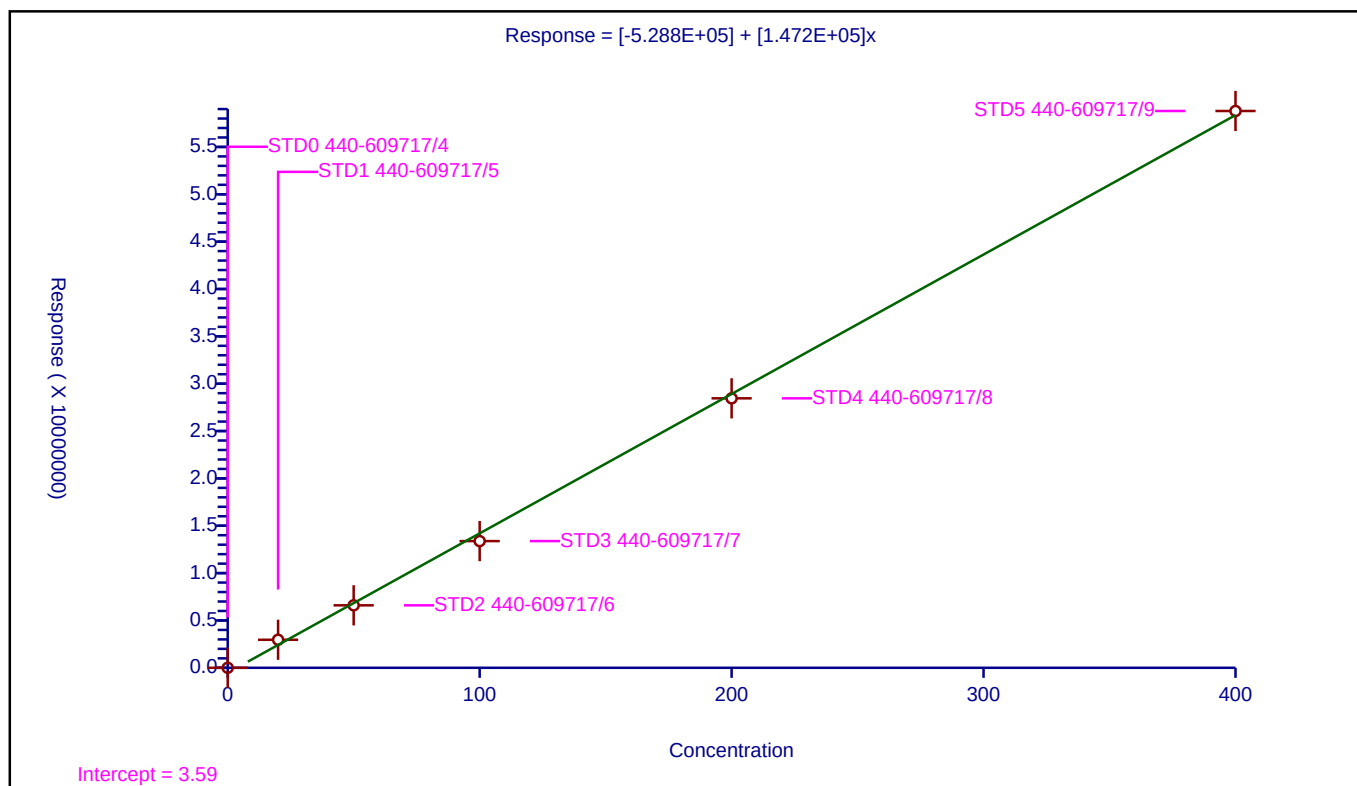
Curve Coefficients

Intercept: -5.288E+05
Slope: 1.472E+05

Error Coefficients

Standard Error: 651000
Relative Standard Error: 11.3
Correlation Coefficient: 1.000
Coefficient of Determination (Adjusted): 0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	STD0 440-609717/4	0.0	0.0			NaN	Y
2	STD1 440-609717/5	20.0	2959710.0			147985.5	Y
3	STD2 440-609717/6	50.0	6597329.0			131946.58	Y
4	STD3 440-609717/7	100.0	13380104.0			133801.04	Y
5	STD4 440-609717/8	200.0	28454610.0			142273.05	Y
6	STD5 440-609717/9	400.0	58794780.0			146986.95	Y



FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-267742-1 Analy Batch No.: 609718
 SDG No.: _____
 Instrument ID: IC-8 GC Column: AS9-HC ID: 4 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 05/22/2020 09:16 Calibration End Date: 05/22/2020 12:17 Calibration ID: 23747

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD0 440-609718/4	440-0133563-004.d
Level 2	STD1 440-609718/5	440-0133563-005.d
Level 3	STD2 440-609718/6	440-0133563-006.d
Level 4	STD3 440-609718/7	440-0133563-007.d
Level 5	STD4 440-609718/8	440-0133563-008.d
Level 6	STD5 440-609718/9	440-0133563-009.d

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6					RT WINDOW	AVG RT
Chlorite		7.467	7.450	7.475	7.467	7.467					0.000 - 0.000	7.465
Dichloroacetic acid(Surr)	14.367	14.392	14.375	14.392	14.392	14.375					13.385 - 15.399	14.382

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Irvine Job No.: 440-267742-1 Analy Batch No.: 609718

SDG No.: _____

Instrument ID: IC-8 GC Column: AS9-HC ID: 4 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/22/2020 09:16 Calibration End Date: 05/22/2020 12:17 Calibration ID: 23747

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD0 440-609718/4	440-0133563-004.d
Level 2	STD1 440-609718/5	440-0133563-005.d
Level 3	STD2 440-609718/6	440-0133563-006.d
Level 4	STD3 440-609718/7	440-0133563-007.d
Level 5	STD4 440-609718/8	440-0133563-008.d
Level 6	STD5 440-609718/9	440-0133563-009.d

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3	LVL 4		B	M1	M2								
Chlorite	156648	147340 161336	164943	157866	Lin	-184385.32	160974.932							1.0000		0.9950
Dichloroacetic acid(Surr)	81472 82873	79911 82419	82160	81302	Ave		81689.4523				1.3		15.0			

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Irvine Job No.: 440-267742-1 Analy Batch No.: 609718
 SDG No.: _____
 Instrument ID: IC-8 GC Column: AS9-HC ID: 4 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 05/22/2020 09:16 Calibration End Date: 05/22/2020 12:17 Calibration ID: 23747

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD0 440-609718/4	440-0133563-004.d
Level 2	STD1 440-609718/5	440-0133563-005.d
Level 3	STD2 440-609718/6	440-0133563-006.d
Level 4	STD3 440-609718/7	440-0133563-007.d
Level 5	STD4 440-609718/8	440-0133563-008.d
Level 6	STD5 440-609718/9	440-0133563-009.d

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
		LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Chlorite	Lin	64534331	2946805	8247146	15786602	31329502	0.000000 400	20.0	50.0	100	200
Dichloroacetic acid(Surr)	Ave	80960103 81900670	79408704	81642881	80790497	82351340	994 994	994	994	994	994

Curve Type Legend:

Ave = Average
Lin = Linear

Report Date: 23-May-2020 06:32:07

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-004.d
 Lims ID: STD0
 Client ID:
 Sample Type: IC Calib Level: 0
 Inject. Date: 22-May-2020 09:16:00 ALS Bottle#: 0 Worklist Smp#: 4
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0133563-004
 Misc. Info.: 4 EB
 Operator ID: Instrument ID: IC-8
 Sublist: chrom-300.1_C8*sub2
 Method: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 23-May-2020 06:32:07 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1019

First Level Reviewer: zakhrabov

Date: 22-May-2020 09:59:03

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
----------	--------------	------------------	------------------	----------	-----------------	-------------------	-------

\$ 6 Dichloroacetic acid(Surr) 14.367 14.392 -0.025 80960103 993.7 991.1

Reagents:

WC3001LCS_00089

Amount Added: 0.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 23-May-2020 06:32:07

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-004.d

Injection Date: 22-May-2020 09:16:00

Instrument ID: IC-8

Operator ID:

Lims ID: STD0

Worklist Smp#: 4

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

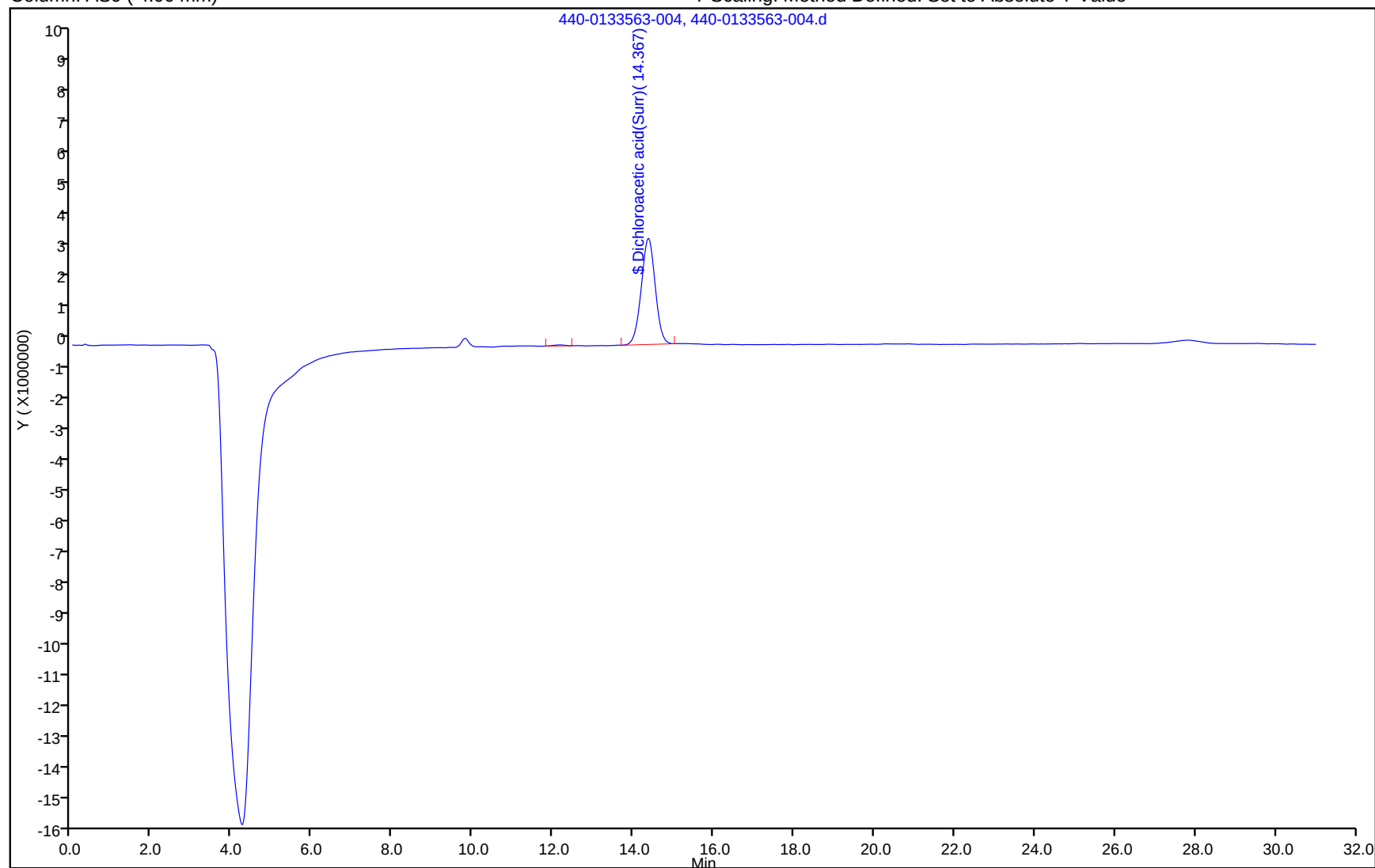
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-868

Report Date: 23-May-2020 06:32:07

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-005.d
 Lims ID: STD1
 Client ID:
 Sample Type: IC Calib Level: 1
 Inject. Date: 22-May-2020 09:52:00 ALS Bottle#: 0 Worklist Smp#: 5
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0133563-005
 Misc. Info.: 5 EB
 Operator ID: Instrument ID: IC-8
 Sublist: chrom-300.1_C8*sub2
 Method: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 23-May-2020 06:32:07 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1019

First Level Reviewer: zakhrabov

Date: 22-May-2020 10:41:13

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.467	7.467	0.000	2946805	20.0	19.5	
3 Bromate	8.609	8.609	0.000	371147	NC	NC	
\$ 6 Dichloroacetic acid(Surr)	14.392	14.392	0.000	79408704	993.7	972.1	
4 Bromide	16.917	16.917	0.000	7170938	NC	NC	
2 Chlorate	18.517	18.517	0.000	2959710	NC	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WC3001LCS_00089

Amount Added: 25.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 23-May-2020 06:32:07

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-005.d

Injection Date: 22-May-2020 09:52:00

Instrument ID: IC-8

Operator ID:

Lims ID: STD1

Worklist Smp#: 5

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

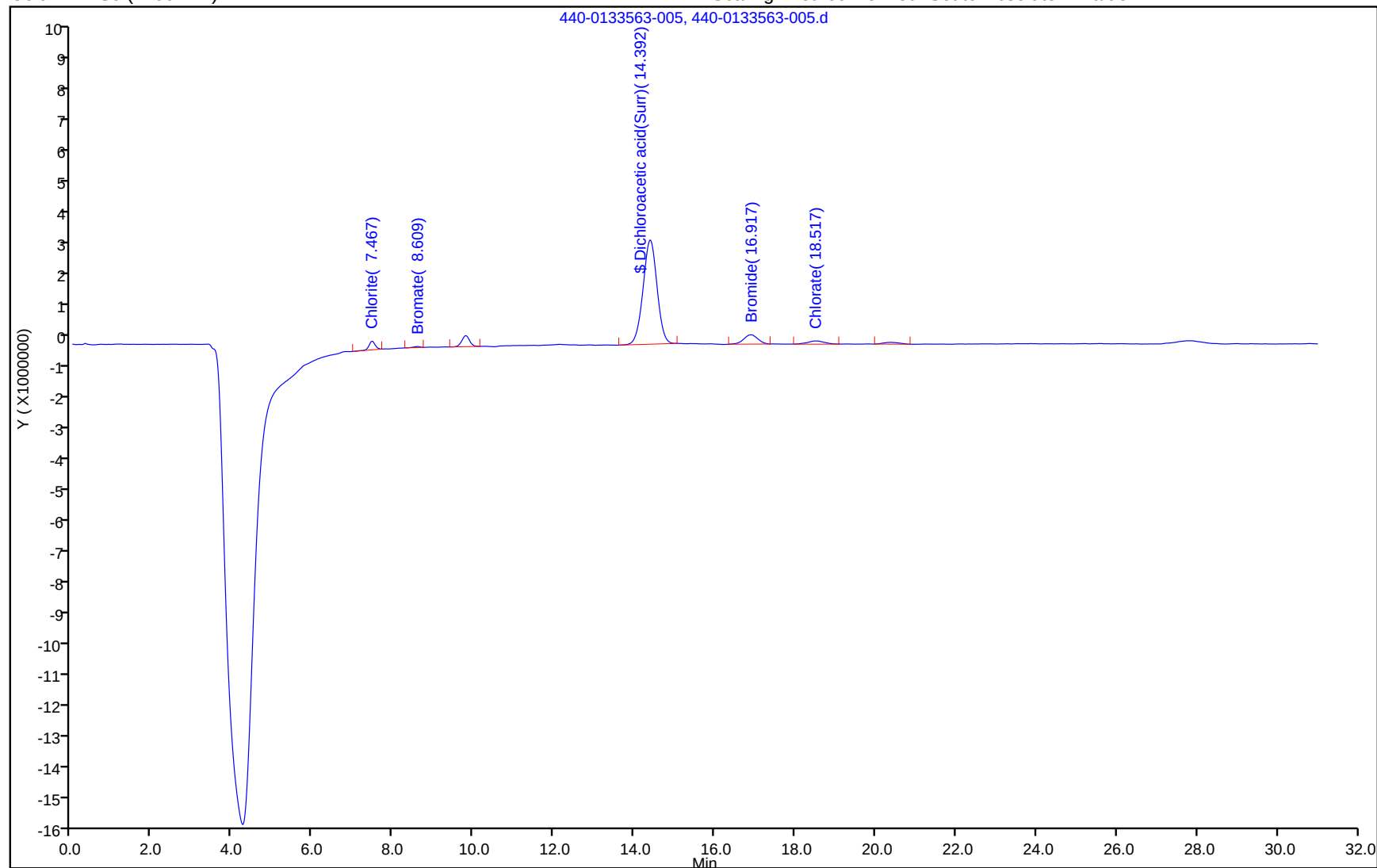
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-870

Report Date: 23-May-2020 06:32:08

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-006.d
 Lims ID: STD2
 Client ID:
 Sample Type: IC Calib Level: 2
 Inject. Date: 22-May-2020 10:29:00 ALS Bottle#: 0 Worklist Smp#: 6
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0133563-006
 Misc. Info.: 6 EB
 Operator ID: Instrument ID: IC-8
 Sublist: chrom-300.1_C8*sub2
 Method: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 23-May-2020 06:32:08 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1019

First Level Reviewer: zakhrabov

Date: 22-May-2020 11:17:30

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.450	7.467	-0.017	8247146	50.0	52.4	
3 Bromate	8.575	8.609	-0.034	917598	NC	NC	M
\$ 6 Dichloroacetic acid(Surr)	14.375	14.392	-0.017	81642881	993.7	999.4	
4 Bromide	16.859	16.917	-0.058	19081776	NC	NC	
2 Chlorate	18.475	18.517	-0.042	6597329	NC	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

WC3001LCS_00089

Amount Added: 62.50

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 23-May-2020 06:32:08

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-006.d

Injection Date: 22-May-2020 10:29:00

Instrument ID: IC-8

Operator ID:

Lims ID: STD2

Worklist Smp#: 6

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

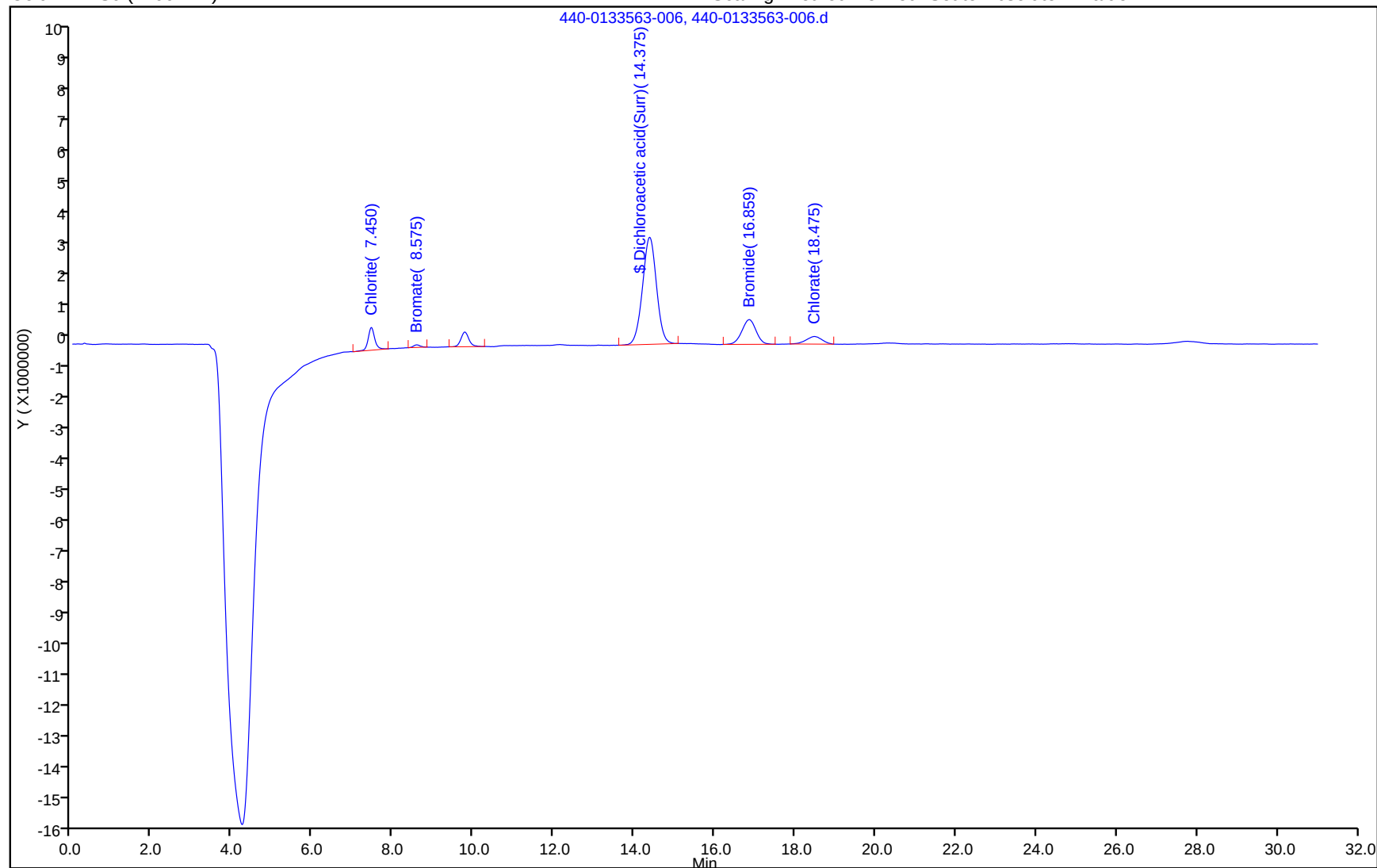
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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SWMUs ST-106/SS-111

I-5-872

Report Date: 23-May-2020 06:32:08

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-007.d
 Lims ID: STD3
 Client ID:
 Sample Type: IC Calib Level: 3
 Inject. Date: 22-May-2020 11:05:00 ALS Bottle#: 0 Worklist Smp#: 7
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0133563-007
 Misc. Info.: 7 EB
 Operator ID: Instrument ID: IC-8
 Sublist: chrom-300.1_C8*sub2
 Method: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 23-May-2020 06:32:08 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1019

First Level Reviewer: zakhrabov

Date: 22-May-2020 11:48:43

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.475	7.467	0.008	15786602	100.0	99.2	
3 Bromate	8.600	8.609	-0.009	2209892	NC	NC	M
\$ 6 Dichloroacetic acid(Surr)	14.392	14.392	0.000	80790497	993.7	989.0	
4 Bromide	16.884	16.917	-0.033	37853087	NC	NC	
2 Chlorate	18.517	18.517	0.000	13380104	NC	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

WC3001LCS_00089

Amount Added: 125.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 23-May-2020 06:32:08

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-007.d

Injection Date: 22-May-2020 11:05:00

Instrument ID: IC-8

Operator ID:

Lims ID: STD3

Worklist Smp#: 7

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

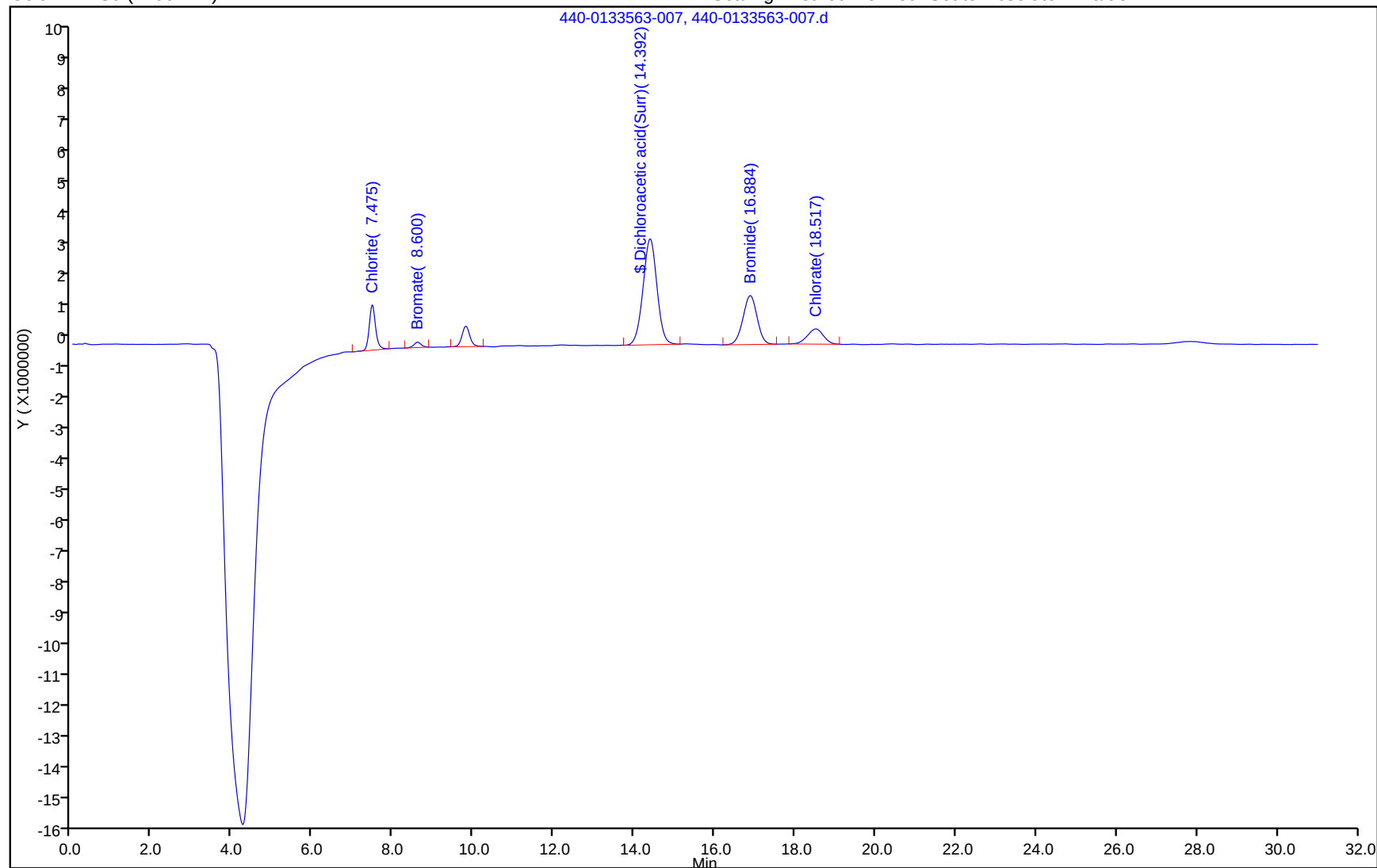
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-874

Report Date: 23-May-2020 06:32:09

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-008.d
 Lims ID: STD4
 Client ID:
 Sample Type: IC Calib Level: 4
 Inject. Date: 22-May-2020 11:41:00 ALS Bottle#: 0 Worklist Smp#: 8
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0133563-008
 Misc. Info.: 8 EB
 Operator ID: Instrument ID: IC-8
 Sublist: chrom-300.1_C8*sub2
 Method: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 23-May-2020 06:32:09 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1019

First Level Reviewer: zakhrabov

Date: 22-May-2020 12:20:16

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.467	7.467	0.000	31329502	200.0	195.8	M
3 Bromate	8.600	8.609	-0.009	4450487	NC	NC	M
\$ 6 Dichloroacetic acid(Surr)	14.392	14.392	0.000	82351340	993.7	1008.1	
4 Bromide	16.875	16.917	-0.042	76505247	NC	NC	Ma
2 Chlorate	18.500	18.517	-0.017	28454610	NC	NC	M

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

WC3001LCS_00089

Amount Added: 250.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 23-May-2020 06:32:09

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-008.d

Injection Date: 22-May-2020 11:41:00

Instrument ID: IC-8

Operator ID:

Lims ID: STD4

Worklist Smp#: 8

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

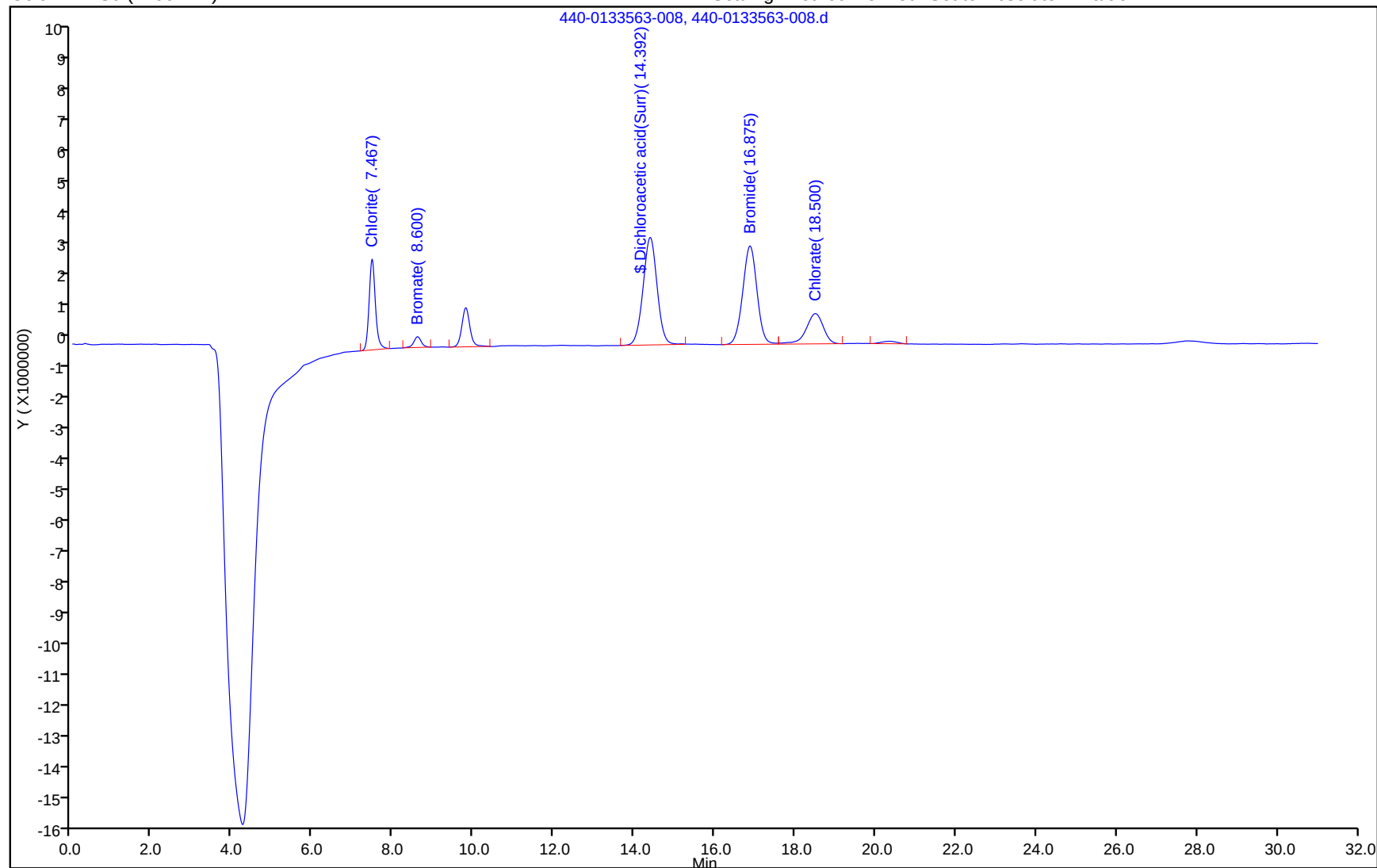
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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Report Date: 23-May-2020 06:32:09

Chrom Revision: 2.3 05-May-2020 17:48:18
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-008.d
 Injection Date: 22-May-2020 11:41:00 Instrument ID: IC-8
 Lims ID: STD4
 Client ID:
 Operator ID:
 Injection Vol: 1.0 ul
 Method: 300.1_C8
 Column: AS9 (4.00 mm)

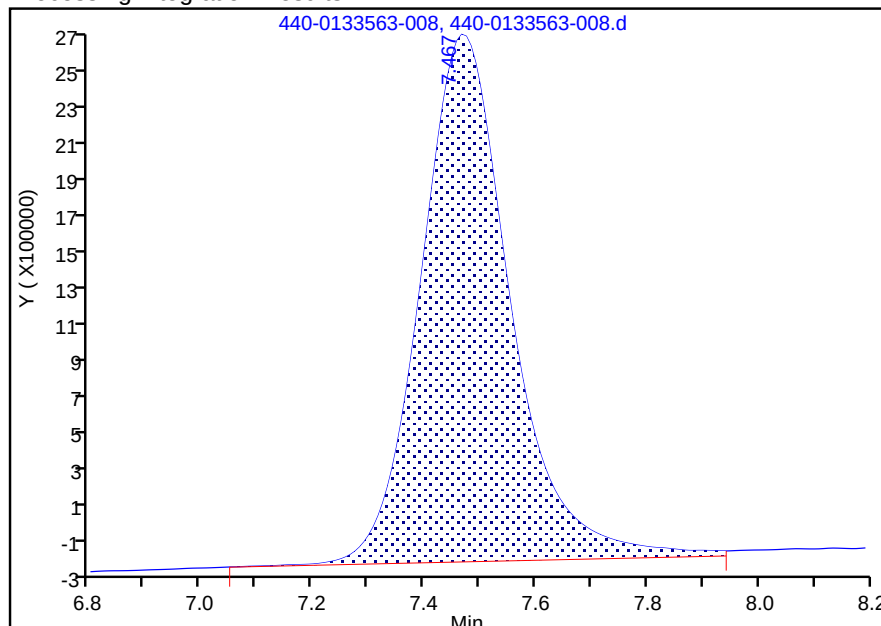
ALS Bottle#: 0 Worklist Smp#: 8
 Dil. Factor: 1.0000
 Limit Group: IC-300.1_14D
 Detector: Ch-A-20110816009

5 Chlorite, CAS: 14998-27-7

Signal: 1

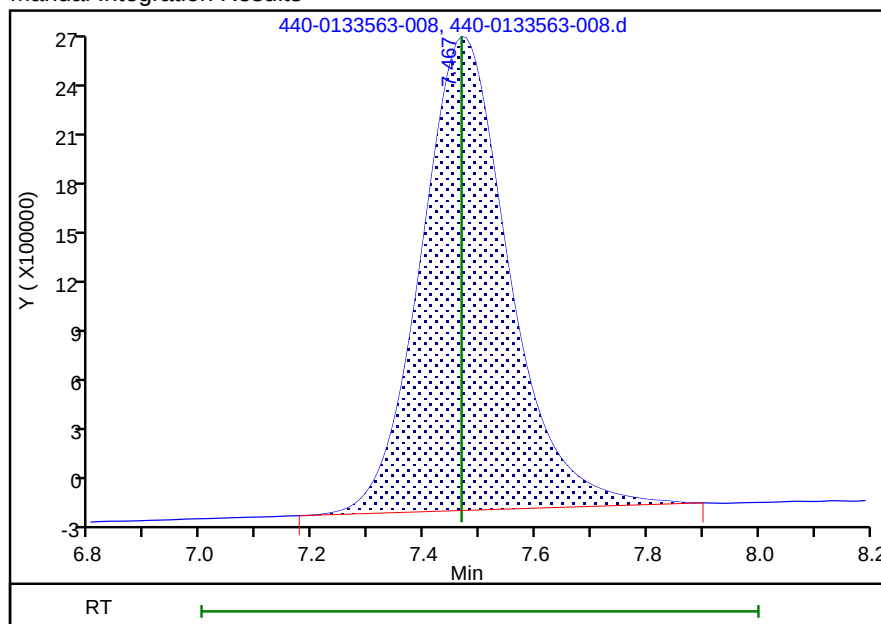
RT: 7.47
 Area: 32257462
 Amount: 0
 Amount Units: ug/l

Processing Integration Results



RT: 7.47
 Area: 31329502
 Amount: 195.7689
 Amount Units: ug/l

Manual Integration Results



Reviewer: zakhrabov, 23-May-2020 06:28:07

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

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Report Date: 23-May-2020 06:32:09

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Lims ID: STD5
 Client ID:
 Sample Type: IC Calib Level: 5
 Inject. Date: 22-May-2020 12:17:00 ALS Bottle#: 0 Worklist Smp#: 9
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0133563-009
 Misc. Info.: 9 EB
 Operator ID: Instrument ID: IC-8
 Sublist: chrom-300.1_C8*sub2
 Method: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 23-May-2020 06:32:09 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1019

First Level Reviewer: zakhrabov

Date: 23-May-2020 06:14:22

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.467	7.467	0.000	64534331	400.0	402.0	M
3 Bromate	8.592	8.609	-0.017	8659858	NC	NC	M
\$ 6 Dichloroacetic acid(Surr)	14.375	14.392	-0.017	81900670	993.7	1002.6	
4 Bromide	16.884	16.917	-0.033	157858867	NC	NC	
2 Chlorate	18.509	18.517	-0.008	58794780	NC	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

WC3001LCS_00089

Amount Added: 500.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 23-May-2020 06:32:09

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d

Injection Date: 22-May-2020 12:17:00

Instrument ID: IC-8

Operator ID:

Lims ID: STD5

Worklist Smp#: 9

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

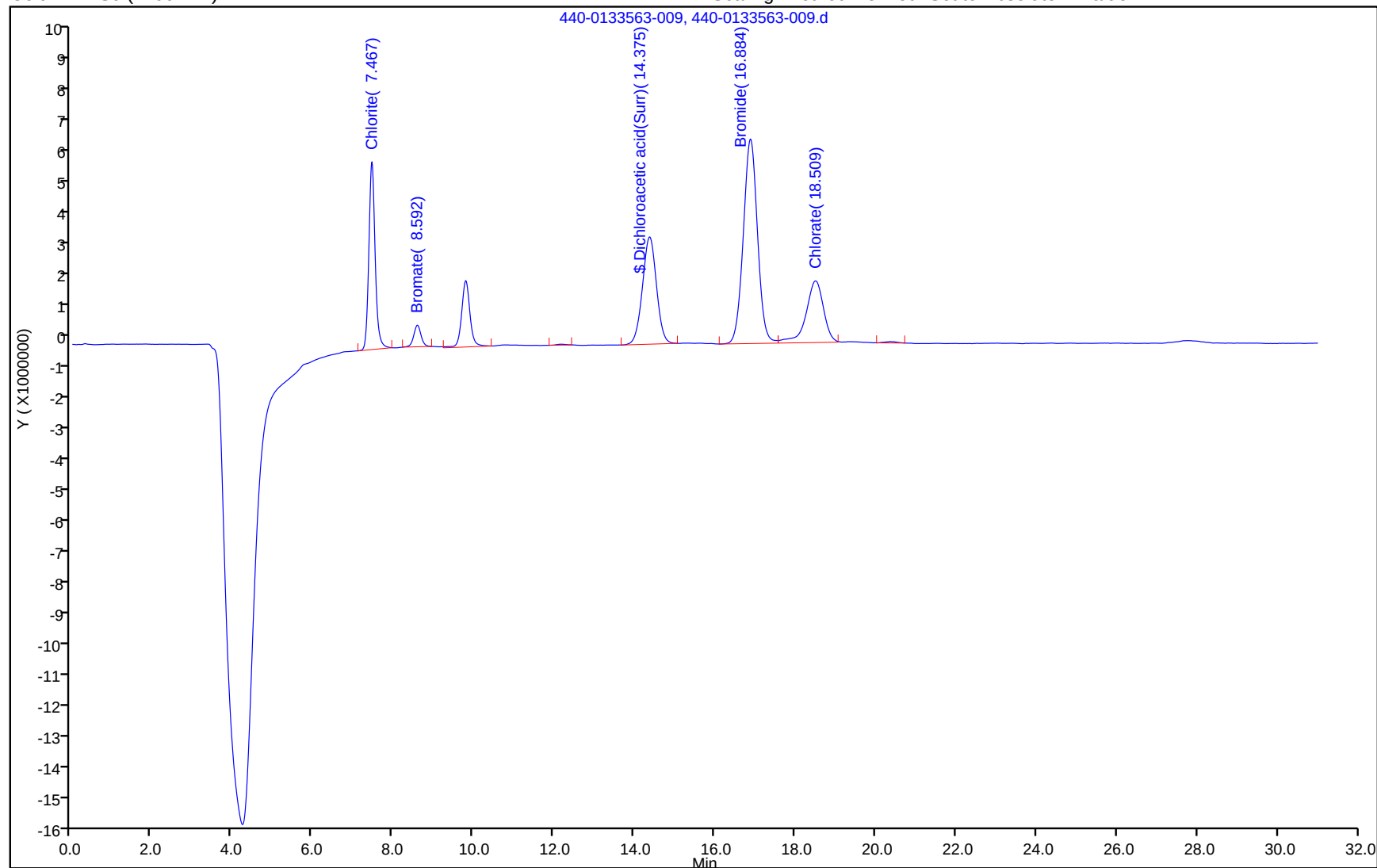
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-879

Report Date: 23-May-2020 06:32:09

Chrom Revision: 2.3 05-May-2020 17:48:18
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Injection Date: 22-May-2020 12:17:00 Instrument ID: IC-8
 Lims ID: STD5
 Client ID:
 Operator ID:
 Injection Vol: 1.0 ul
 Method: 300.1_C8
 Column: AS9 (4.00 mm)

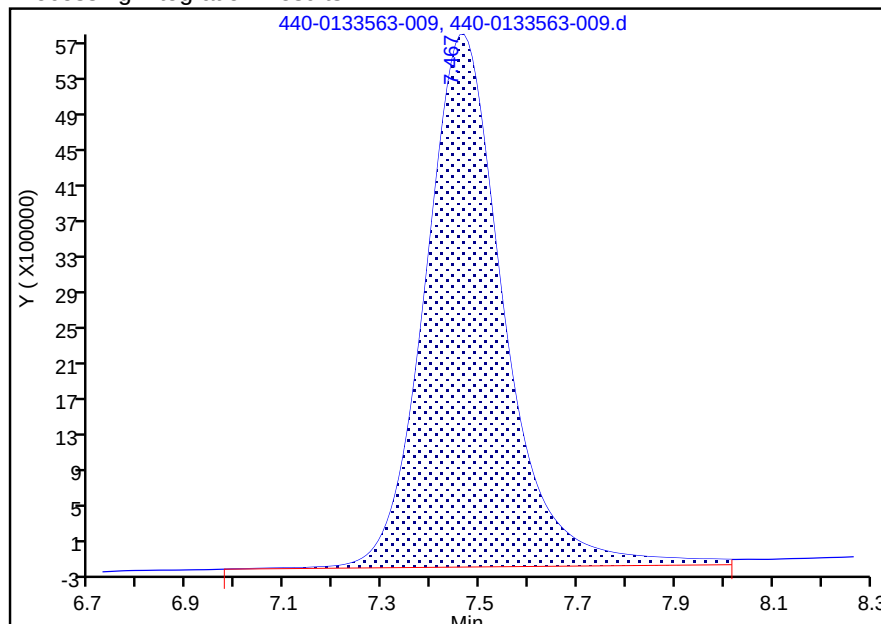
ALS Bottle#: 0 Worklist Smp#: 9
 Dil. Factor: 1.0000
 Limit Group: IC-300.1_14D
 Detector: Ch-A-20110816009

5 Chlorite, CAS: 14998-27-7

Signal: 1

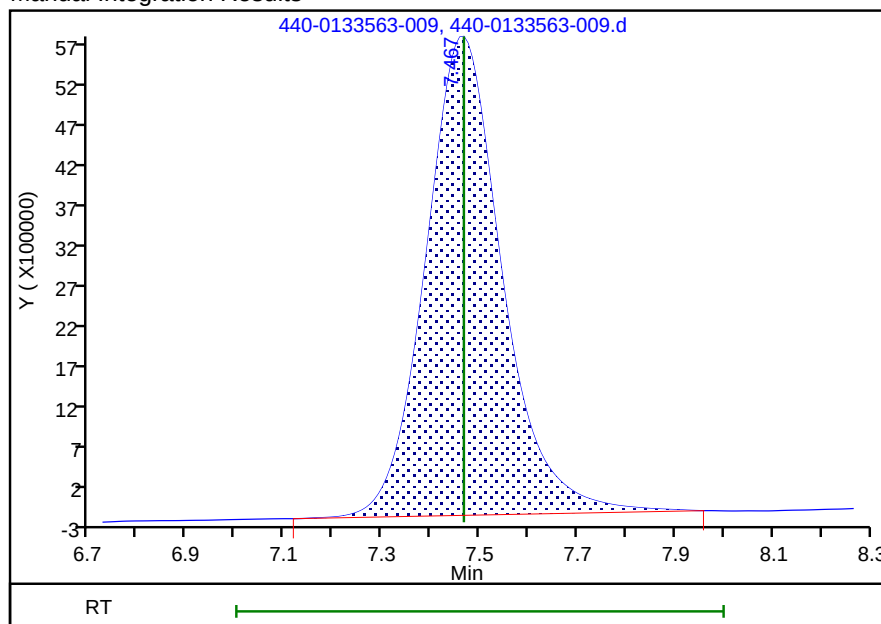
RT: 7.47
 Area: 66611420
 Amount: 0
 Amount Units: ug/l

Processing Integration Results



RT: 7.47
 Area: 64534331
 Amount: 402.0422
 Amount Units: ug/l

Manual Integration Results



Reviewer: zakhrabov, 23-May-2020 06:28:18

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

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Calibration

Curve Type: Linear
Weighting: None
Origin: None
Dependency: Response
Calib Mode: ESTD
Response Base: AREA
RF Rounding: 0

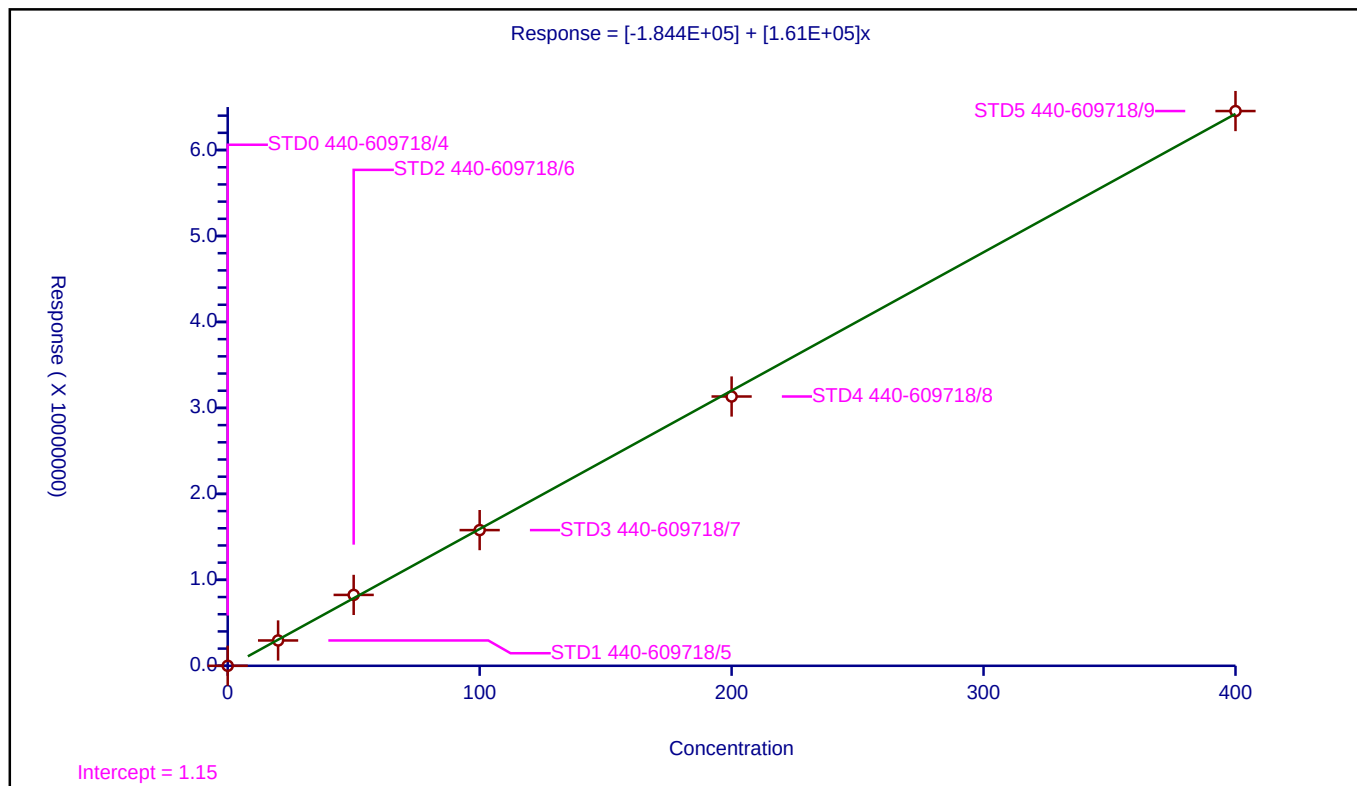
Curve Coefficients

Intercept: -1.844E+05
Slope: 1.61E+05

Error Coefficients

Standard Error: 441000
Relative Standard Error: 3.4
Correlation Coefficient: 1.000
Coefficient of Determination (Adjusted): 1.000

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	STD0 440-609718/4	0.0	0.0			NaN	Y
2	STD1 440-609718/5	20.0	2946805.0			147340.25	Y
3	STD2 440-609718/6	50.0	8247146.0			164942.92	Y
4	STD3 440-609718/7	100.0	15786602.0			157866.02	Y
5	STD4 440-609718/8	200.0	31329502.0			156647.51	Y
6	STD5 440-609718/9	400.0	64534331.0			161335.8275	Y



Calibration

/ Dichloroacetic acid(Surr)

Curve Type: Average
Weighting: Conc_Sq
Origin: Force
Dependency: Response
Calib Mode: ESTD
Response Base: AREA
RF Rounding: 0

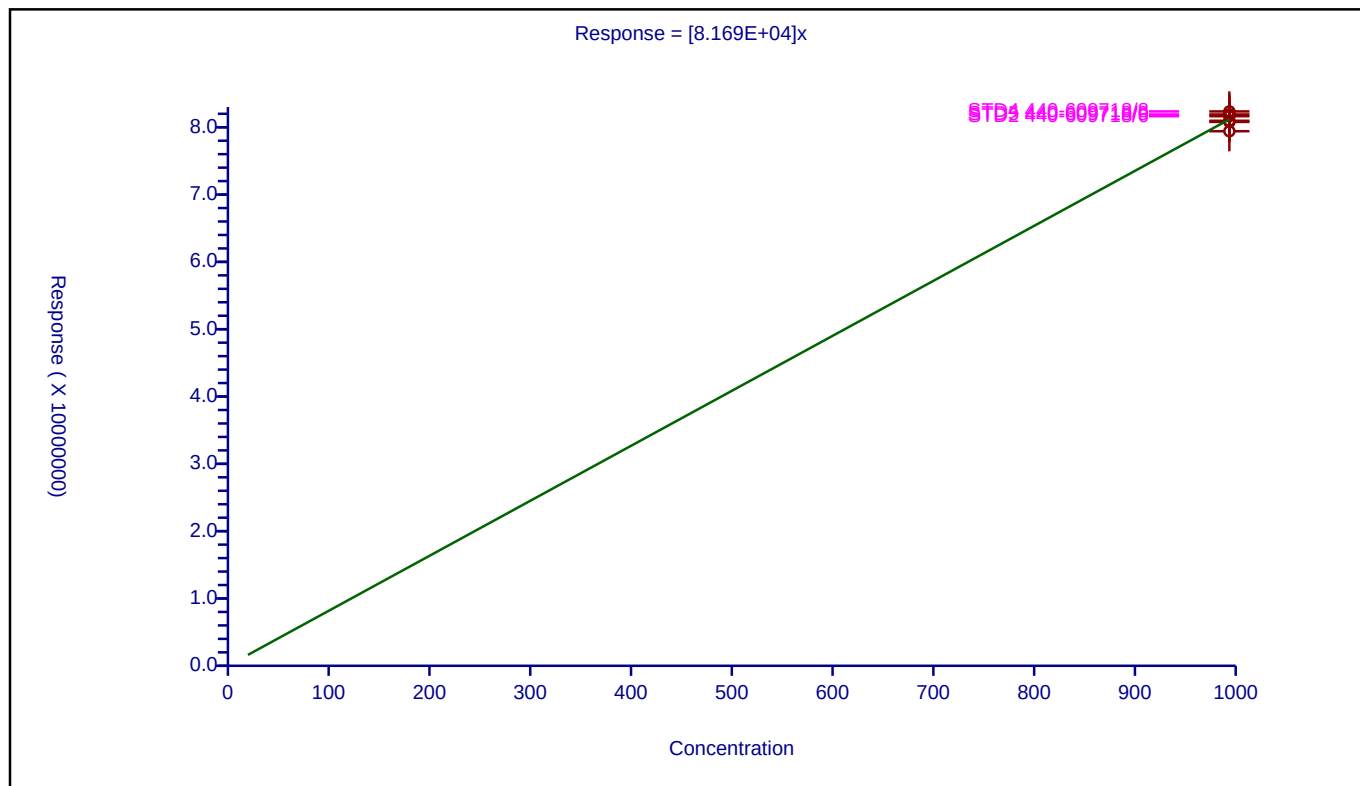
Curve Coefficients

Intercept: 0
Slope: 8.169E+04

Error Coefficients

Standard Error: 1040000
Relative Standard Error: 1.3
Correlation Coefficient: NA
Coefficient of Determination (Adjusted): 0

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	STD0 440-609718/4	993.7109	80960103.0			81472.491647	Y
2	STD1 440-609718/5	993.7109	79408704.0			79911.273993	Y
3	STD2 440-609718/6	993.7109	81642881.0			82159.590883	Y
4	STD3 440-609718/7	993.7109	80790497.0			81301.812227	Y
5	STD4 440-609718/8	993.7109	82351340.0			82872.533651	Y
6	STD5 440-609718/9	993.7109	81900670.0			82419.011405	Y



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Irvine Job No.: 440-267742-1
 SDG No.: _____
 Lab Sample ID: ICV 440-609717/10 Calibration Date: 05/22/2020 12:53
 Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
 GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
 Lab File ID: 440-0133563-010.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Bromate	Lin		93194		32.4	30.0	8.0	15.0
Bromide	Lin		153001		296	300	-1.2	15.0
Chlorate	Lin		131464		111	120	-7.7	15.0
Dichloroacetic acid(Surr)	Ave	81689	81680		994	994	-0.0	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-267742-1
 SDG No.: _____
 Lab Sample ID: ICV 440-609717/10 Calibration Date: 05/22/2020 12:53
 Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
 GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
 Lab File ID: 440-0133563-010.d

Analyte	RT	RT WINDOW	
		FROM	TO
Bromate	8.60	8.01	9.21
Bromide	16.90	15.73	18.10
Chlorate	18.53	17.59	19.44
Dichloroacetic acid(Surr)	14.38	13.39	15.40

Report Date: 23-May-2020 07:24:17

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-010.d
 Lims ID: ICV
 Client ID:
 Sample Type: ICV
 Inject. Date: 22-May-2020 12:53:00 ALS Bottle#: 0 Worklist Smp#: 10
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0133563-010
 Misc. Info.: 10 EB
 Operator ID: Instrument ID: IC-8
 Sublist:
 Method: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 23-May-2020 08:03:05 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1019
 First Level Reviewer: zakhrabov Date: 23-May-2020 06:49:22

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.467	7.467	0.000	19256158	NC	NC	
3 Bromate	8.600	8.609	-0.009	2795826	30.0	32.4	
\$ 6 Dichloroacetic acid(Surr)	14.375	14.392	-0.017	81165934	993.7	993.6	
4 Bromide	16.900	16.917	-0.017	45900215	300.0	296.5	
2 Chlorate	18.525	18.517	0.008	15791406	120.1	110.9	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WC3001ICV_00051 Amount Added: 150.00 Units: uL
 WCDCA_00081 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 23-May-2020 07:24:17

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-010.d

Injection Date: 22-May-2020 12:53:00

Instrument ID: IC-8

Operator ID:

Lims ID: ICV

Worklist Smp#: 10

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

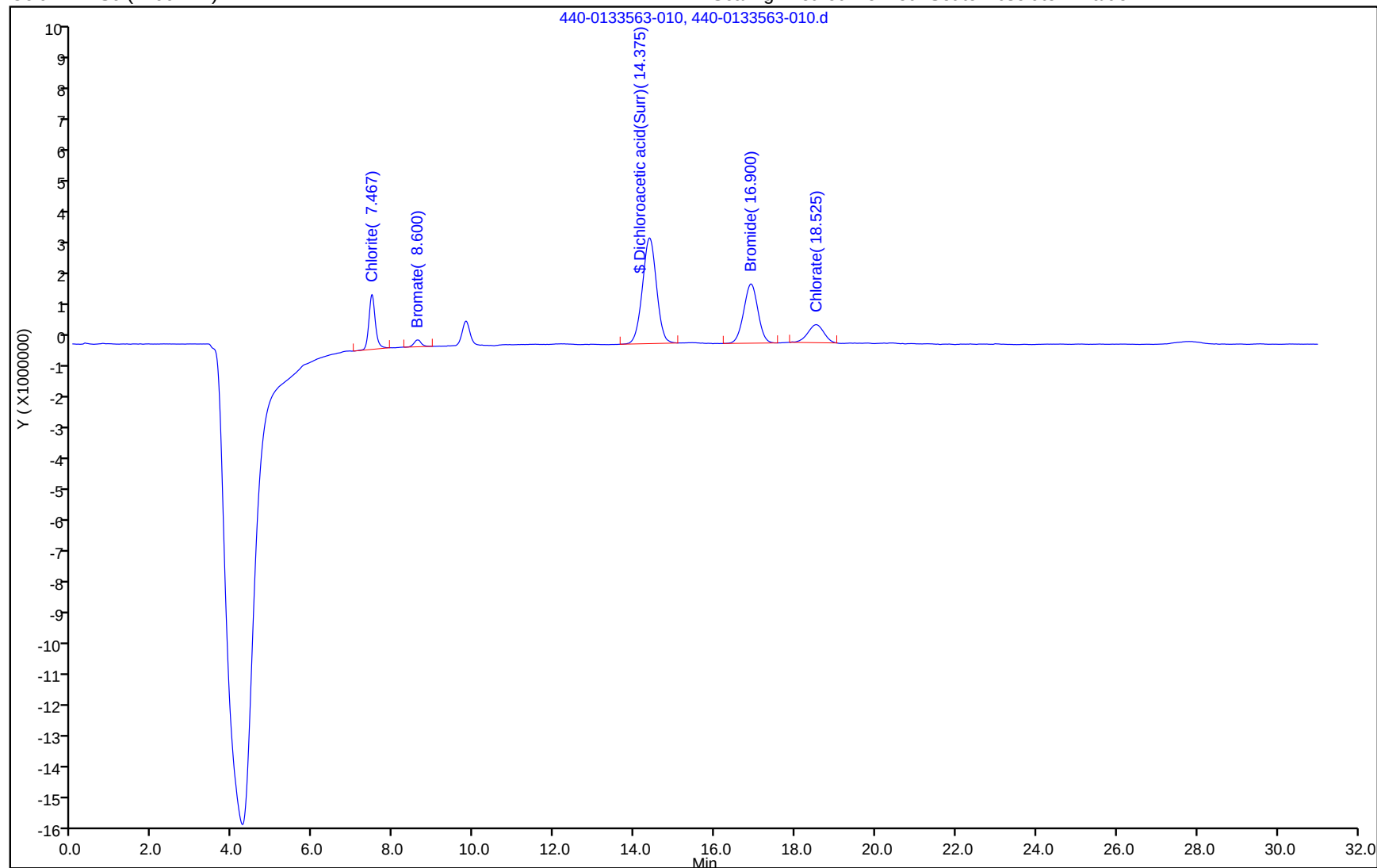
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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September 2020

Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-886

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Irvine Job No.: 440-267742-1
 SDG No.: _____
 Lab Sample ID: ICV 440-609718/10 Calibration Date: 05/22/2020 12:53
 Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
 GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
 Lab File ID: 440-0133563-010.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorite	Lin		160468		121	120	0.6	15.0
Dichloroacetic acid(Surr)	Ave	81689	81680		994	994	-0.0	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-267742-1
SDG No.: _____
Lab Sample ID: ICV 440-609718/10 Calibration Date: 05/22/2020 12:53
Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
Lab File ID: 440-0133563-010.d

Analyte	RT	RT WINDOW	
		FROM	TO
Chlorite	7.47	7.00	8.00
Dichloroacetic acid(Surr)	14.38	13.39	15.40

Report Date: 23-May-2020 07:24:18

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-010.d
 Lims ID: ICV
 Client ID:
 Sample Type: ICV
 Inject. Date: 22-May-2020 12:53:00 ALS Bottle#: 0 Worklist Smp#: 10
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0133563-010
 Misc. Info.: 10 EB
 Operator ID: Instrument ID: IC-8
 Sublist:
 Method: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 23-May-2020 08:03:05 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1019
 First Level Reviewer: zakhrabov Date: 23-May-2020 06:49:22

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.467	7.467	0.000	19256158	120.0	120.8	
3 Bromate	8.600	8.609	-0.009	2795826	NC	NC	
\$ 6 Dichloroacetic acid(Surr)	14.375	14.392	-0.017	81165934	993.7	993.6	
4 Bromide	16.900	16.917	-0.017	45900215	NC	NC	
2 Chlorate	18.525	18.517	0.008	15791406	NC	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WC3001ICV_00051 Amount Added: 150.00 Units: uL
 WCDCA_00081 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 23-May-2020 07:24:18

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-010.d

Injection Date: 22-May-2020 12:53:00

Instrument ID: IC-8

Operator ID:

Lims ID: ICV

Worklist Smp#: 10

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

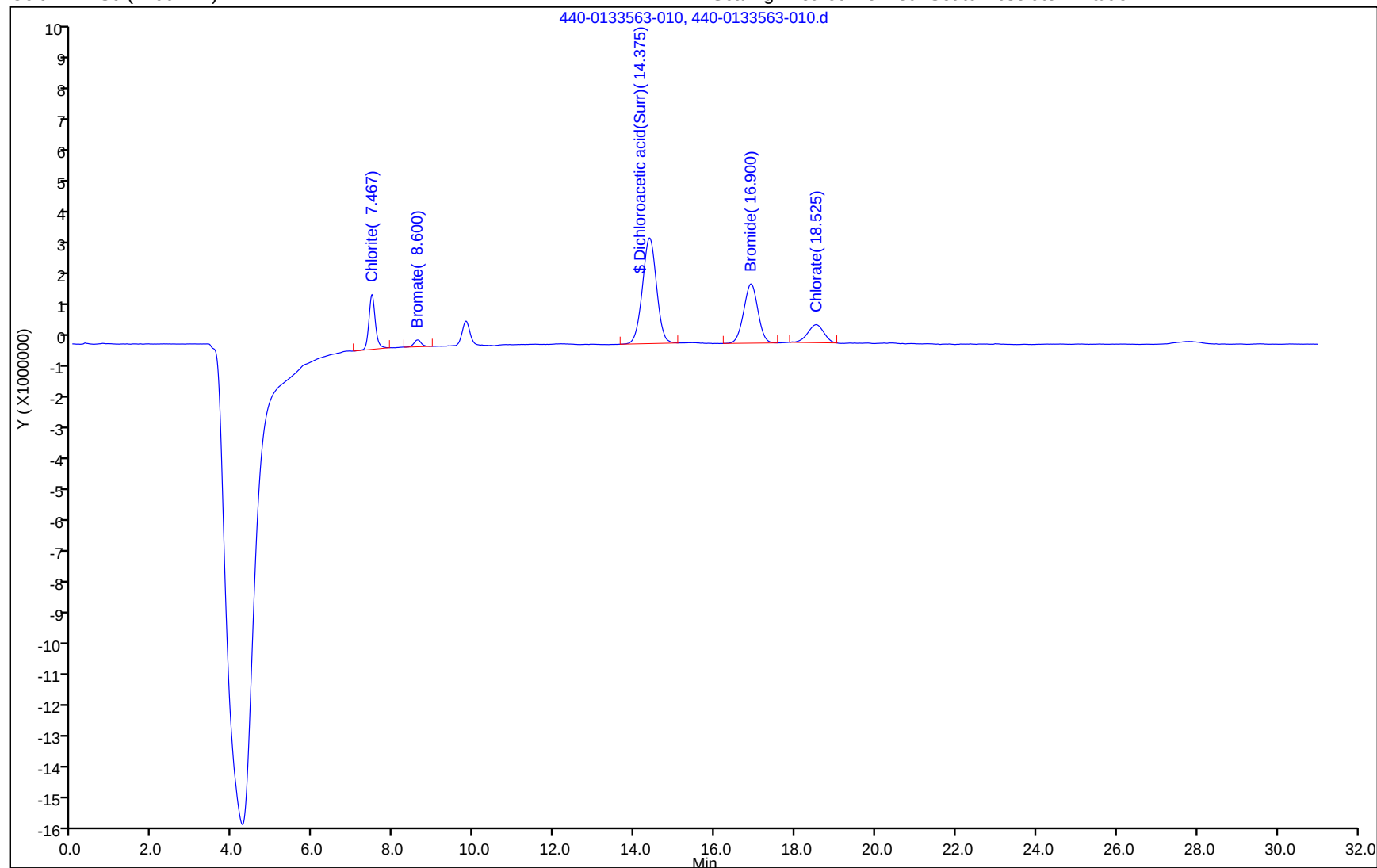
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Irvine Job No.: 440-267742-1
 SDG No.: _____
 Lab Sample ID: CCV 440-613692/1 Calibration Date: 06/22/2020 07:34
 Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
 GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
 Lab File ID: 440-0134572-001440-0134572-001.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Bromate	Lin		91463		26.6	25.0	6.3	15.0
Bromide	Lin		158979		257	250	3.0	15.0
Chlorate	Lin		150150		106	100	5.6	15.0
Dichloroacetic acid(Surr)	Ave	81689	90645		1100	994	11.0	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-267742-1
SDG No.: _____
Lab Sample ID: CCV 440-613692/1 Calibration Date: 06/22/2020 07:34
Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
Lab File ID: 440-0134572-001440-0134572-001.d

Analyte	RT	RT WINDOW	
		FROM	TO
Bromate	8.34	7.60	8.75
Bromide	15.86	14.28	16.43
Chlorate	17.09	15.55	17.19
Dichloroacetic acid(Surr)	13.52	12.05	13.87

Report Date: 22-Jun-2020 08:12:27

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-001440-0134572-001.d
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 22-Jun-2020 07:34:00 ALS Bottle#: 0 Worklist Smp#: 1
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0134572-001
 Misc. Info.: 1 EB
 Operator ID: Instrument ID: IC-8
 Sublist: chrom-300.1_C8*sub2
 Method: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 22-Jun-2020 08:12:27 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1047

First Level Reviewer: zakhrabov

Date: 22-Jun-2020 08:12:27

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.309	7.184	0.125	16054412	NC	NC	
3 Bromate	8.342	8.175	0.167	2286570	25.0	26.6	
\$ 6 Dichloroacetic acid(Surr)	13.517	12.959	0.558	90075243	993.7	1102.7	
4 Bromide	15.859	15.350	0.509	39744675	250.0	257.5	a
2 Chlorate	17.092	16.367	0.725	15014990	100.0	105.6	a

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

a - User Assigned ID

Reagents:

WC3001LCS_00090

Amount Added: 125.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 22-Jun-2020 08:12:27

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-001440-0134572-001.d

Injection Date: 22-Jun-2020 07:34:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCV

Worklist Smp#: 1

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

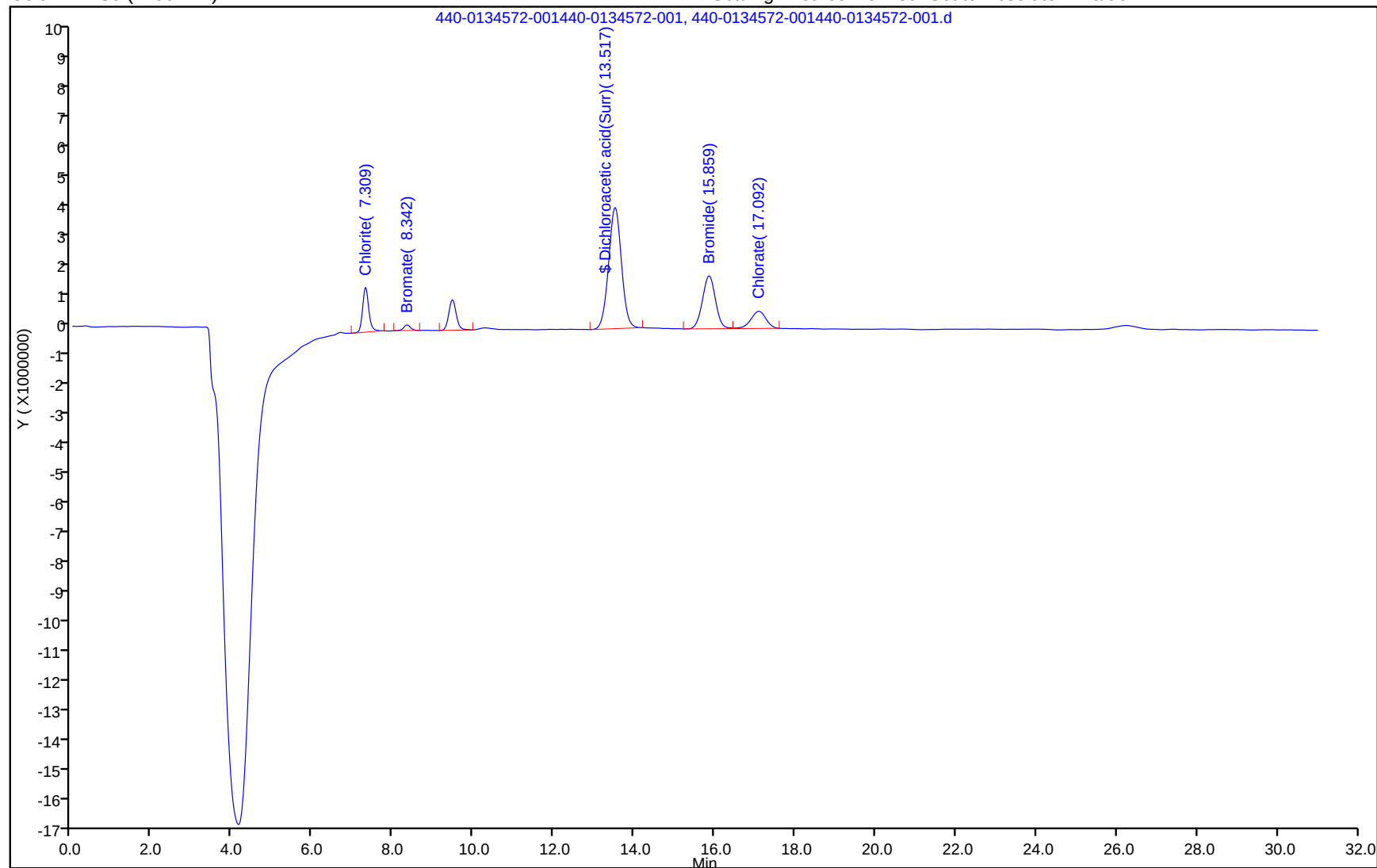
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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Report Date: 22-Jun-2020 08:12:27

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

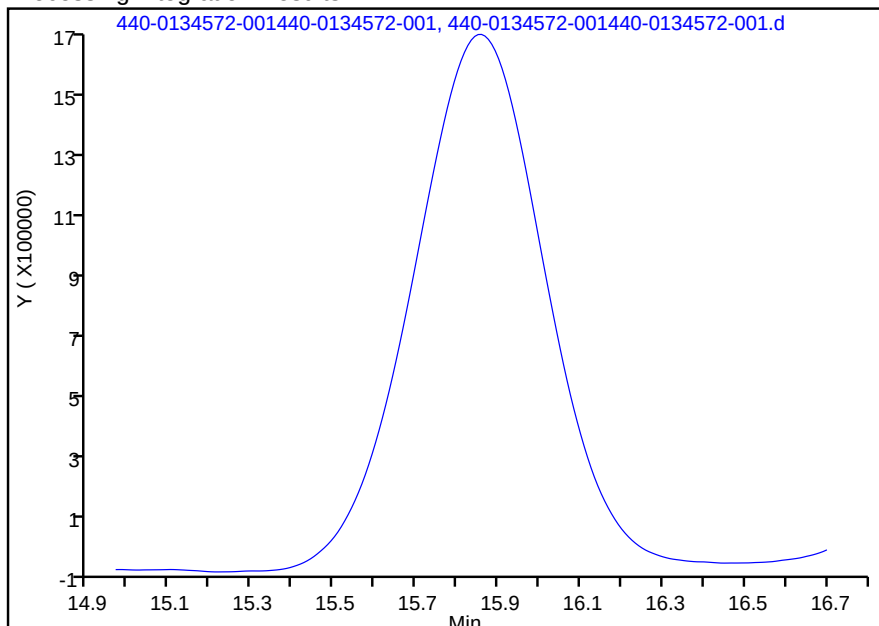
Data File:	\\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-001440-0134572-001.d		
Injection Date:	22-Jun-2020 07:34:00	Instrument ID:	IC-8
Lims ID:	CCV		
Client ID:			
Operator ID:		ALS Bottle#:	0
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	300.1_C8	Limit Group:	IC-300.1_28D
Column:	AS9 (4.00 mm)	Detector:	Ch-A-20110816009
		Worklist Smp#:	1

4 Bromide, CAS: 24959-67-9

Signal: 1

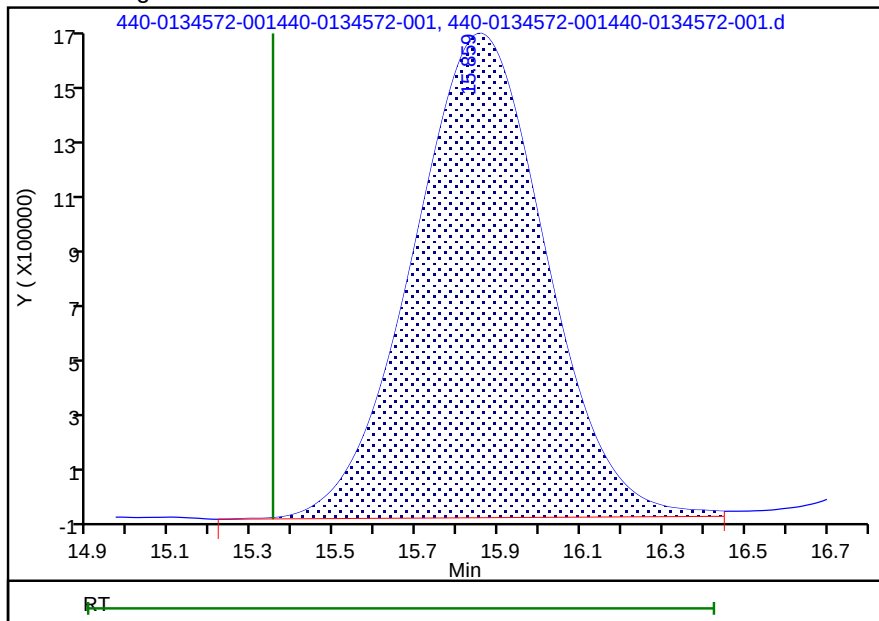
Not Detected
Expected RT: 15.35

Processing Integration Results



Manual Integration Results

RT: 15.86
Area: 39744675
Amount: 257.4852
Amount Units: ug/l



Reviewer: zakhrabov, 22-Jun-2020 08:12:07

Audit Action: Assigned Compound ID

Audit Reason:

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September 2020

Report Date: 22-Jun-2020 08:12:27

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

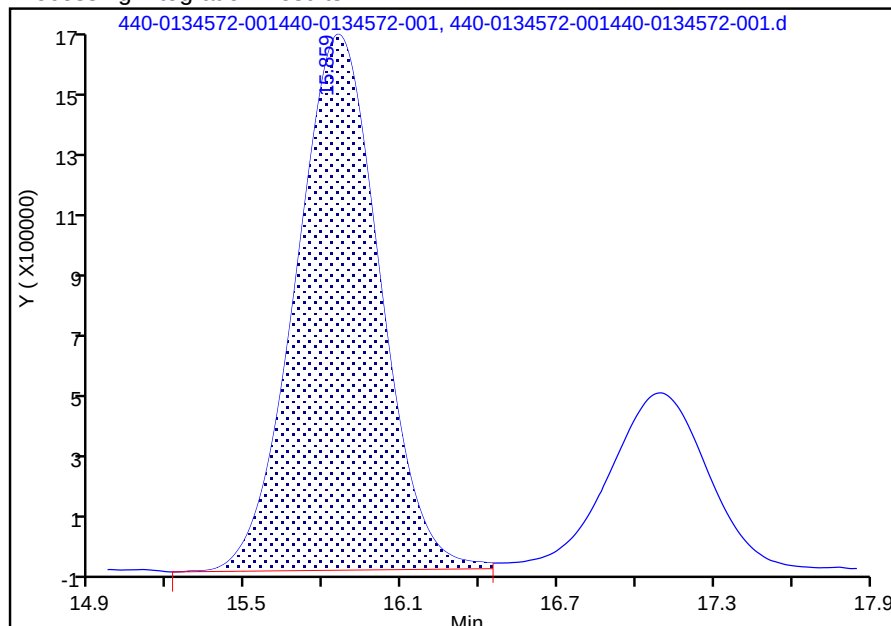
Data File:	\\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-001440-0134572-001.d		
Injection Date:	22-Jun-2020 07:34:00	Instrument ID:	IC-8
Lims ID:	CCV		
Client ID:			
Operator ID:		ALS Bottle#:	0
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	300.1_C8	Limit Group:	IC-300.1_28D
Column:	AS9 (4.00 mm)	Detector:	Ch-A-20110816009
		Worklist Smp#:	1

2 Chlorate, CAS: 7790-93-4

Signal: 1

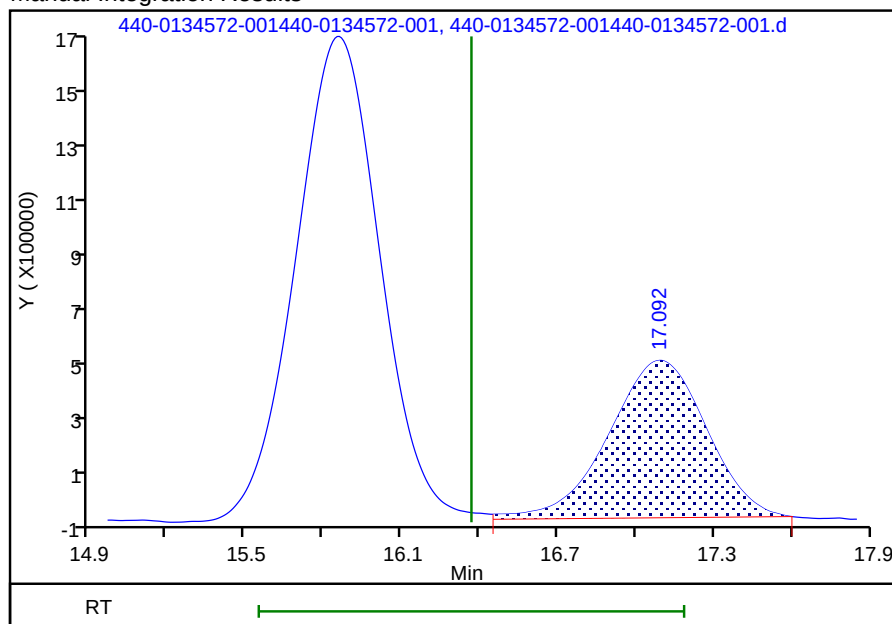
RT: 15.86
Area: 39744675
Amount: 273.5603
Amount Units: ug/l

Processing Integration Results



RT: 17.09
Area: 15014990
Amount: 105.5821
Amount Units: ug/l

Manual Integration Results



Reviewer: zakhrabov, 22-Jun-2020 08:12:12

Audit Action: Assigned Compound ID

Audit Reason:

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September 2020

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Irvine Job No.: 440-267742-1
 SDG No.: _____
 Lab Sample ID: CCV 440-613694/1 Calibration Date: 06/22/2020 07:34
 Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
 GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
 Lab File ID: 440-0134572-001440-0134572-001.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorite	Lin		160544		101	100	0.9	15.0
Dichloroacetic acid(Surr)	Ave	81689	90645		1100	994	11.0	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-267742-1
SDG No.: _____
Lab Sample ID: CCV 440-613694/1 Calibration Date: 06/22/2020 07:34
Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
Lab File ID: 440-0134572-001440-0134572-001.d

Analyte	RT	RT WINDOW	
		FROM	TO
Chlorite	7.31	7.00	8.00
Dichloroacetic acid(Surr)	13.52	12.05	13.87

Report Date: 22-Jun-2020 08:12:27

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-001440-0134572-001.d
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 22-Jun-2020 07:34:00 ALS Bottle#: 0 Worklist Smp#: 1
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0134572-001
 Misc. Info.: 1 EB
 Operator ID: Instrument ID: IC-8
 Sublist: chrom-300.1_C8*sub2
 Method: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 22-Jun-2020 08:12:27 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1047

First Level Reviewer: zakhrabov

Date: 22-Jun-2020 08:12:27

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.309	7.184	0.125	16054412	100.0	100.9	
3 Bromate	8.342	8.175	0.167	2286570	NC	NC	
\$ 6 Dichloroacetic acid(Surr)	13.517	12.959	0.558	90075243	993.7	1102.7	
4 Bromide	15.859	15.350	0.509	39744675	NC	NC	a
2 Chlorate	17.092	16.367	0.725	15014990	NC	NC	a

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

a - User Assigned ID

Reagents:

WC3001LCS_00090

Amount Added: 125.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 22-Jun-2020 08:12:27

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-001440-0134572-001.d

Injection Date: 22-Jun-2020 07:34:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCV

Worklist Smp#: 1

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

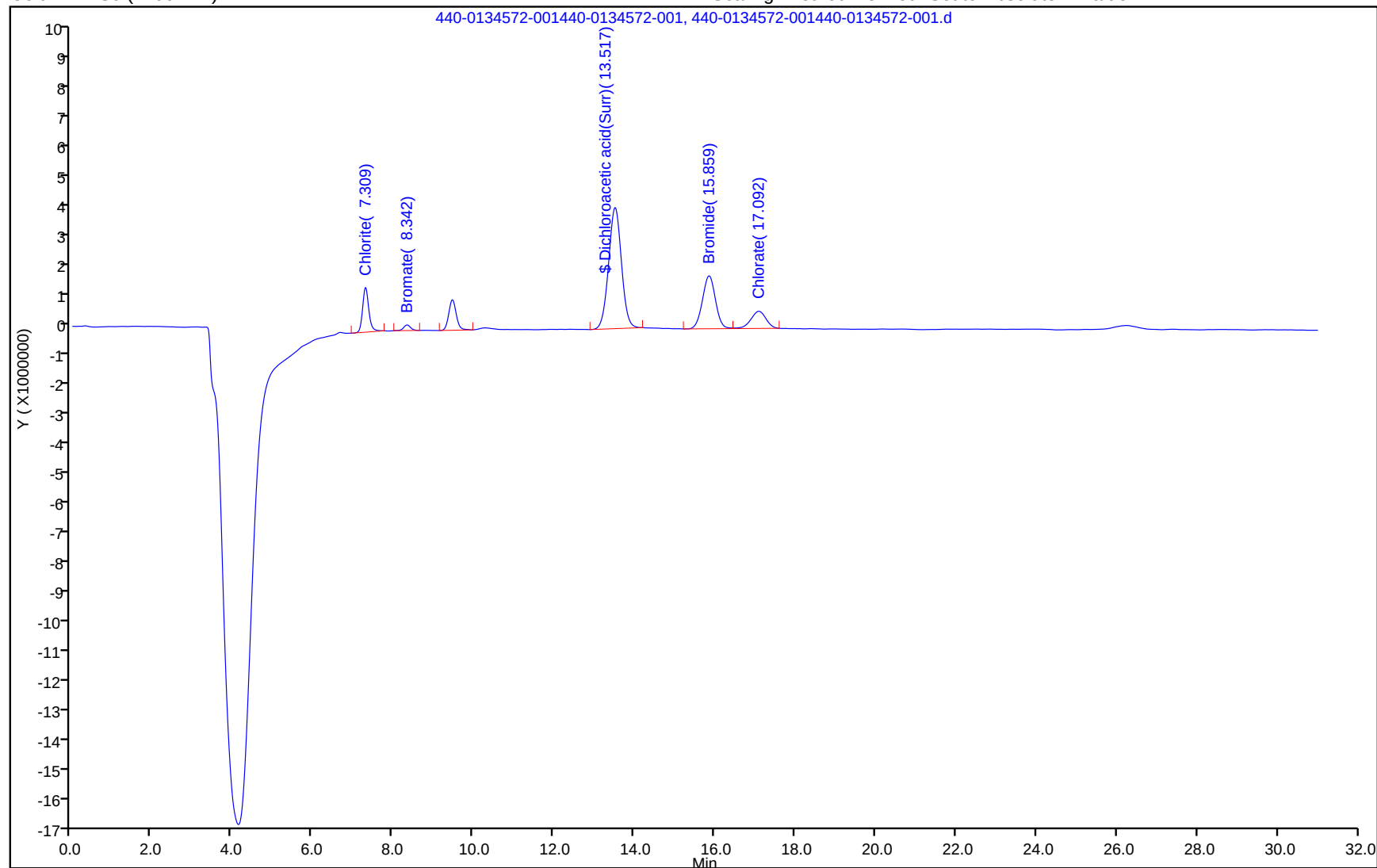
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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September 2020

Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-900

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Irvine Job No.: 440-267742-1
 SDG No.: _____
 Lab Sample ID: CCV 440-613692/13 Calibration Date: 06/22/2020 14:47
 Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
 GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
 Lab File ID: 440-0134572-013440-0134572-013.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Bromate	Lin		95699		55.1	50.0	10.2	15.0
Bromide	Lin		159226		510	500	2.0	15.0
Chlorate	Lin		154286		213	200	6.6	15.0
Dichloroacetic acid(Surr)	Ave	81689	89047		1080	994	9.0	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-267742-1
 SDG No.: _____
 Lab Sample ID: CCV 440-613692/13 Calibration Date: 06/22/2020 14:47
 Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
 GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
 Lab File ID: 440-0134572-013440-0134572-013.d

Analyte	RT	RT WINDOW	
		FROM	TO
Bromate	8.38	7.60	8.75
Bromide	15.98	15.00	17.25
Chlorate	17.25	15.55	17.19
Dichloroacetic acid(Surr)	13.63	12.75	14.67

Report Date: 23-Jun-2020 04:21:37

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-013440-0134572-013.d
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 22-Jun-2020 14:47:00 ALS Bottle#: 0 Worklist Smp#: 13
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0134572-013
 Misc. Info.: 15066 EB
 Operator ID: Instrument ID: IC-8
 Sublist: chrom-300.1_C8*sub2
 Method: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 23-Jun-2020 04:21:37 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1049

First Level Reviewer: zakhrabov

Date: 23-Jun-2020 03:56:04

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.333	7.184	0.149	31563326	NC	NC	
3 Bromate	8.375	8.175	0.200	4784955	50.0	55.1	
\$ 6 Dichloroacetic acid(Surr)	13.625	13.709	-0.084	88486655	993.7	1083.2	
4 Bromide	15.975	16.125	-0.150	79613012	500.0	510.0	a
2 Chlorate	17.250	16.367	0.883	30857174	200.0	213.2	a

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

a - User Assigned ID

Reagents:

WC3001LCS_00090

Amount Added: 250.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 23-Jun-2020 04:21:37

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-013440-0134572-013.d

Injection Date: 22-Jun-2020 14:47:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCV

Worklist Smp#: 13

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

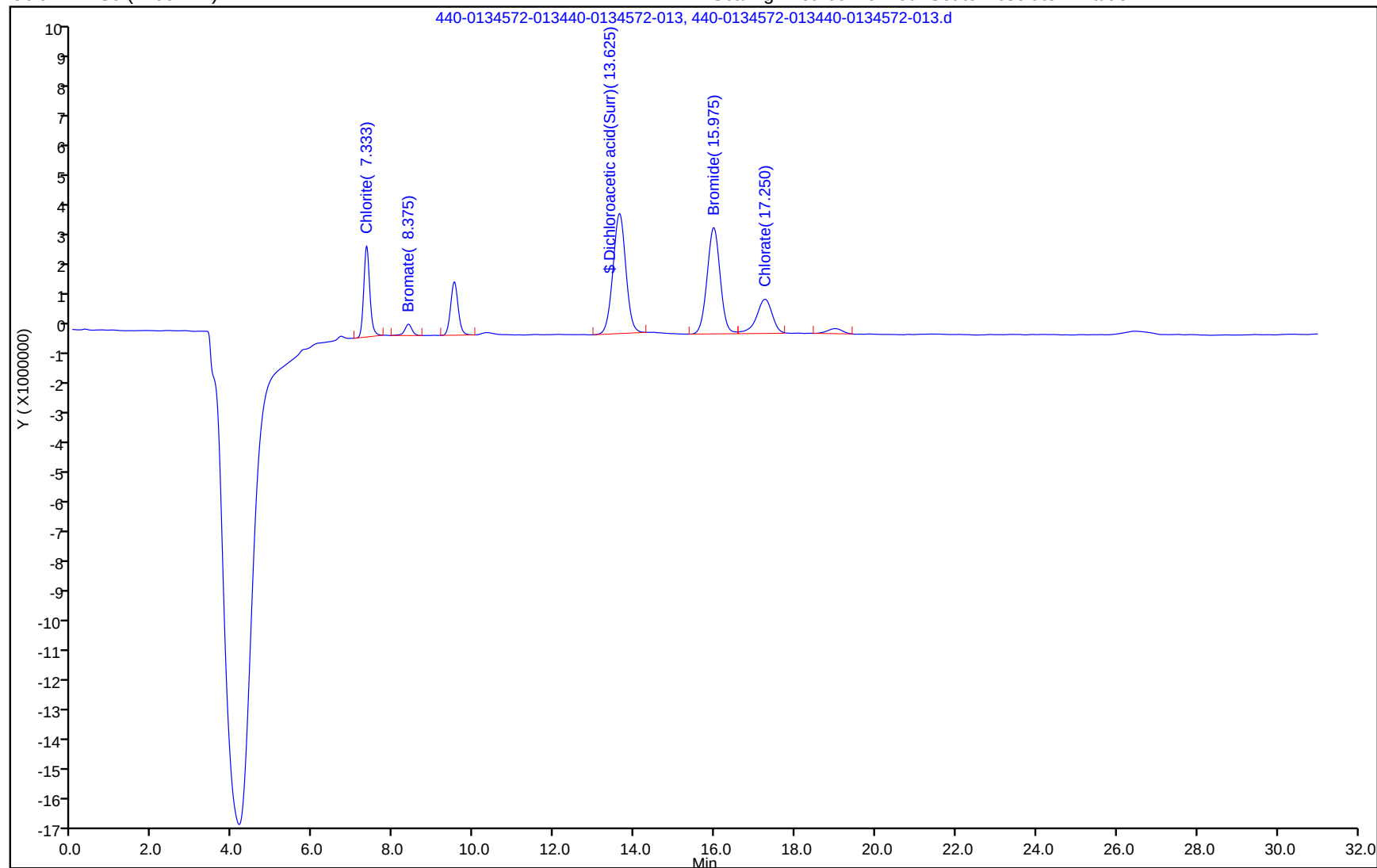
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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Report Date: 23-Jun-2020 04:21:37

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

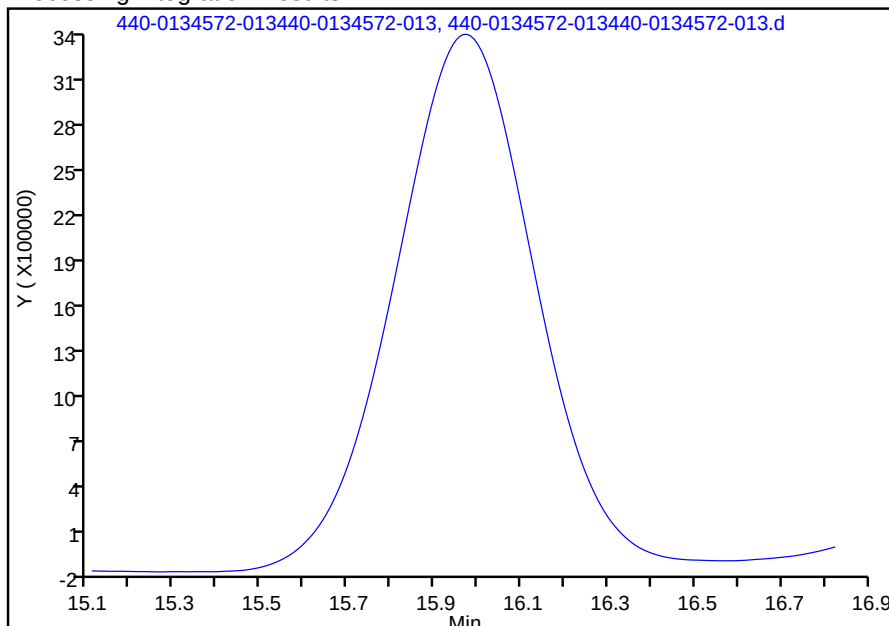
Data File:	\\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-013440-0134572-013.d		
Injection Date:	22-Jun-2020 14:47:00	Instrument ID:	IC-8
Lims ID:	CCV		
Client ID:			
Operator ID:		ALS Bottle#:	0
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	300.1_C8	Limit Group:	IC-300.1_28D
Column:	AS9 (4.00 mm)	Detector:	Ch-A-20110816009
		Worklist Smp#:	13

4 Bromide, CAS: 24959-67-9

Signal: 1

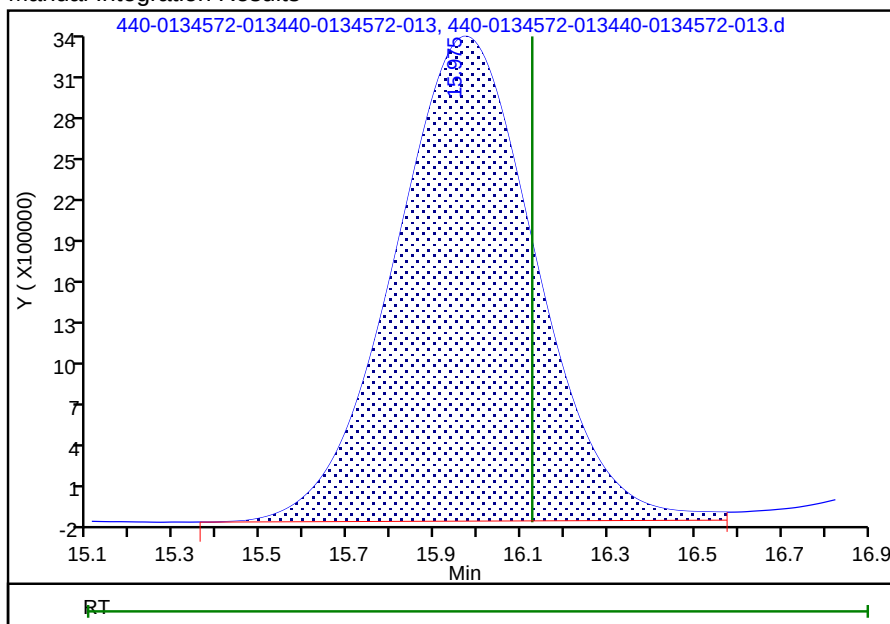
Not Detected
Expected RT: 16.13

Processing Integration Results



Manual Integration Results

RT: 15.98
Area: 79613012
Amount: 510.0358
Amount Units: ug/l



Reviewer: zakhrabov, 23-Jun-2020 03:55:49

Audit Action: Assigned Compound ID

Audit Reason:

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September 2020

Report Date: 23-Jun-2020 04:21:37

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

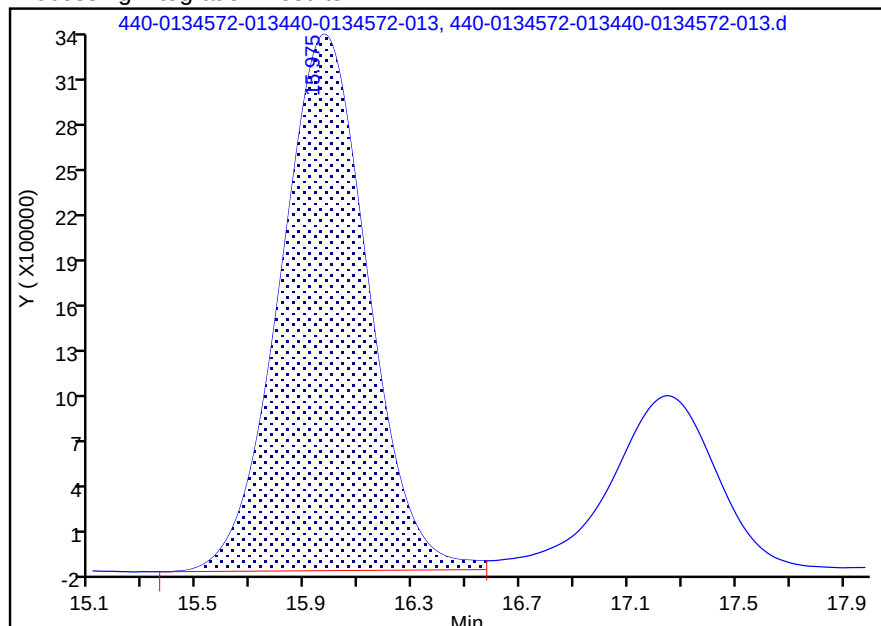
Data File:	\\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-013440-0134572-013.d		
Injection Date:	22-Jun-2020 14:47:00	Instrument ID:	IC-8
Lims ID:	CCV		
Client ID:			
Operator ID:		ALS Bottle#:	0
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	300.1_C8	Limit Group:	IC-300.1_28D
Column:	AS9 (4.00 mm)	Detector:	Ch-A-20110816009
		Worklist Smp#:	13

2 Chlorate, CAS: 7790-93-4

Signal: 1

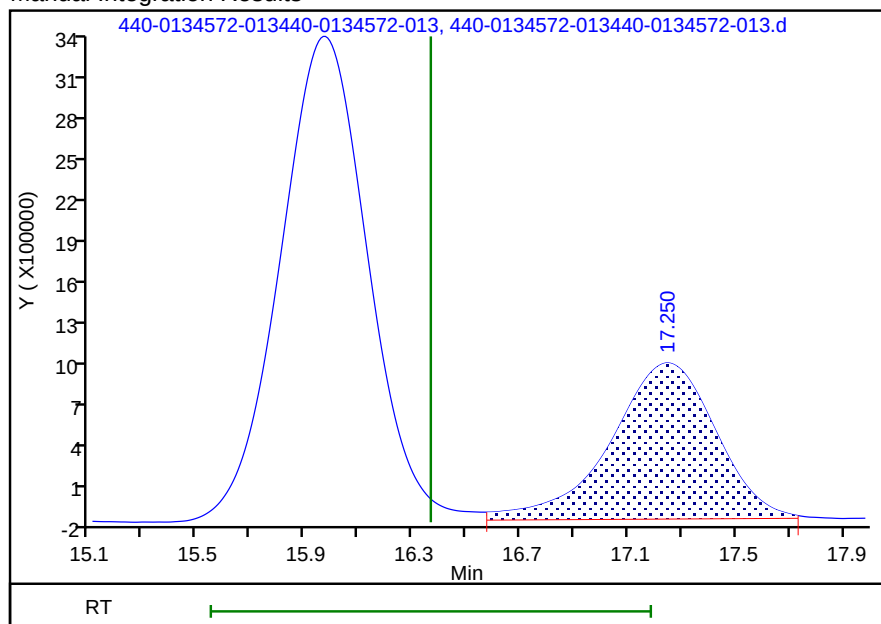
RT: 15.98
Area: 79613012
Amount: 0
Amount Units: ug/l

Processing Integration Results



RT: 17.25
Area: 30857174
Amount: 213.1913
Amount Units: ug/l

Manual Integration Results



Reviewer: zakhrabov, 23-Jun-2020 03:55:54

Audit Action: Assigned Compound ID

Audit Reason:

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September 2020

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Irvine Job No.: 440-267742-1
 SDG No.: _____
 Lab Sample ID: CCV 440-613694/13 Calibration Date: 06/22/2020 14:47
 Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
 GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
 Lab File ID: 440-0134572-013440-0134572-013.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorite	Lin		157817		197	200	-1.4	15.0
Dichloroacetic acid(Surr)	Ave	81689	89047		1080	994	9.0	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-267742-1
SDG No.: _____
Lab Sample ID: CCV 440-613694/13 Calibration Date: 06/22/2020 14:47
Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
Lab File ID: 440-0134572-013440-0134572-013.d

Analyte	RT	RT WINDOW	
		FROM	TO
Chlorite	7.33	7.00	8.00
Dichloroacetic acid(Surr)	13.63	12.75	14.67

Report Date: 23-Jun-2020 04:21:37

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-013440-0134572-013.d
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 22-Jun-2020 14:47:00 ALS Bottle#: 0 Worklist Smp#: 13
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0134572-013
 Misc. Info.: 15066 EB
 Operator ID: Instrument ID: IC-8
 Sublist: chrom-300.1_C8*sub2
 Method: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 23-Jun-2020 04:21:37 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1049

First Level Reviewer: zakhrabov

Date: 23-Jun-2020 03:56:04

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.333	7.184	0.149	31563326	200.0	197.2	
3 Bromate	8.375	8.175	0.200	4784955	NC	NC	
\$ 6 Dichloroacetic acid(Surr)	13.625	13.709	-0.084	88486655	993.7	1083.2	
4 Bromide	15.975	16.125	-0.150	79613012	NC	NC	a
2 Chlorate	17.250	16.367	0.883	30857174	NC	NC	a

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

a - User Assigned ID

Reagents:

WC3001LCS_00090

Amount Added: 250.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 23-Jun-2020 04:21:37

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-013440-0134572-013.d

Injection Date: 22-Jun-2020 14:47:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCV

Worklist Smp#: 13

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

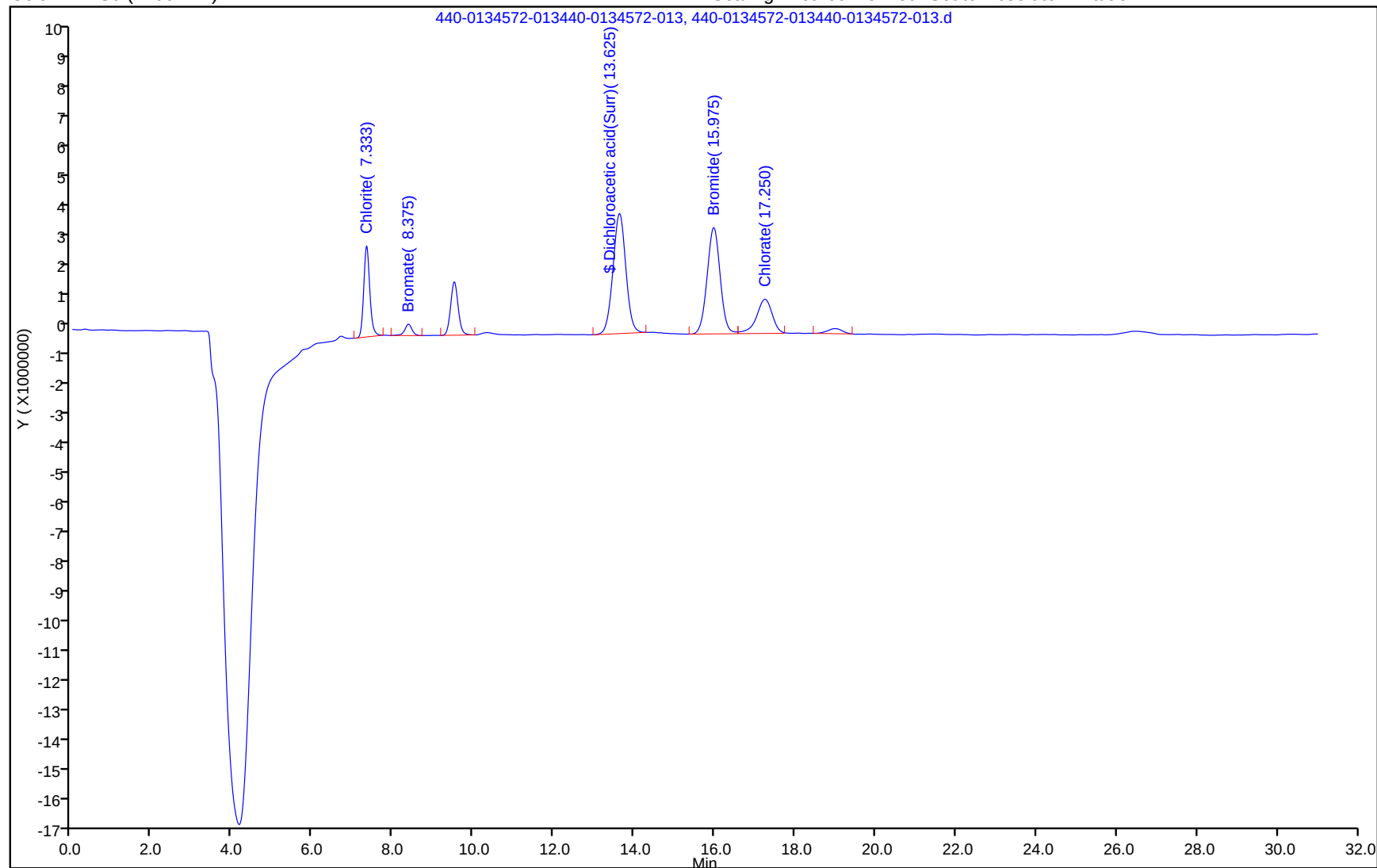
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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September 2020

Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-910

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Irvine Job No.: 440-267742-1
 SDG No.: _____
 Lab Sample ID: CCV 440-613692/25 Calibration Date: 06/22/2020 22:02
 Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
 GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
 Lab File ID: 440-0134572-025440-0134572-025.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Bromate	Lin		88092		25.6	25.0	2.5	15.0
Bromide	Lin		157778		256	250	2.2	15.0
Chlorate	Lin		152702		107	100	7.3	15.0
Dichloroacetic acid(Surr)	Ave	81689	92893		1130	994	13.7	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-267742-1
 SDG No.: _____
 Lab Sample ID: CCV 440-613692/25 Calibration Date: 06/22/2020 22:02
 Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
 GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
 Lab File ID: 440-0134572-025440-0134572-025.d

Analyte	RT	RT WINDOW	
		FROM	TO
Bromate	8.40	7.60	8.75
Bromide	16.04	15.00	17.25
Chlorate	17.36	15.55	17.19
Dichloroacetic acid(Surr)	13.72	12.75	14.67

Report Date: 23-Jun-2020 04:21:41

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-025440-0134572-025.d
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 22-Jun-2020 22:02:00 ALS Bottle#: 0 Worklist Smp#: 25
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0134572-025
 Misc. Info.: 22885 EB
 Operator ID: Instrument ID: IC-8
 Sublist: chrom-300.1_C8*sub2
 Method: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 23-Jun-2020 04:21:41 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1049

First Level Reviewer: zakhrabov

Date: 23-Jun-2020 04:02:35

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.350	7.184	0.166	15988226	NC	NC	
3 Bromate	8.400	8.175	0.225	2202304	25.0	25.6	M
\$ 6 Dichloroacetic acid(Surr)	13.717	13.709	0.008	92308539	993.7	1130.0	
4 Bromide	16.042	16.125	-0.083	39444414	250.0	255.6	a
2 Chlorate	17.358	16.367	0.991	15270215	100.0	107.3	a

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

WC3001LCS_00090

Amount Added: 125.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 23-Jun-2020 04:21:41

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-025440-0134572-025.d

Injection Date: 22-Jun-2020 22:02:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCV

Worklist Smp#: 25

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

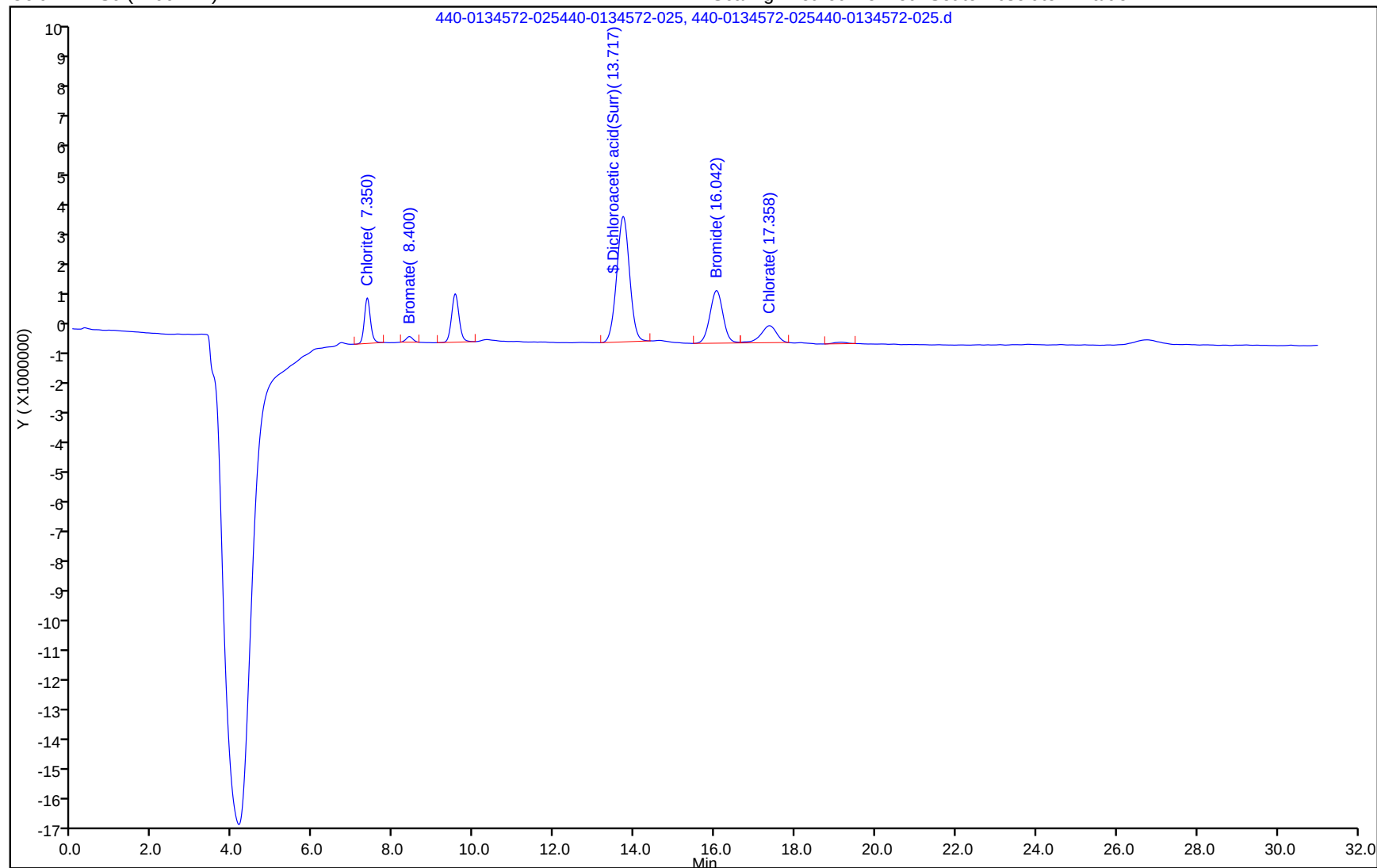
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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September 2020

Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-914

Report Date: 23-Jun-2020 04:21:41

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

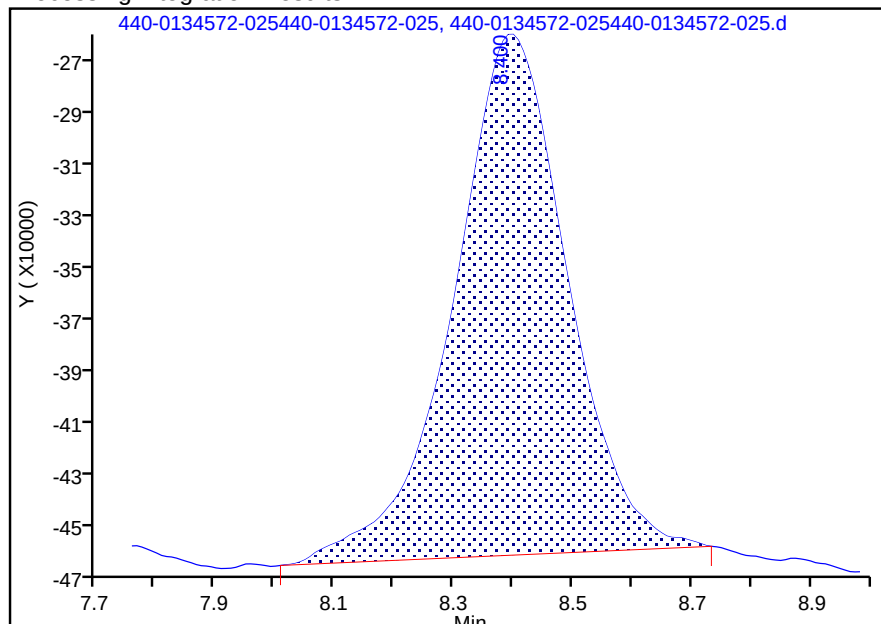
Data File:	\\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-025440-0134572-025.d		
Injection Date:	22-Jun-2020 22:02:00	Instrument ID:	IC-8
Lims ID:	CCV		
Client ID:			
Operator ID:		ALS Bottle#:	0
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	300.1_C8	Limit Group:	IC-300.1_28D
Column:	AS9 (4.00 mm)	Detector:	Ch-A-20110816009
		Worklist Smp#:	25

3 Bromate, CAS: 15541-45-4

Signal: 1

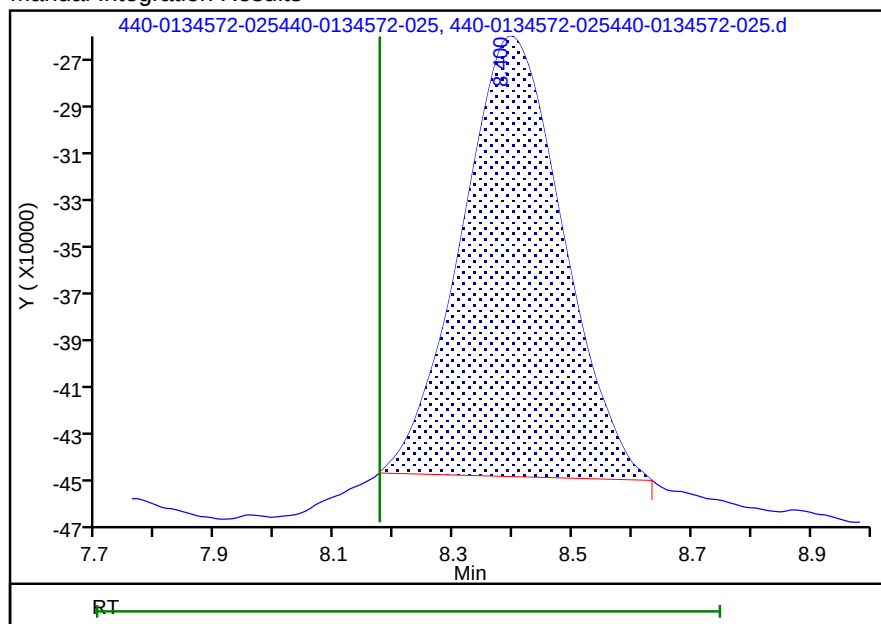
RT: 8.40
Area: 2642041
Amount: 30.642667
Amount Units: ug/l

Processing Integration Results



RT: 8.40
Area: 2202304
Amount: 25.619665
Amount Units: ug/l

Manual Integration Results



Reviewer: zakhrabov, 23-Jun-2020 04:01:59

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

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September 2020

Report Date: 23-Jun-2020 04:21:41

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

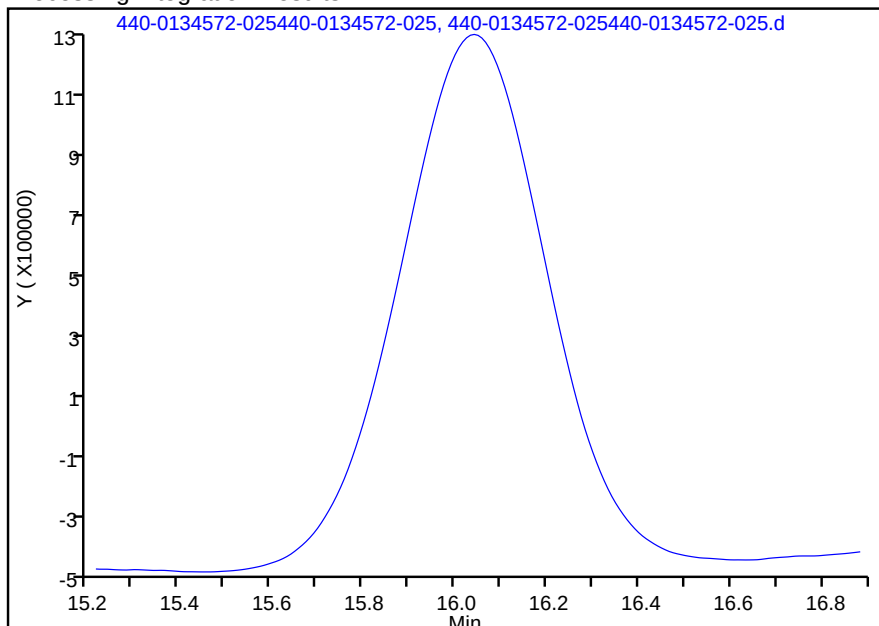
Data File:	\\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-025440-0134572-025.d		
Injection Date:	22-Jun-2020 22:02:00	Instrument ID:	IC-8
Lims ID:	CCV		
Client ID:			
Operator ID:		ALS Bottle#:	0
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	300.1_C8	Limit Group:	IC-300.1_28D
Column:	AS9 (4.00 mm)	Detector:	Ch-A-20110816009
		Worklist Smp#:	25

4 Bromide, CAS: 24959-67-9

Signal: 1

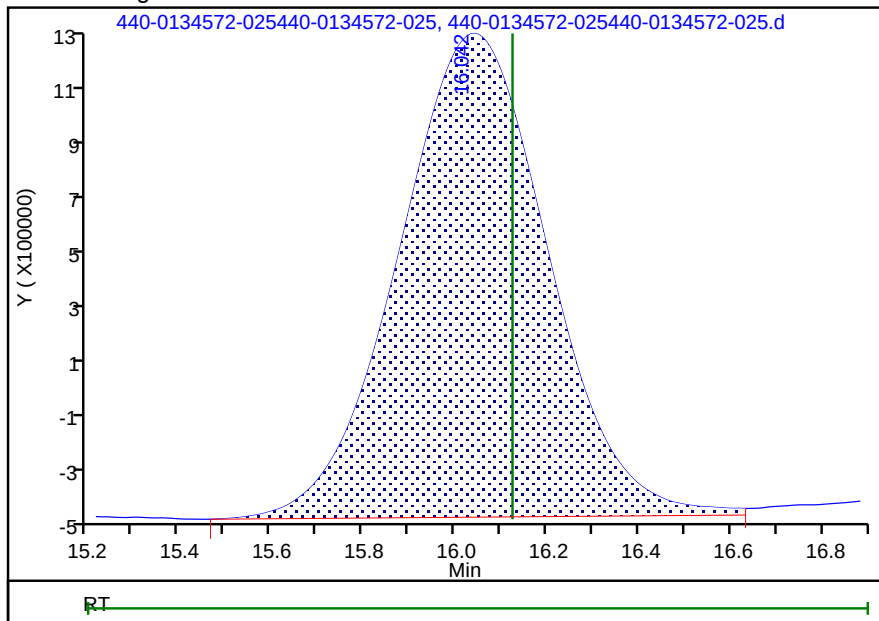
Not Detected
Expected RT: 16.13

Processing Integration Results



Manual Integration Results

RT: 16.04
Area: 39444414
Amount: 255.5832
Amount Units: ug/l



Reviewer: zakhrabov, 23-Jun-2020 04:02:26

Audit Action: Assigned Compound ID

Audit Reason: Baseline Smoothing

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Report Date: 23-Jun-2020 04:21:41

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

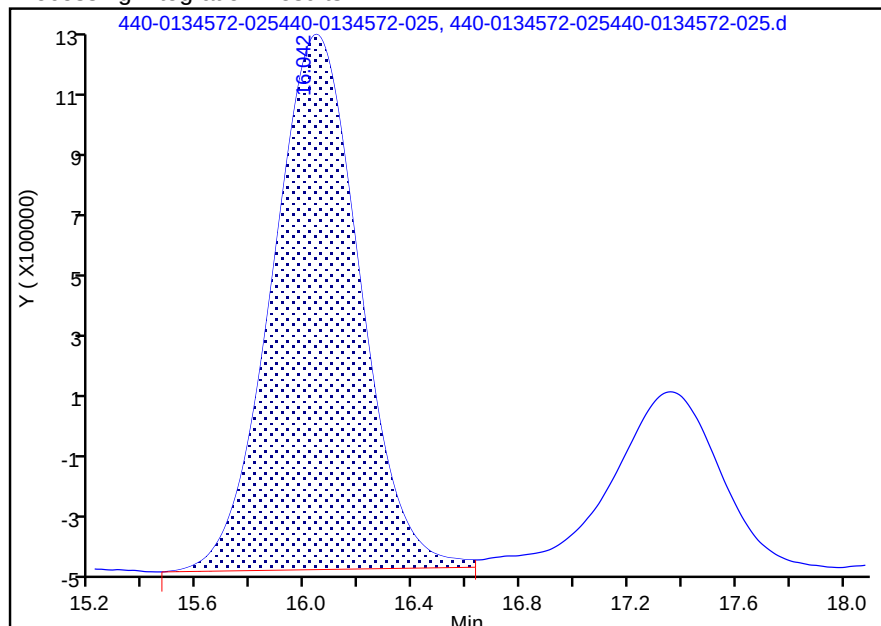
Data File:	\\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-025440-0134572-025.d		
Injection Date:	22-Jun-2020 22:02:00	Instrument ID:	IC-8
Lims ID:	CCV		
Client ID:			
Operator ID:		ALS Bottle#:	0
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	300.1_C8	Limit Group:	IC-300.1_28D
Column:	AS9 (4.00 mm)	Detector:	Ch-A-20110816009
		Worklist Smp#:	25

2 Chlorate, CAS: 7790-93-4

Signal: 1

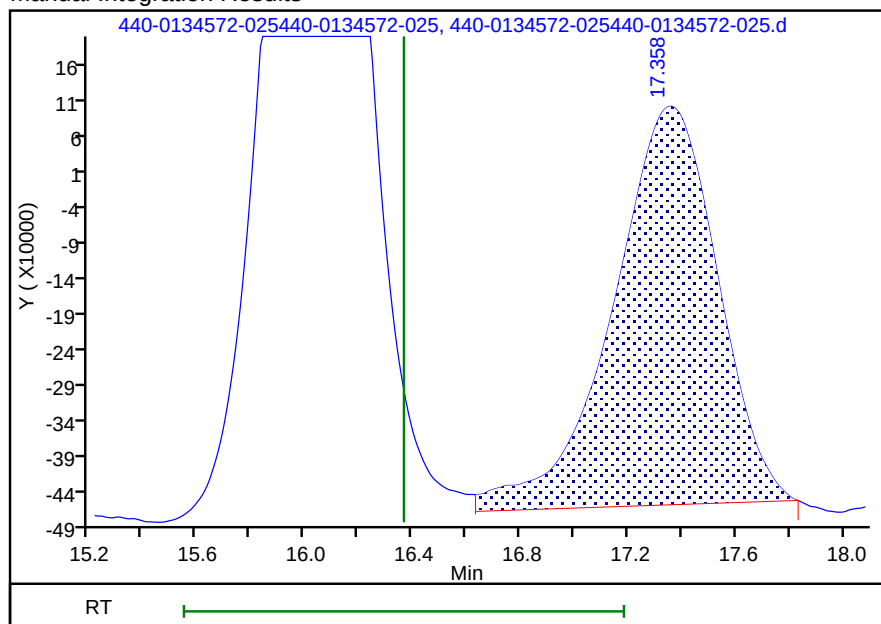
RT: 16.04
Area: 39444414
Amount: 271.5208
Amount Units: ug/l

Processing Integration Results



RT: 17.36
Area: 15270215
Amount: 107.3157
Amount Units: ug/l

Manual Integration Results



Reviewer: zakhrabov, 23-Jun-2020 04:02:23

Audit Action: Assigned Compound ID

Audit Reason: Baseline Smoothing

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September 2020

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Irvine Job No.: 440-267742-1
 SDG No.: _____
 Lab Sample ID: CCV 440-613694/25 Calibration Date: 06/22/2020 22:02
 Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
 GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
 Lab File ID: 440-0134572-025440-0134572-025.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorite	Lin		159882		100	100	0.5	15.0
Dichloroacetic acid(Surr)	Ave	81689	92893		1130	994	13.7	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-267742-1
SDG No.: _____
Lab Sample ID: CCV 440-613694/25 Calibration Date: 06/22/2020 22:02
Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
Lab File ID: 440-0134572-025440-0134572-025.d

Analyte	RT	RT WINDOW	
		FROM	TO
Chlorite	7.35	7.00	8.00
Dichloroacetic acid(Surr)	13.72	12.75	14.67

Report Date: 23-Jun-2020 04:21:41

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-025440-0134572-025.d
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 22-Jun-2020 22:02:00 ALS Bottle#: 0 Worklist Smp#: 25
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0134572-025
 Misc. Info.: 22885 EB
 Operator ID: Instrument ID: IC-8
 Sublist: chrom-300.1_C8*sub2
 Method: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 23-Jun-2020 04:21:41 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1049

First Level Reviewer: zakhrabov

Date: 23-Jun-2020 04:02:35

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.350	7.184	0.166	15988226	100.0	100.5	
3 Bromate	8.400	8.175	0.225	2202304	NC	NC	M
\$ 6 Dichloroacetic acid(Surr)	13.717	13.709	0.008	92308539	993.7	1130.0	
4 Bromide	16.042	16.125	-0.083	39444414	NC	NC	a
2 Chlorate	17.358	16.367	0.991	15270215	NC	NC	a

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

WC3001LCS_00090

Amount Added: 125.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 23-Jun-2020 04:21:42

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-025440-0134572-025.d

Injection Date: 22-Jun-2020 22:02:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCV

Worklist Smp#: 25

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

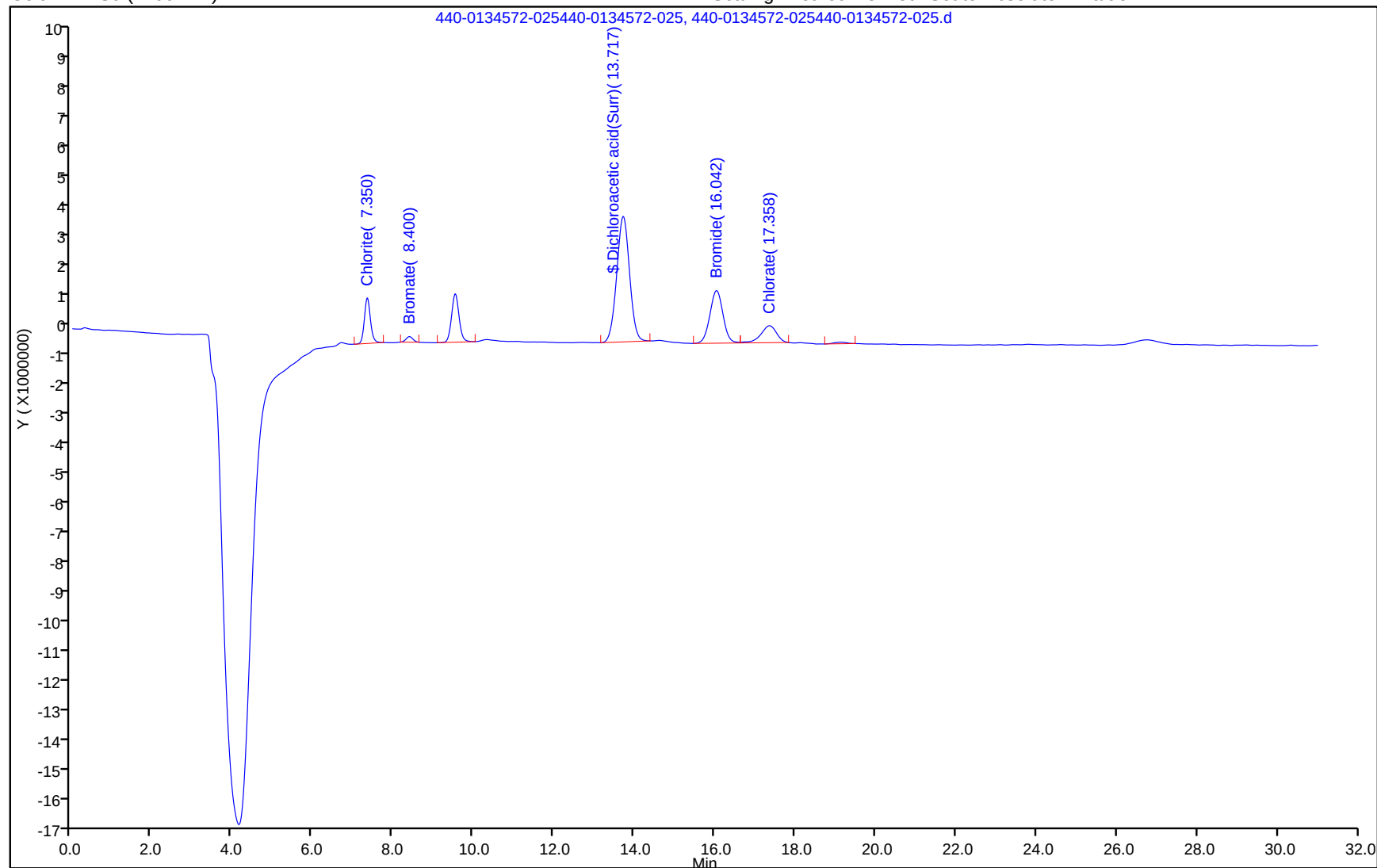
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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September 2020

Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-921

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Irvine Job No.: 440-267742-1
 SDG No.: _____
 Lab Sample ID: CCV 440-613692/37 Calibration Date: 06/23/2020 05:27
 Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
 GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
 Lab File ID: 440-0134572-037440-0134572-037.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Bromate	Lin		86224		49.7	50.0	-0.6	15.0
Bromide	Lin		158823		509	500	1.8	15.0
Chlorate	Lin		154259		213	200	6.6	15.0
Dichloroacetic acid(Surr)	Ave	81689	88484		1080	994	8.3	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-267742-1
 SDG No.: _____
 Lab Sample ID: CCV 440-613692/37 Calibration Date: 06/23/2020 05:27
 Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
 GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
 Lab File ID: 440-0134572-037440-0134572-037.d

Analyte	RT	RT WINDOW	
		FROM	TO
Bromate	8.44	7.60	8.75
Bromide	16.30	15.00	17.25
Chlorate	17.62	15.55	17.19
Dichloroacetic acid(Surr)	13.76	12.75	14.67

Report Date: 23-Jun-2020 06:18:28

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-037440-0134572-037.d
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 23-Jun-2020 05:27:00 ALS Bottle#: 0 Worklist Smp#: 37
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0134572-037
 Misc. Info.: 1555 EB
 Operator ID: Instrument ID: IC-8
 Sublist: chrom-300.1_C8*sub2
 Method: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 23-Jun-2020 06:18:28 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1049

First Level Reviewer: zakhrabov

Date: 23-Jun-2020 06:18:28

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.375	7.184	0.191	31627505	NC	NC	M
3 Bromate	8.442	8.175	0.267	4311184	50.0	49.7	M
\$ 6 Dichloroacetic acid(Surr)	13.759	13.709	0.050	87927874	993.7	1076.4	
4 Bromide	16.300	16.125	0.175	79411315	500.0	508.8	a
2 Chlorate	17.617	16.367	1.250	30851764	200.0	213.2	a

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

WC3001LCS_00090

Amount Added: 250.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 23-Jun-2020 06:18:28

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-037440-0134572-037.d

Injection Date: 23-Jun-2020 05:27:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCV

Worklist Smp#: 37

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

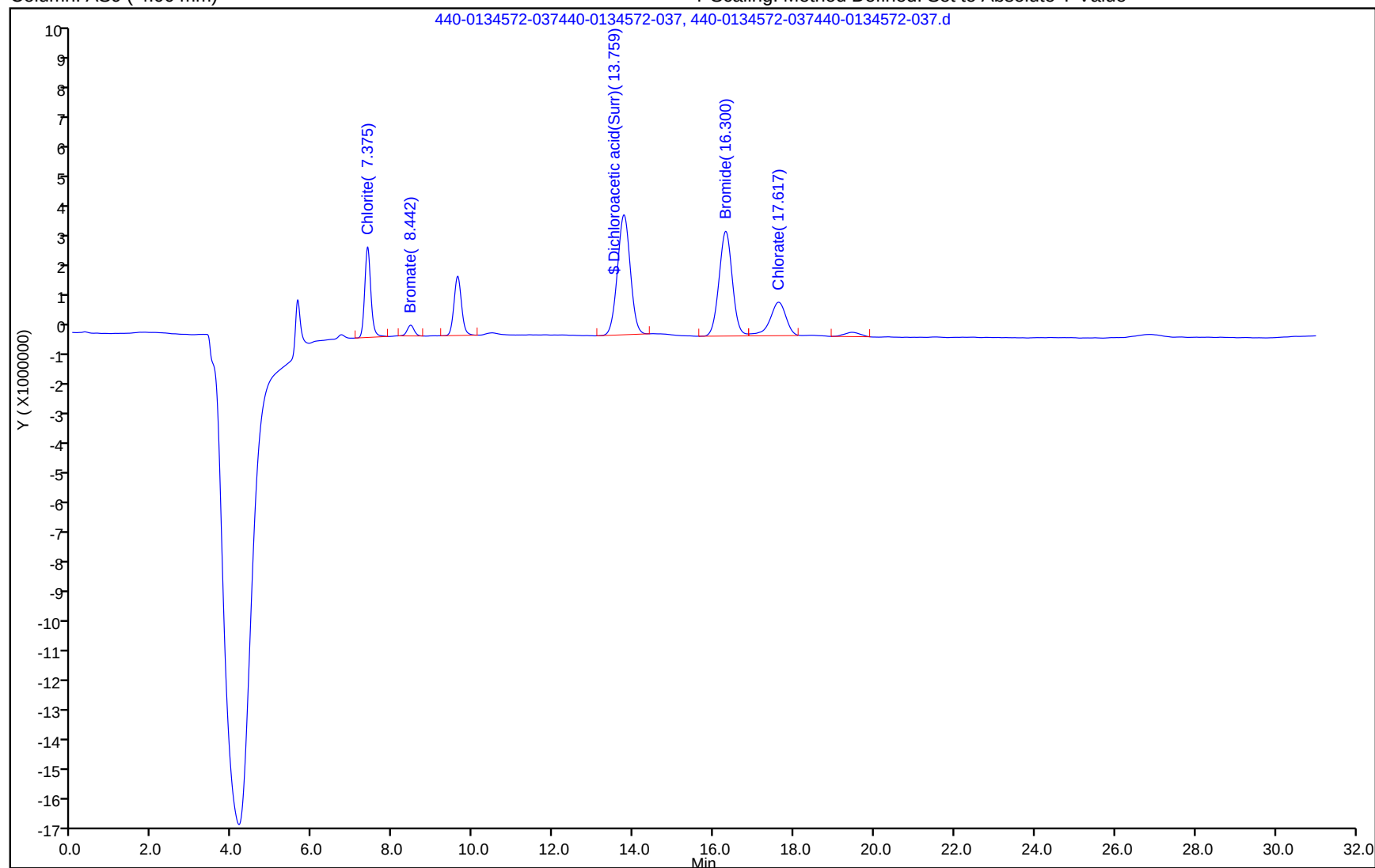
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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September 2020

Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-925

Report Date: 23-Jun-2020 06:18:28

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

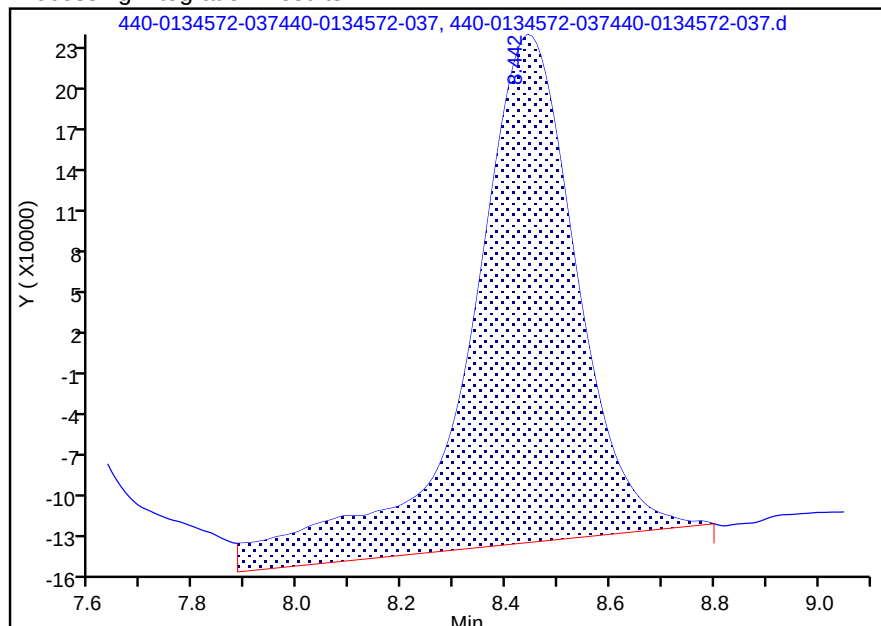
Data File:	\\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-037440-0134572-037.d		
Injection Date:	23-Jun-2020 05:27:00	Instrument ID:	IC-8
Lims ID:	CCV		
Client ID:			
Operator ID:		ALS Bottle#:	0
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	300.1_C8	Limit Group:	IC-300.1_28D
Column:	AS9 (4.00 mm)	Detector:	Ch-A-20110816009
		Worklist Smp#:	37

3 Bromate, CAS: 15541-45-4

Signal: 1

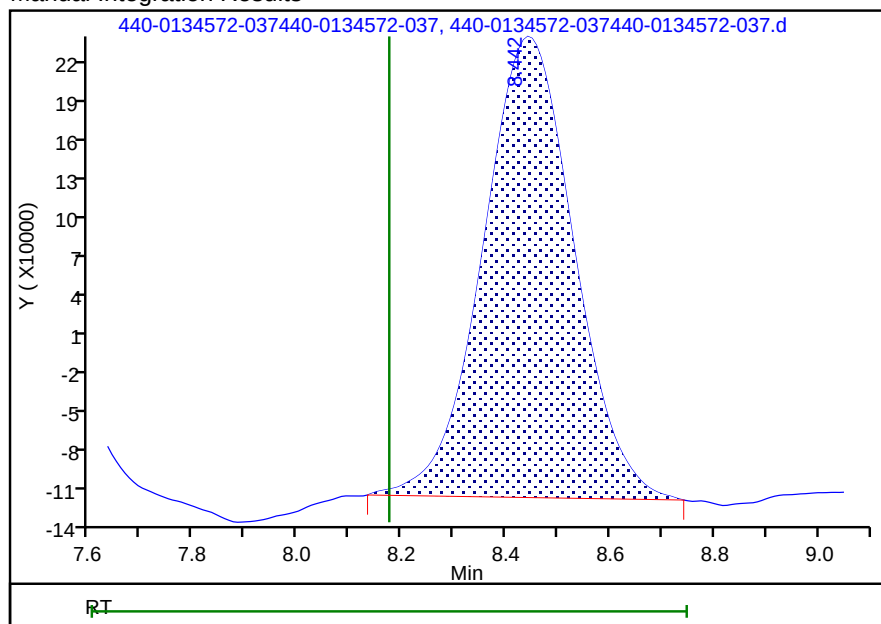
RT: 8.44
Area: 5395818
Amount: 62.098349
Amount Units: ug/l

Processing Integration Results



RT: 8.44
Area: 4311184
Amount: 49.708856
Amount Units: ug/l

Manual Integration Results



Reviewer: zakhrabov, 23-Jun-2020 06:16:38

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

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06/29/2020

September 2020

Report Date: 23-Jun-2020 06:18:28

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

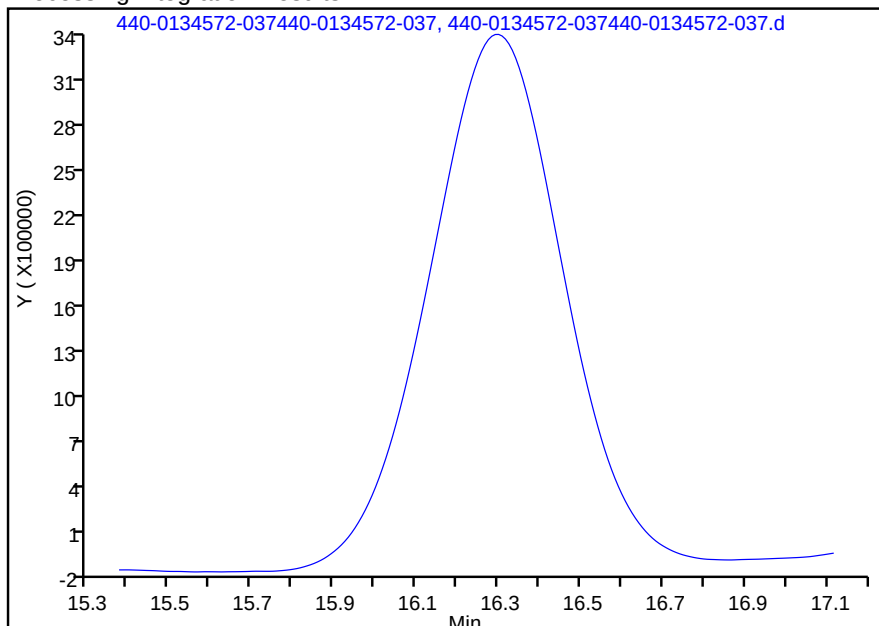
Data File:	\\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-037440-0134572-037.d		
Injection Date:	23-Jun-2020 05:27:00	Instrument ID:	IC-8
Lims ID:	CCV		
Client ID:			
Operator ID:		ALS Bottle#:	0
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	300.1_C8	Limit Group:	IC-300.1_28D
Column:	AS9 (4.00 mm)	Detector:	Ch-A-20110816009
		Worklist Smp#:	37

4 Bromide, CAS: 24959-67-9

Signal: 1

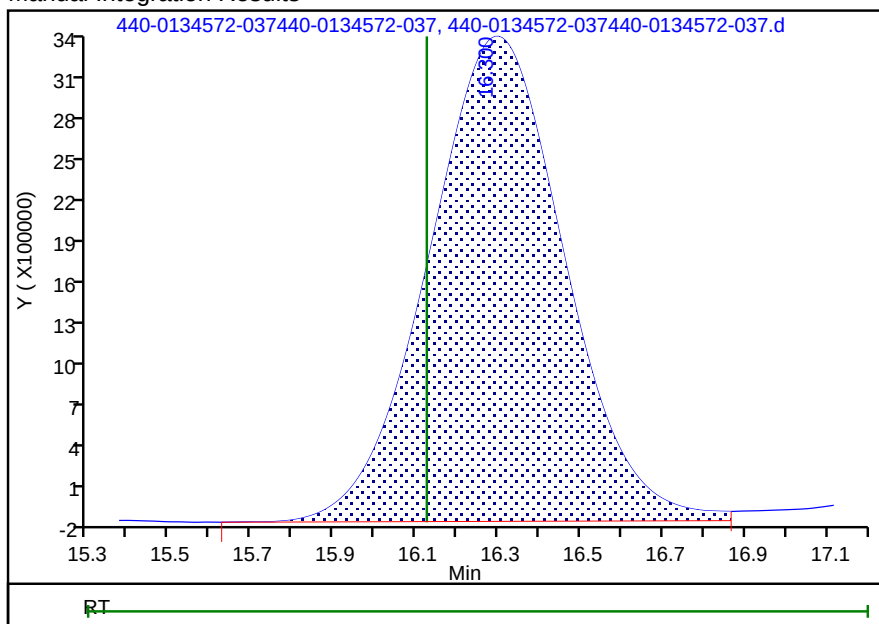
Not Detected
Expected RT: 16.13

Processing Integration Results



Manual Integration Results

RT: 16.30
Area: 79411315
Amount: 508.7581
Amount Units: ug/l



Reviewer: zakhrabov, 23-Jun-2020 06:16:28

Audit Action: Assigned Compound ID

Audit Reason:

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06/29/2020

September 2020

Report Date: 23-Jun-2020 06:18:28

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

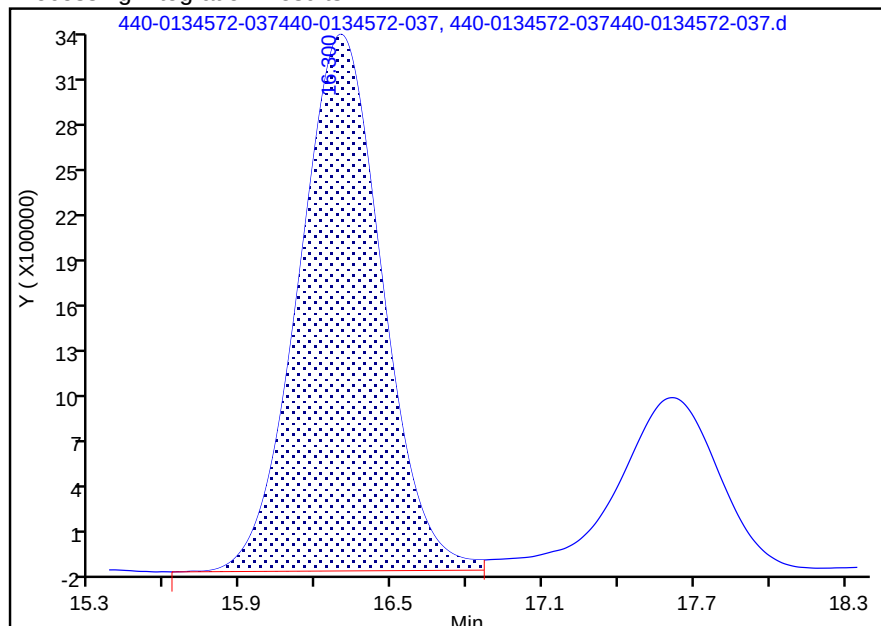
Data File:	\\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-037440-0134572-037.d		
Injection Date:	23-Jun-2020 05:27:00	Instrument ID:	IC-8
Lims ID:	CCV		
Client ID:			
Operator ID:		ALS Bottle#:	0
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	300.1_C8	Limit Group:	IC-300.1_28D
Column:	AS9 (4.00 mm)	Detector:	Ch-A-20110816009
		Worklist Smp#:	37

2 Chlorate, CAS: 7790-93-4

Signal: 1

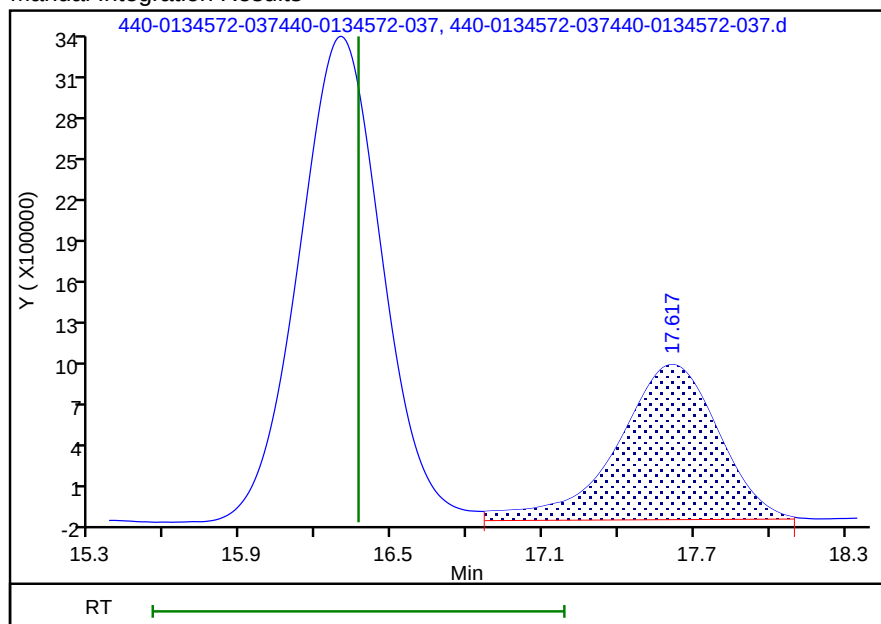
RT: 16.30
Area: 79411315
Amount: 542.9989
Amount Units: ug/l

Processing Integration Results



RT: 17.62
Area: 30851764
Amount: 213.1545
Amount Units: ug/l

Manual Integration Results



Reviewer: zakhrabov, 23-Jun-2020 06:16:24

Audit Action: Assigned Compound ID

Audit Reason:

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06/29/2020

September 2020

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Irvine Job No.: 440-267742-1
 SDG No.: _____
 Lab Sample ID: CCV 440-613694/37 Calibration Date: 06/23/2020 05:27
 Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
 GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
 Lab File ID: 440-0134572-037440-0134572-037.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorite	Lin		158138		198	200	-1.2	15.0
Dichloroacetic acid(Surr)	Ave	81689	88484		1080	994	8.3	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-267742-1
SDG No.: _____
Lab Sample ID: CCV 440-613694/37 Calibration Date: 06/23/2020 05:27
Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
Lab File ID: 440-0134572-037440-0134572-037.d

Analyte	RT	RT WINDOW	
		FROM	TO
Chlorite	7.38	7.00	8.00
Dichloroacetic acid(Surr)	13.76	12.75	14.67

Report Date: 23-Jun-2020 06:18:29

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-037440-0134572-037.d
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 23-Jun-2020 05:27:00 ALS Bottle#: 0 Worklist Smp#: 37
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0134572-037
 Misc. Info.: 1555 EB
 Operator ID: Instrument ID: IC-8
 Sublist: chrom-300.1_C8*sub2
 Method: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 23-Jun-2020 06:18:28 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1049

First Level Reviewer: zakhrabov

Date: 23-Jun-2020 06:18:28

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.375	7.184	0.191	31627505	200.0	197.6	M
3 Bromate	8.442	8.175	0.267	4311184	NC	NC	M
\$ 6 Dichloroacetic acid(Surr)	13.759	13.709	0.050	87927874	993.7	1076.4	
4 Bromide	16.300	16.125	0.175	79411315	NC	NC	a
2 Chlorate	17.617	16.367	1.250	30851764	NC	NC	a

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

WC3001LCS_00090

Amount Added: 250.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 23-Jun-2020 06:18:29

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-037440-0134572-037.d

Injection Date: 23-Jun-2020 05:27:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCV

Worklist Smp#: 37

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

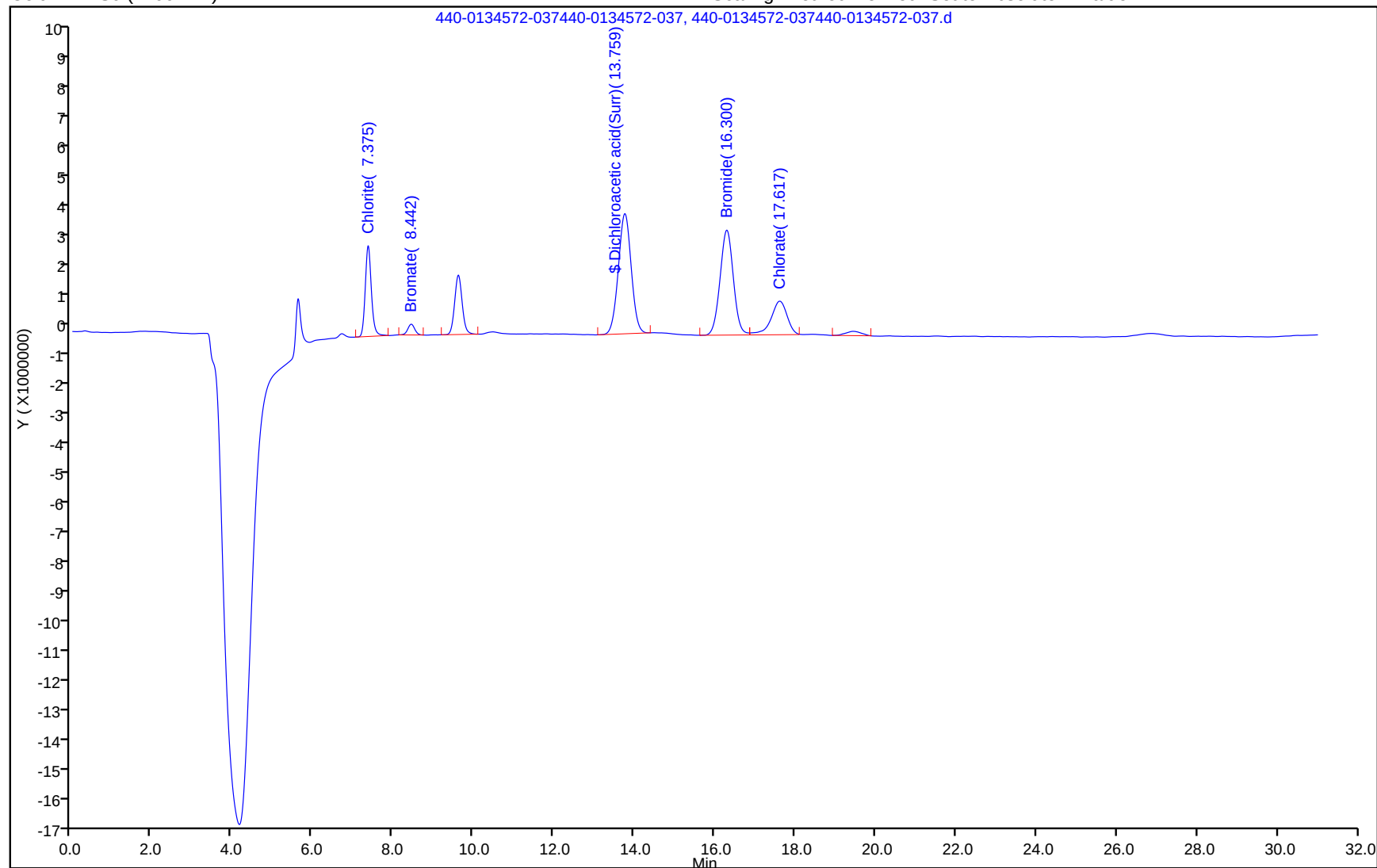
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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September 2020

Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-932

Report Date: 23-Jun-2020 06:18:29

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-037440-0134572-037.d

Injection Date: 23-Jun-2020 05:27:00

Instrument ID: IC-8

Lims ID: CCV

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#: 37

Injection Vol: 1.0 ul

Dil. Factor:

1.0000

Method: 300.1_C8

Limit Group:

IC-300.1_14D

Column: AS9 (4.00 mm)

Detector

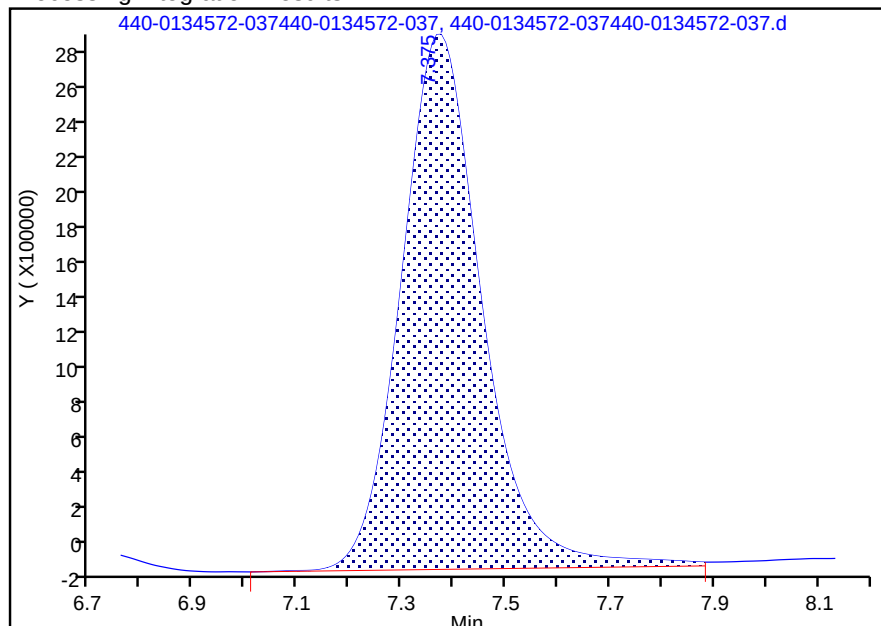
Ch-A-20110816009

5 Chlorite, CAS: 14998-27-7

Signal: 1

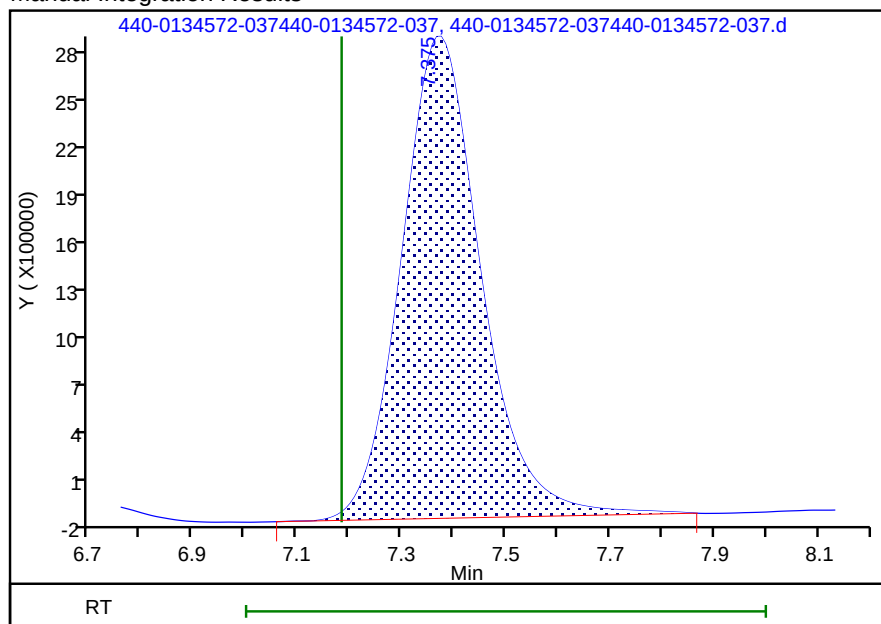
RT: 7.38
 Area: 32248298
 Amount: 0
 Amount Units: ug/l

Processing Integration Results



RT: 7.38
 Area: 31627505
 Amount: 197.6202
 Amount Units: ug/l

Manual Integration Results



Reviewer: zakhrabov, 23-Jun-2020 06:16:43

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

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06/29/2020

September 2020

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-267742-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 440-613692/5
 Matrix: Water Lab File ID: 440-0134572-005440-0134572-005
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 06/22/2020 09:58
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 613692 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
15541-45-4	Bromate	ND		5.0	1.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	110		90-115

Report Date: 22-Jun-2020 10:43:16

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-005440-0134572-005.d
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 22-Jun-2020 09:58:00 ALS Bottle#: 0 Worklist Smp#: 5
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0134572-005
 Misc. Info.: 5 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 22-Jun-2020 11:37:06 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1047

First Level Reviewer: zakhrabov

Date: 22-Jun-2020 10:43:16

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 1 Dichloroacetic acid	13.584	13.525	0.059	88892219		NC	
\$ 6 Dichloroacetic acid(Surr)	13.584	13.525	0.059	88892219	993.7	1088.2	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 22-Jun-2020 10:43:16

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-005440-0134572-005.d

Injection Date: 22-Jun-2020 09:58:00

Instrument ID: IC-8

Operator ID:

Lims ID: MB

Worklist Smp#: 5

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

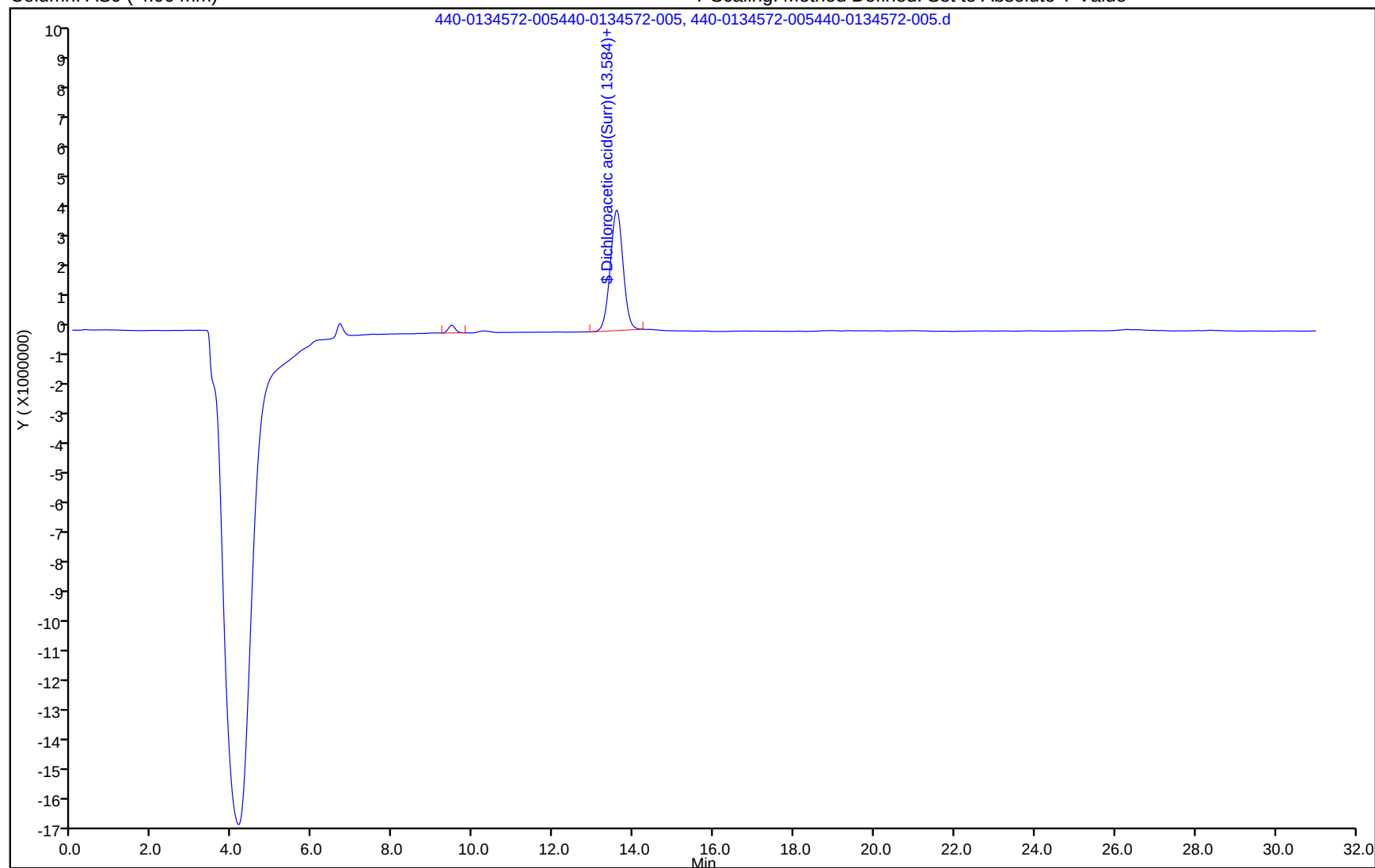
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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06/29/2020

Report Date: 22-Jun-2020 10:43:16

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-005440-0134572-005.d
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 22-Jun-2020 09:58:00 ALS Bottle#: 0 Worklist Smp#: 5
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0134572-005
 Misc. Info.: 5 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 22-Jun-2020 11:37:06 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1047

First Level Reviewer: zakhrabov

Date: 22-Jun-2020 10:43:16

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1088.2	109.51

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-267742-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 440-613694/5
 Matrix: Water Lab File ID: 440-0134572-005440-0134572-005
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 06/22/2020 09:58
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 613694 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14998-27-7	Chlorite	ND		20	4.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	110		90-115

Report Date: 22-Jun-2020 10:43:16

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-005440-0134572-005.d
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 22-Jun-2020 09:58:00 ALS Bottle#: 0 Worklist Smp#: 5
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0134572-005
 Misc. Info.: 5 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 22-Jun-2020 11:37:06 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1047

First Level Reviewer: zakhrabov

Date: 22-Jun-2020 10:43:16

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 1 Dichloroacetic acid	13.584	13.525	0.059	88892219		NC	
\$ 6 Dichloroacetic acid(Surr)	13.584	13.525	0.059	88892219	993.7	1088.2	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 22-Jun-2020 10:43:16

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-005440-0134572-005.d

Injection Date: 22-Jun-2020 09:58:00

Instrument ID: IC-8

Operator ID:

Lims ID: MB

Worklist Smp#: 5

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

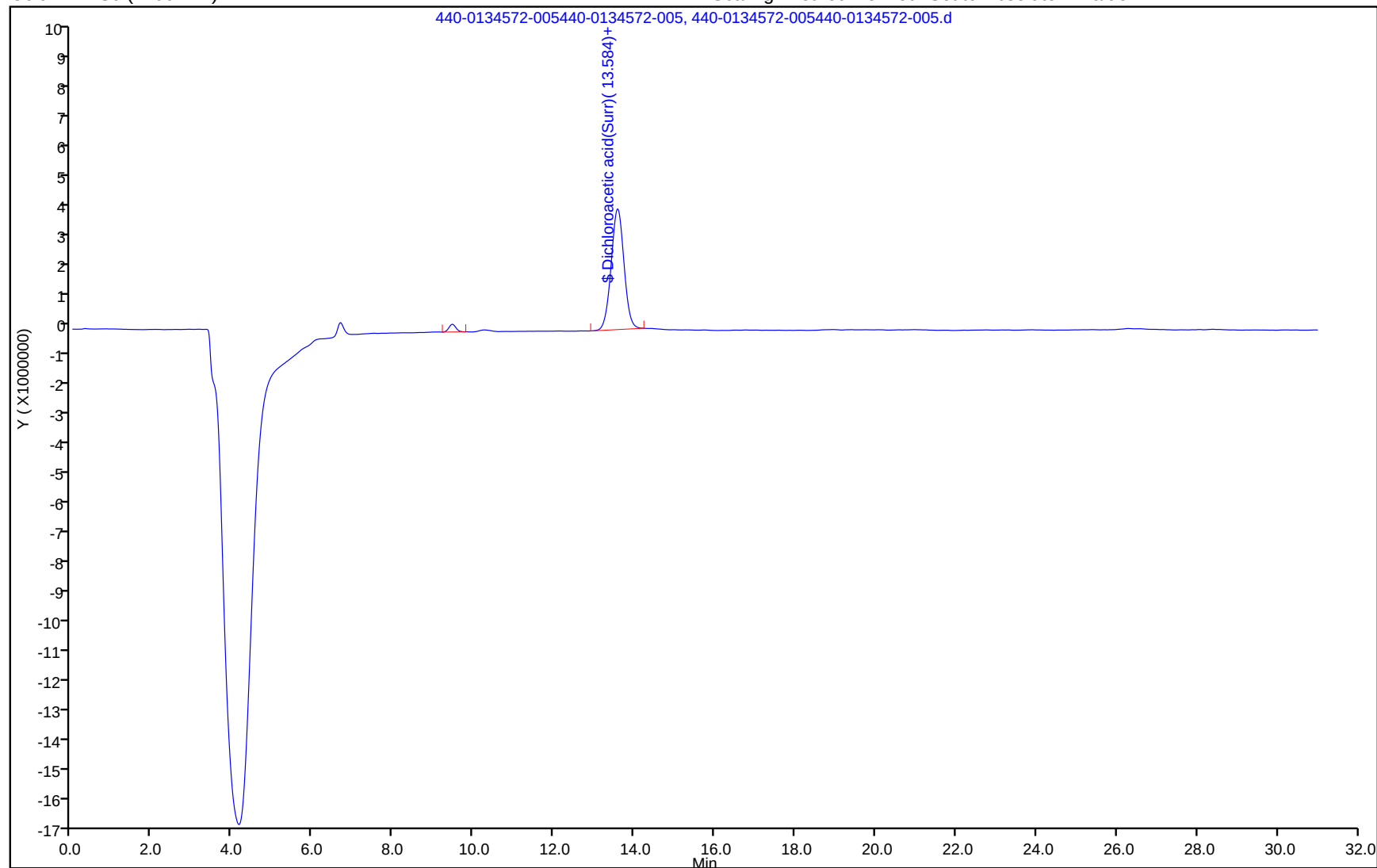
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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06/29/2020

Report Date: 22-Jun-2020 10:43:16

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-005440-0134572-005.d
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 22-Jun-2020 09:58:00 ALS Bottle#: 0 Worklist Smp#: 5
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0134572-005
 Misc. Info.: 5 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 22-Jun-2020 11:37:06 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1047

First Level Reviewer: zakhrabov

Date: 22-Jun-2020 10:43:16

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1088.2	109.51

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-267742-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: CCB 440-613692/2
 Matrix: Water Lab File ID: 440-0134572-002440-0134572-002
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 06/22/2020 08:10
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 613692 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
15541-45-4	Bromate	ND		5.0	1.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	112		90-115

Report Date: 22-Jun-2020 08:48:06

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-002440-0134572-002.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 22-Jun-2020 08:10:00 ALS Bottle#: 0 Worklist Smp#: 2
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0134572-002
 Misc. Info.: 2 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 22-Jun-2020 08:48:02 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1047

First Level Reviewer: zakhrabov

Date: 22-Jun-2020 08:48:06

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 1 Dichloroacetic acid	13.525	13.525	0.000	90880354		NC	a
\$ 6 Dichloroacetic acid(Surr)	13.525	13.525	0.000	90880354	993.7	1112.5	a

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

a - User Assigned ID

Reagents:

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 22-Jun-2020 08:48:06

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-002440-0134572-002.d

Injection Date: 22-Jun-2020 08:10:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCB

Worklist Smp#: 2

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

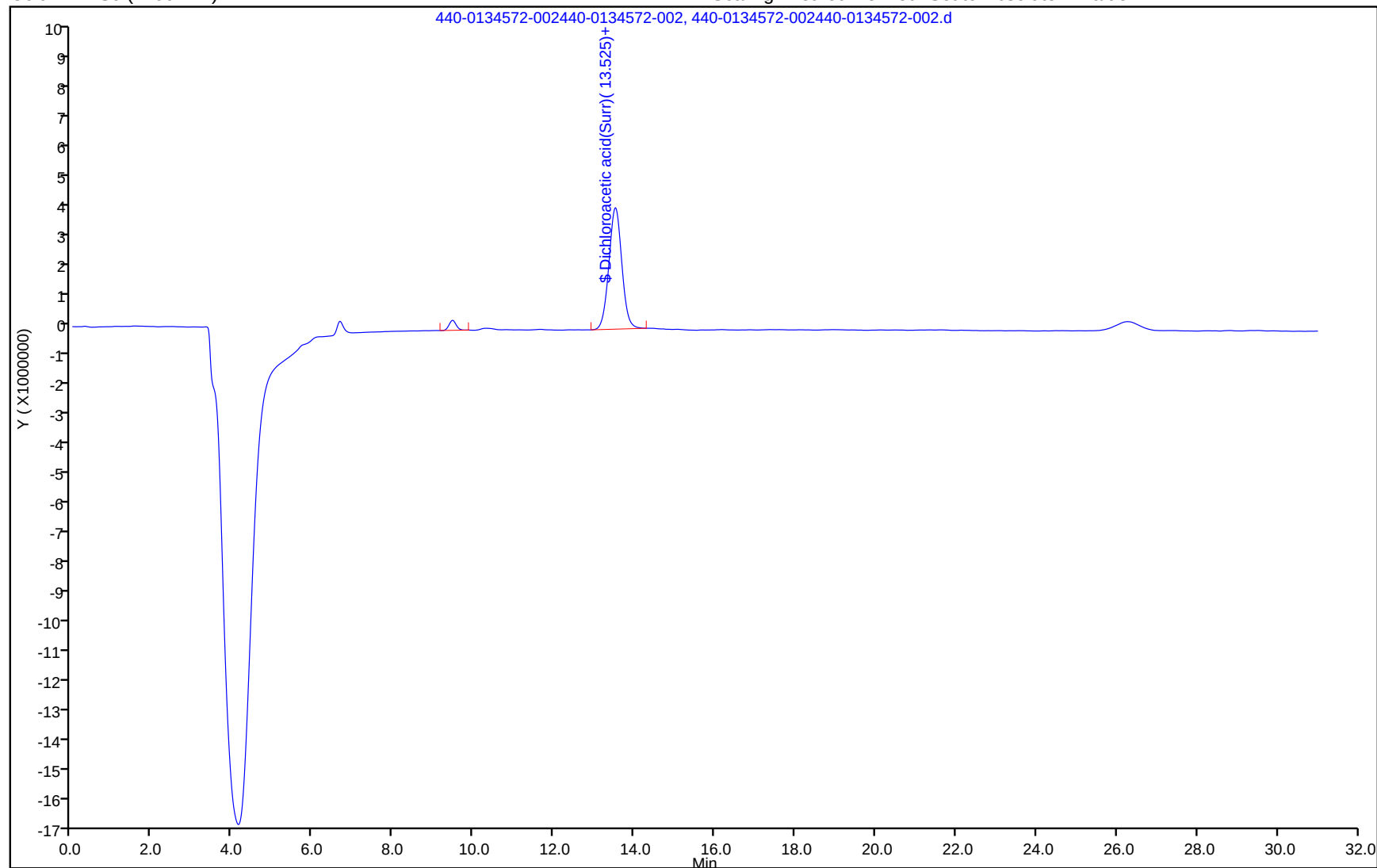
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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Report Date: 22-Jun-2020 08:48:06

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-002440-0134572-002.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 22-Jun-2020 08:10:00 ALS Bottle#: 0 Worklist Smp#: 2
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0134572-002
 Misc. Info.: 2 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 22-Jun-2020 08:48:02 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1047

First Level Reviewer: zakhrabov

Date: 22-Jun-2020 08:48:06

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1112.5	111.96

Report Date: 22-Jun-2020 08:48:06

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

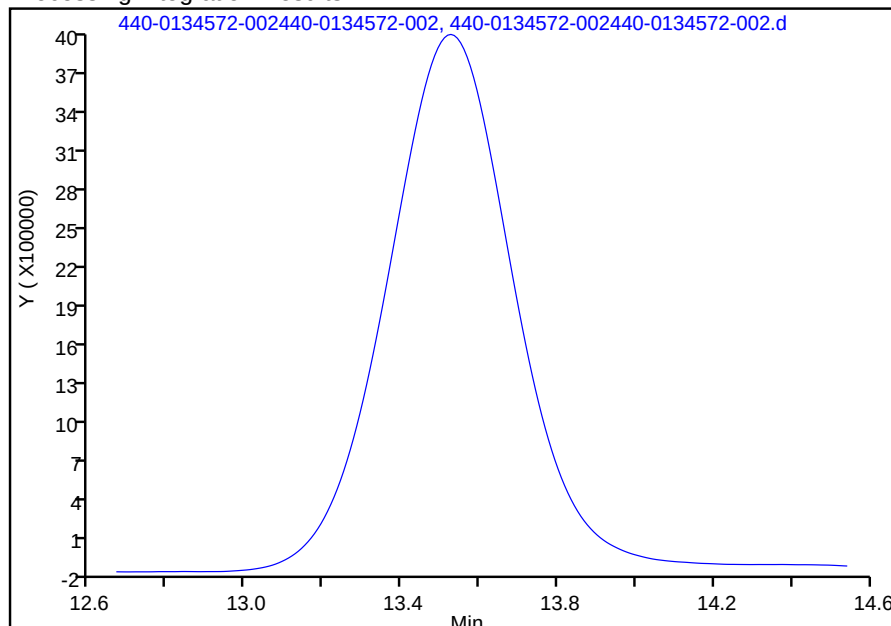
Data File:	\\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-002440-0134572-002.d		
Injection Date:	22-Jun-2020 08:10:00	Instrument ID:	IC-8
Lims ID:	CCB		
Client ID:			
Operator ID:		ALS Bottle#:	0
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	300.1_C8	Limit Group:	IC-300.1_28D
Column:	AS9 (4.00 mm)	Detector	Ch-A-20110816009
		Worklist Smp#:	2

\$ 6 Dichloroacetic acid(Surr), CAS: 79-43-6

Signal: 1

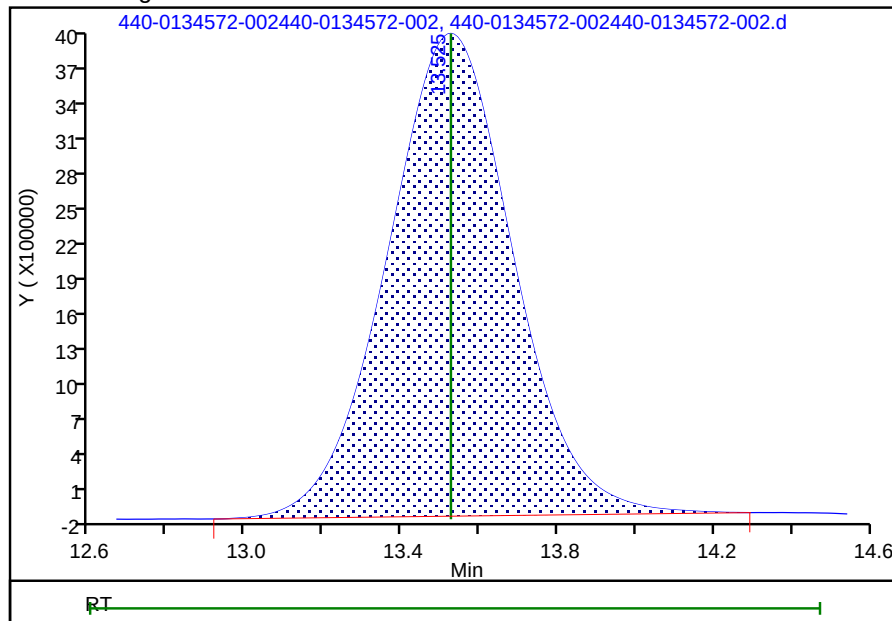
Not Detected
Expected RT: 13.53

Processing Integration Results



Manual Integration Results

RT: 13.53
Area: 90880354
Amount: 1112.5103
Amount Units: ug/l



Reviewer: zakhrabov, 22-Jun-2020 08:47:56

Audit Action: Assigned Compound ID

Audit Reason: Peak assignment corrected

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September 2020

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-267742-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: CCB 440-613692/14
 Matrix: Water Lab File ID: 440-0134572-014440-0134572-014
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 06/22/2020 15:23
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 613692 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
15541-45-4	Bromate	ND		5.0	1.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	106		90-115

Report Date: 23-Jun-2020 04:21:38

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-014440-0134572-014.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 22-Jun-2020 15:23:00 ALS Bottle#: 0 Worklist Smp#: 14
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0134572-014
 Misc. Info.: 16319 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 23-Jun-2020 04:21:37 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1049

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 1 Dichloroacetic acid	13.633	13.709	-0.076	86176417			NC
\$ 6 Dichloroacetic acid(Surr)	13.633	13.709	-0.076	86176417	993.7	1054.9	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WCDCA_00081 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 23-Jun-2020 04:21:38

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-014440-0134572-014.d

Injection Date: 22-Jun-2020 15:23:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCB

Worklist Smp#: 14

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

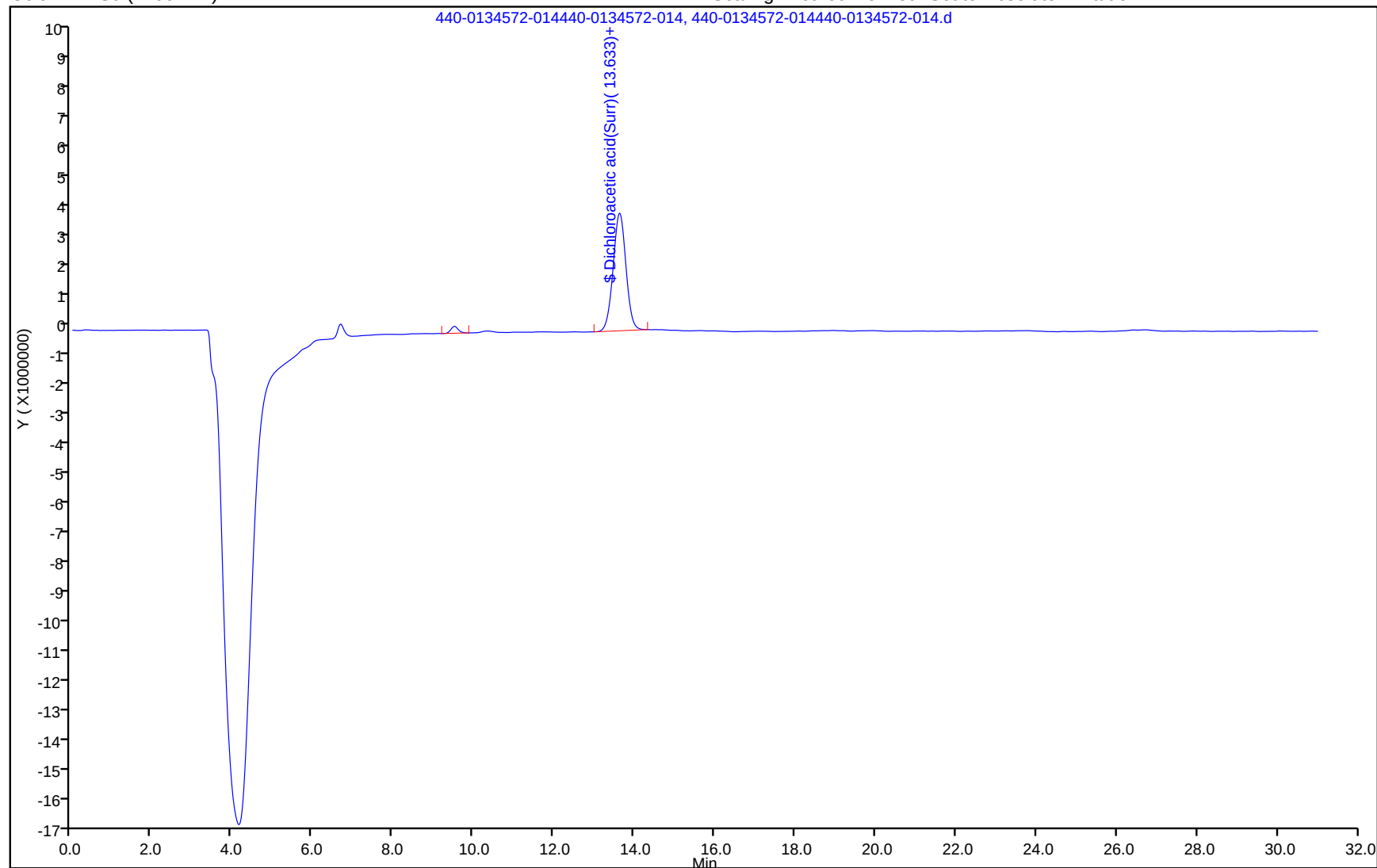
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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Report Date: 23-Jun-2020 04:21:38

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-014440-0134572-014.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 22-Jun-2020 15:23:00 ALS Bottle#: 0 Worklist Smp#: 14
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0134572-014
 Misc. Info.: 16319 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 23-Jun-2020 04:21:37 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1049

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1054.9	106.16

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-267742-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: CCB 440-613692/26
 Matrix: Water Lab File ID: 440-0134572-026440-0134572-026
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 06/22/2020 22:38
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 613692 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
15541-45-4	Bromate	ND		5.0	1.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	110		90-115

Report Date: 23-Jun-2020 04:21:42

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-026440-0134572-026.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 22-Jun-2020 22:38:00 ALS Bottle#: 0 Worklist Smp#: 26
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0134572-026
 Misc. Info.: 13109 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 23-Jun-2020 04:21:41 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1049

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 1 Dichloroacetic acid	13.725	13.709	0.016	89052304			NC
\$ 6 Dichloroacetic acid(Surr)	13.725	13.709	0.016	89052304	993.7	1090.1	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WCDCA_00081 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 23-Jun-2020 04:21:42

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-026440-0134572-026.d

Injection Date: 22-Jun-2020 22:38:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCB

Worklist Smp#: 26

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

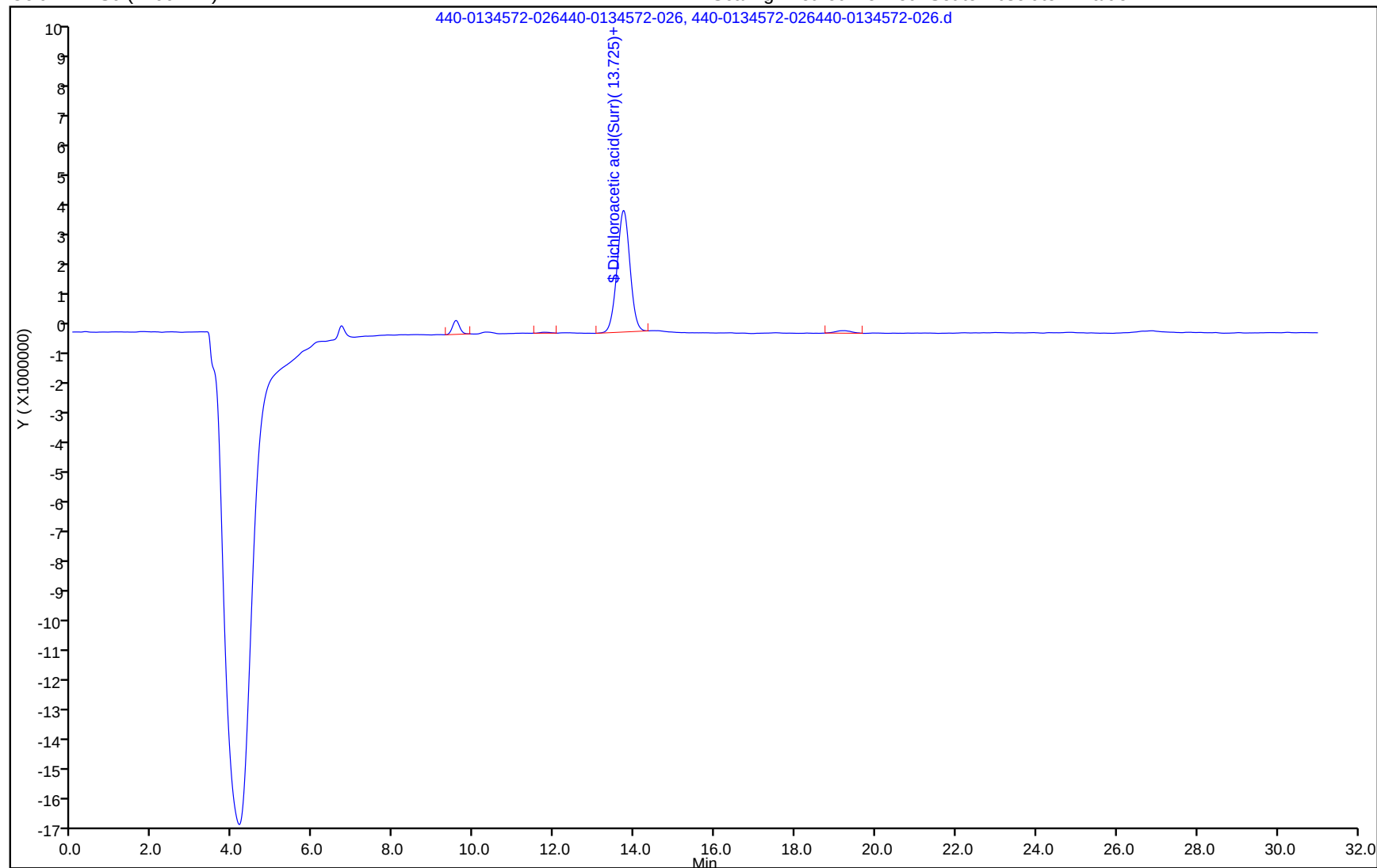
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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Report Date: 23-Jun-2020 04:21:42

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-026440-0134572-026.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 22-Jun-2020 22:38:00 ALS Bottle#: 0 Worklist Smp#: 26
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0134572-026
 Misc. Info.: 13109 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 23-Jun-2020 04:21:41 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1049

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1090.1	109.70

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-267742-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: CCB 440-613692/38
 Matrix: Water Lab File ID: 440-0134572-038440-0134572-038
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 06/23/2020 06:03
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 613692 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
15541-45-4	Bromate	ND		5.0	1.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	105		90-115

Report Date: 23-Jun-2020 06:42:28

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-038440-0134572-038.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 23-Jun-2020 06:03:00 ALS Bottle#: 0 Worklist Smp#: 38
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0134572-038
 Misc. Info.: 9815 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 23-Jun-2020 07:41:18 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1049

First Level Reviewer: zakhrabov

Date: 23-Jun-2020 06:42:28

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 1 Dichloroacetic acid	13.775	13.709	0.066	85055699		NC	
\$ 6 Dichloroacetic acid(Surr)	13.775	13.709	0.066	85055699	993.7	1041.2	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 23-Jun-2020 06:42:28

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-038440-0134572-038.d

Injection Date: 23-Jun-2020 06:03:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCB

Worklist Smp#: 38

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

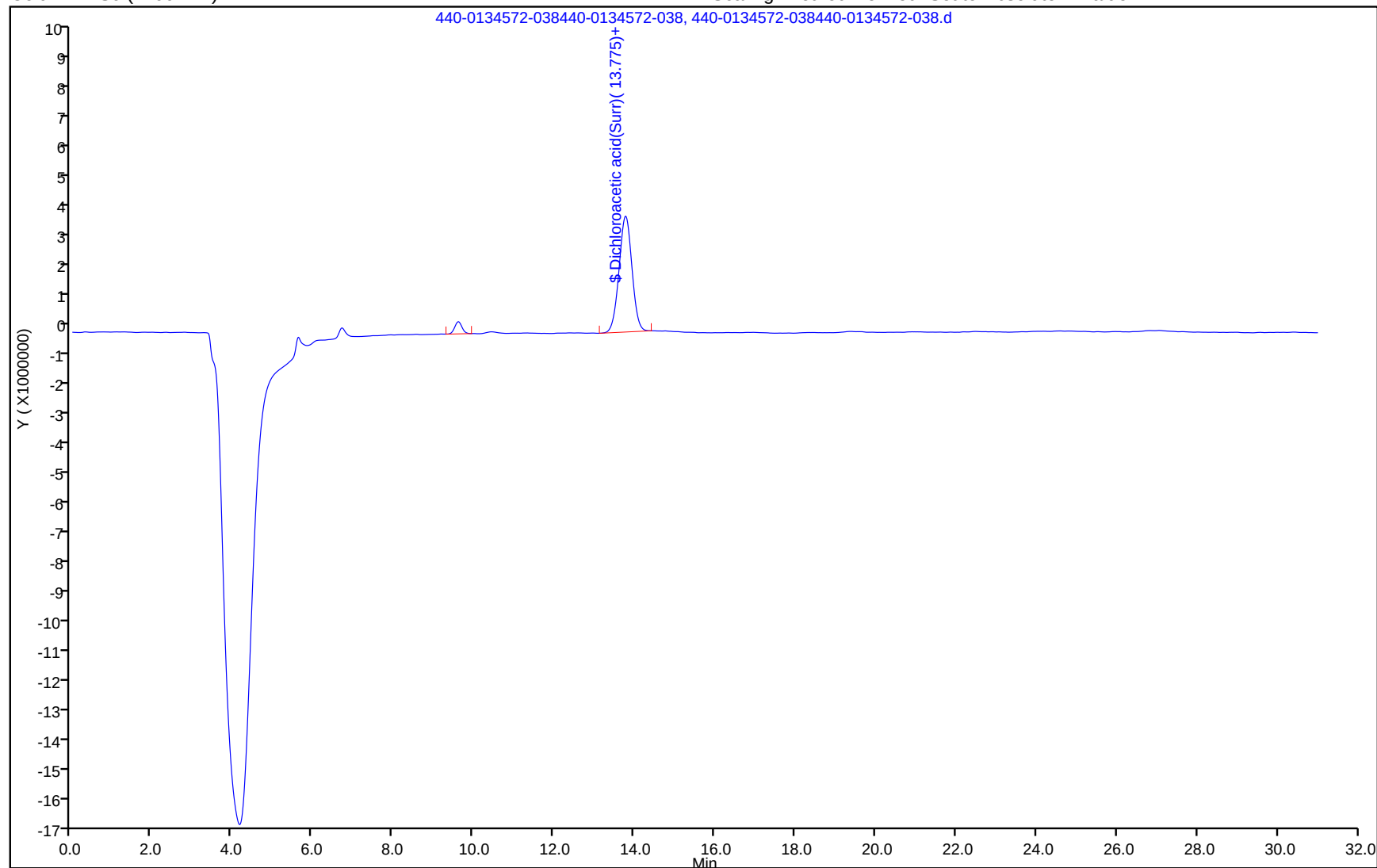
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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Report Date: 23-Jun-2020 06:42:28

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-038440-0134572-038.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 23-Jun-2020 06:03:00 ALS Bottle#: 0 Worklist Smp#: 38
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0134572-038
 Misc. Info.: 9815 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 23-Jun-2020 07:41:18 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1049

First Level Reviewer: zakhrabov

Date: 23-Jun-2020 06:42:28

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1041.2	104.78

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-267742-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: CCB 440-613694/2
 Matrix: Water Lab File ID: 440-0134572-002440-0134572-002
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 06/22/2020 08:10
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 613694 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14998-27-7	Chlorite	ND		20	4.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	112		90-115

Report Date: 22-Jun-2020 08:48:06

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-002440-0134572-002.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 22-Jun-2020 08:10:00 ALS Bottle#: 0 Worklist Smp#: 2
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0134572-002
 Misc. Info.: 2 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 22-Jun-2020 08:48:02 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1047

First Level Reviewer: zakhrabov

Date: 22-Jun-2020 08:48:06

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 1 Dichloroacetic acid	13.525	13.525	0.000	90880354		NC	a
\$ 6 Dichloroacetic acid(Surr)	13.525	13.525	0.000	90880354	993.7	1112.5	a

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

a - User Assigned ID

Reagents:

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 22-Jun-2020 08:48:06

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-002440-0134572-002.d

Injection Date: 22-Jun-2020 08:10:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCB

Worklist Smp#: 2

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

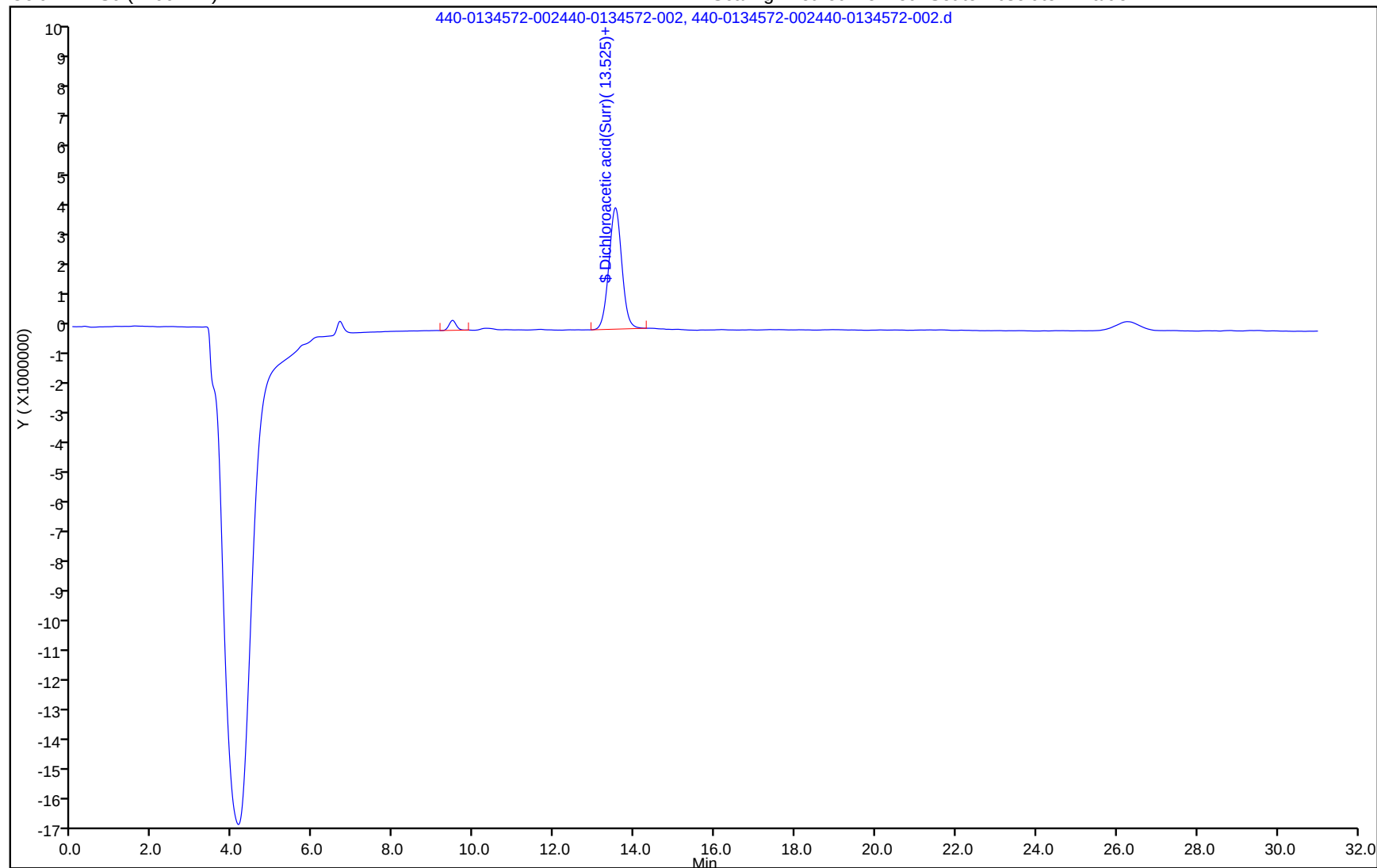
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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September 2020

Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-961

Report Date: 22-Jun-2020 08:48:06

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-002440-0134572-002.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 22-Jun-2020 08:10:00 ALS Bottle#: 0 Worklist Smp#: 2
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0134572-002
 Misc. Info.: 2 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 22-Jun-2020 08:48:02 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1047

First Level Reviewer: zakhrabov

Date: 22-Jun-2020 08:48:06

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1112.5	111.96

Report Date: 22-Jun-2020 08:48:06

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

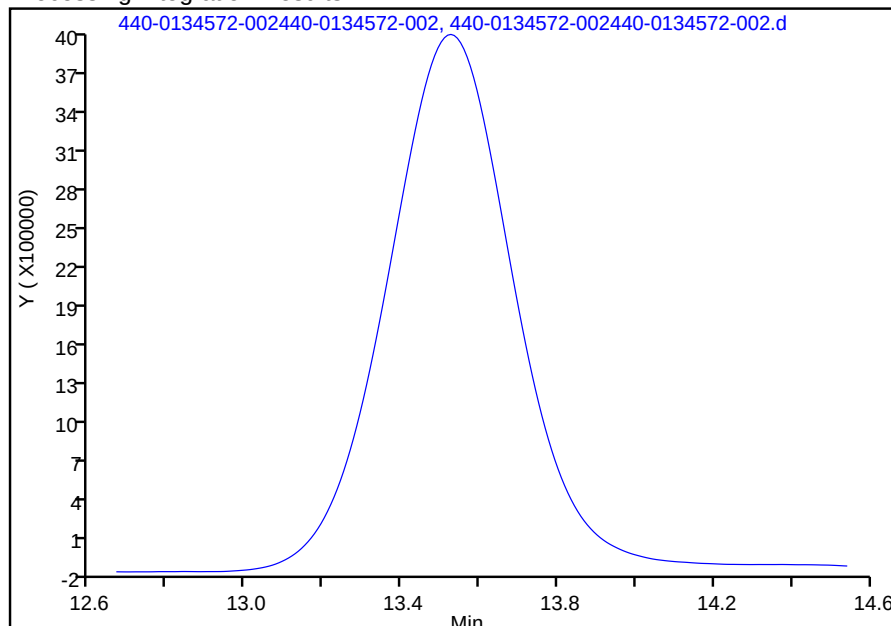
Data File:	\\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-002440-0134572-002.d		
Injection Date:	22-Jun-2020 08:10:00	Instrument ID:	IC-8
Lims ID:	CCB		
Client ID:			
Operator ID:		ALS Bottle#:	0
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	300.1_C8	Limit Group:	IC-300.1_14D
Column:	AS9 (4.00 mm)	Detector	Ch-A-20110816009
		Worklist Smp#:	2

\$ 6 Dichloroacetic acid(Surr), CAS: 79-43-6

Signal: 1

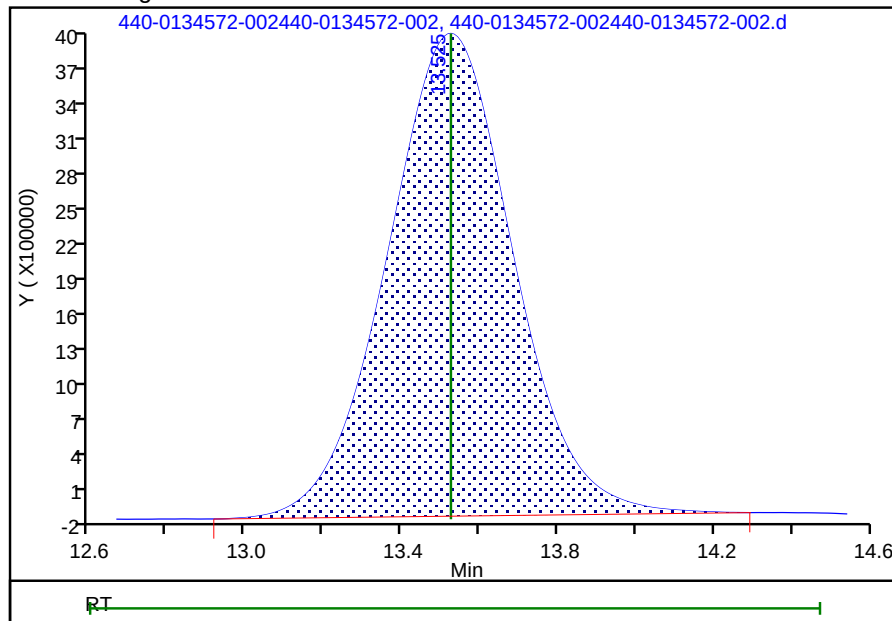
Not Detected
Expected RT: 13.53

Processing Integration Results



Manual Integration Results

RT: 13.53
Area: 90880354
Amount: 1112.5103
Amount Units: ug/l



Reviewer: zakhrabov, 22-Jun-2020 08:47:56

Audit Action: Assigned Compound ID

Audit Reason: Peak assignment corrected

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September 2020

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-267742-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: CCB 440-613694/14
 Matrix: Water Lab File ID: 440-0134572-014440-0134572-014
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 06/22/2020 15:23
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 613694 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14998-27-7	Chlorite	ND		20	4.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	106		90-115

Report Date: 23-Jun-2020 04:21:38

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-014440-0134572-014.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 22-Jun-2020 15:23:00 ALS Bottle#: 0 Worklist Smp#: 14
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0134572-014
 Misc. Info.: 16319 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 23-Jun-2020 04:21:37 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1049

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 1 Dichloroacetic acid	13.633	13.709	-0.076	86176417			NC
\$ 6 Dichloroacetic acid(Surr)	13.633	13.709	-0.076	86176417	993.7	1054.9	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WCDCA_00081 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 23-Jun-2020 04:21:38

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-014440-0134572-014.d

Injection Date: 22-Jun-2020 15:23:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCB

Worklist Smp#: 14

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

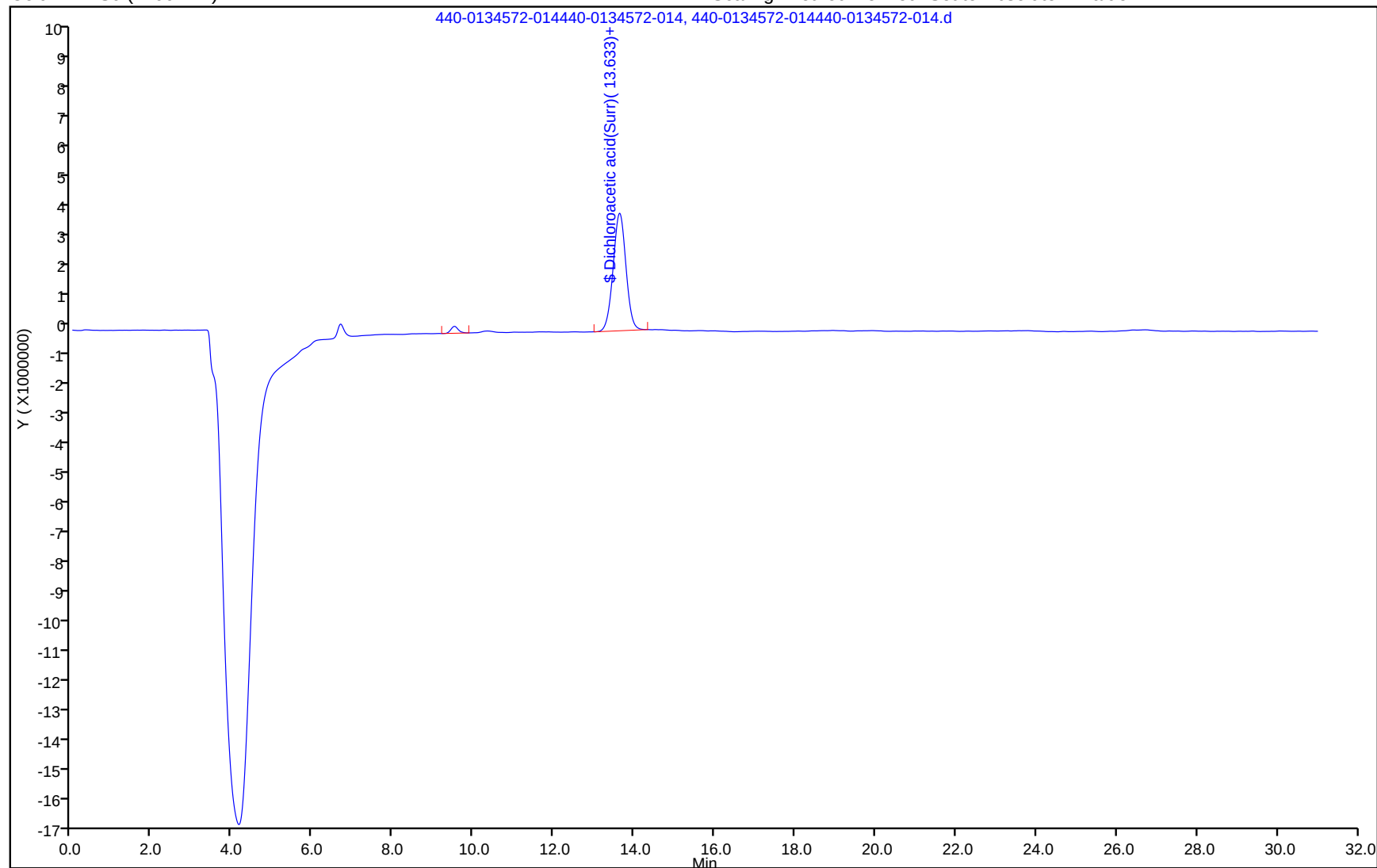
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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I-5-966

Report Date: 23-Jun-2020 04:21:38

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-014440-0134572-014.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 22-Jun-2020 15:23:00 ALS Bottle#: 0 Worklist Smp#: 14
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0134572-014
 Misc. Info.: 16319 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 23-Jun-2020 04:21:37 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1049

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1054.9	106.16

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-267742-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: CCB 440-613694/26
 Matrix: Water Lab File ID: 440-0134572-026440-0134572-026
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 06/22/2020 22:38
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 613694 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14998-27-7	Chlorite	ND		20	4.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	110		90-115

Report Date: 23-Jun-2020 04:21:42

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-026440-0134572-026.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 22-Jun-2020 22:38:00 ALS Bottle#: 0 Worklist Smp#: 26
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0134572-026
 Misc. Info.: 13109 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 23-Jun-2020 04:21:41 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1049

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 1 Dichloroacetic acid	13.725	13.709	0.016	89052304			NC
\$ 6 Dichloroacetic acid(Surr)	13.725	13.709	0.016	89052304	993.7	1090.1	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WCDCA_00081 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 23-Jun-2020 04:21:42

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-026440-0134572-026.d

Injection Date: 22-Jun-2020 22:38:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCB

Worklist Smp#: 26

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

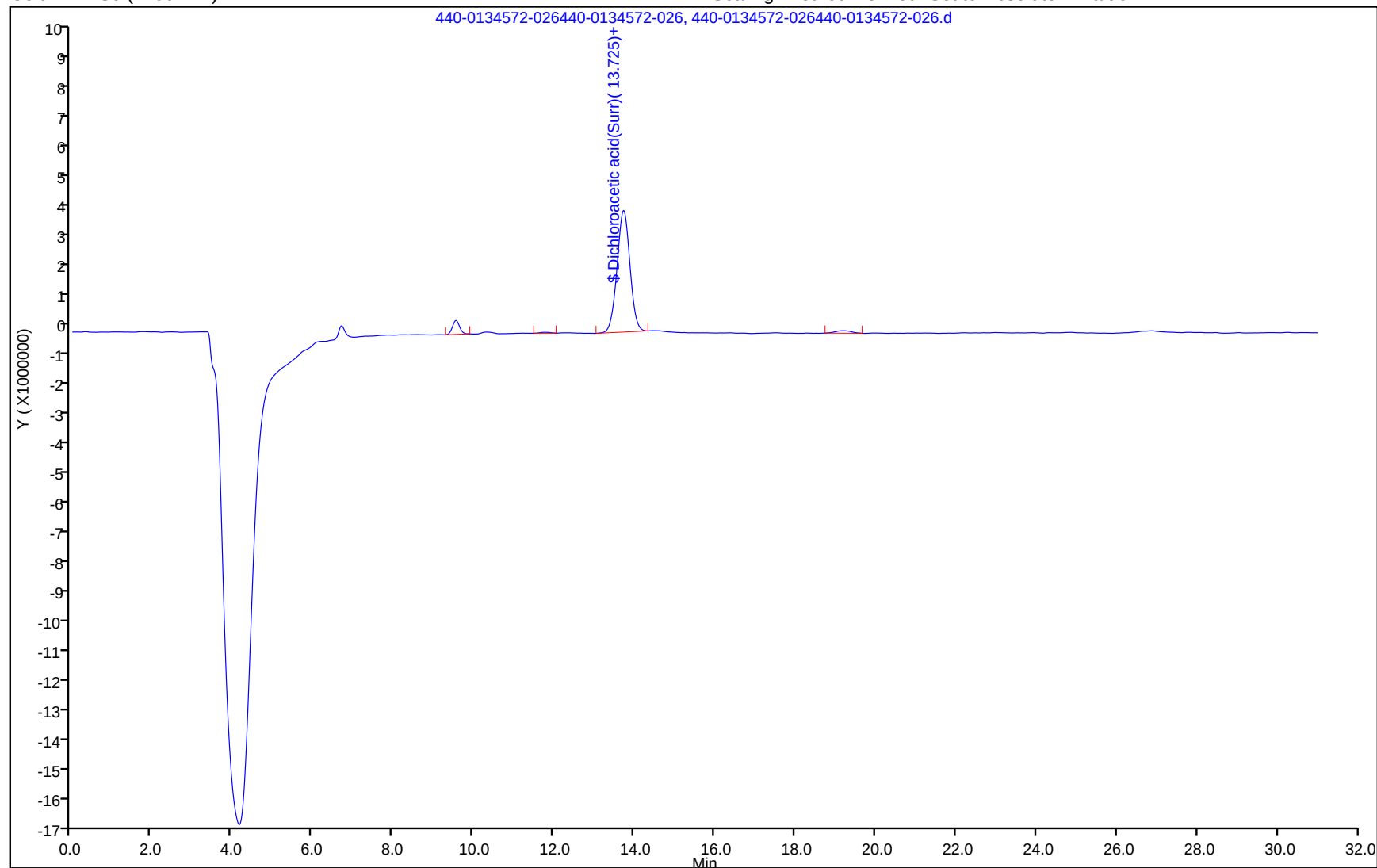
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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Report Date: 23-Jun-2020 04:21:42

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-026440-0134572-026.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 22-Jun-2020 22:38:00 ALS Bottle#: 0 Worklist Smp#: 26
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0134572-026
 Misc. Info.: 13109 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 23-Jun-2020 04:21:41 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1049

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1090.1	109.70

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-267742-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: CCB 440-613694/38
 Matrix: Water Lab File ID: 440-0134572-038440-0134572-038
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 06/23/2020 06:03
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 613694 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14998-27-7	Chlorite	ND		20	4.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	105		90-115

Report Date: 23-Jun-2020 06:42:29

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-038440-0134572-038.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 23-Jun-2020 06:03:00 ALS Bottle#: 0 Worklist Smp#: 38
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0134572-038
 Misc. Info.: 9815 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 23-Jun-2020 07:41:18 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1049

First Level Reviewer: zakhrabov

Date: 23-Jun-2020 06:42:28

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 1 Dichloroacetic acid	13.775	13.709	0.066	85055699		NC	
\$ 6 Dichloroacetic acid(Surr)	13.775	13.709	0.066	85055699	993.7	1041.2	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 23-Jun-2020 06:42:29

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-038440-0134572-038.d

Injection Date: 23-Jun-2020 06:03:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCB

Worklist Smp#: 38

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

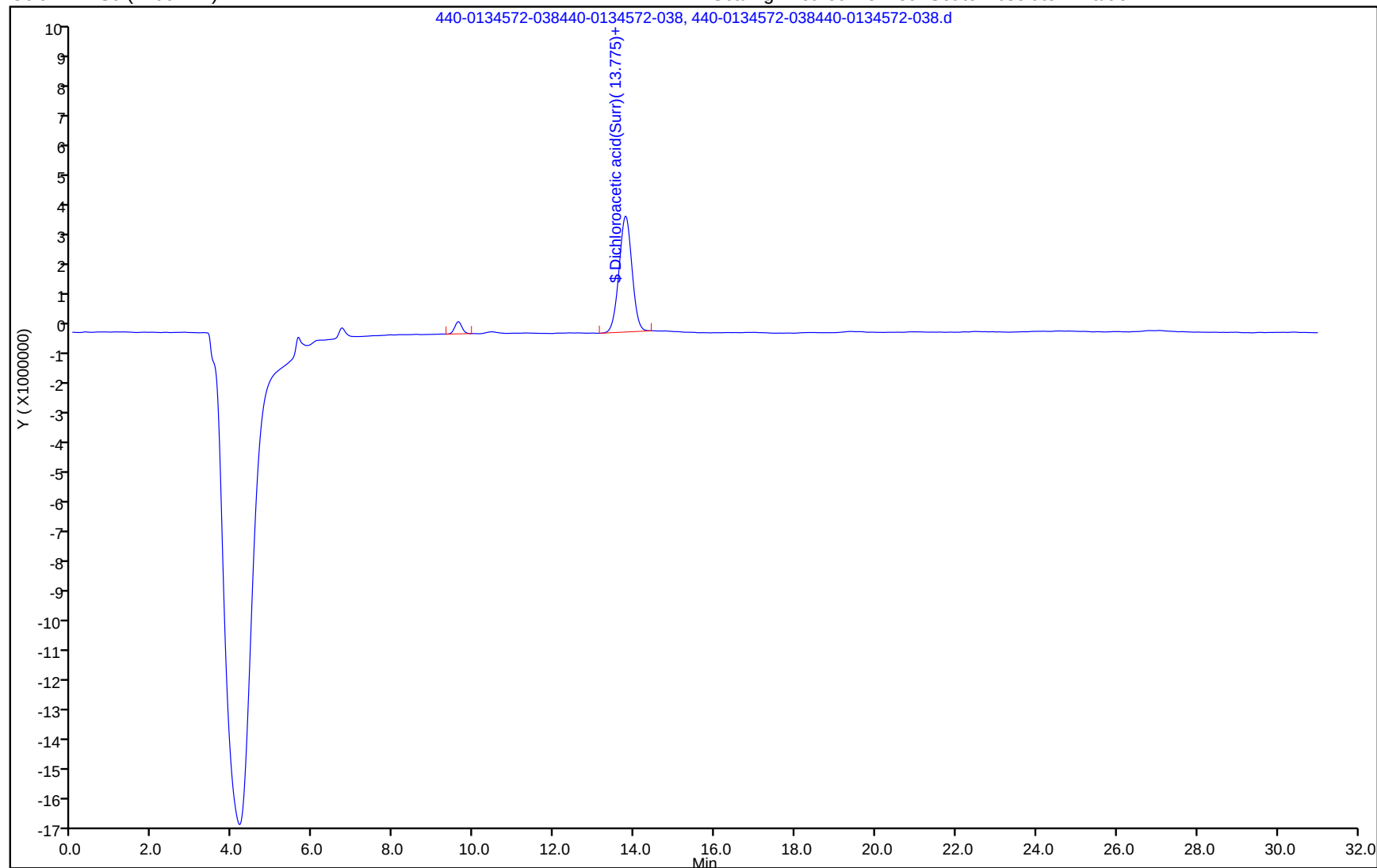
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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Report Date: 23-Jun-2020 06:42:29

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-038440-0134572-038.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 23-Jun-2020 06:03:00 ALS Bottle#: 0 Worklist Smp#: 38
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0134572-038
 Misc. Info.: 9815 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 23-Jun-2020 07:41:18 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1049

First Level Reviewer: zakhrabov

Date: 23-Jun-2020 06:42:28

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1041.2	104.78

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-267742-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: ICB 440-609717/11
 Matrix: Water Lab File ID: 440-0133563-011.d
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 05/22/2020 13:29
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 609717 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
15541-45-4	Bromate	ND		5.0	1.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	101		90-115

Report Date: 23-May-2020 07:24:19

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-011.d
 Lims ID: ICB
 Client ID:
 Sample Type: ICB
 Inject. Date: 22-May-2020 13:29:00 ALS Bottle#: 0 Worklist Smp#: 11
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0133563-011
 Misc. Info.: 11 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 23-May-2020 08:03:05 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1019

First Level Reviewer: zakhrabov

Date: 23-May-2020 06:49:36

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 1 Dichloroacetic acid	14.383	14.367	0.016	82015432		NC	
\$ 6 Dichloroacetic acid(Surr)	14.383	14.392	-0.009	82015432	993.7	1004.0	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 23-May-2020 07:24:19

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-011.d

Injection Date: 22-May-2020 13:29:00

Instrument ID: IC-8

Operator ID:

Lims ID: ICB

Worklist Smp#: 11

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

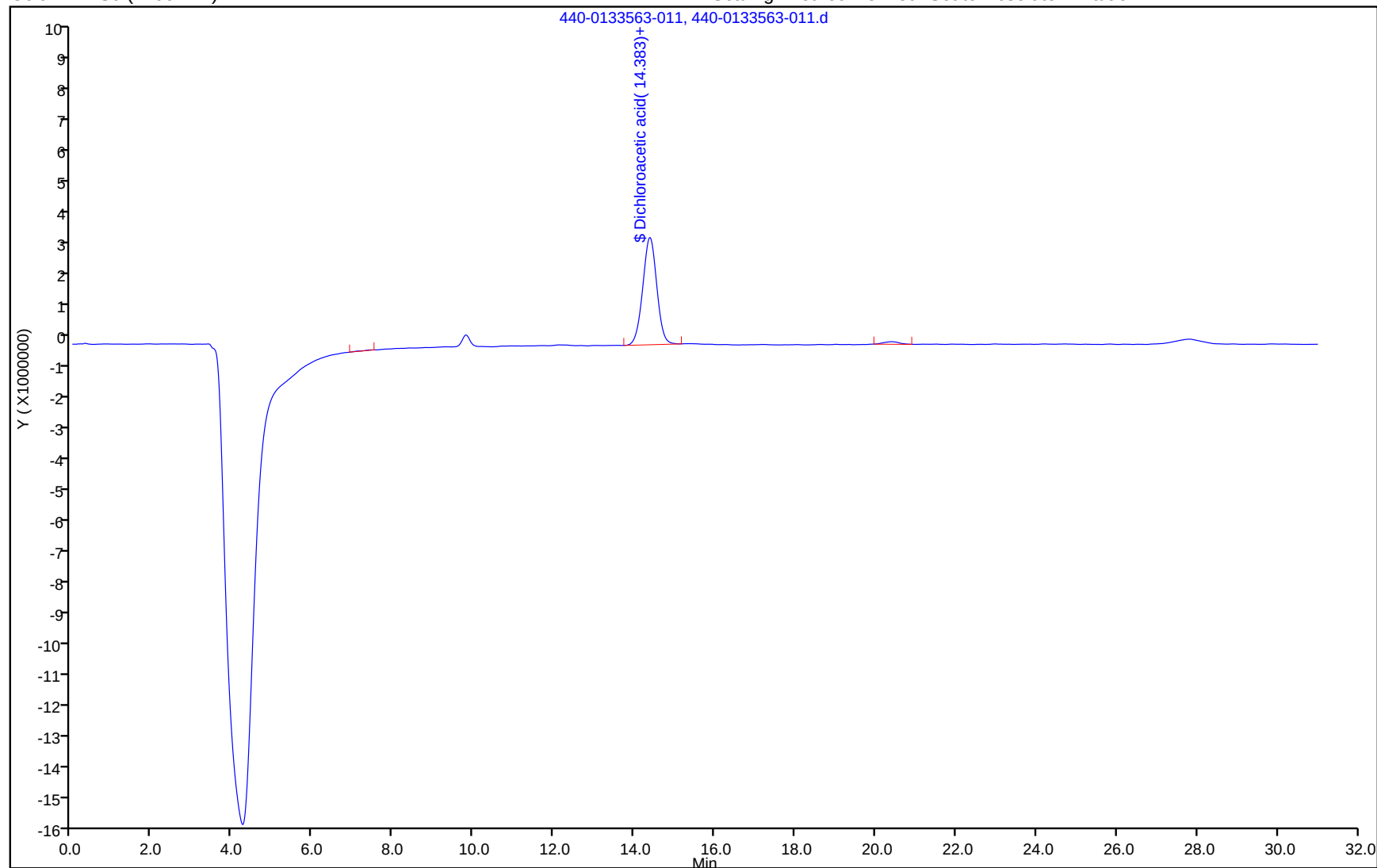
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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I-5-978

Report Date: 23-May-2020 07:24:19

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-011.d
 Lims ID: ICB
 Client ID:
 Sample Type: ICB
 Inject. Date: 22-May-2020 13:29:00 ALS Bottle#: 0 Worklist Smp#: 11
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0133563-011
 Misc. Info.: 11 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 23-May-2020 08:03:05 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1019

First Level Reviewer: zakhrabov

Date: 23-May-2020 06:49:36

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1004.0	101.03

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-267742-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: ICB 440-609718/11
 Matrix: Water Lab File ID: 440-0133563-011.d
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 05/22/2020 13:29
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 609718 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14998-27-7	Chlorite	ND		20	4.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	101		90-115

Report Date: 23-May-2020 07:24:19

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-011.d
 Lims ID: ICB
 Client ID:
 Sample Type: ICB
 Inject. Date: 22-May-2020 13:29:00 ALS Bottle#: 0 Worklist Smp#: 11
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0133563-011
 Misc. Info.: 11 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 23-May-2020 08:03:05 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1019

First Level Reviewer: zakhrabov

Date: 23-May-2020 06:49:36

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 1 Dichloroacetic acid	14.383	14.367	0.016	82015432		NC	
\$ 6 Dichloroacetic acid(Surr)	14.383	14.392	-0.009	82015432	993.7	1004.0	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 23-May-2020 07:24:19

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-011.d

Injection Date: 22-May-2020 13:29:00

Instrument ID: IC-8

Operator ID:

Lims ID: ICB

Worklist Smp#: 11

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

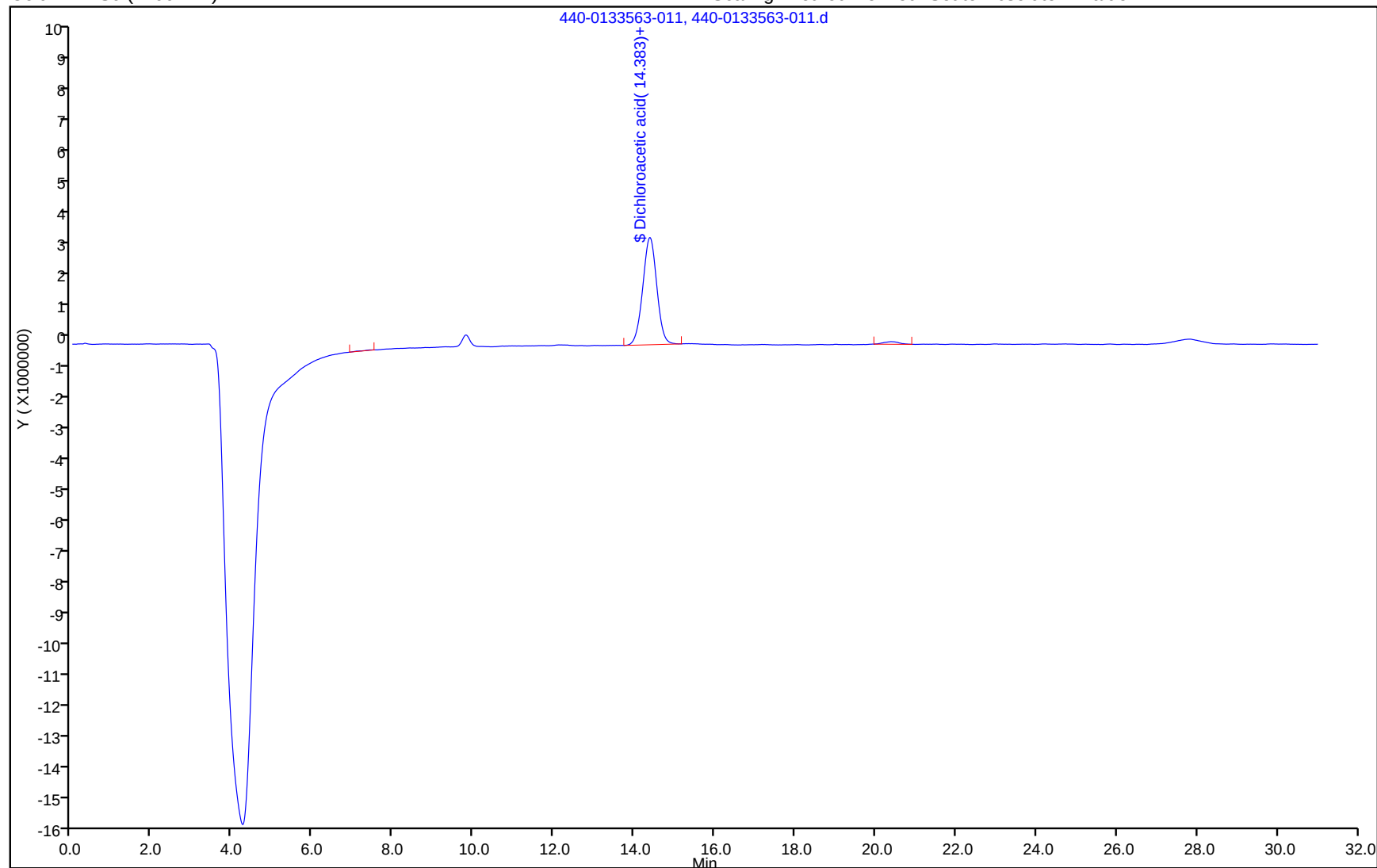
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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SWMUs ST-106/SS-111

I-5-982

Report Date: 23-May-2020 07:24:19

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-011.d
 Lims ID: ICB
 Client ID:
 Sample Type: ICB
 Inject. Date: 22-May-2020 13:29:00 ALS Bottle#: 0 Worklist Smp#: 11
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0133563-011
 Misc. Info.: 11 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 23-May-2020 08:03:05 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1019

First Level Reviewer: zakhrabov

Date: 23-May-2020 06:49:36

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1004.0	101.03

Report Date: 23-May-2020 07:24:19

Chrom Revision: 2.3 05-May-2020 17:48:18
User Disabled Compound Report

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-011.d

Injection Date: 22-May-2020 13:29:00

Instrument ID: IC-8

Lims ID: ICB

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#: 11

Injection Vol: 1.0 ul

Dil. Factor:

1.0000

Method: 300.1_C8

Limit Group:

IC-300.1_14D

Column: AS9 (4.00 mm)

Detector

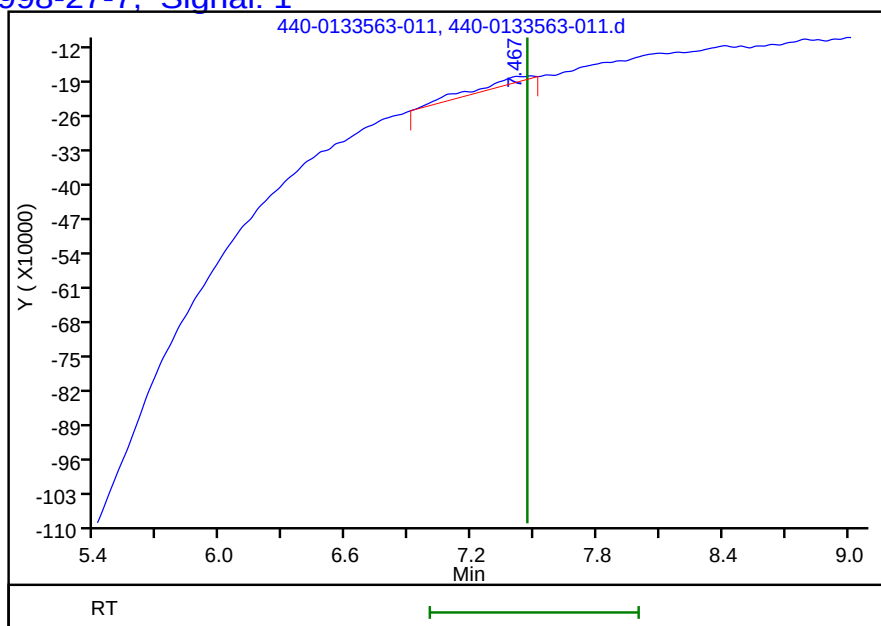
Ch-A-20110816009

5 Chlorite, CAS: 14998-27-7, Signal: 1

RT: 7.47

Response: 276064

Amount: 0



Reviewer: zakhrabov, 23-May-2020 06:49:36

Audit Action: Manually Integrated

Audit Reason:

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-267742-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 440-613692/4
 Matrix: Water Lab File ID: 440-0134572-004440-0134572-004
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 06/22/2020 09:22
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 613692 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
15541-45-4	Bromate	25.8		5.0	1.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	108		90-115

Report Date: 22-Jun-2020 10:15:40

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-004440-0134572-004.d
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 22-Jun-2020 09:22:00 ALS Bottle#: 0 Worklist Smp#: 4
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0134572-004
 Misc. Info.: 4 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 22-Jun-2020 10:15:40 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1047

First Level Reviewer: zakhrabov

Date: 22-Jun-2020 10:15:40

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.317	7.184	0.133	15455403	NC	NC	
3 Bromate	8.350	8.175	0.175	2222403	25.0	25.8	M
\$ 6 Dichloroacetic acid(Surr)	13.567	13.525	0.042	88074358	993.7	1078.2	
4 Bromide	15.850	15.350	0.500	40378608	250.0	261.5	a
2 Chlorate	17.117	16.367	0.750	14600242	100.0	102.8	a

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

WC3001LCS_00090

Amount Added: 125.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 22-Jun-2020 10:15:40

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-004440-0134572-004.d

Injection Date: 22-Jun-2020 09:22:00

Instrument ID: IC-8

Operator ID:

Lims ID: LCS

Worklist Smp#: 4

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

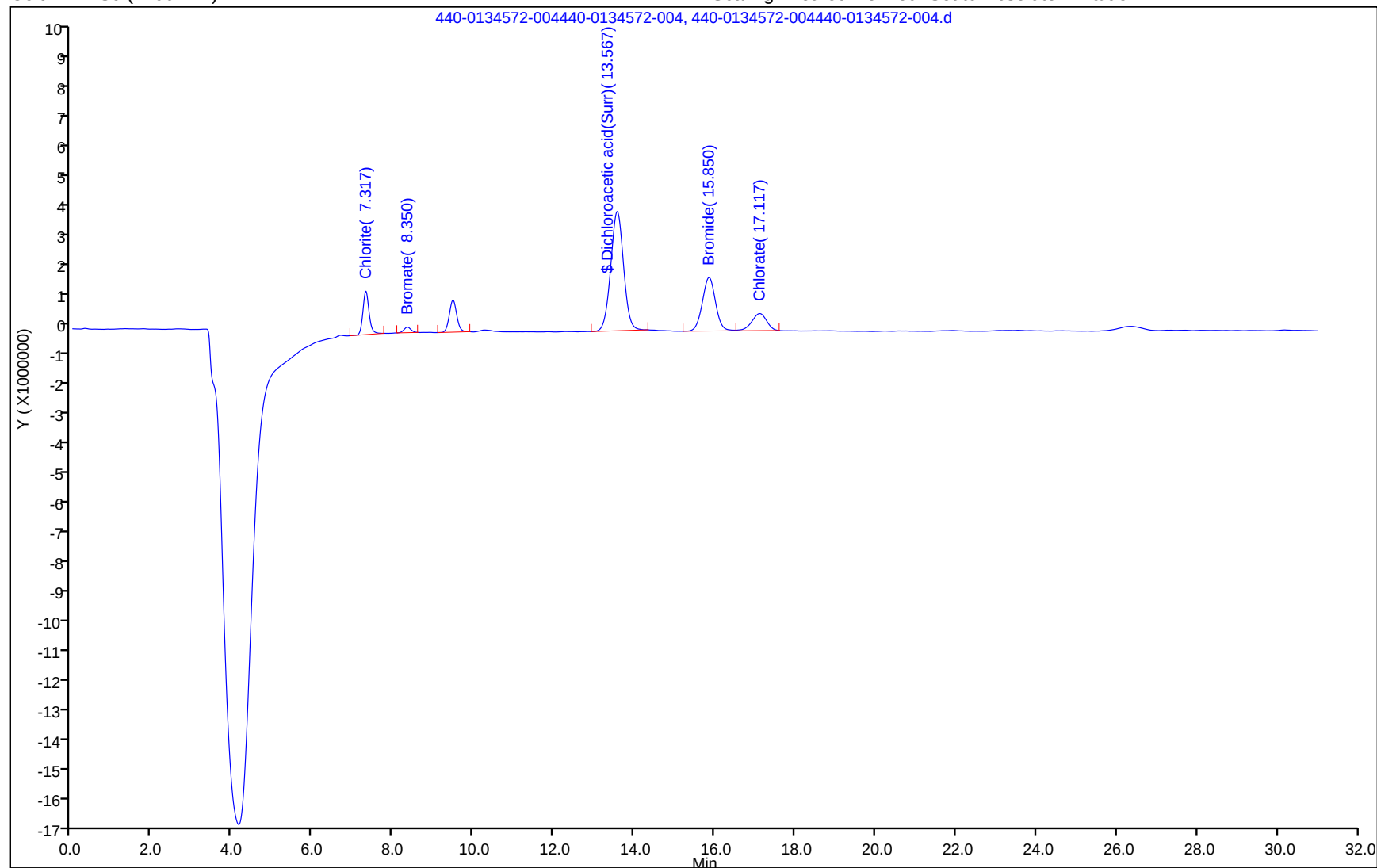
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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I-5-987

Report Date: 22-Jun-2020 10:15:40

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-004440-0134572-004.d
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 22-Jun-2020 09:22:00 ALS Bottle#: 0 Worklist Smp#: 4
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0134572-004
 Misc. Info.: 4 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 22-Jun-2020 10:15:40 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1047

First Level Reviewer: zakhrabov

Date: 22-Jun-2020 10:15:40

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1078.2	108.50

Report Date: 22-Jun-2020 10:15:40

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

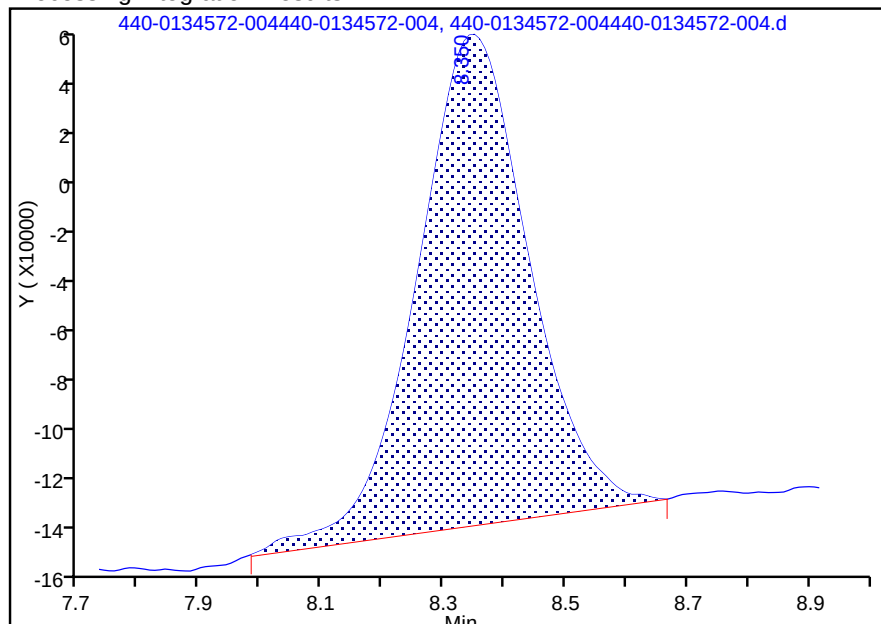
Data File:	\\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-004440-0134572-004.d		
Injection Date:	22-Jun-2020 09:22:00	Instrument ID:	IC-8
Lims ID:	LCS		
Client ID:			
Operator ID:		ALS Bottle#:	0
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	300.1_C8	Limit Group:	IC-300.1_28D
Column:	AS9 (4.00 mm)	Detector:	Ch-A-20110816009
		Worklist Smp#:	4

3 Bromate, CAS: 15541-45-4

Signal: 1

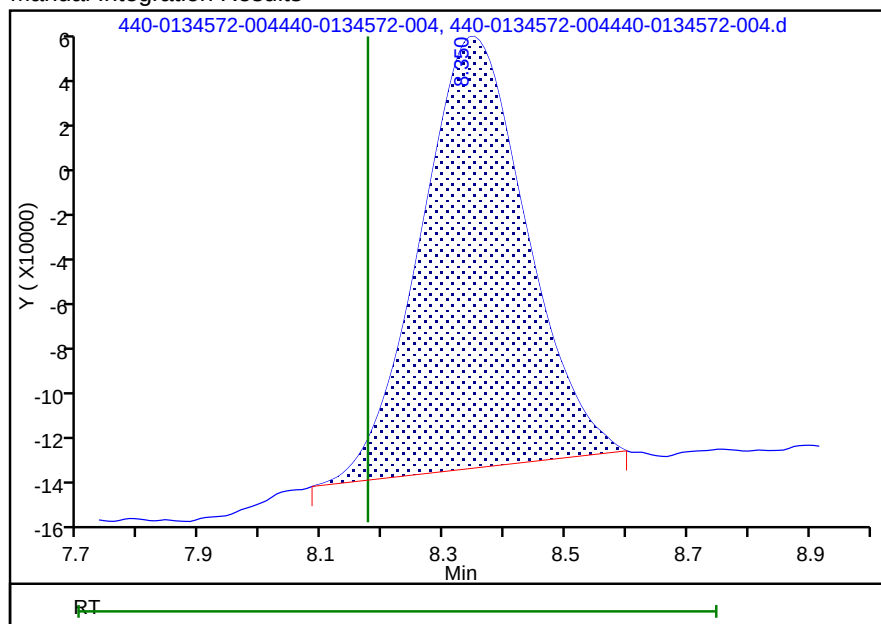
RT: 8.35
Area: 2420639
Amount: 28.113649
Amount Units: ug/l

Processing Integration Results



RT: 8.35
Area: 2222403
Amount: 25.849250
Amount Units: ug/l

Manual Integration Results



Reviewer: zakhrabov, 22-Jun-2020 10:15:17

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

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FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-267742-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 440-613694/4
 Matrix: Water Lab File ID: 440-0134572-004440-0134572-004
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 06/22/2020 09:22
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 613694 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14998-27-7	Chlorite	97.2		20	4.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	108		90-115

Report Date: 22-Jun-2020 10:15:40

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-004440-0134572-004.d
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 22-Jun-2020 09:22:00 ALS Bottle#: 0 Worklist Smp#: 4
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0134572-004
 Misc. Info.: 4 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 22-Jun-2020 10:15:40 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1047

First Level Reviewer: zakhrabov

Date: 22-Jun-2020 10:15:40

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.317	7.184	0.133	15455403	100.0	97.2	
3 Bromate	8.350	8.175	0.175	2222403	NC	NC	M
\$ 6 Dichloroacetic acid(Surr)	13.567	13.525	0.042	88074358	993.7	1078.2	
4 Bromide	15.850	15.350	0.500	40378608	NC	NC	a
2 Chlorate	17.117	16.367	0.750	14600242	NC	NC	a

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

WC3001LCS_00090

Amount Added: 125.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 22-Jun-2020 10:15:40

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-004440-0134572-004.d

Injection Date: 22-Jun-2020 09:22:00

Instrument ID: IC-8

Operator ID:

Lims ID: LCS

Worklist Smp#: 4

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

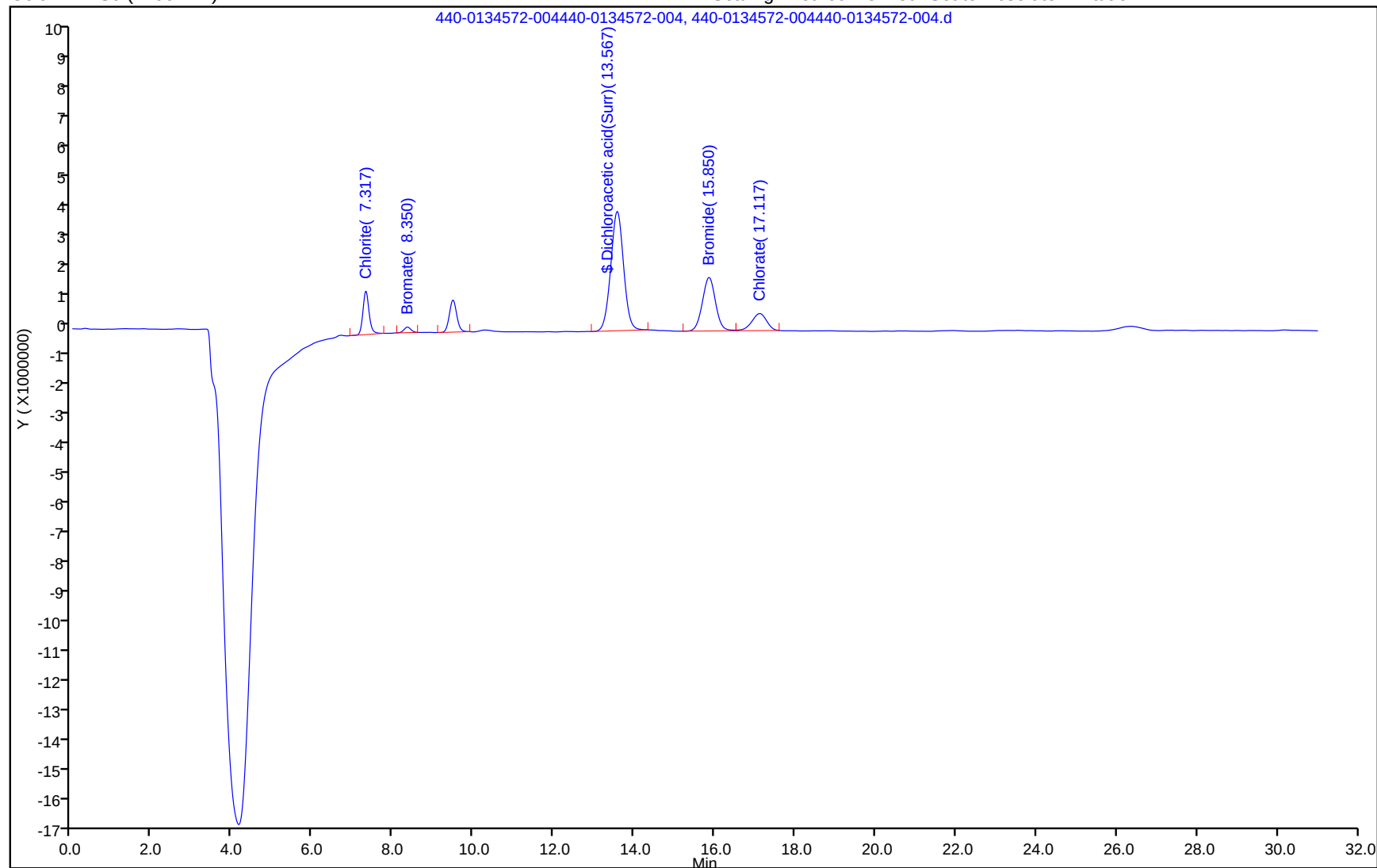
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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I-5-992

Report Date: 22-Jun-2020 10:15:40

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-004440-0134572-004.d
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 22-Jun-2020 09:22:00 ALS Bottle#: 0 Worklist Smp#: 4
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0134572-004
 Misc. Info.: 4 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 22-Jun-2020 10:15:40 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1047

First Level Reviewer: zakhrabov

Date: 22-Jun-2020 10:15:40

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1078.2	108.50

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-267742-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MRL 440-613692/3
 Matrix: Water Lab File ID: 440-0134572-003440-0134572-003
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 06/22/2020 08:46
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 613692 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
15541-45-4	Bromate	4.82	J	5.0	1.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	113		90-115

Report Date: 22-Jun-2020 09:33:34

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-003440-0134572-003.d
 Lims ID: MRL
 Client ID:
 Sample Type: MRL
 Inject. Date: 22-Jun-2020 08:46:00 ALS Bottle#: 0 Worklist Smp#: 3
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0134572-003
 Misc. Info.: 3 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 22-Jun-2020 09:33:17 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1047

First Level Reviewer: zakhrabov

Date: 22-Jun-2020 09:33:33

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.308	7.184	0.124	3317739	NC	NC	
3 Bromate	8.342	8.175	0.167	381551	5.00	4.82	
\$ 6 Dichloroacetic acid(Surr)	13.542	13.525	0.017	91962613	993.7	1125.8	
4 Bromide	15.858	15.350	0.508	7716470	50.0	54.6	a
2 Chlorate	17.108	16.367	0.741	2453804	20.0	20.3	a

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

a - User Assigned ID

Reagents:

WC3001LCS_00090

Amount Added: 25.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 22-Jun-2020 09:33:34

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-003440-0134572-003.d

Injection Date: 22-Jun-2020 08:46:00

Instrument ID: IC-8

Operator ID:

Lims ID: MRL

Worklist Smp#: 3

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

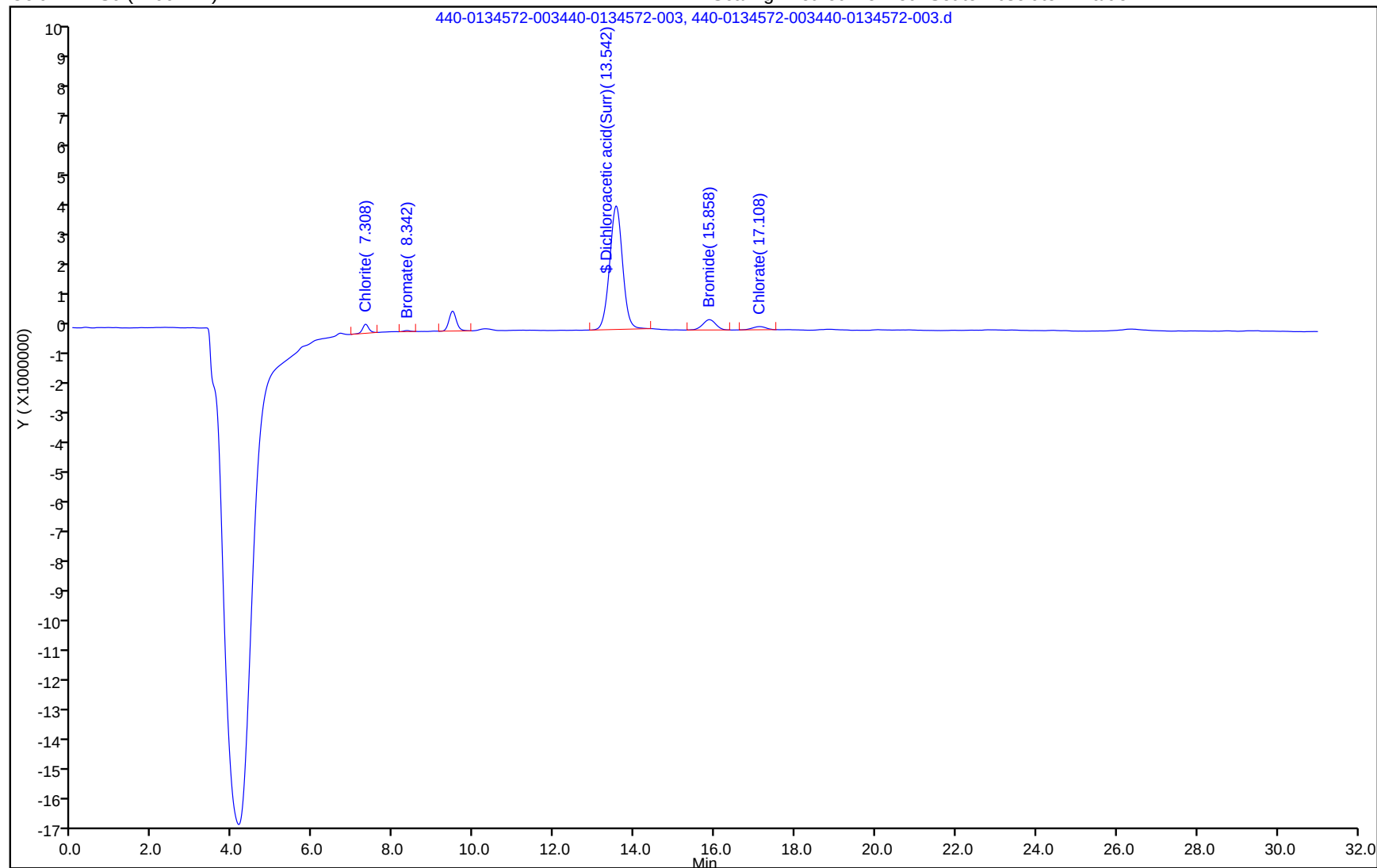
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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I-5-996

Report Date: 22-Jun-2020 09:33:34

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-003440-0134572-003.d
 Lims ID: MRL
 Client ID:
 Sample Type: MRL
 Inject. Date: 22-Jun-2020 08:46:00 ALS Bottle#: 0 Worklist Smp#: 3
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0134572-003
 Misc. Info.: 3 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 22-Jun-2020 09:33:17 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1047

First Level Reviewer: zakhrabov

Date: 22-Jun-2020 09:33:33

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1125.8	113.29

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-267742-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MRL 440-613694/3
 Matrix: Water Lab File ID: 440-0134572-003440-0134572-003
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 06/22/2020 08:46
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 613694 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14998-27-7	Chlorite	21.8		20	4.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	113		90-115

Report Date: 22-Jun-2020 09:33:34

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-003440-0134572-003.d
 Lims ID: MRL
 Client ID:
 Sample Type: MRL
 Inject. Date: 22-Jun-2020 08:46:00 ALS Bottle#: 0 Worklist Smp#: 3
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0134572-003
 Misc. Info.: 3 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 22-Jun-2020 09:33:17 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1047

First Level Reviewer: zakhrabov

Date: 22-Jun-2020 09:33:33

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.308	7.184	0.124	3317739	20.0	21.8	
3 Bromate	8.342	8.175	0.167	381551	NC	NC	
\$ 6 Dichloroacetic acid(Surr)	13.542	13.525	0.017	91962613	993.7	1125.8	
4 Bromide	15.858	15.350	0.508	7716470	NC	NC	a
2 Chlorate	17.108	16.367	0.741	2453804	NC	NC	a

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

a - User Assigned ID

Reagents:

WC3001LCS_00090

Amount Added: 25.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 22-Jun-2020 09:33:34

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-003440-0134572-003.d

Injection Date: 22-Jun-2020 08:46:00

Instrument ID: IC-8

Operator ID:

Lims ID: MRL

Worklist Smp#: 3

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

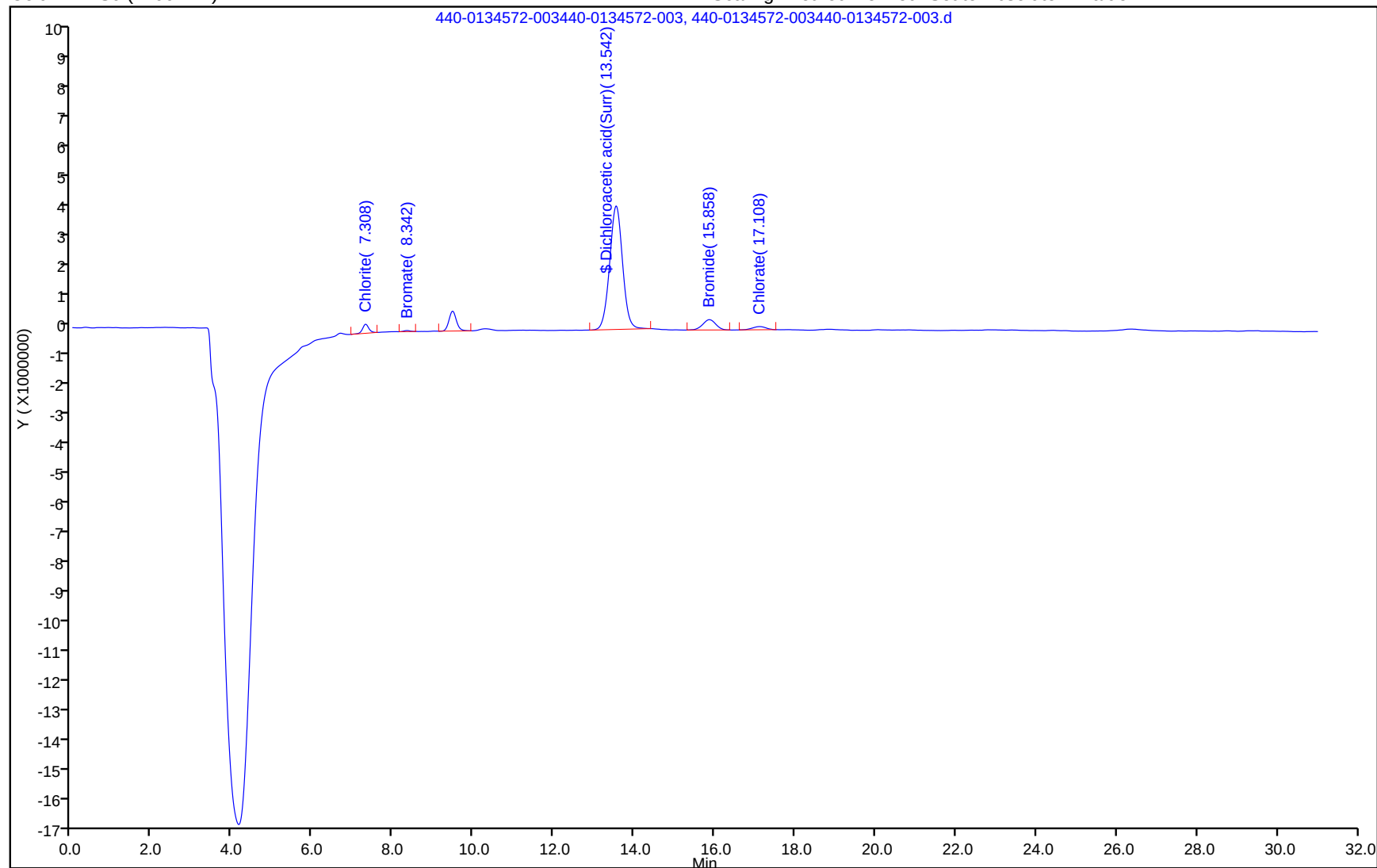
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-1000

Report Date: 22-Jun-2020 09:33:34

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-003440-0134572-003.d
 Lims ID: MRL
 Client ID:
 Sample Type: MRL
 Inject. Date: 22-Jun-2020 08:46:00 ALS Bottle#: 0 Worklist Smp#: 3
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0134572-003
 Misc. Info.: 3 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 22-Jun-2020 09:33:17 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1047

First Level Reviewer: zakhrabov

Date: 22-Jun-2020 09:33:33

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1125.8	113.29

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-267742-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: 550-143620-A-1 MS
 Matrix: Water Lab File ID: 440-0134572-011440-0134572-011
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 06/22/2020 13:34
 Con. Extract Vol.: _____ Dilution Factor: 5
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 613692 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
15541-45-4	Bromate	56.3		25	5.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	104		90-115

Report Date: 23-Jun-2020 04:50:40

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-011440-0134572-011.d
 Lims ID: 550-143620-A-1 MS
 Client ID:
 Sample Type: MS
 Inject. Date: 22-Jun-2020 13:34:00 ALS Bottle#: 0 Worklist Smp#: 11
 Injection Vol: 1.0 ul Dil. Factor: 5.0000
 Sample Info: 440-0134572-011
 Misc. Info.: 17047 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 23-Jun-2020 04:50:36 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1049

First Level Reviewer: zakhrabov

Date: 23-Jun-2020 04:50:39

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.275	7.184	0.091	7605974	NC	NC	
3 Bromate	8.375	8.175	0.200	945142	10.0	11.3	M
\$ 1 Dichloroacetic acid	13.559	13.709	-0.150	84453753		NC	
\$ 6 Dichloroacetic acid(Surr)	13.559	13.709	-0.150	84453753	198.7	1033.8	
4 Bromide	15.859	16.125	-0.266	18631909	100.0	123.7	a
2 Chlorate	17.125	16.367	0.758	7106596	40.0	51.9	a

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

WC3001LCS_00090

Amount Added: 250.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 23-Jun-2020 04:50:40

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-011440-0134572-011.d

Injection Date: 22-Jun-2020 13:34:00

Instrument ID: IC-8

Operator ID:

Lims ID: 550-143620-A-1 MS

Worklist Smp#: 11

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 5.0000

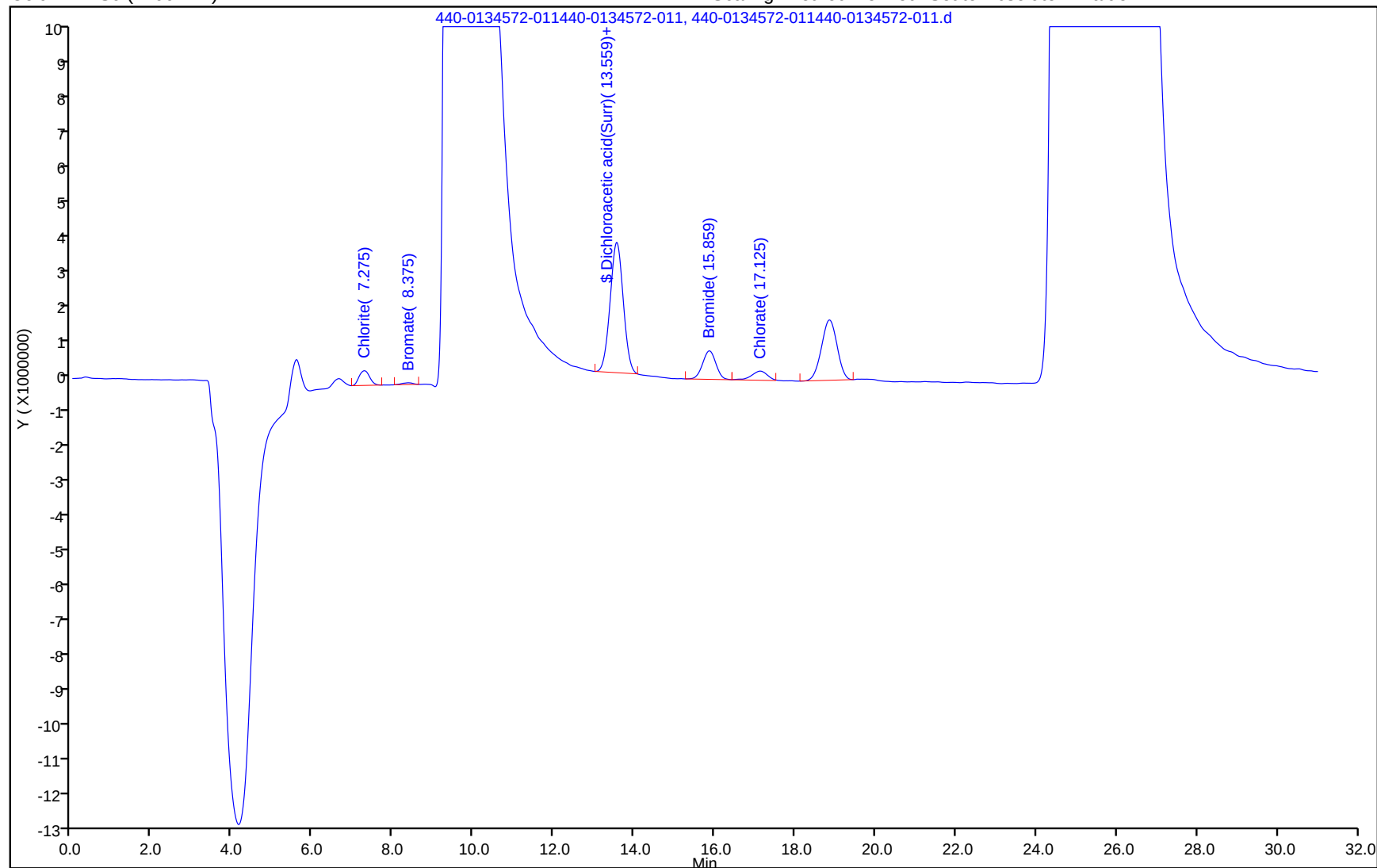
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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Report Date: 23-Jun-2020 04:50:40

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-011440-0134572-011.d
 Lims ID: 550-143620-A-1 MS
 Client ID:
 Sample Type: MS
 Inject. Date: 22-Jun-2020 13:34:00 ALS Bottle#: 0 Worklist Smp#: 11
 Injection Vol: 1.0 ul Dil. Factor: 5.0000
 Sample Info: 440-0134572-011
 Misc. Info.: 17047 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 23-Jun-2020 04:50:36 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1049

First Level Reviewer: zakhrabov

Date: 23-Jun-2020 04:50:39

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1033.8	520.19

Report Date: 23-Jun-2020 04:50:40

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

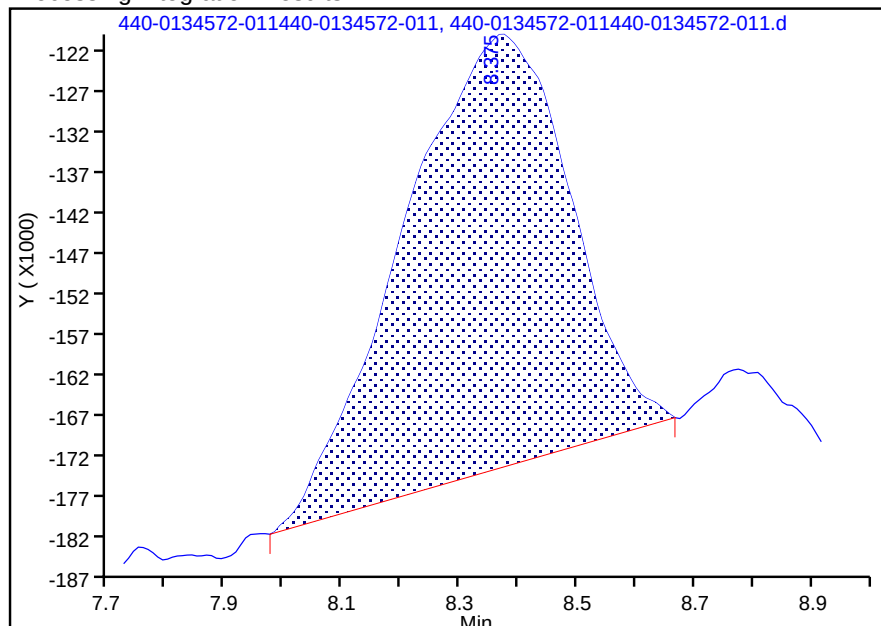
Data File:	\\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-011440-0134572-011.d		
Injection Date:	22-Jun-2020 13:34:00	Instrument ID:	IC-8
Lims ID:	550-143620-A-1 MS		
Client ID:			
Operator ID:	ALS Bottle#:	0	Worklist Smp#:
Injection Vol:	1.0 ul	Dil. Factor:	5.0000
Method:	300.1_C8	Limit Group:	IC-300.1_28D
Column:	AS9 (4.00 mm)	Detector:	Ch-A-20110816009

3 Bromate, CAS: 15541-45-4

Signal: 1

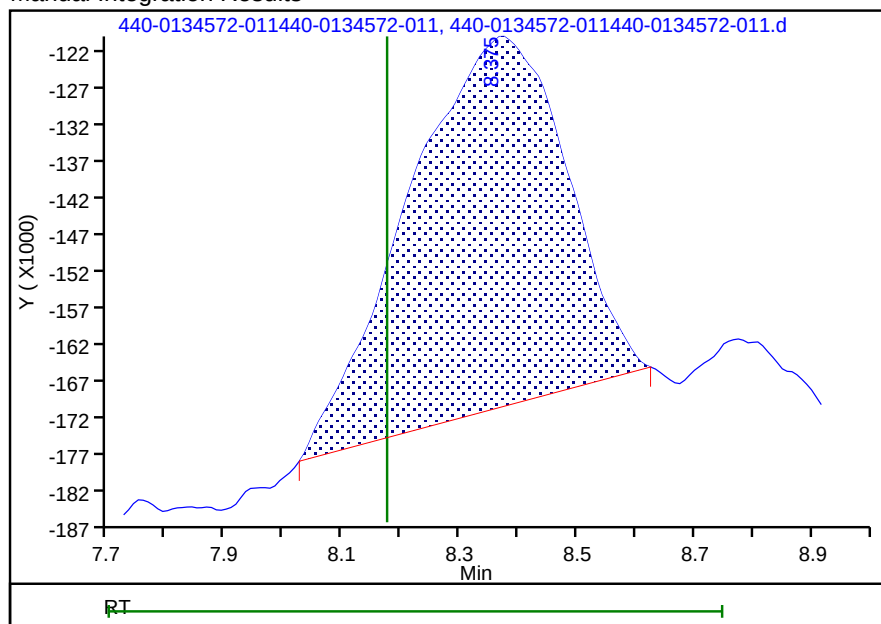
RT: 8.38
Area: 1052998
Amount: 12.491439
Amount Units: ug/l

Processing Integration Results



RT: 8.38
Area: 945142
Amount: 11.259428
Amount Units: ug/l

Manual Integration Results



Reviewer: zakhrabov, 23-Jun-2020 04:50:32

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

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Kirtland AFB BFF
Quarterly Report - April-June 2020
SWMUs ST-106/SS-111

I-5-1006

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-267742-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: 550-143620-A-1 MS
 Matrix: Water Lab File ID: 440-0134572-011440-0134572-011
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 06/22/2020 13:34
 Con. Extract Vol.: _____ Dilution Factor: 5
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 613694 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14998-27-7	Chlorite	242		100	20

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	104		90-115

Report Date: 23-Jun-2020 04:50:39

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-011440-0134572-011.d
 Lims ID: 550-143620-A-1 MS
 Client ID:
 Sample Type: MS
 Inject. Date: 22-Jun-2020 13:34:00 ALS Bottle#: 0 Worklist Smp#: 11
 Injection Vol: 1.0 ul Dil. Factor: 5.0000
 Sample Info: 440-0134572-011
 Misc. Info.: 17047 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 23-Jun-2020 04:50:36 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1049

First Level Reviewer: zakhrabov

Date: 23-Jun-2020 04:50:39

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.275	7.184	0.091	7605974	40.0	48.4	
3 Bromate	8.375	8.175	0.200	945142	NC	NC	M
\$ 1 Dichloroacetic acid	13.559	13.709	-0.150	84453753		NC	
\$ 6 Dichloroacetic acid(Surr)	13.559	13.709	-0.150	84453753	198.7	1033.8	
4 Bromide	15.859	16.125	-0.266	18631909	NC	NC	a
2 Chlorate	17.125	16.367	0.758	7106596	NC	NC	a

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

WC3001LCS_00090

Amount Added: 250.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 23-Jun-2020 04:50:40

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-011440-0134572-011.d

Injection Date: 22-Jun-2020 13:34:00

Instrument ID: IC-8

Operator ID:

Lims ID: 550-143620-A-1 MS

Worklist Smp#: 11

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 5.0000

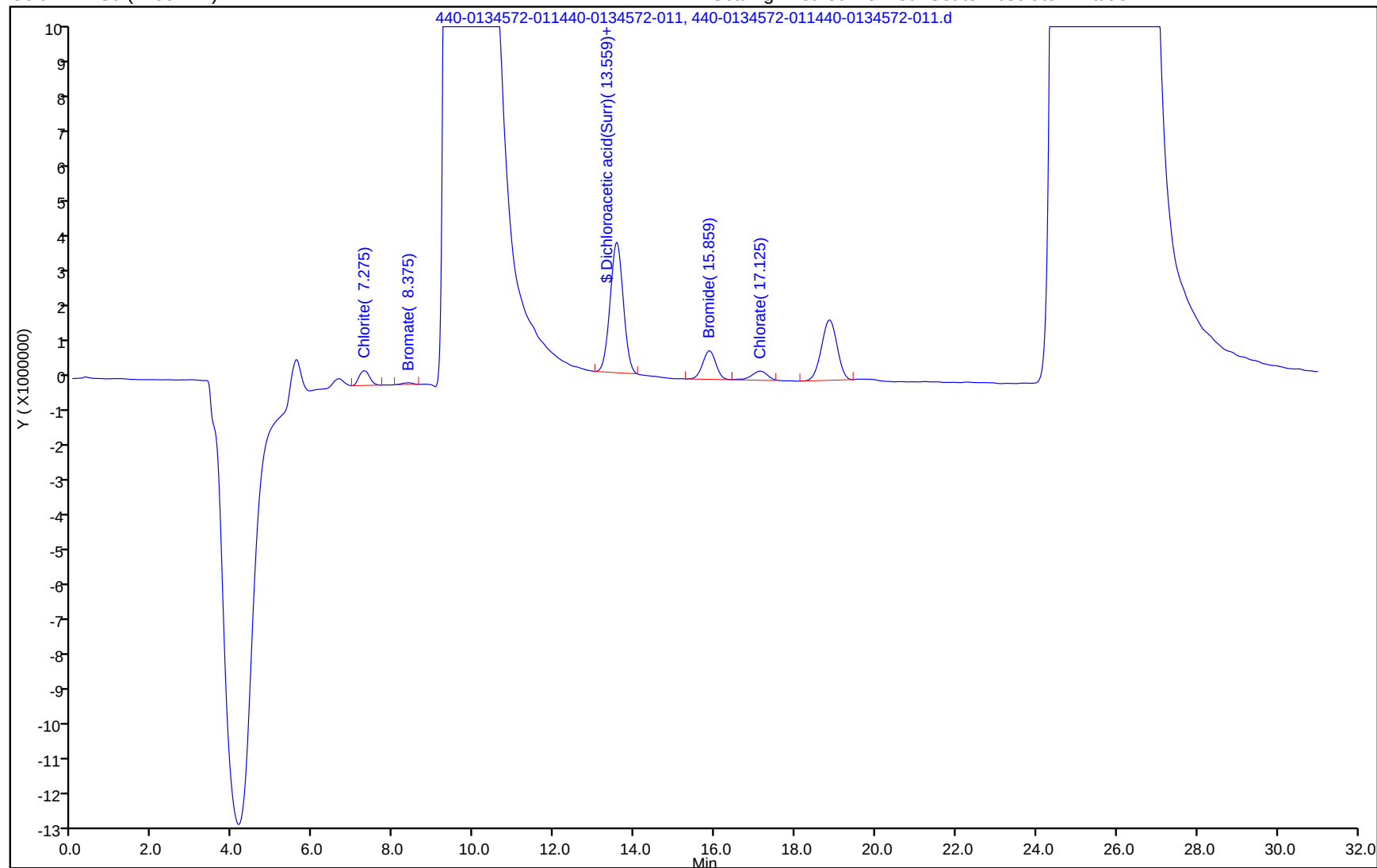
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-1009

Report Date: 23-Jun-2020 04:50:40

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-011440-0134572-011.d
 Lims ID: 550-143620-A-1 MS
 Client ID:
 Sample Type: MS
 Inject. Date: 22-Jun-2020 13:34:00 ALS Bottle#: 0 Worklist Smp#: 11
 Injection Vol: 1.0 ul Dil. Factor: 5.0000
 Sample Info: 440-0134572-011
 Misc. Info.: 17047 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 23-Jun-2020 04:50:36 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1049

First Level Reviewer: zakhrabov

Date: 23-Jun-2020 04:50:39

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1033.8	520.19

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-267742-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: 550-143620-A-1 MSD
 Matrix: Water Lab File ID: 440-0134572-012440-0134572-012
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 06/22/2020 14:10
 Con. Extract Vol.: _____ Dilution Factor: 5
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 613692 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
15541-45-4	Bromate	60.8		25	5.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	103		90-115

Report Date: 23-Jun-2020 04:51:02

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-012440-0134572-012.d
 Lims ID: 550-143620-A-1 MSD
 Client ID:
 Sample Type: MSD
 Inject. Date: 22-Jun-2020 14:10:00 ALS Bottle#: 0 Worklist Smp#: 12
 Injection Vol: 1.0 ul Dil. Factor: 5.0000
 Sample Info: 440-0134572-012
 Misc. Info.: 14099 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 23-Jun-2020 04:50:59 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1049

First Level Reviewer: zakhrabov

Date: 23-Jun-2020 04:51:02

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.283	7.184	0.099	7776510	NC	NC	
3 Bromate	8.375	8.175	0.200	1023371	10.0	12.2	M
\$ 1 Dichloroacetic acid	13.567	13.709	-0.142	83423608		NC	
\$ 6 Dichloroacetic acid(Surr)	13.567	13.709	-0.142	83423608	198.7	1021.2	
4 Bromide	15.892	16.125	-0.233	18900184	100.0	125.4	a
2 Chlorate	17.158	16.367	0.791	6939435	40.0	50.7	a

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

WC3001LCS_00090

Amount Added: 250.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 23-Jun-2020 04:51:02

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-012440-0134572-012.d

Injection Date: 22-Jun-2020 14:10:00

Instrument ID: IC-8

Operator ID:

Lims ID: 550-143620-A-1 MSD

Worklist Smp#: 12

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 5.0000

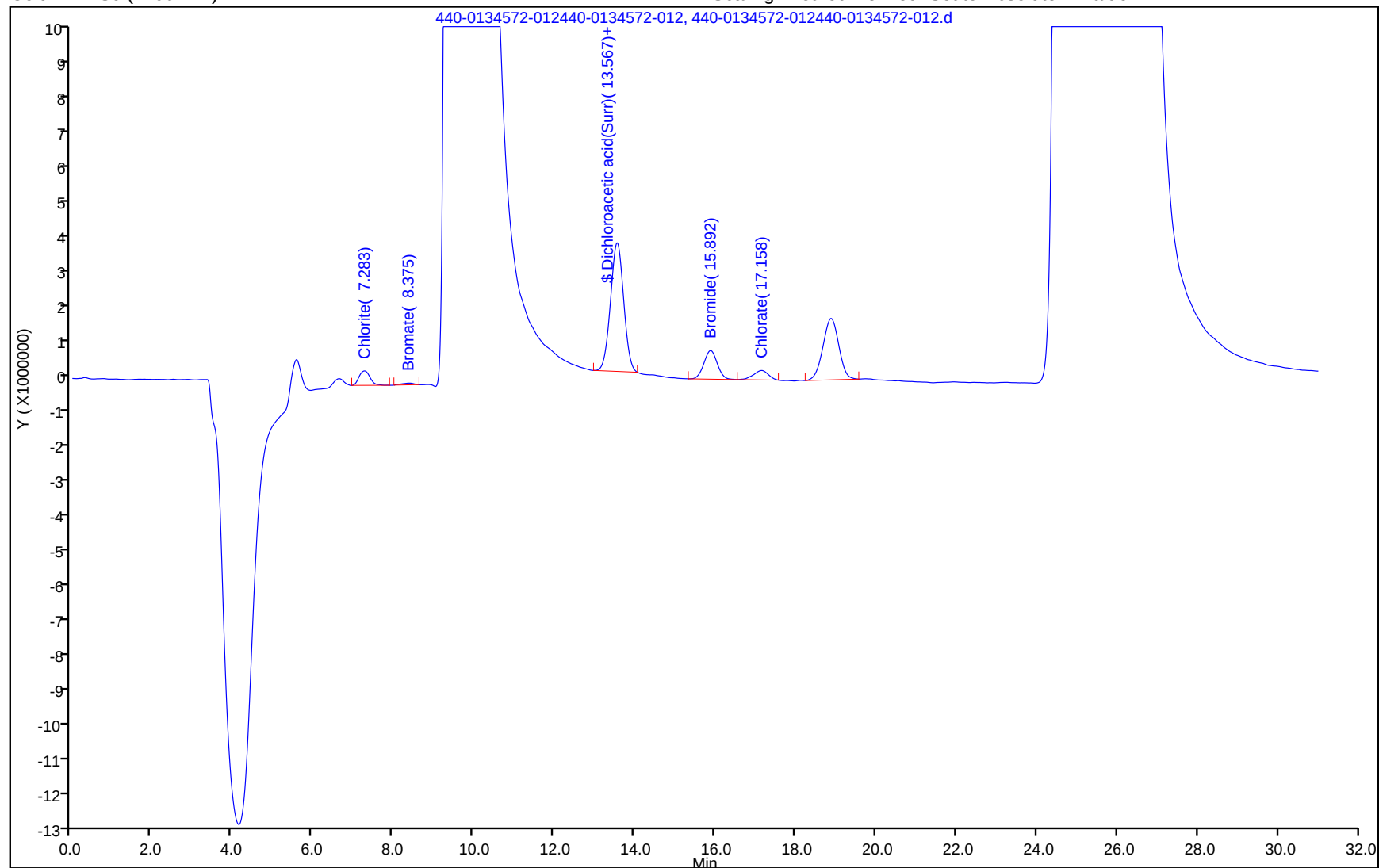
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-1013

Report Date: 23-Jun-2020 04:51:02

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-012440-0134572-012.d
 Lims ID: 550-143620-A-1 MSD
 Client ID:
 Sample Type: MSD
 Inject. Date: 22-Jun-2020 14:10:00 ALS Bottle#: 0 Worklist Smp#: 12
 Injection Vol: 1.0 ul Dil. Factor: 5.0000
 Sample Info: 440-0134572-012
 Misc. Info.: 14099 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 23-Jun-2020 04:50:59 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1049

First Level Reviewer: zakhrabov

Date: 23-Jun-2020 04:51:02

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1021.2	513.85

Report Date: 23-Jun-2020 04:51:02

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

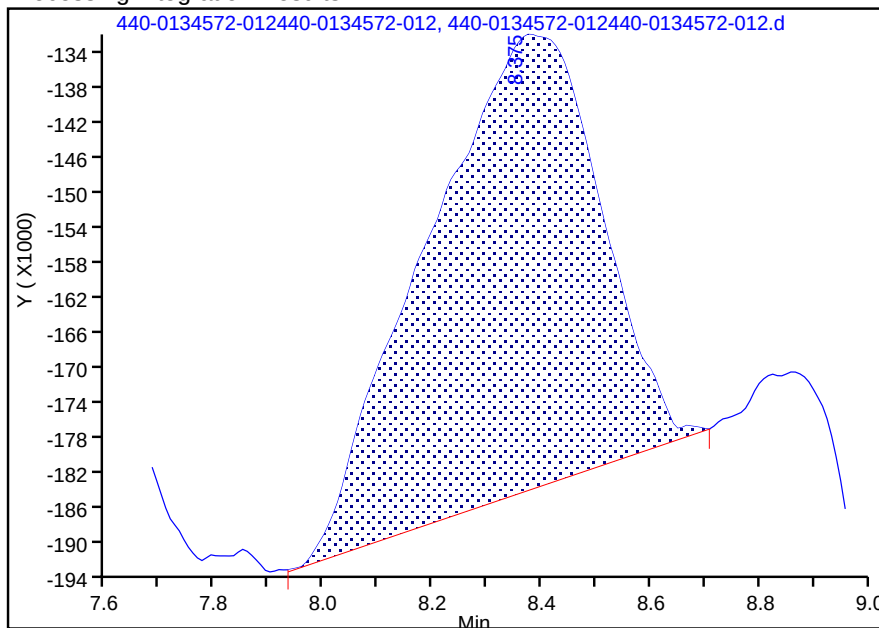
Data File:	\\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-012440-0134572-012.d		
Injection Date:	22-Jun-2020 14:10:00	Instrument ID:	IC-8
Lims ID:	550-143620-A-1 MSD		
Client ID:			
Operator ID:	ALS Bottle#:	0	Worklist Smp#:
Injection Vol:	1.0 ul	Dil. Factor:	5.0000
Method:	300.1_C8	Limit Group:	IC-300.1_28D
Column:	AS9 (4.00 mm)	Detector:	Ch-A-20110816009

3 Bromate, CAS: 15541-45-4

Signal: 1

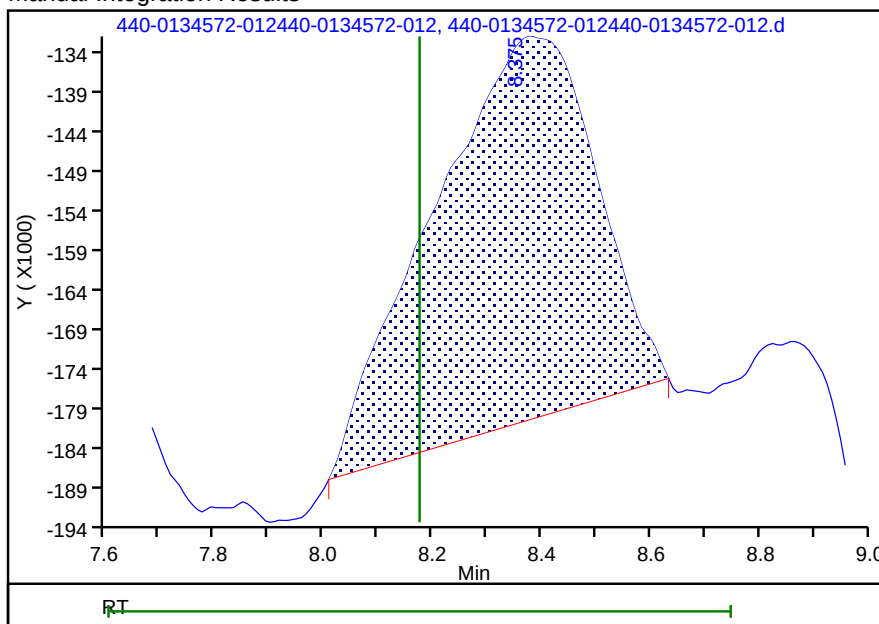
RT: 8.38
Area: 1170104
Amount: 13.829111
Amount Units: ug/l

Processing Integration Results



RT: 8.38
Area: 1023371
Amount: 12.153018
Amount Units: ug/l

Manual Integration Results



Reviewer: zakhrabov, 23-Jun-2020 04:50:53

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

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FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-267742-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: 550-143620-A-1 MSD
 Matrix: Water Lab File ID: 440-0134572-012440-0134572-012
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 06/22/2020 14:10
 Con. Extract Vol.: _____ Dilution Factor: 5
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 613694 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14998-27-7	Chlorite	247		100	20

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	103		90-115

Report Date: 23-Jun-2020 04:51:02

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-012440-0134572-012.d
 Lims ID: 550-143620-A-1 MSD
 Client ID:
 Sample Type: MSD
 Inject. Date: 22-Jun-2020 14:10:00 ALS Bottle#: 0 Worklist Smp#: 12
 Injection Vol: 1.0 ul Dil. Factor: 5.0000
 Sample Info: 440-0134572-012
 Misc. Info.: 14099 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 23-Jun-2020 04:50:59 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1049

First Level Reviewer: zakhrabov

Date: 23-Jun-2020 04:51:02

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.283	7.184	0.099	7776510	40.0	49.5	
3 Bromate	8.375	8.175	0.200	1023371	NC	NC	M
\$ 1 Dichloroacetic acid	13.567	13.709	-0.142	83423608		NC	
\$ 6 Dichloroacetic acid(Surr)	13.567	13.709	-0.142	83423608	198.7	1021.2	
4 Bromide	15.892	16.125	-0.233	18900184	NC	NC	a
2 Chlorate	17.158	16.367	0.791	6939435	NC	NC	a

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

WC3001LCS_00090

Amount Added: 250.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 23-Jun-2020 04:51:02

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-012440-0134572-012.d

Injection Date: 22-Jun-2020 14:10:00

Instrument ID: IC-8

Operator ID:

Lims ID: 550-143620-A-1 MSD

Worklist Smp#: 12

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 5.0000

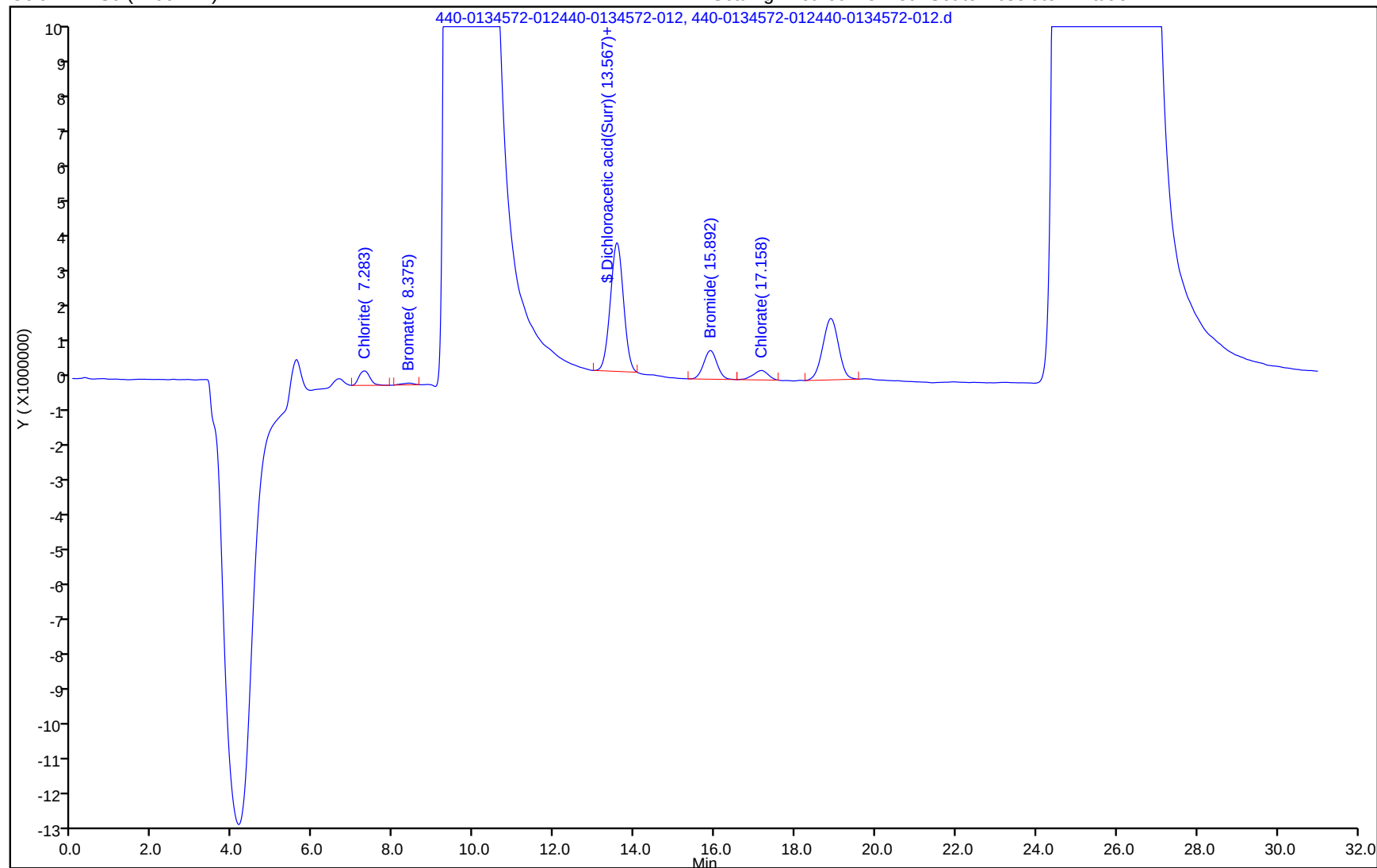
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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06/29/2020

Report Date: 23-Jun-2020 04:51:02

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\440-0134572-012440-0134572-012.d
 Lims ID: 550-143620-A-1 MSD
 Client ID:
 Sample Type: MSD
 Inject. Date: 22-Jun-2020 14:10:00 ALS Bottle#: 0 Worklist Smp#: 12
 Injection Vol: 1.0 ul Dil. Factor: 5.0000
 Sample Info: 440-0134572-012
 Misc. Info.: 14099 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200622-134572.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 23-Jun-2020 04:50:59 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1049

First Level Reviewer: zakhrabov

Date: 23-Jun-2020 04:51:02

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1021.2	513.85

HPLC/IC ANALYSIS RUN LOG

Appendix I-5

Lab Name: Eurofins Irvine

Job No.: 440-267742-1

SDG No.:

Instrument ID: IC-8

Start Date: 05/22/2020 07:28

Analysis Batch Number: 609717

End Date: 05/24/2020 00:14

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		05/22/2020 07:28	1		AS9-HC 4 (mm)
ZZZZZ		05/22/2020 08:04	1		AS9-HC 4 (mm)
ZZZZZ		05/22/2020 08:40	1		AS9-HC 4 (mm)
STD0 440-609717/4 IC		05/22/2020 09:16	1	440-0133563-004 .d	AS9-HC 4 (mm)
STD1 440-609717/5 IC		05/22/2020 09:52	1	440-0133563-005 .d	AS9-HC 4 (mm)
STD2 440-609717/6 IC		05/22/2020 10:29	1	440-0133563-006 .d	AS9-HC 4 (mm)
STD3 440-609717/7 IC		05/22/2020 11:05	1	440-0133563-007 .d	AS9-HC 4 (mm)
STD4 440-609717/8 IC		05/22/2020 11:41	1	440-0133563-008 .d	AS9-HC 4 (mm)
STD5 440-609717/9 IC		05/22/2020 12:17	1	440-0133563-009 .d	AS9-HC 4 (mm)
ICV 440-609717/10		05/22/2020 12:53	1	440-0133563-010 .d	AS9-HC 4 (mm)
ICB 440-609717/11		05/22/2020 13:29	1	440-0133563-011 .d	AS9-HC 4 (mm)
ZZZZZ		05/22/2020 14:06	1		AS9-HC 4 (mm)
ZZZZZ		05/22/2020 14:42	1		AS9-HC 4 (mm)
ZZZZZ		05/22/2020 15:18	1		AS9-HC 4 (mm)
ZZZZZ		05/22/2020 15:54	10		AS9-HC 4 (mm)
ZZZZZ		05/22/2020 16:31	10		AS9-HC 4 (mm)
ZZZZZ		05/22/2020 17:07	10		AS9-HC 4 (mm)
ZZZZZ		05/22/2020 17:43	20		AS9-HC 4 (mm)
ZZZZZ		05/22/2020 18:19	20		AS9-HC 4 (mm)
ZZZZZ		05/22/2020 18:56	1		AS9-HC 4 (mm)
ZZZZZ		05/22/2020 19:32	1		AS9-HC 4 (mm)
CCV 440-609717/22		05/22/2020 20:08	1		AS9-HC 4 (mm)
CCB 440-609717/23		05/22/2020 20:44	1		AS9-HC 4 (mm)
ZZZZZ		05/22/2020 21:20	50		AS9-HC 4 (mm)
ZZZZZ		05/22/2020 21:57	50		AS9-HC 4 (mm)
ZZZZZ		05/22/2020 22:33	50		AS9-HC 4 (mm)
ZZZZZ		05/22/2020 23:09	50		AS9-HC 4 (mm)
ZZZZZ		05/22/2020 23:45	50		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 00:22	50		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 00:58	50		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 01:34	50		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 02:10	1		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 02:47	1		AS9-HC 4 (mm)
CCV 440-609717/34		05/23/2020 03:23	1		AS9-HC 4 (mm)
CCB 440-609717/35		05/23/2020 03:59	1		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 04:35	1		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 05:12	10000		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 05:48	50		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 06:24	50		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 07:09	5		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 07:45	1		AS9-HC 4 (mm)

300.1B

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins Irvine Job No.: 440-267742-1
 SDG No.: _____
 Instrument ID: IC-8 Start Date: 05/22/2020 07:28
 Analysis Batch Number: 609717 End Date: 05/24/2020 00:14

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		05/23/2020 08:32	1		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 09:09	1		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 09:44	1		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 10:21	1		AS9-HC 4 (mm)
CCV 440-609717/46		05/23/2020 10:57	1		AS9-HC 4 (mm)
CCB 440-609717/47		05/23/2020 11:33	1		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 12:09	50		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 12:46	50		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 13:22	50		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 13:58	50		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 14:34	50		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 15:10	2000		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 15:47	10000		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 16:23	1		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 16:59	1		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 17:35	50		AS9-HC 4 (mm)
CCV 440-609717/58		05/23/2020 18:12	1		AS9-HC 4 (mm)
CCB 440-609717/59		05/23/2020 18:48	1		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 19:24	5		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 20:00	5		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 20:37	5		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 21:13	1		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 21:49	500		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 22:25	500		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 23:02	500		AS9-HC 4 (mm)
CCV 440-609717/67		05/23/2020 23:38	1		AS9-HC 4 (mm)
CCB 440-609717/68		05/24/2020 00:14	1		AS9-HC 4 (mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins Irvine Job No.: 440-267742-1

SDG No.: _____

Instrument ID: IC-8 Start Date: 05/22/2020 07:28

Analysis Batch Number: 609718 End Date: 05/24/2020 00:14

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		05/22/2020 07:28	1		AS9-HC 4 (mm)
ZZZZZ		05/22/2020 08:04	1		AS9-HC 4 (mm)
ZZZZZ		05/22/2020 08:40	1		AS9-HC 4 (mm)
STD0 440-609718/4 IC		05/22/2020 09:16	1	440-0133563-004 .d	AS9-HC 4 (mm)
STD1 440-609718/5 IC		05/22/2020 09:52	1	440-0133563-005 .d	AS9-HC 4 (mm)
STD2 440-609718/6 IC		05/22/2020 10:29	1	440-0133563-006 .d	AS9-HC 4 (mm)
STD3 440-609718/7 IC		05/22/2020 11:05	1	440-0133563-007 .d	AS9-HC 4 (mm)
STD4 440-609718/8 IC		05/22/2020 11:41	1	440-0133563-008 .d	AS9-HC 4 (mm)
STD5 440-609718/9 IC		05/22/2020 12:17	1	440-0133563-009 .d	AS9-HC 4 (mm)
ICV 440-609718/10		05/22/2020 12:53	1	440-0133563-010 .d	AS9-HC 4 (mm)
ICB 440-609718/11		05/22/2020 13:29	1	440-0133563-011 .d	AS9-HC 4 (mm)
CCB 440-609718/68		05/24/2020 00:14	1		AS9-HC 4 (mm)

300.1B

Lab Name: Eurofins Irvine

Job No.: 440-267742-1

SDG No.:

Instrument ID: IC-8

Start Date: 06/22/2020 07:34

Analysis Batch Number: 613692

End Date: 06/23/2020 16:57

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 440-613692/1		06/22/2020 07:34	1	440-0134572-001 440-0134572-001 .d	AS9-HC 4 (mm)
CCB 440-613692/2		06/22/2020 08:10	1	440-0134572-002 440-0134572-002 .d	AS9-HC 4 (mm)
MRL 440-613692/3		06/22/2020 08:46	1	440-0134572-003 440-0134572-003 .d	AS9-HC 4 (mm)
LCS 440-613692/4		06/22/2020 09:22	1	440-0134572-004 440-0134572-004 .d	AS9-HC 4 (mm)
MB 440-613692/5		06/22/2020 09:58	1	440-0134572-005 440-0134572-005 .d	AS9-HC 4 (mm)
ZZZZZ		06/22/2020 10:34	1		AS9-HC 4 (mm)
550-143620-A-1 MS		06/22/2020 13:34	5	440-0134572-011 440-0134572-011 .d	AS9-HC 4 (mm)
550-143620-A-1 MSD		06/22/2020 14:10	5	440-0134572-012 440-0134572-012 .d	AS9-HC 4 (mm)
CCV 440-613692/13		06/22/2020 14:47	1	440-0134572-013 440-0134572-013 .d	AS9-HC 4 (mm)
CCB 440-613692/14		06/22/2020 15:23	1	440-0134572-014 440-0134572-014 .d	AS9-HC 4 (mm)
ZZZZZ		06/22/2020 15:59	10		AS9-HC 4 (mm)
ZZZZZ		06/22/2020 16:35	10		AS9-HC 4 (mm)
ZZZZZ		06/22/2020 17:12	10		AS9-HC 4 (mm)
ZZZZZ		06/22/2020 17:48	10		AS9-HC 4 (mm)
CCV 440-613692/25		06/22/2020 22:02	1	440-0134572-025 440-0134572-025 .d	AS9-HC 4 (mm)
CCB 440-613692/26		06/22/2020 22:38	1	440-0134572-026 440-0134572-026 .d	AS9-HC 4 (mm)
440-267742-1		06/22/2020 23:14	5	440-0134572-027 440-0134572-027 .d	AS9-HC 4 (mm)
ZZZZZ		06/22/2020 23:50	1		AS9-HC 4 (mm)
ZZZZZ		06/23/2020 00:27	1		AS9-HC 4 (mm)
ZZZZZ		06/23/2020 01:03	1		AS9-HC 4 (mm)
ZZZZZ		06/23/2020 01:39	1		AS9-HC 4 (mm)
ZZZZZ		06/23/2020 02:15	1		AS9-HC 4 (mm)
ZZZZZ		06/23/2020 02:52	1		AS9-HC 4 (mm)
ZZZZZ		06/23/2020 03:28	1		AS9-HC 4 (mm)
ZZZZZ		06/23/2020 04:04	1		AS9-HC 4 (mm)
ZZZZZ		06/23/2020 04:51	5		AS9-HC 4 (mm)
CCV 440-613692/37		06/23/2020 05:27	1	440-0134572-037 440-0134572-037 .d	AS9-HC 4 (mm)
CCB 440-613692/38		06/23/2020 06:03	1	440-0134572-038 440-0134572-038 .d	AS9-HC 4 (mm)
ZZZZZ		06/23/2020 06:41	5		AS9-HC 4 (mm)

300.1B

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins Irvine Job No.: 440-267742-1
 SDG No.: _____
 Instrument ID: IC-8 Start Date: 06/22/2020 07:34
 Analysis Batch Number: 613692 End Date: 06/23/2020 16:57

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		06/23/2020 10:18	10		AS9-HC 4 (mm)
ZZZZZ		06/23/2020 10:54	10		AS9-HC 4 (mm)
ZZZZZ		06/23/2020 11:30	5		AS9-HC 4 (mm)
ZZZZZ		06/23/2020 12:07	5		AS9-HC 4 (mm)
CCV 440-613692/49		06/23/2020 12:43	1		AS9-HC 4 (mm)
CCB 440-613692/50		06/23/2020 13:19	1		AS9-HC 4 (mm)
ZZZZZ		06/23/2020 13:55	20		AS9-HC 4 (mm)
ZZZZZ		06/23/2020 14:32	5		AS9-HC 4 (mm)
ZZZZZ		06/23/2020 15:08	5		AS9-HC 4 (mm)
ZZZZZ		06/23/2020 15:44	5		AS9-HC 4 (mm)
CCV 440-613692/55		06/23/2020 16:20	1		AS9-HC 4 (mm)
CCB 440-613692/56		06/23/2020 16:57	1		AS9-HC 4 (mm)

HPLC/IC ANALYSIS RUN LOG

Appendix I-5

Lab Name: Eurofins Irvine

Job No.: 440-267742-1

SDG No.:

Instrument ID: IC-8

Start Date: 06/22/2020 07:34

Analysis Batch Number: 613694

End Date: 06/23/2020 16:57

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 440-613694/1		06/22/2020 07:34	1	440-0134572-001 440-0134572-001 .d	AS9-HC 4 (mm)
CCB 440-613694/2		06/22/2020 08:10	1	440-0134572-002 440-0134572-002 .d	AS9-HC 4 (mm)
MRL 440-613694/3		06/22/2020 08:46	1	440-0134572-003 440-0134572-003 .d	AS9-HC 4 (mm)
LCS 440-613694/4		06/22/2020 09:22	1	440-0134572-004 440-0134572-004 .d	AS9-HC 4 (mm)
MB 440-613694/5		06/22/2020 09:58	1	440-0134572-005 440-0134572-005 .d	AS9-HC 4 (mm)
ZZZZZ		06/22/2020 10:34	1		AS9-HC 4 (mm)
ZZZZZ		06/22/2020 11:10	1		AS9-HC 4 (mm)
ZZZZZ		06/22/2020 11:47	5		AS9-HC 4 (mm)
ZZZZZ		06/22/2020 12:22	5		AS9-HC 4 (mm)
ZZZZZ		06/22/2020 12:58	5		AS9-HC 4 (mm)
550-143620-A-1 MS		06/22/2020 13:34	5	440-0134572-011 440-0134572-011 .d	AS9-HC 4 (mm)
550-143620-A-1 MSD		06/22/2020 14:10	5	440-0134572-012 440-0134572-012 .d	AS9-HC 4 (mm)
CCV 440-613694/13		06/22/2020 14:47	1	440-0134572-013 440-0134572-013 .d	AS9-HC 4 (mm)
CCB 440-613694/14		06/22/2020 15:23	1	440-0134572-014 440-0134572-014 .d	AS9-HC 4 (mm)
ZZZZZ		06/22/2020 18:24	1		AS9-HC 4 (mm)
ZZZZZ		06/22/2020 19:00	1		AS9-HC 4 (mm)
ZZZZZ		06/22/2020 19:37	1		AS9-HC 4 (mm)
ZZZZZ		06/22/2020 20:13	1		AS9-HC 4 (mm)
ZZZZZ		06/22/2020 20:49	1		AS9-HC 4 (mm)
ZZZZZ		06/22/2020 21:25	1		AS9-HC 4 (mm)
CCV 440-613694/25		06/22/2020 22:02	1	440-0134572-025 440-0134572-025 .d	AS9-HC 4 (mm)
CCB 440-613694/26		06/22/2020 22:38	1	440-0134572-026 440-0134572-026 .d	AS9-HC 4 (mm)
ZZZZZ		06/22/2020 23:14	5		AS9-HC 4 (mm)
440-267742-1		06/22/2020 23:50	1	440-0134572-028 440-0134572-028 .d	AS9-HC 4 (mm)
ZZZZZ		06/23/2020 00:27	1		AS9-HC 4 (mm)
ZZZZZ		06/23/2020 01:03	1		AS9-HC 4 (mm)
ZZZZZ		06/23/2020 01:39	1		AS9-HC 4 (mm)
ZZZZZ		06/23/2020 02:15	1		AS9-HC 4 (mm)
ZZZZZ		06/23/2020 02:52	1		AS9-HC 4 (mm)
CCV 440-613694/37		06/23/2020 05:27	1	440-0134572-037 440-0134572-037 .d	AS9-HC 4 (mm)

300.1B

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins Irvine Job No.: 440-267742-1
 SDG No.: _____
 Instrument ID: IC-8 Start Date: 06/22/2020 07:34
 Analysis Batch Number: 613694 End Date: 06/23/2020 16:57

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCB 440-613694/38		06/23/2020 06:03	1	440-0134572-038 440-0134572-038 .d	AS9-HC 4 (mm)
ZZZZZ		06/23/2020 07:17	5		AS9-HC 4 (mm)
ZZZZZ		06/23/2020 07:53	5		AS9-HC 4 (mm)
ZZZZZ		06/23/2020 08:29	5		AS9-HC 4 (mm)
ZZZZZ		06/23/2020 09:05	5		AS9-HC 4 (mm)
ZZZZZ		06/23/2020 09:42	5		AS9-HC 4 (mm)
CCV 440-613694/49		06/23/2020 12:43	1		AS9-HC 4 (mm)
CCB 440-613694/50		06/23/2020 13:19	1		AS9-HC 4 (mm)
CCV 440-613694/55		06/23/2020 16:20	1		AS9-HC 4 (mm)
CCB 440-613694/56		06/23/2020 16:57	1		AS9-HC 4 (mm)

HPLC/IC BATCH WORKSHEET

Lab Name: Eurofins Irvine Job No.: 440-267742-1

SDG No.: _____

Batch Number: 613692 Batch Start Date: 06/22/20 07:34 Batch Analyst: Zakhrabov, YuriyBatch Method: 300.1B Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	WC3001LCS 00090	WCDC 00081				
CCV 440-613692/1		300.1B		125 uL	10 uL				
CCB 440-613692/2		300.1B			10 uL				
MRL 440-613692/3		300.1B		25 uL	10 uL				
LCS 440-613692/4		300.1B		125 uL	10 uL				
MB 440-613692/5		300.1B			10 uL				
550-143620-A-1 MS		300.1B		250 uL	10 uL				
550-143620-A-1 MSD		300.1B		250 uL	10 uL				
CCV 440-613692/13		300.1B		250 uL	10 uL				
CCB 440-613692/14		300.1B			10 uL				
CCV 440-613692/25		300.1B		125 uL	10 uL				
CCB 440-613692/26		300.1B			10 uL				
440-267742-B-1	GW239-2020-PreDis	300.1B	T		10 uL				
CCV 440-613692/37		300.1B		250 uL	10 uL				
CCB 440-613692/38		300.1B			10 uL				

Batch Notes	
Ethylenediamine ID	6248970
Eluent 1 ID	6250626
Filter ID	81992103
Pipette/Syringe/Dispenser ID	97, WC010, WC023, WC024, WC028
Sufficient Volume for Batch QC	YES

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

300.1B

Page 1 of 1

HPLC/IC BATCH WORKSHEET

Lab Name: Eurofins Irvine Job No.: 440-267742-1

SDG No.: _____

Batch Number: 613694 Batch Start Date: 06/22/20 07:34 Batch Analyst: Zakhrabov, YuriyBatch Method: 300.1B Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	WC3001LCS 00090	WCDC 00081				
CCV 440-613694/1		300.1B		125 uL	10 uL				
CCB 440-613694/2		300.1B			10 uL				
MRL 440-613694/3		300.1B		25 uL	10 uL				
LCS 440-613694/4		300.1B		125 uL	10 uL				
MB 440-613694/5		300.1B			10 uL				
550-143620-A-1 MS		300.1B	T	250 uL	10 uL				
550-143620-A-1 MSD		300.1B	T	250 uL	10 uL				
CCV 440-613694/13		300.1B		250 uL	10 uL				
CCB 440-613694/14		300.1B			10 uL				
CCV 440-613694/25		300.1B		125 uL	10 uL				
CCB 440-613694/26		300.1B			10 uL				
440-267742-B-1	GW239-2020-PreDis	300.1B	T		10 uL				
CCV 440-613694/37		300.1B		250 uL	10 uL				
CCB 440-613694/38		300.1B			10 uL				

Batch Notes	
Ethylenediamine ID	6248970
Eluent 1 ID	6250626
Filter ID	81992103
Pipette/Syringe/Dispenser ID	97, WC010, WC023, WC024, WC028
Sufficient Volume for Batch QC	YES

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

300.1B

Page 1 of 1

Method 331

Perchlorate (LC/MS/MS) by Method 331

FORM III
LCMS LAB CONTROL SAMPLE RECOVERYLab Name: Eurofins Calscience Job No.: 440-267742-1

SDG No.: _____

Matrix: Water Level: Low Lab File ID: 200625016.dLab ID: LCS 570-77753/16 Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Perchlorate	10.0	10.2	102	85-115	

Column to be used to flag recovery and RPD values

FORM III 331.0

FORM III
LCMS LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Calscience Job No.: 440-267742-1

SDG No.: _____

Matrix: Water Level: Low Lab File ID: 200625017.d

Lab ID: LCSD 570-77753/17 Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
Perchlorate	10.0	10.5	105	2	15	85-115	

Column to be used to flag recovery and RPD values

FORM III 331.0

FORM III
LCMS MATRIX SPIKE RECOVERYLab Name: Eurofins Calscience Job No.: 440-267742-1

SDG No.: _____

Matrix: Water (Dissolved) Level: Low Lab File ID: 200625039.dLab ID: 440-267742-1 MS Client ID: GW239-202-PreDis MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Perchlorate	10.0	0.15	10.2	101	80-120	

Column to be used to flag recovery and RPD values

FORM III 331.0

FORM III
LCMS MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins Calscience Job No.: 440-267742-1

SDG No.: _____

Matrix: Water (Dissolved) Level: Low Lab File ID: 200625040.d

Lab ID: 440-267742-1 MSD Client ID: GW239-202-PreDis MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
Perchlorate	10.0	10.3	101	0	15	80-120	

Column to be used to flag recovery and RPD values

FORM III 331.0

FORM III
LCMS LC INTERFERENCE CHECK STANDARD RECOVERY

Lab Name: Eurofins Calscience Job No.: 440-267742-1
SDG No.: _____
Matrix: Water Level: Low Lab File ID: 200625014.d
Lab ID: INF 570-77753/14 Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	INF CONCENTRATION (ug/L)	INF % REC	QC LIMITS REC	#
Perchlorate	0.500	0.493	99	80-120	

Column to be used to flag recovery and RPD values

FORM III 331.0

FORM IV
LCMS METHOD BLANK SUMMARY

Lab Name: Eurofins Calscience Job No.: 440-267742-1
 SDG No.: _____
 Lab File ID: 200625015.d Lab Sample ID: MB 570-77753/15
 Matrix: Water Date Extracted: _____
 Instrument ID: LCTQ2 Date Analyzed: 06/25/2020 17:05
 Level: (Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	ICB 570-77753/10	200625010.d	06/25/2020 15:53
	CCB 570-77753/13	200625013.d	06/25/2020 16:36
	LCS 570-77753/16	200625016.d	06/25/2020 17:20
	LCSD 570-77753/17	200625017.d	06/25/2020 17:34
	CCB 570-77753/31	200625031.d	06/25/2020 20:57
GW239-202-PreDis	440-267742-1	200625038.d	06/25/2020 22:38
GW239-202-PreDis MS	440-267742-1 MS	200625039.d	06/25/2020 22:53
GW239-202-PreDis MSD	440-267742-1 MSD	200625040.d	06/25/2020 22:55
	CCB 570-77753/42	200625042.d	06/25/2020 23:24

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Calscience Job No.: 440-267742-1
 SDG No.: _____
 Sample No.: STD4 570-77753/6 Date Analyzed: 06/25/2020 14:55
 Instrument ID: LCTQ2 GC Column: Dion-A521 ID: 4 (mm)
 Lab File ID (Standard): 200625006.d Heated Purge: (Y/N) N
 Calibration ID: 8018

		18OP					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		2545072	6.42				
UPPER LIMIT		5090144	6.92				
LOWER LIMIT		1272536	5.92				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 570-77753/9		2666563	6.35				
ICB 570-77753/10		2693685	6.42				
CCVL 570-77753/11		2684094	6.42				
CCVIS 570-77753/12		2678236	6.39				

18OP = 18-O Perchlorate

Area Limit = 50%-200% of internal standard area
 RT Limit = $\pm$ 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 331.0

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Calscience Job No.: 440-267742-1
 SDG No.: _____
 Sample No.: CCVIS 570-77753/12 Date Analyzed: 06/25/2020 16:22
 Instrument ID: LCTQ2 GC Column: Dion-A521 ID: 4 (mm)
 Lab File ID (Standard): 200625012.d Heated Purge: (Y/N) N
 Calibration ID: 8018

		18OP					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		2678236	6.39				
UPPER LIMIT		3481707	6.89				
LOWER LIMIT		1874765	5.89				
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCB 570-77753/13		2577773	6.42				
INF 570-77753/14		1983114	6.25				
MB 570-77753/15		2504030	6.43				
LCS 570-77753/16		2562661	6.40				
LCSD 570-77753/17		2551246	6.40				
CCV 570-77753/30		2576004	6.40				
CCB 570-77753/31		2789945	6.47				
440-267742-1	GW239-202-PreDis	2344669	6.40				
440-267742-1 MS	GW239-202-PreDis MS	2507683	6.37				
440-267742-1 MSD	GW239-202-PreDis MSD	2544821	6.43				
CCV 570-77753/41		2962462	6.35				
CCB 570-77753/42		2940261	6.43				

18OP = 18-O Perchlorate

Area Limit = 70%-130% of internal standard area
 RT Limit = $\pm$ 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 331.0

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Calscience Job No.: 440-267742-1
 SDG No.: _____
 Client Sample ID: GW239-202-PreDis Lab Sample ID: 440-267742-1
 Matrix: Water (Dissolved) Lab File ID: 200625038.d
 Analysis Method: 331.0 Date Collected: 06/19/2020 08:00
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 1.925 (mL) Date Analyzed: 06/25/2020 22:38
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 4 (mL) GC Column: Dion-A521 ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 77753 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.15		0.10	0.016

Report Date: 26-Jun-2020 15:02:25

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC
Target Compound Quantitation Report

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625038.d
 Lims ID: 440-267742-A-1
 Client ID: GW239-202-PreDis
 Sample Type: Client
 Inject. Date: 25-Jun-2020 22:38:41 ALS Bottle#: 0 Worklist Smp#: 38
 Injection Vol: 4.0 mL Dil. Factor: 1.0000
 Sample Info: 440-267742-A-1, Sample
 Misc. Info.: 570-0023031-038
 Operator ID: Instrument ID: LCTQ2
 Method: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\Perchlorate_LCTQ2.m
 Limit Group: LCMS - 331.0
 Last Update: 26-Jun-2020 15:02:20 Calib Date: 25-Jun-2020 15:24:02
 Integrator: Picker
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d
 Column 1 : Dionex A521 (4.00 mm) Det: MS QQQ
 Process Host: CTX1058

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
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* 2 18-O Perchlorate

106.8 > 88.9	6.404	6.404	0.0		2344669	5.00		1925	
--------------	-------	-------	-----	--	---------	------	--	------	--

1 Perchlorate

98.8 > 82.9	6.526	6.412	0.114	1.019	118530	0.1499	Target=3.08	66.3	
100.8 > 84.9	6.357	6.412	-0.055	0.993	45755		2.59(2.31-3.85)	66.1	

Reagents:

LCMS_ISTD_00002	Amount Added: 25.00	Units: uL	Run Reagent
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Report Date: 26-Jun-2020 15:02:25

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625038.d

Injection Date: 25-Jun-2020 22:38:41

Instrument ID: LCTQ2

Lims ID: 440-267742-A-1

Lab Sample ID: 570-267742-1

Client ID: GW239-202-PreDis

Operator ID:

ALS Bottle#:

0

Worklist Smp#:

38

Injection Vol: 4.0 mL

Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

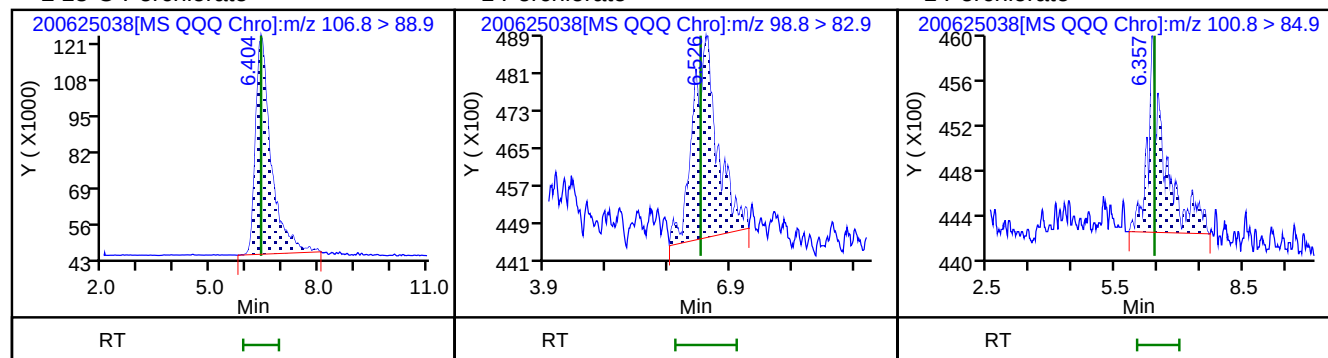
Limit Group:

LCMS - 331.0

* 2 18-O Perchlorate

1 Perchlorate

1 Perchlorate



FORM VI
LCMS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Calscience Job No.: 440-267742-1 Analy Batch No.: 77753

SDG No.: _____

Instrument ID: LCTQ2 GC Column: Dion-A521 ID: 4 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/25/2020 14:11 Calibration End Date: 06/25/2020 15:24 Calibration ID: 8018

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 570-77753/3	200625003.d
Level 2	STD2 570-77753/4	200625004.d
Level 3	STD3 570-77753/5	200625005.d
Level 4	STD4 570-77753/6	200625006.d
Level 5	STD5 570-77753/7	200625007.d
Level 6	STD6 570-77753/8	200625008.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Perchlorate	1.7072 1.6545	1.6261	1.6807	1.6477	1.6398	Lin2	0.0056	1.6487							1.0000		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
LCMS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Calscience Job No.: 440-267742-1 Analy Batch No.: 77753
 SDG No.: _____
 Instrument ID: LCTQ2 GC Column: Dion-A521 ID: 4 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 06/25/2020 14:11 Calibration End Date: 06/25/2020 15:24 Calibration ID: 8018

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 570-77753/3	200625003.d
Level 2	STD2 570-77753/4	200625004.d
Level 3	STD3 570-77753/5	200625005.d
Level 4	STD4 570-77753/6	200625006.d
Level 5	STD5 570-77753/7	200625007.d
Level 6	STD6 570-77753/8	200625008.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Perchlorate	18OP	Lin2	82458 60674460	766556	4318859	8387212	40956140	0.100 75.0	1.00	5.00	10.0	50.0

Curve Type Legend:

Lin2 = Linear 1/conc^2 ISTD

Report Date: 26-Jun-2020 15:02:01

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC
Target Compound Quantitation Report

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625003.d
 Lims ID: STD1
 Client ID:
 Sample Type: IC Calib Level: 1
 Inject. Date: 25-Jun-2020 14:11:27 ALS Bottle#: 0 Worklist Smp#: 3
 Injection Vol: 4.0 mL Dil. Factor: 1.0000
 Sample Info: STD1, Sample
 Misc. Info.: 570-0023031-003
 Operator ID: Instrument ID: LCTQ2
 Sublist: chrom-Perchlorate_LCTQ2*sub3
 Method: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\Perchlorate_LCTQ2.m
 Limit Group: LCMS - 331.0
 Last Update: 26-Jun-2020 15:02:01 Calib Date: 25-Jun-2020 15:24:02
 Integrator: Picker
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d
 Column 1 : Dionex A521 (4.00 mm) Det: MS QQQ
 Process Host: CTX1058

First Level Reviewer: taiw

Date: 26-Jun-2020 14:41:40

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
--------	----	-----------	-----------	-----------	----------	----------------	---------------	-----	-------

* 2 18-O Perchlorate

106.8 > 88.9	6.366	6.391	-0.025		2414948	5.00		1880	
1 Perchlorate									M
98.8 > 82.9	6.361	6.400	-0.039	0.999	82458	0.1001	Target=3.08	50.0	M
100.8 > 84.9	6.421	6.400	0.021	1.009	29927		2.76(2.31-3.85)	34.3	M

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

LCMS_LCS_S_00004	Amount Added: 1.00	Units: uL	
LCMS_ISTD_00002	Amount Added: 25.00	Units: uL	Run Reagent

Report Date: 26-Jun-2020 15:02:01

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625003.d

Injection Date: 25-Jun-2020 14:11:27

Instrument ID: LCTQ2

Lims ID: STD1

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#:

3

Injection Vol: 4.0 mL

Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

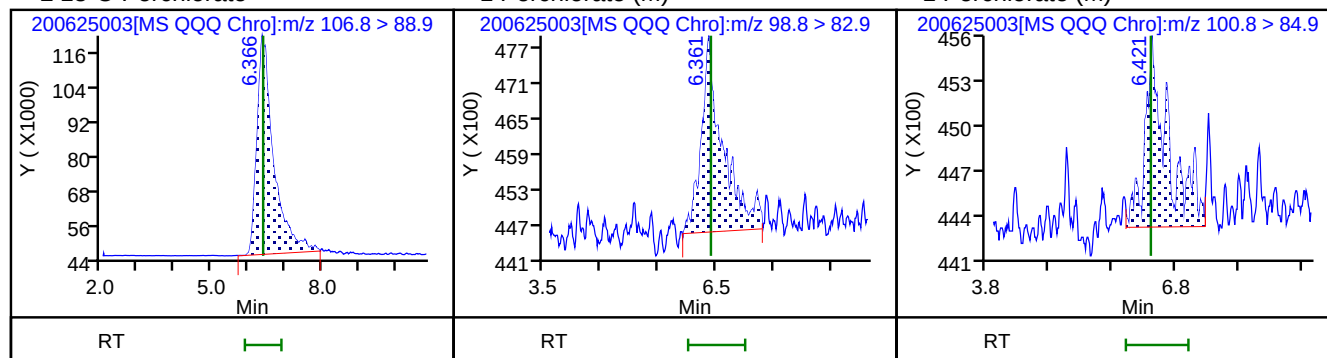
Limit Group:

LCMS - 331.0

* 2 18-O Perchlorate

1 Perchlorate (M)

1 Perchlorate (M)



Report Date: 26-Jun-2020 15:02:01

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625003.d
 Injection Date: 25-Jun-2020 14:11:27 Instrument ID: LCTQ2
 Lims ID: STD1
 Client ID:
 Operator ID:
 Injection Vol: 4.0 mL
 Method: Perchlorate_LCTQ2
 Column: Dionex A521 (4.00 mm)

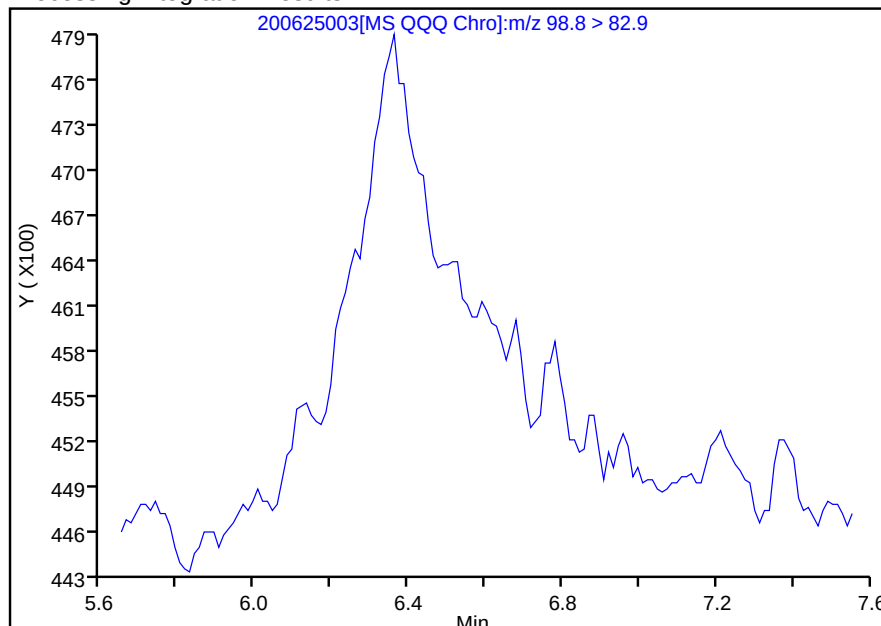
ALS Bottle#: 0 Worklist Smp#: 3
 Dil. Factor: 1.0000
 Limit Group: LCMS - 331.0
 Detector: MS QQQ

1 Perchlorate, CAS: 14797-73-0

Signal: 1

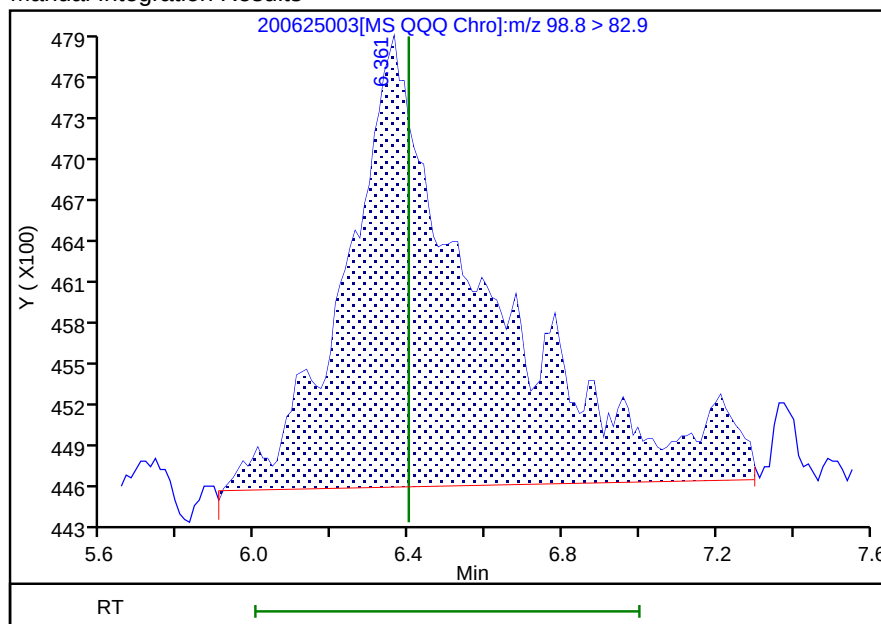
Not Detected
 Expected RT: 6.40

Processing Integration Results



Manual Integration Results

RT: 6.36
 Area: 82458
 Amount: 0.100135
 Amount Units: ug/l



Reviewer: taiw, 26-Jun-2020 14:55:31

Audit Action: Manually Integrated

Audit Reason: Baseline

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September 2020

Kirtland AFB BFF
 Quarterly Report - April-June 2020
 SWMUs ST-106/SS-111

I-5-1045

Report Date: 26-Jun-2020 15:02:01

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625003.d

Injection Date: 25-Jun-2020 14:11:27

Instrument ID: LCTQ2

Lims ID: STD1

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#:

3

Injection Vol: 4.0 mL

Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

Limit Group:

LCMS - 331.0

Column: Dionex A521 (4.00 mm)

Detector

MS QQQ

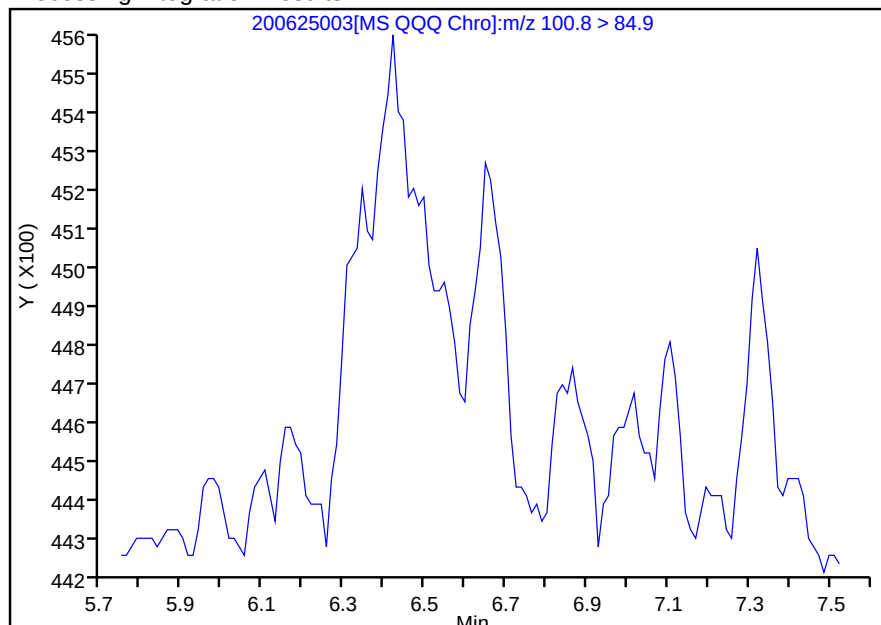
1 Perchlorate, CAS: 14797-73-0

Signal: 2

Not Detected

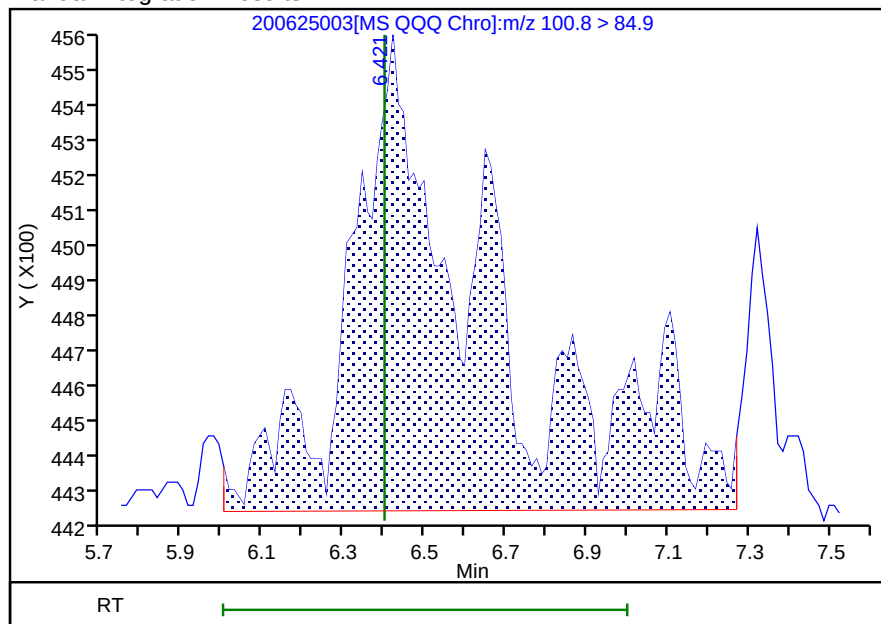
Expected RT: 6.40

Processing Integration Results



Manual Integration Results

RT: 6.42
Area: 29927
Amount: 0.100135
Amount Units: ug/l



Reviewer: taiw, 26-Jun-2020 14:56:02

Audit Action: Manually Integrated

Audit Reason: Baseline

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September 2020

Report Date: 26-Jun-2020 15:02:02

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC
Target Compound Quantitation Report

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625004.d
 Lims ID: STD2
 Client ID:
 Sample Type: IC Calib Level: 2
 Inject. Date: 25-Jun-2020 14:25:59 ALS Bottle#: 0 Worklist Smp#: 4
 Injection Vol: 4.0 mL Dil. Factor: 1.0000
 Sample Info: STD2, Sample
 Misc. Info.: 570-0023031-004
 Operator ID: Instrument ID: LCTQ2
 Sublist: chrom-Perchlorate_LCTQ2*sub3
 Method: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\Perchlorate_LCTQ2.m
 Limit Group: LCMS - 331.0
 Last Update: 26-Jun-2020 15:02:02 Calib Date: 25-Jun-2020 15:24:02
 Integrator: Picker
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d
 Column 1 : Dionex A521 (4.00 mm) Det: MS QQQ
 Process Host: CTX1058

First Level Reviewer: taiw

Date: 26-Jun-2020 14:42:27

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
--------	----	-----------	-----------	-----------	----------	----------------	---------------	-----	-------

* 2 18-O Perchlorate

106.8 > 88.9	6.429	6.391	0.038		2357035	5.00		1847	
1 Perchlorate									M
98.8 > 82.9	6.400	6.400	0.0	0.995	766556	0.9829	Target=3.08	356	
100.8 > 84.9	6.395	6.400	-0.005	0.995	230154		3.33(2.31-3.85)	206	M

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

LCMS_LCS_S_00004	Amount Added: 10.00	Units: uL	
LCMS_ISTD_00002	Amount Added: 25.00	Units: uL	Run Reagent

Report Date: 26-Jun-2020 15:02:02

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625004.d

Injection Date: 25-Jun-2020 14:25:59

Instrument ID: LCTQ2

Lims ID: STD2

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#:

4

Injection Vol: 4.0 mL

Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

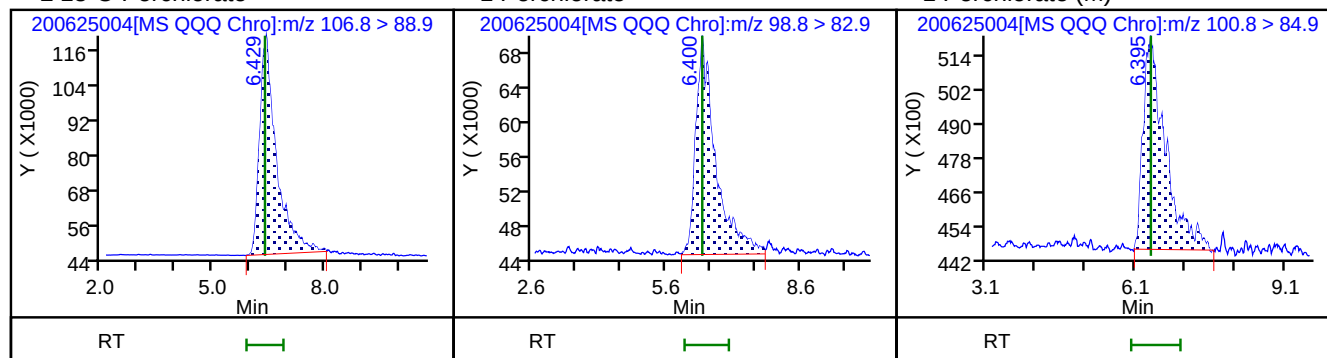
Limit Group:

LCMS - 331.0

* 2 18-O Perchlorate

1 Perchlorate

1 Perchlorate (M)



Report Date: 26-Jun-2020 15:02:02

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625004.d

Injection Date: 25-Jun-2020 14:25:59

Instrument ID: LCTQ2

Lims ID: STD2

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#: 4

Injection Vol: 4.0 mL

Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

Limit Group:

LCMS - 331.0

Column: Dionex A521 (4.00 mm)

Detector

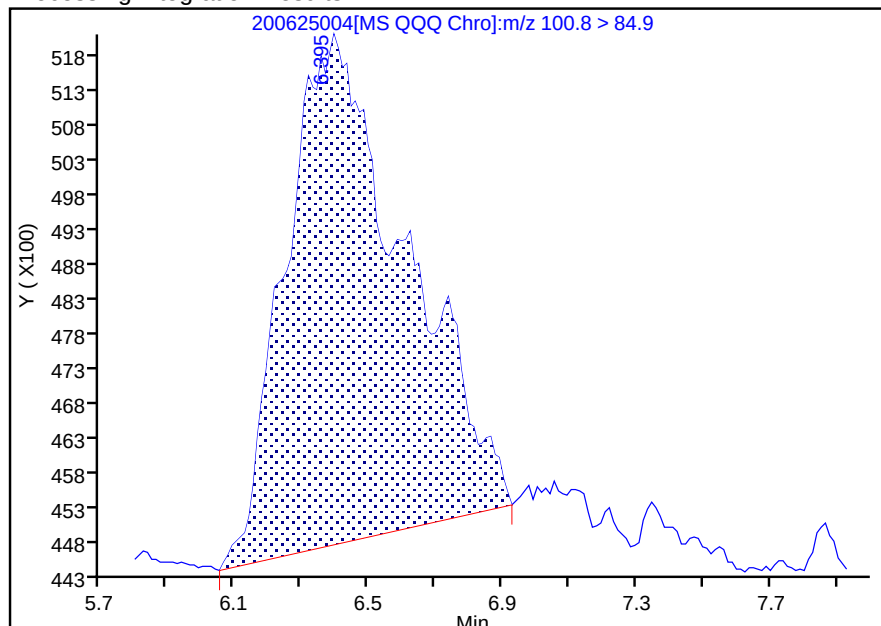
MS QQQ

1 Perchlorate, CAS: 14797-73-0

Signal: 2

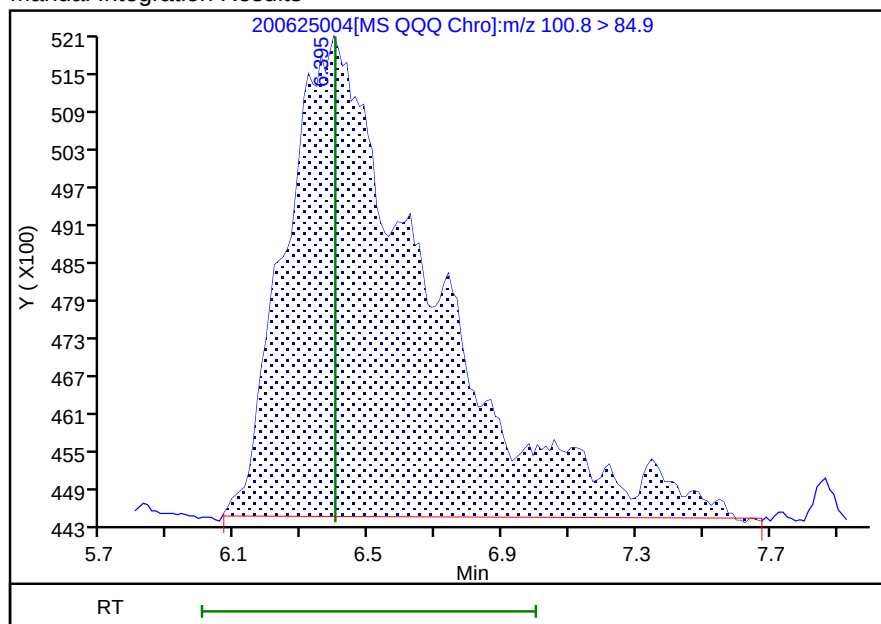
RT: 6.40
 Area: 182077
 Amount: 0.959353
 Amount Units: ug/l

Processing Integration Results



RT: 6.40
 Area: 230154
 Amount: 0.982869
 Amount Units: ug/l

Manual Integration Results



Reviewer: taiw, 26-Jun-2020 14:42:24

Audit Action: Manually Integrated

Audit Reason: Baseline

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September 2020

Kirtland AFB BFF
 Quarterly Report - April-June 2020
 SWMUs ST-106/SS-111

I-5-1049

Report Date: 26-Jun-2020 15:02:03

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC
Target Compound Quantitation Report

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625005.d
 Lims ID: STD3
 Client ID:
 Sample Type: IC Calib Level: 3
 Inject. Date: 25-Jun-2020 14:40:30 ALS Bottle#: 0 Worklist Smp#: 5
 Injection Vol: 4.0 mL Dil. Factor: 1.0000
 Sample Info: STD3, Sample
 Misc. Info.: 570-0023031-005
 Operator ID: Instrument ID: LCTQ2
 Sublist: chrom-Perchlorate_LCTQ2*sub3
 Method: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\Perchlorate_LCTQ2.m
 Limit Group: LCMS - 331.0
 Last Update: 26-Jun-2020 15:02:03 Calib Date: 25-Jun-2020 15:24:02
 Integrator: Picker
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d
 Column 1 : Dionex A521 (4.00 mm) Det: MS QQQ
 Process Host: CTX1058

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
--------	----	-----------	-----------	-----------	----------	----------------	---------------	-----	-------

* 2 18-O Perchlorate

106.8 > 88.9	6.378	6.378	0.0		2569647	5.00		1515	
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1 Perchlorate

98.8 > 82.9	6.361	6.361	0.0	0.997	4318859	5.09	Target=3.08	1568	
100.8 > 84.9	6.408	6.361	0.047	1.005	1351575		3.20(2.31-3.85)	978	

Reagents:

LCMS_LCS_S_00004	Amount Added: 50.00	Units: uL	
LCMS_ISTD_00002	Amount Added: 25.00	Units: uL	Run Reagent

Report Date: 26-Jun-2020 15:02:03

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625005.d

Injection Date: 25-Jun-2020 14:40:30

Instrument ID: LCTQ2

Lims ID: STD3

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#:

5

Injection Vol: 4.0 mL

Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

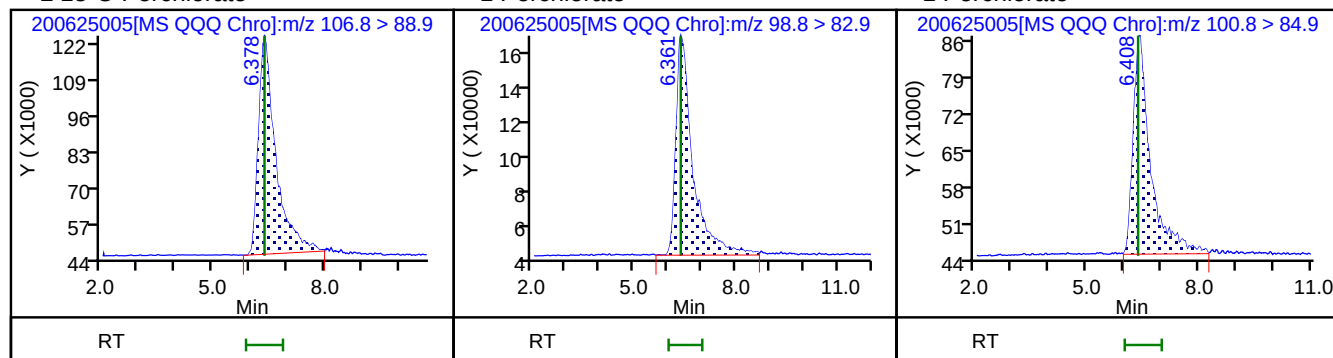
Limit Group:

LCMS - 331.0

* 2 18-O Perchlorate

1 Perchlorate

1 Perchlorate



QQQ Check Tune Report

Instrument Name	LC/TQ2
MS Model	G6430A
MS Instrument Serial	SG11077104
Software_Firmware Version	B.06.00.B6025.0, FW: A.00.07.32
Tune Date & Time	06:25:20 13:01:10
Data Path	C:\MassHunter\Tune\QQQ\G6430A\atunes.tune.xml
Ion Source	ESI
Ionization Mode	ESI
Tuned Resolution	All
Vacuum Pressure	1.84E+0[R]; 7.90E-6[H]

Source Parameters

Parameter	Value
Gas Temp	300
Gas Flow	6
Nebulizer	15
Capillary	4000

QQQ Check Tune Report

Negative Results

Analyzer: MS1 Polarity: Negative Width: Unit

m/z	m/z	Tolerance	Delta	Result	FWHM	FWHM	Tolerance	Delta	Result	Abundance
Expected					Expected					
112.99	112.95	0.10	-0.04	Pass	0.70	0.65	0.14	-0.05	Pass	12754
302.00	302.01	0.10	0.01	Pass	0.70	0.73	0.14	0.03	Pass	19431
601.98	601.99	0.10	0.01	Pass	0.70	0.71	0.14	0.01	Pass	98058
1033.99	1034.00	0.10	0.01	Pass	0.70	0.72	0.14	0.02	Pass	29430
1333.97	1333.98	0.10	0.01	Pass	0.70	0.71	0.14	0.01	Pass	45030
1933.93	1933.90	0.10	-0.03	Pass	0.70	0.74	0.14	0.04	Pass	16158

Analyzer: MS2 Polarity: Negative Width: Unit

m/z	m/z	Tolerance	Delta	Result	FWHM	FWHM	Tolerance	Delta	Result	Abundance
Expected					Expected					
112.99	113.00	0.10	0.01	Pass	0.70	0.70	0.14	0.00	Pass	15417
302.00	301.99	0.10	-0.01	Pass	0.70	0.70	0.14	0.00	Pass	24900
601.98	601.98	0.10	0.00	Pass	0.70	0.70	0.14	0.00	Pass	102636
1033.99	1033.99	0.10	0.00	Pass	0.70	0.70	0.14	0.00	Pass	40865
1333.97	1333.99	0.10	0.02	Pass	0.70	0.68	0.14	-0.02	Pass	60586
1933.93	1933.86	0.10	-0.07	Pass	0.70	0.73	0.14	0.03	Pass	26595

Analyzer: MS1 Polarity: Negative Width: Wide

m/z	m/z	Tolerance	Delta	Result	FWHM	FWHM	Tolerance	Delta	Result	Abundance
Expected					Expected					
112.99	112.90	0.30	-0.09	Pass	1.20	1.09	0.60	-0.11	Pass	16766
302.00	301.93	0.30	-0.07	Pass	1.20	1.23	0.60	0.03	Pass	27667
601.98	601.93	0.30	-0.05	Pass	1.20	1.20	0.60	0.00	Pass	140227
1033.99	1033.89	0.30	-0.10	Pass	1.20	1.22	0.60	0.02	Pass	49888
1333.97	1333.89	0.30	-0.08	Pass	1.20	1.21	0.60	0.01	Pass	79835
1933.93	1933.87	0.30	-0.06	Pass	1.20	1.24	0.60	0.04	Pass	40159

Analyzer: MS2 Polarity: Negative Width: Wide

m/z	m/z	Tolerance	Delta	Result	FWHM	FWHM	Tolerance	Delta	Result	Abundance
Expected					Expected					
112.99	113.00	0.30	0.01	Pass	1.20	1.17	0.60	-0.03	Pass	19533
302.00	301.96	0.30	-0.04	Pass	1.20	1.25	0.60	0.05	Pass	31400
601.98	601.92	0.30	-0.06	Pass	1.20	1.22	0.60	0.02	Pass	142760
1033.99	1033.89	0.30	-0.10	Pass	1.20	1.21	0.60	0.01	Pass	66325
1333.97	1333.88	0.30	-0.09	Pass	1.20	1.22	0.60	0.02	Pass	112495
1933.93	1933.85	0.30	-0.08	Pass	1.20	1.26	0.60	0.06	Pass	73702

Analyzer: MS1 Polarity: Negative Width: Widest

m/z	m/z	Tolerance	Delta	Result	FWHM	FWHM	Tolerance	Delta	Result	Abundance
Expected					Expected					
112.99	112.90	0.50	-0.09	Pass	2.50	2.37	1.25	-0.13	Pass	22053
302.00	302.02	0.50	0.02	Pass	2.50	2.53	1.25	0.03	Pass	35637
601.98	602.05	0.50	0.07	Pass	2.50	2.44	1.25	-0.06	Pass	191683
1033.99	1034.03	0.50	0.04	Pass	2.50	2.41	1.25	-0.09	Pass	78022
1333.97	1334.04	0.50	0.07	Pass	2.50	2.37	1.25	-0.13	Pass	137113
1933.93	1934.03	0.50	0.10	Pass	2.50	2.37	1.25	-0.13	Pass	84620

Analyzer: MS2 Polarity: Negative Width: Widest

m/z	m/z	Tolerance	Delta	Result	FWHM	FWHM	Tolerance	Delta	Result	Abundance
Expected					Expected					
112.99	112.91	0.50	-0.08	Pass	2.50	2.62	1.25	0.12	Pass	25813
302.00	301.92	0.50	-0.08	Pass	2.50	2.67	1.25	0.17	Pass	41804
601.98	601.94	0.50	-0.04	Pass	2.50	2.67	1.25	0.17	Pass	210001
1033.99	1033.96	0.50	-0.03	Pass	2.50	2.72	1.25	0.22	Pass	107742
1333.97	1333.99	0.50	0.02	Pass	2.50	2.68	1.25	0.18	Pass	206474
1933.93	1934.08	0.50	0.15	Pass	2.50	2.58	1.25	0.08	Pass	179819

Report Date: 26-Jun-2020 15:02:04

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC
Target Compound Quantitation Report

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625006.d
 Lims ID: STD4
 Client ID:
 Sample Type: ICIS Calib Level: 4
 Inject. Date: 25-Jun-2020 14:55:00 ALS Bottle#: 0 Worklist Smp#: 6
 Injection Vol: 4.0 mL Dil. Factor: 1.0000
 Sample Info: STD4, Sample
 Misc. Info.: 570-0023031-006
 Operator ID: Instrument ID: LCTQ2
 Sublist: chrom-Perchlorate_LCTQ2*sub3
 Method: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\Perchlorate_LCTQ2.m
 Limit Group: LCMS - 331.0
 Last Update: 26-Jun-2020 15:02:04 Calib Date: 25-Jun-2020 15:24:02
 Integrator: Picker
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d
 Column 1 : Dionex A521 (4.00 mm) Det: MS QQQ
 Process Host: CTX1058

First Level Reviewer: taiw

Date: 26-Jun-2020 14:48:06

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
1 Perchlorate									M
98.8 > 82.9	6.387	6.387	0.0	0.995	8387212	10.0	Target=3.08	2863	M
100.8 > 84.9	6.383	6.387	-0.004	0.995	2566303		3.27(2.31-3.85)	1567	
* 2 18-O Perchlorate									
106.8 > 88.9	6.416	6.416	0.0		2545072	5.00		1741	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

LCMS_LCS_S_00004

Amount Added: 100.00

Units: uL

LCMS_ISTD_00002

Amount Added: 25.00

Units: uL

Run Reagent

Report Date: 26-Jun-2020 15:02:04

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625006.d

Injection Date: 25-Jun-2020 14:55:00

Instrument ID: LCTQ2

Lims ID: STD4

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#:

6

Injection Vol: 4.0 mL

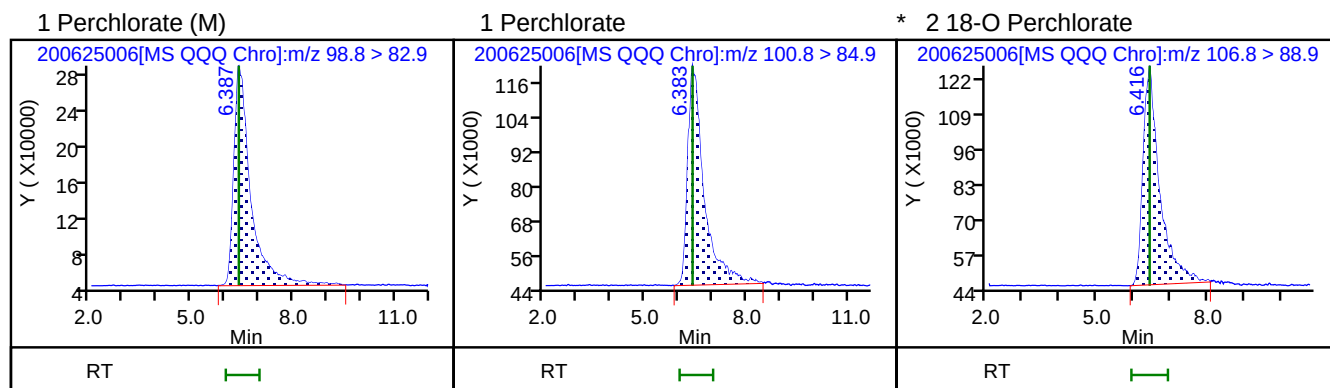
Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

Limit Group:

LCMS - 331.0



Report Date: 26-Jun-2020 15:02:04

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625006.d

Injection Date: 25-Jun-2020 14:55:00

Instrument ID: LCTQ2

Lims ID: STD4

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#: 6

Injection Vol: 4.0 mL

Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

Limit Group:

LCMS - 331.0

Column: Dionex A521 (4.00 mm)

Detector

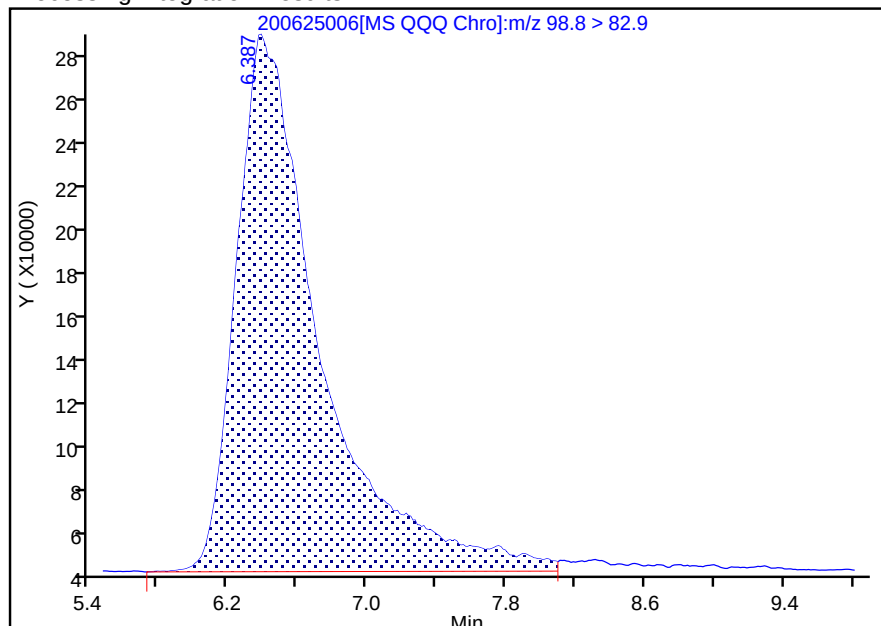
MS QQQ

1 Perchlorate, CAS: 14797-73-0

Signal: 1

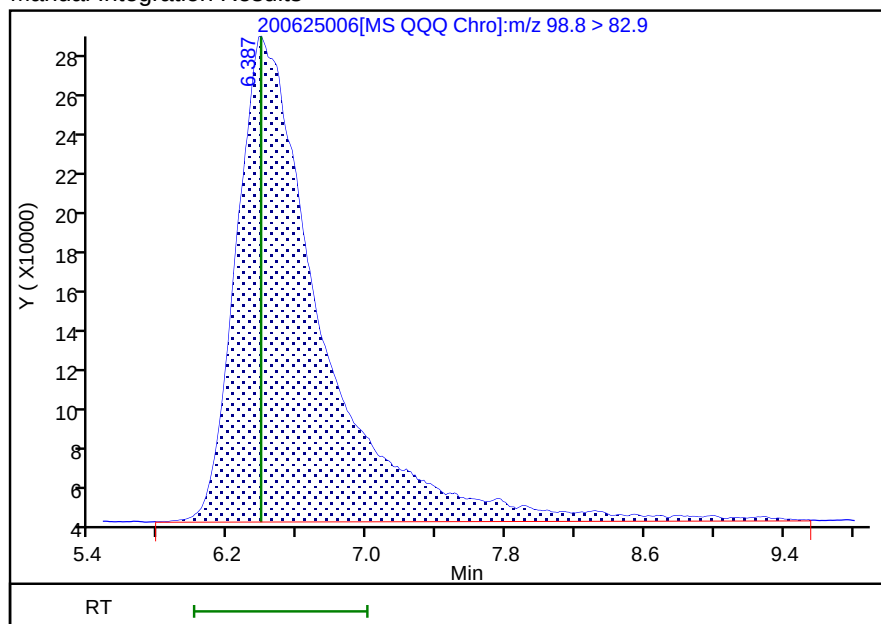
RT: 6.39
 Area: 8165174
 Amount: 9.537142
 Amount Units: ug/l

Processing Integration Results



RT: 6.39
 Area: 8387212
 Amount: 9.990633
 Amount Units: ug/l

Manual Integration Results



Reviewer: taiw, 26-Jun-2020 14:48:00

Audit Action: Manually Integrated

Audit Reason: Baseline

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September 2020

Report Date: 26-Jun-2020 15:02:05

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC
Target Compound Quantitation Report

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625007.d
 Lims ID: STD5
 Client ID:
 Sample Type: IC Calib Level: 5
 Inject. Date: 25-Jun-2020 15:09:32 ALS Bottle#: 0 Worklist Smp#: 7
 Injection Vol: 4.0 mL Dil. Factor: 1.0000
 Sample Info: STD5, Sample
 Misc. Info.: 570-0023031-007
 Operator ID: Instrument ID: LCTQ2
 Sublist: chrom-Perchlorate_LCTQ2*sub3
 Method: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\Perchlorate_LCTQ2.m
 Limit Group: LCMS - 331.0
 Last Update: 26-Jun-2020 15:02:05 Calib Date: 25-Jun-2020 15:24:02
 Integrator: Picker
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d
 Column 1 : Dionex A521 (4.00 mm) Det: MS QQQ
 Process Host: CTX1058

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
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1 Perchlorate

98.8 > 82.9	6.387	6.387	0.0	0.997	40956140	49.7	Target=3.08	10293	
100.8 > 84.9	6.395	6.387	0.008	0.999	12783260		3.20(2.31-3.85)	4637	

* 2 18-O Perchlorate

106.8 > 88.9	6.404	6.416	-0.012		2497659	5.00		1383	
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Reagents:

LCMS_LCS_S_00004	Amount Added: 500.00	Units: uL	
LCMS_ISTD_00002	Amount Added: 25.00	Units: uL	Run Reagent

Report Date: 26-Jun-2020 15:02:05

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625007.d

Injection Date: 25-Jun-2020 15:09:32

Instrument ID: LCTQ2

Lims ID: STD5

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#:

7

Injection Vol: 4.0 mL

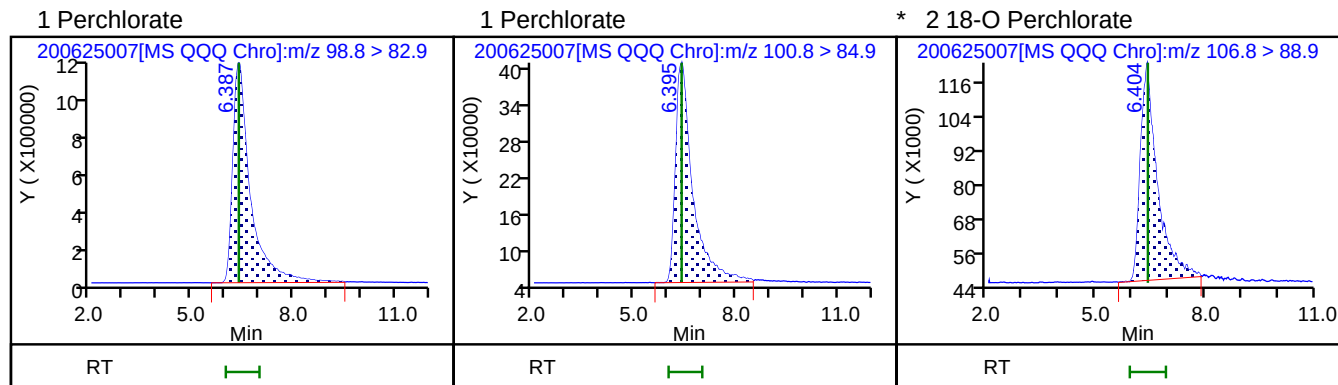
Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

Limit Group:

LCMS - 331.0



Report Date: 26-Jun-2020 15:02:06

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC
Target Compound Quantitation Report

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d
 Lims ID: STD6
 Client ID:
 Sample Type: IC Calib Level: 6
 Inject. Date: 25-Jun-2020 15:24:02 ALS Bottle#: 0 Worklist Smp#: 8
 Injection Vol: 4.0 mL Dil. Factor: 1.0000
 Sample Info: STD6, Sample
 Misc. Info.: 570-0023031-008
 Operator ID: Instrument ID: LCTQ2
 Sublist: chrom-Perchlorate_LCTQ2*sub3
 Method: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\Perchlorate_LCTQ2.m
 Limit Group: LCMS - 331.0
 Last Update: 26-Jun-2020 15:02:06 Calib Date: 25-Jun-2020 15:24:02
 Integrator: Picker
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d
 Column 1 : Dionex A521 (4.00 mm) Det: MS QQQ
 Process Host: CTX1058

First Level Reviewer: taiw

Date: 26-Jun-2020 14:48:30

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
1 Perchlorate									M
98.8 > 82.9	6.425	6.387	0.038	1.007	60674460	75.3	Target=3.08	15242	M
100.8 > 84.9	6.408	6.387	0.021	1.005	19079353		3.18(2.31-3.85)	5501	
* 2 18-O Perchlorate									
106.8 > 88.9	6.378	6.416	-0.038		2444798	5.00		1362	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

LCMS_LCS_S_00004	Amount Added: 750.00	Units: uL	
LCMS_ISTD_00002	Amount Added: 25.00	Units: uL	Run Reagent

Report Date: 26-Jun-2020 15:02:06

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d

Injection Date: 25-Jun-2020 15:24:02

Instrument ID: LCTQ2

Lims ID: STD6

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#:

8

Injection Vol: 4.0 mL

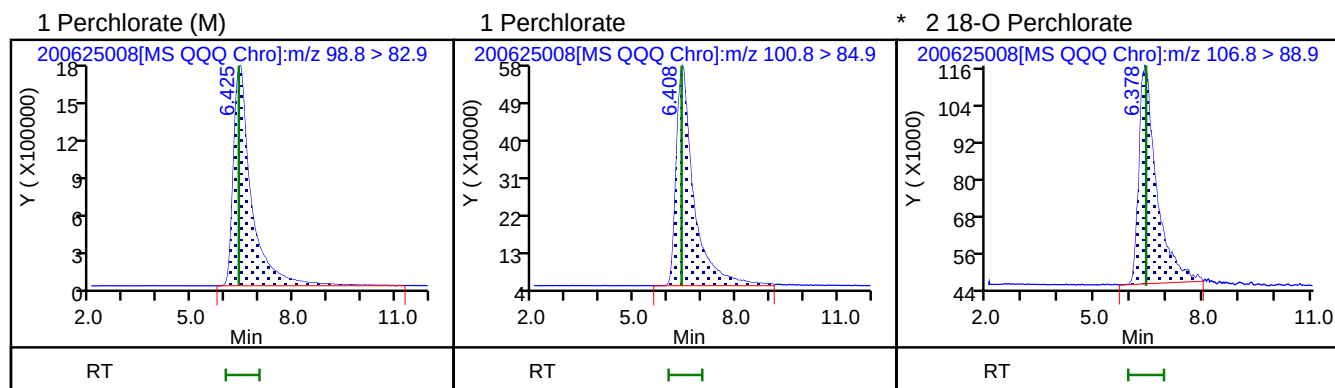
Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

Limit Group:

LCMS - 331.0



Report Date: 26-Jun-2020 15:02:06

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d

Injection Date: 25-Jun-2020 15:24:02

Instrument ID: LCTQ2

Lims ID: STD6

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#: 8

Injection Vol: 4.0 mL

Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

Limit Group:

LCMS - 331.0

Column: Dionex A521 (4.00 mm)

Detector

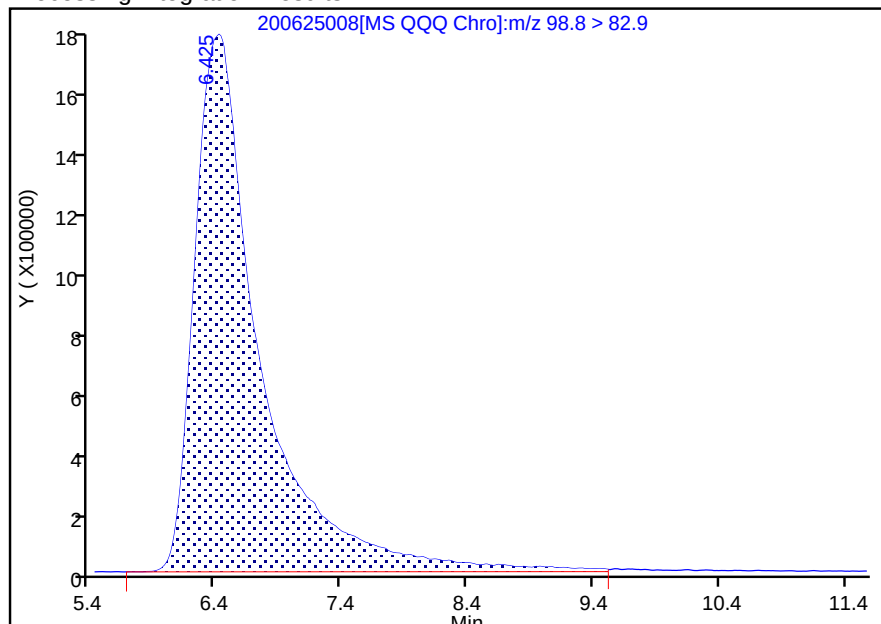
MS QQQ

1 Perchlorate, CAS: 14797-73-0

Signal: 1

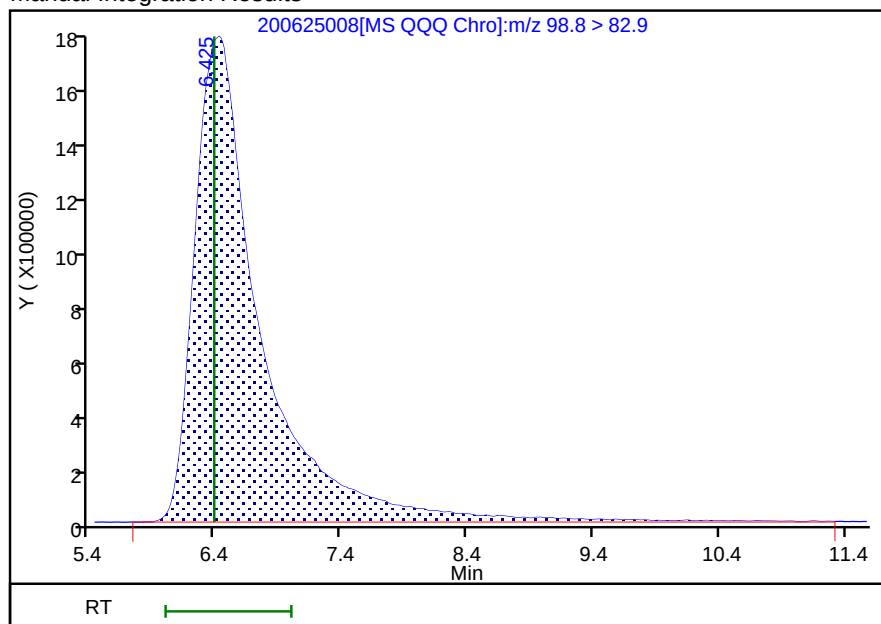
RT: 6.42
 Area: 60284764
 Amount: 72.986792
 Amount Units: ug/l

Processing Integration Results



RT: 6.42
 Area: 60674460
 Amount: 75.260498
 Amount Units: ug/l

Manual Integration Results



Reviewer: taiw, 26-Jun-2020 14:48:24

Audit Action: Manually Integrated

Audit Reason: Baseline

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September 2020

Kirtland AFB BFF
 Quarterly Report - April-June 2020
 SWMUs ST-106/SS-111

I-5-1061

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Calscience Job No.: 440-267742-1
SDG No.: _____
Lab Sample ID: ICV 570-77753/9 Calibration Date: 06/25/2020 15:38
Instrument ID: LCTQ2 Calib Start Date: 06/25/2020 14:11
GC Column: Dion-A521 ID: 4.00 (mm) Calib End Date: 06/25/2020 15:24
Lab File ID: 200625009.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Lin2		1.674		10.1	10.0	1.5	15.0

Report Date: 26-Jun-2020 15:02:07

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC
Target Compound Quantitation Report

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625009.d
 Lims ID: ICV
 Client ID:
 Sample Type: ICV
 Inject. Date: 25-Jun-2020 15:38:33 ALS Bottle#: 0 Worklist Smp#: 9
 Injection Vol: 4.0 mL Dil. Factor: 1.0000
 Sample Info: ICV, Sample
 Misc. Info.: 570-0023031-009
 Operator ID: Instrument ID: LCTQ2
 Sublist:
 Method: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\Perchlorate_LCTQ2.m
 Limit Group: LCMS - 331.0
 Last Update: 26-Jun-2020 15:02:07 Calib Date: 25-Jun-2020 15:24:02
 Integrator: Picker
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d
 Column 1 : Dionex A521 (4.00 mm) Det: MS QQQ
 Process Host: CTX1058

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
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1 Perchlorate

98.8 > 82.9	6.400	6.387	0.013	1.007	8925886	10.1	Target=3.08	2256
100.8 > 84.9	6.433	6.387	0.046	1.013	2787895		3.20(2.31-3.85)	1297

* 2 18-O Perchlorate

106.8 > 88.9	6.353	6.416	-0.063		2666563	5.00		1578
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Reagents:

IC_QCS_CIO4_00002	Amount Added: 1.00	Units: uL	
LCMS_ISTD_00002	Amount Added: 25.00	Units: uL	Run Reagent

Report Date: 26-Jun-2020 15:02:07

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625009.d

Injection Date: 25-Jun-2020 15:38:33

Instrument ID: LCTQ2

Lims ID: ICV

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#:

9

Injection Vol: 4.0 mL

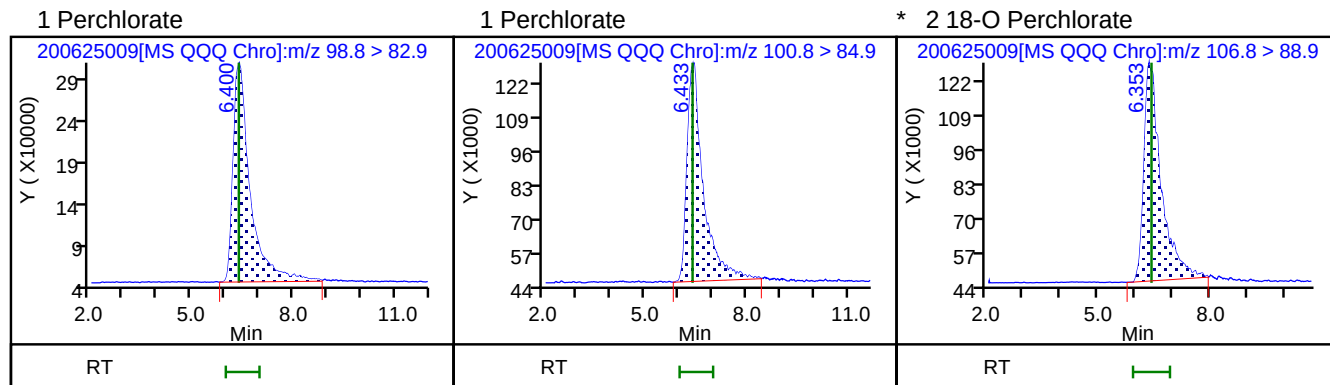
Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

Limit Group:

LCMS - 331.0



FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Calscience Job No.: 440-267742-1
SDG No.: _____
Lab Sample ID: CCVL 570-77753/11 Calibration Date: 06/25/2020 16:07
Instrument ID: LCTQ2 Calib Start Date: 06/25/2020 14:11
GC Column: Dion-A521 ID: 4.00 (mm) Calib End Date: 06/25/2020 15:24
Lab File ID: 200625011.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Lin2		1.803		0.106	0.100	5.9	50.0

Report Date: 26-Jun-2020 15:02:08

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC
Target Compound Quantitation Report

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625011.d
 Lims ID: CCVL
 Client ID:
 Sample Type: CCVL
 Inject. Date: 25-Jun-2020 16:07:35 ALS Bottle#: 0 Worklist Smp#: 11
 Injection Vol: 4.0 mL Dil. Factor: 1.0000
 Sample Info: CCVL, Sample
 Misc. Info.: 570-0023031-011
 Operator ID: Instrument ID: LCTQ2
 Sublist: chrom-Perchlorate_LCTQ2*sub3
 Method: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\Perchlorate_LCTQ2.m
 Limit Group: LCMS - 331.0
 Last Update: 26-Jun-2020 15:02:08 Calib Date: 25-Jun-2020 15:24:02
 Integrator: Picker
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d
 Column 1 : Dionex A521 (4.00 mm) Det: MS QQQ
 Process Host: CTX1058

First Level Reviewer: taiw

Date: 26-Jun-2020 12:35:57

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
1 Perchlorate									Ma
98.8 > 82.9	6.400	6.387	0.013	0.997	96768	0.1059	Target=3.08	41.3	a
100.8 > 84.9	6.433	6.387	0.046	1.003	37682		2.57(2.31-3.85)	34.1	M
* 2 18-O Perchlorate									
106.8 > 88.9	6.416	6.416	0.0		2684094	5.00		1766	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

LCMS_CCVL_00005

Amount Added: 10.00

Units: mL

LCMS_ISTD_00002

Amount Added: 25.00

Units: uL

Run Reagent

Report Date: 26-Jun-2020 15:02:08

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625011.d

Injection Date: 25-Jun-2020 16:07:35

Instrument ID: LCTQ2

Lims ID: CCVL

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#:

11

Injection Vol: 4.0 mL

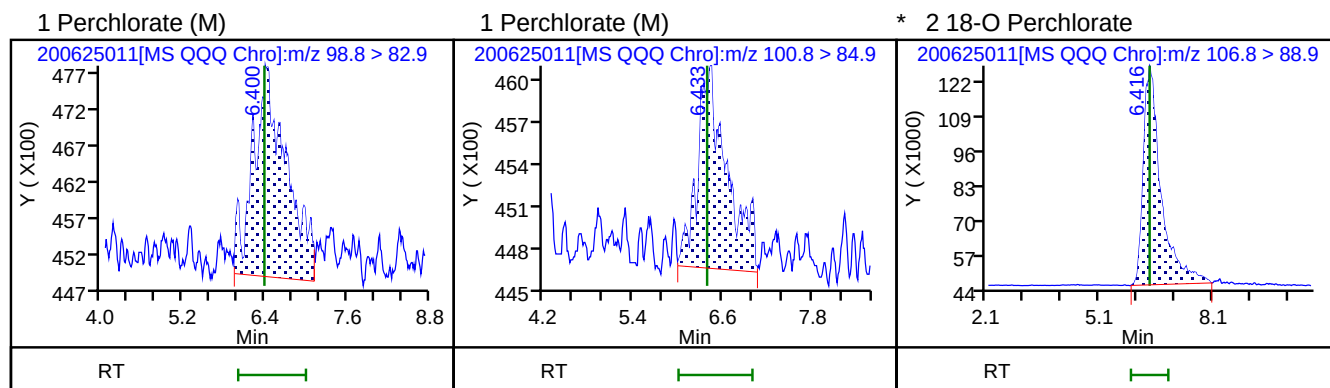
Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

Limit Group:

LCMS - 331.0



Report Date: 26-Jun-2020 15:02:09

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625011.d

Injection Date: 25-Jun-2020 16:07:35

Instrument ID: LCTQ2

Lims ID: CCVL

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#:

11

Injection Vol: 4.0 mL

Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

Limit Group:

LCMS - 331.0

Column: Dionex A521 (4.00 mm)

Detector

MS QQQ

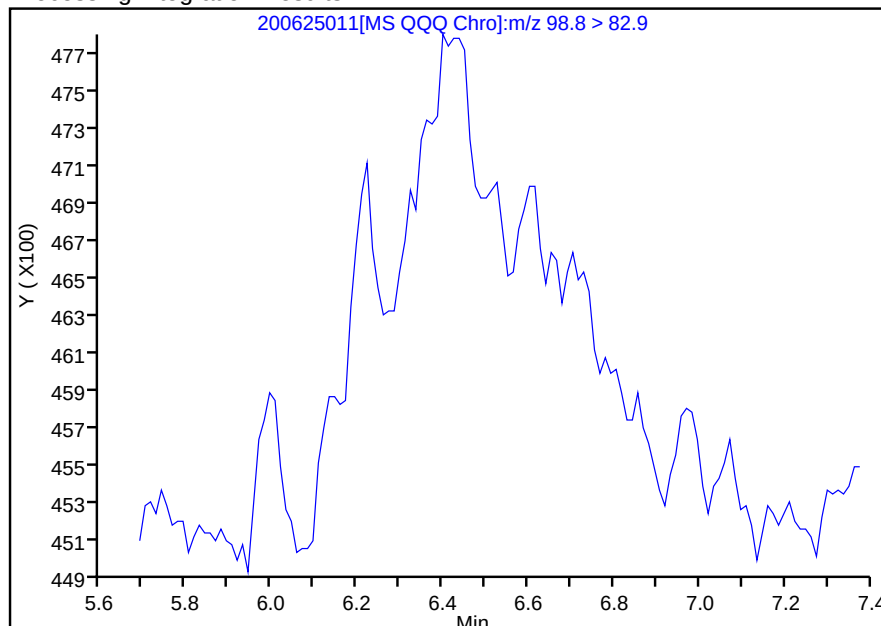
1 Perchlorate, CAS: 14797-73-0

Signal: 1

Not Detected

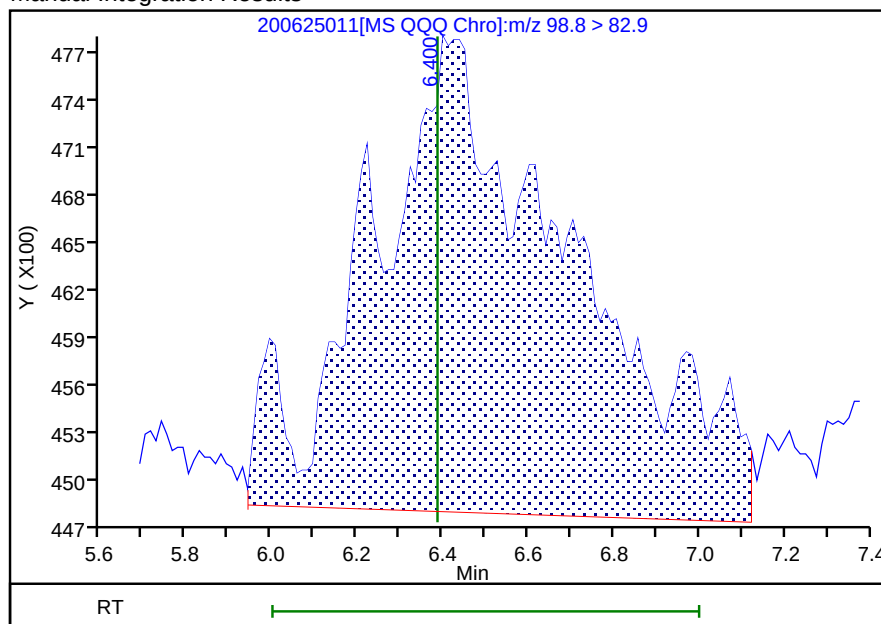
Expected RT: 6.39

Processing Integration Results



Manual Integration Results

RT: 6.40
Area: 96768
Amount: 0.105920
Amount Units: ug/l



Reviewer: taiw, 26-Jun-2020 12:35:39

Audit Action: Assigned Compound ID

Audit Reason: Peak assignment corrected

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06/29/2020

September 2020

Kirtland AFB BFF
Quarterly Report - April-June 2020
SWMUs ST-106/SS-111

I-5-1068

Report Date: 26-Jun-2020 15:02:09

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625011.d

Injection Date: 25-Jun-2020 16:07:35

Instrument ID: LCTQ2

Lims ID: CCVL

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#:

11

Injection Vol: 4.0 mL

Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

Limit Group:

LCMS - 331.0

Column: Dionex A521 (4.00 mm)

Detector

MS QQQ

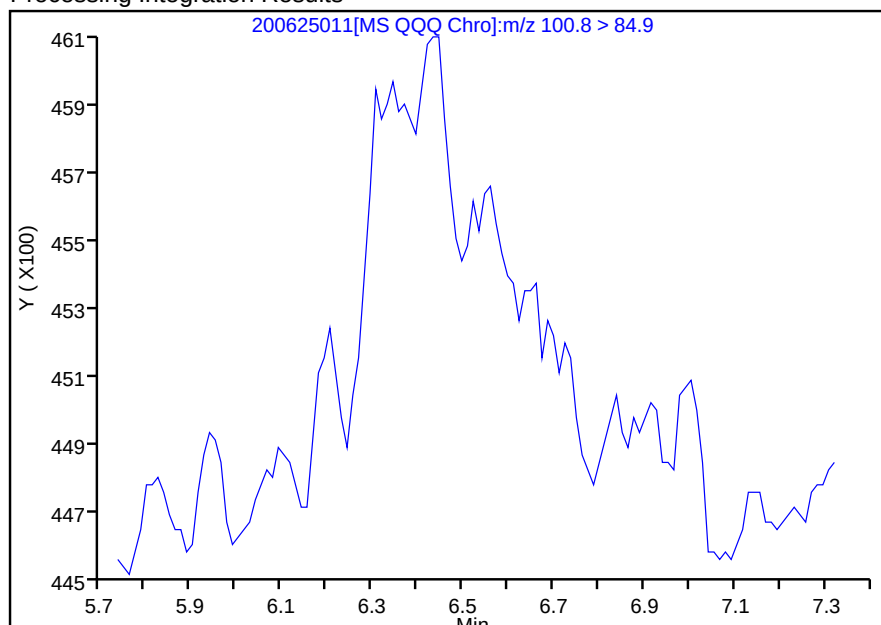
1 Perchlorate, CAS: 14797-73-0

Signal: 2

Not Detected

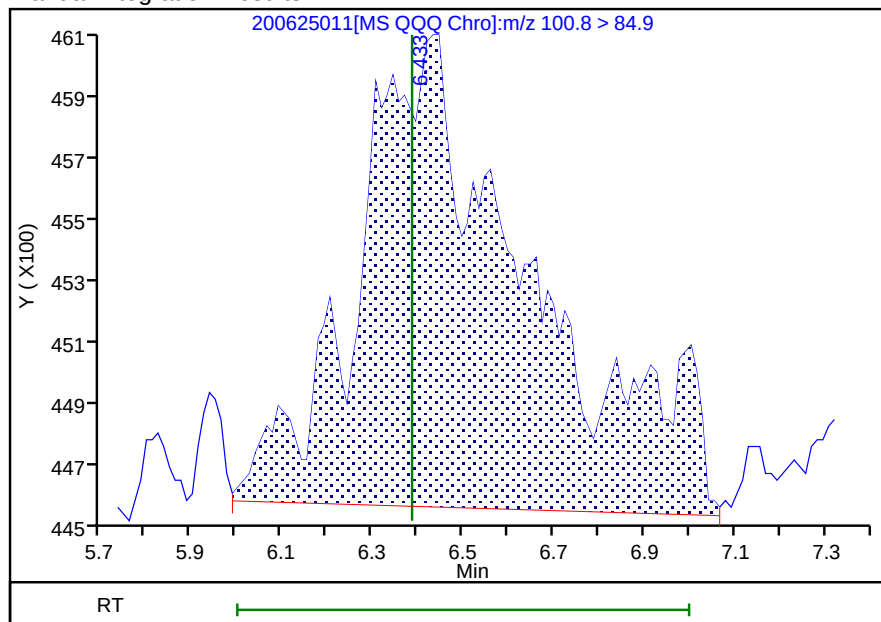
Expected RT: 6.39

Processing Integration Results



Manual Integration Results

RT: 6.43
Area: 37682
Amount: 0.105920
Amount Units: ug/l



Reviewer: taiw, 26-Jun-2020 12:35:47

Audit Action: Manually Integrated

Audit Reason: Baseline

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September 2020

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Calscience Job No.: 440-267742-1
SDG No.: _____
Lab Sample ID: CCVIS 570-77753/12 Calibration Date: 06/25/2020 16:22
Instrument ID: LCTQ2 Calib Start Date: 06/25/2020 14:11
GC Column: Dion-A521 ID: 4.00 (mm) Calib End Date: 06/25/2020 15:24
Lab File ID: 200625012.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Lin2		1.630		4.94	5.00	-1.2	15.0

QQQ Check Tune Report

Instrument Name	LC/TQ2
MS Model	G6430A
MS Instrument Serial	SG11077104
Software_Firmware Version	B.06.00.B6025.0, FW: A.00.07.32
Tune Date & Time	06:25:20 13:01:10
Data Path	C:\MassHunter\Tune\QQQ\G6430A\atunes.tune.xml
Ion Source	ESI
Ionization Mode	ESI
Tuned Resolution	All
Vacuum Pressure	1.84E+0[R]; 7.90E-6[H]

Source Parameters

Parameter	Value
Gas Temp	300
Gas Flow	6
Nebulizer	15
Capillary	4000

QQQ Check Tune Report

Negative Results

Analyzer: MS1 Polarity: Negative Width: Unit

m/z Expected	m/z	Tolerance	Delta	Result	FWHM Expected	FWHM	Tolerance	Delta	Result	Abundance
112.99	112.95	0.10	-0.04	Pass	0.70	0.65	0.14	-0.05	Pass	12754
302.00	302.01	0.10	0.01	Pass	0.70	0.73	0.14	0.03	Pass	19431
601.98	601.99	0.10	0.01	Pass	0.70	0.71	0.14	0.01	Pass	98058
1033.99	1034.00	0.10	0.01	Pass	0.70	0.72	0.14	0.02	Pass	29430
1333.97	1333.98	0.10	0.01	Pass	0.70	0.71	0.14	0.01	Pass	45030
1933.93	1933.90	0.10	-0.03	Pass	0.70	0.74	0.14	0.04	Pass	16158

Analyzer: MS2 Polarity: Negative Width: Unit

m/z Expected	m/z	Tolerance	Delta	Result	FWHM Expected	FWHM	Tolerance	Delta	Result	Abundance
112.99	113.00	0.10	0.01	Pass	0.70	0.70	0.14	0.00	Pass	15417
302.00	301.99	0.10	-0.01	Pass	0.70	0.70	0.14	0.00	Pass	24900
601.98	601.98	0.10	0.00	Pass	0.70	0.70	0.14	0.00	Pass	102636
1033.99	1033.99	0.10	0.00	Pass	0.70	0.70	0.14	0.00	Pass	40865
1333.97	1333.99	0.10	0.02	Pass	0.70	0.68	0.14	-0.02	Pass	60586
1933.93	1933.86	0.10	-0.07	Pass	0.70	0.73	0.14	0.03	Pass	26595

Analyzer: MS1 Polarity: Negative Width: Wide

m/z Expected	m/z	Tolerance	Delta	Result	FWHM Expected	FWHM	Tolerance	Delta	Result	Abundance
112.99	112.90	0.30	-0.09	Pass	1.20	1.09	0.60	-0.11	Pass	16766
302.00	301.93	0.30	-0.07	Pass	1.20	1.23	0.60	0.03	Pass	27667
601.98	601.93	0.30	-0.05	Pass	1.20	1.20	0.60	0.00	Pass	140227
1033.99	1033.89	0.30	-0.10	Pass	1.20	1.22	0.60	0.02	Pass	49888
1333.97	1333.89	0.30	-0.08	Pass	1.20	1.21	0.60	0.01	Pass	79835
1933.93	1933.87	0.30	-0.06	Pass	1.20	1.24	0.60	0.04	Pass	40159

Analyzer: MS2 Polarity: Negative Width: Wide

m/z Expected	m/z	Tolerance	Delta	Result	FWHM Expected	FWHM	Tolerance	Delta	Result	Abundance
112.99	113.00	0.30	0.01	Pass	1.20	1.17	0.60	-0.03	Pass	19533
302.00	301.96	0.30	-0.04	Pass	1.20	1.25	0.60	0.05	Pass	31400
601.98	601.92	0.30	-0.06	Pass	1.20	1.22	0.60	0.02	Pass	142760
1033.99	1033.89	0.30	-0.10	Pass	1.20	1.21	0.60	0.01	Pass	66325
1333.97	1333.88	0.30	-0.09	Pass	1.20	1.22	0.60	0.02	Pass	112495
1933.93	1933.85	0.30	-0.08	Pass	1.20	1.26	0.60	0.06	Pass	73702

Analyzer: MS1 Polarity: Negative Width: Widest

m/z Expected	m/z	Tolerance	Delta	Result	FWHM Expected	FWHM	Tolerance	Delta	Result	Abundance
112.99	112.90	0.50	-0.09	Pass	2.50	2.37	1.25	-0.13	Pass	22053
302.00	302.02	0.50	0.02	Pass	2.50	2.53	1.25	0.03	Pass	35637
601.98	602.05	0.50	0.07	Pass	2.50	2.44	1.25	-0.06	Pass	191683
1033.99	1034.03	0.50	0.04	Pass	2.50	2.41	1.25	-0.09	Pass	78022
1333.97	1334.04	0.50	0.07	Pass	2.50	2.37	1.25	-0.13	Pass	137113
1933.93	1934.03	0.50	0.10	Pass	2.50	2.37	1.25	-0.13	Pass	84620

Analyzer: MS2 Polarity: Negative Width: Widest

m/z Expected	m/z	Tolerance	Delta	Result	FWHM Expected	FWHM	Tolerance	Delta	Result	Abundance
112.99	112.91	0.50	-0.08	Pass	2.50	2.62	1.25	0.12	Pass	25813
302.00	301.92	0.50	-0.08	Pass	2.50	2.67	1.25	0.17	Pass	41804
601.98	601.94	0.50	-0.04	Pass	2.50	2.67	1.25	0.17	Pass	210001
1033.99	1033.96	0.50	-0.03	Pass	2.50	2.72	1.25	0.22	Pass	107742
1333.97	1333.99	0.50	0.02	Pass	2.50	2.68	1.25	0.18	Pass	206474
1933.93	1934.08	0.50	0.15	Pass	2.50	2.58	1.25	0.08	Pass	179819

Report Date: 26-Jun-2020 15:02:09

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC
Target Compound Quantitation Report

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625012.d
 Lims ID: CCVIS
 Client ID:
 Sample Type: CCVIS
 Inject. Date: 25-Jun-2020 16:22:07 ALS Bottle#: 0 Worklist Smp#: 12
 Injection Vol: 4.0 mL Dil. Factor: 1.0000
 Sample Info: CCVL, Sample
 Misc. Info.: 570-0023031-012
 Operator ID: Instrument ID: LCTQ2
 Sublist: chrom-Perchlorate_LCTQ2*sub3
 Method: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\Perchlorate_LCTQ2.m
 Limit Group: LCMS - 331.0
 Last Update: 26-Jun-2020 15:02:09 Calib Date: 25-Jun-2020 15:24:02
 Integrator: Picker
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d
 Column 1 : Dionex A521 (4.00 mm) Det: MS QQQ
 Process Host: CTX1058

First Level Reviewer: taiw

Date: 26-Jun-2020 14:48:52

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
1 Perchlorate									M
98.8 > 82.9	6.400	6.400	0.0	1.001	4365844	4.94	Target=3.08	1518	M
100.8 > 84.9	6.370	6.400	-0.030	0.997	1337791		3.26(2.31-3.85)	817	
* 2 18-O Perchlorate									
106.8 > 88.9	6.391	6.391	0.0		2678236	5.00		1671	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

LCMS_CCV_5_00003

Amount Added: 10.00

Units: mL

LCMS_ISTD_00002

Amount Added: 25.00

Units: uL

Run Reagent

Report Date: 26-Jun-2020 15:02:09

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625012.d

Injection Date: 25-Jun-2020 16:22:07

Instrument ID: LCTQ2

Lims ID: CCVIS

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#:

12

Injection Vol: 4.0 mL

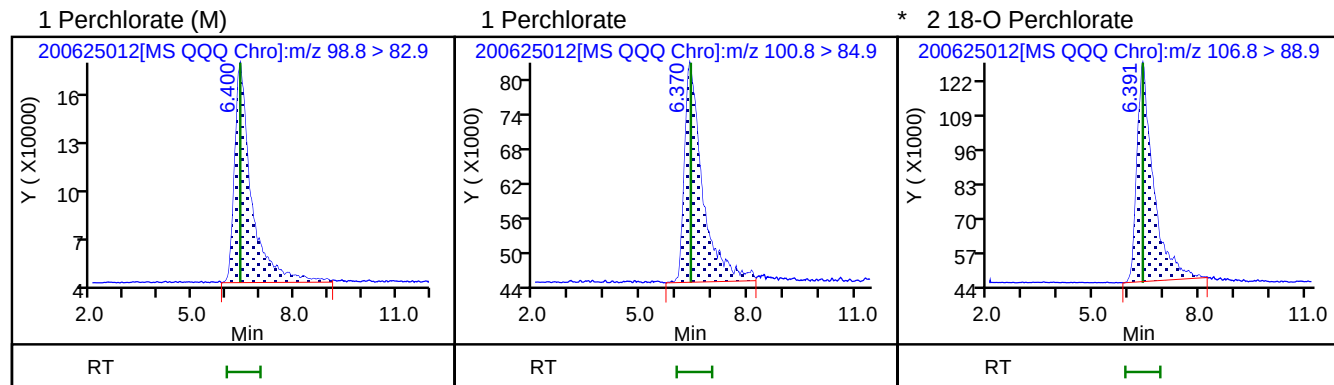
Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

Limit Group:

LCMS - 331.0



Report Date: 26-Jun-2020 15:02:09

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625012.d

Injection Date: 25-Jun-2020 16:22:07

Instrument ID: LCTQ2

Lims ID: CCVIS

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#: 12

Injection Vol: 4.0 mL

Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

Limit Group:

LCMS - 331.0

Column: Dionex A521 (4.00 mm)

Detector

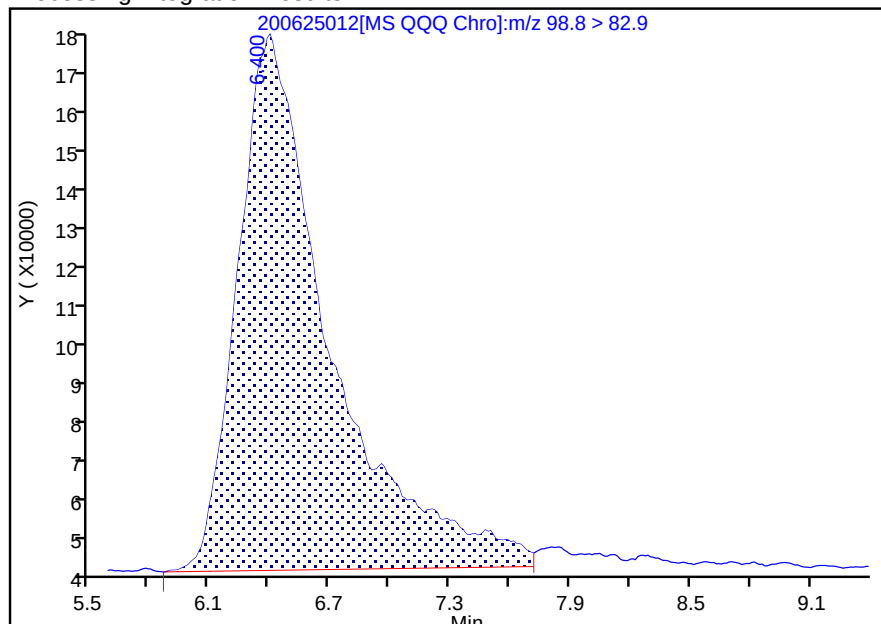
MS QQQ

1 Perchlorate, CAS: 14797-73-0

Signal: 1

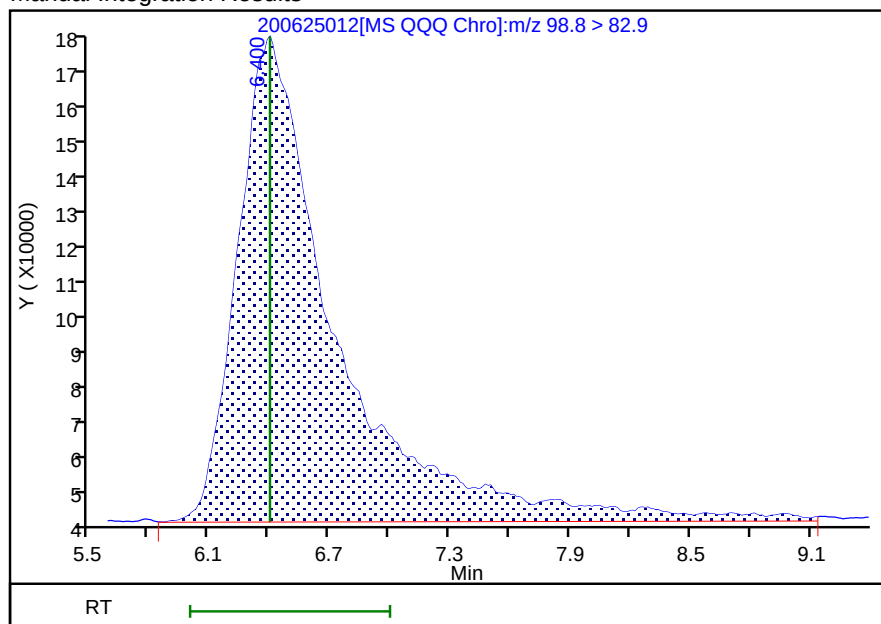
RT: 6.40
Area: 4071391
Amount: 4.494885
Amount Units: ug/l

Processing Integration Results



RT: 6.40
Area: 4365844
Amount: 4.940185
Amount Units: ug/l

Manual Integration Results



Reviewer: taiw, 26-Jun-2020 14:48:46

Audit Action: Manually Integrated

Audit Reason: Baseline

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September 2020

Kirtland AFB BFF
Quarterly Report - April-June 2020
SWMUs ST-106/SS-111

I-5-1075

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Calscience Job No.: 440-267742-1
SDG No.: _____
Lab Sample ID: CCV 570-77753/30 Calibration Date: 06/25/2020 20:42
Instrument ID: LCTQ2 Calib Start Date: 06/25/2020 14:11
GC Column: Dion-A521 ID: 4.00 (mm) Calib End Date: 06/25/2020 15:24
Lab File ID: 200625030.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Lin2		1.640		9.95	10.0	-0.5	15.0

Report Date: 26-Jun-2020 15:02:21

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC
Target Compound Quantitation Report

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625030.d
 Lims ID: ccv
 Client ID:
 Sample Type: CCV
 Inject. Date: 25-Jun-2020 20:42:55 ALS Bottle#: 0 Worklist Smp#: 30
 Injection Vol: 4.0 mL Dil. Factor: 1.0000
 Sample Info: CCV, Sample
 Misc. Info.: 570-0023031-030
 Operator ID: Instrument ID: LCTQ2
 Sublist: chrom-Perchlorate_LCTQ2*sub3
 Method: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\Perchlorate_LCTQ2.m
 Limit Group: LCMS - 331.0
 Last Update: 26-Jun-2020 15:02:20 Calib Date: 25-Jun-2020 15:24:02
 Integrator: Picker
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d
 Column 1 : Dionex A521 (4.00 mm) Det: MS QQQ
 Process Host: CTX1058

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
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* 2 18-O Perchlorate

106.8 > 88.9	6.404	6.404	0.0		2576004	5.00		2037	
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1 Perchlorate

98.8 > 82.9	6.412	6.412	0.0	1.001	8451363	9.95	Target=3.08	2752	
100.8 > 84.9	6.395	6.412	-0.017	0.999	2676149		3.16(2.31-3.85)	1655	

Reagents:

LCMS_CCV_10_00004

Amount Added: 10.00

Units: mL

LCMS_ISTD_00002

Amount Added: 25.00

Units: uL

Run Reagent

Report Date: 26-Jun-2020 15:02:21

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625030.d

Injection Date: 25-Jun-2020 20:42:55

Instrument ID: LCTQ2

Lims ID: ccv

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#:

30

Injection Vol: 4.0 mL

Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

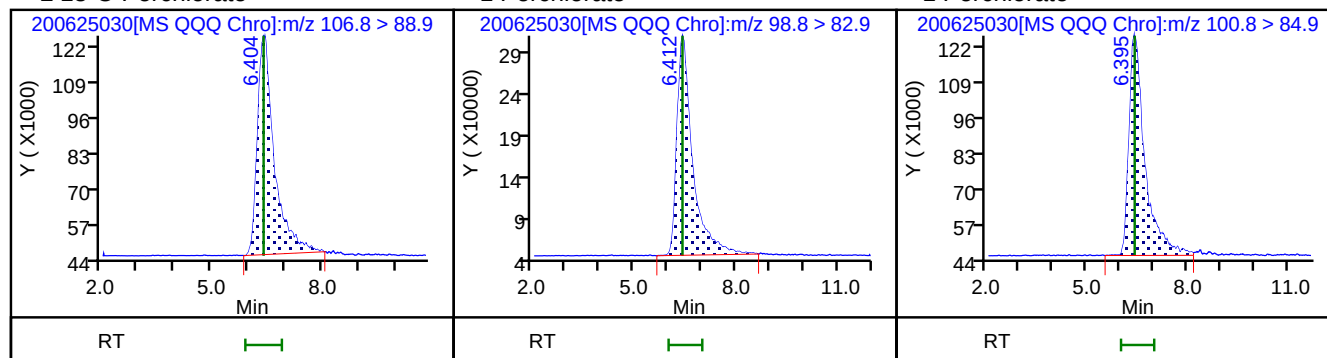
Limit Group:

LCMS - 331.0

* 2 18-O Perchlorate

1 Perchlorate

1 Perchlorate



FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Calscience Job No.: 440-267742-1
SDG No.: _____
Lab Sample ID: CCV 570-77753/41 Calibration Date: 06/25/2020 23:22
Instrument ID: LCTQ2 Calib Start Date: 06/25/2020 14:11
GC Column: Dion-A521 ID: 4.00 (mm) Calib End Date: 06/25/2020 15:24
Lab File ID: 200625041.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Lin2		1.506		45.7	50.0	-8.6	15.0

Report Date: 26-Jun-2020 15:02:27

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC
Target Compound Quantitation Report

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625041.d
 Lims ID: ccv
 Client ID:
 Sample Type: CCV
 Inject. Date: 25-Jun-2020 23:22:06 ALS Bottle#: 0 Worklist Smp#: 41
 Injection Vol: 4.0 mL Dil. Factor: 1.0000
 Sample Info: CCV, Sample
 Misc. Info.: 570-0023031-041
 Operator ID: Instrument ID: LCTQ2
 Sublist: chrom-Perchlorate_LCTQ2*sub3
 Method: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\Perchlorate_LCTQ2.m
 Limit Group: LCMS - 331.0
 Last Update: 26-Jun-2020 15:02:26 Calib Date: 25-Jun-2020 15:24:02
 Integrator: Picker
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d
 Column 1 : Dionex A521 (4.00 mm) Det: MS QQQ
 Process Host: CTX1058

First Level Reviewer: taiw

Date: 26-Jun-2020 12:44:04

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
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* 2 18-O Perchlorate

106.8 > 88.9	6.353	6.353	0.0		2962462	5.00		1690	
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1 Perchlorate

98.8 > 82.9	6.400	6.400	0.0	1.007	44623504	45.7	Target=3.08	9261	
100.8 > 84.9	6.370	6.400	-0.030	1.003	14527760		3.07(2.31-3.85)	6612	

Reagents:

LCMS_CCV_50_00003

Amount Added: 10.00

Units: mL

LCMS_ISTD_00002

Amount Added: 25.00

Units: uL

Run Reagent

Report Date: 26-Jun-2020 15:02:27

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625041.d

Injection Date: 25-Jun-2020 23:22:06

Instrument ID: LCTQ2

Lims ID: ccv

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#:

41

Injection Vol: 4.0 mL

Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

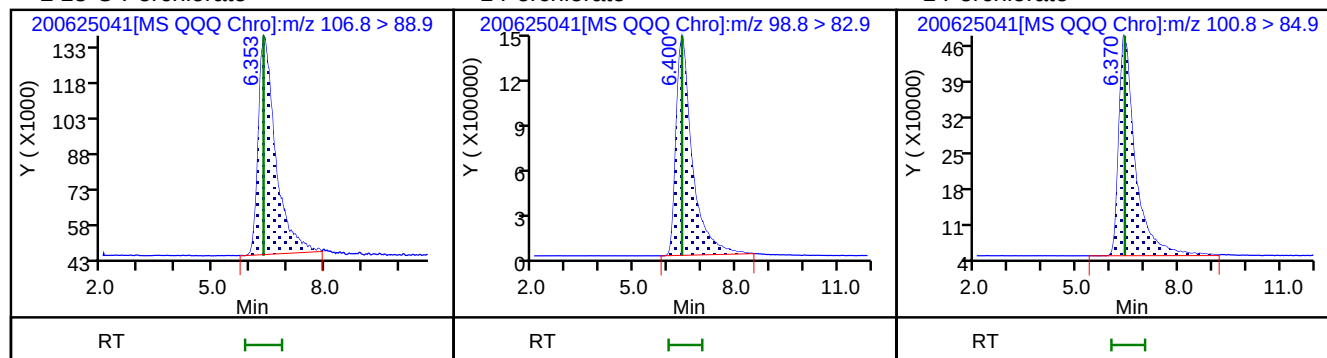
Limit Group:

LCMS - 331.0

* 2 18-O Perchlorate

1 Perchlorate

1 Perchlorate



FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Calscience Job No.: 440-267742-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 570-77753/15
 Matrix: Water Lab File ID: 200625015.d
 Analysis Method: 331.0 Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 1.925 (mL) Date Analyzed: 06/25/2020 17:05
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 4 (mL) GC Column: Dion-A521 ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 77753 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	ND		0.10	0.016

Report Date: 26-Jun-2020 15:02:12

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC
Target Compound Quantitation Report

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625015.d
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 25-Jun-2020 17:05:35 ALS Bottle#: 0 Worklist Smp#: 15
 Injection Vol: 4.0 mL Dil. Factor: 1.0000
 Sample Info: MB, Sample
 Misc. Info.: 570-0023031-015
 Operator ID: Instrument ID: LCTQ2
 Method: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\Perchlorate_LCTQ2.m
 Limit Group: LCMS - 331.0
 Last Update: 26-Jun-2020 15:02:09 Calib Date: 25-Jun-2020 15:24:02
 Integrator: Picker
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d
 Column 1 : Dionex A521 (4.00 mm) Det: MS QQQ
 Process Host: CTX1058

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
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* 2 18-O Perchlorate

106.8 > 88.9 6.429 6.391 0.038 2504030 5.00 1756

Reagents:

LCMS_ISTD_00002

Amount Added: 25.00

Units: uL

Run Reagent

Report Date: 26-Jun-2020 15:02:12

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625015.d

Injection Date: 25-Jun-2020 17:05:35

Instrument ID: LCTQ2

Lims ID: MB

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#:

15

Injection Vol: 4.0 mL

Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

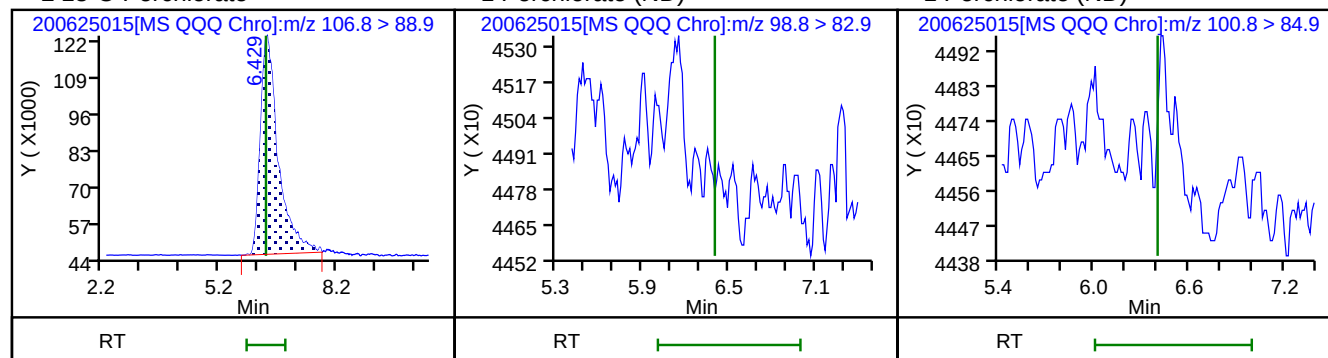
Limit Group:

LCMS - 331.0

* 2 18-O Perchlorate

1 Perchlorate (ND)

1 Perchlorate (ND)



FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Calscience Job No.: 440-267742-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: CCB 570-77753/13
 Matrix: Water Lab File ID: 200625013.d
 Analysis Method: 331.0 Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 1.925 (mL) Date Analyzed: 06/25/2020 16:36
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 4 (mL) GC Column: Dion-A521 ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 77753 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	ND		0.10	0.016

Report Date: 26-Jun-2020 15:02:10

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC
Target Compound Quantitation Report

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625013.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 25-Jun-2020 16:36:36 ALS Bottle#: 0 Worklist Smp#: 13
 Injection Vol: 4.0 mL Dil. Factor: 1.0000
 Sample Info: CCVIS, Sample
 Misc. Info.: 570-0023031-013
 Operator ID: Instrument ID: LCTQ2
 Method: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\Perchlorate_LCTQ2.m
 Limit Group: LCMS - 331.0
 Last Update: 26-Jun-2020 15:02:09 Calib Date: 25-Jun-2020 15:24:02
 Integrator: Picker
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d
 Column 1 : Dionex A521 (4.00 mm) Det: MS QQQ
 Process Host: CTX1058

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
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* 2 18-O Perchlorate

106.8 > 88.9 6.416 6.391 0.025 2577773 5.00 1521

Reagents:

LCMS_ISTD_00002 Amount Added: 25.00 Units: uL Run Reagent

Report Date: 26-Jun-2020 15:02:10

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625013.d

Injection Date: 25-Jun-2020 16:36:36

Instrument ID: LCTQ2

Lims ID: CCB

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#:

13

Injection Vol: 4.0 mL

Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

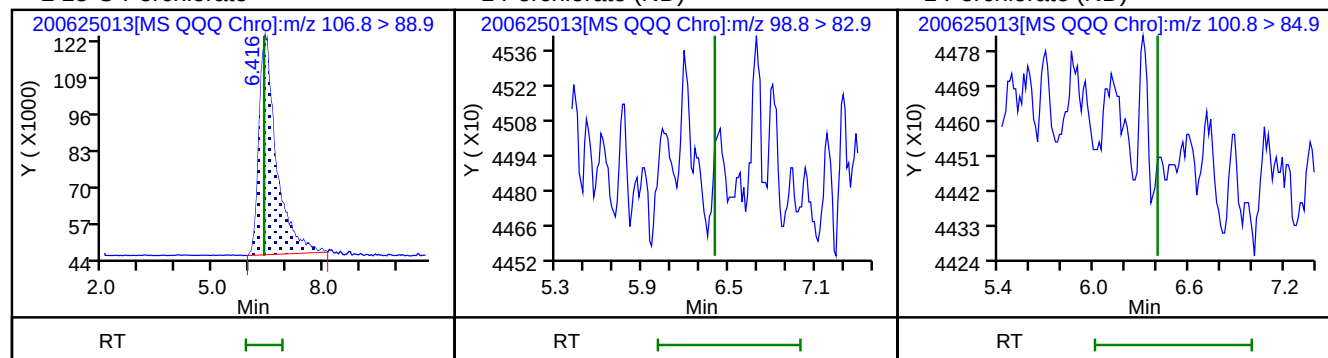
Limit Group:

LCMS - 331.0

* 2 18-O Perchlorate

1 Perchlorate (ND)

1 Perchlorate (ND)



FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Calscience Job No.: 440-267742-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: CCB 570-77753/31
 Matrix: Water Lab File ID: 200625031.d
 Analysis Method: 331.0 Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 1.925 (mL) Date Analyzed: 06/25/2020 20:57
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 4 (mL) GC Column: Dion-A521 ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 77753 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	ND		0.10	0.016

Report Date: 26-Jun-2020 15:02:21

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC
Target Compound Quantitation Report

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625031.d
 Lims ID: ccb
 Client ID:
 Sample Type: CCB
 Inject. Date: 25-Jun-2020 20:57:22 ALS Bottle#: 0 Worklist Smp#: 31
 Injection Vol: 4.0 mL Dil. Factor: 1.0000
 Sample Info: CCB, Sample
 Misc. Info.: 570-0023031-031
 Operator ID: Instrument ID: LCTQ2
 Method: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\Perchlorate_LCTQ2.m
 Limit Group: LCMS - 331.0
 Last Update: 26-Jun-2020 15:02:20 Calib Date: 25-Jun-2020 15:24:02
 Integrator: Picker
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d
 Column 1 : Dionex A521 (4.00 mm) Det: MS QQQ
 Process Host: CTX1058

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
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* 2 18-O Perchlorate

106.8 > 88.9 6.467 6.404 0.063 2789945 5.00 1842

Reagents:

LCMS_ISTD_00002 Amount Added: 25.00 Units: uL Run Reagent

Report Date: 26-Jun-2020 15:02:21

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625031.d

Injection Date: 25-Jun-2020 20:57:22

Instrument ID: LCTQ2

Lims ID: ccb

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#:

31

Injection Vol: 4.0 mL

Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

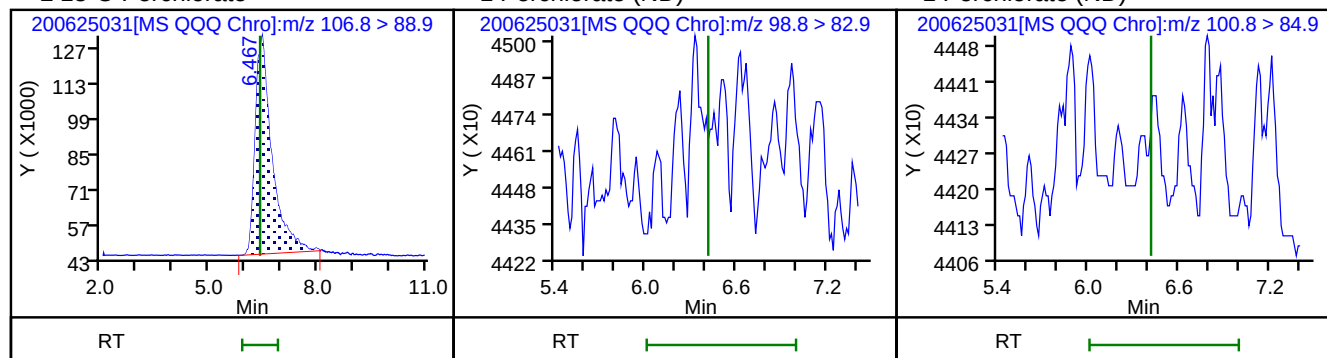
Limit Group:

LCMS - 331.0

* 2 18-O Perchlorate

1 Perchlorate (ND)

1 Perchlorate (ND)



FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Calscience Job No.: 440-267742-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: CCB 570-77753/42
 Matrix: Water Lab File ID: 200625042.d
 Analysis Method: 331.0 Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 1.925 (mL) Date Analyzed: 06/25/2020 23:24
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 4 (mL) GC Column: Dion-A521 ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 77753 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	ND		0.10	0.016

Report Date: 26-Jun-2020 15:02:27

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC
Target Compound Quantitation Report

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625042.d
 Lims ID: ccb
 Client ID:
 Sample Type: CCB
 Inject. Date: 25-Jun-2020 23:24:34 ALS Bottle#: 0 Worklist Smp#: 42
 Injection Vol: 4.0 mL Dil. Factor: 1.0000
 Sample Info: CCB, Sample
 Misc. Info.: 570-0023031-042
 Operator ID: Instrument ID: LCTQ2
 Method: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\Perchlorate_LCTQ2.m
 Limit Group: LCMS - 331.0
 Last Update: 26-Jun-2020 15:02:26 Calib Date: 25-Jun-2020 15:24:02
 Integrator: Picker
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d
 Column 1 : Dionex A521 (4.00 mm) Det: MS QQQ
 Process Host: CTX1058

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
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* 2 18-O Perchlorate

106.8 > 88.9 6.429 6.353 0.076 2940261 5.00 1816

Reagents:

LCMS_ISTD_00002

Amount Added: 25.00

Units: uL

Run Reagent

Report Date: 26-Jun-2020 15:02:27

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625042.d

Injection Date: 25-Jun-2020 23:24:34

Instrument ID: LCTQ2

Lims ID: ccb

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#:

42

Injection Vol: 4.0 mL

Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

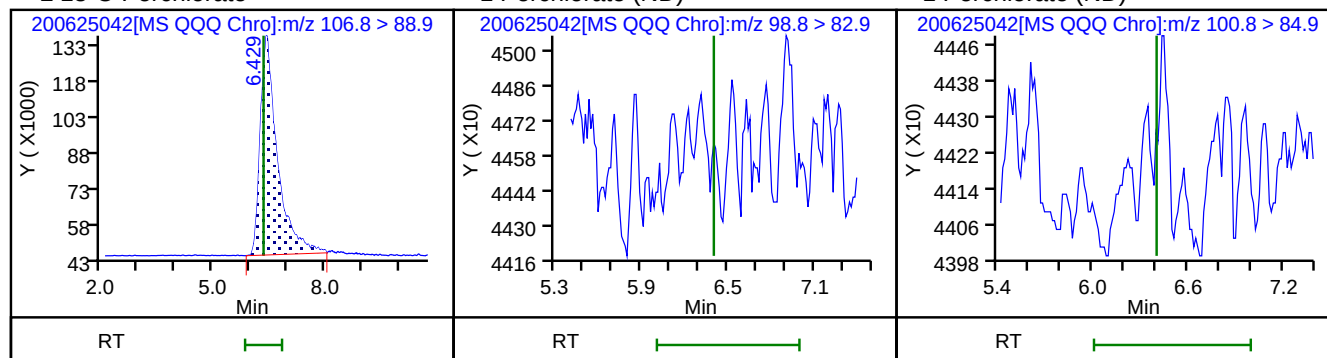
Limit Group:

LCMS - 331.0

* 2 18-O Perchlorate

1 Perchlorate (ND)

1 Perchlorate (ND)



FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Calscience Job No.: 440-267742-1
SDG No.: _____
Client Sample ID: _____ Lab Sample ID: ICB 570-77753/10
Matrix: Water Lab File ID: 200625010.d
Analysis Method: 331.0 Date Collected: _____
Extraction Method: _____ Date Extracted: _____
Sample wt/vol: 1.925 (mL) Date Analyzed: 06/25/2020 15:53
Con. Extract Vol.: _____ Dilution Factor: 1
Injection Volume: 4 (mL) GC Column: Dion-A521 ID: 4 (mm)
% Moisture: _____ GPC Cleanup: (Y/N) N
Analysis Batch No.: 77753 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	ND		0.10	0.016

Report Date: 26-Jun-2020 15:02:08

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC
Target Compound Quantitation Report

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625010.d
 Lims ID: ICB
 Client ID:
 Sample Type: ICB
 Inject. Date: 25-Jun-2020 15:53:04 ALS Bottle#: 0 Worklist Smp#: 10
 Injection Vol: 4.0 mL Dil. Factor: 1.0000
 Sample Info: ICB, Sample
 Misc. Info.: 570-0023031-010
 Operator ID: Instrument ID: LCTQ2
 Method: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\Perchlorate_LCTQ2.m
 Limit Group: LCMS - 331.0
 Last Update: 26-Jun-2020 15:02:07 Calib Date: 25-Jun-2020 15:24:02
 Integrator: Picker
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d
 Column 1 : Dionex A521 (4.00 mm) Det: MS QQQ
 Process Host: CTX1058

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
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* 2 18-O Perchlorate

106.8 > 88.9 6.416 6.416 0.0 2693685 5.00 1626

Reagents:

LCMS_ISTD_00002

Amount Added: 25.00

Units: uL

Run Reagent

Report Date: 26-Jun-2020 15:02:08

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625010.d

Injection Date: 25-Jun-2020 15:53:04

Instrument ID: LCTQ2

Lims ID: ICB

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#:

10

Injection Vol: 4.0 mL

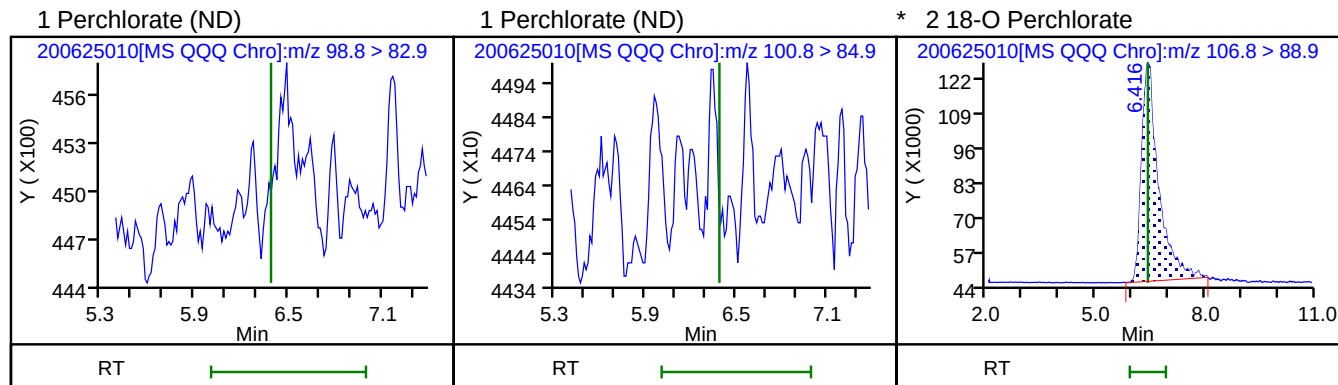
Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

Limit Group:

LCMS - 331.0



FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Calscience Job No.: 440-267742-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 570-77753/16
 Matrix: Water Lab File ID: 200625016.d
 Analysis Method: 331.0 Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 1.925 (mL) Date Analyzed: 06/25/2020 17:20
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 4 (mL) GC Column: Dion-A521 ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 77753 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	10.2		0.10	0.016

Report Date: 26-Jun-2020 15:02:12

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC
Target Compound Quantitation Report

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625016.d
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 25-Jun-2020 17:20:06 ALS Bottle#: 0 Worklist Smp#: 16
 Injection Vol: 4.0 mL Dil. Factor: 1.0000
 Sample Info: LCS, Sample
 Misc. Info.: 570-0023031-016
 Operator ID: Instrument ID: LCTQ2
 Method: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\Perchlorate_LCTQ2.m
 Limit Group: LCMS - 331.0
 Last Update: 26-Jun-2020 15:02:09 Calib Date: 25-Jun-2020 15:24:02
 Integrator: Picker
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d
 Column 1 : Dionex A521 (4.00 mm) Det: MS QQQ
 Process Host: CTX1058

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
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* 2 18-O Perchlorate

106.8 > 88.9	6.404	6.391	0.013		2562661	5.00		1690	
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1 Perchlorate

98.8 > 82.9	6.412	6.400	0.012	1.001	8648379	10.2	Target=3.08	2879	
100.8 > 84.9	6.446	6.400	0.046	1.007	2751749		3.14(2.31-3.85)	1660	

Reagents:

LCMS_LCS_S_00004

Amount Added: 10.00

Units: uL

LCMS_ISTD_00002

Amount Added: 25.00

Units: uL

Run Reagent

Report Date: 26-Jun-2020 15:02:12

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625016.d

Injection Date: 25-Jun-2020 17:20:06

Instrument ID: LCTQ2

Lims ID: LCS

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#:

16

Injection Vol: 4.0 mL

Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

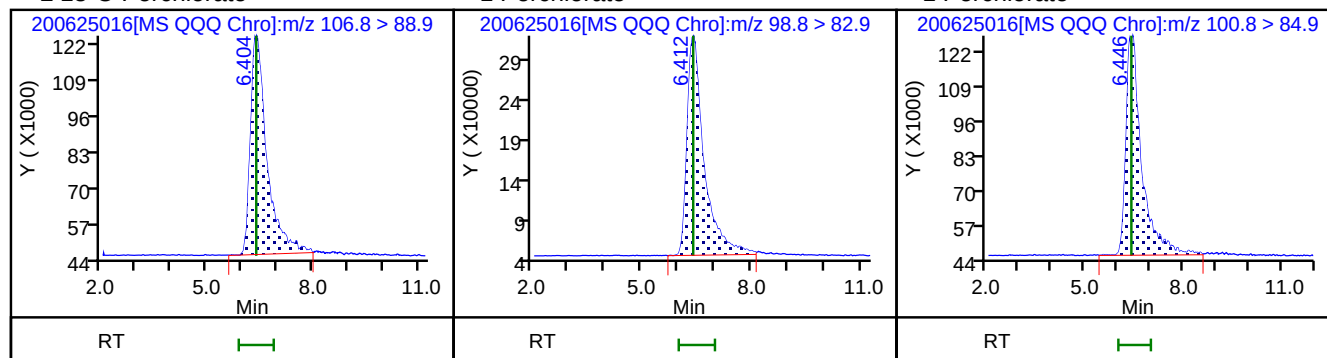
Limit Group:

LCMS - 331.0

* 2 18-O Perchlorate

1 Perchlorate

1 Perchlorate



FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Calscience Job No.: 440-267742-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCSD 570-77753/17
 Matrix: Water Lab File ID: 200625017.d
 Analysis Method: 331.0 Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 1.925 (mL) Date Analyzed: 06/25/2020 17:34
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 4 (mL) GC Column: Dion-A521 ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 77753 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	10.5		0.10	0.016

Report Date: 26-Jun-2020 15:02:13

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC
Target Compound Quantitation Report

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625017.d
 Lims ID: LCSD
 Client ID:
 Sample Type: LCSD
 Inject. Date: 25-Jun-2020 17:34:38 ALS Bottle#: 0 Worklist Smp#: 17
 Injection Vol: 4.0 mL Dil. Factor: 1.0000
 Sample Info: LCSD, Sample
 Misc. Info.: 570-0023031-017
 Operator ID: Instrument ID: LCTQ2
 Method: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\Perchlorate_LCTQ2.m
 Limit Group: LCMS - 331.0
 Last Update: 26-Jun-2020 15:02:09 Calib Date: 25-Jun-2020 15:24:02
 Integrator: Picker
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d
 Column 1 : Dionex A521 (4.00 mm) Det: MS QQQ
 Process Host: CTX1058

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
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* 2 18-O Perchlorate

106.8 > 88.9	6.404	6.391	0.013		2551246	5.00		1646	
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1 Perchlorate

98.8 > 82.9	6.400	6.400	0.0	0.999	8806114	10.5	Target=3.08	3289	
100.8 > 84.9	6.395	6.400	-0.005	0.999	2790126		3.16(2.31-3.85)	1625	

Reagents:

LCMS_LCS_S_00004

Amount Added: 10.00

Units: uL

LCMS_ISTD_00002

Amount Added: 25.00

Units: uL

Run Reagent

Report Date: 26-Jun-2020 15:02:13

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625017.d

Injection Date: 25-Jun-2020 17:34:38

Instrument ID: LCTQ2

Lims ID: LCSD

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#:

17

Injection Vol: 4.0 mL

Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

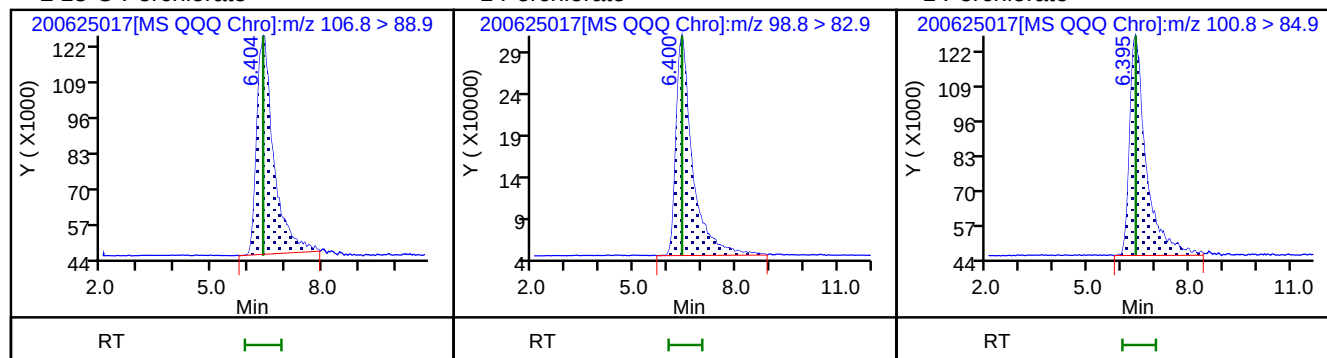
Limit Group:

LCMS - 331.0

* 2 18-O Perchlorate

1 Perchlorate

1 Perchlorate



FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Calscience Job No.: 440-267742-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: INF 570-77753/14
 Matrix: Water Lab File ID: 200625014.d
 Analysis Method: 331.0 Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 1.925 (mL) Date Analyzed: 06/25/2020 16:51
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 4 (mL) GC Column: Dion-A521 ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 77753 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.493		0.10	0.016

Report Date: 26-Jun-2020 15:02:11

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC
Target Compound Quantitation Report

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625014.d
 Lims ID: INF
 Client ID:
 Sample Type: INF
 Inject. Date: 25-Jun-2020 16:51:05 ALS Bottle#: 0 Worklist Smp#: 14
 Injection Vol: 4.0 mL Dil. Factor: 1.0000
 Sample Info: INF, Sample
 Misc. Info.: 570-0023031-014
 Operator ID: Instrument ID: LCTQ2
 Method: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\Perchlorate_LCTQ2.m
 Limit Group: LCMS - 331.0
 Last Update: 26-Jun-2020 15:02:09 Calib Date: 25-Jun-2020 15:24:02
 Integrator: Picker
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d
 Column 1 : Dionex A521 (4.00 mm) Det: MS QQQ
 Process Host: CTX1058

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
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* 2 18-O Perchlorate

106.8 > 88.9	6.251	6.391	-0.140		1983114	5.00		2129	
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1 Perchlorate

98.8 > 82.9	6.247	6.400	-0.153	0.999	324475	0.4928	Target=3.08	134	
100.8 > 84.9	6.256	6.400	-0.144	1.001	104598		3.10(2.31-3.85)	111	

Reagents:

LCMS_INF_00006	Amount Added: 10.00	Units: mL	
LCMS_ISTD_00002	Amount Added: 25.00	Units: uL	Run Reagent

Report Date: 26-Jun-2020 15:02:11

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625014.d

Injection Date: 25-Jun-2020 16:51:05

Instrument ID: LCTQ2

Lims ID: INF

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#:

14

Injection Vol: 4.0 mL

Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

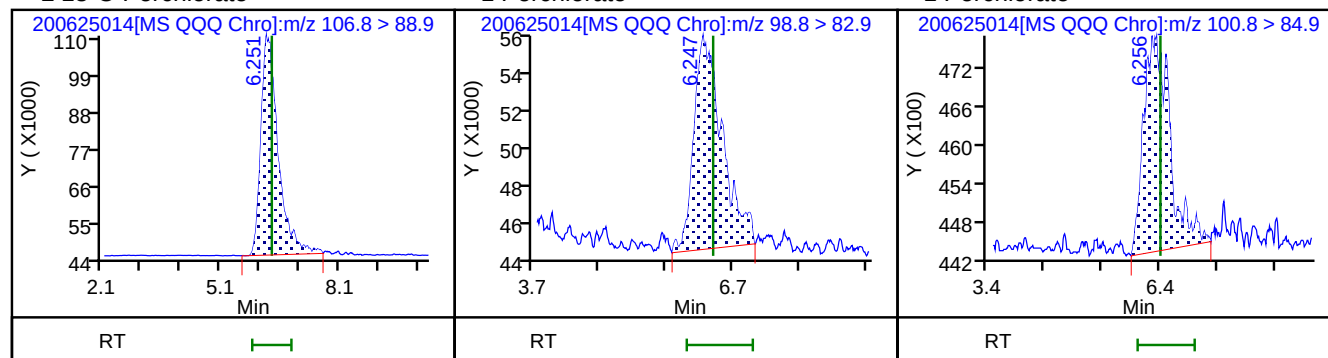
Limit Group:

LCMS - 331.0

* 2 18-O Perchlorate

1 Perchlorate

1 Perchlorate



FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>Eurofins Calscience</u>	Job No.: <u>440-267742-1</u>
SDG No.: _____	
Client Sample ID: <u>GW239-202-PreDis MS</u>	Lab Sample ID: <u>440-267742-1 MS</u>
Matrix: <u>Water (Dissolved)</u>	Lab File ID: <u>200625039.d</u>
Analysis Method: <u>331.0</u>	Date Collected: <u>06/19/2020 08:00</u>
Extraction Method: _____	Date Extracted: _____
Sample wt/vol: <u>1.925 (mL)</u>	Date Analyzed: <u>06/25/2020 22:53</u>
Con. Extract Vol.: _____	Dilution Factor: <u>1</u>
Injection Volume: <u>4 (mL)</u>	GC Column: <u>Dion-A521</u> ID: <u>4 (mm)</u>
% Moisture: _____	GPC Cleanup: (Y/N) <u>N</u>
Analysis Batch No.: <u>77753</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	10.2		0.10	0.016

Report Date: 26-Jun-2020 15:02:25

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC
Target Compound Quantitation Report

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625039.d
 Lims ID: 440-267742-A-1 MS
 Client ID:
 Sample Type: MS
 Inject. Date: 25-Jun-2020 22:53:11 ALS Bottle#: 0 Worklist Smp#: 39
 Injection Vol: 4.0 mL Dil. Factor: 1.0000
 Sample Info: 440-267742-A-1 MS, Sample
 Misc. Info.: 570-0023031-039
 Operator ID: Instrument ID: LCTQ2
 Method: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\Perchlorate_LCTQ2.m
 Limit Group: LCMS - 331.0
 Last Update: 26-Jun-2020 15:02:20 Calib Date: 25-Jun-2020 15:24:02
 Integrator: Picker
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d
 Column 1 : Dionex A521 (4.00 mm) Det: MS QQQ
 Process Host: CTX1058

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
--------	----	-----------	-----------	-----------	----------	----------------	---------------	-----	-------

* 2 18-O Perchlorate

106.8 > 88.9	6.366	6.404	-0.038		2507683	5.00		2073	
--------------	-------	-------	--------	--	---------	------	--	------	--

1 Perchlorate

98.8 > 82.9	6.374	6.412	-0.038	1.001	8472484	10.2	Target=3.08	2846	
100.8 > 84.9	6.370	6.412	-0.042	1.001	2794533		3.03(2.31-3.85)	2200	

Reagents:

LCMS_LCS_S_00004	Amount Added: 10.00	Units: uL	
LCMS_ISTD_00002	Amount Added: 25.00	Units: uL	Run Reagent

Report Date: 26-Jun-2020 15:02:25

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625039.d

Injection Date: 25-Jun-2020 22:53:11

Instrument ID: LCTQ2

Lims ID: 440-267742-A-1 MS

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#:

39

Injection Vol: 4.0 mL

Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

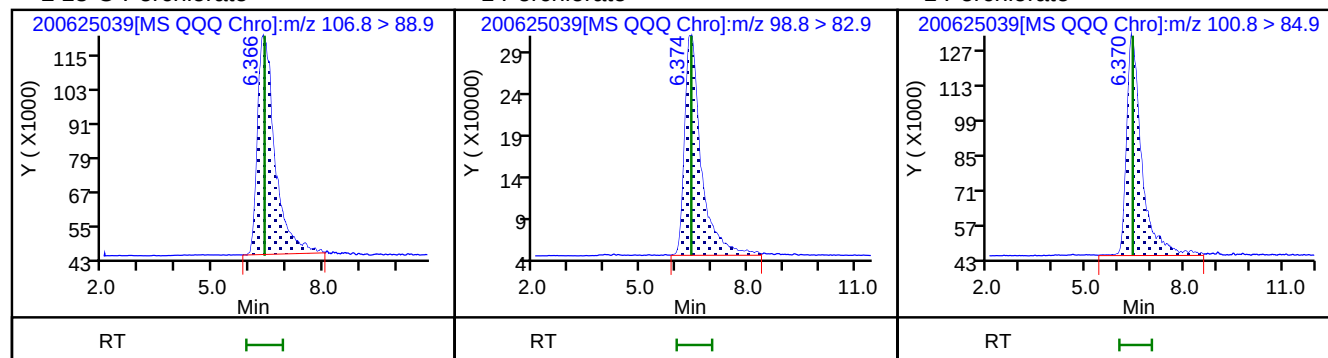
Limit Group:

LCMS - 331.0

* 2 18-O Perchlorate

1 Perchlorate

1 Perchlorate



FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Calscience Job No.: 440-267742-1
 SDG No.: _____
 Client Sample ID: GW239-202-PreDis MSD Lab Sample ID: 440-267742-1 MSD
 Matrix: Water (Dissolved) Lab File ID: 200625040.d
 Analysis Method: 331.0 Date Collected: 06/19/2020 08:00
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 1.925 (mL) Date Analyzed: 06/25/2020 22:55
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 4 (mL) GC Column: Dion-A521 ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 77753 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	10.3		0.10	0.016

Report Date: 26-Jun-2020 15:02:26

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC
Target Compound Quantitation Report

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625040.d
 Lims ID: 440-267742-A-1 MSD
 Client ID:
 Sample Type: MSD
 Inject. Date: 25-Jun-2020 22:55:38 ALS Bottle#: 0 Worklist Smp#: 40
 Injection Vol: 4.0 mL Dil. Factor: 1.0000
 Sample Info: 440-267742-A-1 MS, Sample
 Misc. Info.: 570-0023031-040
 Operator ID: Instrument ID: LCTQ2
 Method: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\Perchlorate_LCTQ2.m
 Limit Group: LCMS - 331.0
 Last Update: 26-Jun-2020 15:02:20 Calib Date: 25-Jun-2020 15:24:02
 Integrator: Picker
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d
 Column 1 : Dionex A521 (4.00 mm) Det: MS QQQ
 Process Host: CTX1058

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
--------	----	-----------	-----------	-----------	----------	----------------	---------------	-----	-------

* 2 18-O Perchlorate

106.8 > 88.9	6.429	6.404	0.025		2544821	5.00		2357	
--------------	-------	-------	-------	--	---------	------	--	------	--

1 Perchlorate

98.8 > 82.9	6.412	6.412	0.0	0.997	8613260	10.3	Target=3.08	2893	
100.8 > 84.9	6.421	6.412	0.009	0.999	2603444		3.31(2.31-3.85)	1845	

Reagents:

LCMS_LCS_S_00004

Amount Added: 10.00

Units: uL

LCMS_ISTD_00002

Amount Added: 25.00

Units: uL

Run Reagent

Report Date: 26-Jun-2020 15:02:26

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625040.d

Injection Date: 25-Jun-2020 22:55:38

Instrument ID: LCTQ2

Lims ID: 440-267742-A-1 MSD

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#:

40

Injection Vol: 4.0 mL

Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

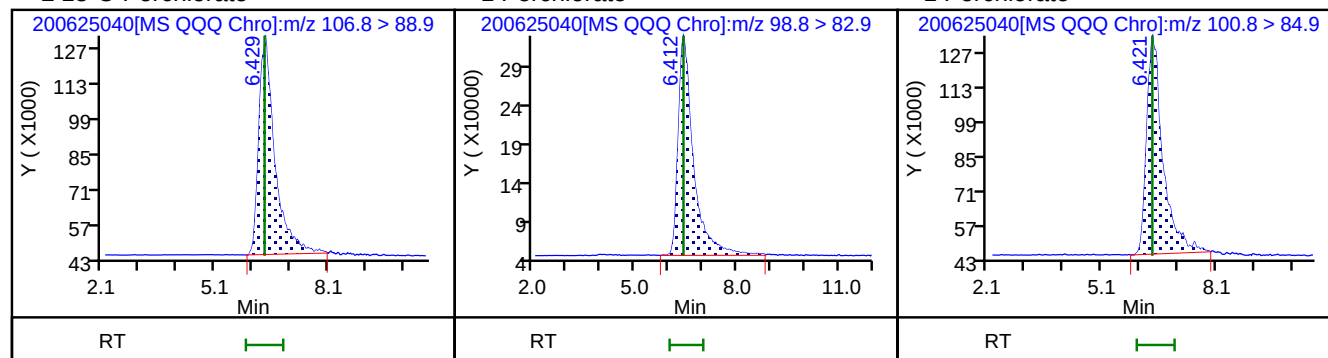
Limit Group:

LCMS - 331.0

* 2 18-O Perchlorate

1 Perchlorate

1 Perchlorate



LCMS ANALYSIS RUN LOG

Lab Name: Eurofins Calscience

Job No.: 440-267742-1

SDG No.:

Instrument ID: LCTQ2

Start Date: 06/25/2020 14:11

Analysis Batch Number: 77753

End Date: 06/25/2020 23:24

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD1 570-77753/3 IC		06/25/2020 14:11	1	200625003.d	Dion-A521 4 (mm)
STD2 570-77753/4 IC		06/25/2020 14:25	1	200625004.d	Dion-A521 4 (mm)
STD3 570-77753/5 IC		06/25/2020 14:40	1	200625005.d	Dion-A521 4 (mm)
STD4 570-77753/6 ICIS		06/25/2020 14:55	1	200625006.d	Dion-A521 4 (mm)
STD5 570-77753/7 IC		06/25/2020 15:09	1	200625007.d	Dion-A521 4 (mm)
STD6 570-77753/8 IC		06/25/2020 15:24	1	200625008.d	Dion-A521 4 (mm)
ICV 570-77753/9		06/25/2020 15:38	1	200625009.d	Dion-A521 4 (mm)
ICB 570-77753/10		06/25/2020 15:53	1	200625010.d	Dion-A521 4 (mm)
CCVL 570-77753/11		06/25/2020 16:07	1	200625011.d	Dion-A521 4 (mm)
CCVIS 570-77753/12		06/25/2020 16:22	1	200625012.d	Dion-A521 4 (mm)
CCB 570-77753/13		06/25/2020 16:36	1	200625013.d	Dion-A521 4 (mm)
INF 570-77753/14		06/25/2020 16:51	1	200625014.d	Dion-A521 4 (mm)
MB 570-77753/15		06/25/2020 17:05	1	200625015.d	Dion-A521 4 (mm)
LCS 570-77753/16		06/25/2020 17:20	1	200625016.d	Dion-A521 4 (mm)
LCSD 570-77753/17		06/25/2020 17:34	1	200625017.d	Dion-A521 4 (mm)
CCV 570-77753/30		06/25/2020 20:42	1	200625030.d	Dion-A521 4 (mm)
CCB 570-77753/31		06/25/2020 20:57	1	200625031.d	Dion-A521 4 (mm)
ZZZZZ		06/25/2020 21:28	1		Dion-A521 4 (mm)
ZZZZZ		06/25/2020 21:55	1		Dion-A521 4 (mm)
ZZZZZ		06/25/2020 22:09	1		Dion-A521 4 (mm)
ZZZZZ		06/25/2020 22:24	1		Dion-A521 4 (mm)
440-267742-1		06/25/2020 22:38	1	200625038.d	Dion-A521 4 (mm)
440-267742-1 MS		06/25/2020 22:53	1	200625039.d	Dion-A521 4 (mm)
440-267742-1 MSD		06/25/2020 22:55	1	200625040.d	Dion-A521 4 (mm)
CCV 570-77753/41		06/25/2020 23:22	1	200625041.d	Dion-A521 4 (mm)
CCB 570-77753/42		06/25/2020 23:24	1	200625042.d	Dion-A521 4 (mm)

331.0

LCMS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 440-267742-1

SDG No.: _____

Batch Number: 77753 Batch Start Date: 06/25/20 14:11 Batch Analyst: Ngo, DouglasBatch Method: 331.0 Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	IC_QCS_C104 00002	LCMS_CCV_10 00004	LCMS_CCV_5 00003	LCMS_CCV_50 00003	LCMS_CCVL 00005	LCMS_INF 00006
STD1 570-77753/3 IC		331.0							
STD2 570-77753/4 IC		331.0							
STD3 570-77753/5 IC		331.0							
STD4 570-77753/6 ICIS		331.0							
STD5 570-77753/7 IC		331.0							
STD6 570-77753/8 IC		331.0							
ICV 570-77753/9		331.0		1 uL					
ICB 570-77753/10		331.0							
CCVL 570-77753/11		331.0						10 mL	
CCVIS 570-77753/12		331.0				10 mL			
CCB 570-77753/13		331.0							
INF 570-77753/14		331.0							10 mL
MB 570-77753/15		331.0							
LCS 570-77753/16		331.0							
LCSD 570-77753/17		331.0							
CCV 570-77753/30		331.0			10 mL				
CCB 570-77753/31		331.0							
440-267742-A-1	GW239-202-PreDis	331.0	D						
440-267742-A-1 MS	GW239-202-PreDis	331.0	D						
440-267742-A-1 MSD	GW239-202-PreDis	331.0	D						
CCV 570-77753/41		331.0					10 mL		

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

331.0

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LCMS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 440-267742-1

SDG No.: _____

Batch Number: 77753 Batch Start Date: 06/25/20 14:11 Batch Analyst: Ngo, Douglas

Batch Method: 331.0 Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	IC_QCS_C104 00002	LCMS_CCV_10 00004	LCMS_CCV_5 00003	LCMS_CCV_50 00003	LCMS_CCVL 00005	LCMS_INF 00006
CCB 570-77753/42		331.0							

Lab Sample ID	Client Sample ID	Method Chain	Basis	LCMS_ISTD 00002	LCMS_LCS_S 00004				
STD1 570-77753/3 IC		331.0		25 uL	1 uL				
STD2 570-77753/4 IC		331.0		25 uL	10 uL				
STD3 570-77753/5 IC		331.0		25 uL	50 uL				
STD4 570-77753/6 ICIS		331.0		25 uL	100 uL				
STD5 570-77753/7 IC		331.0		25 uL	500 uL				
STD6 570-77753/8 IC		331.0		25 uL	750 uL				
ICV 570-77753/9		331.0		25 uL					
ICB 570-77753/10		331.0		25 uL					
CCVL 570-77753/11		331.0		25 uL					
CCVIS 570-77753/12		331.0		25 uL					
CCB 570-77753/13		331.0		25 uL					
INF 570-77753/14		331.0		25 uL					
MB 570-77753/15		331.0		25 uL					
LCS 570-77753/16		331.0		25 uL	10 uL				
LCSD 570-77753/17		331.0		25 uL	10 uL				
CCV 570-77753/30		331.0		25 uL					
CCB 570-77753/31		331.0		25 uL					
440-267742-A-1	GW239-202-PreDis	331.0	D	25 uL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

331.0

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LCMS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 440-267742-1

SDG No.: _____

Batch Number: 77753 Batch Start Date: 06/25/20 14:11 Batch Analyst: Ngo, DouglasBatch Method: 331.0 Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	LCMS_ISTD 00002	LCMS_LCS_S 00004				
440-267742-A-1 MS	GW239-202-PreDis	331.0	D	25 uL	10 uL				
440-267742-A-1 MSD	GW239-202-PreDis	331.0	D	25 uL	10 uL				
CCV 570-77753/41		331.0		25 uL					
CCB 570-77753/42		331.0		25 uL					

Batch Notes	
Syringe Filter Lot #	C001-028-04

Basis	Basis Description
D	Dissolved

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

331.0

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06/29/2020

September 2020

Subcontract Data

Shipping and Receiving Documents

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06/29/2020

TestAmerica Irvine
17461 Derian Ave Suite 100
Irvine, CA 92614-5817
Phone (949) 261-1022 Fax (949) 260-3297

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Chain of Custody Record

[illegible]

Eurofins Calscience Irvine
117461 Derian Ave Suite 100
Irvine, CA 92614-5817
Phone: 949-261-1022 Fax: 949-260-3299

Chain of Custody Record



Environment Testing
America

Client Information (Sub Contract Lab)					
Sampler:	Lab Pkt:	Fama, Sheri M	Carrier Tracking No(s):	COC No:	440-157682.1
Client Contact:	E-Mail:	sherifama@testamericainc.com	State of Origin:	Page:	Page 1 of 1
Shipping/Receiving	Company:	Eurofins Calscience LLC	Accreditations Required (See note):	Job #:	440-267742-1
Address:	City:	Garden Grove	State - California; State Program - New Mexico	Preservation Codes:	A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO ₄ F - MeOH G - Anchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA M - Hexane N - None O - AsNaO ₂ P - Na ₂ O ₄ S Q - Na ₂ SO ₃ R - Na ₂ SO ₃ S - H ₂ SO ₄ T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify) Other:
Due Date Requested:	TAT Requested (days):	PO #:	WO #:	Project #:	SSOW#:
6/29/2020				44021666	
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Seawater, Snow/Ice, Soil, etc.)	Preservation Code
GW239-2020-PreDis (440-267742-1)	6/19/20	08:00 Mountain		Water	X
Total Number of Containers					
Special Instructions/Note:					
J-Flags. Level IV report needed					
Note: Since laboratory accreditations are subject to change, Eurofins Calscience places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the Eurofins Calscience laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Calscience attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Calscience.					
Possible Hazard Identification					
Unconfirmed					
Deliverable Requested: I, II, III, IV, Other (specify) _____					
Primary Deliverable Rank: 4					
Date/Time:	Date:	Time:	Method of Shipment:	Return To Client	Archive For
6/22/20	1137	1137	Company	☐ Return To Client	☐ Disposal By Lab
Special Instructions/QC Requirements:					
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)					
Empty Kit Relinquished by:					
Relinquished by:	Date/Time:	Date:	Time:	Received by:	Company
Relinquished by:	Date/Time:	Date:	Time:	Received by:	Company
Relinquished by:	Date/Time:	Date:	Time:	Received by:	Company
Custody Seal Intact:	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:			
A Yes	A No	2.7/2.3 Sub			

Login Sample Receipt Checklist

Client: EA Engineering, Science, and Technology

Job Number: 440-267742-1

Login Number: 267742**List Source: Eurofins Irvine****List Number: 1****Creator: Dolidze, Lado**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: EA Engineering, Science, and Technology

Job Number: 440-267742-1

Login Number: 267742**List Number: 2****Creator: Stratford, Jordan****List Source: Eurofins Calscience****List Creation: 06/22/20 12:06 PM**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

Job Number: 440-268223-1

SDG Number: Kirtland AFB New Mexico

Job Description: Well Disinfection Water Sampling

Contract Number: CIDIQ09096

For:

EA Engineering, Science, and Technology

7995 E. Prentice Ave, Suite 206E

Greenwood Village, CO 80111

Attention: Pamela J Moss



Approved for release.
Sheri M Fama
Project Manager I
7/9/2020 2:43 PM

Sheri M Fama, Project Manager I
17461 Derian Ave, Irvine, CA, 92614-5817
(949)260-3274
Sheri.Fama@Eurofinset.com
07/09/2020

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Calscience Project Manager.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Eurofins Calscience Irvine

17461 Derian Ave, Suite 100, Irvine, CA 92614-5817

Tel (949) 261-1022 Fax (949) 260-3297 www.EurofinsUS.com



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Definitions/Glossary

Client: EA Engineering, Science, and Technology
Project/Site: Well Disinfection Water Sampling

Job ID: 440-268223-1
SDG: Kirtland AFB New Mexico

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

**Job Narrative
440-268223-1****Comments**

No additional comments.

Receipt

The samples were received on 7/1/2020 9:30 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.7° C.

Receipt Exceptions

Perchlorate analysis requires that samples have significant headspace (1/3 of container volume) to reduce potential anaerobic biodegradation. The following samples were received with insufficient headspace: KAFB-106005-WR-pre (440-268223-1), KAFB-106005-WR-post (440-268223-2), KAFB-106028-WR-pre (440-268223-3), KAFB-106028-WR-post (440-268223-4), KAFB-106239-WR-pre (440-268223-5) and KAFB-106239-WR-post (440-268223-6).

HPLC/IC

Method 300.1B: The following sample was diluted for the chlorite analyte due to the nature of the sample matrix: KAFB-106028-WR-pre (440-268223-3). Elevated reporting limits (RLs) are provided.

Method 300.1B: The following sample was diluted for the bromate analyte due to the nature of the sample matrix: KAFB-106028-WR-pre (440-268223-3). Elevated reporting limits (RLs) are provided.

Method 300.1B: The following samples were diluted for the bromate analyte due to the nature of the sample matrix: KAFB-106005-WR-pre (440-268223-1), KAFB-106005-WR-post (440-268223-2) and KAFB-106028-WR-post (440-268223-4). Elevated reporting limits (RLs) are provided.

Method 300.1B: The following samples were diluted for the chlorite analyte due to the nature of the sample matrix: KAFB-106005-WR-pre (440-268223-1), KAFB-106005-WR-post (440-268223-2), KAFB-106028-WR-pre (440-268223-3) and KAFB-106028-WR-post (440-268223-4). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

LCMS

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Lab Admin

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: EA Engineering, Science, and Technology
Project/Site: Well Disinfection Water Sampling

Job ID: 440-268223-1
SDG: Kirtland AFB New Mexico

Client Sample ID: KAFB-106005-WR-pre

Lab Sample ID: 440-268223-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perchlorate	0.25		0.10	0.016	ug/L	1		331.0	Dissolved

Client Sample ID: KAFB-106005-WR-post

Lab Sample ID: 440-268223-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perchlorate	1.6		0.10	0.016	ug/L	1		331.0	Dissolved

Client Sample ID: KAFB-106028-WR-pre

Lab Sample ID: 440-268223-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perchlorate	0.33		0.10	0.016	ug/L	1		331.0	Dissolved

Client Sample ID: KAFB-106028-WR-post

Lab Sample ID: 440-268223-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perchlorate	1.3		0.10	0.016	ug/L	1		331.0	Dissolved

Client Sample ID: KAFB-106239-WR-pre

Lab Sample ID: 440-268223-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perchlorate	0.20		0.10	0.016	ug/L	1		331.0	Dissolved

Client Sample ID: KAFB-106239-WR-post

Lab Sample ID: 440-268223-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perchlorate	0.16		0.10	0.016	ug/L	1		331.0	Dissolved

This Detection Summary does not include radiochemical test results.

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Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Well Disinfection Water Sampling

Job ID: 440-268223-1
SDG: Kirtland AFB New Mexico

Client Sample ID: KAFB-106005-WR-pre

Lab Sample ID: 440-268223-1

Date Collected: 06/29/20 08:25

Matrix: Water

Date Received: 07/01/20 09:30

Method: 300.1B - Disinfection By-Products, (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		50	10	ug/L	-		07/09/20 05:37	10
Chlorite	ND		200	40	ug/L	-		07/09/20 05:37	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dichloroacetic acid(Surr)	102		90 - 115					07/09/20 05:37	10
Dichloroacetic acid(Surr)	102		90 - 115					07/09/20 05:37	10

Method: 331.0 - Perchlorate (LC/MS/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	0.25		0.10	0.016	ug/L	-		07/07/20 16:26	1

Client Sample ID: KAFB-106005-WR-post

Lab Sample ID: 440-268223-2

Date Collected: 06/30/20 08:50

Matrix: Water

Date Received: 07/01/20 09:30

Method: 300.1B - Disinfection By-Products, (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		50	10	ug/L	-		07/09/20 06:12	10
Chlorite	ND		200	40	ug/L	-		07/09/20 06:12	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dichloroacetic acid(Surr)	102		90 - 115					07/09/20 06:12	10
Dichloroacetic acid(Surr)	102		90 - 115					07/09/20 06:12	10

Method: 331.0 - Perchlorate (LC/MS/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	1.6		0.10	0.016	ug/L	-		07/07/20 16:41	1

Client Sample ID: KAFB-106028-WR-pre

Lab Sample ID: 440-268223-3

Date Collected: 06/24/20 10:15

Matrix: Water

Date Received: 07/01/20 09:30

Method: 300.1B - Disinfection By-Products, (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		25	5.0	ug/L	-		07/07/20 07:47	5
Chlorite	ND		100	20	ug/L	-		07/07/20 07:47	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dichloroacetic acid(Surr)	102		90 - 115					07/07/20 07:47	5
Dichloroacetic acid(Surr)	102		90 - 115					07/07/20 07:47	5

Method: 331.0 - Perchlorate (LC/MS/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	0.33		0.10	0.016	ug/L	-		07/07/20 16:55	1

Client Sample ID: KAFB-106028-WR-post

Lab Sample ID: 440-268223-4

Date Collected: 06/29/20 12:05

Matrix: Water

Date Received: 07/01/20 09:30

Method: 300.1B - Disinfection By-Products, (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		50	10	ug/L	-		07/09/20 06:49	10

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Client Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Well Disinfection Water Sampling

Job ID: 440-268223-1
SDG: Kirtland AFB New Mexico

Client Sample ID: KAFB-106028-WR-post

Lab Sample ID: 440-268223-4

Date Collected: 06/29/20 12:05

Matrix: Water

Date Received: 07/01/20 09:30

Method: 300.1B - Disinfection By-Products, (IC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorite	ND		200	40	ug/L	-		07/09/20 06:49	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dichloroacetic acid(Surr)	107		90 - 115					07/09/20 06:49	10
Dichloroacetic acid(Surr)	107		90 - 115					07/09/20 06:49	10

Method: 331.0 - Perchlorate (LC/MS/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	1.3		0.10	0.016	ug/L	-		07/07/20 17:10	1

Client Sample ID: KAFB-106239-WR-pre

Lab Sample ID: 440-268223-5

Date Collected: 06/25/20 10:30

Matrix: Water

Date Received: 07/01/20 09:30

Method: 300.1B - Disinfection By-Products, (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		5.0	1.0	ug/L	-		07/08/20 07:46	1
Chlorite	ND		20	4.0	ug/L	-		07/08/20 07:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dichloroacetic acid(Surr)	102		90 - 115					07/08/20 07:46	1
Dichloroacetic acid(Surr)	102		90 - 115					07/08/20 07:46	1

Method: 331.0 - Perchlorate (LC/MS/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	0.20		0.10	0.016	ug/L	-		07/07/20 17:53	1

Client Sample ID: KAFB-106239-WR-post

Lab Sample ID: 440-268223-6

Date Collected: 06/29/20 09:30

Matrix: Water

Date Received: 07/01/20 09:30

Method: 300.1B - Disinfection By-Products, (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		5.0	1.0	ug/L	-		07/07/20 05:22	1
Chlorite	ND		20	4.0	ug/L	-		07/07/20 05:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dichloroacetic acid(Surr)	102		90 - 115					07/07/20 05:22	1
Dichloroacetic acid(Surr)	102		90 - 115					07/07/20 05:22	1

Method: 331.0 - Perchlorate (LC/MS/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	0.16		0.10	0.016	ug/L	-		07/07/20 18:08	1

Default Detection Limits

Client: EA Engineering, Science, and Technology
Project/Site: Well Disinfection Water Sampling

Job ID: 440-268223-1
SDG: Kirtland AFB New Mexico

Method: 300.1B - Disinfection By-Products, (IC)

Analyte	RL	MDL	Units
Bromate	5.0	1.0	ug/L
Chlorite	20	4.0	ug/L

Method: 331.0 - Perchlorate (LC/MS/MS) - Dissolved

Analyte	RL	MDL	Units
Perchlorate	0.10	0.016	ug/L

Surrogate Summary

Client: EA Engineering, Science, and Technology
 Project/Site: Well Disinfection Water Sampling

Job ID: 440-268223-1
 SDG: Kirtland AFB New Mexico

Method: 300.1B - Disinfection By-Products, (IC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	DCAA (90-115)	DCAA (90-115)
440-268223-1	KAFB-106005-WR-pre	102	102
440-268223-2	KAFB-106005-WR-post	102	102
440-268223-3	KAFB-106028-WR-pre	102	102
440-268223-4	KAFB-106028-WR-post	107	107
440-268223-5	KAFB-106239-WR-pre	102	102
440-268223-6	KAFB-106239-WR-post	102	102
440-268295-A-1 MS	Matrix Spike	100	100
440-268295-A-1 MSD	Matrix Spike Duplicate	104	104
570-32207-J-3 MS	Matrix Spike	103	103
570-32207-J-3 MSD	Matrix Spike Duplicate	102	102
LCS 440-615429/4	Lab Control Sample	106	106
LCS 440-615430/4	Lab Control Sample	106	106
LCS 440-615752/4	Lab Control Sample	106	106
LCS 440-615753/4	Lab Control Sample	106	106
MB 440-615429/5	Method Blank	104	104
MB 440-615430/5	Method Blank	104	104
MB 440-615752/5	Method Blank	107	107
MB 440-615753/5	Method Blank	107	107
MRL 440-615429/3	Lab Control Sample	105	105
MRL 440-615430/3	Lab Control Sample	105	105
MRL 440-615752/3	Lab Control Sample	106	106
MRL 440-615753/3	Lab Control Sample	106	106

Surrogate Legend

DCAA = Dichloroacetic acid(Surr)

QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Well Disinfection Water Sampling

Job ID: 440-268223-1
SDG: Kirtland AFB New Mexico

Method: 300.1B - Disinfection By-Products, (IC)

Lab Sample ID: MB 440-615429/5

Matrix: Water

Analysis Batch: 615429

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		5.0	1.0	ug/L	-		07/06/20 07:29	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dichloroacetic acid(Surr)	104		90 - 115					07/06/20 07:29	1

Lab Sample ID: LCS 440-615429/4

Matrix: Water

Analysis Batch: 615429

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Bromate	25.0	25.0		ug/L	-	100	75 - 125		
Surrogate	LCS %Recovery	LCS Qualifier	Limits						
Dichloroacetic acid(Surr)	106		90 - 115						

Lab Sample ID: MRL 440-615429/3

Matrix: Water

Analysis Batch: 615429

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits		
Bromate	5.00	4.79	J	ug/L	-	96	50 - 150		
Surrogate	MRL %Recovery	MRL Qualifier	Limits						
Dichloroacetic acid(Surr)	105		90 - 115						

Lab Sample ID: MB 440-615430/5

Matrix: Water

Analysis Batch: 615430

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorite	ND		20	4.0	ug/L	-		07/06/20 07:29	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dichloroacetic acid(Surr)	104		90 - 115					07/06/20 07:29	1

Lab Sample ID: LCS 440-615430/4

Matrix: Water

Analysis Batch: 615430

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chlorite	100	96.1		ug/L	-	96	85 - 115		
Surrogate	LCS %Recovery	LCS Qualifier	Limits						
Dichloroacetic acid(Surr)	106		90 - 115						

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QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Well Disinfection Water Sampling

Job ID: 440-268223-1
SDG: Kirtland AFB New Mexico

Method: 300.1B - Disinfection By-Products, (IC) (Continued)

Lab Sample ID: MRL 440-615430/3

Matrix: Water

Analysis Batch: 615430

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chlorite	20.0	18.1	J	ug/L	-	91	10 - 200
Surrogate	MRL %Recovery	MRL Qualifier	Limits				
Dichloroacetic acid(Surr)	105		90 - 115				

Lab Sample ID: MB 440-615752/5

Matrix: Water

Analysis Batch: 615752

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		5.0	1.0	ug/L	-		07/08/20 06:33	1
Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac			
Dichloroacetic acid(Surr)	107		90 - 115		07/08/20 06:33	1			

Lab Sample ID: LCS 440-615752/4

Matrix: Water

Analysis Batch: 615752

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromate	25.0	26.4		ug/L	-	106	75 - 125
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
Dichloroacetic acid(Surr)	106		90 - 115				

Lab Sample ID: MRL 440-615752/3

Matrix: Water

Analysis Batch: 615752

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Bromate	5.00	5.39		ug/L	-	108	50 - 150
Surrogate	MRL %Recovery	MRL Qualifier	Limits				
Dichloroacetic acid(Surr)	106		90 - 115				

Lab Sample ID: MB 440-615753/5

Matrix: Water

Analysis Batch: 615753

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorite	ND		20	4.0	ug/L	-		07/08/20 06:33	1
Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac			
Dichloroacetic acid(Surr)	107		90 - 115		07/08/20 06:33	1			

Eurofins Calscience Irvine

QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Well Disinfection Water Sampling

Job ID: 440-268223-1
SDG: Kirtland AFB New Mexico

Method: 300.1B - Disinfection By-Products, (IC) (Continued)

Lab Sample ID: LCS 440-615753/4

Matrix: Water

Analysis Batch: 615753

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chlorite	100	92.6		ug/L		93	85 - 115
Surrogate	%Recovery	LCS Qualifier	Limits				
Dichloroacetic acid(Surr)	106		90 - 115				

Lab Sample ID: MRL 440-615753/3

Matrix: Water

Analysis Batch: 615753

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chlorite	20.0	19.3	J	ug/L		97	10 - 200
Surrogate	%Recovery	MRL Qualifier	Limits				
Dichloroacetic acid(Surr)	106		90 - 115				

Method: 331.0 - Perchlorate (LC/MS/MS)

Lab Sample ID: MB 570-79806/6

Matrix: Water

Analysis Batch: 79806

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.10	0.016	ug/L			07/07/20 15:31	1

Lab Sample ID: LCS 570-79806/7

Matrix: Water

Analysis Batch: 79806

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perchlorate	10.0	9.93		ug/L		99	85 - 115

Lab Sample ID: LCSD 570-79806/8

Matrix: Water

Analysis Batch: 79806

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perchlorate	10.0	10.2		ug/L		102	85 - 115	3	15

Lab Sample ID: 440-268223-6 MS

Matrix: Water

Analysis Batch: 79806

Client Sample ID: KAFB-106239-WR-post

Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Perchlorate	0.16		10.0	10.2		ug/L		100	80 - 120

Eurofins Calscience Irvine

QC Sample Results

Client: EA Engineering, Science, and Technology
Project/Site: Well Disinfection Water Sampling

Job ID: 440-268223-1
SDG: Kirtland AFB New Mexico

Method: 331.0 - Perchlorate (LC/MS/MS) (Continued)

Lab Sample ID: 440-268223-6 MSD

Matrix: Water

Analysis Batch: 79806

Client Sample ID: KAFB-106239-WR-post

Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perchlorate	0.16		10.0	10.4		ug/L	—	102	80 - 120	2	15

Lab Sample ID: INF 570-79806/5

Matrix: Water

Analysis Batch: 79806

Client Sample ID: Lab Control Sample

Analyte			Spike Added	INF Result	INF Qualifier	Unit	D	%Rec	%Rec. Limits		
Perchlorate			0.500	0.499		ug/L	—	100	80 - 120		

QC Association Summary

Client: EA Engineering, Science, and Technology
Project/Site: Well Disinfection Water Sampling

Job ID: 440-268223-1
SDG: Kirtland AFB New Mexico

HPLC/IC

Analysis Batch: 615429

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-268223-3	KAFB-106028-WR-pre	Total/NA	Water	300.1B	
440-268223-6	KAFB-106239-WR-post	Total/NA	Water	300.1B	
MB 440-615429/5	Method Blank	Total/NA	Water	300.1B	
LCS 440-615429/4	Lab Control Sample	Total/NA	Water	300.1B	
MRL 440-615429/3	Lab Control Sample	Total/NA	Water	300.1B	

Analysis Batch: 615430

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-268223-3	KAFB-106028-WR-pre	Total/NA	Water	300.1B	
440-268223-6	KAFB-106239-WR-post	Total/NA	Water	300.1B	
MB 440-615430/5	Method Blank	Total/NA	Water	300.1B	
LCS 440-615430/4	Lab Control Sample	Total/NA	Water	300.1B	
MRL 440-615430/3	Lab Control Sample	Total/NA	Water	300.1B	

Analysis Batch: 615752

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-268223-1	KAFB-106005-WR-pre	Total/NA	Water	300.1B	
440-268223-2	KAFB-106005-WR-post	Total/NA	Water	300.1B	
440-268223-4	KAFB-106028-WR-post	Total/NA	Water	300.1B	
440-268223-5	KAFB-106239-WR-pre	Total/NA	Water	300.1B	
MB 440-615752/5	Method Blank	Total/NA	Water	300.1B	
LCS 440-615752/4	Lab Control Sample	Total/NA	Water	300.1B	
MRL 440-615752/3	Lab Control Sample	Total/NA	Water	300.1B	

Analysis Batch: 615753

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-268223-1	KAFB-106005-WR-pre	Total/NA	Water	300.1B	
440-268223-2	KAFB-106005-WR-post	Total/NA	Water	300.1B	
440-268223-4	KAFB-106028-WR-post	Total/NA	Water	300.1B	
440-268223-5	KAFB-106239-WR-pre	Total/NA	Water	300.1B	
MB 440-615753/5	Method Blank	Total/NA	Water	300.1B	
LCS 440-615753/4	Lab Control Sample	Total/NA	Water	300.1B	
MRL 440-615753/3	Lab Control Sample	Total/NA	Water	300.1B	

LCMS

Analysis Batch: 79806

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-268223-1	KAFB-106005-WR-pre	Dissolved	Water	331.0	
440-268223-2	KAFB-106005-WR-post	Dissolved	Water	331.0	
440-268223-3	KAFB-106028-WR-pre	Dissolved	Water	331.0	
440-268223-4	KAFB-106028-WR-post	Dissolved	Water	331.0	
440-268223-5	KAFB-106239-WR-pre	Dissolved	Water	331.0	
440-268223-6	KAFB-106239-WR-post	Dissolved	Water	331.0	
MB 570-79806/6	Method Blank	Total/NA	Water	331.0	
INF 570-79806/5	Lab Control Sample		Water	331.0	
LCS 570-79806/7	Lab Control Sample	Total/NA	Water	331.0	
LCSD 570-79806/8	Lab Control Sample Dup	Total/NA	Water	331.0	
440-268223-6 MS	KAFB-106239-WR-post	Dissolved	Water	331.0	
440-268223-6 MSD	KAFB-106239-WR-post	Dissolved	Water	331.0	

Eurofins Calscience Irvine

Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Well Disinfection Water Sampling

Job ID: 440-268223-1
SDG: Kirtland AFB New Mexico

Client Sample ID: KAFB-106005-WR-pre

Lab Sample ID: 440-268223-1

Date Collected: 06/29/20 08:25

Matrix: Water

Date Received: 07/01/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.1B		10	615752	07/09/20 05:37	YZ	TAL IRV
Total/NA	Analysis	300.1B		10	615753	07/09/20 05:37	YZ	TAL IRV
Dissolved	Analysis	331.0		1	79806	07/07/20 16:26	URMH	ECL 2

Client Sample ID: KAFB-106005-WR-post

Lab Sample ID: 440-268223-2

Date Collected: 06/30/20 08:50

Matrix: Water

Date Received: 07/01/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.1B		10	615752	07/09/20 06:12	YZ	TAL IRV
Total/NA	Analysis	300.1B		10	615753	07/09/20 06:12	YZ	TAL IRV
Dissolved	Analysis	331.0		1	79806	07/07/20 16:41	URMH	ECL 2

Client Sample ID: KAFB-106028-WR-pre

Lab Sample ID: 440-268223-3

Date Collected: 06/24/20 10:15

Matrix: Water

Date Received: 07/01/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.1B		5	615429	07/07/20 07:47	YZ	TAL IRV
Total/NA	Analysis	300.1B		5	615430	07/07/20 07:47	YZ	TAL IRV
Dissolved	Analysis	331.0		1	79806	07/07/20 16:55	URMH	ECL 2

Client Sample ID: KAFB-106028-WR-post

Lab Sample ID: 440-268223-4

Date Collected: 06/29/20 12:05

Matrix: Water

Date Received: 07/01/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.1B		10	615752	07/09/20 06:49	YZ	TAL IRV
Total/NA	Analysis	300.1B		10	615753	07/09/20 06:49	YZ	TAL IRV
Dissolved	Analysis	331.0		1	79806	07/07/20 17:10	URMH	ECL 2

Client Sample ID: KAFB-106239-WR-pre

Lab Sample ID: 440-268223-5

Date Collected: 06/25/20 10:30

Matrix: Water

Date Received: 07/01/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.1B		1	615752	07/08/20 07:46	YZ	TAL IRV
Total/NA	Analysis	300.1B		1	615753	07/08/20 07:46	YZ	TAL IRV
Dissolved	Analysis	331.0		1	79806	07/07/20 17:53	URMH	ECL 2

Eurofins Calscience Irvine

Lab Chronicle

Client: EA Engineering, Science, and Technology
Project/Site: Well Disinfection Water Sampling

Job ID: 440-268223-1
SDG: Kirtland AFB New Mexico

Client Sample ID: KAFB-106239-WR-post

Lab Sample ID: 440-268223-6

Date Collected: 06/29/20 09:30

Matrix: Water

Date Received: 07/01/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.1B		1	615429	07/07/20 05:22	YZ	TAL IRV
Total/NA	Analysis	300.1B		1	615430	07/07/20 05:22	YZ	TAL IRV
Dissolved	Analysis	331.0		1	79806	07/07/20 18:08	URMH	ECL 2

Laboratory References:

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Eurofins Calscience Irvine

Accreditation/Certification Summary

Client: EA Engineering, Science, and Technology
Project/Site: Well Disinfection Water Sampling

Job ID: 440-268223-1
SDG: Kirtland AFB New Mexico

Laboratory: Eurofins Calscience Irvine

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2706	06-30-21
Oregon	NELAP	4028 - 008	01-29-21

Laboratory: Eurofins Calscience LLC

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	CA300001	01-29-21

Eurofins Calscience Irvine

Method Summary

Client: EA Engineering, Science, and Technology
Project/Site: Well Disinfection Water Sampling

Job ID: 440-268223-1
SDG: Kirtland AFB New Mexico

Method	Method Description	Protocol	Laboratory
300.1B	Disinfection By-Products, (IC)	EPA	TAL IRV
331.0	Perchlorate (LC/MS/MS)	EPA	ECL 1

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Eurofins Calscience Irvine

Sample Summary

Client: EA Engineering, Science, and Technology
Project/Site: Well Disinfection Water Sampling

Job ID: 440-268223-1
SDG: Kirtland AFB New Mexico

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
440-268223-1	KAFB-106005-WR-pre	Water	06/29/20 08:25	07/01/20 09:30	
440-268223-2	KAFB-106005-WR-post	Water	06/30/20 08:50	07/01/20 09:30	
440-268223-3	KAFB-106028-WR-pre	Water	06/24/20 10:15	07/01/20 09:30	
440-268223-4	KAFB-106028-WR-post	Water	06/29/20 12:05	07/01/20 09:30	
440-268223-5	KAFB-106239-WR-pre	Water	06/25/20 10:30	07/01/20 09:30	
440-268223-6	KAFB-106239-WR-post	Water	06/29/20 09:30	07/01/20 09:30	

Eurofins Calscience Irvine

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-268223-1SDG No.: Kirtland AFB New MexicoInstrument ID: IC-8 Analysis Batch Number: 609717Lab Sample ID: STD2 440-609717/6 IC Client Sample ID: _____Date Analyzed: 05/22/20 10:29 Lab File ID: 440-0133563-006.d GC Column: AS9-HC ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromate	8.58	Baseline Smoothing	zakhrabov y	05/23/20 06:27

Lab Sample ID: STD3 440-609717/7 IC Client Sample ID: _____Date Analyzed: 05/22/20 11:05 Lab File ID: 440-0133563-007.d GC Column: AS9-HC ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromate	8.60	Baseline Smoothing	zakhrabov y	05/23/20 06:27

Lab Sample ID: STD4 440-609717/8 IC Client Sample ID: _____Date Analyzed: 05/22/20 11:41 Lab File ID: 440-0133563-008.d GC Column: AS9-HC ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromate	8.60	Baseline Smoothing	zakhrabov y	05/23/20 06:28
Bromide	16.88	Split Peak	zakhrabov y	05/23/20 06:31
Chlorate	18.50	Split Peak	zakhrabov y	05/23/20 06:31

Lab Sample ID: STD5 440-609717/9 IC Client Sample ID: _____Date Analyzed: 05/22/20 12:17 Lab File ID: 440-0133563-009.d GC Column: AS9-HC ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromate	8.59	Baseline Smoothing	zakhrabov y	05/23/20 06:28

300.1B

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-268223-1SDG No.: Kirtland AFB New MexicoInstrument ID: IC-8 Analysis Batch Number: 609718Lab Sample ID: STD4 440-609718/8 IC Client Sample ID: _____Date Analyzed: 05/22/20 11:41 Lab File ID: 440-0133563-008.d GC Column: AS9-HC ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chlorite	7.47	Baseline Smoothing	zakhrabov y	05/23/20 06:28

Lab Sample ID: STD5 440-609718/9 IC Client Sample ID: _____Date Analyzed: 05/22/20 12:17 Lab File ID: 440-0133563-009.d GC Column: AS9-HC ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chlorite	7.47	Baseline Smoothing	zakhrabov y	05/23/20 06:28

Lab Sample ID: ICB 440-609718/11 Client Sample ID: _____Date Analyzed: 05/22/20 13:29 Lab File ID: 440-0133563-011.d GC Column: AS9-HC ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chlorite		Unspecified		

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-268223-1SDG No.: Kirtland AFB New MexicoInstrument ID: IC-8 Analysis Batch Number: 615429Lab Sample ID: CCV 440-615429/1 Client Sample ID: _____Date Analyzed: 07/06/20 04:02 Lab File ID: 440-0135020-001440-013502 GC Column: AS9-HC ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromate	8.48	Baseline Smoothing	zakhrabov y	07/06/20 04:59
Dichloroacetic acid(Surr)	13.90	Baseline Smoothing	zakhrabov y	07/06/20 05:00

Lab Sample ID: MRL 440-615429/3 Client Sample ID: _____Date Analyzed: 07/06/20 06:14 Lab File ID: 440-0135020-003440-013502 GC Column: AS9-HC ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromate	8.53	Baseline Smoothing	zakhrabov y	07/06/20 06:52

Lab Sample ID: LCS 440-615429/4 Client Sample ID: _____Date Analyzed: 07/06/20 06:53 Lab File ID: 440-0135020-004440-013502 GC Column: AS9-HC ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromate	8.52	Baseline Smoothing	zakhrabov y	07/06/20 07:35

Lab Sample ID: CCV 440-615429/13 Client Sample ID: _____Date Analyzed: 07/06/20 12:17 Lab File ID: 440-0135020-013440-013502 GC Column: AS9-HC ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromate	8.48	Baseline Smoothing	zakhrabov y	07/07/20 04:09

300.1B

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-268223-1SDG No.: Kirtland AFB New MexicoInstrument ID: IC-8 Analysis Batch Number: 615429Lab Sample ID: CCV 440-615429/25 Client Sample ID: _____Date Analyzed: 07/06/20 19:32 Lab File ID: 440-0135020-025440-013502 GC Column: AS9-HC ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromate	8.47	Baseline Smoothing	zakhrabov y	07/07/20 04:07

Lab Sample ID: CCV 440-615429/37 Client Sample ID: _____Date Analyzed: 07/07/20 02:47 Lab File ID: 440-0135020-037440-013502 GC Column: AS9-HC ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromate	8.48	Baseline Smoothing	zakhrabov y	07/07/20 04:06

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-268223-1SDG No.: Kirtland AFB New MexicoInstrument ID: IC-8 Analysis Batch Number: 615430Lab Sample ID: CCV 440-615430/1 Client Sample ID: _____Date Analyzed: 07/06/20 04:02 Lab File ID: 440-0135020-001440-013502 GC Column: AS9-HC ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichloroacetic acid(Surr)	13.90	Baseline Smoothing	zakhrabov y	07/06/20 05:00

Lab Sample ID: MRL 440-615430/3 Client Sample ID: _____Date Analyzed: 07/06/20 06:14 Lab File ID: 440-0135020-003440-013502 GC Column: AS9-HC ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chlorite	7.42	Baseline Smoothing	zakhrabov y	07/06/20 06:52

Lab Sample ID: LCS 440-615430/4 Client Sample ID: _____Date Analyzed: 07/06/20 06:53 Lab File ID: 440-0135020-004440-013502 GC Column: AS9-HC ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chlorite	7.42	Baseline Smoothing	zakhrabov y	07/06/20 07:35

Lab Sample ID: CCV 440-615430/13 Client Sample ID: _____Date Analyzed: 07/06/20 12:17 Lab File ID: 440-0135020-013440-013502 GC Column: AS9-HC ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chlorite	7.41	Baseline Smoothing	zakhrabov y	07/07/20 04:09

300.1B

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-268223-1SDG No.: Kirtland AFB New MexicoInstrument ID: IC-8 Analysis Batch Number: 615430Lab Sample ID: CCV 440-615430/25 Client Sample ID: _____Date Analyzed: 07/06/20 19:32 Lab File ID: 440-0135020-025440-013502 GC Column: AS9-HC ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chlorite	7.41	Baseline Smoothing	zakhrabov y	07/07/20 04:07

Lab Sample ID: CCV 440-615430/37 Client Sample ID: _____Date Analyzed: 07/07/20 02:47 Lab File ID: 440-0135020-037440-013502 GC Column: AS9-HC ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chlorite	7.41	Baseline Smoothing	zakhrabov y	07/07/20 04:07

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-268223-1SDG No.: Kirtland AFB New MexicoInstrument ID: IC-8 Analysis Batch Number: 615752Lab Sample ID: MRL 440-615752/3 Client Sample ID: _____Date Analyzed: 07/08/20 05:20 Lab File ID: 440-0135088-003440-013508 GC Column: AS9-HC ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromate	8.49	Baseline Smoothing	zakhrabov y	07/08/20 06:00

Lab Sample ID: 440-268223-5 Client Sample ID: KAFB-106239-WR-preDate Analyzed: 07/08/20 07:46 Lab File ID: 440-0135088-007440-013508 GC Column: AS9-HC ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichloroacetic acid(Surr)	13.69	Baseline Smoothing	zakhrabov y	07/08/20 08:47

Lab Sample ID: CCV 440-615752/13 Client Sample ID: _____Date Analyzed: 07/08/20 11:23 Lab File ID: 440-0135088-013440-013508 GC Column: AS9-HC ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromate	8.44	Baseline Smoothing	zakhrabov y	07/08/20 12:04

Lab Sample ID: CCV 440-615752/37 Client Sample ID: _____Date Analyzed: 07/09/20 00:43 Lab File ID: 440-0135088-037440-013508 GC Column: AS9-HC ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromate	8.43	Baseline Smoothing	zakhrabov y	07/09/20 04:26
Bromide	16.20	Baseline Smoothing	zakhrabov y	07/09/20 04:26
Chlorate	17.57	Baseline Smoothing	zakhrabov y	07/09/20 04:26

300.1B

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-268223-1SDG No.: Kirtland AFB New MexicoInstrument ID: IC-8 Analysis Batch Number: 615752Lab Sample ID: CCB 440-615752/38 Client Sample ID: _____Date Analyzed: 07/09/20 01:19 Lab File ID: 440-0135088-038440-013508 GC Column: AS9-HC ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichloroacetic acid(Surr)	13.83	Baseline Smoothing	zakhrabov y	07/09/20 04:26

Lab Sample ID: CCB 440-615752/48 Client Sample ID: _____Date Analyzed: 07/09/20 08:01 Lab File ID: 440-0135088-048440-013508 GC Column: AS9-HC ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichloroacetic acid(Surr)	13.86	Incomplete Integration	nguyent	07/09/20 10:52

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-268223-1SDG No.: Kirtland AFB New MexicoInstrument ID: IC-8 Analysis Batch Number: 615753Lab Sample ID: 440-268223-5 Client Sample ID: KAFB-106239-WR-preDate Analyzed: 07/08/20 07:46 Lab File ID: 440-0135088-007440-013508 GC Column: AS9-HC ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichloroacetic acid(Surr)	13.69	Baseline Smoothing	zakhrabov y	07/08/20 08:47

Lab Sample ID: CCV 440-615753/13 Client Sample ID: _____Date Analyzed: 07/08/20 11:23 Lab File ID: 440-0135088-013440-013508 GC Column: AS9-HC ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chlorite	7.38	Baseline Smoothing	zakhrabov y	07/08/20 12:04

Lab Sample ID: CCV 440-615753/37 Client Sample ID: _____Date Analyzed: 07/09/20 00:43 Lab File ID: 440-0135088-037440-013508 GC Column: AS9-HC ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chlorite	7.37	Baseline Smoothing	zakhrabov y	07/09/20 04:26

Lab Sample ID: CCB 440-615753/38 Client Sample ID: _____Date Analyzed: 07/09/20 01:19 Lab File ID: 440-0135088-038440-013508 GC Column: AS9-HC ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichloroacetic acid(Surr)	13.83	Baseline Smoothing	zakhrabov y	07/09/20 04:26

300.1B

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-268223-1SDG No.: Kirtland AFB New MexicoInstrument ID: IC-8 Analysis Batch Number: 615753Lab Sample ID: CCB 440-615753/48 Client Sample ID: _____Date Analyzed: 07/09/20 08:01 Lab File ID: 440-0135088-048440-013508 GC Column: AS9-HC ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichloroacetic acid(Surr)	13.86	Incomplete Integration	nguyent	07/09/20 10:52

300.1B

LCMS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Calscience Job No.: 440-268223-1SDG No.: Kirtland AFB New MexicoInstrument ID: LCTQ2 Analysis Batch Number: 77753Lab Sample ID: STD1 570-77753/3 IC Client Sample ID: _____Date Analyzed: 06/25/20 14:11 Lab File ID: 200625003.d GC Column: Dion-A521 ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate	6.36	Baseline	taiw	06/26/20 14:55

Lab Sample ID: STD2 570-77753/4 IC Client Sample ID: _____Date Analyzed: 06/25/20 14:25 Lab File ID: 200625004.d GC Column: Dion-A521 ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate	6.40	Baseline	taiw	06/26/20 14:42

Lab Sample ID: STD4 570-77753/6 ICIS Client Sample ID: _____Date Analyzed: 06/25/20 14:55 Lab File ID: 200625006.d GC Column: Dion-A521 ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate	6.39	Baseline	taiw	06/26/20 14:48

Lab Sample ID: STD6 570-77753/8 IC Client Sample ID: _____Date Analyzed: 06/25/20 15:24 Lab File ID: 200625008.d GC Column: Dion-A521 ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate	6.43	Baseline	taiw	06/26/20 14:48

LCMS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Calscience Job No.: 440-268223-1SDG No.: Kirtland AFB New MexicoInstrument ID: LCTQ2 Analysis Batch Number: 79806Lab Sample ID: CCVL 570-79806/2 Client Sample ID: _____Date Analyzed: 07/07/20 14:45 Lab File ID: 200707002.d GC Column: Dion-A521 ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate	6.40	Peak assignment corrected	mchaler	07/08/20 11:55

Lab Sample ID: 440-268223-1 Client Sample ID: KAFB-106005-WR-preDate Analyzed: 07/07/20 16:26 Lab File ID: 200707009.d GC Column: Dion-A521 ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate	6.39	Incomplete Integration	mchaler	07/08/20 11:55

Lab Sample ID: 440-268223-2 Client Sample ID: _____Date Analyzed: 07/07/20 16:41 Lab File ID: 200707010.d GC Column: Dion-A521 ID: 4 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
18-O Perchlorate	6.39	Incomplete Integration	mchaler	07/08/20 11:52

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-268223-1SDG No.: Kirtland AFB New Mexico

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
WC3001ICV_00051	08/31/20	04/29/20	Di Water, Lot 20200429	100 mL	WC2BROMATE 00011	0.1 mL	Bromate	1 mg/L
					WC2CHLORITE 00024	0.4 mL	Chlorite	4 mg/L
	.WC2BROMATE 00011	05/31/22	Agilent, Lot CS-1688		(Purchased Reagent)		Bromate	1000 mg/L
	.WC2CHLORITE 00024	08/31/20	Agilent, Lot 0006514036		(Purchased Reagent)		Chlorite	1000 mg/L
WC3001LCS_00089	10/29/20	04/29/20	Di Water, Lot 20200429	100 mL	WC1BROMATE 00010	0.1 mL	Bromate	1 mg/L
					WC1CHLORATE 00011	0.4 mL	Chlorate	4 mg/L
					WC1CHLORITE 00010	0.4 mL	Chlorite	4 mg/L
					wcbromide 00018	0.1 mL	Bromide	10 mg/L
	.WC1BROMATE 00010	09/30/21	O2Si, Lot 1017506-1		(Purchased Reagent)		Bromate	1000 mg/L
	.WC1CHLORATE 00011	09/30/21	O2Si, Lot 1016226-5		(Purchased Reagent)		Chlorate	1000 mg/L
	.WC1CHLORITE 00010	11/22/20	O2Si smart solutions, Lot 1011868-1		(Purchased Reagent)		Chlorite	1000 mg/L
	.wcbromide 00018	01/31/21	Hgh Purity Standards, Lot 1916127		(Purchased Reagent)		Bromide	10000 ug/mL
WC3001LCS_00090	11/22/20	06/07/20	Di Water, Lot 20200607	100 mL	WC1BROMATE 00010	0.1 mL	Bromate	1 mg/L
					WC1CHLORITE 00010	0.4 mL	Chlorite	4 mg/L
	.WC1BROMATE 00010	09/30/21	O2Si, Lot 1017506-1		(Purchased Reagent)		Bromate	1000 mg/L
	.WC1CHLORITE 00010	11/22/20	O2Si smart solutions, Lot 1011868-1		(Purchased Reagent)		Chlorite	1000 mg/L
WCDCA_00081	07/29/20	04/29/20	Di Water, Lot 20200429	100 mL	WCKDCA 00004	0.065 g	Dichloroacetic acid(Surr)	496.855 mg/L
.WCKDCA 00004	08/30/24		Aldrich, Lot 0000058905		(Purchased Reagent)		Dichloroacetic acid(Surr)	0.764393 g/g

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Calscience Job No.: 440-268223-1

SDG No.: Kirtland AFB New Mexico

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
IC_QCS_C104_00002	09/10/22		INORGANIC VENTURES, Lot N2-CLOX670211		(Purchased Reagent)		Perchlorate	1000 ug/mL
LCMS_CCV_10_00004	12/01/20	06/01/20	Zero-Water, Lot H20	100 mL	LCMS LCS S 00004	100 uL	Perchlorate	10 ug/L
..LCMS LCS S 00004	12/01/20	06/01/20	DI Water, Lot H20	100 mL	IC LCS C104_00006	1 mL	Perchlorate	10 ug/mL
...IC LCS C104_00006	04/21/22		ERA, Lot 390420m		(Purchased Reagent)		Perchlorate	1000 mg/L
LCMS_CCV_5_00003	12/01/20	06/01/20	Zero-Water, Lot H20	100 mL	LCMS LCS S 00004	50 uL	Perchlorate	5 ug/L
..LCMS LCS S 00004	12/01/20	06/01/20	DI Water, Lot H20	100 mL	IC LCS C104_00006	1 mL	Perchlorate	10 ug/mL
...IC LCS C104_00006	04/21/22		ERA, Lot 390420m		(Purchased Reagent)		Perchlorate	1000 mg/L
LCMS_CCVL_00005	12/01/20	06/01/20	Zero-Water, Lot H20	100 mL	LCMS CCV 10_00004	1 mL	Perchlorate	0.1 ug/L
..LCMS CCV 10_00004	12/01/20	06/01/20	Zero-Water, Lot H20	100 mL	LCMS LCS S 00004	100 uL	Perchlorate	10 ug/L
...LCMS LCS S 00004	12/01/20	06/01/20	DI Water, Lot H20	100 mL	IC LCS C104_00006	1 mL	Perchlorate	10 ug/mL
...IC LCS C104_00006	04/21/22		ERA, Lot 390420m		(Purchased Reagent)		Perchlorate	1000 mg/L
LCMS_INF_00006	09/24/20	06/01/20	Zero-Water, Lot H20	100 mL	LCMS CCV 50_00003	1 mL	Perchlorate	0.5 ug/L
..LCMS CCV 50_00003	12/01/20	06/01/20	Zero-Water, Lot H20	100 mL	LCMS LCS S 00004	500 uL	Perchlorate	50 ug/L
...LCMS LCS S 00004	12/01/20	06/01/20	DI Water, Lot H20	100 mL	IC LCS C104_00006	1 mL	Perchlorate	10 ug/mL
...IC LCS C104_00006	04/21/22		ERA, Lot 390420m		(Purchased Reagent)		Perchlorate	1000 mg/L
LCMS_ISTD_00002	08/28/20	02/28/20	Zero-Water, Lot na	100 mL	IC C104_ISTD_00002	385 uL	18-O Perchlorate	385 ppb
..IC C104_ISTD_00002	12/05/28		Cambridge Isotope Lab, Lot SDIH-016		(Purchased Reagent)		18-O Perchlorate	100 mg/L
LCMS_LCS_S_00004	12/01/20	06/01/20	DI Water, Lot H20	100 mL	IC LCS C104_00006	1 mL	Perchlorate	10 ug/mL
..IC LCS C104_00006	04/21/22		ERA, Lot 390420m		(Purchased Reagent)		Perchlorate	1000 mg/L

Reagent

WC1BROMATE_00010



REPORT OF ANALYSIS

Ion Chromatography RM

Bromate (BrO_3^-) – 1000 $\mu\text{g/mL}$

Product #: 062015-01-01

Matrix: H_2O

Lot #: 1017506-1

Ion	Certified Concentration
BrO_3^-	1000 $\mu\text{g/mL}$

Intended Use: This solution is intended for use as a reference material (RM) or calibration standard for ion chromatography (IC) or techniques using other modes of aqueous ion detection.

Certification & Traceability: This RM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO Guide 34**, and **ISO/IEC 17025**. This RM was prepared to a nominal concentration of 1000 $\mu\text{g/mL}$ by gravimetric methods using 99.5% sodium bromate (NaBrO_3) dissolved and diluted with filtered (0.22 μm), 18 M-ohm deionized water. The balances used in the preparation of this RM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration was determined based upon gravimetric procedures. Secondary verification of the certified concentration was performed using ion chromatography (IC) or inductively coupled plasma optical emission spectroscopy (ICP-OES), which was calibrated and/or referenced against **NIST SRM 3184**. The uncertainty associated with the certified concentration is $\pm 0.5\%$ relative, which is the sum of the estimated errors due to the purity of the raw materials, the gravimetric preparation of the solution, and transpiration through the container. This represents the expanded uncertainty at the 95% confidence level using a coverage factor of $k=2$.

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the RM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 μL , and (6) dilute with the same matrix as the original RM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: O2Si ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau, Certifying Officer

March 27, 2020

Certification Date

O2Si waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

6162192
ID: WC1BROMATE_000110
Exp: 09/30/21 Pp: 12 Op: 04/01/20
300 1-Standard Bromate 1

Rec'd 3/31/20
opened 4/1/20

Reagent

WC1CHLORATE_00011



REPORT OF ANALYSIS

Ion Chromatography RM

Chlorate (ClO_3^-) – 1000 $\mu\text{g/mL}$

Product #: 062014-01-01

Matrix: H_2O

Lot #: 1016226-5

Ion	Certified Concentration
ClO_3^-	1000 $\mu\text{g/mL}$

Intended Use: This solution is intended for use as a reference material (RM) or calibration standard for ion chromatography (IC) or techniques using other modes of aqueous ion detection.

Certification & Traceability: This RM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO Guide 34**, and **ISO/IEC 17025**. This RM was prepared to a nominal concentration of 1000 $\mu\text{g/mL}$ by gravimetric methods using 99% pure sodium chlorate (NaClO_3) dissolved and diluted with filtered (0.22 μm), 18 M-ohm deionized water. The balances used in the preparation of this RM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration was determined based upon gravimetric procedures. Secondary verification of the certified concentration was performed using ion chromatography (IC) or inductively coupled plasma optical emission spectroscopy (ICP-OES), which was calibrated and/or referenced against NIST SRM when available. The uncertainty associated with the certified concentration is $\pm 0.5\%$ relative, which is the sum of the estimated errors due to the purity of the raw materials, the gravimetric preparation of the solution, and transpiration through the container. This represents the expanded uncertainty at the 95% confidence level using a coverage factor of $k=2$.

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the RM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 μL , and (6) dilute with the same matrix as the original RM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: O2Si ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau, Certifying Officer

March 27, 2020
Certification Date

O2Si waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.



6162191

ID: WC1CHLORATE_00011
Exp: 09/30/21 Prod YZ: 04/01/20
300 1 - Standard Chlorate

Rec'd 3/31/20
opened 4/1/20

Reagent

WC1CHLORITE_00010



REPORT OF ANALYSIS

Ion Chromatography RM

Chlorite (ClO_2^-) – 1000 $\mu\text{g/mL}$

Matrix: H_2O



5607161
ID: WC1CHLORITE_00010
Exp: 11/30/20 Pypd V2 Opn 05/31/19
300 1- Standard Chlorite

Product #: 062016-01-01

Lot #: 1011868-1

Ion	Certified Concentration
ClO_2^-	1000 $\mu\text{g/mL}$

Intended Use: This solution is intended for use as a reference material (RM) or calibration standard for ion chromatography (IC) or techniques using other modes of aqueous ion detection.

Certification & Traceability: This RM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO Guide 34**, and **ISO/IEC 17025**. This RM was prepared to a nominal concentration of 1000 $\mu\text{g/mL}$ by gravimetric methods using sodium chlorite (NaClO_2) dissolved and diluted with filtered (0.22 μm), 18 M-ohm deionized water. The balances used in the preparation of this RM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration was determined based upon gravimetric procedures. Secondary verification of the certified concentration was performed using ion chromatography (IC) or inductively coupled plasma optical emission spectroscopy (ICP-OES), which was calibrated and/or referenced against NIST SRM when available. The uncertainty associated with the certified concentration is $\pm 0.5\%$ relative, which is the sum of the estimated errors due to the purity of the raw materials, the gravimetric preparation of the solution, and transpiration through the container. This represents the expanded uncertainty at the 95% confidence level using a coverage factor of $k=2$.

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the RM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 μL , and (6) dilute with the same matrix as the original RM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: O2Si ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau, Certifying Officer

May 22, 2019
Certification Date

Rec'd 5/30/19

O2Si waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

Reagent

WC2BROMATE_00011



Certificate of Analysis

ISO Guide 34 Reference Material

Product Number: ICC-010
Lot Number: CS-1688

Lot Issue Date: 06-Apr 2018
Expiration Date: 31-May 2022

Product Name: Bromate Standard

Description:

This Reference Material (RM) was gravimetrically prepared in accordance with ISO Guide 34 and under ULTRA Scientific's ISO 9001 registered quality system. The neat materials used for this product have been verified by ULTRA's ISO 17025 laboratory and under ULTRA's ISO Guide 34 accreditation. The analyte concentrations were verified by ULTRA's ISO 17025 accredited laboratory. For each analyte, the true value, with its uncertainty value calculated at the 95% confidence level, is reported below.

Analyte	Starting Material	Lot Number	Purity (%)	Analyte Concentration	Traceability & Method
bromate	potassium bromate	RM09039	99.8	1000 ± 5 µg/mL	NIST SRM 3141; IC/ICP-OES

Solvent: water (low TOC, <50 ppb)

Storage: Store at Room Temperature (15° to 30°C).

Traceability:

Traceability has been established through an unbroken chain of comparisons, each having stated uncertainties. Comparisons are based on appropriate physical or chemical measurements, including gravimetric or volumetric dilution, where the mass or volume of a solution before and after dilution is measured. The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCCL Z-540-1, ISO 9001, ISO 17025, and ISO Guide 34. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 819.

Estimation of Uncertainties:

The true value is reported, with its uncertainty value calculated at the 95% confidence level.

Homogeneity:

This RM was formulated and unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:

This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods and continuing calibration verification.

Instructions for Use:

Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening and should be processed without delay for the true value to be valid within the stated uncertainties. Do not pipet from the bottle. Do not return any material removed for pipetting to the bottle. Tightly cap the bottle after removing any material and store according to the instructions noted above.

Hazards:

Refer to the Safety Data Sheet for information regarding this RM.

Expiration of Certification:

The certification of this RM is valid, within the measurement uncertainty specified, until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.



6156364
 ID: WC2BROMATE_00011
 Exp: 05/31/22 Prod V2.0/Rev 03/29/20
 300.1 - Standard Bromate 2

*Rec'd 3/27/20
 o/c used 3/27/20*

ISO 9001 Registered Quality System – TUV USA

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07/09/2020

250 Smith Street North Kingstown, Rhode Island 02852 www.agilent.com/quality

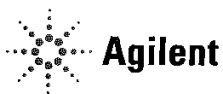
Kirtland AFB BFF
 Quarterly Report - April-June 2020
 SWMUs ST-106/SS-111

I-5-1163

September 2020

Reagent

WC2CHLORITE_00024



Certificate of Analysis

Product Name: Chlorite Standard

Product Number: ICC-012

Lot Issue Date: 22-Jan-2020

Lot Number: 0006514036

Expiration Date: 31-Aug-2020

Description:

This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system, and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration $\pm$ Uncertainty
sodium chlorite (as chlorite)	007758-19-2	RM13607	1001 $\pm$ 5 μ g/mL

Matrix: water (low TOC, < 50 ppb)

Storage Conditions: Store Refrigerated (2° - 8°C).

Traceability:

The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:

This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:

This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Instructions for Use:

Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Hazards:

Refer to the Safety Data Sheet on www.agilent.com for information regarding this RM.

Expiration of Certification:

The certification of this RM is valid until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

Maintenance of Certification:

If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

*Rec'd 3/27/20
opened 3/27/20*



6158363

ID: WC2CHLORITE_00024

Exp: 08/31/20 Prep: YZ Opn: 03/27/20

300 1- Standard Chlorite

Sample lot approver:

mpBourgeois

Monica Bourgeois
QMS Representative



ISO 17034 Cert No.
AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

Page: 1 of 1

www.agilent.com/quality/
CSD-QA-015.1



ISO 17025 Cert
No. AT-1937

Reagent

wcbromide_00018



7221 Investment Drive • North Charleston, SC 29418
843.767.7900 • info@highpuritystandards.com • www.highpuritystandards.com



4/09/2020

IC-Br Bromide - 10000
Exp 01/31/2021 Exp 12/31/2021
Bromide - 10000 (40000) 10000

Certificate of Analysis

rec'd 7/26/19

Certified Reference Material

Product Description:

Product Number: **IC-BR-10M-100**
Lot Number: **1916127**
Matrix: **H2O**



ISO 17034:2016
(RMP) Accreditation
Certificate Number
AR-1436



ISO/IEC 17025:2005
Accreditation
Certificate Number
AT-1529

Certified Value:

Element	µg/mL	SRM ID	SRM Lot#
Bromide	10000 ± 50	3184	151130

The Certified value is based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via ion chromatography (IC) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor k is about 2.

* Refer to Traceability Information, Section 4

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for eighteen months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date: July 2019
Expiration Date: January 31, 2021
Certificate Issue Date: June 12, 2019

Moven Mututuvvari

Moven Mututuvvari, Ph. D, Laboratory Manager

Lot Number: 1916127



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Revision: 0
Page 1 of 2

07/09/2020

Method 300.1

Disinfection By-Products (IC) by Method 300.1

FORM II
HPLC/IC SURROGATE RECOVERY

Lab Name: Eurofins Irvine Job No.: 440-268223-1

SDG No.: Kirtland AFB New Mexico

Matrix: Water Level: Low

GC Column (1): AS9-HC ID: 4 (mm)

Client Sample ID	Lab Sample ID	DCAA #
KAFB-106005-WR-pre	440-268223-1	102
KAFB-106005-WR-pre	440-268223-1	102
KAFB-106005-WR-pos t	440-268223-2	102
KAFB-106005-WR-pos t	440-268223-2	102
KAFB-106028-WR-pre	440-268223-3	102
KAFB-106028-WR-pre	440-268223-3	102
KAFB-106028-WR-pos t	440-268223-4	107
KAFB-106028-WR-pos t	440-268223-4	107
KAFB-106239-WR-pre	440-268223-5	102
KAFB-106239-WR-pre	440-268223-5	102
KAFB-106239-WR-pos t	440-268223-6	102
KAFB-106239-WR-pos t	440-268223-6	102
	MB 440-615429/5	104
	MB 440-615430/5	104
	MB 440-615752/5	107
	MB 440-615753/5	107
	LCS 440-615429/4	106
	LCS 440-615430/4	106
	LCS 440-615752/4	106
	LCS 440-615753/4	106
	MRL 440-615429/3	105
	MRL 440-615430/3	105
	MRL 440-615752/3	106
	MRL 440-615753/3	106
	570-32207-J-3 MS	103
	570-32207-J-3 MS	103
	440-268295-A-1 MS	100
	440-268295-A-1 MS	100
	570-32207-J-3 MSD	102
	570-32207-J-3 MSD	102

DCAA = Dichloroacetic acid(Surr)

QC LIMITS
90-115

Column to be used to flag recovery values

FORM II 300.1B

FORM II
HPLC/IC SURROGATE RECOVERYLab Name: Eurofins Irvine Job No.: 440-268223-1SDG No.: Kirtland AFB New MexicoMatrix: Water Level: LowGC Column (1): AS9-HC ID: 4 (mm)

Client Sample ID	Lab Sample ID	DCAA #
	440-268295-A-1 MSD	104
	440-268295-A-1 MSD	104

DCAA = Dichloroacetic acid(Surr)

QC LIMITS
90-115

Column to be used to flag recovery values

FORM II 300.1B

FORM III
HPLC/IC LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Irvine Job No.: 440-268223-1
SDG No.: Kirtland AFB New Mexico
Matrix: Water Level: Low Lab File ID: 440-0135020-004440-0135020-00
Lab ID: LCS 440-615429/4 Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Bromate	25.0	25.0	100	75-125	

Column to be used to flag recovery and RPD values

FORM III 300.1B

FORM III
HPLC/IC LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Irvine Job No.: 440-268223-1
SDG No.: Kirtland AFB New Mexico
Matrix: Water Level: Low Lab File ID: 440-0135020-004440-0135020-00
Lab ID: LCS 440-615430/4 Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Chlorite	100	96.1	96	85-115	

Column to be used to flag recovery and RPD values

FORM III 300.1B

FORM III
HPLC/IC LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Irvine Job No.: 440-268223-1
SDG No.: Kirtland AFB New Mexico
Matrix: Water Level: Low Lab File ID: 440-0135088-004440-0135088-00
Lab ID: LCS 440-615752/4 Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Bromate	25.0	26.4	106	75-125	

Column to be used to flag recovery and RPD values

FORM III 300.1B

FORM III
HPLC/IC LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Irvine Job No.: 440-268223-1
SDG No.: Kirtland AFB New Mexico
Matrix: Water Level: Low Lab File ID: 440-0135088-004440-0135088-00
Lab ID: LCS 440-615753/4 Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Chlorite	100	92.6	93	85-115	

Column to be used to flag recovery and RPD values

FORM III 300.1B

FORM III
HPLC/IC METHOD REPORTING LIMIT CHECK RECOVERY

Lab Name: Eurofins Irvine Job No.: 440-268223-1
SDG No.: Kirtland AFB New Mexico
Matrix: Water Level: Low Lab File ID: 440-0135020-003440-0135020-00
Lab ID: MRL 440-615429/3 Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	MRL CONCENTRATION (ug/L)	MRL % REC	QC LIMITS REC	#
Bromate	5.00	4.79 J	96	50-150	

Column to be used to flag recovery and RPD values

FORM III 300.1B

FORM III
HPLC/IC METHOD REPORTING LIMIT CHECK RECOVERY

Lab Name: Eurofins Irvine Job No.: 440-268223-1
SDG No.: Kirtland AFB New Mexico
Matrix: Water Level: Low Lab File ID: 440-0135020-003440-0135020-00
Lab ID: MRL 440-615430/3 Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	MRL CONCENTRATION (ug/L)	MRL % REC	QC LIMITS REC	#
Chlorite	20.0	18.1 J	91	10-200	

Column to be used to flag recovery and RPD values

FORM III 300.1B

FORM III
HPLC/IC METHOD REPORTING LIMIT CHECK RECOVERY

Lab Name: Eurofins Irvine Job No.: 440-268223-1
SDG No.: Kirtland AFB New Mexico
Matrix: Water Level: Low Lab File ID: 440-0135088-003440-0135088-00
Lab ID: MRL 440-615752/3 Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	MRL CONCENTRATION (ug/L)	MRL % REC	QC LIMITS REC	#
Bromate	5.00	5.39	108	50-150	

Column to be used to flag recovery and RPD values

FORM III 300.1B

FORM III
HPLC/IC METHOD REPORTING LIMIT CHECK RECOVERY

Lab Name: Eurofins Irvine Job No.: 440-268223-1
SDG No.: Kirtland AFB New Mexico
Matrix: Water Level: Low Lab File ID: 440-0135088-003440-0135088-00
Lab ID: MRL 440-615753/3 Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	MRL CONCENTRATION (ug/L)	MRL % REC	QC LIMITS REC	#
Chlorite	20.0	19.3 J	97	10-200	

Column to be used to flag recovery and RPD values

FORM III 300.1B

FORM III
HPLC/IC MATRIX SPIKE RECOVERY

Lab Name: Eurofins Irvine Job No.: 440-268223-1
SDG No.: Kirtland AFB New Mexico
Matrix: Water Level: Low Lab File ID: 440-0135020-023440-0135020-02
Lab ID: 570-32207-J-3 MS Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Bromate	50.0	ND	58.7	117	75-125	

Column to be used to flag recovery and RPD values

FORM III 300.1B

FORM III
HPLC/IC MATRIX SPIKE RECOVERY

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Matrix: Water Level: Low Lab File ID: 440-0135020-023440-0135020-02
 Lab ID: 570-32207-J-3 MS Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Chlorite	200	ND	201	100	75-125	

Column to be used to flag recovery and RPD values

FORM III 300.1B

FORM III
HPLC/IC MATRIX SPIKE RECOVERY

Lab Name: Eurofins Irvine Job No.: 440-268223-1
SDG No.: Kirtland AFB New Mexico
Matrix: Water Level: Low Lab File ID: 440-0135088-011440-0135088-01
Lab ID: 440-268295-A-1 MS Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Bromate	50.0	ND	59.7	119	75-125	

Column to be used to flag recovery and RPD values

FORM III 300.1B

FORM III
HPLC/IC MATRIX SPIKE RECOVERYLab Name: Eurofins Irvine Job No.: 440-268223-1SDG No.: Kirtland AFB New MexicoMatrix: Water Level: Low Lab File ID: 440-0135088-011440-0135088-01Lab ID: 440-268295-A-1 MS Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Chlorite	200	200	392	94	75-125	

Column to be used to flag recovery and RPD values

FORM III 300.1B

FORM III
HPLC/IC MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins Irvine Job No.: 440-268223-1

SDG No.: Kirtland AFB New Mexico

Matrix: Water Level: Low Lab File ID: 440-0135020-024440-0135020-02

Lab ID: 570-32207-J-3 MSD Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
Bromate	50.0	50.8	102	15	25	75-125	

Column to be used to flag recovery and RPD values

FORM III 300.1B

FORM III
HPLC/IC MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins Irvine Job No.: 440-268223-1

SDG No.: Kirtland AFB New Mexico

Matrix: Water Level: Low Lab File ID: 440-0135020-024440-0135020-02

Lab ID: 570-32207-J-3 MSD Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
Chlorite	200	197	99	2	25	75-125	

Column to be used to flag recovery and RPD values

FORM III 300.1B

FORM III
HPLC/IC MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins Irvine Job No.: 440-268223-1

SDG No.: Kirtland AFB New Mexico

Matrix: Water Level: Low Lab File ID: 440-0135088-012440-0135088-01

Lab ID: 440-268295-A-1 MSD Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
Bromate	50.0	56.1	112	6	25	75-125	

Column to be used to flag recovery and RPD values

FORM III 300.1B

FORM III
HPLC/IC MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Matrix: Water Level: Low Lab File ID: 440-0135088-012440-0135088-01
 Lab ID: 440-268295-A-1 MSD Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
Chlorite	200	394	95	0	25	75-125	

Column to be used to flag recovery and RPD values

FORM III 300.1B

FORM IV
HPLC/IC METHOD BLANK SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Lab File ID: 440-0135020-005440-0135020-00 Lab Sample ID: MB 440-615429/5
 Matrix: Water Date Extracted: _____
 Instrument ID: IC-8 Date Analyzed: 07/06/2020 07:29
 Level: (Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	CCB 440-615429/2	440-0135020-002440-0135020-002.d	07/06/2020 04:38
	LCS 440-615429/4	440-0135020-004440-0135020-004.d	07/06/2020 06:53
	CCB 440-615429/14	440-0135020-014440-0135020-014.d	07/06/2020 12:53
	570-32207-J-3 MS	440-0135020-023440-0135020-023.d	07/06/2020 18:20
	570-32207-J-3 MSD	440-0135020-024440-0135020-024.d	07/06/2020 18:56
	CCB 440-615429/26	440-0135020-026440-0135020-026.d	07/06/2020 20:08
	CCB 440-615429/38	440-0135020-038440-0135020-038.d	07/07/2020 03:23
KAFB-106239-WR-post	440-268223-6	440-0135020-041440-0135020-041.d	07/07/2020 05:22
KAFB-106028-WR-pre	440-268223-3	440-0135020-045440-0135020-045.d	07/07/2020 07:47
	CCB 440-615429/50	440-0135020-050440-0135020-050.d	07/07/2020 10:48

FORM IV
HPLC/IC METHOD BLANK SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Lab File ID: 440-0135020-005440-0135020-00 Lab Sample ID: MB 440-615430/5
 Matrix: Water Date Extracted: _____
 Instrument ID: IC-8 Date Analyzed: 07/06/2020 07:29
 Level: (Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	CCB 440-615430/2	440-0135020 -002440-013 5020-002.d	07/06/2020 04:38
	LCS 440-615430/4	440-0135020 -004440-013 5020-004.d	07/06/2020 06:53
	CCB 440-615430/14	440-0135020 -014440-013 5020-014.d	07/06/2020 12:53
	570-32207-J-3 MS	440-0135020 -023440-013 5020-023.d	07/06/2020 18:20
	570-32207-J-3 MSD	440-0135020 -024440-013 5020-024.d	07/06/2020 18:56
	CCB 440-615430/26	440-0135020 -026440-013 5020-026.d	07/06/2020 20:08
	CCB 440-615430/38	440-0135020 -038440-013 5020-038.d	07/07/2020 03:23
KAFB-106239-WR-post	440-268223-6	440-0135020 -041440-013 5020-041.d	07/07/2020 05:22
KAFB-106028-WR-pre	440-268223-3	440-0135020 -045440-013 5020-045.d	07/07/2020 07:47
	CCB 440-615430/50	440-0135020 -050440-013 5020-050.d	07/07/2020 10:48

FORM IV
HPLC/IC METHOD BLANK SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Lab File ID: 440-0135088-005440-0135088-00 Lab Sample ID: MB 440-615752/5
 Matrix: Water Date Extracted: _____
 Instrument ID: IC-8 Date Analyzed: 07/08/2020 06:33
 Level: (Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	CCB 440-615752/2	440-0135088-002440-0135088-002.d	07/08/2020 04:44
	LCS 440-615752/4	440-0135088-004440-0135088-004.d	07/08/2020 05:57
KAFB-106239-WR-pre	440-268223-5	440-0135088-007440-0135088-007.d	07/08/2020 07:46
	440-268295-A-1 MS	440-0135088-011440-0135088-011.d	07/08/2020 10:11
	440-268295-A-1 MSD	440-0135088-012440-0135088-012.d	07/08/2020 10:47
	CCB 440-615752/14	440-0135088-014440-0135088-014.d	07/08/2020 12:00
	CCB 440-615752/38	440-0135088-038440-0135088-038.d	07/09/2020 01:19
KAFB-106005-WR-pre	440-268223-1	440-0135088-044440-0135088-044.d	07/09/2020 05:37
KAFB-106005-WR-post	440-268223-2	440-0135088-045440-0135088-045.d	07/09/2020 06:12
KAFB-106028-WR-post	440-268223-4	440-0135088-046440-0135088-046.d	07/09/2020 06:49
	CCB 440-615752/48	440-0135088-048440-0135088-048.d	07/09/2020 08:01

FORM IV
HPLC/IC METHOD BLANK SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Lab File ID: 440-0135088-005440-0135088-00 Lab Sample ID: MB 440-615753/5
 Matrix: Water Date Extracted: _____
 Instrument ID: IC-8 Date Analyzed: 07/08/2020 06:33
 Level: (Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	CCB 440-615753/2	440-0135088 -002440-013 5088-002.d	07/08/2020 04:44
	LCS 440-615753/4	440-0135088 -004440-013 5088-004.d	07/08/2020 05:57
KAFB-106239-WR-pre	440-268223-5	440-0135088 -007440-013 5088-007.d	07/08/2020 07:46
	440-268295-A-1 MS	440-0135088 -011440-013 5088-011.d	07/08/2020 10:11
	440-268295-A-1 MSD	440-0135088 -012440-013 5088-012.d	07/08/2020 10:47
	CCB 440-615753/14	440-0135088 -014440-013 5088-014.d	07/08/2020 12:00
	CCB 440-615753/38	440-0135088 -038440-013 5088-038.d	07/09/2020 01:19
KAFB-106005-WR-pre	440-268223-1	440-0135088 -044440-013 5088-044.d	07/09/2020 05:37
KAFB-106005-WR-post	440-268223-2	440-0135088 -045440-013 5088-045.d	07/09/2020 06:12
KAFB-106028-WR-post	440-268223-4	440-0135088 -046440-013 5088-046.d	07/09/2020 06:49
	CCB 440-615753/48	440-0135088 -048440-013 5088-048.d	07/09/2020 08:01

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
SDG No.: Kirtland AFB New Mexico
Client Sample ID: KAFB-106005-WR-pre Lab Sample ID: 440-268223-1
Matrix: Water Lab File ID: 440-0135088-044440-0135088-044
Analysis Method: 300.1B Date Collected: 06/29/2020 08:25
Extraction Method: _____ Date Extracted: _____
Sample wt/vol: 5(mL) Date Analyzed: 07/09/2020 05:37
Con. Extract Vol.: _____ Dilution Factor: 10
Injection Volume: 1(uL) GC Column: AS9-HC ID: 4(mm)
% Moisture: _____ GPC Cleanup: (Y/N) N
Analysis Batch No.: 615752 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
15541-45-4	Bromate	ND		50	10

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	102		90-115

Report Date: 09-Jul-2020 06:35:04

Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-044440-0135088-044.d
 Lims ID: 440-268223-C-1
 Client ID: KAFB-106005-WR-pre
 Sample Type: Client
 Inject. Date: 09-Jul-2020 05:37:00 ALS Bottle#: 0 Worklist Smp#: 44
 Injection Vol: 1.0 ul Dil. Factor: 10.0000
 Sample Info: 440-0135088-044
 Misc. Info.: 14339 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 09-Jul-2020 07:14:44 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1007

First Level Reviewer: zakhrabov

Date: 09-Jul-2020 06:35:04

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/l	Flags
----------	--------------	------------------	------------------	----------	-------------------	-------

\$ 6 Dichloroacetic acid(Surr) 13.833 13.842 -0.009 82961581 1015.6

Reagents:

WCDCA_00081 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 09-Jul-2020 06:35:04

Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-044440-0135088-044.d

Injection Date: 09-Jul-2020 05:37:00

Instrument ID: IC-8

Operator ID:

Lims ID: 440-268223-C-1

Lab Sample ID: 440-268223-1

Worklist Smp#: 44

Client ID: KAFB-106005-WR-pre

Injection Vol: 1.0 ul

Dil. Factor: 10.0000

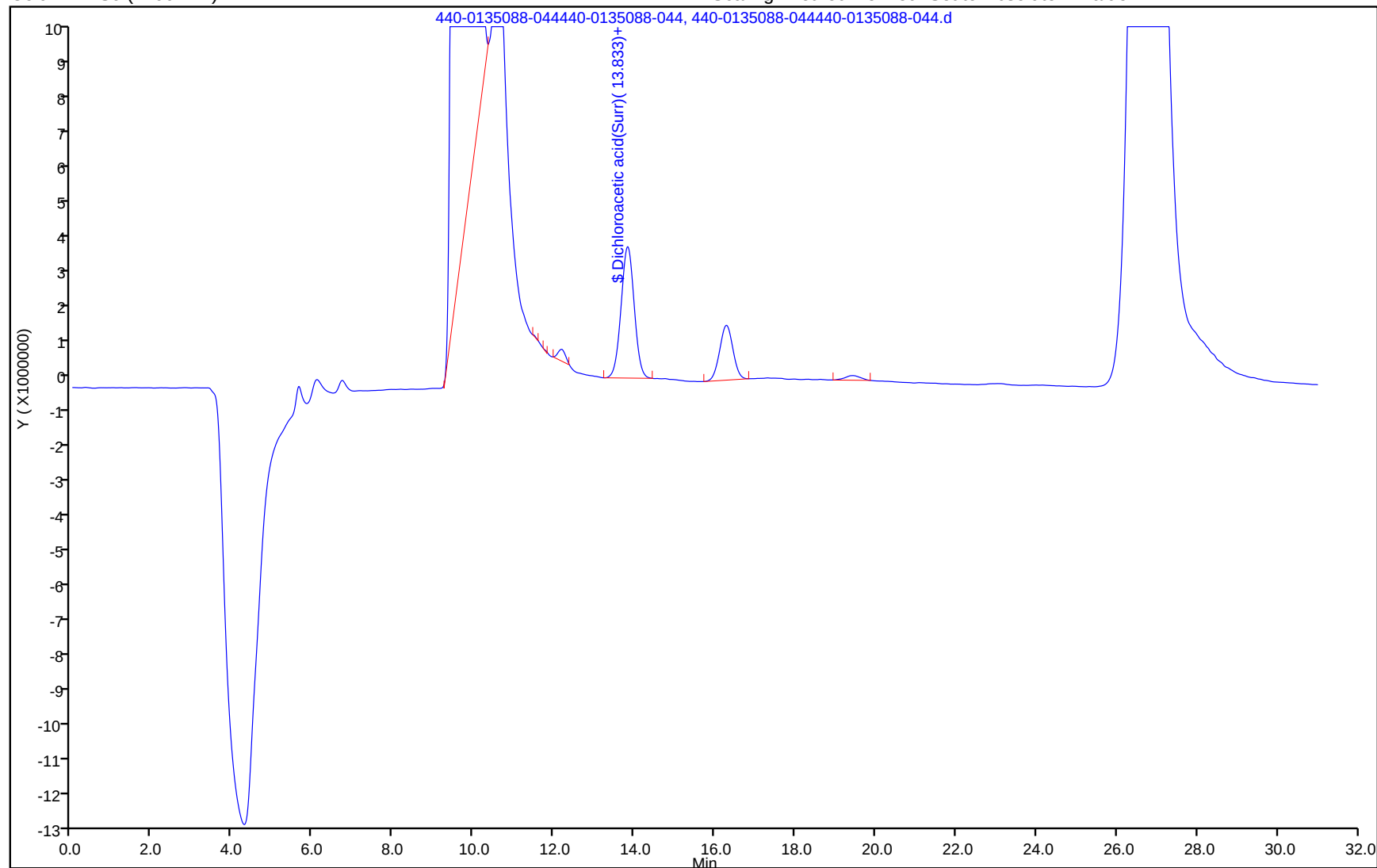
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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07/09/2020

September 2020

Report Date: 09-Jul-2020 06:35:04

Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-044440-0135088-044.d
 Lims ID: 440-268223-C-1
 Client ID: KAFB-106005-WR-pre
 Sample Type: Client
 Inject. Date: 09-Jul-2020 05:37:00 ALS Bottle#: 0 Worklist Smp#: 44
 Injection Vol: 1.0 ul Dil. Factor: 10.0000
 Sample Info: 440-0135088-044
 Misc. Info.: 14339 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 09-Jul-2020 07:14:44 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1007

First Level Reviewer: zakhrabov

Date: 09-Jul-2020 06:35:04

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1015.6	1022.00

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: KAFB-106005-WR-pre Lab Sample ID: 440-268223-1
 Matrix: Water Lab File ID: 440-0135088-044440-0135088-044
 Analysis Method: 300.1B Date Collected: 06/29/2020 08:25
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 07/09/2020 05:37
 Con. Extract Vol.: _____ Dilution Factor: 10
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 615753 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14998-27-7	Chlorite	ND		200	40

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	102		90-115

Report Date: 09-Jul-2020 06:35:04

Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-044440-0135088-044.d
 Lims ID: 440-268223-C-1
 Client ID: KAFB-106005-WR-pre
 Sample Type: Client
 Inject. Date: 09-Jul-2020 05:37:00 ALS Bottle#: 0 Worklist Smp#: 44
 Injection Vol: 1.0 ul Dil. Factor: 10.0000
 Sample Info: 440-0135088-044
 Misc. Info.: 14339 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 09-Jul-2020 07:14:44 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1007

First Level Reviewer: zakhrabov

Date: 09-Jul-2020 06:35:04

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/l	Flags
----------	--------------	------------------	------------------	----------	-------------------	-------

\$ 6 Dichloroacetic acid(Surr) 13.833 13.842 -0.009 82961581 1015.6

Reagents:

WCDCA_00081 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 09-Jul-2020 06:35:04

Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-044440-0135088-044.d

Injection Date: 09-Jul-2020 05:37:00

Instrument ID: IC-8

Operator ID:

Lims ID: 440-268223-C-1

Lab Sample ID: 440-268223-1

Worklist Smp#: 44

Client ID: KAFB-106005-WR-pre

Injection Vol: 1.0 ul

Dil. Factor: 10.0000

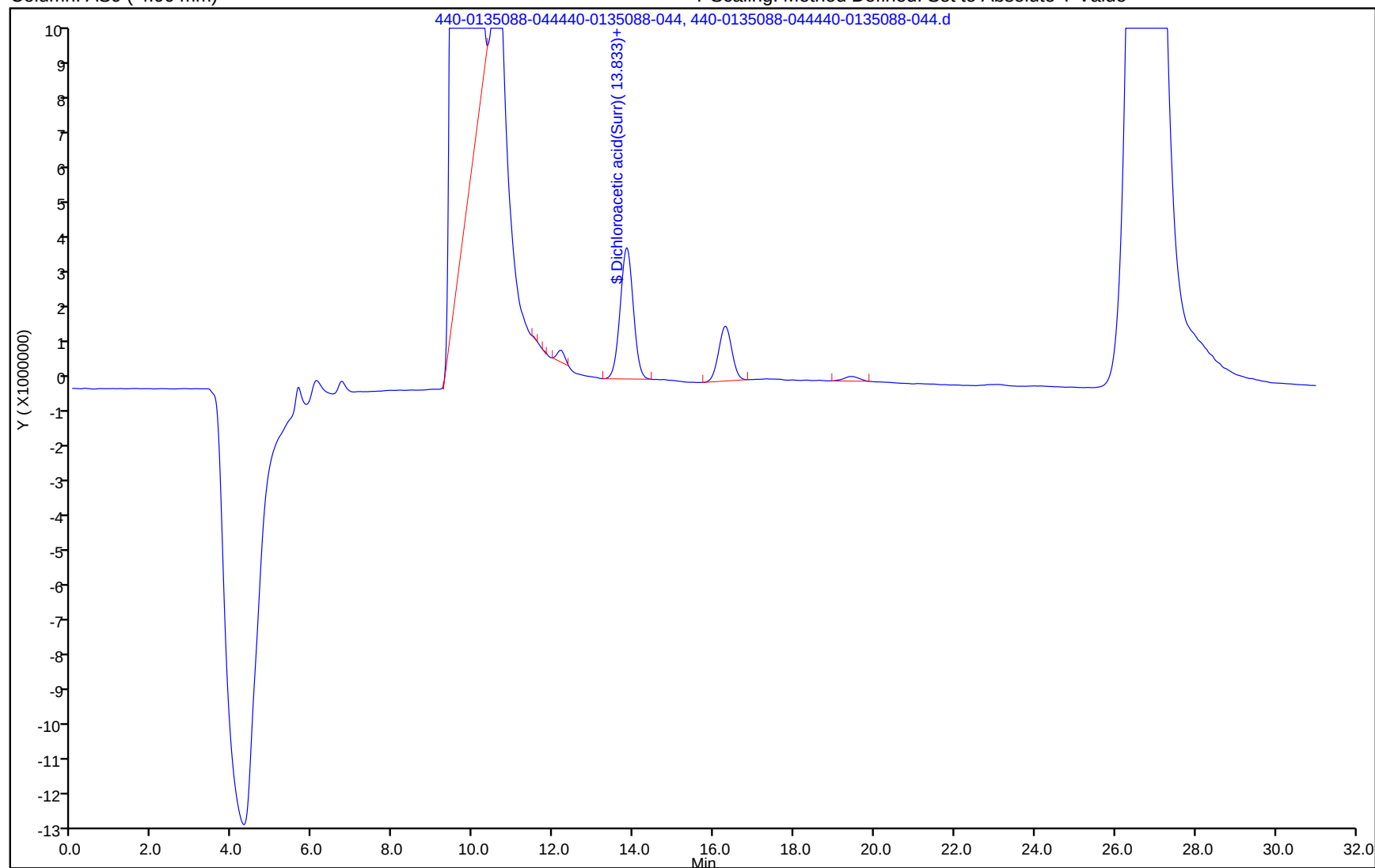
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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September 2020

Report Date: 09-Jul-2020 06:35:04

Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-044440-0135088-044.d
 Lims ID: 440-268223-C-1
 Client ID: KAFB-106005-WR-pre
 Sample Type: Client
 Inject. Date: 09-Jul-2020 05:37:00 ALS Bottle#: 0 Worklist Smp#: 44
 Injection Vol: 1.0 ul Dil. Factor: 10.0000
 Sample Info: 440-0135088-044
 Misc. Info.: 14339 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 09-Jul-2020 07:14:44 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1007

First Level Reviewer: zakhrabov

Date: 09-Jul-2020 06:35:04

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1015.6	1022.00

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: KAFB-106005-WR-post Lab Sample ID: 440-268223-2
 Matrix: Water Lab File ID: 440-0135088-045440-0135088-045
 Analysis Method: 300.1B Date Collected: 06/30/2020 08:50
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 07/09/2020 06:12
 Con. Extract Vol.: _____ Dilution Factor: 10
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 615752 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
15541-45-4	Bromate	ND		50	10

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	102		90-115

Report Date: 09-Jul-2020 06:58:09

Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-045440-0135088-045.d
 Lims ID: 440-268223-C-2
 Client ID: KAFB-106005-WR-post
 Sample Type: Client
 Inject. Date: 09-Jul-2020 06:12:00 ALS Bottle#: 0 Worklist Smp#: 45
 Injection Vol: 1.0 ul Dil. Factor: 10.0000
 Sample Info: 440-0135088-045
 Misc. Info.: 15678 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 09-Jul-2020 07:51:00 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1007

First Level Reviewer: zakhrabov

Date: 09-Jul-2020 06:58:09

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/l	Flags
5 Chlorite	7.125	7.384	-0.259	383712	NC	
\$ 6 Dichloroacetic acid(Surr)	13.825	13.842	-0.017	83050407	1016.7	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 09-Jul-2020 06:58:09

Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-045\440-0135088-045.d

Injection Date: 09-Jul-2020 06:12:00

Instrument ID: IC-8

Operator ID:

Lims ID: 440-268223-C-2

Lab Sample ID: 440-268223-2

Worklist Smp#: 45

Client ID: KAFB-106005-WR-post

Injection Vol: 1.0 ul

Dil. Factor: 10.0000

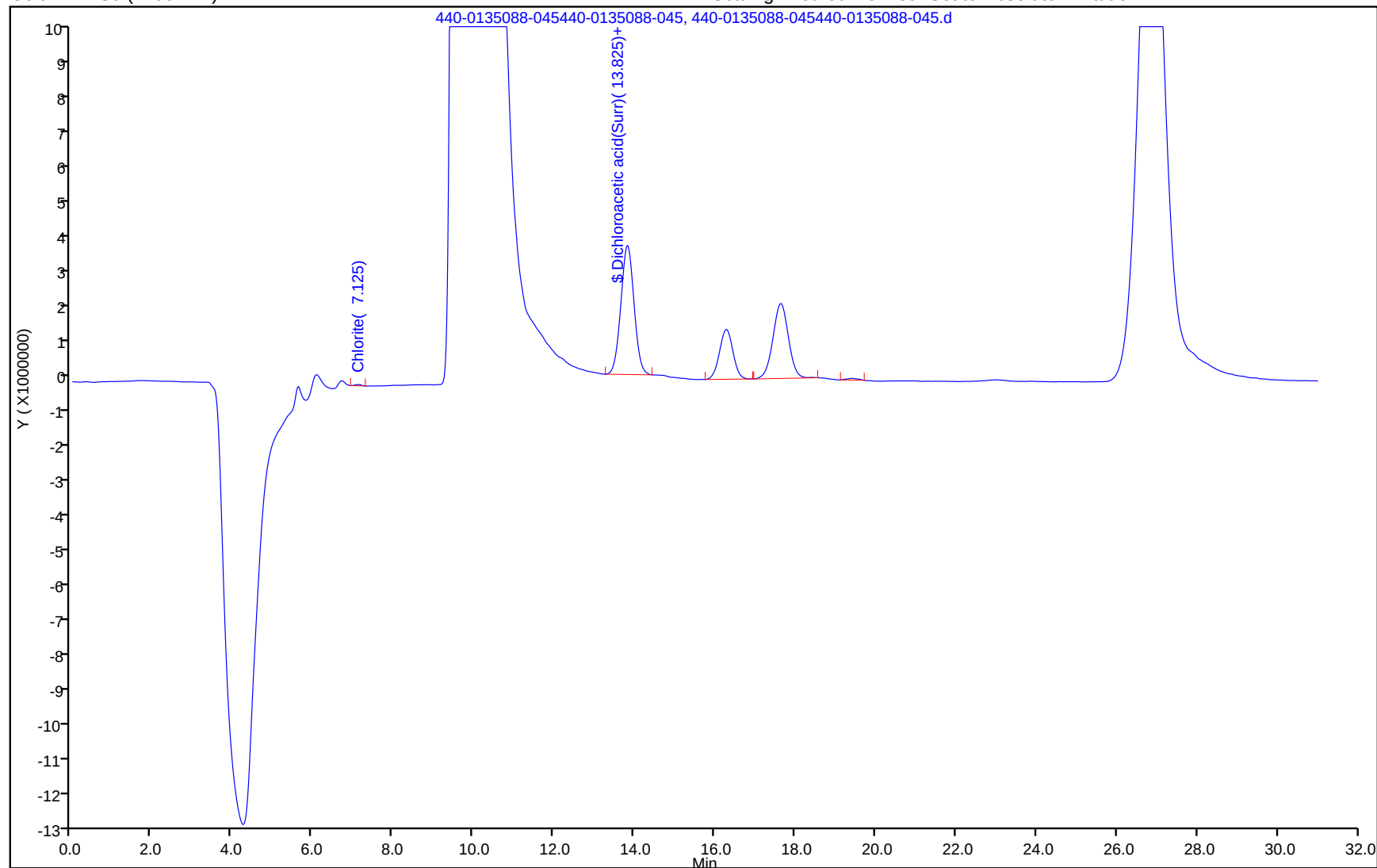
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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September 2020

Report Date: 09-Jul-2020 06:58:09

Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-045440-0135088-045.d
 Lims ID: 440-268223-C-2
 Client ID: KAFB-106005-WR-post
 Sample Type: Client
 Inject. Date: 09-Jul-2020 06:12:00 ALS Bottle#: 0 Worklist Smp#: 45
 Injection Vol: 1.0 ul Dil. Factor: 10.0000
 Sample Info: 440-0135088-045
 Misc. Info.: 15678 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 09-Jul-2020 07:51:00 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1007

First Level Reviewer: zakhrabov

Date: 09-Jul-2020 06:58:09

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1016.7	1023.09

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: KAFB-106005-WR-post Lab Sample ID: 440-268223-2
 Matrix: Water Lab File ID: 440-0135088-045440-0135088-045
 Analysis Method: 300.1B Date Collected: 06/30/2020 08:50
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 07/09/2020 06:12
 Con. Extract Vol.: _____ Dilution Factor: 10
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 615753 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14998-27-7	Chlorite	ND		200	40

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	102		90-115

Report Date: 09-Jul-2020 06:58:09

Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-045440-0135088-045.d
 Lims ID: 440-268223-C-2
 Client ID: KAFB-106005-WR-post
 Sample Type: Client
 Inject. Date: 09-Jul-2020 06:12:00 ALS Bottle#: 0 Worklist Smp#: 45
 Injection Vol: 1.0 ul Dil. Factor: 10.0000
 Sample Info: 440-0135088-045
 Misc. Info.: 15678 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 09-Jul-2020 07:51:00 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1007

First Level Reviewer: zakhrabov

Date: 09-Jul-2020 06:58:09

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/l	Flags
----------	--------------	------------------	------------------	----------	-------------------	-------

\$ 6 Dichloroacetic acid(Surr) 13.825 13.842 -0.017 83050407 1016.7

Reagents:

WCDCA_00081 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 09-Jul-2020 06:58:09

Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-045\440-0135088-045.d

Injection Date: 09-Jul-2020 06:12:00

Instrument ID: IC-8

Operator ID:

Lims ID: 440-268223-C-2

Lab Sample ID: 440-268223-2

Worklist Smp#: 45

Client ID: KAFB-106005-WR-post

Injection Vol: 1.0 ul

Dil. Factor: 10.0000

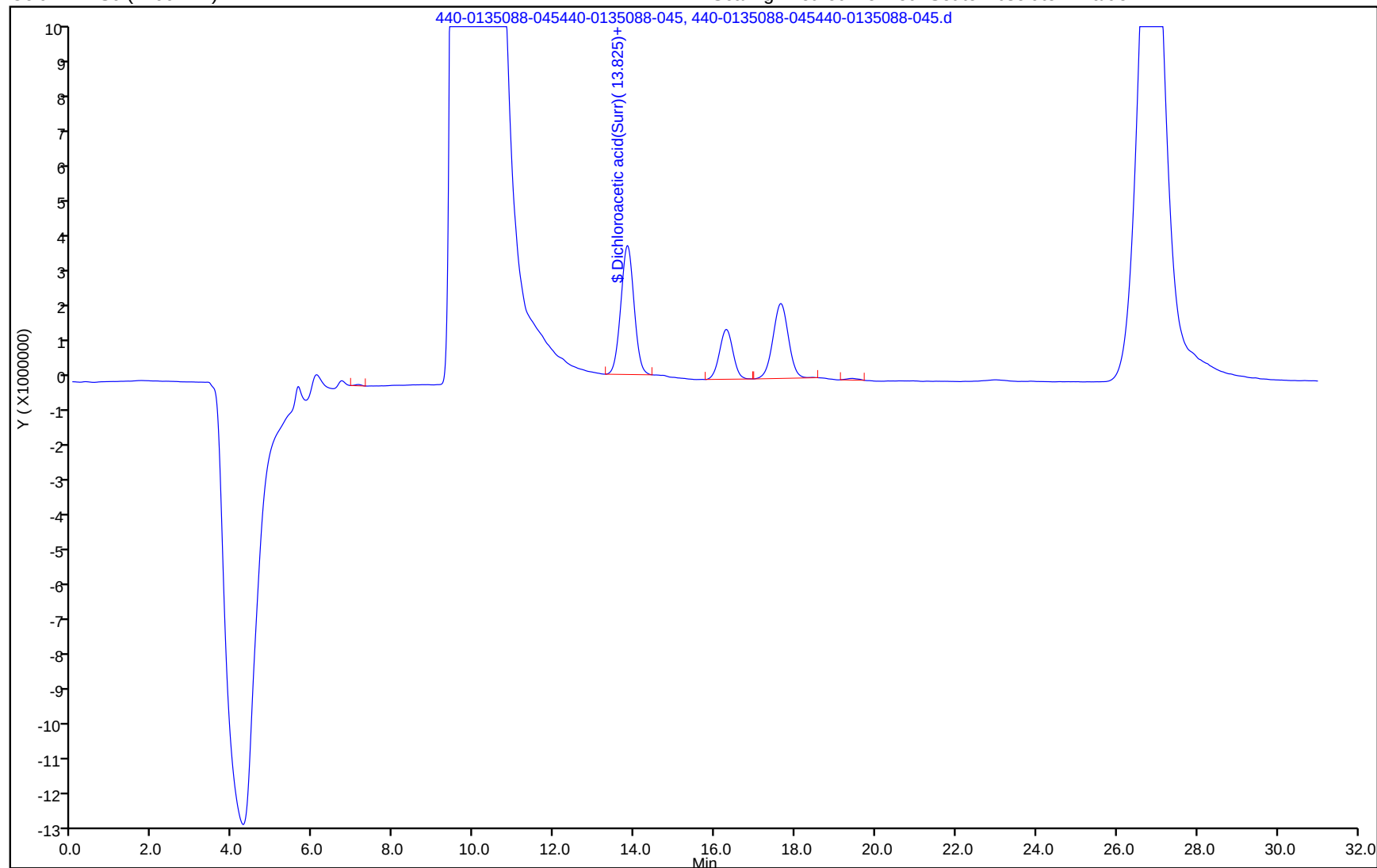
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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September 2020

Report Date: 09-Jul-2020 06:58:09

Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-045440-0135088-045.d
 Lims ID: 440-268223-C-2
 Client ID: KAFB-106005-WR-post
 Sample Type: Client
 Inject. Date: 09-Jul-2020 06:12:00 ALS Bottle#: 0 Worklist Smp#: 45
 Injection Vol: 1.0 ul Dil. Factor: 10.0000
 Sample Info: 440-0135088-045
 Misc. Info.: 15678 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 09-Jul-2020 07:51:00 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1007

First Level Reviewer: zakhrabov

Date: 09-Jul-2020 06:58:09

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1016.7	1023.09

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: KAFB-106028-WR-pre Lab Sample ID: 440-268223-3
 Matrix: Water Lab File ID: 440-0135020-045440-0135020-045
 Analysis Method: 300.1B Date Collected: 06/24/2020 10:15
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 07/07/2020 07:47
 Con. Extract Vol.: _____ Dilution Factor: 5
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 615429 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
15541-45-4	Bromate	ND		25	5.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	102		90-115

Report Date: 08-Jul-2020 04:14:55

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-045440-0135020-045.d
 Lims ID: 440-268223-B-3
 Client ID: KAFB-106028-WR-pre
 Sample Type: Client
 Inject. Date: 07-Jul-2020 07:47:00 ALS Bottle#: 0 Worklist Smp#: 45
 Injection Vol: 1.0 ul Dil. Factor: 5.0000
 Sample Info: 440-0135020-045
 Misc. Info.: 11757 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 08-Jul-2020 04:14:19 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1066

First Level Reviewer: zakhrabov

Date: 08-Jul-2020 04:14:55

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/l	Flags
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\$ 6 Dichloroacetic acid(Surr) 13.825 13.842 -0.017 82707092 1012.5

Reagents:

WCDCA_00081 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 08-Jul-2020 04:14:55

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-045\440-0135020-045.d

Injection Date: 07-Jul-2020 07:47:00

Instrument ID: IC-8

Operator ID:

Lims ID: 440-268223-B-3

Lab Sample ID: 440-268223-3

Worklist Smp#: 45

Client ID: KAFB-106028-WR-pre

Injection Vol: 1.0 ul

Dil. Factor: 5.0000

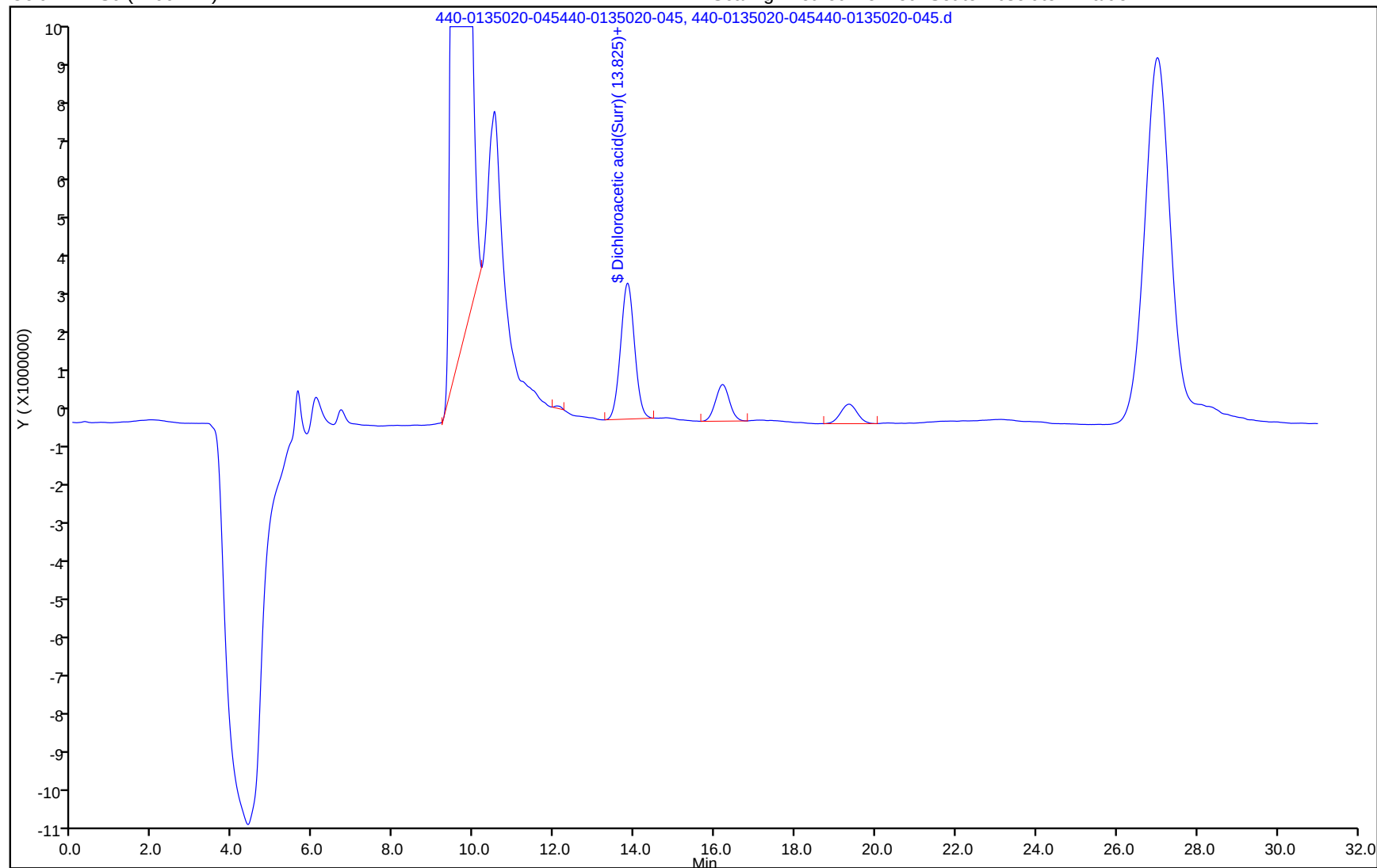
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-1209

Report Date: 08-Jul-2020 04:14:55

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-045440-0135020-045.d
 Lims ID: 440-268223-B-3
 Client ID: KAFB-106028-WR-pre
 Sample Type: Client
 Inject. Date: 07-Jul-2020 07:47:00 ALS Bottle#: 0 Worklist Smp#: 45
 Injection Vol: 1.0 ul Dil. Factor: 5.0000
 Sample Info: 440-0135020-045
 Misc. Info.: 11757 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 08-Jul-2020 04:14:19 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1066

First Level Reviewer: zakhrabov

Date: 08-Jul-2020 04:14:55

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1012.5	509.43

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: KAFB-106028-WR-pre Lab Sample ID: 440-268223-3
 Matrix: Water Lab File ID: 440-0135020-045440-0135020-045
 Analysis Method: 300.1B Date Collected: 06/24/2020 10:15
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 07/07/2020 07:47
 Con. Extract Vol.: _____ Dilution Factor: 5
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 615430 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14998-27-7	Chlorite	ND		100	20

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	102		90-115

Report Date: 08-Jul-2020 04:14:55

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-045440-0135020-045.d
 Lims ID: 440-268223-B-3
 Client ID: KAFB-106028-WR-pre
 Sample Type: Client
 Inject. Date: 07-Jul-2020 07:47:00 ALS Bottle#: 0 Worklist Smp#: 45
 Injection Vol: 1.0 ul Dil. Factor: 5.0000
 Sample Info: 440-0135020-045
 Misc. Info.: 11757 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 08-Jul-2020 04:14:19 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1066

First Level Reviewer: zakhrabov

Date: 08-Jul-2020 04:14:55

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/l	Flags
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\$ 6 Dichloroacetic acid(Surr) 13.825 13.842 -0.017 82707092 1012.5

Reagents:

WCDCA_00081 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 08-Jul-2020 04:14:55

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-045\440-0135020-045.d

Injection Date: 07-Jul-2020 07:47:00

Instrument ID: IC-8

Operator ID:

Lims ID: 440-268223-B-3

Lab Sample ID: 440-268223-3

Worklist Smp#: 45

Client ID: KAFB-106028-WR-pre

Injection Vol: 1.0 ul

Dil. Factor: 5.0000

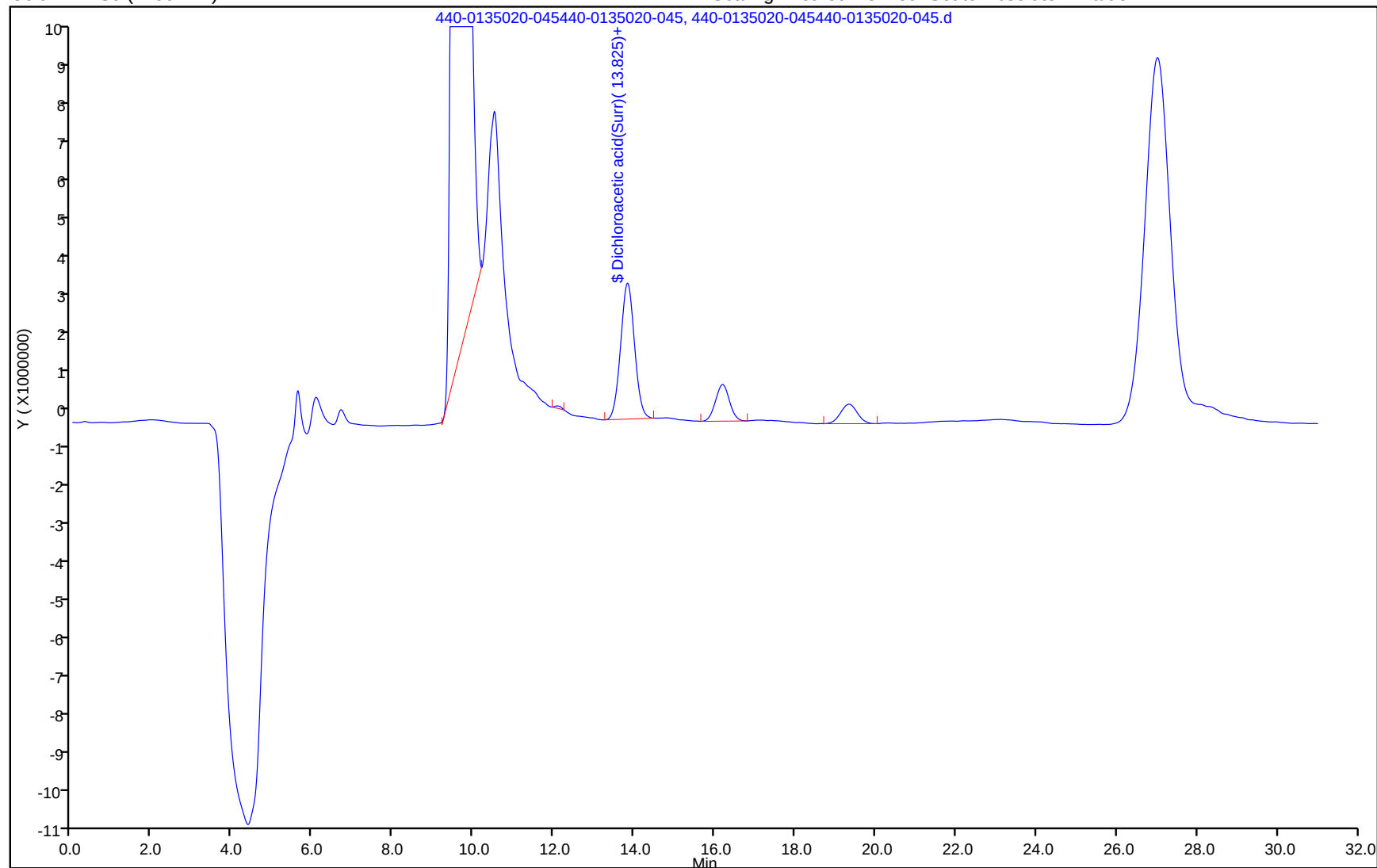
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-1213

Report Date: 08-Jul-2020 04:14:55

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-045440-0135020-045.d
 Lims ID: 440-268223-B-3
 Client ID: KAFB-106028-WR-pre
 Sample Type: Client
 Inject. Date: 07-Jul-2020 07:47:00 ALS Bottle#: 0 Worklist Smp#: 45
 Injection Vol: 1.0 ul Dil. Factor: 5.0000
 Sample Info: 440-0135020-045
 Misc. Info.: 11757 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 08-Jul-2020 04:14:19 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1066

First Level Reviewer: zakhrabov

Date: 08-Jul-2020 04:14:55

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1012.5	509.43

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: KAFB-106028-WR-post Lab Sample ID: 440-268223-4
 Matrix: Water Lab File ID: 440-0135088-046440-0135088-046
 Analysis Method: 300.1B Date Collected: 06/29/2020 12:05
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 07/09/2020 06:49
 Con. Extract Vol.: _____ Dilution Factor: 10
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 615752 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
15541-45-4	Bromate	ND		50	10

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	107		90-115

Report Date: 09-Jul-2020 07:34:08

Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-046440-0135088-046.d
 Lims ID: 440-268223-C-4
 Client ID: KAFB-106028-WR-post
 Sample Type: Client
 Inject. Date: 09-Jul-2020 06:49:00 ALS Bottle#: 0 Worklist Smp#: 46
 Injection Vol: 1.0 ul Dil. Factor: 10.0000
 Sample Info: 440-0135088-046
 Misc. Info.: 22888 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 09-Jul-2020 08:26:39 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1007

First Level Reviewer: zakhrabov

Date: 09-Jul-2020 07:34:08

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/l	Flags
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\$ 6 Dichloroacetic acid(Surr) 13.817 13.842 -0.025 86978372 1064.7

Reagents:

WCDCA_00081 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 09-Jul-2020 07:34:08

Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-046\440-0135088-046.d

Injection Date: 09-Jul-2020 06:49:00

Instrument ID: IC-8

Operator ID:

Lims ID: 440-268223-C-4

Lab Sample ID: 440-268223-4

Worklist Smp#: 46

Client ID: KAFB-106028-WR-post

Injection Vol: 1.0 ul

Dil. Factor: 10.0000

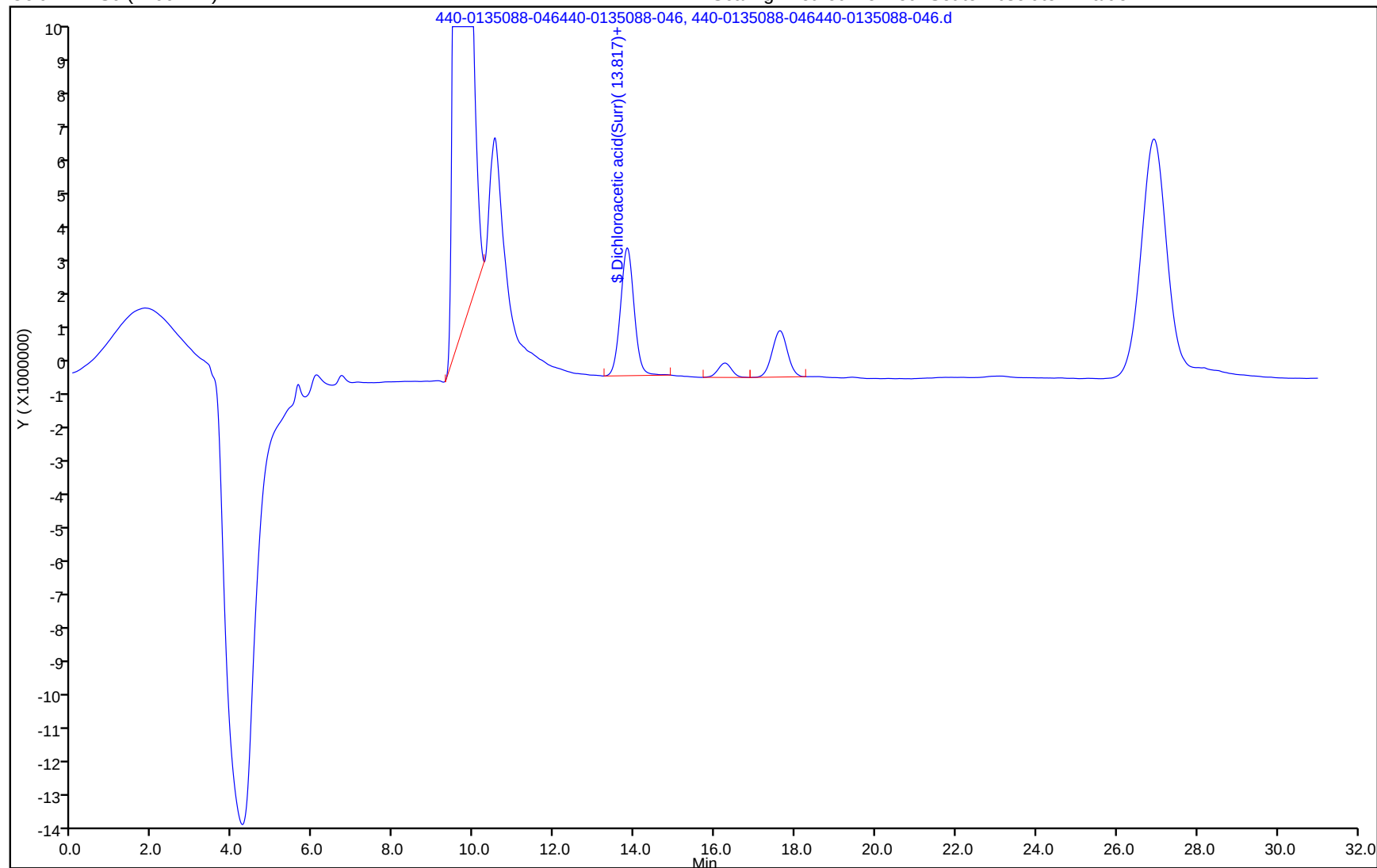
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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September 2020

Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-1217

Report Date: 09-Jul-2020 07:34:08

Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-046440-0135088-046.d
 Lims ID: 440-268223-C-4
 Client ID: KAFB-106028-WR-post
 Sample Type: Client
 Inject. Date: 09-Jul-2020 06:49:00 ALS Bottle#: 0 Worklist Smp#: 46
 Injection Vol: 1.0 ul Dil. Factor: 10.0000
 Sample Info: 440-0135088-046
 Misc. Info.: 22888 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 09-Jul-2020 08:26:39 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1007

First Level Reviewer: zakhrabov

Date: 09-Jul-2020 07:34:08

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1064.7	1071.48

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
SDG No.: Kirtland AFB New Mexico
Client Sample ID: KAFB-106028-WR-post Lab Sample ID: 440-268223-4
Matrix: Water Lab File ID: 440-0135088-046440-0135088-046
Analysis Method: 300.1B Date Collected: 06/29/2020 12:05
Extraction Method: _____ Date Extracted: _____
Sample wt/vol: 5(mL) Date Analyzed: 07/09/2020 06:49
Con. Extract Vol.: _____ Dilution Factor: 10
Injection Volume: 1(uL) GC Column: AS9-HC ID: 4(mm)
% Moisture: _____ GPC Cleanup: (Y/N) N
Analysis Batch No.: 615753 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14998-27-7	Chlorite	ND		200	40

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	107		90-115

Report Date: 09-Jul-2020 07:34:08

Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-046440-0135088-046.d
 Lims ID: 440-268223-C-4
 Client ID: KAFB-106028-WR-post
 Sample Type: Client
 Inject. Date: 09-Jul-2020 06:49:00 ALS Bottle#: 0 Worklist Smp#: 46
 Injection Vol: 1.0 ul Dil. Factor: 10.0000
 Sample Info: 440-0135088-046
 Misc. Info.: 22888 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 09-Jul-2020 08:26:39 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1007

First Level Reviewer: zakhrabov

Date: 09-Jul-2020 07:34:08

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/l	Flags
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\$ 6 Dichloroacetic acid(Surr) 13.817 13.842 -0.025 86978372 1064.7

Reagents:

WCDCA_00081 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 09-Jul-2020 07:34:08

Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-046440-0135088-046.d

Injection Date: 09-Jul-2020 06:49:00

Instrument ID: IC-8

Operator ID:

Lims ID: 440-268223-C-4

Lab Sample ID: 440-268223-4

Worklist Smp#: 46

Client ID: KAFB-106028-WR-post

Injection Vol: 1.0 ul

Dil. Factor: 10.0000

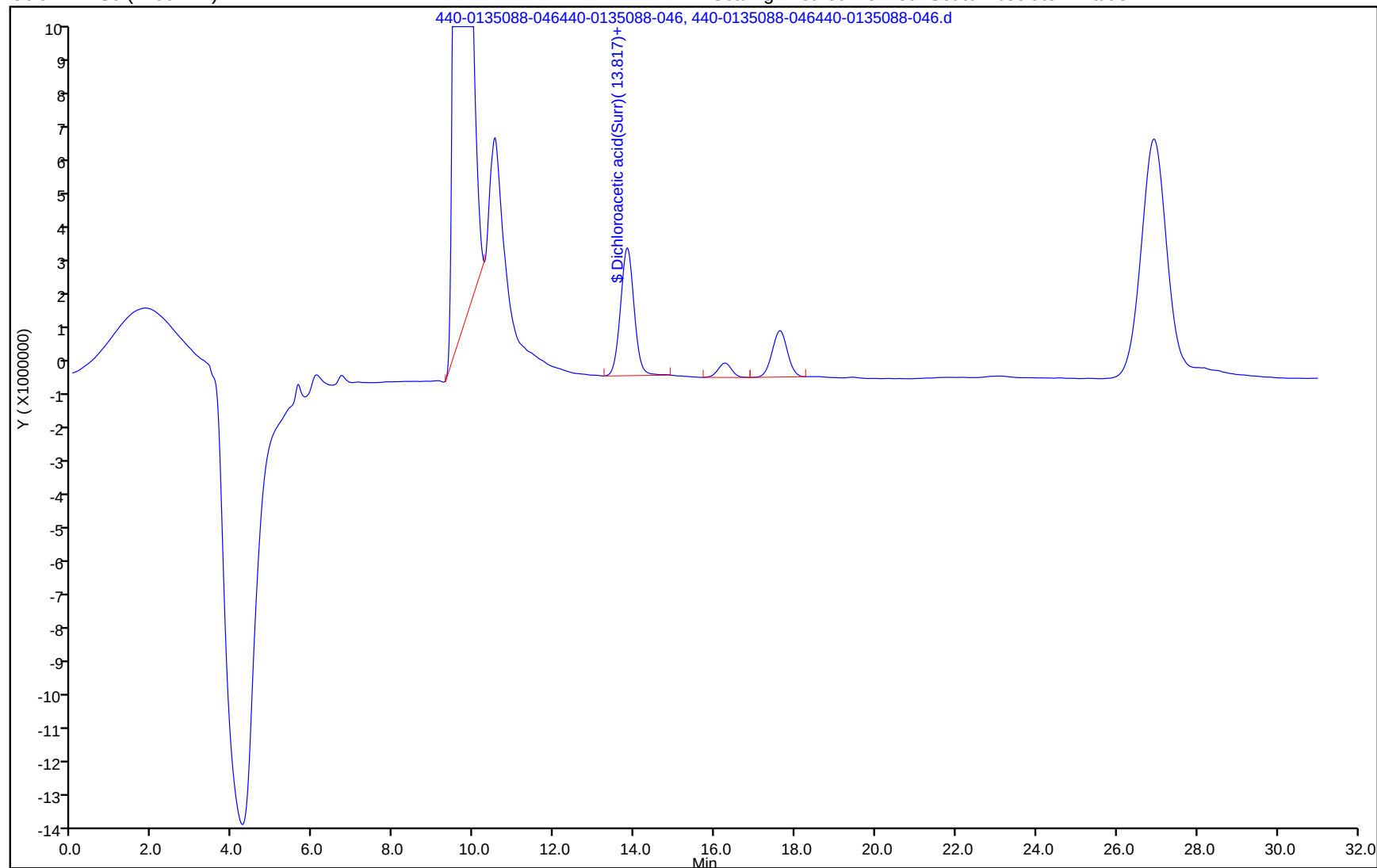
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-1221

Report Date: 09-Jul-2020 07:34:08

Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-046440-0135088-046.d
 Lims ID: 440-268223-C-4
 Client ID: KAFB-106028-WR-post
 Sample Type: Client
 Inject. Date: 09-Jul-2020 06:49:00 ALS Bottle#: 0 Worklist Smp#: 46
 Injection Vol: 1.0 ul Dil. Factor: 10.0000
 Sample Info: 440-0135088-046
 Misc. Info.: 22888 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 09-Jul-2020 08:26:39 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1007

First Level Reviewer: zakhrabov

Date: 09-Jul-2020 07:34:08

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1064.7	1071.48

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: KAFB-106239-WR-pre Lab Sample ID: 440-268223-5
 Matrix: Water Lab File ID: 440-0135088-007440-0135088-007
 Analysis Method: 300.1B Date Collected: 06/25/2020 10:30
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 07/08/2020 07:46
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 615752 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
15541-45-4	Bromate	ND		5.0	1.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	102		90-115

Report Date: 08-Jul-2020 08:47:33

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-007440-0135088-007.d
 Lims ID: 440-268223-C-5
 Client ID: KAFB-106239-WR-pre
 Sample Type: Client
 Inject. Date: 08-Jul-2020 07:46:00 ALS Bottle#: 0 Worklist Smp#: 7
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135088-007
 Misc. Info.: 7 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 08-Jul-2020 08:47:29 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1066

First Level Reviewer: zakhrabov

Date: 08-Jul-2020 08:47:33

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/l	Flags
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\$ 6 Dichloroacetic acid(Surr)	13.692	13.842	-0.150	82964602	1015.6	M
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QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

WCDCA_00081	Amount Added: 10.00	Units: uL	Run Reagent
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Report Date: 08-Jul-2020 08:47:33

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-007440-0135088-007.d

Injection Date: 08-Jul-2020 07:46:00

Instrument ID: IC-8

Operator ID:

Lims ID: 440-268223-C-5

Lab Sample ID: 440-268223-5

Worklist Smp#: 7

Client ID: KAFB-106239-WR-pre

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

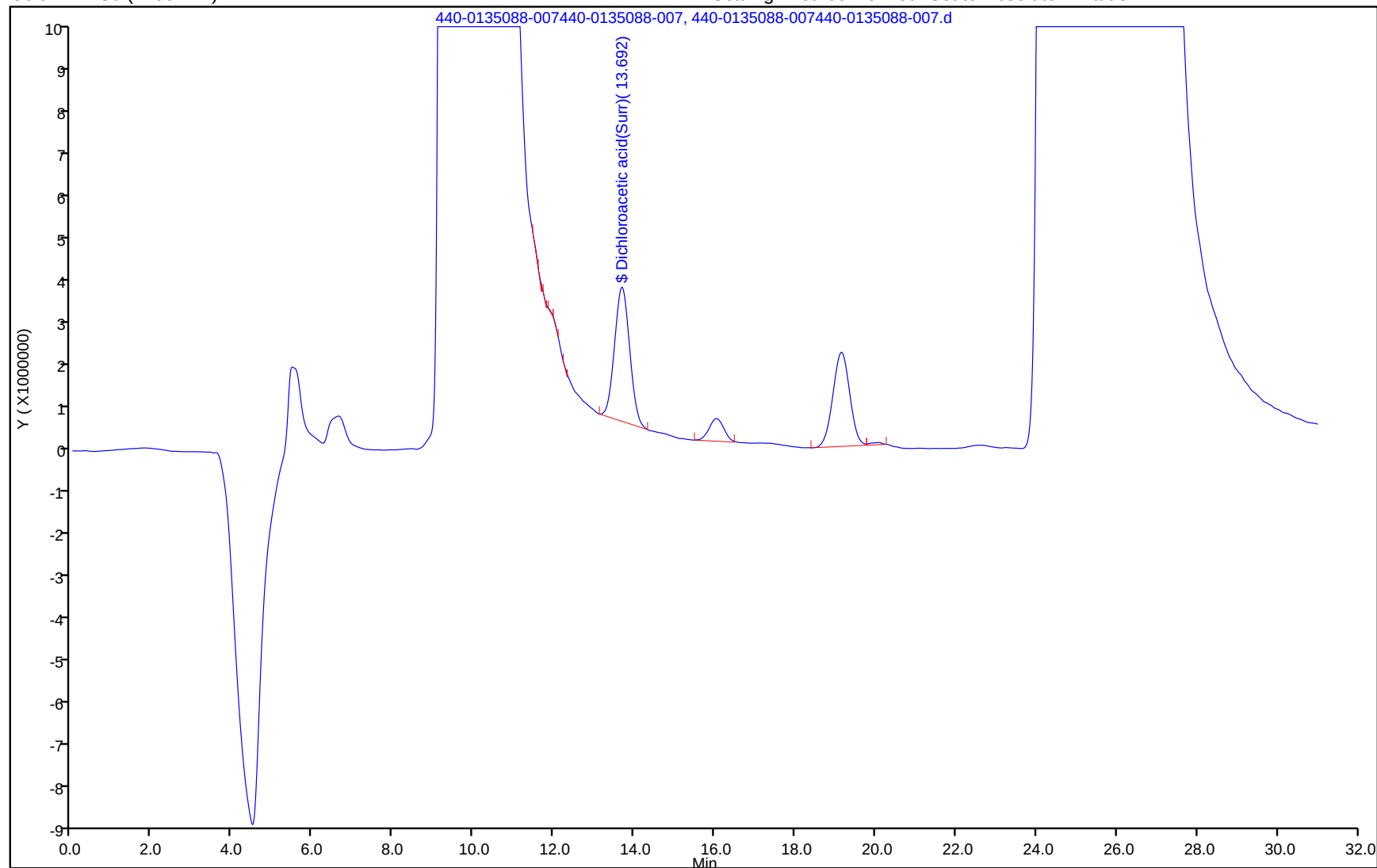
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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SWMUs ST-106/SS-111

I-5-1225

Report Date: 08-Jul-2020 08:47:33

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-007440-0135088-007.d
 Lims ID: 440-268223-C-5
 Client ID: KAFB-106239-WR-pre
 Sample Type: Client
 Inject. Date: 08-Jul-2020 07:46:00 ALS Bottle#: 0 Worklist Smp#: 7
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135088-007
 Misc. Info.: 7 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 08-Jul-2020 08:47:29 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1066

First Level Reviewer: zakhrabov

Date: 08-Jul-2020 08:47:33

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1015.6	102.20

Report Date: 08-Jul-2020 08:47:33

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

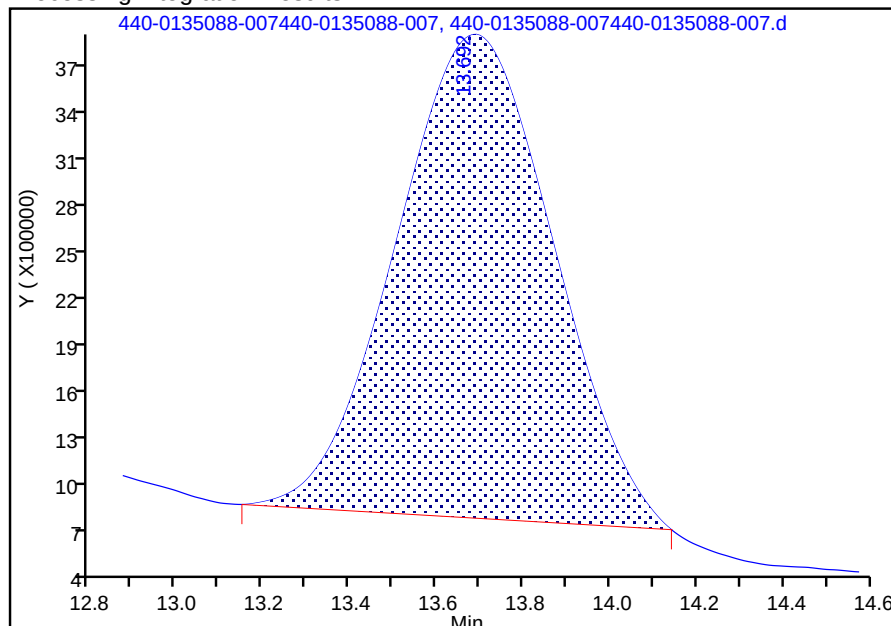
Data File:	\\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-007440-0135088-007.d		
Injection Date:	08-Jul-2020 07:46:00	Instrument ID:	IC-8
Lims ID:	440-268223-C-5	Lab Sample ID:	440-268223-5
Client ID:	KAFB-106239-WR-pre		
Operator ID:		ALS Bottle#:	0
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	300.1_C8	Limit Group:	IC-300.1_28D
Column:	AS9 (4.00 mm)	Detector:	Ch-A-20110816009
		Worklist Smp#:	7

\$ 6 Dichloroacetic acid(Surr), CAS: 79-43-6

Signal: 1

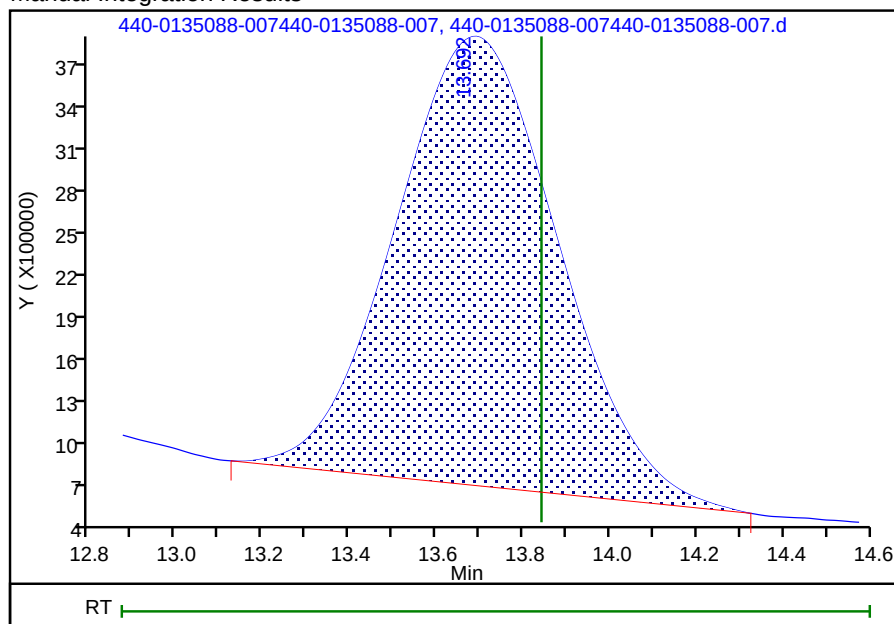
RT: 13.69
Area: 77796342
Amount: 952.3426
Amount Units: ug/l

Processing Integration Results



RT: 13.69
Area: 82964602
Amount: 1015.6097
Amount Units: ug/l

Manual Integration Results



Reviewer: zakhrabov, 08-Jul-2020 08:47:22

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

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FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
SDG No.: Kirtland AFB New Mexico
Client Sample ID: KAFB-106239-WR-pre Lab Sample ID: 440-268223-5
Matrix: Water Lab File ID: 440-0135088-007440-0135088-007
Analysis Method: 300.1B Date Collected: 06/25/2020 10:30
Extraction Method: _____ Date Extracted: _____
Sample wt/vol: 5(mL) Date Analyzed: 07/08/2020 07:46
Con. Extract Vol.: _____ Dilution Factor: 1
Injection Volume: 1(uL) GC Column: AS9-HC ID: 4(mm)
% Moisture: _____ GPC Cleanup: (Y/N) N
Analysis Batch No.: 615753 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14998-27-7	Chlorite	ND		20	4.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	102		90-115

Report Date: 08-Jul-2020 08:47:33

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-007440-0135088-007.d
 Lims ID: 440-268223-C-5
 Client ID: KAFB-106239-WR-pre
 Sample Type: Client
 Inject. Date: 08-Jul-2020 07:46:00 ALS Bottle#: 0 Worklist Smp#: 7
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135088-007
 Misc. Info.: 7 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 08-Jul-2020 08:47:29 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1066

First Level Reviewer: zakhrabov

Date: 08-Jul-2020 08:47:33

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/l	Flags
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\$ 6 Dichloroacetic acid(Surr)	13.692	13.842	-0.150	82964602	1015.6	M
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QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

WCDCA_00081	Amount Added: 10.00	Units: uL	Run Reagent
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Report Date: 08-Jul-2020 08:47:33

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-007440-0135088-007.d

Injection Date: 08-Jul-2020 07:46:00

Instrument ID: IC-8

Operator ID:

Lims ID: 440-268223-C-5

Lab Sample ID: 440-268223-5

Worklist Smp#: 7

Client ID: KAFB-106239-WR-pre

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

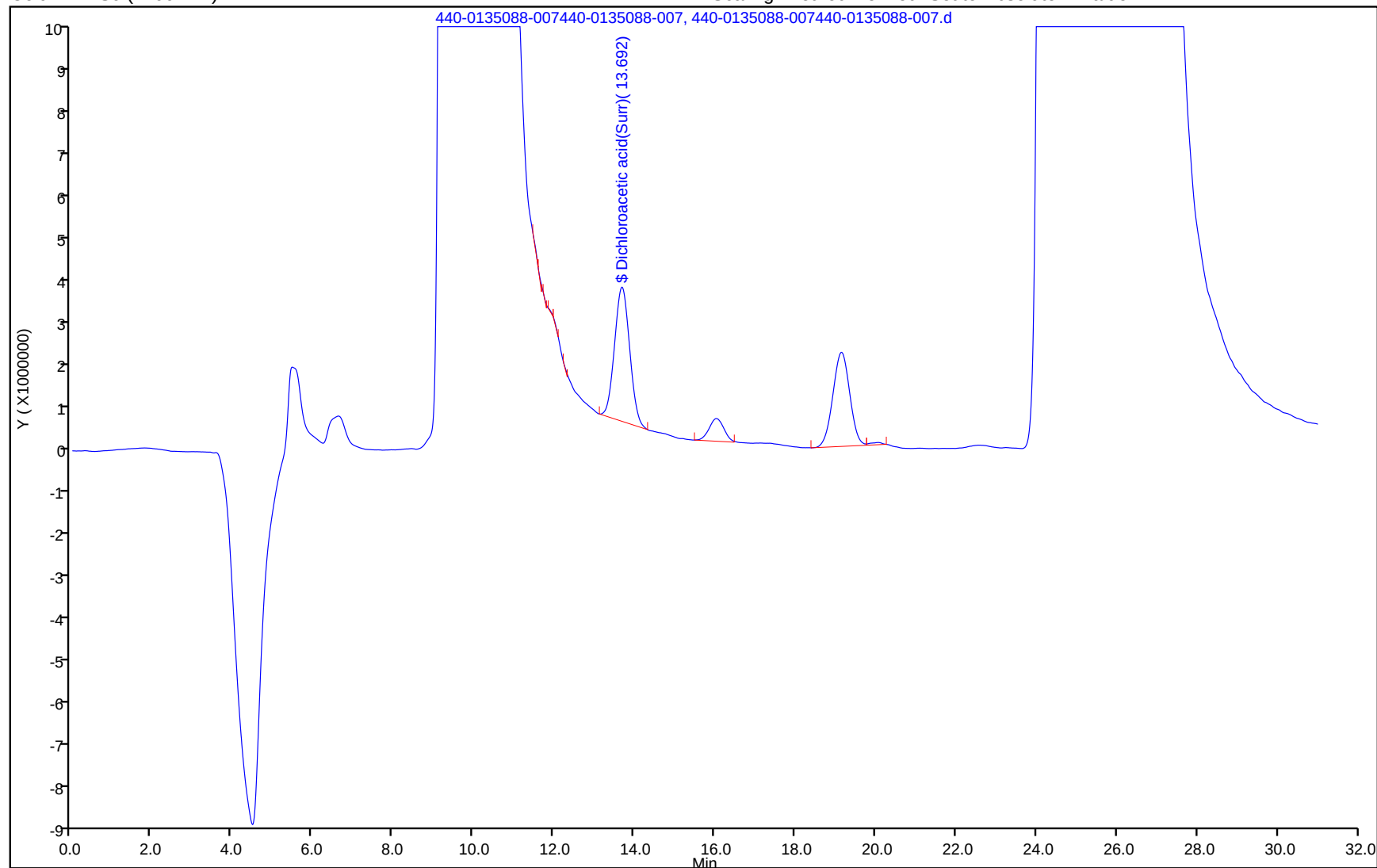
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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SWMUs ST-106/SS-111

I-5-1230

Report Date: 08-Jul-2020 08:47:33

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-007440-0135088-007.d
 Lims ID: 440-268223-C-5
 Client ID: KAFB-106239-WR-pre
 Sample Type: Client
 Inject. Date: 08-Jul-2020 07:46:00 ALS Bottle#: 0 Worklist Smp#: 7
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135088-007
 Misc. Info.: 7 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 08-Jul-2020 08:47:29 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1066

First Level Reviewer: zakhrabov

Date: 08-Jul-2020 08:47:33

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1015.6	102.20

Report Date: 08-Jul-2020 08:47:33

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

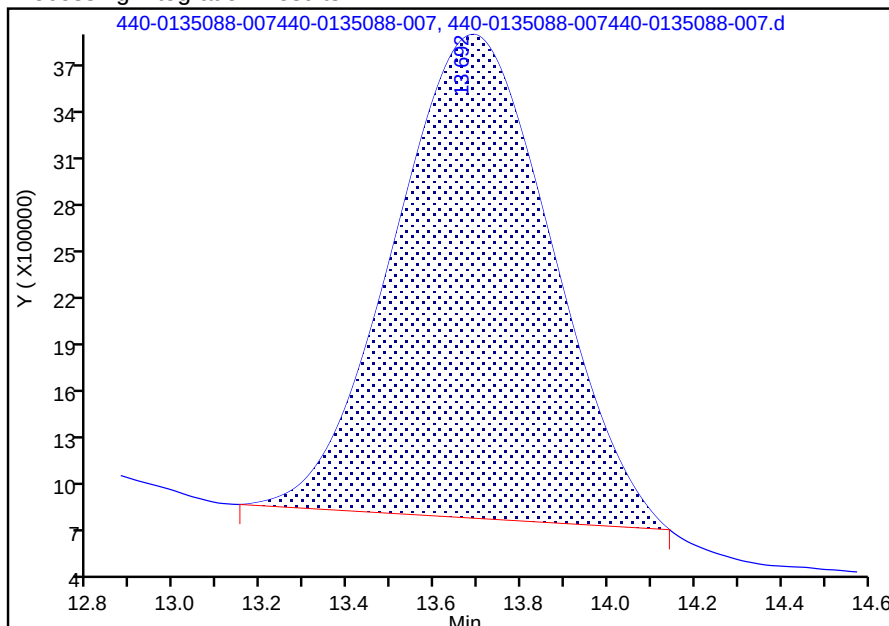
Data File:	\\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-007440-0135088-007.d		
Injection Date:	08-Jul-2020 07:46:00	Instrument ID:	IC-8
Lims ID:	440-268223-C-5	Lab Sample ID:	440-268223-5
Client ID:	KAFB-106239-WR-pre		
Operator ID:		ALS Bottle#:	0
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	300.1_C8	Limit Group:	IC-300.1_14D
Column:	AS9 (4.00 mm)	Detector:	Ch-A-20110816009
		Worklist Smp#:	7

\$ 6 Dichloroacetic acid(Surr), CAS: 79-43-6

Signal: 1

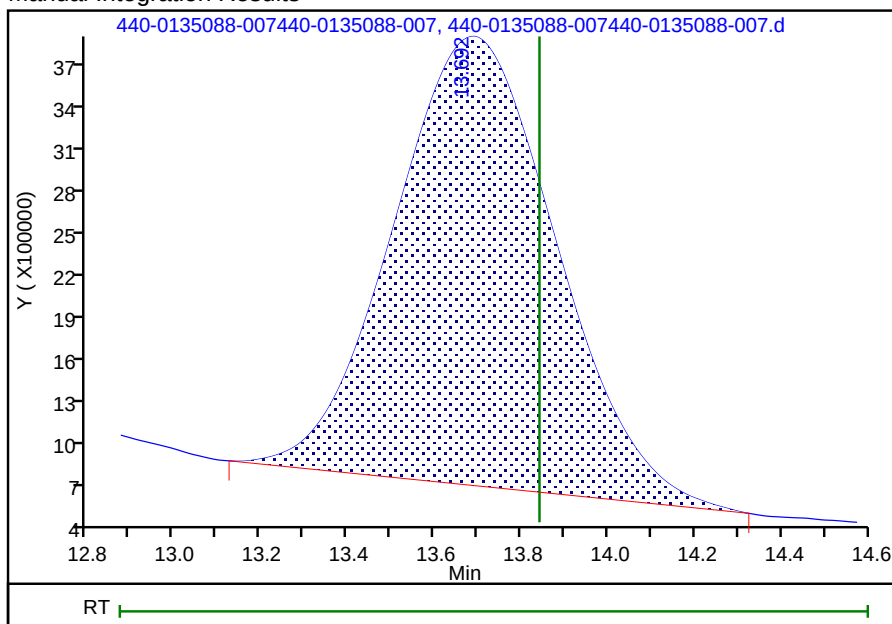
RT: 13.69
Area: 77796342
Amount: 952.3426
Amount Units: ug/l

Processing Integration Results



RT: 13.69
Area: 82964602
Amount: 1015.6097
Amount Units: ug/l

Manual Integration Results



Reviewer: zakhrabov, 08-Jul-2020 08:47:22

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

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FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: KAFB-106239-WR-post Lab Sample ID: 440-268223-6
 Matrix: Water Lab File ID: 440-0135020-041440-0135020-041
 Analysis Method: 300.1B Date Collected: 06/29/2020 09:30
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 07/07/2020 05:22
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 615429 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
15541-45-4	Bromate	ND		5.0	1.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	102		90-115

Report Date: 07-Jul-2020 06:31:27

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-041440-0135020-041.d
 Lims ID: 440-268223-B-6
 Client ID: KAFB-106239-WR-post
 Sample Type: Client
 Inject. Date: 07-Jul-2020 05:22:00 ALS Bottle#: 0 Worklist Smp#: 41
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135020-041
 Misc. Info.: 31188 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 07-Jul-2020 06:59:02 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1026

First Level Reviewer: zakhrabov

Date: 07-Jul-2020 06:31:27

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/l	Flags
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\$ 6 Dichloroacetic acid(Surr) 13.792 13.842 -0.050 82761551 1013.1

Reagents:

WCDCA_00081 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 07-Jul-2020 06:31:27

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-041\440-0135020-041.d

Injection Date: 07-Jul-2020 05:22:00

Instrument ID: IC-8

Operator ID:

Lims ID: 440-268223-B-6

Lab Sample ID: 440-268223-6

Worklist Smp#: 41

Client ID: KAFB-106239-WR-post

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

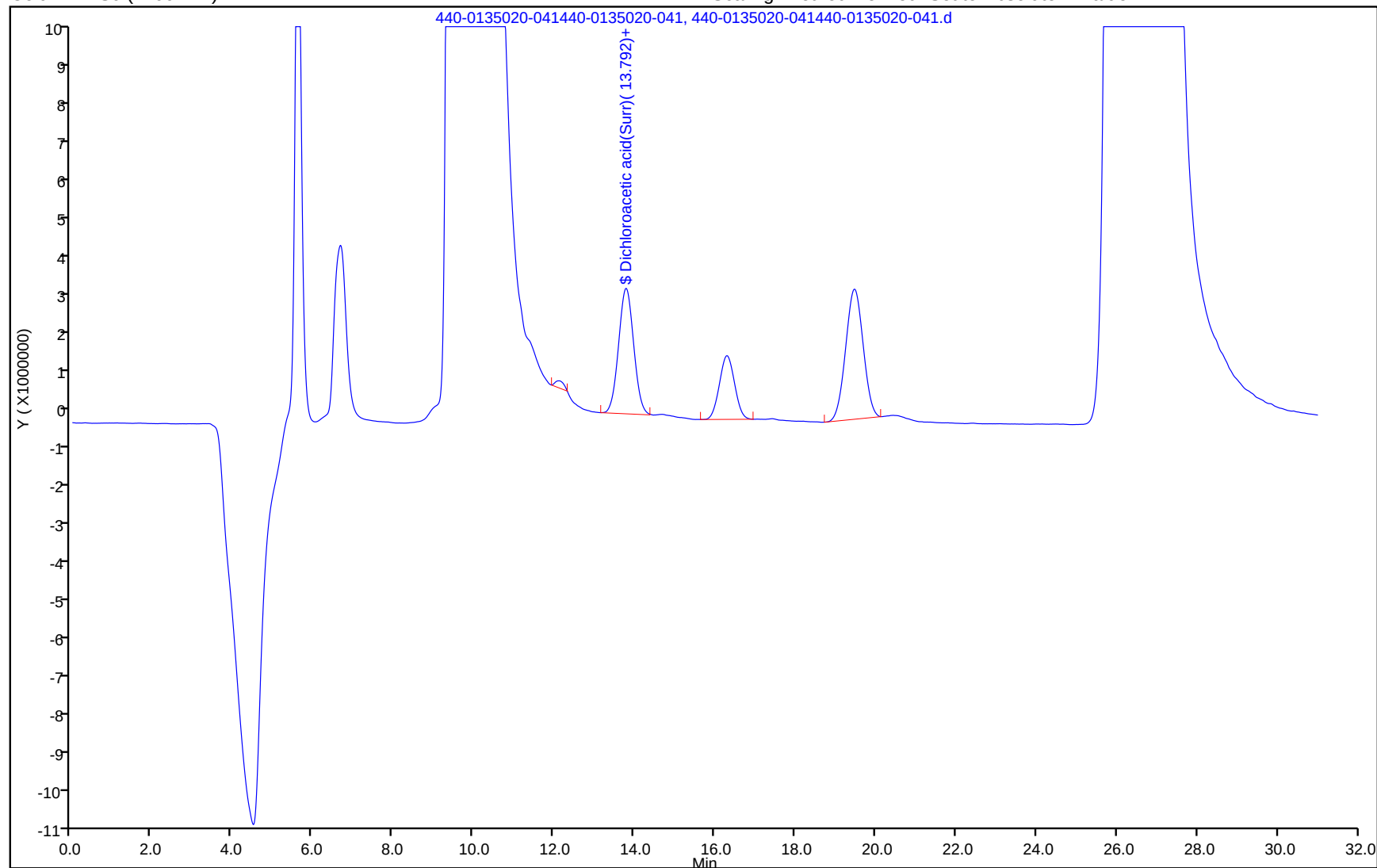
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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Report Date: 07-Jul-2020 06:31:27

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-041440-0135020-041.d
 Lims ID: 440-268223-B-6
 Client ID: KAFB-106239-WR-post
 Sample Type: Client
 Inject. Date: 07-Jul-2020 05:22:00 ALS Bottle#: 0 Worklist Smp#: 41
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135020-041
 Misc. Info.: 31188 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 07-Jul-2020 06:59:02 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1026

First Level Reviewer: zakhrabov

Date: 07-Jul-2020 06:31:27

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1013.1	101.95

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: KAFB-106239-WR-post Lab Sample ID: 440-268223-6
 Matrix: Water Lab File ID: 440-0135020-041440-0135020-041
 Analysis Method: 300.1B Date Collected: 06/29/2020 09:30
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 07/07/2020 05:22
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 615430 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14998-27-7	Chlorite	ND		20	4.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	102		90-115

Report Date: 07-Jul-2020 06:31:27

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-041440-0135020-041.d
 Lims ID: 440-268223-B-6
 Client ID: KAFB-106239-WR-post
 Sample Type: Client
 Inject. Date: 07-Jul-2020 05:22:00 ALS Bottle#: 0 Worklist Smp#: 41
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135020-041
 Misc. Info.: 31188 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 07-Jul-2020 06:59:02 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1026

First Level Reviewer: zakhrabov

Date: 07-Jul-2020 06:31:27

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/l	Flags
----------	--------------	------------------	------------------	----------	-------------------	-------

\$ 6 Dichloroacetic acid(Surr) 13.792 13.842 -0.050 82761551 1013.1

Reagents:

WCDCA_00081 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 07-Jul-2020 06:31:27

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-041\440-0135020-041.d

Injection Date: 07-Jul-2020 05:22:00

Instrument ID: IC-8

Operator ID:

Lims ID: 440-268223-B-6

Lab Sample ID: 440-268223-6

Worklist Smp#: 41

Client ID: KAFB-106239-WR-post

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

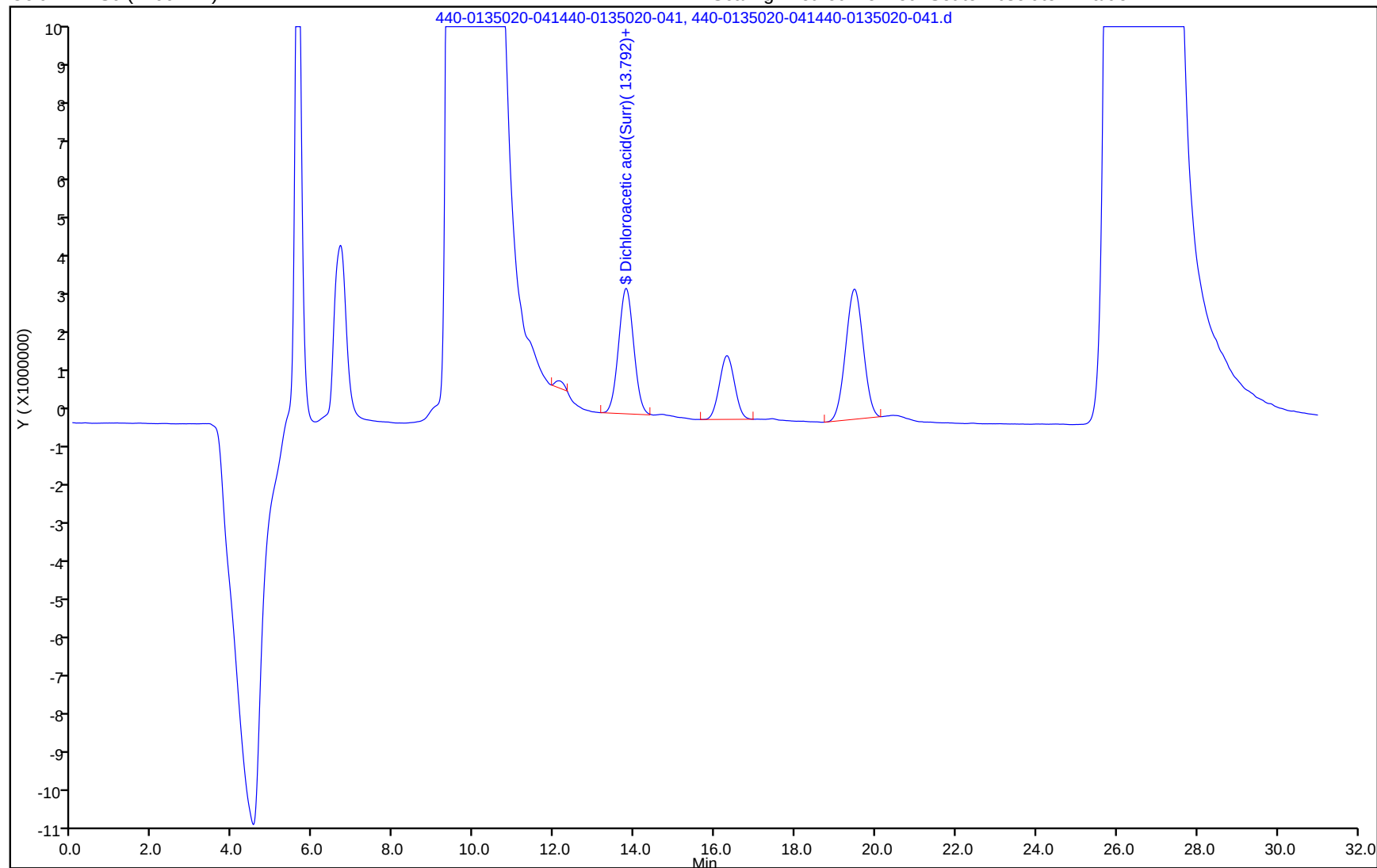
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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SWMUs ST-106/SS-111

I-5-1239

Report Date: 07-Jul-2020 06:31:27

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-041440-0135020-041.d
 Lims ID: 440-268223-B-6
 Client ID: KAFB-106239-WR-post
 Sample Type: Client
 Inject. Date: 07-Jul-2020 05:22:00 ALS Bottle#: 0 Worklist Smp#: 41
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135020-041
 Misc. Info.: 31188 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 07-Jul-2020 06:59:02 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1026

First Level Reviewer: zakhrabov

Date: 07-Jul-2020 06:31:27

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1013.1	101.95

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-268223-1 Analy Batch No.: 609717
 SDG No.: Kirtland AFB New Mexico
 Instrument ID: IC-8 GC Column: AS9-HC ID: 4 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 05/22/2020 09:16 Calibration End Date: 05/22/2020 12:17 Calibration ID: 23746

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD0 440-609717/4	440-0133563-004.d
Level 2	STD1 440-609717/5	440-0133563-005.d
Level 3	STD2 440-609717/6	440-0133563-006.d
Level 4	STD3 440-609717/7	440-0133563-007.d
Level 5	STD4 440-609717/8	440-0133563-008.d
Level 6	STD5 440-609717/9	440-0133563-009.d

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6					RT WINDOW	AVG RT
Bromate		8.609	8.575	8.600	8.600	8.592					0.000 - 0.000	8.595
Bromide		16.917	16.859	16.884	16.875	16.884					0.000 - 0.000	16.884
Chlorate		18.517	18.475	18.517	18.500	18.509					0.000 - 0.000	18.504
Dichloroacetic acid(Surr)	14.367	14.392	14.375	14.392	14.392	14.375					13.385 - 15.399	14.382

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Irvine Job No.: 440-268223-1 Analy Batch No.: 609717
 SDG No.: Kirtland AFB New Mexico
 Instrument ID: IC-8 GC Column: AS9-HC ID: 4 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 05/22/2020 09:16 Calibration End Date: 05/22/2020 12:17 Calibration ID: 23746

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD0 440-609717/4	440-0133563-004.d
Level 2	STD1 440-609717/5	440-0133563-005.d
Level 3	STD2 440-609717/6	440-0133563-006.d
Level 4	STD3 440-609717/7	440-0133563-007.d
Level 5	STD4 440-609717/8	440-0133563-008.d
Level 6	STD5 440-609717/9	440-0133563-009.d

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3	LVL 4		B	M1	M2								
Bromate	89010	74229 86599	73408	88396	Lin	-40560.796	87544.6586							0.9990		0.9950
Bromide	153010	143419 157859	152654	151412	Lin	-902648.20	157862.755							1.0000		0.9950
Chlorate	142273	147986 146987	131947	133801	Lin	-528756.78	147219.576							0.9990		0.9950
Dichloroacetic acid(Surr)	81472 82873	79911 82419	82160	81302	Ave		81689.4523				1.3		15.0			

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Irvine Job No.: 440-268223-1 Analy Batch No.: 609717
SDG No.: Kirtland AFB New Mexico
Instrument ID: IC-8 GC Column: AS9-HC ID: 4 (mm) Heated Purge: (Y/N) N
Calibration Start Date: 05/22/2020 09:16 Calibration End Date: 05/22/2020 12:17 Calibration ID: 23746

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD0 440-609717/4	440-0133563-004.d
Level 2	STD1 440-609717/5	440-0133563-005.d
Level 3	STD2 440-609717/6	440-0133563-006.d
Level 4	STD3 440-609717/7	440-0133563-007.d
Level 5	STD4 440-609717/8	440-0133563-008.d
Level 6	STD5 440-609717/9	440-0133563-009.d

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
		LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Bromate	Lin	8659858	371147	917598	2209892	4450487	0.000000 100	5.00	12.5	25.0	50.0
Bromide	Lin	157858867	7170938	19081776	37853087	76505247	0.000000 1000	50.0	125	250	500
Chlorate	Lin	58794780	2959710	6597329	13380104	28454610	0.000000 400	20.0	50.0	100	200
Dichloroacetic acid(Surr)	Ave	80960103 81900670	79408704	81642881	80790497	82351340	994 994	994	994	994	994

Curve Type Legend:

Ave = Average
Lin = Linear

Report Date: 23-May-2020 06:32:07

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-004.d
 Lims ID: STD0
 Client ID:
 Sample Type: IC Calib Level: 0
 Inject. Date: 22-May-2020 09:16:00 ALS Bottle#: 0 Worklist Smp#: 4
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0133563-004
 Misc. Info.: 4 EB
 Operator ID: Instrument ID: IC-8
 Sublist: chrom-300.1_C8*sub2
 Method: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 23-May-2020 06:32:07 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1019

First Level Reviewer: zakhrabov

Date: 22-May-2020 09:59:03

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
----------	--------------	------------------	------------------	----------	-----------------	-------------------	-------

\$ 6 Dichloroacetic acid(Surr) 14.367 14.392 -0.025 80960103 993.7 991.1

Reagents:

WC3001LCS_00089

Amount Added: 0.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 23-May-2020 06:32:07

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-004.d

Injection Date: 22-May-2020 09:16:00

Instrument ID: IC-8

Operator ID:

Lims ID: STD0

Worklist Smp#: 4

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

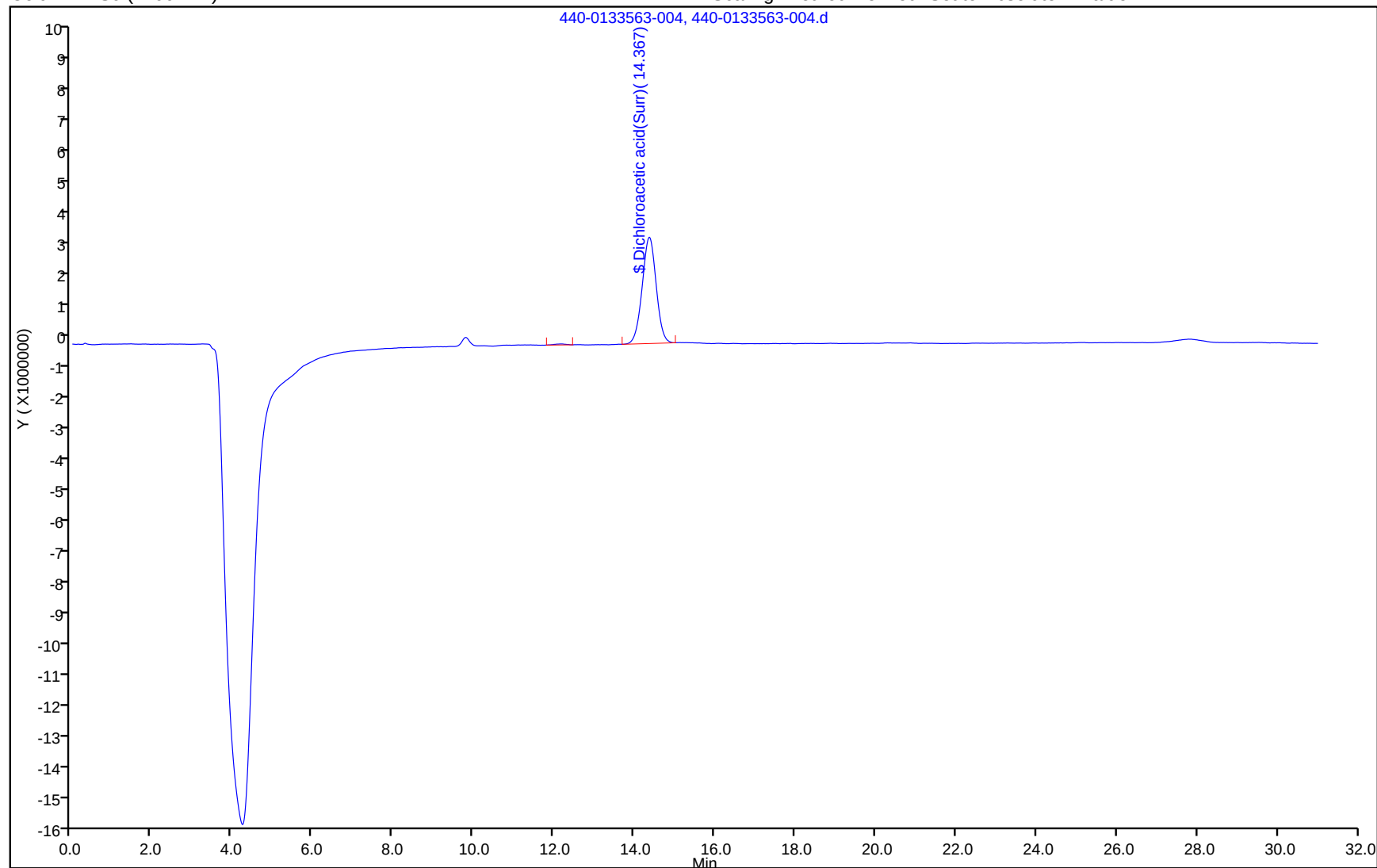
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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I-5-1245

Report Date: 23-May-2020 06:32:07

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-005.d
 Lims ID: STD1
 Client ID:
 Sample Type: IC Calib Level: 1
 Inject. Date: 22-May-2020 09:52:00 ALS Bottle#: 0 Worklist Smp#: 5
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0133563-005
 Misc. Info.: 5 EB
 Operator ID: Instrument ID: IC-8
 Sublist: chrom-300.1_C8*sub2
 Method: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 23-May-2020 06:32:07 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1019

First Level Reviewer: zakhrabov

Date: 22-May-2020 10:41:13

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.467	7.467	0.000	2946805	NC	NC	
3 Bromate	8.609	8.609	0.000	371147	5.00	4.70	
\$ 6 Dichloroacetic acid(Surr)	14.392	14.392	0.000	79408704	993.7	972.1	
4 Bromide	16.917	16.917	0.000	7170938	50.0	51.1	
2 Chlorate	18.517	18.517	0.000	2959710	20.0	23.7	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WC3001LCS_00089

Amount Added: 25.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 23-May-2020 06:32:07

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-005.d

Injection Date: 22-May-2020 09:52:00

Instrument ID: IC-8

Operator ID:

Lims ID: STD1

Worklist Smp#: 5

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

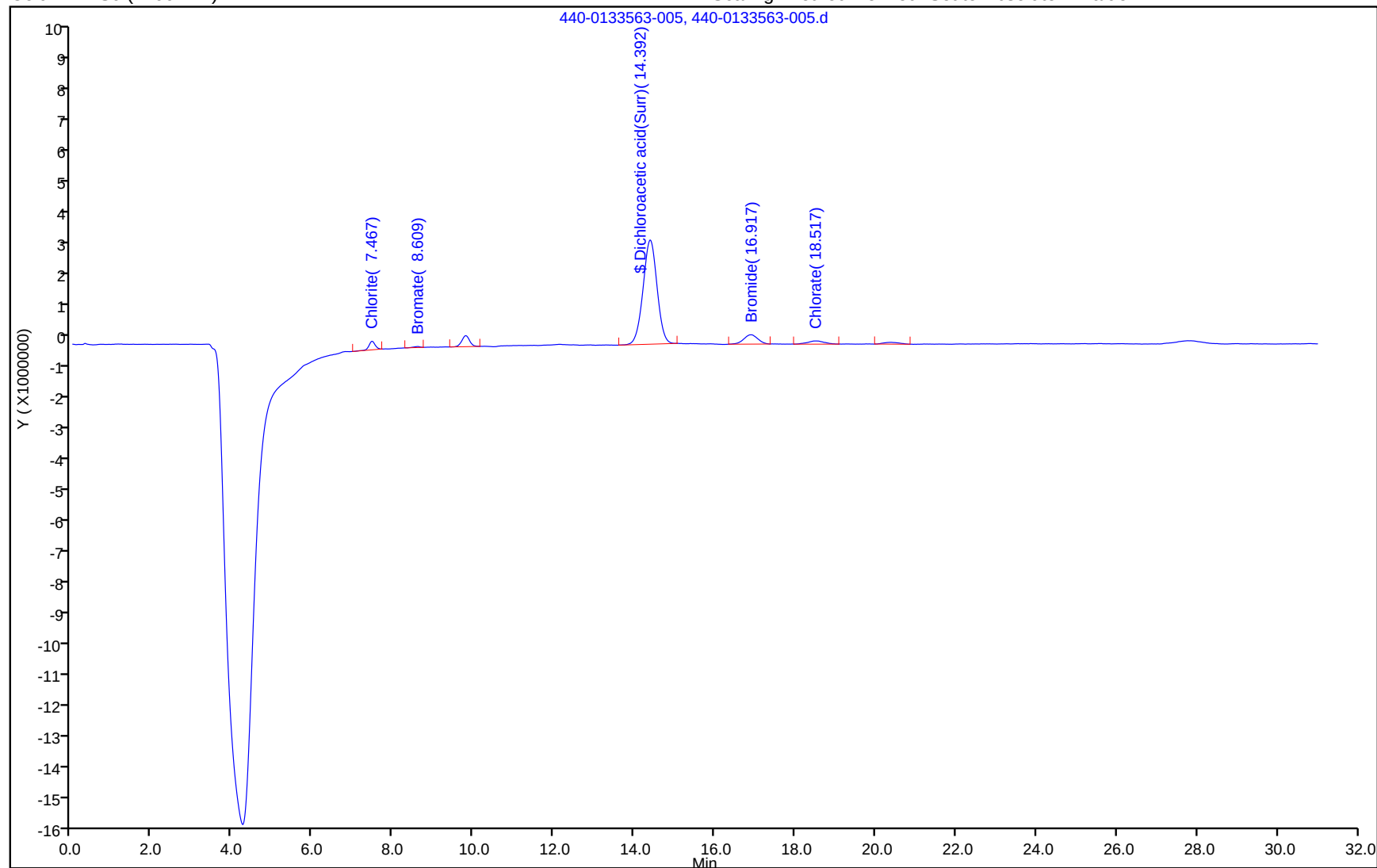
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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I-5-1247

Report Date: 23-May-2020 06:32:08

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-006.d
 Lims ID: STD2
 Client ID:
 Sample Type: IC Calib Level: 2
 Inject. Date: 22-May-2020 10:29:00 ALS Bottle#: 0 Worklist Smp#: 6
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0133563-006
 Misc. Info.: 6 EB
 Operator ID: Instrument ID: IC-8
 Sublist: chrom-300.1_C8*sub2
 Method: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 23-May-2020 06:32:08 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1019

First Level Reviewer: zakhrabov

Date: 22-May-2020 11:17:30

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.450	7.467	-0.017	8247146	NC	NC	
3 Bromate	8.575	8.609	-0.034	917598	12.5	10.9	M
\$ 6 Dichloroacetic acid(Surr)	14.375	14.392	-0.017	81642881	993.7	999.4	
4 Bromide	16.859	16.917	-0.058	19081776	125.0	126.6	
2 Chlorate	18.475	18.517	-0.042	6597329	50.0	48.4	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

WC3001LCS_00089

Amount Added: 62.50

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 23-May-2020 06:32:08

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-006.d

Injection Date: 22-May-2020 10:29:00

Instrument ID: IC-8

Operator ID:

Lims ID: STD2

Worklist Smp#: 6

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

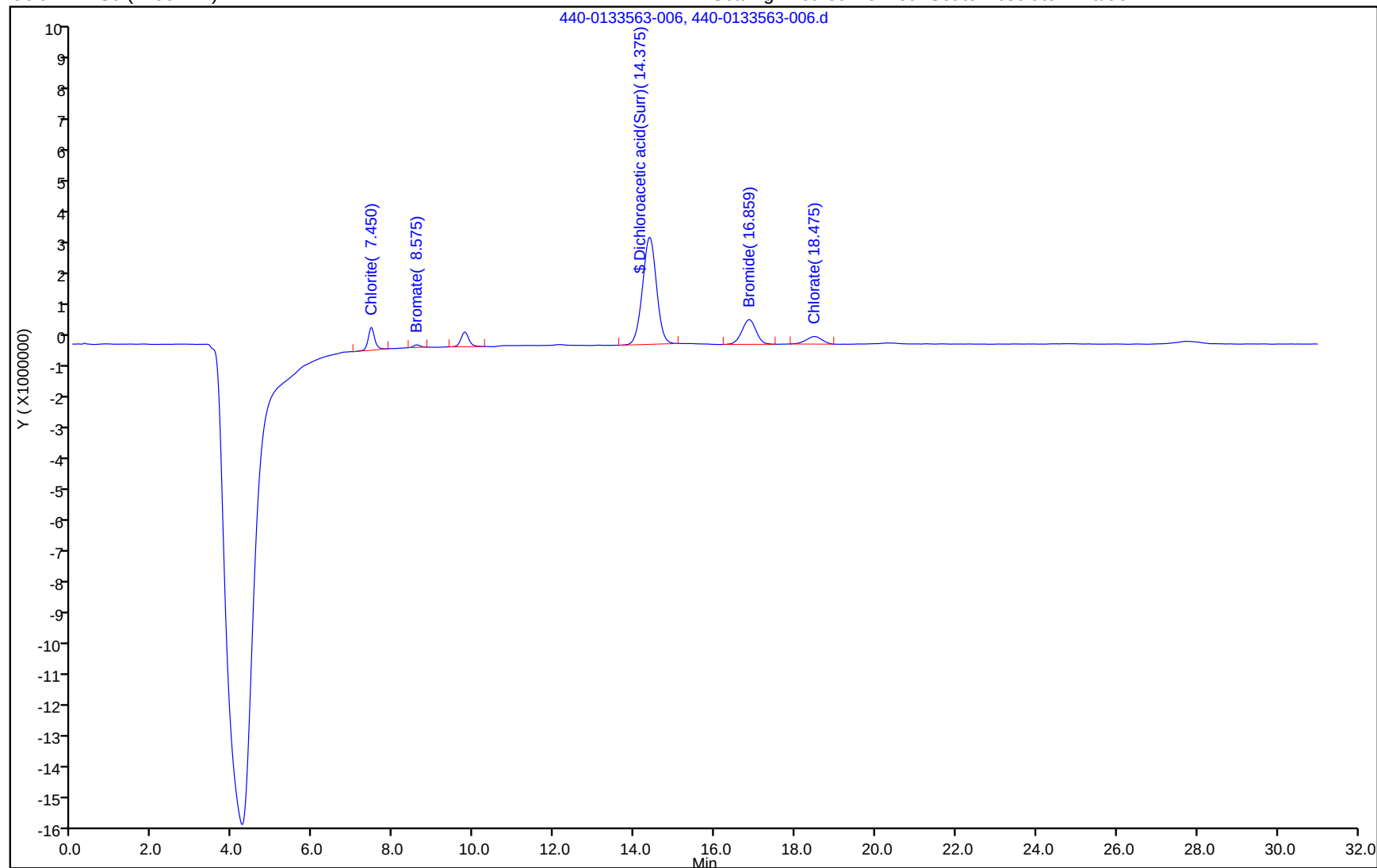
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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SWMUs ST-106/SS-111

I-5-1249

Report Date: 23-May-2020 06:32:08

Chrom Revision: 2.3 05-May-2020 17:48:18
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-006.d

Injection Date: 22-May-2020 10:29:00

Instrument ID: IC-8

Lims ID: STD2

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#: 6

Injection Vol: 1.0 ul

Dil. Factor:

1.0000

Method: 300.1_C8

Limit Group:

IC-300.1_28D

Column: AS9 (4.00 mm)

Detector

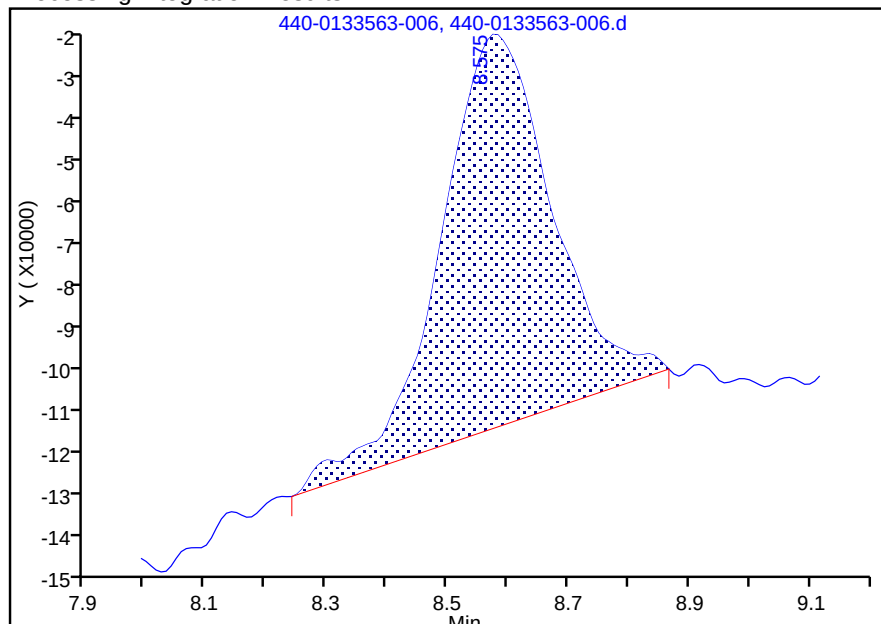
Ch-A-20110816009

3 Bromate, CAS: 15541-45-4

Signal: 1

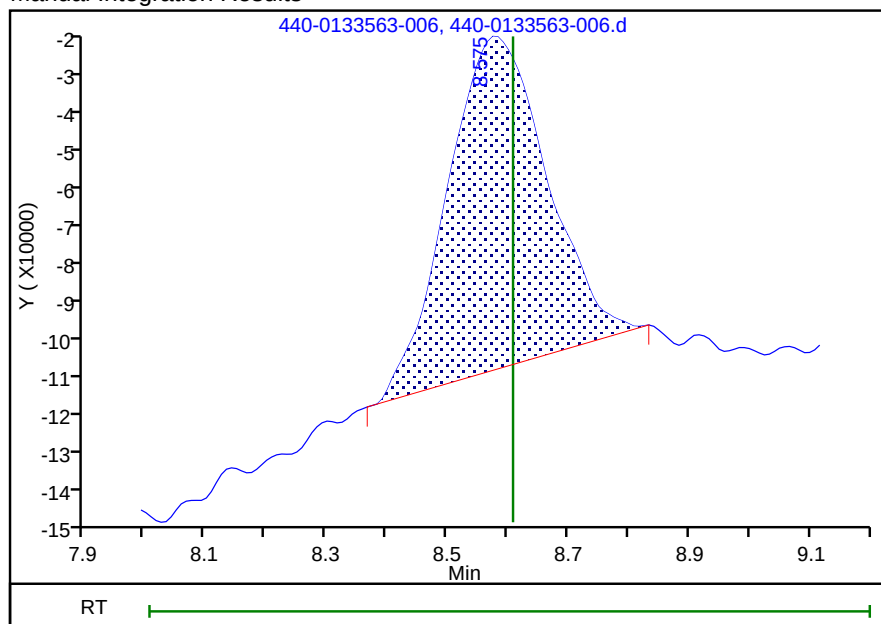
RT: 8.58
 Area: 1101515
 Amount: 12.020824
 Amount Units: ug/l

Processing Integration Results



RT: 8.58
 Area: 917598
 Amount: 10.944800
 Amount Units: ug/l

Manual Integration Results



Reviewer: zakhrabov, 23-May-2020 06:27:26

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

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Report Date: 23-May-2020 06:32:08

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-007.d
 Lims ID: STD3
 Client ID:
 Sample Type: IC Calib Level: 3
 Inject. Date: 22-May-2020 11:05:00 ALS Bottle#: 0 Worklist Smp#: 7
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0133563-007
 Misc. Info.: 7 EB
 Operator ID: Instrument ID: IC-8
 Sublist: chrom-300.1_C8*sub2
 Method: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 23-May-2020 06:32:08 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1019

First Level Reviewer: zakhrabov

Date: 22-May-2020 11:48:43

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.475	7.467	0.008	15786602	NC	NC	
3 Bromate	8.600	8.609	-0.009	2209892	25.0	25.7	M
\$ 6 Dichloroacetic acid(Surr)	14.392	14.392	0.000	80790497	993.7	989.0	
4 Bromide	16.884	16.917	-0.033	37853087	250.0	245.5	
2 Chlorate	18.517	18.517	0.000	13380104	100.0	94.5	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

WC3001LCS_00089 Amount Added: 125.00 Units: uL
 WCDCA_00081 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 23-May-2020 06:32:08

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-007.d

Injection Date: 22-May-2020 11:05:00

Instrument ID: IC-8

Operator ID:

Lims ID: STD3

Worklist Smp#: 7

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

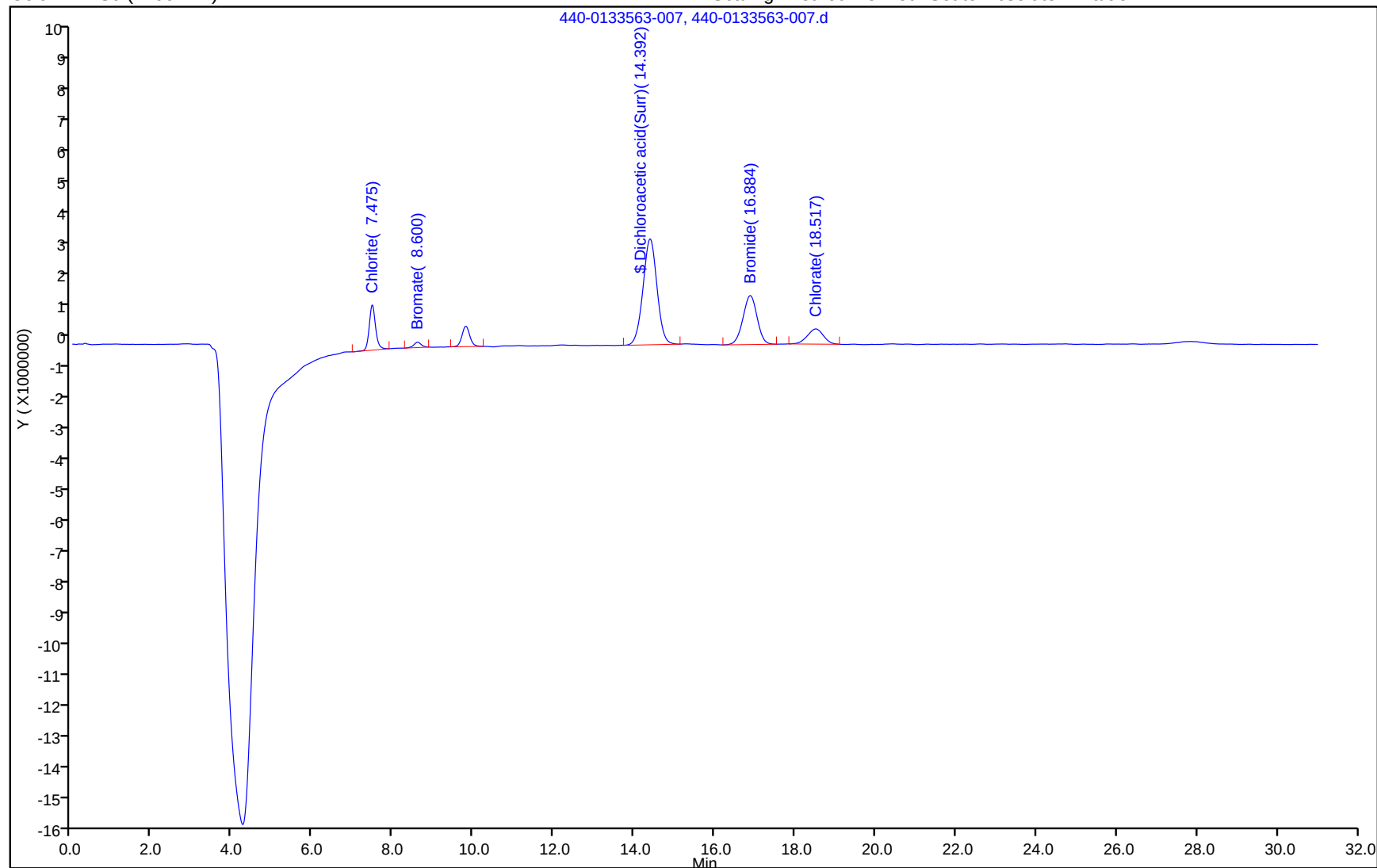
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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SWMUs ST-106/SS-111

I-5-1252

Report Date: 23-May-2020 06:32:08

Chrom Revision: 2.3 05-May-2020 17:48:18
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-007.d

Injection Date: 22-May-2020 11:05:00

Instrument ID: IC-8

Lims ID: STD3

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#: 7

Injection Vol: 1.0 ul

Dil. Factor:

1.0000

Method: 300.1_C8

Limit Group:

IC-300.1_28D

Column: AS9 (4.00 mm)

Detector

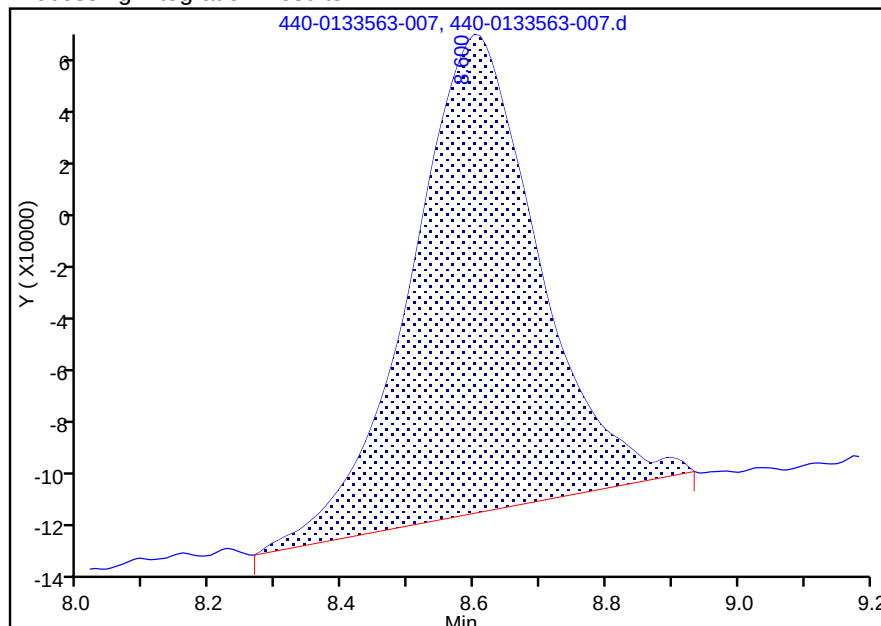
Ch-A-20110816009

3 Bromate, CAS: 15541-45-4

Signal: 1

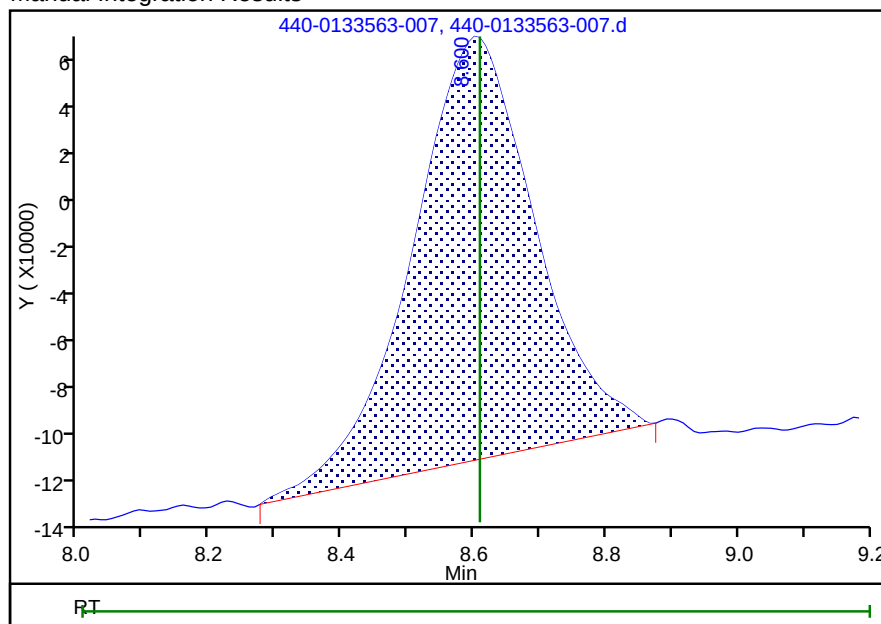
RT: 8.60
 Area: 2348925
 Amount: 26.468669
 Amount Units: ug/l

Processing Integration Results



RT: 8.60
 Area: 2209892
 Amount: 25.706340
 Amount Units: ug/l

Manual Integration Results



Reviewer: zakhrabov, 23-May-2020 06:27:45

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

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Report Date: 23-May-2020 06:32:09

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-008.d
 Lims ID: STD4
 Client ID:
 Sample Type: IC Calib Level: 4
 Inject. Date: 22-May-2020 11:41:00 ALS Bottle#: 0 Worklist Smp#: 8
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0133563-008
 Misc. Info.: 8 EB
 Operator ID: Instrument ID: IC-8
 Sublist: chrom-300.1_C8*sub2
 Method: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 23-May-2020 06:32:09 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1019

First Level Reviewer: zakhrabov

Date: 22-May-2020 12:20:16

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.467	7.467	0.000	31329502	NC	NC	M
3 Bromate	8.600	8.609	-0.009	4450487	50.0	51.3	M
\$ 6 Dichloroacetic acid(Surr)	14.392	14.392	0.000	82351340	993.7	1008.1	
4 Bromide	16.875	16.917	-0.042	76505247	500.0	490.3	Ma
2 Chlorate	18.500	18.517	-0.017	28454610	200.0	196.9	M

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

WC3001LCS_00089

Amount Added: 250.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 23-May-2020 06:32:09

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-008.d

Injection Date: 22-May-2020 11:41:00

Instrument ID: IC-8

Operator ID:

Lims ID: STD4

Worklist Smp#: 8

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

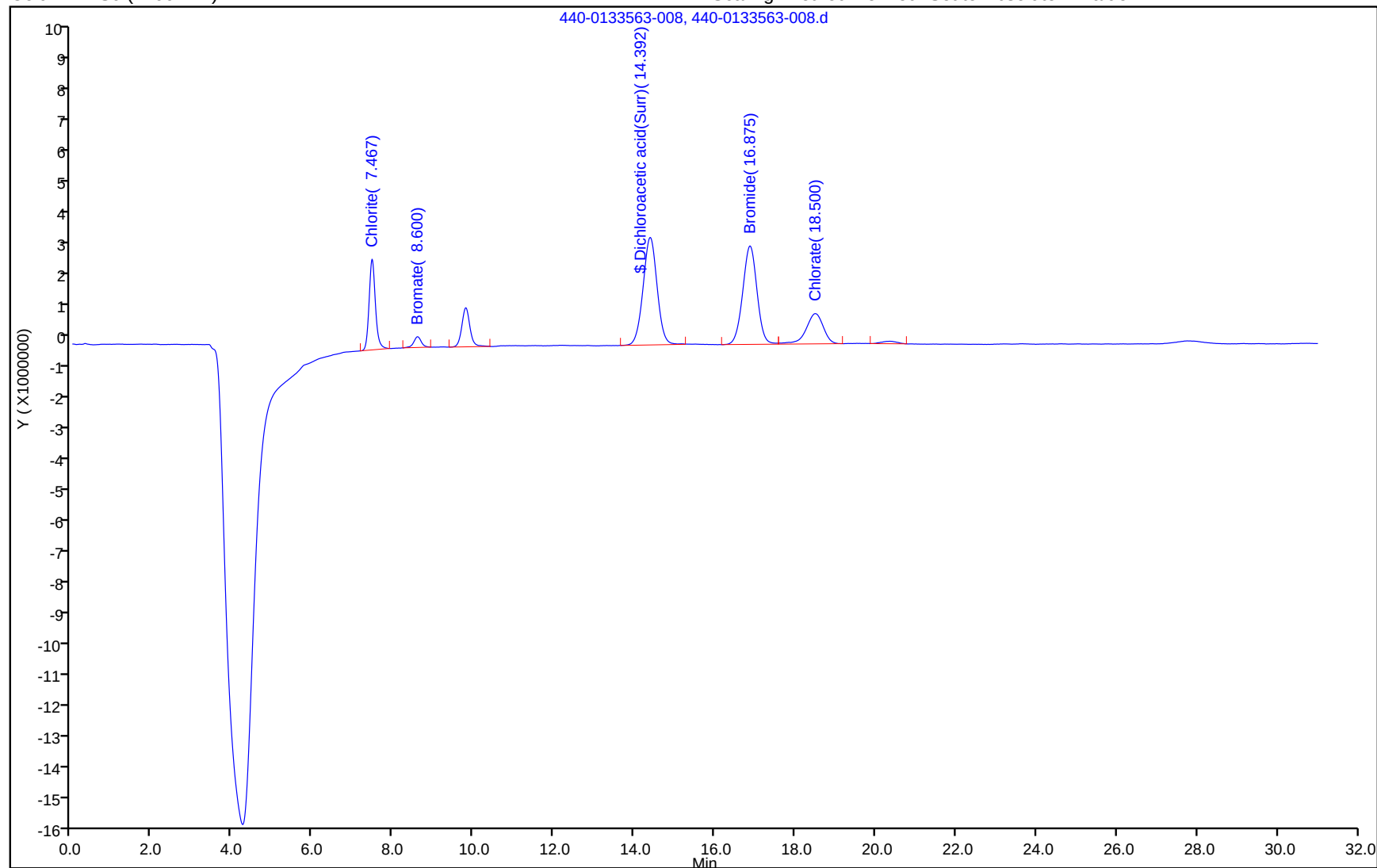
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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September 2020

Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-1255

Report Date: 23-May-2020 06:32:09

Chrom Revision: 2.3 05-May-2020 17:48:18
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-008.d

Injection Date: 22-May-2020 11:41:00

Instrument ID: IC-8

Lims ID: STD4

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#: 8

Injection Vol: 1.0 ul

Dil. Factor:

1.0000

Method: 300.1_C8

Limit Group:

IC-300.1_28D

Column: AS9 (4.00 mm)

Detector

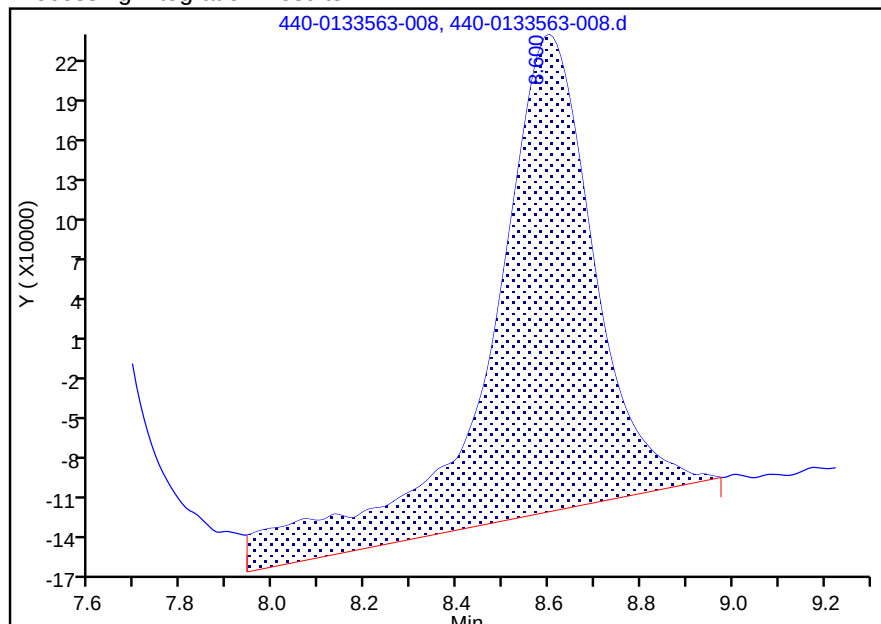
Ch-A-20110816009

3 Bromate, CAS: 15541-45-4

Signal: 1

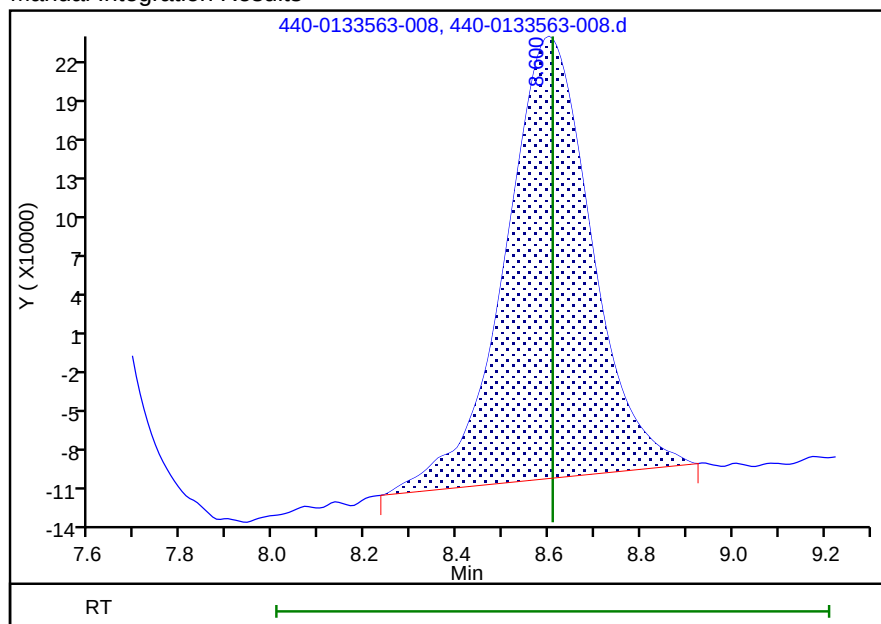
RT: 8.60
 Area: 5651059
 Amount: 64.714893
 Amount Units: ug/l

Processing Integration Results



RT: 8.60
 Area: 4450487
 Amount: 51.300078
 Amount Units: ug/l

Manual Integration Results



Reviewer: zakhrabov, 23-May-2020 06:28:02

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

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September 2020

Report Date: 23-May-2020 06:32:09

Chrom Revision: 2.3 05-May-2020 17:48:18
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-008.d
 Injection Date: 22-May-2020 11:41:00 Instrument ID: IC-8
 Lims ID: STD4
 Client ID:
 Operator ID:
 Injection Vol: 1.0 ul
 Method: 300.1_C8
 Column: AS9 (4.00 mm)

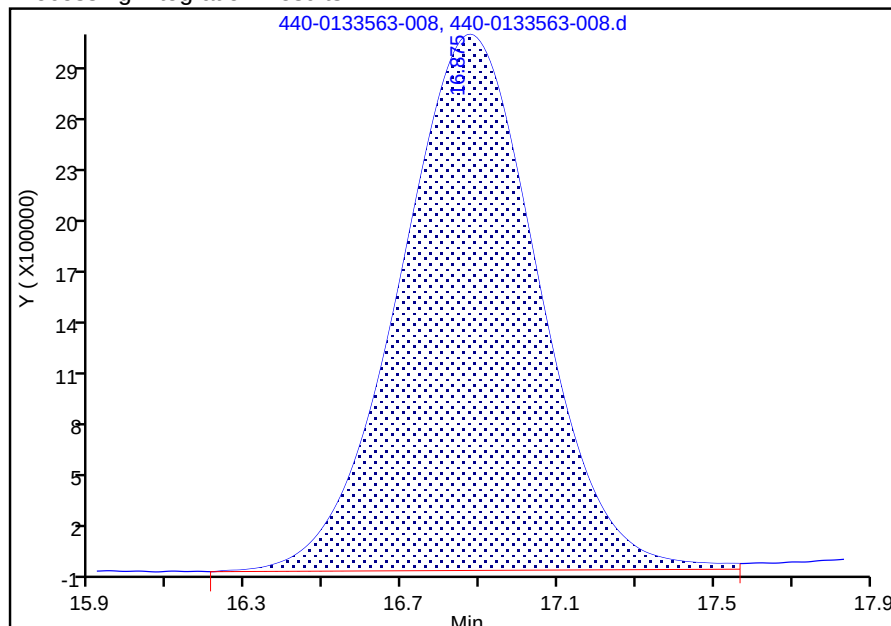
ALS Bottle#: 0 Worklist Smp#: 8
 Dil. Factor: 1.0000
 Limit Group: IC-300.1_28D
 Detector: Ch-A-20110816009

4 Bromide, CAS: 24959-67-9

Signal: 1

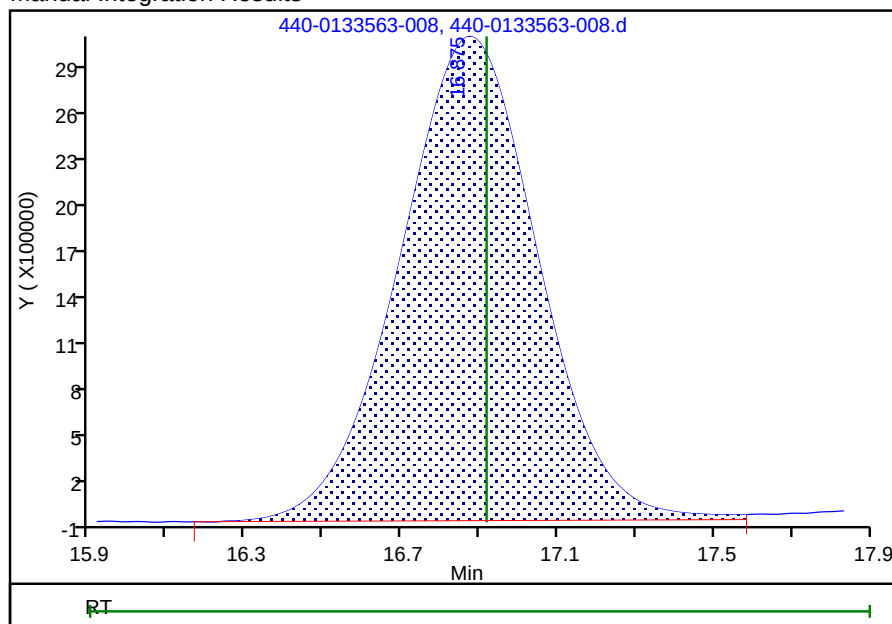
RT: 16.88
 Area: 76615106
 Amount: 490.8995
 Amount Units: ug/l

Processing Integration Results



RT: 16.88
 Area: 76505247
 Amount: 490.3493
 Amount Units: ug/l

Manual Integration Results



Reviewer: zakhrabov, 23-May-2020 06:31:04

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Report Date: 23-May-2020 06:32:09

Chrom Revision: 2.3 05-May-2020 17:48:18
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-008.d
 Injection Date: 22-May-2020 11:41:00 Instrument ID: IC-8
 Lims ID: STD4
 Client ID:
 Operator ID:
 Injection Vol: 1.0 ul
 Method: 300.1_C8
 Column: AS9 (4.00 mm)

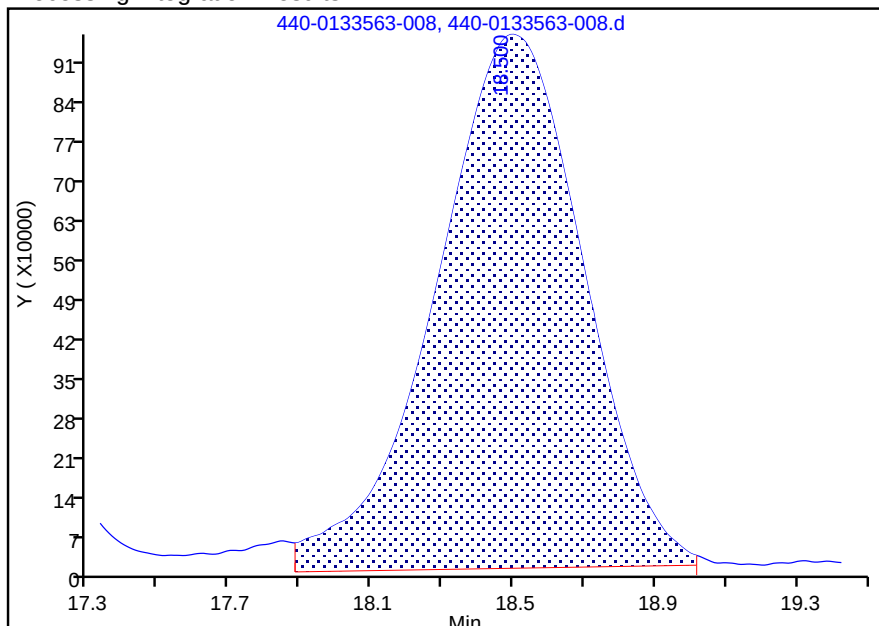
ALS Bottle#: 0 Worklist Smp#: 8
 Dil. Factor: 1.0000
 Limit Group: IC-300.1_28D
 Detector: Ch-A-20110816009

2 Chlorate, CAS: 7790-93-4

Signal: 1

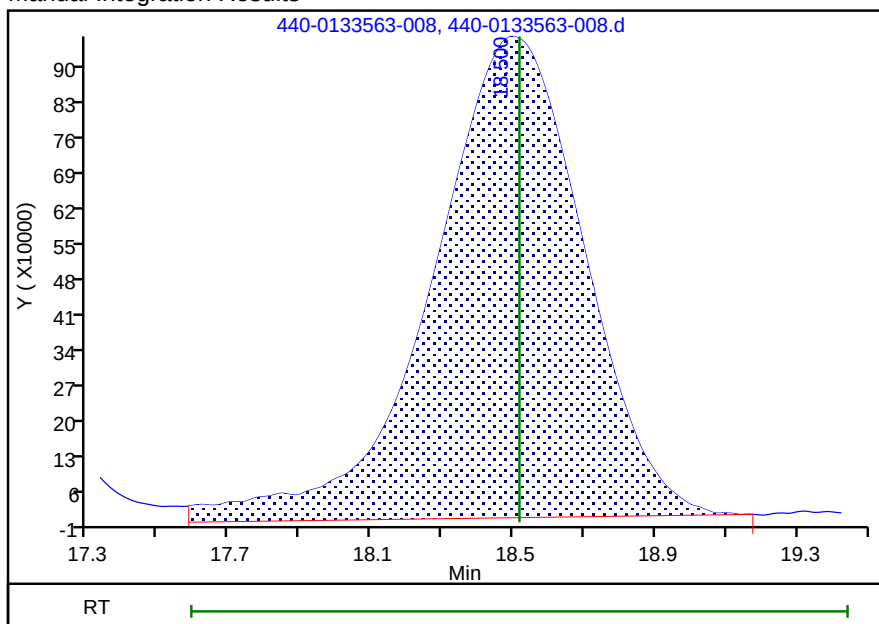
RT: 18.50
 Area: 27679256
 Amount: 192.6958
 Amount Units: ug/l

Processing Integration Results



RT: 18.50
 Area: 28454610
 Amount: 196.8717
 Amount Units: ug/l

Manual Integration Results



Reviewer: zakhrabov, 23-May-2020 06:31:00

Audit Action: Split an Integrated Peak

Audit Reason: Split Peak

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September 2020

Report Date: 23-May-2020 06:32:09

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Lims ID: STD5
 Client ID:
 Sample Type: IC Calib Level: 5
 Inject. Date: 22-May-2020 12:17:00 ALS Bottle#: 0 Worklist Smp#: 9
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0133563-009
 Misc. Info.: 9 EB
 Operator ID: Instrument ID: IC-8
 Sublist: chrom-300.1_C8*sub2
 Method: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 23-May-2020 06:32:09 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1019

First Level Reviewer: zakhrabov

Date: 23-May-2020 06:14:22

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.467	7.467	0.000	64534331	NC	NC	M
3 Bromate	8.592	8.609	-0.017	8659858	100.0	99.4	M
\$ 6 Dichloroacetic acid(Surr)	14.375	14.392	-0.017	81900670	993.7	1002.6	
4 Bromide	16.884	16.917	-0.033	157858867	1000.0	1005.7	
2 Chlorate	18.509	18.517	-0.008	58794780	400.0	403.0	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

WC3001LCS_00089

Amount Added: 500.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 23-May-2020 06:32:09

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d

Injection Date: 22-May-2020 12:17:00

Instrument ID: IC-8

Operator ID:

Lims ID: STD5

Worklist Smp#: 9

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

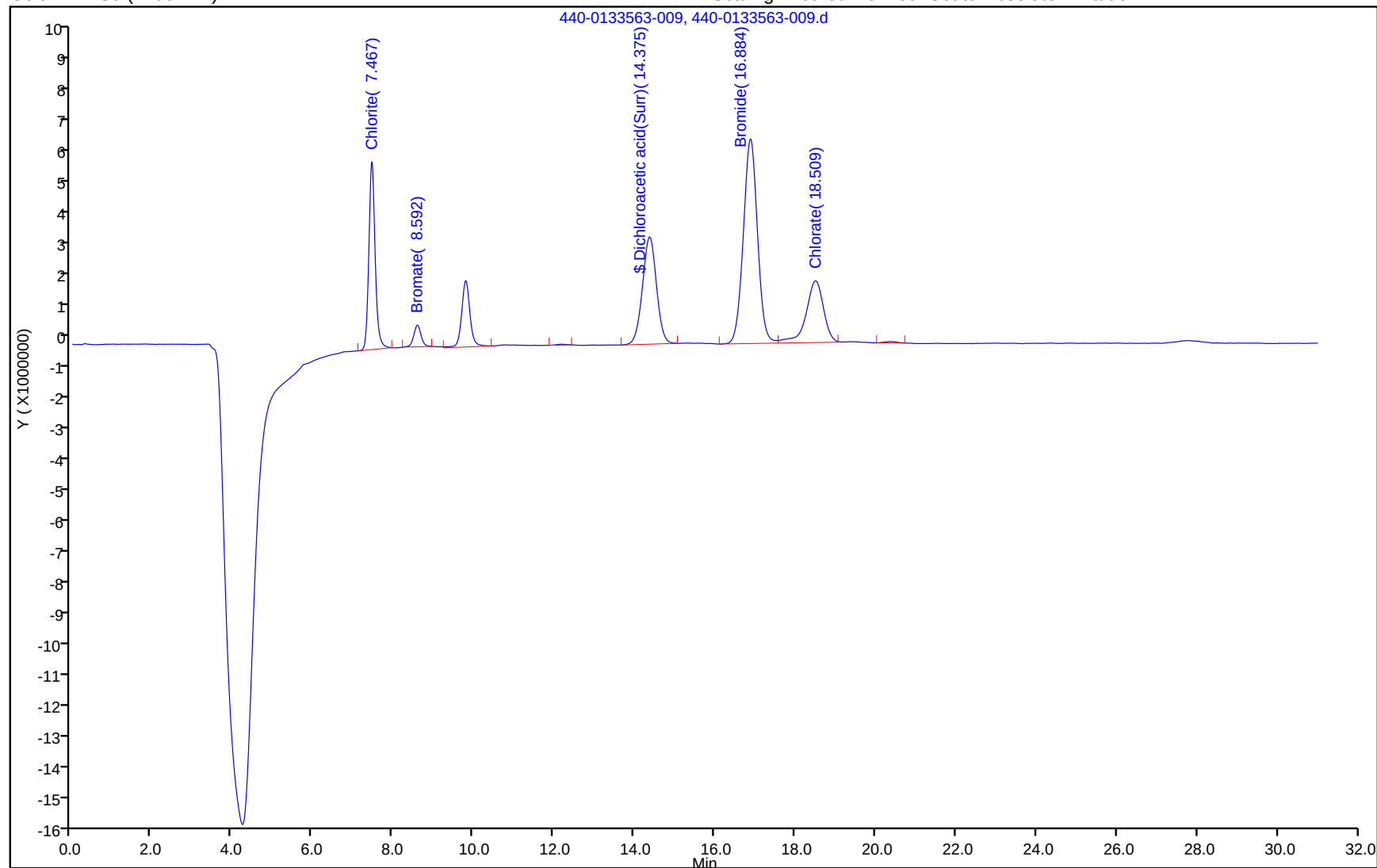
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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September 2020

Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-1260

Report Date: 23-May-2020 06:32:09

Chrom Revision: 2.3 05-May-2020 17:48:18
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Injection Date: 22-May-2020 12:17:00 Instrument ID: IC-8
 Lims ID: STD5
 Client ID:
 Operator ID:
 Injection Vol: 1.0 ul
 Method: 300.1_C8
 Column: AS9 (4.00 mm)

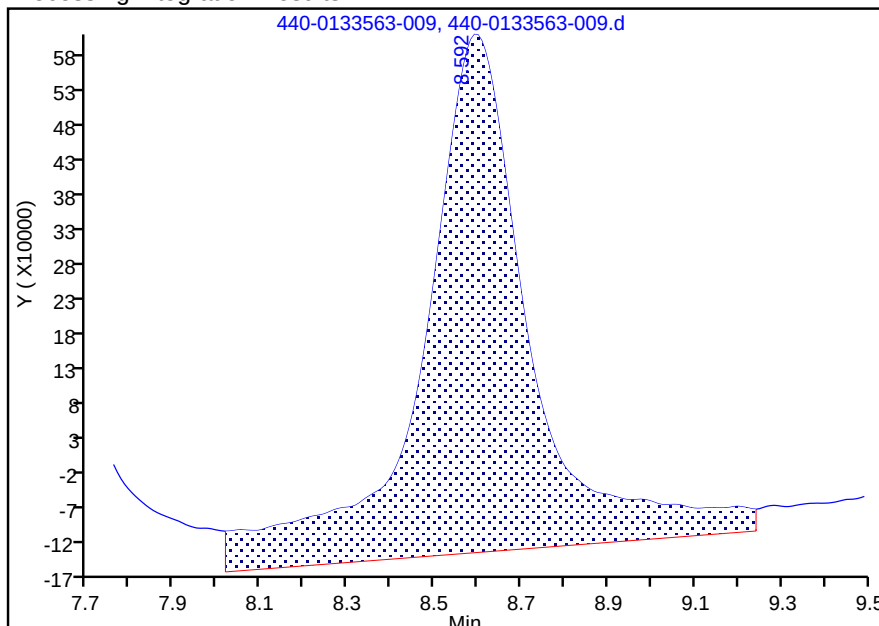
ALS Bottle#: 0 Worklist Smp#: 9
 Dil. Factor: 1.0000
 Limit Group: IC-300.1_28D
 Detector: Ch-A-20110816009

3 Bromate, CAS: 15541-45-4

Signal: 1

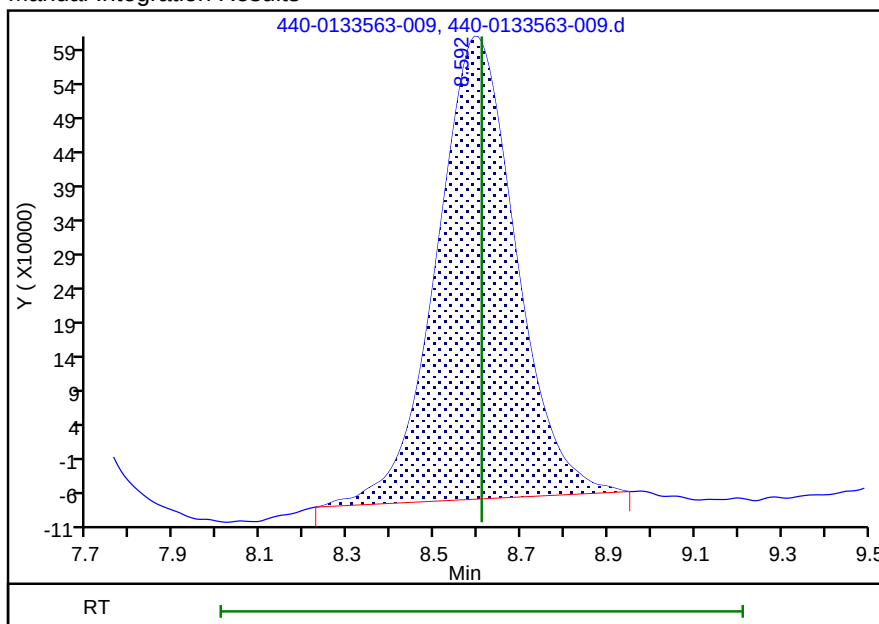
RT: 8.59
 Area: 13001916
 Amount: 149.8545
 Amount Units: ug/l

Processing Integration Results



RT: 8.59
 Area: 8659858
 Amount: 99.382634
 Amount Units: ug/l

Manual Integration Results



Reviewer: zakhrabov, 23-May-2020 06:28:26

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

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September 2020

Calibration

Curve Type: Linear
Weighting: None
Origin: None
Dependency: Response
Calib Mode: ESTD
Response Base: AREA
RF Rounding: 0

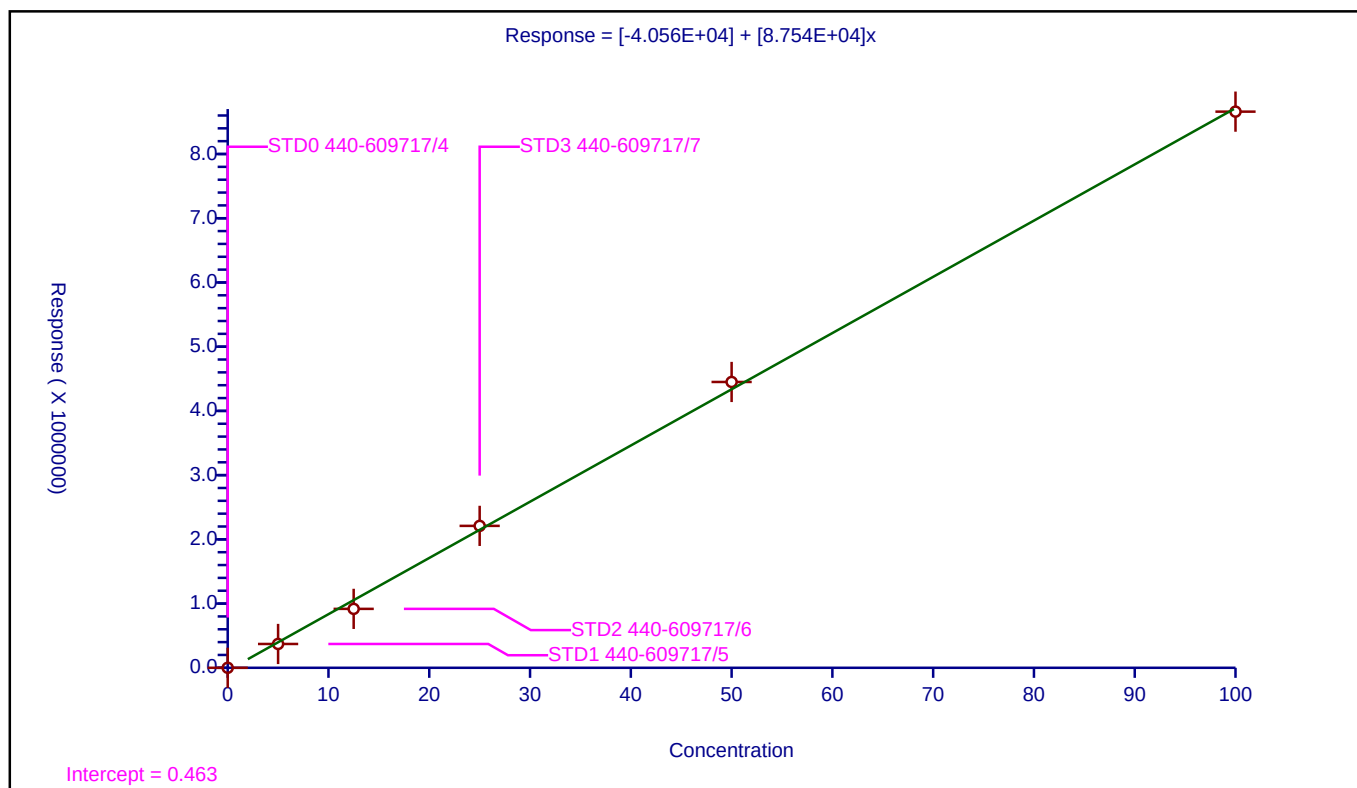
Curve Coefficients

Intercept: -4.056E+04
Slope: 8.754E+04

Error Coefficients

Standard Error: 101000
Relative Standard Error: 8.3
Correlation Coefficient: 1.000
Coefficient of Determination (Adjusted): 0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	STD0 440-609717/4	0.0	0.0			NaN	Y
2	STD1 440-609717/5	5.0	371147.0			74229.4	Y
3	STD2 440-609717/6	12.5	917598.0			73407.84	Y
4	STD3 440-609717/7	25.0	2209892.0			88395.68	Y
5	STD4 440-609717/8	50.0	4450487.0			89009.74	Y
6	STD5 440-609717/9	100.0	8659858.0			86598.58	Y



Calibration

/ Dichloroacetic acid(Surr)

Curve Type: Average
Weighting: Conc_Sq
Origin: Force
Dependency: Response
Calib Mode: ESTD
Response Base: AREA
RF Rounding: 0

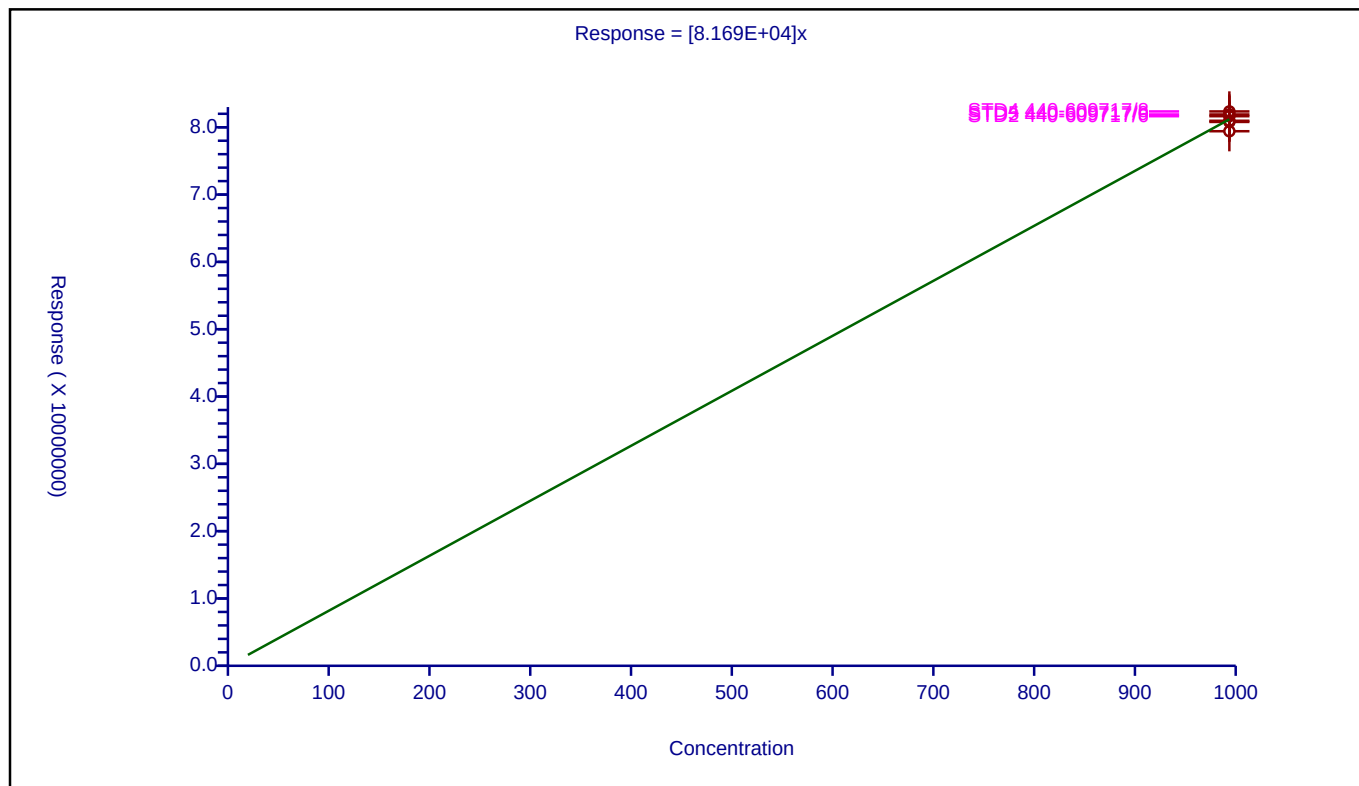
Curve Coefficients

Intercept: 0
Slope: 8.169E+04

Error Coefficients

Standard Error: 1040000
Relative Standard Error: 1.3
Correlation Coefficient: NA
Coefficient of Determination (Adjusted): 0

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	STD0 440-609717/4	993.7109	80960103.0			81472.491647	Y
2	STD1 440-609717/5	993.7109	79408704.0			79911.273993	Y
3	STD2 440-609717/6	993.7109	81642881.0			82159.590883	Y
4	STD3 440-609717/7	993.7109	80790497.0			81301.812227	Y
5	STD4 440-609717/8	993.7109	82351340.0			82872.533651	Y
6	STD5 440-609717/9	993.7109	81900670.0			82419.011405	Y



Calibration

Curve Type: Linear
Weighting: None
Origin: None
Dependency: Response
Calib Mode: ESTD
Response Base: AREA
RF Rounding: 0

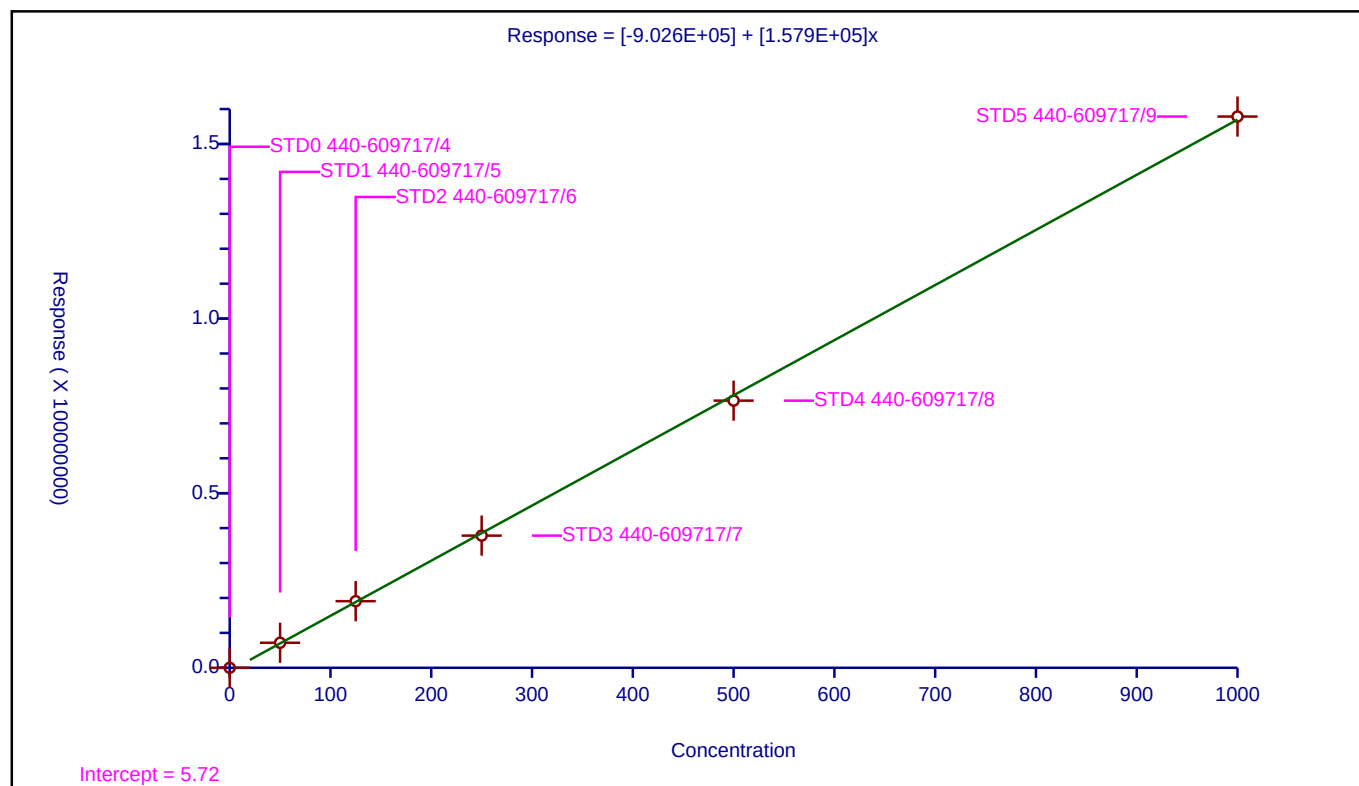
Curve Coefficients

Intercept: -9.026E+05
Slope: 1.579E+05

Error Coefficients

Standard Error: 1070000
Relative Standard Error: 2.2
Correlation Coefficient: 1.000
Coefficient of Determination (Adjusted): 1.000

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	STD0 440-609717/4	0.0	0.0			NaN	Y
2	STD1 440-609717/5	50.0	7170938.0			143418.76	Y
3	STD2 440-609717/6	125.0	19081776.0			152654.208	Y
4	STD3 440-609717/7	250.0	37853087.0			151412.348	Y
5	STD4 440-609717/8	500.0	76505247.0			153010.494	Y
6	STD5 440-609717/9	1000.0	157858867.0			157858.867	Y



Calibration

Curve Type: Linear
Weighting: None
Origin: None
Dependency: Response
Calib Mode: ESTD
Response Base: AREA
RF Rounding: 0

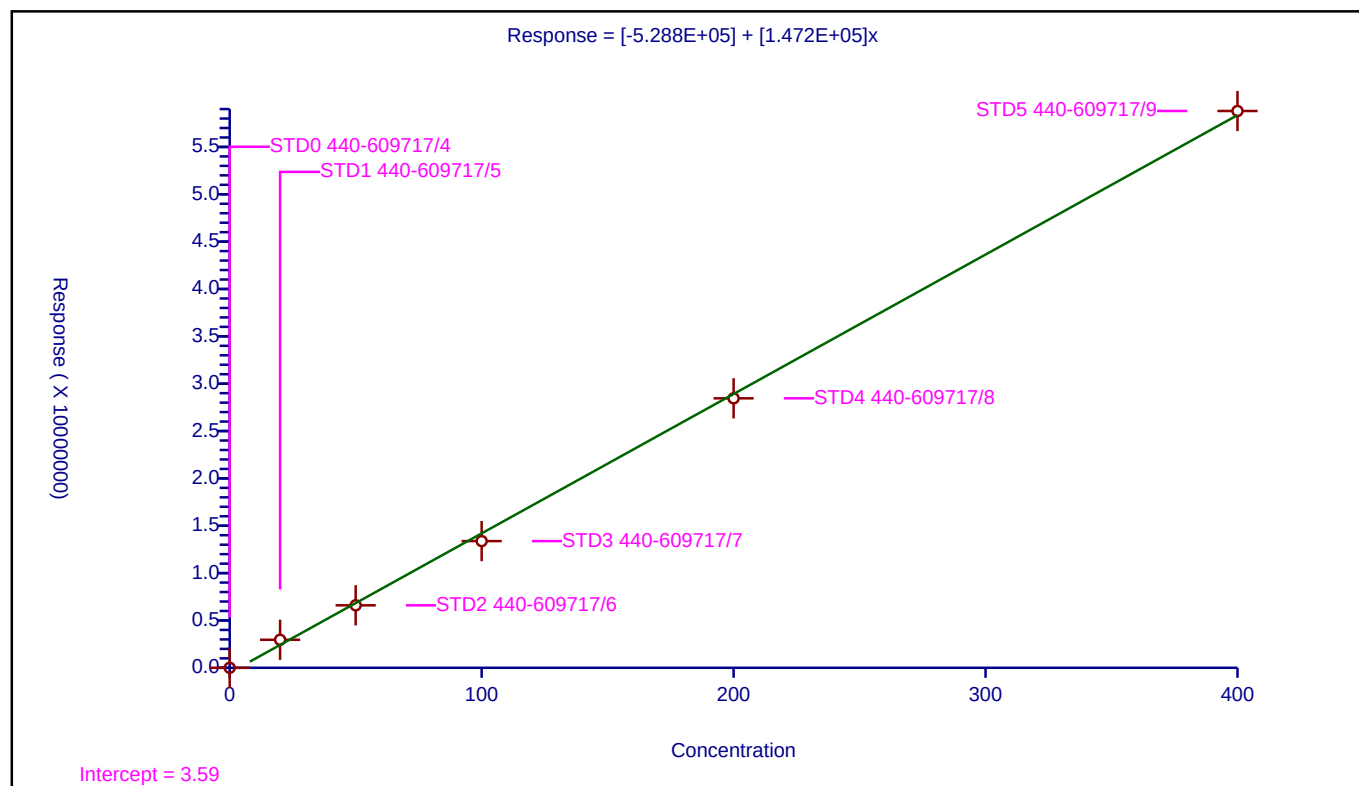
Curve Coefficients

Intercept: -5.288E+05
Slope: 1.472E+05

Error Coefficients

Standard Error: 651000
Relative Standard Error: 11.3
Correlation Coefficient: 1.000
Coefficient of Determination (Adjusted): 0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	STD0 440-609717/4	0.0	0.0			NaN	Y
2	STD1 440-609717/5	20.0	2959710.0			147985.5	Y
3	STD2 440-609717/6	50.0	6597329.0			131946.58	Y
4	STD3 440-609717/7	100.0	13380104.0			133801.04	Y
5	STD4 440-609717/8	200.0	28454610.0			142273.05	Y
6	STD5 440-609717/9	400.0	58794780.0			146986.95	Y



FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-268223-1 Analy Batch No.: 609718
 SDG No.: Kirtland AFB New Mexico
 Instrument ID: IC-8 GC Column: AS9-HC ID: 4 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 05/22/2020 09:16 Calibration End Date: 05/22/2020 12:17 Calibration ID: 23747

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD0 440-609718/4	440-0133563-004.d
Level 2	STD1 440-609718/5	440-0133563-005.d
Level 3	STD2 440-609718/6	440-0133563-006.d
Level 4	STD3 440-609718/7	440-0133563-007.d
Level 5	STD4 440-609718/8	440-0133563-008.d
Level 6	STD5 440-609718/9	440-0133563-009.d

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6					RT WINDOW	AVG RT
Chlorite		7.467	7.450	7.475	7.467	7.467					0.000 - 0.000	7.465
Dichloroacetic acid(Surr)	14.367	14.392	14.375	14.392	14.392	14.375					13.385 - 15.399	14.382

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Irvine Job No.: 440-268223-1 Analy Batch No.: 609718
 SDG No.: Kirtland AFB New Mexico
 Instrument ID: IC-8 GC Column: AS9-HC ID: 4 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 05/22/2020 09:16 Calibration End Date: 05/22/2020 12:17 Calibration ID: 23747

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD0 440-609718/4	440-0133563-004.d
Level 2	STD1 440-609718/5	440-0133563-005.d
Level 3	STD2 440-609718/6	440-0133563-006.d
Level 4	STD3 440-609718/7	440-0133563-007.d
Level 5	STD4 440-609718/8	440-0133563-008.d
Level 6	STD5 440-609718/9	440-0133563-009.d

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3	LVL 4		B	M1	M2								
Chlorite	156648	147340 161336	164943	157866	Lin	-184385.32	160974.932							1.0000		0.9950
Dichloroacetic acid(Surr)	81472 82873	79911 82419	82160	81302	Ave		81689.4523				1.3		15.0			

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Irvine Job No.: 440-268223-1 Analy Batch No.: 609718
SDG No.: Kirtland AFB New Mexico
Instrument ID: IC-8 GC Column: AS9-HC ID: 4 (mm) Heated Purge: (Y/N) N
Calibration Start Date: 05/22/2020 09:16 Calibration End Date: 05/22/2020 12:17 Calibration ID: 23747

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD0 440-609718/4	440-0133563-004.d
Level 2	STD1 440-609718/5	440-0133563-005.d
Level 3	STD2 440-609718/6	440-0133563-006.d
Level 4	STD3 440-609718/7	440-0133563-007.d
Level 5	STD4 440-609718/8	440-0133563-008.d
Level 6	STD5 440-609718/9	440-0133563-009.d

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
		LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Chlorite	Lin	64534331	2946805	8247146	15786602	31329502	0.000000 400	20.0	50.0	100	200
Dichloroacetic acid(Surr)	Ave	80960103 81900670	79408704	81642881	80790497	82351340	994 994	994	994	994	994

Curve Type Legend:

Ave = Average
Lin = Linear

Report Date: 23-May-2020 06:32:07

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-004.d
 Lims ID: STD0
 Client ID:
 Sample Type: IC Calib Level: 0
 Inject. Date: 22-May-2020 09:16:00 ALS Bottle#: 0 Worklist Smp#: 4
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0133563-004
 Misc. Info.: 4 EB
 Operator ID: Instrument ID: IC-8
 Sublist: chrom-300.1_C8*sub2
 Method: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 23-May-2020 06:32:07 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1019

First Level Reviewer: zakhrabov

Date: 22-May-2020 09:59:03

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
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\$ 6 Dichloroacetic acid(Surr) 14.367 14.392 -0.025 80960103 993.7 991.1

Reagents:

WC3001LCS_00089

Amount Added: 0.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 23-May-2020 06:32:07

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-004.d

Injection Date: 22-May-2020 09:16:00

Instrument ID: IC-8

Operator ID:

Lims ID: STD0

Worklist Smp#: 4

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

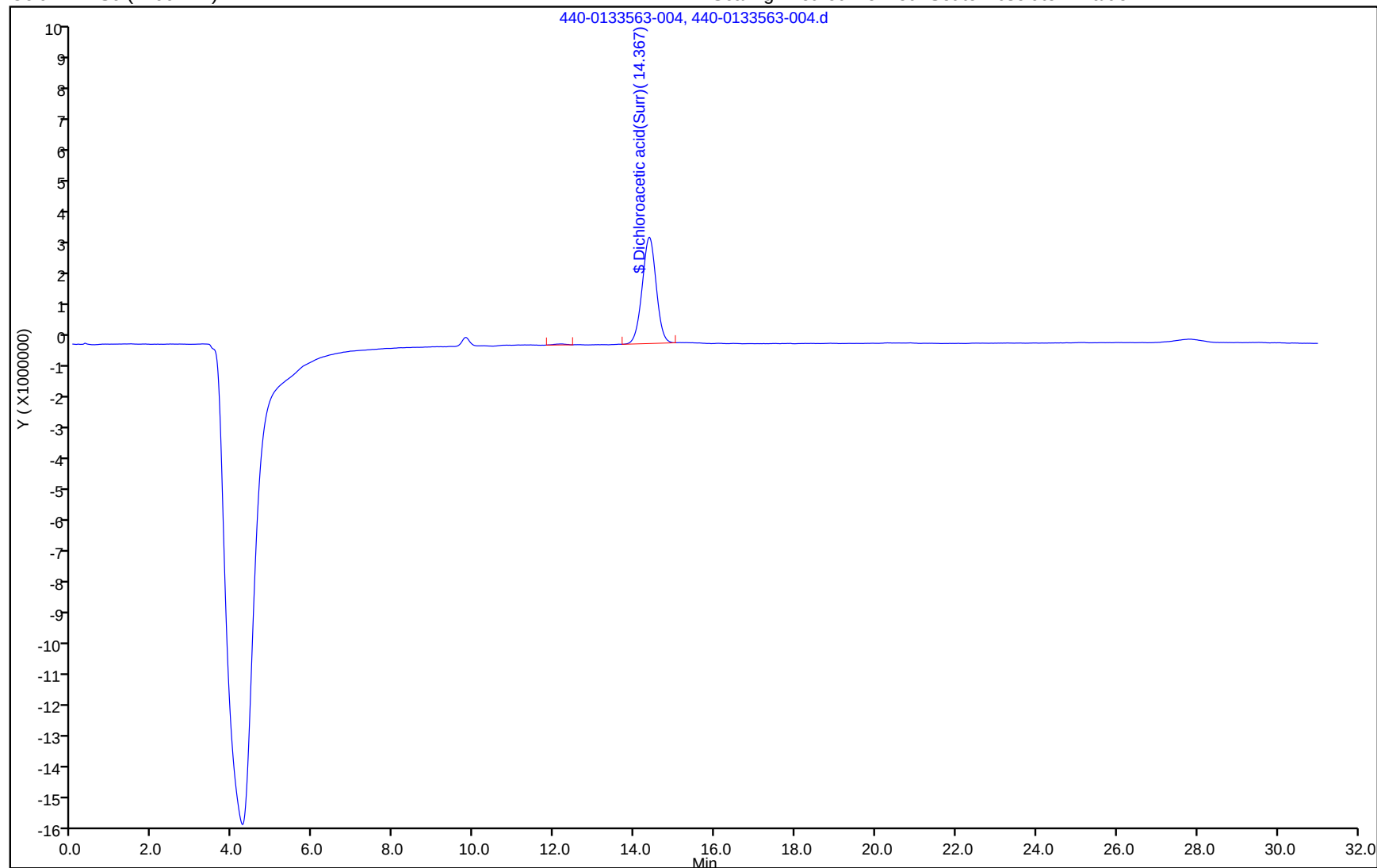
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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Report Date: 23-May-2020 06:32:07

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-005.d
 Lims ID: STD1
 Client ID:
 Sample Type: IC Calib Level: 1
 Inject. Date: 22-May-2020 09:52:00 ALS Bottle#: 0 Worklist Smp#: 5
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0133563-005
 Misc. Info.: 5 EB
 Operator ID: Instrument ID: IC-8
 Sublist: chrom-300.1_C8*sub2
 Method: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 23-May-2020 06:32:07 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1019

First Level Reviewer: zakhrabov

Date: 22-May-2020 10:41:13

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.467	7.467	0.000	2946805	20.0	19.5	
3 Bromate	8.609	8.609	0.000	371147	NC	NC	
\$ 6 Dichloroacetic acid(Surr)	14.392	14.392	0.000	79408704	993.7	972.1	
4 Bromide	16.917	16.917	0.000	7170938	NC	NC	
2 Chlorate	18.517	18.517	0.000	2959710	NC	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WC3001LCS_00089

Amount Added: 25.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 23-May-2020 06:32:07

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-005.d

Injection Date: 22-May-2020 09:52:00

Instrument ID: IC-8

Operator ID:

Lims ID: STD1

Worklist Smp#: 5

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

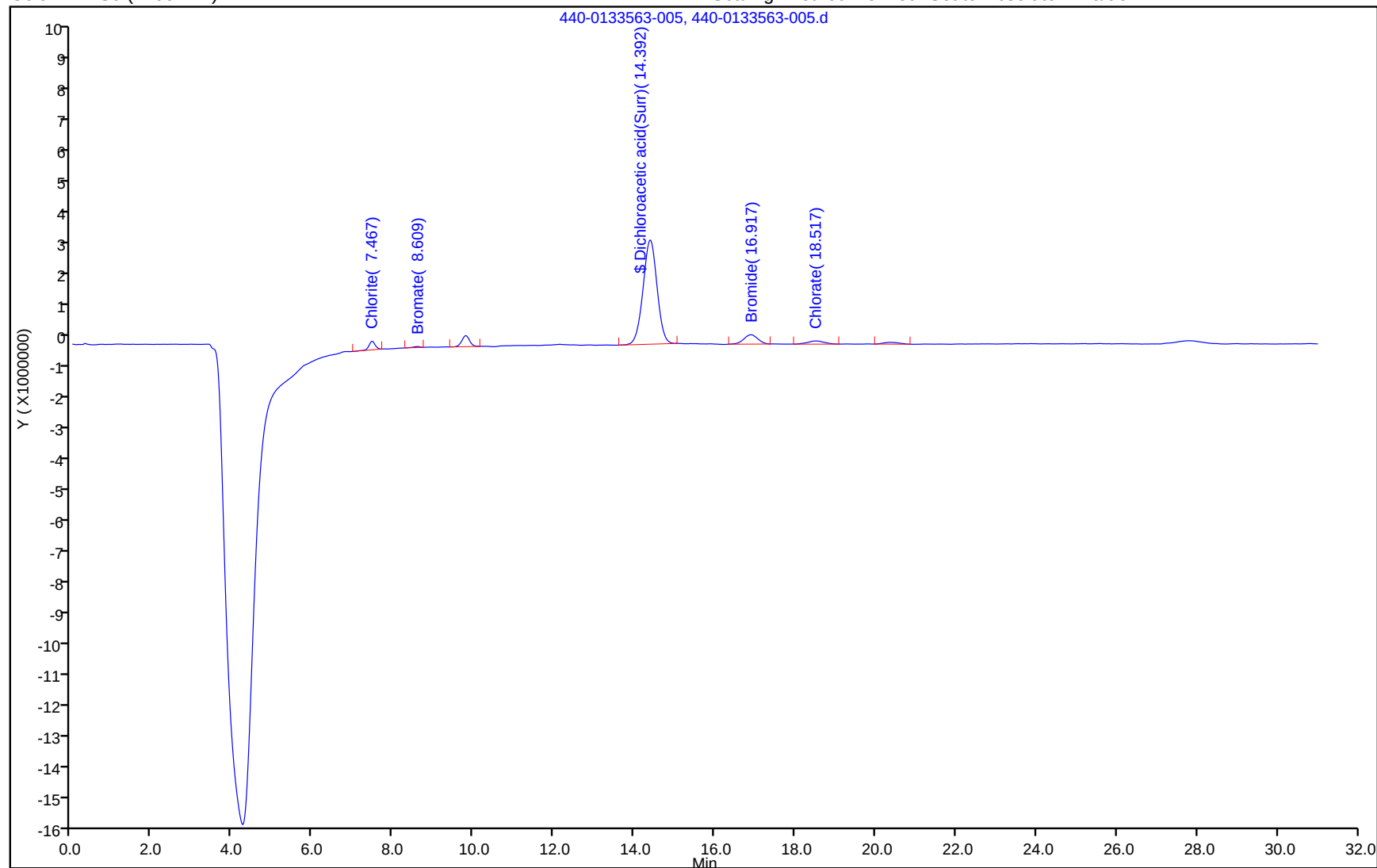
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-1272

Report Date: 23-May-2020 06:32:08

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-006.d
 Lims ID: STD2
 Client ID:
 Sample Type: IC Calib Level: 2
 Inject. Date: 22-May-2020 10:29:00 ALS Bottle#: 0 Worklist Smp#: 6
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0133563-006
 Misc. Info.: 6 EB
 Operator ID: Instrument ID: IC-8
 Sublist: chrom-300.1_C8*sub2
 Method: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 23-May-2020 06:32:08 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1019

First Level Reviewer: zakhrabov

Date: 22-May-2020 11:17:30

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.450	7.467	-0.017	8247146	50.0	52.4	
3 Bromate	8.575	8.609	-0.034	917598	NC	NC	M
\$ 6 Dichloroacetic acid(Surr)	14.375	14.392	-0.017	81642881	993.7	999.4	
4 Bromide	16.859	16.917	-0.058	19081776	NC	NC	
2 Chlorate	18.475	18.517	-0.042	6597329	NC	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

WC3001LCS_00089 Amount Added: 62.50 Units: uL
 WCDCA_00081 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 23-May-2020 06:32:08

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-006.d

Injection Date: 22-May-2020 10:29:00

Instrument ID: IC-8

Operator ID:

Lims ID: STD2

Worklist Smp#: 6

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

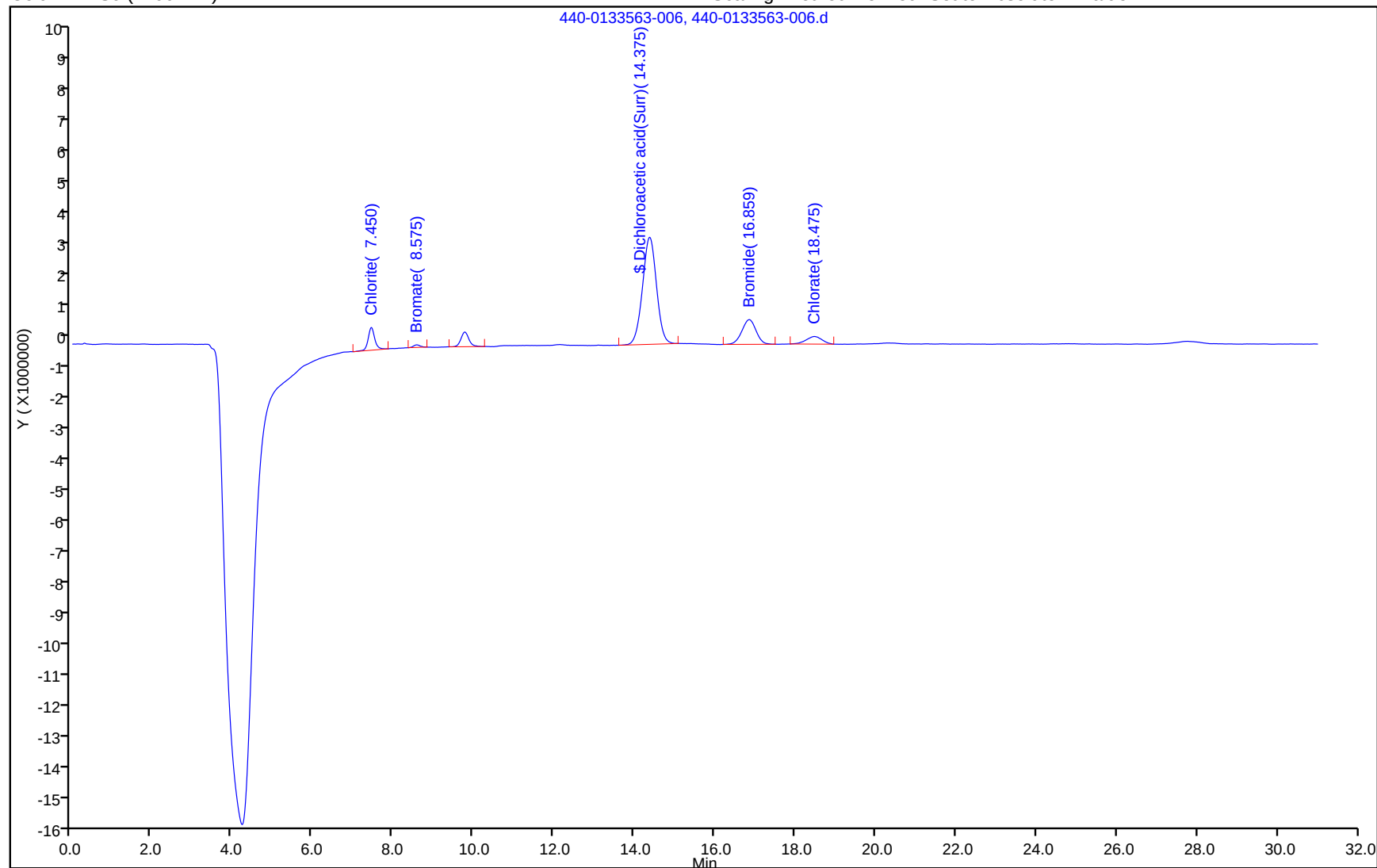
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-1274

Report Date: 23-May-2020 06:32:08

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-007.d
 Lims ID: STD3
 Client ID:
 Sample Type: IC Calib Level: 3
 Inject. Date: 22-May-2020 11:05:00 ALS Bottle#: 0 Worklist Smp#: 7
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0133563-007
 Misc. Info.: 7 EB
 Operator ID: Instrument ID: IC-8
 Sublist: chrom-300.1_C8*sub2
 Method: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 23-May-2020 06:32:08 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1019

First Level Reviewer: zakhrabov

Date: 22-May-2020 11:48:43

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.475	7.467	0.008	15786602	100.0	99.2	
3 Bromate	8.600	8.609	-0.009	2209892	NC	NC	M
\$ 6 Dichloroacetic acid(Surr)	14.392	14.392	0.000	80790497	993.7	989.0	
4 Bromide	16.884	16.917	-0.033	37853087	NC	NC	
2 Chlorate	18.517	18.517	0.000	13380104	NC	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

WC3001LCS_00089

Amount Added: 125.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 23-May-2020 06:32:08

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-007.d

Injection Date: 22-May-2020 11:05:00

Instrument ID: IC-8

Operator ID:

Lims ID: STD3

Worklist Smp#: 7

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

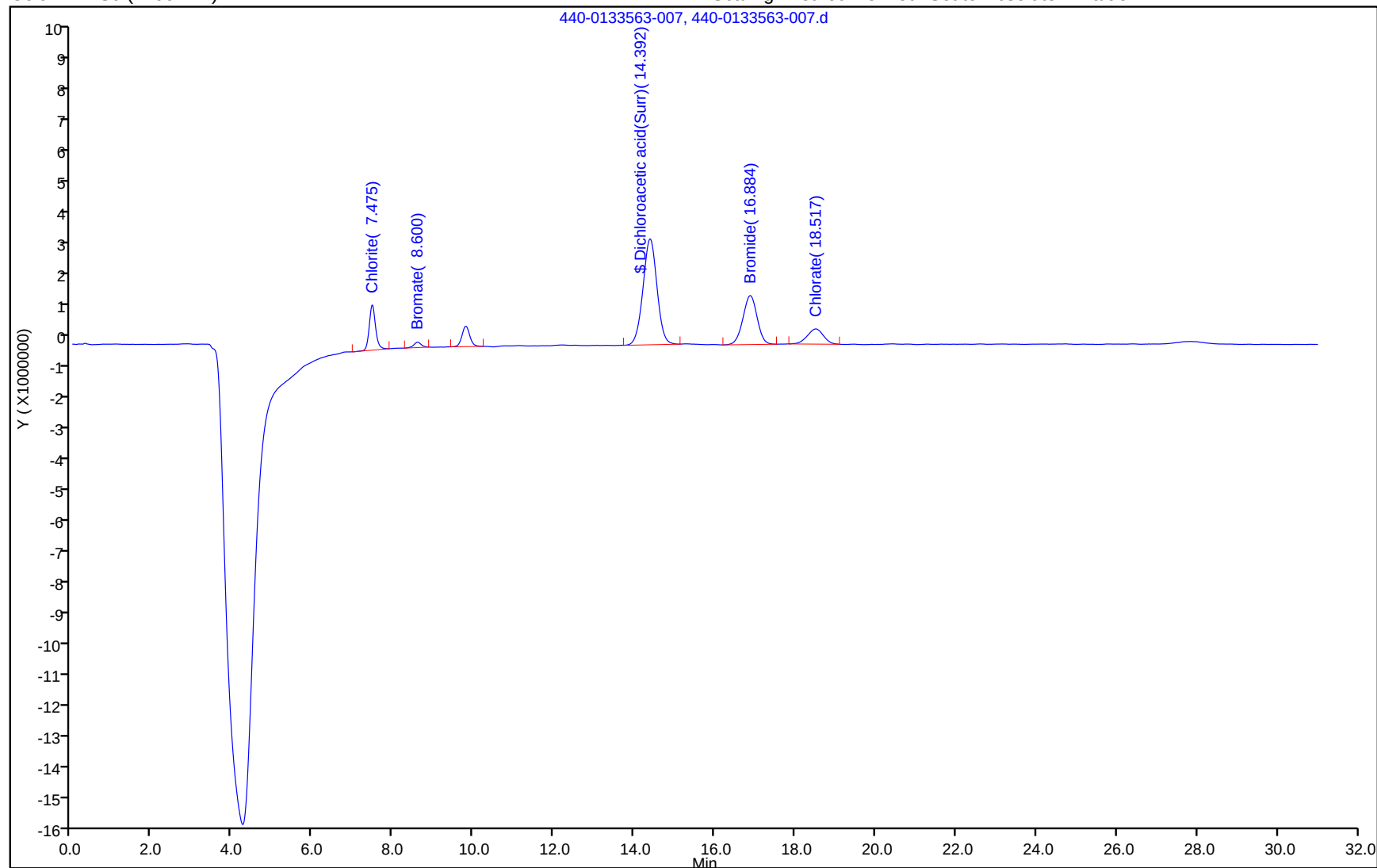
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-1276

Report Date: 23-May-2020 06:32:09

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-008.d
 Lims ID: STD4
 Client ID:
 Sample Type: IC Calib Level: 4
 Inject. Date: 22-May-2020 11:41:00 ALS Bottle#: 0 Worklist Smp#: 8
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0133563-008
 Misc. Info.: 8 EB
 Operator ID: Instrument ID: IC-8
 Sublist: chrom-300.1_C8*sub2
 Method: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 23-May-2020 06:32:09 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1019

First Level Reviewer: zakhrabov

Date: 22-May-2020 12:20:16

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.467	7.467	0.000	31329502	200.0	195.8	M
3 Bromate	8.600	8.609	-0.009	4450487	NC	NC	M
\$ 6 Dichloroacetic acid(Surr)	14.392	14.392	0.000	82351340	993.7	1008.1	
4 Bromide	16.875	16.917	-0.042	76505247	NC	NC	Ma
2 Chlorate	18.500	18.517	-0.017	28454610	NC	NC	M

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

WC3001LCS_00089

Amount Added: 250.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 23-May-2020 06:32:09

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-008.d

Injection Date: 22-May-2020 11:41:00

Instrument ID: IC-8

Operator ID:

Lims ID: STD4

Worklist Smp#: 8

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

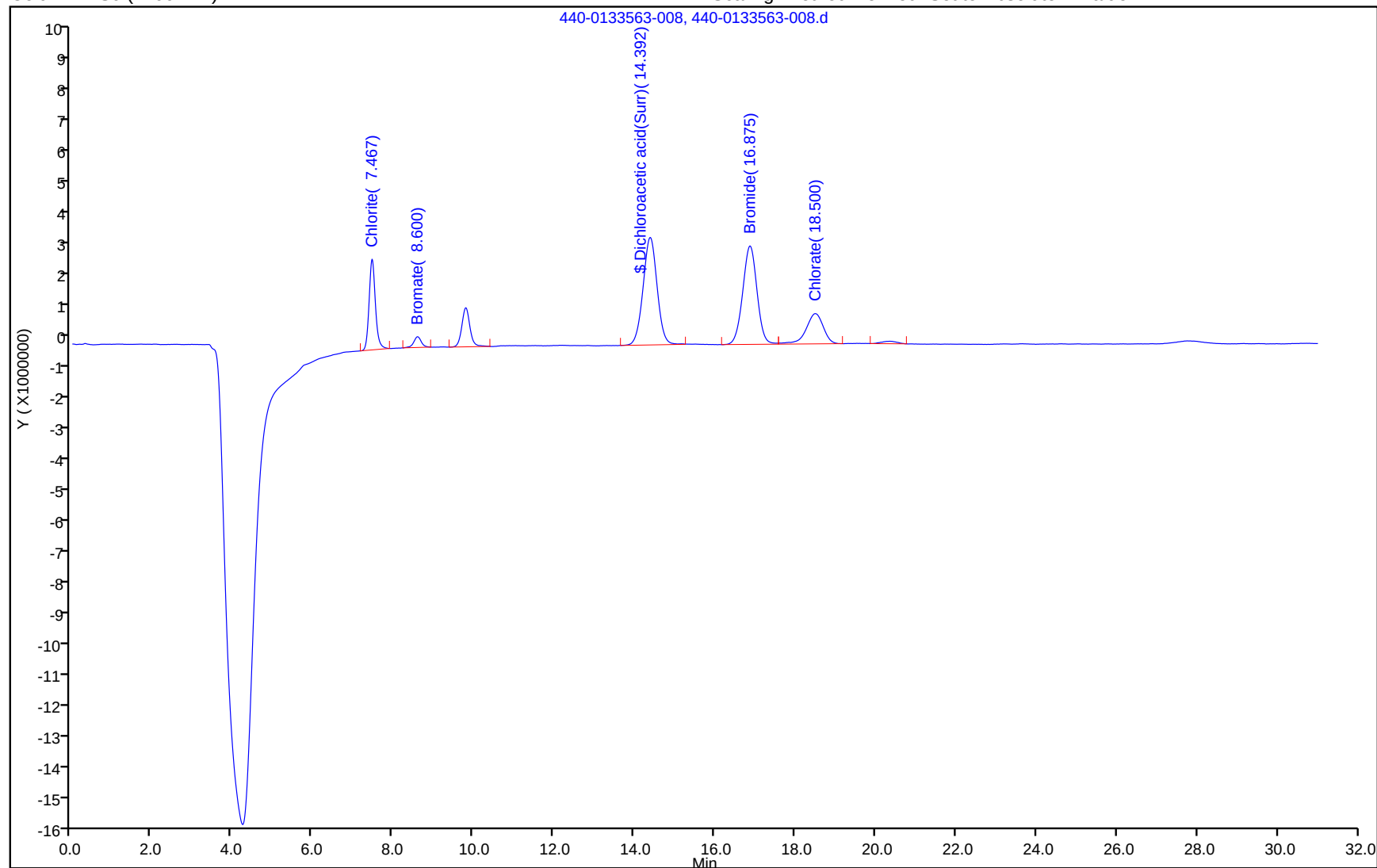
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-1278

Report Date: 23-May-2020 06:32:09

Chrom Revision: 2.3 05-May-2020 17:48:18
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-008.d
 Injection Date: 22-May-2020 11:41:00 Instrument ID: IC-8
 Lims ID: STD4
 Client ID:
 Operator ID:
 Injection Vol: 1.0 ul
 Method: 300.1_C8
 Column: AS9 (4.00 mm)

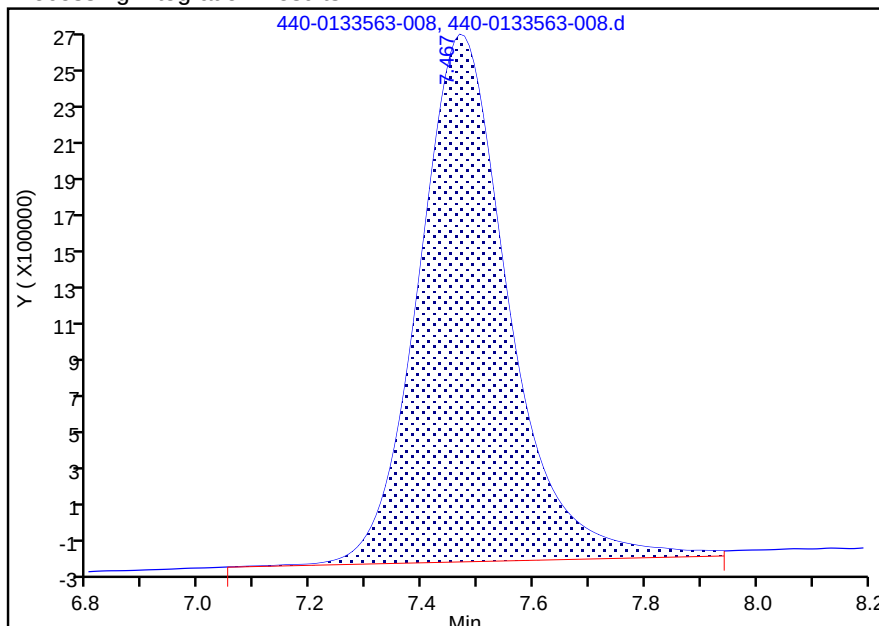
ALS Bottle#: 0 Worklist Smp#: 8
 Dil. Factor: 1.0000
 Limit Group: IC-300.1_14D
 Detector: Ch-A-20110816009

5 Chlorite, CAS: 14998-27-7

Signal: 1

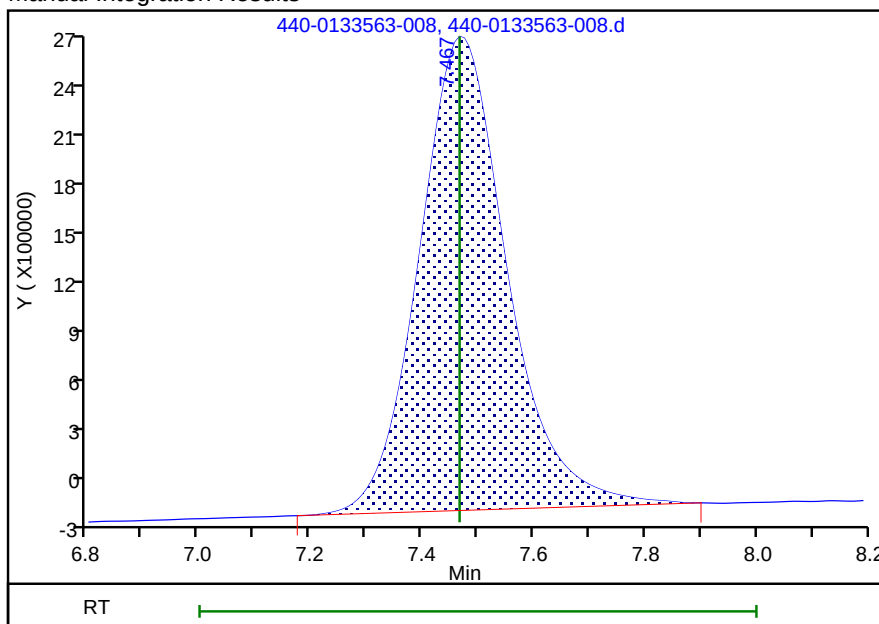
RT: 7.47
 Area: 32257462
 Amount: 0
 Amount Units: ug/l

Processing Integration Results



RT: 7.47
 Area: 31329502
 Amount: 195.7689
 Amount Units: ug/l

Manual Integration Results



Reviewer: zakhrabov, 23-May-2020 06:28:07

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

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Report Date: 23-May-2020 06:32:09

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Lims ID: STD5
 Client ID:
 Sample Type: IC Calib Level: 5
 Inject. Date: 22-May-2020 12:17:00 ALS Bottle#: 0 Worklist Smp#: 9
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0133563-009
 Misc. Info.: 9 EB
 Operator ID: Instrument ID: IC-8
 Sublist: chrom-300.1_C8*sub2
 Method: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 23-May-2020 06:32:09 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1019

First Level Reviewer: zakhrabov

Date: 23-May-2020 06:14:22

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.467	7.467	0.000	64534331	400.0	402.0	M
3 Bromate	8.592	8.609	-0.017	8659858	NC	NC	M
\$ 6 Dichloroacetic acid(Surr)	14.375	14.392	-0.017	81900670	993.7	1002.6	
4 Bromide	16.884	16.917	-0.033	157858867	NC	NC	
2 Chlorate	18.509	18.517	-0.008	58794780	NC	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

WC3001LCS_00089

Amount Added: 500.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 23-May-2020 06:32:09

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d

Injection Date: 22-May-2020 12:17:00

Instrument ID: IC-8

Operator ID:

Lims ID: STD5

Worklist Smp#: 9

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

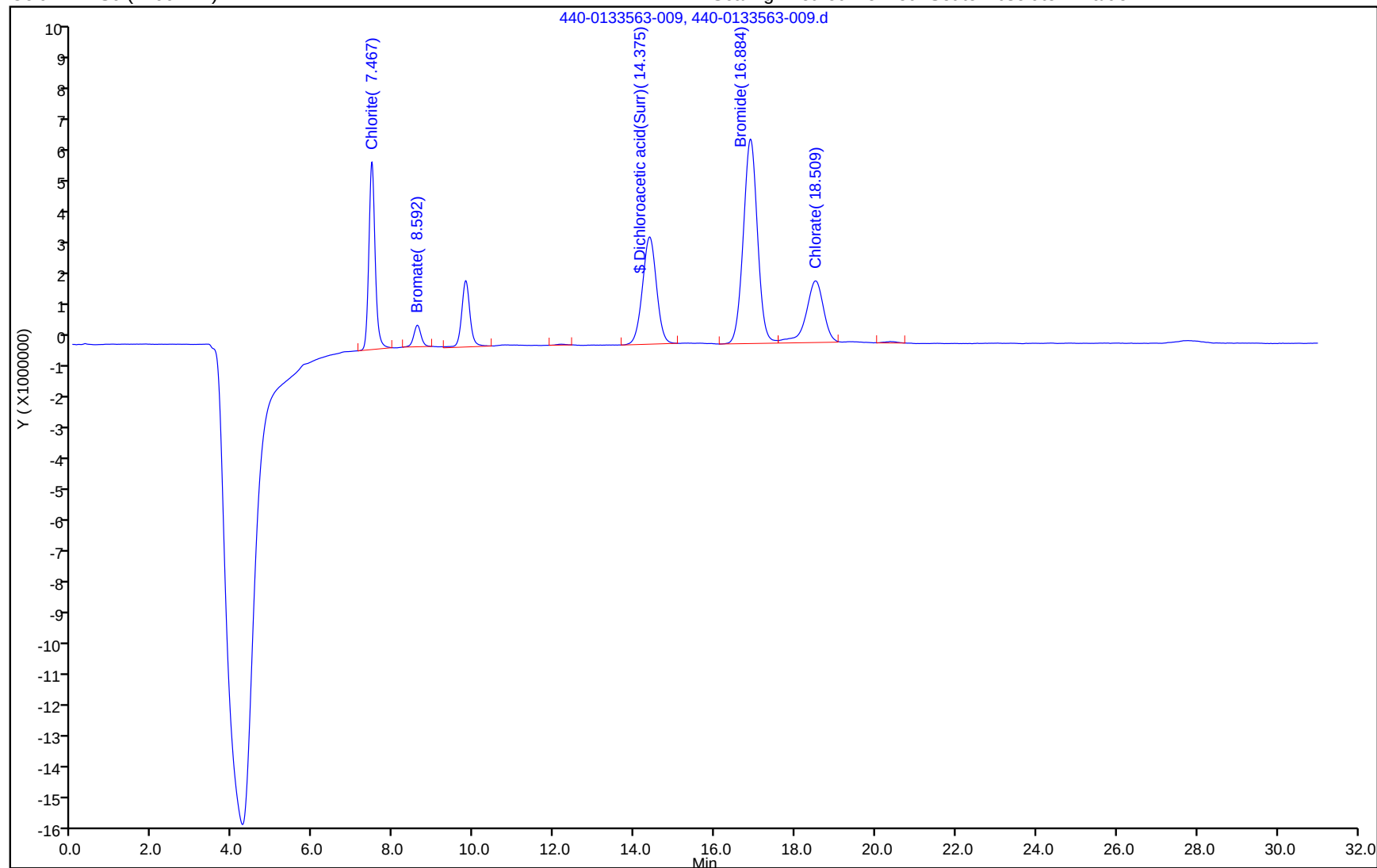
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-1281

Report Date: 23-May-2020 06:32:09

Chrom Revision: 2.3 05-May-2020 17:48:18
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Injection Date: 22-May-2020 12:17:00 Instrument ID: IC-8
 Lims ID: STD5
 Client ID:
 Operator ID:
 Injection Vol: 1.0 ul
 Method: 300.1_C8
 Column: AS9 (4.00 mm)

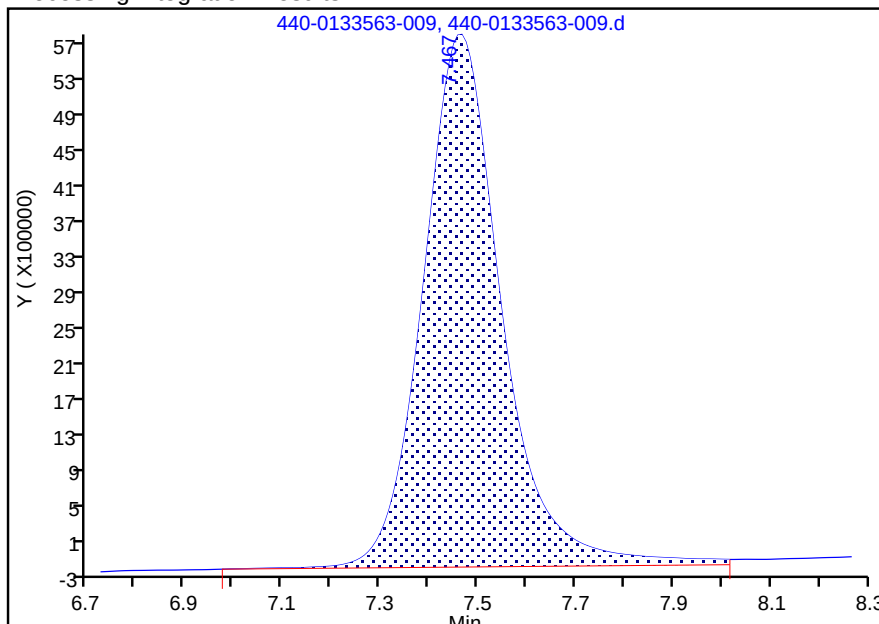
ALS Bottle#: 0 Worklist Smp#: 9
 Dil. Factor: 1.0000
 Limit Group: IC-300.1_14D
 Detector: Ch-A-20110816009

5 Chlorite, CAS: 14998-27-7

Signal: 1

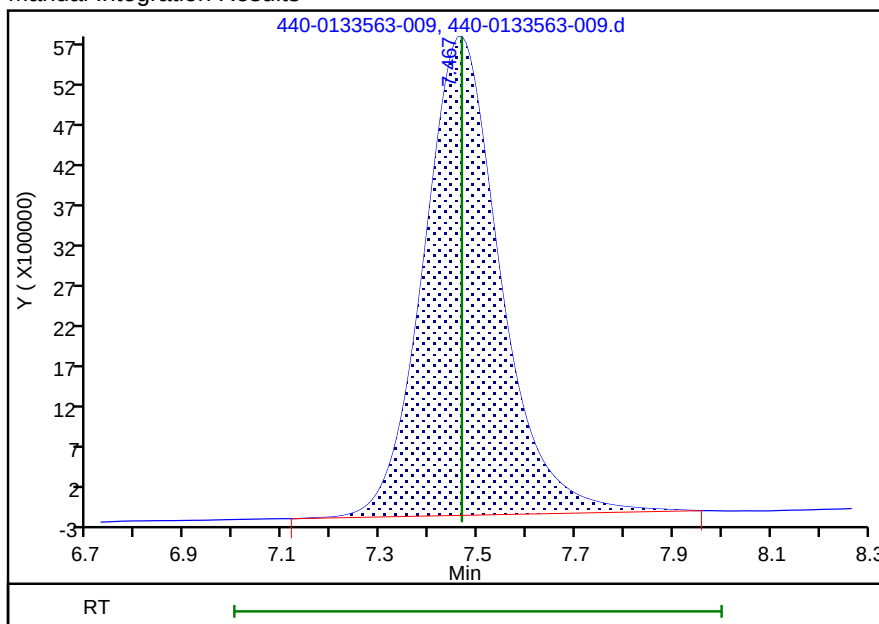
RT: 7.47
 Area: 66611420
 Amount: 0
 Amount Units: ug/l

Processing Integration Results



RT: 7.47
 Area: 64534331
 Amount: 402.0422
 Amount Units: ug/l

Manual Integration Results



Reviewer: zakhrabov, 23-May-2020 06:28:18

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

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September 2020

Calibration

Curve Type: Linear
Weighting: None
Origin: None
Dependency: Response
Calib Mode: ESTD
Response Base: AREA
RF Rounding: 0

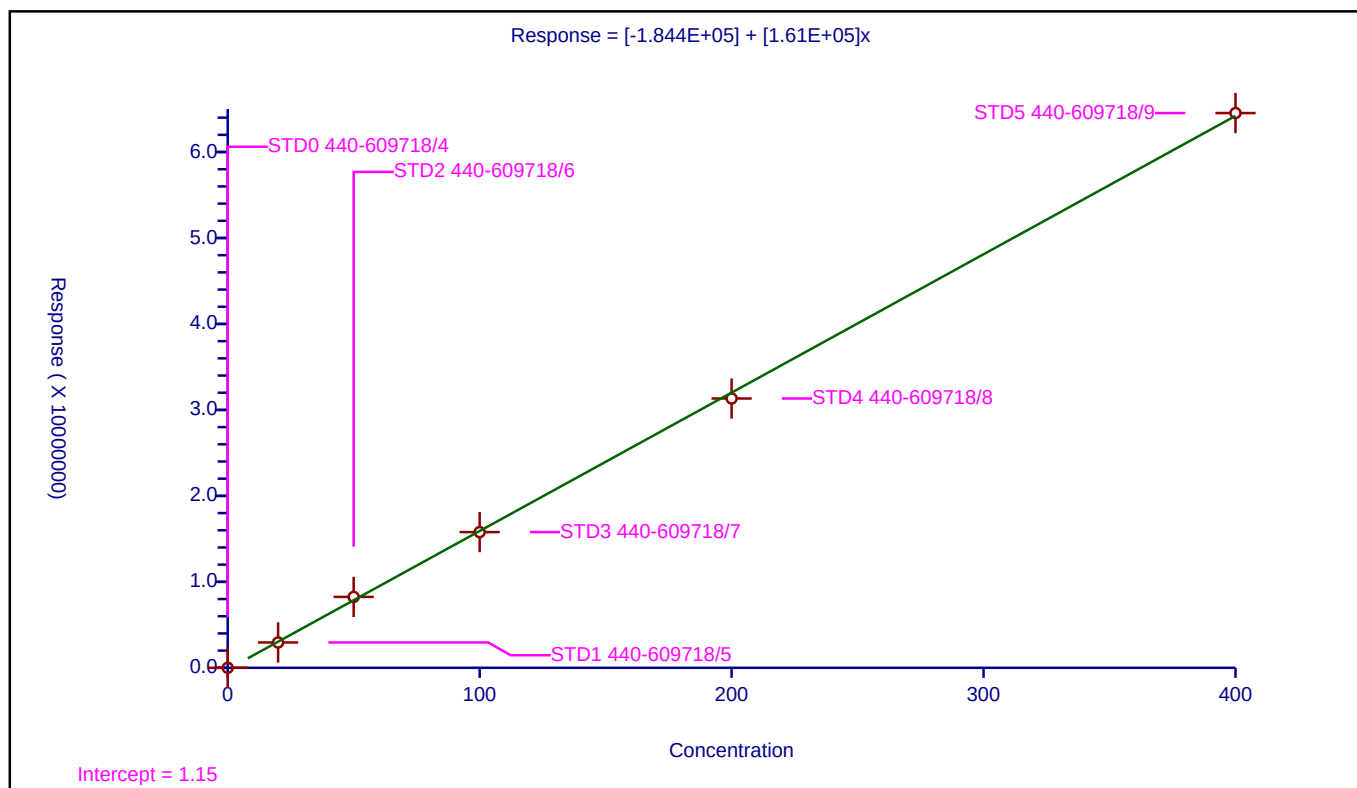
Curve Coefficients

Intercept: -1.844E+05
Slope: 1.61E+05

Error Coefficients

Standard Error: 441000
Relative Standard Error: 3.4
Correlation Coefficient: 1.000
Coefficient of Determination (Adjusted): 1.000

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	STD0 440-609718/4	0.0	0.0			NaN	Y
2	STD1 440-609718/5	20.0	2946805.0			147340.25	Y
3	STD2 440-609718/6	50.0	8247146.0			164942.92	Y
4	STD3 440-609718/7	100.0	15786602.0			157866.02	Y
5	STD4 440-609718/8	200.0	31329502.0			156647.51	Y
6	STD5 440-609718/9	400.0	64534331.0			161335.8275	Y



Calibration

/ Dichloroacetic acid(Surr)

Curve Type: Average
Weighting: Conc_Sq
Origin: Force
Dependency: Response
Calib Mode: ESTD
Response Base: AREA
RF Rounding: 0

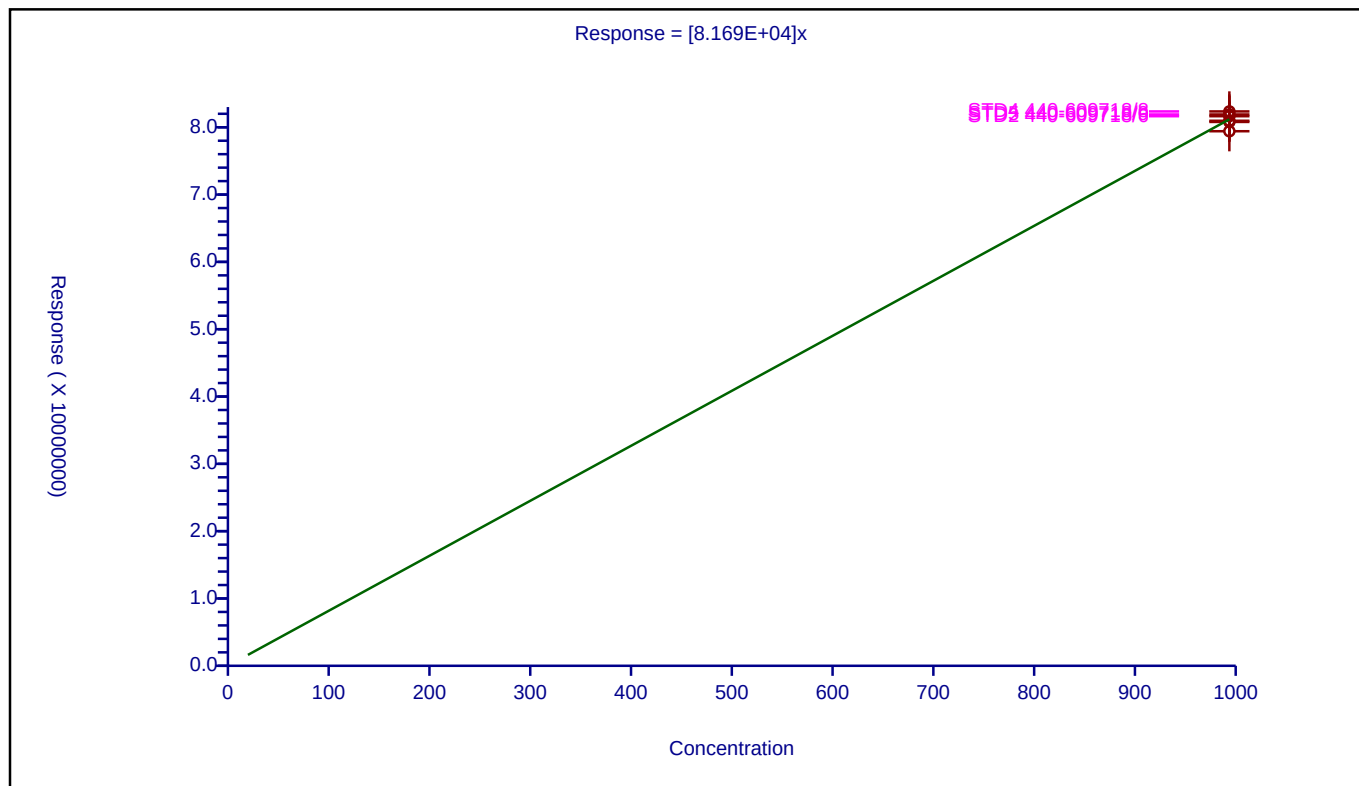
Curve Coefficients

Intercept: 0
Slope: 8.169E+04

Error Coefficients

Standard Error: 1040000
Relative Standard Error: 1.3
Correlation Coefficient: NA
Coefficient of Determination (Adjusted): 0

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	STD0 440-609718/4	993.7109	80960103.0			81472.491647	Y
2	STD1 440-609718/5	993.7109	79408704.0			79911.273993	Y
3	STD2 440-609718/6	993.7109	81642881.0			82159.590883	Y
4	STD3 440-609718/7	993.7109	80790497.0			81301.812227	Y
5	STD4 440-609718/8	993.7109	82351340.0			82872.533651	Y
6	STD5 440-609718/9	993.7109	81900670.0			82419.011405	Y



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Lab Sample ID: ICV 440-609717/10 Calibration Date: 05/22/2020 12:53
 Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
 GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
 Lab File ID: 440-0133563-010.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Bromate	Lin		93194		32.4	30.0	8.0	15.0
Bromide	Lin		153001		296	300	-1.2	15.0
Chlorate	Lin		131464		111	120	-7.7	15.0
Dichloroacetic acid(Surr)	Ave	81689	81680		994	994	-0.0	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-268223-1
SDG No.: Kirtland AFB New Mexico
Lab Sample ID: ICV 440-609717/10 Calibration Date: 05/22/2020 12:53
Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
Lab File ID: 440-0133563-010.d

Analyte	RT	RT WINDOW	
		FROM	TO
Bromate	8.60	8.01	9.21
Bromide	16.90	15.73	18.10
Chlorate	18.53	17.59	19.44
Dichloroacetic acid(Surr)	14.38	13.39	15.40

Report Date: 23-May-2020 07:24:17

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-010.d
 Lims ID: ICV
 Client ID:
 Sample Type: ICV
 Inject. Date: 22-May-2020 12:53:00 ALS Bottle#: 0 Worklist Smp#: 10
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0133563-010
 Misc. Info.: 10 EB
 Operator ID: Instrument ID: IC-8
 Sublist:
 Method: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 23-May-2020 08:03:05 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1019

First Level Reviewer: zakhrabov

Date: 23-May-2020 06:49:22

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.467	7.467	0.000	19256158	NC	NC	
3 Bromate	8.600	8.609	-0.009	2795826	30.0	32.4	
\$ 6 Dichloroacetic acid(Surr)	14.375	14.392	-0.017	81165934	993.7	993.6	
4 Bromide	16.900	16.917	-0.017	45900215	300.0	296.5	
2 Chlorate	18.525	18.517	0.008	15791406	120.1	110.9	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WC3001ICV_00051

Amount Added: 150.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 23-May-2020 07:24:17

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-010.d

Injection Date: 22-May-2020 12:53:00

Instrument ID: IC-8

Operator ID:

Lims ID: ICV

Worklist Smp#: 10

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

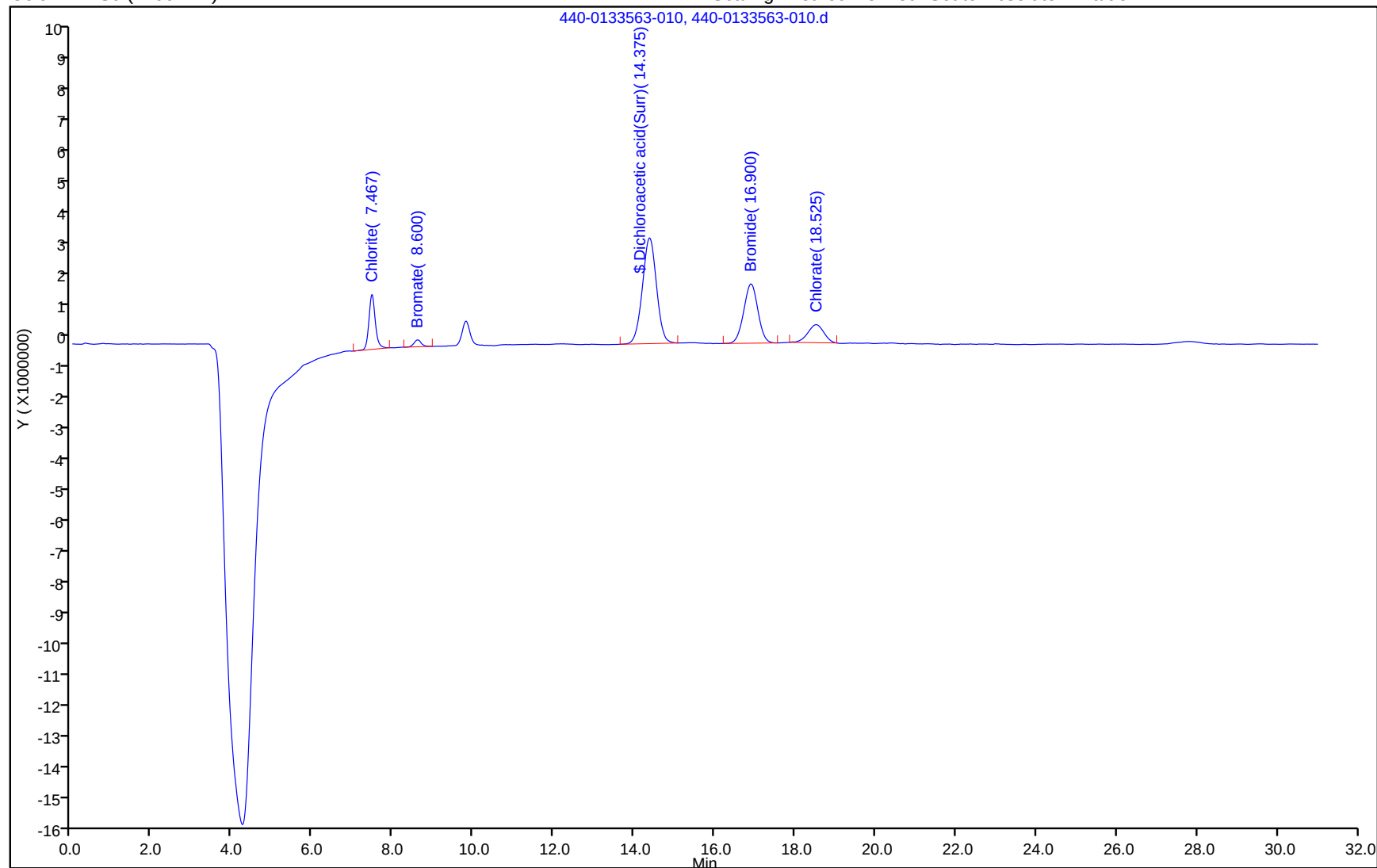
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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September 2020

Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-1288

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Lab Sample ID: ICV 440-609718/10 Calibration Date: 05/22/2020 12:53
 Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
 GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
 Lab File ID: 440-0133563-010.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorite	Lin		160468		121	120	0.6	15.0
Dichloroacetic acid(Surr)	Ave	81689	81680		994	994	-0.0	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-268223-1
SDG No.: Kirtland AFB New Mexico
Lab Sample ID: ICV 440-609718/10 Calibration Date: 05/22/2020 12:53
Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
Lab File ID: 440-0133563-010.d

Analyte	RT	RT WINDOW	
		FROM	TO
Chlorite	7.47	7.00	8.00
Dichloroacetic acid(Surr)	14.38	13.39	15.40

Report Date: 23-May-2020 07:24:18

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-010.d
 Lims ID: ICV
 Client ID:
 Sample Type: ICV
 Inject. Date: 22-May-2020 12:53:00 ALS Bottle#: 0 Worklist Smp#: 10
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0133563-010
 Misc. Info.: 10 EB
 Operator ID: Instrument ID: IC-8
 Sublist:
 Method: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 23-May-2020 08:03:05 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1019
 First Level Reviewer: zakhrabov Date: 23-May-2020 06:49:22

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.467	7.467	0.000	19256158	120.0	120.8	
3 Bromate	8.600	8.609	-0.009	2795826	NC	NC	
\$ 6 Dichloroacetic acid(Surr)	14.375	14.392	-0.017	81165934	993.7	993.6	
4 Bromide	16.900	16.917	-0.017	45900215	NC	NC	
2 Chlorate	18.525	18.517	0.008	15791406	NC	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WC3001ICV_00051 Amount Added: 150.00 Units: uL
 WCDCA_00081 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 23-May-2020 07:24:18

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-010.d

Injection Date: 22-May-2020 12:53:00

Instrument ID: IC-8

Operator ID:

Lims ID: ICV

Worklist Smp#: 10

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

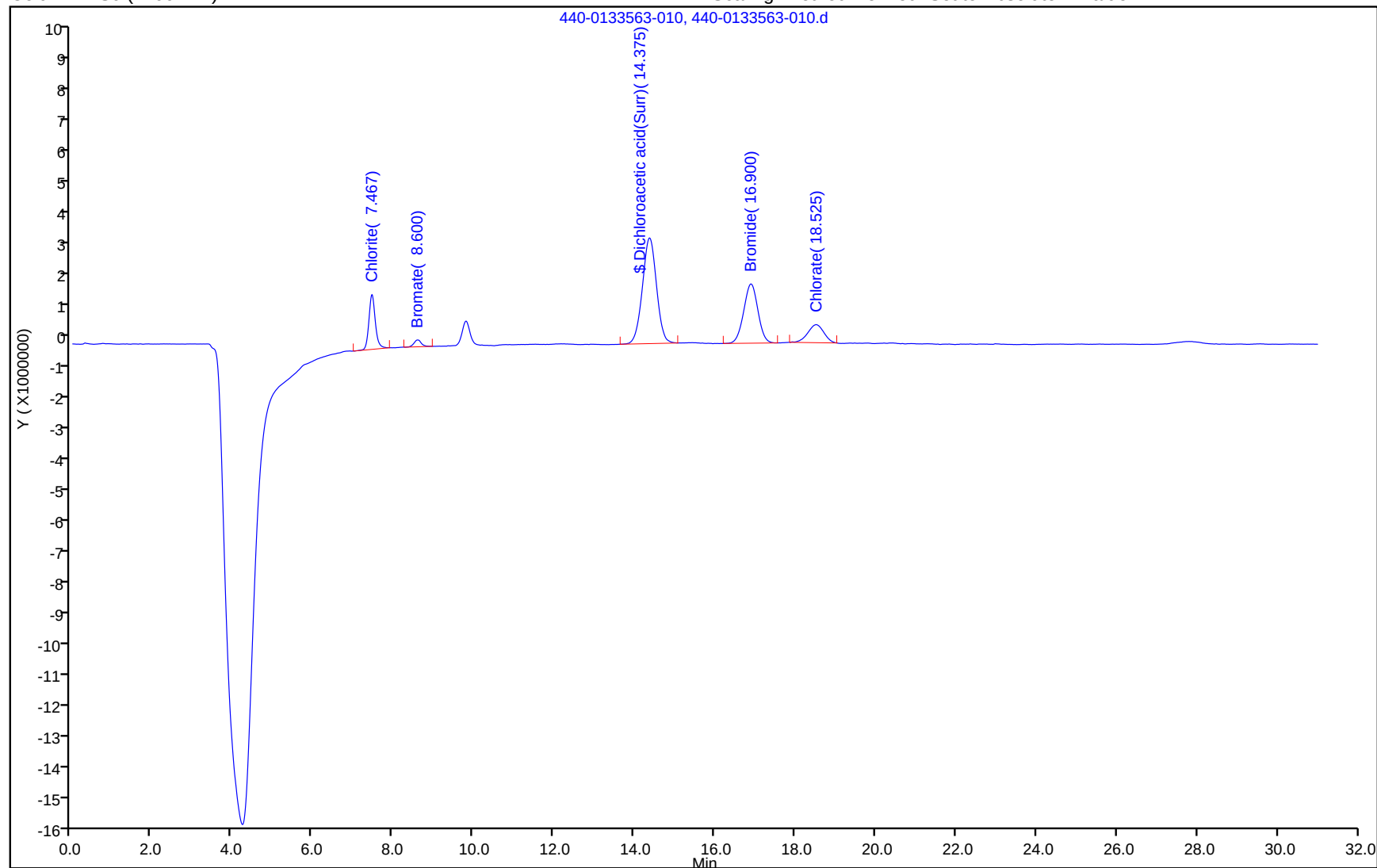
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-1292

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Lab Sample ID: CCV 440-615429/1 Calibration Date: 07/06/2020 04:02
 Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
 GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
 Lab File ID: 440-0135020-001440-0135020-001.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Bromate	Lin		89191		25.9	25.0	3.7	15.0
Bromide	Lin		153971		250	250	-0.2	15.0
Chlorate	Lin		148637		105	100	4.6	15.0
Dichloroacetic acid(Surr)	Ave	81689	86251		1050	994	5.6	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-268223-1
SDG No.: Kirtland AFB New Mexico
Lab Sample ID: CCV 440-615429/1 Calibration Date: 07/06/2020 04:02
Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
Lab File ID: 440-0135020-001440-0135020-001.d

Analyte	RT	RT WINDOW	
		FROM	TO
Bromate	8.48	7.86	9.04
Bromide	16.45	15.08	17.35
Chlorate	17.83	16.71	18.47
Dichloroacetic acid(Surr)	13.90	12.87	14.81

Report Date: 06-Jul-2020 09:50:52

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-001440-0135020-001.d
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 06-Jul-2020 04:02:00 ALS Bottle#: 0 Worklist Smp#: 1
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135020-001
 Misc. Info.: 1 EB
 Operator ID: Instrument ID: IC-8
 Sublist: chrom-300.1_C8*sub2
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 06-Jul-2020 09:50:52 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1040

First Level Reviewer: zakhrabov

Date: 06-Jul-2020 05:05:42

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.392	7.384	0.008	15438180	NC	NC	
3 Bromate	8.483	8.450	0.033	2229767	25.0	25.9	M
\$ 6 Dichloroacetic acid(Surr)	13.900	13.842	0.058	85708781	993.7	1049.2	M
4 Bromide	16.450	16.217	0.233	38492772	250.0	249.6	
2 Chlorate	17.825	17.592	0.233	14863718	100.0	104.6	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

WC3001LCS_00090

Amount Added: 125.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 06-Jul-2020 09:50:52

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-001440-0135020-001.d

Injection Date: 06-Jul-2020 04:02:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCV

Worklist Smp#: 1

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

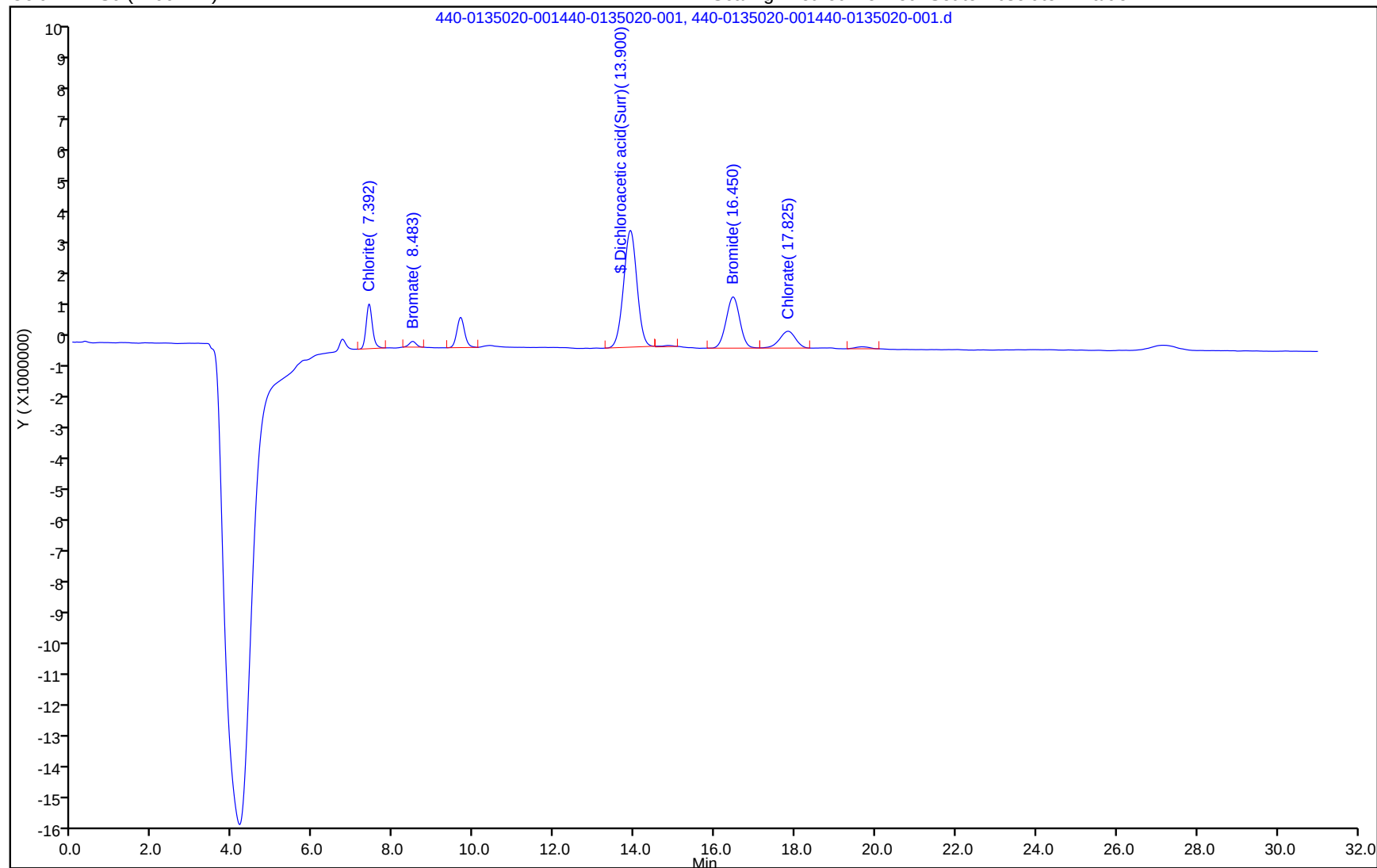
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-1296

Report Date: 06-Jul-2020 09:50:52

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

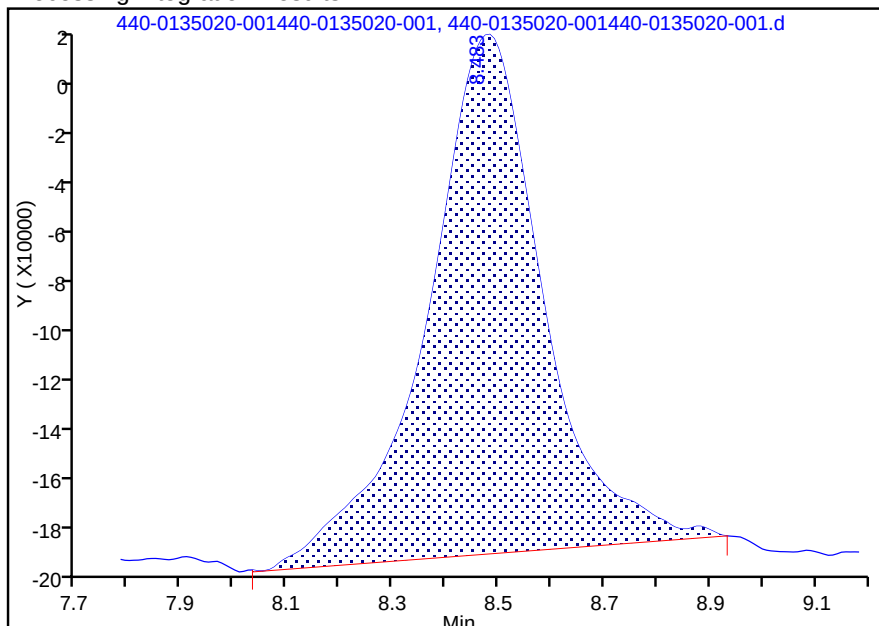
Data File:	\\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-001440-0135020-001.d		
Injection Date:	06-Jul-2020 04:02:00	Instrument ID:	IC-8
Lims ID:	CCV		
Client ID:			
Operator ID:		ALS Bottle#:	0
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	300.1_C8	Limit Group:	IC-300.1_28D
Column:	AS9 (4.00 mm)	Detector:	Ch-A-20110816009
		Worklist Smp#:	1

3 Bromate, CAS: 15541-45-4

Signal: 1

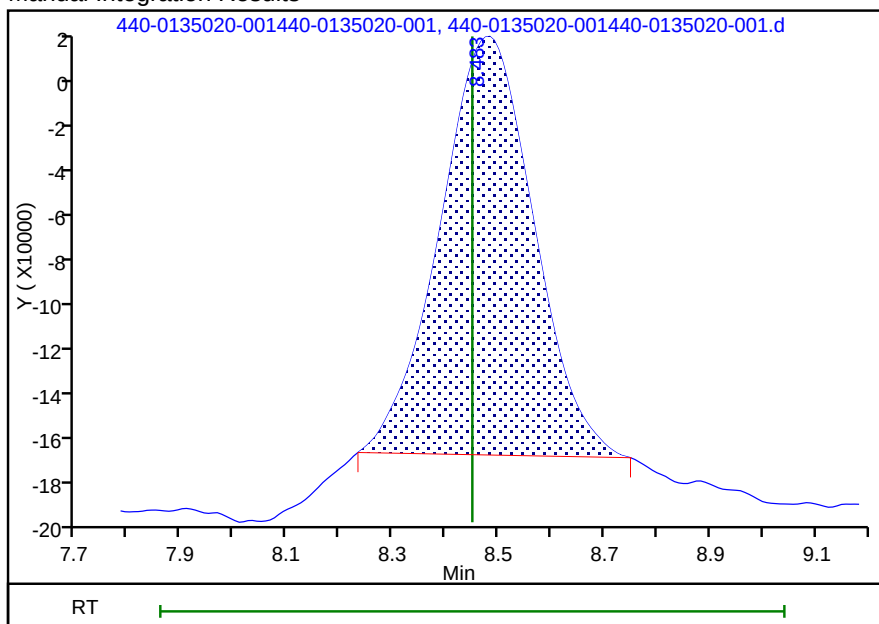
RT: 8.48
Area: 3100880
Amount: 35.883866
Amount Units: ug/l

Processing Integration Results



RT: 8.48
Area: 2229767
Amount: 25.933367
Amount Units: ug/l

Manual Integration Results



Reviewer: zakhrabov, 06-Jul-2020 04:59:50

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

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Report Date: 06-Jul-2020 09:50:52

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

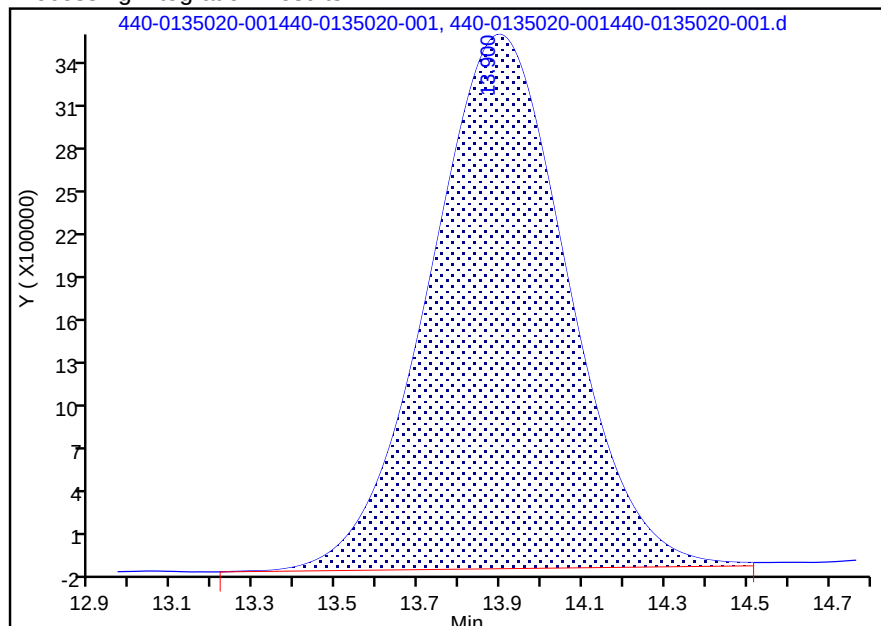
Data File:	\\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-001440-0135020-001.d		
Injection Date:	06-Jul-2020 04:02:00	Instrument ID:	IC-8
Lims ID:	CCV		
Client ID:			
Operator ID:		ALS Bottle#:	0
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	300.1_C8	Limit Group:	IC-300.1_28D
Column:	AS9 (4.00 mm)	Detector:	Ch-A-20110816009
		Worklist Smp#:	1

\$ 6 Dichloroacetic acid(Surr), CAS: 79-43-6

Signal: 1

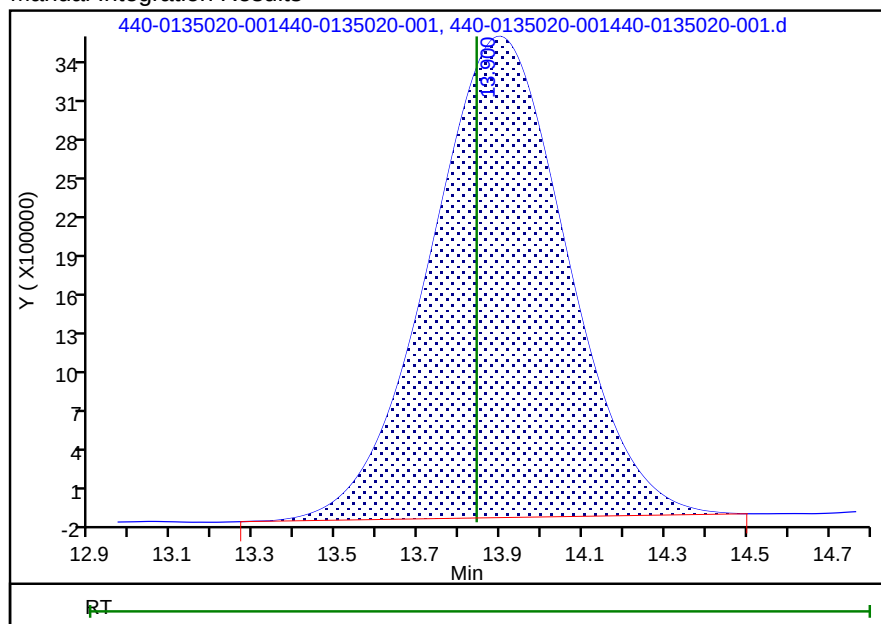
RT: 13.90
Area: 86717979
Amount: 1061.5566
Amount Units: ug/l

Processing Integration Results



RT: 13.90
Area: 85708781
Amount: 1049.2025
Amount Units: ug/l

Manual Integration Results



Reviewer: zakhrabov, 06-Jul-2020 05:00:06

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

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September 2020

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Lab Sample ID: CCV 440-615430/1 Calibration Date: 07/06/2020 04:02
 Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
 GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
 Lab File ID: 440-0135020-001440-0135020-001.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorite	Lin		154382		97.0	100	-3.0	15.0
Dichloroacetic acid(Surr)	Ave	81689	86251		1050	994	5.6	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-268223-1
SDG No.: Kirtland AFB New Mexico
Lab Sample ID: CCV 440-615430/1 Calibration Date: 07/06/2020 04:02
Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
Lab File ID: 440-0135020-001440-0135020-001.d

Analyte	RT	RT WINDOW	
		FROM	TO
Chlorite	7.39	7.00	8.00
Dichloroacetic acid(Surr)	13.90	12.87	14.81

Report Date: 06-Jul-2020 09:50:52

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-001440-0135020-001.d
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 06-Jul-2020 04:02:00 ALS Bottle#: 0 Worklist Smp#: 1
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135020-001
 Misc. Info.: 1 EB
 Operator ID: Instrument ID: IC-8
 Sublist: chrom-300.1_C8*sub2
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 06-Jul-2020 09:50:52 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1040

First Level Reviewer: zakhrabov

Date: 06-Jul-2020 05:05:42

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.392	7.384	0.008	15438180	100.0	97.0	
3 Bromate	8.483	8.450	0.033	2229767	NC	NC	M
\$ 6 Dichloroacetic acid(Surr)	13.900	13.842	0.058	85708781	993.7	1049.2	M
4 Bromide	16.450	16.217	0.233	38492772	NC	NC	
2 Chlorate	17.825	17.592	0.233	14863718	NC	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

WC3001LCS_00090

Amount Added: 125.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 06-Jul-2020 09:50:52

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-001440-0135020-001.d

Injection Date: 06-Jul-2020 04:02:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCV

Worklist Smp#: 1

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

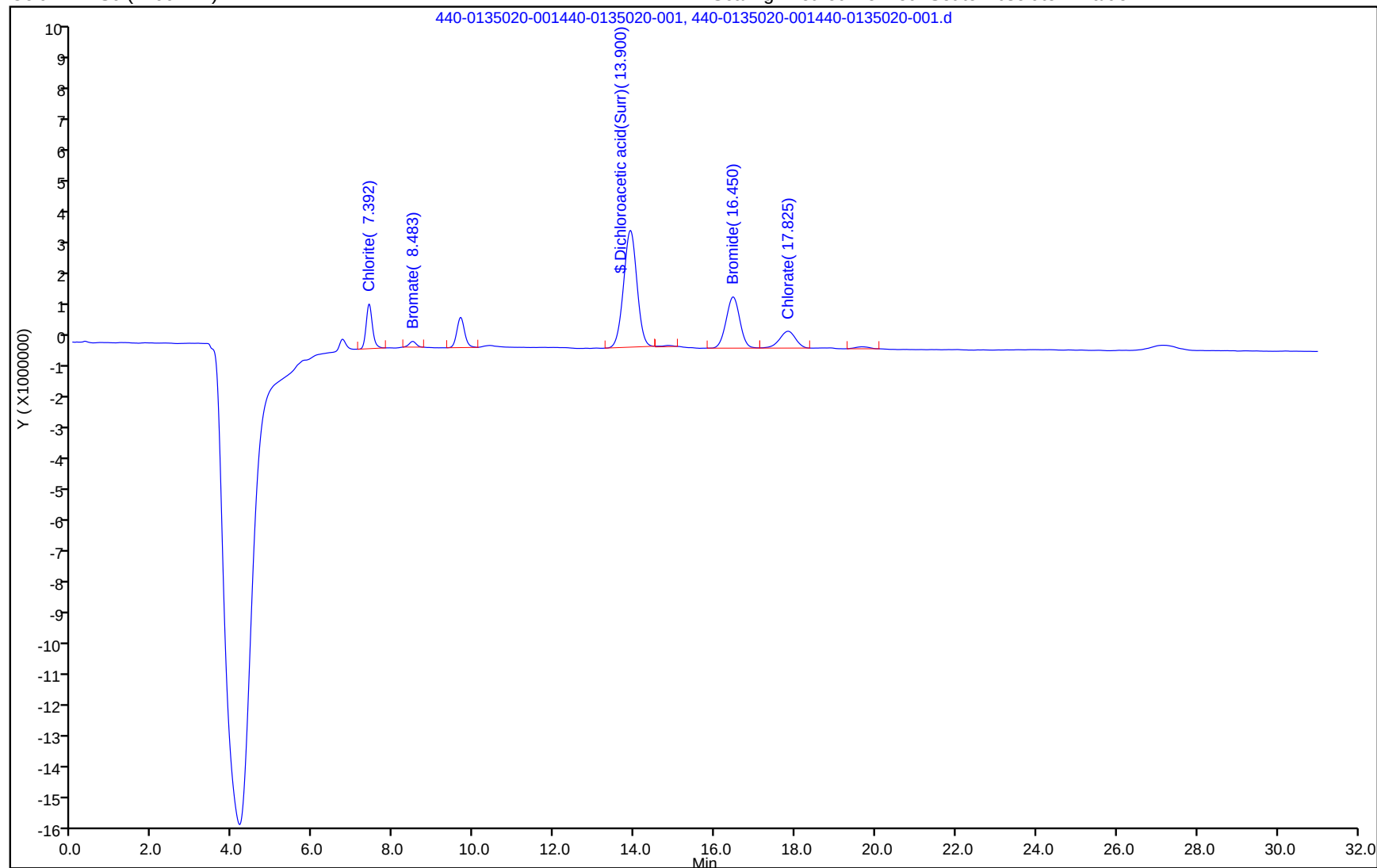
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-1302

Report Date: 06-Jul-2020 09:50:52

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

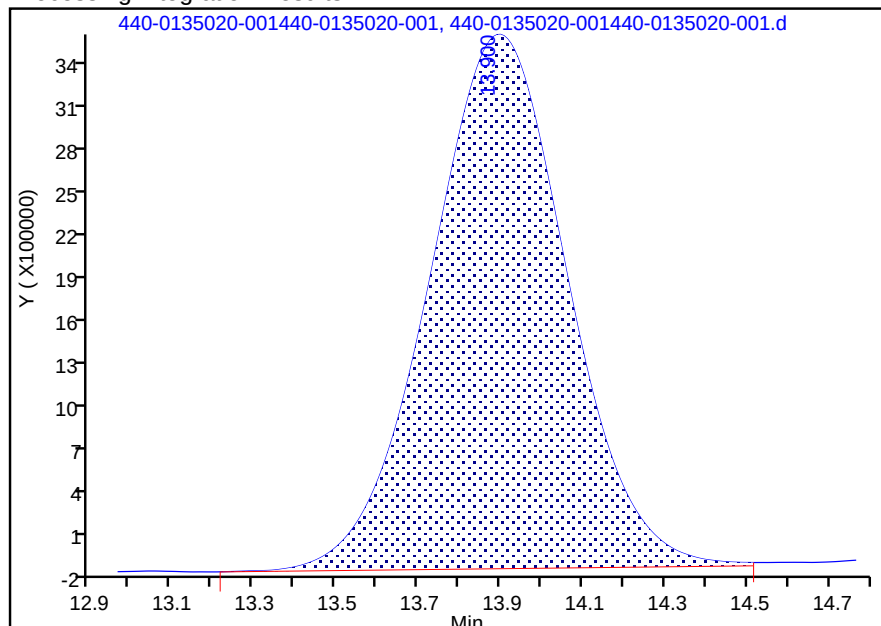
Data File:	\\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-001440-0135020-001.d		
Injection Date:	06-Jul-2020 04:02:00	Instrument ID:	IC-8
Lims ID:	CCV		
Client ID:			
Operator ID:		ALS Bottle#:	0
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	300.1_C8	Limit Group:	IC-300.1_14D
Column:	AS9 (4.00 mm)	Detector:	Ch-A-20110816009
		Worklist Smp#:	1

\$ 6 Dichloroacetic acid(Surr), CAS: 79-43-6

Signal: 1

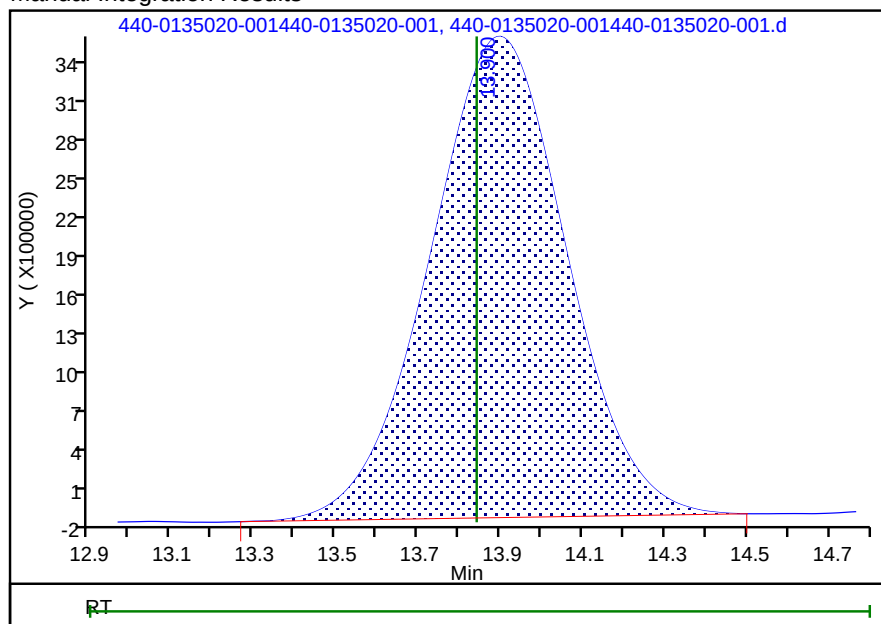
RT: 13.90
Area: 86717979
Amount: 1061.5566
Amount Units: ug/l

Processing Integration Results



RT: 13.90
Area: 85708781
Amount: 1049.2025
Amount Units: ug/l

Manual Integration Results



Reviewer: zakhrabov, 06-Jul-2020 05:00:06

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

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FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Lab Sample ID: CCV 440-615429/13 Calibration Date: 07/06/2020 12:17
 Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
 GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
 Lab File ID: 440-0135020-013440-0135020-013.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Bromate	Lin		88644		51.1	50.0	2.2	15.0
Bromide	Lin		153113		491	500	-1.9	15.0
Chlorate	Lin		148159		205	200	2.4	15.0
Dichloroacetic acid(Surr)	Ave	81689	84534		1030	994	3.5	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Lab Sample ID: CCV 440-615429/13 Calibration Date: 07/06/2020 12:17
 Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
 GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
 Lab File ID: 440-0135020-013440-0135020-013.d

Analyte	RT	RT WINDOW	
		FROM	TO
Bromate	8.48	7.86	9.04
Bromide	16.33	15.08	17.35
Chlorate	17.72	16.71	18.47
Dichloroacetic acid(Surr)	13.92	12.87	14.81

Report Date: 07-Jul-2020 04:16:20

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-013440-0135020-013.d
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 06-Jul-2020 12:17:00 ALS Bottle#: 0 Worklist Smp#: 13
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135020-013
 Misc. Info.: 13 EB
 Operator ID: Instrument ID: IC-8
 Sublist: chrom-300.1_C8*sub2
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 07-Jul-2020 04:16:20 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1026

First Level Reviewer: zakhrabov

Date: 07-Jul-2020 04:09:22

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.408	7.384	0.024	30110241	NC	NC	M
3 Bromate	8.483	8.450	0.033	4432185	50.0	51.1	M
\$ 6 Dichloroacetic acid(Surr)	13.917	13.842	0.075	84002757	993.7	1028.3	
4 Bromide	16.325	16.217	0.108	76556724	500.0	490.7	
2 Chlorate	17.717	17.592	0.125	29631736	200.0	204.9	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

WC3001LCS_00090

Amount Added: 250.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 07-Jul-2020 04:16:20

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-013440-0135020-013.d

Injection Date: 06-Jul-2020 12:17:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCV

Worklist Smp#: 13

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

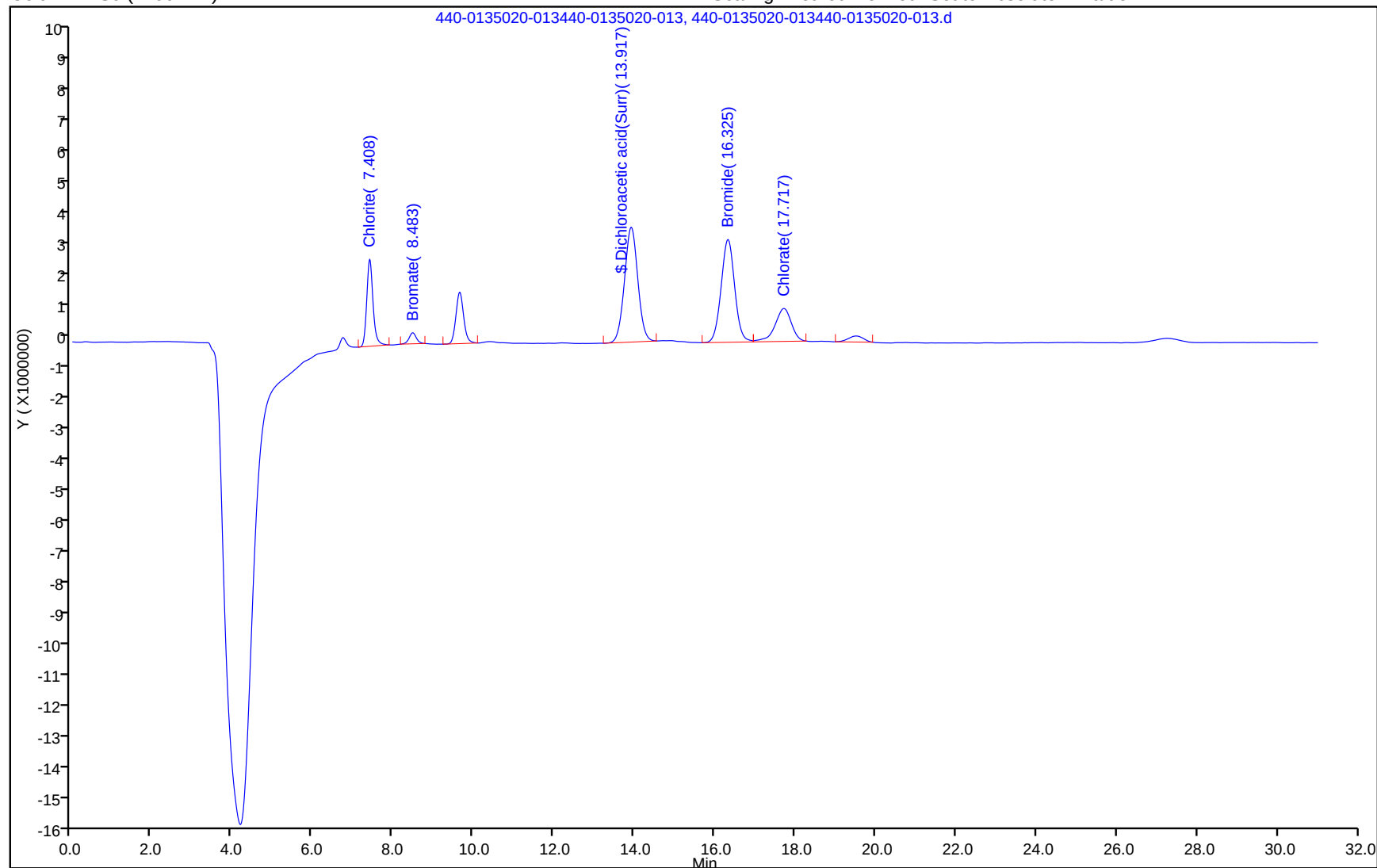
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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September 2020

Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-1307

Report Date: 07-Jul-2020 04:16:20

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

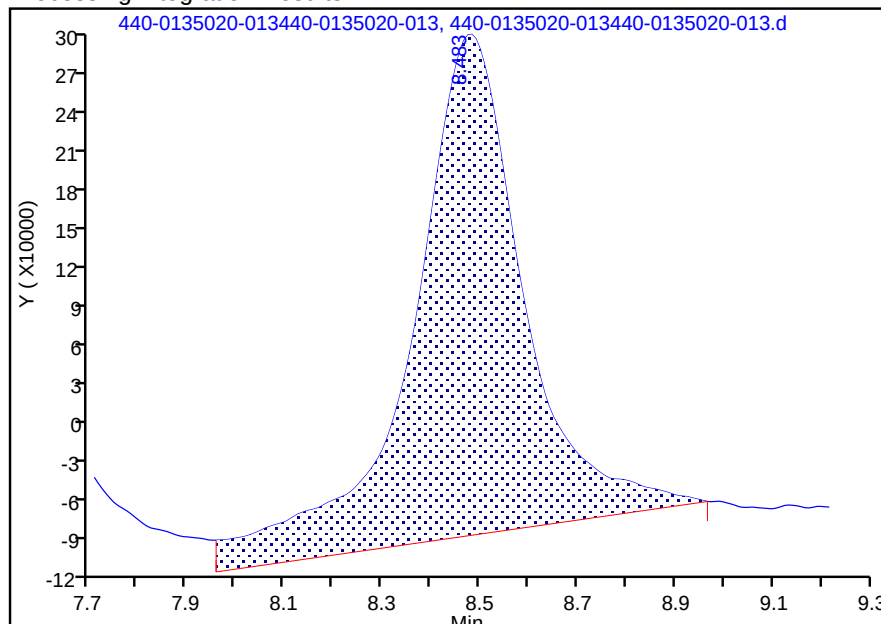
Data File:	\\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-013440-0135020-013.d		
Injection Date:	06-Jul-2020 12:17:00	Instrument ID:	IC-8
Lims ID:	CCV		
Client ID:			
Operator ID:	ALS Bottle#:	0	Worklist Smp#: 13
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	300.1_C8	Limit Group:	IC-300.1_28D
Column:	AS9 (4.00 mm)	Detector:	Ch-A-20110816009

3 Bromate, CAS: 15541-45-4

Signal: 1

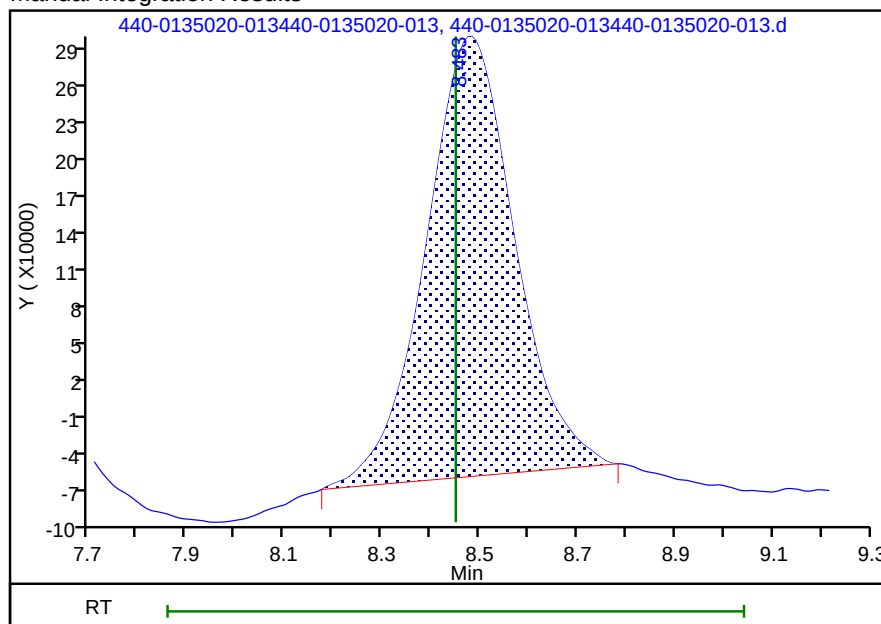
RT: 8.48
Area: 6147285
Amount: 70.682163
Amount Units: ug/l

Processing Integration Results



RT: 8.48
Area: 4432185
Amount: 51.091019
Amount Units: ug/l

Manual Integration Results



Reviewer: zakhrabov, 07-Jul-2020 04:09:12

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

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September 2020

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Lab Sample ID: CCV 440-615430/13 Calibration Date: 07/06/2020 12:17
 Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
 GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
 Lab File ID: 440-0135020-013440-0135020-013.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorite	Lin		150551		188	200	-5.9	15.0
Dichloroacetic acid(Surr)	Ave	81689	84534		1030	994	3.5	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-268223-1
SDG No.: Kirtland AFB New Mexico
Lab Sample ID: CCV 440-615430/13 Calibration Date: 07/06/2020 12:17
Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
Lab File ID: 440-0135020-013440-0135020-013.d

Analyte	RT	RT WINDOW	
		FROM	TO
Chlorite	7.41	7.00	8.00
Dichloroacetic acid(Surr)	13.92	12.87	14.81

Report Date: 07-Jul-2020 04:16:20

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-013440-0135020-013.d
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 06-Jul-2020 12:17:00 ALS Bottle#: 0 Worklist Smp#: 13
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135020-013
 Misc. Info.: 13 EB
 Operator ID: Instrument ID: IC-8
 Sublist: chrom-300.1_C8*sub2
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 07-Jul-2020 04:16:20 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1026

First Level Reviewer: zakhrabov

Date: 07-Jul-2020 04:09:22

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.408	7.384	0.024	30110241	200.0	188.2	M
3 Bromate	8.483	8.450	0.033	4432185	NC	NC	M
\$ 6 Dichloroacetic acid(Surr)	13.917	13.842	0.075	84002757	993.7	1028.3	
4 Bromide	16.325	16.217	0.108	76556724	NC	NC	
2 Chlorate	17.717	17.592	0.125	29631736	NC	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

WC3001LCS_00090

Amount Added: 250.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 07-Jul-2020 04:16:20

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-013440-0135020-013.d

Injection Date: 06-Jul-2020 12:17:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCV

Worklist Smp#: 13

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

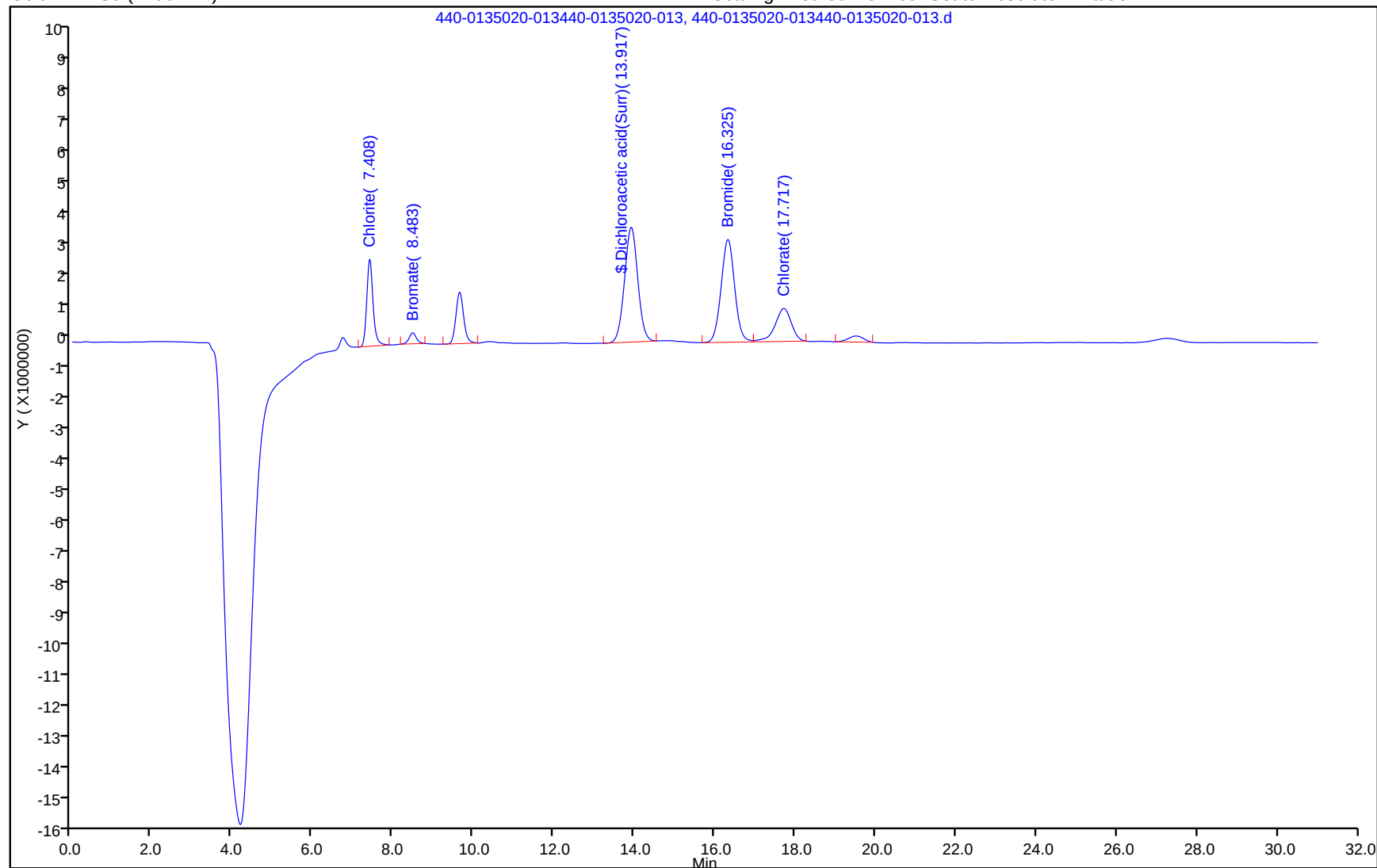
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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September 2020

Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-1312

Report Date: 07-Jul-2020 04:16:20

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

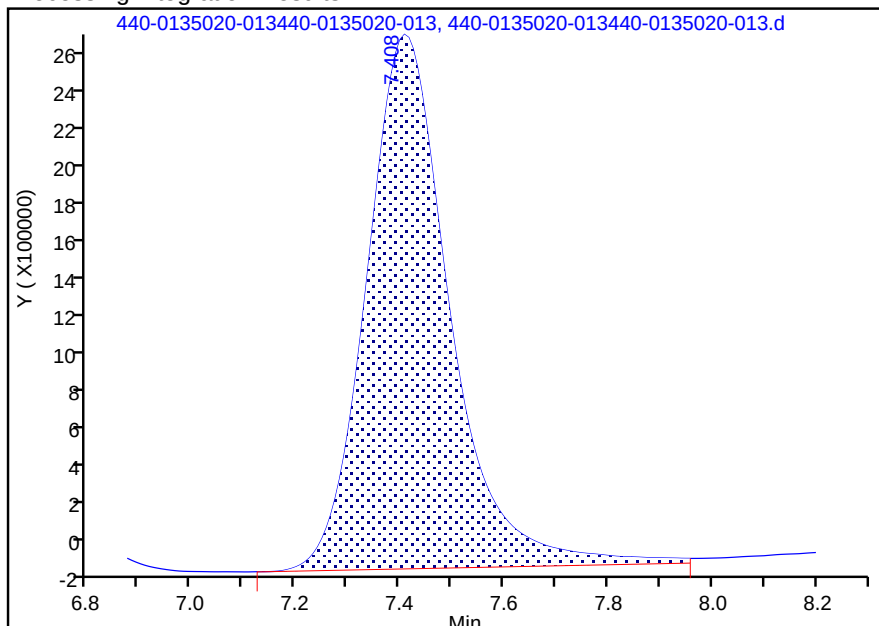
Data File:	\\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-013440-0135020-013.d		
Injection Date:	06-Jul-2020 12:17:00	Instrument ID:	IC-8
Lims ID:	CCV		
Client ID:			
Operator ID:		ALS Bottle#:	0
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	300.1_C8	Limit Group:	IC-300.1_14D
Column:	AS9 (4.00 mm)	Detector:	Ch-A-20110816009
		Worklist Smp#:	13

5 Chlorite, CAS: 14998-27-7

Signal: 1

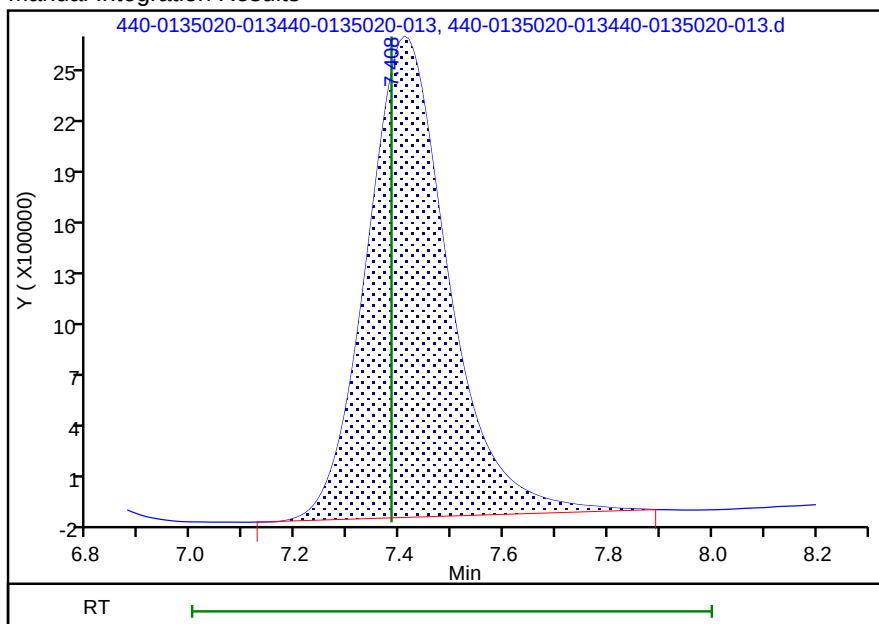
RT: 7.41
Area: 30948014
Amount: 0
Amount Units: ug/l

Processing Integration Results



RT: 7.41
Area: 30110241
Amount: 188.1947
Amount Units: ug/l

Manual Integration Results



Reviewer: zakhrabov, 07-Jul-2020 04:09:16

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

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September 2020

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Lab Sample ID: CCV 440-615429/25 Calibration Date: 07/06/2020 19:32
 Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
 GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
 Lab File ID: 440-0135020-025440-0135020-025.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Bromate	Lin		87493		25.4	25.0	1.8	15.0
Bromide	Lin		152666		247	250	-1.0	15.0
Chlorate	Lin		152832		107	100	7.4	15.0
Dichloroacetic acid(Surr)	Ave	81689	83744		1020	994	2.5	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Lab Sample ID: CCV 440-615429/25 Calibration Date: 07/06/2020 19:32
 Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
 GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
 Lab File ID: 440-0135020-025440-0135020-025.d

Analyte	RT	RT WINDOW	
		FROM	TO
Bromate	8.47	7.86	9.04
Bromide	16.24	15.08	17.35
Chlorate	17.65	16.71	18.47
Dichloroacetic acid(Surr)	13.93	12.87	14.81

Report Date: 07-Jul-2020 04:16:24

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-025440-0135020-025.d
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 06-Jul-2020 19:32:00 ALS Bottle#: 0 Worklist Smp#: 25
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135020-025
 Misc. Info.: 25 EB
 Operator ID: Instrument ID: IC-8
 Sublist: chrom-300.1_C8*sub2
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 07-Jul-2020 04:16:23 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1026

First Level Reviewer: zakhrabov

Date: 07-Jul-2020 04:08:02

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.408	7.384	0.024	15287585	NC	NC	M
3 Bromate	8.467	8.450	0.017	2187321	25.0	25.4	M
\$ 6 Dichloroacetic acid(Surr)	13.925	13.842	0.083	83216886	993.7	1018.7	
4 Bromide	16.242	16.217	0.025	38166469	250.0	247.5	
2 Chlorate	17.650	17.592	0.058	15283159	100.0	107.4	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

WC3001LCS_00090

Amount Added: 125.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 07-Jul-2020 04:16:24

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-025440-0135020-025.d

Injection Date: 06-Jul-2020 19:32:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCV

Worklist Smp#: 25

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

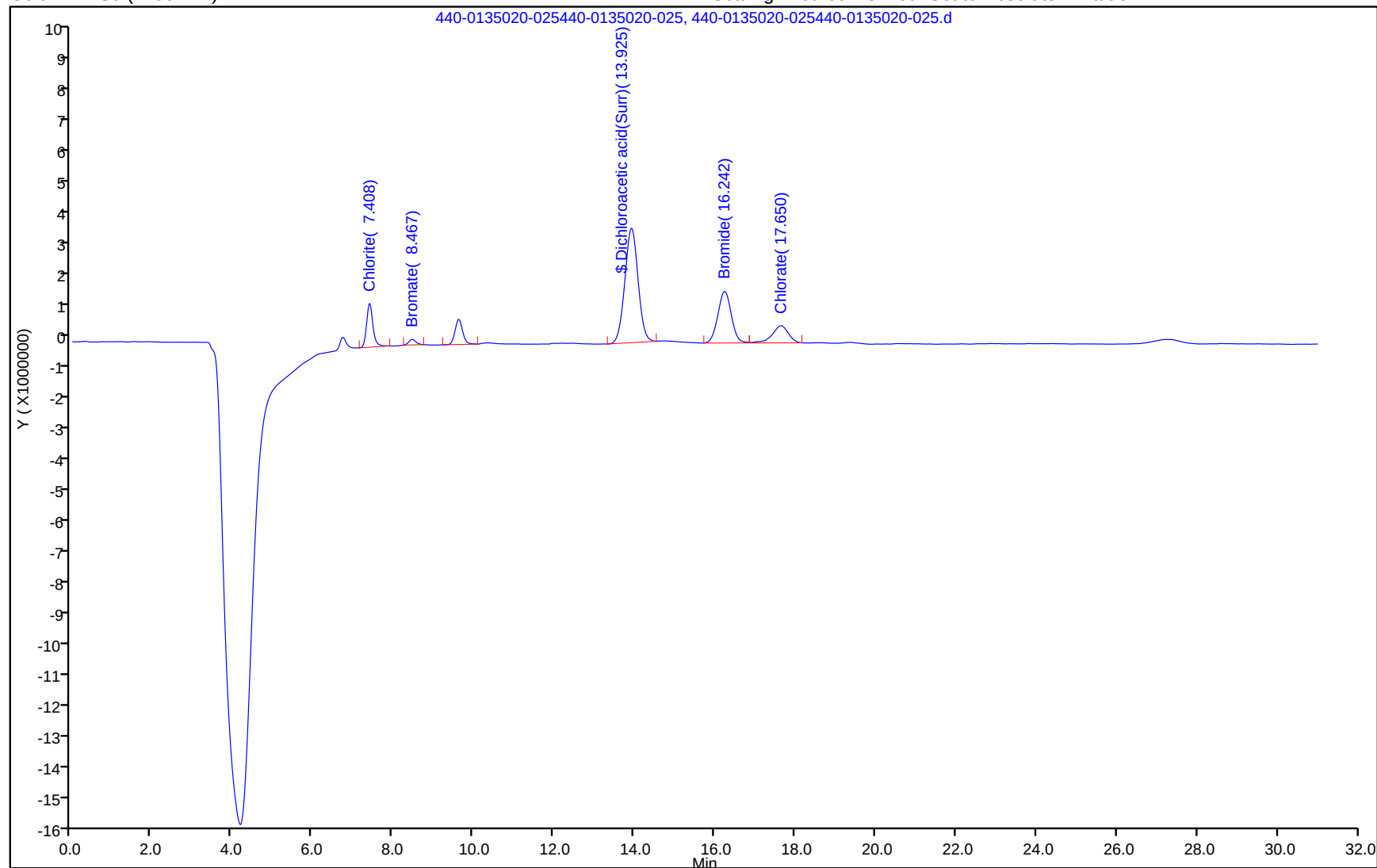
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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September 2020

Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-1317

Report Date: 07-Jul-2020 04:16:24

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

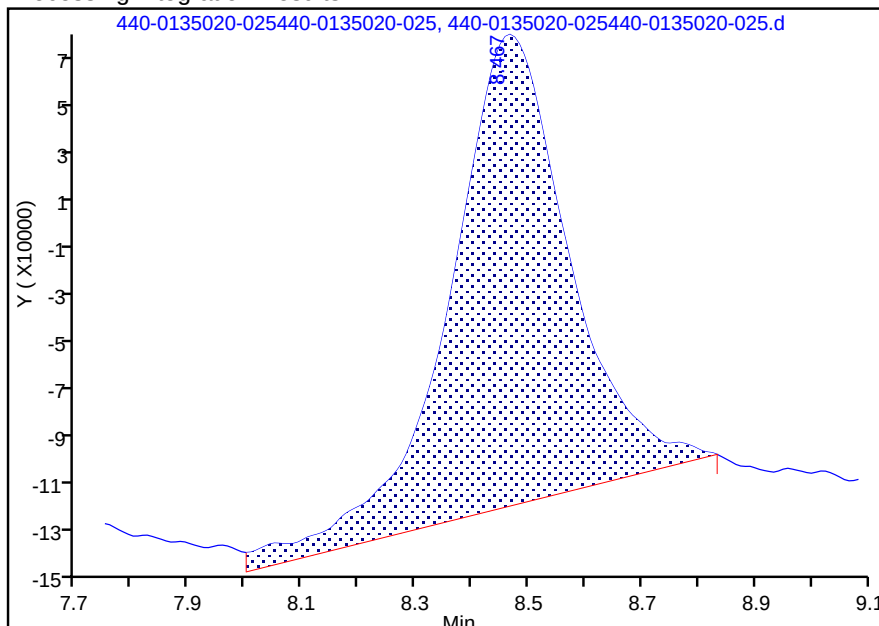
Data File:	\\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-025440-0135020-025.d		
Injection Date:	06-Jul-2020 19:32:00	Instrument ID:	IC-8
Lims ID:	CCV		
Client ID:			
Operator ID:	ALS Bottle#:	0	Worklist Smp#:
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	300.1_C8	Limit Group:	IC-300.1_28D
Column:	AS9 (4.00 mm)	Detector:	Ch-A-20110816009

3 Bromate, CAS: 15541-45-4

Signal: 1

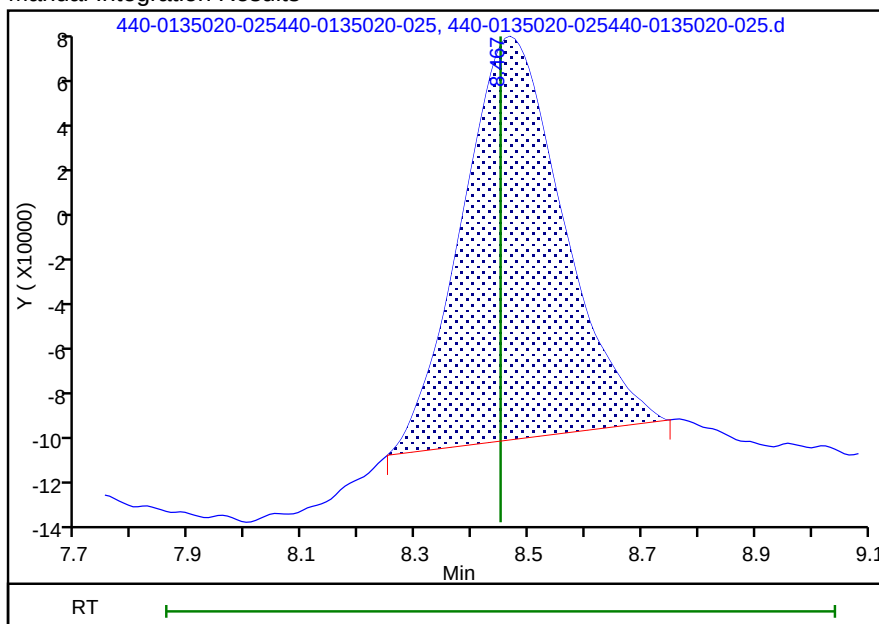
RT: 8.47
Area: 2859675
Amount: 33.128644
Amount Units: ug/l

Processing Integration Results



RT: 8.47
Area: 2187321
Amount: 25.448518
Amount Units: ug/l

Manual Integration Results



Reviewer: zakhrabov, 07-Jul-2020 04:07:49

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

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September 2020

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Lab Sample ID: CCV 440-615430/25 Calibration Date: 07/06/2020 19:32
 Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
 GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
 Lab File ID: 440-0135020-025440-0135020-025.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorite	Lin		152876		96.1	100	-3.9	15.0
Dichloroacetic acid(Surr)	Ave	81689	83744		1020	994	2.5	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-268223-1
SDG No.: Kirtland AFB New Mexico
Lab Sample ID: CCV 440-615430/25 Calibration Date: 07/06/2020 19:32
Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
Lab File ID: 440-0135020-025440-0135020-025.d

Analyte	RT	RT WINDOW	
		FROM	TO
Chlorite	7.41	7.00	8.00
Dichloroacetic acid(Surr)	13.93	12.87	14.81

Report Date: 07-Jul-2020 04:16:24

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-025440-0135020-025.d
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 06-Jul-2020 19:32:00 ALS Bottle#: 0 Worklist Smp#: 25
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135020-025
 Misc. Info.: 25 EB
 Operator ID: Instrument ID: IC-8
 Sublist: chrom-300.1_C8*sub2
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 07-Jul-2020 04:16:23 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1026

First Level Reviewer: zakhrabov

Date: 07-Jul-2020 04:08:02

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.408	7.384	0.024	15287585	100.0	96.1	M
3 Bromate	8.467	8.450	0.017	2187321	NC	NC	M
\$ 6 Dichloroacetic acid(Surr)	13.925	13.842	0.083	83216886	993.7	1018.7	
4 Bromide	16.242	16.217	0.025	38166469	NC	NC	
2 Chlorate	17.650	17.592	0.058	15283159	NC	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

WC3001LCS_00090

Amount Added: 125.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 07-Jul-2020 04:16:24

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-025440-0135020-025.d

Injection Date: 06-Jul-2020 19:32:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCV

Worklist Smp#: 25

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

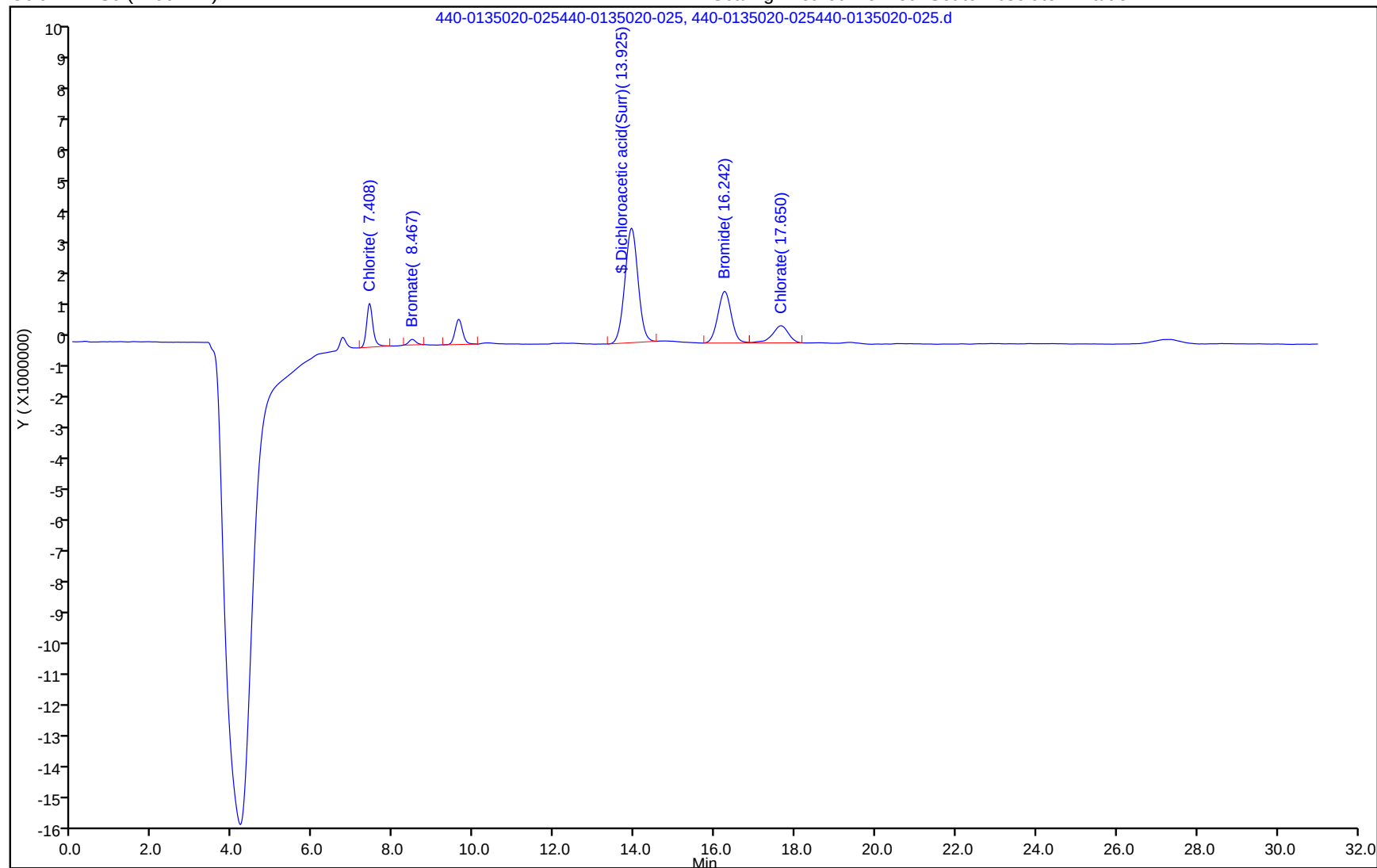
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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September 2020

Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-1322

Report Date: 07-Jul-2020 04:16:24

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

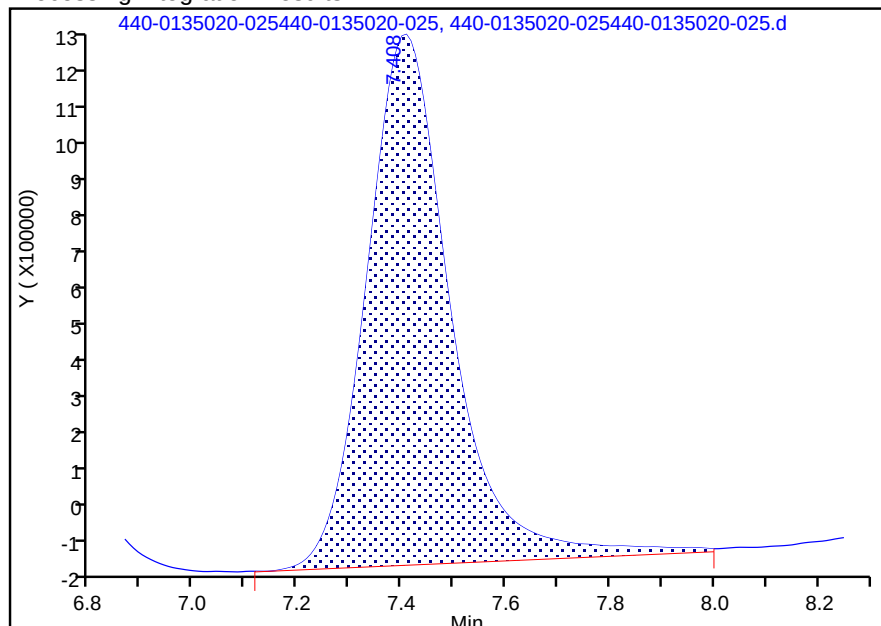
Data File:	\\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-025440-0135020-025.d		
Injection Date:	06-Jul-2020 19:32:00	Instrument ID:	IC-8
Lims ID:	CCV		
Client ID:			
Operator ID:		ALS Bottle#:	0
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	300.1_C8	Limit Group:	IC-300.1_14D
Column:	AS9 (4.00 mm)	Detector:	Ch-A-20110816009
		Worklist Smp#:	25

5 Chlorite, CAS: 14998-27-7

Signal: 1

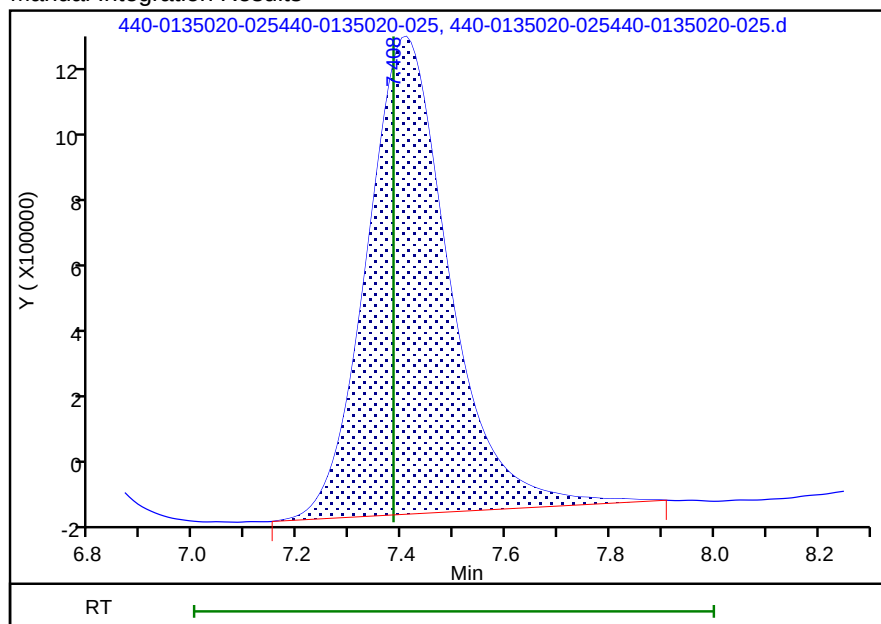
RT: 7.41
Area: 15741243
Amount: 0
Amount Units: ug/l

Processing Integration Results



RT: 7.41
Area: 15287585
Amount: 96.114159
Amount Units: ug/l

Manual Integration Results



Reviewer: zakhrabov, 07-Jul-2020 04:07:54

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

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FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Lab Sample ID: CCV 440-615429/37 Calibration Date: 07/07/2020 02:47
 Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
 GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
 Lab File ID: 440-0135020-037440-0135020-037.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Bromate	Lin		86195		49.7	50.0	-0.6	15.0
Bromide	Lin		153339		491	500	-1.7	15.0
Chlorate	Lin		148163		205	200	2.4	15.0
Dichloroacetic acid(Surr)	Ave	81689	84050		1020	994	2.9	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Lab Sample ID: CCV 440-615429/37 Calibration Date: 07/07/2020 02:47
 Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
 GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
 Lab File ID: 440-0135020-037440-0135020-037.d

Analyte	RT	RT WINDOW	
		FROM	TO
Bromate	8.48	7.86	9.04
Bromide	16.40	15.08	17.35
Chlorate	17.78	16.71	18.47
Dichloroacetic acid(Surr)	13.89	12.87	14.81

Report Date: 07-Jul-2020 04:16:27

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-037440-0135020-037.d
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 07-Jul-2020 02:47:00 ALS Bottle#: 0 Worklist Smp#: 37
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135020-037
 Misc. Info.: 19274 EB
 Operator ID: Instrument ID: IC-8
 Sublist: chrom-300.1_C8*sub2
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 07-Jul-2020 04:16:27 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1026
 First Level Reviewer: zakhrabov Date: 07-Jul-2020 04:07:11

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.409	7.384	0.025	29476648	NC	NC	M
3 Bromate	8.484	8.450	0.034	4309761	50.0	49.7	M
\$ 6 Dichloroacetic acid(Surr)	13.892	13.842	0.050	83521647	993.7	1022.4	
4 Bromide	16.400	16.217	0.183	76669729	500.0	491.4	
2 Chlorate	17.775	17.592	0.183	29632588	200.0	204.9	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

WC3001LCS_00090

Amount Added: 250.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 07-Jul-2020 04:16:27

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-037440-0135020-037.d

Injection Date: 07-Jul-2020 02:47:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCV

Worklist Smp#: 37

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

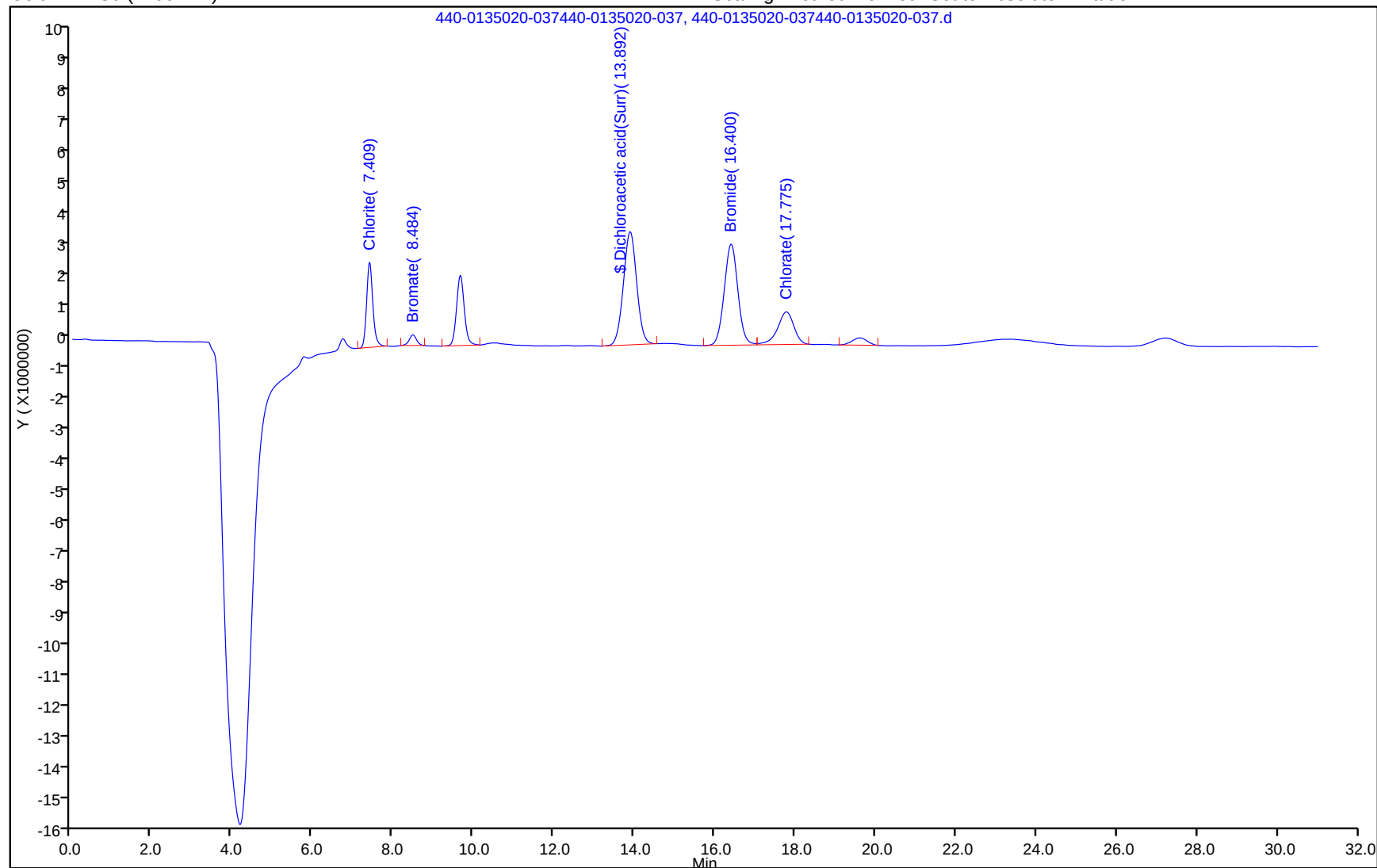
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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September 2020

Report Date: 07-Jul-2020 04:16:27

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

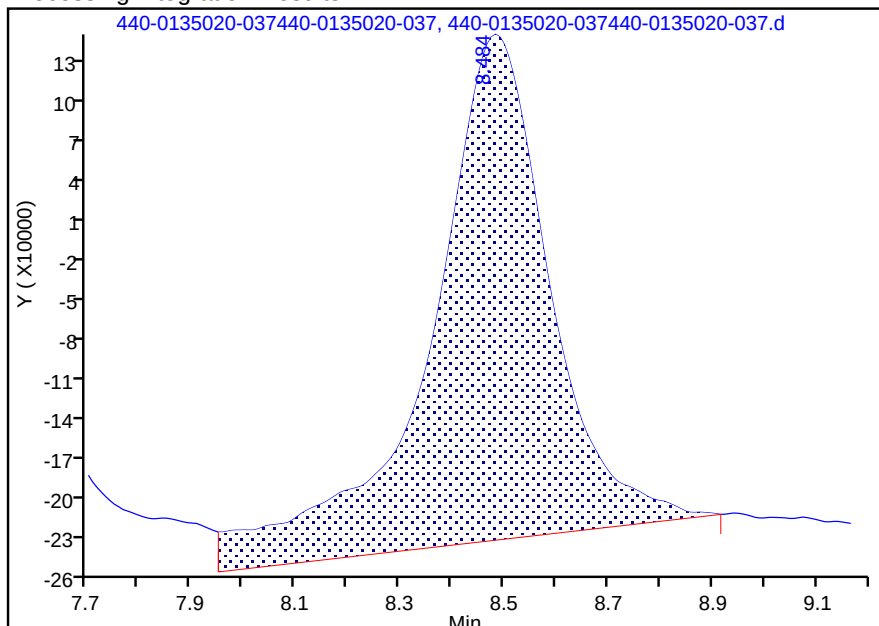
Data File:	\\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-037440-0135020-037.d		
Injection Date:	07-Jul-2020 02:47:00	Instrument ID:	IC-8
Lims ID:	CCV		
Client ID:			
Operator ID:		ALS Bottle#:	0
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	300.1_C8	Limit Group:	IC-300.1_28D
Column:	AS9 (4.00 mm)	Detector:	Ch-A-20110816009
		Worklist Smp#:	37

3 Bromate, CAS: 15541-45-4

Signal: 1

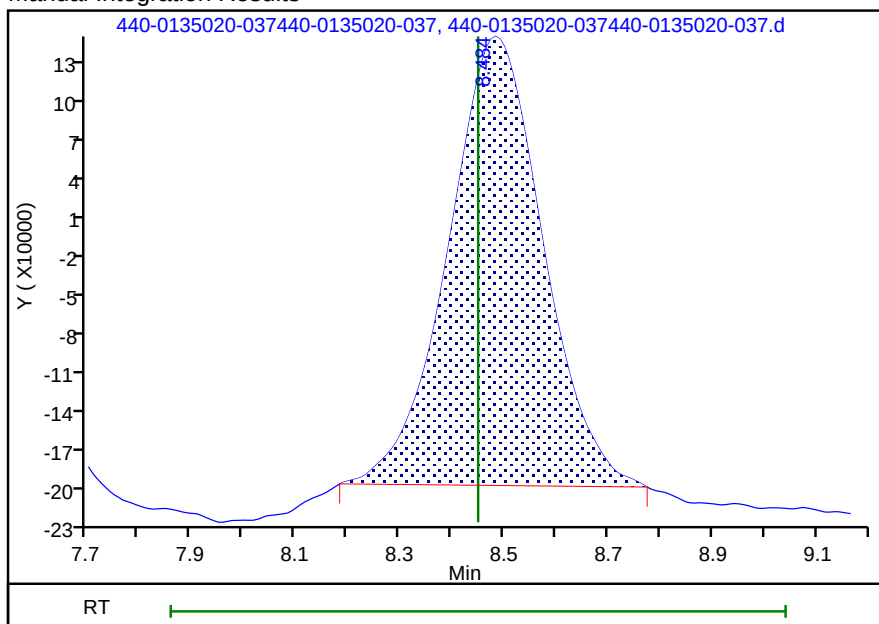
RT: 8.48
Area: 6051758
Amount: 69.590982
Amount Units: ug/l

Processing Integration Results



RT: 8.48
Area: 4309761
Amount: 49.692601
Amount Units: ug/l

Manual Integration Results



Reviewer: zakhrabov, 07-Jul-2020 04:06:56

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

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September 2020

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Lab Sample ID: CCV 440-615430/37 Calibration Date: 07/07/2020 02:47
 Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
 GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
 Lab File ID: 440-0135020-037440-0135020-037.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorite	Lin		147383		184	200	-7.9	15.0
Dichloroacetic acid(Surr)	Ave	81689	84050		1020	994	2.9	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-268223-1
SDG No.: Kirtland AFB New Mexico
Lab Sample ID: CCV 440-615430/37 Calibration Date: 07/07/2020 02:47
Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
Lab File ID: 440-0135020-037440-0135020-037.d

Analyte	RT	RT WINDOW	
		FROM	TO
Chlorite	7.41	7.00	8.00
Dichloroacetic acid(Surr)	13.89	12.87	14.81

Report Date: 07-Jul-2020 04:16:27

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-037440-0135020-037.d
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 07-Jul-2020 02:47:00 ALS Bottle#: 0 Worklist Smp#: 37
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135020-037
 Misc. Info.: 19274 EB
 Operator ID: Instrument ID: IC-8
 Sublist: chrom-300.1_C8*sub2
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 07-Jul-2020 04:16:27 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1026

First Level Reviewer: zakhrabov

Date: 07-Jul-2020 04:07:11

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.409	7.384	0.025	29476648	200.0	184.3	M
3 Bromate	8.484	8.450	0.034	4309761	NC	NC	M
\$ 6 Dichloroacetic acid(Surr)	13.892	13.842	0.050	83521647	993.7	1022.4	
4 Bromide	16.400	16.217	0.183	76669729	NC	NC	
2 Chlorate	17.775	17.592	0.183	29632588	NC	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

WC3001LCS_00090

Amount Added: 250.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 07-Jul-2020 04:16:27

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-037440-0135020-037.d

Injection Date: 07-Jul-2020 02:47:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCV

Worklist Smp#: 37

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

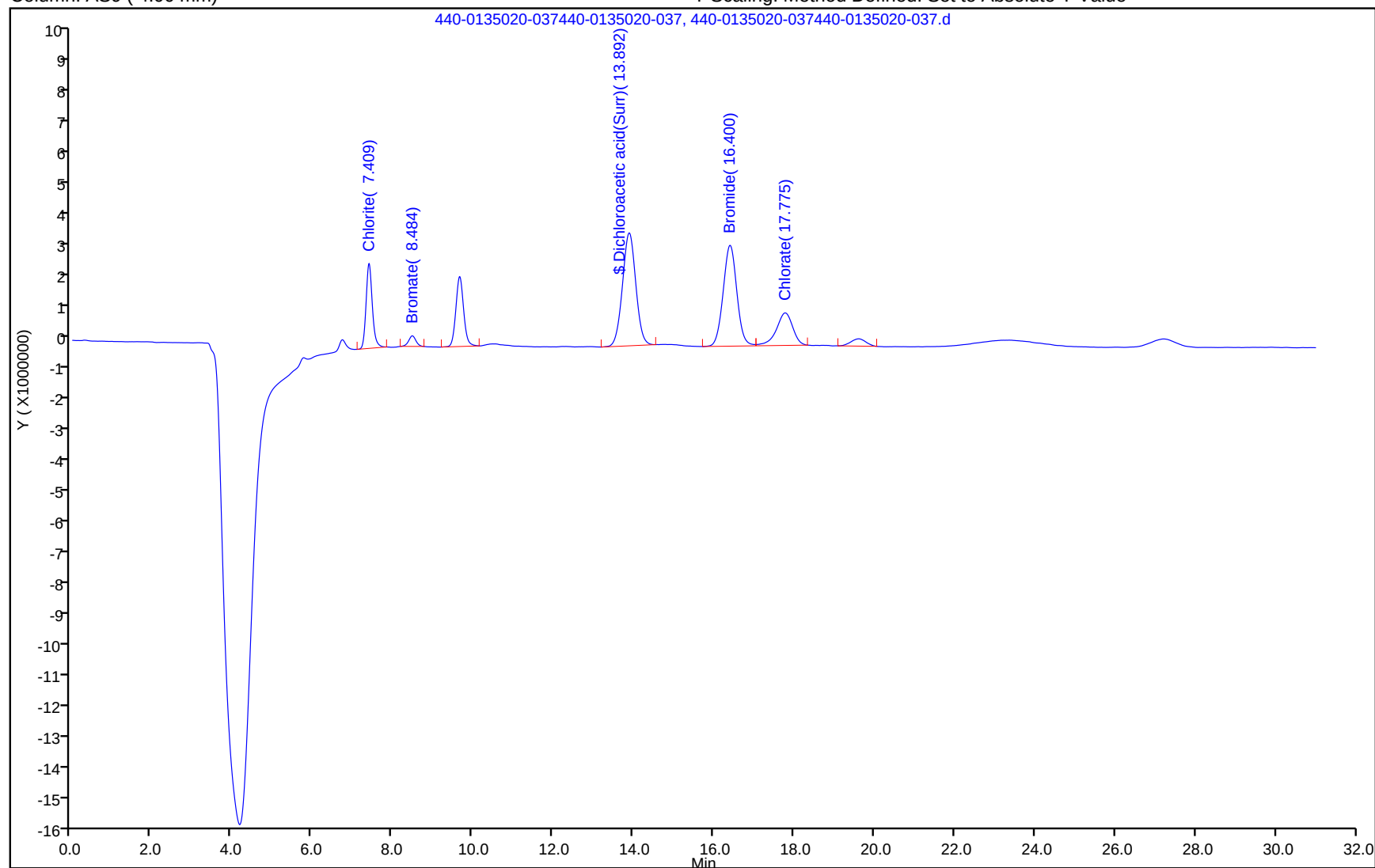
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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September 2020

Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-1332

Report Date: 07-Jul-2020 04:16:27

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-037440-0135020-037.d

Injection Date: 07-Jul-2020 02:47:00

Instrument ID: IC-8

Lims ID: CCV

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#:

37

Injection Vol: 1.0 ul

Dil. Factor:

1.0000

Method: 300.1_C8

Limit Group:

IC-300.1_14D

Column: AS9 (4.00 mm)

Detector

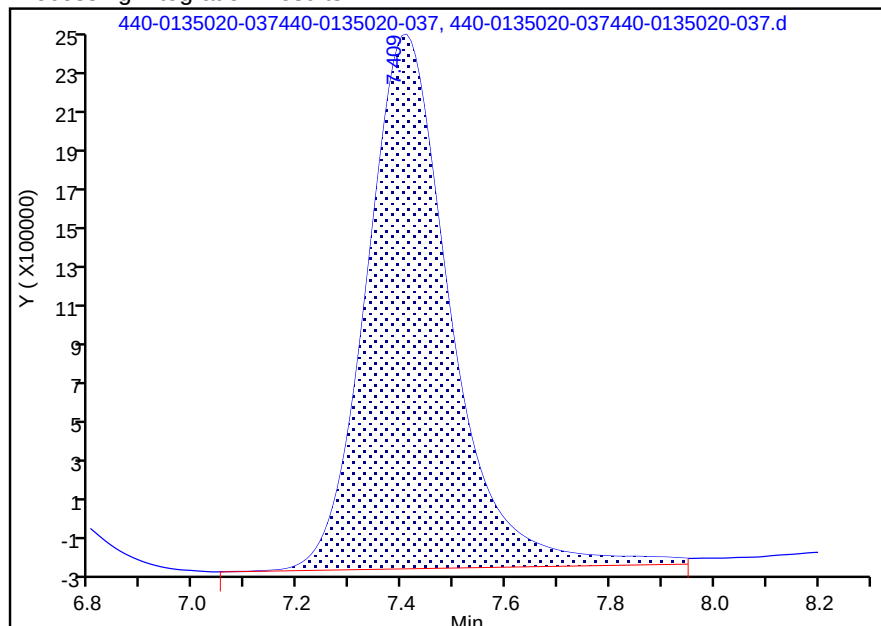
Ch-A-20110816009

5 Chlorite, CAS: 14998-27-7

Signal: 1

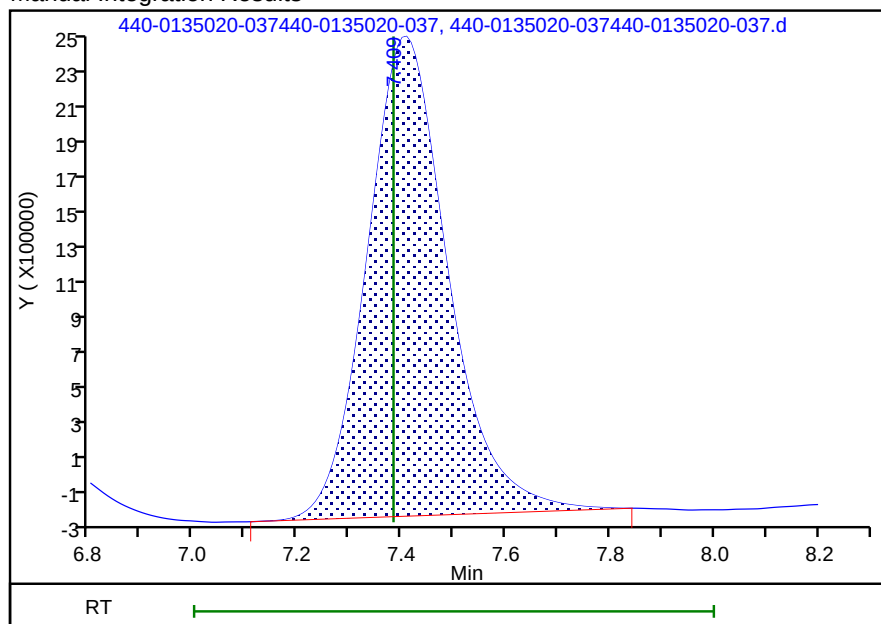
RT: 7.41
 Area: 30716545
 Amount: 0
 Amount Units: ug/l

Processing Integration Results



RT: 7.41
 Area: 29476648
 Amount: 184.2587
 Amount Units: ug/l

Manual Integration Results



Reviewer: zakhrabov, 07-Jul-2020 04:07:01

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

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September 2020

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Lab Sample ID: CCV 440-615429/49 Calibration Date: 07/07/2020 10:12
 Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
 GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
 Lab File ID: 440-0135020-049440-0135020-049.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Bromate	Lin		98677		28.6	25.0	14.6	15.0
Bromide	Lin		147216		239	250	-4.5	15.0
Chlorate	Lin		145865		103	100	2.7	15.0
Dichloroacetic acid(Surr)	Ave	81689	84468		1030	994	3.4	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Lab Sample ID: CCV 440-615429/49 Calibration Date: 07/07/2020 10:12
 Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
 GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
 Lab File ID: 440-0135020-049440-0135020-049.d

Analyte	RT	RT WINDOW	
		FROM	TO
Bromate	8.47	7.86	9.04
Bromide	16.24	15.08	17.35
Chlorate	17.63	16.71	18.47
Dichloroacetic acid(Surr)	13.89	12.87	14.81

Report Date: 08-Jul-2020 04:14:08

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-049440-0135020-049.d
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 07-Jul-2020 10:12:00 ALS Bottle#: 0 Worklist Smp#: 49
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135020-049
 Misc. Info.: 1536 EB
 Operator ID: Instrument ID: IC-8
 Sublist: chrom-300.1_C8*sub2
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 08-Jul-2020 04:14:08 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1066

First Level Reviewer: zakhrabov

Date: 08-Jul-2020 04:11:45

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.400	7.384	0.016	15082355	NC	NC	
3 Bromate	8.467	8.450	0.017	2466925	25.0	28.6	
\$ 6 Dichloroacetic acid(Surr)	13.892	13.842	0.050	83936377	993.7	1027.5	
4 Bromide	16.242	16.217	0.025	36804011	250.0	238.9	
2 Chlorate	17.625	17.592	0.033	14586484	100.0	102.7	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WC3001LCS_00090

Amount Added: 125.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 08-Jul-2020 04:14:08

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-049440-0135020-049.d

Injection Date: 07-Jul-2020 10:12:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCV

Worklist Smp#: 49

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

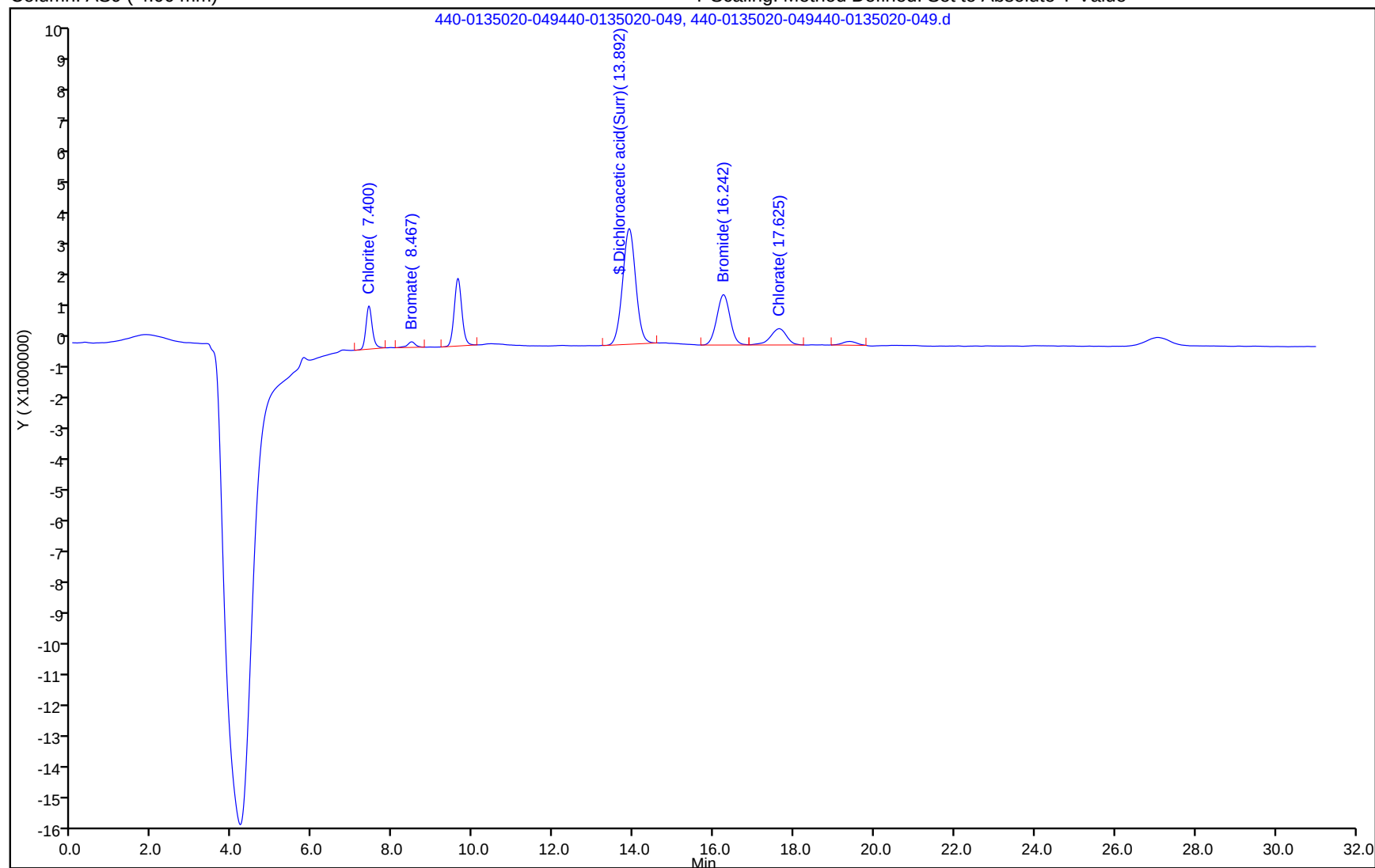
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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September 2020

Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-1337

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Lab Sample ID: CCV 440-615430/49 Calibration Date: 07/07/2020 10:12
 Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
 GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
 Lab File ID: 440-0135020-049440-0135020-049.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorite	Lin		150824		94.8	100	-5.2	15.0
Dichloroacetic acid(Surr)	Ave	81689	84468		1030	994	3.4	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-268223-1
SDG No.: Kirtland AFB New Mexico
Lab Sample ID: CCV 440-615430/49 Calibration Date: 07/07/2020 10:12
Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
Lab File ID: 440-0135020-049440-0135020-049.d

Analyte	RT	RT WINDOW	
		FROM	TO
Chlorite	7.40	7.00	8.00
Dichloroacetic acid(Surr)	13.89	12.87	14.81

Report Date: 08-Jul-2020 04:14:09

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-049440-0135020-049.d
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 07-Jul-2020 10:12:00 ALS Bottle#: 0 Worklist Smp#: 49
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135020-049
 Misc. Info.: 1536 EB
 Operator ID: Instrument ID: IC-8
 Sublist: chrom-300.1_C8*sub2
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 08-Jul-2020 04:14:08 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1066

First Level Reviewer: zakhrabov

Date: 08-Jul-2020 04:11:45

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.400	7.384	0.016	15082355	100.0	94.8	
3 Bromate	8.467	8.450	0.017	2466925	NC	NC	
\$ 6 Dichloroacetic acid(Surr)	13.892	13.842	0.050	83936377	993.7	1027.5	
4 Bromide	16.242	16.217	0.025	36804011	NC	NC	
2 Chlorate	17.625	17.592	0.033	14586484	NC	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WC3001LCS_00090

Amount Added: 125.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 08-Jul-2020 04:14:09

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-049440-0135020-049.d

Injection Date: 07-Jul-2020 10:12:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCV

Worklist Smp#: 49

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

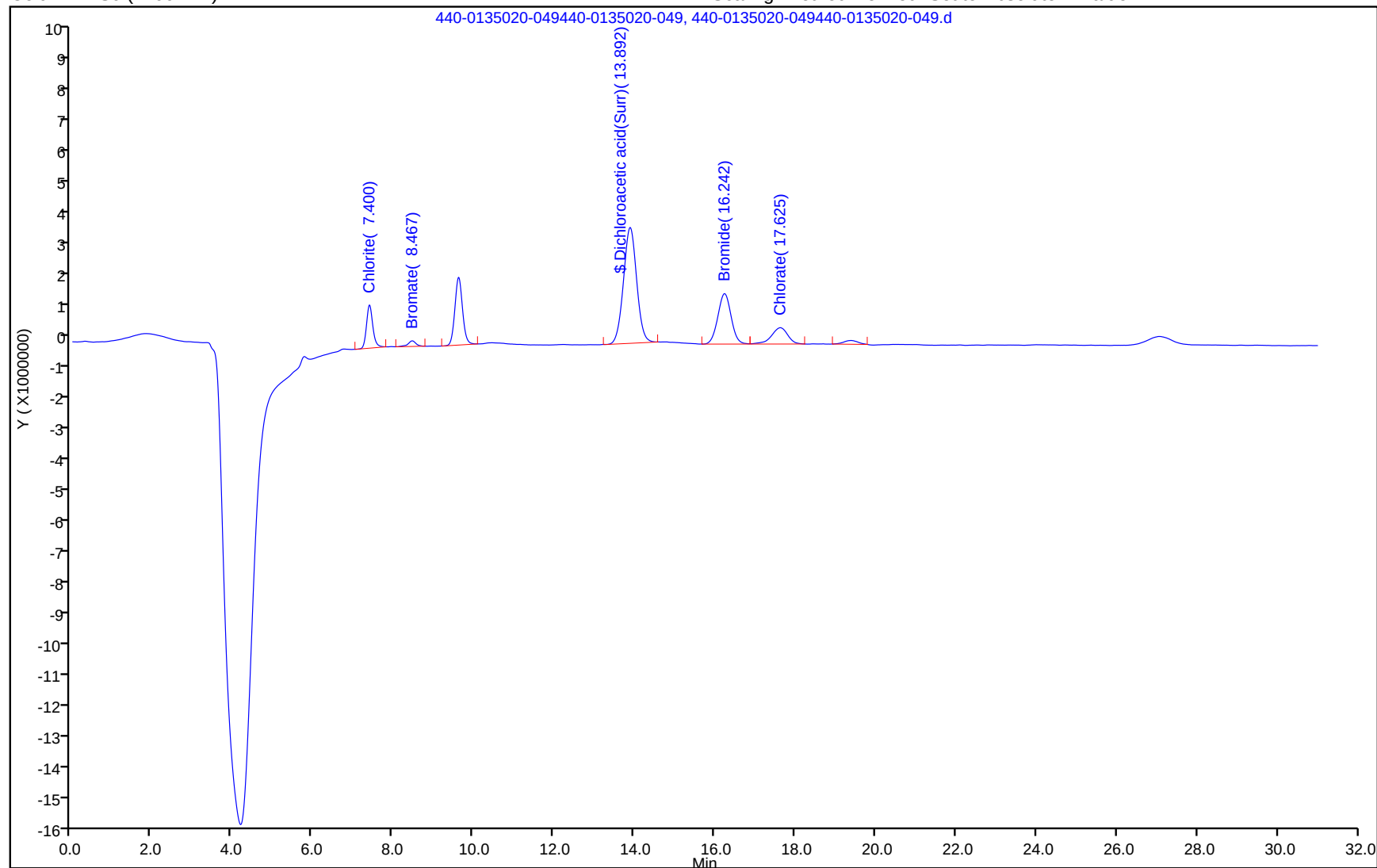
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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September 2020

Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-1341

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Lab Sample ID: CCV 440-615752/1 Calibration Date: 07/08/2020 04:08
 Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
 GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
 Lab File ID: 440-0135088-001440-0135088-001.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Bromate	Lin		96791		28.1	25.0	12.4	15.0
Bromide	Lin		151004		245	250	-2.1	15.0
Chlorate	Lin		146991		103	100	3.4	15.0
Dichloroacetic acid(Surr)	Ave	81689	84704		1030	994	3.7	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-268223-1
SDG No.: Kirtland AFB New Mexico
Lab Sample ID: CCV 440-615752/1 Calibration Date: 07/08/2020 04:08
Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
Lab File ID: 440-0135088-001440-0135088-001.d

Analyte	RT	RT WINDOW	
		FROM	TO
Bromate	8.46	7.86	9.04
Bromide	16.33	15.08	17.35
Chlorate	17.70	16.71	18.47
Dichloroacetic acid(Surr)	13.84	12.87	14.81

Report Date: 08-Jul-2020 05:30:40

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-001440-0135088-001.d
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 08-Jul-2020 04:08:00 ALS Bottle#: 0 Worklist Smp#: 1
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135088-001
 Misc. Info.: 1 EB
 Operator ID: Instrument ID: IC-8
 Sublist: chrom-300.1_C8*sub2
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 08-Jul-2020 05:30:39 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1066

First Level Reviewer: zakhrabov

Date: 08-Jul-2020 05:30:39

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.392	7.384	0.008	15009304	NC	NC	
3 Bromate	8.459	8.450	0.009	2419763	25.0	28.1	
\$ 6 Dichloroacetic acid(Surr)	13.842	13.842	0.000	84171254	993.7	1030.4	
4 Bromide	16.325	16.217	0.108	37750887	250.0	244.9	
2 Chlorate	17.700	17.592	0.108	14699077	100.0	103.4	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WC3001LCS_00090

Amount Added: 125.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 08-Jul-2020 05:30:40

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-001440-0135088-001.d

Injection Date: 08-Jul-2020 04:08:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCV

Worklist Smp#: 1

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

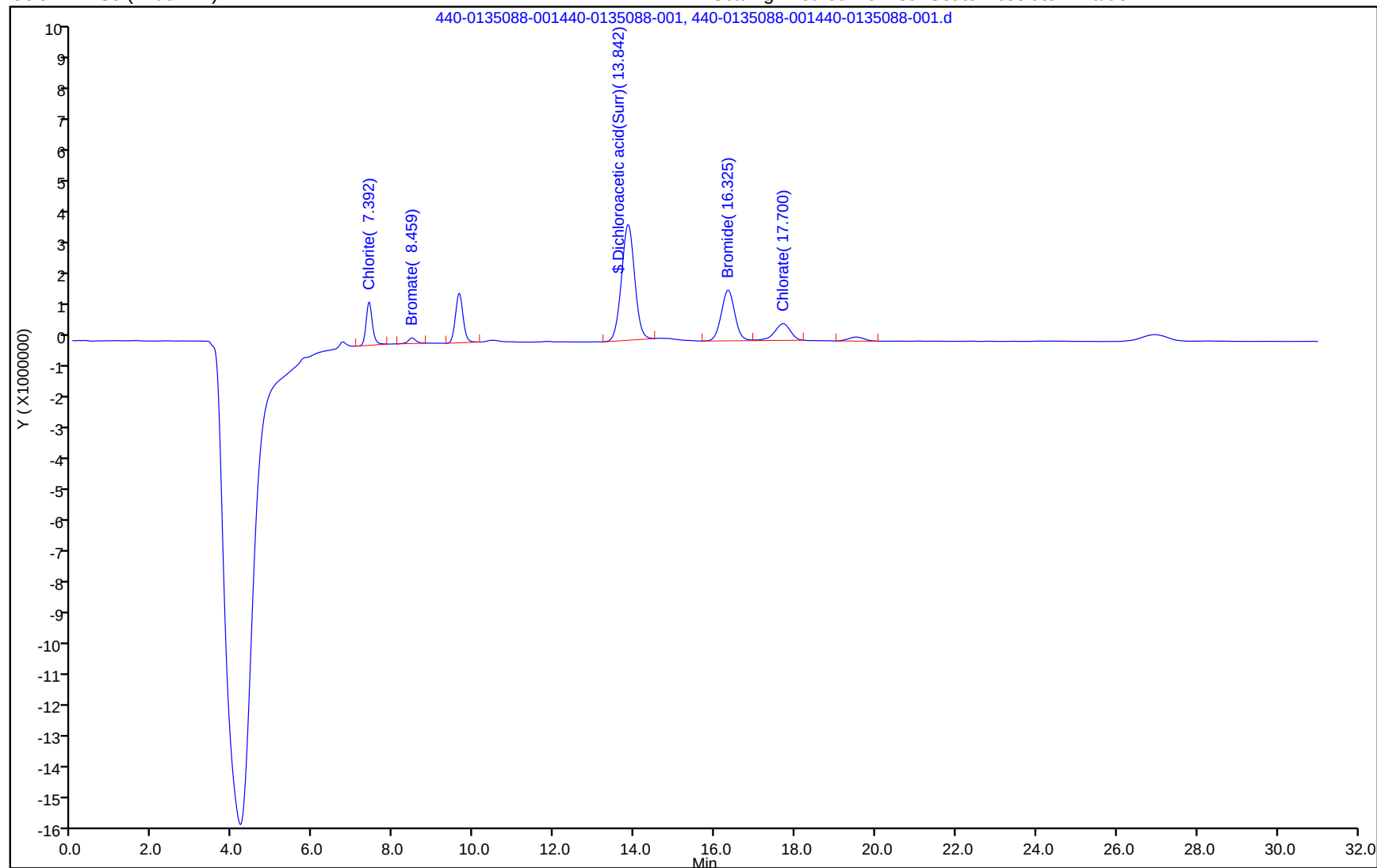
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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September 2020

Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-1345

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Lab Sample ID: CCV 440-615753/1 Calibration Date: 07/08/2020 04:08
 Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
 GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
 Lab File ID: 440-0135088-001440-0135088-001.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorite	Lin		150093		94.4	100	-5.6	15.0
Dichloroacetic acid(Surr)	Ave	81689	84704		1030	994	3.7	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-268223-1
SDG No.: Kirtland AFB New Mexico
Lab Sample ID: CCV 440-615753/1 Calibration Date: 07/08/2020 04:08
Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
Lab File ID: 440-0135088-001440-0135088-001.d

Analyte	RT	RT WINDOW	
		FROM	TO
Chlorite	7.39	7.00	8.00
Dichloroacetic acid(Surr)	13.84	12.87	14.81

Report Date: 08-Jul-2020 05:30:40

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-001440-0135088-001.d
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 08-Jul-2020 04:08:00 ALS Bottle#: 0 Worklist Smp#: 1
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135088-001
 Misc. Info.: 1 EB
 Operator ID: Instrument ID: IC-8
 Sublist: chrom-300.1_C8*sub2
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 08-Jul-2020 05:30:39 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1066

First Level Reviewer: zakhrabov

Date: 08-Jul-2020 05:30:39

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.392	7.384	0.008	15009304	100.0	94.4	
3 Bromate	8.459	8.450	0.009	2419763	NC	NC	
\$ 6 Dichloroacetic acid(Surr)	13.842	13.842	0.000	84171254	993.7	1030.4	
4 Bromide	16.325	16.217	0.108	37750887	NC	NC	
2 Chlorate	17.700	17.592	0.108	14699077	NC	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WC3001LCS_00090

Amount Added: 125.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 08-Jul-2020 05:30:40

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-001440-0135088-001.d

Injection Date: 08-Jul-2020 04:08:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCV

Worklist Smp#: 1

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

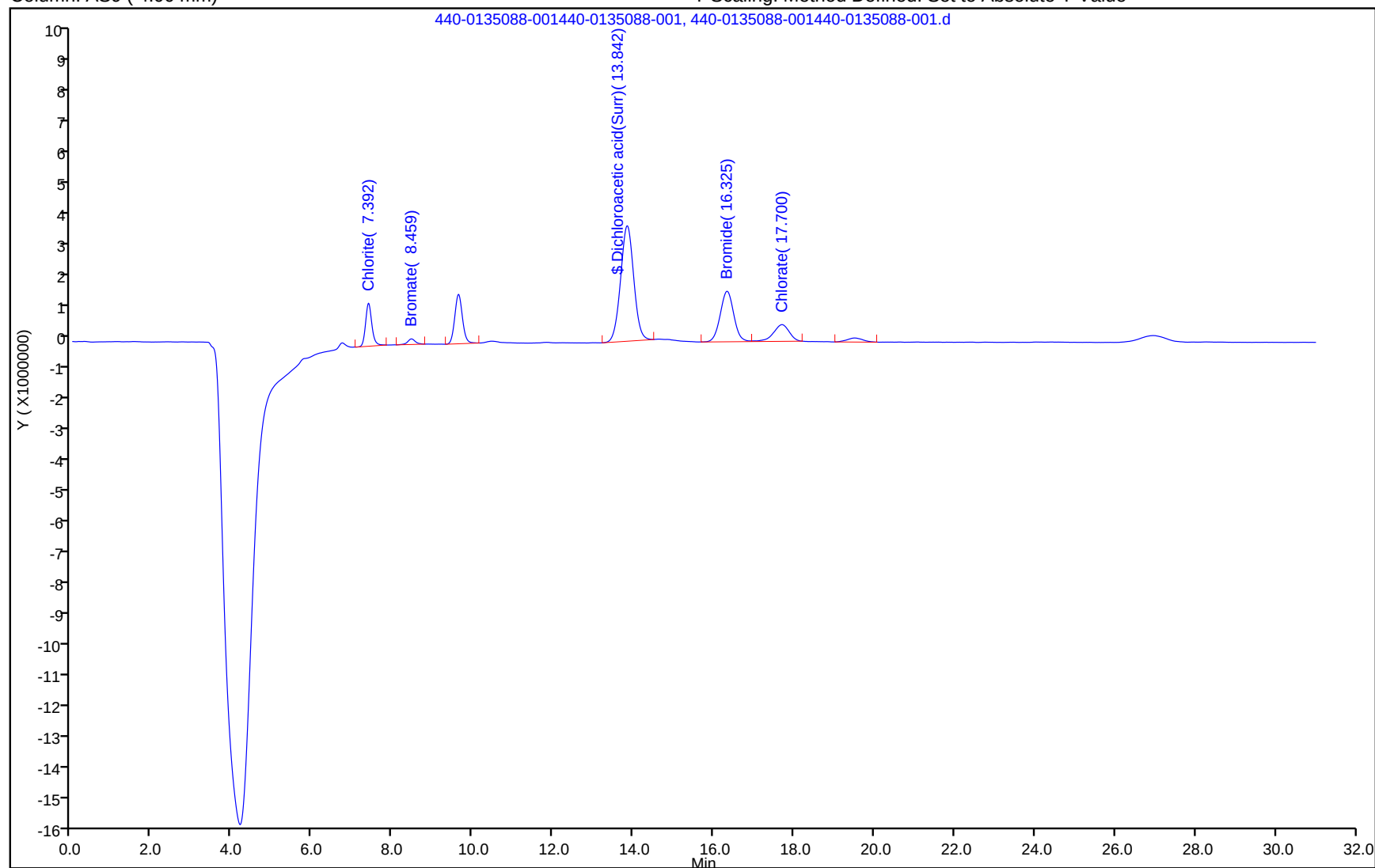
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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September 2020

Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-1349

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Lab Sample ID: CCV 440-615752/13 Calibration Date: 07/08/2020 11:23
 Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
 GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
 Lab File ID: 440-0135088-013440-0135088-013.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Bromate	Lin		88491		51.0	50.0	2.0	15.0
Bromide	Lin		150184		481	500	-3.7	15.0
Chlorate	Lin		141337		196	200	-2.2	15.0
Dichloroacetic acid(Surr)	Ave	81689	85469		1040	994	4.6	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Lab Sample ID: CCV 440-615752/13 Calibration Date: 07/08/2020 11:23
 Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
 GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
 Lab File ID: 440-0135088-013440-0135088-013.d

Analyte	RT	RT WINDOW	
		FROM	TO
Bromate	8.44	7.86	9.04
Bromide	16.22	15.08	17.35
Chlorate	17.59	16.71	18.47
Dichloroacetic acid(Surr)	13.83	12.87	14.81

Report Date: 08-Jul-2020 12:04:30

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-013440-0135088-013.d
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 08-Jul-2020 11:23:00 ALS Bottle#: 0 Worklist Smp#: 13
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135088-013
 Misc. Info.: 13 EB
 Operator ID: Instrument ID: IC-8
 Sublist: chrom-300.1_C8*sub2
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 08-Jul-2020 12:04:29 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1066

First Level Reviewer: zakhrabov

Date: 08-Jul-2020 12:04:29

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.375	7.384	-0.009	30048534	NC	NC	M
3 Bromate	8.442	8.450	-0.008	4424531	50.0	51.0	M
\$ 6 Dichloroacetic acid(Surr)	13.825	13.842	-0.017	84931253	993.7	1039.7	
4 Bromide	16.217	16.217	0.000	75092244	500.0	481.4	
2 Chlorate	17.592	17.592	0.000	28267363	200.0	195.6	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

WC3001LCS_00090

Amount Added: 250.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 08-Jul-2020 12:04:30

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-013440-0135088-013.d

Injection Date: 08-Jul-2020 11:23:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCV

Worklist Smp#: 13

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

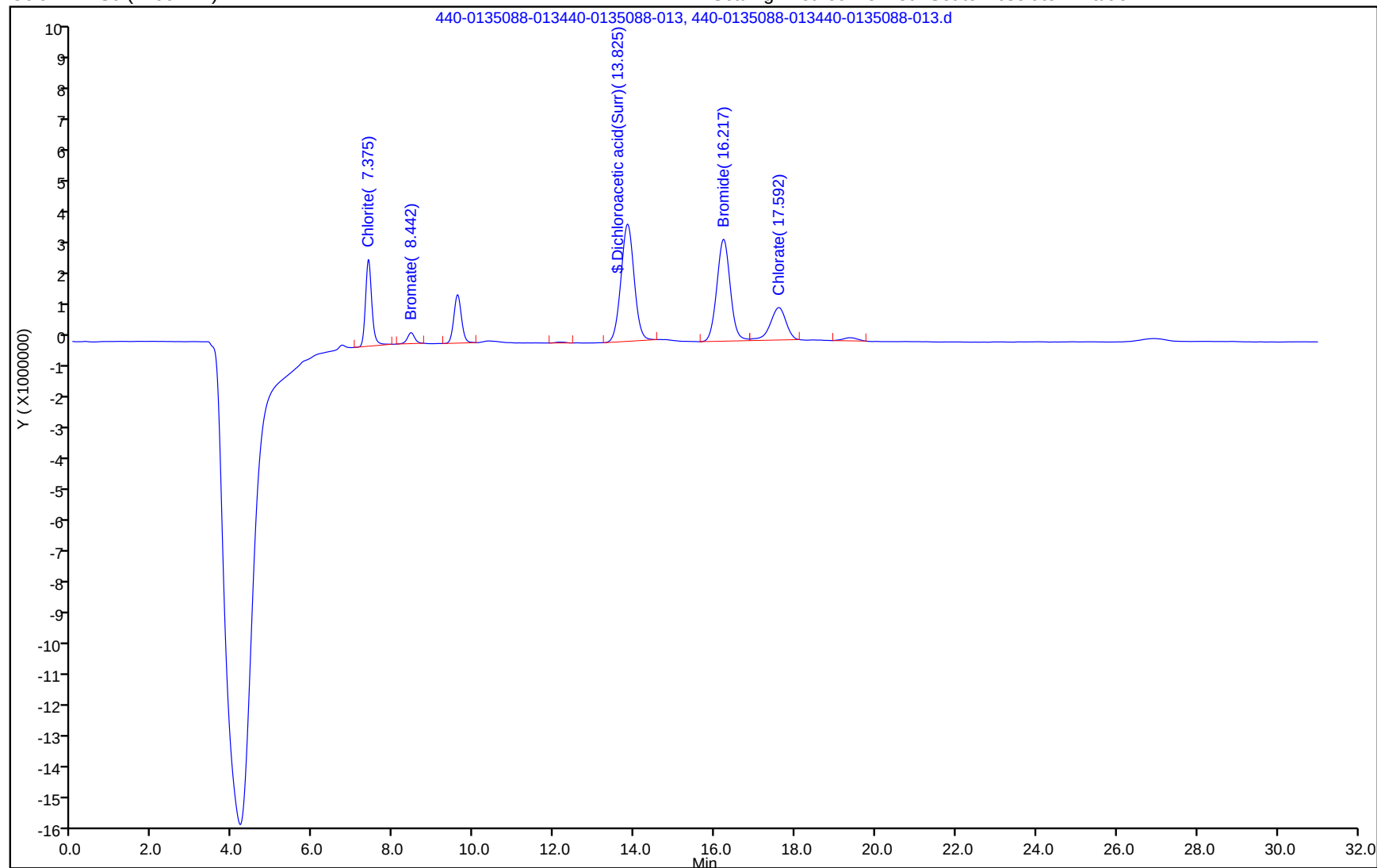
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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September 2020

Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-1353

Report Date: 08-Jul-2020 12:04:30

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

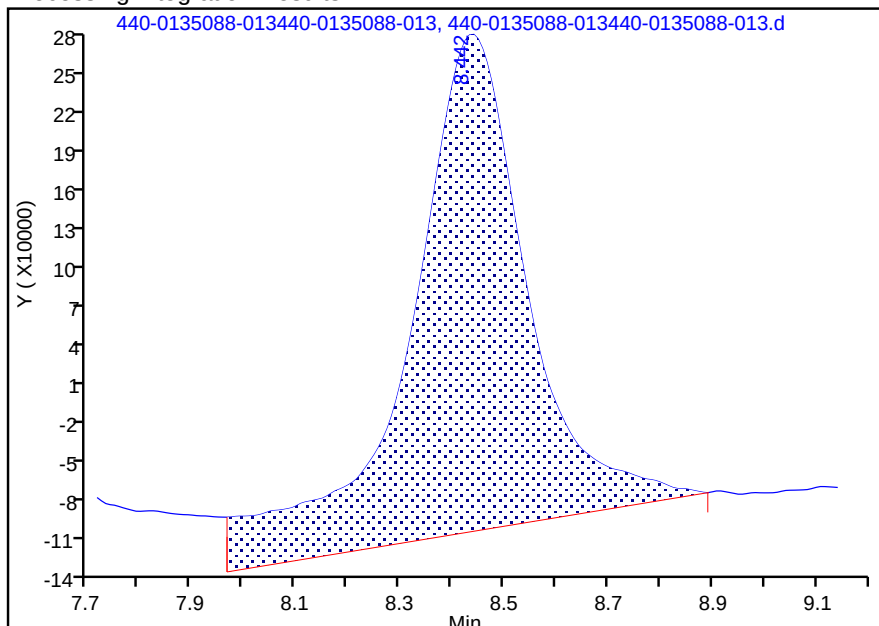
Data File:	\\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-013440-0135088-013.d		
Injection Date:	08-Jul-2020 11:23:00	Instrument ID:	IC-8
Lims ID:	CCV		
Client ID:			
Operator ID:		ALS Bottle#:	0
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	300.1_C8	Limit Group:	IC-300.1_28D
Column:	AS9 (4.00 mm)	Detector:	Ch-A-20110816009
		Worklist Smp#:	13

3 Bromate, CAS: 15541-45-4

Signal: 1

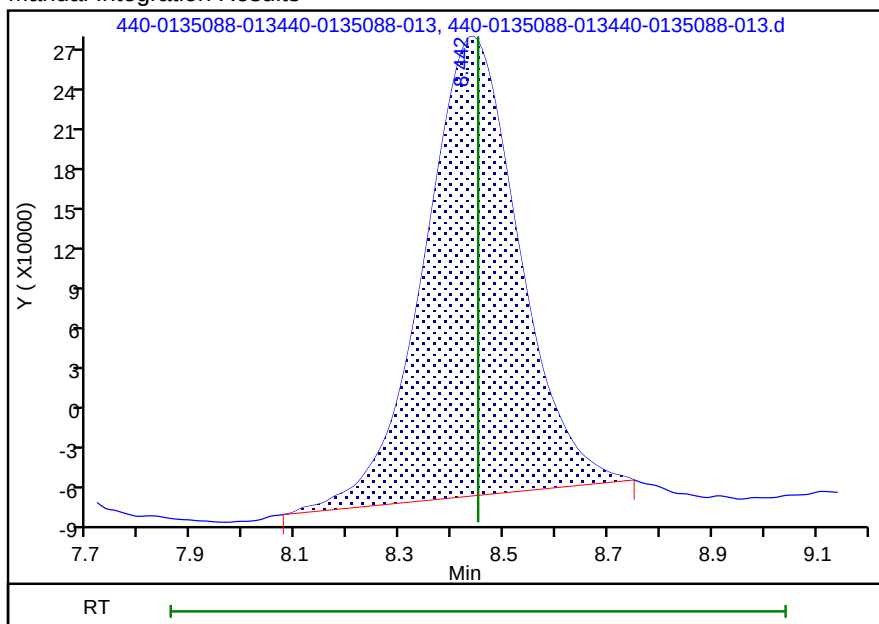
RT: 8.44
Area: 6048745
Amount: 69.556566
Amount Units: ug/l

Processing Integration Results



RT: 8.44
Area: 4424531
Amount: 51.003589
Amount Units: ug/l

Manual Integration Results



Reviewer: zakhrabov, 08-Jul-2020 12:04:08

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

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September 2020

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Lab Sample ID: CCV 440-615753/13 Calibration Date: 07/08/2020 11:23
 Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
 GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
 Lab File ID: 440-0135088-013440-0135088-013.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorite	Lin		150243		188	200	-6.1	15.0
Dichloroacetic acid(Surr)	Ave	81689	85469		1040	994	4.6	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-268223-1
SDG No.: Kirtland AFB New Mexico
Lab Sample ID: CCV 440-615753/13 Calibration Date: 07/08/2020 11:23
Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
Lab File ID: 440-0135088-013440-0135088-013.d

Analyte	RT	RT WINDOW	
		FROM	TO
Chlorite	7.38	7.00	8.00
Dichloroacetic acid(Surr)	13.83	12.87	14.81

Report Date: 08-Jul-2020 12:04:30

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-013440-0135088-013.d
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 08-Jul-2020 11:23:00 ALS Bottle#: 0 Worklist Smp#: 13
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135088-013
 Misc. Info.: 13 EB
 Operator ID: Instrument ID: IC-8
 Sublist: chrom-300.1_C8*sub2
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 08-Jul-2020 12:04:29 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1066

First Level Reviewer: zakhrabov

Date: 08-Jul-2020 12:04:29

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.375	7.384	-0.009	30048534	200.0	187.8	M
3 Bromate	8.442	8.450	-0.008	4424531	NC	NC	M
\$ 6 Dichloroacetic acid(Surr)	13.825	13.842	-0.017	84931253	993.7	1039.7	
4 Bromide	16.217	16.217	0.000	75092244	NC	NC	
2 Chlorate	17.592	17.592	0.000	28267363	NC	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

WC3001LCS_00090

Amount Added: 250.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 08-Jul-2020 12:04:30

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-013440-0135088-013.d

Injection Date: 08-Jul-2020 11:23:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCV

Worklist Smp#: 13

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

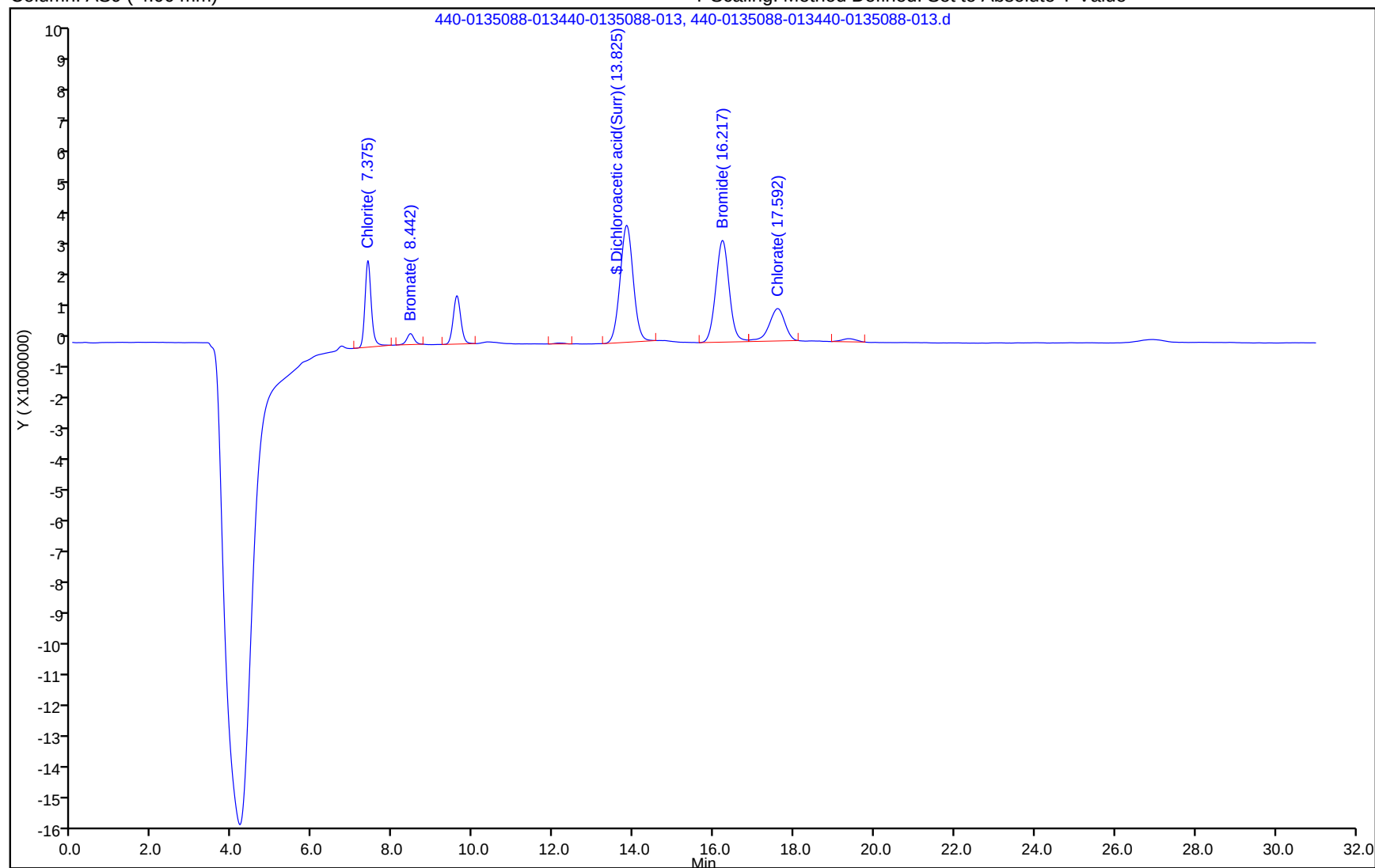
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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September 2020

Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-1358

Report Date: 08-Jul-2020 12:04:30

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

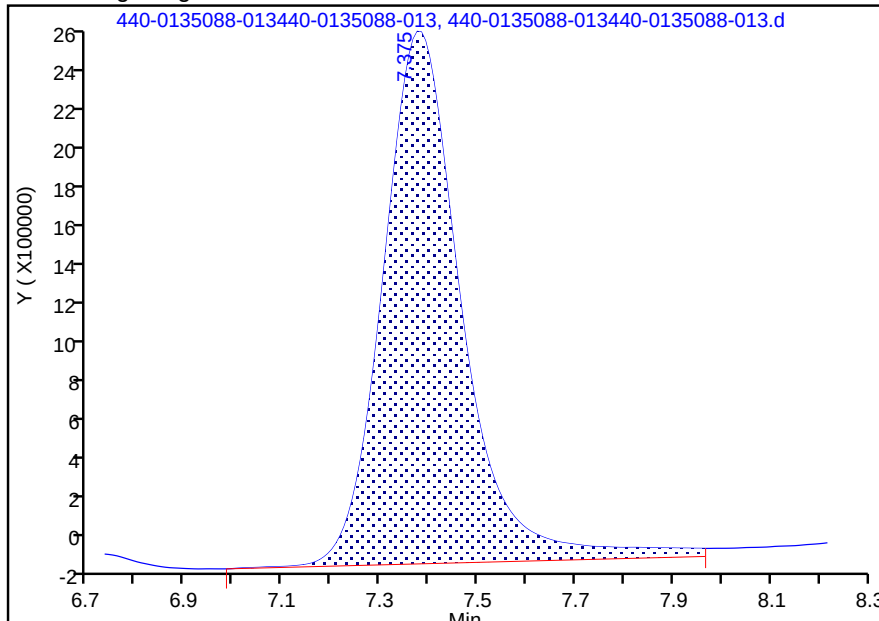
Data File:	\\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-013440-0135088-013.d		
Injection Date:	08-Jul-2020 11:23:00	Instrument ID:	IC-8
Lims ID:	CCV		
Client ID:			
Operator ID:	ALS Bottle#:	0	Worklist Smp#:
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	300.1_C8	Limit Group:	IC-300.1_14D
Column:	AS9 (4.00 mm)	Detector:	Ch-A-20110816009

5 Chlorite, CAS: 14998-27-7

Signal: 1

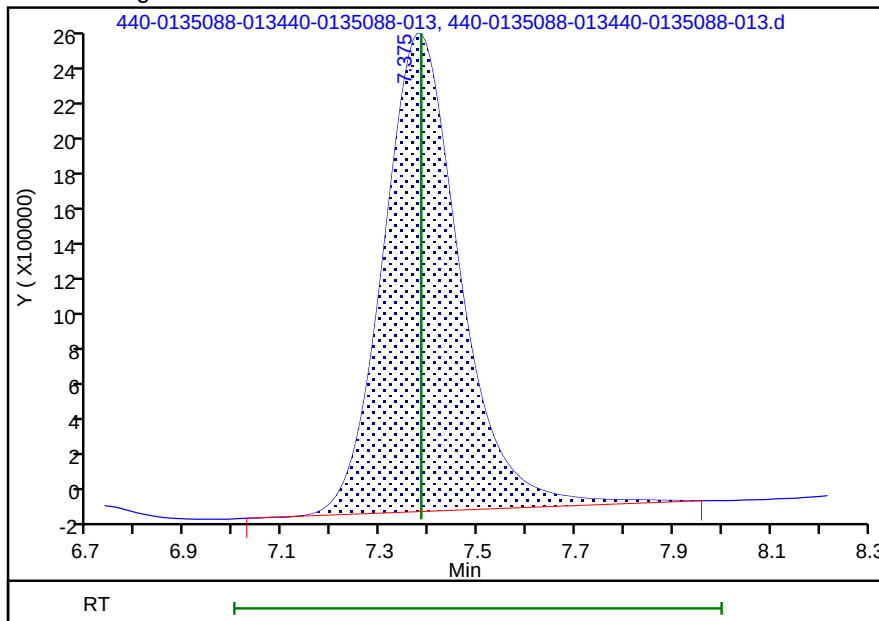
RT: 7.38
Area: 31336405
Amount: 0
Amount Units: ug/l

Processing Integration Results



RT: 7.38
Area: 30048534
Amount: 187.8113
Amount Units: ug/l

Manual Integration Results



Reviewer: zakhrabov, 08-Jul-2020 12:04:14

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

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September 2020

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Lab Sample ID: CCV 440-615752/37 Calibration Date: 07/09/2020 00:43
 Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
 GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
 Lab File ID: 440-0135088-037440-0135088-037.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Bromate	Lin		89330		51.5	50.0	3.0	15.0
Bromide	Lin		151045		484	500	-3.2	15.0
Chlorate	Lin		143572		199	200	-0.7	15.0
Dichloroacetic acid(Surr)	Ave	81689	85971		1050	994	5.2	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-268223-1
SDG No.: Kirtland AFB New Mexico
Lab Sample ID: CCV 440-615752/37 Calibration Date: 07/09/2020 00:43
Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
Lab File ID: 440-0135088-037440-0135088-037.d

Analyte	RT	RT WINDOW	
		FROM	TO
Bromate	8.43	7.86	9.04
Bromide	16.20	15.08	17.35
Chlorate	17.57	16.71	18.47
Dichloroacetic acid(Surr)	13.80	12.87	14.81

Report Date: 09-Jul-2020 05:17:46

Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-037440-0135088-037.d
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 09-Jul-2020 00:43:00 ALS Bottle#: 0 Worklist Smp#: 37
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135088-037
 Misc. Info.: 37 EB
 Operator ID: Instrument ID: IC-8
 Sublist: chrom-300.1_C8*sub2
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 09-Jul-2020 05:17:46 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1007

First Level Reviewer: zakhrabov

Date: 09-Jul-2020 04:26:22

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.367	7.384	-0.017	29748910	NC	NC	M
3 Bromate	8.425	8.450	-0.025	4466518	50.0	51.5	M
\$ 6 Dichloroacetic acid(Surr)	13.800	13.842	-0.042	85430191	993.7	1045.8	
4 Bromide	16.200	16.217	-0.017	75522283	500.0	484.1	M
2 Chlorate	17.567	17.592	-0.025	28714372	200.0	198.6	M

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

WC3001LCS_00090

Amount Added: 250.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 09-Jul-2020 05:17:46

Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-037440-0135088-037.d

Injection Date: 09-Jul-2020 00:43:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCV

Worklist Smp#: 37

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

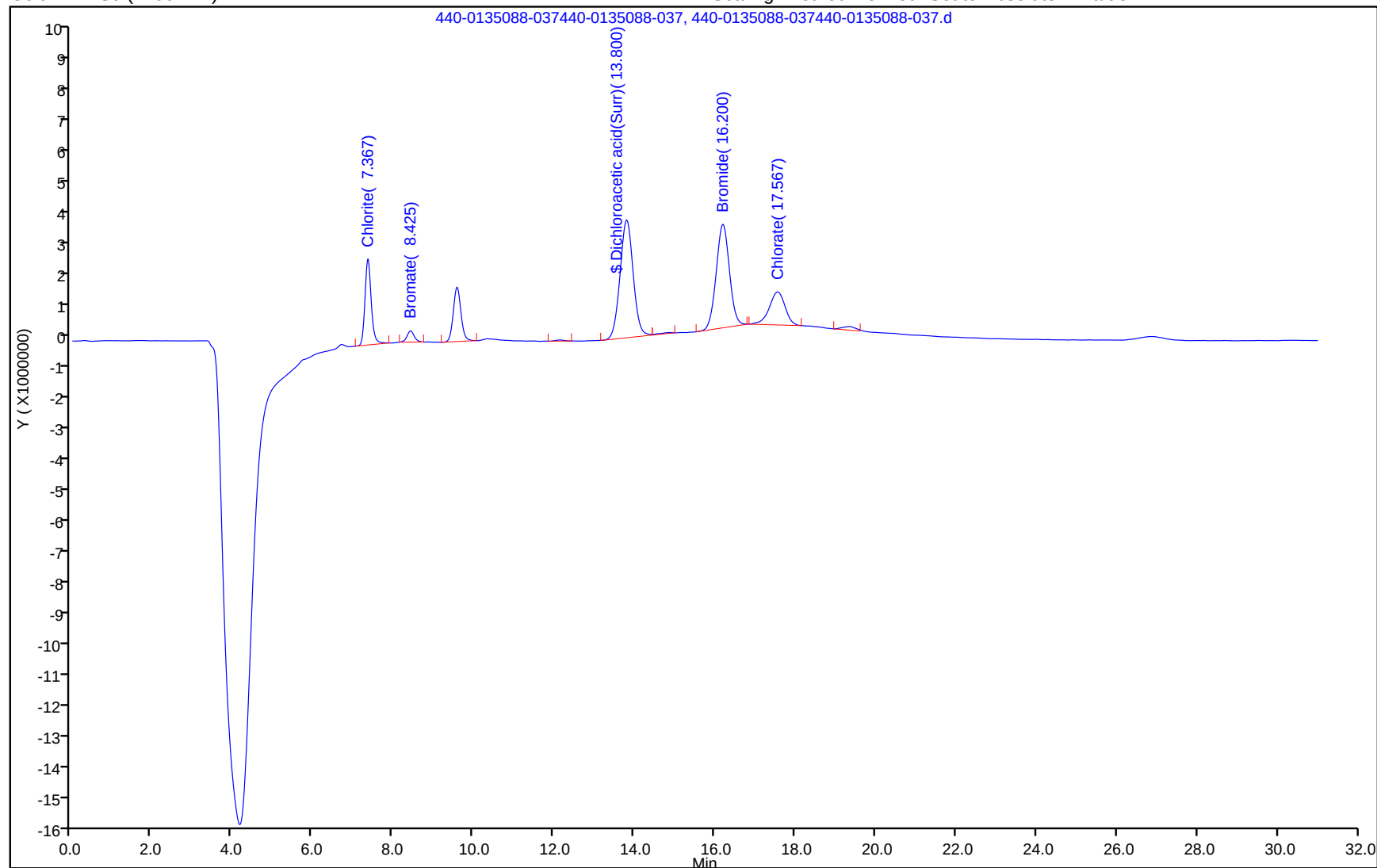
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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September 2020

Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-1363

Report Date: 09-Jul-2020 05:17:46

Chrom Revision: 2.3 30-Jun-2020 12:05:54
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

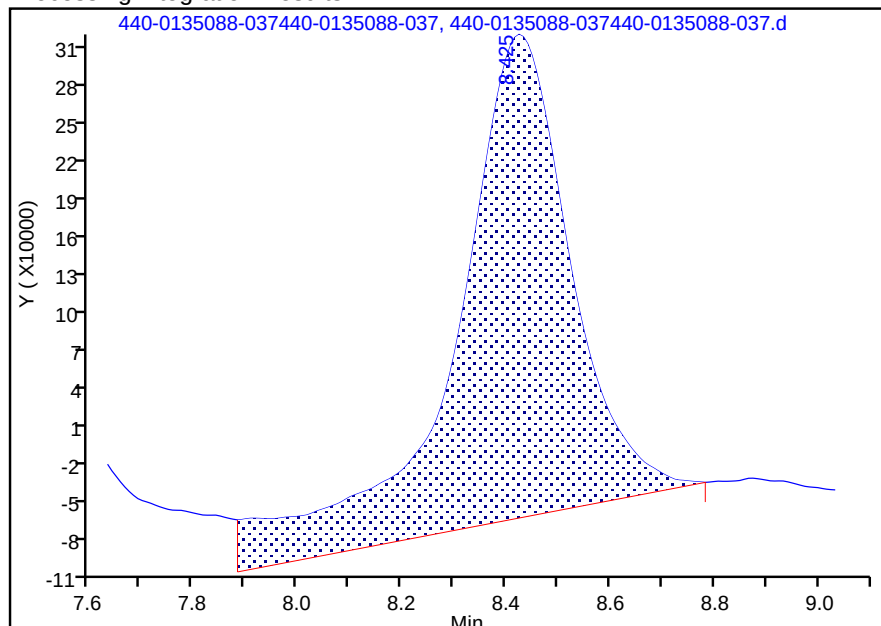
Data File:	\\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-037440-0135088-037.d		
Injection Date:	09-Jul-2020 00:43:00	Instrument ID:	IC-8
Lims ID:	CCV		
Client ID:			
Operator ID:		ALS Bottle#:	0
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	300.1_C8	Limit Group:	IC-300.1_28D
Column:	AS9 (4.00 mm)	Detector:	Ch-A-20110816009
		Worklist Smp#:	37

3 Bromate, CAS: 15541-45-4

Signal: 1

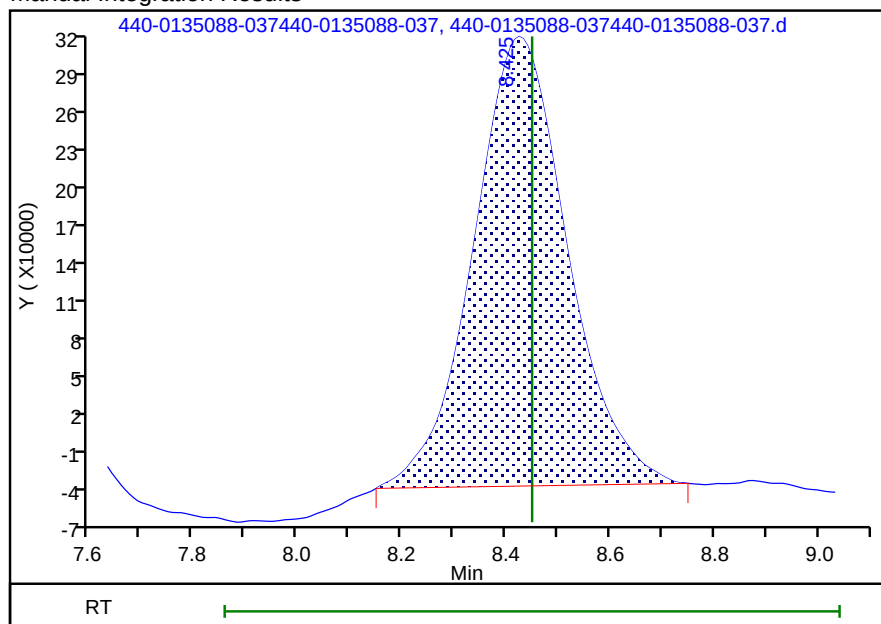
RT: 8.43
Area: 6001461
Amount: 69.016453
Amount Units: ug/l

Processing Integration Results



RT: 8.43
Area: 4466518
Amount: 51.483196
Amount Units: ug/l

Manual Integration Results



Reviewer: zakhrabov, 09-Jul-2020 04:26:06

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

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September 2020

Report Date: 09-Jul-2020 05:17:46

Chrom Revision: 2.3 30-Jun-2020 12:05:54
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

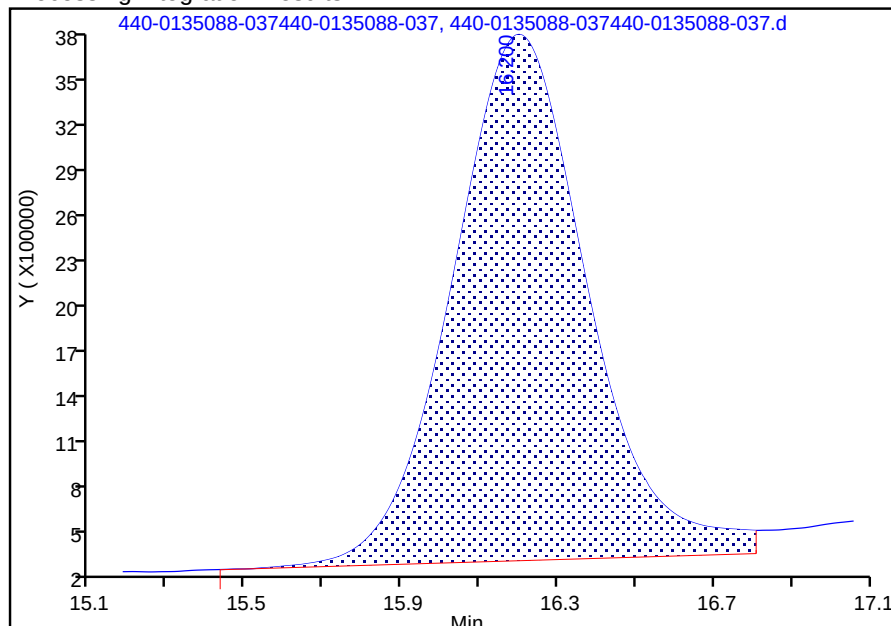
Data File:	\\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-037440-0135088-037.d		
Injection Date:	09-Jul-2020 00:43:00	Instrument ID:	IC-8
Lims ID:	CCV		
Client ID:			
Operator ID:		ALS Bottle#:	0
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	300.1_C8	Limit Group:	IC-300.1_28D
Column:	AS9 (4.00 mm)	Detector:	Ch-A-20110816009
		Worklist Smp#:	37

4 Bromide, CAS: 24959-67-9

Signal: 1

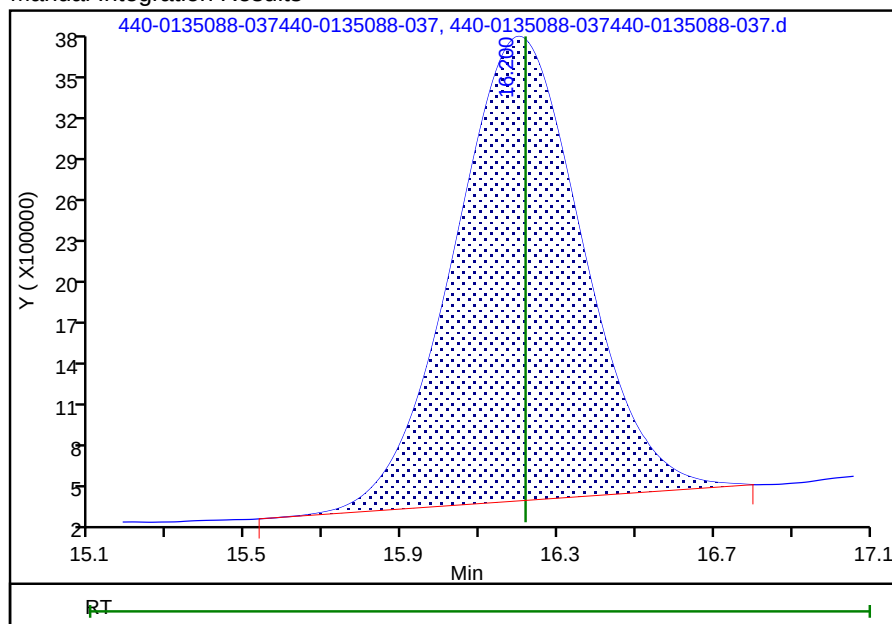
RT: 16.20
Area: 81385093
Amount: 521.2613
Amount Units: ug/l

Processing Integration Results



RT: 16.20
Area: 75522283
Amount: 484.1226
Amount Units: ug/l

Manual Integration Results



Reviewer: zakhrabov, 09-Jul-2020 04:26:18

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

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Report Date: 09-Jul-2020 05:17:46

Chrom Revision: 2.3 30-Jun-2020 12:05:54
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

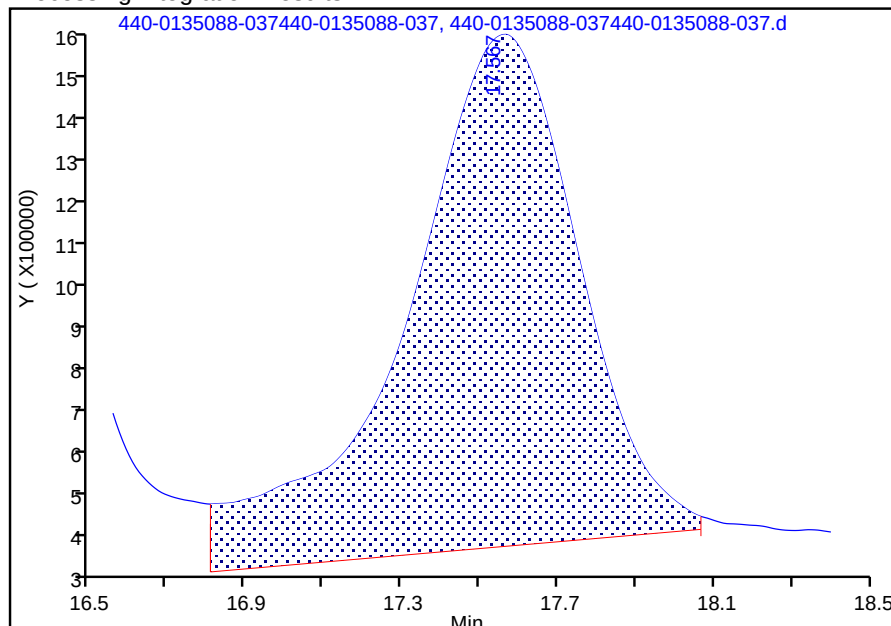
Data File:	\\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-037440-0135088-037.d		
Injection Date:	09-Jul-2020 00:43:00	Instrument ID:	IC-8
Lims ID:	CCV		
Client ID:			
Operator ID:		ALS Bottle#:	0
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	300.1_C8	Limit Group:	IC-300.1_28D
Column:	AS9 (4.00 mm)	Detector:	Ch-A-20110816009
		Worklist Smp#:	37

2 Chlorate, CAS: 7790-93-4

Signal: 1

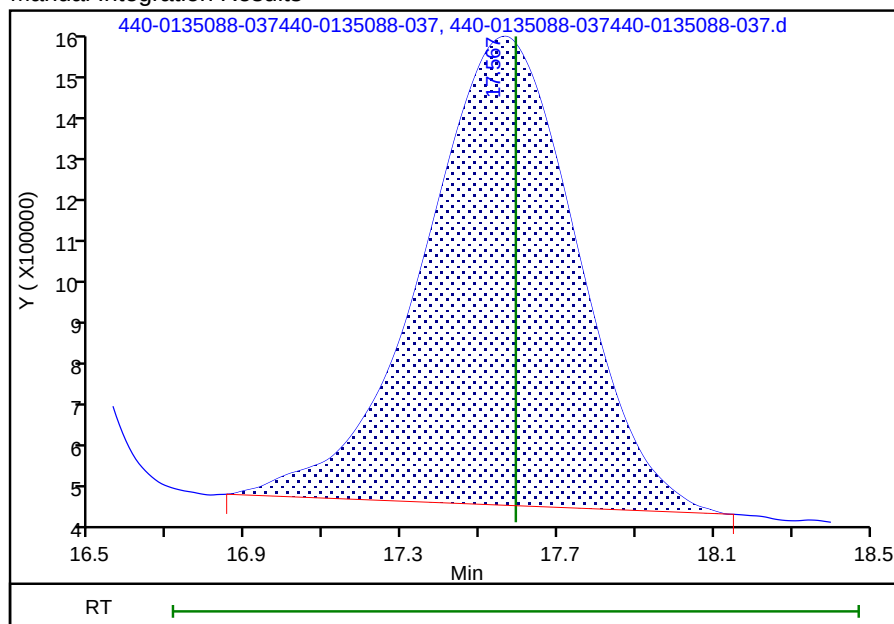
RT: 17.57
Area: 34969488
Amount: 241.1245
Amount Units: ug/l

Processing Integration Results



RT: 17.57
Area: 28714372
Amount: 198.6361
Amount Units: ug/l

Manual Integration Results



Reviewer: zakhrabov, 09-Jul-2020 04:26:14

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

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FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Lab Sample ID: CCV 440-615753/37 Calibration Date: 07/09/2020 00:43
 Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
 GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
 Lab File ID: 440-0135088-037440-0135088-037.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorite	Lin		148745		186	200	-7.0	15.0
Dichloroacetic acid(Surr)	Ave	81689	85971		1050	994	5.2	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-268223-1
SDG No.: Kirtland AFB New Mexico
Lab Sample ID: CCV 440-615753/37 Calibration Date: 07/09/2020 00:43
Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
Lab File ID: 440-0135088-037440-0135088-037.d

Analyte	RT	RT WINDOW	
		FROM	TO
Chlorite	7.37	7.00	8.00
Dichloroacetic acid(Surr)	13.80	12.87	14.81

Report Date: 09-Jul-2020 05:17:46

Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-037440-0135088-037.d
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 09-Jul-2020 00:43:00 ALS Bottle#: 0 Worklist Smp#: 37
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135088-037
 Misc. Info.: 37 EB
 Operator ID: Instrument ID: IC-8
 Sublist: chrom-300.1_C8*sub2
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 09-Jul-2020 05:17:46 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1007

First Level Reviewer: zakhrabov

Date: 09-Jul-2020 04:26:22

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.367	7.384	-0.017	29748910	200.0	186.0	M
3 Bromate	8.425	8.450	-0.025	4466518	NC	NC	M
\$ 6 Dichloroacetic acid(Surr)	13.800	13.842	-0.042	85430191	993.7	1045.8	
4 Bromide	16.200	16.217	-0.017	75522283	NC	NC	M
2 Chlorate	17.567	17.592	-0.025	28714372	NC	NC	M

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

WC3001LCS_00090

Amount Added: 250.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 09-Jul-2020 05:17:46

Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-037440-0135088-037.d

Injection Date: 09-Jul-2020 00:43:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCV

Worklist Smp#: 37

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

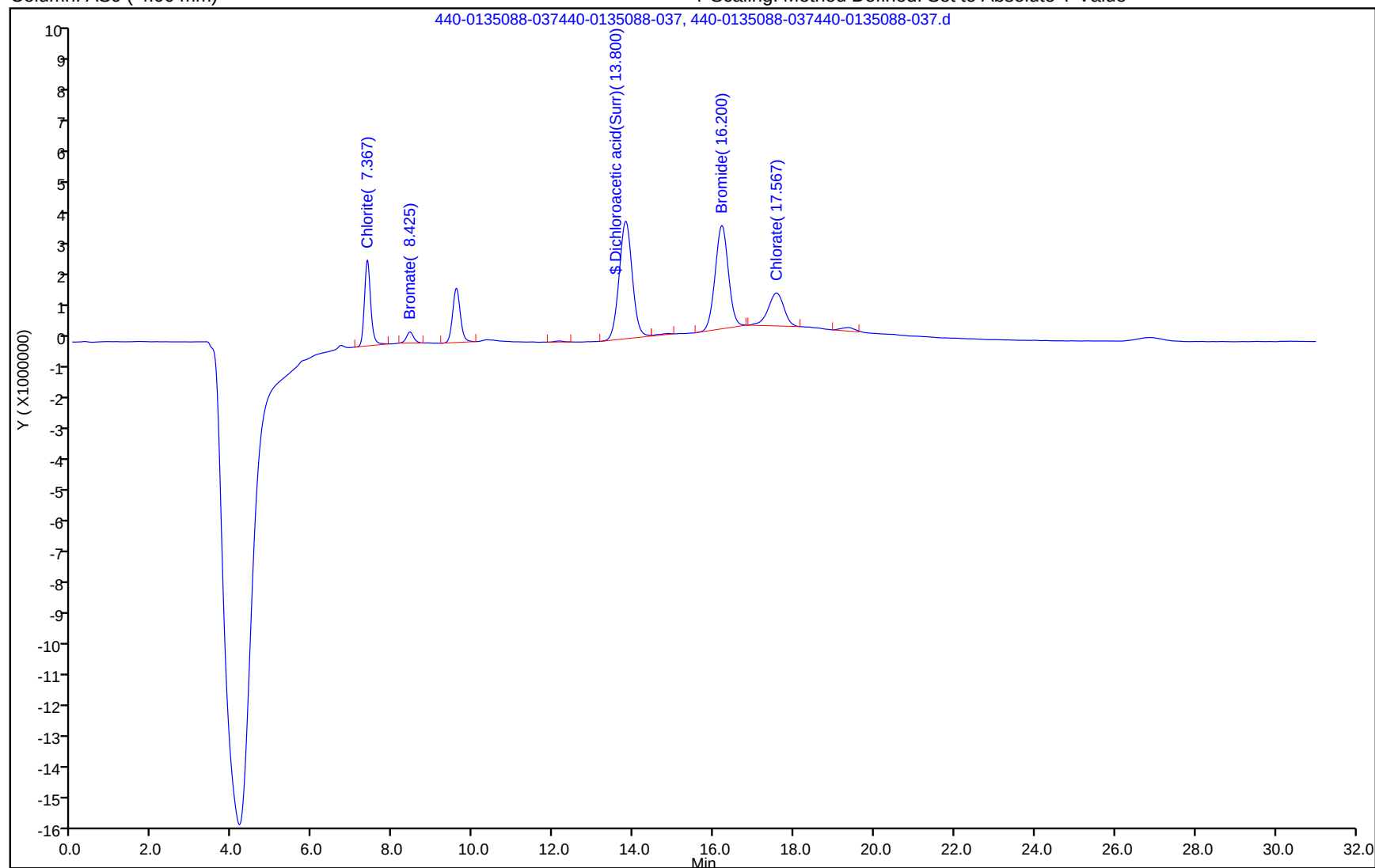
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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September 2020

Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-1370

Report Date: 09-Jul-2020 05:17:46

Chrom Revision: 2.3 30-Jun-2020 12:05:54
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-037440-0135088-037.d

Injection Date: 09-Jul-2020 00:43:00

Instrument ID: IC-8

Lims ID: CCV

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#:

37

Injection Vol: 1.0 ul

Dil. Factor:

1.0000

Method: 300.1_C8

Limit Group:

IC-300.1_14D

Column: AS9 (4.00 mm)

Detector

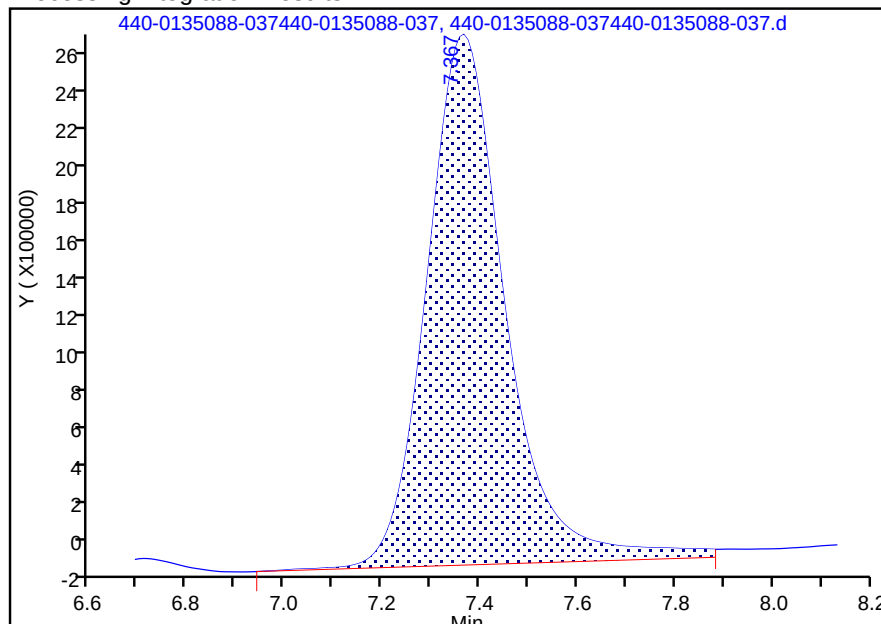
Ch-A-20110816009

5 Chlorite, CAS: 14998-27-7

Signal: 1

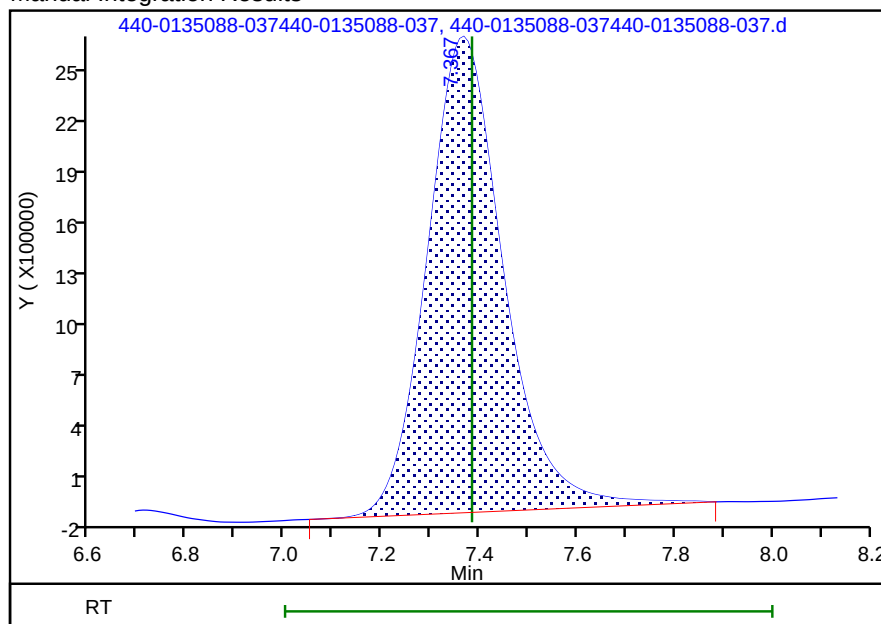
RT: 7.37
 Area: 30938928
 Amount: 0
 Amount Units: ug/l

Processing Integration Results



RT: 7.37
 Area: 29748910
 Amount: 185.9500
 Amount Units: ug/l

Manual Integration Results



Reviewer: zakhrabov, 09-Jul-2020 04:26:10

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

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FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Lab Sample ID: CCV 440-615752/47 Calibration Date: 07/09/2020 07:25
 Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
 GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
 Lab File ID: 440-0135088-047440-0135088-047.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Bromate	Lin		90680		26.4	25.0	5.4	15.0
Bromide	Lin		149839		243	250	-2.8	15.0
Chlorate	Lin		138749		97.8	100	-2.2	15.0
Dichloroacetic acid(Surr)	Ave	81689	87248		1060	994	6.8	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-268223-1
SDG No.: Kirtland AFB New Mexico
Lab Sample ID: CCV 440-615752/47 Calibration Date: 07/09/2020 07:25
Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
Lab File ID: 440-0135088-047440-0135088-047.d

Analyte	RT	RT WINDOW	
		FROM	TO
Bromate	8.47	7.86	9.04
Bromide	16.23	15.08	17.35
Chlorate	17.61	16.71	18.47
Dichloroacetic acid(Surr)	13.85	12.87	14.81

Report Date: 09-Jul-2020 08:03:13

Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-047440-0135088-047.d
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 09-Jul-2020 07:25:00 ALS Bottle#: 0 Worklist Smp#: 47
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135088-047
 Misc. Info.: 1640 EB
 Operator ID: Instrument ID: IC-8
 Sublist: chrom-300.1_C8*sub2
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 09-Jul-2020 08:03:13 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1007

First Level Reviewer: zakhrabov

Date: 09-Jul-2020 08:03:13

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.400	7.384	0.016	14818746	NC	NC	
3 Bromate	8.467	8.450	0.017	2266997	25.0	26.4	
\$ 6 Dichloroacetic acid(Surr)	13.850	13.842	0.008	86699224	993.7	1061.3	
4 Bromide	16.225	16.217	0.008	37459743	250.0	243.0	
2 Chlorate	17.609	17.592	0.017	13874922	100.0	97.8	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WC3001LCS_00090

Amount Added: 125.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 09-Jul-2020 08:03:13

Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-047440-0135088-047.d

Injection Date: 09-Jul-2020 07:25:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCV

Worklist Smp#: 47

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

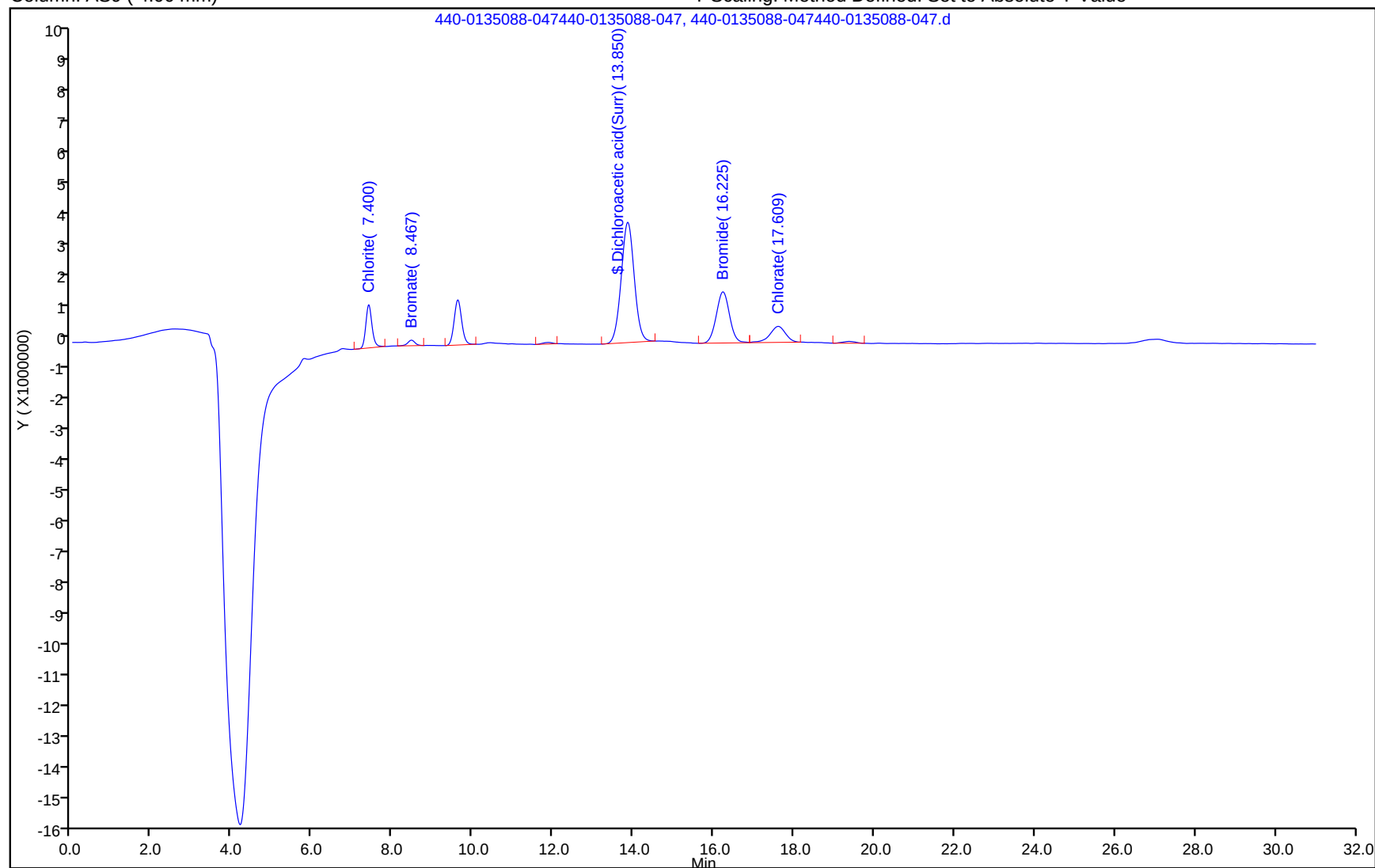
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-1375

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Lab Sample ID: CCV 440-615753/47 Calibration Date: 07/09/2020 07:25
 Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
 GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
 Lab File ID: 440-0135088-047440-0135088-047.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorite	Lin		148187		93.2	100	-6.8	15.0
Dichloroacetic acid(Surr)	Ave	81689	87248		1060	994	6.8	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins Irvine Job No.: 440-268223-1
SDG No.: Kirtland AFB New Mexico
Lab Sample ID: CCV 440-615753/47 Calibration Date: 07/09/2020 07:25
Instrument ID: IC-8 Calib Start Date: 05/22/2020 09:16
GC Column: AS9-HC ID: 4.00 (mm) Calib End Date: 05/22/2020 12:17
Lab File ID: 440-0135088-047440-0135088-047.d

Analyte	RT	RT WINDOW	
		FROM	TO
Chlorite	7.40	7.00	8.00
Dichloroacetic acid(Surr)	13.85	12.87	14.81

Report Date: 09-Jul-2020 08:03:13

Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-047440-0135088-047.d
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 09-Jul-2020 07:25:00 ALS Bottle#: 0 Worklist Smp#: 47
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135088-047
 Misc. Info.: 1640 EB
 Operator ID: Instrument ID: IC-8
 Sublist: chrom-300.1_C8*sub2
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 09-Jul-2020 08:03:13 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1007

First Level Reviewer: zakhrabov

Date: 09-Jul-2020 08:03:13

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.400	7.384	0.016	14818746	100.0	93.2	
3 Bromate	8.467	8.450	0.017	2266997	NC	NC	
\$ 6 Dichloroacetic acid(Surr)	13.850	13.842	0.008	86699224	993.7	1061.3	
4 Bromide	16.225	16.217	0.008	37459743	NC	NC	
2 Chlorate	17.609	17.592	0.017	13874922	NC	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WC3001LCS_00090

Amount Added: 125.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 09-Jul-2020 08:03:13

Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-047440-0135088-047.d

Injection Date: 09-Jul-2020 07:25:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCV

Worklist Smp#: 47

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

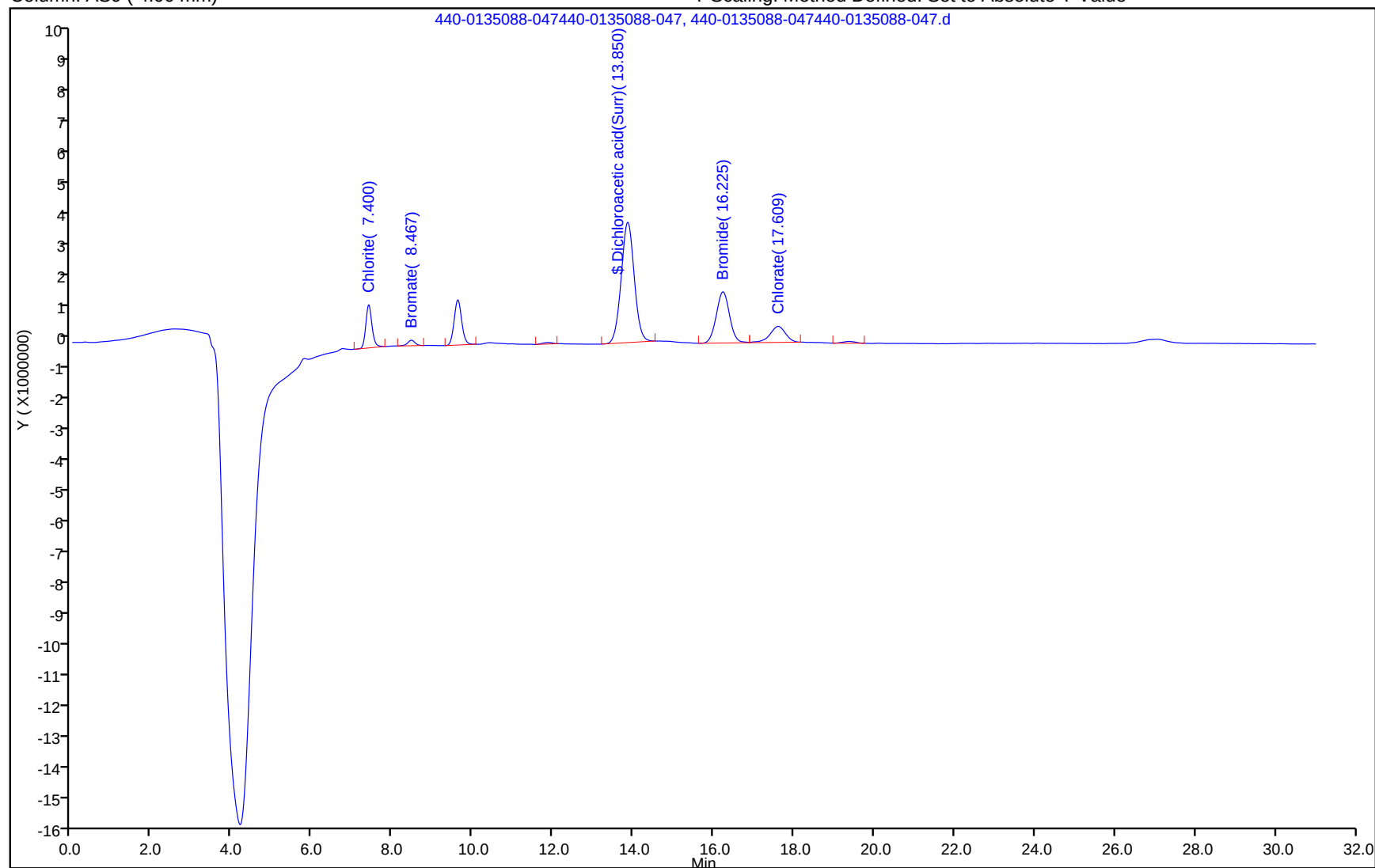
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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September 2020

Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-1379

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: _____ Lab Sample ID: MB 440-615429/5
 Matrix: Water Lab File ID: 440-0135020-005440-0135020-005
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 07/06/2020 07:29
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 615429 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
15541-45-4	Bromate	ND		5.0	1.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	104		90-115

Report Date: 06-Jul-2020 08:12:04

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-005440-0135020-005.d
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 06-Jul-2020 07:29:00 ALS Bottle#: 0 Worklist Smp#: 5
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135020-005
 Misc. Info.: 5 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 06-Jul-2020 09:06:47 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1040

First Level Reviewer: zakhrabov

Date: 06-Jul-2020 08:12:04

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 1 Dichloroacetic acid	13.950	13.709	0.241	84639648		NC	
\$ 6 Dichloroacetic acid(Surr)	13.950	13.842	0.108	84639648	993.7	1036.1	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 06-Jul-2020 08:12:04

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-005440-0135020-005.d

Injection Date: 06-Jul-2020 07:29:00

Instrument ID: IC-8

Operator ID:

Lims ID: MB

Worklist Smp#: 5

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

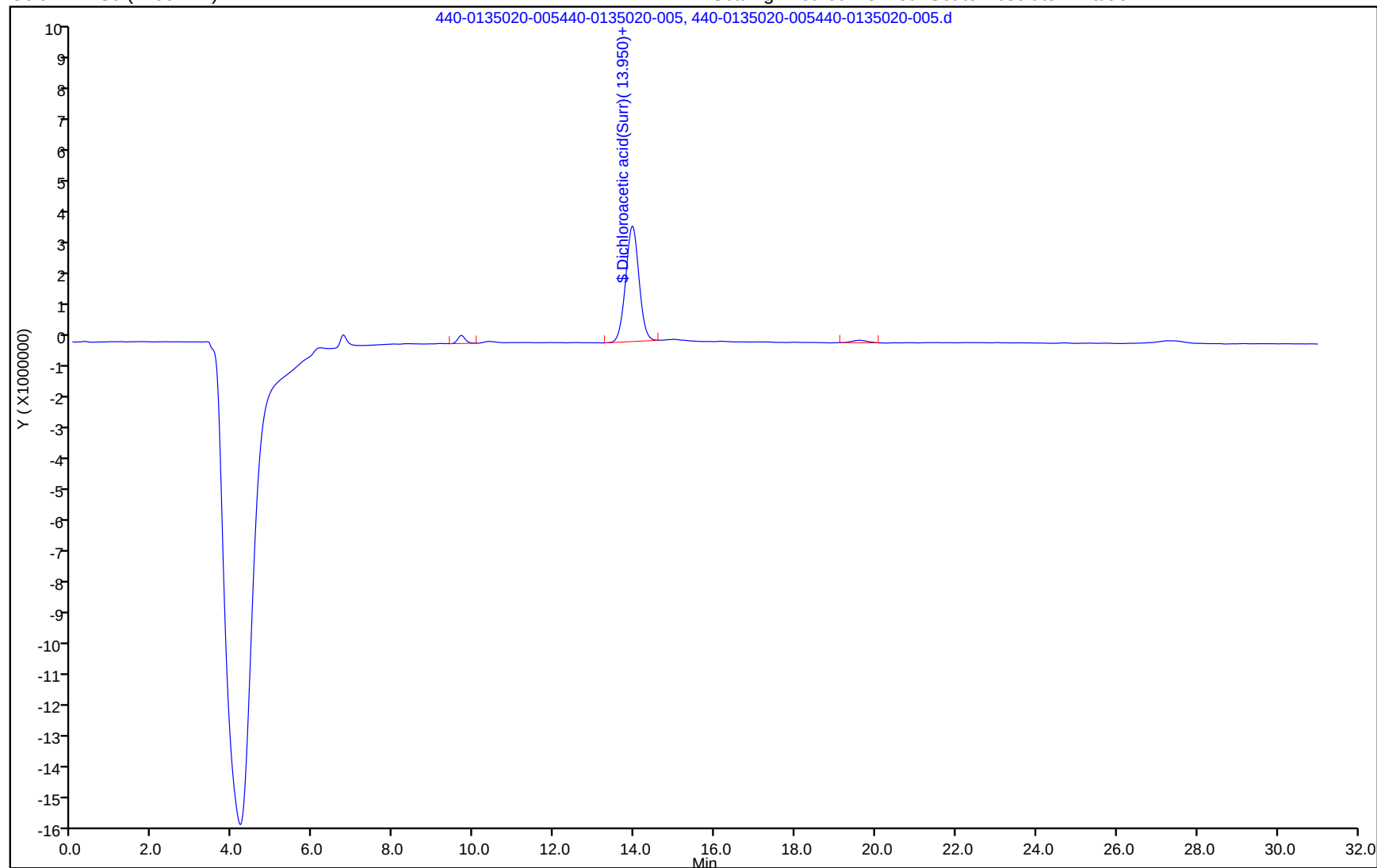
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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September 2020

Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-1382

Report Date: 06-Jul-2020 08:12:04

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-005440-0135020-005.d
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 06-Jul-2020 07:29:00 ALS Bottle#: 0 Worklist Smp#: 5
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135020-005
 Misc. Info.: 5 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 06-Jul-2020 09:06:47 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1040

First Level Reviewer: zakhrabov

Date: 06-Jul-2020 08:12:04

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1036.1	104.27

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: _____ Lab Sample ID: MB 440-615430/5
 Matrix: Water Lab File ID: 440-0135020-005440-0135020-005
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 07/06/2020 07:29
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 615430 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14998-27-7	Chlorite	ND		20	4.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	104		90-115

Report Date: 06-Jul-2020 08:12:04

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-005440-0135020-005.d
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 06-Jul-2020 07:29:00 ALS Bottle#: 0 Worklist Smp#: 5
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135020-005
 Misc. Info.: 5 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 06-Jul-2020 09:06:47 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1040

First Level Reviewer: zakhrabov

Date: 06-Jul-2020 08:12:04

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 1 Dichloroacetic acid	13.950	13.709	0.241	84639648			NC
\$ 6 Dichloroacetic acid(Surr)	13.950	13.842	0.108	84639648	993.7	1036.1	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 06-Jul-2020 08:12:04

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-005440-0135020-005.d

Injection Date: 06-Jul-2020 07:29:00

Instrument ID: IC-8

Operator ID:

Lims ID: MB

Worklist Smp#: 5

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

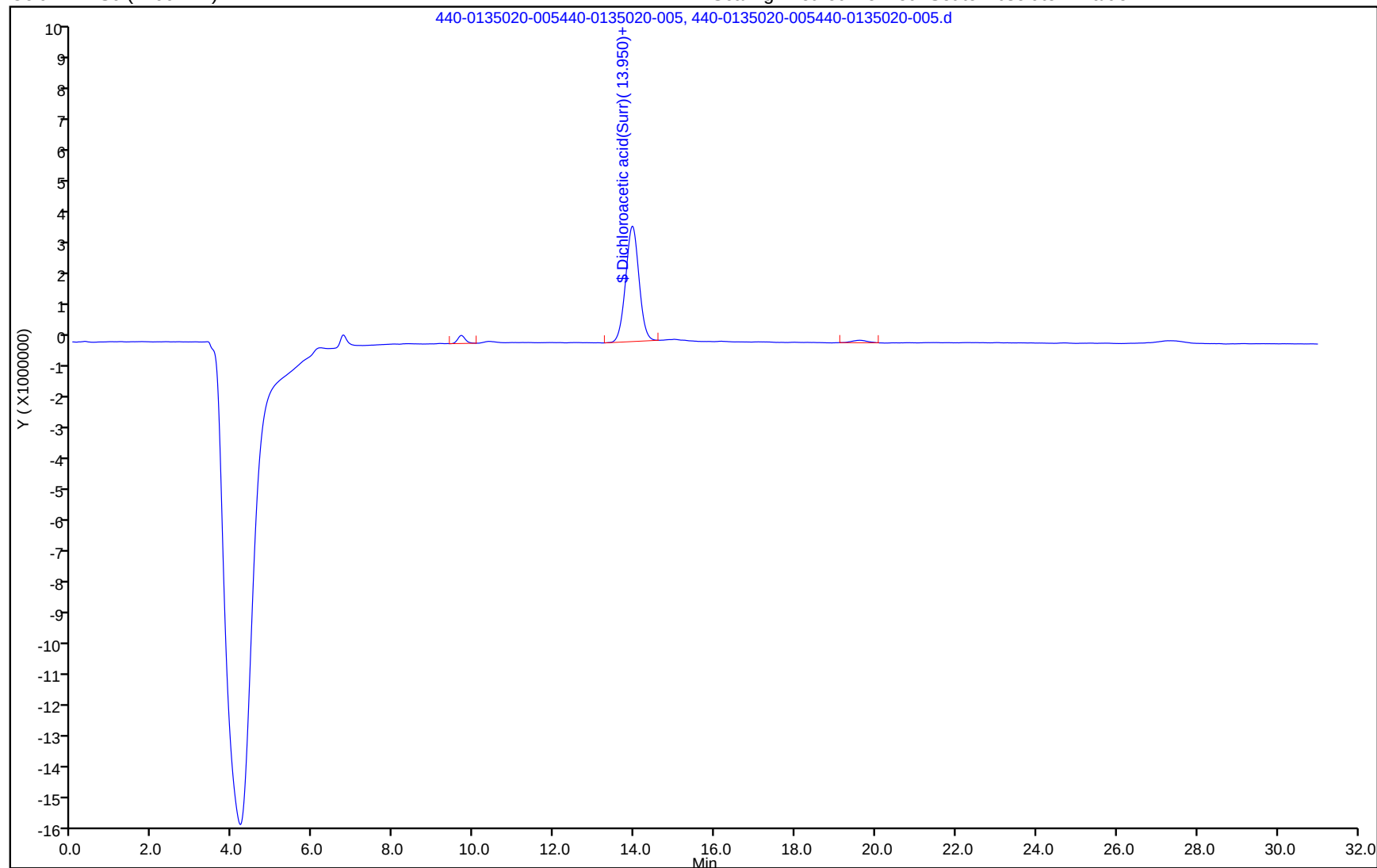
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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I-5-1386

Report Date: 06-Jul-2020 08:12:04

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-005440-0135020-005.d
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 06-Jul-2020 07:29:00 ALS Bottle#: 0 Worklist Smp#: 5
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135020-005
 Misc. Info.: 5 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 06-Jul-2020 09:06:47 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1040

First Level Reviewer: zakhrabov

Date: 06-Jul-2020 08:12:04

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1036.1	104.27

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: _____ Lab Sample ID: MB 440-615752/5
 Matrix: Water Lab File ID: 440-0135088-005440-0135088-005
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 07/08/2020 06:33
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 615752 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
15541-45-4	Bromate	ND		5.0	1.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	107		90-115

Report Date: 08-Jul-2020 07:14:20

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-005440-0135088-005.d
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 08-Jul-2020 06:33:00 ALS Bottle#: 0 Worklist Smp#: 5
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135088-005
 Misc. Info.: 5 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 08-Jul-2020 08:10:34 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1066

First Level Reviewer: zakhrabov

Date: 08-Jul-2020 07:14:19

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 1 Dichloroacetic acid	13.834	13.709	0.125	86889734		NC	
\$ 6 Dichloroacetic acid(Surr)	13.834	13.842	-0.008	86889734	993.7	1063.7	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 08-Jul-2020 07:14:20

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-005440-0135088-005.d

Injection Date: 08-Jul-2020 06:33:00

Instrument ID: IC-8

Operator ID:

Lims ID: MB

Worklist Smp#: 5

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

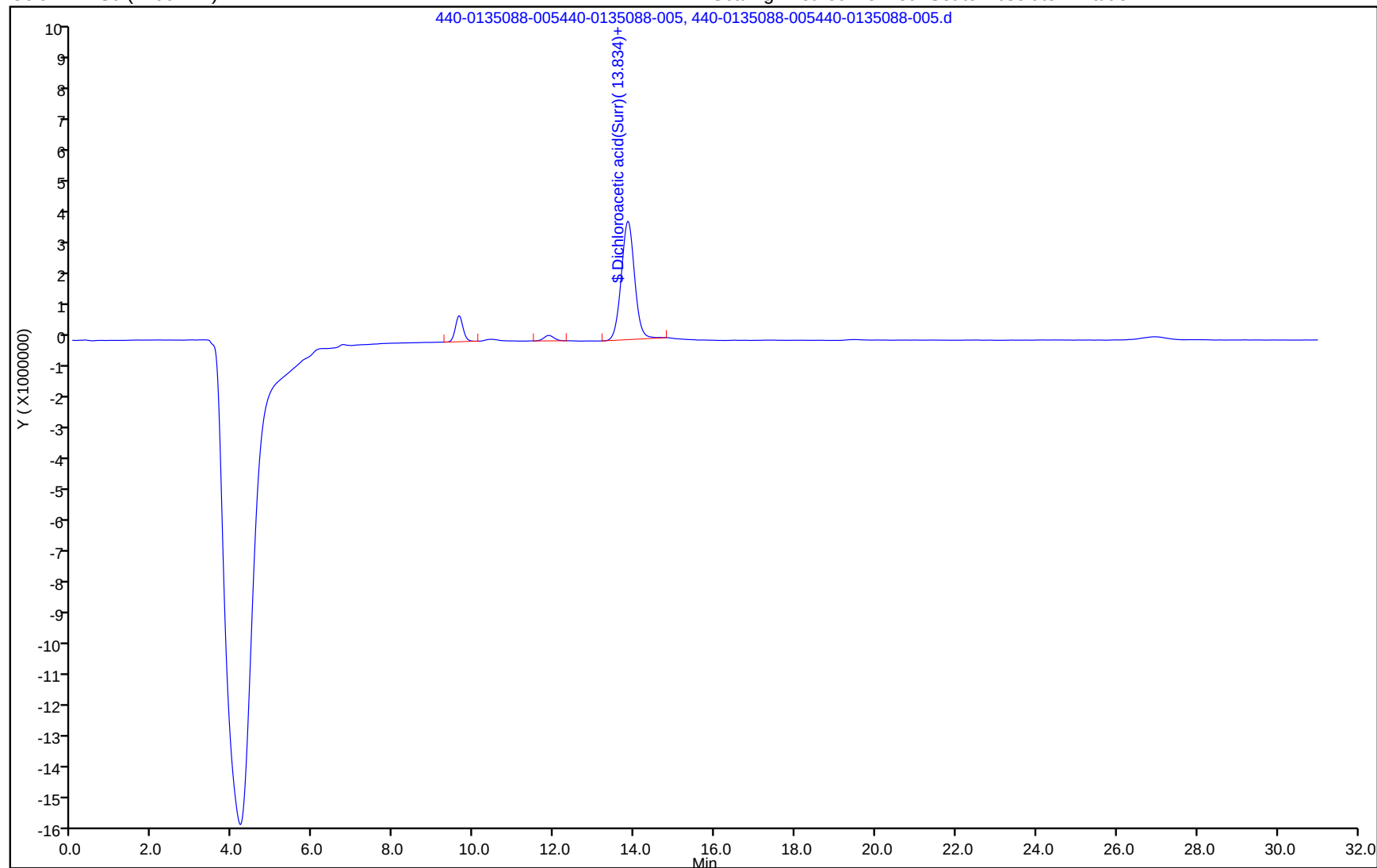
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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I-5-1390

Report Date: 08-Jul-2020 07:14:20

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-005440-0135088-005.d
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 08-Jul-2020 06:33:00 ALS Bottle#: 0 Worklist Smp#: 5
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135088-005
 Misc. Info.: 5 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 08-Jul-2020 08:10:34 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1066

First Level Reviewer: zakhrabov

Date: 08-Jul-2020 07:14:19

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1063.7	107.04

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: _____ Lab Sample ID: MB 440-615753/5
 Matrix: Water Lab File ID: 440-0135088-005440-0135088-005
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 07/08/2020 06:33
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 615753 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14998-27-7	Chlorite	ND		20	4.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	107		90-115

Report Date: 08-Jul-2020 07:14:20

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-005440-0135088-005.d
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 08-Jul-2020 06:33:00 ALS Bottle#: 0 Worklist Smp#: 5
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135088-005
 Misc. Info.: 5 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 08-Jul-2020 08:10:34 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1066

First Level Reviewer: zakhrabov

Date: 08-Jul-2020 07:14:19

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 1 Dichloroacetic acid	13.834	13.709	0.125	86889734		NC	
\$ 6 Dichloroacetic acid(Surr)	13.834	13.842	-0.008	86889734	993.7	1063.7	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 08-Jul-2020 07:14:20

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-005440-0135088-005.d

Injection Date: 08-Jul-2020 06:33:00

Instrument ID: IC-8

Operator ID:

Lims ID: MB

Worklist Smp#: 5

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

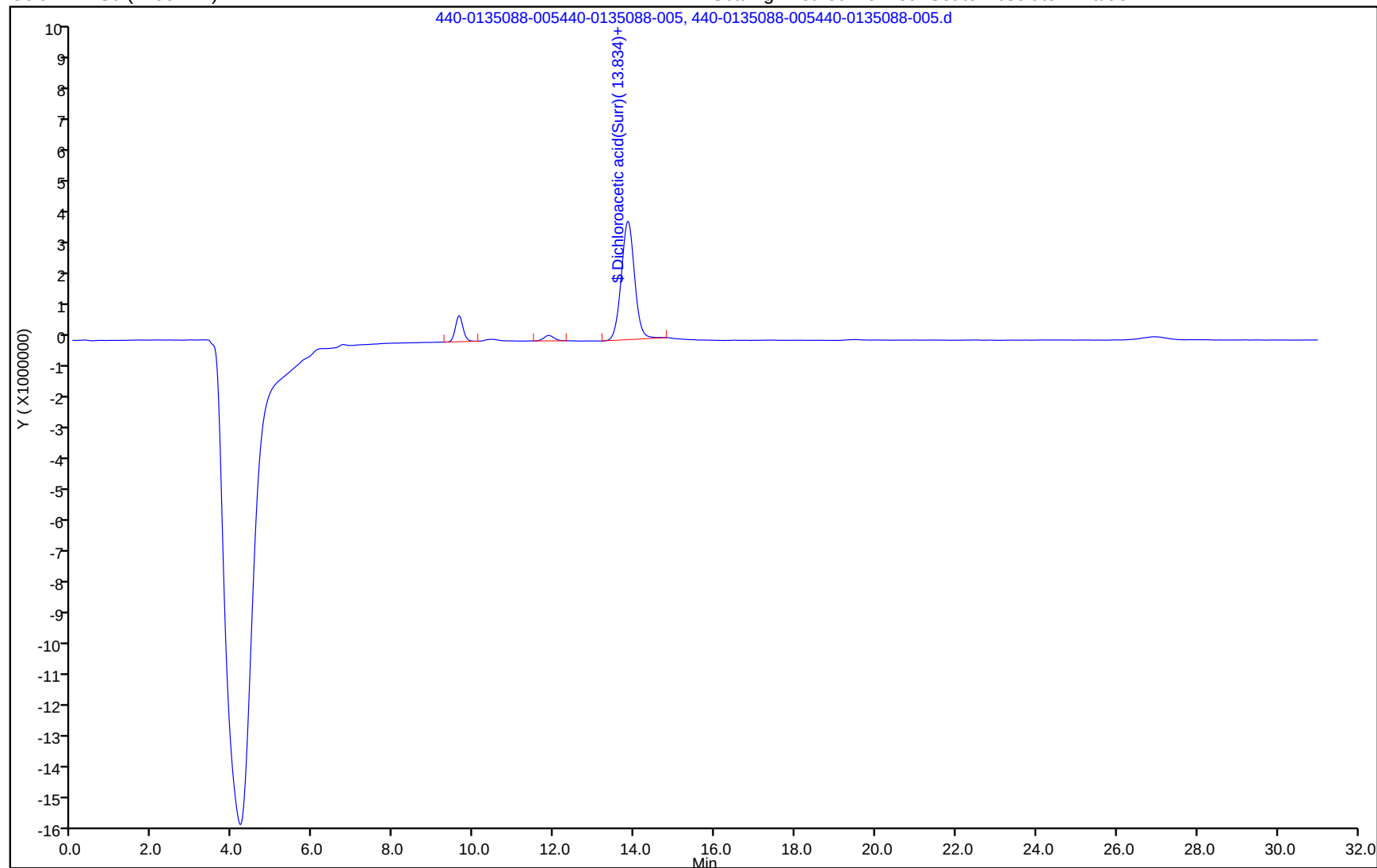
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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I-5-1394

Report Date: 08-Jul-2020 07:14:20

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-005440-0135088-005.d
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 08-Jul-2020 06:33:00 ALS Bottle#: 0 Worklist Smp#: 5
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135088-005
 Misc. Info.: 5 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 08-Jul-2020 08:10:34 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1066

First Level Reviewer: zakhrabov

Date: 08-Jul-2020 07:14:19

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1063.7	107.04

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: _____ Lab Sample ID: CCB 440-615429/2
 Matrix: Water Lab File ID: 440-0135020-002440-0135020-002
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 07/06/2020 04:38
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 615429 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
15541-45-4	Bromate	ND		5.0	1.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	104		90-115

Report Date: 06-Jul-2020 07:12:10

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-002440-0135020-002.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 06-Jul-2020 04:38:00 ALS Bottle#: 0 Worklist Smp#: 2
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135020-002
 Misc. Info.: 2 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 06-Jul-2020 07:12:10 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1040

First Level Reviewer: zakhrabov

Date: 06-Jul-2020 06:14:13

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 1 Dichloroacetic acid	13.867	13.709	0.158	84638955		NC	
\$ 6 Dichloroacetic acid(Surr)	13.867	13.842	0.025	84638955	993.7	1036.1	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 06-Jul-2020 07:12:11

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-002440-0135020-002.d

Injection Date: 06-Jul-2020 04:38:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCB

Worklist Smp#: 2

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

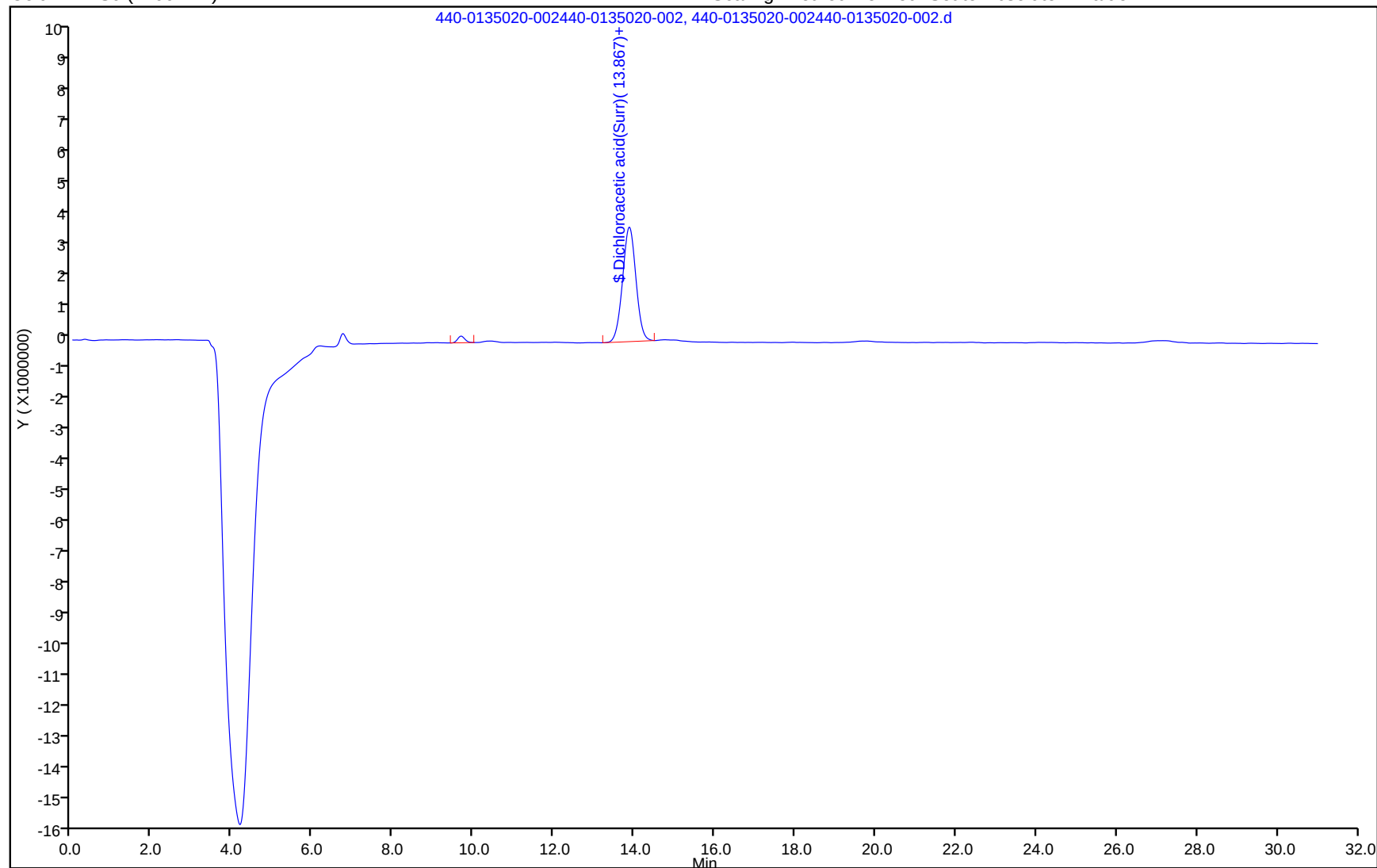
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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I-5-1398

Report Date: 06-Jul-2020 07:12:11

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-002440-0135020-002.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 06-Jul-2020 04:38:00 ALS Bottle#: 0 Worklist Smp#: 2
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135020-002
 Misc. Info.: 2 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 06-Jul-2020 07:12:10 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1040

First Level Reviewer: zakhrabov

Date: 06-Jul-2020 06:14:13

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1036.1	104.27

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: _____ Lab Sample ID: CCB 440-615429/14
 Matrix: Water Lab File ID: 440-0135020-014440-0135020-014
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 07/06/2020 12:53
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 615429 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
15541-45-4	Bromate	ND		5.0	1.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	104		90-115

Report Date: 07-Jul-2020 04:16:21

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-014440-0135020-014.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 06-Jul-2020 12:53:00 ALS Bottle#: 0 Worklist Smp#: 14
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135020-014
 Misc. Info.: 14 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 07-Jul-2020 04:16:20 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1026

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 1 Dichloroacetic acid	13.917	13.709	0.208	84141769			NC
\$ 6 Dichloroacetic acid(Surr)	13.917	13.842	0.075	84141769	993.7	1030.0	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 07-Jul-2020 04:16:21

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-014440-0135020-014.d

Injection Date: 06-Jul-2020 12:53:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCB

Worklist Smp#: 14

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

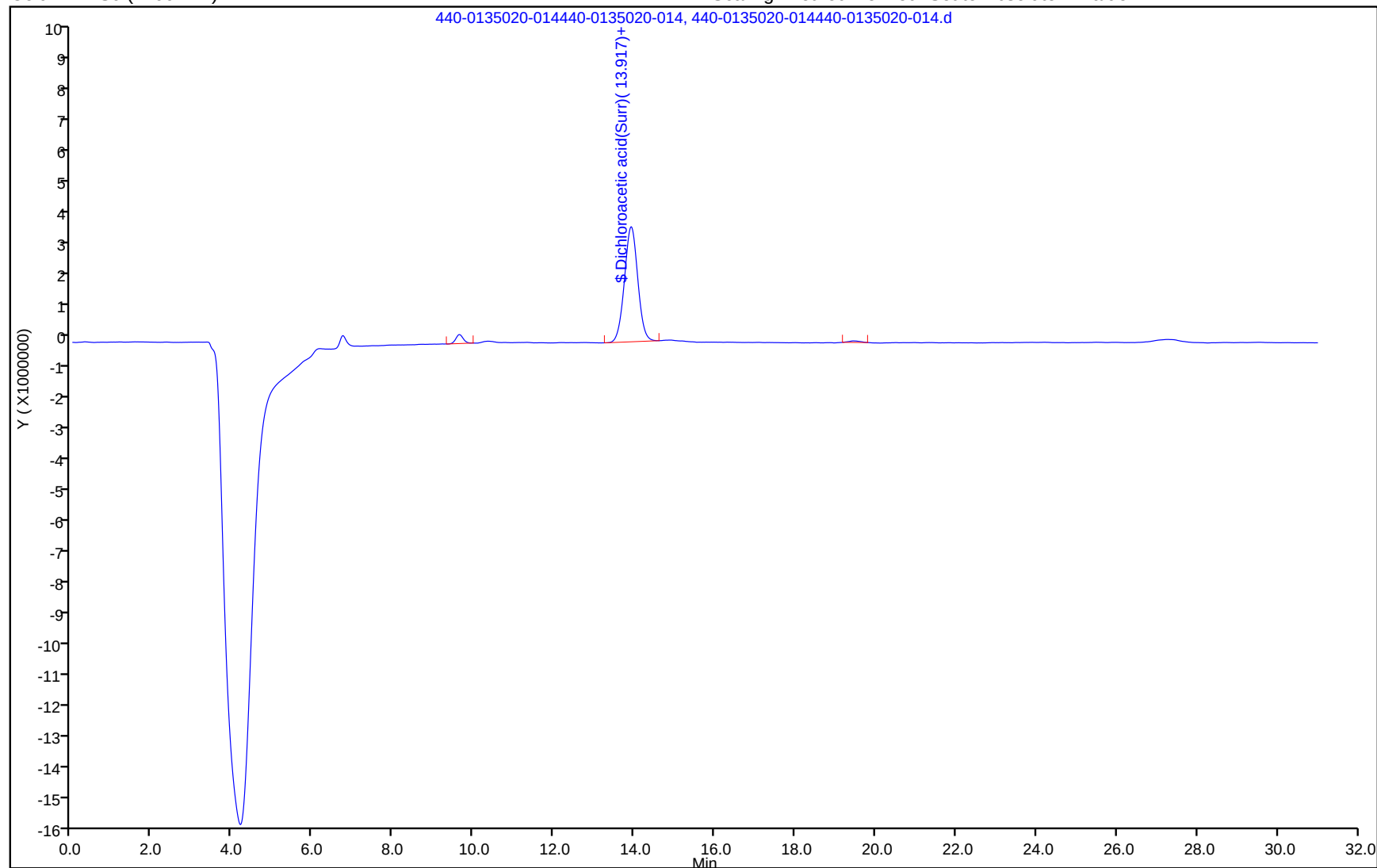
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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I-5-1402

Report Date: 07-Jul-2020 04:16:21

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-014440-0135020-014.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 06-Jul-2020 12:53:00 ALS Bottle#: 0 Worklist Smp#: 14
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135020-014
 Misc. Info.: 14 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 07-Jul-2020 04:16:20 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1026

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1030.0	103.65

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: _____ Lab Sample ID: CCB 440-615429/26
 Matrix: Water Lab File ID: 440-0135020-026440-0135020-026
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 07/06/2020 20:08
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 615429 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
15541-45-4	Bromate	ND		5.0	1.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	105		90-115

Report Date: 07-Jul-2020 04:16:24

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-026440-0135020-026.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 06-Jul-2020 20:08:00 ALS Bottle#: 0 Worklist Smp#: 26
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135020-026
 Misc. Info.: 26 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 07-Jul-2020 04:16:23 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1026

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 1 Dichloroacetic acid	13.942	13.709	0.233	85035286		NC	
\$ 6 Dichloroacetic acid(Surr)	13.942	13.842	0.100	85035286	993.7	1041.0	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WCDCA_00081 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 07-Jul-2020 04:16:24

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-026440-0135020-026.d

Injection Date: 06-Jul-2020 20:08:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCB

Worklist Smp#: 26

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

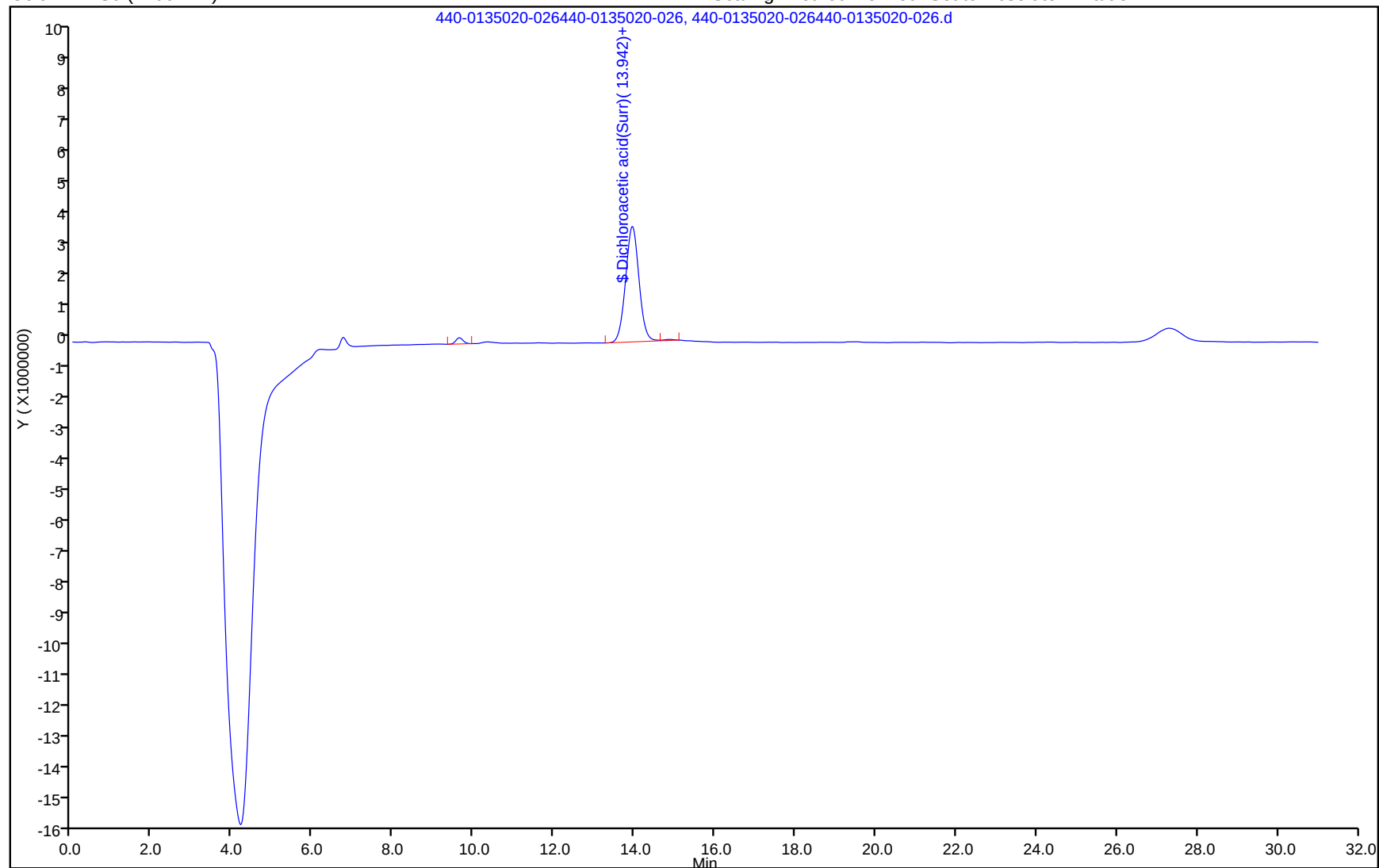
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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I-5-1406

Report Date: 07-Jul-2020 04:16:24

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-026440-0135020-026.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 06-Jul-2020 20:08:00 ALS Bottle#: 0 Worklist Smp#: 26
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135020-026
 Misc. Info.: 26 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 07-Jul-2020 04:16:23 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1026

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1041.0	104.75

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: _____ Lab Sample ID: CCB 440-615429/38
 Matrix: Water Lab File ID: 440-0135020-038440-0135020-038
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 07/07/2020 03:23
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 615429 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
15541-45-4	Bromate	ND		5.0	1.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	104		90-115

Report Date: 07-Jul-2020 04:16:28

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-038440-0135020-038.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 07-Jul-2020 03:23:00 ALS Bottle#: 0 Worklist Smp#: 38
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135020-038
 Misc. Info.: 25564 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 07-Jul-2020 04:16:27 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1026

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 1 Dichloroacetic acid	13.900	13.709	0.191	84414840			NC
\$ 6 Dichloroacetic acid(Surr)	13.900	13.842	0.058	84414840	993.7	1033.4	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WCDCA_00081 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 07-Jul-2020 04:16:28

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-038440-0135020-038.d

Injection Date: 07-Jul-2020 03:23:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCB

Worklist Smp#: 38

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

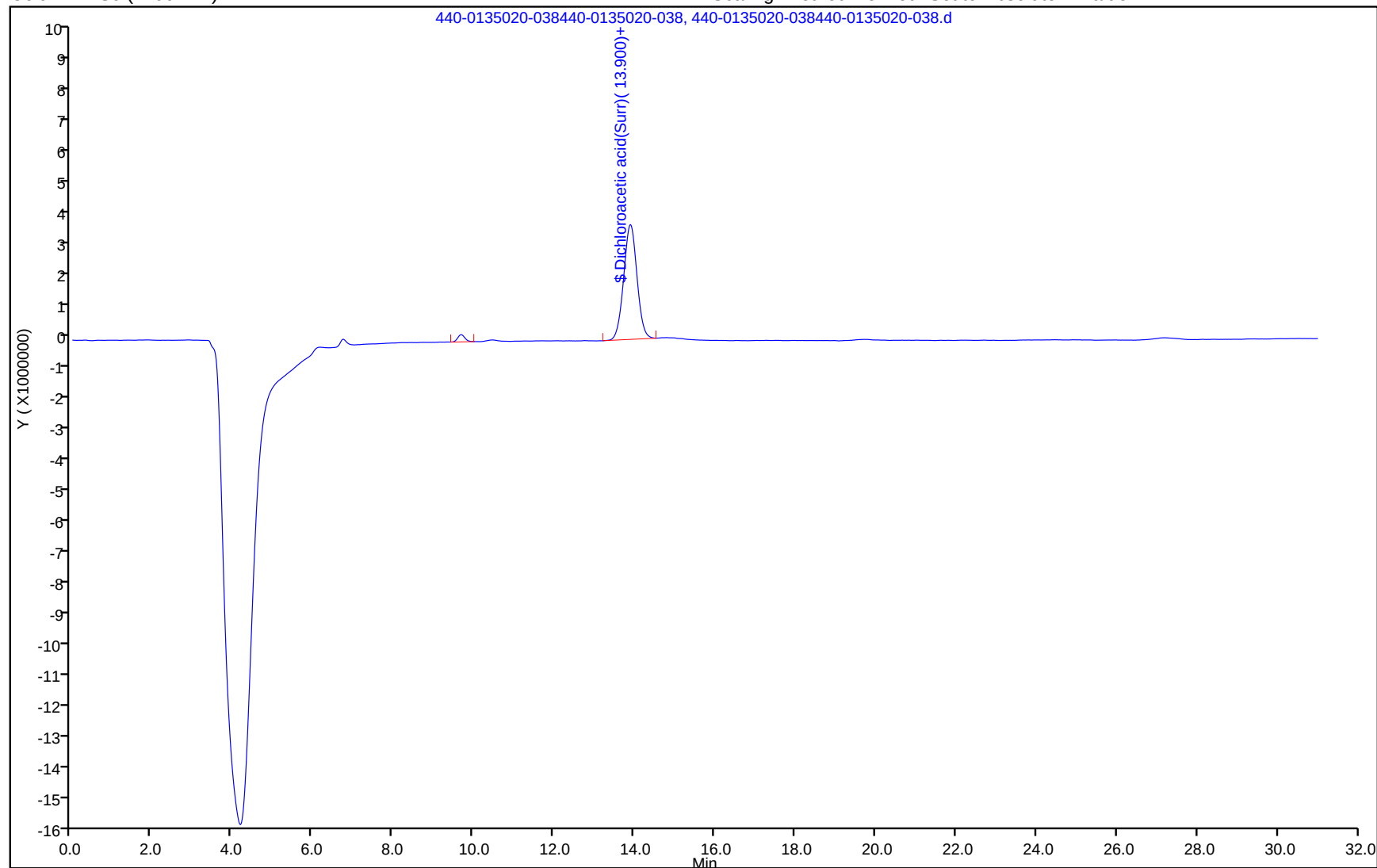
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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I-5-1410

Report Date: 07-Jul-2020 04:16:28

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-038440-0135020-038.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 07-Jul-2020 03:23:00 ALS Bottle#: 0 Worklist Smp#: 38
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135020-038
 Misc. Info.: 25564 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 07-Jul-2020 04:16:27 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1026

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1033.4	103.99

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: _____ Lab Sample ID: CCB 440-615429/50
 Matrix: Water Lab File ID: 440-0135020-050440-0135020-050
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 07/07/2020 10:48
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 615429 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
15541-45-4	Bromate	ND		5.0	1.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	105		90-115

Report Date: 08-Jul-2020 04:14:09

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-050440-0135020-050.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 07-Jul-2020 10:48:00 ALS Bottle#: 0 Worklist Smp#: 50
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135020-050
 Misc. Info.: 1588 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 08-Jul-2020 04:14:08 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1066

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 1 Dichloroacetic acid	13.859	13.709	0.150	84920061			NC
\$ 6 Dichloroacetic acid(Surr)	13.859	13.842	0.017	84920061	993.7	1039.5	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 08-Jul-2020 04:14:09

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-050440-0135020-050.d

Injection Date: 07-Jul-2020 10:48:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCB

Worklist Smp#: 50

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

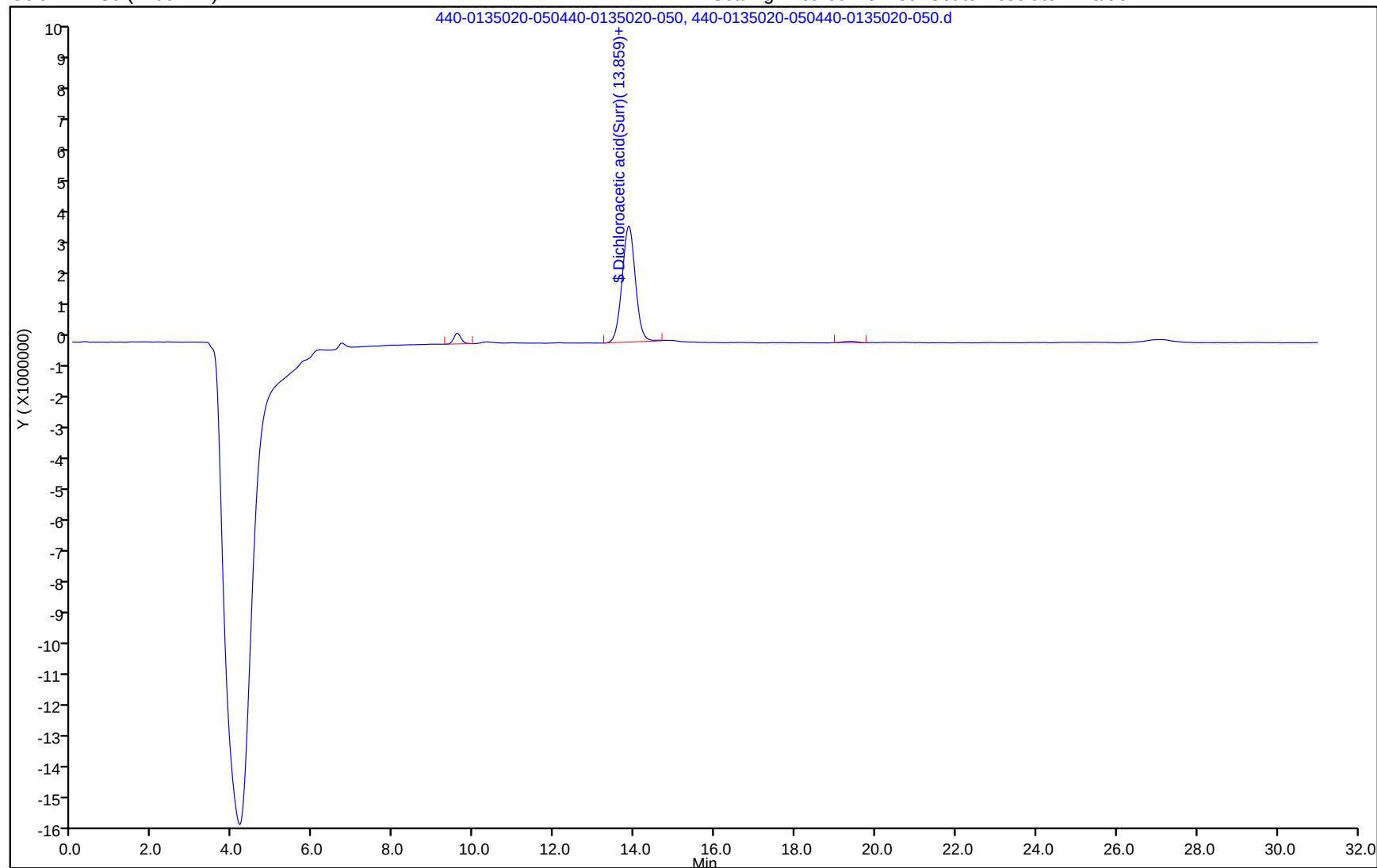
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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I-5-1414

Report Date: 08-Jul-2020 04:14:09

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-050440-0135020-050.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 07-Jul-2020 10:48:00 ALS Bottle#: 0 Worklist Smp#: 50
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135020-050
 Misc. Info.: 1588 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 08-Jul-2020 04:14:08 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1066

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1039.5	104.61

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: _____ Lab Sample ID: CCB 440-615430/2
 Matrix: Water Lab File ID: 440-0135020-002440-0135020-002
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 07/06/2020 04:38
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 615430 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14998-27-7	Chlorite	ND		20	4.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	104		90-115

Report Date: 06-Jul-2020 07:12:11

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-002440-0135020-002.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 06-Jul-2020 04:38:00 ALS Bottle#: 0 Worklist Smp#: 2
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135020-002
 Misc. Info.: 2 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 06-Jul-2020 07:12:10 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1040

First Level Reviewer: zakhrabov

Date: 06-Jul-2020 06:14:13

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 1 Dichloroacetic acid	13.867	13.709	0.158	84638955		NC	
\$ 6 Dichloroacetic acid(Surr)	13.867	13.842	0.025	84638955	993.7	1036.1	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 06-Jul-2020 07:12:11

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-002440-0135020-002.d

Injection Date: 06-Jul-2020 04:38:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCB

Worklist Smp#: 2

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

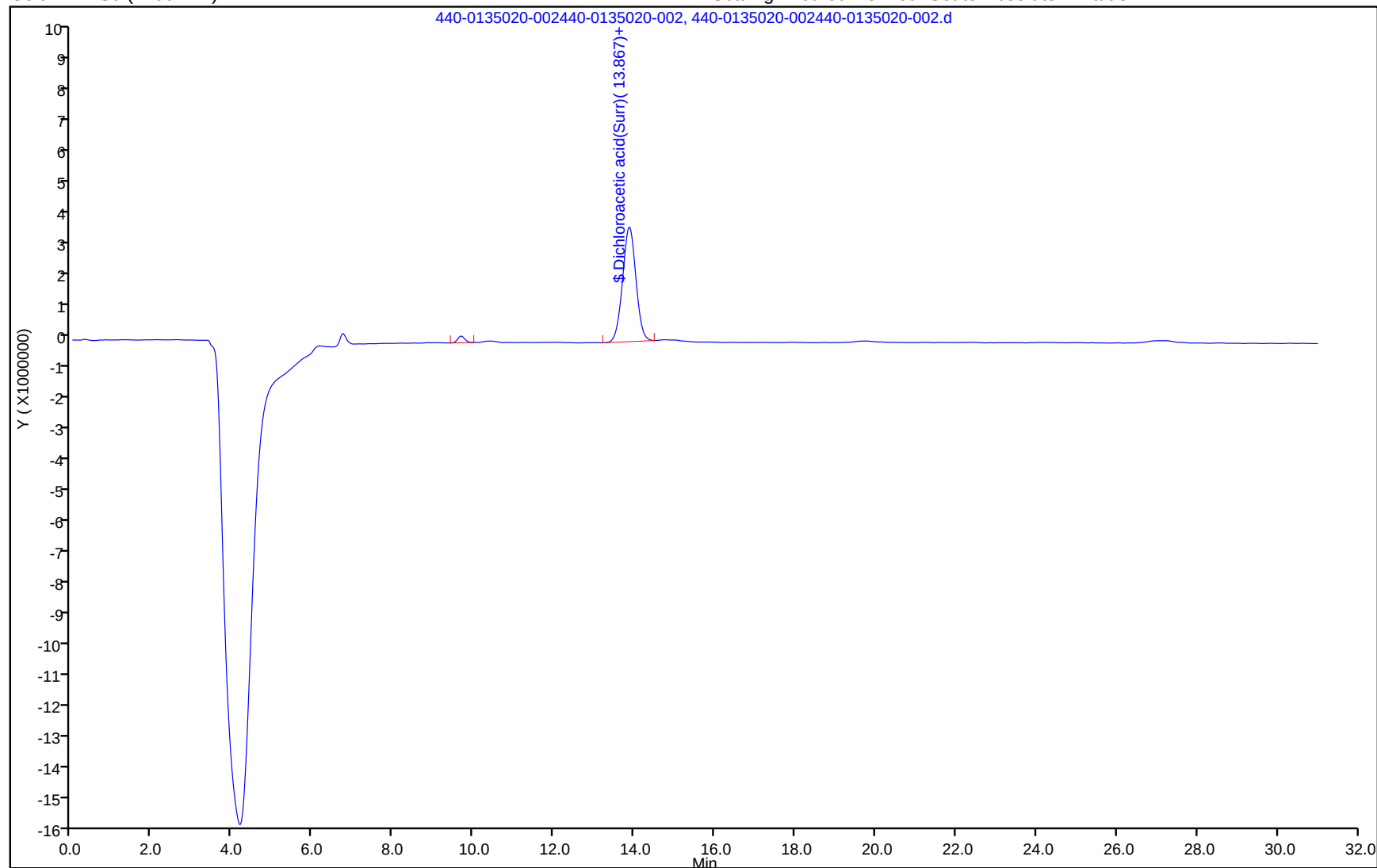
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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I-5-1418

Report Date: 06-Jul-2020 07:12:11

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-002440-0135020-002.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 06-Jul-2020 04:38:00 ALS Bottle#: 0 Worklist Smp#: 2
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135020-002
 Misc. Info.: 2 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 06-Jul-2020 07:12:10 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1040

First Level Reviewer: zakhrabov

Date: 06-Jul-2020 06:14:13

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1036.1	104.27

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: _____ Lab Sample ID: CCB 440-615430/14
 Matrix: Water Lab File ID: 440-0135020-014440-0135020-014
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 07/06/2020 12:53
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 615430 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14998-27-7	Chlorite	ND		20	4.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	104		90-115

Report Date: 07-Jul-2020 04:16:21

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-014440-0135020-014.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 06-Jul-2020 12:53:00 ALS Bottle#: 0 Worklist Smp#: 14
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135020-014
 Misc. Info.: 14 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 07-Jul-2020 04:16:20 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1026

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 1 Dichloroacetic acid	13.917	13.709	0.208	84141769			NC
\$ 6 Dichloroacetic acid(Surr)	13.917	13.842	0.075	84141769	993.7	1030.0	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WCDCA_00081 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 07-Jul-2020 04:16:21

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-014440-0135020-014.d

Injection Date: 06-Jul-2020 12:53:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCB

Worklist Smp#: 14

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

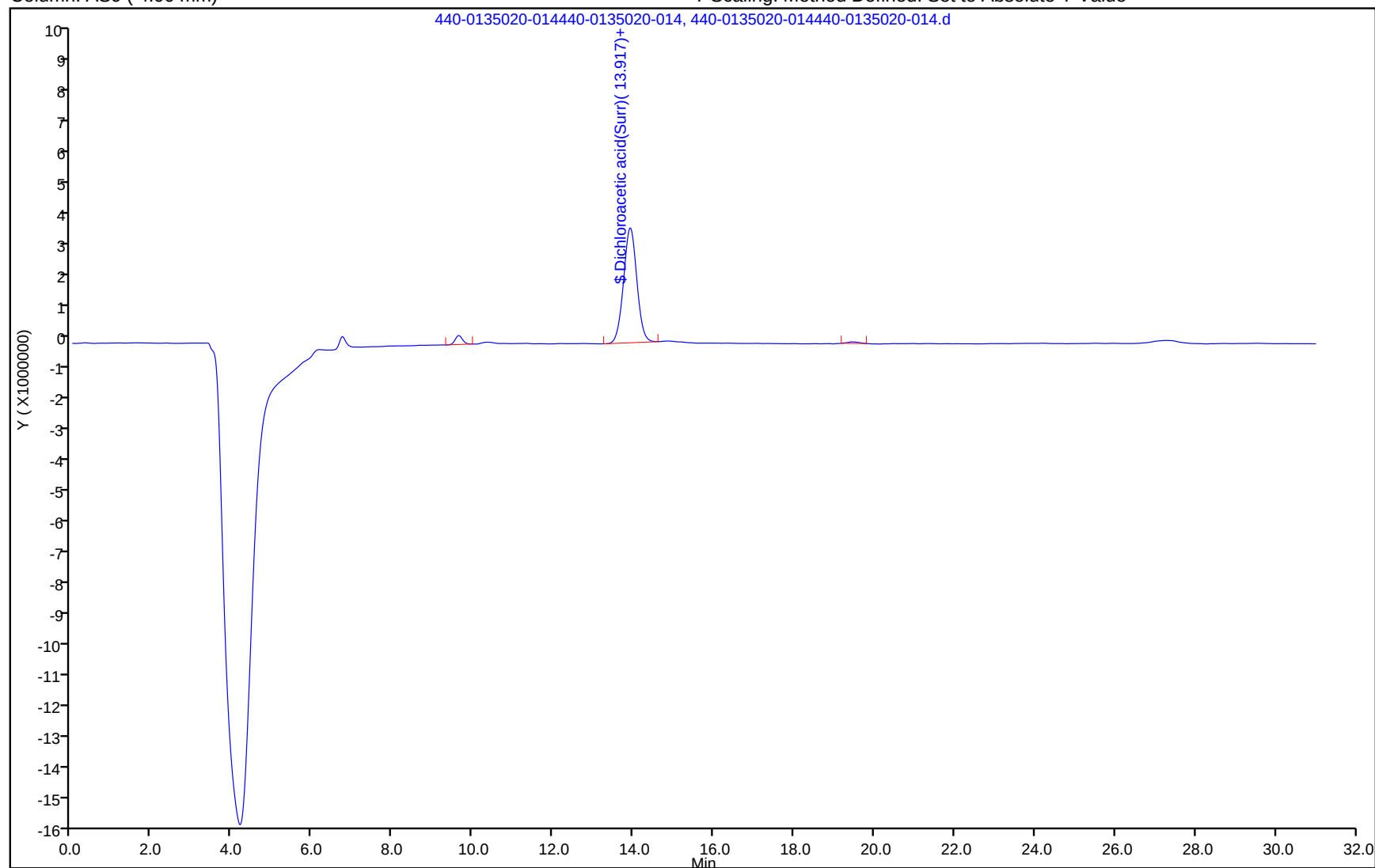
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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I-5-1422

Report Date: 07-Jul-2020 04:16:21

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-014440-0135020-014.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 06-Jul-2020 12:53:00 ALS Bottle#: 0 Worklist Smp#: 14
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135020-014
 Misc. Info.: 14 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 07-Jul-2020 04:16:20 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1026

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1030.0	103.65

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: _____ Lab Sample ID: CCB 440-615430/26
 Matrix: Water Lab File ID: 440-0135020-026440-0135020-026
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 07/06/2020 20:08
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 615430 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14998-27-7	Chlorite	ND		20	4.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	105		90-115

Report Date: 07-Jul-2020 04:16:24

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-026440-0135020-026.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 06-Jul-2020 20:08:00 ALS Bottle#: 0 Worklist Smp#: 26
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135020-026
 Misc. Info.: 26 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 07-Jul-2020 04:16:23 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1026

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 1 Dichloroacetic acid	13.942	13.709	0.233	85035286		NC	
\$ 6 Dichloroacetic acid(Surr)	13.942	13.842	0.100	85035286	993.7	1041.0	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 07-Jul-2020 04:16:24

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-026440-0135020-026.d

Injection Date: 06-Jul-2020 20:08:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCB

Worklist Smp#: 26

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

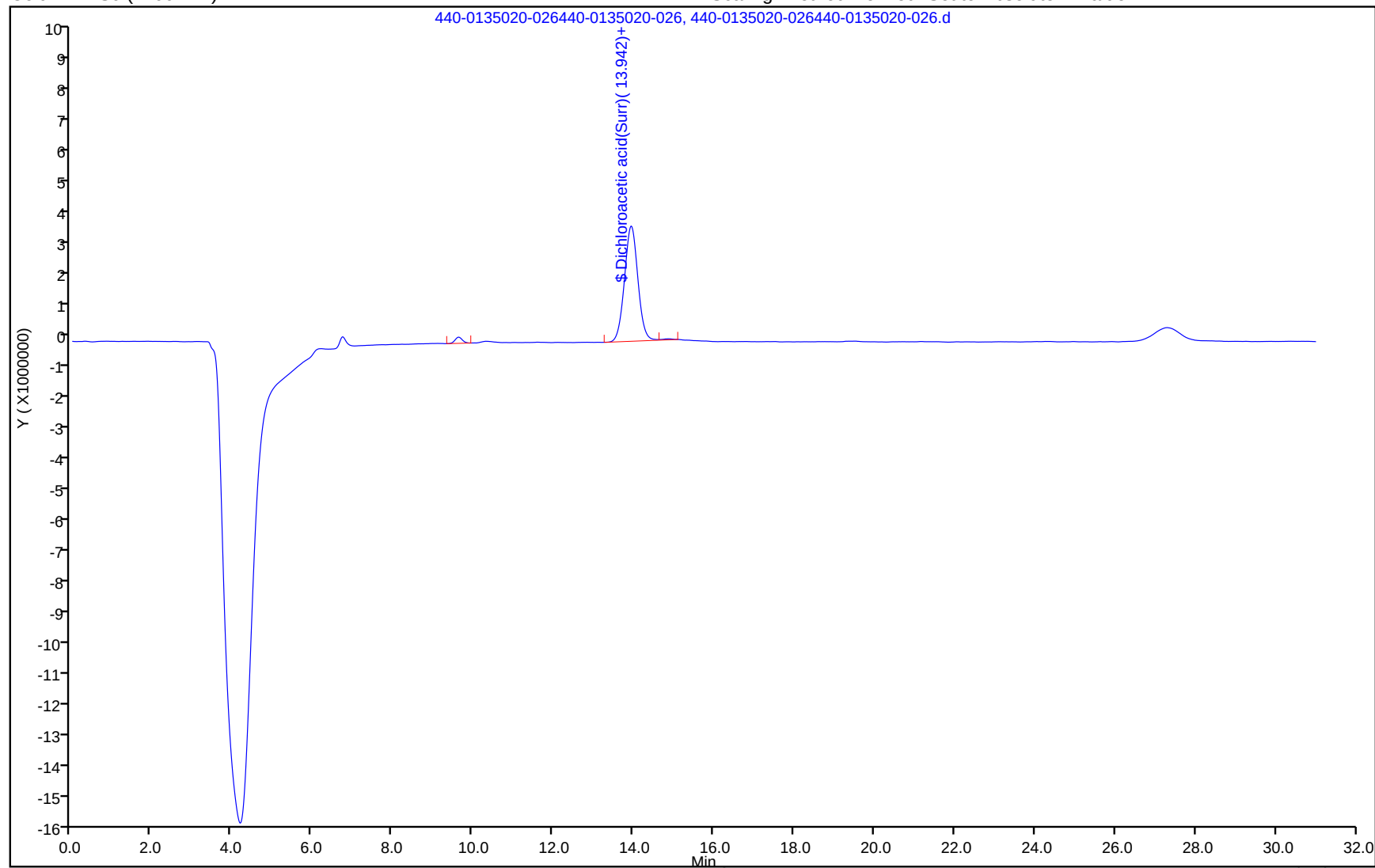
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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I-5-1426

Report Date: 07-Jul-2020 04:16:24

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-026440-0135020-026.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 06-Jul-2020 20:08:00 ALS Bottle#: 0 Worklist Smp#: 26
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135020-026
 Misc. Info.: 26 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 07-Jul-2020 04:16:23 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1026

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1041.0	104.75

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: _____ Lab Sample ID: CCB 440-615430/38
 Matrix: Water Lab File ID: 440-0135020-038440-0135020-038
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 07/07/2020 03:23
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 615430 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14998-27-7	Chlorite	ND		20	4.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	104		90-115

Report Date: 07-Jul-2020 04:16:28

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-038440-0135020-038.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 07-Jul-2020 03:23:00 ALS Bottle#: 0 Worklist Smp#: 38
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135020-038
 Misc. Info.: 25564 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 07-Jul-2020 04:16:27 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1026

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 1 Dichloroacetic acid	13.900	13.709	0.191	84414840			NC
\$ 6 Dichloroacetic acid(Surr)	13.900	13.842	0.058	84414840	993.7	1033.4	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WCDCA_00081 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 07-Jul-2020 04:16:28

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-038440-0135020-038.d

Injection Date: 07-Jul-2020 03:23:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCB

Worklist Smp#: 38

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

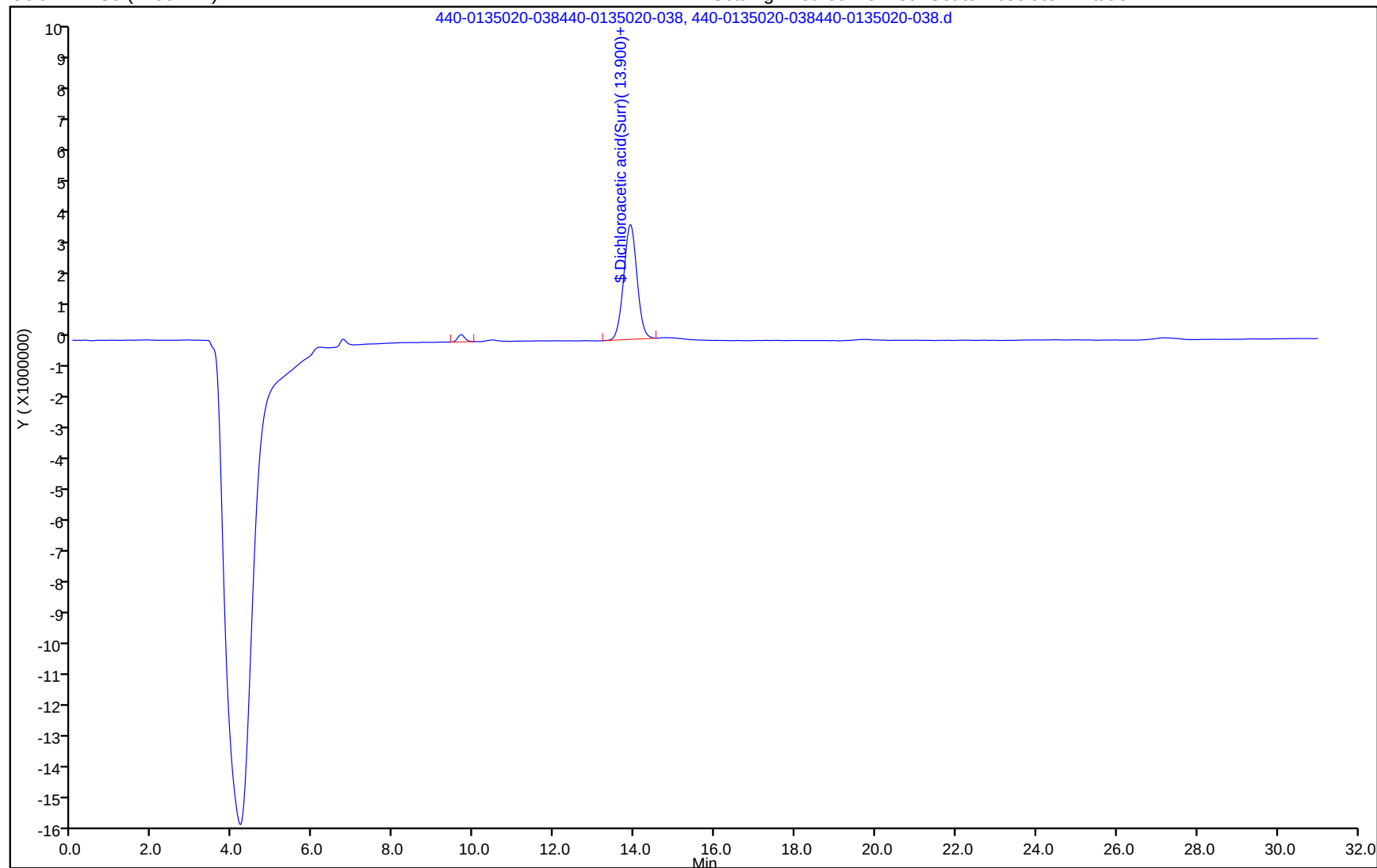
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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I-5-1430

Report Date: 07-Jul-2020 04:16:28

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-038440-0135020-038.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 07-Jul-2020 03:23:00 ALS Bottle#: 0 Worklist Smp#: 38
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135020-038
 Misc. Info.: 25564 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 07-Jul-2020 04:16:27 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1026

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1033.4	103.99

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: _____ Lab Sample ID: CCB 440-615430/50
 Matrix: Water Lab File ID: 440-0135020-050440-0135020-050
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 07/07/2020 10:48
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 615430 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14998-27-7	Chlorite	ND		20	4.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	105		90-115

Report Date: 08-Jul-2020 04:14:09

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-050440-0135020-050.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 07-Jul-2020 10:48:00 ALS Bottle#: 0 Worklist Smp#: 50
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135020-050
 Misc. Info.: 1588 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 08-Jul-2020 04:14:08 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1066

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 1 Dichloroacetic acid	13.859	13.709	0.150	84920061			NC
\$ 6 Dichloroacetic acid(Surr)	13.859	13.842	0.017	84920061	993.7	1039.5	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WCDCA_00081 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 08-Jul-2020 04:14:09

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-050440-0135020-050.d

Injection Date: 07-Jul-2020 10:48:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCB

Worklist Smp#: 50

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

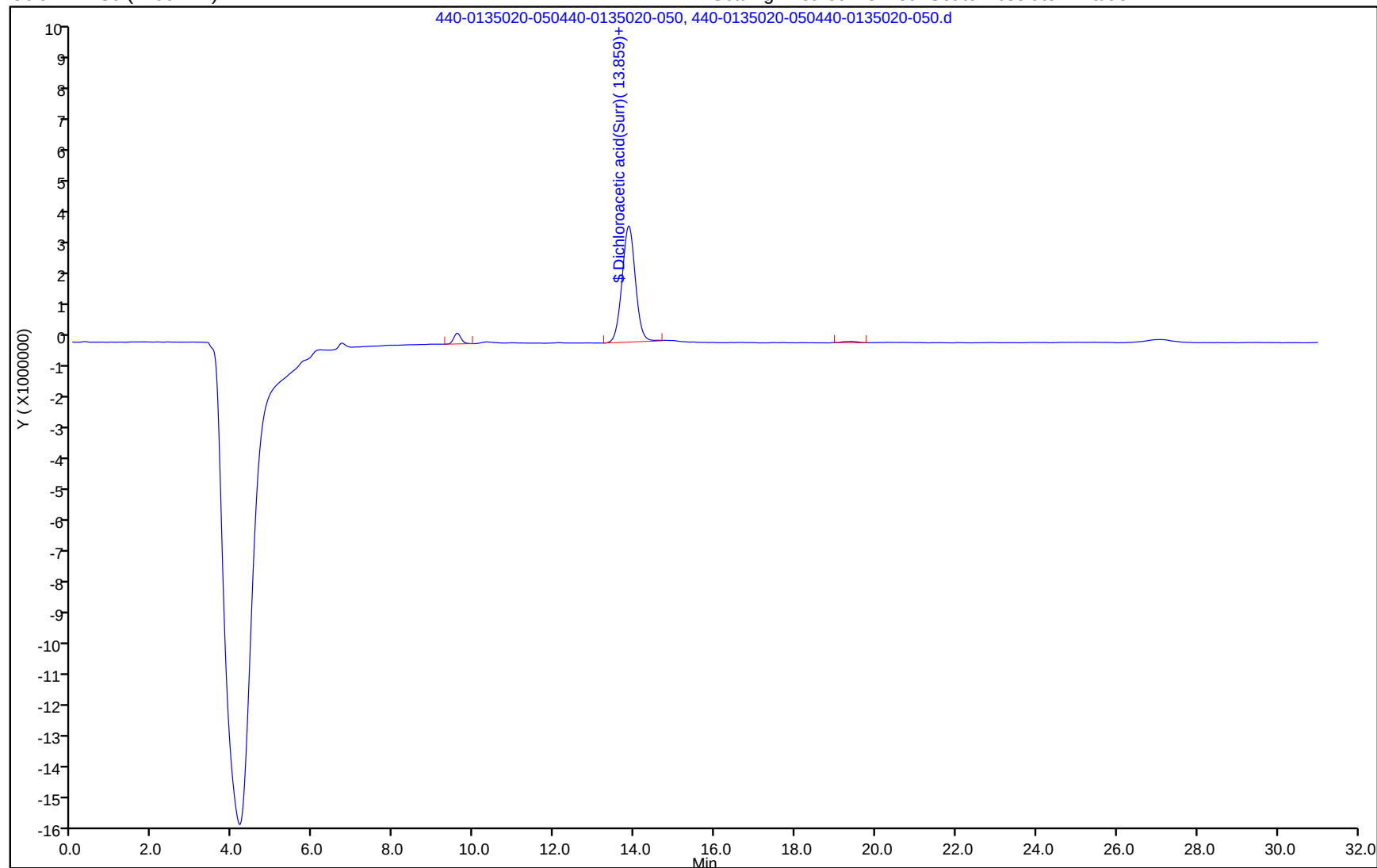
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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I-5-1434

Report Date: 08-Jul-2020 04:14:09

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-050440-0135020-050.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 07-Jul-2020 10:48:00 ALS Bottle#: 0 Worklist Smp#: 50
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135020-050
 Misc. Info.: 1588 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 08-Jul-2020 04:14:08 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1066

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1039.5	104.61

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: _____ Lab Sample ID: CCB 440-615752/2
 Matrix: Water Lab File ID: 440-0135088-002440-0135088-002
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 07/08/2020 04:44
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 615752 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
15541-45-4	Bromate	ND		5.0	1.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	104		90-115

Report Date: 08-Jul-2020 05:30:46

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-002440-0135088-002.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 08-Jul-2020 04:44:00 ALS Bottle#: 0 Worklist Smp#: 2
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135088-002
 Misc. Info.: 2 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 08-Jul-2020 05:30:39 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1066

First Level Reviewer: zakhrabov

Date: 08-Jul-2020 05:30:46

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 1 Dichloroacetic acid	13.833	13.709	0.124	84621919		NC	
\$ 6 Dichloroacetic acid(Surr)	13.833	13.842	-0.009	84621919	993.7	1035.9	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 08-Jul-2020 05:30:46

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-002440-0135088-002.d

Injection Date: 08-Jul-2020 04:44:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCB

Worklist Smp#: 2

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

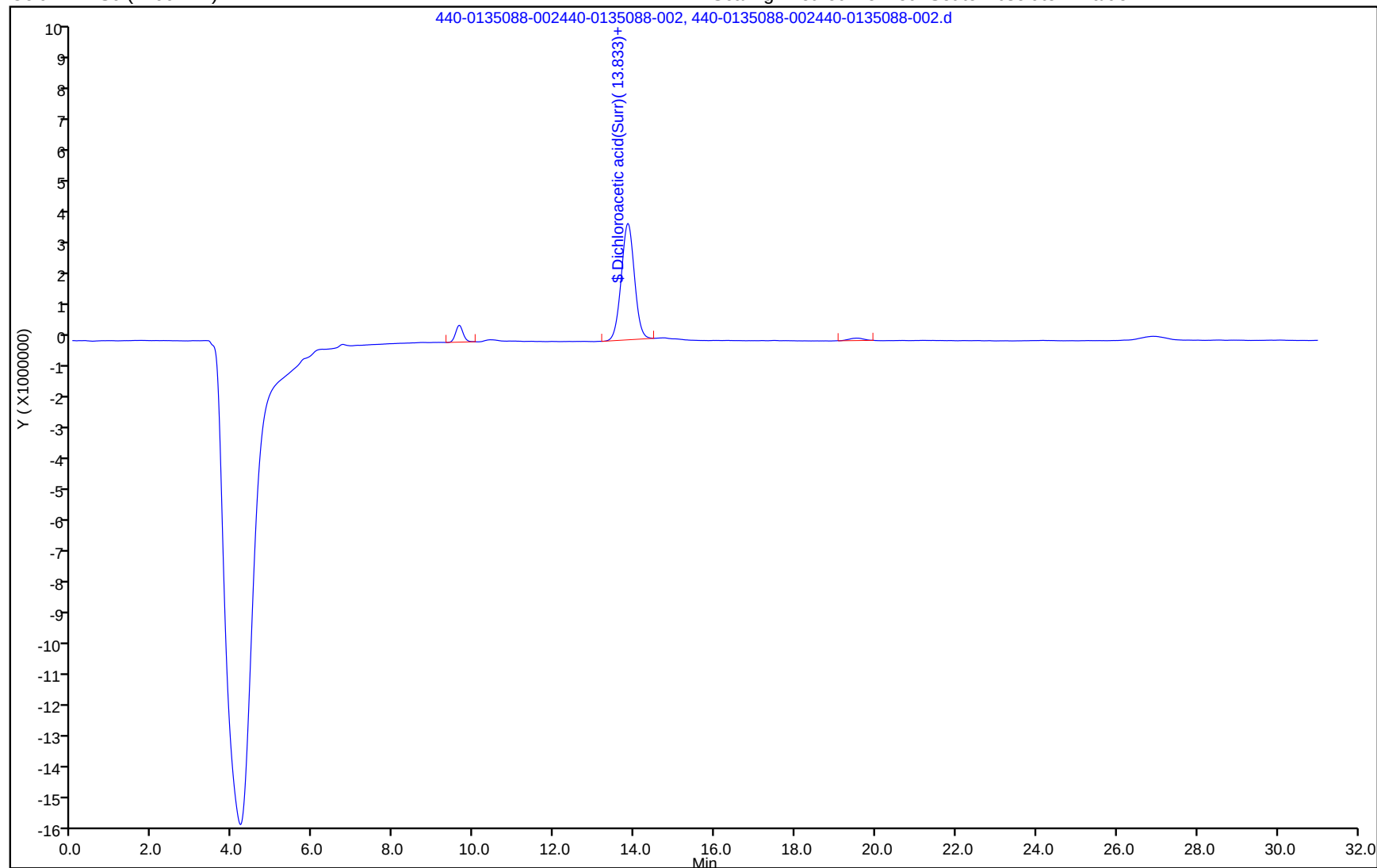
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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I-5-1438

Report Date: 08-Jul-2020 05:30:46

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-002440-0135088-002.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 08-Jul-2020 04:44:00 ALS Bottle#: 0 Worklist Smp#: 2
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135088-002
 Misc. Info.: 2 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 08-Jul-2020 05:30:39 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1066

First Level Reviewer: zakhrabov

Date: 08-Jul-2020 05:30:46

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1035.9	104.25

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: _____ Lab Sample ID: CCB 440-615752/14
 Matrix: Water Lab File ID: 440-0135088-014440-0135088-014
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 07/08/2020 12:00
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 615752 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
15541-45-4	Bromate	ND		5.0	1.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	104		90-115

Report Date: 09-Jul-2020 05:17:38

Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-014440-0135088-014.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 08-Jul-2020 12:00:00 ALS Bottle#: 0 Worklist Smp#: 14
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135088-014
 Misc. Info.: 14 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 09-Jul-2020 05:12:55 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1007

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 1 Dichloroacetic acid	13.825	13.709	0.116	84171849			NC
\$ 6 Dichloroacetic acid(Surr)	13.825	13.842	-0.017	84171849	993.7	1030.4	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WCDCA_00081 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 09-Jul-2020 05:17:38

Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-014440-0135088-014.d

Injection Date: 08-Jul-2020 12:00:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCB

Worklist Smp#: 14

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

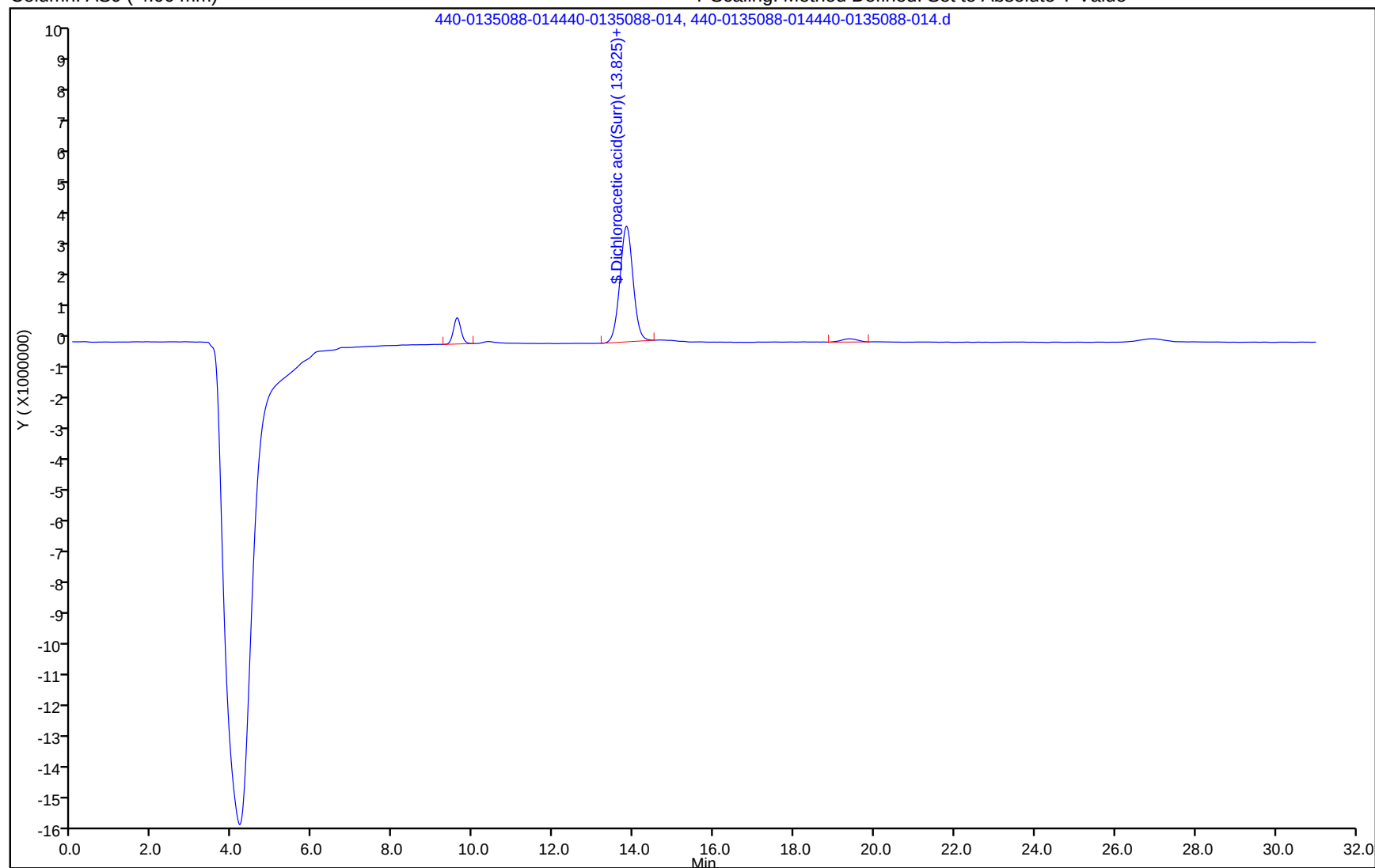
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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I-5-1442

Report Date: 09-Jul-2020 05:17:38

Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-014440-0135088-014.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 08-Jul-2020 12:00:00 ALS Bottle#: 0 Worklist Smp#: 14
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135088-014
 Misc. Info.: 14 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 09-Jul-2020 05:12:55 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1007

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1030.4	103.69

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: _____ Lab Sample ID: CCB 440-615752/38
 Matrix: Water Lab File ID: 440-0135088-038440-0135088-038
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 07/09/2020 01:19
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 615752 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
15541-45-4	Bromate	ND		5.0	1.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	111		90-115

Report Date: 09-Jul-2020 05:17:46

Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-038440-0135088-038.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 09-Jul-2020 01:19:00 ALS Bottle#: 0 Worklist Smp#: 38
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135088-038
 Misc. Info.: 38 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 09-Jul-2020 05:17:46 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1007

First Level Reviewer: zakhrabov

Date: 09-Jul-2020 04:26:34

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 1 Dichloroacetic acid	13.825	13.709	0.116	90188897		NC	M
\$ 6 Dichloroacetic acid(Surr)	13.825	13.842	-0.017	90188897	993.7	1104.0	M

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 09-Jul-2020 05:17:46

Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-038440-0135088-038.d

Injection Date: 09-Jul-2020 01:19:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCB

Worklist Smp#: 38

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

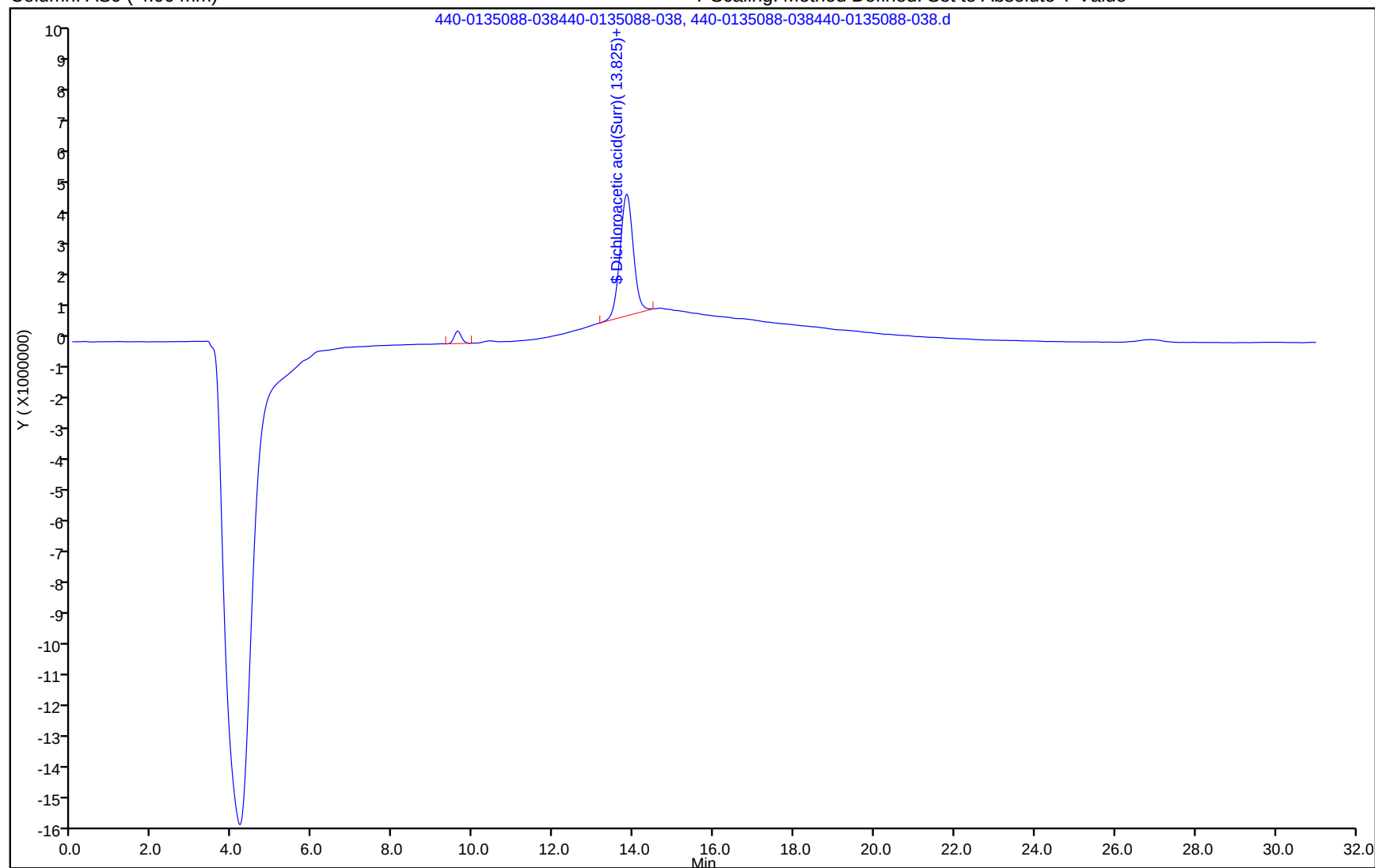
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-1446

Report Date: 09-Jul-2020 05:17:46

Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-038440-0135088-038.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 09-Jul-2020 01:19:00 ALS Bottle#: 0 Worklist Smp#: 38
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135088-038
 Misc. Info.: 38 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 09-Jul-2020 05:17:46 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1007

First Level Reviewer: zakhrabov

Date: 09-Jul-2020 04:26:34

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1104.0	111.10

Report Date: 09-Jul-2020 05:17:46

Chrom Revision: 2.3 30-Jun-2020 12:05:54
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

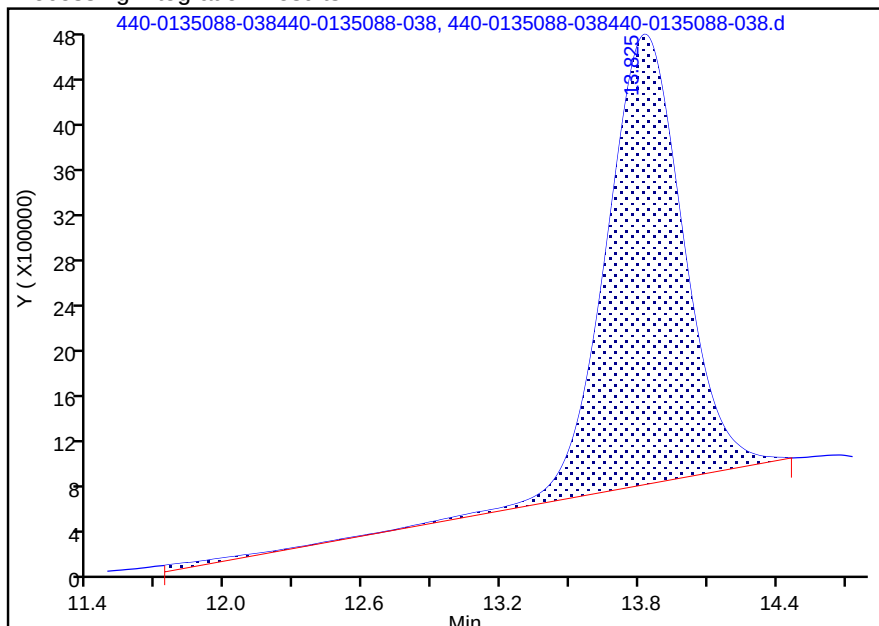
Data File:	\\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-038440-0135088-038.d		
Injection Date:	09-Jul-2020 01:19:00	Instrument ID:	IC-8
Lims ID:	CCB		
Client ID:			
Operator ID:	ALS Bottle#:	0	Worklist Smp#:
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	300.1_C8	Limit Group:	IC-300.1_28D
Column:	AS9 (4.00 mm)	Detector	Ch-A-20110816009

\$ 6 Dichloroacetic acid(Surr), CAS: 79-43-6

Signal: 1

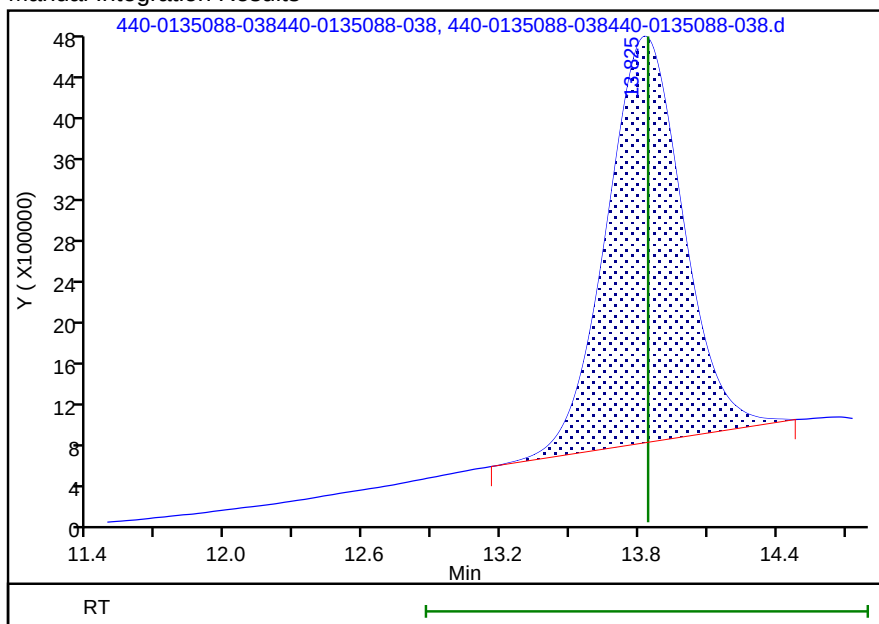
RT: 13.83
Area: 92354914
Amount: 1130.5611
Amount Units: ug/l

Processing Integration Results



RT: 13.83
Area: 90188897
Amount: 1104.0458
Amount Units: ug/l

Manual Integration Results



Reviewer: zakhrabov, 09-Jul-2020 04:26:30

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

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FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: _____ Lab Sample ID: CCB 440-615752/48
 Matrix: Water Lab File ID: 440-0135088-048440-0135088-048
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 07/09/2020 08:01
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 615752 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
15541-45-4	Bromate	ND		5.0	1.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	110		90-115

Report Date: 09-Jul-2020 10:53:03

Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-048440-0135088-048.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 09-Jul-2020 08:01:00 ALS Bottle#: 0 Worklist Smp#: 48
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135088-048
 Misc. Info.: 22536 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 09-Jul-2020 10:52:44 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1002

First Level Reviewer: nguyent

Date: 09-Jul-2020 10:52:44

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 1 Dichloroacetic acid	13.859	13.709	0.150	88902263		NC	M
\$ 6 Dichloroacetic acid(Surr)	13.859	13.842	0.017	88902263	993.7	1088.3	M

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 09-Jul-2020 10:53:03

Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-048440-0135088-048.d

Injection Date: 09-Jul-2020 08:01:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCB

Worklist Smp#: 48

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

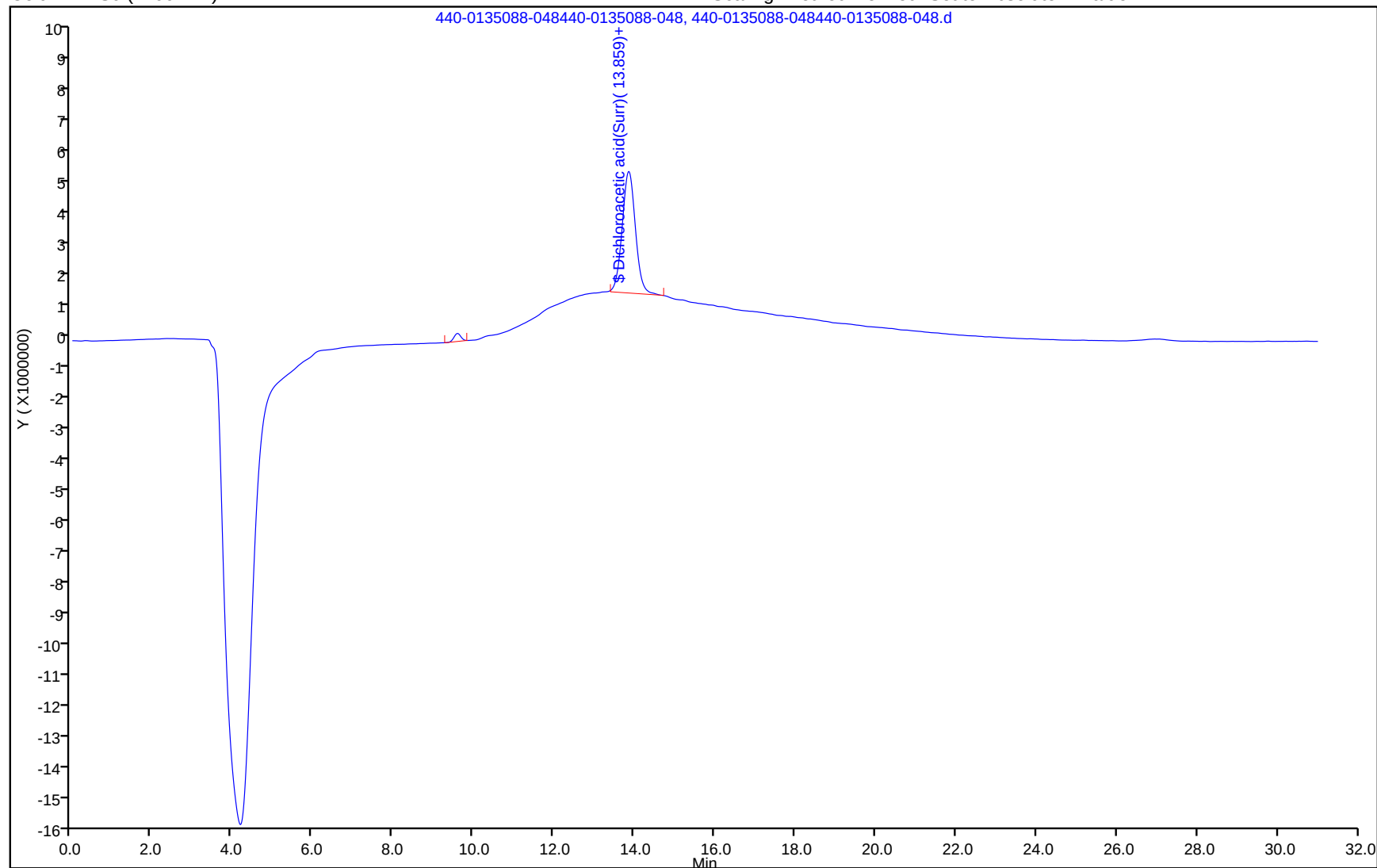
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-1451

Report Date: 09-Jul-2020 10:53:03

Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-048440-0135088-048.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 09-Jul-2020 08:01:00 ALS Bottle#: 0 Worklist Smp#: 48
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135088-048
 Misc. Info.: 22536 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 09-Jul-2020 10:52:44 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1002

First Level Reviewer: nguyent

Date: 09-Jul-2020 10:52:44

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1088.3	109.52

Report Date: 09-Jul-2020 10:53:03

Chrom Revision: 2.3 30-Jun-2020 12:05:54
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

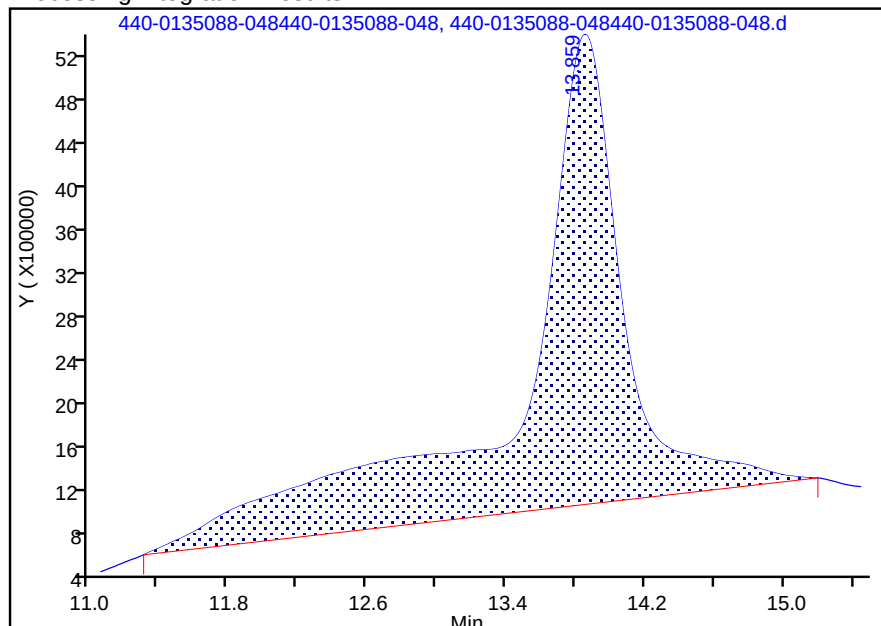
Data File:	\\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-048440-0135088-048.d		
Injection Date:	09-Jul-2020 08:01:00	Instrument ID:	IC-8
Lims ID:	CCB		
Client ID:			
Operator ID:	ALS Bottle#:	0	Worklist Smp#:
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	300.1_C8	Limit Group:	IC-300.1_28D
Column:	AS9 (4.00 mm)	Detector	Ch-A-20110816009

\$ 6 Dichloroacetic acid(Surr), CAS: 79-43-6

Signal: 1

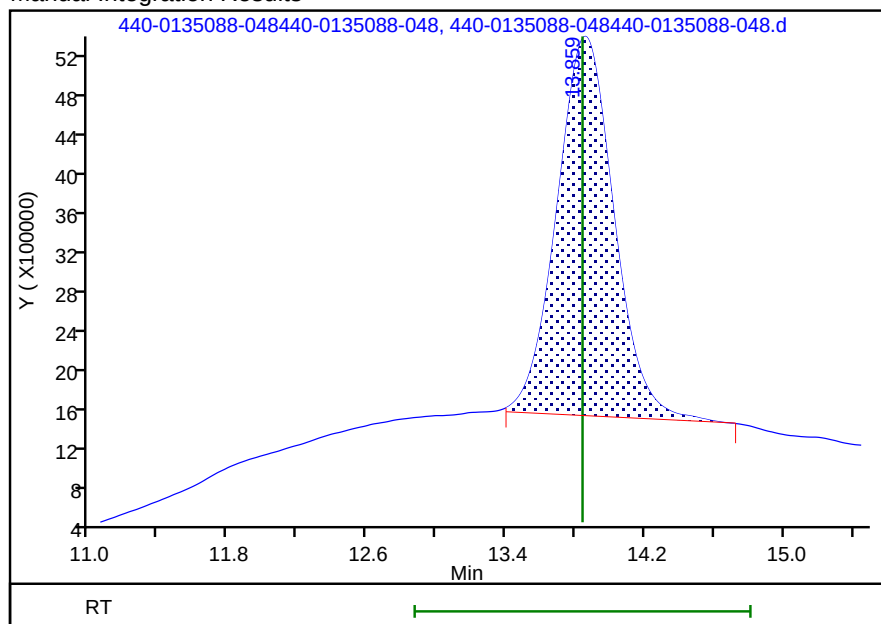
RT: 13.86
Area: 180523377
Amount: 2209.8738
Amount Units: ug/l

Processing Integration Results



RT: 13.86
Area: 88902263
Amount: 1088.2955
Amount Units: ug/l

Manual Integration Results



Reviewer: nguyent, 09-Jul-2020 10:52:36

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

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FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: _____ Lab Sample ID: CCB 440-615753/2
 Matrix: Water Lab File ID: 440-0135088-002440-0135088-002
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 07/08/2020 04:44
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 615753 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14998-27-7	Chlorite	ND		20	4.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	104		90-115

Report Date: 08-Jul-2020 05:30:46

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-002440-0135088-002.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 08-Jul-2020 04:44:00 ALS Bottle#: 0 Worklist Smp#: 2
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135088-002
 Misc. Info.: 2 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 08-Jul-2020 05:30:39 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1066

First Level Reviewer: zakhrabov

Date: 08-Jul-2020 05:30:46

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 1 Dichloroacetic acid	13.833	13.709	0.124	84621919		NC	
\$ 6 Dichloroacetic acid(Surr)	13.833	13.842	-0.009	84621919	993.7	1035.9	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 08-Jul-2020 05:30:46

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-002440-0135088-002.d

Injection Date: 08-Jul-2020 04:44:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCB

Worklist Smp#: 2

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

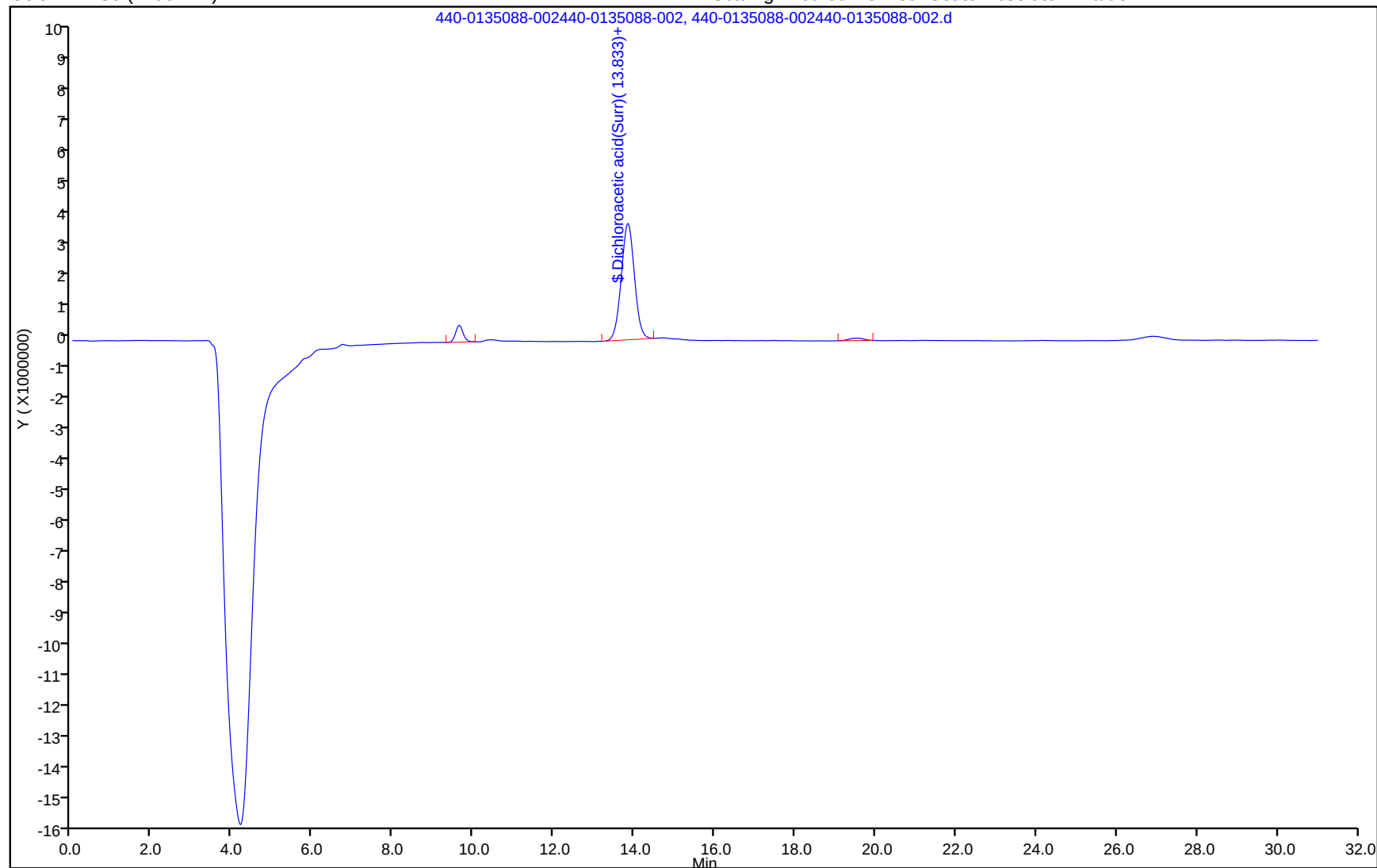
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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Quarterly Report - April-June 2020

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I-5-1456

Report Date: 08-Jul-2020 05:30:46

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-002440-0135088-002.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 08-Jul-2020 04:44:00 ALS Bottle#: 0 Worklist Smp#: 2
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135088-002
 Misc. Info.: 2 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 08-Jul-2020 05:30:39 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1066

First Level Reviewer: zakhrabov

Date: 08-Jul-2020 05:30:46

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1035.9	104.25

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: _____ Lab Sample ID: CCB 440-615753/14
 Matrix: Water Lab File ID: 440-0135088-014440-0135088-014
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 07/08/2020 12:00
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 615753 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14998-27-7	Chlorite	ND		20	4.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	104		90-115

Report Date: 09-Jul-2020 05:17:38

Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-014440-0135088-014.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 08-Jul-2020 12:00:00 ALS Bottle#: 0 Worklist Smp#: 14
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135088-014
 Misc. Info.: 14 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 09-Jul-2020 05:12:55 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1007

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 1 Dichloroacetic acid	13.825	13.709	0.116	84171849		NC	
\$ 6 Dichloroacetic acid(Surr)	13.825	13.842	-0.017	84171849	993.7	1030.4	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WCDCA_00081 Amount Added: 10.00 Units: uL Run Reagent

Report Date: 09-Jul-2020 05:17:38

Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-014440-0135088-014.d

Injection Date: 08-Jul-2020 12:00:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCB

Worklist Smp#: 14

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

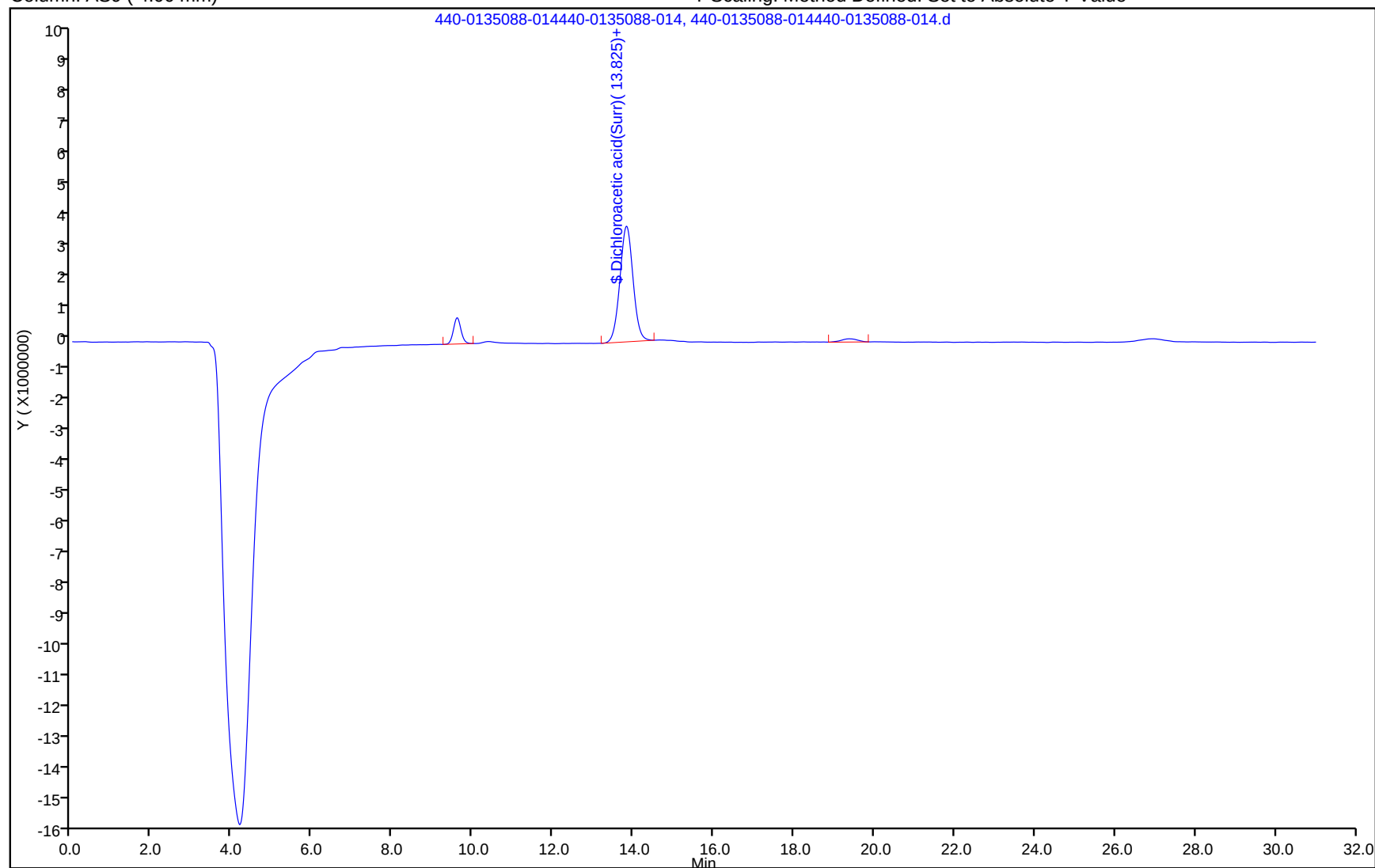
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-1460

Report Date: 09-Jul-2020 05:17:38

Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-014440-0135088-014.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 08-Jul-2020 12:00:00 ALS Bottle#: 0 Worklist Smp#: 14
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135088-014
 Misc. Info.: 14 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 09-Jul-2020 05:12:55 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1007

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1030.4	103.69

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: _____ Lab Sample ID: CCB 440-615753/38
 Matrix: Water Lab File ID: 440-0135088-038440-0135088-038
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 07/09/2020 01:19
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 615753 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14998-27-7	Chlorite	ND		20	4.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	111		90-115

Report Date: 09-Jul-2020 05:17:46

Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-038440-0135088-038.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 09-Jul-2020 01:19:00 ALS Bottle#: 0 Worklist Smp#: 38
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135088-038
 Misc. Info.: 38 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 09-Jul-2020 05:17:46 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1007

First Level Reviewer: zakhrabov

Date: 09-Jul-2020 04:26:34

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 1 Dichloroacetic acid	13.825	13.709	0.116	90188897		NC	M
\$ 6 Dichloroacetic acid(Surr)	13.825	13.842	-0.017	90188897	993.7	1104.0	M

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 09-Jul-2020 05:17:46

Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-038440-0135088-038.d

Injection Date: 09-Jul-2020 01:19:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCB

Worklist Smp#: 38

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

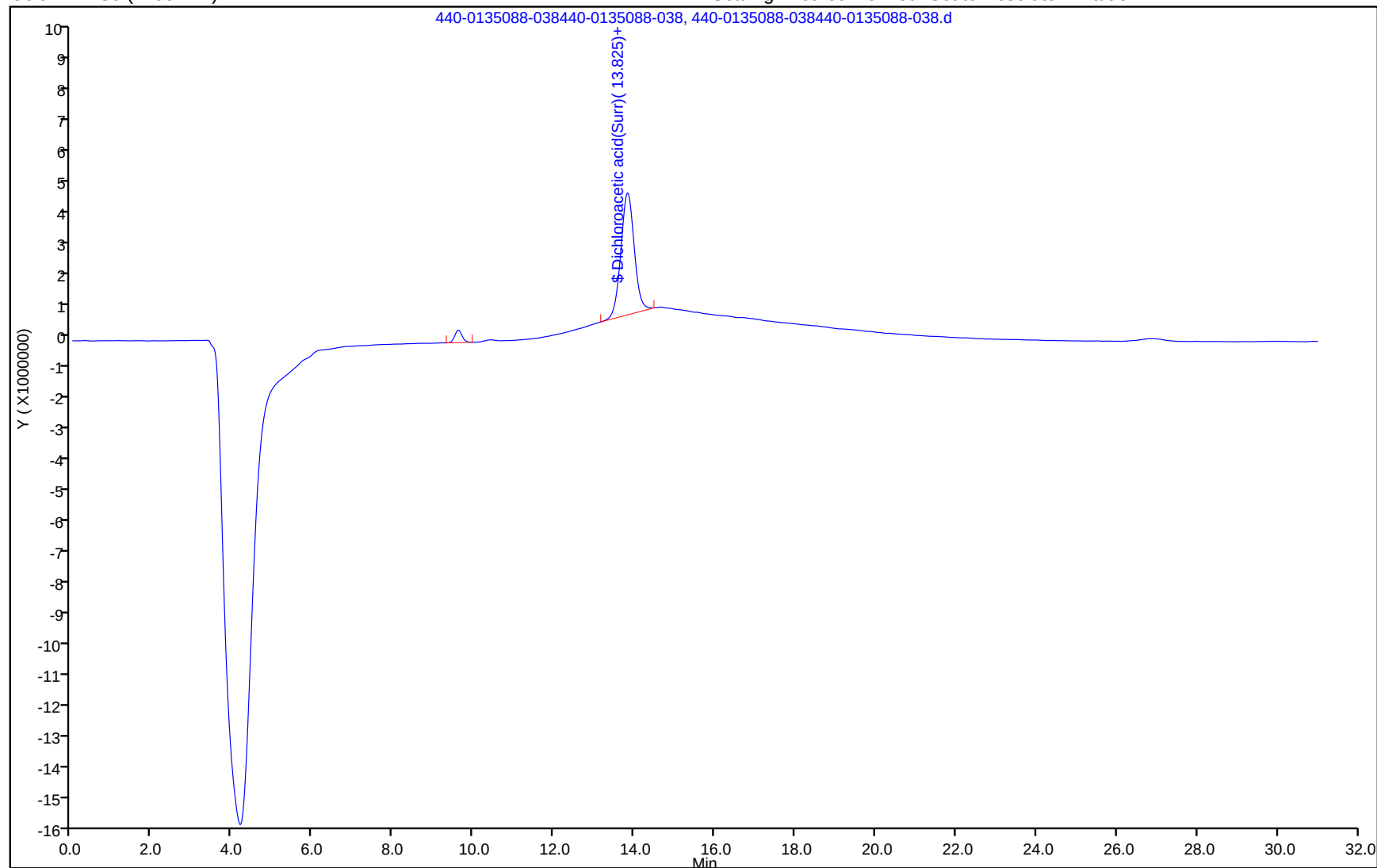
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-1464

Report Date: 09-Jul-2020 05:17:46

Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-038440-0135088-038.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 09-Jul-2020 01:19:00 ALS Bottle#: 0 Worklist Smp#: 38
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135088-038
 Misc. Info.: 38 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 09-Jul-2020 05:17:46 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1007

First Level Reviewer: zakhrabov

Date: 09-Jul-2020 04:26:34

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1104.0	111.10

Report Date: 09-Jul-2020 05:17:46

Chrom Revision: 2.3 30-Jun-2020 12:05:54
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

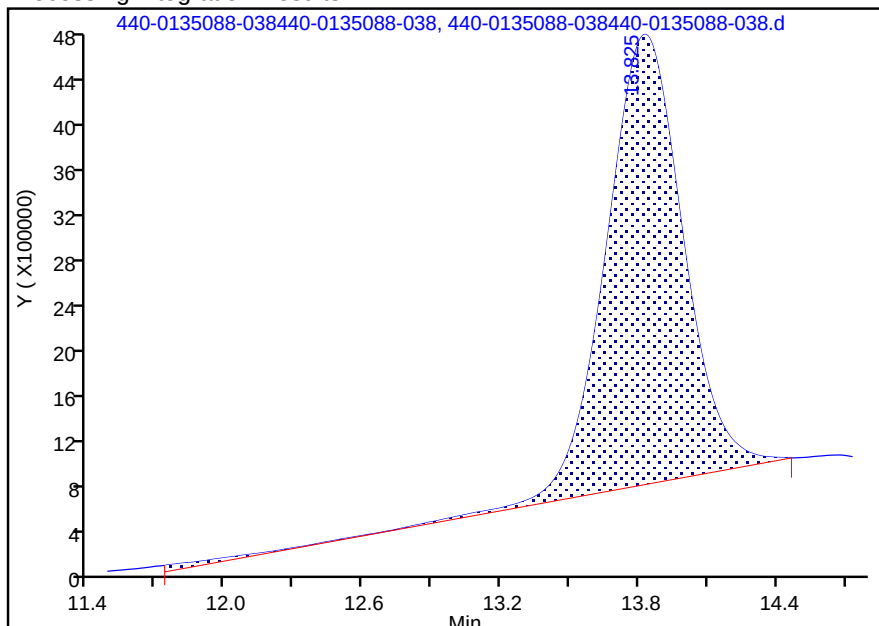
Data File:	\\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-038440-0135088-038.d		
Injection Date:	09-Jul-2020 01:19:00	Instrument ID:	IC-8
Lims ID:	CCB		
Client ID:			
Operator ID:	ALS Bottle#:	0	Worklist Smp#:
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	300.1_C8	Limit Group:	IC-300.1_14D
Column:	AS9 (4.00 mm)	Detector	Ch-A-20110816009

\$ 6 Dichloroacetic acid(Surr), CAS: 79-43-6

Signal: 1

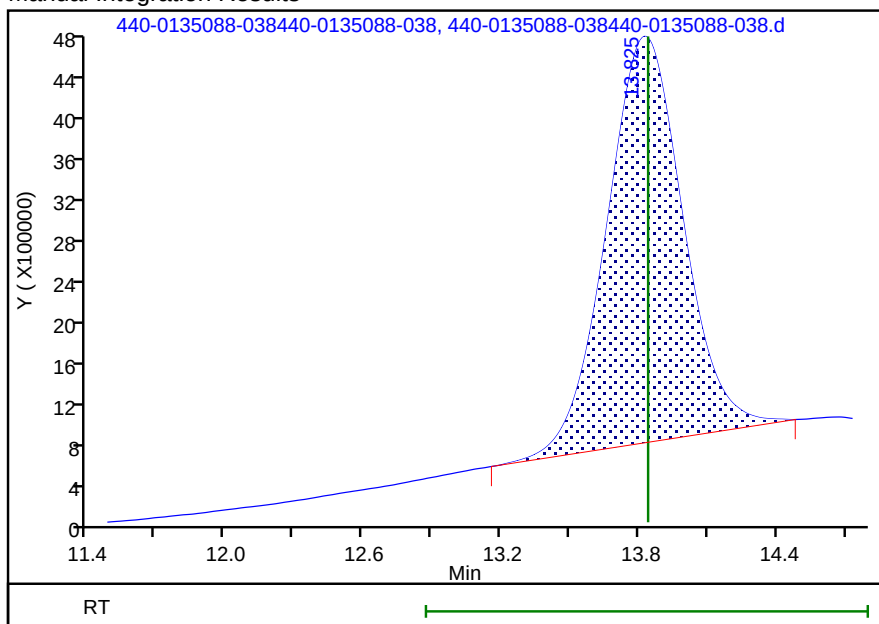
RT: 13.83
Area: 92354914
Amount: 1130.5611
Amount Units: ug/l

Processing Integration Results



RT: 13.83
Area: 90188897
Amount: 1104.0458
Amount Units: ug/l

Manual Integration Results



Reviewer: zakhrabov, 09-Jul-2020 04:26:30

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

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FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: _____ Lab Sample ID: CCB 440-615753/48
 Matrix: Water Lab File ID: 440-0135088-048440-0135088-048
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 07/09/2020 08:01
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 615753 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14998-27-7	Chlorite	ND		20	4.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	110		90-115

Report Date: 09-Jul-2020 10:53:03

Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-048440-0135088-048.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 09-Jul-2020 08:01:00 ALS Bottle#: 0 Worklist Smp#: 48
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135088-048
 Misc. Info.: 22536 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 09-Jul-2020 10:52:44 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1002

First Level Reviewer: nguyent

Date: 09-Jul-2020 10:52:44

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 1 Dichloroacetic acid	13.859	13.709	0.150	88902263		NC	M
\$ 6 Dichloroacetic acid(Surr)	13.859	13.842	0.017	88902263	993.7	1088.3	M

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 09-Jul-2020 10:53:03

Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-048440-0135088-048.d

Injection Date: 09-Jul-2020 08:01:00

Instrument ID: IC-8

Operator ID:

Lims ID: CCB

Worklist Smp#: 48

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

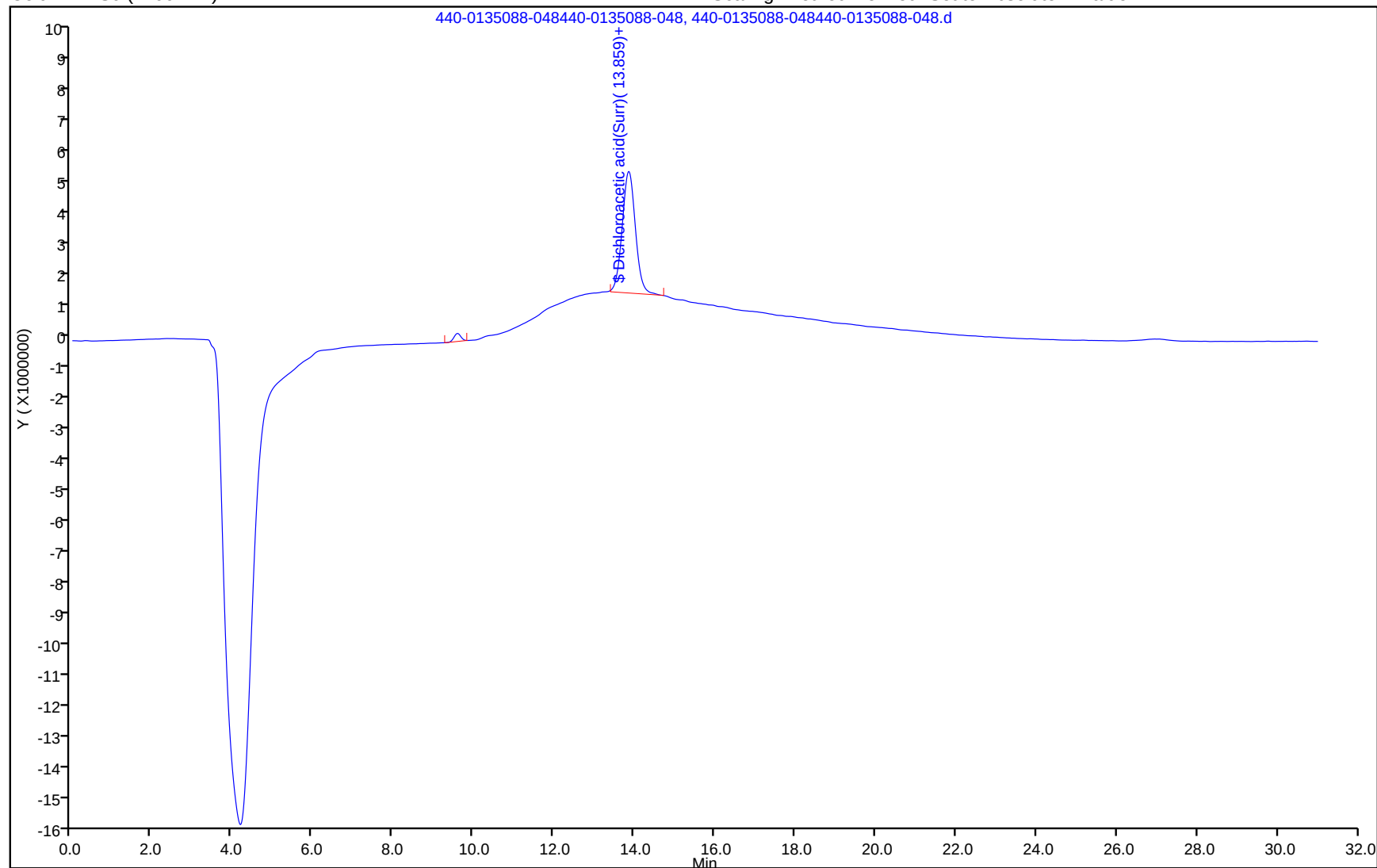
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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Kirtland AFB BFF

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I-5-1469

Report Date: 09-Jul-2020 10:53:03

Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-048440-0135088-048.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 09-Jul-2020 08:01:00 ALS Bottle#: 0 Worklist Smp#: 48
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135088-048
 Misc. Info.: 22536 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 09-Jul-2020 10:52:44 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1002

First Level Reviewer: nguyent

Date: 09-Jul-2020 10:52:44

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1088.3	109.52

Report Date: 09-Jul-2020 10:53:03

Chrom Revision: 2.3 30-Jun-2020 12:05:54
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

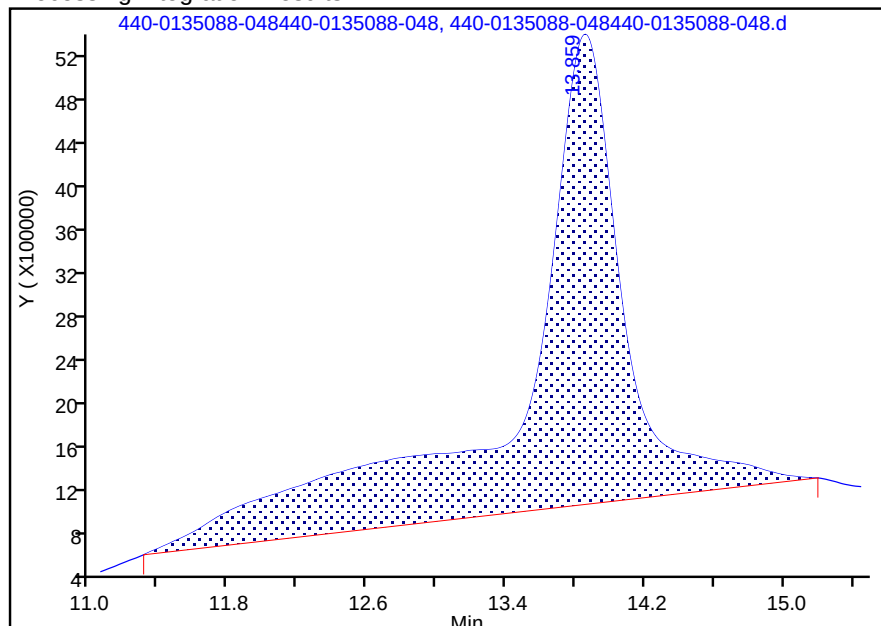
Data File:	\\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-048440-0135088-048.d		
Injection Date:	09-Jul-2020 08:01:00	Instrument ID:	IC-8
Lims ID:	CCB		
Client ID:			
Operator ID:	ALS Bottle#:	0	Worklist Smp#:
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	300.1_C8	Limit Group:	IC-300.1_14D
Column:	AS9 (4.00 mm)	Detector	Ch-A-20110816009

\$ 6 Dichloroacetic acid(Surr), CAS: 79-43-6

Signal: 1

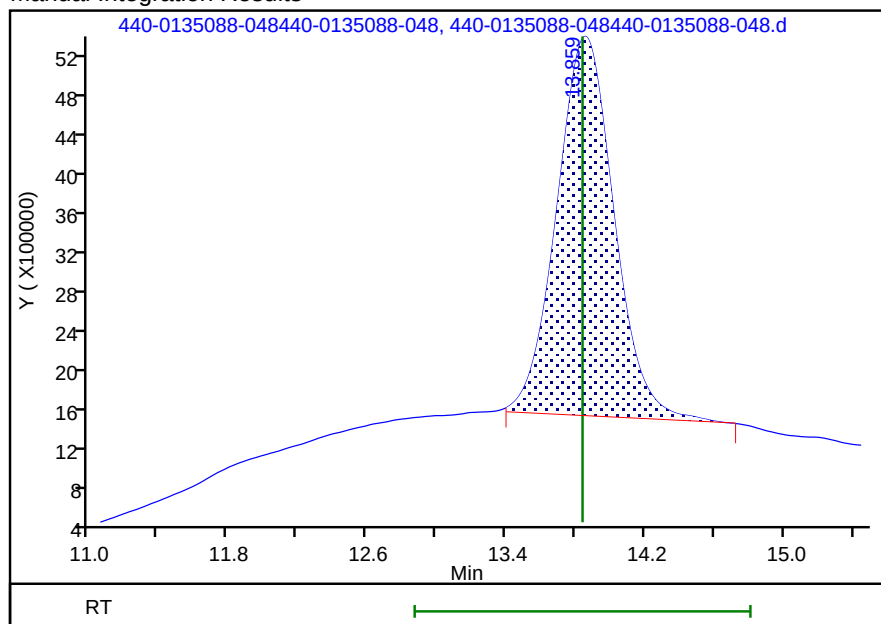
RT: 13.86
Area: 180523377
Amount: 2209.8738
Amount Units: ug/l

Processing Integration Results



RT: 13.86
Area: 88902263
Amount: 1088.2955
Amount Units: ug/l

Manual Integration Results



Reviewer: nguyent, 09-Jul-2020 10:52:36

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

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FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: _____ Lab Sample ID: ICB 440-609717/11
 Matrix: Water Lab File ID: 440-0133563-011.d
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 05/22/2020 13:29
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 609717 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
15541-45-4	Bromate	ND		5.0	1.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	101		90-115

Report Date: 23-May-2020 07:24:19

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-011.d
 Lims ID: ICB
 Client ID:
 Sample Type: ICB
 Inject. Date: 22-May-2020 13:29:00 ALS Bottle#: 0 Worklist Smp#: 11
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0133563-011
 Misc. Info.: 11 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 23-May-2020 08:03:05 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1019

First Level Reviewer: zakhrabov

Date: 23-May-2020 06:49:36

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 1 Dichloroacetic acid	14.383	14.367	0.016	82015432		NC	
\$ 6 Dichloroacetic acid(Surr)	14.383	14.392	-0.009	82015432	993.7	1004.0	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 23-May-2020 07:24:19

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-011.d

Injection Date: 22-May-2020 13:29:00

Instrument ID: IC-8

Operator ID:

Lims ID: ICB

Worklist Smp#: 11

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

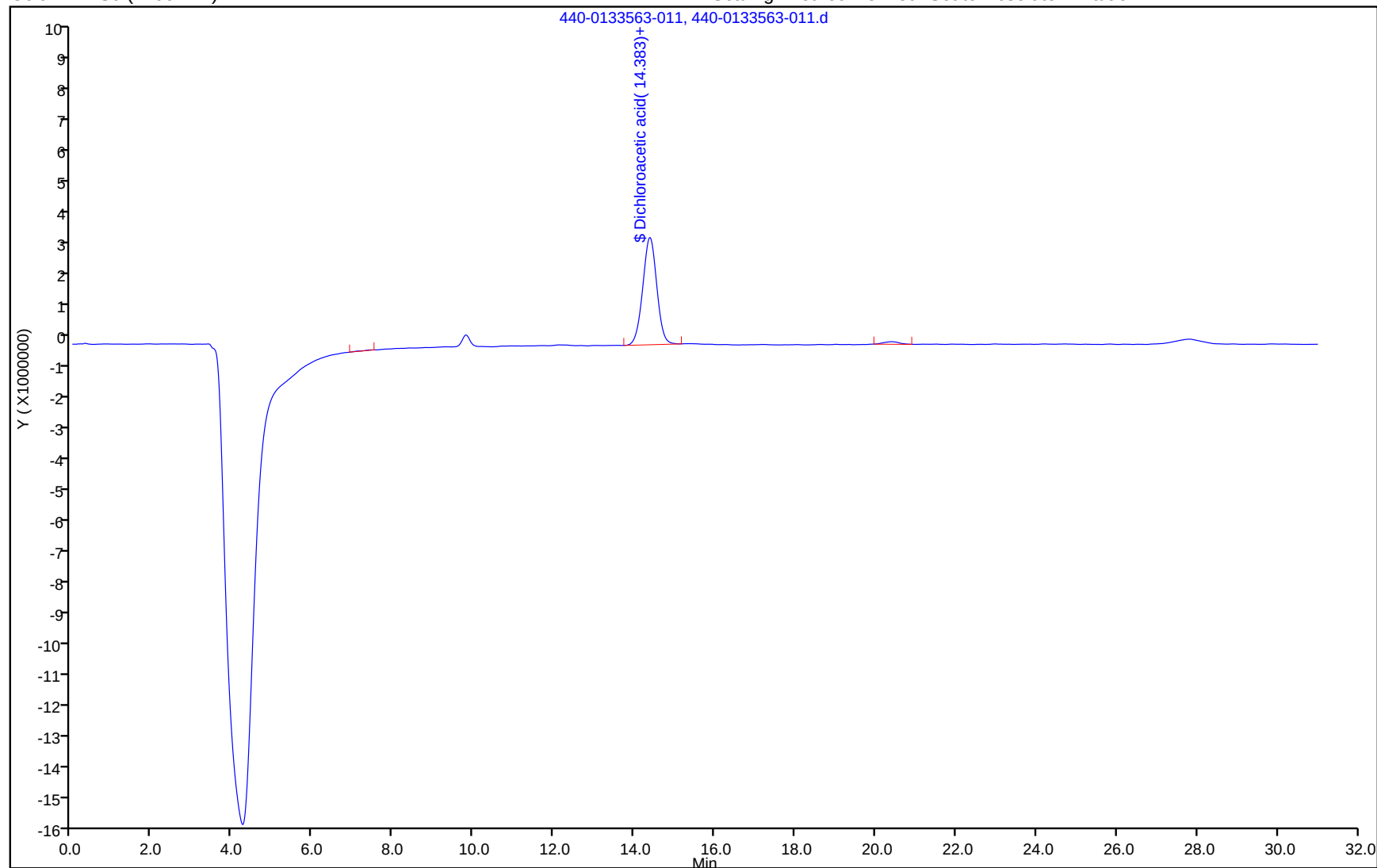
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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I-5-1474

Report Date: 23-May-2020 07:24:19

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-011.d
 Lims ID: ICB
 Client ID:
 Sample Type: ICB
 Inject. Date: 22-May-2020 13:29:00 ALS Bottle#: 0 Worklist Smp#: 11
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0133563-011
 Misc. Info.: 11 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 23-May-2020 08:03:05 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1019

First Level Reviewer: zakhrabov

Date: 23-May-2020 06:49:36

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1004.0	101.03

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: _____ Lab Sample ID: ICB 440-609718/11
 Matrix: Water Lab File ID: 440-0133563-011.d
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 05/22/2020 13:29
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 609718 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14998-27-7	Chlorite	ND		20	4.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	101		90-115

Report Date: 23-May-2020 07:24:19

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-011.d
 Lims ID: ICB
 Client ID:
 Sample Type: ICB
 Inject. Date: 22-May-2020 13:29:00 ALS Bottle#: 0 Worklist Smp#: 11
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0133563-011
 Misc. Info.: 11 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 23-May-2020 08:03:05 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1019

First Level Reviewer: zakhrabov

Date: 23-May-2020 06:49:36

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 1 Dichloroacetic acid	14.383	14.367	0.016	82015432		NC	
\$ 6 Dichloroacetic acid(Surr)	14.383	14.392	-0.009	82015432	993.7	1004.0	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 23-May-2020 07:24:19

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-011.d

Injection Date: 22-May-2020 13:29:00

Instrument ID: IC-8

Operator ID:

Lims ID: ICB

Worklist Smp#: 11

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

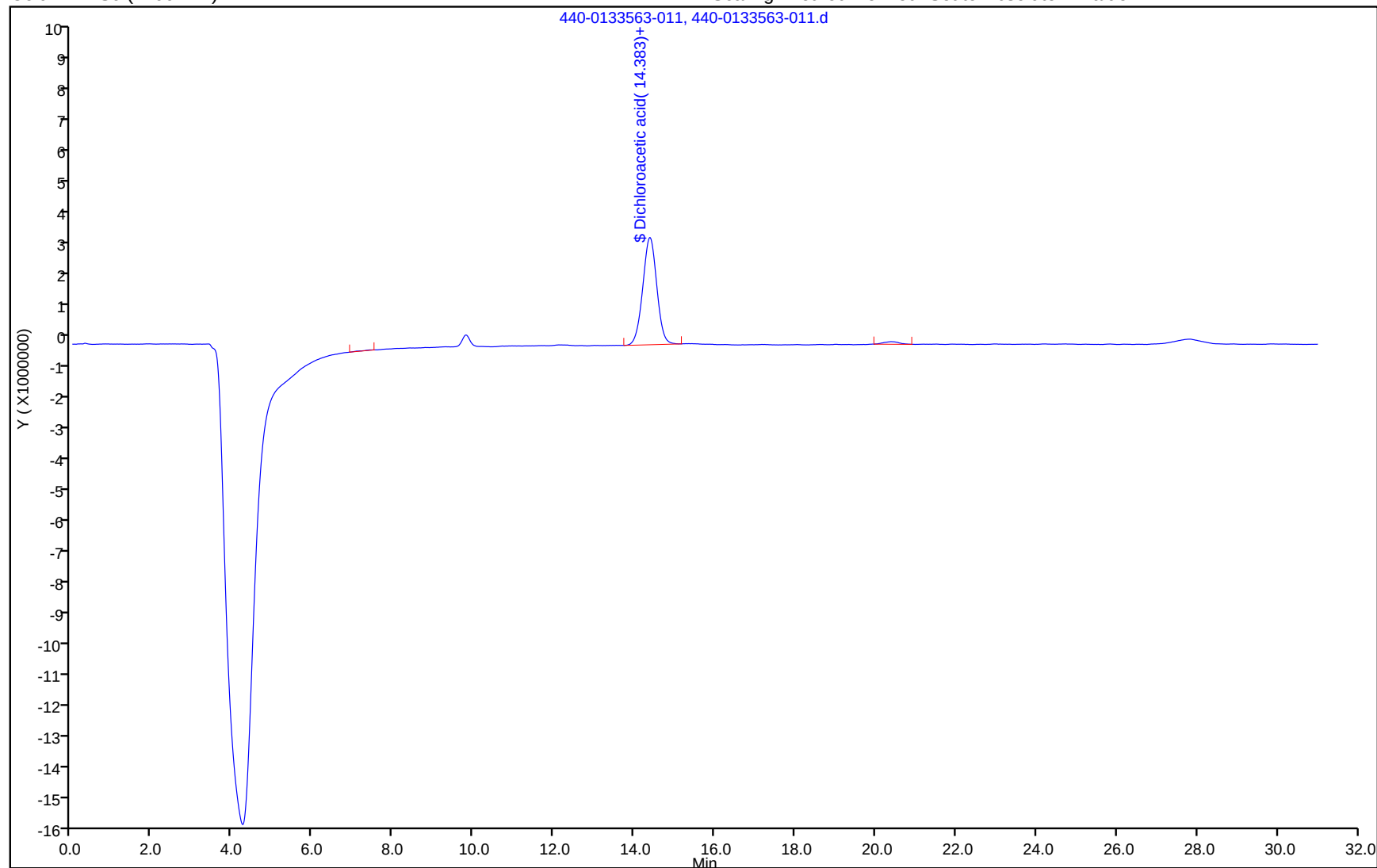
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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I-5-1478

Report Date: 23-May-2020 07:24:19

Chrom Revision: 2.3 05-May-2020 17:48:18

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-011.d
 Lims ID: ICB
 Client ID:
 Sample Type: ICB
 Inject. Date: 22-May-2020 13:29:00 ALS Bottle#: 0 Worklist Smp#: 11
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0133563-011
 Misc. Info.: 11 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 23-May-2020 08:03:05 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1019

First Level Reviewer: zakhrabov

Date: 23-May-2020 06:49:36

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1004.0	101.03

Report Date: 23-May-2020 07:24:19

Chrom Revision: 2.3 05-May-2020 17:48:18
User Disabled Compound Report

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-011.d

Injection Date: 22-May-2020 13:29:00

Instrument ID: IC-8

Lims ID: ICB

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#: 11

Injection Vol: 1.0 ul

Dil. Factor:

1.0000

Method: 300.1_C8

Limit Group:

IC-300.1_14D

Column: AS9 (4.00 mm)

Detector

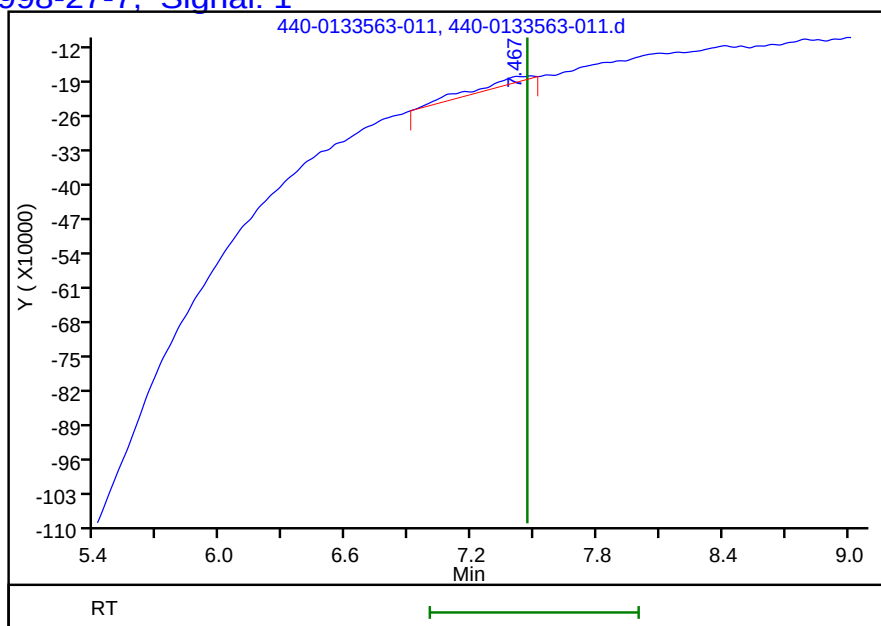
Ch-A-20110816009

5 Chlorite, CAS: 14998-27-7, Signal: 1

RT: 7.47

Response: 276064

Amount: 0



Reviewer: zakhrabov, 23-May-2020 06:49:36

Audit Action: Manually Integrated

Audit Reason:

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: _____ Lab Sample ID: LCS 440-615429/4
 Matrix: Water Lab File ID: 440-0135020-004440-0135020-004
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 07/06/2020 06:53
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 615429 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
15541-45-4	Bromate	25.0		5.0	1.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	106		90-115

Report Date: 06-Jul-2020 07:35:39

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-004440-0135020-004.d
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 06-Jul-2020 06:53:00 ALS Bottle#: 0 Worklist Smp#: 4
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135020-004
 Misc. Info.: 4 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 06-Jul-2020 07:35:36 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1040

First Level Reviewer: zakhrabov

Date: 06-Jul-2020 07:35:39

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.417	7.384	0.033	15289666	NC	NC	M
3 Bromate	8.517	8.450	0.067	2147549	25.0	25.0	M
\$ 6 Dichloroacetic acid(Surr)	13.925	13.842	0.083	85982641	993.7	1052.6	
4 Bromide	16.525	16.217	0.308	38315722	250.0	248.4	
2 Chlorate	17.892	17.592	0.300	15112529	100.0	106.2	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

WC3001LCS_00090

Amount Added: 125.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 06-Jul-2020 07:35:39

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-004440-0135020-004.d

Injection Date: 06-Jul-2020 06:53:00

Instrument ID: IC-8

Operator ID:

Lims ID: LCS

Worklist Smp#: 4

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

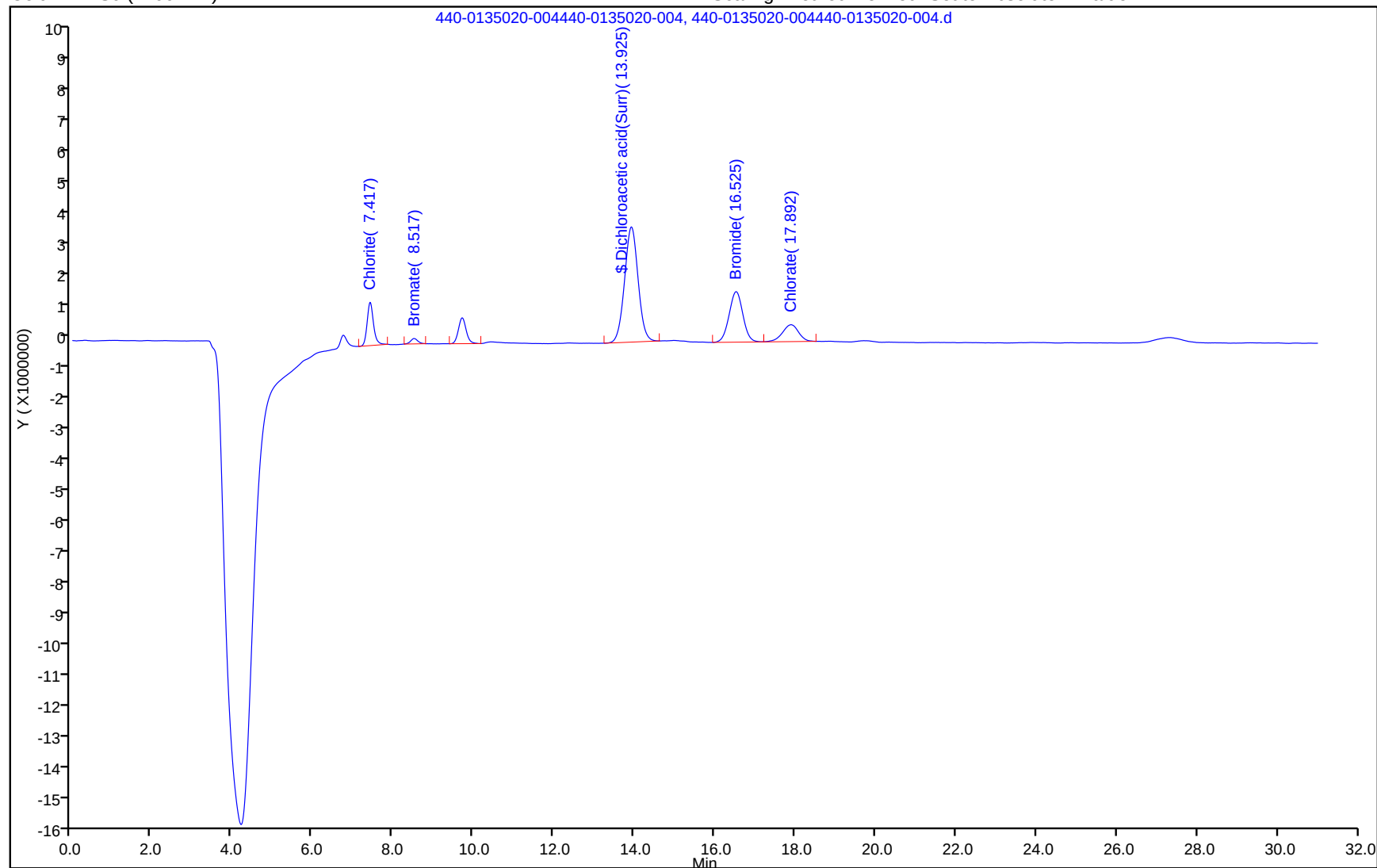
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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I-5-1483

Report Date: 06-Jul-2020 07:35:39

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-004440-0135020-004.d
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 06-Jul-2020 06:53:00 ALS Bottle#: 0 Worklist Smp#: 4
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135020-004
 Misc. Info.: 4 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 06-Jul-2020 07:35:36 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1040

First Level Reviewer: zakhrabov

Date: 06-Jul-2020 07:35:39

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1052.6	105.92

Report Date: 06-Jul-2020 07:35:39

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

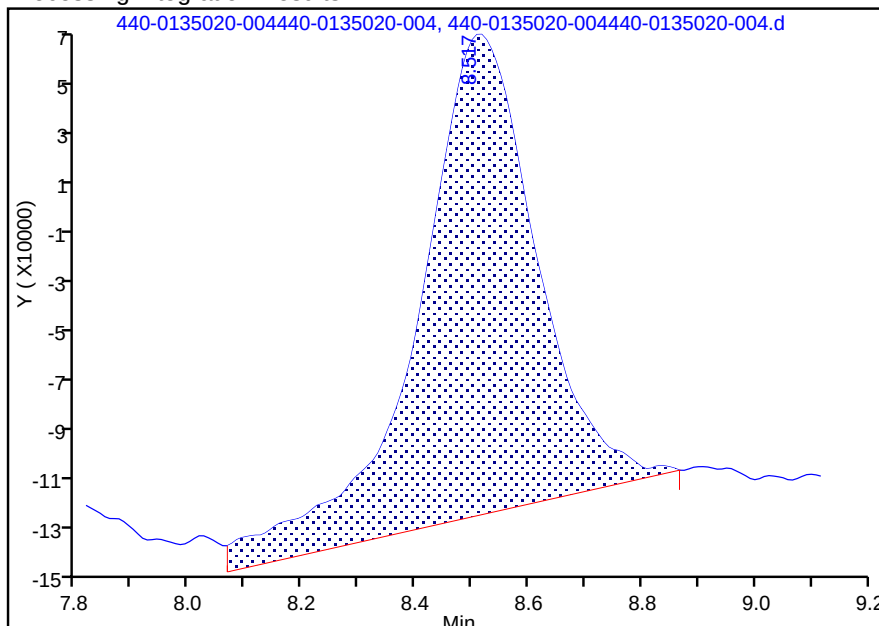
Data File:	\\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-004440-0135020-004.d		
Injection Date:	06-Jul-2020 06:53:00	Instrument ID:	IC-8
Lims ID:	LCS		
Client ID:			
Operator ID:		ALS Bottle#:	0
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	300.1_C8	Limit Group:	IC-300.1_28D
Column:	AS9 (4.00 mm)	Detector:	Ch-A-20110816009
		Worklist Smp#:	4

3 Bromate, CAS: 15541-45-4

Signal: 1

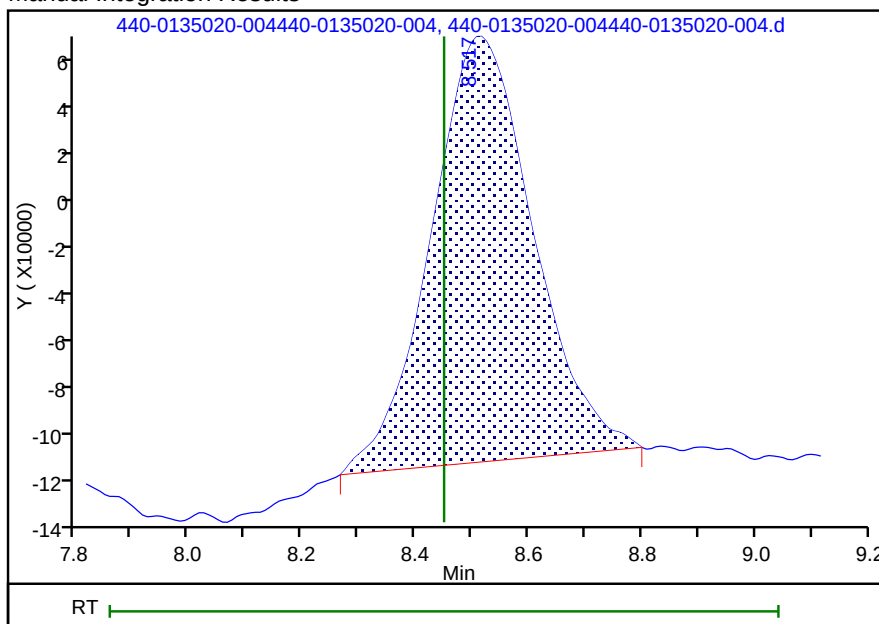
RT: 8.52
Area: 2709839
Amount: 31.417106
Amount Units: ug/l

Processing Integration Results



RT: 8.52
Area: 2147549
Amount: 24.994212
Amount Units: ug/l

Manual Integration Results



Reviewer: zakhrabov, 06-Jul-2020 07:35:30

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

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FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: _____ Lab Sample ID: LCS 440-615430/4
 Matrix: Water Lab File ID: 440-0135020-004440-0135020-004
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 07/06/2020 06:53
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 615430 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14998-27-7	Chlorite	96.1		20	4.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	106		90-115

Report Date: 06-Jul-2020 07:35:39

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-004440-0135020-004.d
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 06-Jul-2020 06:53:00 ALS Bottle#: 0 Worklist Smp#: 4
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135020-004
 Misc. Info.: 4 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 06-Jul-2020 07:35:36 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1040

First Level Reviewer: zakhrabov

Date: 06-Jul-2020 07:35:39

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.417	7.384	0.033	15289666	100.0	96.1	M
3 Bromate	8.517	8.450	0.067	2147549	NC	NC	M
\$ 6 Dichloroacetic acid(Surr)	13.925	13.842	0.083	85982641	993.7	1052.6	
4 Bromide	16.525	16.217	0.308	38315722	NC	NC	
2 Chlorate	17.892	17.592	0.300	15112529	NC	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

WC3001LCS_00090

Amount Added: 125.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 06-Jul-2020 07:35:39

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-004440-0135020-004.d

Injection Date: 06-Jul-2020 06:53:00

Instrument ID: IC-8

Operator ID:

Lims ID: LCS

Worklist Smp#: 4

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

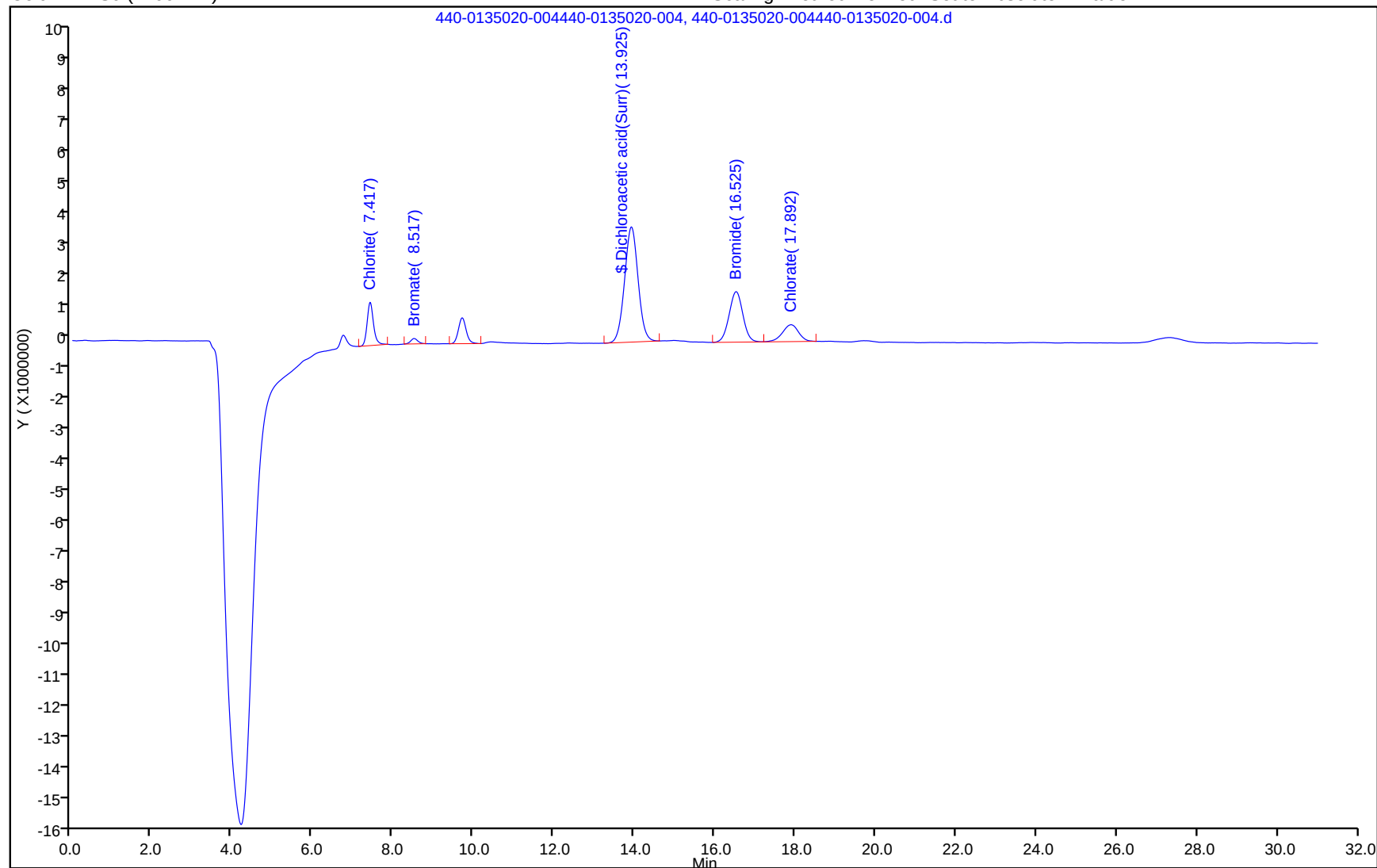
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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I-5-1488

Report Date: 06-Jul-2020 07:35:39

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-004440-0135020-004.d
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 06-Jul-2020 06:53:00 ALS Bottle#: 0 Worklist Smp#: 4
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135020-004
 Misc. Info.: 4 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 06-Jul-2020 07:35:36 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1040

First Level Reviewer: zakhrabov

Date: 06-Jul-2020 07:35:39

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1052.6	105.92

Report Date: 06-Jul-2020 07:35:39

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

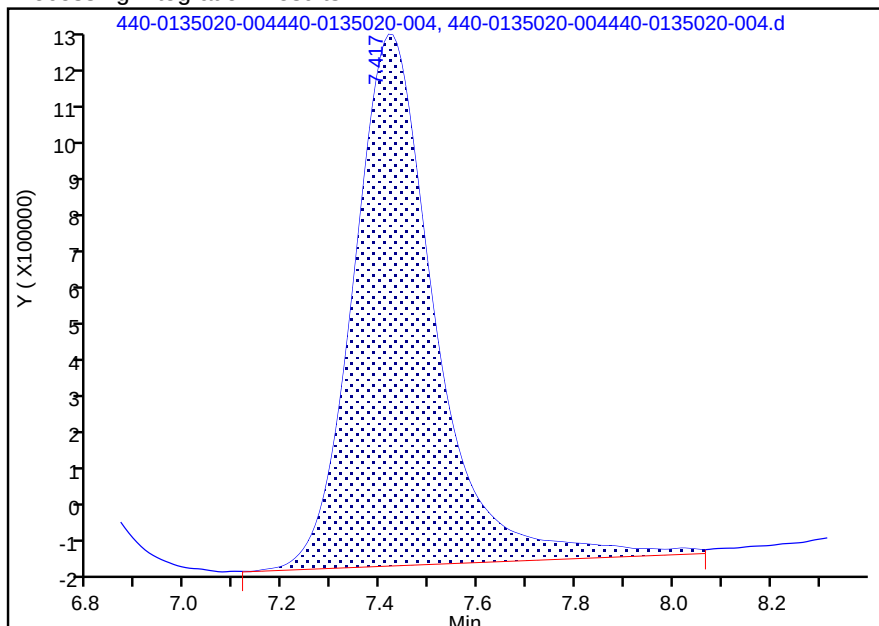
Data File:	\\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-004440-0135020-004.d		
Injection Date:	06-Jul-2020 06:53:00	Instrument ID:	IC-8
Lims ID:	LCS		
Client ID:			
Operator ID:		ALS Bottle#:	0
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	300.1_C8	Limit Group:	IC-300.1_14D
Column:	AS9 (4.00 mm)	Detector:	Ch-A-20110816009
		Worklist Smp#:	4

5 Chlorite, CAS: 14998-27-7

Signal: 1

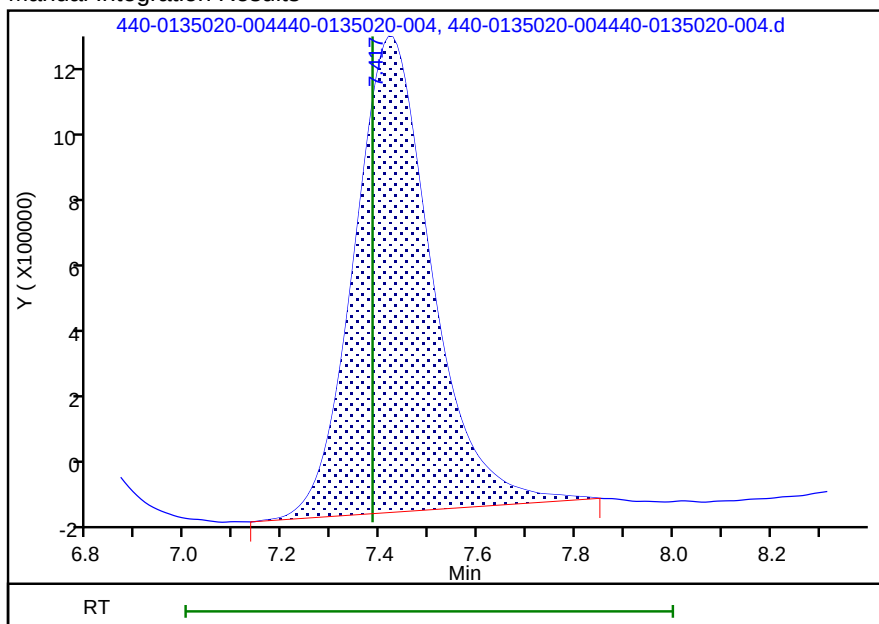
RT: 7.42
Area: 16235932
Amount: 102.0054
Amount Units: ug/l

Processing Integration Results



RT: 7.42
Area: 15289666
Amount: 96.127087
Amount Units: ug/l

Manual Integration Results



Reviewer: zakhrabov, 06-Jul-2020 07:35:23

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

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FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: _____ Lab Sample ID: LCS 440-615752/4
 Matrix: Water Lab File ID: 440-0135088-004440-0135088-004
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 07/08/2020 05:57
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 615752 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
15541-45-4	Bromate	26.4		5.0	1.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	106		90-115

Report Date: 08-Jul-2020 06:35:05

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-004440-0135088-004.d
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 08-Jul-2020 05:57:00 ALS Bottle#: 0 Worklist Smp#: 4
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135088-004
 Misc. Info.: 4 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 08-Jul-2020 07:34:46 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1066

First Level Reviewer: zakhrabov

Date: 08-Jul-2020 06:35:04

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.400	7.384	0.016	14723603	NC	NC	
3 Bromate	8.475	8.450	0.025	2274850	25.0	26.4	
\$ 6 Dichloroacetic acid(Surr)	13.842	13.842	0.000	86198193	993.7	1055.2	
4 Bromide	16.350	16.217	0.133	37870384	250.0	245.6	
2 Chlorate	17.709	17.592	0.117	14308989	100.0	100.8	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WC3001LCS_00090

Amount Added: 125.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 08-Jul-2020 06:35:05

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-004440-0135088-004.d

Injection Date: 08-Jul-2020 05:57:00

Instrument ID: IC-8

Operator ID:

Lims ID: LCS

Worklist Smp#: 4

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

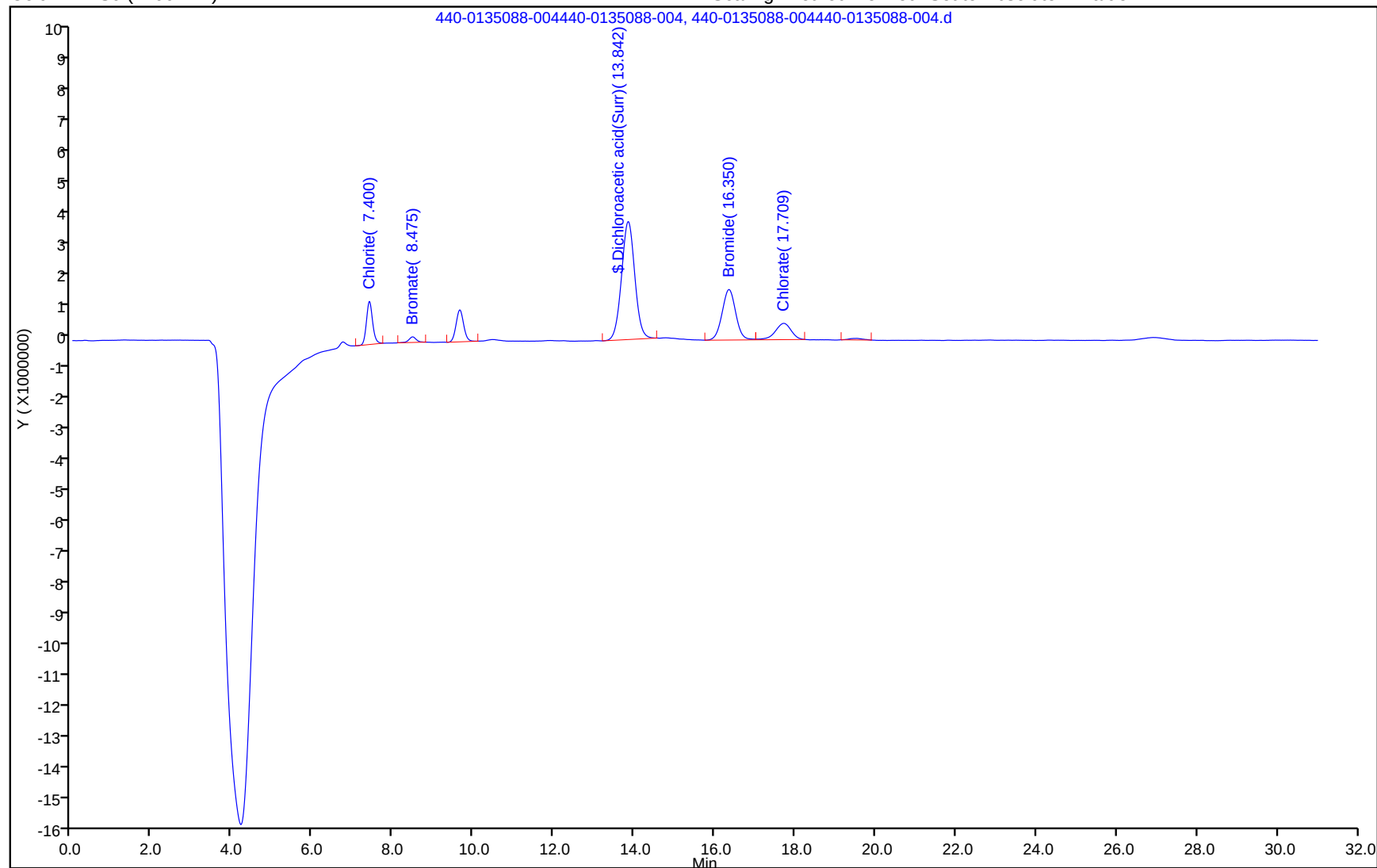
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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I-5-1493

Report Date: 08-Jul-2020 06:35:05

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-004440-0135088-004.d
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 08-Jul-2020 05:57:00 ALS Bottle#: 0 Worklist Smp#: 4
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135088-004
 Misc. Info.: 4 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 08-Jul-2020 07:34:46 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1066

First Level Reviewer: zakhrabov

Date: 08-Jul-2020 06:35:04

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1055.2	106.19

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: _____ Lab Sample ID: LCS 440-615753/4
 Matrix: Water Lab File ID: 440-0135088-004440-0135088-004
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 07/08/2020 05:57
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 615753 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14998-27-7	Chlorite	92.6		20	4.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	106		90-115

Report Date: 08-Jul-2020 06:35:05

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-004440-0135088-004.d
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 08-Jul-2020 05:57:00 ALS Bottle#: 0 Worklist Smp#: 4
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135088-004
 Misc. Info.: 4 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 08-Jul-2020 07:34:46 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1066

First Level Reviewer: zakhrabov

Date: 08-Jul-2020 06:35:04

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.400	7.384	0.016	14723603	100.0	92.6	
3 Bromate	8.475	8.450	0.025	2274850	NC	NC	
\$ 6 Dichloroacetic acid(Surr)	13.842	13.842	0.000	86198193	993.7	1055.2	
4 Bromide	16.350	16.217	0.133	37870384	NC	NC	
2 Chlorate	17.709	17.592	0.117	14308989	NC	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WC3001LCS_00090

Amount Added: 125.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 08-Jul-2020 06:35:05

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-004440-0135088-004.d

Injection Date: 08-Jul-2020 05:57:00

Instrument ID: IC-8

Operator ID:

Lims ID: LCS

Worklist Smp#: 4

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

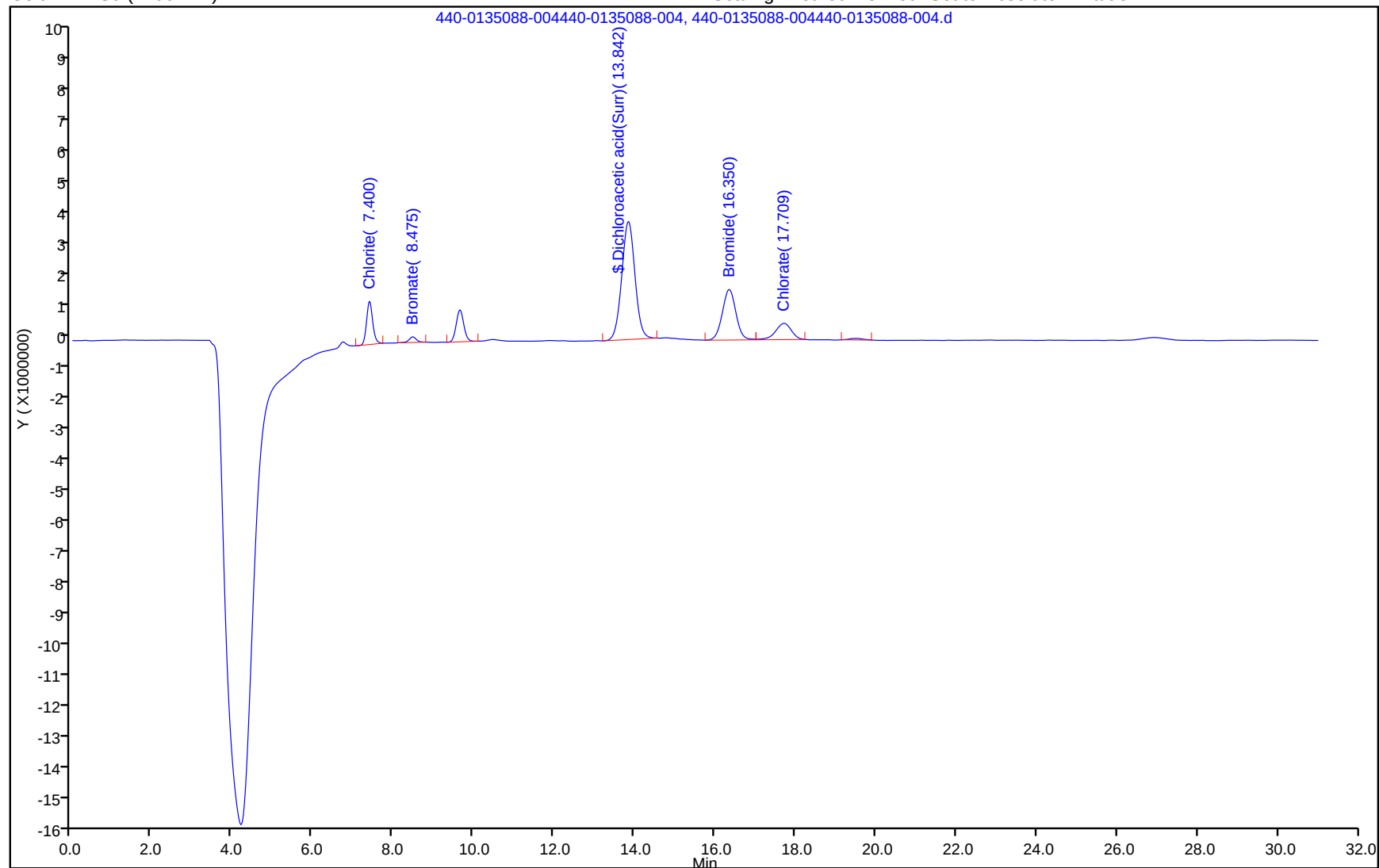
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-1497

Report Date: 08-Jul-2020 06:35:05

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-004440-0135088-004.d
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 08-Jul-2020 05:57:00 ALS Bottle#: 0 Worklist Smp#: 4
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135088-004
 Misc. Info.: 4 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 08-Jul-2020 07:34:46 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1066

First Level Reviewer: zakhrabov

Date: 08-Jul-2020 06:35:04

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1055.2	106.19

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: _____ Lab Sample ID: MRL 440-615429/3
 Matrix: Water Lab File ID: 440-0135020-003440-0135020-003
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 07/06/2020 06:14
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 615429 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
15541-45-4	Bromate	4.79	J	5.0	1.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	105		90-115

Report Date: 06-Jul-2020 07:12:11

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-003440-0135020-003.d
 Lims ID: MRL
 Client ID:
 Sample Type: MRL
 Inject. Date: 06-Jul-2020 06:14:00 ALS Bottle#: 0 Worklist Smp#: 3
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135020-003
 Misc. Info.: 3 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 06-Jul-2020 07:12:10 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1040

First Level Reviewer: zakhrabov

Date: 06-Jul-2020 06:53:07

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.417	7.384	0.033	2733235	NC	NC	M
3 Bromate	8.525	8.450	0.075	379115	5.00	4.79	M
\$ 6 Dichloroacetic acid(Surr)	13.909	13.842	0.067	85155867	993.7	1042.4	
4 Bromide	16.584	16.217	0.367	7360565	50.0	52.3	
2 Chlorate	17.909	17.592	0.317	2613786	20.0	21.3	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

WC3001LCS_00090

Amount Added: 25.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 06-Jul-2020 07:12:11

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-003440-0135020-003.d

Injection Date: 06-Jul-2020 06:14:00

Instrument ID: IC-8

Operator ID:

Lims ID: MRL

Worklist Smp#: 3

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

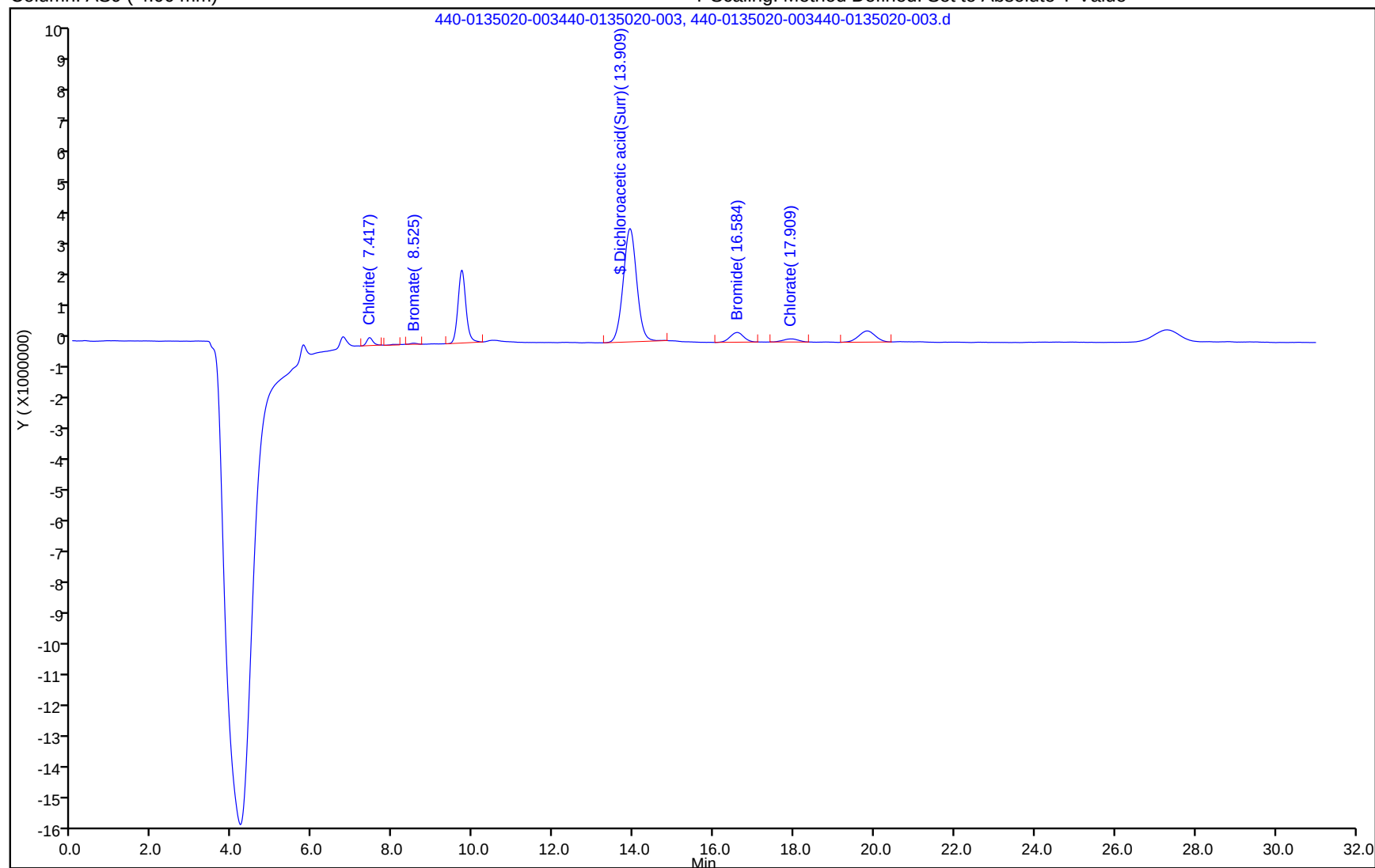
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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Kirtland AFB BFF

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I-5-1501

Report Date: 06-Jul-2020 07:12:11

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-003440-0135020-003.d
 Lims ID: MRL
 Client ID:
 Sample Type: MRL
 Inject. Date: 06-Jul-2020 06:14:00 ALS Bottle#: 0 Worklist Smp#: 3
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135020-003
 Misc. Info.: 3 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 06-Jul-2020 07:12:10 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1040

First Level Reviewer: zakhrabov

Date: 06-Jul-2020 06:53:07

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1042.4	104.90

Report Date: 06-Jul-2020 07:12:11

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

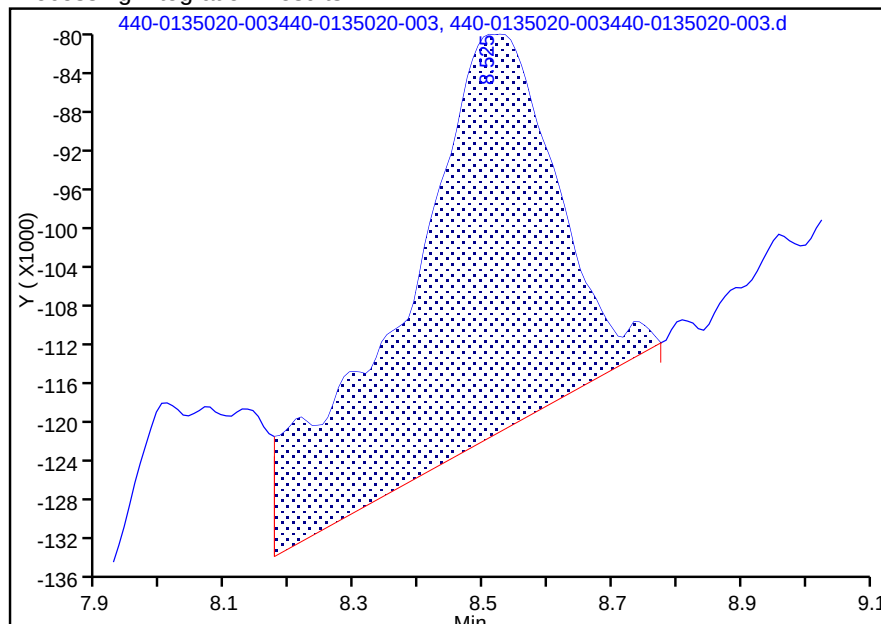
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Injection Date:	06-Jul-2020 06:14:00	Instrument ID:	IC-8
Lims ID:	MRL		
Client ID:			
Operator ID:		ALS Bottle#:	0
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	300.1_C8	Limit Group:	IC-300.1_28D
Column:	AS9 (4.00 mm)	Detector:	Ch-A-20110816009
		Worklist Smp#:	3

3 Bromate, CAS: 15541-45-4

Signal: 1

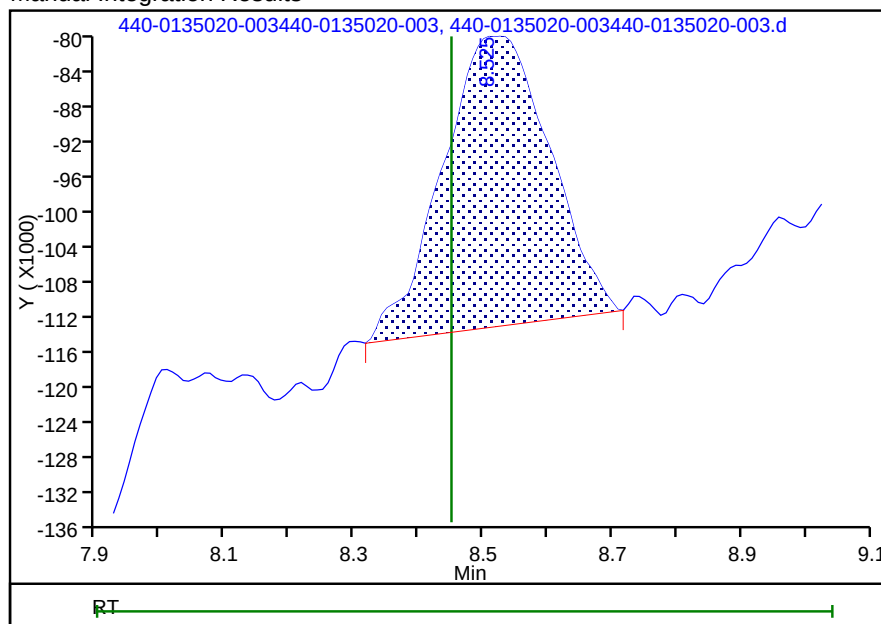
RT: 8.53
Area: 688622
Amount: 8.329267
Amount Units: ug/l

Processing Integration Results



RT: 8.53
Area: 379115
Amount: 4.793848
Amount Units: ug/l

Manual Integration Results



Reviewer: zakhrabov, 06-Jul-2020 06:52:39

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

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FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: _____ Lab Sample ID: MRL 440-615430/3
 Matrix: Water Lab File ID: 440-0135020-003440-0135020-003
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 07/06/2020 06:14
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 615430 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14998-27-7	Chlorite	18.1	J	20	4.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	105		90-115

Report Date: 06-Jul-2020 07:12:11

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-003440-0135020-003.d
 Lims ID: MRL
 Client ID:
 Sample Type: MRL
 Inject. Date: 06-Jul-2020 06:14:00 ALS Bottle#: 0 Worklist Smp#: 3
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135020-003
 Misc. Info.: 3 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 06-Jul-2020 07:12:10 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1040

First Level Reviewer: zakhrabov

Date: 06-Jul-2020 06:53:07

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.417	7.384	0.033	2733235	20.0	18.1	M
3 Bromate	8.525	8.450	0.075	379115	NC	NC	M
\$ 6 Dichloroacetic acid(Surr)	13.909	13.842	0.067	85155867	993.7	1042.4	
4 Bromide	16.584	16.217	0.367	7360565	NC	NC	
2 Chlorate	17.909	17.592	0.317	2613786	NC	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

WC3001LCS_00090

Amount Added: 25.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 06-Jul-2020 07:12:11

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-003440-0135020-003.d

Injection Date: 06-Jul-2020 06:14:00

Instrument ID: IC-8

Operator ID:

Lims ID: MRL

Worklist Smp#: 3

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

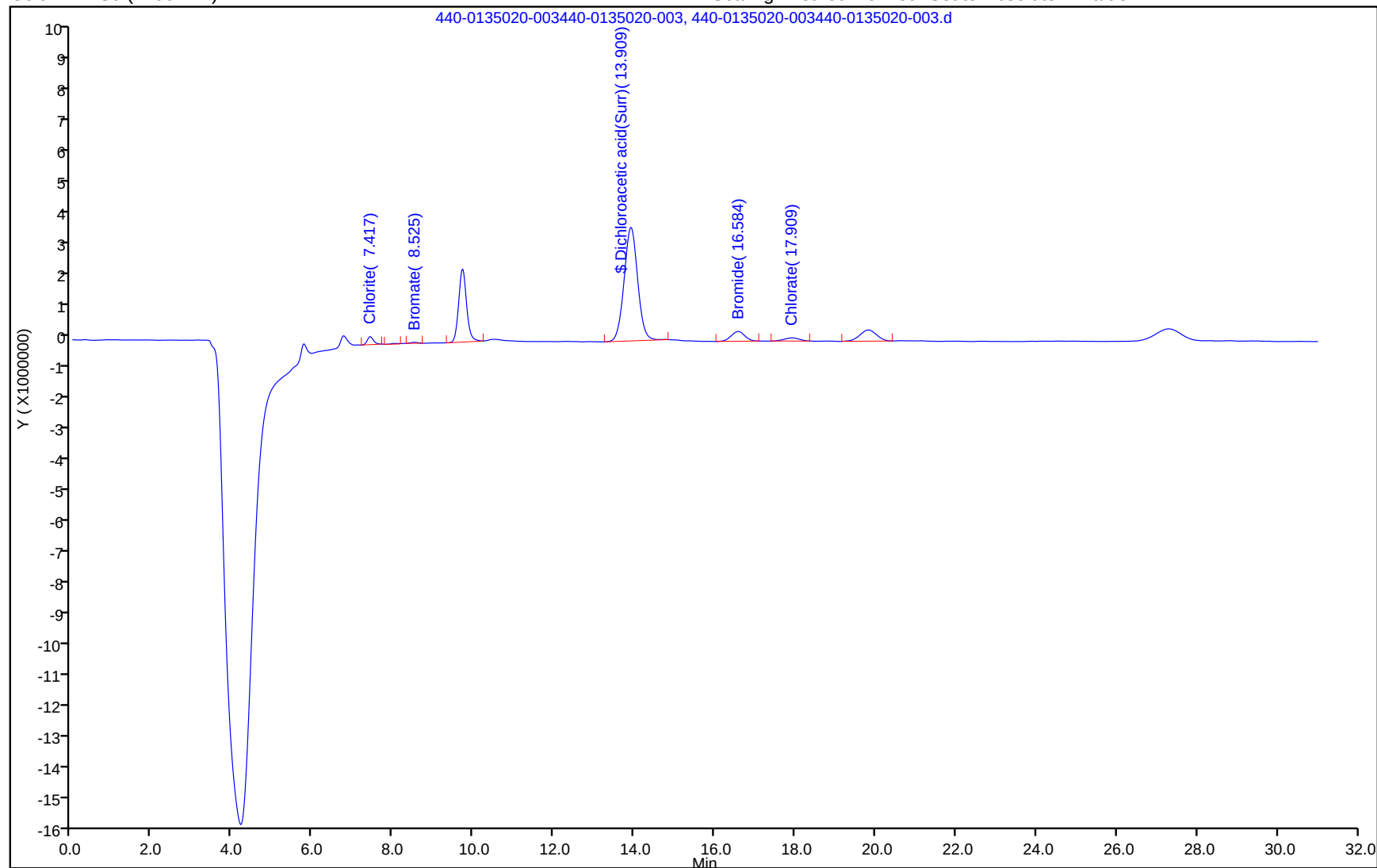
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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I-5-1506

Report Date: 06-Jul-2020 07:12:11

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-003440-0135020-003.d
 Lims ID: MRL
 Client ID:
 Sample Type: MRL
 Inject. Date: 06-Jul-2020 06:14:00 ALS Bottle#: 0 Worklist Smp#: 3
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135020-003
 Misc. Info.: 3 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 06-Jul-2020 07:12:10 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1040

First Level Reviewer: zakhrabov

Date: 06-Jul-2020 06:53:07

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1042.4	104.90

Report Date: 06-Jul-2020 07:12:11

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

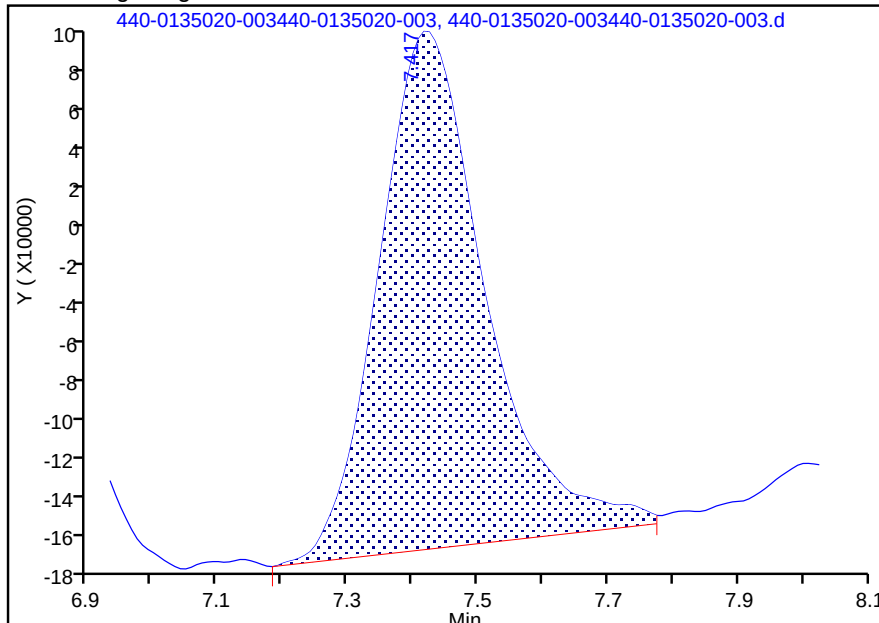
Data File:	\\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-003440-0135020-003.d		
Injection Date:	06-Jul-2020 06:14:00	Instrument ID:	IC-8
Lims ID:	MRL		
Client ID:			
Operator ID:		ALS Bottle#:	0
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	300.1_C8	Limit Group:	IC-300.1_14D
Column:	AS9 (4.00 mm)	Detector:	Ch-A-20110816009
		Worklist Smp#:	3

5 Chlorite, CAS: 14998-27-7

Signal: 1

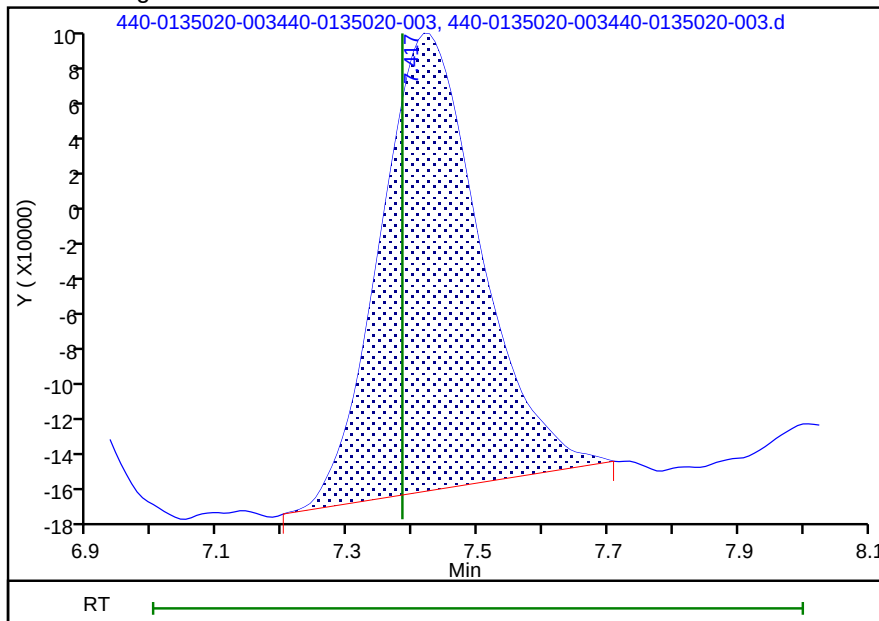
RT: 7.42
Area: 2969248
Amount: 0
Amount Units: ug/l

Processing Integration Results



RT: 7.42
Area: 2733235
Amount: 18.124687
Amount Units: ug/l

Manual Integration Results



Reviewer: zakhrabov, 06-Jul-2020 06:52:45

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

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FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: _____ Lab Sample ID: MRL 440-615752/3
 Matrix: Water Lab File ID: 440-0135088-003440-0135088-003
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 07/08/2020 05:20
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 615752 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
15541-45-4	Bromate	5.39		5.0	1.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	106		90-115

Report Date: 08-Jul-2020 06:00:43

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-003440-0135088-003.d
 Lims ID: MRL
 Client ID:
 Sample Type: MRL
 Inject. Date: 08-Jul-2020 05:20:00 ALS Bottle#: 0 Worklist Smp#: 3
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135088-003
 Misc. Info.: 3 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 08-Jul-2020 06:00:29 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1066

First Level Reviewer: zakhrabov

Date: 08-Jul-2020 06:00:43

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.392	7.384	0.008	2925359	NC	NC	
3 Bromate	8.492	8.450	0.042	431252	5.00	5.39	M
\$ 6 Dichloroacetic acid(Surr)	13.834	13.842	-0.008	86316627	993.7	1056.6	
4 Bromide	16.325	16.217	0.108	6988301	50.0	50.0	
2 Chlorate	17.709	17.592	0.117	2480992	20.0	20.4	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

WC3001LCS_00090

Amount Added: 25.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 08-Jul-2020 06:00:43

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-003440-0135088-003.d

Injection Date: 08-Jul-2020 05:20:00

Instrument ID: IC-8

Operator ID:

Lims ID: MRL

Worklist Smp#: 3

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

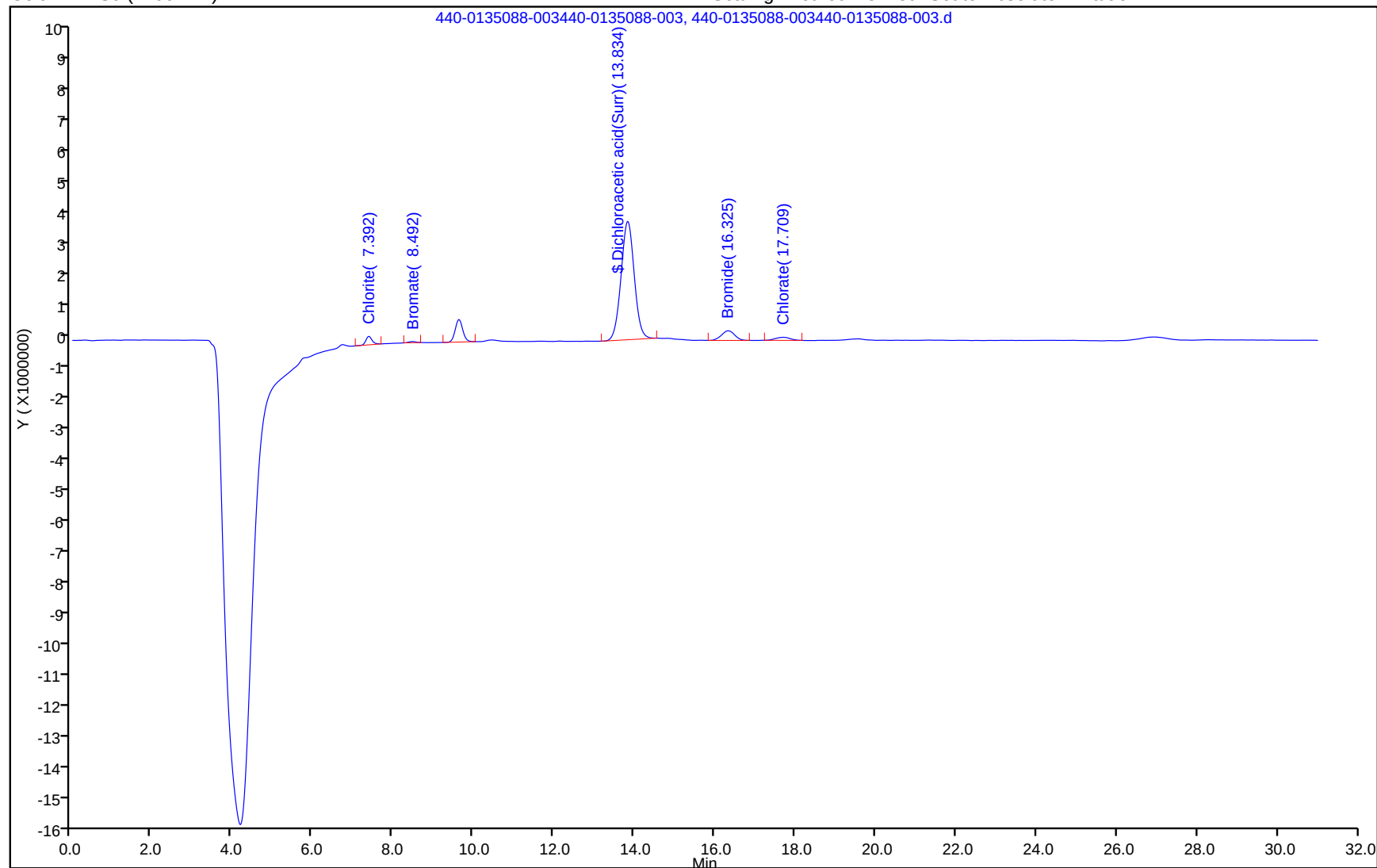
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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I-5-1511

Report Date: 08-Jul-2020 06:00:43

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-003440-0135088-003.d
 Lims ID: MRL
 Client ID:
 Sample Type: MRL
 Inject. Date: 08-Jul-2020 05:20:00 ALS Bottle#: 0 Worklist Smp#: 3
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135088-003
 Misc. Info.: 3 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 08-Jul-2020 06:00:29 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1066

First Level Reviewer: zakhrabov

Date: 08-Jul-2020 06:00:43

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1056.6	106.33

Report Date: 08-Jul-2020 06:00:43

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience Irvine

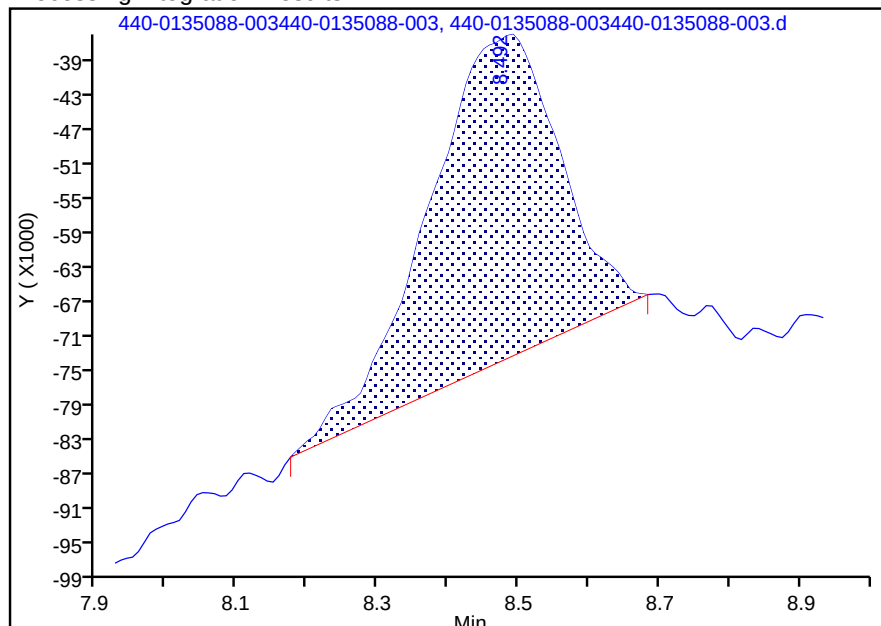
Data File:	\\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-003440-0135088-003.d		
Injection Date:	08-Jul-2020 05:20:00	Instrument ID:	IC-8
Lims ID:	MRL		
Client ID:			
Operator ID:		ALS Bottle#:	0
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	300.1_C8	Limit Group:	IC-300.1_28D
Column:	AS9 (4.00 mm)	Detector:	Ch-A-20110816009
		Worklist Smp#:	3

3 Bromate, CAS: 15541-45-4

Signal: 1

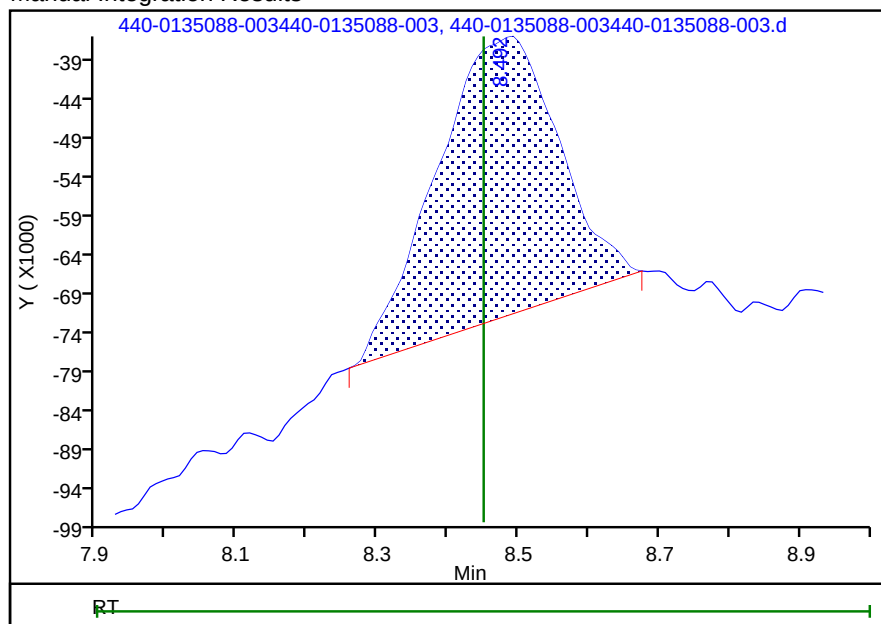
RT: 8.49
Area: 487534
Amount: 6.032290
Amount Units: ug/l

Processing Integration Results



RT: 8.49
Area: 431252
Amount: 5.389396
Amount Units: ug/l

Manual Integration Results



Reviewer: zakhrabov, 08-Jul-2020 06:00:23

Audit Action: Manually Integrated

Audit Reason: Baseline Smoothing

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FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: _____ Lab Sample ID: MRL 440-615753/3
 Matrix: Water Lab File ID: 440-0135088-003440-0135088-003
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 07/08/2020 05:20
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 615753 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14998-27-7	Chlorite	19.3	J	20	4.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	106		90-115

Report Date: 08-Jul-2020 06:00:43

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-003440-0135088-003.d
 Lims ID: MRL
 Client ID:
 Sample Type: MRL
 Inject. Date: 08-Jul-2020 05:20:00 ALS Bottle#: 0 Worklist Smp#: 3
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135088-003
 Misc. Info.: 3 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 08-Jul-2020 06:00:29 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1066

First Level Reviewer: zakhrabov

Date: 08-Jul-2020 06:00:43

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.392	7.384	0.008	2925359	20.0	19.3	
3 Bromate	8.492	8.450	0.042	431252	NC	NC	M
\$ 6 Dichloroacetic acid(Surr)	13.834	13.842	-0.008	86316627	993.7	1056.6	
4 Bromide	16.325	16.217	0.108	6988301	NC	NC	
2 Chlorate	17.709	17.592	0.117	2480992	NC	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

WC3001LCS_00090

Amount Added: 25.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 08-Jul-2020 06:00:43

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-003440-0135088-003.d

Injection Date: 08-Jul-2020 05:20:00

Instrument ID: IC-8

Operator ID:

Lims ID: MRL

Worklist Smp#: 3

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

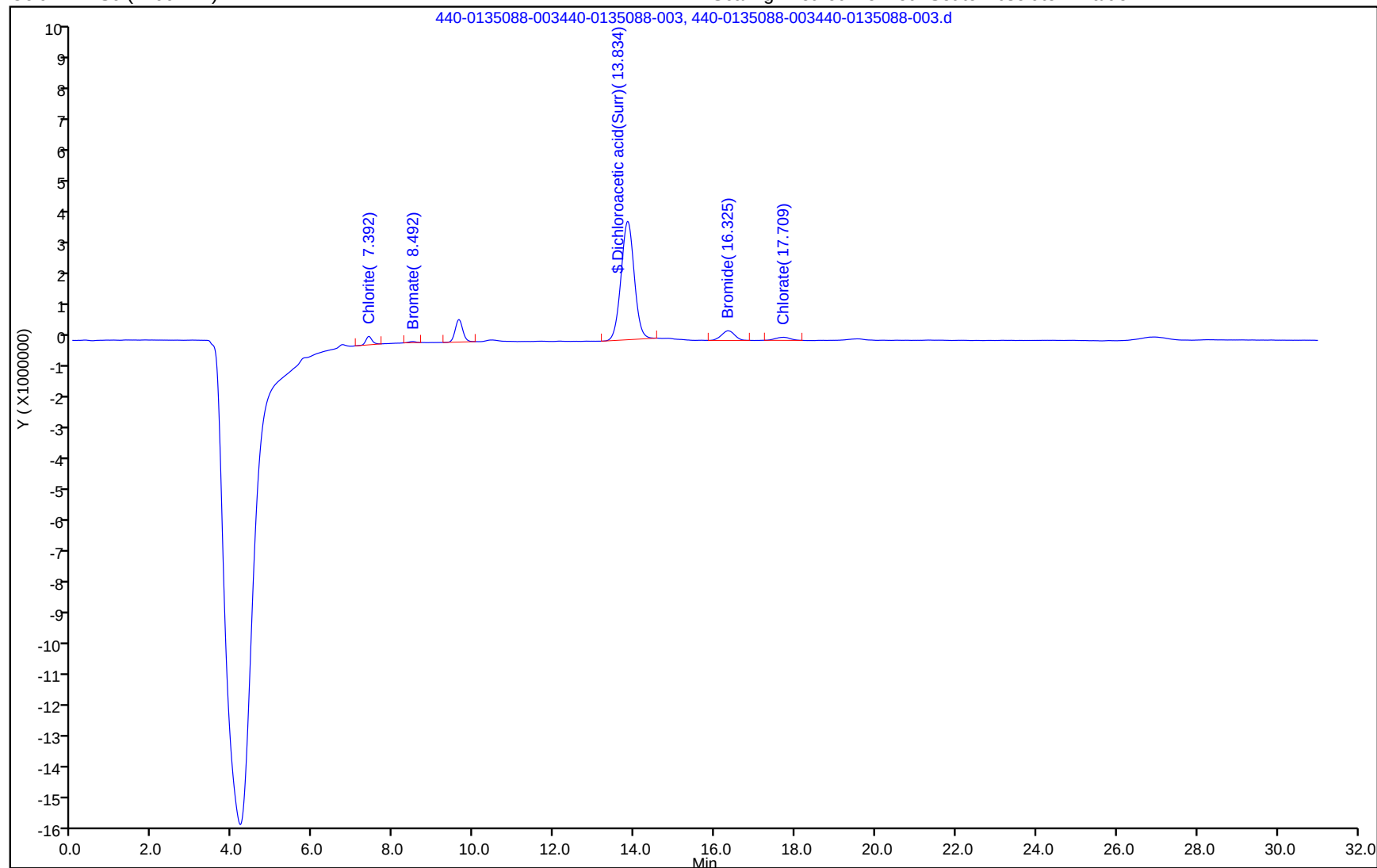
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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SWMUs ST-106/SS-111

I-5-1516

Report Date: 08-Jul-2020 06:00:43

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-003440-0135088-003.d
 Lims ID: MRL
 Client ID:
 Sample Type: MRL
 Inject. Date: 08-Jul-2020 05:20:00 ALS Bottle#: 0 Worklist Smp#: 3
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135088-003
 Misc. Info.: 3 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 08-Jul-2020 06:00:29 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1066

First Level Reviewer: zakhrabov

Date: 08-Jul-2020 06:00:43

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1056.6	106.33

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: _____ Lab Sample ID: 570-32207-J-3 MS
 Matrix: Water Lab File ID: 440-0135020-023440-0135020-023
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 07/06/2020 18:20
 Con. Extract Vol.: _____ Dilution Factor: 5
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 615429 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
15541-45-4	Bromate	58.7		25	5.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	103		90-115

Report Date: 07-Jul-2020 04:44:26

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-023440-0135020-023.d
 Lims ID: 570-32207-J-3 MS
 Client ID:
 Sample Type: MS
 Inject. Date: 06-Jul-2020 18:20:00 ALS Bottle#: 0 Worklist Smp#: 23
 Injection Vol: 1.0 ul Dil. Factor: 5.0000
 Sample Info: 440-0135020-023
 Misc. Info.: 23 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 07-Jul-2020 04:16:27 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1026

First Level Reviewer: zakhrabov

Date: 07-Jul-2020 04:11:44

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.383	7.384	-0.001	6281632	NC	NC	
3 Bromate	8.508	8.450	0.058	987680	10.0	11.7	
\$ 1 Dichloroacetic acid	13.892	13.709	0.183	83631871		NC	
\$ 6 Dichloroacetic acid(Surr)	13.892	13.842	0.050	83631871	198.7	1023.8	
4 Bromide	16.358	16.217	0.141	19417339	100.0	128.7	
2 Chlorate	17.742	17.592	0.150	10567800	40.0	75.4	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WC3001LCS_00090

Amount Added: 250.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 07-Jul-2020 04:44:26

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-023440-0135020-023.d

Injection Date: 06-Jul-2020 18:20:00

Instrument ID: IC-8

Operator ID:

Lims ID: 570-32207-J-3 MS

Worklist Smp#: 23

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 5.0000

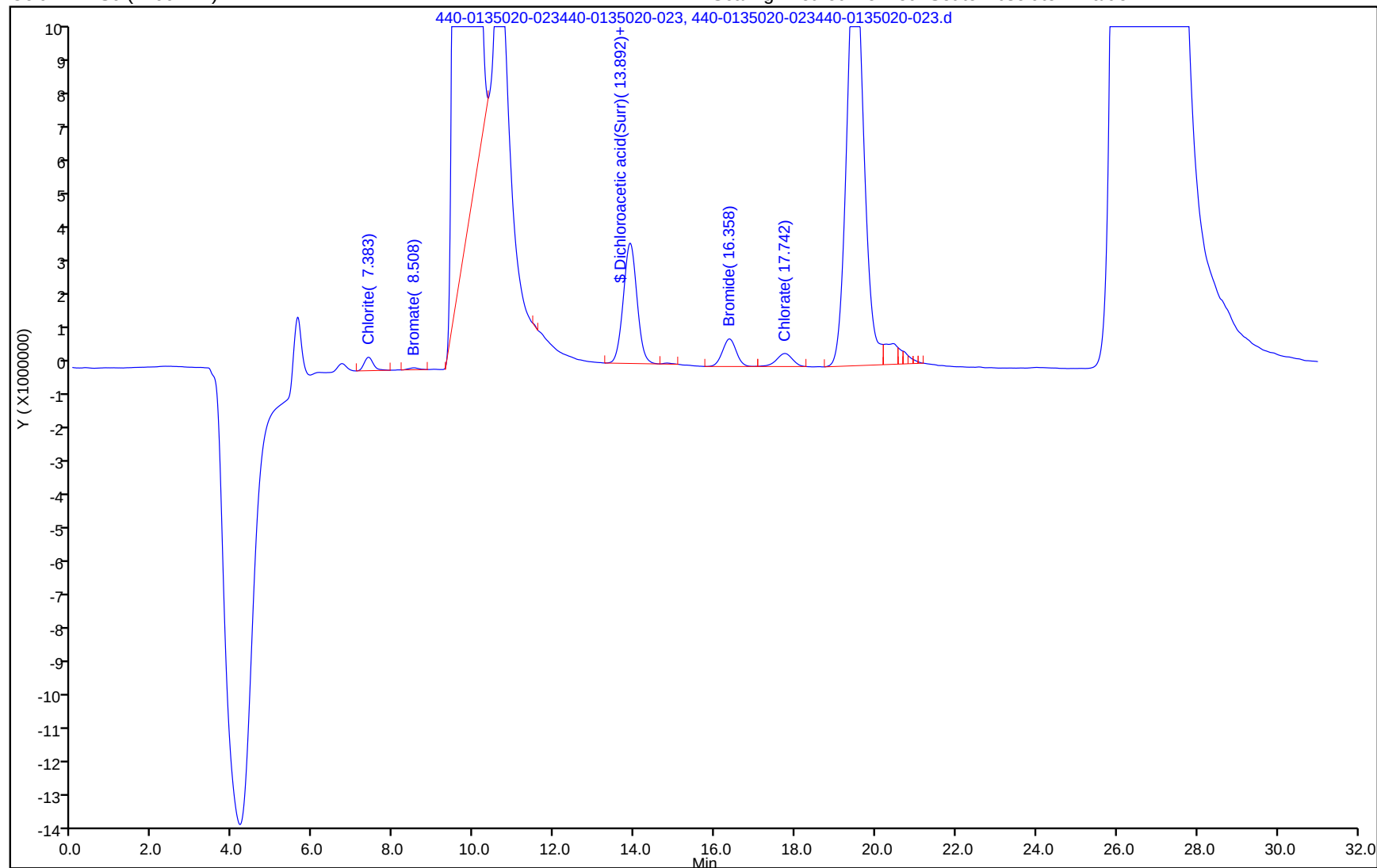
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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Report Date: 07-Jul-2020 04:44:26

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-023440-0135020-023.d
 Lims ID: 570-32207-J-3 MS
 Client ID:
 Sample Type: MS
 Inject. Date: 06-Jul-2020 18:20:00 ALS Bottle#: 0 Worklist Smp#: 23
 Injection Vol: 1.0 ul Dil. Factor: 5.0000
 Sample Info: 440-0135020-023
 Misc. Info.: 23 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 07-Jul-2020 04:16:27 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1026

First Level Reviewer: zakhrabov

Date: 07-Jul-2020 04:11:44

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1023.8	515.13

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: _____ Lab Sample ID: 570-32207-J-3 MS
 Matrix: Water Lab File ID: 440-0135020-023440-0135020-023
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 07/06/2020 18:20
 Con. Extract Vol.: _____ Dilution Factor: 5
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 615430 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14998-27-7	Chlorite	201		100	20

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	103		90-115

Report Date: 07-Jul-2020 04:44:26

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-023440-0135020-023.d
 Lims ID: 570-32207-J-3 MS
 Client ID:
 Sample Type: MS
 Inject. Date: 06-Jul-2020 18:20:00 ALS Bottle#: 0 Worklist Smp#: 23
 Injection Vol: 1.0 ul Dil. Factor: 5.0000
 Sample Info: 440-0135020-023
 Misc. Info.: 23 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 07-Jul-2020 04:16:27 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1026

First Level Reviewer: zakhrabov

Date: 07-Jul-2020 04:11:44

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.383	7.384	-0.001	6281632	40.0	40.2	
3 Bromate	8.508	8.450	0.058	987680	NC	NC	
\$ 1 Dichloroacetic acid	13.892	13.709	0.183	83631871		NC	
\$ 6 Dichloroacetic acid(Surr)	13.892	13.842	0.050	83631871	198.7	1023.8	
4 Bromide	16.358	16.217	0.141	19417339	NC	NC	
2 Chlorate	17.742	17.592	0.150	10567800	NC	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WC3001LCS_00090

Amount Added: 250.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 07-Jul-2020 04:44:26

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-023440-0135020-023.d

Injection Date: 06-Jul-2020 18:20:00

Instrument ID: IC-8

Operator ID:

Lims ID: 570-32207-J-3 MS

Worklist Smp#: 23

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 5.0000

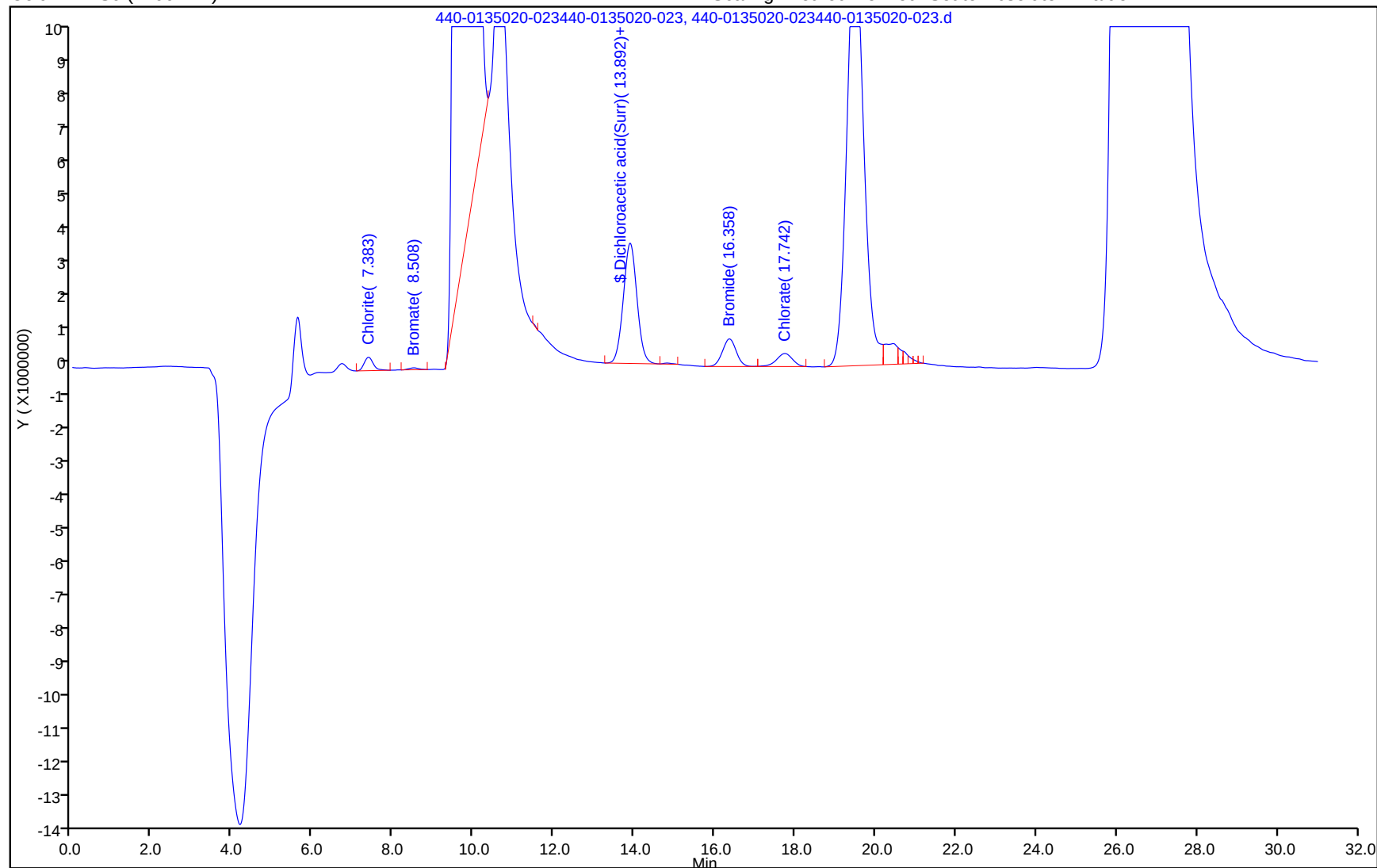
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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SWMUs ST-106/SS-111

I-5-1524

Report Date: 07-Jul-2020 04:44:26

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-023440-0135020-023.d
 Lims ID: 570-32207-J-3 MS
 Client ID:
 Sample Type: MS
 Inject. Date: 06-Jul-2020 18:20:00 ALS Bottle#: 0 Worklist Smp#: 23
 Injection Vol: 1.0 ul Dil. Factor: 5.0000
 Sample Info: 440-0135020-023
 Misc. Info.: 23 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 07-Jul-2020 04:16:27 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1026

First Level Reviewer: zakhrabov

Date: 07-Jul-2020 04:11:44

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1023.8	515.13

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: _____ Lab Sample ID: 440-268295-A-1 MS
 Matrix: Water Lab File ID: 440-0135088-011440-0135088-011
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 07/08/2020 10:11
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 615752 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
15541-45-4	Bromate	59.7		5.0	1.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	100		90-115

Report Date: 08-Jul-2020 11:17:25

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-011440-0135088-011.d
 Lims ID: 440-268295-A-1 MS
 Client ID:
 Sample Type: MS
 Inject. Date: 08-Jul-2020 10:11:00 ALS Bottle#: 0 Worklist Smp#: 11
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135088-011
 Misc. Info.: 11 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 08-Jul-2020 11:48:37 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1066

First Level Reviewer: zakhrabov

Date: 08-Jul-2020 11:17:25

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.409	7.384	0.025	62996011	NC	NC	
3 Bromate	8.475	8.450	0.025	5182583	50.0	59.7	
\$ 1 Dichloroacetic acid	13.867	13.709	0.158	81321463		NC	
\$ 6 Dichloroacetic acid(Surr)	13.867	13.842	0.025	81321463	993.7	995.5	
4 Bromide	16.150	16.217	-0.067	79707863	500.0	510.6	
2 Chlorate	17.542	17.592	-0.050	38869747	200.0	267.6	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WC3001LCS_00090

Amount Added: 250.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 08-Jul-2020 11:17:25

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-011440-0135088-011.d

Injection Date: 08-Jul-2020 10:11:00

Instrument ID: IC-8

Operator ID:

Lims ID: 440-268295-A-1 MS

Worklist Smp#: 11

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

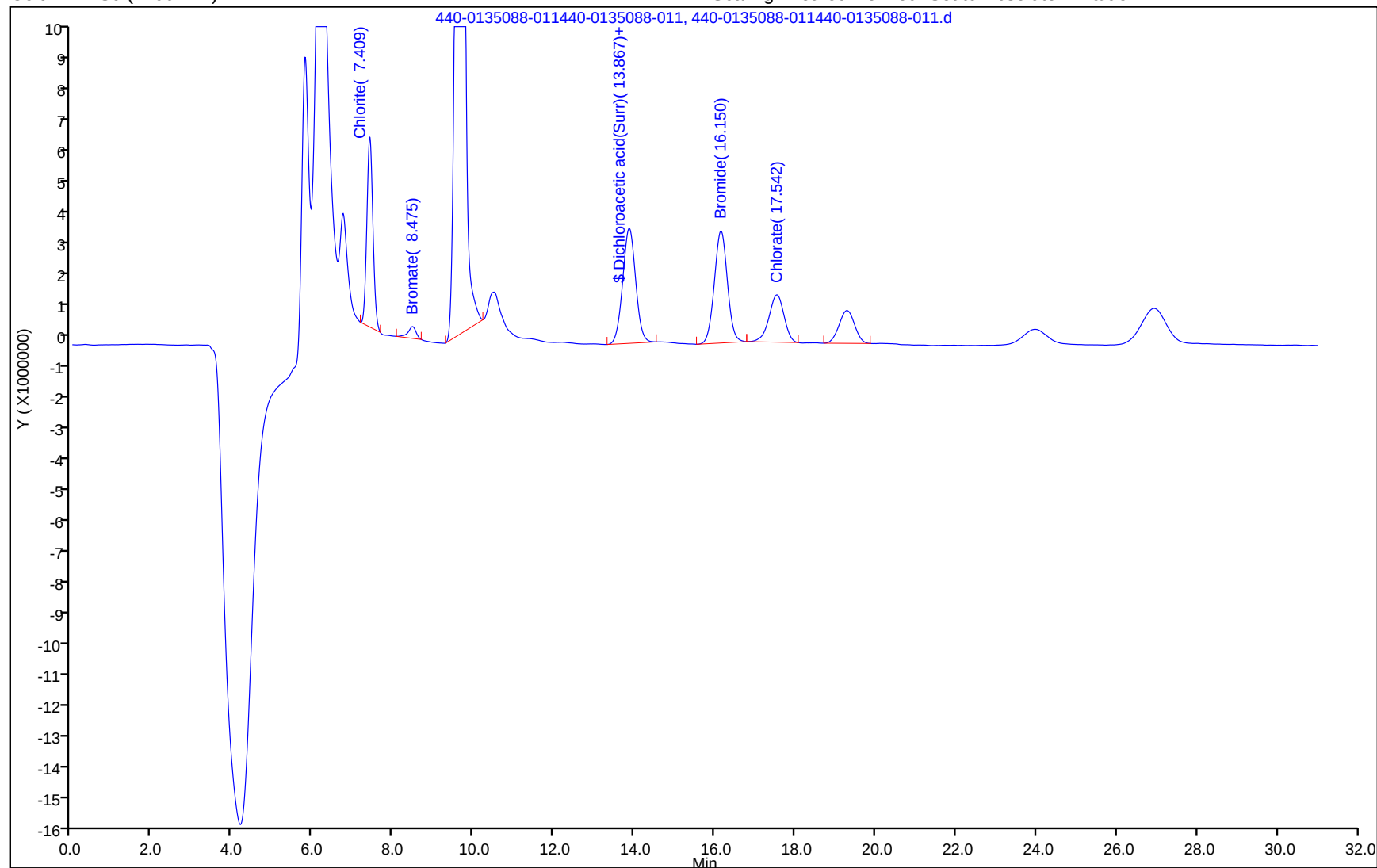
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-1528

Report Date: 08-Jul-2020 11:17:25

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-011440-0135088-011.d
 Lims ID: 440-268295-A-1 MS
 Client ID:
 Sample Type: MS
 Inject. Date: 08-Jul-2020 10:11:00 ALS Bottle#: 0 Worklist Smp#: 11
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135088-011
 Misc. Info.: 11 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 08-Jul-2020 11:48:37 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1066

First Level Reviewer: zakhrabov

Date: 08-Jul-2020 11:17:25

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	995.5	100.18

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: _____ Lab Sample ID: 440-268295-A-1 MS
 Matrix: Water Lab File ID: 440-0135088-011440-0135088-011
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 07/08/2020 10:11
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 615753 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14998-27-7	Chlorite	392		20	4.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	100		90-115

Report Date: 08-Jul-2020 11:17:25

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-011440-0135088-011.d
 Lims ID: 440-268295-A-1 MS
 Client ID:
 Sample Type: MS
 Inject. Date: 08-Jul-2020 10:11:00 ALS Bottle#: 0 Worklist Smp#: 11
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135088-011
 Misc. Info.: 11 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 08-Jul-2020 11:48:37 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1066

First Level Reviewer: zakhrabov

Date: 08-Jul-2020 11:17:25

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.409	7.384	0.025	62996011	200.0	392.5	
3 Bromate	8.475	8.450	0.025	5182583	NC	NC	
\$ 1 Dichloroacetic acid	13.867	13.709	0.158	81321463		NC	
\$ 6 Dichloroacetic acid(Surr)	13.867	13.842	0.025	81321463	993.7	995.5	
4 Bromide	16.150	16.217	-0.067	79707863	NC	NC	
2 Chlorate	17.542	17.592	-0.050	38869747	NC	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WC3001LCS_00090

Amount Added: 250.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 08-Jul-2020 11:17:25

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-011440-0135088-011.d

Injection Date: 08-Jul-2020 10:11:00

Instrument ID: IC-8

Operator ID:

Lims ID: 440-268295-A-1 MS

Worklist Smp#: 11

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

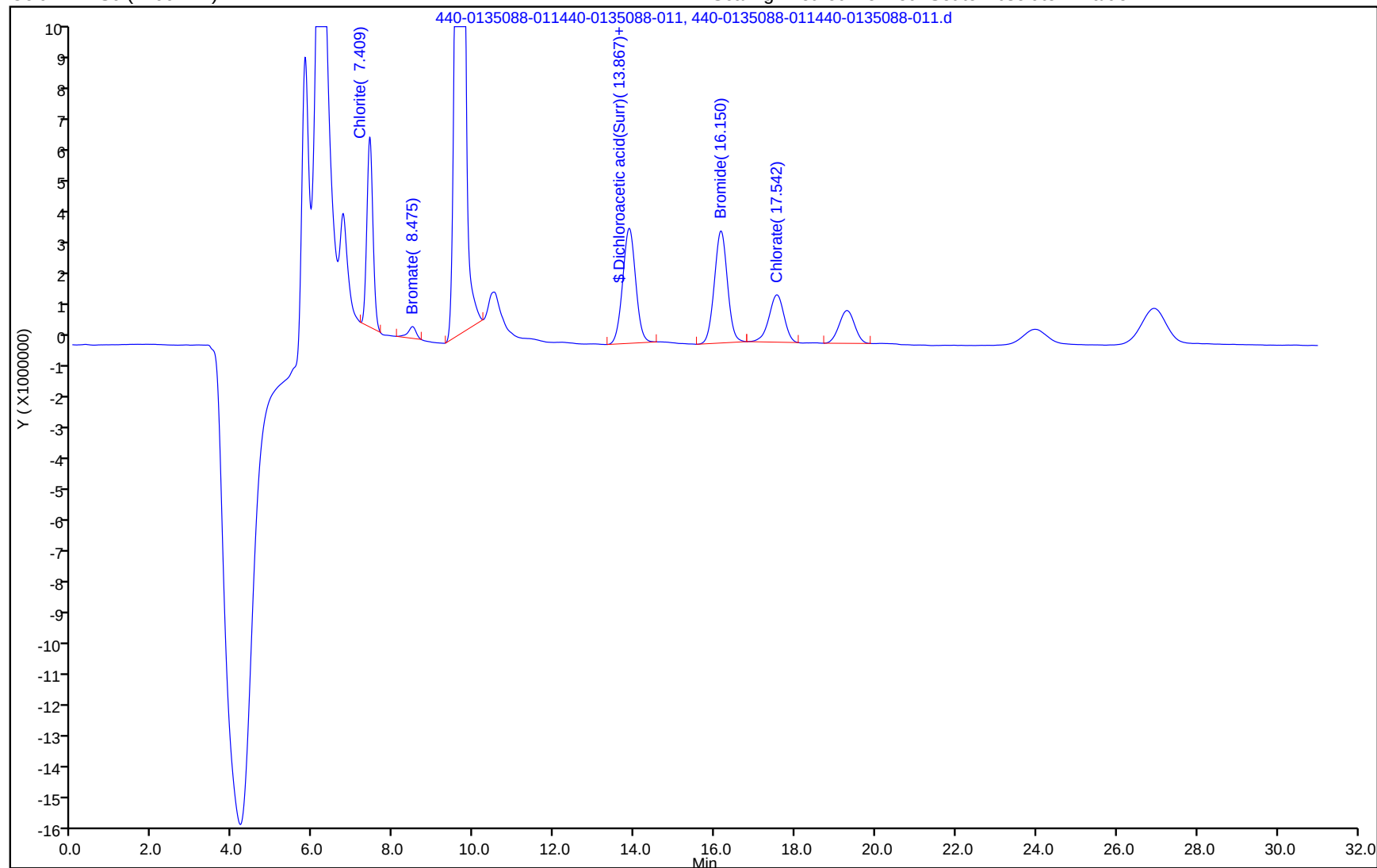
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-1532

Report Date: 08-Jul-2020 11:17:25

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-011440-0135088-011.d
 Lims ID: 440-268295-A-1 MS
 Client ID:
 Sample Type: MS
 Inject. Date: 08-Jul-2020 10:11:00 ALS Bottle#: 0 Worklist Smp#: 11
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135088-011
 Misc. Info.: 11 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 08-Jul-2020 11:48:37 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1066

First Level Reviewer: zakhrabov

Date: 08-Jul-2020 11:17:25

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	995.5	100.18

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: _____ Lab Sample ID: 570-32207-J-3 MSD
 Matrix: Water Lab File ID: 440-0135020-024440-0135020-024
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 07/06/2020 18:56
 Con. Extract Vol.: _____ Dilution Factor: 5
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 615429 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
15541-45-4	Bromate	50.8		25	5.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	102		90-115

Report Date: 07-Jul-2020 04:44:26

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-024440-0135020-024.d
 Lims ID: 570-32207-J-3 MSD
 Client ID:
 Sample Type: MSD
 Inject. Date: 06-Jul-2020 18:56:00 ALS Bottle#: 0 Worklist Smp#: 24
 Injection Vol: 1.0 ul Dil. Factor: 5.0000
 Sample Info: 440-0135020-024
 Misc. Info.: 24 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 07-Jul-2020 04:16:27 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1026

First Level Reviewer: zakhrabov

Date: 07-Jul-2020 04:11:57

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.384	7.384	0.000	6171224	NC	NC	
3 Bromate	8.475	8.450	0.025	848434	10.0	10.2	
\$ 1 Dichloroacetic acid	13.884	13.709	0.175	82639655		NC	
\$ 6 Dichloroacetic acid(Surr)	13.884	13.842	0.042	82639655	198.7	1011.6	
4 Bromide	16.342	16.217	0.125	20050445	100.0	132.7	
2 Chlorate	17.717	17.592	0.125	10781931	40.0	76.8	M

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

WC3001LCS_00090

Amount Added: 250.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 07-Jul-2020 04:44:26

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-024440-0135020-024.d

Injection Date: 06-Jul-2020 18:56:00

Instrument ID: IC-8

Operator ID:

Lims ID: 570-32207-J-3 MSD

Worklist Smp#: 24

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 5.0000

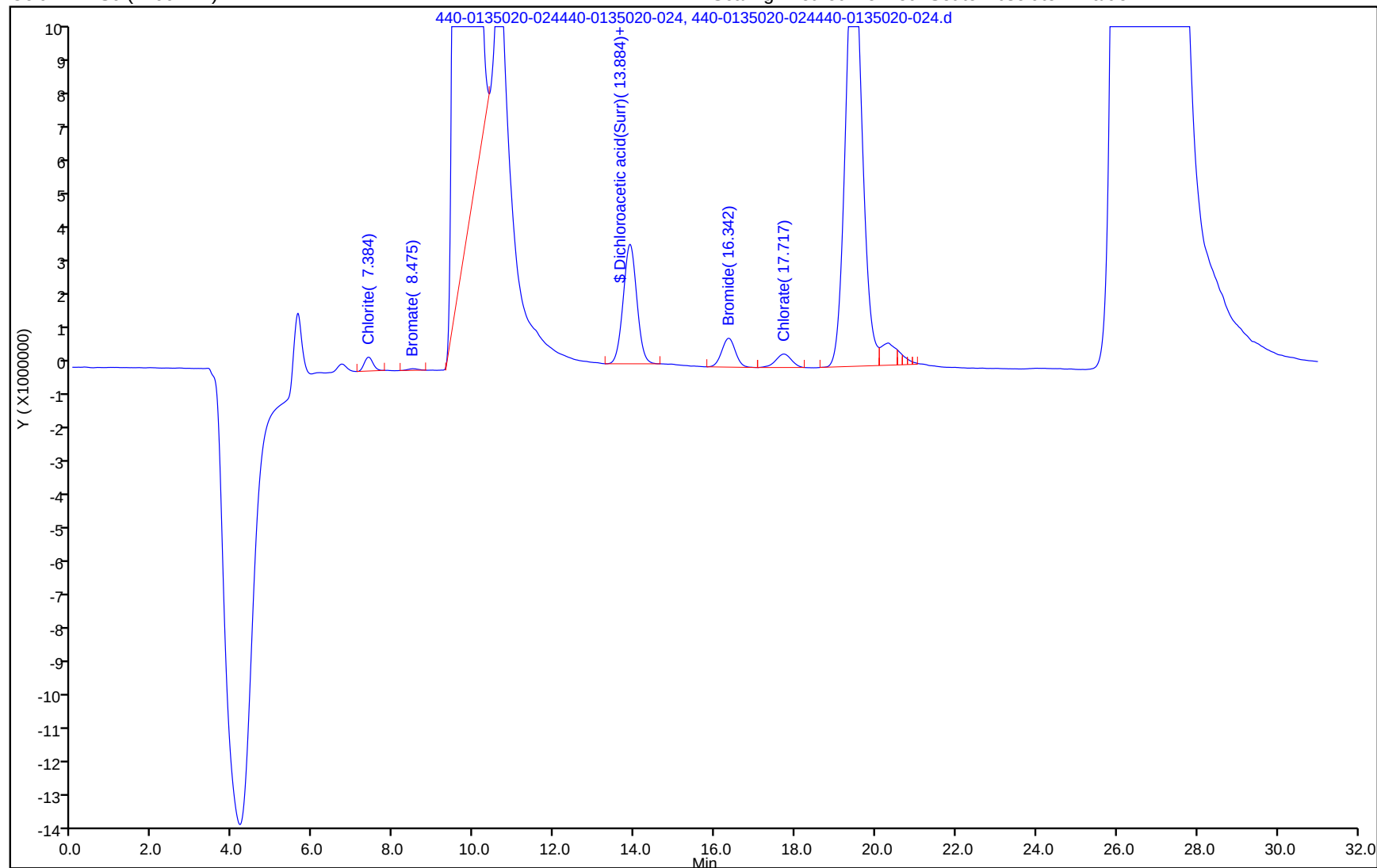
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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SWMUs ST-106/SS-111

I-5-1536

Report Date: 07-Jul-2020 04:44:26

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-024440-0135020-024.d
 Lims ID: 570-32207-J-3 MSD
 Client ID:
 Sample Type: MSD
 Inject. Date: 06-Jul-2020 18:56:00 ALS Bottle#: 0 Worklist Smp#: 24
 Injection Vol: 1.0 ul Dil. Factor: 5.0000
 Sample Info: 440-0135020-024
 Misc. Info.: 24 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 07-Jul-2020 04:16:27 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1026

First Level Reviewer: zakhrabov

Date: 07-Jul-2020 04:11:57

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1011.6	509.02

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: _____ Lab Sample ID: 570-32207-J-3 MSD
 Matrix: Water Lab File ID: 440-0135020-024440-0135020-024
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 07/06/2020 18:56
 Con. Extract Vol.: _____ Dilution Factor: 5
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 615430 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14998-27-7	Chlorite	197		100	20

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	102		90-115

Report Date: 07-Jul-2020 04:44:26

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-024440-0135020-024.d
 Lims ID: 570-32207-J-3 MSD
 Client ID:
 Sample Type: MSD
 Inject. Date: 06-Jul-2020 18:56:00 ALS Bottle#: 0 Worklist Smp#: 24
 Injection Vol: 1.0 ul Dil. Factor: 5.0000
 Sample Info: 440-0135020-024
 Misc. Info.: 24 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 07-Jul-2020 04:16:27 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1026

First Level Reviewer: zakhrabov

Date: 07-Jul-2020 04:11:57

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.384	7.384	0.000	6171224	40.0	39.5	
3 Bromate	8.475	8.450	0.025	848434	NC	NC	
\$ 1 Dichloroacetic acid	13.884	13.709	0.175	82639655		NC	
\$ 6 Dichloroacetic acid(Surr)	13.884	13.842	0.042	82639655	198.7	1011.6	
4 Bromide	16.342	16.217	0.125	20050445	NC	NC	
2 Chlorate	17.717	17.592	0.125	10781931	NC	NC	M

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

WC3001LCS_00090

Amount Added: 250.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 07-Jul-2020 04:44:26

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-024440-0135020-024.d

Injection Date: 06-Jul-2020 18:56:00

Instrument ID: IC-8

Operator ID:

Lims ID: 570-32207-J-3 MSD

Worklist Smp#: 24

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 5.0000

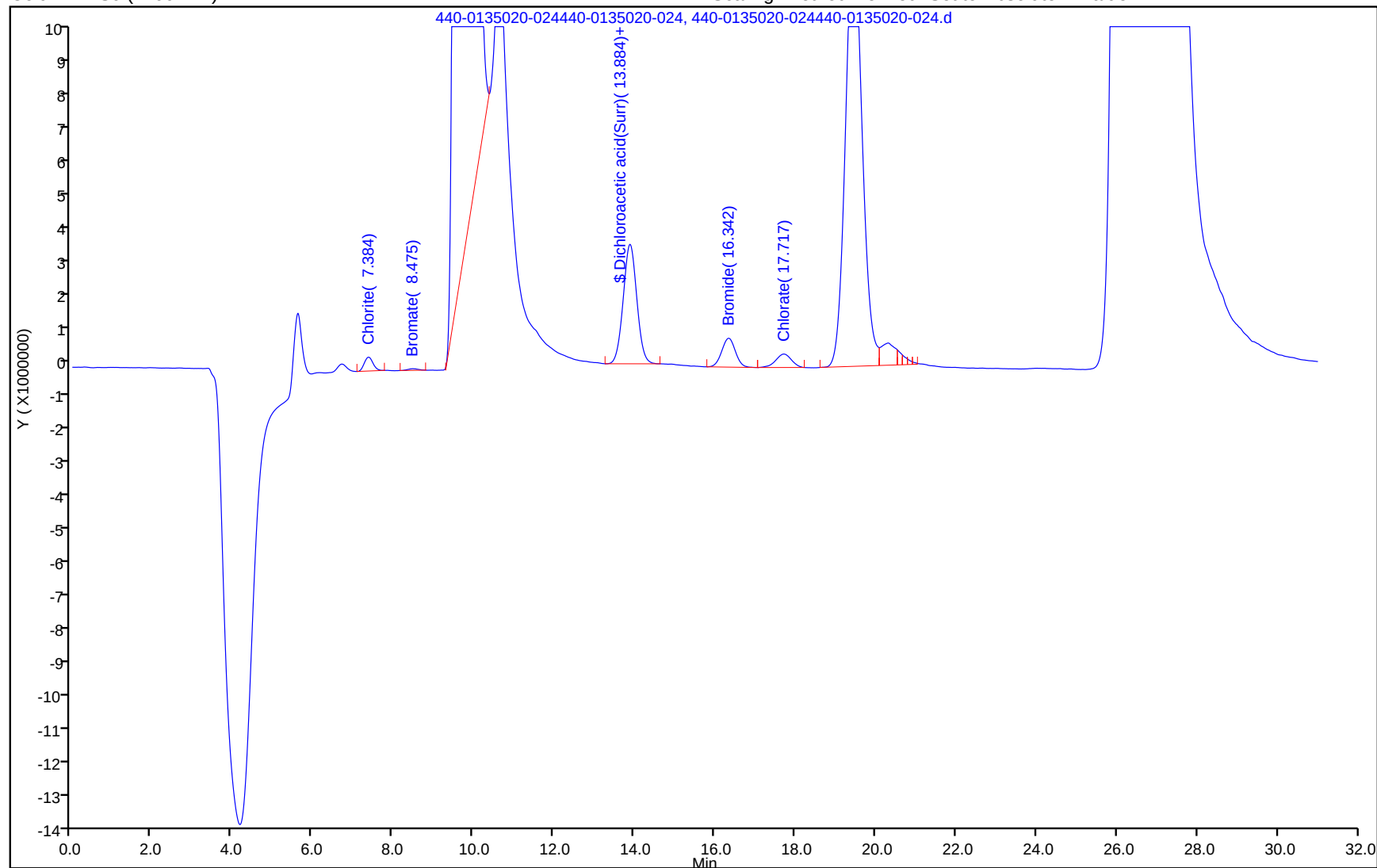
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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September 2020

Report Date: 07-Jul-2020 04:44:26

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\440-0135020-024440-0135020-024.d
 Lims ID: 570-32207-J-3 MSD
 Client ID:
 Sample Type: MSD
 Inject. Date: 06-Jul-2020 18:56:00 ALS Bottle#: 0 Worklist Smp#: 24
 Injection Vol: 1.0 ul Dil. Factor: 5.0000
 Sample Info: 440-0135020-024
 Misc. Info.: 24 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200706-135020.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 07-Jul-2020 04:16:27 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1026

First Level Reviewer: zakhrabov

Date: 07-Jul-2020 04:11:57

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1011.6	509.02

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: _____ Lab Sample ID: 440-268295-A-1 MSD
 Matrix: Water Lab File ID: 440-0135088-012440-0135088-012
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 07/08/2020 10:47
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 615752 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
15541-45-4	Bromate	56.1		5.0	1.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	104		90-115

Report Date: 08-Jul-2020 11:39:28

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-012440-0135088-012.d
 Lims ID: 440-268295-A-1 MSD
 Client ID:
 Sample Type: MSD
 Inject. Date: 08-Jul-2020 10:47:00 ALS Bottle#: 0 Worklist Smp#: 12
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135088-012
 Misc. Info.: 12 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 08-Jul-2020 12:25:08 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1066

First Level Reviewer: zakhrabov

Date: 08-Jul-2020 11:39:28

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.417	7.384	0.033	63198861	NC	NC	
3 Bromate	8.484	8.450	0.034	4870347	50.0	56.1	
\$ 1 Dichloroacetic acid	13.867	13.709	0.158	84553699		NC	
\$ 6 Dichloroacetic acid(Surr)	13.867	13.842	0.025	84553699	993.7	1035.1	
4 Bromide	16.234	16.217	0.017	79455523	500.0	509.0	
2 Chlorate	17.617	17.592	0.025	38214707	200.0	263.2	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WC3001LCS_00090

Amount Added: 250.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 08-Jul-2020 11:39:28

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-012440-0135088-012.d

Injection Date: 08-Jul-2020 10:47:00

Instrument ID: IC-8

Operator ID:

Lims ID: 440-268295-A-1 MSD

Worklist Smp#: 12

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

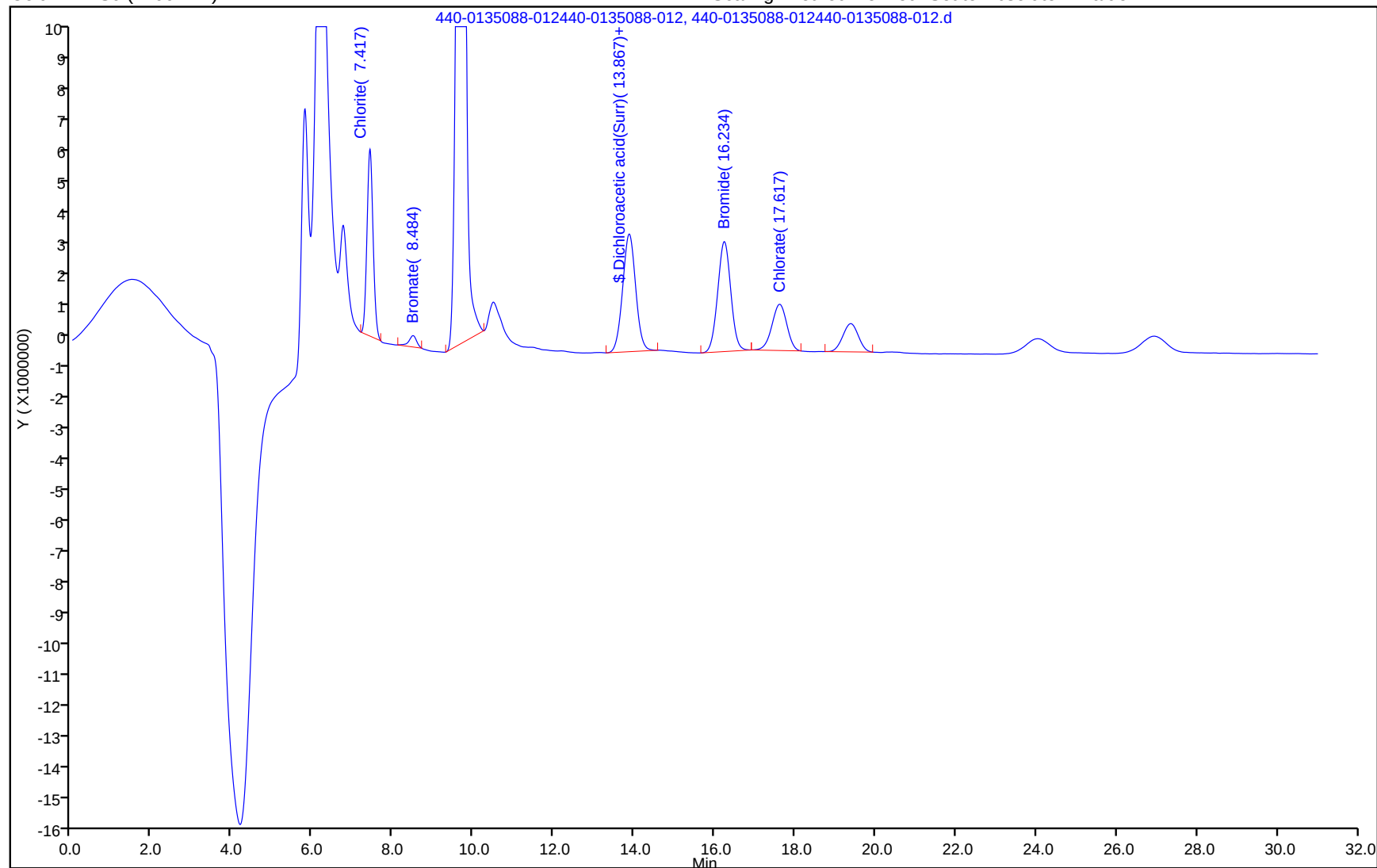
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_28D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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September 2020

Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-1544

Report Date: 08-Jul-2020 11:39:28

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-012440-0135088-012.d
 Lims ID: 440-268295-A-1 MSD
 Client ID:
 Sample Type: MSD
 Inject. Date: 08-Jul-2020 10:47:00 ALS Bottle#: 0 Worklist Smp#: 12
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135088-012
 Misc. Info.: 12 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_28D
 Method Label: 300.1
 Last Update: 08-Jul-2020 12:25:08 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1066

First Level Reviewer: zakhrabov

Date: 08-Jul-2020 11:39:28

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1035.1	104.16

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: _____ Lab Sample ID: 440-268295-A-1 MSD
 Matrix: Water Lab File ID: 440-0135088-012440-0135088-012
 Analysis Method: 300.1B Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 5(mL) Date Analyzed: 07/08/2020 10:47
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: AS9-HC ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 615753 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14998-27-7	Chlorite	394		20	4.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
79-43-6	Dichloroacetic acid(Surr)	104		90-115

Report Date: 08-Jul-2020 11:39:28

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Target Compound Quantitation Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-012440-0135088-012.d
 Lims ID: 440-268295-A-1 MSD
 Client ID:
 Sample Type: MSD
 Inject. Date: 08-Jul-2020 10:47:00 ALS Bottle#: 0 Worklist Smp#: 12
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135088-012
 Misc. Info.: 12 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 08-Jul-2020 12:25:08 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1066

First Level Reviewer: zakhrabov

Date: 08-Jul-2020 11:39:28

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
5 Chlorite	7.417	7.384	0.033	63198861	200.0	393.7	
3 Bromate	8.484	8.450	0.034	4870347	NC	NC	
\$ 1 Dichloroacetic acid	13.867	13.709	0.158	84553699		NC	
\$ 6 Dichloroacetic acid(Surr)	13.867	13.842	0.025	84553699	993.7	1035.1	
4 Bromide	16.234	16.217	0.017	79455523	NC	NC	
2 Chlorate	17.617	17.592	0.025	38214707	NC	NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

WC3001LCS_00090

Amount Added: 250.00

Units: uL

WCDCA_00081

Amount Added: 10.00

Units: uL

Run Reagent

Report Date: 08-Jul-2020 11:39:28

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-012440-0135088-012.d

Injection Date: 08-Jul-2020 10:47:00

Instrument ID: IC-8

Operator ID:

Lims ID: 440-268295-A-1 MSD

Worklist Smp#: 12

Client ID:

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

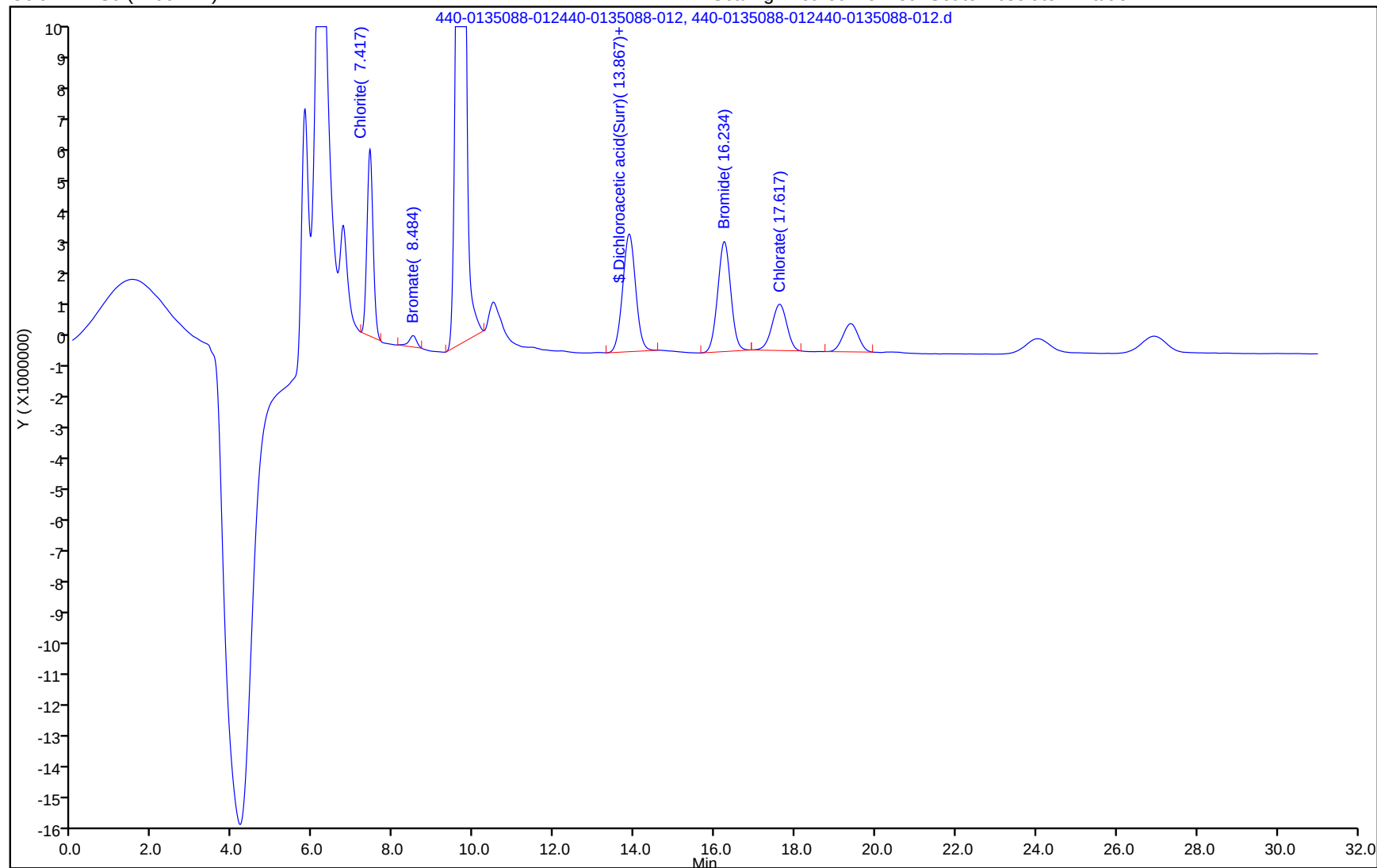
ALS Bottle#: 0

Method: 300.1_C8

Limit Group: IC-300.1_14D

Column: AS9 (4.00 mm)

Y Scaling: Method Defined: Set to Absolute Y Value



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September 2020

Kirtland AFB BFF

Quarterly Report - April-June 2020

SWMUs ST-106/SS-111

I-5-1548

Report Date: 08-Jul-2020 11:39:28

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience Irvine
Recovery Report

Data File: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\440-0135088-012440-0135088-012.d
 Lims ID: 440-268295-A-1 MSD
 Client ID:
 Sample Type: MSD
 Inject. Date: 08-Jul-2020 10:47:00 ALS Bottle#: 0 Worklist Smp#: 12
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 440-0135088-012
 Misc. Info.: 12 EB
 Operator ID: Instrument ID: IC-8
 Method: \\chromfs\Irvine\ChromData\IC8\20200708-135088.b\300.1_C8.m
 Limit Group: IC-300.1_14D
 Method Label: 300.1
 Last Update: 08-Jul-2020 12:25:08 Calib Date: 22-May-2020 12:17:00
 Integrator: Falcon
 Quant Method: External Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Irvine\ChromData\IC8\20200522-133563.b\440-0133563-009.d
 Column 1 : AS9 (4.00 mm) Det: Ch-A-20110816009
 Process Host: CTX1066

First Level Reviewer: zakhrabov

Date: 08-Jul-2020 11:39:28

Compound	Amount Added	Amount Recovered	% Rec.
\$ 6 Dichloroacetic acid(Surr)	993.7	1035.1	104.16

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins IrvineJob No.: 440-268223-1SDG No.: Kirtland AFB New MexicoInstrument ID: IC-8Start Date: 05/22/2020 07:28Analysis Batch Number: 609717End Date: 05/24/2020 00:14

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		05/22/2020 07:28	1		AS9-HC 4 (mm)
ZZZZZ		05/22/2020 08:04	1		AS9-HC 4 (mm)
ZZZZZ		05/22/2020 08:40	1		AS9-HC 4 (mm)
STD0 440-609717/4 IC		05/22/2020 09:16	1	440-0133563-004 .d	AS9-HC 4 (mm)
STD1 440-609717/5 IC		05/22/2020 09:52	1	440-0133563-005 .d	AS9-HC 4 (mm)
STD2 440-609717/6 IC		05/22/2020 10:29	1	440-0133563-006 .d	AS9-HC 4 (mm)
STD3 440-609717/7 IC		05/22/2020 11:05	1	440-0133563-007 .d	AS9-HC 4 (mm)
STD4 440-609717/8 IC		05/22/2020 11:41	1	440-0133563-008 .d	AS9-HC 4 (mm)
STD5 440-609717/9 IC		05/22/2020 12:17	1	440-0133563-009 .d	AS9-HC 4 (mm)
ICV 440-609717/10		05/22/2020 12:53	1	440-0133563-010 .d	AS9-HC 4 (mm)
ICB 440-609717/11		05/22/2020 13:29	1	440-0133563-011 .d	AS9-HC 4 (mm)
ZZZZZ		05/22/2020 14:06	1		AS9-HC 4 (mm)
ZZZZZ		05/22/2020 14:42	1		AS9-HC 4 (mm)
ZZZZZ		05/22/2020 15:18	1		AS9-HC 4 (mm)
ZZZZZ		05/22/2020 15:54	10		AS9-HC 4 (mm)
ZZZZZ		05/22/2020 16:31	10		AS9-HC 4 (mm)
ZZZZZ		05/22/2020 17:07	10		AS9-HC 4 (mm)
ZZZZZ		05/22/2020 17:43	20		AS9-HC 4 (mm)
ZZZZZ		05/22/2020 18:19	20		AS9-HC 4 (mm)
ZZZZZ		05/22/2020 18:56	1		AS9-HC 4 (mm)
ZZZZZ		05/22/2020 19:32	1		AS9-HC 4 (mm)
CCV 440-609717/22		05/22/2020 20:08	1		AS9-HC 4 (mm)
CCB 440-609717/23		05/22/2020 20:44	1		AS9-HC 4 (mm)
ZZZZZ		05/22/2020 21:20	50		AS9-HC 4 (mm)
ZZZZZ		05/22/2020 21:57	50		AS9-HC 4 (mm)
ZZZZZ		05/22/2020 22:33	50		AS9-HC 4 (mm)
ZZZZZ		05/22/2020 23:09	50		AS9-HC 4 (mm)
ZZZZZ		05/22/2020 23:45	50		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 00:22	50		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 00:58	50		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 01:34	50		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 02:10	1		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 02:47	1		AS9-HC 4 (mm)
CCV 440-609717/34		05/23/2020 03:23	1		AS9-HC 4 (mm)
CCB 440-609717/35		05/23/2020 03:59	1		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 04:35	1		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 05:12	10000		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 05:48	50		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 06:24	50		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 07:09	5		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 07:45	1		AS9-HC 4 (mm)

300.1B

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Instrument ID: IC-8 Start Date: 05/22/2020 07:28
 Analysis Batch Number: 609717 End Date: 05/24/2020 00:14

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		05/23/2020 08:32	1		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 09:09	1		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 09:44	1		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 10:21	1		AS9-HC 4 (mm)
CCV 440-609717/46		05/23/2020 10:57	1		AS9-HC 4 (mm)
CCB 440-609717/47		05/23/2020 11:33	1		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 12:09	50		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 12:46	50		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 13:22	50		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 13:58	50		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 14:34	50		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 15:10	2000		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 15:47	10000		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 16:23	1		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 16:59	1		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 17:35	50		AS9-HC 4 (mm)
CCV 440-609717/58		05/23/2020 18:12	1		AS9-HC 4 (mm)
CCB 440-609717/59		05/23/2020 18:48	1		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 19:24	5		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 20:00	5		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 20:37	5		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 21:13	1		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 21:49	500		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 22:25	500		AS9-HC 4 (mm)
ZZZZZ		05/23/2020 23:02	500		AS9-HC 4 (mm)
CCV 440-609717/67		05/23/2020 23:38	1		AS9-HC 4 (mm)
CCB 440-609717/68		05/24/2020 00:14	1		AS9-HC 4 (mm)

300.1B

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Instrument ID: IC-8 Start Date: 05/22/2020 07:28
 Analysis Batch Number: 609718 End Date: 05/24/2020 00:14

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		05/22/2020 07:28	1		AS9-HC 4 (mm)
ZZZZZ		05/22/2020 08:04	1		AS9-HC 4 (mm)
ZZZZZ		05/22/2020 08:40	1		AS9-HC 4 (mm)
STD0 440-609718/4 IC		05/22/2020 09:16	1	440-0133563-004 .d	AS9-HC 4 (mm)
STD1 440-609718/5 IC		05/22/2020 09:52	1	440-0133563-005 .d	AS9-HC 4 (mm)
STD2 440-609718/6 IC		05/22/2020 10:29	1	440-0133563-006 .d	AS9-HC 4 (mm)
STD3 440-609718/7 IC		05/22/2020 11:05	1	440-0133563-007 .d	AS9-HC 4 (mm)
STD4 440-609718/8 IC		05/22/2020 11:41	1	440-0133563-008 .d	AS9-HC 4 (mm)
STD5 440-609718/9 IC		05/22/2020 12:17	1	440-0133563-009 .d	AS9-HC 4 (mm)
ICV 440-609718/10		05/22/2020 12:53	1	440-0133563-010 .d	AS9-HC 4 (mm)
ICB 440-609718/11		05/22/2020 13:29	1	440-0133563-011 .d	AS9-HC 4 (mm)
CCB 440-609718/68		05/24/2020 00:14	1		AS9-HC 4 (mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins Irvine

Job No.: 440-268223-1

SDG No.: Kirtland AFB New Mexico

Instrument ID: IC-8

Start Date: 07/06/2020 04:02

Analysis Batch Number: 615429

End Date: 07/07/2020 15:39

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 440-615429/1		07/06/2020 04:02	1	440-0135020-001 440-0135020-001 .d	AS9-HC 4 (mm)
CCB 440-615429/2		07/06/2020 04:38	1	440-0135020-002 440-0135020-002 .d	AS9-HC 4 (mm)
MRL 440-615429/3		07/06/2020 06:14	1	440-0135020-003 440-0135020-003 .d	AS9-HC 4 (mm)
LCS 440-615429/4		07/06/2020 06:53	1	440-0135020-004 440-0135020-004 .d	AS9-HC 4 (mm)
MB 440-615429/5		07/06/2020 07:29	1	440-0135020-005 440-0135020-005 .d	AS9-HC 4 (mm)
ZZZZZ		07/06/2020 08:05	5		AS9-HC 4 (mm)
ZZZZZ		07/06/2020 08:41	5		AS9-HC 4 (mm)
ZZZZZ		07/06/2020 09:53	5		AS9-HC 4 (mm)
ZZZZZ		07/06/2020 10:29	5		AS9-HC 4 (mm)
ZZZZZ		07/06/2020 11:05	5		AS9-HC 4 (mm)
CCV 440-615429/13		07/06/2020 12:17	1	440-0135020-013 440-0135020-013 .d	AS9-HC 4 (mm)
CCB 440-615429/14		07/06/2020 12:53	1	440-0135020-014 440-0135020-014 .d	AS9-HC 4 (mm)
ZZZZZ		07/06/2020 14:06	5		AS9-HC 4 (mm)
ZZZZZ		07/06/2020 14:42	5		AS9-HC 4 (mm)
ZZZZZ		07/06/2020 15:18	5		AS9-HC 4 (mm)
ZZZZZ		07/06/2020 15:55	5		AS9-HC 4 (mm)
570-32207-J-3 MS		07/06/2020 18:20	5	440-0135020-023 440-0135020-023 .d	AS9-HC 4 (mm)
570-32207-J-3 MSD		07/06/2020 18:56	5	440-0135020-024 440-0135020-024 .d	AS9-HC 4 (mm)
CCV 440-615429/25		07/06/2020 19:32	1	440-0135020-025 440-0135020-025 .d	AS9-HC 4 (mm)
CCB 440-615429/26		07/06/2020 20:08	1	440-0135020-026 440-0135020-026 .d	AS9-HC 4 (mm)
ZZZZZ		07/06/2020 22:33	1		AS9-HC 4 (mm)
ZZZZZ		07/06/2020 23:10	1		AS9-HC 4 (mm)
ZZZZZ		07/06/2020 23:46	1		AS9-HC 4 (mm)
ZZZZZ		07/07/2020 00:22	1		AS9-HC 4 (mm)
ZZZZZ		07/07/2020 00:58	1		AS9-HC 4 (mm)
ZZZZZ		07/07/2020 01:34	1		AS9-HC 4 (mm)
ZZZZZ		07/07/2020 02:11	1		AS9-HC 4 (mm)
CCV 440-615429/37		07/07/2020 02:47	1	440-0135020-037 440-0135020-037 .d	AS9-HC 4 (mm)
CCB 440-615429/38		07/07/2020 03:23	1	440-0135020-038 440-0135020-038 .d	AS9-HC 4 (mm)
ZZZZZ		07/07/2020 04:09	1		AS9-HC 4 (mm)

300.1B

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Instrument ID: IC-8 Start Date: 07/06/2020 04:02
 Analysis Batch Number: 615429 End Date: 07/07/2020 15:39

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		07/07/2020 04:45	1		AS9-HC 4 (mm)
440-268223-6		07/07/2020 05:22	1	440-0135020-041 440-0135020-041 .d	AS9-HC 4 (mm)
ZZZZZ		07/07/2020 07:10	1		AS9-HC 4 (mm)
440-268223-3		07/07/2020 07:47	5	440-0135020-045 440-0135020-045 .d	AS9-HC 4 (mm)
CCV 440-615429/49		07/07/2020 10:12	1	440-0135020-049 440-0135020-049 .d	AS9-HC 4 (mm)
CCB 440-615429/50		07/07/2020 10:48	1	440-0135020-050 440-0135020-050 .d	AS9-HC 4 (mm)
ZZZZZ		07/07/2020 13:50	1		AS9-HC 4 (mm)
ZZZZZ		07/07/2020 14:26	6		AS9-HC 4 (mm)
CCV 440-615429/57		07/07/2020 15:02	1		AS9-HC 4 (mm)
CCB 440-615429/58		07/07/2020 15:39	1		AS9-HC 4 (mm)

Lab Name: Eurofins Irvine

Job No.: 440-268223-1

SDG No.: Kirtland AFB New Mexico

Instrument ID: IC-8

Start Date: 07/06/2020 04:02

Analysis Batch Number: 615430

End Date: 07/07/2020 15:39

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 440-615430/1		07/06/2020 04:02	1	440-0135020-001 440-0135020-001 .d	AS9-HC 4 (mm)
CCB 440-615430/2		07/06/2020 04:38	1	440-0135020-002 440-0135020-002 .d	AS9-HC 4 (mm)
MRL 440-615430/3		07/06/2020 06:14	1	440-0135020-003 440-0135020-003 .d	AS9-HC 4 (mm)
LCS 440-615430/4		07/06/2020 06:53	1	440-0135020-004 440-0135020-004 .d	AS9-HC 4 (mm)
MB 440-615430/5		07/06/2020 07:29	1	440-0135020-005 440-0135020-005 .d	AS9-HC 4 (mm)
ZZZZZ		07/06/2020 08:05	5		AS9-HC 4 (mm)
ZZZZZ		07/06/2020 08:41	5		AS9-HC 4 (mm)
ZZZZZ		07/06/2020 09:17	1		AS9-HC 4 (mm)
ZZZZZ		07/06/2020 10:29	5		AS9-HC 4 (mm)
ZZZZZ		07/06/2020 11:05	5		AS9-HC 4 (mm)
ZZZZZ		07/06/2020 11:41	5		AS9-HC 4 (mm)
CCV 440-615430/13		07/06/2020 12:17	1	440-0135020-013 440-0135020-013 .d	AS9-HC 4 (mm)
CCB 440-615430/14		07/06/2020 12:53	1	440-0135020-014 440-0135020-014 .d	AS9-HC 4 (mm)
ZZZZZ		07/06/2020 13:30	1		AS9-HC 4 (mm)
ZZZZZ		07/06/2020 14:06	5		AS9-HC 4 (mm)
ZZZZZ		07/06/2020 14:42	5		AS9-HC 4 (mm)
ZZZZZ		07/06/2020 16:31	5		AS9-HC 4 (mm)
ZZZZZ		07/06/2020 17:07	5		AS9-HC 4 (mm)
ZZZZZ		07/06/2020 17:43	5		AS9-HC 4 (mm)
570-32207-J-3 MS		07/06/2020 18:20	5	440-0135020-023 440-0135020-023 .d	AS9-HC 4 (mm)
570-32207-J-3 MSD		07/06/2020 18:56	5	440-0135020-024 440-0135020-024 .d	AS9-HC 4 (mm)
CCV 440-615430/25		07/06/2020 19:32	1	440-0135020-025 440-0135020-025 .d	AS9-HC 4 (mm)
CCB 440-615430/26		07/06/2020 20:08	1	440-0135020-026 440-0135020-026 .d	AS9-HC 4 (mm)
ZZZZZ		07/06/2020 20:45	5		AS9-HC 4 (mm)
ZZZZZ		07/06/2020 21:21	5		AS9-HC 4 (mm)
ZZZZZ		07/06/2020 21:57	5		AS9-HC 4 (mm)
ZZZZZ		07/06/2020 22:33	1		AS9-HC 4 (mm)
ZZZZZ		07/06/2020 23:10	1		AS9-HC 4 (mm)
CCV 440-615430/37		07/07/2020 02:47	1	440-0135020-037 440-0135020-037 .d	AS9-HC 4 (mm)
CCB 440-615430/38		07/07/2020 03:23	1	440-0135020-038 440-0135020-038 .d	AS9-HC 4 (mm)

300.1B

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins Irvine Job No.: 440-268223-1

SDG No.: Kirtland AFB New Mexico

Instrument ID: IC-8 Start Date: 07/06/2020 04:02

Analysis Batch Number: 615430 End Date: 07/07/2020 15:39

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
440-268223-6		07/07/2020 05:22	1	440-0135020-041 440-0135020-041 .d	AS9-HC 4 (mm)
ZZZZZ		07/07/2020 05:58	1		AS9-HC 4 (mm)
ZZZZZ		07/07/2020 06:34	1		AS9-HC 4 (mm)
ZZZZZ		07/07/2020 07:10	1		AS9-HC 4 (mm)
440-268223-3		07/07/2020 07:47	5	440-0135020-045 440-0135020-045 .d	AS9-HC 4 (mm)
ZZZZZ		07/07/2020 08:23	1		AS9-HC 4 (mm)
ZZZZZ		07/07/2020 08:59	1		AS9-HC 4 (mm)
ZZZZZ		07/07/2020 09:35	1		AS9-HC 4 (mm)
CCV 440-615430/49		07/07/2020 10:12	1	440-0135020-049 440-0135020-049 .d	AS9-HC 4 (mm)
CCB 440-615430/50		07/07/2020 10:48	1	440-0135020-050 440-0135020-050 .d	AS9-HC 4 (mm)
ZZZZZ		07/07/2020 11:24	1		AS9-HC 4 (mm)
ZZZZZ		07/07/2020 12:01	1		AS9-HC 4 (mm)
ZZZZZ		07/07/2020 12:37	1		AS9-HC 4 (mm)
ZZZZZ		07/07/2020 13:13	1		AS9-HC 4 (mm)
ZZZZZ		07/07/2020 13:50	1		AS9-HC 4 (mm)
ZZZZZ		07/07/2020 14:26	5		AS9-HC 4 (mm)
CCV 440-615430/57		07/07/2020 15:02	1		AS9-HC 4 (mm)
CCB 440-615430/58		07/07/2020 15:39	1		AS9-HC 4 (mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins Irvine

Job No.: 440-268223-1

SDG No.: Kirtland AFB New Mexico

Instrument ID: IC-8

Start Date: 07/08/2020 04:08

Analysis Batch Number: 615752

End Date: 07/09/2020 08:01

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 440-615752/1		07/08/2020 04:08	1	440-0135088-001 440-0135088-001 .d	AS9-HC 4 (mm)
CCB 440-615752/2		07/08/2020 04:44	1	440-0135088-002 440-0135088-002 .d	AS9-HC 4 (mm)
MRL 440-615752/3		07/08/2020 05:20	1	440-0135088-003 440-0135088-003 .d	AS9-HC 4 (mm)
LCS 440-615752/4		07/08/2020 05:57	1	440-0135088-004 440-0135088-004 .d	AS9-HC 4 (mm)
MB 440-615752/5		07/08/2020 06:33	1	440-0135088-005 440-0135088-005 .d	AS9-HC 4 (mm)
ZZZZZ		07/08/2020 07:09	1		AS9-HC 4 (mm)
440-268223-5		07/08/2020 07:46	1	440-0135088-007 440-0135088-007 .d	AS9-HC 4 (mm)
ZZZZZ		07/08/2020 08:22	5		AS9-HC 4 (mm)
ZZZZZ		07/08/2020 08:58	1		AS9-HC 4 (mm)
ZZZZZ		07/08/2020 09:35	5		AS9-HC 4 (mm)
440-268295-A-1 MS		07/08/2020 10:11	1	440-0135088-011 440-0135088-011 .d	AS9-HC 4 (mm)
440-268295-A-1 MSD		07/08/2020 10:47	1	440-0135088-012 440-0135088-012 .d	AS9-HC 4 (mm)
CCV 440-615752/13		07/08/2020 11:23	1	440-0135088-013 440-0135088-013 .d	AS9-HC 4 (mm)
CCB 440-615752/14		07/08/2020 12:00	1	440-0135088-014 440-0135088-014 .d	AS9-HC 4 (mm)
ZZZZZ		07/08/2020 12:36	2		AS9-HC 4 (mm)
ZZZZZ		07/08/2020 13:12	50		AS9-HC 4 (mm)
ZZZZZ		07/08/2020 13:49	1		AS9-HC 4 (mm)
ZZZZZ		07/08/2020 14:25	1		AS9-HC 4 (mm)
ZZZZZ		07/08/2020 15:02	2		AS9-HC 4 (mm)
ZZZZZ		07/08/2020 15:38	2		AS9-HC 4 (mm)
ZZZZZ		07/08/2020 16:14	1		AS9-HC 4 (mm)
ZZZZZ		07/08/2020 16:50	1		AS9-HC 4 (mm)
CCV 440-615752/25		07/08/2020 17:27	1		AS9-HC 4 (mm)
CCB 440-615752/26		07/08/2020 18:03	1		AS9-HC 4 (mm)
ZZZZZ		07/08/2020 18:39	500		AS9-HC 4 (mm)
ZZZZZ		07/08/2020 19:16	5		AS9-HC 4 (mm)
ZZZZZ		07/08/2020 19:52	100		AS9-HC 4 (mm)
ZZZZZ		07/08/2020 20:28	1000		AS9-HC 4 (mm)
ZZZZZ		07/08/2020 21:05	1000		AS9-HC 4 (mm)
ZZZZZ		07/08/2020 21:41	100		AS9-HC 4 (mm)
ZZZZZ		07/08/2020 22:17	100		AS9-HC 4 (mm)
ZZZZZ		07/08/2020 22:54	100		AS9-HC 4 (mm)
ZZZZZ		07/08/2020 23:30	100		AS9-HC 4 (mm)

300.1B

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins Irvine Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Instrument ID: IC-8 Start Date: 07/08/2020 04:08
 Analysis Batch Number: 615752 End Date: 07/09/2020 08:01

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		07/09/2020 00:06	1		AS9-HC 4 (mm)
CCV 440-615752/37		07/09/2020 00:43	1	440-0135088-037 440-0135088-037 .d	AS9-HC 4 (mm)
CCB 440-615752/38		07/09/2020 01:19	1	440-0135088-038 440-0135088-038 .d	AS9-HC 4 (mm)
ZZZZZ		07/09/2020 01:55	100		AS9-HC 4 (mm)
ZZZZZ		07/09/2020 02:32	1000		AS9-HC 4 (mm)
ZZZZZ		07/09/2020 03:08	1		AS9-HC 4 (mm)
ZZZZZ		07/09/2020 04:23	2		AS9-HC 4 (mm)
ZZZZZ		07/09/2020 04:59	100		AS9-HC 4 (mm)
440-268223-1		07/09/2020 05:37	10	440-0135088-044 440-0135088-044 .d	AS9-HC 4 (mm)
440-268223-2		07/09/2020 06:12	10	440-0135088-045 440-0135088-045 .d	AS9-HC 4 (mm)
440-268223-4		07/09/2020 06:49	10	440-0135088-046 440-0135088-046 .d	AS9-HC 4 (mm)
CCV 440-615752/47		07/09/2020 07:25	1	440-0135088-047 440-0135088-047 .d	AS9-HC 4 (mm)
CCB 440-615752/48		07/09/2020 08:01	1	440-0135088-048 440-0135088-048 .d	AS9-HC 4 (mm)

HPLC/IC ANALYSIS RUN LOG

Appendix I-5

Lab Name: Eurofins Irvine

Job No.: 440-268223-1

SDG No.: Kirtland AFB New Mexico

Instrument ID: IC-8

Start Date: 07/08/2020 04:08

Analysis Batch Number: 615753

End Date: 07/09/2020 08:01

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 440-615753/1		07/08/2020 04:08	1	440-0135088-001 440-0135088-001 .d	AS9-HC 4 (mm)
CCB 440-615753/2		07/08/2020 04:44	1	440-0135088-002 440-0135088-002 .d	AS9-HC 4 (mm)
MRL 440-615753/3		07/08/2020 05:20	1	440-0135088-003 440-0135088-003 .d	AS9-HC 4 (mm)
LCS 440-615753/4		07/08/2020 05:57	1	440-0135088-004 440-0135088-004 .d	AS9-HC 4 (mm)
MB 440-615753/5		07/08/2020 06:33	1	440-0135088-005 440-0135088-005 .d	AS9-HC 4 (mm)
ZZZZZ		07/08/2020 07:09	1		AS9-HC 4 (mm)
440-268223-5		07/08/2020 07:46	1	440-0135088-007 440-0135088-007 .d	AS9-HC 4 (mm)
ZZZZZ		07/08/2020 08:22	5		AS9-HC 4 (mm)
ZZZZZ		07/08/2020 08:58	1		AS9-HC 4 (mm)
ZZZZZ		07/08/2020 09:35	5		AS9-HC 4 (mm)
440-268295-A-1 MS		07/08/2020 10:11	1	440-0135088-011 440-0135088-011 .d	AS9-HC 4 (mm)
440-268295-A-1 MSD		07/08/2020 10:47	1	440-0135088-012 440-0135088-012 .d	AS9-HC 4 (mm)
CCV 440-615753/13		07/08/2020 11:23	1	440-0135088-013 440-0135088-013 .d	AS9-HC 4 (mm)
CCB 440-615753/14		07/08/2020 12:00	1	440-0135088-014 440-0135088-014 .d	AS9-HC 4 (mm)
ZZZZZ		07/08/2020 12:36	2		AS9-HC 4 (mm)
ZZZZZ		07/08/2020 13:12	50		AS9-HC 4 (mm)
ZZZZZ		07/08/2020 13:49	1		AS9-HC 4 (mm)
ZZZZZ		07/08/2020 14:25	1		AS9-HC 4 (mm)
ZZZZZ		07/08/2020 15:02	2		AS9-HC 4 (mm)
ZZZZZ		07/08/2020 15:38	2		AS9-HC 4 (mm)
ZZZZZ		07/08/2020 16:14	1		AS9-HC 4 (mm)
ZZZZZ		07/08/2020 16:50	1		AS9-HC 4 (mm)
CCV 440-615753/25		07/08/2020 17:27	1		AS9-HC 4 (mm)
CCB 440-615753/26		07/08/2020 18:03	1		AS9-HC 4 (mm)
CCV 440-615753/37		07/09/2020 00:43	1	440-0135088-037 440-0135088-037 .d	AS9-HC 4 (mm)
CCB 440-615753/38		07/09/2020 01:19	1	440-0135088-038 440-0135088-038 .d	AS9-HC 4 (mm)
440-268223-1		07/09/2020 05:37	10	440-0135088-044 440-0135088-044 .d	AS9-HC 4 (mm)
440-268223-2		07/09/2020 06:12	10	440-0135088-045 440-0135088-045 .d	AS9-HC 4 (mm)

300.1B

Lab Name: Eurofins Irvine Job No.: 440-268223-1
SDG No.: Kirtland AFB New Mexico
Instrument ID: IC-8 Start Date: 07/08/2020 04:08
Analysis Batch Number: 615753 End Date: 07/09/2020 08:01

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
440-268223-4		07/09/2020 06:49	10	440-0135088-046 440-0135088-046 .d	AS9-HC 4 (mm)
CCV 440-615753/47		07/09/2020 07:25	1	440-0135088-047 440-0135088-047 .d	AS9-HC 4 (mm)
CCB 440-615753/48		07/09/2020 08:01	1	440-0135088-048 440-0135088-048 .d	AS9-HC 4 (mm)

HPLC/IC BATCH WORKSHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1SDG No.: Kirtland AFB New MexicoBatch Number: 615429 Batch Start Date: 07/06/20 04:02 Batch Analyst: Zakhrabov, YuriyBatch Method: 300.1B Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	WC3001LCS 00090	WCDC 00081				
CCV 440-615429/1		300.1B		125 uL	10 uL				
CCB 440-615429/2		300.1B			10 uL				
MRL 440-615429/3		300.1B		25 uL	10 uL				
LCS 440-615429/4		300.1B		125 uL	10 uL				
MB 440-615429/5		300.1B			10 uL				
CCV 440-615429/13		300.1B		250 uL	10 uL				
CCB 440-615429/14		300.1B			10 uL				
570-32207-J-3 MS		300.1B	T	250 uL	10 uL				
570-32207-J-3 MSD		300.1B	T	250 uL	10 uL				
CCV 440-615429/25		300.1B		125 uL	10 uL				
CCB 440-615429/26		300.1B			10 uL				
CCV 440-615429/37		300.1B		250 uL	10 uL				
CCB 440-615429/38		300.1B			10 uL				
440-268223-B-6	KAFB-106239-WR-post	300.1B	T		10 uL				
440-268223-B-3	KAFB-106028-WR-pre	300.1B	T		10 uL				
CCV 440-615429/49		300.1B		125 uL	10 uL				
CCB 440-615429/50		300.1B			10 uL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

300.1B

Page 1 of 2

HPLC/IC BATCH WORKSHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1SDG No.: Kirtland AFB New MexicoBatch Number: 615429 Batch Start Date: 07/06/20 04:02 Batch Analyst: Zakhrabov, YuriyBatch Method: 300.1B Batch End Date: _____

Batch Notes	
Ethylenediamine ID	6248970
Eluent 1 ID	6263446
Filter ID	81992103
Pipette/Syringe/Dispenser ID	97, WC010, WC023, WC024, WC028
Sufficient Volume for Batch QC	YES

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

300.1B

Page 2 of 2

HPLC/IC BATCH WORKSHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1SDG No.: Kirtland AFB New MexicoBatch Number: 615430 Batch Start Date: 07/06/20 04:02 Batch Analyst: Zakhrabov, YuriyBatch Method: 300.1B Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	WC3001LCS 00090	WCDCa 00081				
CCV 440-615430/1		300.1B		125 uL	10 uL				
CCB 440-615430/2		300.1B			10 uL				
MRL 440-615430/3		300.1B		25 uL	10 uL				
LCS 440-615430/4		300.1B		125 uL	10 uL				
MB 440-615430/5		300.1B			10 uL				
CCV 440-615430/13		300.1B		250 uL	10 uL				
CCB 440-615430/14		300.1B			10 uL				
570-32207-J-3 MS		300.1B		250 uL	10 uL				
570-32207-J-3 MSD		300.1B		250 uL	10 uL				
CCV 440-615430/25		300.1B		125 uL	10 uL				
CCB 440-615430/26		300.1B			10 uL				
CCV 440-615430/37		300.1B		250 uL	10 uL				
CCB 440-615430/38		300.1B			10 uL				
440-268223-B-6	KAFB-106239-WR-post	300.1B	T		10 uL				
440-268223-B-3	KAFB-106028-WR-pre	300.1B	T		10 uL				
CCV 440-615430/49		300.1B		125 uL	10 uL				
CCB 440-615430/50		300.1B			10 uL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

300.1B

Page 1 of 2

HPLC/IC BATCH WORKSHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1SDG No.: Kirtland AFB New MexicoBatch Number: 615430 Batch Start Date: 07/06/20 04:02 Batch Analyst: Zakhrabov, YuriyBatch Method: 300.1B Batch End Date: _____

Batch Notes	
Ethylenediamine ID	6248970
Eluent 1 ID	6263446
Filter ID	81992103
Pipette/Syringe/Dispenser ID	97, WC010, WC023, WC024, WC028
Sufficient Volume for Batch QC	YES

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

300.1B

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HPLC/IC BATCH WORKSHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1SDG No.: Kirtland AFB New MexicoBatch Number: 615752 Batch Start Date: 07/08/20 04:08 Batch Analyst: Zakhrabov, YuriyBatch Method: 300.1B Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	WC3001LCS 00090	WCDC 00081				
CCV 440-615752/1		300.1B		125 uL	10 uL				
CCB 440-615752/2		300.1B			10 uL				
MRL 440-615752/3		300.1B		25 uL	10 uL				
LCS 440-615752/4		300.1B		125 uL	10 uL				
MB 440-615752/5		300.1B			10 uL				
440-268223-C-5	KAFB-106239-WR-pre	300.1B	T		10 uL				
440-268295-A-1 MS		300.1B	T	250 uL	10 uL				
440-268295-A-1 MSD		300.1B	T	250 uL	10 uL				
CCV 440-615752/13		300.1B		250 uL	10 uL				
CCB 440-615752/14		300.1B			10 uL				
CCV 440-615752/37		300.1B		250 uL	10 uL				
CCB 440-615752/38		300.1B			10 uL				
440-268223-C-1	KAFB-106005-WR-pre	300.1B	T		10 uL				
440-268223-C-2	KAFB-106005-WR-post	300.1B	T		10 uL				
440-268223-C-4	KAFB-106028-WR-post	300.1B	T		10 uL				
CCV 440-615752/47		300.1B		125 uL	10 uL				
CCB 440-615752/48		300.1B			10 uL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

300.1B

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Kirtland AFB BFF
Quarterly Report - April-June 2020
SWMUs ST-106/SS-111

I-5-1565

07/09/2020
September 2020

HPLC/IC BATCH WORKSHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1SDG No.: Kirtland AFB New MexicoBatch Number: 615752 Batch Start Date: 07/08/20 04:08 Batch Analyst: Zakhrabov, YuriyBatch Method: 300.1B Batch End Date: _____

Batch Notes	
Ethylenediamine ID	6248970
Eluent 1 ID	6266157
Filter ID	81992103
Pipette/Syringe/Dispenser ID	97, WC010, WC023, WC024, WC028
Sufficient Volume for Batch QC	YES

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

300.1B

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HPLC/IC BATCH WORKSHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1SDG No.: Kirtland AFB New MexicoBatch Number: 615753 Batch Start Date: 07/08/20 04:08 Batch Analyst: Zakhrabov, YuriyBatch Method: 300.1B Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	WC3001LCS 00090	WCDC 00081				
CCV 440-615753/1		300.1B		125 uL	10 uL				
CCB 440-615753/2		300.1B			10 uL				
MRL 440-615753/3		300.1B		25 uL	10 uL				
LCS 440-615753/4		300.1B		125 uL	10 uL				
MB 440-615753/5		300.1B			10 uL				
440-268223-C-5	KAFB-106239-WR-pre	300.1B	T		10 uL				
440-268295-A-1 MS		300.1B		250 uL	10 uL				
440-268295-A-1 MSD		300.1B		250 uL	10 uL				
CCV 440-615753/13		300.1B		250 uL	10 uL				
CCB 440-615753/14		300.1B			10 uL				
CCV 440-615753/37		300.1B		250 uL	10 uL				
CCB 440-615753/38		300.1B			10 uL				
440-268223-C-1	KAFB-106005-WR-pre	300.1B	T		10 uL				
440-268223-C-2	KAFB-106005-WR-post	300.1B	T		10 uL				
440-268223-C-4	KAFB-106028-WR-post	300.1B	T		10 uL				
CCV 440-615753/47		300.1B		125 uL	10 uL				
CCB 440-615753/48		300.1B			10 uL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

300.1B

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HPLC/IC BATCH WORKSHEET

Lab Name: Eurofins Irvine Job No.: 440-268223-1SDG No.: Kirtland AFB New MexicoBatch Number: 615753 Batch Start Date: 07/08/20 04:08 Batch Analyst: Zakhrabov, YuriyBatch Method: 300.1B Batch End Date: _____

Batch Notes	
Ethylenediamine ID	6248970
Eluent 1 ID	6266157
Filter ID	81992103
Pipette/Syringe/Dispenser ID	97, WC010, WC023, WC024, WC028
Sufficient Volume for Batch QC	YES

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

300.1B

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Method 331

Perchlorate (LC/MS/MS) by Method 331

FORM III
LCMS LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Calscience Job No.: 440-268223-1
SDG No.: Kirtland AFB New Mexico
Matrix: Water Level: Low Lab File ID: 200707007.d
Lab ID: LCS 570-79806/7 Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Perchlorate	10.0	9.93	99	85-115	

Column to be used to flag recovery and RPD values

FORM III 331.0

FORM III
LCMS LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Calscience Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Matrix: Water Level: Low Lab File ID: 200707008.d
 Lab ID: LCSD 570-79806/8 Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
Perchlorate	10.0	10.2	102	3	15	85-115	

Column to be used to flag recovery and RPD values

FORM III 331.0

FORM III
LCMS MATRIX SPIKE RECOVERY

Lab Name: Eurofins Calscience Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Matrix: Water (Dissolved) Level: Low Lab File ID: 200707013.d
 Lab ID: 440-268223-6 MS Client ID: KAFB-106239-WR-post MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Perchlorate	10.0	0.16	10.2	100	80-120	

Column to be used to flag recovery and RPD values

FORM III 331.0

FORM III
LCMS MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins Calscience Job No.: 440-268223-1

SDG No.: Kirtland AFB New Mexico

Matrix: Water (Dissolved) Level: Low Lab File ID: 200707014.d

Lab ID: 440-268223-6 MSD Client ID: KAFB-106239-WR-post MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
Perchlorate	10.0	10.4	102	2	15	80-120	

Column to be used to flag recovery and RPD values

FORM III 331.0

FORM III
LCMS LC INTERFERENCE CHECK STANDARD RECOVERY

Lab Name: Eurofins Calscience Job No.: 440-268223-1
SDG No.: Kirtland AFB New Mexico
Matrix: Water Level: Low Lab File ID: 200707005.d
Lab ID: INF 570-79806/5 Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	INF CONCENTRATION (ug/L)	INF % REC	QC LIMITS REC	#
Perchlorate	0.500	0.499	100	80-120	

Column to be used to flag recovery and RPD values

FORM III 331.0

FORM IV
LCMS METHOD BLANK SUMMARY

Lab Name: Eurofins Calscience Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Lab File ID: 200707006.d Lab Sample ID: MB 570-79806/6
 Matrix: Water Date Extracted: _____
 Instrument ID: LCTQ2 Date Analyzed: 07/07/2020 15:31
 Level: (Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	CCB 570-79806/4	200707004.d	07/07/2020 15:14
	LCS 570-79806/7	200707007.d	07/07/2020 15:57
	LCSD 570-79806/8	200707008.d	07/07/2020 16:00
KAFB-106005-WR-pre	440-268223-1	200707009.d	07/07/2020 16:26
KAFB-106005-WR-post	440-268223-2	200707010.d	07/07/2020 16:41
KAFB-106028-WR-pre	440-268223-3	200707011.d	07/07/2020 16:55
KAFB-106028-WR-post	440-268223-4	200707012.d	07/07/2020 17:10
KAFB-106239-WR-post MS	440-268223-6 MS	200707013.d	07/07/2020 17:24
KAFB-106239-WR-post MSD	440-268223-6 MSD	200707014.d	07/07/2020 17:39
KAFB-106239-WR-pre	440-268223-5	200707015.d	07/07/2020 17:53
KAFB-106239-WR-post	440-268223-6	200707016.d	07/07/2020 18:08
	CCB 570-79806/20	200707020.d	07/07/2020 19:06

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Calscience Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Sample No.: STD4 570-77753/6 Date Analyzed: 06/25/2020 14:55
 Instrument ID: LCTQ2 GC Column: Dion-A521 ID: 4 (mm)
 Lab File ID (Standard): 200625006.d Heated Purge: (Y/N) N
 Calibration ID: 8018

		18OP					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		2545072	6.42				
UPPER LIMIT		5090144	6.92				
LOWER LIMIT		1272536	5.92				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 570-77753/9		2666563	6.35				
ICB 570-77753/10		2693685	6.42				
CCVIS 570-79806/3		2841032	6.37				

18OP = 18-O Perchlorate

Area Limit = 50%-200% of internal standard area
 RT Limit = $\pm$ 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 331.0

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Calscience Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Sample No.: CCVIS 570-79806/3 Date Analyzed: 07/07/2020 14:59
 Instrument ID: LCTQ2 GC Column: Dion-A521 ID: 4 (mm)
 Lab File ID (Standard): 200707003.d Heated Purge: (Y/N) N
 Calibration ID: 8018

		18OP					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		2841032	6.37				
UPPER LIMIT		3693342	6.87				
LOWER LIMIT		1988722	5.87				
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCB 570-79806/4		2825919	6.38				
INF 570-79806/5		2184181	6.29				
MB 570-79806/6		3015050	6.40				
LCS 570-79806/7		3142553	6.37				
LCSD 570-79806/8		2985895	6.37				
440-268223-1	KAFB-106005-WR-pre	2096539	6.37				
440-268223-2	KAFB-106005-WR-post	2038238	6.39				
440-268223-3	KAFB-106028-WR-pre	2130942	6.39				
440-268223-4	KAFB-106028-WR-post	2081457	6.39				
440-268223-6 MS	KAFB-106239-WR-post MS	2670907	6.38				
440-268223-6 MSD	KAFB-106239-WR-post MSD	2619189	6.38				
440-268223-5	KAFB-106239-WR-pre	2208471	6.42				
440-268223-6	KAFB-106239-WR-post	2558894	6.38				
CCV 570-79806/19		3030534	6.35				
CCB 570-79806/20		3144587	6.40				

18OP = 18-O Perchlorate

Area Limit = 70%-130% of internal standard area
 RT Limit = $\pm$ 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 331.0

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>Eurofins Calscience</u>	Job No.: <u>440-268223-1</u>
SDG No.: <u>Kirtland AFB New Mexico</u>	
Client Sample ID: <u>KAFB-106005-WR-pre</u>	Lab Sample ID: <u>440-268223-1</u>
Matrix: <u>Water (Dissolved)</u>	Lab File ID: <u>200707009.d</u>
Analysis Method: <u>331.0</u>	Date Collected: <u>06/29/2020 08:25</u>
Extraction Method: _____	Date Extracted: _____
Sample wt/vol: <u>1.925 (mL)</u>	Date Analyzed: <u>07/07/2020 16:26</u>
Con. Extract Vol.: _____	Dilution Factor: <u>1</u>
Injection Volume: <u>4 (mL)</u>	GC Column: <u>Dion-A521</u> ID: <u>4 (mm)</u>
% Moisture: _____	GPC Cleanup: (Y/N) <u>N</u>
Analysis Batch No.: <u>79806</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.25		0.10	0.016

Report Date: 08-Jul-2020 12:02:24

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC
Target Compound Quantitation Report

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\200707009.d
 Lims ID: 440-268223-A-1
 Client ID: KAFB-106005-WR-pre
 Sample Type: Client
 Inject. Date: 07-Jul-2020 16:26:57 ALS Bottle#: 0 Worklist Smp#: 9
 Injection Vol: 4.0 mL Dil. Factor: 1.0000
 Sample Info: 440-268223-A-1, Sample
 Misc. Info.: 570-0023679-009
 Operator ID: Instrument ID: LCTQ2
 Method: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\Perchlorate_LCTQ2.m
 Limit Group: LCMS - 331.0
 Last Update: 08-Jul-2020 12:02:19 Calib Date: 25-Jun-2020 15:24:02
 Integrator: Picker
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d
 Column 1 : Dionex A521 (4.00 mm) Det: MS QQQ
 Process Host: CTX1028

First Level Reviewer: mchaler

Date: 08-Jul-2020 11:55:56

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
--------	----	-----------	-----------	-----------	----------	----------------	---------------	-----	-------

* 2 18-O Perchlorate

106.8 > 88.9	6.366	6.366	0.0		2096539	5.00		2249	
1 Perchlorate									M
98.8 > 82.9	6.387	6.374	0.013	1.003	173231	0.2472	Target=3.08	112	
100.8 > 84.9	6.497	6.374	0.123	1.021	66303		2.61(2.31-3.85)	105	M

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

LCMS_ISTD_00002 Amount Added: 25.00 Units: uL Run Reagent

Report Date: 08-Jul-2020 12:02:24

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\200707009.d

Injection Date: 07-Jul-2020 16:26:57

Instrument ID: LCTQ2

Lims ID: 440-268223-A-1

Lab Sample ID: 570-268223-1

Client ID: KAFB-106005-WR-pre

Operator ID:

ALS Bottle#:

0

Worklist Smp#:

9

Injection Vol: 4.0 mL

Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

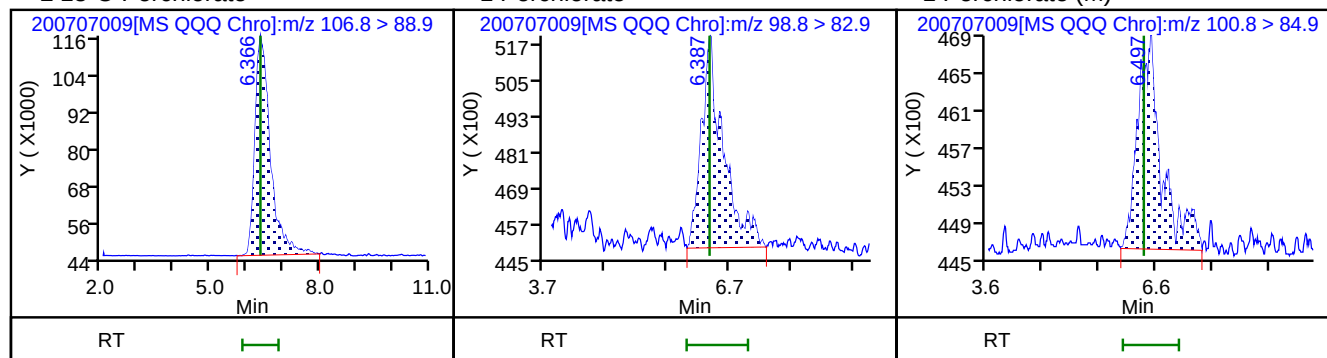
Limit Group:

LCMS - 331.0

* 2 18-O Perchlorate

1 Perchlorate

1 Perchlorate (M)



Report Date: 08-Jul-2020 12:02:24

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\200707009.d

Injection Date: 07-Jul-2020 16:26:57

Instrument ID: LCTQ2

Lims ID: 440-268223-A-1

Lab Sample ID: 570-268223-1

Client ID: KAFB-106005-WR-pre

Operator ID:

ALS Bottle#:

0

Worklist Smp#: 9

Injection Vol: 4.0 mL

Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

Limit Group:

LCMS - 331.0

Column: Dionex A521 (4.00 mm)

Detector

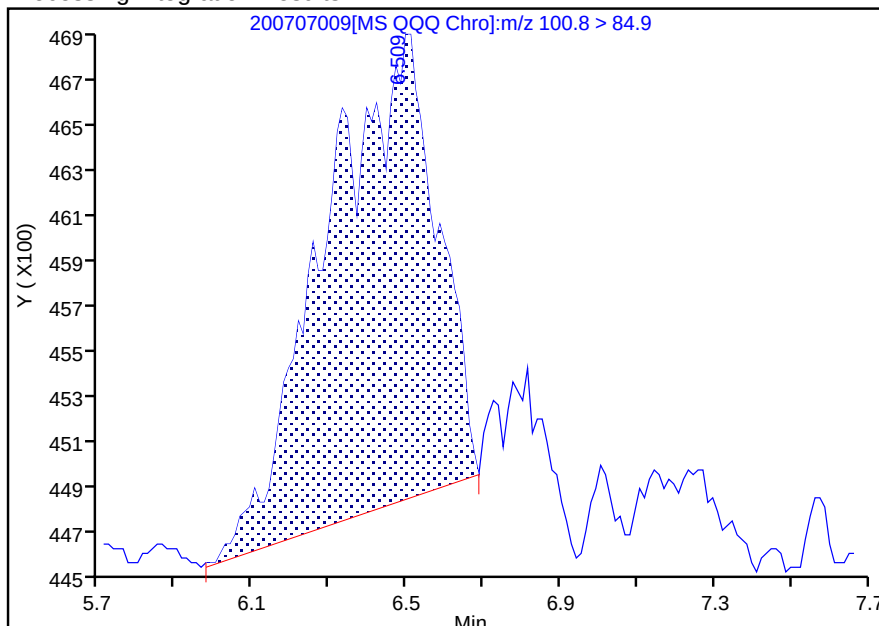
MS QQQ

1 Perchlorate, CAS: 14797-73-0

Signal: 2

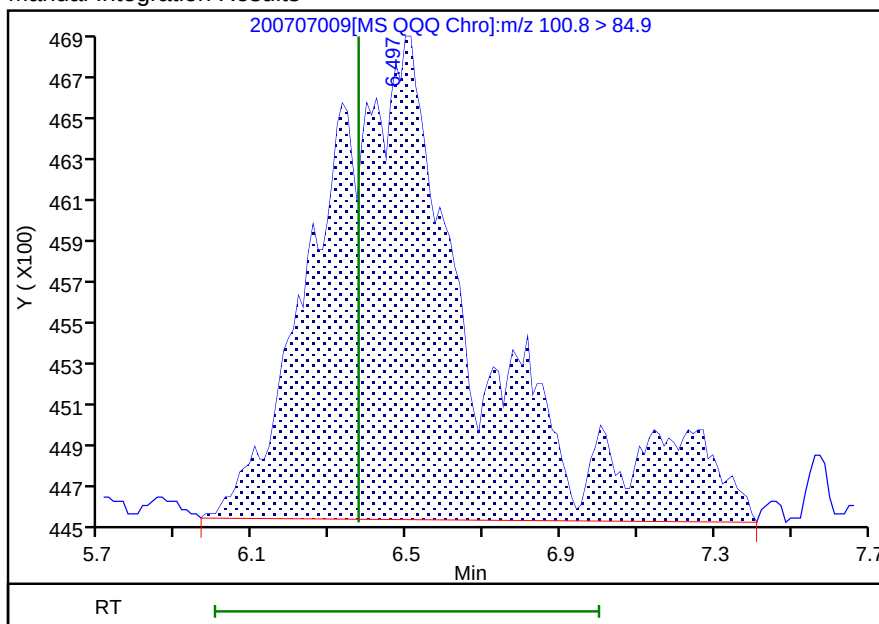
RT: 6.51
Area: 40936
Amount: 0.247166
Amount Units: ug/l

Processing Integration Results



RT: 6.50
Area: 66303
Amount: 0.247166
Amount Units: ug/l

Manual Integration Results



Reviewer: mchaler, 08-Jul-2020 11:55:54

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

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FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>Eurofins Calscience</u>	Job No.: <u>440-268223-1</u>
SDG No.: <u>Kirtland AFB New Mexico</u>	
Client Sample ID: <u>KAFB-106005-WR-post</u>	Lab Sample ID: <u>440-268223-2</u>
Matrix: <u>Water (Dissolved)</u>	Lab File ID: <u>200707010.d</u>
Analysis Method: <u>331.0</u>	Date Collected: <u>06/30/2020 08:50</u>
Extraction Method: _____	Date Extracted: _____
Sample wt/vol: <u>1.925 (mL)</u>	Date Analyzed: <u>07/07/2020 16:41</u>
Con. Extract Vol.: _____	Dilution Factor: <u>1</u>
Injection Volume: <u>4 (mL)</u>	GC Column: <u>Dion-A521</u> ID: <u>4 (mm)</u>
% Moisture: _____	GPC Cleanup: (Y/N) <u>N</u>
Analysis Batch No.: <u>79806</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	1.6		0.10	0.016

Report Date: 08-Jul-2020 12:02:24

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC
Target Compound Quantitation Report

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\200707010.d
 Lims ID: 440-268223-A-2
 Client ID: KAFB-106005-WR-post
 Sample Type: Client
 Inject. Date: 07-Jul-2020 16:41:27 ALS Bottle#: 0 Worklist Smp#: 10
 Injection Vol: 4.0 mL Dil. Factor: 1.0000
 Sample Info: 440-268223-A-2, Sample
 Misc. Info.: 570-0023679-010
 Operator ID: Instrument ID: LCTQ2
 Method: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\Perchlorate_LCTQ2.m
 Limit Group: LCMS - 331.0
 Last Update: 08-Jul-2020 12:02:19 Calib Date: 25-Jun-2020 15:24:02
 Integrator: Picker
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d
 Column 1 : Dionex A521 (4.00 mm) Det: MS QQQ
 Process Host: CTX1028

First Level Reviewer: mchaler

Date: 08-Jul-2020 11:52:49

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
--------	----	-----------	-----------	-----------	----------	----------------	---------------	-----	-------

* 2 18-O Perchlorate M
 106.8 > 88.9 6.391 6.366 0.025 2038238 5.00 3623 M
 1 Perchlorate
 98.8 > 82.9 6.361 6.374 -0.013 0.995 1068806 1.59 Target=3.08 697
 100.8 > 84.9 6.383 6.374 0.009 0.999 341895 3.13(2.31-3.85) 501

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

LCMS_ISTD_00002 Amount Added: 25.00 Units: uL Run Reagent

Report Date: 08-Jul-2020 12:02:24

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\200707010.d

Injection Date: 07-Jul-2020 16:41:27

Instrument ID: LCTQ2

Lims ID: 440-268223-A-2

Lab Sample ID: 570-268223-2

Client ID: KAFB-106005-WR-post

Operator ID:

ALS Bottle#: 0

Worklist Smp#: 10

Injection Vol: 4.0 mL

Dil. Factor: 1.0000

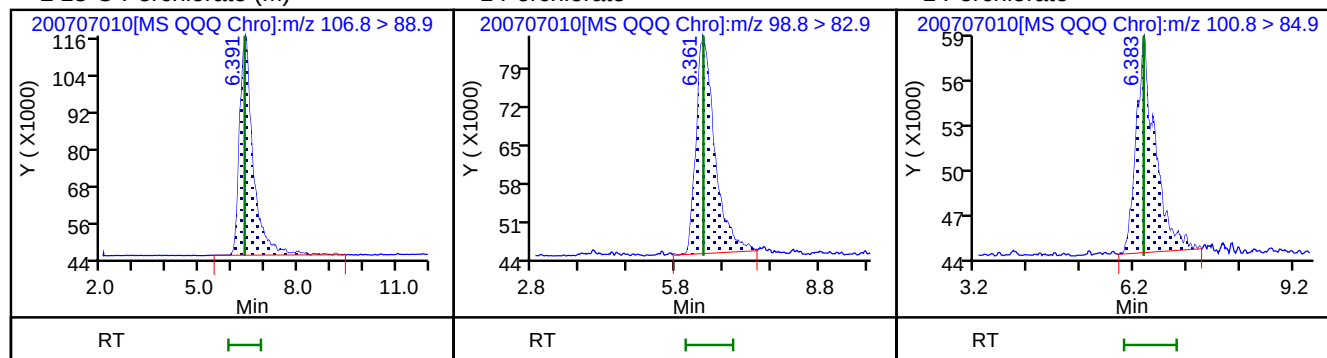
Method: Perchlorate_LCTQ2

Limit Group: LCMS - 331.0

* 2 18-O Perchlorate (M)

1 Perchlorate

1 Perchlorate



Report Date: 08-Jul-2020 12:02:24

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\200707010.d

Injection Date: 07-Jul-2020 16:41:27

Instrument ID: LCTQ2

Lims ID: 440-268223-A-2

Lab Sample ID: 570-268223-2

Client ID: KAFB-106005-WR-post

Operator ID:

ALS Bottle#:

0

Worklist Smp#: 10

Injection Vol: 4.0 mL

Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

Limit Group:

LCMS - 331.0

Column: Dionex A521 (4.00 mm)

Detector

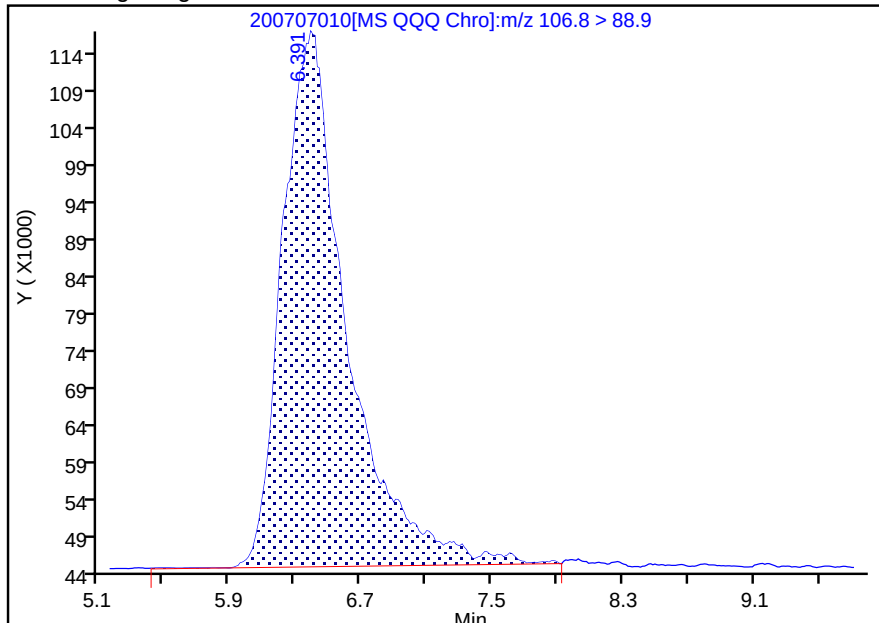
MS QQQ

*** 2 18-O Perchlorate, CAS: 7601-89-0**

Signal: 1

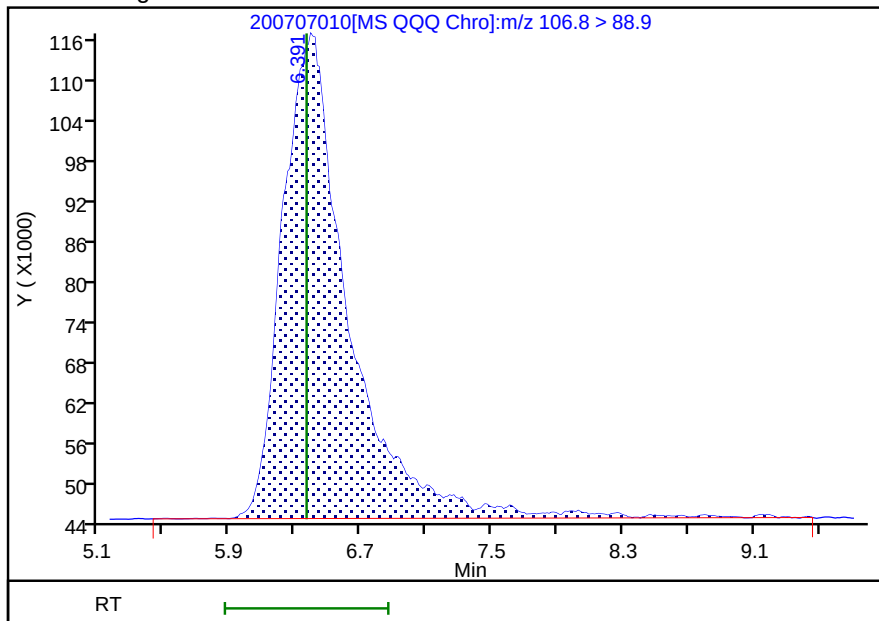
RT: 6.39
Area: 1979502
Amount: 5.000000
Amount Units: ug/l

Processing Integration Results



RT: 6.39
Area: 2038238
Amount: 5.000000
Amount Units: ug/l

Manual Integration Results



Reviewer: mchaler, 08-Jul-2020 11:52:46

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

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07/09/2020

September 2020

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>Eurofins Calscience</u>	Job No.: <u>440-268223-1</u>
SDG No.: <u>Kirtland AFB New Mexico</u>	
Client Sample ID: <u>KAFB-106028-WR-pre</u>	Lab Sample ID: <u>440-268223-3</u>
Matrix: <u>Water (Dissolved)</u>	Lab File ID: <u>200707011.d</u>
Analysis Method: <u>331.0</u>	Date Collected: <u>06/24/2020 10:15</u>
Extraction Method: _____	Date Extracted: _____
Sample wt/vol: <u>1.925 (mL)</u>	Date Analyzed: <u>07/07/2020 16:55</u>
Con. Extract Vol.: _____	Dilution Factor: <u>1</u>
Injection Volume: <u>4 (mL)</u>	GC Column: <u>Dion-A521</u> ID: <u>4 (mm)</u>
% Moisture: _____	GPC Cleanup: (Y/N) <u>N</u>
Analysis Batch No.: <u>79806</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.33		0.10	0.016

Report Date: 08-Jul-2020 12:02:25

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC
Target Compound Quantitation Report

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\200707011.d
 Lims ID: 440-268223-A-3
 Client ID: KAFB-106028-WR-pre
 Sample Type: Client
 Inject. Date: 07-Jul-2020 16:55:56 ALS Bottle#: 0 Worklist Smp#: 11
 Injection Vol: 4.0 mL Dil. Factor: 1.0000
 Sample Info: 440-268223-A-3, Sample
 Misc. Info.: 570-0023679-011
 Operator ID: Instrument ID: LCTQ2
 Method: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\Perchlorate_LCTQ2.m
 Limit Group: LCMS - 331.0
 Last Update: 08-Jul-2020 12:02:19 Calib Date: 25-Jun-2020 15:24:02
 Integrator: Picker
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d
 Column 1 : Dionex A521 (4.00 mm) Det: MS QQQ
 Process Host: CTX1028

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
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* 2 18-O Perchlorate

106.8 > 88.9	6.391	6.366	0.025		2130942	5.00		2085	
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1 Perchlorate

98.8 > 82.9	6.387	6.374	0.013	0.999	237358	0.3344	Target=3.08	167	
100.8 > 84.9	6.433	6.374	0.059	1.007	74320		3.19(2.31-3.85)	174	

Reagents:

LCMS_ISTD_00002	Amount Added: 25.00	Units: uL	Run Reagent
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Report Date: 08-Jul-2020 12:02:25

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\200707011.d

Injection Date: 07-Jul-2020 16:55:56

Instrument ID: LCTQ2

Lims ID: 440-268223-A-3

Lab Sample ID: 570-268223-3

Client ID: KAFB-106028-WR-pre

Operator ID:

ALS Bottle#:

0

Worklist Smp#:

11

Injection Vol: 4.0 mL

Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

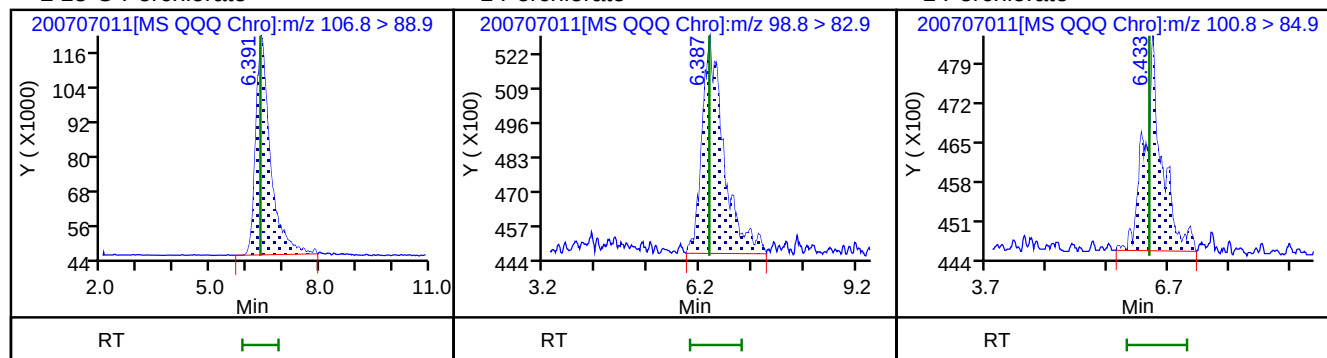
Limit Group:

LCMS - 331.0

* 2 18-O Perchlorate

1 Perchlorate

1 Perchlorate



FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>Eurofins Calscience</u>	Job No.: <u>440-268223-1</u>
SDG No.: <u>Kirtland AFB New Mexico</u>	
Client Sample ID: <u>KAFB-106028-WR-post</u>	Lab Sample ID: <u>440-268223-4</u>
Matrix: <u>Water (Dissolved)</u>	Lab File ID: <u>200707012.d</u>
Analysis Method: <u>331.0</u>	Date Collected: <u>06/29/2020 12:05</u>
Extraction Method: _____	Date Extracted: _____
Sample wt/vol: <u>1.925 (mL)</u>	Date Analyzed: <u>07/07/2020 17:10</u>
Con. Extract Vol.: _____	Dilution Factor: <u>1</u>
Injection Volume: <u>4 (mL)</u>	GC Column: <u>Dion-A521</u> ID: <u>4 (mm)</u>
% Moisture: _____	GPC Cleanup: (Y/N) <u>N</u>
Analysis Batch No.: <u>79806</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	1.3		0.10	0.016

Report Date: 08-Jul-2020 12:02:26

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC
Target Compound Quantitation Report

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\200707012.d
 Lims ID: 440-268223-A-4
 Client ID: KAFB-106028-WR-post
 Sample Type: Client
 Inject. Date: 07-Jul-2020 17:10:25 ALS Bottle#: 0 Worklist Smp#: 12
 Injection Vol: 4.0 mL Dil. Factor: 1.0000
 Sample Info: 440-268223-A-4, Sample
 Misc. Info.: 570-0023679-012
 Operator ID: Instrument ID: LCTQ2
 Method: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\Perchlorate_LCTQ2.m
 Limit Group: LCMS - 331.0
 Last Update: 08-Jul-2020 12:02:19 Calib Date: 25-Jun-2020 15:24:02
 Integrator: Picker
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d
 Column 1 : Dionex A521 (4.00 mm) Det: MS QQQ
 Process Host: CTX1028

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
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* 2 18-O Perchlorate

106.8 > 88.9	6.391	6.366	0.025		2081457	5.00		2436	
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1 Perchlorate

98.8 > 82.9	6.387	6.374	0.013	0.999	927430	1.35	Target=3.08	613	
100.8 > 84.9	6.395	6.374	0.021	1.001	309181		3.00(2.31-3.85)	436	

Reagents:

LCMS_ISTD_00002	Amount Added: 25.00	Units: uL	Run Reagent
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Report Date: 08-Jul-2020 12:02:26

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\200707012.d

Injection Date: 07-Jul-2020 17:10:25

Instrument ID: LCTQ2

Lims ID: 440-268223-A-4

Lab Sample ID: 570-268223-4

Client ID: KAFB-106028-WR-post

Operator ID:

ALS Bottle#: 0

Worklist Smp#: 12

Injection Vol: 4.0 mL

Dil. Factor: 1.0000

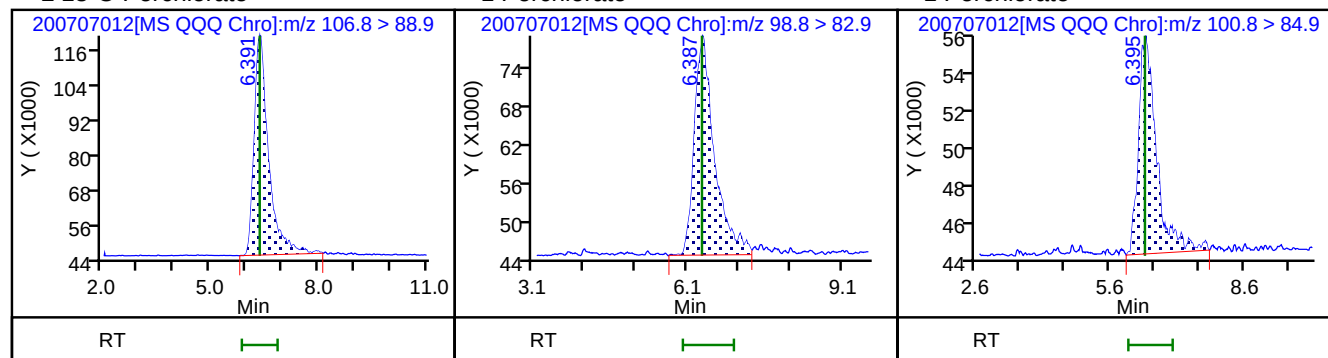
Method: Perchlorate_LCTQ2

Limit Group: LCMS - 331.0

* 2 18-O Perchlorate

1 Perchlorate

1 Perchlorate



FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>Eurofins Calscience</u>	Job No.: <u>440-268223-1</u>
SDG No.: <u>Kirtland AFB New Mexico</u>	
Client Sample ID: <u>KAFB-106239-WR-pre</u>	Lab Sample ID: <u>440-268223-5</u>
Matrix: <u>Water (Dissolved)</u>	Lab File ID: <u>200707015.d</u>
Analysis Method: <u>331.0</u>	Date Collected: <u>06/25/2020 10:30</u>
Extraction Method: _____	Date Extracted: _____
Sample wt/vol: <u>1.925 (mL)</u>	Date Analyzed: <u>07/07/2020 17:53</u>
Con. Extract Vol.: _____	Dilution Factor: <u>1</u>
Injection Volume: <u>4 (mL)</u>	GC Column: <u>Dion-A521</u> ID: <u>4 (mm)</u>
% Moisture: _____	GPC Cleanup: (Y/N) <u>N</u>
Analysis Batch No.: <u>79806</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.20		0.10	0.016

Report Date: 08-Jul-2020 12:18:26

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC
Target Compound Quantitation Report

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\200707015.d
 Lims ID: 440-268223-A-5
 Client ID: KAFB-106239-WR-pre
 Sample Type: Client
 Inject. Date: 07-Jul-2020 17:53:55 ALS Bottle#: 0 Worklist Smp#: 15
 Injection Vol: 4.0 mL Dil. Factor: 1.0000
 Sample Info: 440-268223-A-6 MS, Sample
 Misc. Info.: 570-0023679-015
 Operator ID: Instrument ID: LCTQ2
 Method: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\Perchlorate_LCTQ2.m
 Limit Group: LCMS - 331.0
 Last Update: 08-Jul-2020 12:02:36 Calib Date: 25-Jun-2020 15:24:02
 Integrator: Picker
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d
 Column 1 : Dionex A521 (4.00 mm) Det: MS QQQ
 Process Host: CTX1028

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
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* 2 18-O Perchlorate

106.8 > 88.9	6.416	6.366	0.050		2208471	5.00		2197	
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1 Perchlorate

98.8 > 82.9	6.323	6.387	-0.064	0.985	146996	0.1984	Target=3.08	66.2	
100.8 > 84.9	6.408	6.387	0.021	0.999	49387		2.98(2.31-3.85)	78.3	

Reagents:

LCMS_ISTD_00002	Amount Added: 25.00	Units: uL	Run Reagent
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Report Date: 08-Jul-2020 12:18:26

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\200707015.d

Injection Date: 07-Jul-2020 17:53:55

Instrument ID: LCTQ2

Lims ID: 440-268223-A-5

Lab Sample ID: 570-268223-5

Client ID: KAFB-106239-WR-pre

Operator ID:

ALS Bottle#:

0

Worklist Smp#:

15

Injection Vol: 4.0 mL

Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

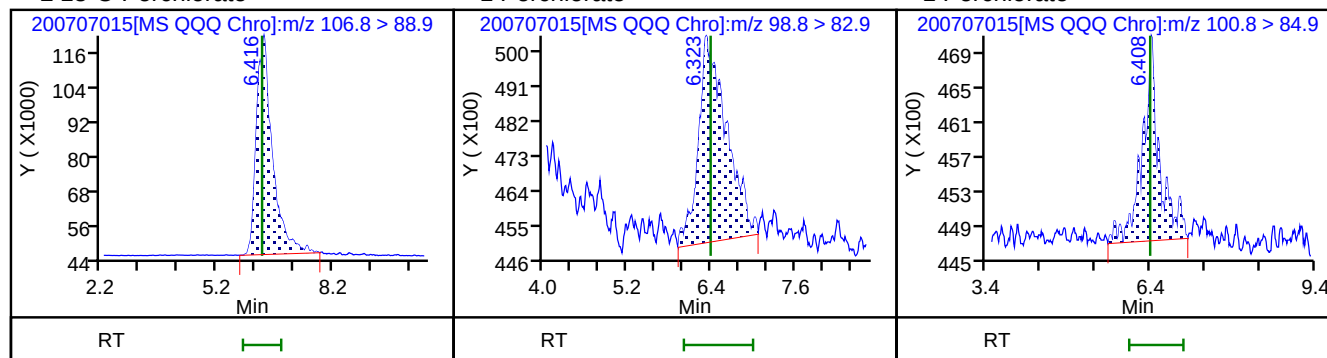
Limit Group:

LCMS - 331.0

* 2 18-O Perchlorate

1 Perchlorate

1 Perchlorate



FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>Eurofins Calscience</u>	Job No.: <u>440-268223-1</u>
SDG No.: <u>Kirtland AFB New Mexico</u>	
Client Sample ID: <u>KAFB-106239-WR-post</u>	Lab Sample ID: <u>440-268223-6</u>
Matrix: <u>Water (Dissolved)</u>	Lab File ID: <u>200707016.d</u>
Analysis Method: <u>331.0</u>	Date Collected: <u>06/29/2020 09:30</u>
Extraction Method: _____	Date Extracted: _____
Sample wt/vol: <u>1.925 (mL)</u>	Date Analyzed: <u>07/07/2020 18:08</u>
Con. Extract Vol.: _____	Dilution Factor: <u>1</u>
Injection Volume: <u>4 (mL)</u>	GC Column: <u>Dion-A521</u> ID: <u>4 (mm)</u>
% Moisture: _____	GPC Cleanup: (Y/N) <u>N</u>
Analysis Batch No.: <u>79806</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.16		0.10	0.016

Report Date: 08-Jul-2020 12:18:26

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC
Target Compound Quantitation Report

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\200707016.d
 Lims ID: 440-268223-A-6
 Client ID: KAFB-106239-WR-post
 Sample Type: Client
 Inject. Date: 07-Jul-2020 18:08:23 ALS Bottle#: 0 Worklist Smp#: 16
 Injection Vol: 4.0 mL Dil. Factor: 1.0000
 Sample Info: 440-268223-A-6 MSD, Sample
 Misc. Info.: 570-0023679-016
 Operator ID: Instrument ID: LCTQ2
 Method: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\Perchlorate_LCTQ2.m
 Limit Group: LCMS - 331.0
 Last Update: 08-Jul-2020 12:02:36 Calib Date: 25-Jun-2020 15:24:02
 Integrator: Picker
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d
 Column 1 : Dionex A521 (4.00 mm) Det: MS QQQ
 Process Host: CTX1028

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
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* 2 18-O Perchlorate

106.8 > 88.9	6.378	6.366	0.012		2558894	5.00		2303	
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1 Perchlorate

98.8 > 82.9	6.400	6.387	0.013	1.003	138629	0.1609	Target=3.08	60.2	
100.8 > 84.9	6.408	6.387	0.021	1.005	45009		3.08(2.31-3.85)	68.2	

Reagents:

LCMS_ISTD_00002	Amount Added: 25.00	Units: uL	Run Reagent
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Report Date: 08-Jul-2020 12:18:26

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\200707016.d

Injection Date: 07-Jul-2020 18:08:23

Instrument ID: LCTQ2

Lims ID: 440-268223-A-6

Lab Sample ID: 570-268223-6

Client ID: KAFB-106239-WR-post

Operator ID:

ALS Bottle#:

0

Worklist Smp#:

16

Injection Vol: 4.0 mL

Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

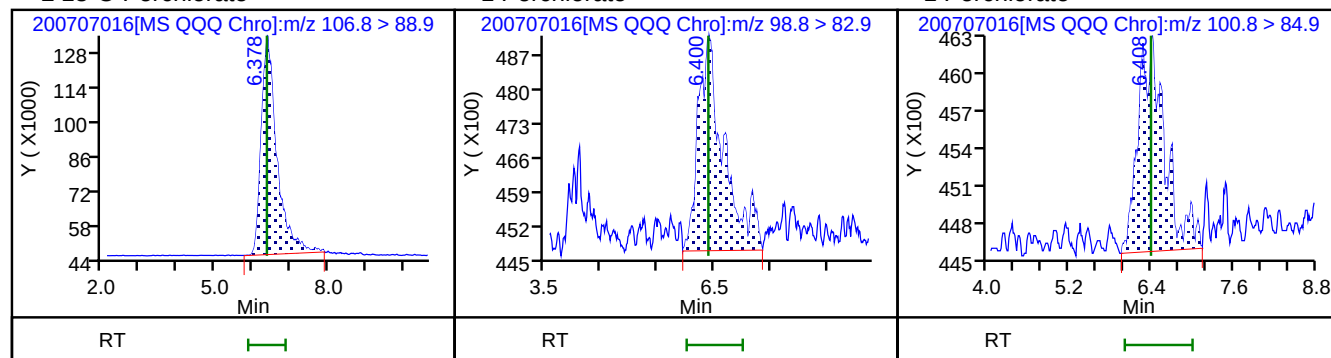
Limit Group:

LCMS - 331.0

* 2 18-O Perchlorate

1 Perchlorate

1 Perchlorate



FORM VI
LCMS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Calscience Job No.: 440-268223-1 Analy Batch No.: 77753
 SDG No.: Kirtland AFB New Mexico
 Instrument ID: LCTQ2 GC Column: Dion-A521 ID: 4 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 06/25/2020 14:11 Calibration End Date: 06/25/2020 15:24 Calibration ID: 8018

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 570-77753/3	200625003.d
Level 2	STD2 570-77753/4	200625004.d
Level 3	STD3 570-77753/5	200625005.d
Level 4	STD4 570-77753/6	200625006.d
Level 5	STD5 570-77753/7	200625007.d
Level 6	STD6 570-77753/8	200625008.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Perchlorate	1.7072 1.6545	1.6261	1.6807	1.6477	1.6398	Lin2	0.0056	1.6487							1.0000		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
LCMS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Calscience Job No.: 440-268223-1 Analy Batch No.: 77753
SDG No.: Kirtland AFB New Mexico
Instrument ID: LCTQ2 GC Column: Dion-A521 ID: 4 (mm) Heated Purge: (Y/N) N
Calibration Start Date: 06/25/2020 14:11 Calibration End Date: 06/25/2020 15:24 Calibration ID: 8018

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 570-77753/3	200625003.d
Level 2	STD2 570-77753/4	200625004.d
Level 3	STD3 570-77753/5	200625005.d
Level 4	STD4 570-77753/6	200625006.d
Level 5	STD5 570-77753/7	200625007.d
Level 6	STD6 570-77753/8	200625008.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Perchlorate	18OP	Lin2	82458 60674460	766556	4318859	8387212	40956140	0.100 75.0	1.00	5.00	10.0	50.0

Curve Type Legend:

Lin2 = Linear 1/conc^2 ISTD

Report Date: 26-Jun-2020 15:02:01

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC
Target Compound Quantitation Report

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625003.d
 Lims ID: STD1
 Client ID:
 Sample Type: IC Calib Level: 1
 Inject. Date: 25-Jun-2020 14:11:27 ALS Bottle#: 0 Worklist Smp#: 3
 Injection Vol: 4.0 mL Dil. Factor: 1.0000
 Sample Info: STD1, Sample
 Misc. Info.: 570-0023031-003
 Operator ID: Instrument ID: LCTQ2
 Sublist: chrom-Perchlorate_LCTQ2*sub3
 Method: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\Perchlorate_LCTQ2.m
 Limit Group: LCMS - 331.0
 Last Update: 26-Jun-2020 15:02:01 Calib Date: 25-Jun-2020 15:24:02
 Integrator: Picker
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d
 Column 1 : Dionex A521 (4.00 mm) Det: MS QQQ
 Process Host: CTX1058

First Level Reviewer: taiw

Date: 26-Jun-2020 14:41:40

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
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* 2 18-O Perchlorate

106.8 > 88.9 6.366 6.391 -0.025 2414948 5.00 1880

1 Perchlorate

M

98.8 > 82.9 6.361 6.400 -0.039 0.999 82458 0.1001 Target=3.08 50.0 M

100.8 > 84.9 6.421 6.400 0.021 1.009 29927 2.76(2.31-3.85) 34.3 M

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

LCMS_LCS_S_00004

Amount Added: 1.00

Units: uL

LCMS_ISTD_00002

Amount Added: 25.00

Units: uL

Run Reagent

Report Date: 26-Jun-2020 15:02:01

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625003.d

Injection Date: 25-Jun-2020 14:11:27

Instrument ID: LCTQ2

Lims ID: STD1

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#:

3

Injection Vol: 4.0 mL

Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

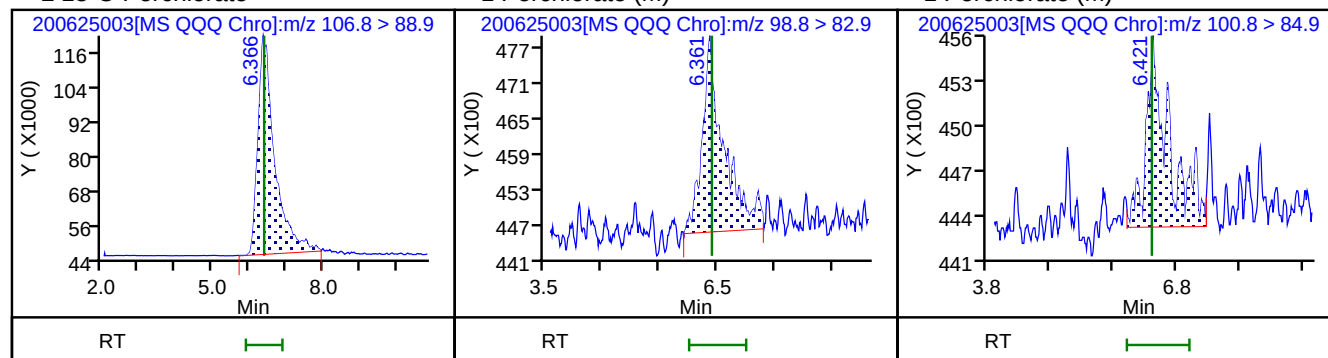
Limit Group:

LCMS - 331.0

* 2 18-O Perchlorate

1 Perchlorate (M)

1 Perchlorate (M)



Report Date: 26-Jun-2020 15:02:01

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625003.d
 Injection Date: 25-Jun-2020 14:11:27 Instrument ID: LCTQ2
 Lims ID: STD1
 Client ID:
 Operator ID:
 Injection Vol: 4.0 mL
 Method: Perchlorate_LCTQ2
 Column: Dionex A521 (4.00 mm)

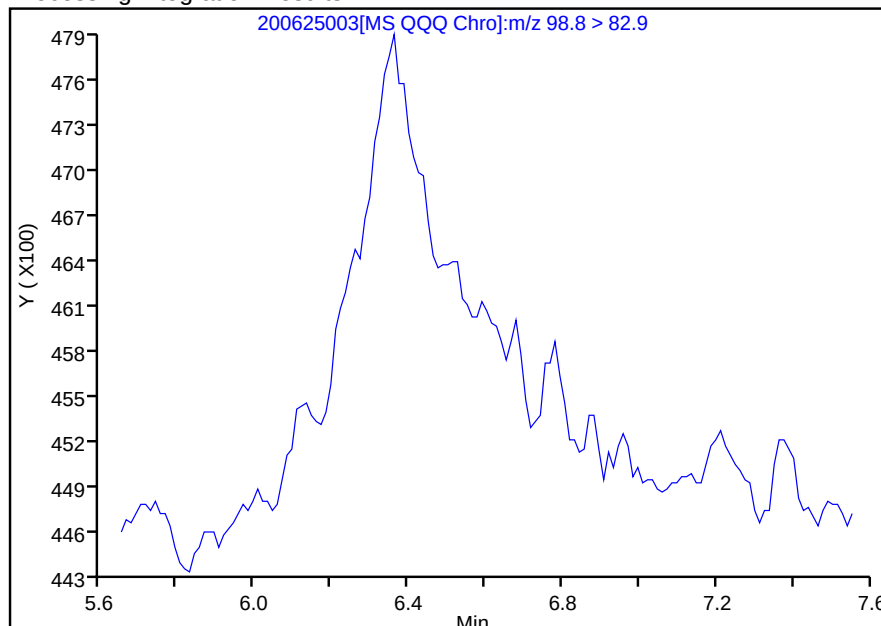
ALS Bottle#: 0 Worklist Smp#: 3
 Dil. Factor: 1.0000
 Limit Group: LCMS - 331.0
 Detector: MS QQQ

1 Perchlorate, CAS: 14797-73-0

Signal: 1

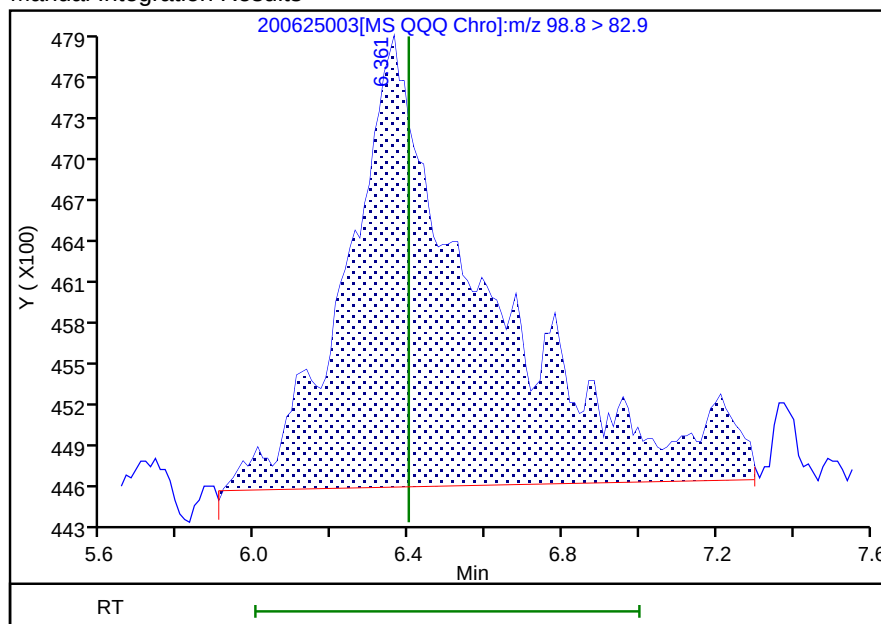
Not Detected
 Expected RT: 6.40

Processing Integration Results



Manual Integration Results

RT: 6.36
 Area: 82458
 Amount: 0.100135
 Amount Units: ug/l



Reviewer: taiw, 26-Jun-2020 14:55:31

Audit Action: Manually Integrated

Audit Reason: Baseline

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07/09/2020

September 2020

Kirtland AFB BFF
 Quarterly Report - April-June 2020
 SWMUs ST-106/SS-111

I-5-1602

Report Date: 26-Jun-2020 15:02:01

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625003.d

Injection Date: 25-Jun-2020 14:11:27

Instrument ID: LCTQ2

Lims ID: STD1

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#: 3

Injection Vol: 4.0 mL

Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

Limit Group:

LCMS - 331.0

Column: Dionex A521 (4.00 mm)

Detector

MS QQQ

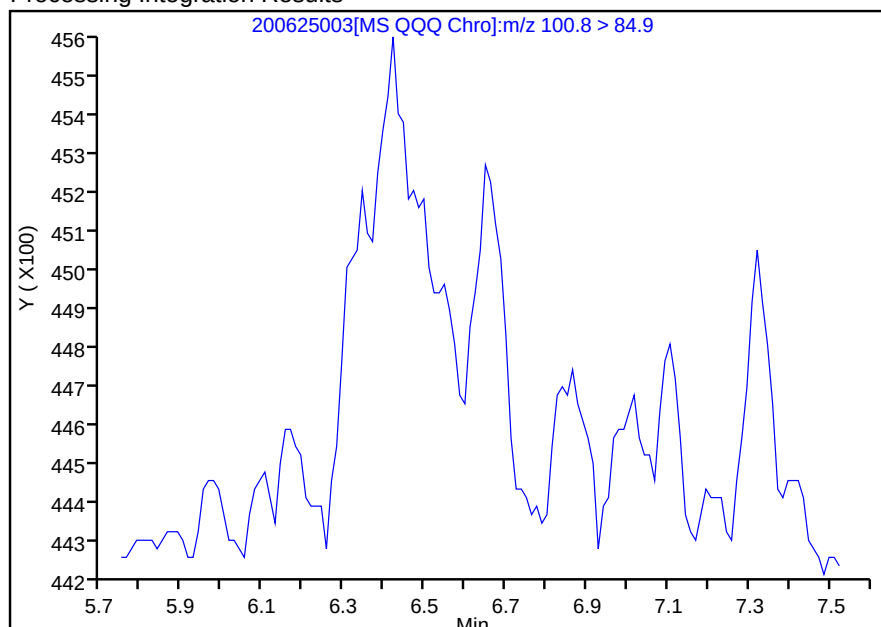
1 Perchlorate, CAS: 14797-73-0

Signal: 2

Not Detected

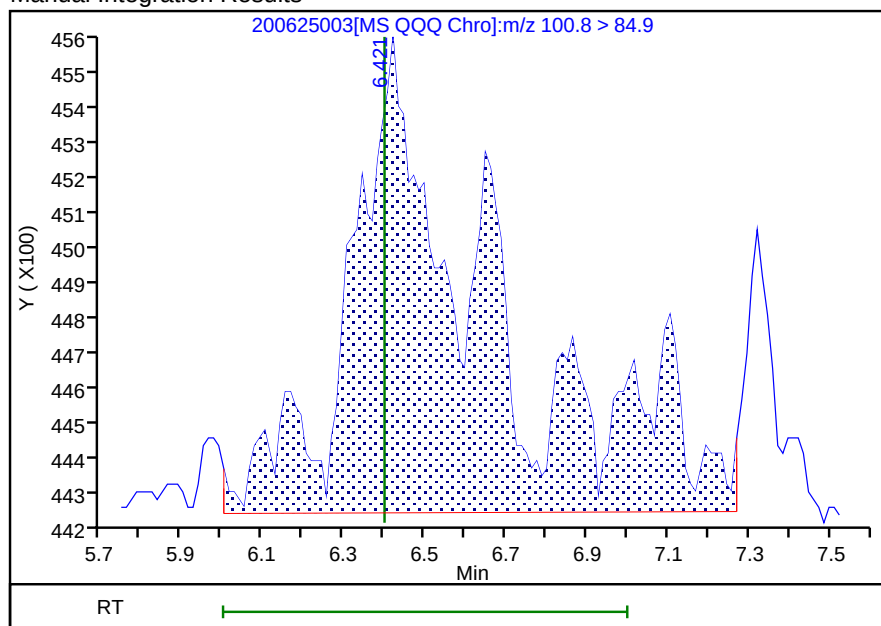
Expected RT: 6.40

Processing Integration Results



Manual Integration Results

RT: 6.42
Area: 29927
Amount: 0.100135
Amount Units: ug/l



Reviewer: taiw, 26-Jun-2020 14:56:02

Audit Action: Manually Integrated

Audit Reason: Baseline

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September 2020

Report Date: 26-Jun-2020 15:02:02

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC
Target Compound Quantitation Report

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625004.d
 Lims ID: STD2
 Client ID:
 Sample Type: IC Calib Level: 2
 Inject. Date: 25-Jun-2020 14:25:59 ALS Bottle#: 0 Worklist Smp#: 4
 Injection Vol: 4.0 mL Dil. Factor: 1.0000
 Sample Info: STD2, Sample
 Misc. Info.: 570-0023031-004
 Operator ID: Instrument ID: LCTQ2
 Sublist: chrom-Perchlorate_LCTQ2*sub3
 Method: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\Perchlorate_LCTQ2.m
 Limit Group: LCMS - 331.0
 Last Update: 26-Jun-2020 15:02:02 Calib Date: 25-Jun-2020 15:24:02
 Integrator: Picker
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d
 Column 1 : Dionex A521 (4.00 mm) Det: MS QQQ
 Process Host: CTX1058

First Level Reviewer: taiw

Date: 26-Jun-2020 14:42:27

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
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* 2 18-O Perchlorate

106.8 > 88.9	6.429	6.391	0.038		2357035	5.00		1847	
1 Perchlorate									M
98.8 > 82.9	6.400	6.400	0.0	0.995	766556	0.9829	Target=3.08	356	
100.8 > 84.9	6.395	6.400	-0.005	0.995	230154		3.33(2.31-3.85)	206	M

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

LCMS_LCS_S_00004	Amount Added: 10.00	Units: uL	
LCMS_ISTD_00002	Amount Added: 25.00	Units: uL	Run Reagent

Report Date: 26-Jun-2020 15:02:02

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625004.d

Injection Date: 25-Jun-2020 14:25:59

Instrument ID: LCTQ2

Lims ID: STD2

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#:

4

Injection Vol: 4.0 mL

Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

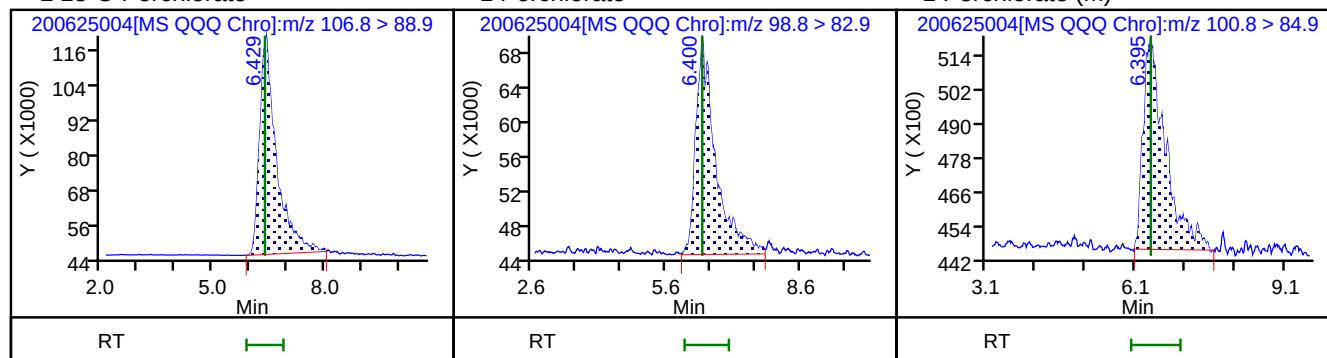
Limit Group:

LCMS - 331.0

* 2 18-O Perchlorate

1 Perchlorate

1 Perchlorate (M)



Report Date: 26-Jun-2020 15:02:02

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625004.d

Injection Date: 25-Jun-2020 14:25:59

Instrument ID: LCTQ2

Lims ID: STD2

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#: 4

Injection Vol: 4.0 mL

Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

Limit Group:

LCMS - 331.0

Column: Dionex A521 (4.00 mm)

Detector

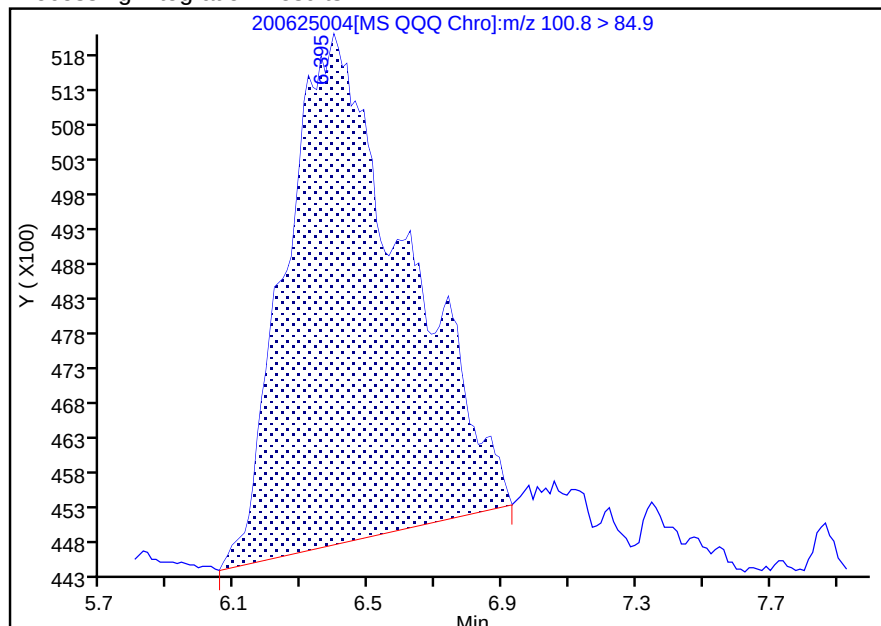
MS QQQ

1 Perchlorate, CAS: 14797-73-0

Signal: 2

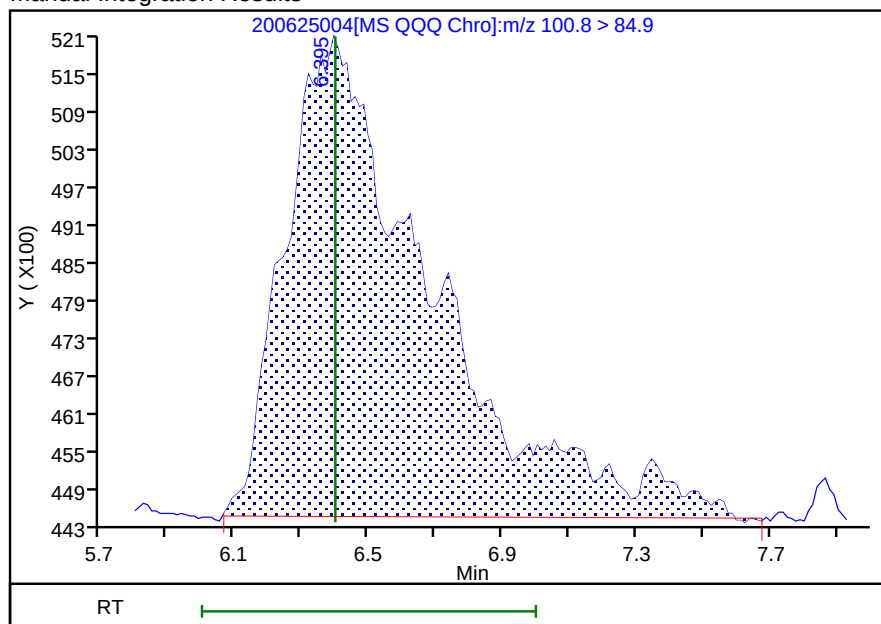
RT: 6.40
Area: 182077
Amount: 0.959353
Amount Units: ug/l

Processing Integration Results



RT: 6.40
Area: 230154
Amount: 0.982869
Amount Units: ug/l

Manual Integration Results



Reviewer: taiw, 26-Jun-2020 14:42:24

Audit Action: Manually Integrated

Audit Reason: Baseline

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September 2020

Kirtland AFB BFF
Quarterly Report - April-June 2020
SWMUs ST-106/SS-111

I-5-1606

Report Date: 26-Jun-2020 15:02:03

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC
Target Compound Quantitation Report

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625005.d
 Lims ID: STD3
 Client ID:
 Sample Type: IC Calib Level: 3
 Inject. Date: 25-Jun-2020 14:40:30 ALS Bottle#: 0 Worklist Smp#: 5
 Injection Vol: 4.0 mL Dil. Factor: 1.0000
 Sample Info: STD3, Sample
 Misc. Info.: 570-0023031-005
 Operator ID: Instrument ID: LCTQ2
 Sublist: chrom-Perchlorate_LCTQ2*sub3
 Method: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\Perchlorate_LCTQ2.m
 Limit Group: LCMS - 331.0
 Last Update: 26-Jun-2020 15:02:03 Calib Date: 25-Jun-2020 15:24:02
 Integrator: Picker
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d
 Column 1 : Dionex A521 (4.00 mm) Det: MS QQQ
 Process Host: CTX1058

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
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* 2 18-O Perchlorate

106.8 > 88.9	6.378	6.378	0.0		2569647	5.00		1515	
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1 Perchlorate

98.8 > 82.9	6.361	6.361	0.0	0.997	4318859	5.09	Target=3.08	1568	
100.8 > 84.9	6.408	6.361	0.047	1.005	1351575		3.20(2.31-3.85)	978	

Reagents:

LCMS_LCS_S_00004	Amount Added: 50.00	Units: uL	
LCMS_ISTD_00002	Amount Added: 25.00	Units: uL	Run Reagent

Report Date: 26-Jun-2020 15:02:03

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625005.d

Injection Date: 25-Jun-2020 14:40:30

Instrument ID: LCTQ2

Lims ID: STD3

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#:

5

Injection Vol: 4.0 mL

Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

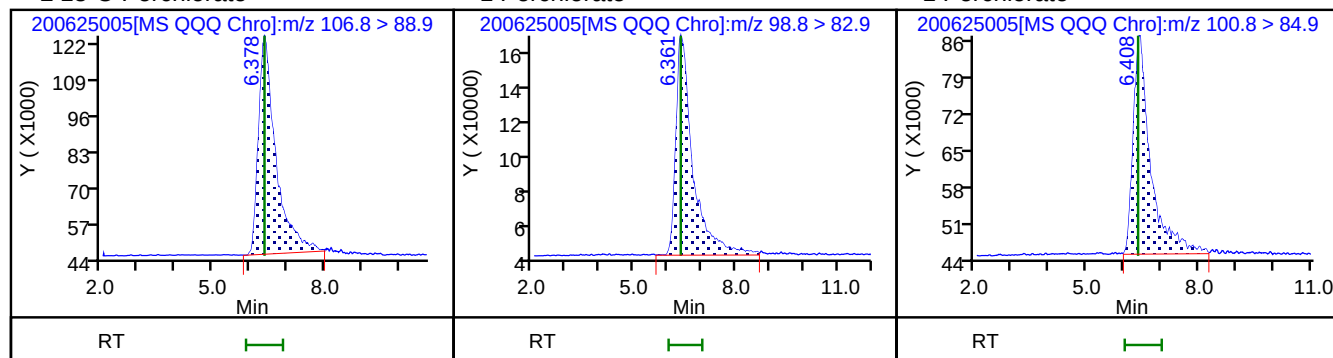
Limit Group:

LCMS - 331.0

* 2 18-O Perchlorate

1 Perchlorate

1 Perchlorate



QQQ Check Tune Report

Instrument Name	LC/TQ2
MS Model	G6430A
MS Instrument Serial	SG11077104
Software_Firmware Version	B.06.00.B6025.0, FW: A.00.07.32
Tune Date & Time	06:25:20 13:01:10
Data Path	C:\MassHunter\Tune\QQQ\G6430A\atunes.tune.xml
Ion Source	ESI
Ionization Mode	ESI
Tuned Resolution	All
Vacuum Pressure	1.84E+0[R]; 7.90E-6[H]

Source Parameters

Parameter	Value
Gas Temp	300
Gas Flow	6
Nebulizer	15
Capillary	4000

QQQ Check Tune Report

Negative Results

Analyzer: MS1 Polarity: Negative Width: Unit

m/z Expected	m/z	Tolerance	Delta	Result	FWHM Expected	FWHM	Tolerance	Delta	Result	Abundance
112.99	112.95	0.10	-0.04	Pass	0.70	0.65	0.14	-0.05	Pass	12754
302.00	302.01	0.10	0.01	Pass	0.70	0.73	0.14	0.03	Pass	19431
601.98	601.99	0.10	0.01	Pass	0.70	0.71	0.14	0.01	Pass	98058
1033.99	1034.00	0.10	0.01	Pass	0.70	0.72	0.14	0.02	Pass	29430
1333.97	1333.98	0.10	0.01	Pass	0.70	0.71	0.14	0.01	Pass	45030
1933.93	1933.90	0.10	-0.03	Pass	0.70	0.74	0.14	0.04	Pass	16158

Analyzer: MS2 Polarity: Negative Width: Unit

m/z Expected	m/z	Tolerance	Delta	Result	FWHM Expected	FWHM	Tolerance	Delta	Result	Abundance
112.99	113.00	0.10	0.01	Pass	0.70	0.70	0.14	0.00	Pass	15417
302.00	301.99	0.10	-0.01	Pass	0.70	0.70	0.14	0.00	Pass	24900
601.98	601.98	0.10	0.00	Pass	0.70	0.70	0.14	0.00	Pass	102636
1033.99	1033.99	0.10	0.00	Pass	0.70	0.70	0.14	0.00	Pass	40865
1333.97	1333.99	0.10	0.02	Pass	0.70	0.68	0.14	-0.02	Pass	60586
1933.93	1933.86	0.10	-0.07	Pass	0.70	0.73	0.14	0.03	Pass	26595

Analyzer: MS1 Polarity: Negative Width: Wide

m/z Expected	m/z	Tolerance	Delta	Result	FWHM Expected	FWHM	Tolerance	Delta	Result	Abundance
112.99	112.90	0.30	-0.09	Pass	1.20	1.09	0.60	-0.11	Pass	16766
302.00	301.93	0.30	-0.07	Pass	1.20	1.23	0.60	0.03	Pass	27667
601.98	601.93	0.30	-0.05	Pass	1.20	1.20	0.60	0.00	Pass	140227
1033.99	1033.89	0.30	-0.10	Pass	1.20	1.22	0.60	0.02	Pass	49888
1333.97	1333.89	0.30	-0.08	Pass	1.20	1.21	0.60	0.01	Pass	79835
1933.93	1933.87	0.30	-0.06	Pass	1.20	1.24	0.60	0.04	Pass	40159

Analyzer: MS2 Polarity: Negative Width: Wide

m/z Expected	m/z	Tolerance	Delta	Result	FWHM Expected	FWHM	Tolerance	Delta	Result	Abundance
112.99	113.00	0.30	0.01	Pass	1.20	1.17	0.60	-0.03	Pass	19533
302.00	301.96	0.30	-0.04	Pass	1.20	1.25	0.60	0.05	Pass	31400
601.98	601.92	0.30	-0.06	Pass	1.20	1.22	0.60	0.02	Pass	142760
1033.99	1033.89	0.30	-0.10	Pass	1.20	1.21	0.60	0.01	Pass	66325
1333.97	1333.88	0.30	-0.09	Pass	1.20	1.22	0.60	0.02	Pass	112495
1933.93	1933.85	0.30	-0.08	Pass	1.20	1.26	0.60	0.06	Pass	73702

Analyzer: MS1 Polarity: Negative Width: Widest

m/z Expected	m/z	Tolerance	Delta	Result	FWHM Expected	FWHM	Tolerance	Delta	Result	Abundance
112.99	112.90	0.50	-0.09	Pass	2.50	2.37	1.25	-0.13	Pass	22053
302.00	302.02	0.50	0.02	Pass	2.50	2.53	1.25	0.03	Pass	35637
601.98	602.05	0.50	0.07	Pass	2.50	2.44	1.25	-0.06	Pass	191683
1033.99	1034.03	0.50	0.04	Pass	2.50	2.41	1.25	-0.09	Pass	78022
1333.97	1334.04	0.50	0.07	Pass	2.50	2.37	1.25	-0.13	Pass	137113
1933.93	1934.03	0.50	0.10	Pass	2.50	2.37	1.25	-0.13	Pass	84620

Analyzer: MS2 Polarity: Negative Width: Widest

m/z Expected	m/z	Tolerance	Delta	Result	FWHM Expected	FWHM	Tolerance	Delta	Result	Abundance
112.99	112.91	0.50	-0.08	Pass	2.50	2.62	1.25	0.12	Pass	25813
302.00	301.92	0.50	-0.08	Pass	2.50	2.67	1.25	0.17	Pass	41804
601.98	601.94	0.50	-0.04	Pass	2.50	2.67	1.25	0.17	Pass	210001
1033.99	1033.96	0.50	-0.03	Pass	2.50	2.72	1.25	0.22	Pass	107742
1333.97	1333.99	0.50	0.02	Pass	2.50	2.68	1.25	0.18	Pass	206474
1933.93	1934.08	0.50	0.15	Pass	2.50	2.58	1.25	0.08	Pass	179819

Report Date: 26-Jun-2020 15:02:04

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC
Target Compound Quantitation Report

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625006.d
 Lims ID: STD4
 Client ID:
 Sample Type: ICIS Calib Level: 4
 Inject. Date: 25-Jun-2020 14:55:00 ALS Bottle#: 0 Worklist Smp#: 6
 Injection Vol: 4.0 mL Dil. Factor: 1.0000
 Sample Info: STD4, Sample
 Misc. Info.: 570-0023031-006
 Operator ID: Instrument ID: LCTQ2
 Sublist: chrom-Perchlorate_LCTQ2*sub3
 Method: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\Perchlorate_LCTQ2.m
 Limit Group: LCMS - 331.0
 Last Update: 26-Jun-2020 15:02:04 Calib Date: 25-Jun-2020 15:24:02
 Integrator: Picker
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d
 Column 1 : Dionex A521 (4.00 mm) Det: MS QQQ
 Process Host: CTX1058

First Level Reviewer: taiw

Date: 26-Jun-2020 14:48:06

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
1 Perchlorate									M
98.8 > 82.9	6.387	6.387	0.0	0.995	8387212	10.0	Target=3.08	2863	M
100.8 > 84.9	6.383	6.387	-0.004	0.995	2566303		3.27(2.31-3.85)	1567	
* 2 18-O Perchlorate									
106.8 > 88.9	6.416	6.416	0.0		2545072	5.00		1741	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

LCMS_LCS_S_00004 Amount Added: 100.00 Units: uL
 LCMS_ISTD_00002 Amount Added: 25.00 Units: uL Run Reagent

Report Date: 26-Jun-2020 15:02:04

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625006.d

Injection Date: 25-Jun-2020 14:55:00

Instrument ID: LCTQ2

Lims ID: STD4

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#:

6

Injection Vol: 4.0 mL

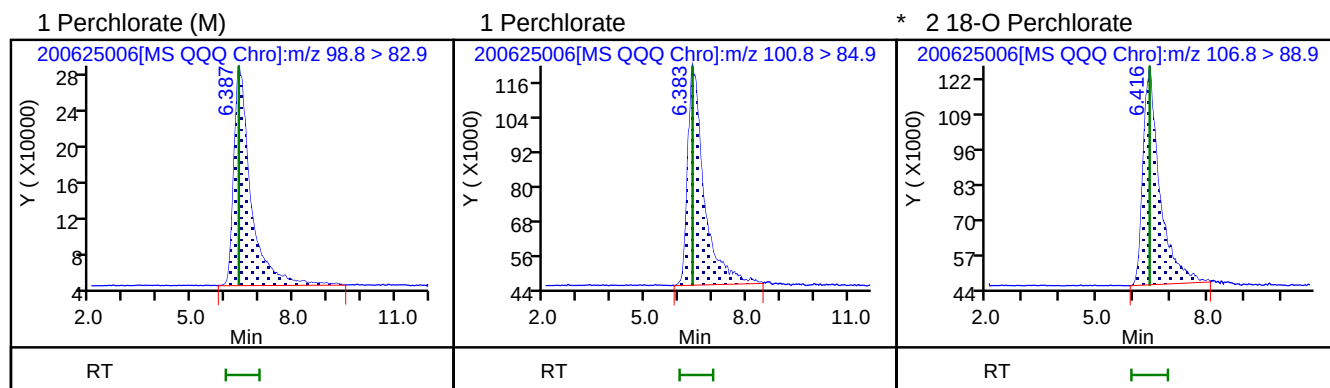
Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

Limit Group:

LCMS - 331.0



Report Date: 26-Jun-2020 15:02:04

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625006.d

Injection Date: 25-Jun-2020 14:55:00

Instrument ID: LCTQ2

Lims ID: STD4

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#: 6

Injection Vol: 4.0 mL

Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

Limit Group:

LCMS - 331.0

Column: Dionex A521 (4.00 mm)

Detector

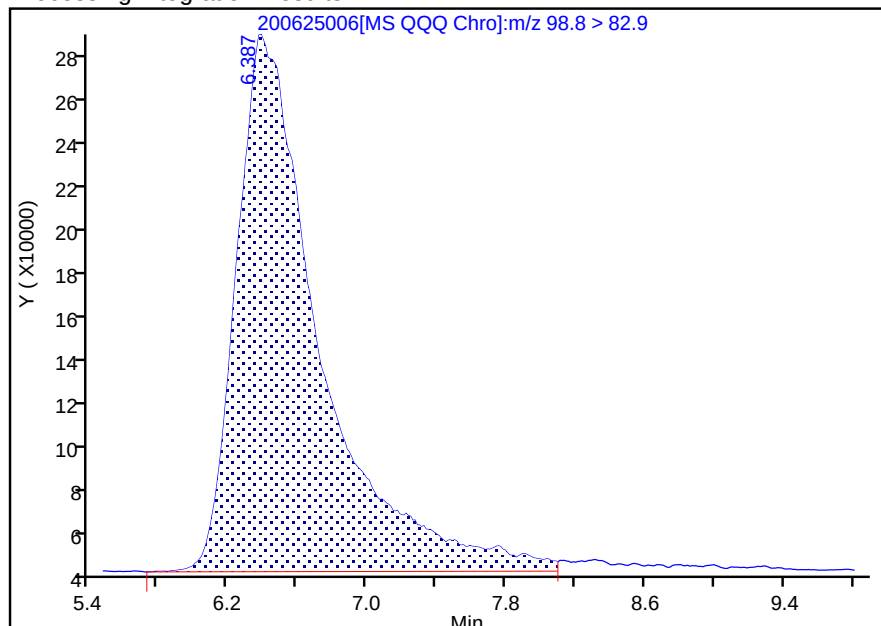
MS QQQ

1 Perchlorate, CAS: 14797-73-0

Signal: 1

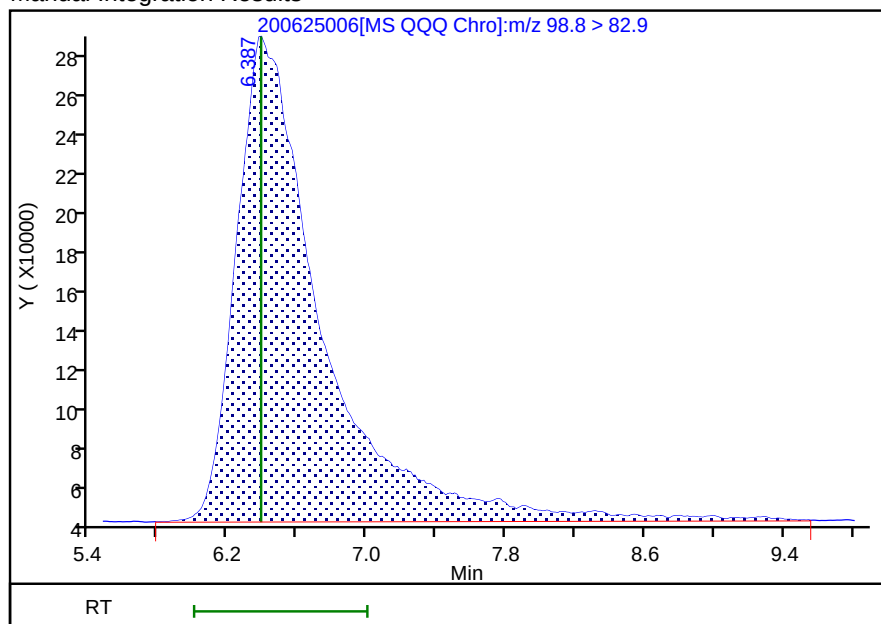
RT: 6.39
 Area: 8165174
 Amount: 9.537142
 Amount Units: ug/l

Processing Integration Results



RT: 6.39
 Area: 8387212
 Amount: 9.990633
 Amount Units: ug/l

Manual Integration Results



Reviewer: taiw, 26-Jun-2020 14:48:00

Audit Action: Manually Integrated

Audit Reason: Baseline

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September 2020

Report Date: 26-Jun-2020 15:02:05

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC
Target Compound Quantitation Report

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625007.d
 Lims ID: STD5
 Client ID:
 Sample Type: IC Calib Level: 5
 Inject. Date: 25-Jun-2020 15:09:32 ALS Bottle#: 0 Worklist Smp#: 7
 Injection Vol: 4.0 mL Dil. Factor: 1.0000
 Sample Info: STD5, Sample
 Misc. Info.: 570-0023031-007
 Operator ID: Instrument ID: LCTQ2
 Sublist: chrom-Perchlorate_LCTQ2*sub3
 Method: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\Perchlorate_LCTQ2.m
 Limit Group: LCMS - 331.0
 Last Update: 26-Jun-2020 15:02:05 Calib Date: 25-Jun-2020 15:24:02
 Integrator: Picker
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d
 Column 1 : Dionex A521 (4.00 mm) Det: MS QQQ
 Process Host: CTX1058

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
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1 Perchlorate

98.8 > 82.9	6.387	6.387	0.0	0.997	40956140	49.7	Target=3.08	10293	
100.8 > 84.9	6.395	6.387	0.008	0.999	12783260		3.20(2.31-3.85)	4637	

* 2 18-O Perchlorate

106.8 > 88.9	6.404	6.416	-0.012		2497659	5.00		1383	
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Reagents:

LCMS_LCS_S_00004	Amount Added: 500.00	Units: uL	
LCMS_ISTD_00002	Amount Added: 25.00	Units: uL	Run Reagent

Report Date: 26-Jun-2020 15:02:05

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625007.d

Injection Date: 25-Jun-2020 15:09:32

Instrument ID: LCTQ2

Lims ID: STD5

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#:

7

Injection Vol: 4.0 mL

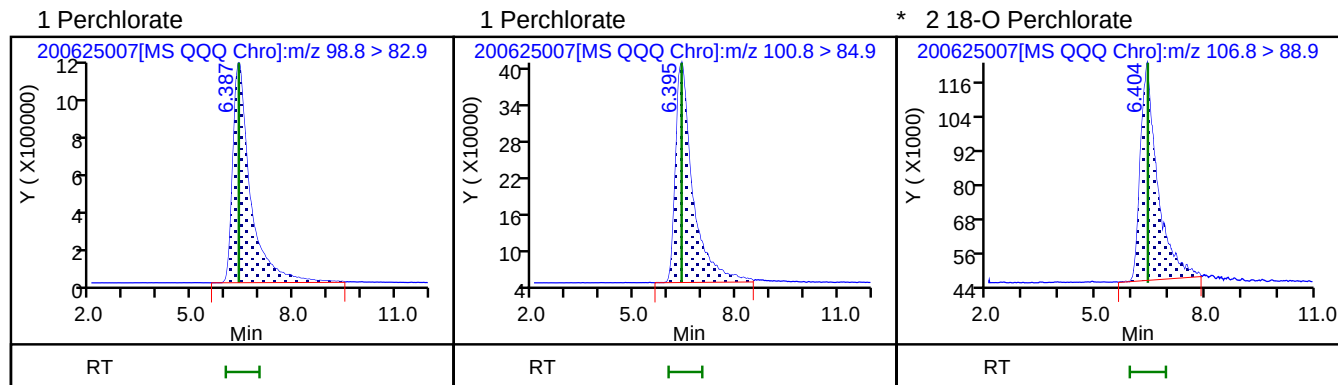
Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

Limit Group:

LCMS - 331.0



Report Date: 26-Jun-2020 15:02:06

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC
Target Compound Quantitation Report

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d
 Lims ID: STD6
 Client ID:
 Sample Type: IC Calib Level: 6
 Inject. Date: 25-Jun-2020 15:24:02 ALS Bottle#: 0 Worklist Smp#: 8
 Injection Vol: 4.0 mL Dil. Factor: 1.0000
 Sample Info: STD6, Sample
 Misc. Info.: 570-0023031-008
 Operator ID: Instrument ID: LCTQ2
 Sublist: chrom-Perchlorate_LCTQ2*sub3
 Method: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\Perchlorate_LCTQ2.m
 Limit Group: LCMS - 331.0
 Last Update: 26-Jun-2020 15:02:06 Calib Date: 25-Jun-2020 15:24:02
 Integrator: Picker
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d
 Column 1 : Dionex A521 (4.00 mm) Det: MS QQQ
 Process Host: CTX1058

First Level Reviewer: taiw

Date: 26-Jun-2020 14:48:30

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
1 Perchlorate									M
98.8 > 82.9	6.425	6.387	0.038	1.007	60674460	75.3	Target=3.08	15242	M
100.8 > 84.9	6.408	6.387	0.021	1.005	19079353		3.18(2.31-3.85)	5501	
* 2 18-O Perchlorate									
106.8 > 88.9	6.378	6.416	-0.038		2444798	5.00		1362	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

LCMS_LCS_S_00004	Amount Added: 750.00	Units: uL	
LCMS_ISTD_00002	Amount Added: 25.00	Units: uL	Run Reagent

Report Date: 26-Jun-2020 15:02:06

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d

Injection Date: 25-Jun-2020 15:24:02

Instrument ID: LCTQ2

Lims ID: STD6

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#:

8

Injection Vol: 4.0 mL

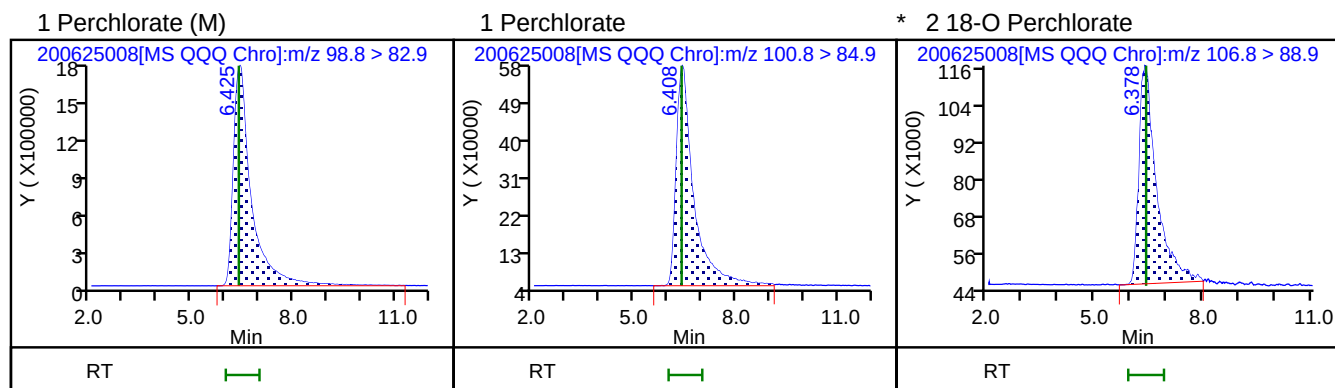
Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

Limit Group:

LCMS - 331.0



Report Date: 26-Jun-2020 15:02:06

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d

Injection Date: 25-Jun-2020 15:24:02

Instrument ID: LCTQ2

Lims ID: STD6

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#: 8

Injection Vol: 4.0 mL

Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

Limit Group:

LCMS - 331.0

Column: Dionex A521 (4.00 mm)

Detector

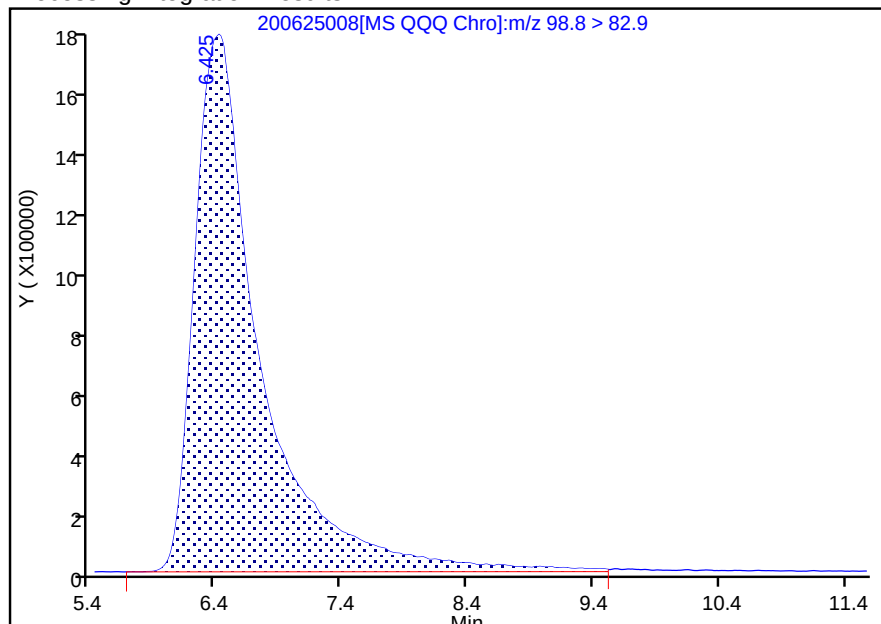
MS QQQ

1 Perchlorate, CAS: 14797-73-0

Signal: 1

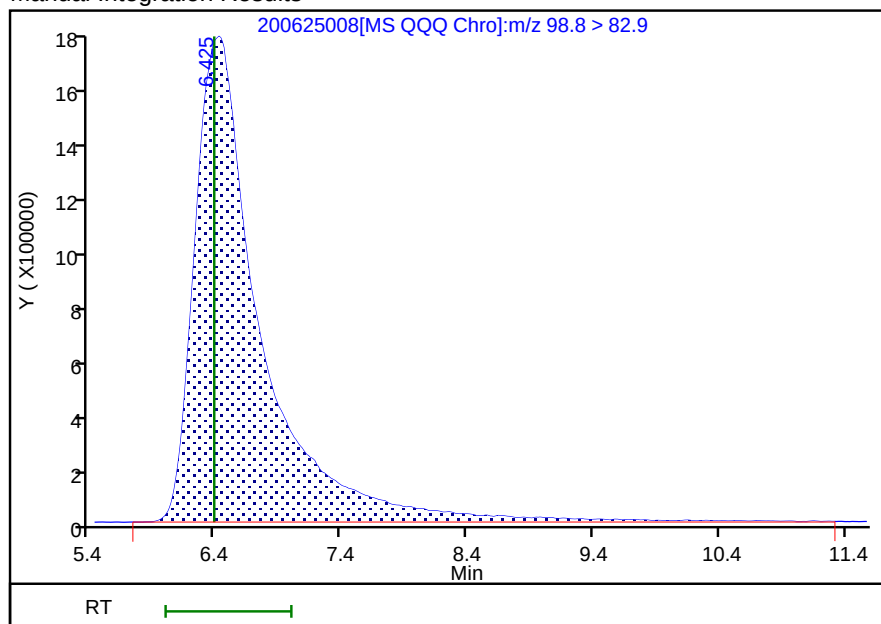
RT: 6.42
Area: 60284764
Amount: 72.986792
Amount Units: ug/l

Processing Integration Results



RT: 6.42
Area: 60674460
Amount: 75.260498
Amount Units: ug/l

Manual Integration Results



Reviewer: taiw, 26-Jun-2020 14:48:24

Audit Action: Manually Integrated

Audit Reason: Baseline

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Kirtland AFB BFF
Quarterly Report - April-June 2020
SWMUs ST-106/SS-111

I-5-1618

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Calscience Job No.: 440-268223-1
SDG No.: Kirtland AFB New Mexico
Lab Sample ID: ICV 570-77753/9 Calibration Date: 06/25/2020 15:38
Instrument ID: LCTQ2 Calib Start Date: 06/25/2020 14:11
GC Column: Dion-A521 ID: 4.00 (mm) Calib End Date: 06/25/2020 15:24
Lab File ID: 200625009.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Lin2		1.674		10.1	10.0	1.5	15.0

Report Date: 26-Jun-2020 15:02:07

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC
Target Compound Quantitation Report

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625009.d
 Lims ID: ICV
 Client ID:
 Sample Type: ICV
 Inject. Date: 25-Jun-2020 15:38:33 ALS Bottle#: 0 Worklist Smp#: 9
 Injection Vol: 4.0 mL Dil. Factor: 1.0000
 Sample Info: ICV, Sample
 Misc. Info.: 570-0023031-009
 Operator ID: Instrument ID: LCTQ2
 Sublist:
 Method: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\Perchlorate_LCTQ2.m
 Limit Group: LCMS - 331.0
 Last Update: 26-Jun-2020 15:02:07 Calib Date: 25-Jun-2020 15:24:02
 Integrator: Picker
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d
 Column 1 : Dionex A521 (4.00 mm) Det: MS QQQ
 Process Host: CTX1058

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
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1 Perchlorate

98.8 > 82.9	6.400	6.387	0.013	1.007	8925886	10.1	Target=3.08	2256	
100.8 > 84.9	6.433	6.387	0.046	1.013	2787895		3.20(2.31-3.85)	1297	

* 2 18-O Perchlorate

106.8 > 88.9	6.353	6.416	-0.063		2666563	5.00		1578	
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Reagents:

IC_QCS_CIO4_00002	Amount Added: 1.00	Units: uL	
LCMS_ISTD_00002	Amount Added: 25.00	Units: uL	Run Reagent

Report Date: 26-Jun-2020 15:02:07

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625009.d

Injection Date: 25-Jun-2020 15:38:33

Instrument ID: LCTQ2

Lims ID: ICV

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#:

9

Injection Vol: 4.0 mL

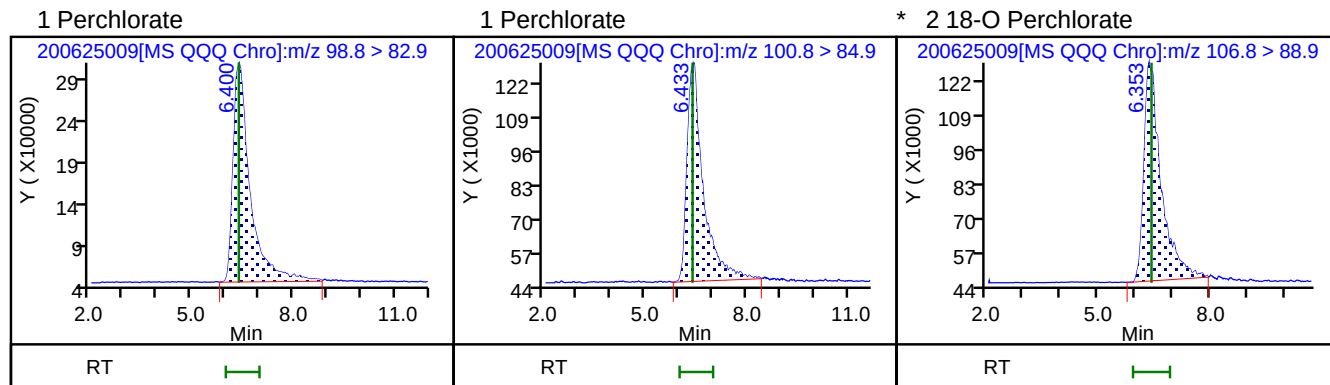
Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

Limit Group:

LCMS - 331.0



FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Calscience Job No.: 440-268223-1
SDG No.: Kirtland AFB New Mexico
Lab Sample ID: CCVL 570-79806/2 Calibration Date: 07/07/2020 14:45
Instrument ID: LCTQ2 Calib Start Date: 06/25/2020 14:11
GC Column: Dion-A521 ID: 4.00 (mm) Calib End Date: 06/25/2020 15:24
Lab File ID: 200707002.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Lin2		1.794		0.105	0.100	5.4	50.0

Report Date: 08-Jul-2020 12:02:18

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC
Target Compound Quantitation Report

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\200707002.d
 Lims ID: CCVL
 Client ID:
 Sample Type: CCVL
 Inject. Date: 07-Jul-2020 14:45:20 ALS Bottle#: 0 Worklist Smp#: 2
 Injection Vol: 4.0 mL Dil. Factor: 1.0000
 Sample Info: CCVL, Sample
 Misc. Info.: 570-0023679-002
 Operator ID: Instrument ID: LCTQ2
 Sublist: chrom-Perchlorate_LCTQ2*sub3
 Method: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\Perchlorate_LCTQ2.m
 Limit Group: LCMS - 331.0
 Last Update: 08-Jul-2020 12:02:18 Calib Date: 25-Jun-2020 15:24:02
 Integrator: Picker
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d
 Column 1 : Dionex A521 (4.00 mm) Det: MS QQQ
 Process Host: CTX1028

First Level Reviewer: mchaler

Date: 08-Jul-2020 11:55:34

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
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* 2 18-O Perchlorate

106.8 > 88.9 6.391 6.353 0.038 2562012 5.00 1748

1 Perchlorate

98.8 > 82.9	6.400	6.361	0.039	1.001	91944	0.1054	Target=3.08	78.0	Ma
100.8 > 84.9	6.256	6.361	-0.105	0.979	26407		3.48(2.31-3.85)	44.7	M

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

LCMS_CCVL_00005

Amount Added: 10.00

Units: mL

LCMS_ISTD_00002

Amount Added: 25.00

Units: uL

Run Reagent

Report Date: 08-Jul-2020 12:02:18

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\200707002.d

Injection Date: 07-Jul-2020 14:45:20

Instrument ID: LCTQ2

Lims ID: CCVL

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#:

2

Injection Vol: 4.0 mL

Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

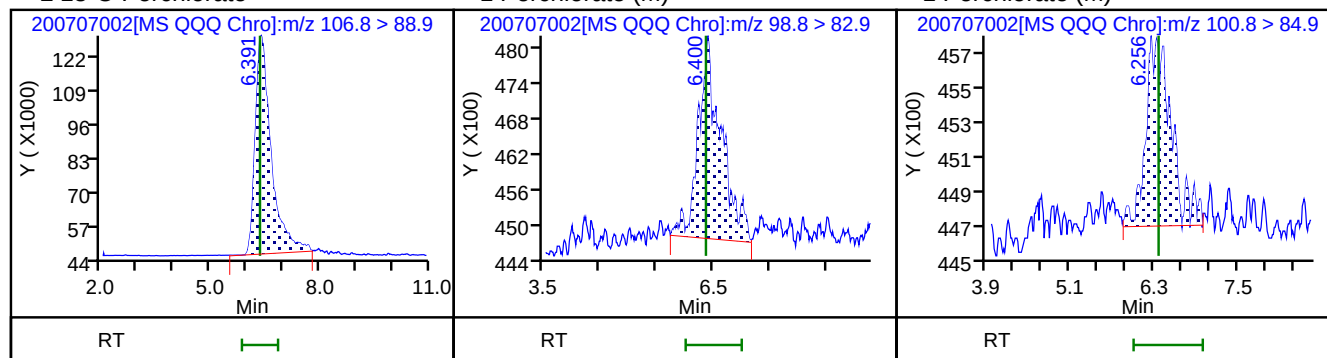
Limit Group:

LCMS - 331.0

* 2 18-O Perchlorate

1 Perchlorate (M)

1 Perchlorate (M)



Report Date: 08-Jul-2020 12:02:18

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\200707002.d
 Injection Date: 07-Jul-2020 14:45:20 Instrument ID: LCTQ2
 Lims ID: CCVL
 Client ID:
 Operator ID:
 Injection Vol: 4.0 mL
 Method: Perchlorate_LCTQ2
 Column: Dionex A521 (4.00 mm)

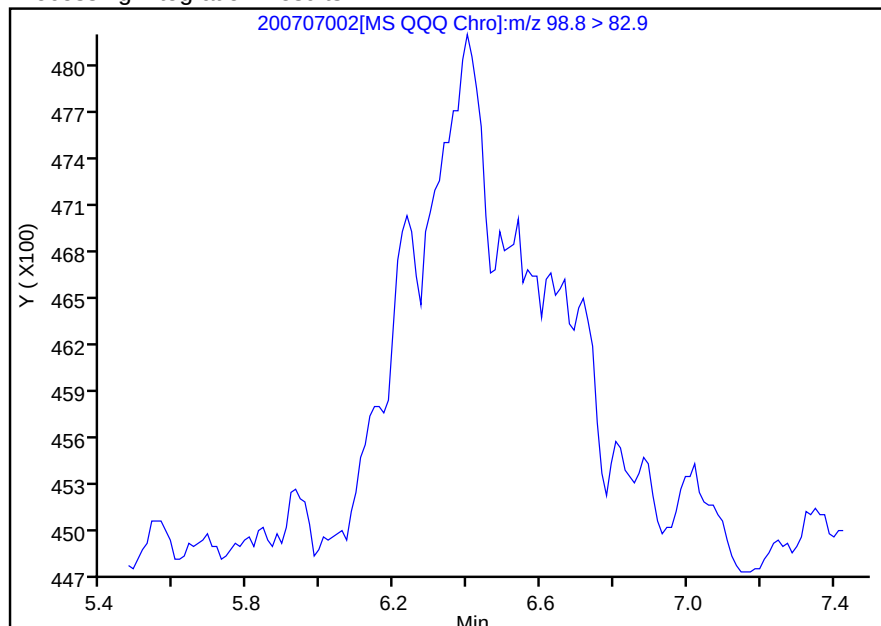
ALS Bottle#: 0 Worklist Smp#: 2
 Dil. Factor: 1.0000
 Limit Group: LCMS - 331.0
 Detector: MS QQQ

1 Perchlorate, CAS: 14797-73-0

Signal: 1

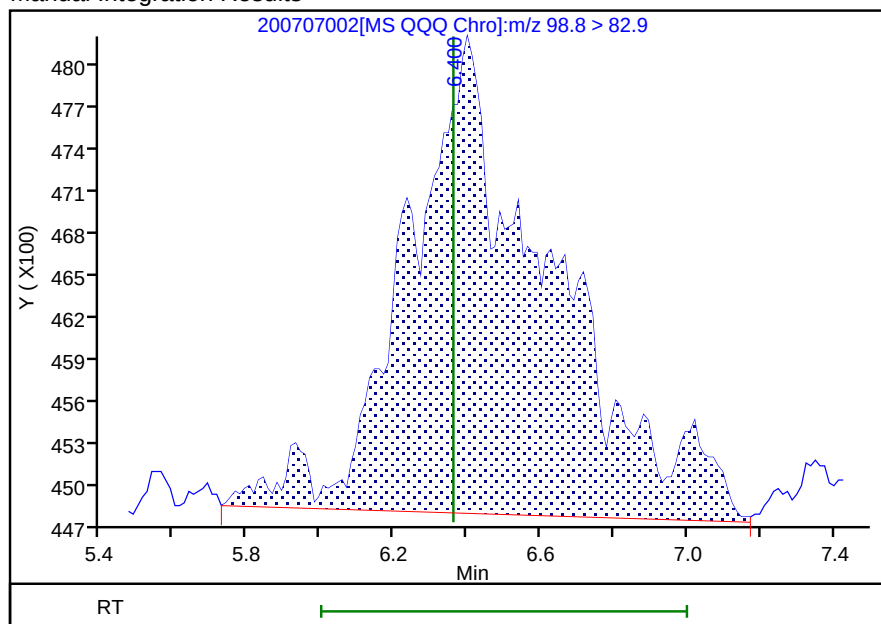
Not Detected
 Expected RT: 6.36

Processing Integration Results



Manual Integration Results

RT: 6.40
 Area: 91944
 Amount: 0.105420
 Amount Units: ug/l



Reviewer: mchaler, 08-Jul-2020 11:55:22

Audit Action: Assigned Compound ID

Audit Reason: Peak assignment corrected

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Report Date: 08-Jul-2020 12:02:18

Chrom Revision: 2.3 21-Jun-2020 18:30:46
Manual Integration/User Assign Peak Report

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\200707002.d
 Injection Date: 07-Jul-2020 14:45:20 Instrument ID: LCTQ2
 Lims ID: CCVL
 Client ID:
 Operator ID:
 Injection Vol: 4.0 mL
 Method: Perchlorate_LCTQ2
 Column: Dionex A521 (4.00 mm)

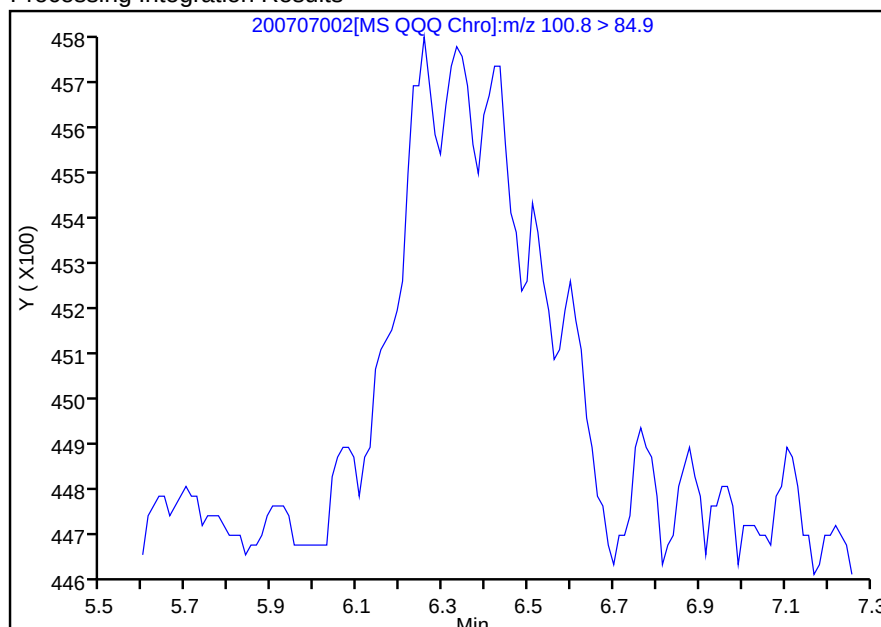
ALS Bottle#: 0 Worklist Smp#: 2
 Dil. Factor: 1.0000
 Limit Group: LCMS - 331.0
 Detector: MS QQQ

1 Perchlorate, CAS: 14797-73-0

Signal: 2

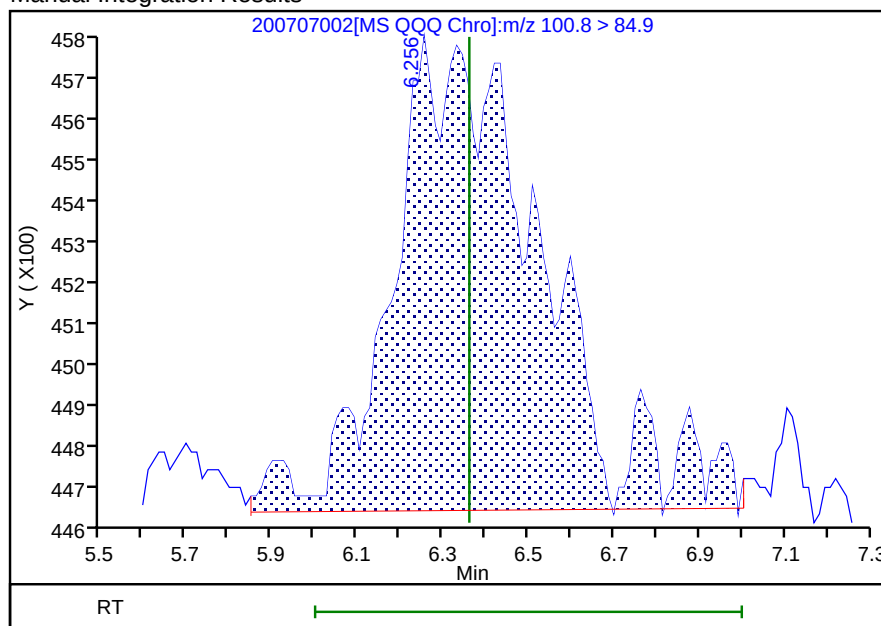
Not Detected
 Expected RT: 6.36

Processing Integration Results



Manual Integration Results

RT: 6.26
 Area: 26407
 Amount: 0.105420
 Amount Units: ug/l



Reviewer: mchaler, 08-Jul-2020 11:55:29

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

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FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Calscience Job No.: 440-268223-1
SDG No.: Kirtland AFB New Mexico
Lab Sample ID: CCVIS 570-79806/3 Calibration Date: 07/07/2020 14:59
Instrument ID: LCTQ2 Calib Start Date: 06/25/2020 14:11
GC Column: Dion-A521 ID: 4.00 (mm) Calib End Date: 06/25/2020 15:24
Lab File ID: 200707003.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Lin2		1.607		4.87	5.00	-2.6	15.0

QQQ Check Tune Report

Instrument Name	LC/TQ2
MS Model	G6430A
MS Instrument Serial	SG11077104
Software_Firmware Version	B.06.00.B6025.0, FW: A.00.07.32
Tune Date & Time	07:07:20 13:40:20
Data Path	C:\MassHunter\Tune\QQQ\G6430A\atunes.tune.xml
Ion Source	ESI
Ionization Mode	ESI
Tuned Resolution	All
Vacuum Pressure	1.87E+0[R]; 7.90E-6[H]

Source Parameters

Parameter	Value
Gas Temp	300
Gas Flow	6
Nebulizer	15
Capillary	4000

QQQ Check Tune Report

Negative Results

Analyzer: MS1 Polarity: Negative Width: Unit

m/z Expected	m/z	Tolerance	Delta	Result	FWHM Expected	FWHM	Tolerance	Delta	Result	Abundance
112.99	112.95	0.10	-0.04	Pass	0.70	0.63	0.14	-0.07	Pass	12675
302.00	302.01	0.10	0.01	Pass	0.70	0.71	0.14	0.01	Pass	20885
601.98	601.98	0.10	0.00	Pass	0.70	0.71	0.14	0.01	Pass	103066
1033.99	1033.98	0.10	-0.01	Pass	0.70	0.71	0.14	0.01	Pass	34455
1333.97	1333.93	0.10	-0.04	Pass	0.70	0.72	0.14	0.02	Pass	48500
1933.93	1933.85	0.10	-0.08	Pass	0.70	0.74	0.14	0.04	Pass	18509

Analyzer: MS2 Polarity: Negative Width: Unit

m/z Expected	m/z	Tolerance	Delta	Result	FWHM Expected	FWHM	Tolerance	Delta	Result	Abundance
112.99	113.00	0.10	0.01	Pass	0.70	0.70	0.14	0.00	Pass	17091
302.00	301.99	0.10	-0.01	Pass	0.70	0.70	0.14	0.00	Pass	26130
601.98	601.98	0.10	0.00	Pass	0.70	0.71	0.14	0.01	Pass	107449
1033.99	1033.99	0.10	0.00	Pass	0.70	0.69	0.14	-0.01	Pass	44895
1333.97	1333.96	0.10	-0.01	Pass	0.70	0.68	0.14	-0.02	Pass	63352
1933.93	1933.83	0.10	-0.10	Pass	0.70	0.72	0.14	0.02	Pass	28344

Analyzer: MS1 Polarity: Negative Width: Wide

m/z Expected	m/z	Tolerance	Delta	Result	FWHM Expected	FWHM	Tolerance	Delta	Result	Abundance
112.99	112.90	0.30	-0.09	Pass	1.20	1.08	0.60	-0.12	Pass	17314
302.00	301.94	0.30	-0.06	Pass	1.20	1.22	0.60	0.02	Pass	28456
601.98	601.90	0.30	-0.08	Pass	1.20	1.20	0.60	0.00	Pass	152309
1033.99	1033.87	0.30	-0.12	Pass	1.20	1.22	0.60	0.02	Pass	56905
1333.97	1333.86	0.30	-0.11	Pass	1.20	1.21	0.60	0.01	Pass	86909
1933.93	1933.83	0.30	-0.10	Pass	1.20	1.23	0.60	0.03	Pass	47365

Analyzer: MS2 Polarity: Negative Width: Wide

m/z Expected	m/z	Tolerance	Delta	Result	FWHM Expected	FWHM	Tolerance	Delta	Result	Abundance
112.99	113.01	0.30	0.02	Pass	1.20	1.18	0.60	-0.02	Pass	21446
302.00	301.96	0.30	-0.04	Pass	1.20	1.24	0.60	0.04	Pass	33162
601.98	601.92	0.30	-0.06	Pass	1.20	1.21	0.60	0.01	Pass	153780
1033.99	1033.89	0.30	-0.10	Pass	1.20	1.22	0.60	0.02	Pass	70623
1333.97	1333.87	0.30	-0.10	Pass	1.20	1.22	0.60	0.02	Pass	115055
1933.93	1933.83	0.30	-0.10	Pass	1.20	1.26	0.60	0.06	Pass	77436

Analyzer: MS1 Polarity: Negative Width: Widest

m/z Expected	m/z	Tolerance	Delta	Result	FWHM Expected	FWHM	Tolerance	Delta	Result	Abundance
112.99	112.89	0.50	-0.10	Pass	2.50	2.36	1.25	-0.14	Pass	23889
302.00	302.02	0.50	0.02	Pass	2.50	2.51	1.25	0.01	Pass	37088
601.98	602.03	0.50	0.05	Pass	2.50	2.43	1.25	-0.07	Pass	208069
1033.99	1034.01	0.50	0.02	Pass	2.50	2.43	1.25	-0.07	Pass	89933
1333.97	1334.00	0.50	0.03	Pass	2.50	2.40	1.25	-0.10	Pass	147779
1933.93	1933.98	0.50	0.05	Pass	2.50	2.40	1.25	-0.10	Pass	97160

Analyzer: MS2 Polarity: Negative Width: Widest

m/z Expected	m/z	Tolerance	Delta	Result	FWHM Expected	FWHM	Tolerance	Delta	Result	Abundance
112.99	112.91	0.50	-0.08	Pass	2.50	2.67	1.25	0.17	Pass	29363
302.00	301.91	0.50	-0.09	Pass	2.50	2.71	1.25	0.21	Pass	43921
601.98	601.94	0.50	-0.04	Pass	2.50	2.67	1.25	0.17	Pass	221939
1033.99	1033.96	0.50	-0.03	Pass	2.50	2.72	1.25	0.22	Pass	116277
1333.97	1333.98	0.50	0.01	Pass	2.50	2.70	1.25	0.20	Pass	213258
1933.93	1934.07	0.50	0.14	Pass	2.50	2.60	1.25	0.10	Pass	190577

Report Date: 08-Jul-2020 12:02:19

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC
Target Compound Quantitation Report

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\200707003.d
 Lims ID: CCVIS
 Client ID:
 Sample Type: CCVIS
 Inject. Date: 07-Jul-2020 14:59:52 ALS Bottle#: 0 Worklist Smp#: 3
 Injection Vol: 4.0 mL Dil. Factor: 1.0000
 Sample Info: CCVIS, Sample
 Misc. Info.: 570-0023679-003
 Operator ID: Instrument ID: LCTQ2
 Sublist: chrom-Perchlorate_LCTQ2*sub3
 Method: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\Perchlorate_LCTQ2.m
 Limit Group: LCMS - 331.0
 Last Update: 08-Jul-2020 12:02:19 Calib Date: 25-Jun-2020 15:24:02
 Integrator: Picker
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d
 Column 1 : Dionex A521 (4.00 mm) Det: MS QQQ
 Process Host: CTX1028

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
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* 2 18-O Perchlorate

106.8 > 88.9	6.366	6.366	0.0		2841032	5.00		2134	
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1 Perchlorate

98.8 > 82.9	6.374	6.374	0.0	1.001	4564141	4.87	Target=3.08	2206	
100.8 > 84.9	6.383	6.374	0.009	1.003	1431008		3.19(2.31-3.85)	1350	

Reagents:

LCMS_CCV_5_00003	Amount Added: 10.00	Units: mL	
LCMS_ISTD_00002	Amount Added: 25.00	Units: uL	Run Reagent

Report Date: 08-Jul-2020 12:02:19

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\200707003.d

Injection Date: 07-Jul-2020 14:59:52

Instrument ID: LCTQ2

Lims ID: CCVIS

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#:

3

Injection Vol: 4.0 mL

Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

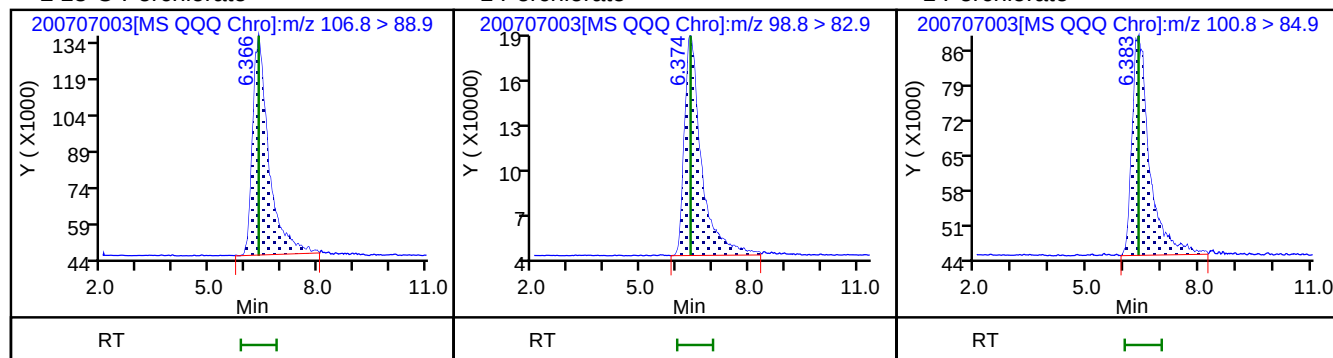
Limit Group:

LCMS - 331.0

* 2 18-O Perchlorate

1 Perchlorate

1 Perchlorate



FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Calscience Job No.: 440-268223-1
SDG No.: Kirtland AFB New Mexico
Lab Sample ID: CCV 570-79806/19 Calibration Date: 07/07/2020 18:51
Instrument ID: LCTQ2 Calib Start Date: 06/25/2020 14:11
GC Column: Dion-A521 ID: 4.00 (mm) Calib End Date: 06/25/2020 15:24
Lab File ID: 200707019.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Lin2		1.597		9.68	10.0	-3.2	15.0

Report Date: 08-Jul-2020 12:25:59

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC
Target Compound Quantitation Report

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\200707019.d
 Lims ID: ccv
 Client ID:
 Sample Type: CCV
 Inject. Date: 07-Jul-2020 18:51:54 ALS Bottle#: 0 Worklist Smp#: 19
 Injection Vol: 4.0 mL Dil. Factor: 1.0000
 Sample Info: CCV, Sample
 Misc. Info.: 570-0023679-019
 Operator ID: Instrument ID: LCTQ2
 Sublist: chrom-Perchlorate_LCTQ2*sub3
 Method: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\Perchlorate_LCTQ2.m
 Limit Group: LCMS - 331.0
 Last Update: 08-Jul-2020 12:25:59 Calib Date: 25-Jun-2020 15:24:02
 Integrator: Picker
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d
 Column 1 : Dionex A521 (4.00 mm) Det: MS QQQ
 Process Host: CTX1028

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
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* 2 18-O Perchlorate

106.8 > 88.9	6.353	6.353	0.0		3030534	5.00		2573	
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1 Perchlorate

98.8 > 82.9	6.361	6.361	0.0	1.001	9681259	9.68	Target=3.08	3560	
100.8 > 84.9	6.345	6.361	-0.016	0.999	3118795		3.10(2.31-3.85)	2441	

Reagents:

LCMS_CCV_10_00004

Amount Added: 10.00

Units: mL

LCMS_ISTD_00002

Amount Added: 25.00

Units: uL

Run Reagent

Report Date: 08-Jul-2020 12:25:59

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\200707019.d

Injection Date: 07-Jul-2020 18:51:54

Instrument ID: LCTQ2

Lims ID: ccv

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#:

19

Injection Vol: 4.0 mL

Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

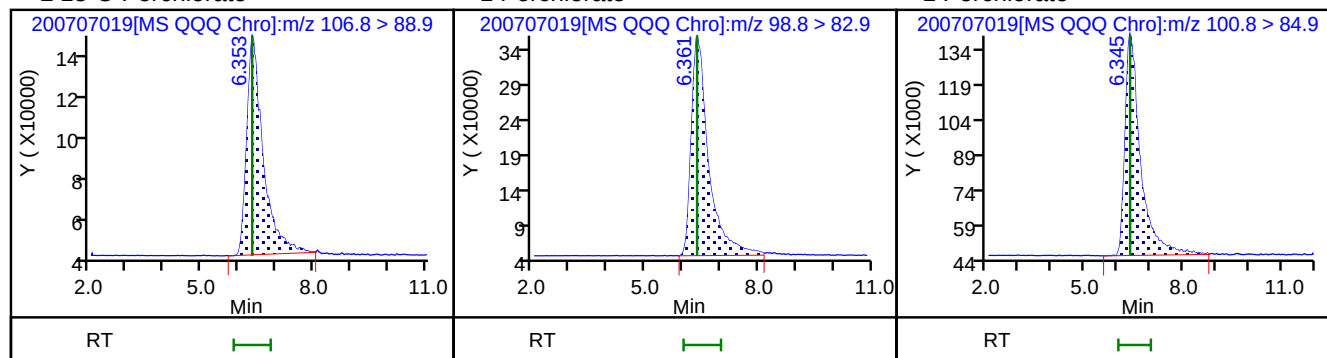
Limit Group:

LCMS - 331.0

* 2 18-O Perchlorate

1 Perchlorate

1 Perchlorate



FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Calscience Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: _____ Lab Sample ID: MB 570-79806/6
 Matrix: Water Lab File ID: 200707006.d
 Analysis Method: 331.0 Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 1.925 (mL) Date Analyzed: 07/07/2020 15:31
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 4 (mL) GC Column: Dion-A521 ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 79806 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	ND		0.10	0.016

Report Date: 08-Jul-2020 12:02:21

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC
Target Compound Quantitation Report

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\200707006.d
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 07-Jul-2020 15:31:21 ALS Bottle#: 0 Worklist Smp#: 6
 Injection Vol: 4.0 mL Dil. Factor: 1.0000
 Sample Info: MB, Sample
 Misc. Info.: 570-0023679-006
 Operator ID: Instrument ID: LCTQ2
 Method: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\Perchlorate_LCTQ2.m
 Limit Group: LCMS - 331.0
 Last Update: 08-Jul-2020 12:02:19 Calib Date: 25-Jun-2020 15:24:02
 Integrator: Picker
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d
 Column 1 : Dionex A521 (4.00 mm) Det: MS QQQ
 Process Host: CTX1028

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
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* 2 18-O Perchlorate

106.8 > 88.9 6.404 6.366 0.038 3015050 5.00 2250

Reagents:

LCMS_ISTD_00002

Amount Added: 25.00

Units: uL

Run Reagent

Report Date: 08-Jul-2020 12:02:21

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\200707006.d

Injection Date: 07-Jul-2020 15:31:21

Instrument ID: LCTQ2

Lims ID: MB

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#:

6

Injection Vol: 4.0 mL

Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

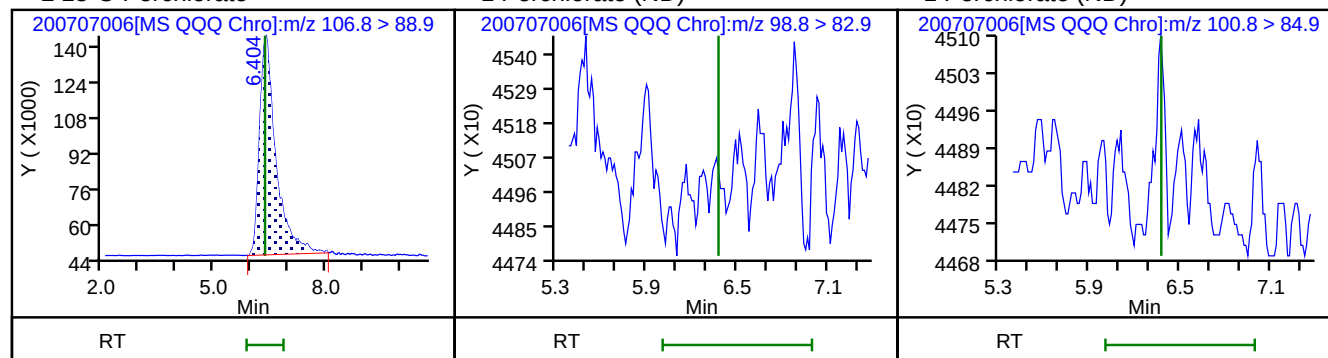
Limit Group:

LCMS - 331.0

* 2 18-O Perchlorate

1 Perchlorate (ND)

1 Perchlorate (ND)



FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Calscience Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: _____ Lab Sample ID: CCB 570-79806/4
 Matrix: Water Lab File ID: 200707004.d
 Analysis Method: 331.0 Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 1.925 (mL) Date Analyzed: 07/07/2020 15:14
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 4 (mL) GC Column: Dion-A521 ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 79806 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	ND		0.10	0.016

Report Date: 08-Jul-2020 12:02:20

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC
Target Compound Quantitation Report

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\200707004.d
 Lims ID: CCB
 Client ID:
 Sample Type: CCB
 Inject. Date: 07-Jul-2020 15:14:21 ALS Bottle#: 0 Worklist Smp#: 4
 Injection Vol: 4.0 mL Dil. Factor: 1.0000
 Sample Info: CCB, Sample
 Misc. Info.: 570-0023679-004
 Operator ID: Instrument ID: LCTQ2
 Method: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\Perchlorate_LCTQ2.m
 Limit Group: LCMS - 331.0
 Last Update: 08-Jul-2020 12:02:19 Calib Date: 25-Jun-2020 15:24:02
 Integrator: Picker
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d
 Column 1 : Dionex A521 (4.00 mm) Det: MS QQQ
 Process Host: CTX1028

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
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* 2 18-O Perchlorate

106.8 > 88.9 6.378 6.366 0.012 2825919 5.00 1839

Reagents:

LCMS_ISTD_00002 Amount Added: 25.00 Units: uL Run Reagent

Report Date: 08-Jul-2020 12:02:20

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\200707004.d

Injection Date: 07-Jul-2020 15:14:21

Instrument ID: LCTQ2

Lims ID: CCB

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#:

4

Injection Vol: 4.0 mL

Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

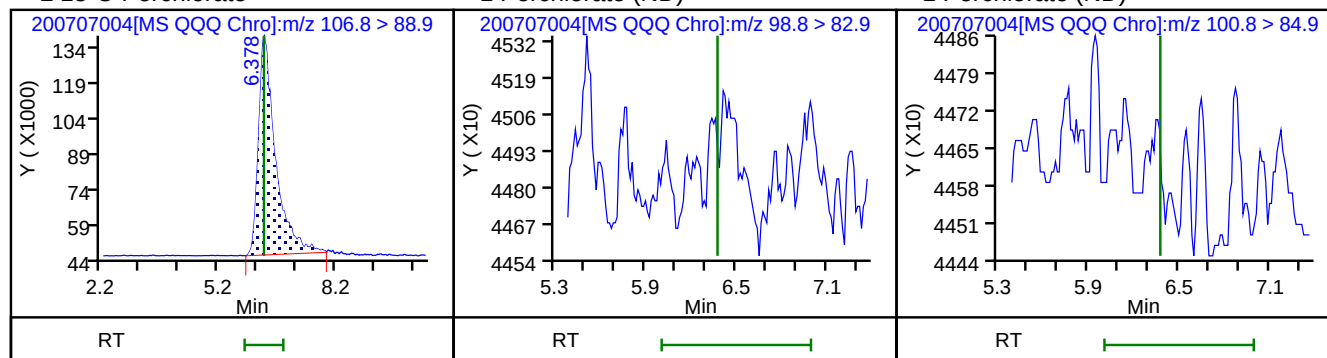
Limit Group:

LCMS - 331.0

* 2 18-O Perchlorate

1 Perchlorate (ND)

1 Perchlorate (ND)



FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Calscience Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: _____ Lab Sample ID: CCB 570-79806/20
 Matrix: Water Lab File ID: 200707020.d
 Analysis Method: 331.0 Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 1.925 (mL) Date Analyzed: 07/07/2020 19:06
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 4 (mL) GC Column: Dion-A521 ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 79806 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	ND		0.10	0.016

Report Date: 08-Jul-2020 12:26:00

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC
Target Compound Quantitation Report

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\200707020.d
 Lims ID: ccb
 Client ID:
 Sample Type: CCB
 Inject. Date: 07-Jul-2020 19:06:21 ALS Bottle#: 0 Worklist Smp#: 20
 Injection Vol: 4.0 mL Dil. Factor: 1.0000
 Sample Info: CCB, Sample
 Misc. Info.: 570-0023679-020
 Operator ID: Instrument ID: LCTQ2
 Method: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\Perchlorate_LCTQ2.m
 Limit Group: LCMS - 331.0
 Last Update: 08-Jul-2020 12:25:59 Calib Date: 25-Jun-2020 15:24:02
 Integrator: Picker
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d
 Column 1 : Dionex A521 (4.00 mm) Det: MS QQQ
 Process Host: CTX1028

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
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* 2 18-O Perchlorate

106.8 > 88.9 6.404 6.353 0.051 3144587 5.00 2073

Reagents:

LCMS_ISTD_00002 Amount Added: 25.00 Units: uL Run Reagent

Report Date: 08-Jul-2020 12:26:00

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\200707020.d

Injection Date: 07-Jul-2020 19:06:21

Instrument ID: LCTQ2

Lims ID: ccb

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#:

20

Injection Vol: 4.0 mL

Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

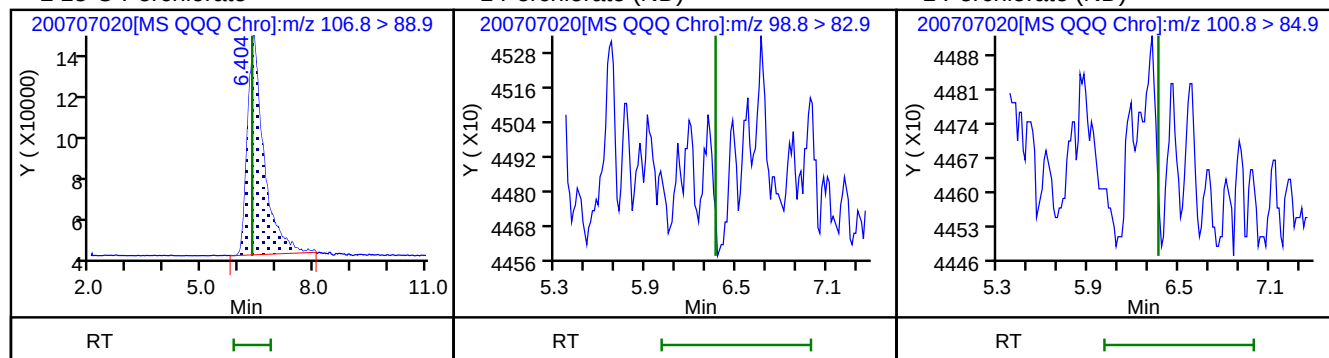
Limit Group:

LCMS - 331.0

* 2 18-O Perchlorate

1 Perchlorate (ND)

1 Perchlorate (ND)



FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Calscience Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: _____ Lab Sample ID: ICB 570-77753/10
 Matrix: Water Lab File ID: 200625010.d
 Analysis Method: 331.0 Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 1.925 (mL) Date Analyzed: 06/25/2020 15:53
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 4 (mL) GC Column: Dion-A521 ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 77753 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	ND		0.10	0.016

Report Date: 26-Jun-2020 15:02:08

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC
Target Compound Quantitation Report

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625010.d
 Lims ID: ICB
 Client ID:
 Sample Type: ICB
 Inject. Date: 25-Jun-2020 15:53:04 ALS Bottle#: 0 Worklist Smp#: 10
 Injection Vol: 4.0 mL Dil. Factor: 1.0000
 Sample Info: ICB, Sample
 Misc. Info.: 570-0023031-010
 Operator ID: Instrument ID: LCTQ2
 Method: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\Perchlorate_LCTQ2.m
 Limit Group: LCMS - 331.0
 Last Update: 26-Jun-2020 15:02:07 Calib Date: 25-Jun-2020 15:24:02
 Integrator: Picker
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d
 Column 1 : Dionex A521 (4.00 mm) Det: MS QQQ
 Process Host: CTX1058

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
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* 2 18-O Perchlorate

106.8 > 88.9 6.416 6.416 0.0 2693685 5.00 1626

Reagents:

LCMS_ISTD_00002 Amount Added: 25.00 Units: uL Run Reagent

Report Date: 26-Jun-2020 15:02:08

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625010.d

Injection Date: 25-Jun-2020 15:53:04

Instrument ID: LCTQ2

Lims ID: ICB

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#:

10

Injection Vol: 4.0 mL

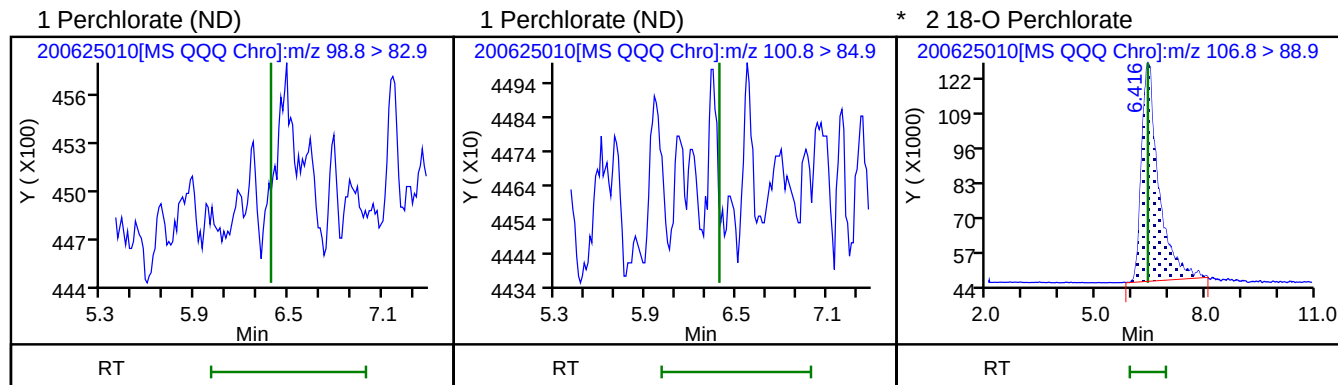
Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

Limit Group:

LCMS - 331.0



FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Calscience Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: _____ Lab Sample ID: LCS 570-79806/7
 Matrix: Water Lab File ID: 200707007.d
 Analysis Method: 331.0 Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 1.925 (mL) Date Analyzed: 07/07/2020 15:57
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 4 (mL) GC Column: Dion-A521 ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 79806 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	9.93		0.10	0.016

Report Date: 08-Jul-2020 12:02:22

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC
Target Compound Quantitation Report

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\200707007.d
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 07-Jul-2020 15:57:53 ALS Bottle#: 0 Worklist Smp#: 7
 Injection Vol: 4.0 mL Dil. Factor: 1.0000
 Sample Info: LCS, Sample
 Misc. Info.: 570-0023679-007
 Operator ID: Instrument ID: LCTQ2
 Method: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\Perchlorate_LCTQ2.m
 Limit Group: LCMS - 331.0
 Last Update: 08-Jul-2020 12:02:19 Calib Date: 25-Jun-2020 15:24:02
 Integrator: Picker
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d
 Column 1 : Dionex A521 (4.00 mm) Det: MS QQQ
 Process Host: CTX1028

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
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* 2 18-O Perchlorate

106.8 > 88.9	6.366	6.366	0.0		3142553	5.00		2158	
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1 Perchlorate

98.8 > 82.9	6.387	6.374	0.013	1.003	10288641	9.93	Target=3.08	3836	
100.8 > 84.9	6.332	6.374	-0.042	0.995	3193650		3.22(2.31-3.85)	2064	

Reagents:

LCMS_LCS_S_00004

Amount Added: 10.00

Units: uL

LCMS_ISTD_00002

Amount Added: 25.00

Units: uL

Run Reagent

Report Date: 08-Jul-2020 12:02:22

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\200707007.d

Injection Date: 07-Jul-2020 15:57:53

Instrument ID: LCTQ2

Lims ID: LCS

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#:

7

Injection Vol: 4.0 mL

Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

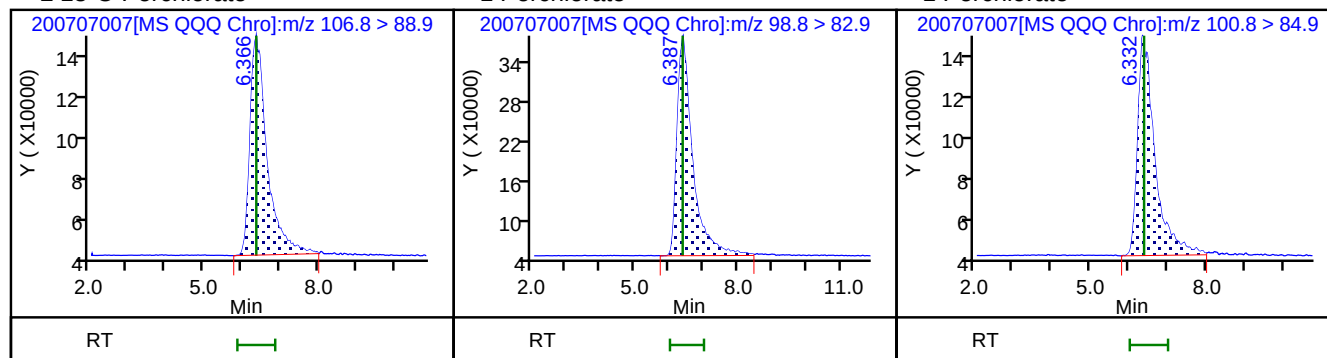
Limit Group:

LCMS - 331.0

* 2 18-O Perchlorate

1 Perchlorate

1 Perchlorate



FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Calscience Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: _____ Lab Sample ID: LCSD 570-79806/8
 Matrix: Water Lab File ID: 200707008.d
 Analysis Method: 331.0 Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 1.925 (mL) Date Analyzed: 07/07/2020 16:00
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 4 (mL) GC Column: Dion-A521 ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 79806 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	10.2		0.10	0.016

Report Date: 08-Jul-2020 12:02:23

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC
Target Compound Quantitation Report

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\200707008.d
 Lims ID: LCSD
 Client ID:
 Sample Type: LCSD
 Inject. Date: 07-Jul-2020 16:00:26 ALS Bottle#: 0 Worklist Smp#: 8
 Injection Vol: 4.0 mL Dil. Factor: 1.0000
 Sample Info: LCSD, Sample
 Misc. Info.: 570-0023679-008
 Operator ID: Instrument ID: LCTQ2
 Method: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\Perchlorate_LCTQ2.m
 Limit Group: LCMS - 331.0
 Last Update: 08-Jul-2020 12:02:19 Calib Date: 25-Jun-2020 15:24:02
 Integrator: Picker
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d
 Column 1 : Dionex A521 (4.00 mm) Det: MS QQQ
 Process Host: CTX1028

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
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* 2 18-O Perchlorate

106.8 > 88.9	6.366	6.366	0.0		2985895	5.00		2148	
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1 Perchlorate

98.8 > 82.9	6.374	6.374	0.0	1.001	10027980	10.2	Target=3.08	3317	
100.8 > 84.9	6.370	6.374	-0.004	1.001	3232637		3.10(2.31-3.85)	2050	

Reagents:

LCMS_LCS_S_00004

Amount Added: 10.00

Units: uL

LCMS_ISTD_00002

Amount Added: 25.00

Units: uL

Run Reagent

Report Date: 08-Jul-2020 12:02:23

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\200707008.d

Injection Date: 07-Jul-2020 16:00:26

Instrument ID: LCTQ2

Lims ID: LCSD

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#:

8

Injection Vol: 4.0 mL

Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

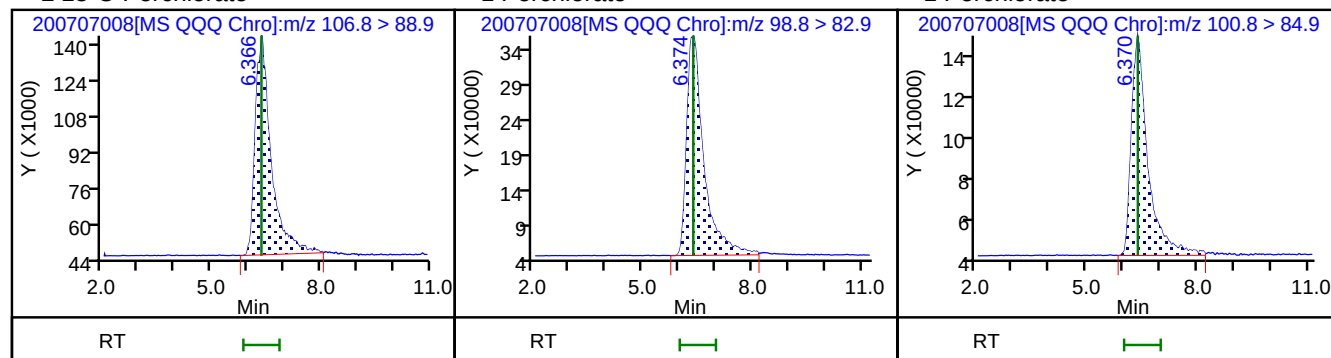
Limit Group:

LCMS - 331.0

* 2 18-O Perchlorate

1 Perchlorate

1 Perchlorate



FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Calscience Job No.: 440-268223-1
 SDG No.: Kirtland AFB New Mexico
 Client Sample ID: _____ Lab Sample ID: INF 570-79806/5
 Matrix: Water Lab File ID: 200707005.d
 Analysis Method: 331.0 Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 1.925 (mL) Date Analyzed: 07/07/2020 15:28
 Con. Extract Vol.: _____ Dilution Factor: 1
 Injection Volume: 4 (mL) GC Column: Dion-A521 ID: 4 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 79806 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.499		0.10	0.016

Report Date: 08-Jul-2020 12:02:21

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC
Target Compound Quantitation Report

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\200707005.d
 Lims ID: INF
 Client ID:
 Sample Type: INF
 Inject. Date: 07-Jul-2020 15:28:52 ALS Bottle#: 0 Worklist Smp#: 5
 Injection Vol: 4.0 mL Dil. Factor: 1.0000
 Sample Info: INF, Sample
 Misc. Info.: 570-0023679-005
 Operator ID: Instrument ID: LCTQ2
 Method: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\Perchlorate_LCTQ2.m
 Limit Group: LCMS - 331.0
 Last Update: 08-Jul-2020 12:02:19 Calib Date: 25-Jun-2020 15:24:02
 Integrator: Picker
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d
 Column 1 : Dionex A521 (4.00 mm) Det: MS QQQ
 Process Host: CTX1028

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
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* 2 18-O Perchlorate

106.8 > 88.9	6.290	6.366	-0.076		2184181	5.00		2929	
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1 Perchlorate

98.8 > 82.9	6.323	6.374	-0.051	1.005	361531	0.4986	Target=3.08	181	
100.8 > 84.9	6.230	6.374	-0.144	0.991	111838		3.23(2.31-3.85)	202	

Reagents:

LCMS_INF_00006	Amount Added: 10.00	Units: mL	
LCMS_ISTD_00002	Amount Added: 25.00	Units: uL	Run Reagent

Report Date: 08-Jul-2020 12:02:21

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\200707005.d

Injection Date: 07-Jul-2020 15:28:52

Instrument ID: LCTQ2

Lims ID: INF

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#:

5

Injection Vol: 4.0 mL

Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

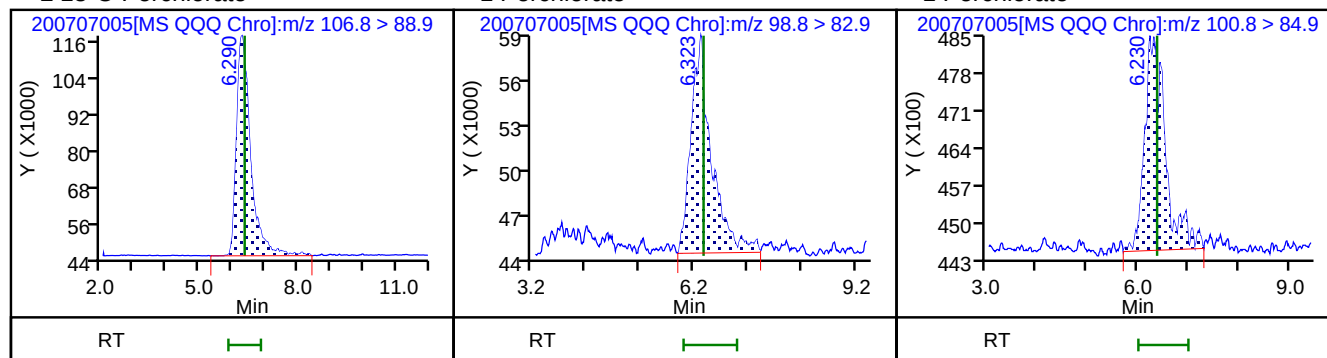
Limit Group:

LCMS - 331.0

* 2 18-O Perchlorate

1 Perchlorate

1 Perchlorate



FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>Eurofins Calscience</u>	Job No.: <u>440-268223-1</u>
SDG No.: <u>Kirtland AFB New Mexico</u>	
Client Sample ID: <u>KAFB-106239-WR-post MS</u>	Lab Sample ID: <u>440-268223-6 MS</u>
Matrix: <u>Water (Dissolved)</u>	Lab File ID: <u>200707013.d</u>
Analysis Method: <u>331.0</u>	Date Collected: <u>06/29/2020 09:30</u>
Extraction Method: _____	Date Extracted: _____
Sample wt/vol: <u>1.925 (mL)</u>	Date Analyzed: <u>07/07/2020 17:24</u>
Con. Extract Vol.: _____	Dilution Factor: <u>1</u>
Injection Volume: <u>4 (mL)</u>	GC Column: <u>Dion-A521</u> ID: <u>4 (mm)</u>
% Moisture: _____	GPC Cleanup: (Y/N) <u>N</u>
Analysis Batch No.: <u>79806</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	10.2		0.10	0.016

Report Date: 08-Jul-2020 12:18:24

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC
Target Compound Quantitation Report

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\200707013.d
 Lims ID: 440-268223-A-6 MS
 Client ID:
 Sample Type: MS
 Inject. Date: 07-Jul-2020 17:24:55 ALS Bottle#: 0 Worklist Smp#: 13
 Injection Vol: 4.0 mL Dil. Factor: 1.0000
 Sample Info: 440-268223-A-5, Sample
 Misc. Info.: 570-0023679-013
 Operator ID: Instrument ID: LCTQ2
 Method: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\Perchlorate_LCTQ2.m
 Limit Group: LCMS - 331.0
 Last Update: 08-Jul-2020 12:02:36 Calib Date: 25-Jun-2020 15:24:02
 Integrator: Picker
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d
 Column 1 : Dionex A521 (4.00 mm) Det: MS QQQ
 Process Host: CTX1028

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
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* 2 18-O Perchlorate

106.8 > 88.9	6.378	6.366	0.012		2670907	5.00		2825	
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1 Perchlorate

98.8 > 82.9	6.412	6.387	0.025	1.005	8993840	10.2	Target=3.08	3667	
100.8 > 84.9	6.383	6.387	-0.004	1.001	2889643		3.11(2.31-3.85)	3051	

Reagents:

LCMS_LCS_S_00004

Amount Added: 10.00

Units: uL

LCMS_ISTD_00002

Amount Added: 25.00

Units: uL

Run Reagent

Report Date: 08-Jul-2020 12:18:24

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\200707013.d

Injection Date: 07-Jul-2020 17:24:55

Instrument ID: LCTQ2

Lims ID: 440-268223-A-6 MS

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#:

13

Injection Vol: 4.0 mL

Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

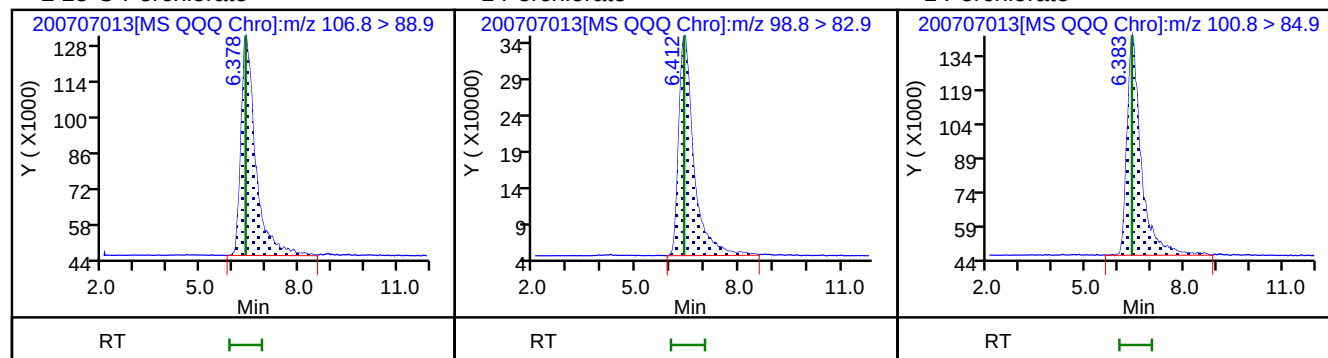
Limit Group:

LCMS - 331.0

* 2 18-O Perchlorate

1 Perchlorate

1 Perchlorate



FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Calscience Job No.: 440-268223-1
SDG No.: Kirtland AFB New Mexico
Client Sample ID: KAFB-106239-WR-post MSD Lab Sample ID: 440-268223-6 MSD
Matrix: Water (Dissolved) Lab File ID: 200707014.d
Analysis Method: 331.0 Date Collected: 06/29/2020 09:30
Extraction Method: _____ Date Extracted: _____
Sample wt/vol: 1.925 (mL) Date Analyzed: 07/07/2020 17:39
Con. Extract Vol.: _____ Dilution Factor: 1
Injection Volume: 4 (mL) GC Column: Dion-A521 ID: 4 (mm)
% Moisture: _____ GPC Cleanup: (Y/N) N
Analysis Batch No.: 79806 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	10.4		0.10	0.016

Report Date: 08-Jul-2020 12:18:25

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC
Target Compound Quantitation Report

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\200707014.d
 Lims ID: 440-268223-A-6 MSD
 Client ID:
 Sample Type: MSD
 Inject. Date: 07-Jul-2020 17:39:25 ALS Bottle#: 0 Worklist Smp#: 14
 Injection Vol: 4.0 mL Dil. Factor: 1.0000
 Sample Info: 440-268223-A-6, Sample
 Misc. Info.: 570-0023679-014
 Operator ID: Instrument ID: LCTQ2
 Method: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\Perchlorate_LCTQ2.m
 Limit Group: LCMS - 331.0
 Last Update: 08-Jul-2020 12:02:36 Calib Date: 25-Jun-2020 15:24:02
 Integrator: Picker
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\CalScience\ChromData\LCTQ2\20200625-23031.b\200625008.d
 Column 1 : Dionex A521 (4.00 mm) Det: MS QQQ
 Process Host: CTX1028

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ug/l	Ratio(Limits)	S/N	Flags
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* 2 18-O Perchlorate

106.8 > 88.9	6.378	6.366	0.012		2619189	5.00		2428	
--------------	-------	-------	-------	--	---------	------	--	------	--

1 Perchlorate

98.8 > 82.9	6.374	6.387	-0.013	0.999	8990621	10.4	Target=3.08	3717	
100.8 > 84.9	6.357	6.387	-0.030	0.997	2875897		3.13(2.31-3.85)	2378	

Reagents:

LCMS_LCS_S_00004

Amount Added: 10.00

Units: uL

LCMS_ISTD_00002

Amount Added: 25.00

Units: uL

Run Reagent

Report Date: 08-Jul-2020 12:18:25

Chrom Revision: 2.3 21-Jun-2020 18:30:46

Eurofins Calscience LLC

Data File: \\chromfs\CalScience\ChromData\LCTQ2\20200707-23679.b\200707014.d

Injection Date: 07-Jul-2020 17:39:25

Instrument ID: LCTQ2

Lims ID: 440-268223-A-6 MSD

Client ID:

Operator ID:

ALS Bottle#:

0

Worklist Smp#:

14

Injection Vol: 4.0 mL

Dil. Factor:

1.0000

Method: Perchlorate_LCTQ2

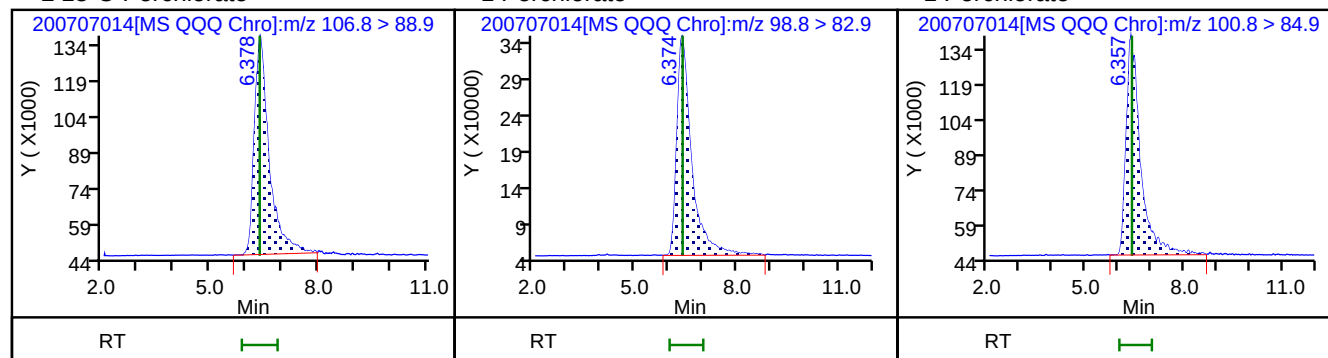
Limit Group:

LCMS - 331.0

* 2 18-O Perchlorate

1 Perchlorate

1 Perchlorate



LCMS ANALYSIS RUN LOG

Lab Name: Eurofins Calscience

Job No.: 440-268223-1

SDG No.: Kirtland AFB New Mexico

Instrument ID: LCTQ2

Start Date: 06/25/2020 14:11

Analysis Batch Number: 77753

End Date: 06/25/2020 23:24

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD1 570-77753/3 IC		06/25/2020 14:11	1	200625003.d	Dion-A521 4 (mm)
STD2 570-77753/4 IC		06/25/2020 14:25	1	200625004.d	Dion-A521 4 (mm)
STD3 570-77753/5 IC		06/25/2020 14:40	1	200625005.d	Dion-A521 4 (mm)
STD4 570-77753/6 ICIS		06/25/2020 14:55	1	200625006.d	Dion-A521 4 (mm)
STD5 570-77753/7 IC		06/25/2020 15:09	1	200625007.d	Dion-A521 4 (mm)
STD6 570-77753/8 IC		06/25/2020 15:24	1	200625008.d	Dion-A521 4 (mm)
ICV 570-77753/9		06/25/2020 15:38	1	200625009.d	Dion-A521 4 (mm)
ICB 570-77753/10		06/25/2020 15:53	1	200625010.d	Dion-A521 4 (mm)
CCVL 570-77753/11		06/25/2020 16:07	1		Dion-A521 4 (mm)
CCVIS 570-77753/12		06/25/2020 16:22	1		Dion-A521 4 (mm)
CCB 570-77753/13		06/25/2020 16:36	1		Dion-A521 4 (mm)
INF 570-77753/14		06/25/2020 16:51	1		Dion-A521 4 (mm)
ZZZZZ		06/25/2020 17:05	1		Dion-A521 4 (mm)
ZZZZZ		06/25/2020 17:20	1		Dion-A521 4 (mm)
ZZZZZ		06/25/2020 17:34	1		Dion-A521 4 (mm)
CCV 570-77753/30		06/25/2020 20:42	1		Dion-A521 4 (mm)
CCB 570-77753/31		06/25/2020 20:57	1		Dion-A521 4 (mm)
ZZZZZ		06/25/2020 21:28	1		Dion-A521 4 (mm)
ZZZZZ		06/25/2020 21:55	1		Dion-A521 4 (mm)
ZZZZZ		06/25/2020 22:09	1		Dion-A521 4 (mm)
ZZZZZ		06/25/2020 22:24	1		Dion-A521 4 (mm)
ZZZZZ		06/25/2020 22:38	1		Dion-A521 4 (mm)
ZZZZZ		06/25/2020 22:53	1		Dion-A521 4 (mm)
ZZZZZ		06/25/2020 22:55	1		Dion-A521 4 (mm)
CCV 570-77753/41		06/25/2020 23:22	1		Dion-A521 4 (mm)
CCB 570-77753/42		06/25/2020 23:24	1		Dion-A521 4 (mm)

331.0

LCMS ANALYSIS RUN LOG

Lab Name: Eurofins Calscience

Job No.: 440-268223-1

SDG No.: Kirtland AFB New Mexico

Instrument ID: LCTQ2

Start Date: 07/07/2020 14:45

Analysis Batch Number: 79806

End Date: 07/07/2020 21:31

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVL 570-79806/2		07/07/2020 14:45	1	200707002.d	Dion-A521 4 (mm)
CCVIS 570-79806/3		07/07/2020 14:59	1	200707003.d	Dion-A521 4 (mm)
CCB 570-79806/4		07/07/2020 15:14	1	200707004.d	Dion-A521 4 (mm)
INF 570-79806/5		07/07/2020 15:28	1	200707005.d	Dion-A521 4 (mm)
MB 570-79806/6		07/07/2020 15:31	1	200707006.d	Dion-A521 4 (mm)
LCS 570-79806/7		07/07/2020 15:57	1	200707007.d	Dion-A521 4 (mm)
LCSD 570-79806/8		07/07/2020 16:00	1	200707008.d	Dion-A521 4 (mm)
440-268223-1		07/07/2020 16:26	1	200707009.d	Dion-A521 4 (mm)
440-268223-2		07/07/2020 16:41	1	200707010.d	Dion-A521 4 (mm)
440-268223-3		07/07/2020 16:55	1	200707011.d	Dion-A521 4 (mm)
440-268223-4		07/07/2020 17:10	1	200707012.d	Dion-A521 4 (mm)
440-268223-6 MS		07/07/2020 17:24	1	200707013.d	Dion-A521 4 (mm)
440-268223-6 MSD		07/07/2020 17:39	1	200707014.d	Dion-A521 4 (mm)
440-268223-5		07/07/2020 17:53	1	200707015.d	Dion-A521 4 (mm)
440-268223-6		07/07/2020 18:08	1	200707016.d	Dion-A521 4 (mm)
ZZZZZ		07/07/2020 18:22	1		Dion-A521 4 (mm)
ZZZZZ		07/07/2020 18:25	1		Dion-A521 4 (mm)
CCV 570-79806/19		07/07/2020 18:51	1	200707019.d	Dion-A521 4 (mm)
CCB 570-79806/20		07/07/2020 19:06	1	200707020.d	Dion-A521 4 (mm)
ZZZZZ		07/07/2020 20:33	1		Dion-A521 4 (mm)
ZZZZZ		07/07/2020 20:47	1		Dion-A521 4 (mm)
ZZZZZ		07/07/2020 20:50	1		Dion-A521 4 (mm)
CCV 570-79806/29		07/07/2020 21:16	1		Dion-A521 4 (mm)
CCB 570-79806/30		07/07/2020 21:31	1		Dion-A521 4 (mm)

331.0

LCMS BATCH WORKSHEET

Lab Name: Eurofins Calscience Job No.: 440-268223-1SDG No.: Kirtland AFB New MexicoBatch Number: 79806 Batch Start Date: 07/07/20 14:45 Batch Analyst: McHale, RichardBatch Method: 331.0 Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	LCMS_CCV_10 00004	LCMS_CCV_5 00003	LCMS_CCVL 00005	LCMS_INF 00006	LCMS_ISTD 00002	LCMS_LCS_S 00004
CCVL 570-79806/2		331.0				10 mL		25 uL	
CCVIS 570-79806/3		331.0			10 mL			25 uL	
CCB 570-79806/4		331.0						25 uL	
INF 570-79806/5		331.0					10 mL	25 uL	
MB 570-79806/6		331.0						25 uL	
LCS 570-79806/7		331.0						25 uL	10 uL
LCSD 570-79806/8		331.0						25 uL	10 uL
440-268223-A-1	KAFB-106005-WR-p re	331.0	D					25 uL	
440-268223-A-2	KAFB-106005-WR-p ost	331.0	D					25 uL	
440-268223-A-3	KAFB-106028-WR-p re	331.0	D					25 uL	
440-268223-A-4	KAFB-106028-WR-p ost	331.0	D					25 uL	
440-268223-A-6 MS	KAFB-106239-WR-p ost	331.0	D					25 uL	10 uL
440-268223-A-6 MSD	KAFB-106239-WR-p ost	331.0	D					25 uL	10 uL
440-268223-A-5	KAFB-106239-WR-p re	331.0	D					25 uL	
440-268223-A-6	KAFB-106239-WR-p ost	331.0	D					25 uL	
CCV 570-79806/19		331.0		10 mL				25 uL	
CCB 570-79806/20		331.0						25 uL	

Batch Notes

Basis	Basis Description
D	Dissolved

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

331.0

Page 1 of 1

Subcontract Data

Shipping and Receiving Documents

Page 545 of 548

07/09/2020

Login Sample Receipt Checklist

Client: EA Engineering, Science, and Technology

 Job Number: 440-268223-1
 SDG Number: Kirtland AFB New Mexico
Login Number: 268223**List Source: Eurofins Irvine****List Number: 1****Creator: Bonta, Lucia F**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	Method requires headspace.
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: EA Engineering, Science, and Technology

 Job Number: 440-268223-1
 SDG Number: Kirtland AFB New Mexico
Login Number: 268223**List Number: 2****Creator: Patel, Jayesh****List Source: Eurofins Calscience****List Creation: 07/01/20 08:46 PM**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

DoD Type I Data Package

Prepared for:

EA Engineering, Science & Tech

Building C, Suite 100
405 State Highway 121 Bypass
Lewisville TX 75067-8192

Project: Kirtland AFB

Water Samples

Collected on 04/02/20

SDG# KR421

GROUP

2094808

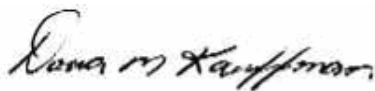
SAMPLE NUMBERS

1292523-1292534

A2LA (DoD) Cert. # 0001.01
PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-20-35
AZ Cert. # AZ0780

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by:



Date: 04/23/2020

Dana M. Kauffman
Manager

Any questions or concerns you might have regarding this data package should be directed to your client representative, Kay Hower at (717) 556-7364.

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**Sample Reference List for SDG Number KR421
with a Data Package Type of I-DOD**

31675 - EA Engineering, Science & Tech
Project: Kirtland AFB

Lab Sample Number	Client Sample ID	Collection Date	Date Received
1292523	GWTS-EFF1-040220	04/02/2020 10:20	04/03/2020 10:00
1292524	GWTS-EFF1DUP-040220	04/02/2020 10:20	04/03/2020 10:00
1292525	GWTS-GAC1-040220	04/02/2020 10:35	04/03/2020 10:00
1292526	GWTS-INF1-040220	04/02/2020 10:50	04/03/2020 10:00
1292527	GWTS-TB01-040220	04/02/2020 10:55	04/03/2020 10:00
1292528	GWTS-EFF2-040220	04/02/2020 09:20	04/03/2020 10:00
1292529	GWTS-EFF2-040220 MS	04/02/2020 09:20	04/03/2020 10:00
1292530	GWTS-EFF2-040220 MSD	04/02/2020 09:20	04/03/2020 10:00
1292531	GWTS-EFF2-040220 DUP	04/02/2020 09:20	04/03/2020 10:00
1292532	GWTS-GAC2-040220	04/02/2020 09:50	04/03/2020 10:00
1292533	GWTS-INF2-040220	04/02/2020 10:00	04/03/2020 10:00
1292534	GWTS-FB02-040220	04/02/2020 09:20	04/03/2020 10:00

Sample pH Log

SDG: KR421

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	*pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	**Chlorine Present?	Corrective Substance	CS Lot #	Record Date	Employee
1292523	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/6/2020 11:34:14AM	835
1292523	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/8/2020 9:09:14PM	2002
1292524	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/6/2020 11:31:39AM	835
1292524	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/8/2020 9:09:14PM	2002
1292525	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/6/2020 11:29:01AM	835
1292525	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/8/2020 9:09:14PM	2002
1292526	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/6/2020 11:30:45AM	835
1292526	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/8/2020 9:09:14PM	2002
1292527	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/8/2020 9:09:14PM	2002
1292528	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/6/2020 11:36:06AM	835
1292528	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/8/2020 9:09:14PM	2002
1292529	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/6/2020 11:33:43AM	835
1292529	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/8/2020 9:09:14PM	2002
1292529	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/8/2020 9:09:15PM	2002
1292530	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/6/2020 11:32:54AM	835
1292530	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/8/2020 9:09:15PM	2002
1292530	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/8/2020 9:09:15PM	2002
1292532	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/6/2020 11:35:32AM	835
1292532	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/8/2020 9:09:15PM	2002
1292533	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/6/2020 11:30:08AM	835
1292533	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/10/2020 2:15:54PM	895
1292534	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/10/2020 2:15:36PM	895

*pH Check Code Key	**Chlorine Present Code Key
PK = Original container checked - pH is within the correct range. (No preservative was added) PA = Original container checked - pH adjusted to correct range. (Preservative was added) PV = Volatile container checked PC = pH checked (unpreserved container) SPK = Subsampled from an original container. Original container checked - pH is within correct range SPA = Subsampled from an original container. Subsample container checked - pH adjusted to correct range. SPC = Subsampled from an original container. pH checked (unpreserved container). SUP = Subsampled from original container. Unable to be preserved due to the matrix of the sample. UP = Unable to preserve due to matrix of the sample. NA = Not applicable	NA = Chlorine Not Checked Y = Chlorine Present N = Chlorine Not Present

**Method Summary/Reference
for SDG# KR421_I-DOD**

Page 1 of 1

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 · 717-656-2300 Fax: 717-656-2681 · www.lancasterlabs.com

01163 GC/MS VOA Water Prep

An undiluted aliquot of the water sample or a dilution of the sample is purged with an inert gas and the volatiles are collected on an adsorbent trap that is subsequently desorbed onto a gas chromatographic column.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 5030C, May 2003.

11997 VOCs- 5ml Water by 8260C/D

The water sample is purged and the volatile compounds are collected on a sorbent trap that is subsequently desorbed onto the GC/MS system for chromatographic and mass spectral analysis.

Reference: Volatile Organic Compounds by Gas Chromatography/ Mass Spectrometry (GC/MS), SW-846 Method 8260C, August 2006.

14866 ICP filtered no-digest SW-846

The sample is digested with nitric and hydrochloric acid.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 3010A, July 1992

01754 Iron**07058 Manganese**

The solution resulting from the metals digestion is analyzed by Trace ICP.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 6010C, February 2007.

10398 8011 Master Master

The sample is extracted with hexane using micro-extraction technique. The extract is analyzed using gas chromatography on two capillary columns (primary and confirmation) with electron capture detectors.

Reference: Test Methods for Evaluating Solid Wastes, SW846 Method 8011, July 1992.

07786 EDB Extraction (8011)

A 35ml aliquot of sample is extracted in the 40 ml sampling vial with 2 ml hexane (micro-extraction). The solvent layer is drawn off and ready for analysis.

Reference: Test Methods for Evaluating Solid Wastes, SW846 Method 8011, July 1992.

Analysis Reports / Field Chain of Custody

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

EA Engineering, Science & Tech
Building C, Suite 100
405 State Highway 121 Bypass
Lewisville TX 75067-8192

Report Date: April 14, 2020 20:33

Project: Kirtland AFB

Account #: 31675
Group Number: 2094808
SDG: KR421
PO Number: 14800
State of Sample Origin: NM

Electronic Copy To	EA Engineering, Science & Tech	Attn: Pamela Moss
Electronic Copy To	EA Science & Technology	Attn: Amanda Smith
Electronic Copy To	EA Engineering, Science & Tech	Attn: Bernie Bockisch
Electronic Copy To	EA Engineering, Science & Tech	Attn: Erin Sullivan

Respectfully Submitted,



Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to <https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/>. Historical copies may be requested through your project manager.



SAMPLE INFORMATION

<u>Client Sample Description</u>	<u>Sample Collection</u> <u>Date/Time</u>	<u>ELLE#</u>
GWTS-EFF1-040220 Water	04/02/2020 10:20	1292523
GWTS-EFF1DUP-040220 Water	04/02/2020 10:20	1292524
GWTS-GAC1-040220 Water	04/02/2020 10:35	1292525
GWTS-INF1-040220 Water	04/02/2020 10:50	1292526
GWTS-TB01-040220 Water	04/02/2020 10:55	1292527
GWTS-EFF2-040220 Water	04/02/2020 09:20	1292528
GWTS-EFF2-040220 MS Water	04/02/2020 09:20	1292529
GWTS-EFF2-040220 MSD Water	04/02/2020 09:20	1292530
GWTS-EFF2-040220 DUP Water	04/02/2020 09:20	1292531
GWTS-GAC2-040220 Water	04/02/2020 09:50	1292532
GWTS-INF2-040220 Water	04/02/2020 10:00	1292533
GWTS-FB02-040220 Water	04/02/2020 09:20	1292534

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Case Narrative

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Project Name: Kirtland AFB
ELLE Group #: 2094808

General Comments:

All analyses have been performed in accordance with DOD QSM Version 5.1.1 unless otherwise noted below.

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below.

Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are included in this data set.

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:

SW-846 8011, Volatiles by Extraction

Sample #s: 1292532

The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and no target analytes were detected, the data is reported.

Batch #: 200940024A (Sample number(s): 1292523-1292530, 1292532-1292534 UNSPK: 1292528)

The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: Ethylene dibromide

The recovery(ies) for one or more surrogates exceeded the acceptance window indicating a positive bias for sample(s) 1292532

Analysis Report

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Sample Description: GWTS-EFF1-040220 Water
Kirtland AFB Bulk Fuels Facility**EA Engineering, Science & Tech**
ELLE Sample #: WW 1292523
ELLE Group #: 2094808
Matrix: Water**Project Name:** Kirtland AFB**Submittal Date/Time:** 04/03/2020 10:00
Collection Date/Time: 04/02/2020 10:20
SDG#: KR421-01

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
GC/MS Volatiles		SW-846 8260C	ug/l	ug/l	ug/l	ug/l	
11997	Benzene	71-43-2	0.5 U	0.2	0.5	1	1
11997	Ethylbenzene	100-41-4	0.8 U	0.4	0.8	1	1
11997	Toluene	108-88-3	0.5 U	0.2	0.5	1	1
11997	Xylene (Total)	1330-20-7	2 U	1	2	6	1
Volatiles by Extraction		SW-846 8011	ug/l	ug/l	ug/l	ug/l	
10398	Ethylene dibromide	106-93-4	0.019 UD1	0.0096	0.019	0.029	1
Metals Dissolved		SW-846 6010C	mg/l	mg/l	mg/l	mg/l	
01754	Iron	7439-89-6	0.103 U	0.0412	0.103	0.206	1
07058	Manganese	7439-96-5	0.0052 U	0.0031	0.0052	0.0103	1

Sample Comments

This sample was field filtered for dissolved metals.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	BTEX 8260C Water	SW-846 8260C	1	L200991AA	04/08/2020 15:49	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L200991AA	04/08/2020 15:48	Corie Mellinger	1
10398	EDB 8011 Water	SW-846 8011	1	200940024A	04/08/2020 02:09	Rachel Umberger	1
07786	EDB Extraction (8011)	SW-846 8011	1	200940024A	04/06/2020 00:00	Sean Rooney	1
01754	Iron	SW-846 6010C	1	200971486601	04/06/2020 23:47	Elaine F Stoltzfus	1
07058	Manganese	SW-846 6010C	1	200971486601	04/06/2020 23:47	Elaine F Stoltzfus	1
14866	ICP filtered no-digest SW-846	SW-846 3010A	1	200971486601	04/06/2020 16:20	JoElla L Rice	1

*This limit was used in the evaluation of the final result

Analysis Report

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Sample Description: GWTS-EFF1DUP-040220 Water
Kirtland AFB Bulk Fuels Facility**EA Engineering, Science & Tech**
ELLE Sample #: WW 1292524
ELLE Group #: 2094808
Matrix: Water**Project Name:** Kirtland AFB**Submittal Date/Time:** 04/03/2020 10:00
Collection Date/Time: 04/02/2020 10:20
SDG#: KR421-02FD

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
GC/MS Volatiles		SW-846 8260C	ug/l	ug/l	ug/l	ug/l	
11997	Benzene	71-43-2	0.5 U	0.2	0.5	1	1
11997	Ethylbenzene	100-41-4	0.8 U	0.4	0.8	1	1
11997	Toluene	108-88-3	0.5 U	0.2	0.5	1	1
11997	Xylene (Total)	1330-20-7	2 U	1	2	6	1
Volatiles by Extraction		SW-846 8011	ug/l	ug/l	ug/l	ug/l	
10398	Ethylene dibromide	106-93-4	0.020 UD1	0.0098	0.020	0.029	1
Metals Dissolved		SW-846 6010C	mg/l	mg/l	mg/l	mg/l	
01754	Iron	7439-89-6	0.103 U	0.0412	0.103	0.206	1
07058	Manganese	7439-96-5	0.0052 U	0.0031	0.0052	0.0103	1

Sample Comments

This sample was field filtered for dissolved metals.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	BTEX 8260C Water	SW-846 8260C	1	L200991AA	04/08/2020 16:11	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L200991AA	04/08/2020 16:10	Corie Mellinger	1
10398	EDB 8011 Water	SW-846 8011	1	200940024A	04/08/2020 02:26	Rachel Umberger	1
07786	EDB Extraction (8011)	SW-846 8011	1	200940024A	04/06/2020 00:00	Sean Rooney	1
01754	Iron	SW-846 6010C	1	200971486601	04/06/2020 23:50	Elaine F Stoltzfus	1
07058	Manganese	SW-846 6010C	1	200971486601	04/06/2020 23:50	Elaine F Stoltzfus	1
14866	ICP filtered no-digest SW-846	SW-846 3010A	1	200971486601	04/06/2020 16:20	JoElla L Rice	1

*This limit was used in the evaluation of the final result

Analysis Report

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Sample Description: GWTS-GAC1-040220 Water
Kirtland AFB Bulk Fuels Facility

EA Engineering, Science & Tech
ELLE Sample #: WW 1292525
ELLE Group #: 2094808
Matrix: Water

Project Name: Kirtland AFB

Submittal Date/Time: 04/03/2020 10:00
Collection Date/Time: 04/02/2020 10:35
SDG#: KR421-03

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
GC/MS Volatiles		SW-846 8260C	ug/l	ug/l	ug/l	ug/l	
11997	Benzene	71-43-2	0.5 U	0.2	0.5	1	1
11997	Ethylbenzene	100-41-4	0.8 U	0.4	0.8	1	1
11997	Toluene	108-88-3	0.5 U	0.2	0.5	1	1
11997	Xylene (Total)	1330-20-7	2 U	1	2	6	1
Volatiles by Extraction		SW-846 8011	ug/l	ug/l	ug/l	ug/l	
10398	Ethylene dibromide	106-93-4	0.019 UD1	0.0095	0.019	0.028	1
Metals Dissolved		SW-846 6010C	mg/l	mg/l	mg/l	mg/l	
01754	Iron	7439-89-6	0.103 U	0.0412	0.103	0.206	1
07058	Manganese	7439-96-5	0.0052 U	0.0031	0.0052	0.0103	1

Sample Comments

This sample was field filtered for dissolved metals.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	BTEX 8260C Water	SW-846 8260C	1	L200991AA	04/08/2020 16:33	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L200991AA	04/08/2020 16:32	Corie Mellinger	1
10398	EDB 8011 Water	SW-846 8011	1	200940024A	04/08/2020 02:43	Rachel Umberger	1
07786	EDB Extraction (8011)	SW-846 8011	1	200940024A	04/06/2020 00:00	Sean Rooney	1
01754	Iron	SW-846 6010C	1	200971486601	04/07/2020 00:00	Elaine F Stoltzfus	1
07058	Manganese	SW-846 6010C	1	200971486601	04/07/2020 00:00	Elaine F Stoltzfus	1
14866	ICP filtered no-digest SW-846	SW-846 3010A	1	200971486601	04/06/2020 16:20	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Analysis Report

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Sample Description: GWTS-INF1-040220 Water
Kirtland AFB Bulk Fuels Facility

EA Engineering, Science & Tech
ELLE Sample #: WW 1292526
ELLE Group #: 2094808
Matrix: Water

Project Name: Kirtland AFB

Submittal Date/Time: 04/03/2020 10:00
Collection Date/Time: 04/02/2020 10:50
SDG#: KR421-04

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
GC/MS Volatiles		SW-846 8260C	ug/l	ug/l	ug/l	ug/l	
11997	Benzene	71-43-2	0.5 U	0.2	0.5	1	1
11997	Ethylbenzene	100-41-4	0.8 U	0.4	0.8	1	1
11997	Toluene	108-88-3	0.5 U	0.2	0.5	1	1
11997	Xylene (Total)	1330-20-7	2 U	1	2	6	1
Volatiles by Extraction		SW-846 8011	ug/l	ug/l	ug/l	ug/l	
10398	Ethylene dibromide	106-93-4	0.019 UD1	0.0096	0.019	0.029	1
Metals Dissolved		SW-846 6010C	mg/l	mg/l	mg/l	mg/l	
01754	Iron	7439-89-6	0.103 U	0.0412	0.103	0.206	1
07058	Manganese	7439-96-5	0.0052 U	0.0031	0.0052	0.0103	1

Sample Comments

This sample was field filtered for dissolved metals.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	BTEX 8260C Water	SW-846 8260C	1	L200991AA	04/08/2020 16:55	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L200991AA	04/08/2020 16:54	Corie Mellinger	1
10398	EDB 8011 Water	SW-846 8011	1	200940024A	04/08/2020 03:00	Rachel Umberger	1
07786	EDB Extraction (8011)	SW-846 8011	1	200940024A	04/06/2020 00:00	Sean Rooney	1
01754	Iron	SW-846 6010C	1	200971486601	04/07/2020 00:04	Elaine F Stoltzfus	1
07058	Manganese	SW-846 6010C	1	200971486601	04/07/2020 00:04	Elaine F Stoltzfus	1
14866	ICP filtered no-digest SW-846	SW-846 3010A	1	200971486601	04/06/2020 16:20	JoElla L Rice	1

*=This limit was used in the evaluation of the final result



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Analysis Report

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Sample Description: GWTS-TB01-040220 Water
Kirtland AFB Bulk Fuels Facility

EA Engineering, Science & Tech
ELLE Sample #: WW 1292527
ELLE Group #: 2094808
Matrix: Water

Project Name: Kirtland AFB

Submittal Date/Time: 04/03/2020 10:00
Collection Date/Time: 04/02/2020 10:55
SDG#: KR421-05TB

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
GC/MS Volatiles		SW-846 8260C	ug/l	ug/l	ug/l	ug/l	
11997	Benzene	71-43-2	0.5 U	0.2	0.5	1	1
11997	Ethylbenzene	100-41-4	0.8 U	0.4	0.8	1	1
11997	Toluene	108-88-3	0.5 U	0.2	0.5	1	1
11997	Xylene (Total)	1330-20-7	2 U	1	2	6	1
Volatiles by Extraction		SW-846 8011	ug/l	ug/l	ug/l	ug/l	
10398	Ethylene dibromide	106-93-4	0.019 UD1	0.0094	0.019	0.028	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	BTEX 8260C Water	SW-846 8260C	1	L200991AA	04/08/2020 12:08	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L200991AA	04/08/2020 12:07	Corie Mellinger	1
10398	EDB 8011 Water	SW-846 8011	1	200940024A	04/08/2020 03:17	Rachel Umberger	1
07786	EDB Extraction (8011)	SW-846 8011	1	200940024A	04/06/2020 00:00	Sean Rooney	1

*=This limit was used in the evaluation of the final result

Analysis Report

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Sample Description: GWTS-EFF2-040220 Water
Kirtland AFB Bulk Fuels Facility**EA Engineering, Science & Tech**
ELLE Sample #: WW 1292528
ELLE Group #: 2094808
Matrix: Water**Project Name:** Kirtland AFB**Submittal Date/Time:** 04/03/2020 10:00
Collection Date/Time: 04/02/2020 09:20
SDG#: KR421-06BKG

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
GC/MS Volatiles		SW-846 8260C	ug/l	ug/l	ug/l	ug/l	
11997	Benzene	71-43-2	0.5 U	0.2	0.5	1	1
11997	Ethylbenzene	100-41-4	0.8 U	0.4	0.8	1	1
11997	Toluene	108-88-3	0.5 U	0.2	0.5	1	1
11997	Xylene (Total)	1330-20-7	2 U	1	2	6	1
Volatiles by Extraction		SW-846 8011	ug/l	ug/l	ug/l	ug/l	
10398	Ethylene dibromide	106-93-4	0.019 UD1	0.0095	0.019	0.028	1
Metals Dissolved		SW-846 6010C	mg/l	mg/l	mg/l	mg/l	
01754	Iron	7439-89-6	0.103 U	0.0412	0.103	0.206	1
07058	Manganese	7439-96-5	0.0052 U	0.0031	0.0052	0.0103	1

Sample Comments

This sample was field filtered for dissolved metals.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	BTEX 8260C Water	SW-846 8260C	1	L200991AA	04/08/2020 13:36	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L200991AA	04/08/2020 13:35	Corie Mellinger	1
10398	EDB 8011 Water	SW-846 8011	1	200940024A	04/08/2020 03:33	Rachel Umberger	1
07786	EDB Extraction (8011)	SW-846 8011	1	200940024A	04/06/2020 00:00	Sean Rooney	1
01754	Iron	SW-846 6010C	1	200971486601	04/06/2020 23:28	Elaine F Stoltzfus	1
07058	Manganese	SW-846 6010C	1	200971486601	04/06/2020 23:28	Elaine F Stoltzfus	1
14866	ICP filtered no-digest SW-846	SW-846 3010A	1	200971486601	04/06/2020 16:20	JoElla L Rice	1

*This limit was used in the evaluation of the final result

Analysis Report

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Sample Description: GWTS-EFF2-040220 MS Water
Kirtland AFB Bulk Fuels Facility**EA Engineering, Science & Tech**
ELLE Sample #: WW 1292529
ELLE Group #: 2094808
Matrix: Water**Project Name:** Kirtland AFB**Submittal Date/Time:** 04/03/2020 10:00
Collection Date/Time: 04/02/2020 09:20
SDG#: KR421-06MS

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
GC/MS Volatiles		SW-846 8260C	ug/l	ug/l	ug/l	ug/l	
11997	Benzene	71-43-2	22	0.2	0.5	1	1
11997	Ethylbenzene	100-41-4	21	0.4	0.8	1	1
11997	Toluene	108-88-3	21	0.2	0.5	1	1
11997	Xylene (Total)	1330-20-7	65	1	2	6	1
Volatiles by Extraction		SW-846 8011	ug/l	ug/l	ug/l	ug/l	
10398	Ethylene dibromide	106-93-4	0.18 D1	0.0096	0.019	0.029	1
Metals Dissolved		SW-846 6010C	mg/l	mg/l	mg/l	mg/l	
01754	Iron	7439-89-6	0.412	0.0418	0.104	0.209	1
07058	Manganese	7439-96-5	0.0208	0.0031	0.0052	0.0104	1

Sample Comments

This sample was field filtered for dissolved metals.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	BTEX 8260C Water	SW-846 8260C	1	L200991AA	04/08/2020 13:58	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L200991AA	04/08/2020 13:57	Corie Mellinger	1
10398	EDB 8011 Water	SW-846 8011	1	200940024A	04/08/2020 04:24	Rachel Umberger	1
07786	EDB Extraction (8011)	SW-846 8011	1	200940024A	04/06/2020 00:00	Sean Rooney	1
01754	Iron	SW-846 6010C	1	200971486601	04/06/2020 23:37	Elaine F Stoltzfus	1
07058	Manganese	SW-846 6010C	1	200971486601	04/06/2020 23:37	Elaine F Stoltzfus	1
14866	ICP filtered no-digest SW-846	SW-846 3010A	1	200971486601	04/06/2020 16:20	JoElla L Rice	1

*This limit was used in the evaluation of the final result

Analysis Report

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Sample Description: GWTS-EFF2-040220 MSD Water
Kirtland AFB Bulk Fuels Facility**EA Engineering, Science & Tech**
ELLE Sample #: WW 1292530
ELLE Group #: 2094808
Matrix: Water**Project Name:** Kirtland AFB**Submittal Date/Time:** 04/03/2020 10:00
Collection Date/Time: 04/02/2020 09:20
SDG#: KR421-06MSD

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
GC/MS Volatiles		SW-846 8260C	ug/l	ug/l	ug/l	ug/l	
11997	Benzene	71-43-2	22	0.2	0.5	1	1
11997	Ethylbenzene	100-41-4	22	0.4	0.8	1	1
11997	Toluene	108-88-3	21	0.2	0.5	1	1
11997	Xylene (Total)	1330-20-7	65	1	2	6	1
Volatiles by Extraction		SW-846 8011	ug/l	ug/l	ug/l	ug/l	
10398	Ethylene dibromide	106-93-4	0.18 D1	0.0094	0.019	0.028	1
Metals Dissolved		SW-846 6010C	mg/l	mg/l	mg/l	mg/l	
01754	Iron	7439-89-6	0.418	0.0418	0.104	0.209	1
07058	Manganese	7439-96-5	0.0215	0.0031	0.0052	0.0104	1

Sample Comments

This sample was field filtered for dissolved metals.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	BTEX 8260C Water	SW-846 8260C	1	L200991AA	04/08/2020 14:20	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L200991AA	04/08/2020 14:19	Corie Mellinger	1
10398	EDB 8011 Water	SW-846 8011	1	200940024A	04/08/2020 04:41	Rachel Umberger	1
07786	EDB Extraction (8011)	SW-846 8011	1	200940024A	04/06/2020 00:00	Sean Rooney	1
01754	Iron	SW-846 6010C	1	200971486601	04/06/2020 23:40	Elaine F Stoltzfus	1
07058	Manganese	SW-846 6010C	1	200971486601	04/06/2020 23:40	Elaine F Stoltzfus	1
14866	ICP filtered no-digest SW-846	SW-846 3010A	1	200971486601	04/06/2020 16:20	JoElla L Rice	1

*This limit was used in the evaluation of the final result



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Analysis Report

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Sample Description: GWTS-EFF2-040220 DUP Water
Kirtland AFB Bulk Fuels Facility

EA Engineering, Science & Tech
ELLE Sample #: WW 1292531
ELLE Group #: 2094808
Matrix: Water

Project Name: Kirtland AFB

Submittal Date/Time: 04/03/2020 10:00
Collection Date/Time: 04/02/2020 09:20
SDG#: KR421-06DUP

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
Metals Dissolved		SW-846 6010C	mg/l	mg/l	mg/l	mg/l	
01754	Iron	7439-89-6	0.103 U	0.0412	0.103	0.206	1
07058	Manganese	7439-96-5	0.0052 U	0.0031	0.0052	0.0103	1

Sample Comments

This sample was field filtered for dissolved metals.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010C	1	200971486601	04/06/2020 23:34	Elaine F Stoltzfus	1
07058	Manganese	SW-846 6010C	1	200971486601	04/06/2020 23:34	Elaine F Stoltzfus	1
14866	ICP filtered no-digest SW-846	SW-846 3010A	1	200971486601	04/06/2020 16:20	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Analysis Report

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Sample Description: GWTS-GAC2-040220 Water
Kirtland AFB Bulk Fuels Facility**EA Engineering, Science & Tech**
ELLE Sample #: WW 1292532
ELLE Group #: 2094808
Matrix: Water**Project Name:** Kirtland AFB**Submittal Date/Time:** 04/03/2020 10:00
Collection Date/Time: 04/02/2020 09:50
SDG#: KR421-07

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
GC/MS Volatiles		SW-846 8260C	ug/l	ug/l	ug/l	ug/l	
11997	Benzene	71-43-2	0.5 U	0.2	0.5	1	1
11997	Ethylbenzene	100-41-4	0.8 U	0.4	0.8	1	1
11997	Toluene	108-88-3	0.5 U	0.2	0.5	1	1
11997	Xylene (Total)	1330-20-7	2 U	1	2	6	1
Volatiles by Extraction		SW-846 8011	ug/l	ug/l	ug/l	ug/l	
10398	Ethylene dibromide	106-93-4	0.019 UD1	0.0095	0.019	0.028	1
The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and no target analytes were detected, the data is reported.							
Metals Dissolved		SW-846 6010C	mg/l	mg/l	mg/l	mg/l	
01754	Iron	7439-89-6	0.103 U	0.0412	0.103	0.206	1
07058	Manganese	7439-96-5	0.0052 U	0.0031	0.0052	0.0103	1

Sample Comments

This sample was field filtered for dissolved metals.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	BTEX 8260C Water	SW-846 8260C	1	L200991AA	04/08/2020 17:17	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L200991AA	04/08/2020 17:16	Corie Mellinger	1
10398	EDB 8011 Water	SW-846 8011	1	200940024A	04/08/2020 04:57	Rachel Umberger	1
07786	EDB Extraction (8011)	SW-846 8011	1	200940024A	04/06/2020 00:00	Sean Rooney	1
01754	Iron	SW-846 6010C	1	200971486601	04/07/2020 00:07	Elaine F Stoltzfus	1
07058	Manganese	SW-846 6010C	1	200971486601	04/07/2020 00:07	Elaine F Stoltzfus	1
14866	ICP filtered no-digest SW-846	SW-846 3010A	1	200971486601	04/06/2020 16:20	JoElla L Rice	1

*This limit was used in the evaluation of the final result

Analysis Report

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Sample Description: GWTS-INF2-040220 Water
Kirtland AFB Bulk Fuels Facility**EA Engineering, Science & Tech**
ELLE Sample #: WW 1292533
ELLE Group #: 2094808
Matrix: Water**Project Name:** Kirtland AFB**Submittal Date/Time:** 04/03/2020 10:00
Collection Date/Time: 04/02/2020 10:00
SDG#: KR421-08

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
GC/MS Volatiles		SW-846 8260C	ug/l	ug/l	ug/l	ug/l	
11997	Benzene	71-43-2	0.5 U	0.2	0.5	1	1
11997	Ethylbenzene	100-41-4	0.8 U	0.4	0.8	1	1
11997	Toluene	108-88-3	0.5 U	0.2	0.5	1	1
11997	Xylene (Total)	1330-20-7	2 U	1	2	6	1
Volatiles by Extraction		SW-846 8011	ug/l	ug/l	ug/l	ug/l	
10398	Ethylene dibromide	106-93-4	0.010 JD1	0.0096	0.019	0.029	1
Metals Dissolved		SW-846 6010C	mg/l	mg/l	mg/l	mg/l	
01754	Iron	7439-89-6	0.103 U	0.0412	0.103	0.206	1
07058	Manganese	7439-96-5	0.0258	0.0031	0.0052	0.0103	1

Sample Comments

This sample was field filtered for dissolved metals.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	BTEX 8260C Water	SW-846 8260C	1	L201002AA	04/09/2020 13:14	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L201002AA	04/09/2020 13:13	Corie Mellinger	1
10398	EDB 8011 Water	SW-846 8011	1	200940024A	04/08/2020 05:14	Rachel Umberger	1
07786	EDB Extraction (8011)	SW-846 8011	1	200940024A	04/06/2020 00:00	Sean Rooney	1
01754	Iron	SW-846 6010C	1	200971486601	04/07/2020 00:10	Elaine F Stoltzfus	1
07058	Manganese	SW-846 6010C	1	200971486601	04/07/2020 00:10	Elaine F Stoltzfus	1
14866	ICP filtered no-digest SW-846	SW-846 3010A	1	200971486601	04/06/2020 16:20	JoElla L Rice	1

*This limit was used in the evaluation of the final result



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Analysis Report

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Sample Description: GWTS-FB02-040220 Water
Kirtland AFB Bulk Fuels Facility

EA Engineering, Science & Tech
ELLE Sample #: WW 1292534
ELLE Group #: 2094808
Matrix: Water

Project Name: Kirtland AFB

Submittal Date/Time: 04/03/2020 10:00
Collection Date/Time: 04/02/2020 09:20
SDG#: KR421-09FB

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
GC/MS Volatiles		SW-846 8260C	ug/l	ug/l	ug/l	ug/l	
11997	Benzene	71-43-2	N.D.	0.2	0.5	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	0.8	1	1
11997	Toluene	108-88-3	N.D.	0.2	0.5	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	2	6	1
Volatiles by Extraction		SW-846 8011	ug/l	ug/l	ug/l	ug/l	
10398	Ethylene dibromide	106-93-4	N.D. D1	0.0095	0.019	0.028	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	BTEX 8260C Water	SW-846 8260C	1	L201002AA	04/09/2020 12:30	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L201002AA	04/09/2020 12:29	Corie Mellinger	1
10398	EDB 8011 Water	SW-846 8011	1	200940024A	04/08/2020 05:31	Rachel Umberger	1
07786	EDB Extraction (8011)	SW-846 8011	1	200940024A	04/06/2020 00:00	Sean Rooney	1

*=This limit was used in the evaluation of the final result

Quality Control SummaryClient Name: EA Engineering, Science & Tech
Reported: 04/14/2020 20:33

Group Number: 2094808

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result ug/l	DL** ug/l	LOD ug/l	LOQ ug/l
Batch number: L200991AA	Sample number(s): 1292523-1292530,1292532			
Benzene	0.5 U	0.2	0.5	1
Ethylbenzene	0.8 U	0.4	0.8	1
Toluene	0.5 U	0.2	0.5	1
Xylene (Total)	2 U	1	2	6
Batch number: L201002AA	Sample number(s): 1292533-1292534			
Benzene	0.5 U	0.2	0.5	1
Ethylbenzene	0.8 U	0.4	0.8	1
Toluene	0.5 U	0.2	0.5	1
Xylene (Total)	2 U	1	2	6
Batch number: 200940024A	Sample number(s): 1292523-1292530,1292532-1292534			
Ethylene dibromide	0.020 U	0.010	0.020	0.030
	mg/l	mg/l	mg/l	mg/l
Batch number: 200971486601	Sample number(s): 1292523-1292526,1292528-1292533			
Iron	0.103 U	0.0412	0.103	0.206
Manganese	0.0052 U	0.0031	0.0052	0.0103

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: L200991AA	Sample number(s): 1292523-1292530,1292532								
Benzene	20	20.64			103		79-120		
Ethylbenzene	20	20.37			102		79-121		
Toluene	20	20.54			103		80-121		
Xylene (Total)	60	62.33			104		79-121		
Batch number: L201002AA	Sample number(s): 1292533-1292534								
Benzene	20	21.32	20	21.58	107	108	79-120	1	20
Ethylbenzene	20	20.74	20	20.9	104	105	79-121	1	20
Toluene	20	20.79	20	20.94	104	105	80-121	1	20
Xylene (Total)	60	63.02	60	63.58	105	106	79-121	1	20
	ug/l	ug/l	ug/l	ug/l					

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

(3) The surrogate spike amount was less than the LOD.



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Analysis Report

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Quality Control Summary

Client Name: EA Engineering, Science & Tech
Reported: 04/14/2020 20:33

Group Number: 2094808

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 200940024A Ethylene dibromide	0.128	0.171	0.128	0.170	134	133	60-140	1	20
	mg/l	mg/l	mg/l	mg/l					
Batch number: 200971486601 Iron	0.400	0.389			97		87-115		
Manganese	0.0200	0.0205			103		90-114		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: L200991AA Benzene	0.5 U	20	22.19	20	21.96	111	110	79-120	1	20
Ethylbenzene	0.8 U	20	21.48	20	21.57	107	108	79-121	0	20
Toluene	0.5 U	20	21.46	20	21.44	107	107	80-121	0	20
Xylene (Total)	2 U	60	65.07	60	65.42	108	109	79-121	1	20
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 200940024A Ethylene dibromide	0.019 U	0.122	0.183	0.121	0.184	149*	153*	60-140	1	20
	mg/l	mg/l	mg/l	mg/l	mg/l					
Batch number: 200971486601 Iron	0.103 U	0.418	0.412	0.418	0.418	99	100	87-115	1	20
Manganese	0.0052 U	0.0209	0.0208	0.0209	0.0215	100	103	90-114	3	20

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc mg/l	DUP Conc mg/l	DUP RPD	DUP RPD Max
Batch number: 200971486601 Iron	0.103 U	0.103 U	0 (1)	20

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

(3) The surrogate spike amount was less than the LOD.

Analysis Report

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Quality Control Summary

Client Name: EA Engineering, Science & Tech
Reported: 04/14/2020 20:33

Group Number: 2094808

Laboratory Duplicate (continued)

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc mg/l	DUP Conc mg/l	DUP RPD	DUP RPD Max
Manganese	0.0052 U	0.0052 U	0 (1)	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX 8260C Water
Batch number: L200991AA

	Dibromofluoromethane		1,2-Dichloroethane-d4		Toluene-d8		4-Bromofluorobenzene	
	%Rec	LOD (ug/l)	%Rec	LOD (ug/l)	%Rec	LOD (ug/l)	%Rec	LOD (ug/l)
1292523	104	1	103	1	97	1	93	1
1292524	106	1	104	1	97	1	93	1
1292525	106	1	106	1	97	1	92	1
1292526	106	1	105	1	97	1	92	1
1292527	105	1	106	1	98	1	94	1
1292528	105	1	105	1	97	1	93	1
1292529	105	1	104	1	98	1	98	1
1292530	104	1	104	1	98	1	97	1
1292532	107	1	106	1	97	1	92	1
Blank	103	1	104	1	97	1	94	1
LCS	103	1	101	1	99	1	97	1
MS	105	1	104	1	98	1	98	1
MSD	104	1	104	1	98	1	97	1
Limits:	80-119		81-118		89-112		85-114	

Analysis Name: BTEX 8260C Water
Batch number: L201002AA

	Dibromofluoromethane		1,2-Dichloroethane-d4		Toluene-d8		4-Bromofluorobenzene	
	%Rec	LOD (ug/l)	%Rec	LOD (ug/l)	%Rec	LOD (ug/l)	%Rec	LOD (ug/l)
1292533	106	1	104	1	97	1	95	1
1292534	106	1	106	1	97	1	94	1
Blank	106	1	103	1	97	1	93	1
LCS	105	1	103	1	99	1	98	1
LCSD	104	1	104	1	98	1	97	1
Limits:	80-119		81-118		89-112		85-114	

*- Outside of specification

**-This limit was used in the evaluation of the final result for the blank

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.
- (3) The surrogate spike amount was less than the LOD.



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Analysis Report

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Quality Control Summary

Client Name: EA Engineering, Science & Tech
Reported: 04/14/2020 20:33

Group Number: 2094808

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: EDB 8011 Water

Batch number: 200940024A

1,1,2,2-Tetrachloroethane-D1			1,1,2,2-Tetrachloroethane-D2		
	%Rec	LOD		%Rec	LOD
1292523	108	0.0067	93	0.0067	
1292524	81	0.0069	95	0.0069	
1292525	125	0.0066	104	0.0066	
1292526	112	0.0067	99	0.0067	
1292527	111	0.0066	99	0.0066	
1292528	117	0.0066	97	0.0066	
1292529	118	0.0067	96	0.0067	
1292530	102	0.0066	102	0.0066	
1292532	151*	0.0066	103	0.0066	
1292533	110	0.0067	96	0.0067	
1292534	110	0.0066	95	0.0066	
Blank	115	0.0070	97	0.0070	
LCS	115	0.0070	104	0.0070	
LCSD	113	0.0070	103	0.0070	
MS	118	0.0067	96	0.0067	
MSD	102	0.0066	102	0.0066	
Limits:	46-136		46-136		

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

(3) The surrogate spike amount was less than the LOD.

31675 / 2094808 / 1292523-34

 225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-GWTS1-040220					
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				YEAR: 2020 QUARTER: Q2					
PROJECT SITE AND PHASE: ST106/SS111				LAB PO NUMBER: 14800				LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258									
ANALYSIS REQUIRED (Specify number of bottles)																	
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (2280C)	BTEX (2260C)	BTEXN (2260C)	ED8 (8011)	Total As, Pb, Cd, K, Na, Mg (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Ammonia (SM4500NH3)	Sulfide (SM4500S2O7)	Alkalinity (SM2320B)	COMMENTS	
1	GWTS-EFF1-040220	04/02/2020	1020	6	--	3	--	2	--	1*	--	--	--	--	--		
2	GWTS-EFF1DUP-040220	04/02/2020	1020	6	--	3	--	2	--	1*	--	--	--	--	--		
3	GWTS-GAC1-040220	04/02/2020	1035	6	--	3	--	2	--	1*	--	--	--	--	--		
4	GWTS-INF1-040220	04/02/2020	1050	6	--	3	--	2	--	1*	--	--	--	--	--		
5	GWTS-TB01-040220	04/02/2020	1055	4	--	2	--	2	--	--	--	--	--	--	--		
6																	
COMMENTS: *Dissolved Fe, Mn aliquot was field filtered.																	
SAMPLER(S): <i>Pete Ferrari</i>								COURIER AND SHIPPING NUMBER: Fedex: 815528257602									
RELINQUISHED BY:				DATE	TIME	RECEIVED BY:				DATE	TIME						
Printed Name and Signature:						Printed Name and Signature:											
<i>Pete Ferrari</i>				<i>Pete Ferrari</i>	4-2-2020	1130											
Printed Name and Signature:						Printed Name and Signature:											
Printed Name and Signature:						Printed Name and Signature:											
Printed Name and Signature:						Printed Name and Signature:											
						<i>Chad Wetzig</i>				<i>Chad Wetzig</i>	4/3/20	10:00					

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316-75 | 2094808 | ~~1294808~~ → 1292523-34
 ③ KM 2241
 4/3/20

EA 225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1625		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-GWTS2-040220			
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				YEAR: 2020 QUARTER: Q2			
PROJECT SITE AND PHASE: ST106/SS111		LAB PO NUMBER: 14800				LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258									
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	ANALYSIS REQUIRED (Specify number of bottles)										COMMENTS	
				Total Number of Bottles	VOCs (8280C)	BTEX (8280C)	BTEXN (8280C)	ED8 (8011)	Total As,Pb,Ca,K,Na,Mg (6020A6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Ammonia (SM4500-NH3)		Sulfide (SM4500-S2C7)
1	GWTS-EFF2-040220	04/02/2020	0920	18	--	9	--	6	--	3*	--	--	--	--	Additional Volume Provided for MSMSD
2	GWTS-GAC2-040220	04/02/2020	0950	6	--	3	--	2	--	1*	--	--	--	--	
3	GWTS-INF2-040220	04/02/2020	1000	6	--	3	--	2	--	1*	--	--	--	--	
4	GWTS-FB02-040220	04/02/2020	0920	5	--	3	--	2	--	--	--	--	--	--	Collected simultaneously with GWTS-EFF2-040220
5															
6															
COMMENTS: *Dissolved Fe, Mn aliquot was field filtered.															
SAMPLER(S): Pete Ferraro										COURIER AND SHIPPING NUMBER: Fedex: 815528257602					
RELINQUISHED BY:				DATE	TIME	RECEIVED BY:				DATE	TIME				
Printed Name and Signature: Pete Ferraro				4-2-2020	1130	Printed Name and Signature:									
Printed Name and Signature:						Printed Name and Signature:									
Printed Name and Signature:						Printed Name and Signature:									
Printed Name and Signature:						Printed Name and Signature:									
Printed Name and Signature:						Printed Name and Signature: Chad Whittig				4/3/20	10:00				

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Sample Administration Receipt Documentation Log



Client: EA

Delivery and Receipt Information

Delivery Method:	<u>Fed Ex</u>	Arrival Date:	<u>04/03/2020</u>
Number of Packages:	<u>1</u>	Number of Projects:	<u>1</u>

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	4
Samples Chilled:	Yes	Trip Blank Type:	HCl
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Julissa Rivera-Santa

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	46730060WS	0.2	IR	Wet	Y	Loose	N

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	mL	milliliter(s)
C	degrees Celsius	MPN	Most Probable Number
cfu	colony forming units	N.D.	non-detect
CP Units	cobalt-chloroplatinate units	ng	nanogram(s)
F	degrees Fahrenheit	NTU	nephelometric turbidity units
g	gram(s)	pg/L	picogram/liter
IU	International Units	RL	Reporting Limit
kg	kilogram(s)	TNTC	Too Numerous To Count
L	liter(s)	µg	microgram(s)
lb.	pound(s)	µL	microliter(s)
m3	cubic meter(s)	umhos/cm	micromhos/cm
meq	milliequivalents	MCL	Maximum Contamination Limit
mg	milligram(s)		
<	less than		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is less than the LOQ
K2	Continuing Calibration Blank is above the QC limit and the sample result is less than the LOQ
K3	Initial Calibration Verification is above the QC limit and the sample result is less than the LOQ
K4	Continuing Calibration Verification is above the QC limit and the sample result is less than the LOQ
J (or G, I, X)	Estimated value $\geq$ the Method Detection Limit (MDL or DL) and $<$ the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported.
P [^]	Concentration difference between the primary and confirmation column $>40\%$. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.

Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Volatiles by GC/MS Data

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Case Narrative/Conformance Summary

Volatiles by GC/MS

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Case Narrative/Conformance Summary

CLIENT: EA Engineering, Science & Tech

SDG: KR421

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Sample #	Client ID	Matrix		DF	Comments
		Liquid	Solid		
1292523	GWTS-EFF1-040220	X		1	
1292524	GWTS-EFF1DUP-040220	X		1	Field Duplicate Sample
1292525	GWTS-GAC1-040220	X		1	
1292526	GWTS-INF1-040220	X		1	
1292527	GWTS-TB01-040220	X		1	Trip Blank
1292528	GWTS-EFF2-040220	X		1	Unspiked
1292529	GWTS-EFF2-040220 MS	X		1	Matrix Spike
1292530	GWTS-EFF2-040220 MSD	X		1	Matrix Spike Duplicate
1292532	GWTS-GAC2-040220	X		1	
1292533	GWTS-INF2-040220	X		1	
1292534	GWTS-FB02-040220	X		1	Field Blank

All analyses have been performed in accordance with DOD QSM Version 5.1.1 unless otherwise noted below.
See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

All QC is within specification.

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

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Case Narrative/Conformance Summary

CLIENT: EA Engineering, Science & Tech

SDG: KR421

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
+MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

Quality Control and Calibration Summary Forms

Volatiles by GC/MS

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Quality Control Reference List GC/MS Volatiles

CLIENT: EA Engineering, Science & Tech
SDG: KR421

Fraction: Volatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
BTEX 8260C Water	L200991AA	VBLKL01	04/08/2020 11:29
		LCSL01	04/08/2020 10:23
		1292523	04/08/2020 15:49
		1292524	04/08/2020 16:11
		1292525	04/08/2020 16:33
		1292526	04/08/2020 16:55
		1292527	04/08/2020 12:08
		1292528 UNSPK	04/08/2020 13:36
		1292529 MS	04/08/2020 13:58
		1292530 MSD	04/08/2020 14:20
		1292532	04/08/2020 17:17
BTEX 8260C Water	L201002AA	VBLKL05	04/09/2020 11:48
		LCSL05	04/09/2020 10:20
		LCDL05	04/09/2020 11:04
		1292533	04/09/2020 13:14
		1292534	04/09/2020 12:30

Quality Control Summary
Method Blank
GC/MS Volatiles
SDG: KR421
Matrix: LIQUID

Fraction: Volatiles by GC/MS

L200991AA / VBLKL01						
Analyte	Analysis Date	Blank Results	Units	DL	LOD	LOQ
Benzene	04/08/20	N.D.	ug/l	0.2	0.5	1
Toluene	04/08/20	N.D.	ug/l	0.2	0.5	1
Ethylbenzene	04/08/20	N.D.	ug/l	0.4	0.8	1
Xylene (Total)	04/08/20	N.D.	ug/l	1	2	6

L201002AA / VBLKL05						
Analyte	Analysis Date	Blank Results	Units	DL	LOD	LOQ
Benzene	04/09/20	N.D.	ug/l	0.2	0.5	1
Toluene	04/09/20	N.D.	ug/l	0.2	0.5	1
Ethylbenzene	04/09/20	N.D.	ug/l	0.4	0.8	1
Xylene (Total)	04/09/20	N.D.	ug/l	1	2	6

Quality Control Summary
Surrogates
GC/MS Volatiles
SDG: KR421
Matrix: LIQUID

Fraction: Volatiles by GC/MS

L200991AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l
	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKL01	104	81 - 118	94	85 - 114	103	80 - 119	97	89 - 112
LCSL01	101	81 - 118	97	85 - 114	103	80 - 119	99	89 - 112
1292523	103	81 - 118	93	85 - 114	104	80 - 119	97	89 - 112
1292524	104	81 - 118	93	85 - 114	106	80 - 119	97	89 - 112
1292525	106	81 - 118	92	85 - 114	106	80 - 119	97	89 - 112
1292526	105	81 - 118	92	85 - 114	106	80 - 119	97	89 - 112
1292527	106	81 - 118	94	85 - 114	105	80 - 119	98	89 - 112
1292528 UNSPK	105	81 - 118	93	85 - 114	105	80 - 119	97	89 - 112
1292529 MS	104	81 - 118	98	85 - 114	105	80 - 119	98	89 - 112
1292530 MSD	104	81 - 118	97	85 - 114	104	80 - 119	98	89 - 112
1292532	106	81 - 118	92	85 - 114	107	80 - 119	97	89 - 112

L201002AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l
	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKL05	103	81 - 118	93	85 - 114	106	80 - 119	97	89 - 112
LCSL05	103	81 - 118	98	85 - 114	105	80 - 119	99	89 - 112
LCDL05	104	81 - 118	97	85 - 114	104	80 - 119	98	89 - 112
1292533	104	81 - 118	95	85 - 114	106	80 - 119	97	89 - 112
1292534	106	81 - 118	94	85 - 114	106	80 - 119	97	89 - 112

Quality Control Summary
Matrix Spike/Matrix Spike Duplicate

SDG: KR421
Matrix: LIQUID

GC/MS Volatiles

Fraction: Volatiles by GC/MS

UNSPK: 1292528 MS: 1292529 MSD: 1292530 Analyte	Batch: L200991AA (Sample number(s): 1292523-1292530, 1292532)								
	Spike Added ug/l	Unspiked Conc ug/l	MS Conc ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	%Rec Limits	%RPD	%RPD Limits
Benzene	20	N.D.	22.19	21.96	111	110	79-120	1	20
Toluene	20	N.D.	21.46	21.44	107	107	80-121	0	20
Ethylbenzene	20	N.D.	21.48	21.57	107	108	79-121	0	20
Xylene (Total)	60	N.D.	65.07	65.42	108	109	79-121	1	20

Comments:

(2) The unspiked sample result is greater than four times the spike added.

* = Out of Specification

Results are being reported on an as received basis.

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Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: KR421
Matrix: LIQUID

GC/MS Volatiles
Fraction: Volatiles by GC/MS

LCS: LCSL01	Batch: L200991AA (Sample number(s): 1292523-1292530, 1292532)							
Analyte	Spike Added ug/l	LCS Conc ug/l	LCSD Conc ug/l	LCS %Rec	LCSD %Rec	%Rec Limits	%RPD	%RPD Limits
Benzene	20	20.64	NA	103	NA	79-120	NA	NA
Toluene	20	20.54	NA	103	NA	80-121	NA	NA
Ethylbenzene	20	20.37	NA	102	NA	79-121	NA	NA
Xylene (Total)	60	62.33	NA	104	NA	79-121	NA	NA

LCS: LCSL05 LCSD: LCDL05	Batch: L201002AA (Sample number(s): 1292533-1292534)							
Analyte	Spike Added ug/l	LCS Conc ug/l	LCSD Conc ug/l	LCS %Rec	LCSD %Rec	%Rec Limits	%RPD	%RPD Limits
Benzene	20	21.32	21.58	107	108	79-120	1	20
Toluene	20	20.79	20.94	104	105	80-121	1	20
Ethylbenzene	20	20.74	20.9	104	105	79-121	1	20
Xylene (Total)	60	63.02	63.58	105	106	79-121	1	20

**LOQ/MDL Summary
GC/MS Volatiles**

SDG: KR421

Fraction: Volatiles by GC/MS

11997: BTEX 8260C Water Analyte Name	Default DL	Default LOD	Default LOQ	Units
Benzene	.2	.5	1	ug/l
Toluene	.2	.5	1	ug/l
Ethylbenzene	.4	.8	1	ug/l
Xylene (Total)	1.4	2	6	ug/l

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____
 Lab File ID: lf24t01.d BFB Injection Date: 02/24/20
 Instrument ID: HP09915 BFB Injection Time: 15:40
 Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.58
75	30.0 - 60.0% of mass 95	44.60
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.48
173	Less than 2.0% of mass 174	0.51 (0.63)1
174	Greater than 50.0% of mass 95	81.49
175	5.0 - 9.0% of mass 174	5.80 (7.12)1
176	Greater than 95.0%, but less than 101.0% of mass 174	80.58 (98.88)1
177	5.0 - 9.0% of mass 176	5.72 (7.10)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD300	lf24i01.d	02/24/20	16:17
02	VSTD100	lf24i02.d	02/24/20	16:39
03	VSTD50	lf24i03.d	02/24/20	17:01
04	VSTD20	lf24i04.d	02/24/20	17:23
05	VSTD10	lf24i05.d	02/24/20	17:45
06	VSTD4	lf24i06.d	02/24/20	18:07
07	VSTD1	lf24i07.d	02/24/20	18:29
08	ICVLLG	lf24v01.d	02/24/20	19:13
09	VSTD300	lf24i11.d	02/24/20	19:57
10	VSTD100	lf24i12.d	02/24/20	20:19
11	VSTD50	lf24i13.d	02/24/20	20:41
12	VSTD20	lf24i14.d	02/24/20	21:03
13	VSTD10	lf24i15.d	02/24/20	21:25
14	VSTD4	lf24i16.d	02/24/20	21:47
15	ICVLSM	lf24v11.d	02/24/20	22:09

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____
 Lab File ID: lf26t01.d BFB Injection Date: 02/26/20
 Instrument ID: HP09915 BFB Injection Time: 07:57
 Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.79
75	30.0 - 60.0% of mass 95	45.39
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.35
173	Less than 2.0% of mass 174	0.59 (0.70)1
174	Greater than 50.0% of mass 95	83.41
175	5.0 - 9.0% of mass 174	6.07 (7.27)1
176	Greater than 95.0%, but less than 101.0% of mass 174	81.06 (97.18)1
177	5.0 - 9.0% of mass 176	5.43 (6.70)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	lf26c01.d	02/26/20	08:44
02	ACRO	lf26s99.d	02/26/20	09:06
03	LCSL23	lf26s01.d	02/26/20	09:06
04	VLKL23	lf26b01.d	02/26/20	09:50

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____
 Lab File ID: la08t03.d BFB Injection Date: 04/08/20
 Instrument ID: HP09915 BFB Injection Time: 08:32
 Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.08
75	30.0 - 60.0% of mass 95	43.55
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.95
173	Less than 2.0% of mass 174	0.50 (0.57)1
174	Greater than 50.0% of mass 95	87.21
175	5.0 - 9.0% of mass 174	5.99 (6.86)1
176	Greater than 95.0%, but less than 101.0% of mass 174	83.97 (96.29)1
177	5.0 - 9.0% of mass 176	5.31 (6.33)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	la08c01.d	04/08/20	09:17
02	VSTD50	la08c02.d	04/08/20	09:39
03	LCSL01	la08s01.d	04/08/20	10:23
04	LCSL03	la08s02.d	04/08/20	10:45
05	VBLKL01	la08b01.d	04/08/20	11:29
06	1292527	la08s03.d	04/08/20	12:08
07	1293283	la08s04.d	04/08/20	12:30
08	1293286	la08s05.d	04/08/20	12:52
09	1293990	la08s06.d	04/08/20	13:14
10	1292528	la08s07.d	04/08/20	13:36
11	1292529MS	la08s08.d	04/08/20	13:58
12	1292530MSD	la08s09.d	04/08/20	14:20
13	1292529MSMS1	la08s10.d	04/08/20	14:43
14	1292530MSDMS	la08s11.d	04/08/20	15:05
15	1292520	la08s12.d	04/08/20	15:27
16	1292523	la08s13.d	04/08/20	15:49
17	1292524	la08s14.d	04/08/20	16:11
18	1292525	la08s15.d	04/08/20	16:33
19	1292526	la08s16.d	04/08/20	16:55
20	1292532	la08s17.d	04/08/20	17:17
21	1293271	la08s18.d	04/08/20	17:39
22	1293273	la08s19.d	04/08/20	18:01

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FORM V VOA

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____
 Lab File ID: la08t03.d BFB Injection Date: 04/08/20
 Instrument ID: HP09915 BFB Injection Time: 08:32
 Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.08
75	30.0 - 60.0% of mass 95	43.55
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.95
173	Less than 2.0% of mass 174	0.50 (0.57)1
174	Greater than 50.0% of mass 95	87.21
175	5.0 - 9.0% of mass 174	5.99 (6.86)1
176	Greater than 95.0%, but less than 101.0% of mass 174	83.97 (96.29)1
177	5.0 - 9.0% of mass 176	5.31 (6.33)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	1293275	la08s20.d	04/08/20	18:23
24	1293276	la08s21.d	04/08/20	18:46
25	1293277	la08s22.d	04/08/20	19:08
26	1293279	la08s23.d	04/08/20	19:30
27	1293284	la08s24.d	04/08/20	19:52
28	SECC050	la08ec5.d	04/08/20	20:14
29	SECA050	la08ec6.d	04/08/20	20:36

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____
 Lab File ID: 1a09t02.d BFB Injection Date: 04/09/20
 Instrument ID: HP09915 BFB Injection Time: 08:51
 Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.34
75	30.0 - 60.0% of mass 95	43.61
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.49
173	Less than 2.0% of mass 174	0.61 (0.73)1
174	Greater than 50.0% of mass 95	83.73
175	5.0 - 9.0% of mass 174	6.19 (7.40)1
176	Greater than 95.0%, but less than 101.0% of mass 174	83.12 (99.28)1
177	5.0 - 9.0% of mass 176	5.84 (7.02)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	1a09c02.d	04/09/20	09:36
02	LCSL04	1a09s01.d	04/09/20	10:20
03	LCSL05	1a09s31.d	04/09/20	10:20
04	LCDL04	1a09s02.d	04/09/20	11:04
05	LCDL05	1a09s32.d	04/09/20	11:04
06	VBLKL04	1a09b01.d	04/09/20	11:48
07	VBLKL05	1a09b05.d	04/09/20	11:48
08	1292534	1a09s33.d	04/09/20	12:30
09	1293996	1a09s34.d	04/09/20	12:52
10	1292533	1a09s35.d	04/09/20	13:14
11	1293991	1a09s36.d	04/09/20	13:36
12	1293992	1a09s37.d	04/09/20	13:59
13	1293993	1a09s38.d	04/09/20	14:21
14	1293994	1a09s39.d	04/09/20	14:43
15	1293995	1a09s40.d	04/09/20	15:05
16	1293995DL	1a09s41.d	04/09/20	15:27
17	1293391	1a09s3a.d	04/09/20	15:57
18	1293436	1a09s04.d	04/09/20	16:19
19	1293438	1a09s05.d	04/09/20	16:41
20	1293442	1a09s06.d	04/09/20	17:03
21	1293443	1a09s07.d	04/09/20	17:26
22	1293429	1a09s08.d	04/09/20	17:48

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FORM V VOA

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____
 Lab File ID: la09t02.d BFB Injection Date: 04/09/20
 Instrument ID: HP09915 BFB Injection Time: 08:51
 Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.34
75	30.0 - 60.0% of mass 95	43.61
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.49
173	Less than 2.0% of mass 174	0.61 (0.73)1
174	Greater than 50.0% of mass 95	83.73
175	5.0 - 9.0% of mass 174	6.19 (7.40)1
176	Greater than 95.0%, but less than 101.0% of mass 174	83.12 (99.28)1
177	5.0 - 9.0% of mass 176	5.84 (7.02)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	1293434	la09s09.d	04/09/20	18:10
24	1293435	la09s10.d	04/09/20	18:32
25	1293439	la09s11.d	04/09/20	18:54
26	1293440	la09s12.d	04/09/20	19:16
27	1293383	la09s13.d	04/09/20	19:38
28	SECC050	la09ec5.d	04/09/20	21:07

LAB FILE ID:	RRF 1 = 1f24i07.d	RRF 4 = 1f24i06.d	RRF 10= 1f24i05.d
RRF 20= 1f24i04.d	RRF 50= 1f24i03.d	RRF100= 1f24i02.d	RRF300= 1f24i01.d

```
# Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.
```

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: HP09915 Calibration Date(s): 02/24/20 02/24/20

Heated Purge: (Y/N) Y Calibration Times: 16:17 18:29

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID:	RRF 1 = 1f24i07.d	RRF 4 = 1f24i06.d	RRF 10= 1f24i05.d	RRF 20= 1f24i04.d	RRF 50= 1f24i03.d	RRF100= 1f24i02.d	RRF300= 1f24i01.d		%	CAL.
COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	RSD	METHOD
Trichloroethene	#0.1788	0.2256	0.2475	0.2517	0.2365	0.2509	0.2584	0.2356	12	AVG #
Methylcyclohexane	#0.3003	0.4000	0.3877	0.4237	0.3980	0.4217	0.4355	0.3953	11	AVG #
Methylcyclohexane(2)	#0.1422	0.1808	0.1761	0.1863	0.1785	0.1887	0.1954	0.1783	10	AVG #
1,2-Dichloropropane	#0.1938	0.2347	0.2509	0.2609	0.2442	0.2590	0.2585	0.2431	10	AVG #
Dibromomethane	0.1224	0.1549	0.1607	0.1680	0.1597	0.1684	0.1728	0.1581	11	AVG
1,4-Dioxane	0.0577	0.0721	0.0768	0.0792	0.0714	0.0775	0.0784	0.0733	10	AVG
Methyl Methacrylate	0.1777	0.2194	0.2303	0.2475	0.2388	0.2522	0.2590	0.2321	12	AVG
Bromodichloromethane	#0.1990	0.2552	0.2850	0.3043	0.2911	0.3153	0.3290	0.2827	15	AVG #
2-Nitropropane	0.0783	0.0728	0.0844	0.0867	0.0934	0.0969	0.0963	0.0870	11	AVG
2-Chloroethyl Vinyl Ether	0.1377	0.1736	0.1760	0.1837	0.1819	0.1945	0.2003	0.1782	11	AVG
cis-1,3-Dichloropropene	#0.2740	0.3435	0.3800	0.4121	0.3898	0.4204	0.4313	0.3787	14	AVG #
4-Methyl-2-pentanone	#0.3335	0.3573	0.3955	0.3919	0.3919	0.3956	0.3762	0.3774	6	AVG #
Toluene	#0.5856	0.7475	0.8372	0.8533	0.7889	0.8239	0.8273	0.7805	12	AVG #
trans-1,3-Dichloropropene	#0.3238	0.4125	0.4680	0.5074	0.4857	0.5201	0.5382	0.4651	16	AVG #
Ethyl Methacrylate	0.3938	0.4785	0.5514	0.5874	0.5471	0.5790	0.5907	0.5325	14	AVG
1,1,2-Trichloroethane	#0.2426	0.2984	0.3161	0.3327	0.3078	0.3245	0.3312	0.3076	10	AVG #
Tetrachloroethene	#0.2502	0.3150	0.3574	0.3542	0.3393	0.3479	0.3546	0.3312	12	AVG #
1,3-Dichloropropane	0.4030	0.4901	0.5290	0.5578	0.5154	0.5439	0.5553	0.5135	11	AVG
2-Hexanone	#0.3074	0.3363	0.3800	0.3797	0.3780	0.3761	0.3605	0.3597	8	AVG #
Dibromochloromethane	#0.2096	0.2669	0.3122	0.3377	0.3250	0.3541	0.3711	0.3109	18	AVG #
1,2-Dibromoethane	#0.2564	0.3135	0.3432	0.3649	0.3387	0.3575	0.3689	0.3347	12	AVG #
1-Chlorohexane	0.4159	0.4178	0.4393	0.4592	0.4206	0.4439	0.4492	0.4351	4	AVG
Chlorobenzene	#0.6693	0.8448	0.9418	0.9618	0.8790	0.9244	0.9185	0.8771	11	AVG #
1,1,1,2-Tetrachloroethane	0.1954	0.2730	0.3106	0.3248	0.3042	0.3252	0.3192	0.2932	16	AVG
Ethylbenzene	#1.1190	1.4427	1.5886	1.6433	1.5154	1.5865	1.5421	1.4911	12	AVG #
m+p-Xylene	#0.4395	0.5606	0.6300	0.6545	0.5972	0.6249	0.5898	0.5852	12	AVG #
o-Xylene	#0.4451	0.5515	0.6253	0.6427	0.5922	0.6179	0.5859	0.5801	11	AVG #
Styrene	#0.6767	0.9147	1.0547	1.0962	1.0123	1.0611	1.0142	0.9757	15	AVG #
Bromoform	#	0.1884	0.2234	0.2453	0.2405	0.2647	0.2817	0.2407	14	AVG #
Isopropylbenzene	#1.0975	1.4349	1.5939	1.6610	1.5082	1.5791	1.5299	1.4863	12	AVG #
Cyclohexanone	0.2287	0.2994	0.3066	0.3079	0.2987	0.3099	0.3060	0.2939	10	AVG
Bromobenzene	0.5426	0.6914	0.7604	0.7732	0.7110	0.7442	0.7244	0.7067	11	AVG
1,1,2,2-Tetrachloroethane	#0.7550	0.9038	1.0617	1.0509	0.9481	0.9805	0.9476	0.9497	11	AVG #
1,2,3-Trichloropropane	0.2270	0.2708	0.3111	0.3084	0.2793	0.2864	0.2898	0.2818	10	AVG
trans-1,4-Dichloro-2-butene	0.2067	0.2546	0.2882	0.3005	0.2816	0.2903	0.2825	0.2720	12	AVG
n-Propylbenzene	2.4567	3.1096	3.4289	3.5187	3.2116	3.3475	3.2410	3.1877	11	AVG
2-Chlorotoluene	0.5136	0.6296	0.7067	0.7290	0.6599	0.6941	0.7027	0.6622	11	AVG
4-Chlorotoluene	0.5346	0.6580	0.7362	0.7498	0.6859	0.7200	0.7246	0.6870	11	AVG
1,3,5-Trimethylbenzene	1.7601	2.2495	2.5045	2.6000	2.3823	2.4938	2.4263	2.3452	12	AVG
tert-Butylbenzene	0.3880	0.4533	0.5122	0.5323	0.4830	0.5064	0.5024	0.4825	10	AVG
Pentachloroethane	0.2587	0.3644	0.3691	0.4327	0.4051	0.4352	0.4352	0.3858	17	AVG
1,2,4-Trimethylbenzene	1.8570	2.3440	2.6727	2.7405	2.4905	2.6022	2.4771	2.4549	12	AVG
sec-Butylbenzene	2.2779	2.7703	3.1096	3.2026	2.9131	3.0363	2.8602	2.8814	11	AVG
1,3-Dichlorobenzene	#1.1039	1.3149	1.4638	1.4709	1.3270	1.3783	1.2684	1.3324	9	AVG #
p-Isopropyltoluene	1.9515	2.4110	2.6966	2.7911	2.5327	2.6416	2.3515	2.4823	11	AVG
1,4-Dichlorobenzene	#1.1460	1.3659	1.5193	1.5155	1.3649	1.4183	1.3302	1.3800	9	AVG #
1,2,3-Trimethylbenzene	2.0224	2.5373	2.5601	2.6530	2.4719	2.5281	2.4066	2.4542	8	AVG
Benzyl Chloride	1.1412	1.4934	1.9003	2.0119	1.9153	2.0374	2.0743	1.7963	19	AVG
1,3-Diethylbenzene	1.2251	1.5517	1.5616	1.6343	1.5083	1.5524	1.4941	1.5039	9	AVG
1,4-Diethylbenzene	1.2943	1.6374	1.6514	1.7150	1.5770	1.6225	1.5305	1.5754	9	AVG
1,2-Dichlorobenzene	#1.1133	1.2961	1.4563	1.4577	1.3094	1.3618	1.2875	1.3260	9	AVG #
n-Butylbenzene	1.0795	1.2469	1.3358	1.3784	1.2329	1.2961	1.1899	1.2514	8	AVG

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

[illegible]

September 2020

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP09915.i/20feb24i.b/1f24i01.d	VSTD300
/chem/HP09915.i/20feb24i.b/1f24i02.d	VSTD100
/chem/HP09915.i/20feb24i.b/1f24i03.d	VSTD050
/chem/HP09915.i/20feb24i.b/1f24i04.d	VSTD020
/chem/HP09915.i/20feb24i.b/1f24i05.d	VSTD010
/chem/HP09915.i/20feb24i.b/1f24i06.d	VSTD004
/chem/HP09915.i/20feb24i.b/1f24i07.d	VSTD001

Area Summary

File ID:

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Internal Standard Name	1f24i01.d	1f24i02.d	1f24i03.d	1f24i04.d	1f24i05.d	1f24i06.d	1f24i07.d	Avg. Area	%RSD	In Spec
t-Butyl alcohol-d10	264984	284406	313738	301250	291154	295469	335105	298015	7	Yes
Fluorobenzene	1311115	1323333	1333909	1336522	1348858	1329669	1329719	1330446	1	Yes
Chlorobenzene-d5	1005617	1019860	1014578	1004822	1011830	1006965	1005001	1009810	1	Yes
1,4-Dichlorobenzene-d4	544675	558412	551907	550949	551668	551524	551645	551540	1	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

=====

Internal Standard Name	1f24i01.d	1f24i02.d	1f24i03.d	1f24i04.d	1f24i05.d	1f24i06.d	1f24i07.d	Avg. RT
t-Butyl alcohol-d10	4.496	4.500	4.509	4.506	4.506	4.500	4.493	4.501
Fluorobenzene	7.953	7.956	7.956	7.956	7.959	7.956	7.953	7.956
Chlorobenzene-d5	11.358	11.358	11.358	11.355	11.355	11.355	11.354	11.356
1,4-Dichlorobenzene-d4	13.220	13.220	13.219	13.220	13.220	13.220	13.219	13.220

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 02/25/2020 at 18:01.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP09915 ICV Date: 02/24/20 Time: 19:13
 Lab File ID: 1f24v01.d Init. Calib. Date(s): 02/24/20 02/24/20
 Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT
# Dichlorodifluoromethane	0.3154	0.2491	15.79	20	-21 #
# Chloromethane	0.3152	0.3006	19.07	20	-5 #
1,3-Butadiene	0.2362	0.2344	19.84	20	-1 #
# Vinyl Chloride	0.2974	0.2930	19.71	20	-1 #
# Bromomethane	0.2087	0.1978	18.96	20	-5 #
# Chloroethane	0.1642	0.1568	19.09	20	-5 #
Dichlorofluoromethane	0.3642	0.3477	19.10	20	-5 #
n-Pentane	0.3485	0.3282	18.83	20	-6 #
# Trichlorofluoromethane	0.3083	0.3223	20.91	20	5 #
Ethyl ether	0.2200	0.1701	15.46	20	-23 #
Freon 123a	0.2476	0.2430	19.62	20	-2 #
Acrolein	1.8260	1.2228	100.45	150	-33 # <-
# 1,1-Dichloroethene	0.2109	0.1891	17.94	20	-10 #
# Acetone	0.8075	0.7320	135.96	150	-9 #
# Freon 113	0.2006	0.1938	19.33	20	-3 #
2-Propanol	0.5626	0.4663	124.32	150	-17 #
Methyl Iodide	0.3728	0.3505	18.80	20	-6 #
# Carbon Disulfide	0.6661	0.6216	18.66	20	-7 #
Allyl Chloride	0.3393	0.3455	20.37	20	2 #
# Methyl Acetate	0.2632	0.2583	19.63	20	-2 #
# Methylene Chloride	0.2354	0.2195	18.65	20	-7 #
t-Butyl alcohol	0.9670	0.8688	179.67	200	-10 #
Acrylonitrile	0.1426	0.1333	93.47	100	-7 #
# trans-1,2-Dichloroethene	0.2313	0.2148	18.57	20	-7 #
# Methyl Tertiary Butyl Ether	0.7046	0.6427	18.25	20	-9 #
n-Hexane	0.3327	0.3148	18.93	20	-5 #
# 1,1-Dichloroethane	0.3871	0.3637	18.79	20	-6 #
di-Isopropyl ether	0.7439	0.7023	18.88	20	-6 #
2-Chloro-1,3-butadiene	0.3311	0.3220	19.45	20	-3 #
Ethyl t-butyl ether	0.7064	0.6620	18.74	20	-6 #
# cis-1,2-Dichloroethene	0.2587	0.2505	19.37	20	-3 #
# 2-Butanone	0.1824	0.1736	142.72	150	-5 #
2,2-Dichloropropane	0.3080	0.2966	19.26	20	-4 #
Propionitrile	1.2533	1.2011	143.75	150	-4 #
Methacrylonitrile	0.1459	0.1431	147.08	150	-2 #
Bromochloromethane	0.1285	0.1233	19.19	20	-4 #

Compounds with required minimum RRF.
 Maximum % Drift = 30 %

page 1 of 3

FORM VII VOA

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP09915 ICV Date: 02/24/20 Time: 19:13
 Lab File ID: lf24v01.d Init. Calib. Date(s): 02/24/20 02/24/20
 Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT
Tetrahydrofuran	1.1268	1.0594	94.02	100	-6
# Chloroform	0.3751	0.3555	18.96	20	-5
# 1,1,1-Trichloroethane	0.3289	0.3061	18.62	20	-7
# Cyclohexane	0.4050	0.3761	18.57	20	-7
# 1,1-Dichloropropene	0.3068	0.2902	18.91	20	-5
# Carbon Tetrachloride	0.2687	0.2539	18.90	20	-5
# Isobutyl Alcohol	0.3286	0.2928	445.61	500	-11
# Benzene	0.9359	0.8910	19.04	20	-5
# 1,2-Dichloroethane	0.3129	0.2894	18.50	20	-8
# t-Amyl methyl ether	0.7106	0.6632	18.67	20	-7
# n-Heptane	0.3258	0.2797	17.17	20	-14
# n-Butanol	0.2751	0.2412	876.78	1000	-12
# Trichloroethene	0.2356	0.2253	19.12	20	-4
# Methylcyclohexane	0.3953	0.3898	19.72	20	-1
# 1,2-Dichloropropane	0.2431	0.2317	19.05	20	-5
# Dibromomethane	0.1581	0.1465	18.53	20	-7
# 1,4-Dioxane	0.0733	0.0694	473.46	500	-5
# Methyl Methacrylate	0.2321	0.2278	19.63	20	-2
# Bromodichloromethane	0.2827	0.2570	18.19	20	-9
# 2-Nitropropane	0.0870	0.0716	16.48	20	-18
# 2-Chloroethyl Vinyl Ether	0.1782	0.1639	18.39	20	-8
# cis-1,3-Dichloropropene	0.3787	0.3512	18.54	20	-7
# 4-Methyl-2-pentanone	0.3774	0.3552	94.11	100	-6
# Toluene	0.7805	0.7482	19.17	20	-4
# trans-1,3-Dichloropropene	0.4651	0.4132	17.77	20	-11
# Ethyl Methacrylate	0.5325	0.4700	17.65	20	-12
# 1,1,2-Trichloroethane	0.3076	0.2911	18.93	20	-5
# Tetrachloroethene	0.3312	0.3182	19.21	20	-4
# 1,3-Dichloropropane	0.5135	0.4760	18.54	20	-7
# 2-Hexanone	0.3597	0.3496	97.19	100	-3
# Dibromochloromethane	0.3109	0.2839	18.26	20	-9
# 1,2-Dibromoethane	0.3347	0.3110	18.59	20	-7
# 1-Chlorohexane	0.4351	0.3890	17.88	20	-11
# Chlorobenzene	0.8771	0.8397	19.15	20	-4
# 1,1,1,2-Tetrachloroethane	0.2932	0.2696	18.39	20	-8
# Ethylbenzene	1.4911	1.4389	19.30	20	-4

Compounds with required minimum RRF.
 Maximum % Drift = 30 %

page 2 of 3

FORM VII VOA

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP09915 ICV Date: 02/24/20 Time: 19:13
 Lab File ID: lf24v01.d Init. Calib. Date(s): 02/24/20 02/24/20
 Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT
# m+p-Xylene	0.5852	0.5742	39.25	40	-2 #
# o-Xylene	0.5801	0.5587	19.26	20	-4 #
# Styrene	0.9757	0.9372	19.21	20	-4 #
# Bromoform	0.2407	0.1929	16.03	20	-20 #
# Isopropylbenzene	1.4863	1.4465	19.46	20	-3 #
# Cyclohexanone	0.2939	0.2487	423.12	500	-15
# Bromobenzene	0.7067	0.6643	18.80	20	-6
# 1,1,2,2-Tetrachloroethane	0.9497	0.8697	18.32	20	-8 #
# 1,2,3-Trichloropropane	0.2818	0.2613	18.55	20	-7
# trans-1,4-Dichloro-2-butene	0.2720	0.2643	97.14	100	-3
# n-Propylbenzene	3.1877	3.0630	19.22	20	-4
# 2-Chlorotoluene	0.6622	0.6317	19.08	20	-5
# 4-Chlorotoluene	0.6870	0.6429	18.72	20	-6
# 1,3,5-Trimethylbenzene	2.3452	2.2113	18.86	20	-6
# tert-Butylbenzene	0.4825	0.4485	18.59	20	-7
# Pentachloroethane	0.3858	0.3820	19.80	20	-1
# 1,2,4-Trimethylbenzene	2.4549	2.2790	18.57	20	-7
# sec-Butylbenzene	2.8814	2.7013	18.75	20	-6
# 1,3-Dichlorobenzene	1.3324	1.2523	18.80	20	-6 #
# p-Isopropyltoluene	2.4823	2.3455	18.90	20	-6
# 1,4-Dichlorobenzene	1.3800	1.2951	18.77	20	-6 #
# 1,2,3-Trimethylbenzene	2.4542	2.4466	19.94	20	0
# Benzyl Chloride	1.7963	1.4414	16.05	20	-20
# 1,3-Diethylbenzene	1.5039	1.4642	19.47	20	-3
# 1,4-Diethylbenzene	1.5754	1.5339	19.47	20	-3
# 1,2-Dichlorobenzene	1.3260	1.2344	18.62	20	-7 #
# n-Butylbenzene	1.2514	1.1192	17.89	20	-11
# 1,2-Diethylbenzene	1.2648	1.2500	19.77	20	-1
# 1,2-Dibromo-3-chloropropane	0.2069	0.1870	18.07	20	-10 #
# 1,3,5-Trichlorobenzene	0.9973	0.8568	17.18	20	-14
# 1,2,4-Trichlorobenzene	0.9577	0.8181	17.09	20	-15 #
# Hexachlorobutadiene	0.4211	0.3214	15.26	20	-24
# Naphthalene	3.2327	2.8674	17.74	20	-11
# 1,2,3-Trichlorobenzene	0.9062	0.7645	16.87	20	-16
# 2-Methylnaphthalene	1.7338	1.5625	18.02	20	-10

Average %Drift 7

Compounds with required minimum RRF.
 Maximum % Drift = 30 %

page 3 of 3

FORM VII VOA

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP09915 ICV Date: 02/26/20 Time: 09:06
 Lab File ID: lf26s99.d Init. Calib. Date(s): 02/26/20 02/26/20
 Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT
=====	=====	=====	=====	=====	=====
Acrolein	1.8260	1.7361	142.61	150	-5

Average %Drift 5

Compounds with required minimum RRF.
 Maximum % Drift = 30 %

page 1 of 1

FORM VII VOA

Lancaster Laboratories

Continuing Calibration Internal Standard Check

Initial Calibration Standards:

```

/chem/HP09915.i/20feb24i.b/lf24i07.d
/chem/HP09915.i/20feb24i.b/lf24i06.d
/chem/HP09915.i/20feb24i.b/lf24i05.d
/chem/HP09915.i/20feb24i.b/lf24i04.d
/chem/HP09915.i/20feb24i.b/lf24i03.d
/chem/HP09915.i/20feb24i.b/lf24i02.d
/chem/HP09915.i/20feb24i.b/lf24i01.d

```

File /chem/HP09915.i/20feb24i.b/lf24i03.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

```

/chem/HP09915.i/20apr08a.b/la08c01.d

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RT Summary

File ID:

=====

Internal Standard Name	la08c01.d	ICAL RT	In Spec
t-Butyl alcohol-d10	4.493	4.509	Yes
Fluorobenzene	7.950	7.956	Yes
Chlorobenzene-d5	11.351	11.358	Yes
1,4-Dichlorobenzene-d4	13.216	13.219	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

File ID:

=====

Internal Standard Name	la08c01.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl alcohol-d10	279262	313738	156869	627476	Yes
Fluorobenzene	1257238	1333909	666954	2667818	Yes
Chlorobenzene-d5	970727	1014578	507289	2029156	Yes
1,4-Dichlorobenzene-d4	528305	551907	275954	1103814	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments:

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report generated on 04/08/2020 at 10:01

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: HP09915 Calibration Date: 04/08/20 Time: 09:17

Lab File ID: la08c01.d Init. Calib. Date(s): 02/24/20 02/24/20

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
# Dichlorodifluoromethane	0.3154	0.3036	48.12	50	-4 #
# Chloromethane	0.3152	0.3019	47.89	50	-4 #
1,3-Butadiene	0.2362	0.2767	58.57	50	17
# Vinyl Chloride	0.2974	0.2923	49.15	50	-2 #
# Bromomethane	0.2087	0.2020	48.39	50	-3 #
# Chloroethane	0.1642	0.1631	49.65	50	-1 #
Dichlorofluoromethane	0.3642	0.3434	47.15	50	-6
n-Pentane	0.3485	0.3400	48.77	50	-2
# Trichlorofluoromethane	0.3083	0.3295	53.45	50	7 #
Ethyl ether	0.2200	0.1754	39.88	50	-20
Freon 123a	0.2476	0.2624	52.97	50	6
Acrolein	1.8260	1.7365	475.52	500	-5
# 1,1-Dichloroethene	0.2109	0.2068	49.03	50	-2 #
# 1,1-Dichloroethene(2)	0.0996	0.1010	50.68	50	1 #
# Acetone	0.8075	0.8009	99.17	100	-1 #
# Freon 113	0.2006	0.2133	53.17	50	6 #
2-Propanol	0.5626	0.5765	256.17	250	2
Methyl Iodide	0.3728	0.4027	54.01	50	8
# Carbon Disulfide	0.6661	0.7204	54.08	50	8 #
Allyl Chloride	0.3393	0.3318	48.89	50	-2
# Methyl Acetate	0.2632	0.2611	49.60	50	-1 #
# Methylene Chloride	0.2354	0.2423	51.46	50	3 #
t-Butyl alcohol	0.9670	0.9349	241.68	250	-3
Acrylonitrile	0.1426	0.1410	49.44	50	-1
# trans-1,2-Dichloroethene	0.2313	0.2346	50.73	50	1 #
# Methyl Tertiary Butyl Ether	0.7046	0.6614	46.94	50	-6 #
n-Hexane	0.3327	0.3578	53.78	50	8
# 1,1-Dichloroethane	0.3871	0.4069	52.55	50	5 #
di-Isopropyl ether	0.7439	0.7473	50.23	50	0
2-Chloro-1,3-butadiene	0.3311	0.3388	51.16	50	2
Ethyl t-butyl ether	0.7064	0.6646	47.04	50	-6
# cis-1,2-Dichloroethene	0.2587	0.2614	50.53	50	1 #
# 2-Butanone	0.1824	0.1739	95.35	100	-5 #
2,2-Dichloropropane	0.3080	0.3103	50.36	50	1
Propionitrile	1.2533	1.3304	265.38	250	6
Methacrylonitrile	0.1459	0.1513	129.60	125	4

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

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7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: HP09915 Calibration Date: 04/08/20 Time: 09:17

Lab File ID: la08c01.d Init. Calib. Date(s): 02/24/20 02/24/20

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
=====	=====	=====	=====	=====	=====
Bromochloromethane	0.1285	0.1362	52.98	50	6
Tetrahydrofuran	1.1268	1.0811	95.94	100	-4
# Chloroform	0.3751	0.3897	51.95	50	4 #
# 1,1,1-Trichloroethane	0.3289	0.3395	51.61	50	3 #
# Cyclohexane	0.4050	0.4146	51.18	50	2 #
# Cyclohexane(2)	0.3420	0.3501	51.18	50	2 #
# Cyclohexane(3)	0.1242	0.1238	49.83	50	0 #
1,1-Dichloropropene	0.3068	0.3189	51.97	50	4
# Carbon Tetrachloride	0.2687	0.2940	54.71	50	9 #
Isobutyl Alcohol	0.3286	0.3341	635.58	625	2
# Benzene	0.9359	0.9635	51.47	50	3 #
# 1,2-Dichloroethane	0.3129	0.3137	50.12	50	0 #
# 1,2-Dichloroethane(2)	0.0287	0.0317	55.23	50	10 #<-
t-Amyl methyl ether	0.7106	0.6845	48.17	50	-4
n-Heptane	0.3258	0.3739	57.38	50	15
n-Butanol	0.2751	0.2855	1297.32	1250	4
# Trichloroethene	0.2356	0.2413	51.20	50	2 #
# Methylcyclohexane	0.3953	0.4275	54.07	50	8 #
# Methylcyclohexane(2)	0.1783	0.1932	54.18	50	8 #
# 1,2-Dichloropropane	0.2431	0.2521	51.85	50	4 #
Dibromomethane	0.1581	0.1668	52.76	50	6
1,4-Dioxane	0.0733	0.0915	780.82	625	25 <-
Methyl Methacrylate	0.2321	0.2316	49.88	50	0
# Bromodichloromethane	0.2827	0.2961	52.37	50	5 #
2-Nitropropane	0.0870	0.0903	103.78	100	4
2-Chloroethyl Vinyl Ether	0.1782	0.1836	51.51	50	3
# cis-1,3-Dichloropropene	0.3787	0.3968	52.38	50	5 #
# 4-Methyl-2-pentanone	0.3774	0.3581	94.88	100	-5 #
# Toluene	0.7805	0.7877	50.46	50	1 #
# trans-1,3-Dichloropropene	0.4651	0.4839	52.03	50	4 #
Ethyl Methacrylate	0.5325	0.5186	48.69	50	-3
# 1,1,2-Trichloroethane	0.3076	0.3126	50.81	50	2 #
# Tetrachloroethene	0.3312	0.3441	51.95	50	4 #
1,3-Dichloropropane	0.5135	0.5269	51.31	50	3
# 2-Hexanone	0.3597	0.3406	94.70	100	-5 #
# Dibromochloromethane	0.3109	0.3376	54.29	50	9 #

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: HP09915 Calibration Date: 04/08/20 Time: 09:17

Lab File ID: la08c01.d Init. Calib. Date(s): 02/24/20 02/24/20

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
=====					
# 1,2-Dibromoethane	0.3347	0.3422	51.12	50	2 #
1-Chlorohexane	0.4351	0.4224	48.53	50	-3
# Chlorobenzene	0.8771	0.9157	52.20	50	4 #
1,1,1,2-Tetrachloroethane	0.2932	0.3166	53.98	50	8
# Ethylbenzene	1.4911	1.5128	50.73	50	1 #
# m+p-Xylene	0.5852	0.6035	103.13	100	3 #
# o-Xylene	0.5801	0.5859	50.50	50	1 #
# Styrene	0.9757	0.9807	50.25	50	1 #
# Bromoform	0.2407	0.2504	52.01	50	4 #
# Isopropylbenzene	1.4863	1.5074	50.71	50	1 #
Cyclohexanone	0.2939	0.2950	627.31	625	0
Bromobenzene	0.7067	0.7383	52.23	50	4
# 1,1,2,2-Tetrachloroethane	0.9497	0.9220	48.54	50	-3 #
1,2,3-Trichloropropane	0.2818	0.2842	50.43	50	1
trans-1,4-Dichloro-2-butene	0.2720	0.2004	92.10	125	-26 <-
n-Propylbenzene	3.1877	3.3053	51.84	50	4
2-Chlorotoluene	0.6622	0.6886	51.99	50	4
4-Chlorotoluene	0.6870	0.7190	52.33	50	5
1,3,5-Trimethylbenzene	2.3452	2.4189	51.57	50	3
tert-Butylbenzene	0.4825	0.5103	52.88	50	6
Pentachloroethane	0.3858	0.4316	55.94	50	12
1,2,4-Trimethylbenzene	2.4549	2.5627	52.20	50	4
sec-Butylbenzene	2.8814	3.0719	53.30	50	7
# 1,3-Dichlorobenzene	1.3324	1.3833	51.91	50	4 #
p-Isopropyltoluene	2.4823	2.6648	53.68	50	7
# 1,4-Dichlorobenzene	1.3800	1.4225	51.54	50	3 #
1,2,3-Trimethylbenzene	2.4542	2.5089	51.11	50	2
Benzyl Chloride	1.7963	1.9330	53.81	50	8
1,3-Diethylbenzene	1.5039	1.5859	52.73	50	5
1,4-Diethylbenzene	1.5754	1.6680	52.94	50	6
# 1,2-Dichlorobenzene	1.3260	1.3471	50.80	50	2 #
n-Butylbenzene	1.2514	1.2920	51.62	50	3
1,2-Diethylbenzene	1.2648	1.3343	52.75	50	5
# 1,2-Dibromo-3-chloropropane	0.2069	0.2059	49.75	50	-1 #
1,3,5-Trichlorobenzene	0.9973	1.0308	51.68	50	3
# 1,2,4-Trichlorobenzene	0.9577	0.9566	49.94	50	0 #

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP09915 Calibration Date: 04/08/20 Time: 09:17
 Lab File ID: la08c01.d Init. Calib. Date(s): 02/24/20 02/24/20
 Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
Hexachlorobutadiene	0.4211	0.4006	47.57	50	-5
Naphthalene	3.2327	3.3449	51.73	50	3
1,2,3-Trichlorobenzene	0.9062	0.9463	52.21	50	4
2-Methylnaphthalene	1.7338	1.8461	53.24	50	6
Dibromofluoromethane	0.2364	0.2484	52.53	50	5
Dibromofluoromethane (2)	0.2415	0.2547	52.73	50	5
1,2-Dichloroethane-d4	0.0613	0.0649	52.89	50	6
1,2-Dichloroethane-d4 (2)	0.2737	0.2802	51.19	50	2
1,2-Dichloroethane-d4 (3)	0.0389	0.0406	52.19	50	4
Toluene-d8	1.3136	1.2955	49.31	50	-1
Toluene-d8 (2)	0.8537	0.8449	49.48	50	-1
4-Bromofluorobenzene	0.4954	0.4773	48.18	50	-4
4-Bromofluorobenzene (2)	0.4095	0.4094	49.99	50	0

Average %Drift 4

Compounds with required minimum RRF.
 All compounds must meet a maximum % Drift of 20.

Data File: /chem/HP09915.i/20apr08a.b/la08ec5.d
 Report Date: 04/08/2020 20:39

Lancaster Laboratories, Inc.
 Shift Ending Continuing Calibration Check Report

Instrument ID: HP09915.i Injection Date and Time: 08-APR-2020 20:14
 Client ID: SECC050 Initial Calibration Date(s): 24-FEB-2020 24-FEB-2020
 Lab Sample ID: SECC050 Initial Calibration Time(s): 16:17 21:47
 Sublist used: L200991-SM.sub Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m

Target Compounds	ICAL Avg. RRF	SECC RRF	Min. RRF	% Diff.	Max. %Diff.
Dichlorodifluoromethane	0.31541	0.32418	0.01	2.8	50.0
Chloromethane	0.31524	0.31030	0.01	-1.6	50.0
Vinyl Chloride	0.29741	0.30325	0.01	2.0	50.0
Bromomethane	0.20872	0.21579	0.01	3.4	50.0
Chloroethane	0.16421	0.16972	0.01	3.4	50.0
Trichlorofluoromethane	0.30826	0.35578	0.01	15.4	50.0
1,1-Dichloroethene	0.21086	0.20774	0.01	-1.5	50.0
Acetone	0.80753	0.97953	0.01	21.3	50.0
Freon 113	0.20058	0.22198	0.01	10.7	50.0
Carbon Disulfide	0.66607	0.73827	0.01	10.8	50.0
Methyl Acetate	0.26318	0.26210	0.01	-0.4	50.0
Methylene Chloride	0.23543	0.24774	0.01	5.2	50.0
trans-1,2-Dichloroethene	0.23128	0.23981	0.01	3.7	50.0
Methyl Tertiary Butyl Ether	0.70456	0.64524	0.01	-8.4	50.0
1,1-Dichloroethane	0.38711	0.41512	0.01	7.2	50.0
cis-1,2-Dichloroethene	0.25866	0.26675	0.01	3.1	50.0
1,2-Dichloroethene (Total)	0.24497	0.25328	0.01	3.4	50.0
2-Butanone	0.18241	0.17209	0.01	-5.7	50.0
2,2-Dichloropropane	0.30804	0.30915	0.01	0.4	50.0
Bromochloromethane	0.12854	0.14026	0.01	9.1	50.0
Chloroform	0.37510	0.40711	0.01	8.5	50.0
1,1,1-Trichloroethane	0.32889	0.35117	0.01	6.8	50.0
Cyclohexane	0.40501	0.41852	0.01	3.3	50.0
1,1-Dichloropropene	0.30681	0.32535	0.01	6.0	50.0
Carbon Tetrachloride	0.26872	0.30871	0.01	14.9	50.0
Benzene	0.93594	0.99991	0.01	6.8	50.0
1,2-Dichloroethane	0.31293	0.33204	0.01	6.1	50.0
Trichloroethene	0.23562	0.24912	0.01	5.7	50.0
Methylcyclohexane	0.39529	0.42866	0.01	8.4	50.0
1,2-Dichloropropane	0.24315	0.26065	0.01	7.2	50.0
Dibromomethane	0.15812	0.17229	0.01	9.0	50.0
Bromodichloromethane	0.28268	0.30732	0.01	8.7	50.0
2-Chloroethyl Vinyl Ether	0.17825	0.18027	0.01	1.1	50.0
cis-1,3-Dichloropropene	0.37873	0.39529	0.01	4.4	50.0
4-Methyl-2-pentanone	0.37739	0.36191	0.01	-4.1	50.0
Toluene	0.78052	0.79915	0.01	2.4	50.0
trans-1,3-Dichloropropene	0.46510	0.47991	0.01	3.2	50.0
1,1,2-Trichloroethane	0.30763	0.32037	0.01	4.1	50.0
Tetrachloroethene	0.33124	0.38651	0.01	16.7	50.0
1,3-Dichloropropane	0.51349	0.54256	0.01	5.7	50.0
2-Hexanone	0.35973	0.34332	0.01	-4.6	50.0
Dibromochloromethane	0.31092	0.34310	0.01	10.3	50.0
1,2-Dibromoethane	0.33471	0.34315	0.01	2.5	50.0
Chlorobenzene	0.87710	0.93697	0.01	6.8	50.0
1,1,1,2-Tetrachloroethane	0.29321	0.32775	0.01	11.8	50.0
Ethylbenzene	1.49108	1.55625	0.01	4.4	50.0
m+p-Xylene	0.58523	0.62183	0.01	6.3	50.0
o-Xylene	0.58009	0.59970	0.01	3.4	50.0

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Data File: /chem/HP09915.i/20apr08a.b/la08ec5.d
 Report Date: 04/08/2020 20:39

Lancaster Laboratories, Inc.
 Shift Ending Continuing Calibration Check Report

Instrument ID: HP09915.i Injection Date and Time: 08-APR-2020 20:14
 Client ID: SECC050 Initial Calibration Date(s): 24-FEB-2020 24-FEB-2020
 Lab Sample ID: SECC050 Initial Calibration Time(s): 16:17 21:47
 Sublist used: L200991-SM.sub Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m

Target Compounds	ICAL Avg. RRF	SECC RRF	Min. RRF	% Diff.	Max. %Diff.
Xylene (Total)	0.58352	0.61446	0.01	5.3	50.0
Styrene	0.97570	1.00130	0.01	2.6	50.0
Bromoform	0.24067	0.24913	0.01	3.5	50.0
Isopropylbenzene	1.48634	1.55332	0.01	4.5	50.0
Bromobenzene	0.70674	0.73995	0.01	4.7	50.0
1,1,2,2-Tetrachloroethane	0.94966	0.90870	0.01	-4.3	50.0
1,2,3-Trichloropropane	0.28182	0.28634	0.01	1.6	50.0
n-Propylbenzene	3.18772	3.29003	0.01	3.2	50.0
2-Chlorotoluene	0.66223	0.68957	0.01	4.1	50.0
4-Chlorotoluene	0.68701	0.71445	0.01	4.0	50.0
1,3,5-Trimethylbenzene	2.34521	2.40706	0.01	2.6	50.0
tert-Butylbenzene	0.48252	0.50631	0.01	4.9	50.0
1,2,4-Trimethylbenzene	2.45488	2.55407	0.01	4.0	50.0
sec-Butylbenzene	2.88142	3.05845	0.01	6.1	50.0
1,3-Dichlorobenzene	1.33245	1.40851	0.01	5.7	50.0
p-Isopropyltoluene	2.48229	2.67280	0.01	7.7	50.0
1,4-Dichlorobenzene	1.38002	1.44020	0.01	4.4	50.0
1,2-Dichlorobenzene	1.32601	1.36539	0.01	3.0	50.0
n-Butylbenzene	1.25136	1.29069	0.01	3.1	50.0
1,2-Dibromo-3-chloropropane	0.20695	0.19937	0.01	-3.7	50.0
1,2,4-Trichlorobenzene	0.95768	0.95791	0.01	0.0	50.0
Hexachlorobutadiene	0.42112	0.40263	0.01	-4.4	50.0
Naphthalene	3.23276	3.30361	0.01	2.2	50.0
1,2,3-Trichlorobenzene	0.90620	0.96354	0.01	6.3	50.0
Surrogate Standards	ICAL Avg. RRF	SECC RRF	Min. RRF	% Diff.	Max. %Diff.
Dibromofluoromethane	0.23642	0.24707	0.01	4.5	50.0
1,2-Dichloroethane-d4	0.06132	0.06231	0.01	1.6	50.0
Toluene-d8	1.31363	1.28268	0.01	-2.4	50.0
4-Bromofluorobenzene	0.49538	0.48119	0.01	-2.9	50.0

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Lancaster Laboratories

Continuing Calibration Internal Standard Check

Initial Calibration Standards:

```

/chem/HP09915.i/20feb24i.b/lf24i07.d
/chem/HP09915.i/20feb24i.b/lf24i06.d
/chem/HP09915.i/20feb24i.b/lf24i05.d
/chem/HP09915.i/20feb24i.b/lf24i04.d
/chem/HP09915.i/20feb24i.b/lf24i03.d
/chem/HP09915.i/20feb24i.b/lf24i02.d
/chem/HP09915.i/20feb24i.b/lf24i01.d

```

File /chem/HP09915.i/20feb24i.b/lf24i03.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

```

/chem/HP09915.i/20apr09b.b/la09c02.d

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RT Summary

File ID:

=====

Internal Standard Name	la09c02.d	ICAL RT	In Spec
t-Butyl alcohol-d10	4.500	4.509	Yes
Fluorobenzene	7.953	7.956	Yes
Chlorobenzene-d5	11.355	11.358	Yes
1,4-Dichlorobenzene-d4	13.216	13.219	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

File ID:

=====

Internal Standard Name	la09c02.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl alcohol-d10	265642	313738	156869	627476	Yes
Fluorobenzene	1250728	1333909	666954	2667818	Yes
Chlorobenzene-d5	973135	1014578	507289	2029156	Yes
1,4-Dichlorobenzene-d4	535245	551907	275954	1103814	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: KR421 Page 64 of 592

report generated on 04/09/2020 at 10:01

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP09915 Calibration Date: 04/09/20 Time: 09:36
 Lab File ID: la09c02.d Init. Calib. Date(s): 02/24/20 02/24/20
 Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
# Dichlorodifluoromethane	0.3154	0.3230	51.20	50	2 #
# Chloromethane	0.3152	0.3023	47.96	50	-4 #
# 1,3-Butadiene	0.2362	0.2727	57.72	50	15
# Vinyl Chloride	0.2974	0.2892	48.61	50	-3 #
# Bromomethane	0.2087	0.2031	48.64	50	-3 #
# Chloroethane	0.1642	0.1588	48.36	50	-3 #
Dichlorofluoromethane	0.3642	0.3657	50.21	50	0
n-Pentane	0.3485	0.3753	53.84	50	8
# Trichlorofluoromethane	0.3083	0.3305	53.61	50	7 #
Ethyl ether	0.2200	0.1653	37.56	50	-25 <-
Freon 123a	0.2476	0.2746	55.44	50	11
Acrolein	1.8260	1.7695	484.55	500	-3
# 1,1-Dichloroethene	0.2109	0.2167	51.39	50	3 #
# 1,1-Dichloroethene (2)	0.0996	0.1079	54.15	50	8 #
# Acetone	0.8075	0.8179	101.28	100	1 #
# Freon 113	0.2006	0.2283	56.90	50	14 #
2-Propanol	0.5626	0.5924	263.23	250	5
Methyl Iodide	0.3728	0.4236	56.81	50	14
# Carbon Disulfide	0.6661	0.7673	57.60	50	15 #
Allyl Chloride	0.3393	0.3576	52.69	50	5
# Methyl Acetate	0.2632	0.2780	52.82	50	6 #
# Methylene Chloride	0.2354	0.2534	53.81	50	8 #
t-Butyl alcohol	0.9670	0.9495	245.45	250	-2
Acrylonitrile	0.1426	0.1405	49.26	50	-1
# trans-1,2-Dichloroethene	0.2313	0.2433	52.60	50	5 #
# Methyl Tertiary Butyl Ether	0.7046	0.6668	47.32	50	-5 #
n-Hexane	0.3327	0.3786	56.90	50	14
# 1,1-Dichloroethane	0.3871	0.4261	55.04	50	10 #
di-Isopropyl ether	0.7439	0.7840	52.70	50	5
2-Chloro-1,3-butadiene	0.3311	0.3541	53.49	50	7
Ethyl t-butyl ether	0.7064	0.6703	47.44	50	-5
# cis-1,2-Dichloroethene	0.2587	0.2701	52.21	50	4 #
# 2-Butanone	0.1824	0.1721	94.34	100	-6 #
2,2-Dichloropropane	0.3080	0.2999	48.68	50	-3
Propionitrile	1.2533	1.4288	285.00	250	14
Methacrylonitrile	0.1459	0.1564	133.97	125	7

Compounds with required minimum RRF.
 All compounds must meet a maximum % Drift of 20.

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: HP09915 Calibration Date: 04/09/20 Time: 09:36

Lab File ID: la09c02.d Init. Calib. Date(s): 02/24/20 02/24/20

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
Bromochloromethane	0.1285	0.1415	55.03	50	10
Tetrahydrofuran	1.1268	1.1092	98.43	100	-2
# Chloroform	0.3751	0.4095	54.59	50	9 #
# 1,1,1-Trichloroethane	0.3289	0.3483	52.95	50	6 #
# Cyclohexane	0.4050	0.4324	53.38	50	7 #
# Cyclohexane(2)	0.3420	0.3677	53.76	50	8 #
# Cyclohexane(3)	0.1242	0.1310	52.73	50	5 #
1,1-Dichloropropene	0.3068	0.3330	54.26	50	9
# Carbon Tetrachloride	0.2687	0.3095	57.58	50	15 #
Isobutyl Alcohol	0.3286	0.3670	698.08	625	12
# Benzene	0.9359	1.0091	53.91	50	8 #
# 1,2-Dichloroethane	0.3129	0.3324	53.10	50	6 #
# 1,2-Dichloroethane(2)	0.0287	0.0326	56.87	50	14 # <-
t-Amyl methyl ether	0.7106	0.6816	47.96	50	-4
n-Heptane	0.3258	0.3964	60.84	50	22 <-
n-Butanol	0.2751	0.3039	1381.14	1250	10
# Trichloroethene	0.2356	0.2533	53.76	50	8 #
# Methylcyclohexane	0.3953	0.4519	57.16	50	14 #
# Methylcyclohexane(2)	0.1783	0.2031	56.97	50	14 #
# 1,2-Dichloropropane	0.2431	0.2629	54.06	50	8 #
Dibromomethane	0.1581	0.1742	55.08	50	10
1,4-Dioxane	0.0733	0.0983	838.27	625	34 <-
Methyl Methacrylate	0.2321	0.2401	51.71	50	3
# Bromodichloromethane	0.2827	0.3102	54.88	50	10 #
2-Nitropropane	0.0870	0.0901	103.59	100	4
2-Chloroethyl Vinyl Ether	0.1782	0.1862	52.24	50	4
# cis-1,3-Dichloropropene	0.3787	0.4072	53.75	50	8 #
# 4-Methyl-2-pentanone	0.3774	0.3569	94.58	100	-5 #
# Toluene	0.7805	0.8124	52.04	50	4 #
# trans-1,3-Dichloropropene	0.4651	0.4967	53.39	50	7 #
Ethyl Methacrylate	0.5325	0.5353	50.26	50	1
# 1,1,2-Trichloroethane	0.3076	0.3272	53.18	50	6 #
# Tetrachloroethene	0.3312	0.3569	53.87	50	8 #
1,3-Dichloropropane	0.5135	0.5498	53.54	50	7
# 2-Hexanone	0.3597	0.3383	94.05	100	-6 #
# Dibromochloromethane	0.3109	0.3531	56.78	50	14 #

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

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7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP09915 Calibration Date: 04/09/20 Time: 09:36
 Lab File ID: la09c02.d Init. Calib. Date(s): 02/24/20 02/24/20
 Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
# 1,2-Dibromoethane	0.3347	0.3510	52.43	50	5 #
1-Chlorohexane	0.4351	0.4331	49.77	50	0
# Chlorobenzene	0.8771	0.9451	53.88	50	8 #
1,1,1,2-Tetrachloroethane	0.2932	0.3314	56.51	50	13
# Ethylbenzene	1.4911	1.5789	52.94	50	6 #
# m+p-Xylene	0.5852	0.6274	107.21	100	7 #
# o-Xylene	0.5801	0.6131	52.85	50	6 #
# Styrene	0.9757	1.0256	52.56	50	5 #
# Bromoform	0.2407	0.2640	54.86	50	10 #
# Isopropylbenzene	1.4863	1.5767	53.04	50	6 #
Cyclohexanone	0.2939	0.3150	669.88	625	7
Bromobenzene	0.7067	0.7614	53.86	50	8
# 1,1,2,2-Tetrachloroethane	0.9497	0.9706	51.10	50	2 #
1,2,3-Trichloropropane	0.2818	0.2935	52.07	50	4
trans-1,4-Dichloro-2-butene	0.2720	0.2509	115.30	125	-8
n-Propylbenzene	3.1877	3.3946	53.24	50	6
2-Chlorotoluene	0.6622	0.7192	54.30	50	9
4-Chlorotoluene	0.6870	0.7397	53.83	50	8
1,3,5-Trimethylbenzene	2.3452	2.4876	53.04	50	6
tert-Butylbenzene	0.4825	0.5183	53.71	50	7
Pentachloroethane	0.3858	0.4461	57.82	50	16
1,2,4-Trimethylbenzene	2.4549	2.6300	53.57	50	7
sec-Butylbenzene	2.8814	3.1512	54.68	50	9
# 1,3-Dichlorobenzene	1.3324	1.4433	54.16	50	8 #
p-Isopropyltoluene	2.4823	2.7540	55.47	50	11
# 1,4-Dichlorobenzene	1.3800	1.4740	53.41	50	7 #
1,2,3-Trimethylbenzene	2.4542	2.5456	51.86	50	4
Benzyl Chloride	1.7963	1.9649	54.69	50	9
1,3-Diethylbenzene	1.5039	1.6144	53.67	50	7
1,4-Diethylbenzene	1.5754	1.6839	53.44	50	7
# 1,2-Dichlorobenzene	1.3260	1.3992	52.76	50	6 #
n-Butylbenzene	1.2514	1.3366	53.41	50	7
1,2-Diethylbenzene	1.2648	1.3602	53.77	50	8
# 1,2-Dibromo-3-chloropropane	0.2069	0.2124	51.31	50	3 #
1,3,5-Trichlorobenzene	0.9973	1.0703	53.66	50	7
# 1,2,4-Trichlorobenzene	0.9577	1.0099	52.73	50	5 #

Compounds with required minimum RRF.
 All compounds must meet a maximum % Drift of 20.

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7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP09915 Calibration Date: 04/09/20 Time: 09:36
 Lab File ID: la09c02.d Init. Calib. Date(s): 02/24/20 02/24/20
 Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
Hexachlorobutadiene	0.4211	0.4142	49.18	50	-2
Naphthalene	3.2327	3.4568	53.46	50	7
1,2,3-Trichlorobenzene	0.9062	0.9986	55.10	50	10
2-Methylnaphthalene	1.7338	1.9076	55.01	50	10
Dibromofluoromethane	0.2364	0.2487	52.60	50	5
Dibromofluoromethane(2)	0.2415	0.2550	52.79	50	6
1,2-Dichloroethane-d4	0.0613	0.0625	51.00	50	2
1,2-Dichloroethane-d4(2)	0.2737	0.2855	52.15	50	4
1,2-Dichloroethane-d4(3)	0.0389	0.0404	51.87	50	4
Toluene-d8	1.3136	1.2933	49.23	50	-2
Toluene-d8(2)	0.8537	0.8331	48.79	50	-2
4-Bromofluorobenzene	0.4954	0.4789	48.34	50	-3
4-Bromofluorobenzene(2)	0.4095	0.4069	49.69	50	-1

Average %Drift 7

Compounds with required minimum RRF.
 All compounds must meet a maximum % Drift of 20.

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Data File: /chem/HP09915.i/20apr09b.b/la09ec5.d
 Report Date: 04/10/2020 09:01

Lancaster Laboratories, Inc.
 Shift Ending Continuing Calibration Check Report

Instrument ID: HP09915.i Injection Date and Time: 09-APR-2020 21:07
 Client ID: SECC050 Initial Calibration Date(s): 24-FEB-2020 24-FEB-2020
 Lab Sample ID: SECC050 Initial Calibration Time(s): 16:17 21:47
 Sublist used: L201002.sub Method used: /chem/HP09915.i/20apr09b.b/m8260c5.m

Target Compounds	ICAL Avg. RRF	SECC RRF	Min. RRF	% Diff.	Max. %Diff.
Vinyl Chloride	0.29741	0.29836	0.01	0.3	50.0
1,1-Dichloroethene	0.21086	0.22336	0.01	5.9	50.0
trans-1,2-Dichloroethene	0.23128	0.25076	0.01	8.4	50.0
1,1-Dichloroethane	0.38711	0.44482	0.01	14.9	50.0
cis-1,2-Dichloroethene	0.25866	0.27905	0.01	7.9	50.0
Chloroform	0.37510	0.42384	0.01	13.0	50.0
1,1,1-Trichloroethane	0.32889	0.36259	0.01	10.2	50.0
Benzene	0.93594	1.04297	0.01	11.4	50.0
1,2-Dichloroethane	0.31293	0.34361	0.01	9.8	50.0
Trichloroethene	0.23562	0.25864	0.01	9.8	50.0
Bromodichloromethane	0.28268	0.32068	0.01	13.4	50.0
Toluene	0.78052	0.83892	0.01	7.5	50.0
Tetrachloroethene	0.33124	0.37176	0.01	12.2	50.0
Ethylbenzene	1.49108	1.63236	0.01	9.5	50.0
m+p-Xylene	0.58523	0.65005	0.01	11.1	50.0
o-Xylene	0.58009	0.63069	0.01	8.7	50.0
Xylene (Total)	0.58352	0.64360	0.01	10.3	50.0
Surrogate Standards	ICAL Avg. RRF	SECC RRF	Min. RRF	% Diff.	Max. %Diff.
Dibromofluoromethane	0.23642	0.24593	0.01	4.0	50.0
1,2-Dichloroethane-d4	0.06132	0.06200	0.01	1.1	50.0
Toluene-d8	1.31363	1.29134	0.01	-1.7	50.0
4-Bromofluorobenzene	0.49538	0.47791	0.01	-3.5	50.0

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8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____
 Lab File ID (Standard): la08c01.d Date Analyzed: 04/08/20
 Instrument ID: HP09915 Time Analyzed: 09:17
 Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

		IS1 (TBA)	RT #	IS2 (FBZ)	RT #	IS3 (CBZ)	RT #	IS4 (DCB)	RT #
		AREA #		AREA #		AREA #		AREA #	
	12 HOUR STD	279262	4.493	1257238	7.950	970727	11.351	528305	13.216
	UPPER LIMIT	558524	4.993	2514476	8.450	1941454	11.851	1056610	13.716
	LOWER LIMIT	139631	3.993	628619	7.450	485364	10.851	264152	12.716
	LAB SAMPLE ID								
01	LCSL01	261964	4.490	1245956	7.950	958203	11.354	528024	13.216
02	LCSL03	261139	4.496	1201337	7.946	927261	11.351	502348	13.216
03	VBLKL01	231173	4.493	1192812	7.946	912702	11.351	495416	13.219
04	1292527	268926	4.496	1279410	7.946	981579	11.355	537751	13.220
05	1293283	239803	4.490	1198074	7.950	926656	11.351	507004	13.216
06	1293286	231642	4.503	1195898	7.953	918747	11.354	498765	13.219
07	1293990	232908	4.506	1187082	7.953	919858	11.354	505885	13.219
08	1292528	233488	4.496	1203077	7.953	926691	11.351	513012	13.216
09	1292529MS	259597	4.487	1222690	7.943	955240	11.351	532828	13.216
10	1292530MSD	260999	4.496	1226754	7.949	953145	11.354	526874	13.216
11	1292529MSMS1	243909	4.496	1202068	7.950	924796	11.351	494909	13.216
12	1292530MSDMS	229666	4.496	1154606	7.943	894425	11.351	475306	13.216
13	1292520	231627	4.496	1162041	7.949	884825	11.351	483597	13.216
14	1292523	223823	4.490	1203565	7.946	918171	11.351	496596	13.216
15	1292524	206942	4.493	1127773	7.946	871932	11.355	476665	13.216
16	1292525	217810	4.483	1152257	7.950	891994	11.351	488594	13.219
17	1292526	205715	4.493	1121050	7.950	861612	11.351	472571	13.216
18	1292532	197972	4.500	1098484	7.950	849507	11.351	468552	13.219
19	1293271	193875	4.503	1094648	7.949	845609	11.351	458428	13.219
20	1293273	208036	4.493	1137905	7.946	878414	11.351	477783	13.216
21	1293275	194298	4.487	1067970	7.946	838812	11.351	457203	13.216
22	1293276	199248	4.480	1062105	7.946	822316	11.351	448301	13.216

IS1 (TBA)=t-Butyl alcohol-d10
 IS2 (FBZ)=Fluorobenzene
 IS3 (CBZ)=Chlorobenzene-d5
 IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
 of internal standard area.
 LOWER LIMIT = - 50%
 of internal standard area.

Column used to flag values outside QC limits with an asterisk
 * Values outside of QC limits.

page 1 of 2

FORM VIII VOA

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____
 Lab File ID (Standard): la08c01.d Date Analyzed: 04/08/20
 Instrument ID: HP09915 Time Analyzed: 09:17
 Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)	RT #	IS2(FBZ)	RT #	IS3(CBZ)	RT #	IS4(DCB)	RT #
	AREA #		AREA #		AREA #		AREA #	
=====	=====	=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	279262	4.493	1257238	7.950	970727	11.351	528305	13.216
UPPER LIMIT	558524	4.993	2514476	8.450	1941454	11.851	1056610	13.716
LOWER LIMIT	139631	3.993	628619	7.450	485364	10.851	264152	12.716
=====	=====	=====	=====	=====	=====	=====	=====	=====
LAB SAMPLE								
ID								
=====	=====	=====	=====	=====	=====	=====	=====	=====
23 1293277	183978	4.480	1053472	7.950	821056	11.354	443636	13.216
24 1293279	187526	4.490	1043275	7.949	808747	11.354	444847	13.219
25 1293284	191824	4.493	1033577	7.946	794581	11.355	431428	13.220
26 SECC050	200964	4.493	1115256	7.950	870165	11.354	490828	13.219
27 SECA050	211668	4.480	1120154	7.946	866163	11.351	461099	13.216

IS1 (TBA)=t-Butyl alcohol-d10
 IS2 (FBZ)=Fluorobenzene
 IS3 (CBZ)=Chlorobenzene-d5
 IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
 of internal standard area.
 LOWER LIMIT = - 50%
 of internal standard area.

Column used to flag values outside QC limits with an asterisk
 * Values outside of QC limits.

page 2 of 2

FORM VIII VOA

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____
 Lab File ID (Standard): la09c02.d Date Analyzed: 04/09/20
 Instrument ID: HP09915 Time Analyzed: 09:36
 Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

		IS1 (TBA)	RT #	IS2 (FBZ)	RT #	IS3 (CBZ)	RT #	IS4 (DCB)	RT #
		AREA #		AREA #		AREA #		AREA #	
	12 HOUR STD	265642	4.500	1250728	7.953	973135	11.355	535245	13.216
	UPPER LIMIT	531284	5.000	2501456	8.453	1946270	11.855	1070490	13.716
	LOWER LIMIT	132821	4.000	625364	7.453	486568	10.855	267622	12.716
	LAB SAMPLE ID								
01	LCSL04	259495	4.493	1234215	7.950	957216	11.351	531754	13.216
02	LCSL05	259495	4.493	1234215	7.950	957216	11.351	531754	13.216
03	LCDL04	266497	4.490	1231000	7.946	954533	11.351	526199	13.216
04	LCDL05	266497	4.490	1231000	7.946	954533	11.351	526199	13.216
05	VBLKL04	246341	4.500	1211929	7.946	939253	11.351	504013	13.216
06	VBLKL05	246341	4.500	1211929	7.946	939253	11.351	504013	13.216
07	1292534	269754	4.493	1274697	7.946	988489	11.354	533956	13.219
08	1293996	233411	4.496	1181766	7.949	913837	11.354	496784	13.219
09	1292533	233998	4.487	1172517	7.946	930323	11.351	500155	13.216
10	1293991	238807	4.490	1179005	7.946	908888	11.351	497900	13.216
11	1293992	229693	4.496	1177448	7.950	890134	11.354	485932	13.219
12	1293993	228774	4.490	1148100	7.946	883860	11.351	480107	13.219
13	1293994	218202	4.483	1145655	7.946	873071	11.351	471789	13.216
14	1293995	220098	4.487	1168934	7.946	901135	11.351	484789	13.216
15	1293995DL	211649	4.490	1133620	7.949	875778	11.351	473612	13.216
16	1293391	211837	4.500	1165169	7.950	898545	11.354	492401	13.219
17	1293436	210971	4.483	1117631	7.946	872488	11.351	472727	13.216
18	1293438	216751	4.490	1131675	7.950	878167	11.352	476344	13.216
19	1293442	212973	4.480	1118423	7.946	870733	11.351	471324	13.220
20	1293443	208920	4.480	1089121	7.946	850430	11.351	463312	13.216
21	1293429	257402	4.499	1172245	7.950	914360	11.351	508949	13.216
22	1293434	246705	4.480	1200083	7.946	925130	11.351	499975	13.216

IS1 (TBA)=t-Butyl alcohol-d10
 IS2 (FBZ)=Fluorobenzene
 IS3 (CBZ)=Chlorobenzene-d5
 IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
 of internal standard area.
 LOWER LIMIT = - 50%
 of internal standard area.

Column used to flag values outside QC limits with an asterisk
 * Values outside of QC limits.

page 1 of 2

FORM VIII VOA

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____
 Lab File ID (Standard): la09c02.d Date Analyzed: 04/09/20
 Instrument ID: HP09915 Time Analyzed: 09:36
 Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)	RT #	IS2(FBZ)	RT #	IS3(CBZ)	RT #	IS4(DCB)	RT #
	AREA #		AREA #		AREA #		AREA #	
=====	=====	=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	265642	4.500	1250728	7.953	973135	11.355	535245	13.216
UPPER LIMIT	531284	5.000	2501456	8.453	1946270	11.855	1070490	13.716
LOWER LIMIT	132821	4.000	625364	7.453	486568	10.855	267622	12.716
=====	=====	=====	=====	=====	=====	=====	=====	=====
LAB SAMPLE								
ID								
=====	=====	=====	=====	=====	=====	=====	=====	=====
23 1293435	246156	4.490	1255792	7.950	971018	11.351	531252	13.220
24 1293439	244478	4.480	1181331	7.946	911221	11.351	492706	13.216
25 1293440	226238	4.484	1178214	7.943	920173	11.351	504426	13.219
26 1293383	244837	4.499	1202493	7.949	915021	11.354	500603	13.219
27 SECC050	233741	4.493	1187692	7.946	922069	11.351	513088	13.216

IS1 (TBA)=t-Butyl alcohol-d10
 IS2 (FBZ)=Fluorobenzene
 IS3 (CBZ)=Chlorobenzene-d5
 IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
 of internal standard area.
 LOWER LIMIT = - 50%
 of internal standard area.

Column used to flag values outside QC limits with an asterisk
 * Values outside of QC limits.

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FORM VIII VOA

Sample Data

Volatiles by GC/MS

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42101

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1292523

Data file: /chem/HP09915.i/20apr08a.b/la08s13.d Injection date and time: 08-APR-2020 15:49
 Data file Sample Info. Line: 42101;1292523;1;0;;KR421;DODWW;;la08b01; Instrument ID: HP09915.i Batch: L200991AA
 Date, time and analyst ID of latest file update: 08-Apr-2020 16:07 Automation

Blank Data file reference: /chem/HP09915.i/20apr08a.b/la08b01.d

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m Sublist used: 17639
 Calibration date and time (Last Method Edit): 08-APR-2020 10:49
 Mid Level Daily Calibration Standard Reference: /chem/HP09915.i/20apr08a.b/la08c01.d

Bottle Code: 038A Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.490 (0.003)	935	65	223823 (-20)	250.00	
66) Fluorobenzene	7.946 (0.003)	2010	96	1203565 (-4)	50.00	
100) Chlorobenzene-d5	11.351 (0.000)	3069	117	918171 (-5)	50.00	
131) 1,4-Dichlorobenzene-d4	13.216 (0.000)	3649	152	496596 (-6)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.062 (0.000)	113	296033	52.019	104%		80 - 119
57) 1,2-Dichloroethane-d4	(2)	7.522 (0.000)	102	75828	51.375	103%		81 - 118
83) Toluene-d8	(3)	9.924 (0.000)	98	1175115	48.714	97%		89 - 112
114) 4-Bromofluorobenzene	(3)	12.342 (0.000)	95	421011	46.281	93%		85 - 114

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ
60) Benzene	(2)			Not Detected					0.2	1
88) Toluene	(3)			Not Detected					0.2	1
104) Ethylbenzene	(3)			Not Detected					0.4	1
106) m+p-Xylene	(3)			Not Detected					1	5
107) o-Xylene	(3)			Not Detected					0.4	1
108) Xylene (Total)	(3)			Not Detected					1	6

Total number of targets = 6

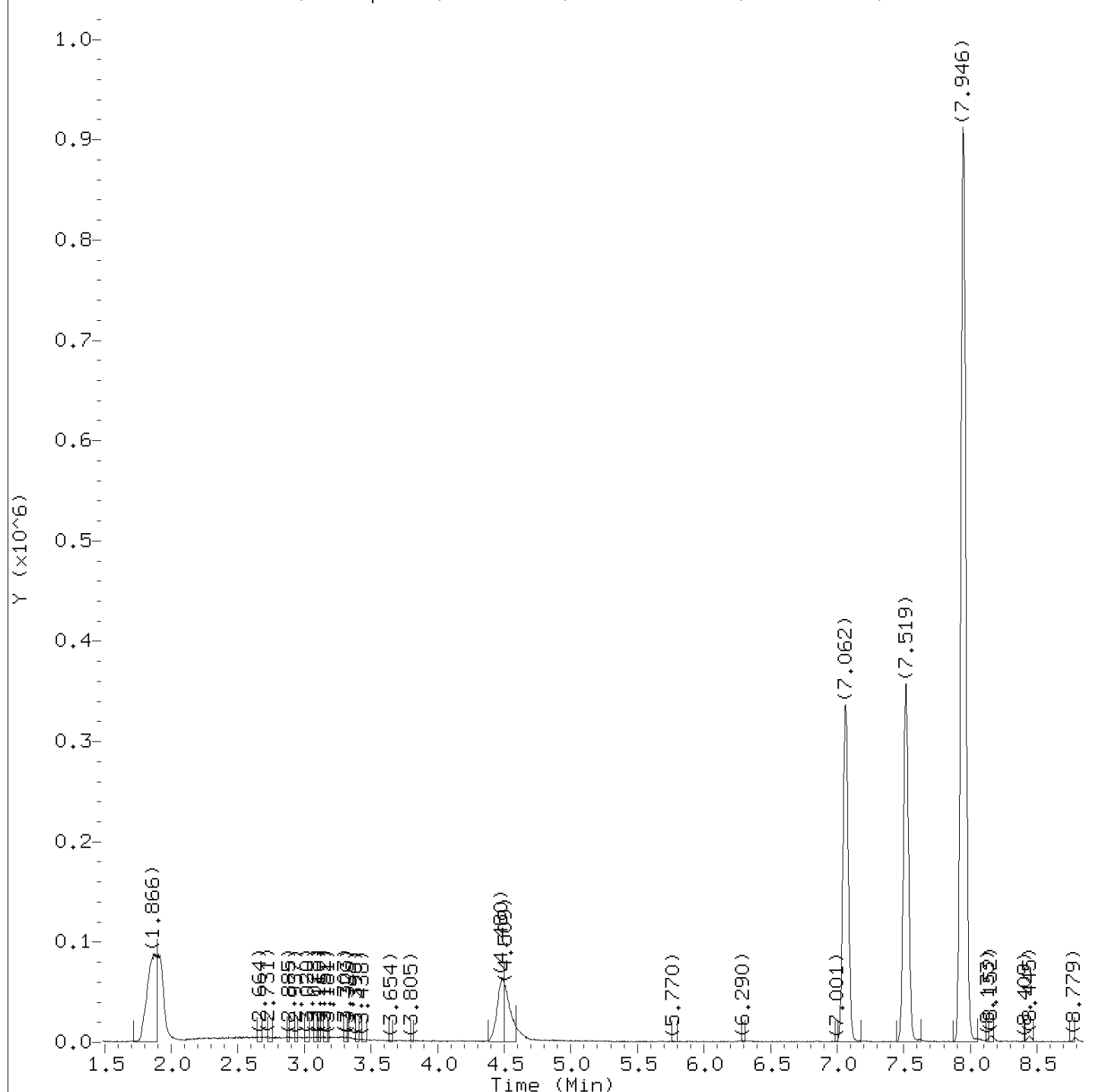
Digitally signed by Sara E. Johnson on 04/08/2020 at 17:30. Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 04/08/2020 at 21:36. PARALLAX ID: kmb29664

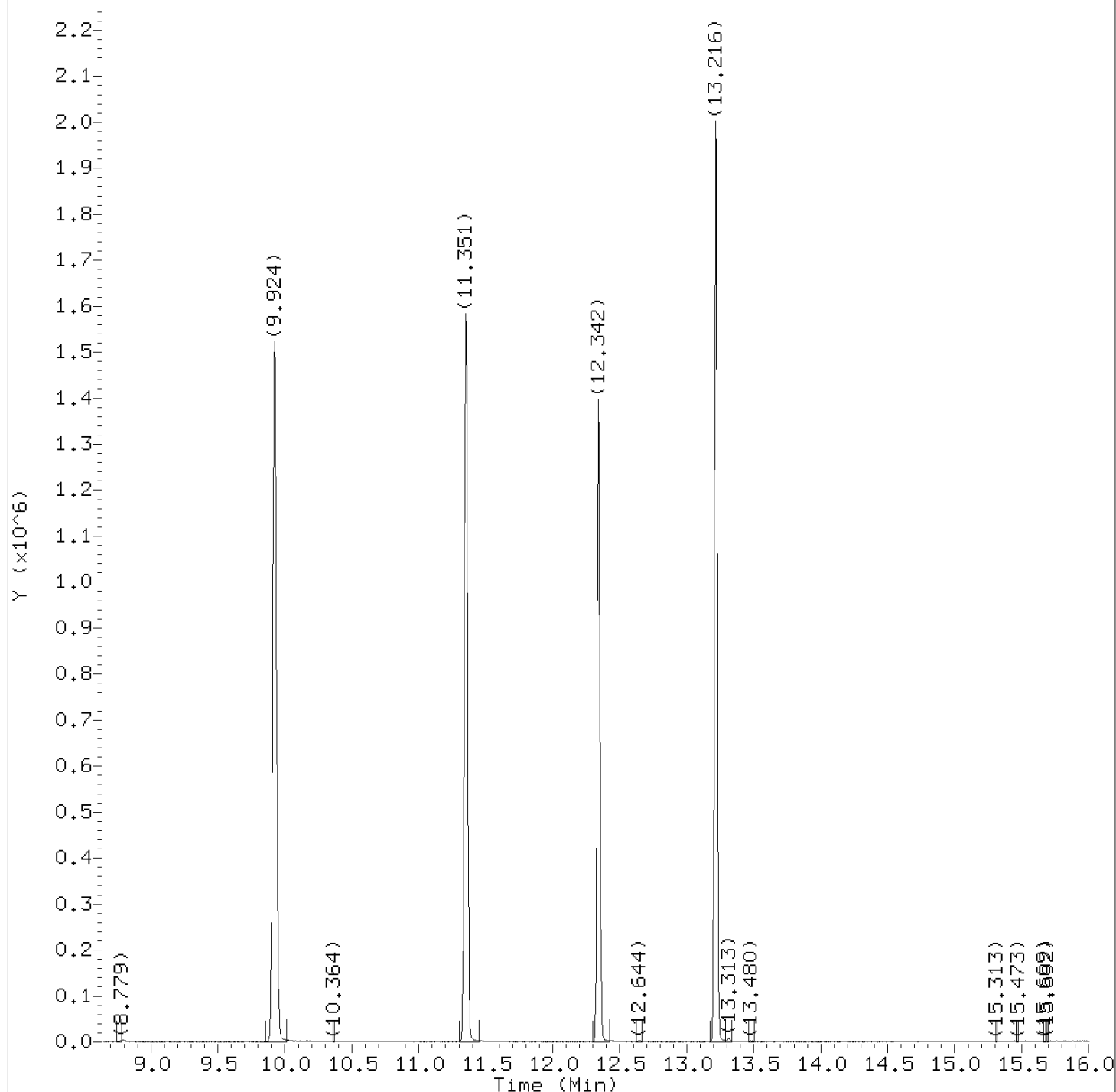
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/chem/HP09915.i/20apr08a.b/1a08s13.d GC Column: DB-624 (0.18mm ID)



/chem/HP09915.i/20apr08a.b/1a08s13.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20apr08a.b/1a08s13.d
 Injection date and time: 08-APR-2020 15:49

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m
 Calibration date and time: 08-APR-2020 10:49

Sublist used: 17639

Date, time and analyst ID of latest file update: 08-Apr-2020 16:07 Automation

Sample Name: 42101

Lab Sample ID: 1292523

Digitally signed by Sara E. Johnson
 on 04/08/2020 at 17:30.

Target 3.5 esignature user ID: se102002

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20apr08a.b/la08s13.d

Instrument ID: HP09915.i

Injection date and time: 08-APR-2020 15:49

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m

Sublist used: 17639

Calibration date and time: 08-APR-2020 10:49

Date, time and analyst ID of latest file update: 08-Apr-2020 16:07 Automation

Sample Name: 42101

Lab Sample ID: 1292523

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
29) *t-Butyl alcohol-d10	(1)	4.490	65	223823	250.000
52) \$Dibromofluoromethane	(2)	7.062	113	296033	52.019
57) \$1,2-Dichloroethane-d4	(2)	7.522	102	75828	51.375
66) *Fluorobenzene	(2)	7.946	96	1203565	50.000
83) \$Toluene-d8	(3)	9.924	98	1175115	48.714
100) *Chlorobenzene-d5	(3)	11.351	117	918171	50.000
114) \$4-Bromofluorobenzene	(3)	12.342	95	421011	46.281
131) *1,4-Dichlorobenzene-d4	(4)	13.216	152	496596	50.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 1 of 1

Digitally signed by Sara E. Johnson

on 04/08/2020 at 17:30.

Target 3.5 esignature user ID: sej02002

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42102

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1292524

Data file: /chem/HP09915.i/20apr08a.b/la08s14.d Injection date and time: 08-APR-2020 16:11
 Data file Sample Info. Line: 42102;1292524;1;0;;KR421;DODWW;;la08b01; Instrument ID: HP09915.i Batch: L200991AA
 Date, time and analyst ID of latest file update: 08-Apr-2020 16:29 Automation

Blank Data file reference: /chem/HP09915.i/20apr08a.b/la08b01.d

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m Sublist used: 17639
 Calibration date and time (Last Method Edit): 08-APR-2020 10:49
 Mid Level Daily Calibration Standard Reference: /chem/HP09915.i/20apr08a.b/la08c01.d

Bottle Code: 038A Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.493 (0.000)	936	65	206942 (-26)	250.00	
66) Fluorobenzene	7.946 (0.003)	2010	96	1127773 (-10)	50.00	
100) Chlorobenzene-d5	11.355 (-0.003)	3070	117	871932 (-10)	50.00	
131) 1,4-Dichlorobenzene-d4	13.216 (0.000)	3649	152	476665 (-10)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.065 (0.000)	113	281697	52.826	106%		80 - 119
57) 1,2-Dichloroethane-d4	(2)	7.522 (0.000)	102	72065	52.107	104%		81 - 118
83) Toluene-d8	(3)	9.924 (0.001)	98	1105317	48.251	97%		89 - 112
114) 4-Bromofluorobenzene	(3)	12.342 (0.000)	95	401179	46.439	93%		85 - 114

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ
60) Benzene	(2)			Not Detected					0.2	1
88) Toluene	(3)			Not Detected					0.2	1
104) Ethylbenzene	(3)			Not Detected					0.4	1
106) m+p-Xylene	(3)			Not Detected					1	5
107) o-Xylene	(3)			Not Detected					0.4	1
108) Xylene (Total)	(3)			Not Detected					1	6

Total number of targets = 6

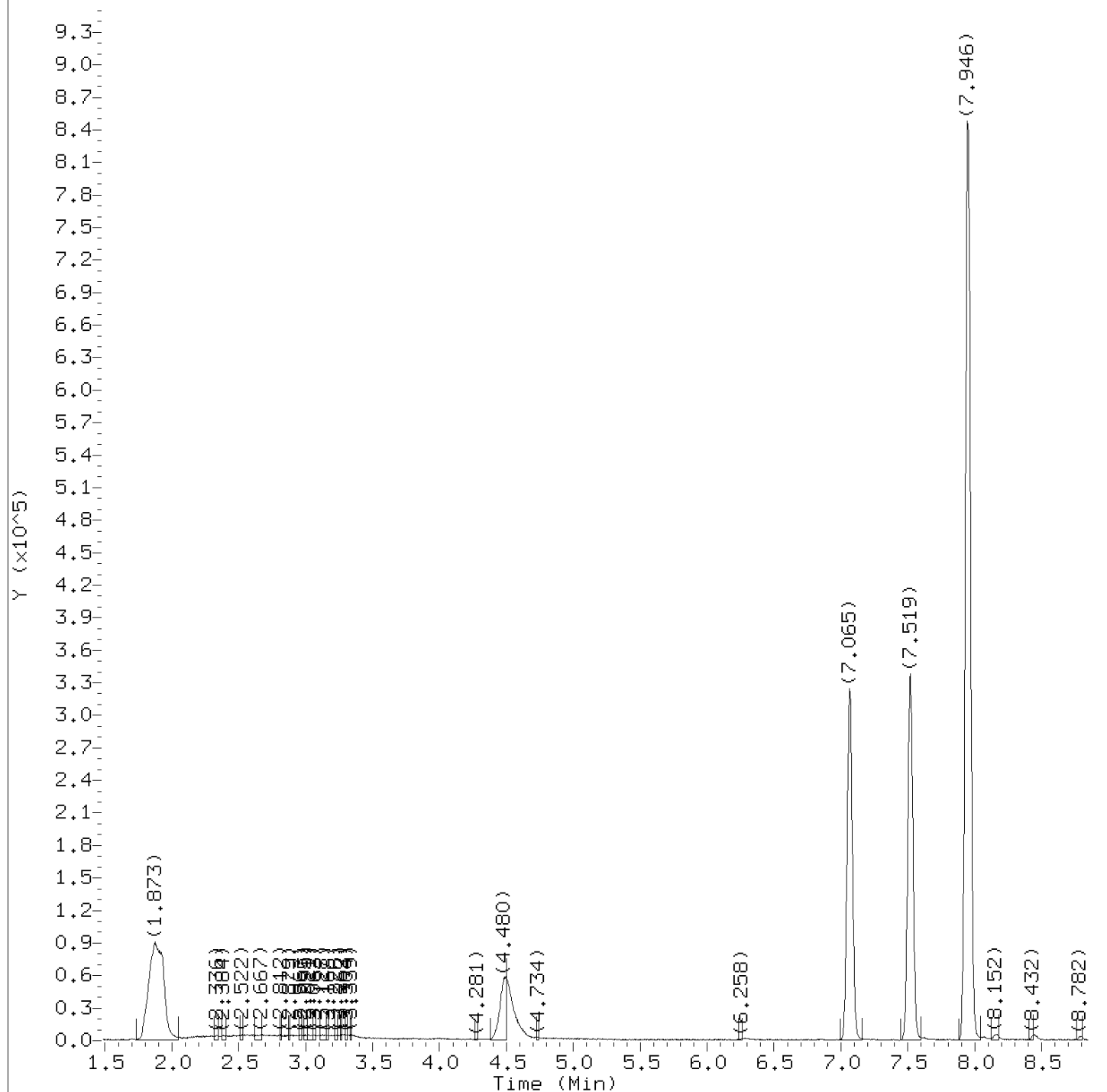
Digitally signed by Sara E. Johnson on 04/08/2020 at 17:31. Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 04/08/2020 at 21:36. PARALLAX ID: kmb29664

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/chem/HP09915.i/20apr08a.b/1a08s14.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20apr08a.b/1a08s14.d
 Injection date and time: 08-APR-2020 16:11

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m
 Calibration date and time: 08-APR-2020 10:49

Sublist used: 17639

Date, time and analyst ID of latest file update: 08-Apr-2020 16:29 Automation

Sample Name: 42102

Lab Sample ID: 1292524

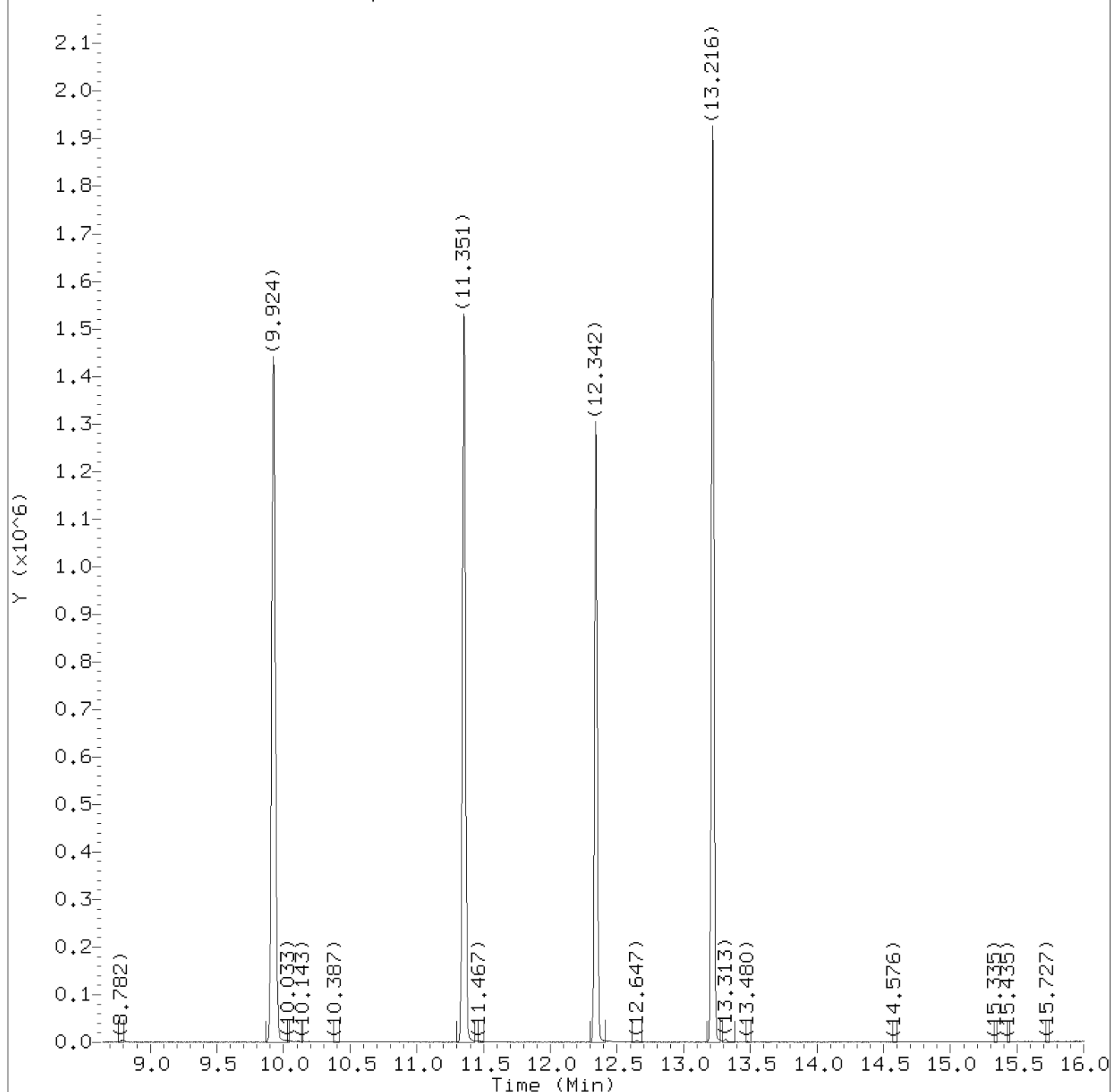
Digitally signed by Sara E. Johnson
 on 04/08/2020 at 17:31.

Target 3.5 esignature user ID: sei02002

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/chem/HP09915.i/20apr08a.b/1a08s14.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20apr08a.b/1a08s14.d
 Injection date and time: 08-APR-2020 16:11

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m
 Calibration date and time: 08-APR-2020 10:49

Sublist used: 17639

Date, time and analyst ID of latest file update: 08-Apr-2020 16:29 Automation

Sample Name: 42102

Lab Sample ID: 1292524

Digitally signed by Sara E. Johnson
 on 04/08/2020 at 17:31.

Target 3.5 esignature user ID: se102002

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20apr08a.b/la08s14.d

Instrument ID: HP09915.i

Injection date and time: 08-APR-2020 16:11

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m

Sublist used: 17639

Calibration date and time: 08-APR-2020 10:49

Date, time and analyst ID of latest file update: 08-Apr-2020 16:29 Automation

Sample Name: 42102

Lab Sample ID: 1292524

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
29) *t-Butyl alcohol-d10	(1)	4.493	65	206942	250.000
52) \$Dibromofluoromethane	(2)	7.065	113	281697	52.826
57) \$1,2-Dichloroethane-d4	(2)	7.522	102	72065	52.107
66) *Fluorobenzene	(2)	7.946	96	1127773	50.000
83) \$Toluene-d8	(3)	9.924	98	1105317	48.251
100) *Chlorobenzene-d5	(3)	11.355	117	871932	50.000
114) \$4-Bromofluorobenzene	(3)	12.342	95	401179	46.439
131) *1,4-Dichlorobenzene-d4	(4)	13.216	152	476665	50.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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Digitally signed by Sara E. Johnson

on 04/08/2020 at 17:31.

Target 3.5 esignature user ID: sej02002

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42103

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1292525

Data file: /chem/HP09915.i/20apr08a.b/la08s15.d Injection date and time: 08-APR-2020 16:33
 Data file Sample Info. Line: 42103;1292525;1;0;;KR421;DODWW;;la08b01; Instrument ID: HP09915.i Batch: L200991AA
 Date, time and analyst ID of latest file update: 08-Apr-2020 16:51 Automation

Blank Data file reference: /chem/HP09915.i/20apr08a.b/la08b01.d

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m Sublist used: 17639
 Calibration date and time (Last Method Edit): 08-APR-2020 10:49
 Mid Level Daily Calibration Standard Reference: /chem/HP09915.i/20apr08a.b/la08c01.d

Bottle Code: 038A Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.483 (0.010)	933	65	217810 (-22)	250.00	
66) Fluorobenzene	7.950 (0.000)	2011	96	1152257 (-8)	50.00	
100) Chlorobenzene-d5	11.351 (0.000)	3069	117	891994 (-8)	50.00	
131) 1,4-Dichlorobenzene-d4	13.219 (-0.003)	3650	152	488594 (-8)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.062 (0.000)	113	288150	52.888	106%		80 - 119
57) 1,2-Dichloroethane-d4	(2)	7.519 (0.000)	102	74549	52.758	106%		81 - 118
83) Toluene-d8	(3)	9.924 (0.000)	98	1134716	48.420	97%		89 - 112
114) 4-Bromofluorobenzene	(3)	12.342 (0.000)	95	407977	46.164	92%		85 - 114

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Reporting Limit	LOQ
60) Benzene	(2)			Not Detected				0.2	1
88) Toluene	(3)			Not Detected				0.2	1
104) Ethylbenzene	(3)			Not Detected				0.4	1
106) m+p-Xylene	(3)			Not Detected				1	5
107) o-Xylene	(3)			Not Detected				0.4	1
108) Xylene (Total)	(3)			Not Detected				1	6

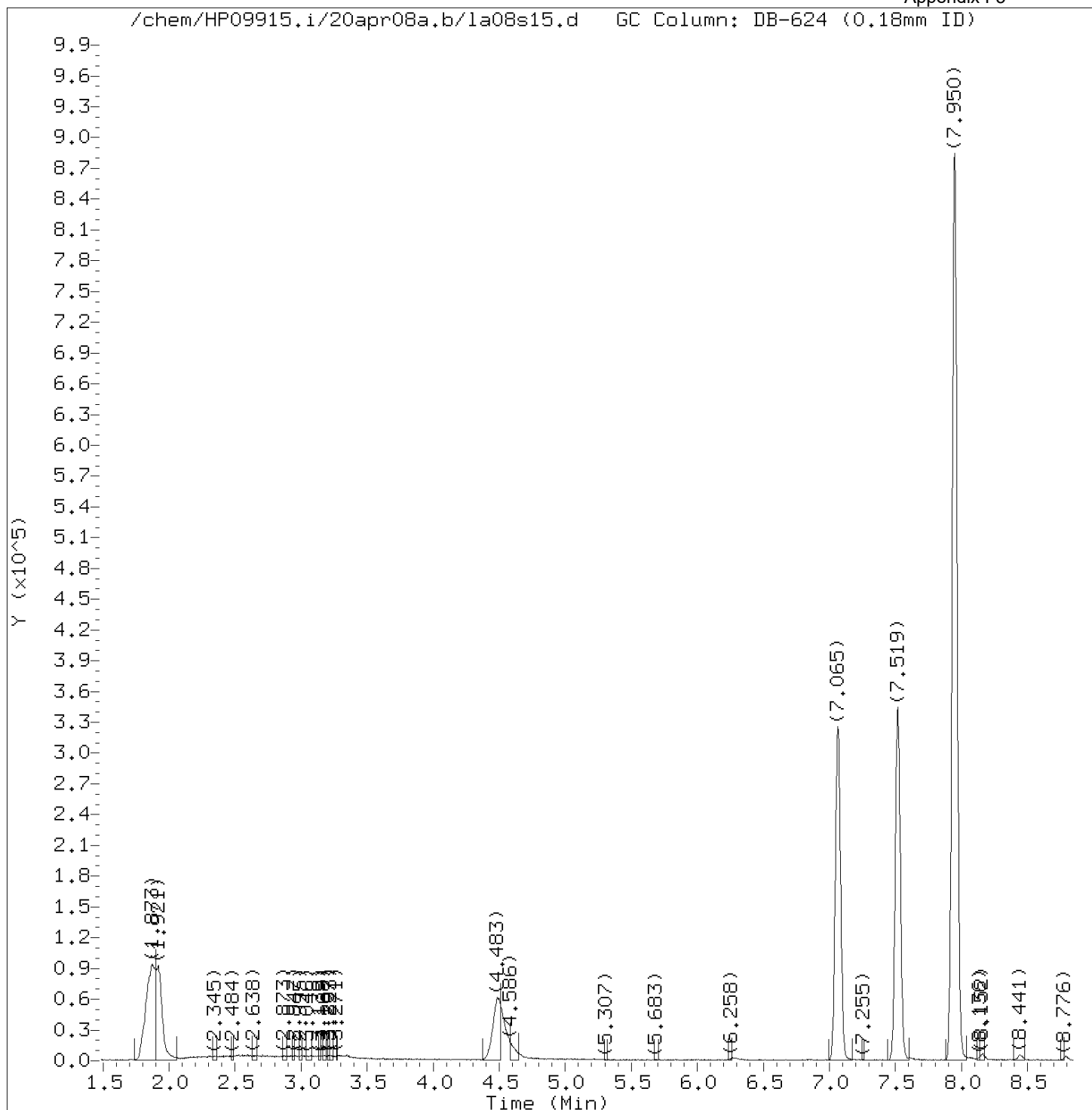
Total number of targets = 6

Digitally signed by Sara E. Johnson on 04/08/2020 at 17:31. Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 04/08/2020 at 21:36. PARALLAX ID: kmb29664

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Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20apr08a.b/1a08s15.d
 Injection date and time: 08-APR-2020 16:33

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m
 Calibration date and time: 08-APR-2020 10:49

Sublist used: 17639

Date, time and analyst ID of latest file update: 08-Apr-2020 16:51 Automation

Sample Name: 42103

Lab Sample ID: 1292525

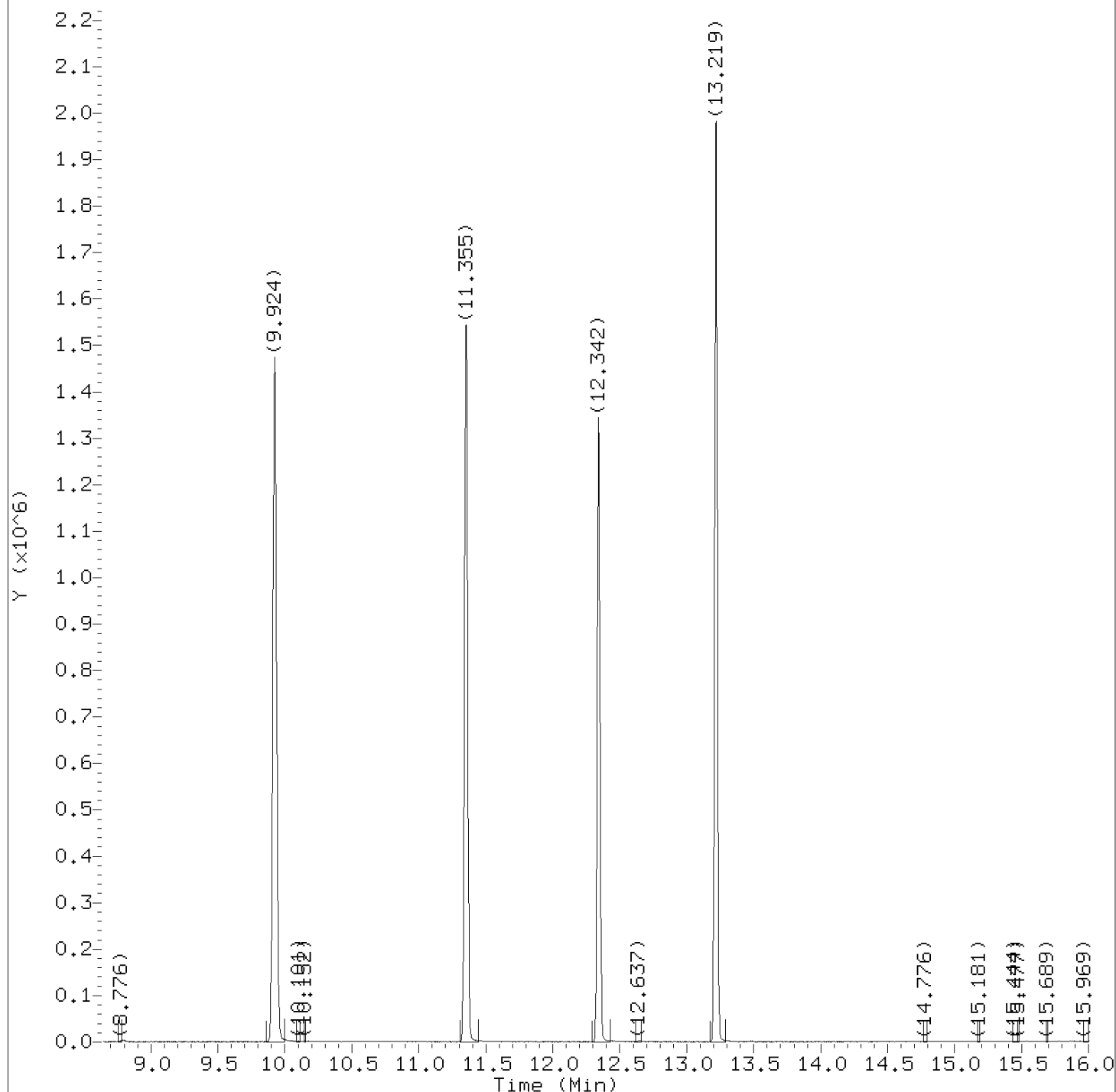
Digitally signed by Sara E. Johnson
 on 04/08/2020 at 17:31.

Target 3.5 esignature user ID: sei02002

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/chem/HP09915.i/20apr08a.b/1a08s15.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20apr08a.b/1a08s15.d
 Injection date and time: 08-APR-2020 16:33

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m
 Calibration date and time: 08-APR-2020 10:49

Sublist used: 17639

Date, time and analyst ID of latest file update: 08-Apr-2020 16:51 Automation

Sample Name: 42103

Lab Sample ID: 1292525

Digitally signed by Sara E. Johnson
 on 04/08/2020 at 17:31.

Target 3.5 esignature user ID: sei02002

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20apr08a.b/la08s15.d

Instrument ID: HP09915.i

Injection date and time: 08-APR-2020 16:33

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m

Sublist used: 17639

Calibration date and time: 08-APR-2020 10:49

Date, time and analyst ID of latest file update: 08-Apr-2020 16:51 Automation

Sample Name: 42103

Lab Sample ID: 1292525

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
29) *t-Butyl alcohol-d10	(1)	4.483	65	217810	250.000
52) \$Dibromofluoromethane	(2)	7.062	113	288150	52.888
57) \$1,2-Dichloroethane-d4	(2)	7.519	102	74549	52.758
66) *Fluorobenzene	(2)	7.950	96	1152257	50.000
83) \$Toluene-d8	(3)	9.924	98	1134716	48.420
100) *Chlorobenzene-d5	(3)	11.351	117	891994	50.000
114) \$4-Bromofluorobenzene	(3)	12.342	95	407977	46.164
131) *1,4-Dichlorobenzene-d4	(4)	13.219	152	488594	50.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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Digitally signed by Sara E. Johnson

on 04/08/2020 at 17:31.

Target 3.5 esignature user ID: sej02002

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42104

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1292526

Data file: /chem/HP09915.i/20apr08a.b/la08s16.d Injection date and time: 08-APR-2020 16:55
 Data file Sample Info. Line: 42104;1292526;1;0;;KR421;DODWW;;la08b01; Instrument ID: HP09915.i Batch: L200991AA
 Date, time and analyst ID of latest file update: 08-Apr-2020 17:13 Automation

Blank Data file reference: /chem/HP09915.i/20apr08a.b/la08b01.d

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m Sublist used: 17639
 Calibration date and time (Last Method Edit): 08-APR-2020 10:49
 Mid Level Daily Calibration Standard Reference: /chem/HP09915.i/20apr08a.b/la08c01.d

Bottle Code: 038A Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.493 (0.000)	936	65	205715 (-26)	250.00	
66) Fluorobenzene	7.950 (0.000)	2011	96	1121050 (-11)	50.00	
100) Chlorobenzene-d5	11.351 (0.000)	3069	117	861612 (-11)	50.00	
131) 1,4-Dichlorobenzene-d4	13.216 (0.000)	3649	152	472571 (-11)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.069 (0.000)	113	280337	52.886	106%		80 - 119
57) 1,2-Dichloroethane-d4	(2)	7.516 (0.001)	102	72218	52.531	105%		81 - 118
83) Toluene-d8	(3)	9.924 (0.000)	98	1098450	48.525	97%		89 - 112
114) 4-Bromofluorobenzene	(3)	12.342 (0.000)	95	394339	46.194	92%		85 - 114

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Reporting Limit	LOQ
60) Benzene	(2)			Not Detected				0.2	1
88) Toluene	(3)			Not Detected				0.2	1
104) Ethylbenzene	(3)			Not Detected				0.4	1
106) m+p-Xylene	(3)			Not Detected				1	5
107) o-Xylene	(3)			Not Detected				0.4	1
108) Xylene (Total)	(3)			Not Detected				1	6

Total number of targets = 6

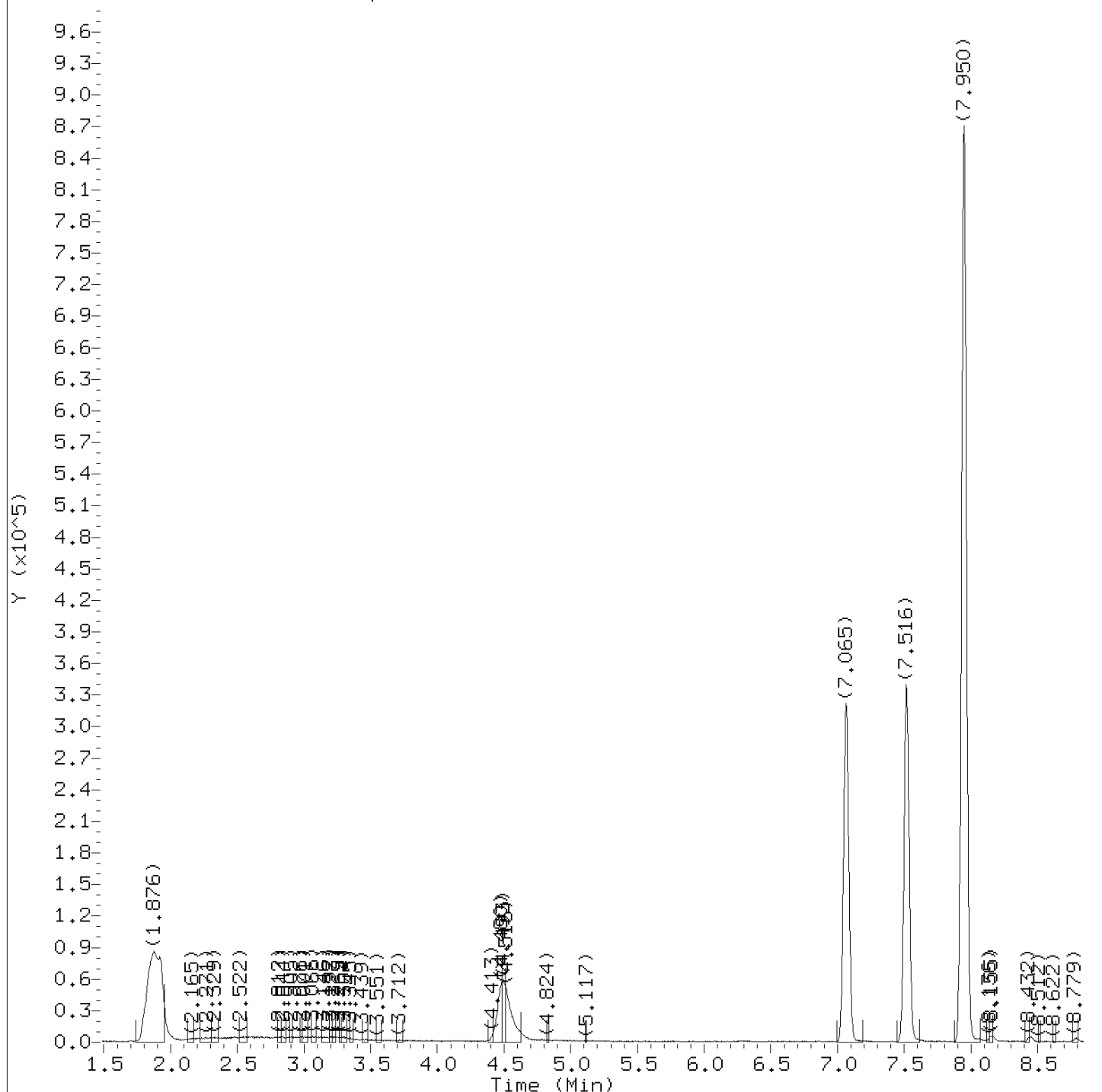
Digitally signed by Sara E. Johnson on 04/08/2020 at 17:31. Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 04/08/2020 at 21:36. PARALLAX ID: kmb29664

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/chem/HP09915.i/20apr08a.b/1a08s16.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20apr08a.b/1a08s16.d
 Injection date and time: 08-APR-2020 16:55

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m
 Calibration date and time: 08-APR-2020 10:49

Sublist used: 17639

Date, time and analyst ID of latest file update: 08-Apr-2020 17:13 Automation

Sample Name: 42104

Lab Sample ID: 1292526

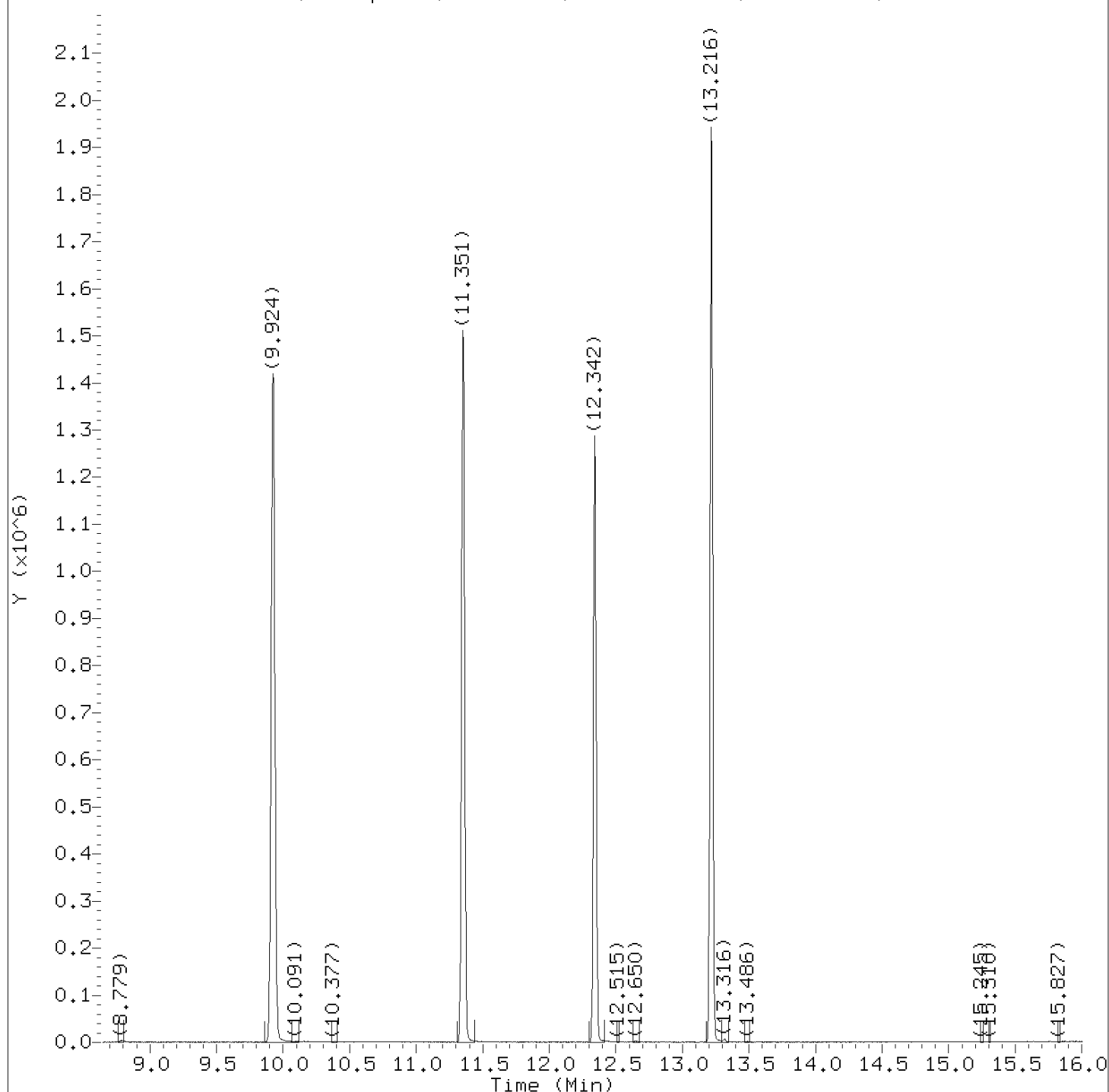
Digitally signed by Sara E. Johnson
 on 04/08/2020 at 17:31.

Target 3.5 esignature user ID: sei02002

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/chem/HP09915.i/20apr08a.b/1a08s16.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20apr08a.b/1a08s16.d
 Injection date and time: 08-APR-2020 16:55

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m
 Calibration date and time: 08-APR-2020 10:49

Sublist used: 17639

Date, time and analyst ID of latest file update: 08-Apr-2020 17:13 Automation

Sample Name: 42104

Lab Sample ID: 1292526

Digitally signed by Sara E. Johnson
 on 04/08/2020 at 17:31.

Target 3.5 esignature user ID: se102002

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20apr08a.b/la08s16.d

Instrument ID: HP09915.i

Injection date and time: 08-APR-2020 16:55

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m

Sublist used: 17639

Calibration date and time: 08-APR-2020 10:49

Date, time and analyst ID of latest file update: 08-Apr-2020 17:13 Automation

Sample Name: 42104

Lab Sample ID: 1292526

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
29) *t-Butyl alcohol-d10	(1)	4.493	65	205715	250.000
52) \$Dibromofluoromethane	(2)	7.069	113	280337	52.886
57) \$1,2-Dichloroethane-d4	(2)	7.516	102	72218	52.531
66) *Fluorobenzene	(2)	7.950	96	1121050	50.000
83) \$Toluene-d8	(3)	9.924	98	1098450	48.525
100) *Chlorobenzene-d5	(3)	11.351	117	861612	50.000
114) \$4-Bromofluorobenzene	(3)	12.342	95	394339	46.194
131) *1,4-Dichlorobenzene-d4	(4)	13.216	152	472571	50.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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Digitally signed by Sara E. Johnson

on 04/08/2020 at 17:31.

Target 3.5 esignature user ID: sej02002

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42105

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1292527

Data file: /chem/HP09915.i/20apr08a.b/la08s03.d Injection date and time: 08-APR-2020 12:08
 Data file Sample Info. Line: 42105;1292527;1;0;;KR421;DODWW;;la08b01; Instrument ID: HP09915.i Batch: L200991AA
 Date, time and analyst ID of latest file update: 08-Apr-2020 12:26 Automation

Blank Data file reference: /chem/HP09915.i/20apr08a.b/la08b01.d

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m Sublist used: 17639
 Calibration date and time (Last Method Edit): 08-APR-2020 10:49
 Mid Level Daily Calibration Standard Reference: /chem/HP09915.i/20apr08a.b/la08c01.d

Bottle Code: 038A Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.496 (-0.003)	937	65	268926 (-4)	250.00	
66) Fluorobenzene	7.946 (0.003)	2010	96	1279410 (2)	50.00	
100) Chlorobenzene-d5	11.355 (-0.003)	3070	117	981579 (1)	50.00	
131) 1,4-Dichlorobenzene-d4	13.220 (-0.003)	3650	152	537751 (2)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.065 (0.000)	113	317766	52.527	105%		80 - 119
57) 1,2-Dichloroethane-d4	(2)	7.519 (0.000)	102	83214	53.037	106%		81 - 118
83) Toluene-d8	(3)	9.924 (0.001)	98	1258742	48.810	98%		89 - 112
114) 4-Bromofluorobenzene	(3)	12.342 (0.000)	95	458813	47.178	94%		85 - 114

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Reporting Limit	LOQ
60) Benzene	(2)			Not Detected				0.2	1
88) Toluene	(3)			Not Detected				0.2	1
104) Ethylbenzene	(3)			Not Detected				0.4	1
106) m+p-Xylene	(3)			Not Detected				1	5
107) o-Xylene	(3)			Not Detected				0.4	1
108) Xylene (Total)	(3)			Not Detected				1	6

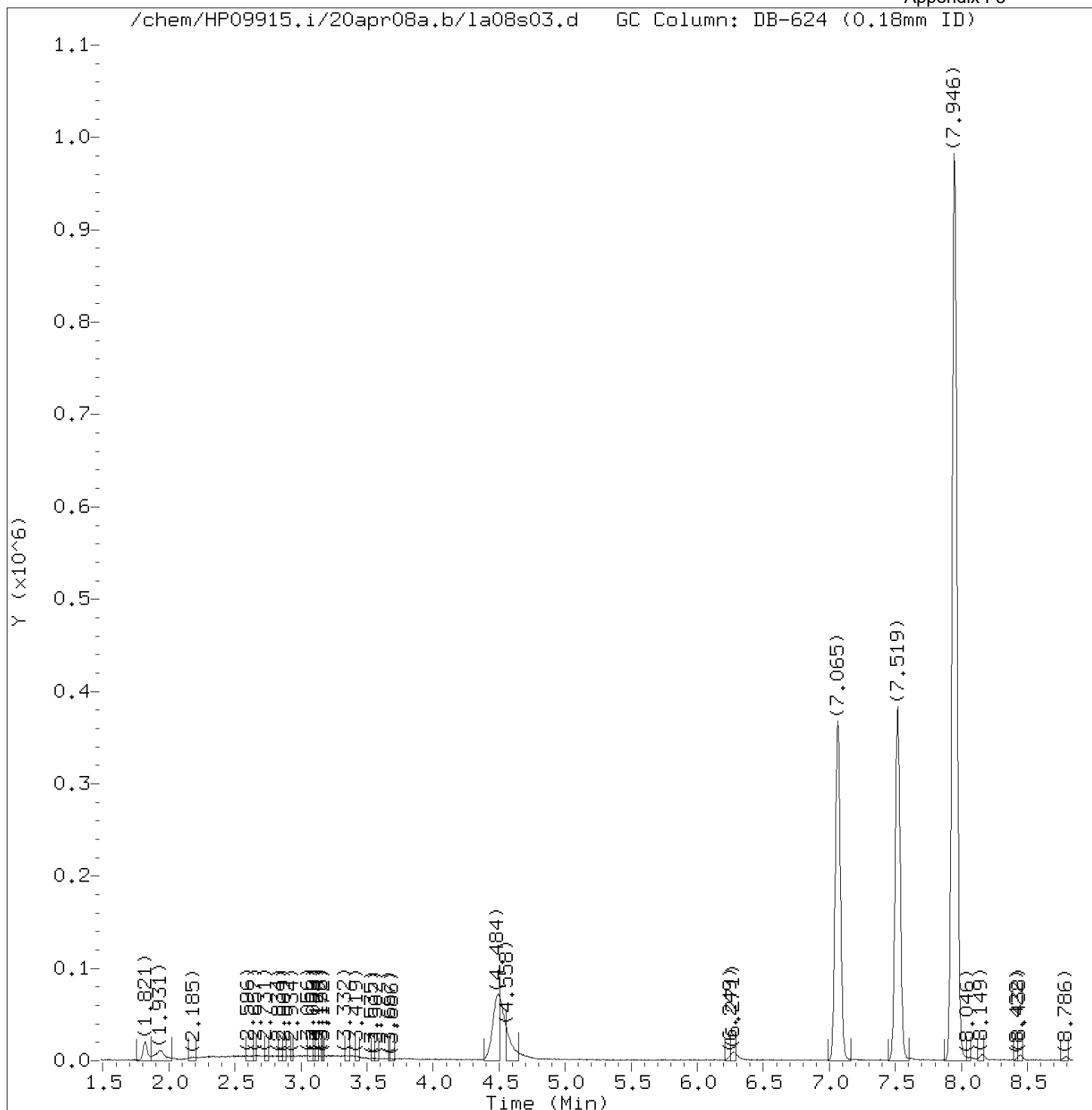
Total number of targets = 6

Digitally signed by Corie L. Mellinger on 04/08/2020 at 13:45. Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kari Becker on 04/08/2020 at 18:50. PARALLAX ID: kmb29664

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Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20apr08a.b/1a08s03.d
 Injection date and time: 08-APR-2020 12:08

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m
 Calibration date and time: 08-APR-2020 10:49

Sublist used: 17639

Date, time and analyst ID of latest file update: 08-Apr-2020 12:26 Automation

Sample Name: 42105

Lab Sample ID: 1292527

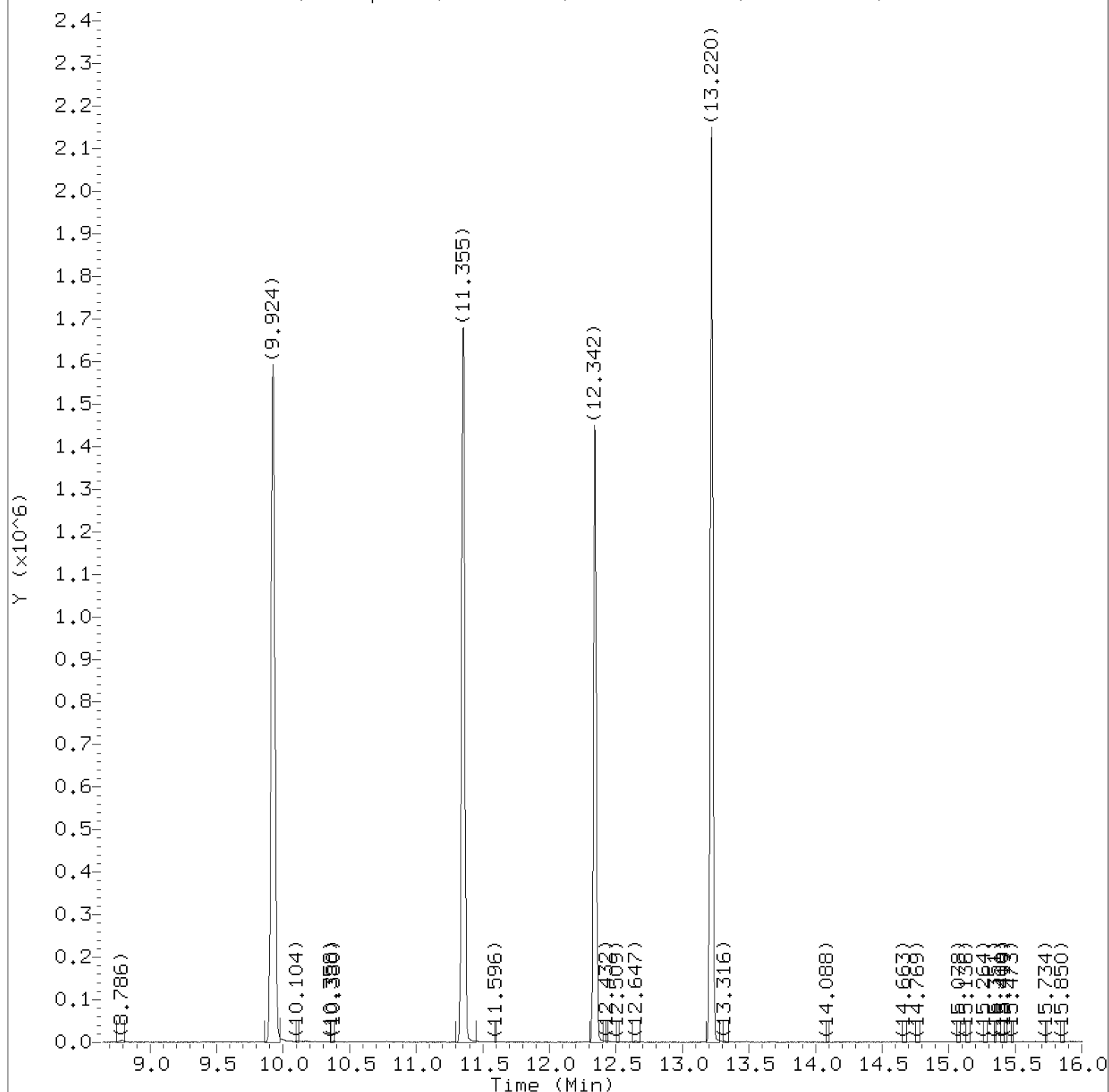
Digitally signed by Corie L. Mellinger
 on 04/08/2020 at 13:45.

Target 3.5 esignature user ID: clm27445

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/chem/HP09915.i/20apr08a.b/1a08s03.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20apr08a.b/1a08s03.d
 Injection date and time: 08-APR-2020 12:08

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m
 Calibration date and time: 08-APR-2020 10:49

Sublist used: 17639

Date, time and analyst ID of latest file update: 08-Apr-2020 12:26 Automation

Sample Name: 42105

Lab Sample ID: 1292527

Digitally signed by Corie L. Mellinger
 on 04/08/2020 at 13:45.

Target 3.5 esignature user ID: clm27445

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20apr08a.b/la08s03.d

Instrument ID: HP09915.i

Injection date and time: 08-APR-2020 12:08

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m

Sublist used: 17639

Calibration date and time: 08-APR-2020 10:49

Date, time and analyst ID of latest file update: 08-Apr-2020 12:26 Automation

Sample Name: 42105

Lab Sample ID: 1292527

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
29) *t-Butyl alcohol-d10	(1)	4.496	65	268926	250.000
52) \$Dibromofluoromethane	(2)	7.065	113	317766	52.527
57) \$1,2-Dichloroethane-d4	(2)	7.519	102	83214	53.037
66) *Fluorobenzene	(2)	7.946	96	1279410	50.000
83) \$Toluene-d8	(3)	9.924	98	1258742	48.810
100) *Chlorobenzene-d5	(3)	11.355	117	981579	50.000
114) \$4-Bromofluorobenzene	(3)	12.342	95	458813	47.178
131) *1,4-Dichlorobenzene-d4	(4)	13.220	152	537751	50.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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Digitally signed by Corie L. Mellinger

on 04/08/2020 at 13:45.

Target 3.5 esignature user ID: clm27445

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42106

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1292528

Data file: /chem/HP09915.i/20apr08a.b/la08s07.d Injection date and time: 08-APR-2020 13:36
 Data file Sample Info. Line: 42106;1292528;1;0;;KR421;DODWW;;la08b01; Instrument ID: HP09915.i Batch: L200991AA
 Date, time and analyst ID of latest file update: 08-Apr-2020 17:30 sej02002

Blank Data file reference: /chem/HP09915.i/20apr08a.b/la08b01.d

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m Sublist used: 17639
 Calibration date and time (Last Method Edit): 08-APR-2020 10:49
 Mid Level Daily Calibration Standard Reference: /chem/HP09915.i/20apr08a.b/la08c01.d

Bottle Code: 038A Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.496 (-0.003)	937	65	233488 (-16)	250.00	
66) Fluorobenzene	7.953 (-0.003)	2012	96	1203077 (-4)	50.00	
100) Chlorobenzene-d5	11.351 (0.000)	3069	117	926691 (-5)	50.00	
131) 1,4-Dichlorobenzene-d4	13.216 (0.000)	3649	152	513012 (-3)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.069 (0.000)	113	299937	52.726	105%		80 - 119
57) 1,2-Dichloroethane-d4	(2)	7.522 (0.000)	102	77251	52.360	105%		81 - 118
83) Toluene-d8	(3)	9.927 (0.000)	98	1175738	48.292	97%		89 - 112
114) 4-Bromofluorobenzene	(3)	12.342 (0.000)	95	428314	46.650	93%		85 - 114

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Reporting Limit	LOQ
60) Benzene	(2)			Not Detected				0.2	1
88) Toluene	(3)			Not Detected				0.2	1
104) Ethylbenzene	(3)			Not Detected				0.4	1
106) m+p-Xylene	(3)			Not Detected				1	5
107) o-Xylene	(3)			Not Detected				0.4	1
108) Xylene (Total)	(3)			Not Detected				1	6

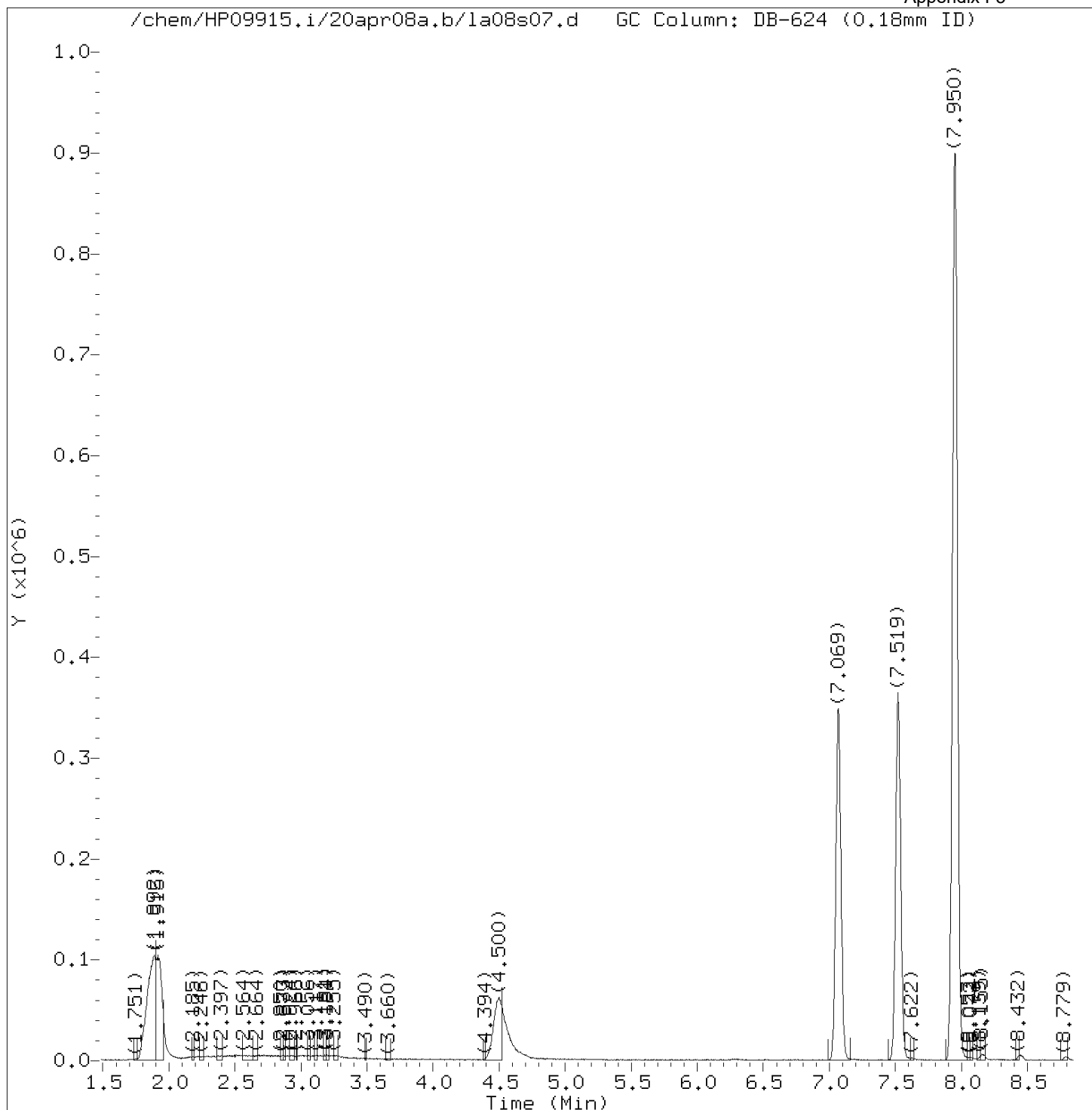
Total number of targets = 6

Digitally signed by Sara E. Johnson on 04/08/2020 at 17:30. Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 04/08/2020 at 21:36. PARALLAX ID: kmb29664

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Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20apr08a.b/1a08s07.d
 Injection date and time: 08-APR-2020 13:36

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m
 Calibration date and time: 08-APR-2020 10:49

Sublist used: 17639

Date, time and analyst ID of latest file update: 08-Apr-2020 17:30 sej02002

Sample Name: 42106

Lab Sample ID: 1292528

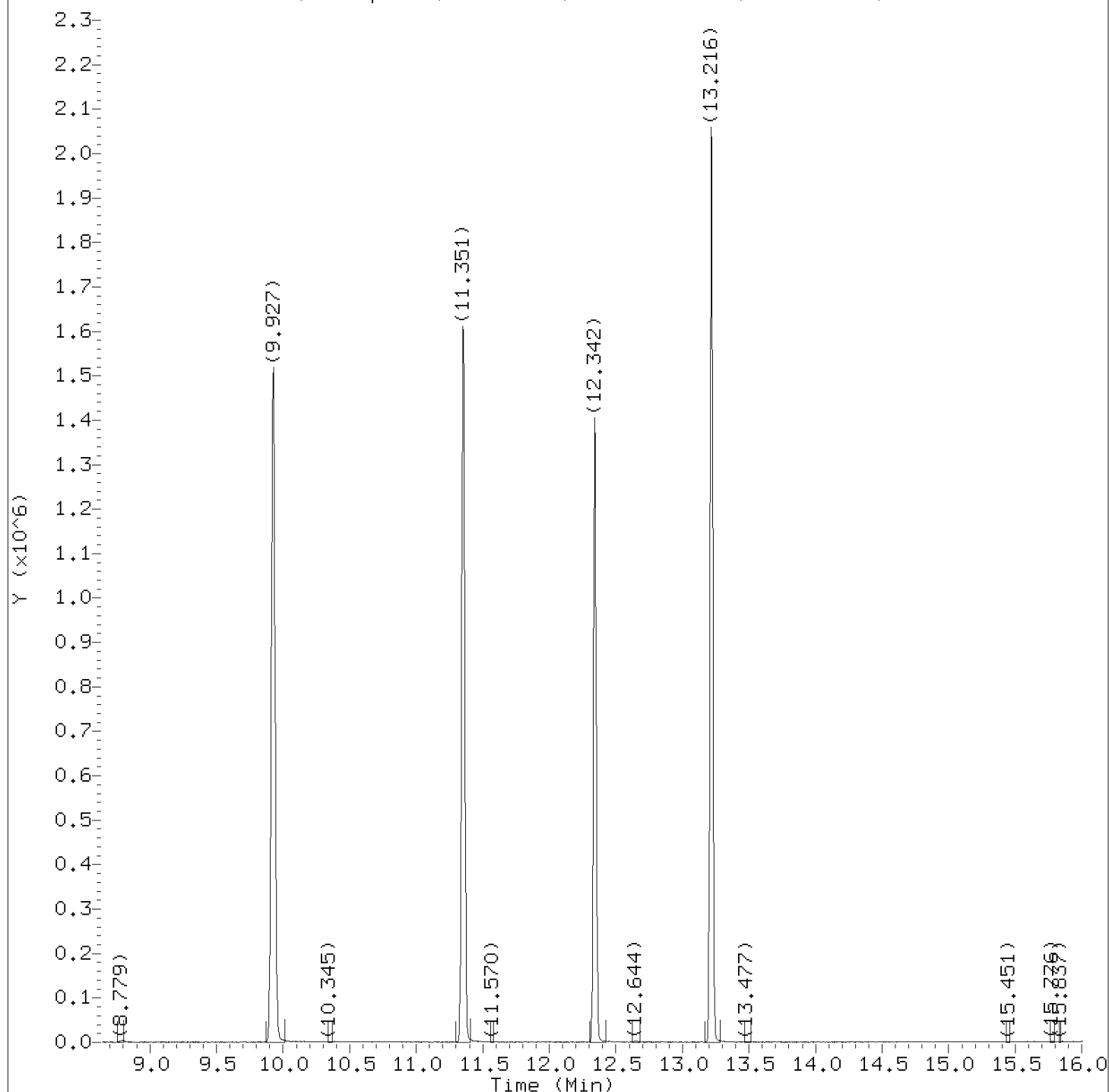
Digitally signed by Sara E. Johnson
 on 04/08/2020 at 17:30.

Target 3.5 esignature user ID: sej02002

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/chem/HP09915.i/20apr08a.b/1a08s07.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20apr08a.b/1a08s07.d
 Injection date and time: 08-APR-2020 13:36

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m
 Calibration date and time: 08-APR-2020 10:49

Sublist used: 17639

Date, time and analyst ID of latest file update: 08-Apr-2020 17:30 sej02002

Sample Name: 42106

Lab Sample ID: 1292528

Digitally signed by Sara E. Johnson
 on 04/08/2020 at 17:30.

Target 3.5 esignature user ID: sej02002

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20apr08a.b/la08s07.d
 Injection date and time: 08-APR-2020 13:36

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m

Sublist used: 17639

Calibration date and time: 08-APR-2020 10:49

Date, time and analyst ID of latest file update: 08-Apr-2020 17:30 sej02002

Sample Name: 42106

Lab Sample ID: 1292528

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
29) *t-Butyl alcohol-d10	(1)	4.496	65	233488	250.000
52) \$Dibromofluoromethane	(2)	7.069	113	299937	52.726
57) \$1,2-Dichloroethane-d4	(2)	7.522	102	77251	52.360
66) *Fluorobenzene	(2)	7.953	96	1203077	50.000
83) \$Toluene-d8	(3)	9.927	98	1175738	48.292
100) *Chlorobenzene-d5	(3)	11.351	117	926691	50.000
114) \$4-Bromofluorobenzene	(3)	12.342	95	428314	46.650
131) *1,4-Dichlorobenzene-d4	(4)	13.216	152	513012	50.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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Digitally signed by Sara E. Johnson
 on 04/08/2020 at 17:30.

Target 3.5 esignature user ID: sej02002

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42107

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1292532

Data file: /chem/HP09915.i/20apr08a.b/la08s17.d Injection date and time: 08-APR-2020 17:17
 Data file Sample Info. Line: 42107;1292532;1;0;;KR421;DODWW;;la08b01; Instrument ID: HP09915.i Batch: L200991AA
 Date, time and analyst ID of latest file update: 08-Apr-2020 17:35 Automation

Blank Data file reference: /chem/HP09915.i/20apr08a.b/la08b01.d

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m Sublist used: 17639
 Calibration date and time (Last Method Edit): 08-APR-2020 10:49
 Mid Level Daily Calibration Standard Reference: /chem/HP09915.i/20apr08a.b/la08c01.d

Bottle Code: 038A Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.500 (-0.006)	938	65	197972 (-29)	250.00	
66) Fluorobenzene	7.950 (0.000)	2011	96	1098484 (-13)	50.00	
100) Chlorobenzene-d5	11.351 (0.000)	3069	117	849507 (-12)	50.00	
131) 1,4-Dichlorobenzene-d4	13.220 (-0.003)	3650	152	468552 (-11)	50.00	

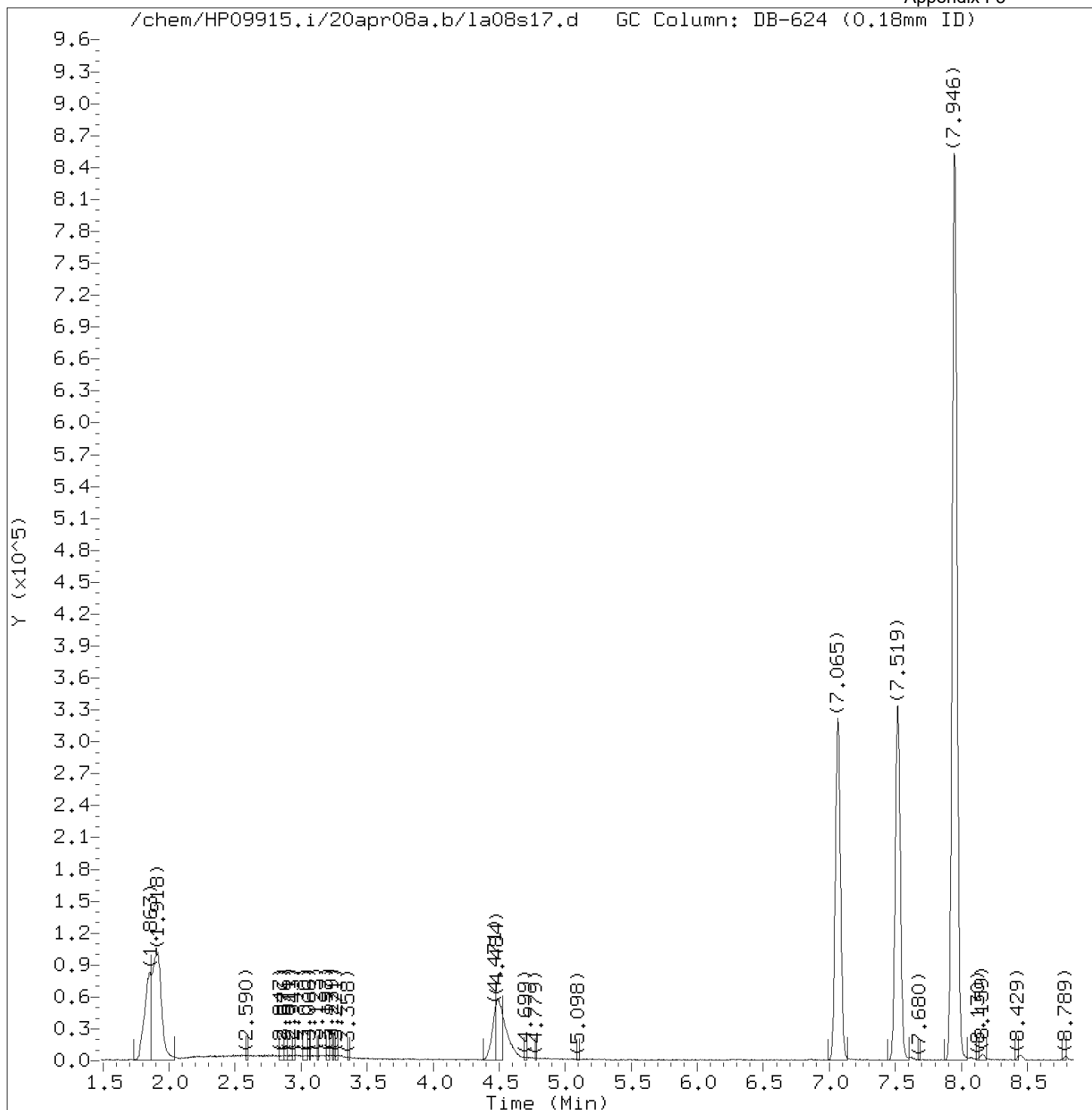
Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.065 (0.000)	113	277893	53.502	107%		80 - 119
57) 1,2-Dichloroethane-d4	(2)	7.516 (0.001)	102	71653	53.190	106%		81 - 118
83) Toluene-d8	(3)	9.924 (0.000)	98	1080203	48.399	97%		89 - 112
114) 4-Bromofluorobenzene	(3)	12.342 (0.000)	95	388681	46.180	92%		85 - 114

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ
60) Benzene	(2)			Not Detected					0.2	1
88) Toluene	(3)			Not Detected					0.2	1
104) Ethylbenzene	(3)			Not Detected					0.4	1
106) m+p-Xylene	(3)			Not Detected					1	5
107) o-Xylene	(3)			Not Detected					0.4	1
108) Xylene (Total)	(3)			Not Detected					1	6

Total number of targets = 6

Digitally signed by Sara E. Johnson on 04/08/2020 at 18:37. Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 04/08/2020 at 21:36. PARALLAX ID: kmb29664



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20apr08a.b/1a08s17.d
 Injection date and time: 08-APR-2020 17:17

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m
 Calibration date and time: 08-APR-2020 10:49

Sublist used: 17639

Date, time and analyst ID of latest file update: 08-Apr-2020 17:35 Automation

Sample Name: 42107

Lab Sample ID: 1292532

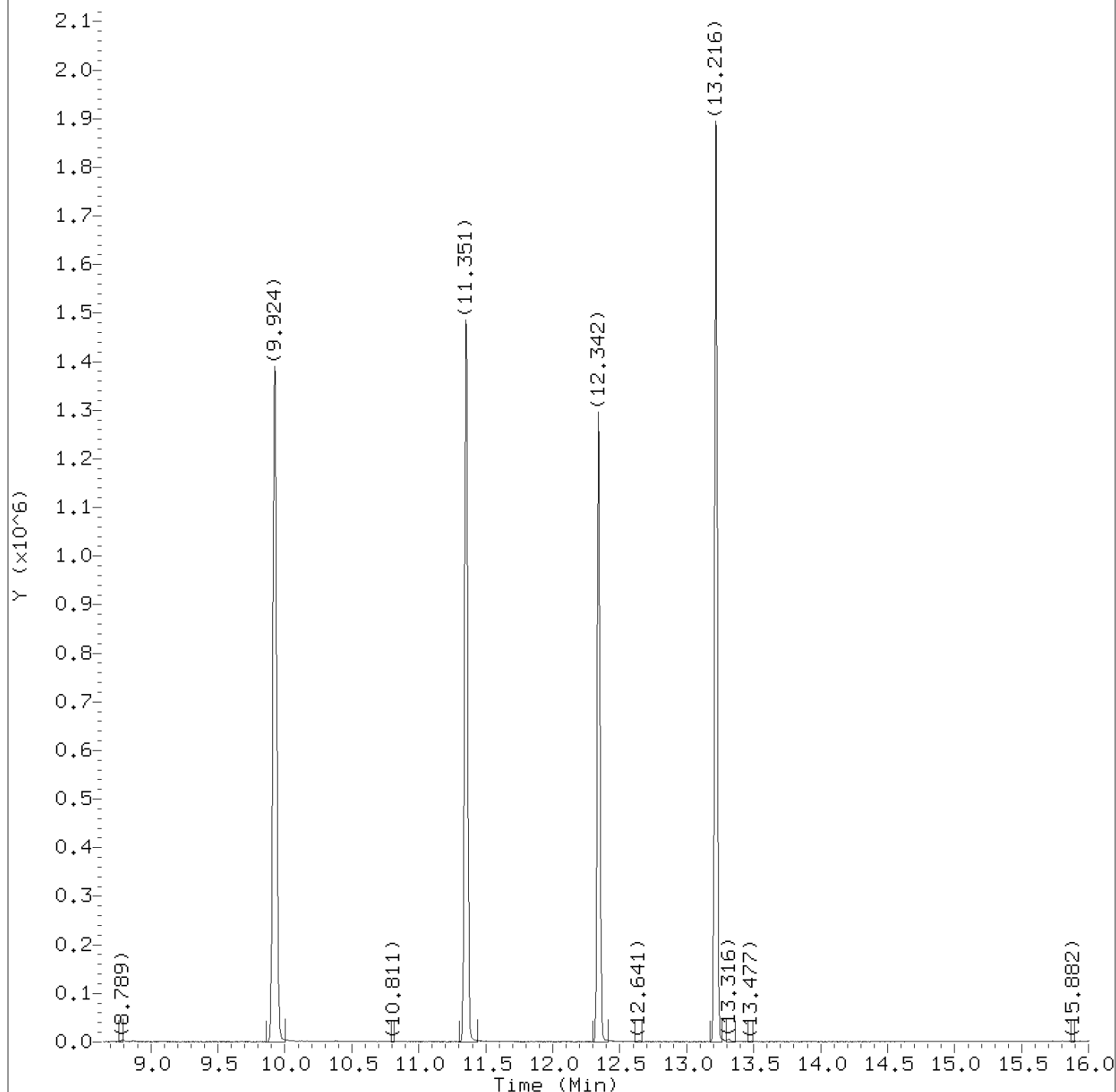
Digitally signed by Sara E. Johnson
 on 04/08/2020 at 18:37.

Target 3.5 esignature user ID: ss102002

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/chem/HP09915.i/20apr08a.b/1a08s17.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20apr08a.b/1a08s17.d
 Injection date and time: 08-APR-2020 17:17

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m
 Calibration date and time: 08-APR-2020 10:49

Sublist used: 17639

Date, time and analyst ID of latest file update: 08-Apr-2020 17:35 Automation

Sample Name: 42107

Lab Sample ID: 1292532

Digitally signed by Sara E. Johnson
 on 04/08/2020 at 18:37.

Target 3.5 esignature user ID: ss102002

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20apr08a.b/la08s17.d

Instrument ID: HP09915.i

Injection date and time: 08-APR-2020 17:17

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m

Sublist used: 17639

Calibration date and time: 08-APR-2020 10:49

Date, time and analyst ID of latest file update: 08-Apr-2020 17:35 Automation

Sample Name: 42107

Lab Sample ID: 1292532

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
29) *t-Butyl alcohol-d10	(1)	4.500	65	197972	250.000
52) \$Dibromofluoromethane	(2)	7.065	113	277893	53.502
57) \$1,2-Dichloroethane-d4	(2)	7.516	102	71653	53.190
66) *Fluorobenzene	(2)	7.950	96	1098484	50.000
83) \$Toluene-d8	(3)	9.924	98	1080203	48.399
100) *Chlorobenzene-d5	(3)	11.351	117	849507	50.000
114) \$4-Bromofluorobenzene	(3)	12.342	95	388681	46.180
131) *1,4-Dichlorobenzene-d4	(4)	13.220	152	468552	50.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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Digitally signed by Sara E. Johnson

on 04/08/2020 at 18:37.

Target 3.5 esignature user ID: sej02002

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42108

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1292533

Data file: /chem/HP09915.i/20apr09b.b/la09s35.d Injection date and time: 09-APR-2020 13:14
 Data file Sample Info. Line: 42108;1292533;1;0;;KR421;DODWW;;la09b05; Instrument ID: HP09915.i Batch: L201002AA
 Date, time and analyst ID of latest file update: 09-Apr-2020 13:32 Automation

Blank Data file reference: /chem/HP09915.i/20apr09b.b/la09b05.d

Method used: /chem/HP09915.i/20apr09b.b/m8260c5.m Sublist used: 17639
 Calibration date and time (Last Method Edit): 09-APR-2020 10:00
 Mid Level Daily Calibration Standard Reference: /chem/HP09915.i/20apr09b.b/la09c02.d

Bottle Code: 038A Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.487 (0.013)	934	65	233998 (-12)	250.00	
66) Fluorobenzene	7.946 (0.007)	2010	96	1172517 (-6)	50.00	
100) Chlorobenzene-d5	11.351 (0.003)	3069	117	930323 (-4)	50.00	
131) 1,4-Dichlorobenzene-d4	13.216 (0.000)	3649	152	500155 (-7)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.062 (0.000)	113	293577	52.953	106%		80 - 119
57) 1,2-Dichloroethane-d4	(2)	7.512 (0.000)	102	74590	51.874	104%		81 - 118
83) Toluene-d8	(3)	9.924 (0.000)	98	1182925	48.397	97%		89 - 112
114) 4-Bromofluorobenzene	(3)	12.342 (0.000)	95	437834	47.501	95%		85 - 114

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Reporting Limit	LOQ
60) Benzene	(2)			Not Detected				0.2	1
88) Toluene	(3)			Not Detected				0.2	1
104) Ethylbenzene	(3)			Not Detected				0.4	1
106) m+p-Xylene	(3)			Not Detected				1	5
107) o-Xylene	(3)			Not Detected				0.4	1
108) Xylene (Total)	(3)			Not Detected				1	6

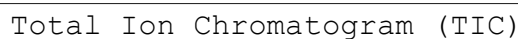
Total number of targets = 6

Digitally signed by Linda C. Pape on 04/10/2020 at 14:01. Target 3.5 esignature user ID: lcp00895

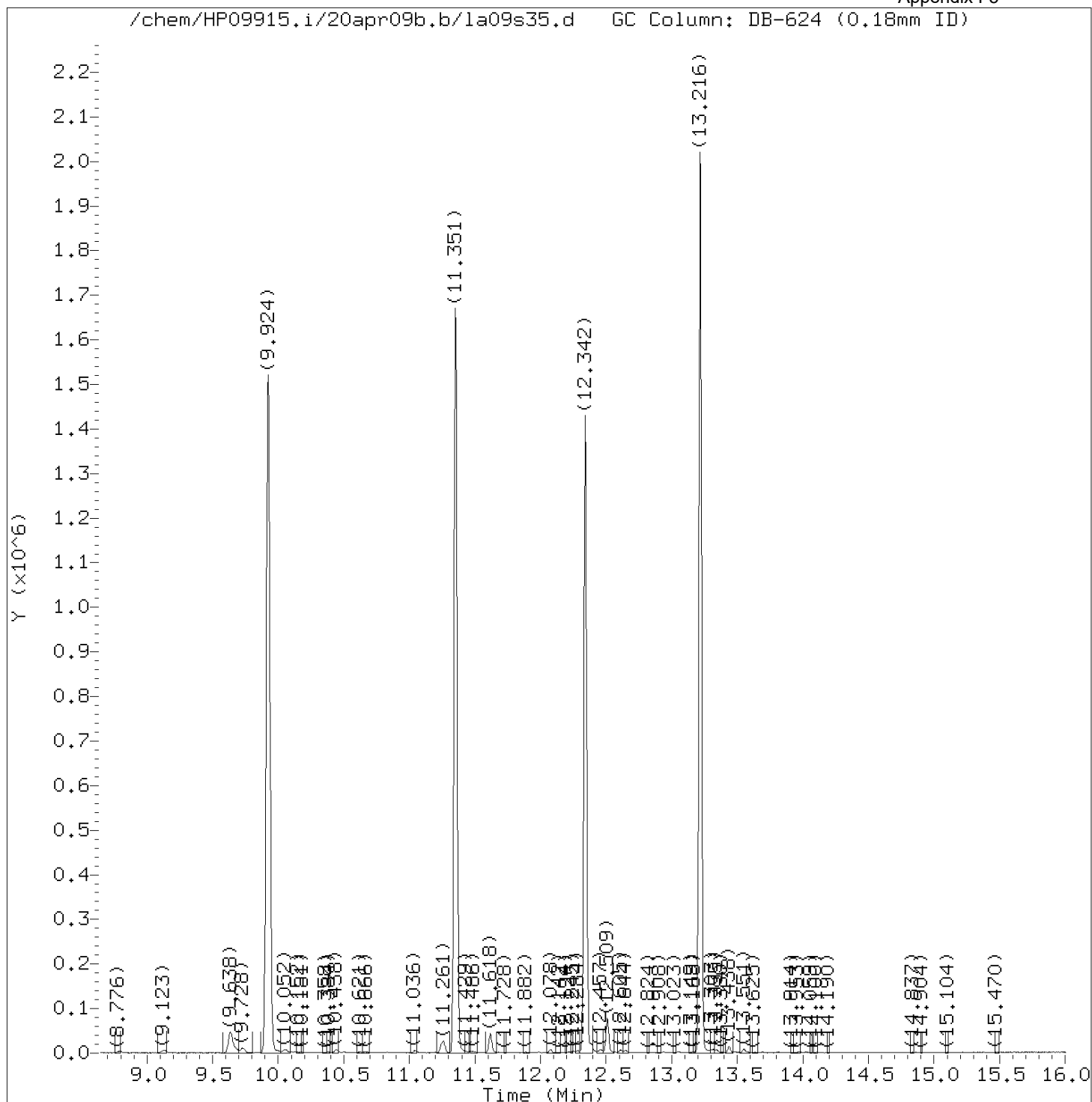
Secondary review performed and digitally signed by Kari Becker on 04/13/2020 at 18:26. PARALLAX ID: kmb29664

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1-5-1774



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20apr09b.b/1a09s35.d
 Injection date and time: 09-APR-2020 13:14

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr09b.b/m8260c5.m
 Calibration date and time: 09-APR-2020 10:00

Sublist used: 17639

Date, time and analyst ID of latest file update: 09-Apr-2020 13:32 Automation

Sample Name: 42108

Lab Sample ID: 1292533

Digitally signed by Linda C. Pape
 on 04/10/2020 at 14:01.

Target 3.5 esignature user ID: lcp00895

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20apr09b.b/la09s35.d

Instrument ID: HP09915.i

Injection date and time: 09-APR-2020 13:14

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr09b.b/m8260c5.m

Sublist used: 17639

Calibration date and time: 09-APR-2020 10:00

Date, time and analyst ID of latest file update: 09-Apr-2020 13:32 Automation

Sample Name: 42108

Lab Sample ID: 1292533

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
29) *t-Butyl alcohol-d10	(1)	4.487	65	233998	250.000
52) \$Dibromofluoromethane	(2)	7.062	113	293577	52.953
57) \$1,2-Dichloroethane-d4	(2)	7.512	102	74590	51.874
66) *Fluorobenzene	(2)	7.946	96	1172517	50.000
83) \$Toluene-d8	(3)	9.924	98	1182925	48.397
100) *Chlorobenzene-d5	(3)	11.351	117	930323	50.000
114) \$4-Bromofluorobenzene	(3)	12.342	95	437834	47.501
131) *1,4-Dichlorobenzene-d4	(4)	13.216	152	500155	50.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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Digitally signed by Linda C. Pape

on 04/10/2020 at 14:01.

Target 3.5 esignature user ID: lcp00895

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42109

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1292534

Data file: /chem/HP09915.i/20apr09b.b/la09s33.d Injection date and time: 09-APR-2020 12:30
 Data file Sample Info. Line: 42109;1292534;1;0;;KR421;DODWW;;la09b05; Instrument ID: HP09915.i Batch: L201002AA
 Date, time and analyst ID of latest file update: 09-Apr-2020 12:48 Automation

Blank Data file reference: /chem/HP09915.i/20apr09b.b/la09b05.d

Method used: /chem/HP09915.i/20apr09b.b/m8260c5.m Sublist used: 17639
 Calibration date and time (Last Method Edit): 09-APR-2020 10:00
 Mid Level Daily Calibration Standard Reference: /chem/HP09915.i/20apr09b.b/la09c02.d

Bottle Code: 038A Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.493 (0.007)	936	65	269754 (2)	250.00	
66) Fluorobenzene	7.946 (0.007)	2010	96	1274697 (2)	50.00	
100) Chlorobenzene-d5	11.355 (0.000)	3070	117	988489 (2)	50.00	
131) 1,4-Dichlorobenzene-d4	13.219 (-0.003)	3650	152	533956 (0)	50.00	

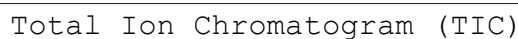
Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.062 (0.000)	113	319638	53.032	106%		80 - 119
57) 1,2-Dichloroethane-d4	(2)	7.522 (-0.001)	102	83226	53.241	106%		81 - 118
83) Toluene-d8	(3)	9.924 (0.000)	98	1262092	48.598	97%		89 - 112
114) 4-Bromofluorobenzene	(3)	12.342 (0.000)	95	460137	46.983	94%		85 - 114

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Reporting Limit	LOQ
60) Benzene	(2)			Not Detected				0.2	1
88) Toluene	(3)			Not Detected				0.2	1
104) Ethylbenzene	(3)			Not Detected				0.4	1
106) m+p-Xylene	(3)			Not Detected				1	5
107) o-Xylene	(3)			Not Detected				0.4	1
108) Xylene (Total)	(3)			Not Detected				1	6

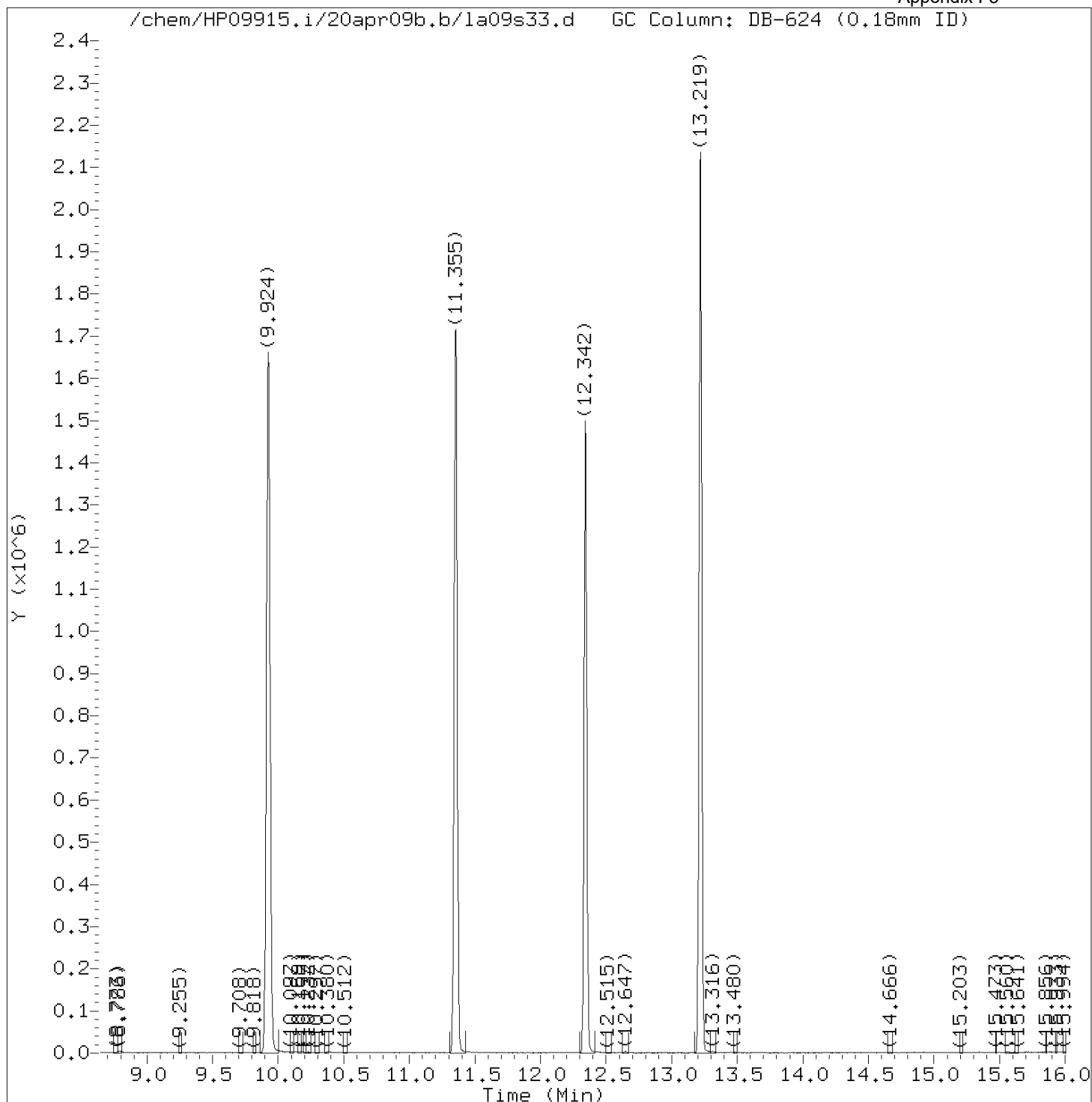
Total number of targets = 6

Digitally signed by Linda C. Pape on 04/10/2020 at 14:01. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 04/13/2020 at 18:26. PARALLAX ID: kmb29664



1-5-1778



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20apr09b.b/1a09s33.d
 Injection date and time: 09-APR-2020 12:30

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr09b.b/m8260c5.m
 Calibration date and time: 09-APR-2020 10:00

Sublist used: 17639

Date, time and analyst ID of latest file update: 09-Apr-2020 12:48 Automation

Sample Name: 42109

Lab Sample ID: 1292534

Digitally signed by Linda C. Pape
 on 04/10/2020 at 14:01.

Target 3.5 esignature user ID: lcp00895

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20apr09b.b/la09s33.d

Instrument ID: HP09915.i

Injection date and time: 09-APR-2020 12:30

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr09b.b/m8260c5.m

Sublist used: 17639

Calibration date and time: 09-APR-2020 10:00

Date, time and analyst ID of latest file update: 09-Apr-2020 12:48 Automation

Sample Name: 42109

Lab Sample ID: 1292534

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
29) *t-Butyl alcohol-d10	(1)	4.493	65	269754	250.000
52) \$Dibromofluoromethane	(2)	7.062	113	319638	53.032
57) \$1,2-Dichloroethane-d4	(2)	7.522	102	83226	53.241
66) *Fluorobenzene	(2)	7.946	96	1274697	50.000
83) \$Toluene-d8	(3)	9.924	98	1262092	48.598
100) *Chlorobenzene-d5	(3)	11.355	117	988489	50.000
114) \$4-Bromofluorobenzene	(3)	12.342	95	460137	46.983
131) *1,4-Dichlorobenzene-d4	(4)	13.219	152	533956	50.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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Digitally signed by Linda C. Pape

on 04/10/2020 at 14:01.

Target 3.5 esignature user ID: lcp00895

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Standards Data

Volatiles by GC/MS

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Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09915 **HP #23**

Data Directory Path is - D:\DATA\20feb24i\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
KAS02648	LF24T01.D	50NGBFB	02/24/2020	15:40		
KAS02648	LF24X01.D	CLNBLK	02/24/2020	15:55		
KAS02648	LF24I01.D	VSTD300	02/24/2020	16:17		
KAS02648	LF24I02.D	VSTD100	02/24/2020	16:39		
KAS02648	LF24I03.D	VSTD050	02/24/2020	17:01		
KAS02648	LF24I04.D	VSTD020	02/24/2020	17:23		
KAS02648	LF24I05.D	VSTD010	02/24/2020	17:45		
KAS02648	LF24I06.D	VSTD004	02/24/2020	18:07		
KAS02648	LF24I07.D	VSTD001	02/24/2020	18:29		
KAS02648	LF24X11.D	CLNBLK	02/24/2020	18:51		
KAS02648	LF24V01.D	ICVLLG	02/24/2020	19:13		
KAS02648	LF24X12.D	CLNBLK	02/24/2020	19:35		
KAS02648	LF24I11.D	VSTD300	02/24/2020	19:57		
KAS02648	LF24I12.D	VSTD100	02/24/2020	20:19		
KAS02648	LF24I13.D	VSTD050	02/24/2020	20:41		
KAS02648	LF24I14.D	VSTD020	02/24/2020	21:03		
KAS02648	LF24I15.D	VSTD010	02/24/2020	21:25		
KAS02648	LF24I16.D	VSTD004	02/24/2020	21:47		
KAS02648	LF24V11.D	ICVLSM	02/24/2020	22:09		
KAS02648	LF24X13.D	CLNBLK	02/24/2020	22:31		

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09915 **HP #23**

Data Directory Path is - D:\DATA\20feb26a\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
DVV10203	LF26T01.D	50NGBFB	02/26/2020	07:57		
DVV10203	LF26X01.D	BLK	02/26/2020	08:22	L200571AA	
DVV10203	LF26C01.D	VSTD050	02/26/2020	08:44	L200571AA	
DVV10203	LF26S01.D	LCSL23	02/26/2020	09:06	L200571AA	
DVV10203	LF26R01.D	RLVL23	02/26/2020	09:28	L200571AA	
DVV10203	LF26B01.D	VBLKL23	02/26/2020	09:50	L200571AA	
DVV10203	LF26S02.D	1264705	02/26/2020	10:28	L200571AA	
DVV10203	LF26S03.D	1264706	02/26/2020	10:50	L200571AA	
DVV10203	LF26S04.D	1263595	02/26/2020	11:12	L200571AA	
DVV10203	LF26S05.D	1263587	02/26/2020	11:34	L200571AA	
DVV10203	LF26S06.D	1263588	02/26/2020	11:56	L200571AA	
DVV10203	LF26S07.D	1263589	02/26/2020	12:18	L200571AA	
DVV10203	LF26S08.D	1263590	02/26/2020	12:40	L200571AA	
DVV10203	LF26S09.D	1263591	02/26/2020	13:02	L200571AA	
DVV10203	LF26S10.D	1263592	02/26/2020	13:24	L200571AA	
DVV10203	LF26S11.D	1263593	02/26/2020	13:46	L200571AA	
DVV10203	LF26S12.D	1263594	02/26/2020	14:08	L200571AA	
DVV10203	LF26S13.D	1264403	02/26/2020	14:30	L200571AA	
DVV10203	LF26S14.D	1264693	02/26/2020	14:52	L200571AA	20
DVV10203	LF26S15.D	1264694	02/26/2020	15:14	L200571AA	20
DVV10203	LF26S16.D	1264695	02/26/2020	15:37	L200571AA	20
DVV10203	LF26S17.D	1264696	02/26/2020	15:59	L200571AA	20
DVV10203	LF26S18.D	1264697MS	02/26/2020	16:21	L200571AA	20
DVV10203	LF26S19.D	1264698MSD	02/26/2020	16:43	L200571AA	20
DVV10203	LF26X02.D	BLK	02/26/2020	17:05	L200571AA	
DVV10203	LF26S20.D	1264700	02/26/2020	17:27	L200571AA	20
DVV10203	LF26S21.D	1264701	02/26/2020	17:49	L200571AA	20
DVV10203	LF26S22.D	1264702	02/26/2020	18:11	L200571AA	20
DVV10203	LF26S23.D	1264703	02/26/2020	18:33	L200571AA	20
DVV10203	LF26S24.D	1264704	02/26/2020	18:55	L200571AA	20
DVV10203	LF26EC1.D	SECC150	02/26/2020	19:17	L200571AA	

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09915 **HP #23**

Data Directory Path is - D:\DATA\20apr08a\

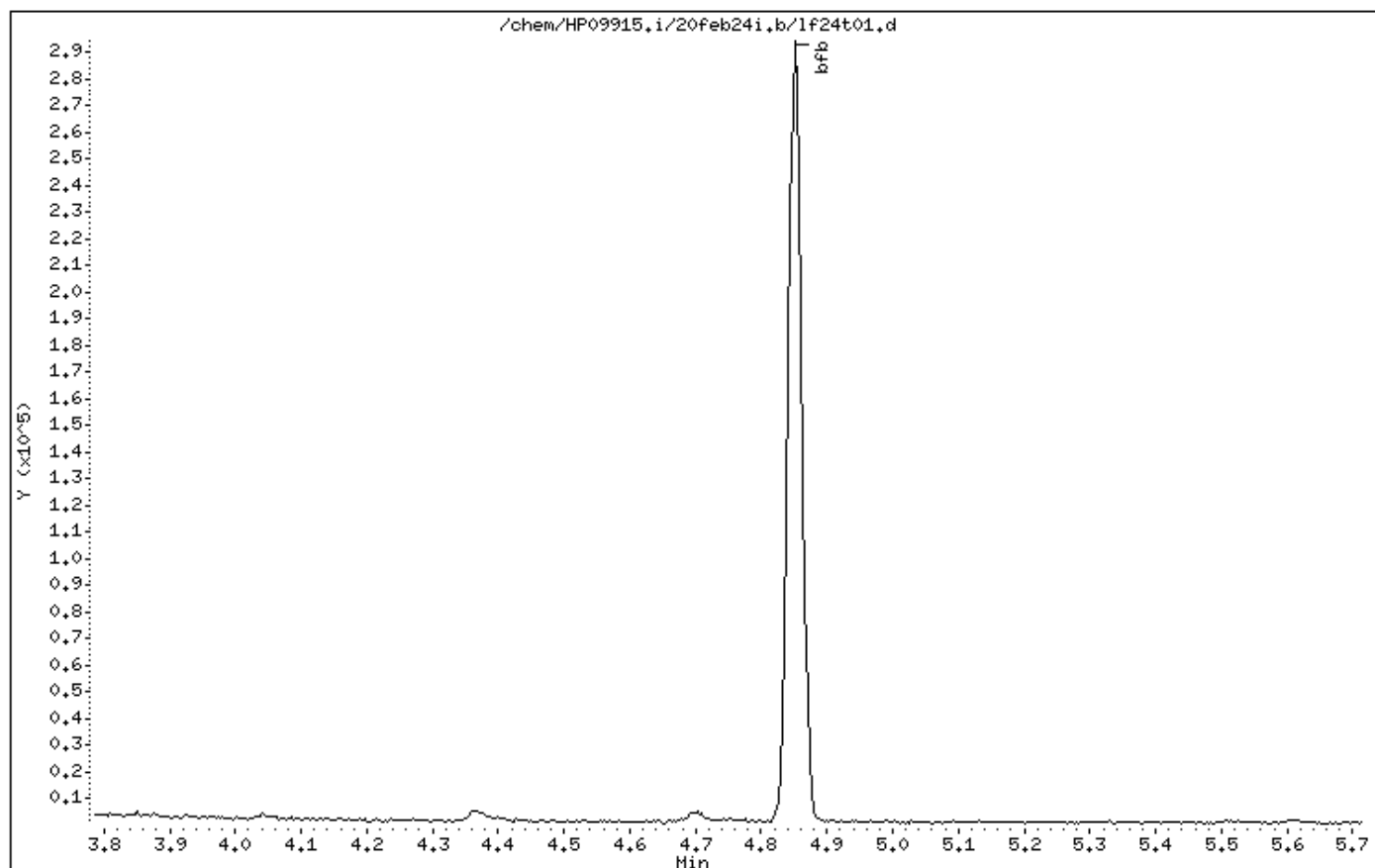
OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
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CLM27445	LA08X56.D	VLKLL99	04/08/2020	07:25	L200981AA	
CLM27445	LA08T01.D	50NGBFB	04/08/2020	07:57	L200991AA	
CLM27445	LA08T02.D	50NGBFB	04/08/2020	08:11	L200991AA	
CLM27445	LA08T03.D	50NGBFB	04/08/2020	08:32	L200991AA	
CLM27445	LA08X00.D	VLKLL01	04/08/2020	08:55	L200991AA	
CLM27445	LA08C01.D	VSTD050	04/08/2020	09:17	L200991AA	
CLM27445	LA08C02.D	VSTD050	04/08/2020	09:39	L200991AA	
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CLM27445	LA08S10.D	1292529MS	04/08/2020	14:43	L200991AA	
CLM27445	LA08S11.D	1292530MSD	04/08/2020	15:05	L200991AA	
CLM27445	LA08S12.D	1292520	04/08/2020	15:27	L200991AA	
CLM27445	LA08S13.D	1292523	04/08/2020	15:49	L200991AA	
CLM27445	LA08S14.D	1292524	04/08/2020	16:11	L200991AA	
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Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09915 **HP #23**

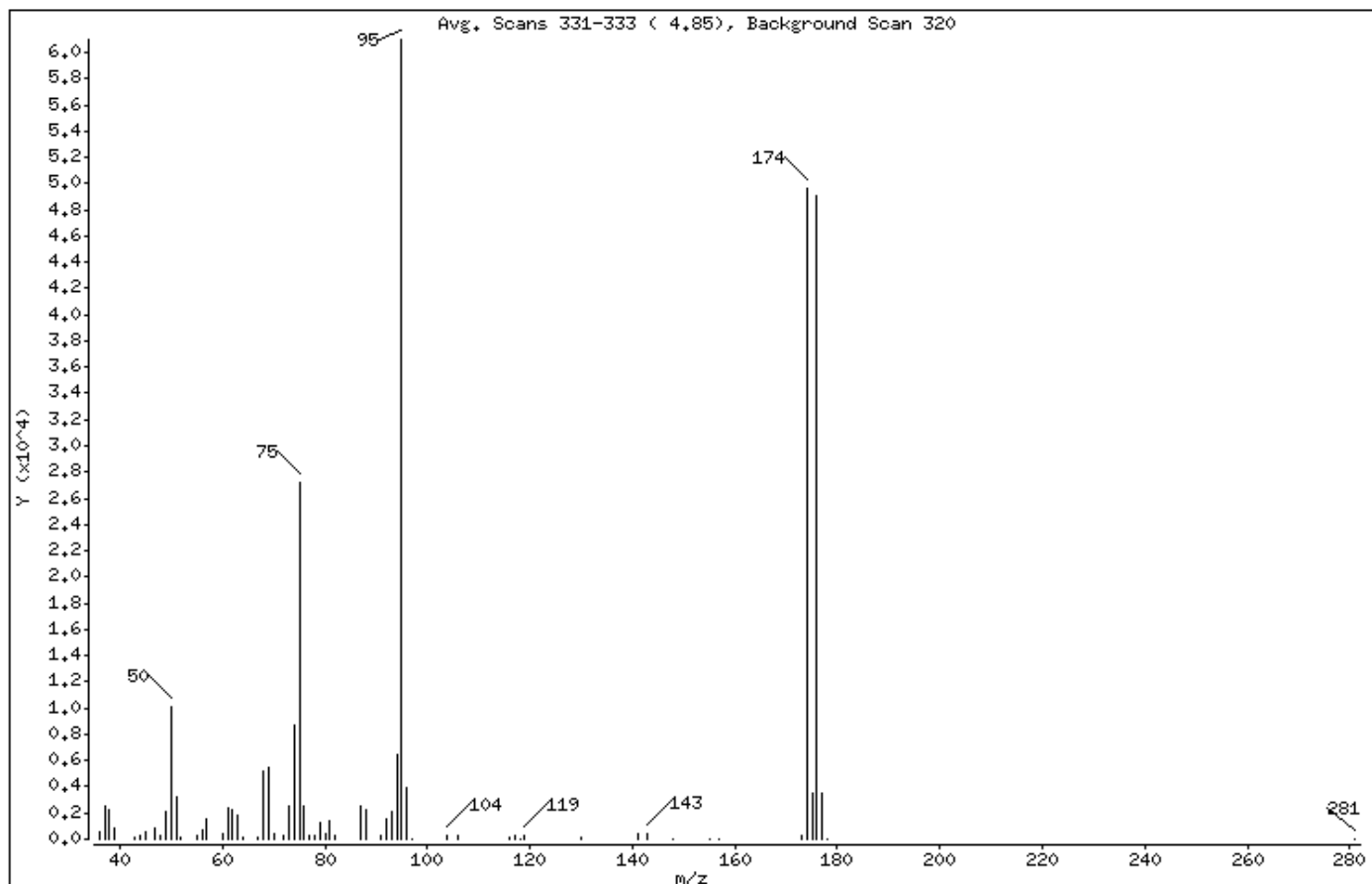
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CLM27445	LA09X60.D	VLKLL04	04/09/2020	09:58	L201001AA	
CLM27445	LA09S01.D	LCSL04	04/09/2020	10:20	L201001AA	
CLM27445	LA09X70.D	VLKLL04	04/09/2020	10:42	L201001AA	
CLM27445	LA09S02.D	LCDL04	04/09/2020	11:04	L201001AA	
CLM27445	LA09R01.D	RLVL04	04/09/2020	11:26	L201001AA	
CLM27445	LA09B01.D	VLKLL04	04/09/2020	11:48	L201001AA	
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CLM27445	LA09S36.D	1293991	04/09/2020	13:36	L201002AA	
CLM27445	LA09S37.D	1293992	04/09/2020	13:59	L201002AA	
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CLM27445	LA09S39.D	1293994	04/09/2020	14:43	L201002AA	
CLM27445	LA09S40.D	1293995	04/09/2020	15:05	L201002AA	2
CLM27445	LA09S41.D	1293995DL	04/09/2020	15:27	L201002AA	20
CLM27445	LA09S3A.D	1293391	04/09/2020	15:57	L201001AA	
CLM27445	LA09S04.D	1293436	04/09/2020	16:19	L201001AA	
CLM27445	LA09S05.D	1293438	04/09/2020	16:41	L201001AA	
CLM27445	LA09S06.D	1293442	04/09/2020	17:03	L201001AA	
CLM27445	LA09S07.D	1293443	04/09/2020	17:26	L201001AA	
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CLM27445	LA09S10.D	1293435	04/09/2020	18:32	L201001AA	
CLM27445	LA09S11.D	1293439	04/09/2020	18:54	L201001AA	
CLM27445	LA09S12.D	1293440	04/09/2020	19:16	L201001AA	
CLM27445	LA09S13.D	1293383	04/09/2020	19:38	L201001AA	
CLM27445	LA09S14.D	1293383DL	04/09/2020	20:00	L201001AA	10
CLM27445	LA09S15.D	1293382	04/09/2020	20:23	L201001AA	2
CLM27445	LA09S16.D	1293382DL	04/09/2020	20:45	L201001AA	20
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Column diameter: 0.25



1 bfb

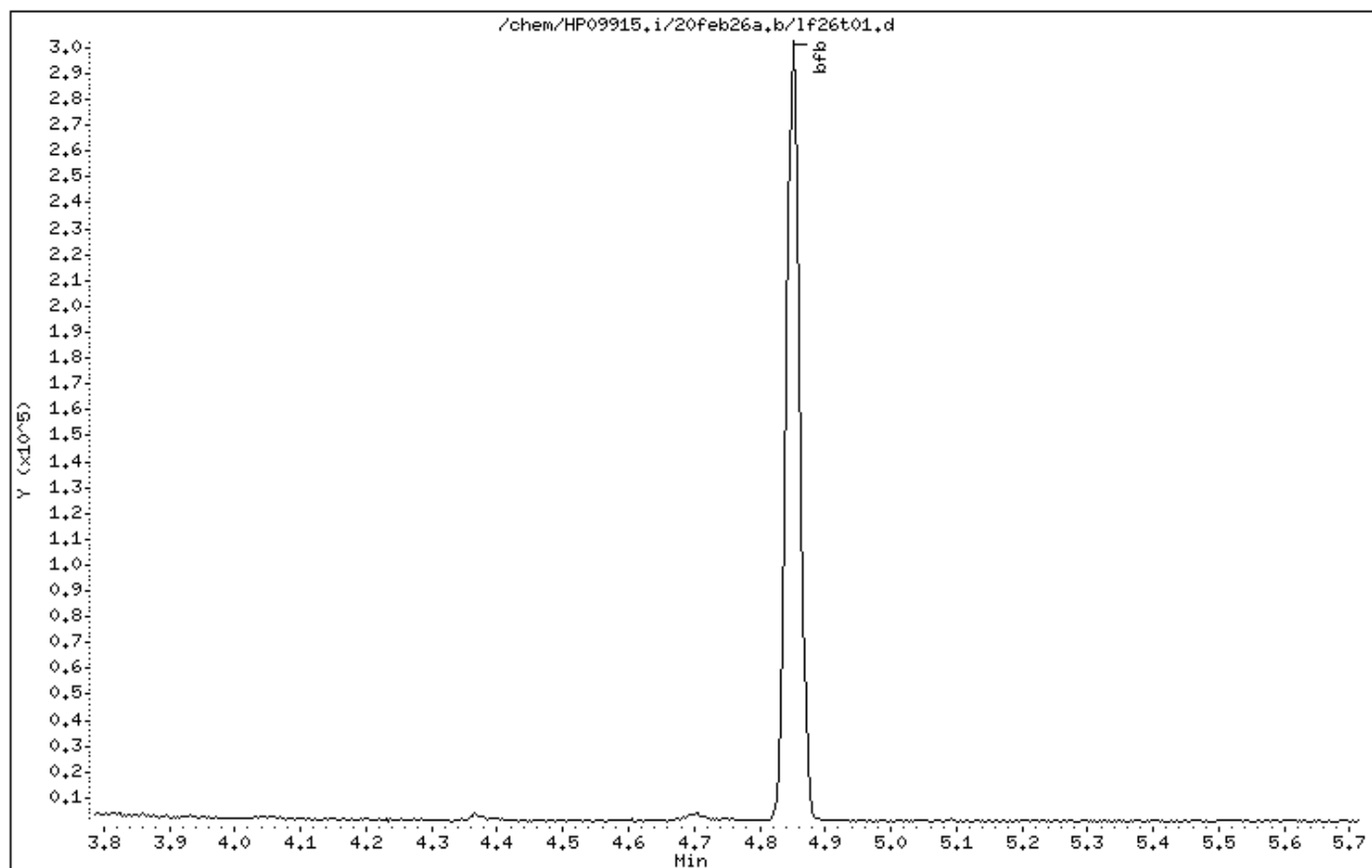


m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.58
75	30.00 - 60.00% of mass 95	44.60
96	5.00 - 9.00% of mass 95	6.48
173	Less than 2.00% of mass 174	0.51 (0.63)
174	50.00 - 100.00% of mass 95	81.49
175	5.00 - 9.00% of mass 174	5.80 (7.12)
176	95.00 - 101.00% of mass 174	80.58 (98.88)
177	5.00 - 9.00% of mass 176	5.72 (7.10)

Column diameter: 0.25

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36,00	524	61,00	2329	81,00	1348	130,00	160
37,00	2472	62,00	2253	82,00	310	141,00	421
38,00	2272	63,00	1797	87,00	2465	143,00	483
39,00	904	64,00	96	88,00	2214	148,00	60
43,00	108	67,00	119	91,00	236	155,00	56
44,00	264	68,00	5187	92,00	1589	157,00	54
45,00	521	69,00	5459	93,00	2172	173,00	314
47,00	772	70,00	423	94,00	6516	174,00	49688
48,00	329	72,00	336	95,00	60984	175,00	3540
49,00	2102	73,00	2584	96,00	3949	176,00	49136
50,00	10113	74,00	8742	97,00	50	177,00	3487
51,00	3167	75,00	27192	104,00	289	178,00	53
52,00	172	76,00	2530	106,00	268	281,00	63
55,00	257	77,00	337	116,00	141		
56,00	694	78,00	288	117,00	283		
57,00	1505	79,00	1240	118,00	59		
60,00	471	80,00	459	119,00	331		

Column diameter: 0.25



Data File: /chem/HP09915.i/20Feb26a,b/1f26t01.d

Date : 26-FEB-2020 07:57

Client ID: JAN28-2020

Instrument: HP09915.i

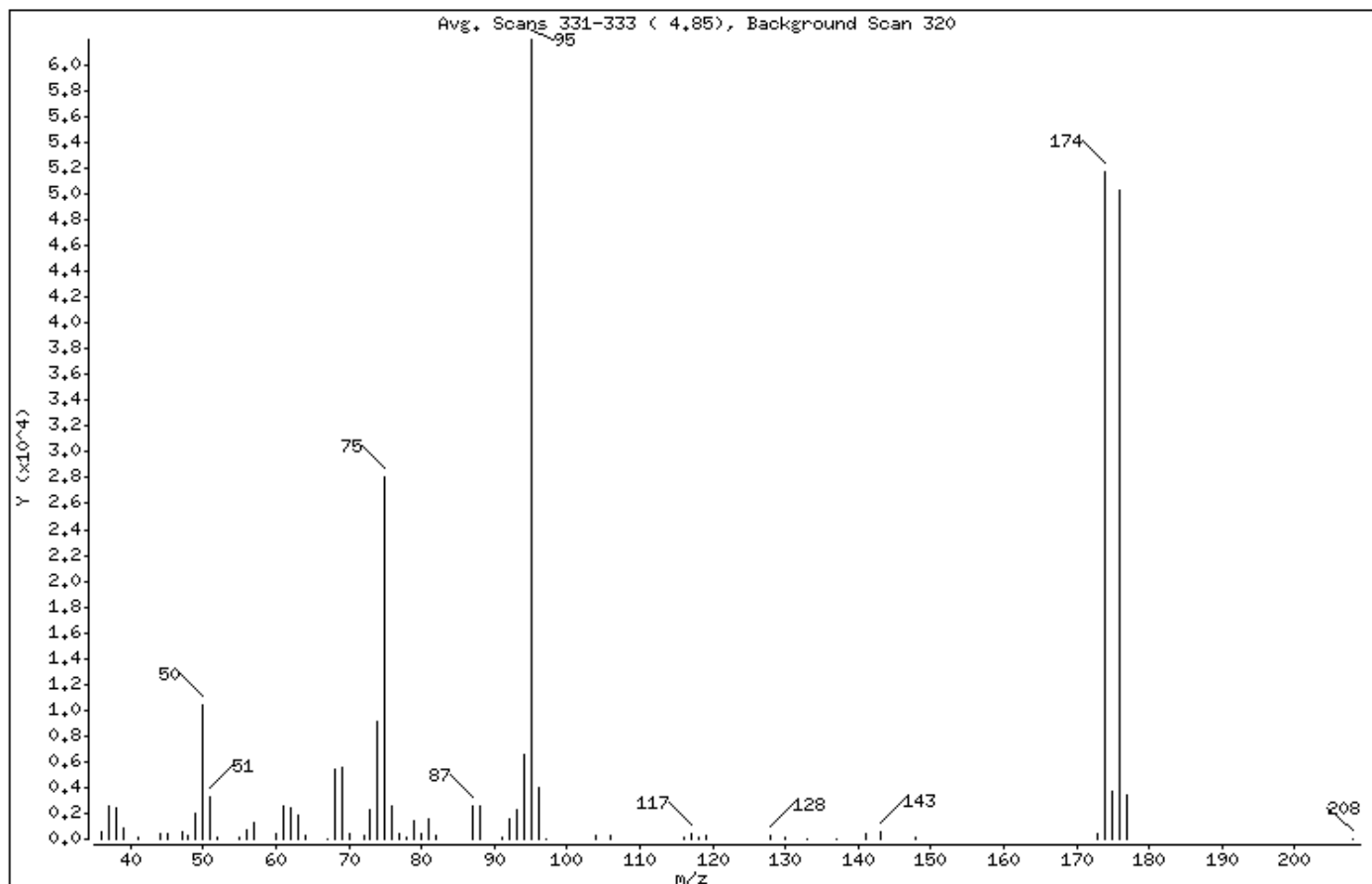
Sample Info: JAN28-2020;50NGBFB;1;3;3;3;3;3;3

Operator: DVV10203

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.79
75	30.00 - 60.00% of mass 95	45.39
96	5.00 - 9.00% of mass 95	6.35
173	Less than 2.00% of mass 174	0.59 (0.70)
174	50.00 - 100.00% of mass 95	83.41
175	5.00 - 9.00% of mass 174	6.07 (7.27)
176	95.00 - 101.00% of mass 174	81.06 (97.18)
177	5.00 - 9.00% of mass 176	5.43 (6.70)

Data File: /chem/HP09915.i/20Feb26a,b/1f26t01.d

Date : 26-FEB-2020 07:57

Client ID: JAN28-2020

Instrument: HP09915.i

Sample Info: JAN28-2020;50NGBFB;1;3;:::;

Operator: DVV10203

Column phase: Rxi-624S11 MS

Column diameter: 0.25

Data File: 1f26t01.d

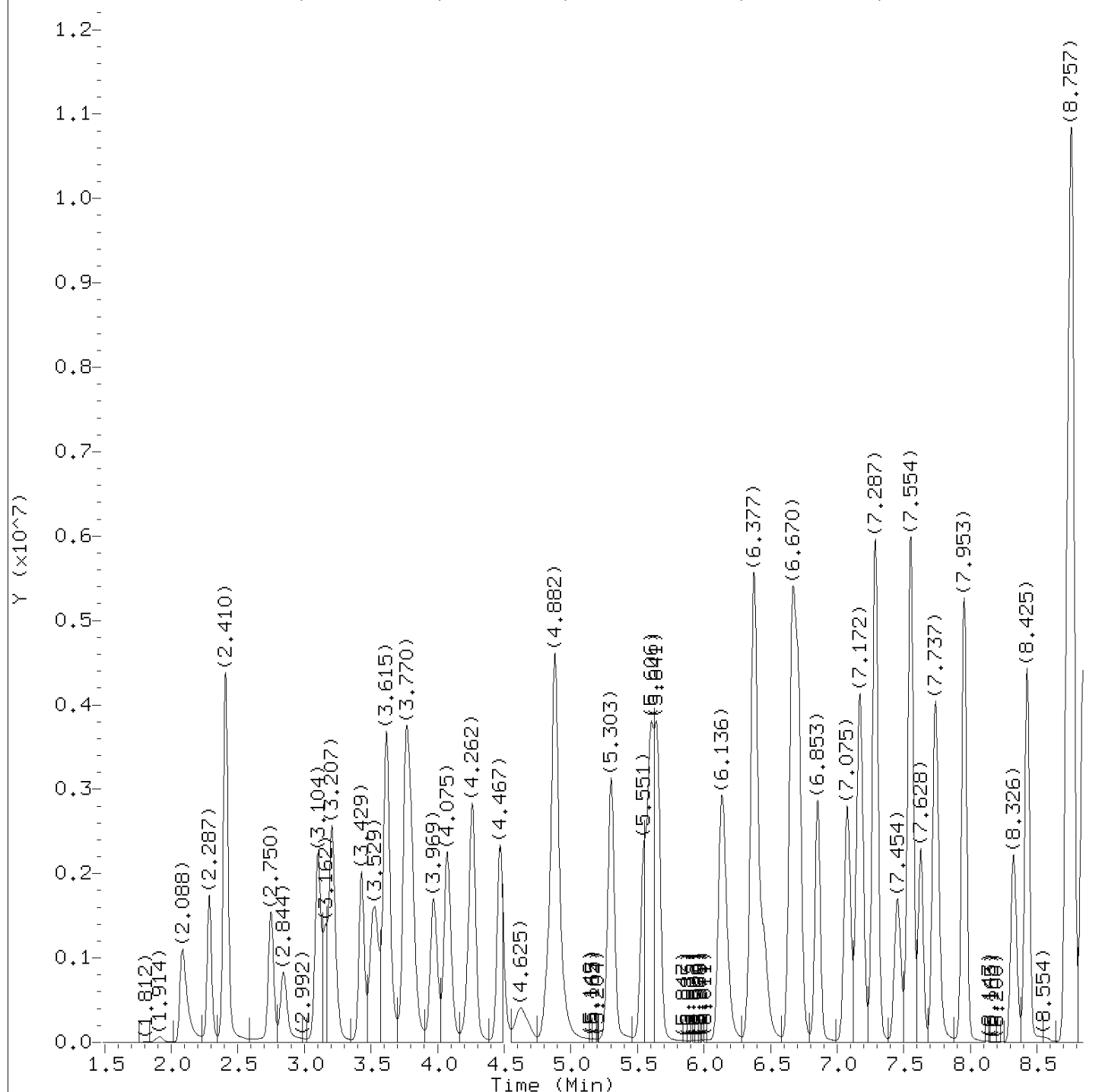
Spectrum: Avg. Scans 331-333 (4.85), Background Scan 320

Location of Maximum: 95.00

Number of points: 64

m/z	Y	m/z	Y	m/z	Y	m/z	Y
+-----+-----+-----+-----+							
36.00	528	61.00	2563	81.00	1521	128.00	250
37.00	2601	62.00	2459	82.00	270	130.00	195
38.00	2437	63.00	1840	87.00	2554	133.00	56
39.00	881	64.00	260	88.00	2529	137.00	54
41.00	174	67.00	66	91.00	203	141.00	383
+-----+-----+-----+-----+							
44.00	431	68.00	5411	92.00	1591	143.00	609
45.00	457	69.00	5584	93.00	2253	148.00	121
47.00	629	70.00	391	94.00	6583	173.00	363
48.00	313	72.00	309	95.00	61960	174.00	51680
49.00	2008	73.00	2271	96.00	3933	175.00	3759
+-----+-----+-----+-----+							
50.00	10401	74.00	9139	97.00	53	176.00	50224
51.00	3269	75.00	28120	104.00	240	177.00	3367
52.00	129	76.00	2523	106.00	285	208.00	68
55.00	192	77.00	387	116.00	74		
56.00	689	78.00	184	117.00	360		
+-----+-----+-----+-----+							
57.00	1300	79.00	1357	118.00	168		
60.00	481	80.00	405	119.00	275		
+-----+-----+-----+-----+							

/chem/HP09915.i/20feb24i.b/1f24i01.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20feb24i.b/1f24i01.d
 Injection date and time: 24-FEB-2020 16:17

Instrument ID: HP09915.i
 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m
 Calibration date and time: 25-FEB-2020 12:44

Sublist used: 8260W

Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD300

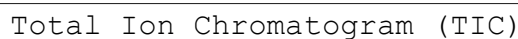
Lab Sample ID: VSTD300

Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:05.

Target 3.5 esignature user ID: msc29284

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September 2020

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20feb24i.b/1f24i01.d
 Injection date and time: 24-FEB-2020 16:17

Instrument ID: HP09915.i
 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 25-FEB-2020 12:44

Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD300

Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
3) Dichlorodifluoromethane	(2)	2.085	85	2688564M	325.070
4) Chloromethane	(2)	2.287	50	2489839	301.206
5) 1,3-Butadiene	(2)	2.406	39	1883481M	304.053
6) Vinyl Chloride	(2)	2.406	62	2357744	302.325
8) Bromomethane	(2)	2.750	94	1571380	287.104
9) Chloroethane	(2)	2.844	64	1229189	285.462
10) Dichlorofluoromethane	(2)	3.101	67	2759214	288.946
12) Trichlorofluoromethane	(2)	3.159	101	2522326	312.038
11) n-Pentane	(2)	3.207	43	2793890	305.709
14) Ethyl ether	(2)	3.429	59	1823083	316.029
15) Freon 123a	(2)	3.525	67	2083535	320.851
16) Acrolein	(1)	3.615	56	6221000	3214.332
17) 1,1-Dichloroethene	(2)	3.760	96	1704662	308.295
17) 1,1-Dichloroethene	(2)	3.760	63	834886	319.616
19) Freon 113	(2)	3.795	101	1763469	335.283
18) Acetone	(1)	3.799	58	533743	623.581
22) Methyl Iodide	(2)	3.969	142	3166938	323.939
21) 2-Propanol	(1)	3.988	45	921939	1546.033
23) Carbon Disulfide	(2)	4.075	76	5852431	335.076
27) Methyl Acetate	(2)	4.239	43	2077049	300.970
25) Allyl Chloride	(2)	4.265	41	2756351	309.784
28) Methylene Chloride	(2)	4.467	84	1979927	320.719
29) *t-Butyl alcohol-d10	(1)	4.496	65	264984M	250.000
30) t-Butyl alcohol	(1)	4.625	59	1550843	1513.006
31) Acrylonitrile	(2)	4.824	53	1117107	298.642
32) trans-1,2-Dichloroethene	(2)	4.882	96	1894186	312.327
33) Methyl Tertiary Butyl Ether	(2)	4.882	73	5565862	301.260
34) n-Hexane	(2)	5.303	57	2838784	325.437
36) 1,1-Dichloroethane	(2)	5.548	63	3249683	320.140
38) di-Isopropyl ether	(2)	5.606	45	6192155	317.447
39) 2-Chloro-1,3-butadiene	(2)	5.654	53	2892701	333.210
40) Ethyl t-butyl ether	(2)	6.136	59	5627065	303.757
43) 1,2-Dichloroethene (Total)	(2)		96	4030708	627.330
44) 2-Butanone	(2)	6.358	43	2833072	592.307
42) cis-1,2-Dichloroethene	(2)	6.377	96	2136522	315.003
45) 2,2-Dichloropropane	(2)	6.393	77	2648620	327.897
47) Propionitrile	(1)	6.455	54	2217157	1669.000
48) Methacrylonitrile	(2)	6.663	67	3057331	799.069

M = Compound was manually integrated.

* = Compound is an internal standard.

page 1 of 4

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 on 02/25/2020 at 18:05.

Target 3.5 esignature user ID: mec29284

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20feb24i.b/1f24i01.d
 Injection date and time: 24-FEB-2020 16:17

Instrument ID: HP09915.i
 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 25-FEB-2020 12:44

Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD300

Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
49) Bromochloromethane	(2)	6.705	128	1064382	315.788
50) Tetrahydrofuran	(1)	6.718	71	787023	658.943
51) Chloroform	(2)	6.853	83	3221269	327.496
52)\$Dibromofluoromethane	(2)	7.069	113	312298	50.375
52)\$Dibromofluoromethane	(2)	7.069	111	320231	50.559
53) 1,1,1-Trichloroethane	(2)	7.078	97	2892795	335.430
54) Cyclohexane	(2)	7.172	56	3547978	334.072
54) Cyclohexane	(2)	7.172	84	3031055	338.016
54) Cyclohexane	(2)	7.172	69	1099448	337.530
56) Carbon Tetrachloride	(2)	7.281	117	2445206	347.009
55) 1,1-Dichloropropene	(2)	7.290	75	2669094	331.758
58) Isobutyl Alcohol	(1)	7.451	41	1387314	3983.403
57)\$1,2-Dichloroethane-d4	(2)	7.522	102	81002	50.379
57)\$1,2-Dichloroethane-d4	(2)	7.522	65	359726	50.121
57)\$1,2-Dichloroethane-d4	(2)	7.525	104	51523	50.481
60) Benzene	(2)	7.554	78	7945766	323.756
61) 1,2-Dichloroethane	(2)	7.628	62	2537695	309.261
61) 1,2-Dichloroethane	(2)	7.628	98	262455	349.242
65) t-Amyl methyl ether	(2)	7.741	73	5507357	295.573
67) n-Heptane	(2)	7.953	43	2635646	308.539
66)*Fluorobenzene	(2)	7.953	96	1311115	50.000
69) n-Butanol	(1)	8.326	56	2325868	7977.803
71) Trichloroethene	(2)	8.429	95	2032439	328.960
72) Methylcyclohexane	(2)	8.728	83	3426161	330.538
72) Methylcyclohexane	(2)	8.728	98	1537508	328.881
73) 1,2-Dichloropropane	(2)	8.763	63	2033257	318.896
76) Methyl Methacrylate	(2)	8.843	69	2037512	334.726
75) 1,4-Dioxane	(1)	8.853	88	311514M	4011.223
74) Dibromomethane	(2)	8.872	93	1359516	327.880
78) Bromodichloromethane	(2)	9.107	83	2587818	349.111
79) 2-Nitropropane	(2)	9.384	41	1515188	664.397
80) 2-Chloroethyl Vinyl Ether	(2)	9.454	63	1575546	337.072
81) cis-1,3-Dichloropropene	(2)	9.634	75	3393042	341.657
82) 4-Methyl-2-pentanone	(2)	9.802	43	5918395	598.063
83)\$Toluene-d8	(3)	9.930	98	1318677	49.912
83)\$Toluene-d8	(3)	9.930	100	865602	50.415
88) Toluene	(3)	10.004	92	4991450	317.966
90) 1,3-Dichloropropene (total)	(3)		100	6640505	688.820

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 2 of 4

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 on 02/25/2020 at 18:05.

Target 3.5 esignature user ID: mec29284

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20feb24i.b/1f24i01.d
 Injection date and time: 24-FEB-2020 16:17

Instrument ID: HP09915.i
 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 25-FEB-2020 12:44

Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD300

Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
89) trans-1,3-Dichloropropene	(3)	10.255	75	3247463	347.162
91) Ethyl Methacrylate	(3)	10.310	69	3564374	332.781
92) 1,1,2-Trichloroethane	(3)	10.454	97	1998490	323.004
93) Tetrachloroethene	(3)	10.538	166	2139836	321.198
94) 1,3-Dichloropropane	(3)	10.615	76	3350301	324.404
96) 2-Hexanone	(3)	10.667	43	4349934	601.241
97) Dibromochloromethane	(3)	10.824	129	2238806	358.013
99) 1,2-Dibromoethane	(3)	10.933	107	2225707	330.625
100) *Chlorobenzene-d5	(3)	11.358	117	1005617	50.000
101) 1-Chlorohexane	(3)	11.361	91	2710187	309.687
102) Chlorobenzene	(3)	11.384	112	5541740	314.150
103) 1,1,1,2-Tetrachloroethane	(3)	11.461	131	1925847	326.576
104) Ethylbenzene	(3)	11.467	91	9304719	310.269
106) m+p-Xylene	(3)	11.580	106	7117935	604.738
108) Xylene (Total)	(3)		106	10653339	907.762
107) o-Xylene	(3)	11.904	106	3535404	303.024
109) Styrene	(3)	11.921	104	6119582	311.847
110) Bromoform	(3)	12.078	173	1699609	351.130
111) Isopropylbenzene	(3)	12.200	105	9230735	308.785
112) Cyclohexanone	(1)	12.284	55	1216290	3904.511
114) \$4-Bromofluorobenzene	(3)	12.345	95	500518	50.236
114) \$4-Bromofluorobenzene	(3)	12.345	174	413143	50.164
116) 1,1,2,2-Tetrachloroethane	(4)	12.448	83	3096840	299.352
115) Bromobenzene	(4)	12.464	156	2367361	307.496
118) trans-1,4-Dichloro-2-butene	(4)	12.474	53	2307679	778.723
117) 1,2,3-Trichloropropane	(4)	12.496	110	946968	308.457
119) n-Propylbenzene	(4)	12.528	91	10591756	305.014
120) 2-Chlorotoluene	(4)	12.605	126	2296385	318.325
122) 1,3,5-Trimethylbenzene	(4)	12.660	105	7929346	310.376
121) 4-Chlorotoluene	(4)	12.699	126	2368007	316.412
124) tert-Butylbenzene	(4)	12.904	134	1641862M	312.359
125) Pentachloroethane	(4)	12.937	167	1422392	338.467
126) 1,2,4-Trimethylbenzene	(4)	12.946	105	8095417	302.720
127) sec-Butylbenzene	(4)	13.065	105	9347316	297.792
129) 1,3-Dichlorobenzene	(4)	13.165	146	4145352	285.590
130) p-Isopropyltoluene	(4)	13.171	119	7684707	284.189
131) *1,4-Dichlorobenzene-d4	(4)	13.220	152	544675	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	4347106	289.167

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 3 of 4

Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:05.

Target 3.5 esignature user ID: mec29284

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20feb24i.b/lf24i01.d
 Injection date and time: 24-FEB-2020 16:17

Instrument ID: HP09915.i
 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 25-FEB-2020 12:44

Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD300

Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
134) 1,2,3-Trimethylbenzene	(4)	13.252	105	7865012	294.187
135) Benzyl Chloride	(4)	13.316	91	6778964	346.438
136) 1,3-Diethylbenzene	(4)	13.371	119	4882640	298.032
141) Diethylbenzene (total)	(4)		100	13890501	880.226
137) 1,4-Diethylbenzene	(4)	13.441	119	5001616	291.435
139) n-Butylbenzene	(4)	13.464	92	3888731	285.271
138) 1,2-Dichlorobenzene	(4)	13.499	146	4207497	291.280
140) 1,2-Diethylbenzene	(4)	13.515	119	4006245	290.758
142) 1,2-Dibromo-3-chloropropane	(4)	14.039	75	722459	320.460
144) 1,3,5-Trichlorobenzene	(4)	14.162	180	2933451	270.009
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	2765207	265.057
147) Hexachlorobutadiene	(4)	14.666	225	1057258	230.469
148) Naphthalene	(4)	14.772	128	9673521	274.691
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	2574553	260.801
150) 2-Methylnaphthalene	(4)	15.560	142	5073139	268.605

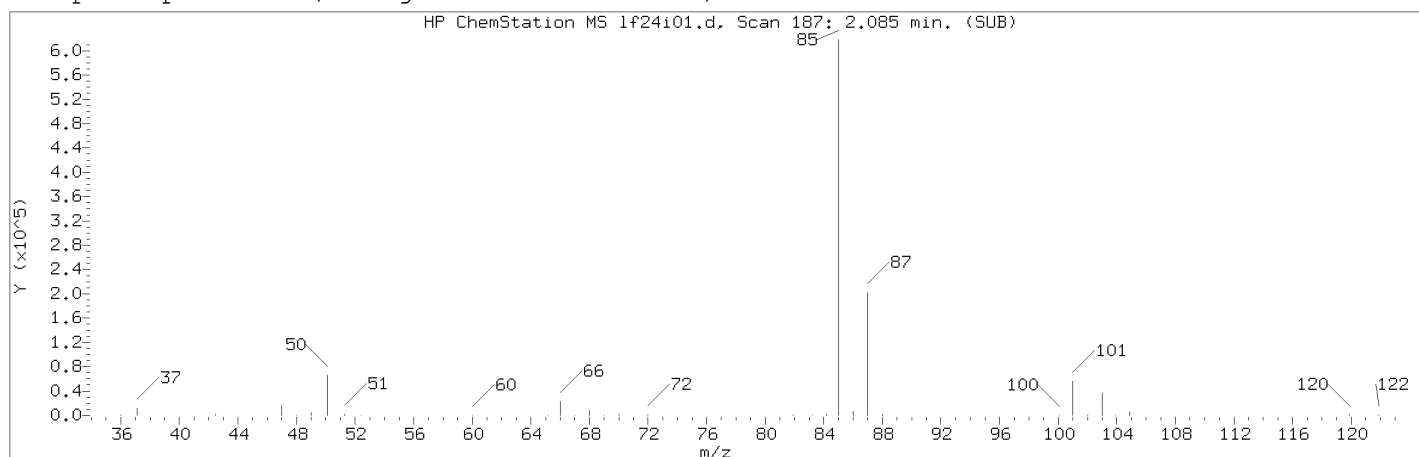
page 4 of 4

Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:05.

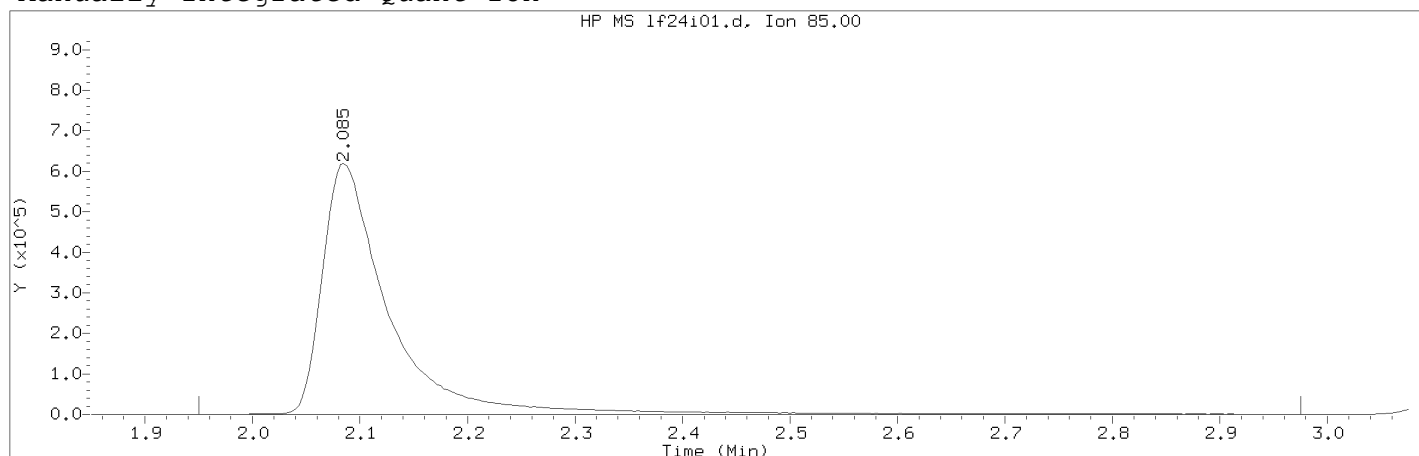
Target 3.5 esignature user ID: mec29284

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Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i01.d Instrument ID: HP09915.i
 Injection date and time: 24-FEB-2020 16:17 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 25-FEB-2020 12:44
 Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD300 Lab Sample ID: VSTD300

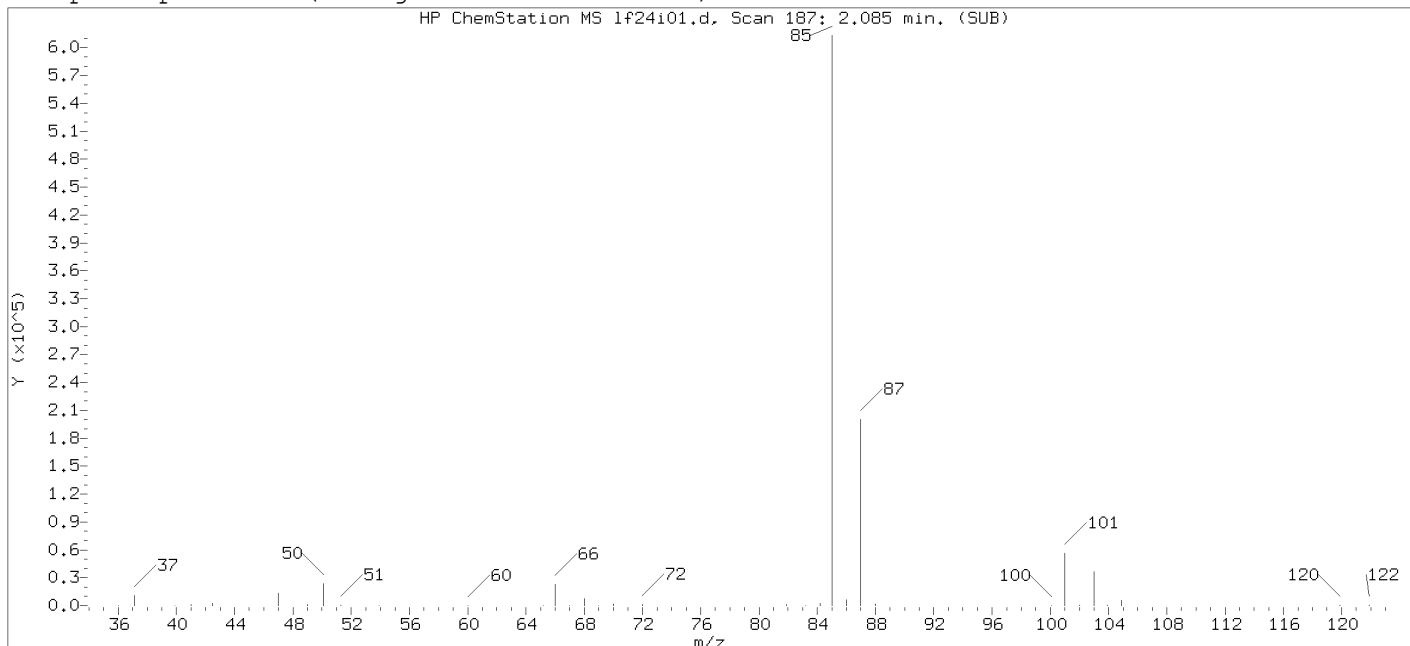
Compound Number : 3
 Compound Name : Dichlorodifluoromethane
 Scan Number : 187
 Retention Time (minutes): 2.085
 Quant Ion : 85.00
 Area (flag) : 2688564M
 On-Column Amount (ng) : 325.0704
 Integration start scan : 144 Integration stop scan: 463
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

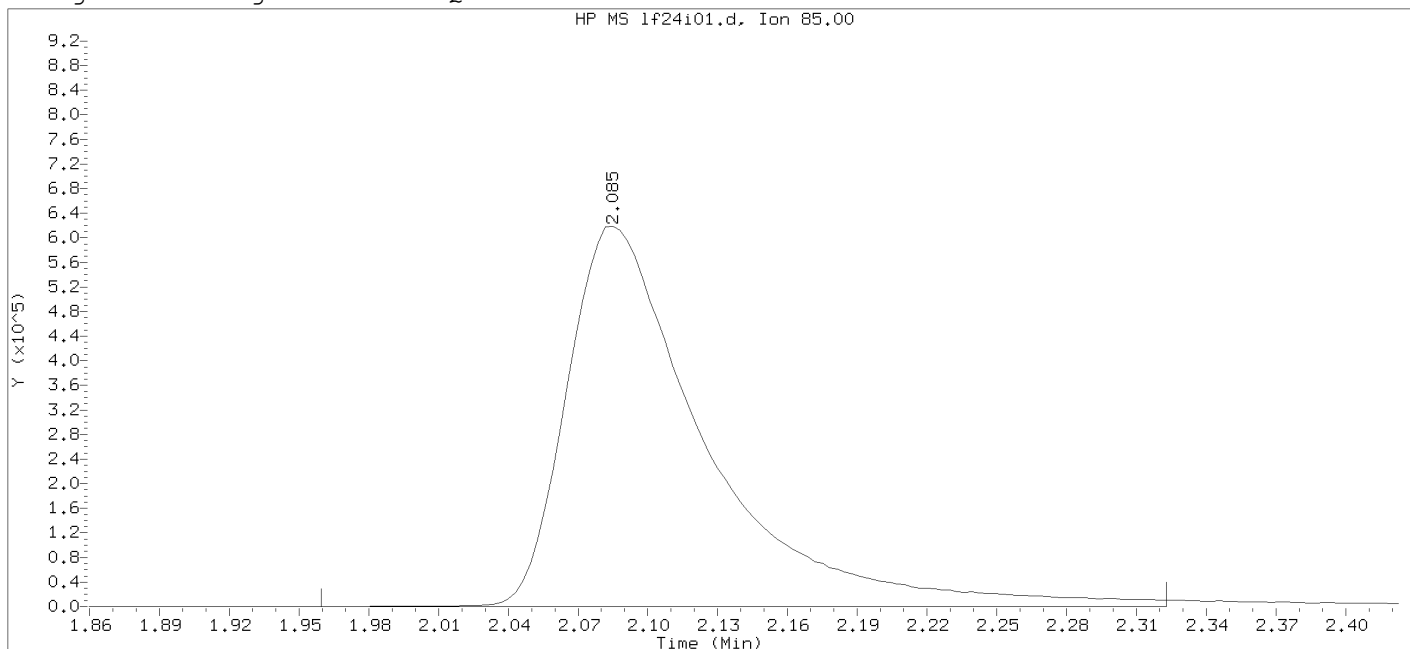
Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:05.
 Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:49.
 PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i01.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 16:17

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:54

Date, time and analyst ID of latest file update: 24-Feb-2020 20:54 mec29284

Sample Name: VSTD300

Lab Sample ID: VSTD300

Compound Number : 3

Compound Name : Dichlorodifluoromethane

Scan Number : 187

Retention Time (minutes): 2.085

Quant Ion : 85.00

Area : 2581222

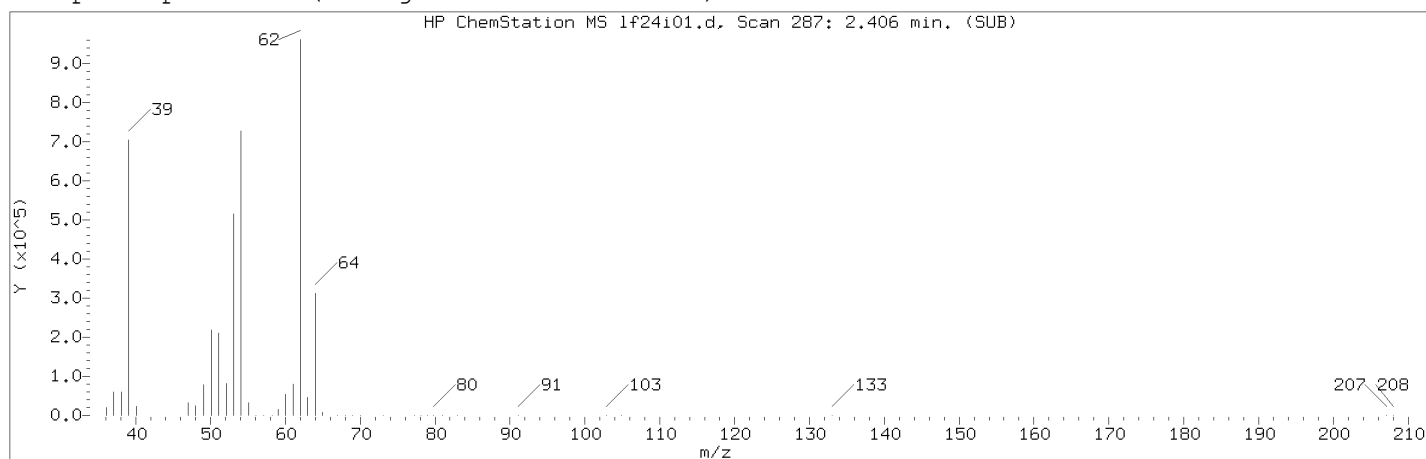
On-column Amount (ng) : 1.0000

Integration start scan : 147 Integration stop scan: 260

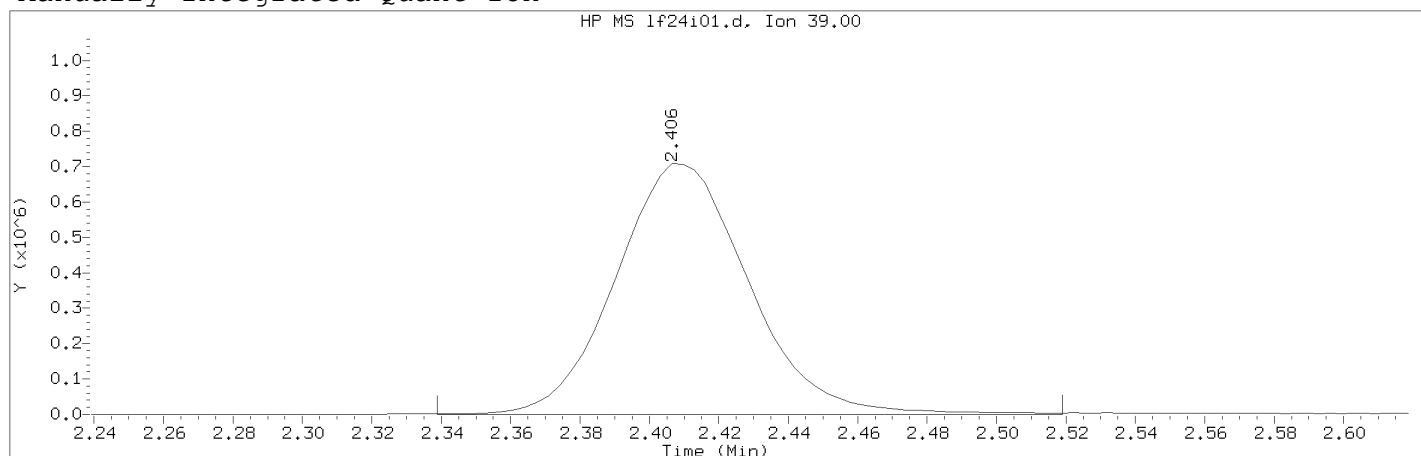
Y at integration start : 0 Y at integration end: 0

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 Target 3.5 esignature user KR421m Page 130 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i01.d Instrument ID: HP09915.i
 Injection date and time: 24-FEB-2020 16:17 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 25-FEB-2020 12:44
 Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD300

Lab Sample ID: VSTD300

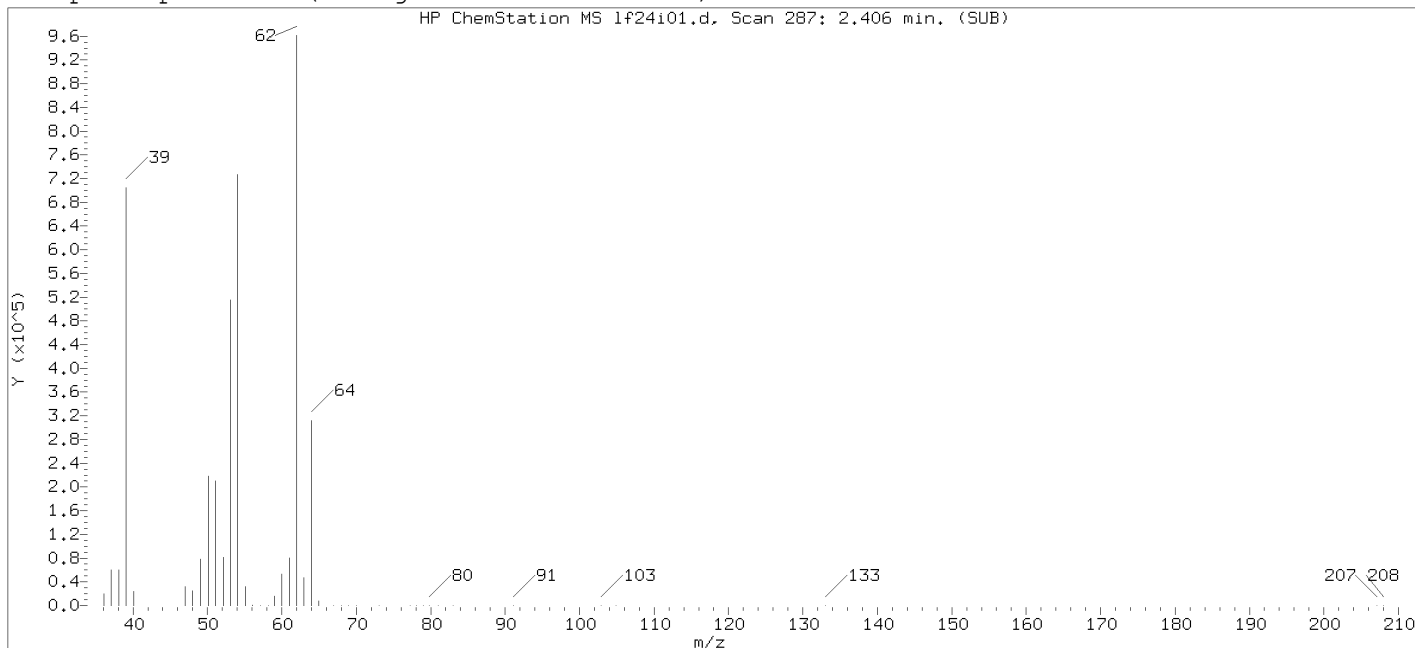
Compound Number : 5
 Compound Name : 1,3-Butadiene
 Scan Number : 287
 Retention Time (minutes): 2.406
 Quant Ion : 39.00
 Area (flag) : 1883481M
 On-Column Amount (ng) : 304.0532
 Integration start scan : 265 Integration stop scan: 321
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

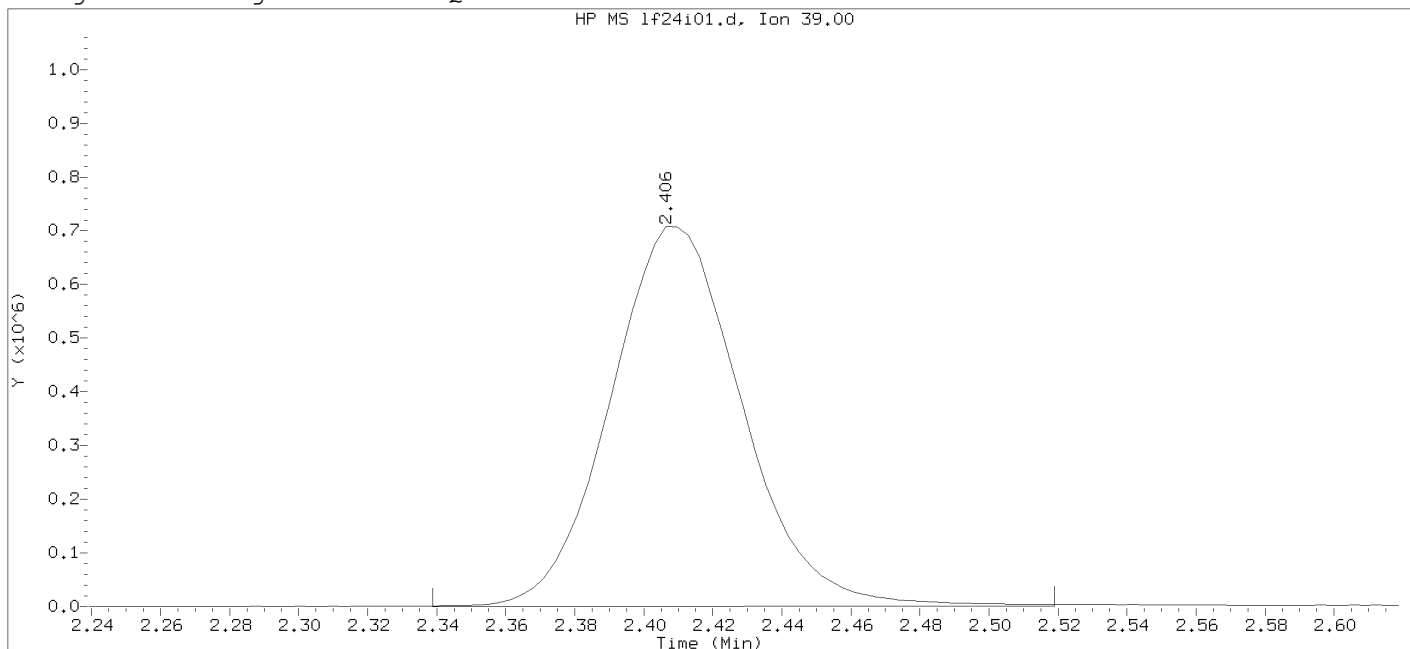
Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:05.
 Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:49.
 PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i01.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 16:17

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:54

Date, time and analyst ID of latest file update: 24-Feb-2020 20:54 mec29284

Sample Name: VSTD300

Lab Sample ID: VSTD300

Compound Number : 5

Compound Name : 1,3-Butadiene

Scan Number : 287

Retention Time (minutes): 2.406

Quant Ion : 39.00

Area : 1875159

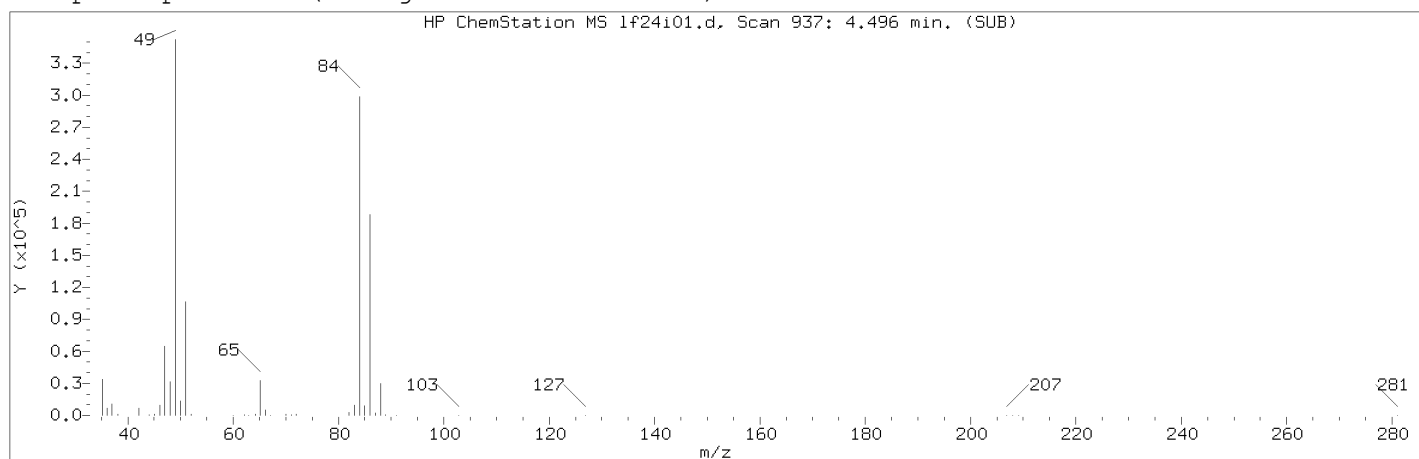
On-column Amount (ng) : 1.0000

Integration start scan : 265 Integration stop scan: 321

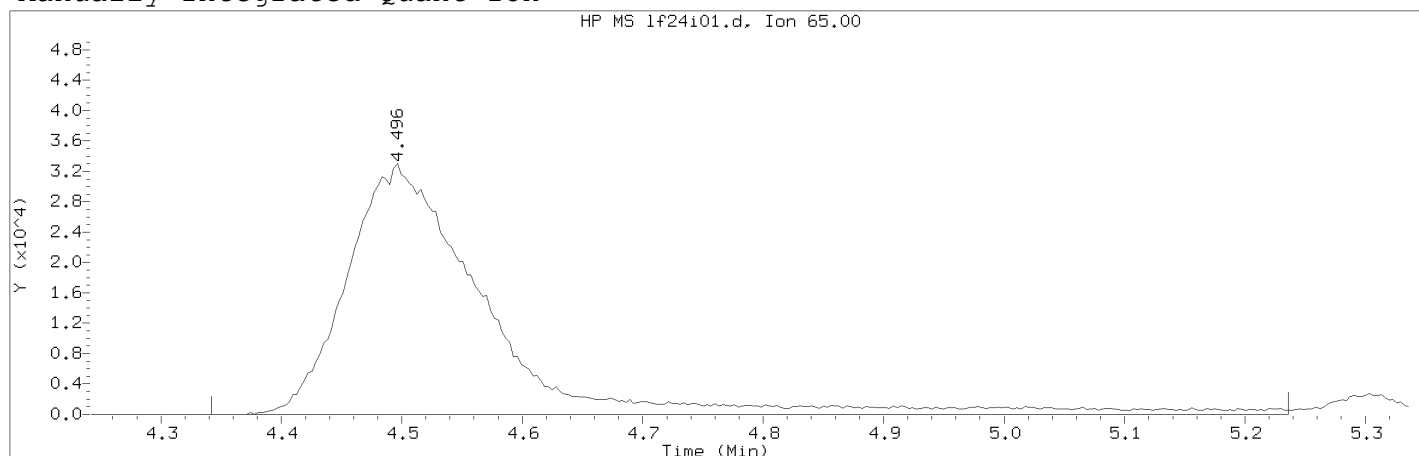
Y at integration start : 456 Y at integration end: 985

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 Target 3.5 esignature user KR421m Page 132 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i01.d Instrument ID: HP09915.i
 Injection date and time: 24-FEB-2020 16:17 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 25-FEB-2020 12:44
 Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD300 Lab Sample ID: VSTD300

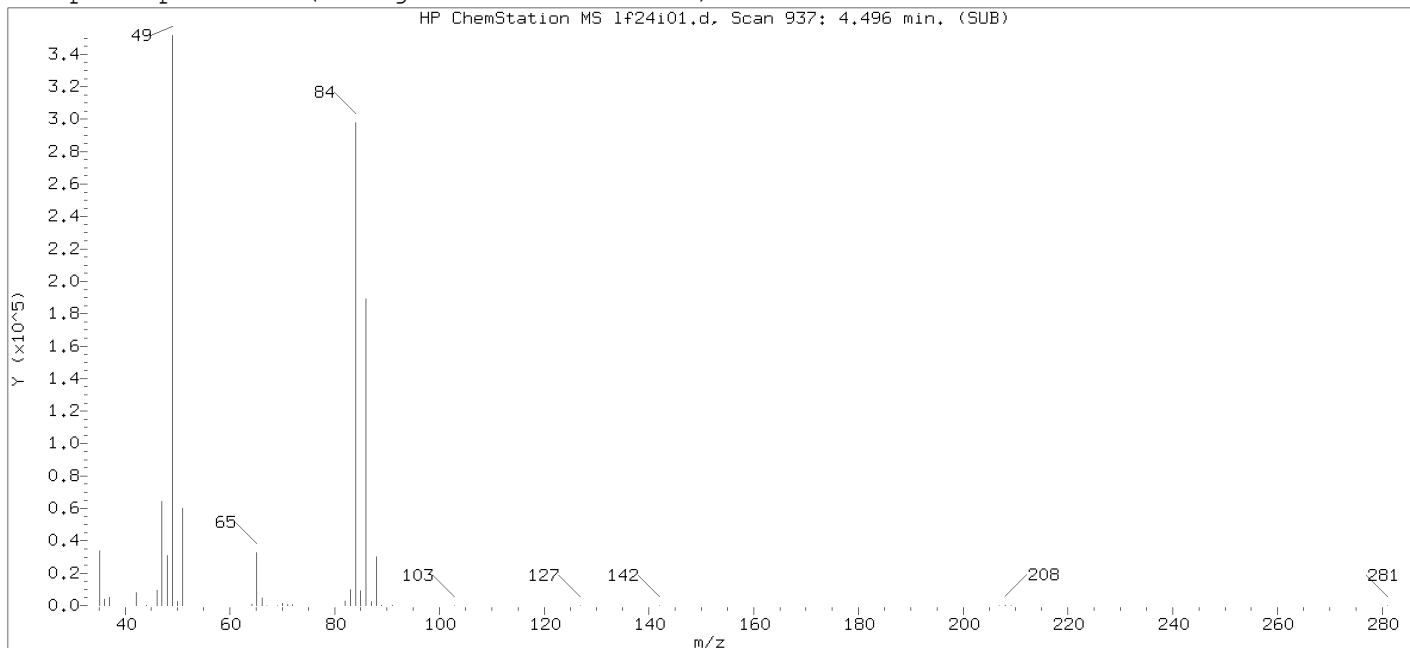
Compound Number : 29
 Compound Name : t-Butyl alcohol-d10
 Scan Number : 937
 Retention Time (minutes): 4.496
 Quant Ion : 65.00
 Area (flag) : 264984M
 On-Column Amount (ng) : 250.0000
 Integration start scan : 888 Integration stop scan: 1166
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

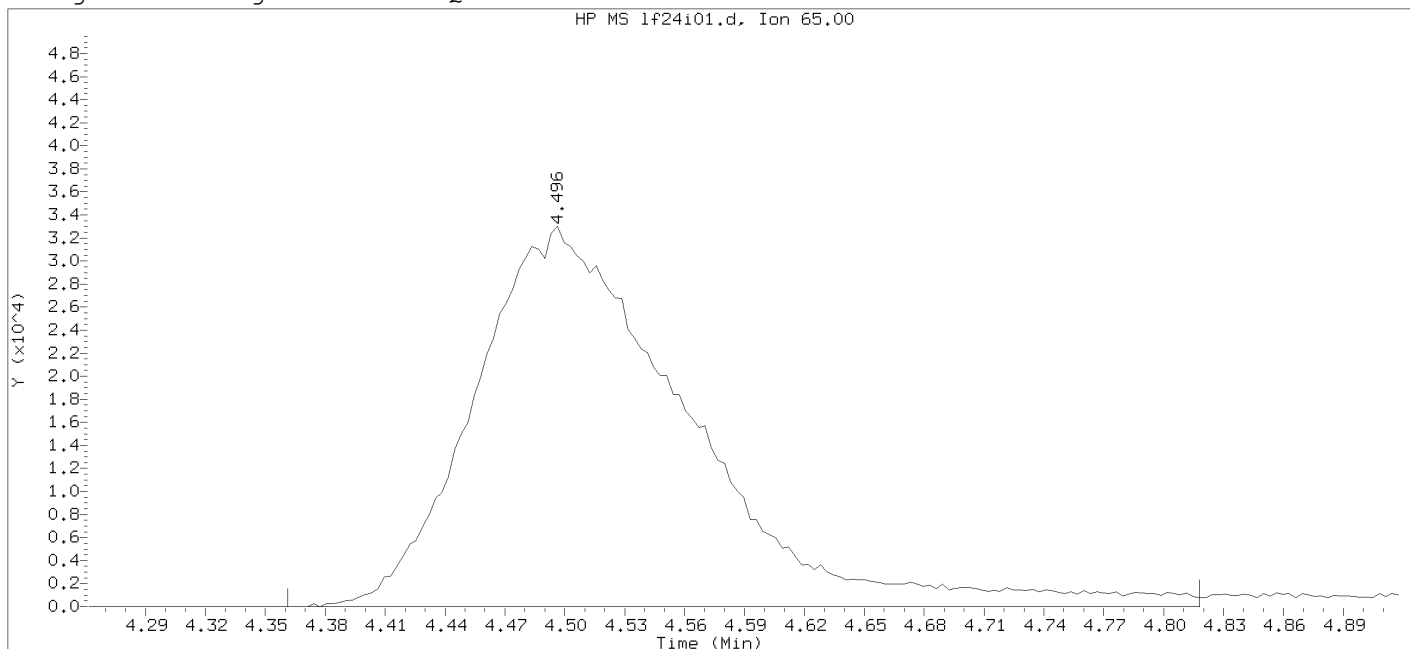
Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:05.
 Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:49.
 PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i01.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 16:17

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:54

Date, time and analyst ID of latest file update: 24-Feb-2020 20:54 mec29284

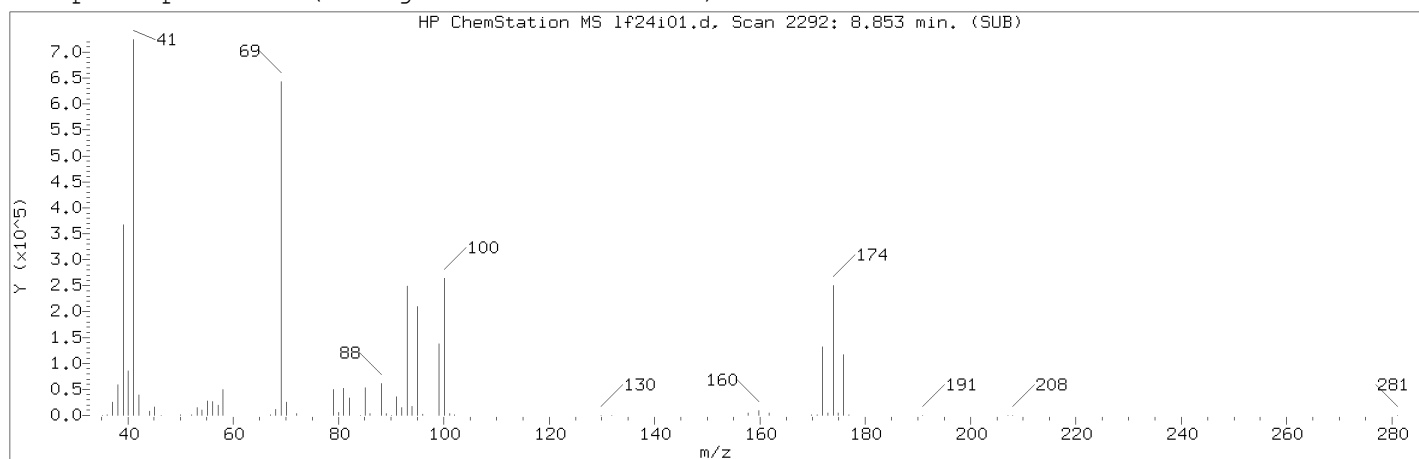
Sample Name: VSTD300

Lab Sample ID: VSTD300

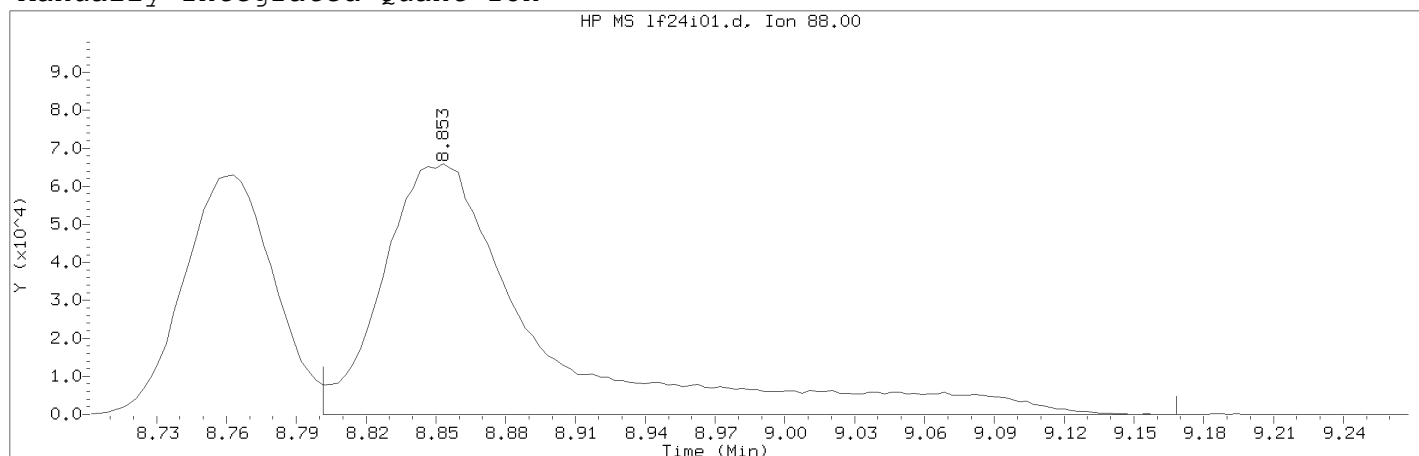
Compound Number	: 29
Compound Name	: t-Butyl alcohol-d10
Scan Number	: 937
Retention Time (minutes)	: 4.496
Quant Ion	: 65.00
Area	: 245175
On-column Amount (ng)	: 250.0000
Integration start scan	: 894
Integration stop scan	: 1036
Y at integration start	: 0
Y at integration end	: 0

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 Target 3.5 esignature user KR421m Page 134 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i01.d Instrument ID: HP09915.i
 Injection date and time: 24-FEB-2020 16:17 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 25-FEB-2020 12:44
 Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD300

Lab Sample ID: VSTD300

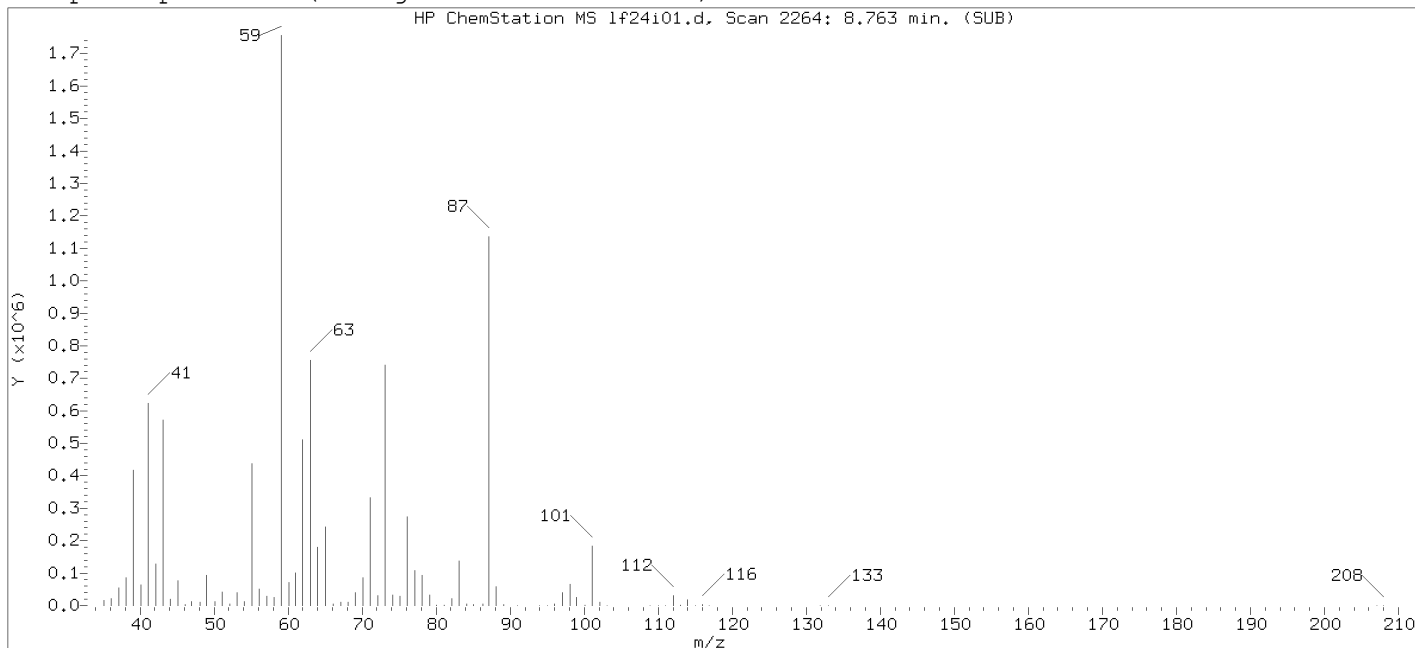
Compound Number : 75
 Compound Name : 1,4-Dioxane
 Scan Number : 2292
 Retention Time (minutes): 8.853
 Quant Ion : 88.00
 Area (flag) : 311514M
 On-Column Amount (ng) : 4011.2227
 Integration start scan : 2275 Integration stop scan: 2389
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

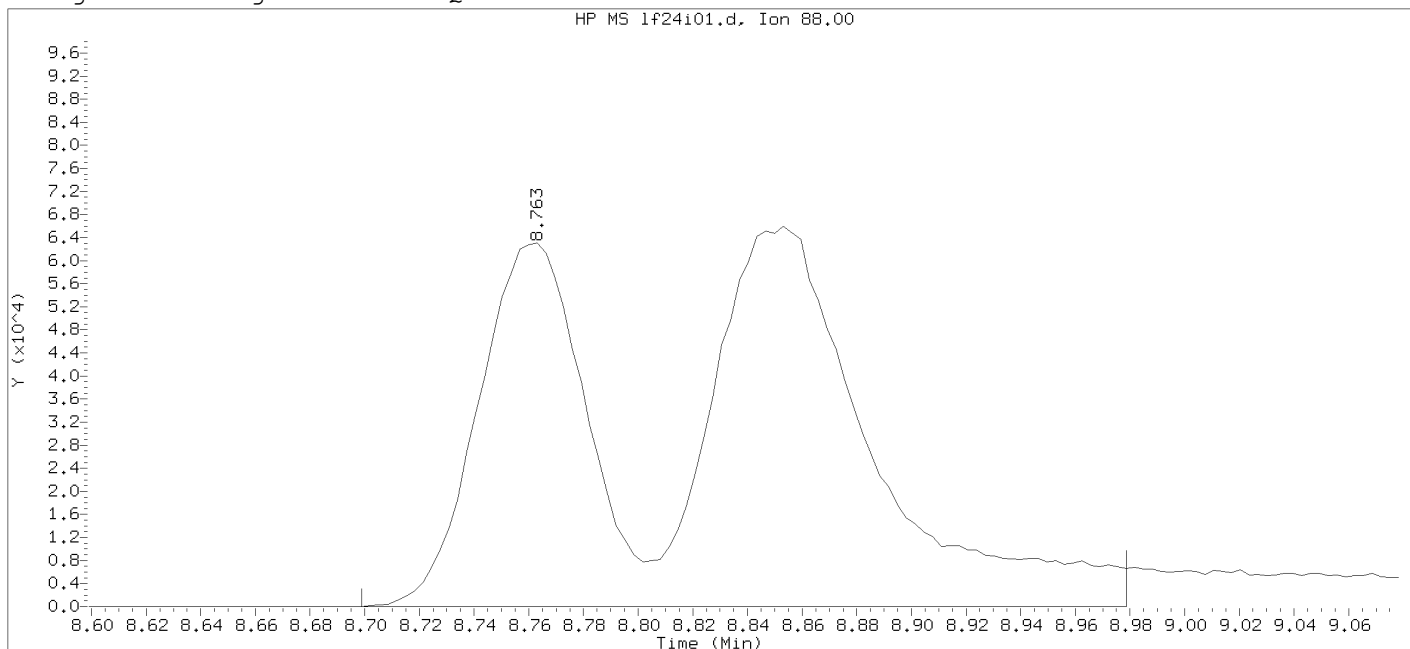
Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:05.
 Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:49.
 PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i01.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 16:17

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:54

Date, time and analyst ID of latest file update: 24-Feb-2020 20:54 mec29284

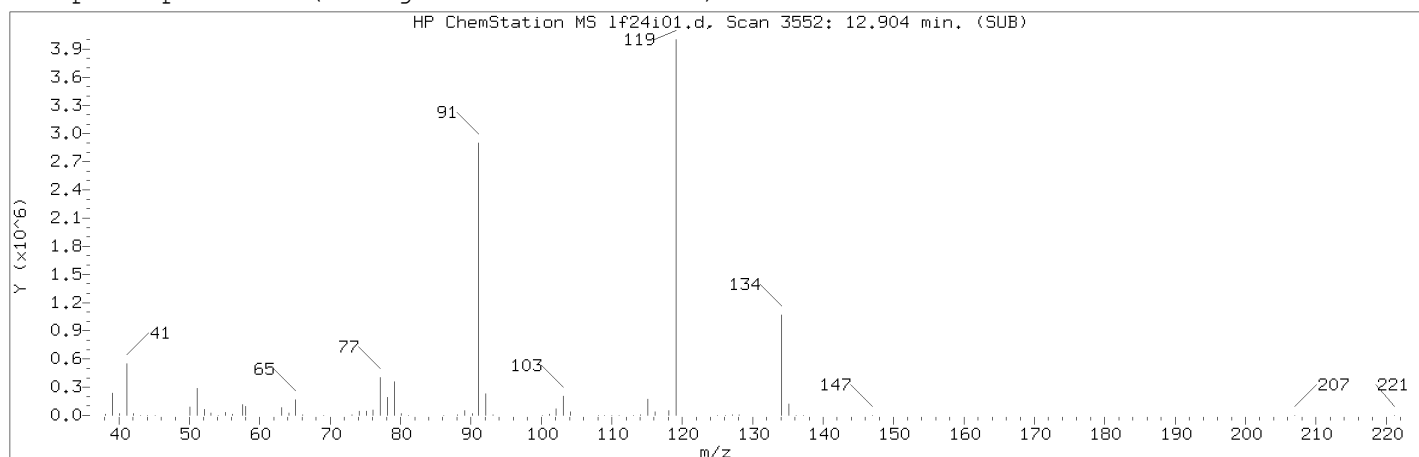
Sample Name: VSTD300

Lab Sample ID: VSTD300

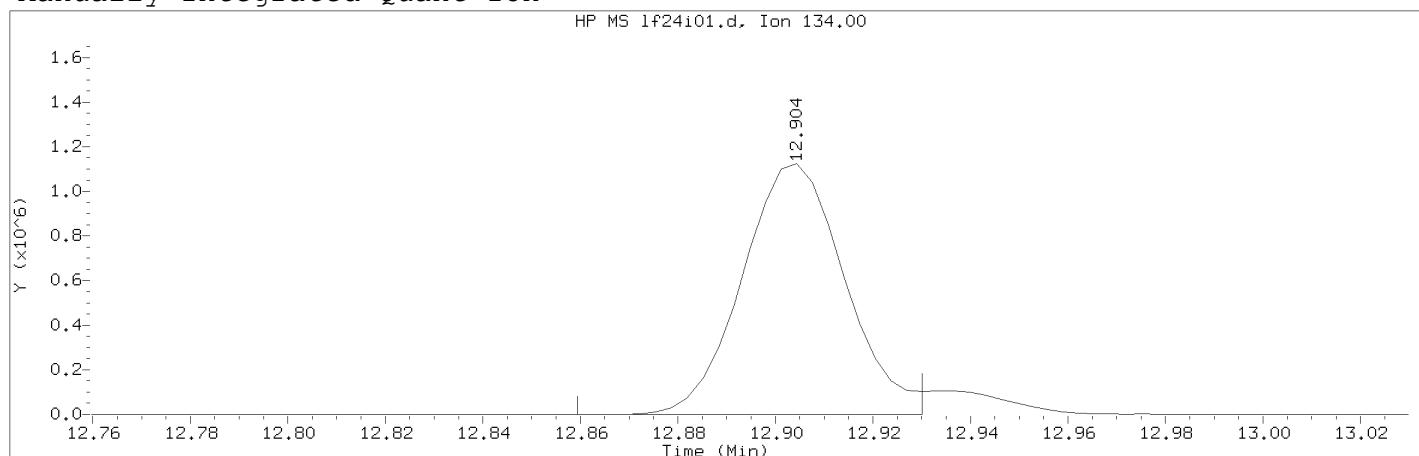
Compound Number	: 75	
Compound Name	: 1,4-Dioxane	
Scan Number	: 2264	
Retention Time (minutes)	: 8.763	
Quant Ion	: 88.00	
Area	: 435118	
On-column Amount (ng)	: 50.0000	
Integration start scan	: 2243	Integration stop scan: 2330
Y at integration start	: 0	Y at integration end: 0

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 Target 3.5 esignature user KR421m Page 136 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i01.d Instrument ID: HP09915.i
 Injection date and time: 24-FEB-2020 16:17 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 25-FEB-2020 12:44
 Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD300

Lab Sample ID: VSTD300

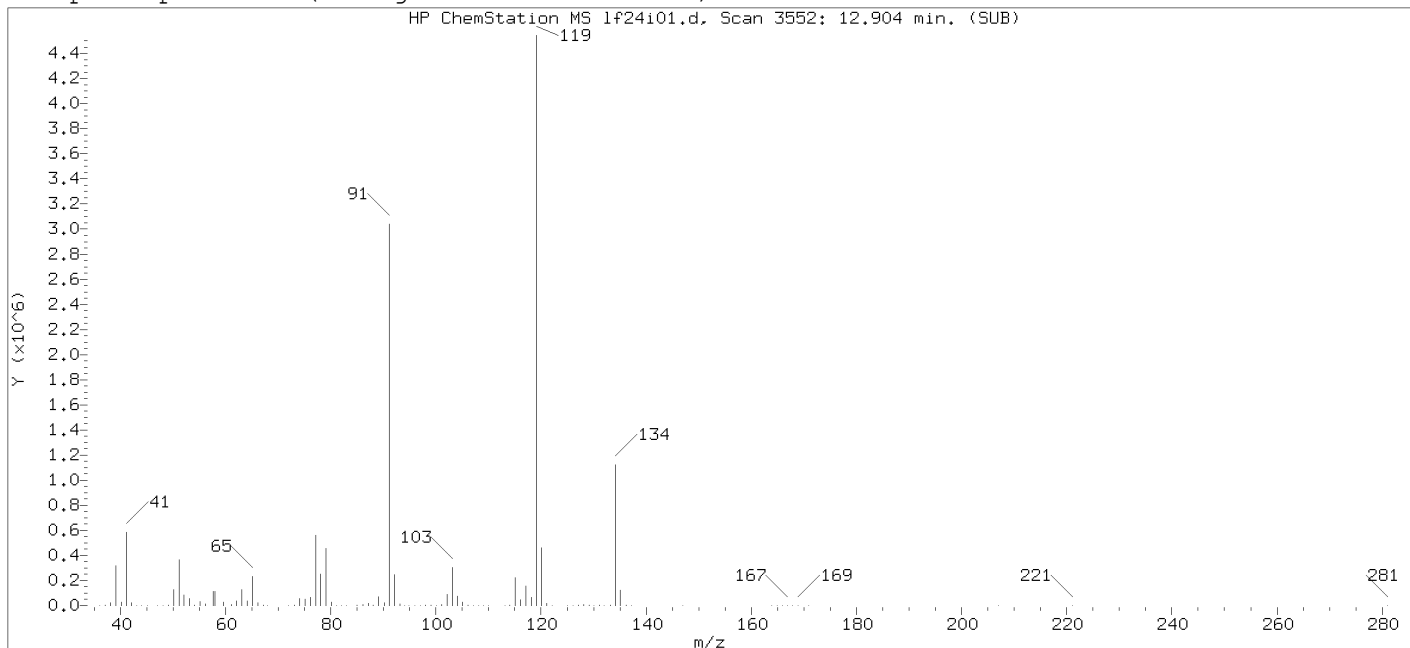
Compound Number : 124
 Compound Name : tert-Butylbenzene
 Scan Number : 3552
 Retention Time (minutes): 12.904
 Quant Ion : 134.00
 Area (flag) : 1641862M
 On-Column Amount (ng) : 312.3591
 Integration start scan : 3537 Integration stop scan: 3559
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

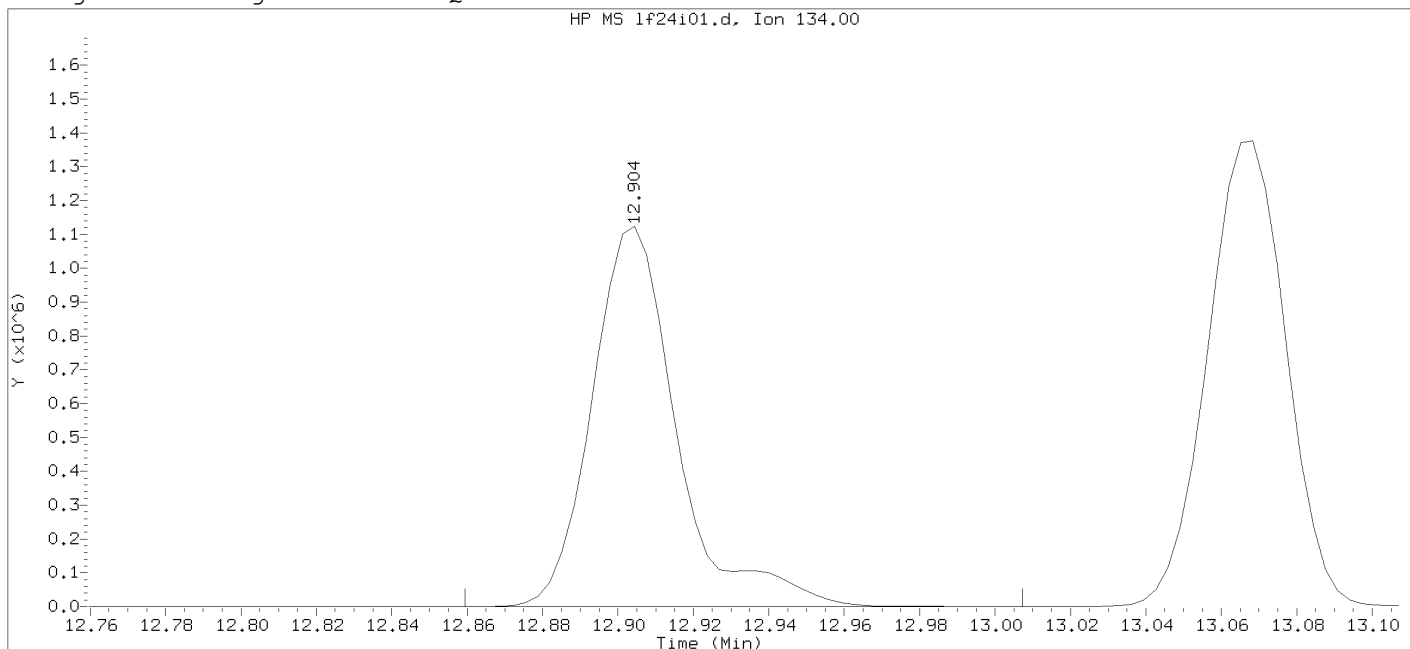
Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:05.
 Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:49.
 PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i01.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 16:17

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:54

Date, time and analyst ID of latest file update: 24-Feb-2020 20:54 mec29284

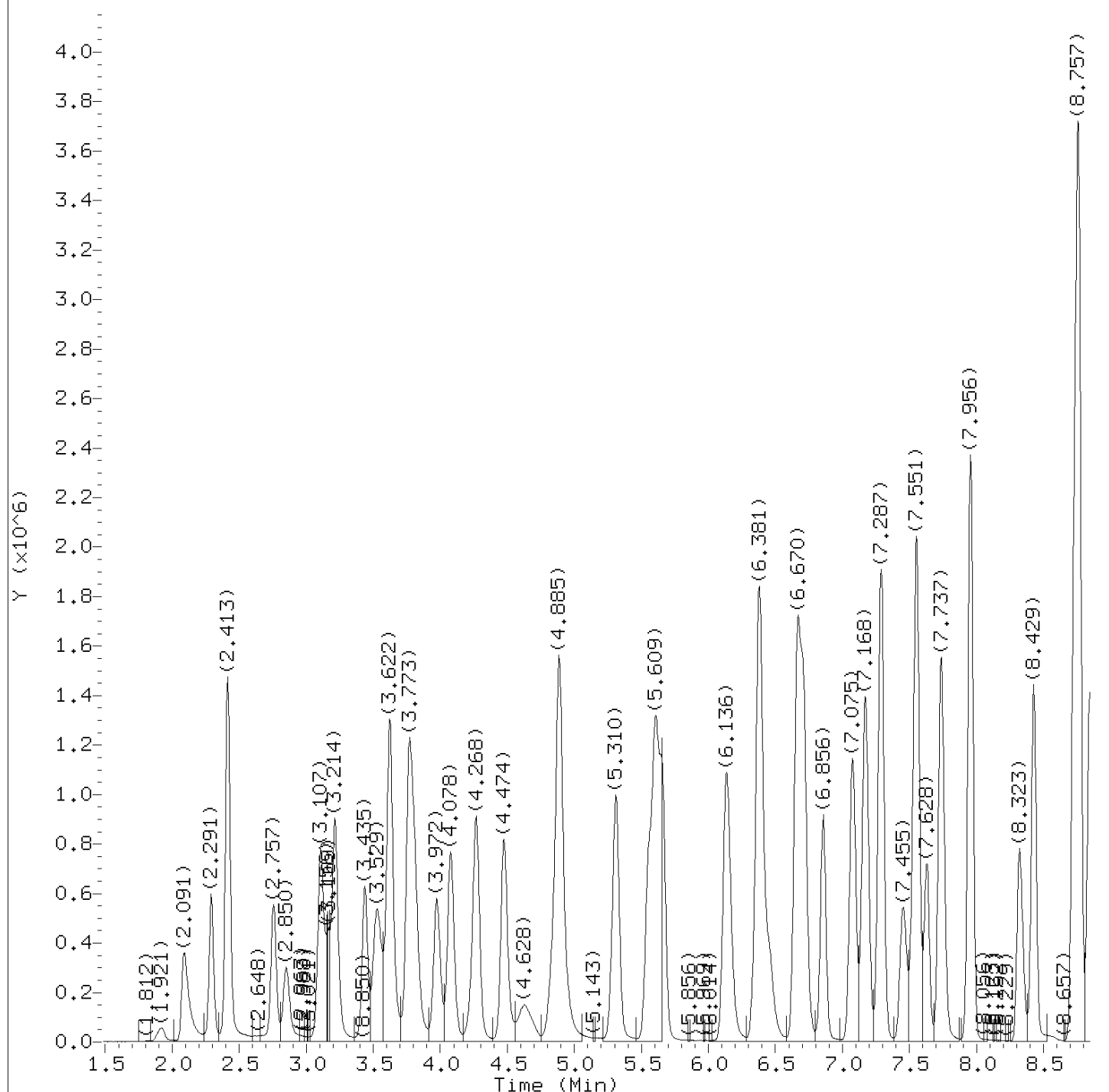
Sample Name: VSTD300

Lab Sample ID: VSTD300

Compound Number	: 124	
Compound Name	: tert-Butylbenzene	
Scan Number	: 3552	
Retention Time (minutes)	: 12.904	
Quant Ion	: 134.00	
Area	: 1758266	
On-column Amount (ng)	: 1.0000	
Integration start scan	: 3537	Integration stop scan: 3583
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Miranda E. Campbell on 02/25/2020 at 18:05.
 Target 3.5 esignature user KR421m Page 138 of 592

/chem/HP09915.i/20feb24i.b/1f24i02.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20feb24i.b/1f24i02.d
 Injection date and time: 24-FEB-2020 16:39

Instrument ID: HP09915.i
 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m
 Calibration date and time: 25-FEB-2020 12:44

Sublist used: 8260W

Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD100

Lab Sample ID: VSTD100

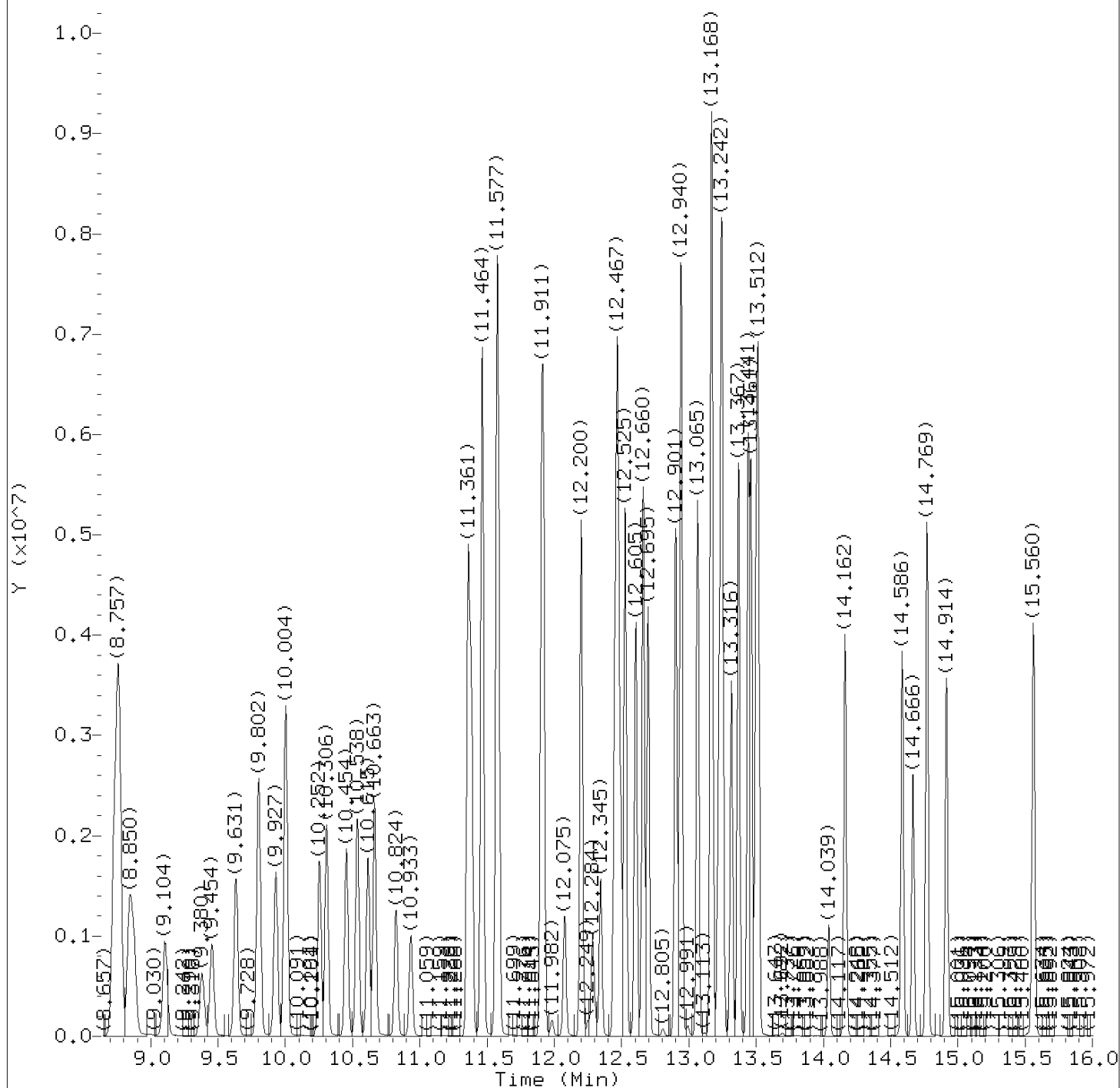
Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:05.

Target 3.5 esignature user ID: msc29284

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/chem/HP09915.i/20feb24i.b/1f24i02.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20feb24i.b/1f24i02.d
 Injection date and time: 24-FEB-2020 16:39

Instrument ID: HP09915.i
 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m
 Calibration date and time: 25-FEB-2020 12:44

Sublist used: 8260W

Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD100

Lab Sample ID: VSTD100

Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:05.

Target 3.5 esignature user ID: msc29284

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page 2 of 2

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20feb24i.b/1f24i02.d
 Injection date and time: 24-FEB-2020 16:39

Instrument ID: HP09915.i
 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 25-FEB-2020 12:44

Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD100

Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
3) Dichlorodifluoromethane	(2)	2.088	85	878391M	105.224
4) Chloromethane	(2)	2.291	50	843286	101.074
5) 1,3-Butadiene	(2)	2.413	39	627228M	100.320
6) Vinyl Chloride	(2)	2.413	62	803582	102.089
8) Bromomethane	(2)	2.757	94	551976	99.919
9) Chloroethane	(2)	2.853	64	431940	99.386
10) Dichlorofluoromethane	(2)	3.104	67	939312	97.457
12) Trichlorofluoromethane	(2)	3.162	101	845360	103.614
11) n-Pentane	(2)	3.217	43	930703	100.898
14) Ethyl ether	(2)	3.435	59	588426	101.061
15) Freon 123a	(2)	3.529	67	677607	103.384
16) Acrolein	(1)	3.622	56	2186686	1052.684
17) 1,1-Dichloroethene	(2)	3.763	96	555131	99.471
17) 1,1-Dichloroethene	(2)	3.767	63	274157	103.985
19) Freon 113	(2)	3.799	101	572582	107.858
18) Acetone	(1)	3.805	58	187297	203.879
22) Methyl Iodide	(2)	3.972	142	1041815	105.581
21) 2-Propanol	(1)	3.988	45	313128M	489.237
23) Carbon Disulfide	(2)	4.078	76	1896908	107.603
27) Methyl Acetate	(2)	4.246	43	678803	97.452
25) Allyl Chloride	(2)	4.268	41	898749	100.077
28) Methylene Chloride	(2)	4.477	84	650644	104.422
29) *t-Butyl alcohol-d10	(1)	4.500	65	284406M	250.000
30) t-Butyl alcohol	(1)	4.628	59	552963	502.632
31) Acrylonitrile	(2)	4.834	53	383154	101.485
33) Methyl Tertiary Butyl Ether	(2)	4.882	73	1907646	102.301
32) trans-1,2-Dichloroethene	(2)	4.889	96	622274	101.658
34) n-Hexane	(2)	5.310	57	941054	106.886
36) 1,1-Dichloroethane	(2)	5.551	63	1075169	104.941
38) di-Isopropyl ether	(2)	5.606	45	2088811	106.096
39) 2-Chloro-1,3-butadiene	(2)	5.660	53	953922	108.868
40) Ethyl t-butyl ether	(2)	6.136	59	1958158	104.728
43) 1,2-Dichloroethene (Total)	(2)		96	1326780	204.569
44) 2-Butanone	(2)	6.355	43	979751	202.944
42) cis-1,2-Dichloroethene	(2)	6.377	96	704506	102.911
45) 2,2-Dichloropropane	(2)	6.393	77	880040	107.942
47) Propionitrile	(1)	6.451	54	748849	525.212
48) Methacrylonitrile	(2)	6.667	67	1010647	261.705

M = Compound was manually integrated.

* = Compound is an internal standard.

page 1 of 4

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 on 02/25/2020 at 18:05.

Target 3.5 esignature user ID: mec29284

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20feb24i.b/1f24i02.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 16:39

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 25-FEB-2020 12:44

Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD100

Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
49) Bromochloromethane	(2)	6.709	128	351350	103.278
50) Tetrahydrofuran	(1)	6.721	71	270348	210.894
51) Chloroform	(2)	6.856	83	1060268	106.799
52)\$Dibromofluoromethane	(2)	7.069	113	317602	50.758
52)\$Dibromofluoromethane	(2)	7.069	111	326101	51.011
53) 1,1,1-Trichloroethane	(2)	7.078	97	943144	108.351
54) Cyclohexane	(2)	7.168	56	1164342	108.621
54) Cyclohexane	(2)	7.168	84	984890	108.819
54) Cyclohexane	(2)	7.175	69	357210	108.651
56) Carbon Tetrachloride	(2)	7.284	117	788534	110.871
55) 1,1-Dichloropropene	(2)	7.294	75	870752	107.232
58) Isobutyl Alcohol	(1)	7.458	41	475884	1273.097
57)\$1,2-Dichloroethane-d4	(2)	7.525	102	81791	50.400
57)\$1,2-Dichloroethane-d4	(2)	7.525	65	367822	50.776
57)\$1,2-Dichloroethane-d4	(2)	7.525	104	52438	50.904
60) Benzene	(2)	7.554	78	2633995	106.333
61) 1,2-Dichloroethane	(2)	7.628	62	845339	102.068
61) 1,2-Dichloroethane	(2)	7.628	98	85779	113.090
65) t-Amyl methyl ether	(2)	7.737	73	1978702	105.214
67) n-Heptane	(2)	7.956	43	896726	104.005
66)*Fluorobenzene	(2)	7.956	96	1323333	50.000
69) n-Butanol	(1)	8.323	56	833533	2663.802
71) Trichloroethene	(2)	8.426	95	663985	106.477
72) Methylcyclohexane	(2)	8.731	83	1116230	106.694
72) Methylcyclohexane	(2)	8.728	98	499407	105.839
73) 1,2-Dichloropropane	(2)	8.763	63	685609	106.538
76) Methyl Methacrylate	(2)	8.840	69	667532	108.651
75) 1,4-Dioxane	(1)	8.847	88	110138M	1321.348
74) Dibromomethane	(2)	8.876	93	445624	106.481
78) Bromodichloromethane	(2)	9.104	83	834562	111.547
79) 2-Nitropropane	(2)	9.380	41	512770	222.769
80) 2-Chloroethyl Vinyl Ether	(2)	9.454	63	514844	109.129
81) cis-1,3-Dichloropropene	(2)	9.634	75	1112650	111.002
82) 4-Methyl-2-pentanone	(2)	9.802	43	2093825	209.631
83)\$Toluene-d8	(3)	9.930	98	1336054	49.863
83)\$Toluene-d8	(3)	9.927	100	864045	49.621
88) Toluene	(3)	10.004	92	1680559	105.560
90) 1,3-Dichloropropene (total)	(3)		100	2173499	222.826

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 2 of 4

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Target 3.5 esignature user ID: mec29284

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20feb24i.b/1f24i02.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 16:39

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 25-FEB-2020 12:44

Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD100

Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
89) trans-1,3-Dichloropropene	(3)	10.252	75	1060849	111.824
91) Ethyl Methacrylate	(3)	10.306	69	1180990	108.721
92) 1,1,2-Trichloroethane	(3)	10.454	97	661972	105.496
93) Tetrachloroethene	(3)	10.538	166	709697	105.041
94) 1,3-Dichloropropane	(3)	10.615	76	1109337	105.915
96) 2-Hexanone	(3)	10.663	43	1534320	209.110
97) Dibromochloromethane	(3)	10.824	129	722247	113.883
99) 1,2-Dibromoethane	(3)	10.933	107	729244	106.815
100) *Chlorobenzene-d5	(3)	11.358	117	1019860	50.000
101) 1-Chlorohexane	(3)	11.361	91	905425	102.016
102) Chlorobenzene	(3)	11.384	112	1885620	105.399
103) 1,1,1,2-Tetrachloroethane	(3)	11.461	131	663377	110.921
104) Ethylbenzene	(3)	11.464	91	3235999	106.399
106) m+p-Xylene	(3)	11.577	106	2549318	213.565
108) Xylene (Total)	(3)		106	3809724	320.087
107) o-Xylene	(3)	11.905	106	1260406	106.522
109) Styrene	(3)	11.921	104	2164261	108.748
110) Bromoform	(3)	12.075	173	539855	109.973
111) Isopropylbenzene	(3)	12.200	105	3220830	106.238
112) Cyclohexanone	(1)	12.284	55	440741	1318.238
114) \$4-Bromofluorobenzene	(3)	12.345	95	504573	49.936
114) \$4-Bromofluorobenzene	(3)	12.345	174	414838	49.667
116) 1,1,2,2-Tetrachloroethane	(4)	12.445	83	1095034	103.246
115) Bromobenzene	(4)	12.461	156	831166	105.304
118) trans-1,4-Dichloro-2-butene	(4)	12.470	53	810427	266.750
117) 1,2,3-Trichloropropane	(4)	12.493	110	319824	101.614
119) n-Propylbenzene	(4)	12.525	91	3738591	105.013
120) 2-Chlorotoluene	(4)	12.605	126	775199	104.815
122) 1,3,5-Trimethylbenzene	(4)	12.660	105	2785174	106.337
121) 4-Chlorotoluene	(4)	12.695	126	804066	104.796
124) tert-Butylbenzene	(4)	12.901	134	565521M	104.942
125) Pentachloroethane	(4)	12.937	167	486096	112.824
126) 1,2,4-Trimethylbenzene	(4)	12.943	105	2906242	106.003
127) sec-Butylbenzene	(4)	13.065	105	3391031	105.376
129) 1,3-Dichlorobenzene	(4)	13.165	146	1539364	103.444
130) p-Isopropyltoluene	(4)	13.171	119	2950164	106.417
131) *1,4-Dichlorobenzene-d4	(4)	13.220	152	558412	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	1583977	102.773

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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Target 3.5 esignature user ID: mec29284

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20feb24i.b/lf24i02.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 16:39

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 25-FEB-2020 12:44

Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD100

Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
134) 1,2,3-Trimethylbenzene	(4)	13.248	105	2823412	103.010
135) Benzyl Chloride	(4)	13.316	91	2275451	113.426
136) 1,3-Diethylbenzene	(4)	13.367	119	1733729	103.222
141) Diethylbenzene (total)	(4)		100	5010065	309.867
137) 1,4-Diethylbenzene	(4)	13.441	119	1812062	102.988
139) n-Butylbenzene	(4)	13.461	92	1447521	103.576
138) 1,2-Dichlorobenzene	(4)	13.499	146	1520837	102.696
140) 1,2-Diethylbenzene	(4)	13.515	119	1464274	103.657
142) 1,2-Dibromo-3-chloropropane	(4)	14.039	75	246026	106.445
144) 1,3,5-Trichlorobenzene	(4)	14.162	180	1136951	102.076
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	1088658	101.785
147) Hexachlorobutadiene	(4)	14.666	225	438031	93.136
148) Naphthalene	(4)	14.769	128	3740767	103.610
149) 1,2,3-Trichlorobenzene	(4)	14.914	180	1036002	102.365
150) 2-Methylnaphthalene	(4)	15.560	142	2083226	107.586

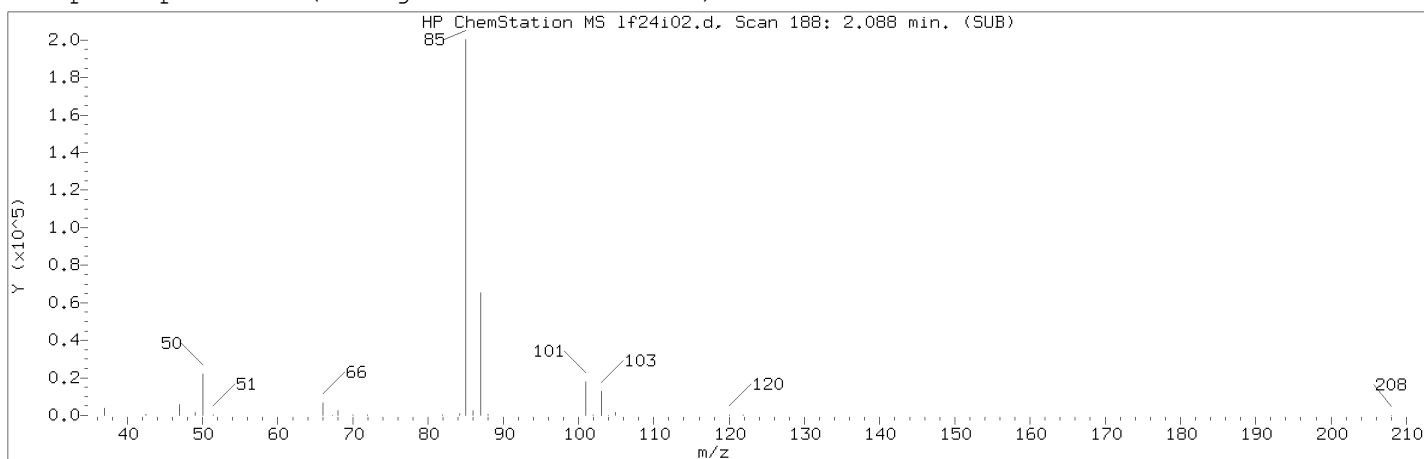
page 4 of 4

Digitally signed by Miranda E. Campbell
on 02/25/2020 at 18:05.

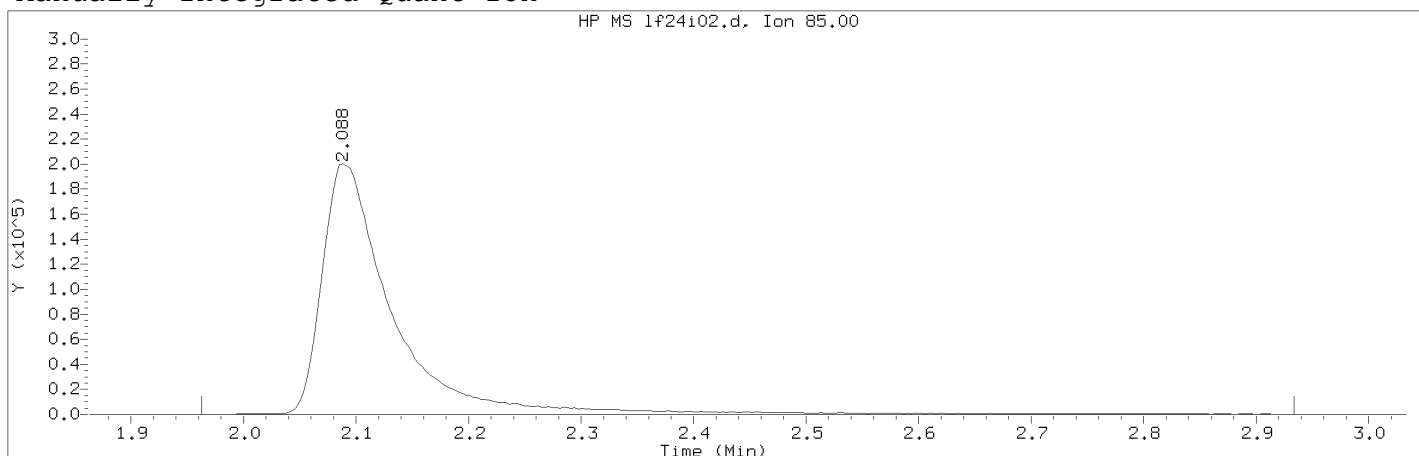
Target 3.5 esignature user ID: mec29284

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Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i02.d Instrument ID: HP09915.i
 Injection date and time: 24-FEB-2020 16:39 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 25-FEB-2020 12:44
 Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD100

Lab Sample ID: VSTD100

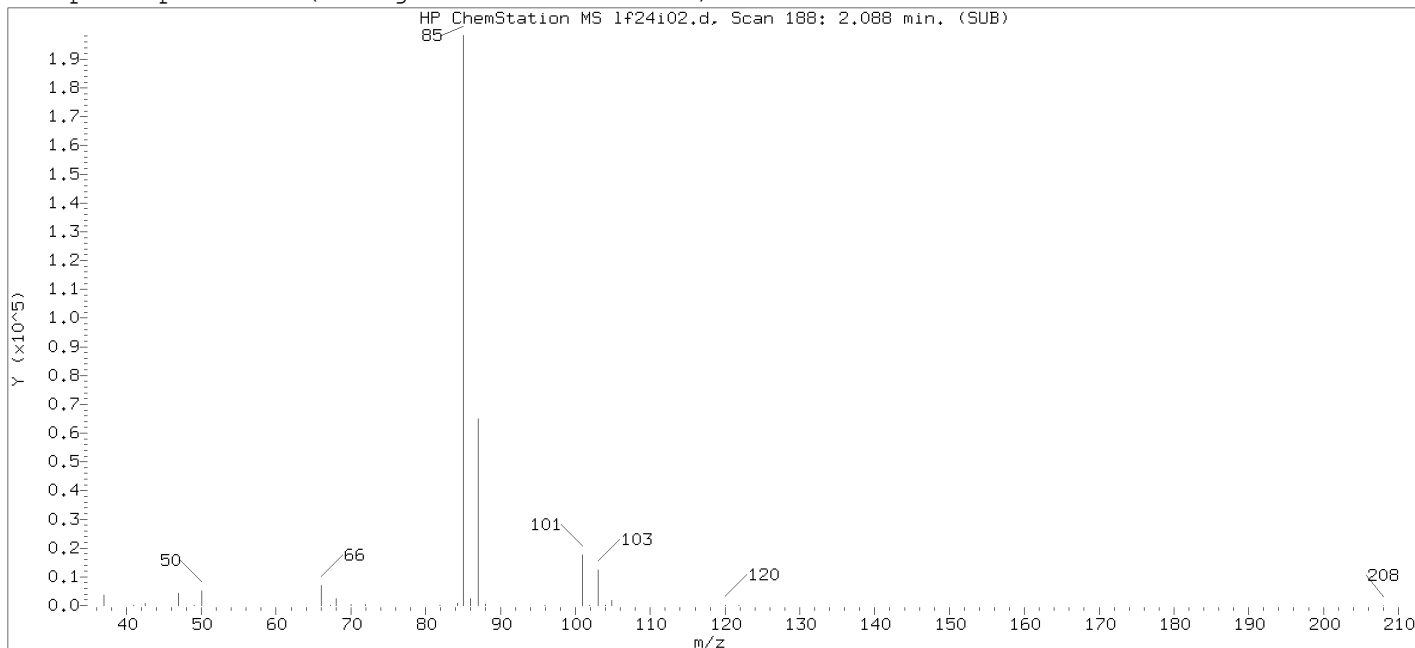
Compound Number : 3
 Compound Name : Dichlorodifluoromethane
 Scan Number : 188
 Retention Time (minutes): 2.088
 Quant Ion : 85.00
 Area (flag) : 878391M
 On-Column Amount (ng) : 105.2244
 Integration start scan : 148 Integration stop scan: 450
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

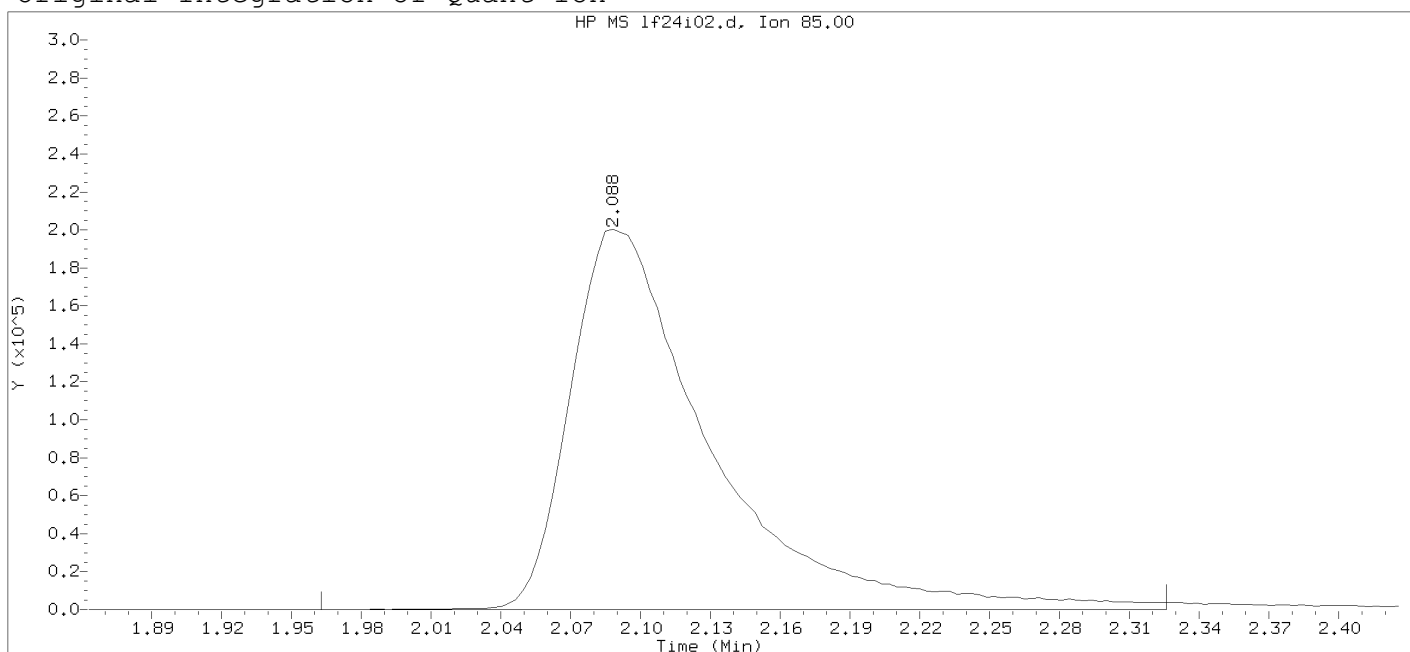
Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:05.
 Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:49.
 PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i02.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 16:39

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:55

Date, time and analyst ID of latest file update: 24-Feb-2020 20:55 mec29284

Sample Name: VSTD100

Lab Sample ID: VSTD100

Compound Number : 3

Compound Name : Dichlorodifluoromethane

Scan Number : 188

Retention Time (minutes): 2.088

Quant Ion : 85.00

Area : 841715

On-column Amount (ng) : 1.0000

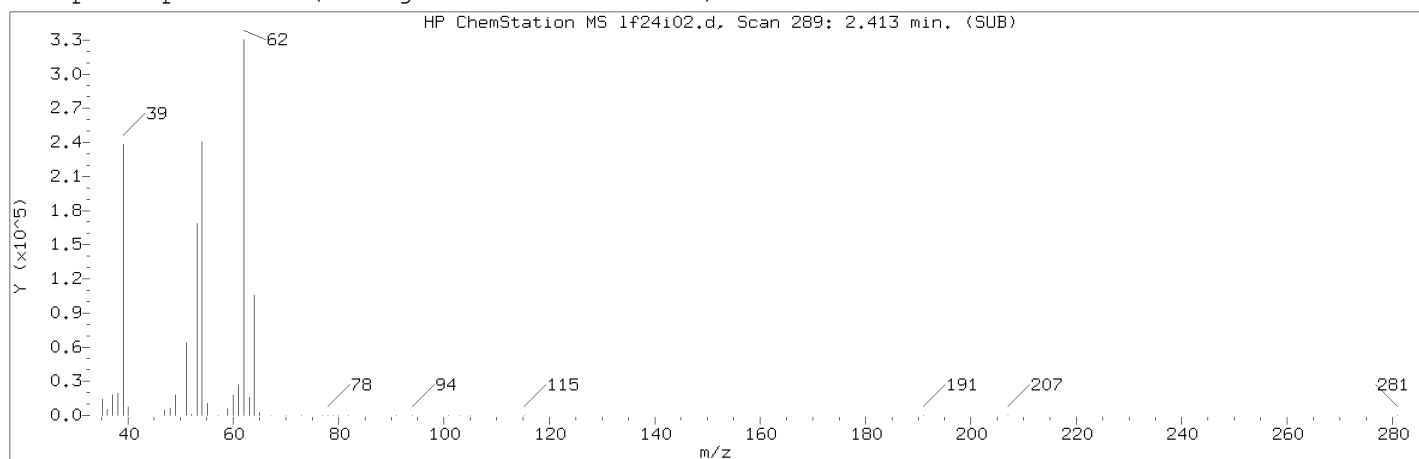
Integration start scan : 148 Integration stop scan: 261

Y at integration start : 0 Y at integration end: 0

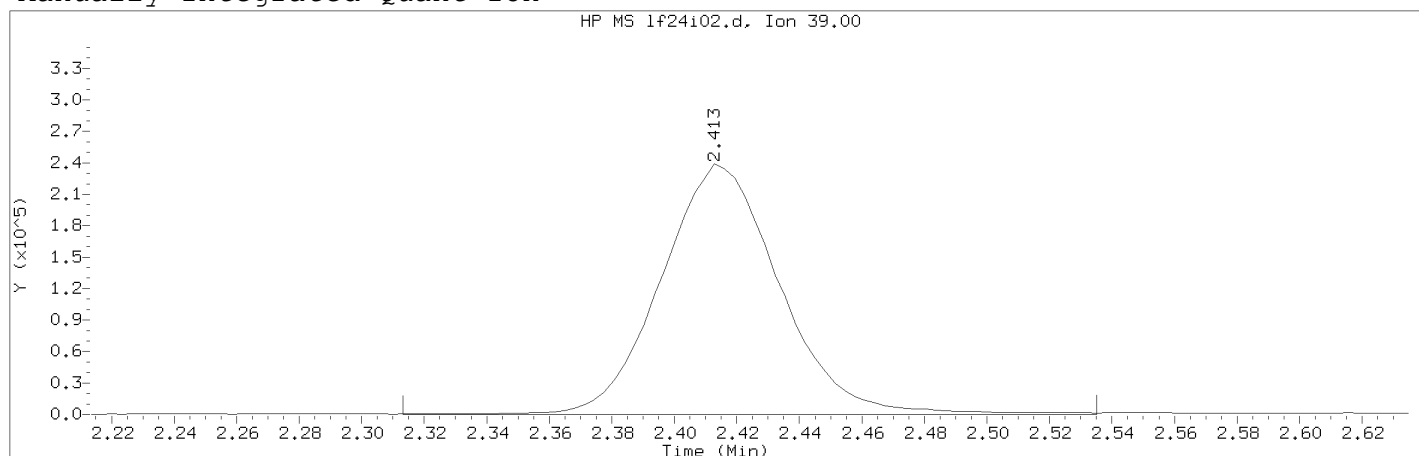
Digitally signed by Miranda E. Campbell on 02/25/2020 at 18:05.

Target 3.5 esignature user KR421m Page 146 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i02.d Instrument ID: HP09915.i
 Injection date and time: 24-FEB-2020 16:39 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 25-FEB-2020 12:44
 Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD100 Lab Sample ID: VSTD100

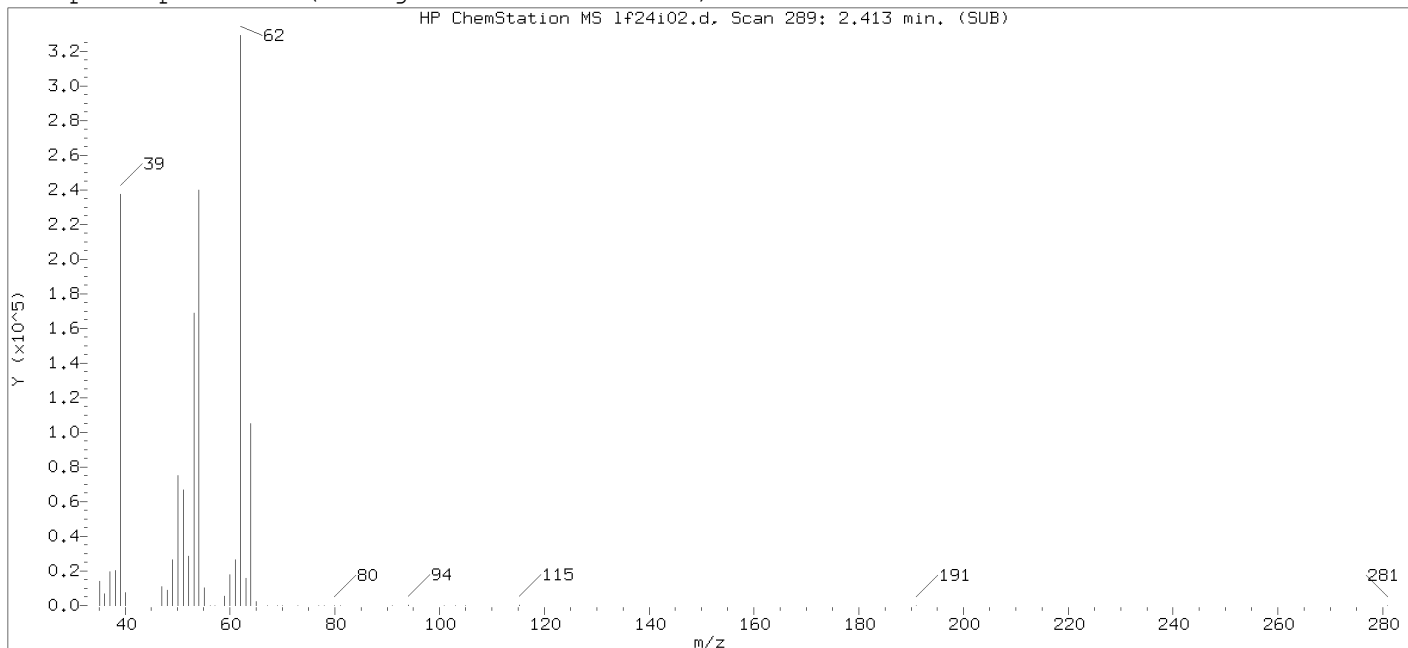
Compound Number : 5
 Compound Name : 1,3-Butadiene
 Scan Number : 289
 Retention Time (minutes): 2.413
 Quant Ion : 39.00
 Area (flag) : 627228M
 On-Column Amount (ng) : 100.3195
 Integration start scan : 257 Integration stop scan: 326
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

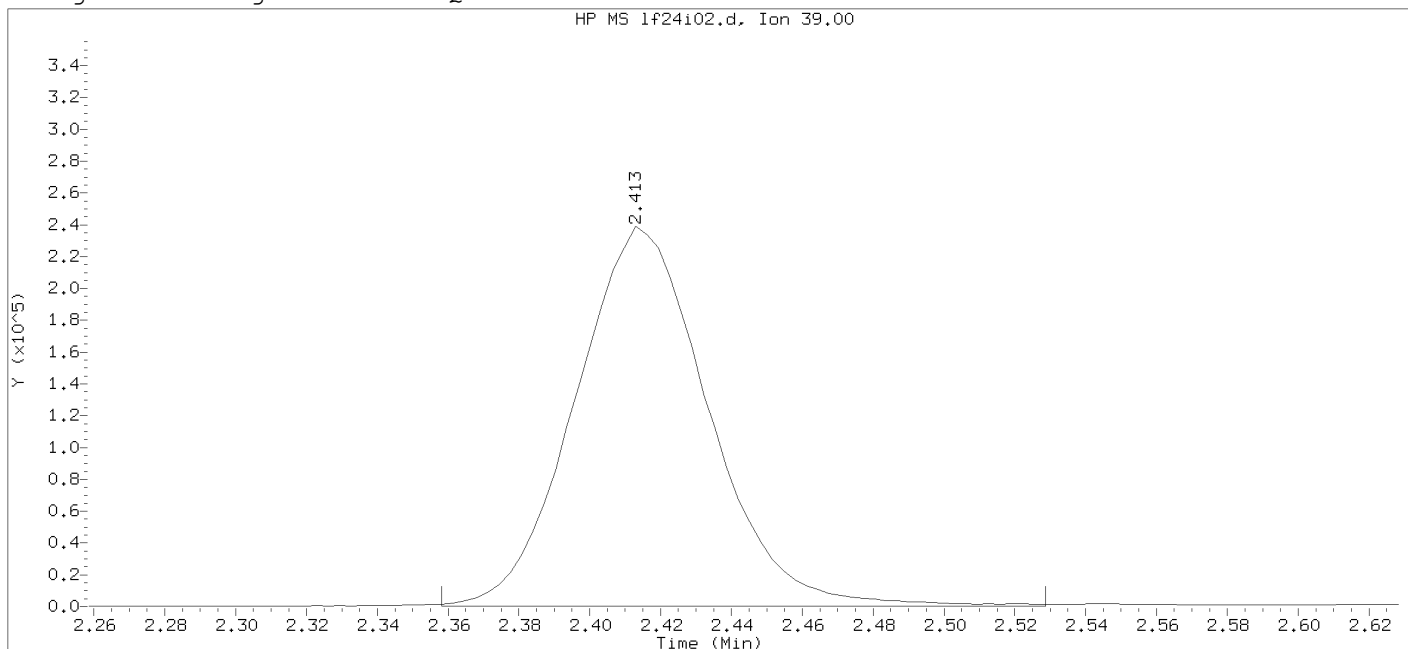
Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:05.
 Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:49.
 PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i02.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 16:39

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:55

Date, time and analyst ID of latest file update: 24-Feb-2020 20:55 mec29284

Sample Name: VSTD100

Lab Sample ID: VSTD100

Compound Number : 5

Compound Name : 1,3-Butadiene

Scan Number : 289

Retention Time (minutes): 2.413

Quant Ion : 39.00

Area : 619334

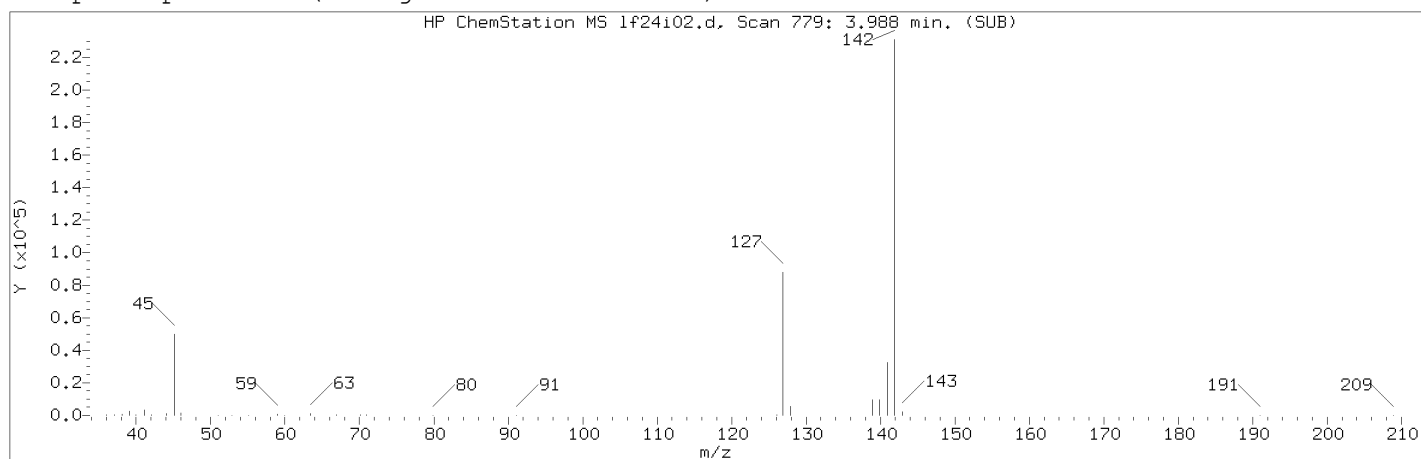
On-column Amount (ng) : 1.0000

Integration start scan : 271 Integration stop scan: 324

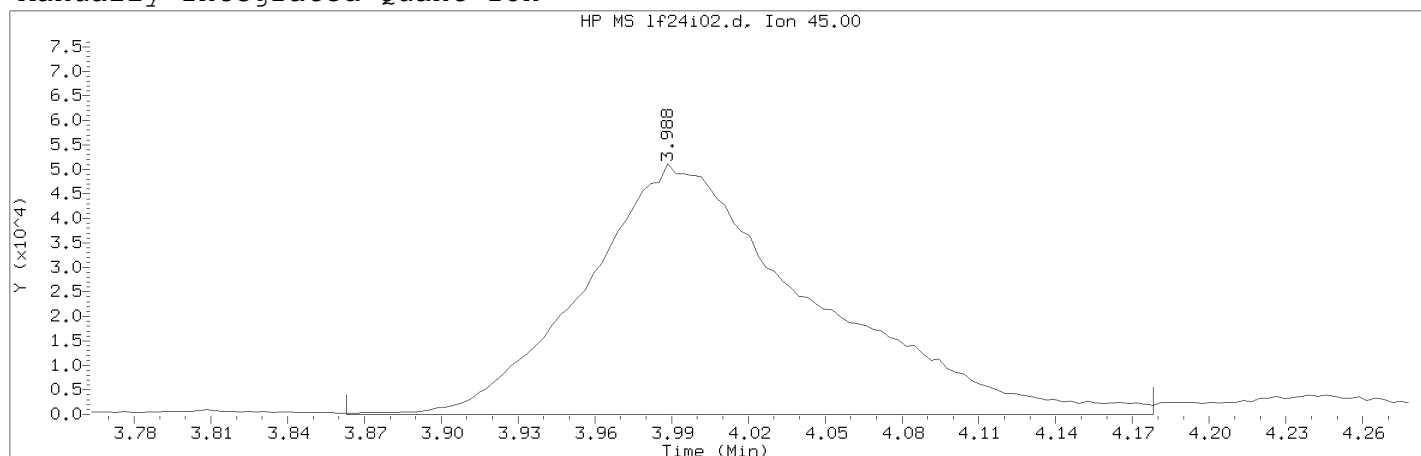
Y at integration start : 418 Y at integration end: 563

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 Target 3.5 esignature user KR421m Page 148 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i02.d Instrument ID: HP09915.i
 Injection date and time: 24-FEB-2020 16:39 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 25-FEB-2020 12:44
 Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD100

Lab Sample ID: VSTD100

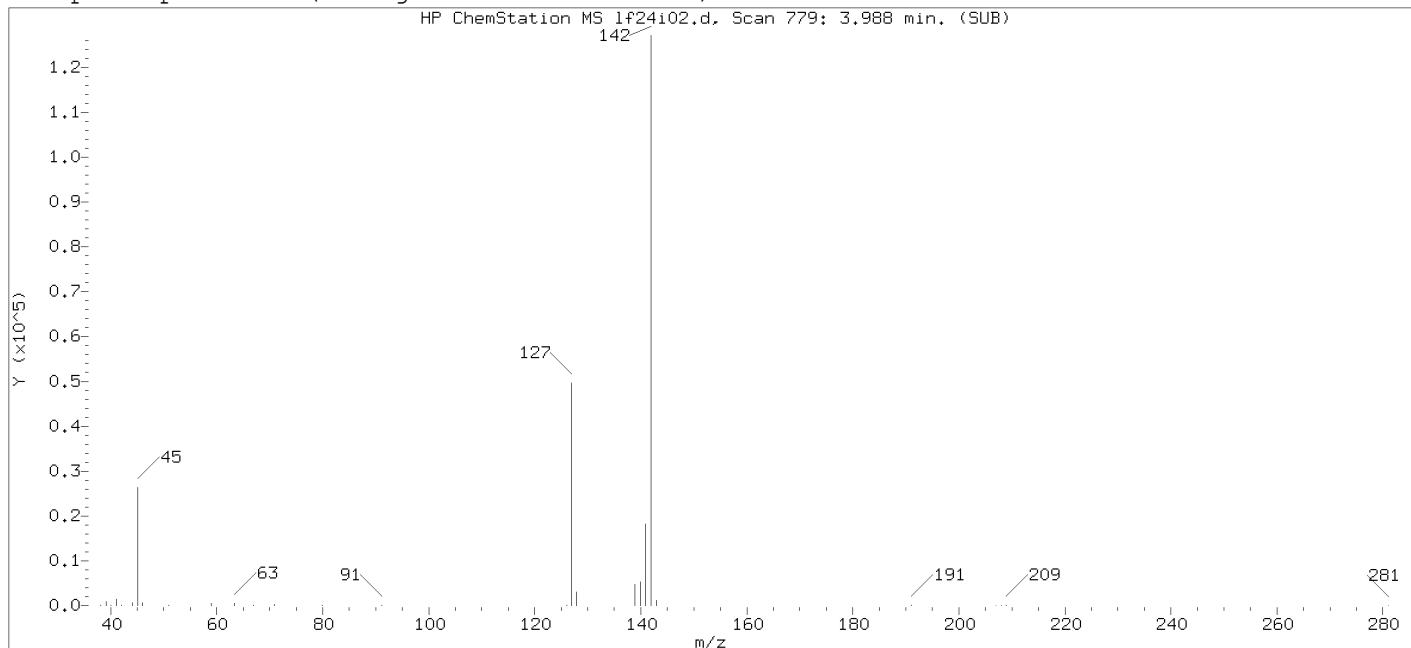
Compound Number : 21
 Compound Name : 2-Propanol
 Scan Number : 779
 Retention Time (minutes): 3.988
 Quant Ion : 45.00
 Area (flag) : 313128M
 On-Column Amount (ng) : 489.2370
 Integration start scan : 739 Integration stop scan: 837
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

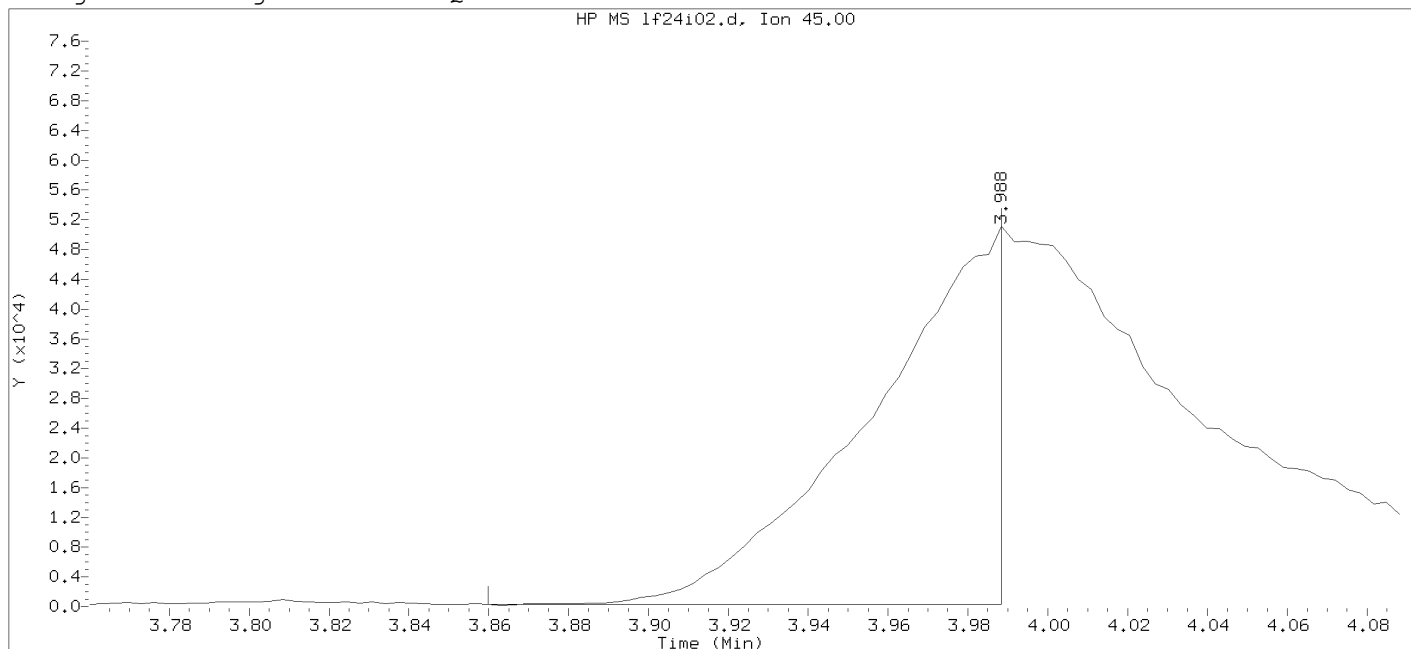
Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:05.
 Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:49.
 PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i02.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 16:39

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:55

Date, time and analyst ID of latest file update: 24-Feb-2020 20:55 mec29284

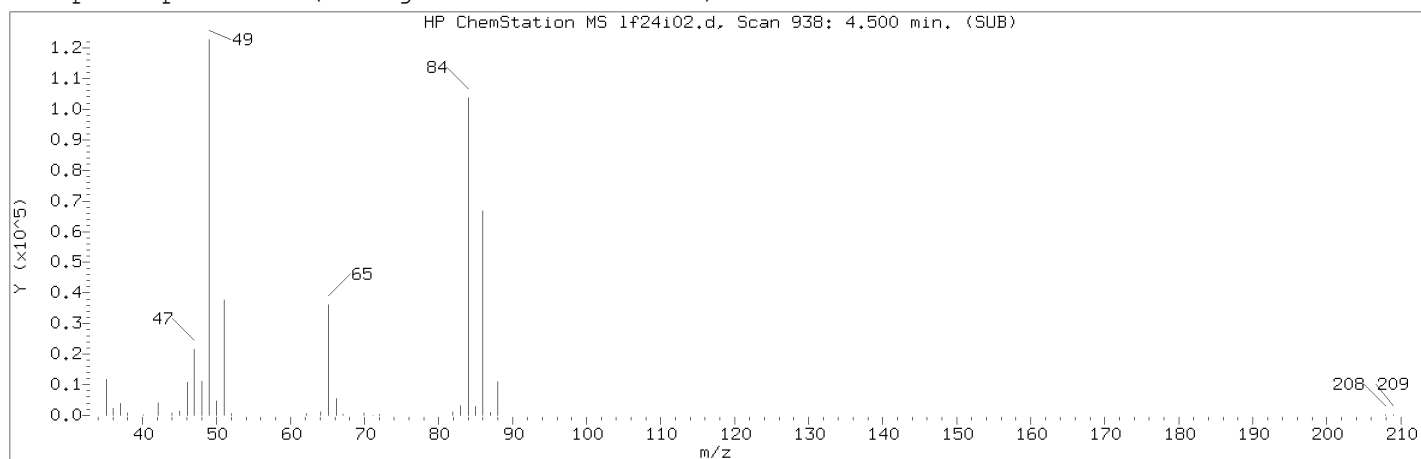
Sample Name: VSTD100

Lab Sample ID: VSTD100

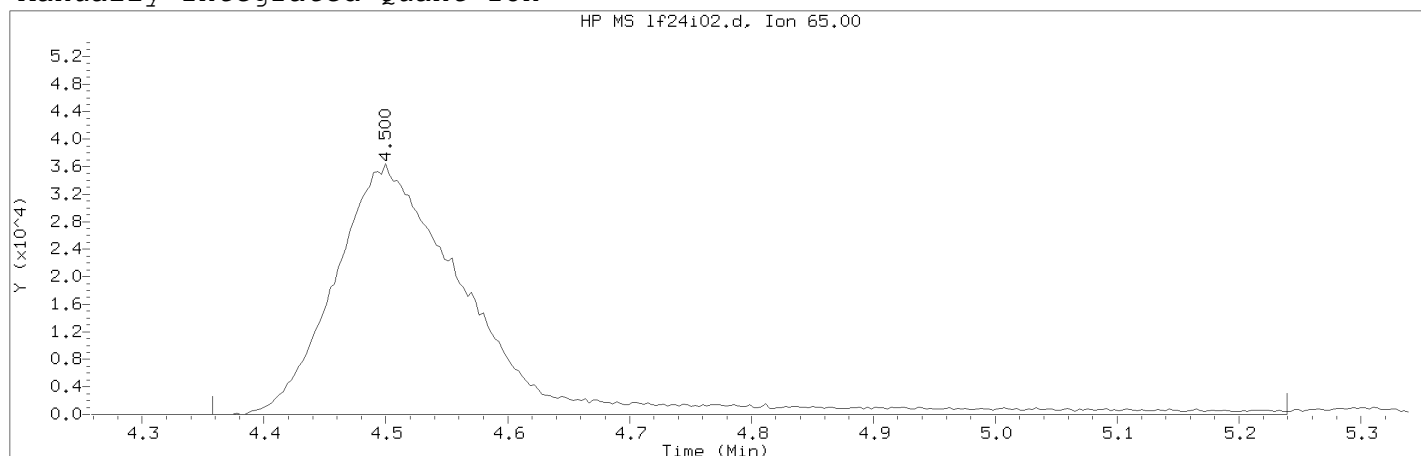
Compound Number	: 21	
Compound Name	: 2-Propanol	
Scan Number	: 779	
Retention Time (minutes)	: 3.988	
Quant Ion	: 45.00	
Area	: 112020	
On-column Amount (ng)	: 20.0000	
Integration start scan	: 738	Integration stop scan: 778
Y at integration start	: 281	Y at integration end: 281

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 Target 3.5 esignature user KR421m Page 150 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i02.d Instrument ID: HP09915.i
 Injection date and time: 24-FEB-2020 16:39 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 25-FEB-2020 12:44
 Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD100

Lab Sample ID: VSTD100

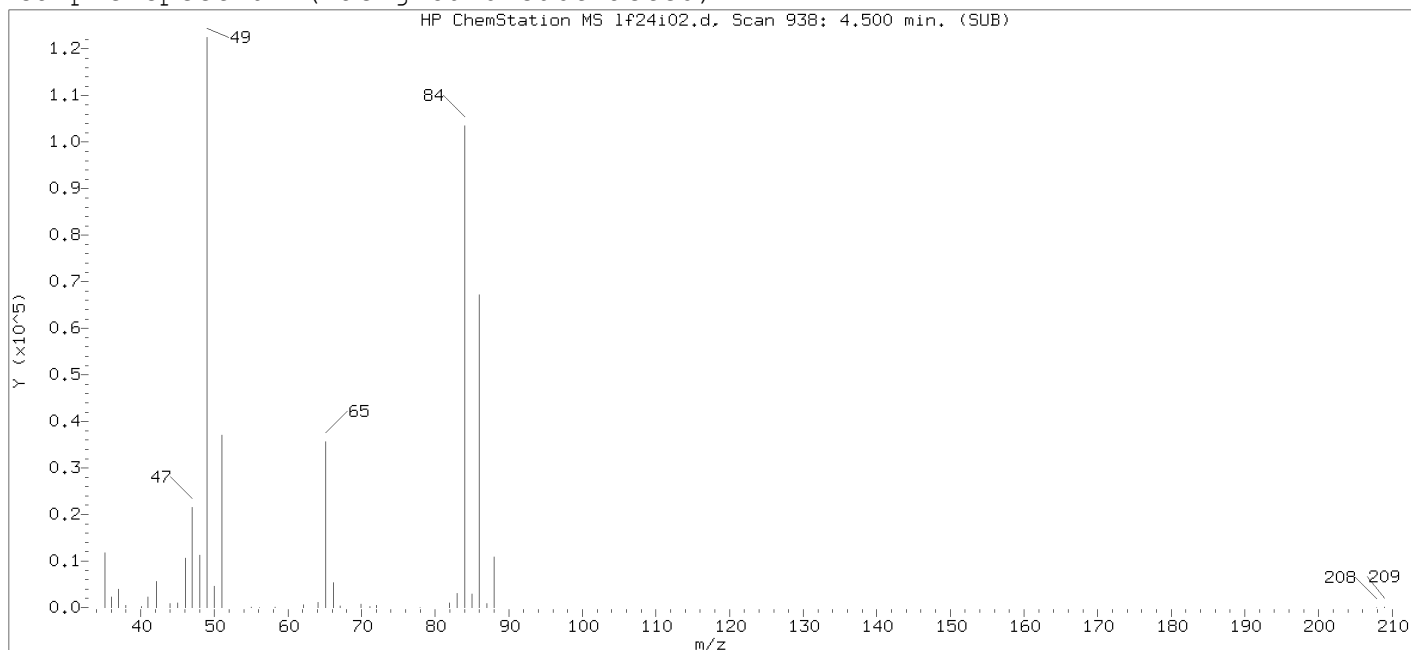
Compound Number : 29
 Compound Name : t-Butyl alcohol-d10
 Scan Number : 938
 Retention Time (minutes): 4.500
 Quant Ion : 65.00
 Area (flag) : 284406M
 On-Column Amount (ng) : 250.0000
 Integration start scan : 893 Integration stop scan: 1167
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

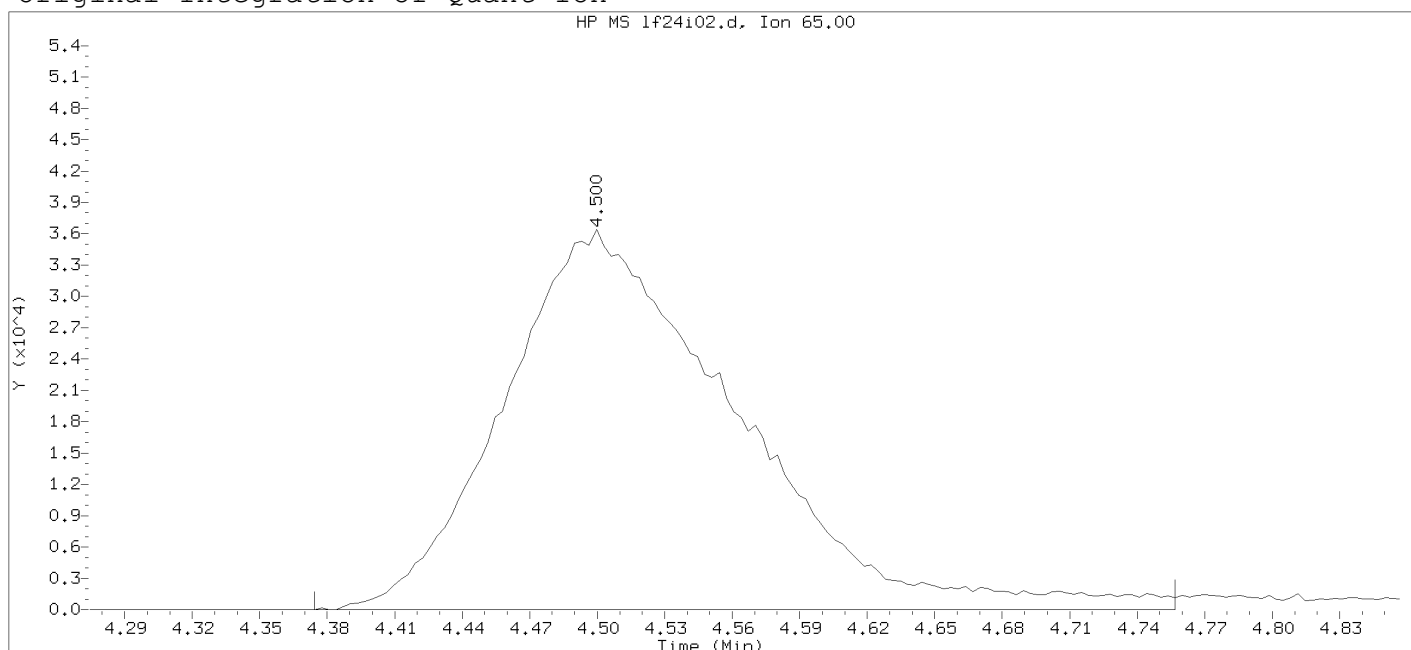
Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:05.
 Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:49.
 PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i02.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 16:39

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:55

Date, time and analyst ID of latest file update: 24-Feb-2020 20:55 mec29284

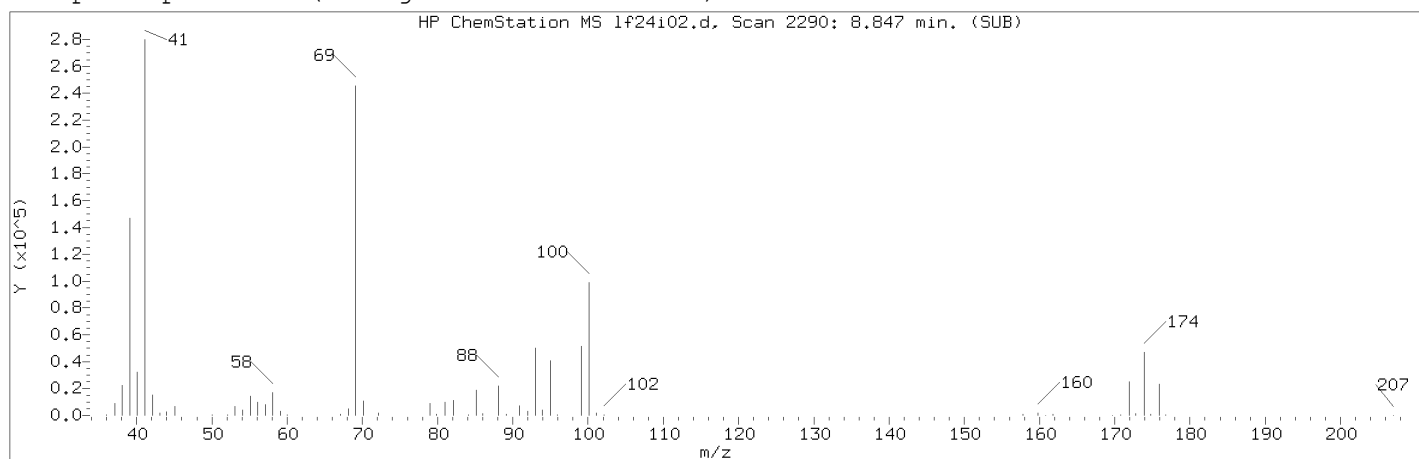
Sample Name: VSTD100

Lab Sample ID: VSTD100

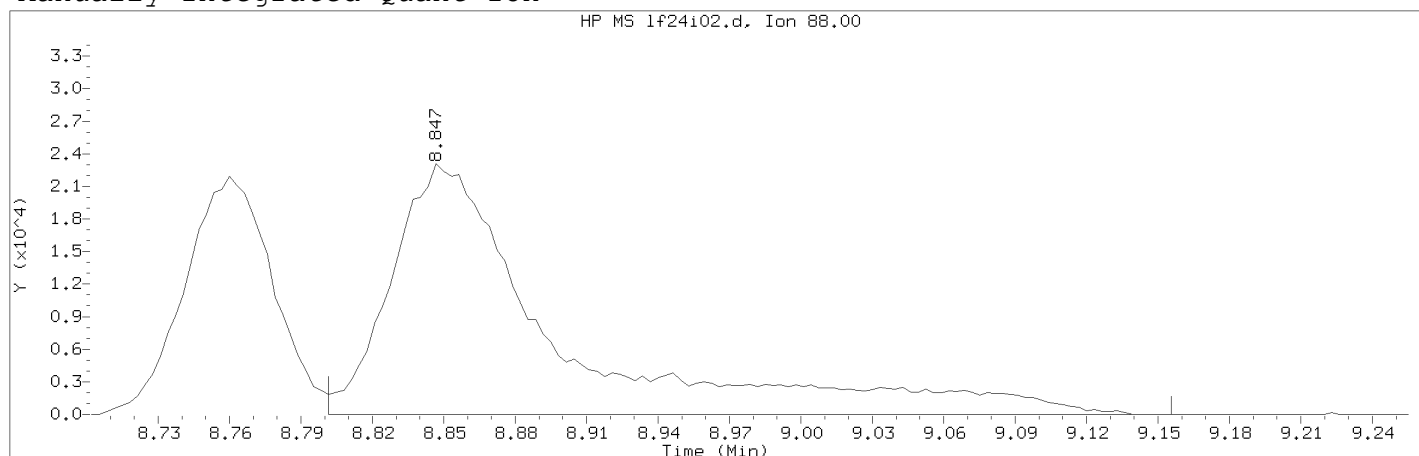
Compound Number	: 29
Compound Name	: t-Butyl alcohol-d10
Scan Number	: 938
Retention Time (minutes)	: 4.500
Quant Ion	: 65.00
Area	: 260755
On-column Amount (ng)	: 250.0000
Integration start scan	: 898
Integration stop scan	: 1017
Y at integration start	: 0
Y at integration end	: 0

Digitally signed by Miranda E. Campbell on 02/25/2020 at 18:05.
 Target 3.5 esignature user KR421m Page 152 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i02.d Instrument ID: HP09915.i
 Injection date and time: 24-FEB-2020 16:39 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 25-FEB-2020 12:44
 Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD100

Lab Sample ID: VSTD100

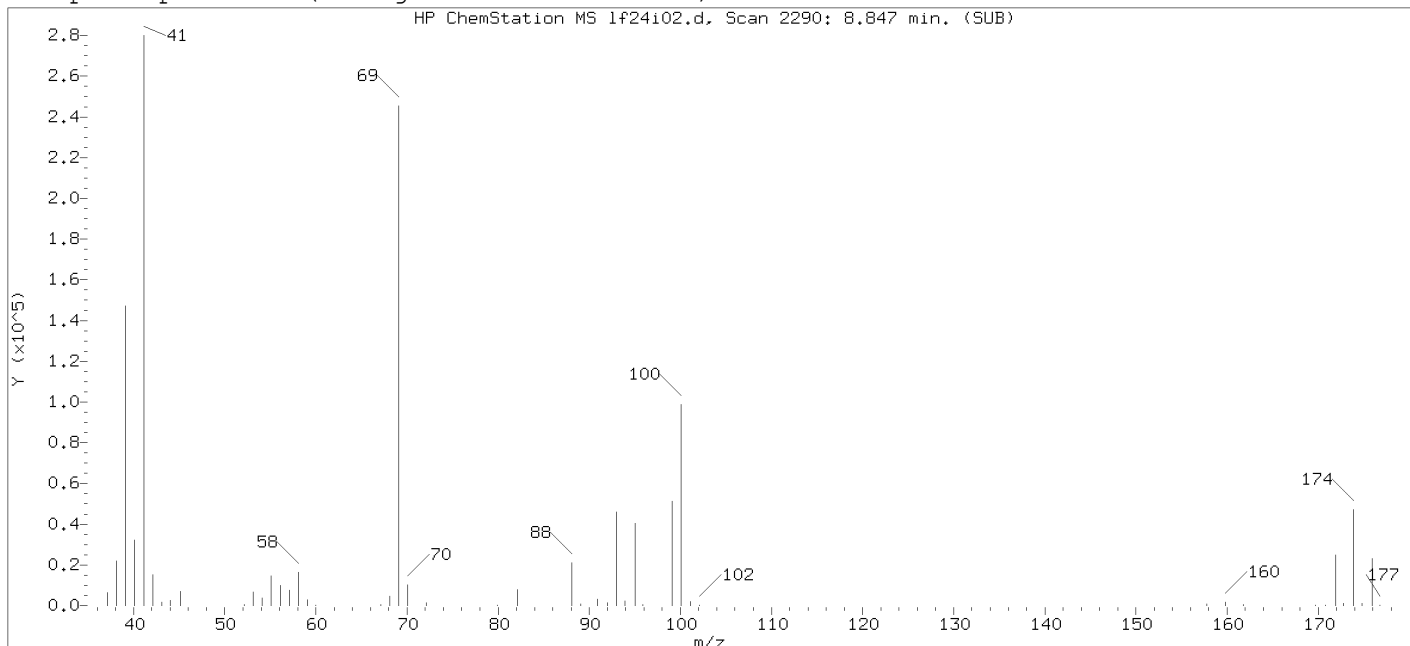
Compound Number : 75
 Compound Name : 1,4-Dioxane
 Scan Number : 2290
 Retention Time (minutes): 8.847
 Quant Ion : 88.00
 Area (flag) : 110138M
 On-Column Amount (ng) : 1321.3482
 Integration start scan : 2275 Integration stop scan: 2385
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

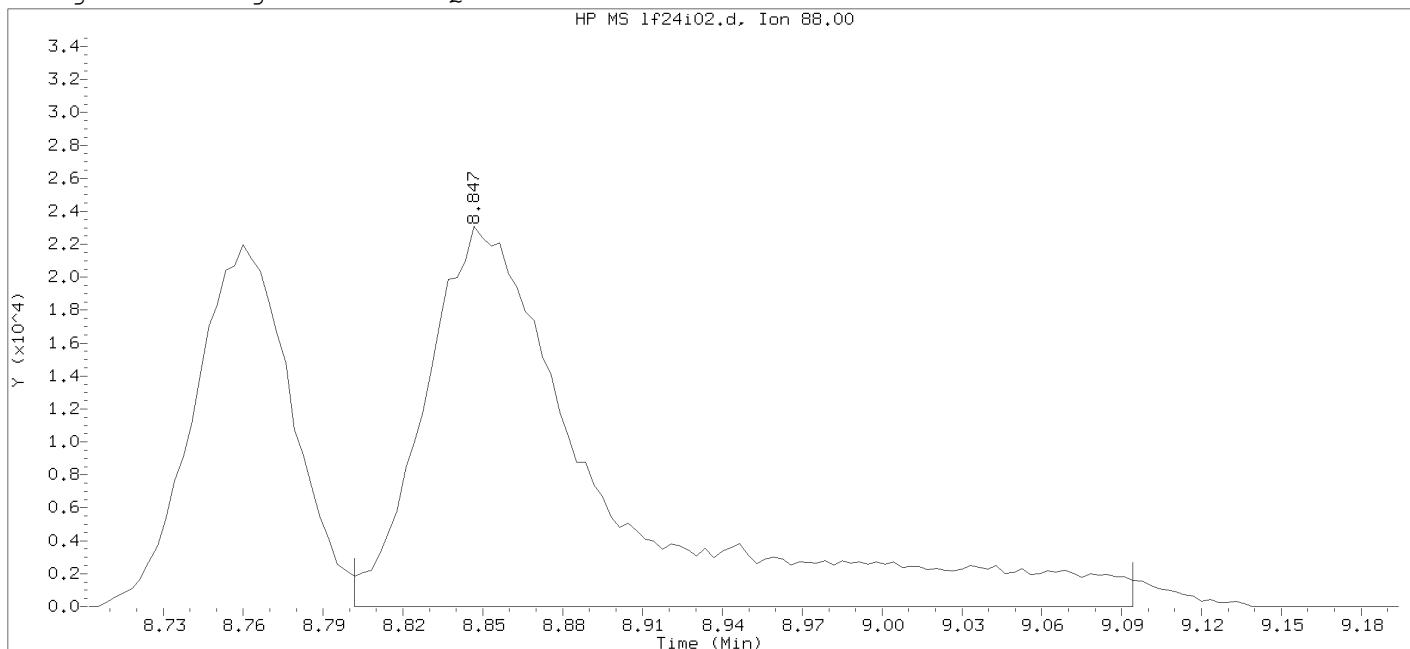
Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:05.
 Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:49.
 PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i02.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 16:39

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:55

Date, time and analyst ID of latest file update: 24-Feb-2020 20:55 mec29284

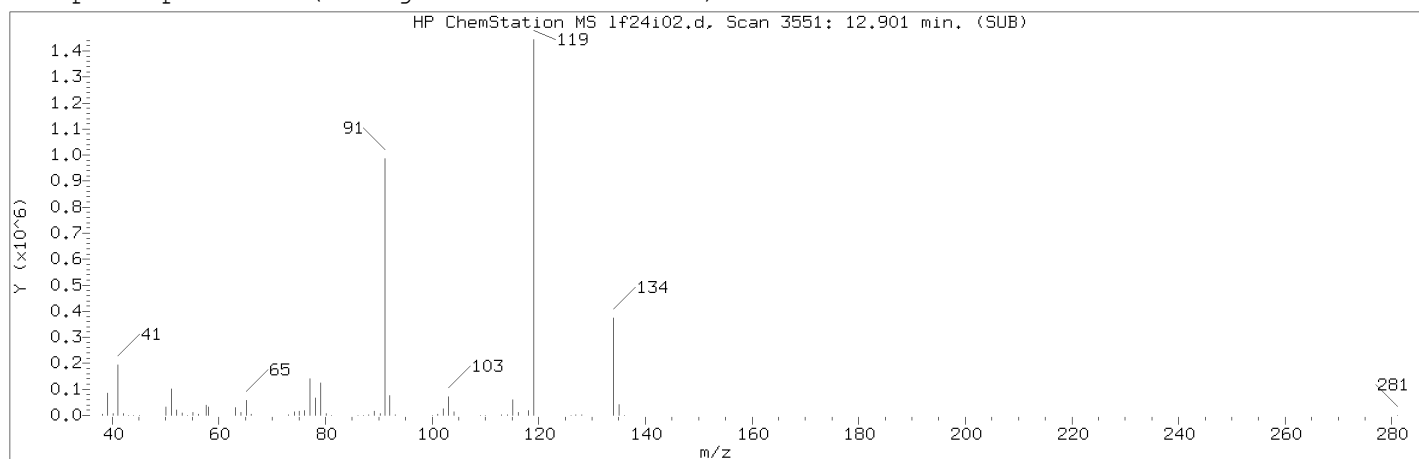
Sample Name: VSTD100

Lab Sample ID: VSTD100

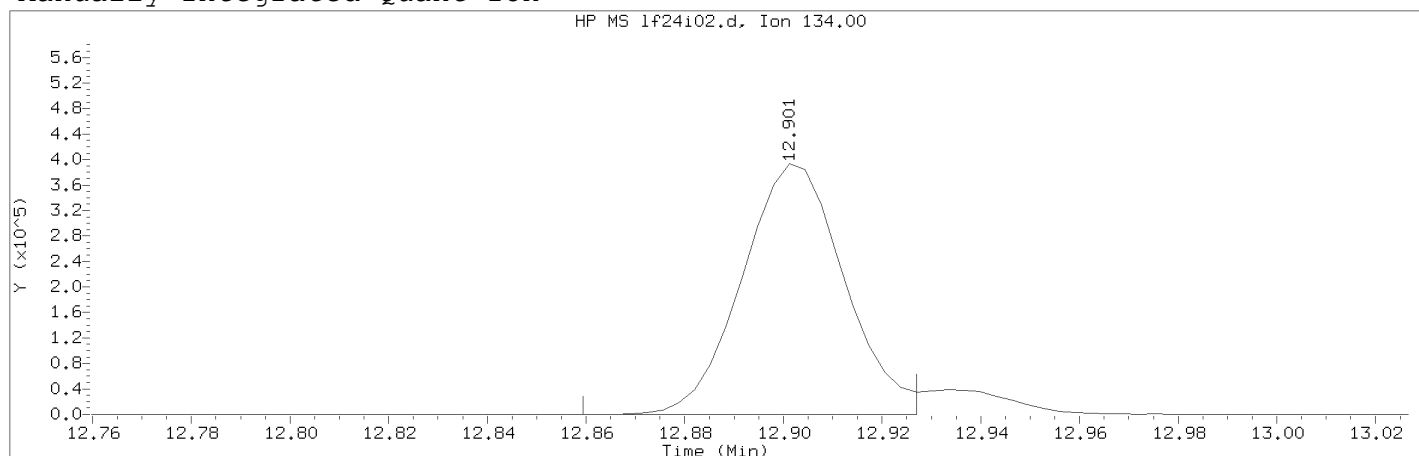
Compound Number	: 75
Compound Name	: 1,4-Dioxane
Scan Number	: 2290
Retention Time (minutes)	: 8.847
Quant Ion	: 88.00
Area	: 108066
On-column Amount (ng)	: 50.0000
Integration start scan	: 2275
Integration stop scan	: 2366
Y at integration start	: 0
Y at integration end	: 0

Digitally signed by Miranda E. Campbell on 02/25/2020 at 18:05.
 Target 3.5 esignature user KR421m Page 154 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i02.d Instrument ID: HP09915.i
 Injection date and time: 24-FEB-2020 16:39 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 25-FEB-2020 12:44
 Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD100

Lab Sample ID: VSTD100

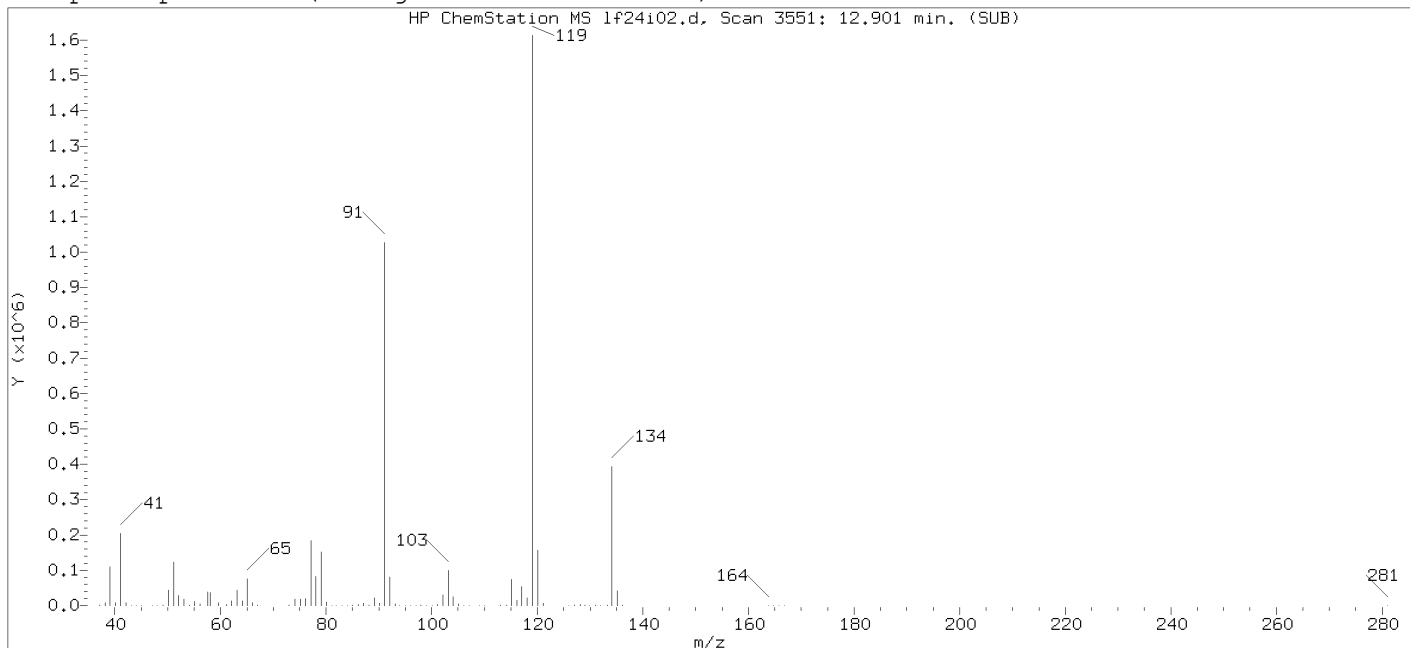
Compound Number : 124
 Compound Name : tert-Butylbenzene
 Scan Number : 3551
 Retention Time (minutes): 12.901
 Quant Ion : 134.00
 Area (flag) : 565521M
 On-Column Amount (ng) : 104.9419
 Integration start scan : 3537 Integration stop scan: 3558
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

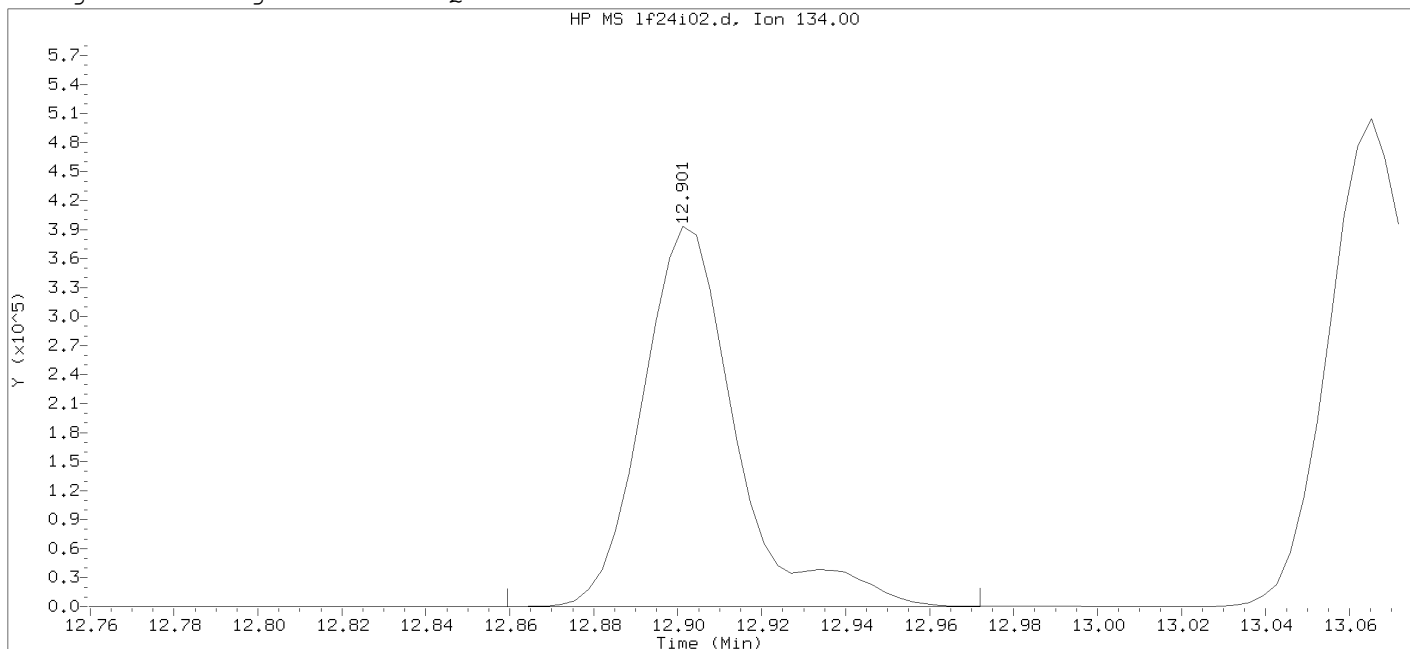
Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:05.
 Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:49.
 PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i02.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 16:39

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:55

Date, time and analyst ID of latest file update: 24-Feb-2020 20:55 mec29284

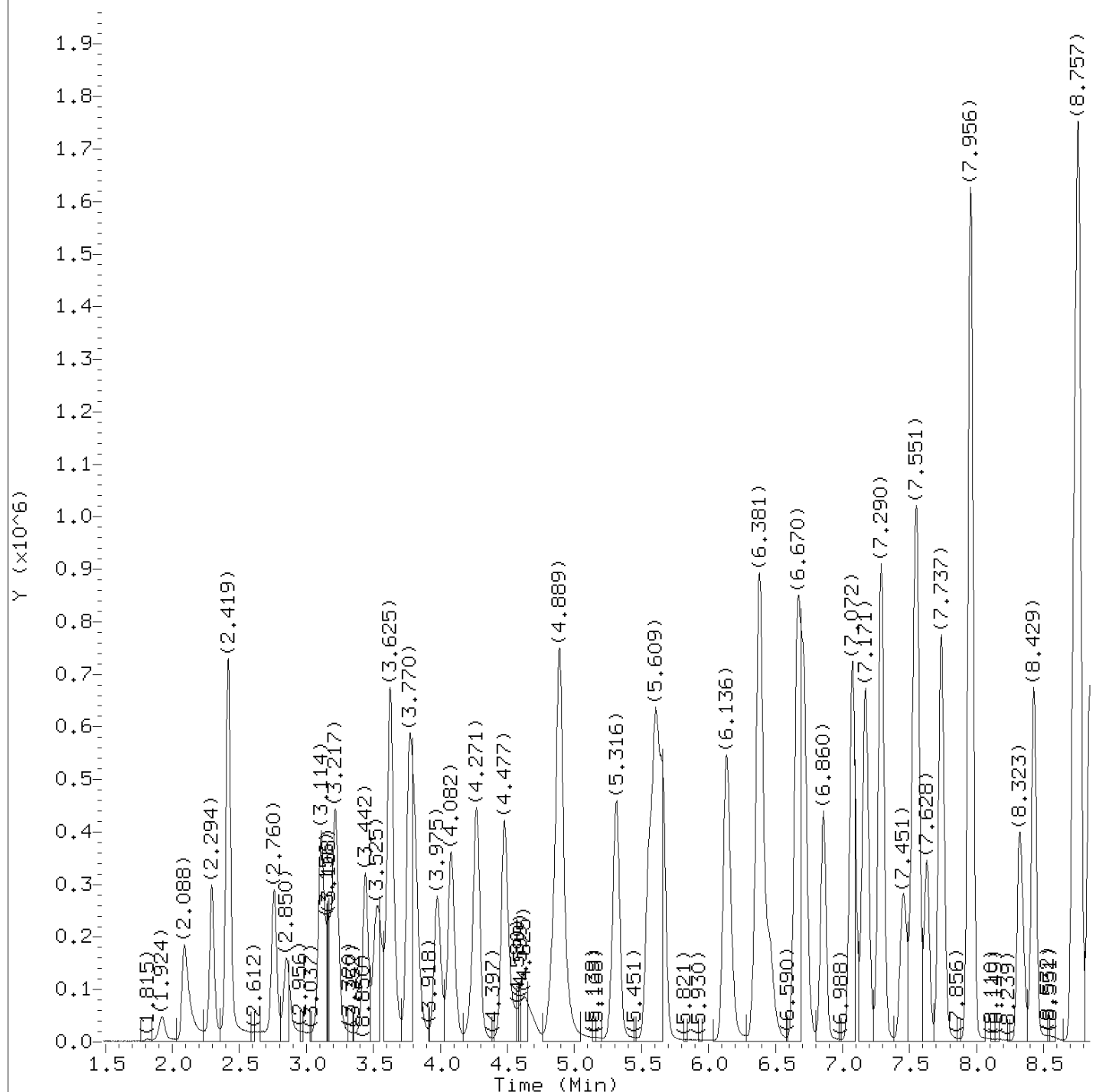
Sample Name: VSTD100

Lab Sample ID: VSTD100

Compound Number	: 124	
Compound Name	: tert-Butylbenzene	
Scan Number	: 3551	
Retention Time (minutes)	: 12.901	
Quant Ion	: 134.00	
Area	: 610802	
On-column Amount (ng)	: 1.0000	
Integration start scan	: 3537	Integration stop scan: 3572
Y at integration start	: 0	Y at integration end: 0

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 Target 3.5 esignature user KR421m Page 156 of 592

/chem/HP09915.i/20feb24i.b/1f24i03.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20feb24i.b/1f24i03.d
 Injection date and time: 24-FEB-2020 17:01

Instrument ID: HP09915.i
 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m
 Calibration date and time: 25-FEB-2020 12:44

Sublist used: 8260W

Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD050

Lab Sample ID: VSTD050

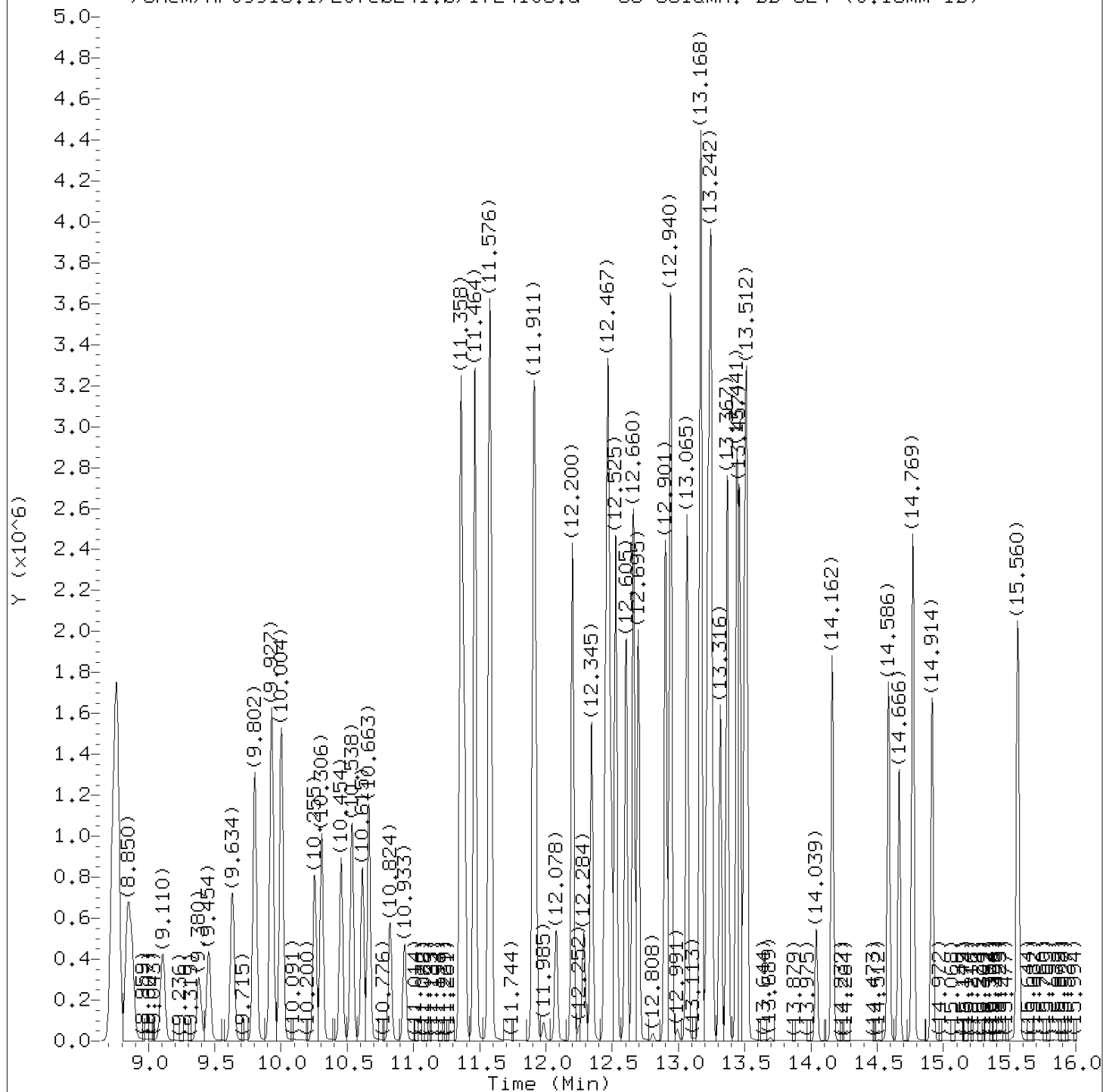
Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.

Target 3.5 esignature user ID: msc29284

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page 1 of 2

/chem/HP09915.i/20feb24i.b/1f24i03.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20feb24i.b/1f24i03.d
 Injection date and time: 24-FEB-2020 17:01

Instrument ID: HP09915.i
 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m
 Calibration date and time: 25-FEB-2020 12:44

Sublist used: 8260W

Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD050

Lab Sample ID: VSTD050

Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.

Target 3.5 esignature user ID: msc29284

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20feb24i.b/1f24i03.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 17:01

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 25-FEB-2020 12:44

Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD050

Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
3) Dichlorodifluoromethane	(2)	2.088	85	444007M	52.767
4) Chloromethane	(2)	2.297	50	419376	49.867
5) 1,3-Butadiene	(2)	2.416	39	302785M	48.044
6) Vinyl Chloride	(2)	2.416	62	404631	50.998
8) Bromomethane	(2)	2.763	94	280237	50.327
9) Chloroethane	(2)	2.853	64	218131	49.792
10) Dichlorofluoromethane	(2)	3.111	67	471015	48.482
12) Trichlorofluoromethane	(2)	3.165	101	430153	52.305
11) n-Pentane	(2)	3.217	43	453236	48.746
14) Ethyl ether	(2)	3.442	59	295451	50.341
15) Freon 123a	(2)	3.535	67	326767	49.460
16) Acrolein	(1)	3.625	56	1106052	482.679
17) 1,1-Dichloroethene	(2)	3.763	96	269099	47.836
17) 1,1-Dichloroethene	(2)	3.766	63	131482	49.475
19) Freon 113	(2)	3.802	101	275193	51.428
18) Acetone	(1)	3.805	58	94393	93.144
22) Methyl Iodide	(2)	3.975	142	497572	50.026
21) 2-Propanol	(1)	4.001	45	168382	238.487
23) Carbon Disulfide	(2)	4.082	76	901705	50.744
27) Methyl Acetate	(2)	4.249	43	339050	48.290
25) Allyl Chloride	(2)	4.274	41	434682	48.019
28) Methylene Chloride	(2)	4.477	84	309505	49.279
29) *t-Butyl alcohol-d10	(1)	4.509	65	313738M	250.000
30) t-Butyl alcohol	(1)	4.635	59	292562	241.070
31) Acrylonitrile	(2)	4.834	53	194063	50.993
32) trans-1,2-Dichloroethene	(2)	4.892	96	298918	48.446
33) Methyl Tertiary Butyl Ether	(2)	4.892	73	916259	48.746
34) n-Hexane	(2)	5.316	57	446186	50.276
36) 1,1-Dichloroethane	(2)	5.554	63	520722	50.422
38) di-Isopropyl ether	(2)	5.609	45	996204	50.199
39) 2-Chloro-1,3-butadiene	(2)	5.660	53	454113	51.415
40) Ethyl t-butyl ether	(2)	6.136	59	944990	50.140
43) 1,2-Dichloroethene (Total)	(2)		96	634543	97.084
44) 2-Butanone	(2)	6.361	43	496607	102.051
42) cis-1,2-Dichloroethene	(2)	6.381	96	335625	48.638
45) 2,2-Dichloropropane	(2)	6.393	77	417617	50.817
47) Propionitrile	(1)	6.461	54	382071	242.916
48) Methacrylonitrile	(2)	6.663	67	494501	127.035

M = Compound was manually integrated.

* = Compound is an internal standard.

page 1 of 4

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on 02/25/2020 at 18:06.

Target 3.5 esignature user ID: mec29284

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20feb24i.b/1f24i03.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 17:01

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 25-FEB-2020 12:44

Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD050

Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
49) Bromochloromethane	(2)	6.712	128	167585	48.871
50) Tetrahydrofuran	(1)	6.715	71	137873	97.497
51) Chloroform	(2)	6.860	83	505226	50.487
52)\$Dibromofluoromethane	(2)	7.072	113	315462	50.016
52)\$Dibromofluoromethane	(2)	7.072	111	322591	50.062
53) 1,1,1-Trichloroethane	(2)	7.078	97	443260	50.519
54) Cyclohexane	(2)	7.171	56	552795	51.161
54) Cyclohexane	(2)	7.171	84	465623	51.038
54) Cyclohexane	(2)	7.175	69	167976	50.687
56) Carbon Tetrachloride	(2)	7.284	117	368423	51.391
55) 1,1-Dichloropropene	(2)	7.290	75	412337	50.376
58) Isobutyl Alcohol	(1)	7.454	41	246854	598.649
57)\$1,2-Dichloroethane-d4	(2)	7.525	102	81803	50.007
57)\$1,2-Dichloroethane-d4	(2)	7.525	65	364670	49.942
57)\$1,2-Dichloroethane-d4	(2)	7.528	104	52146	50.219
60) Benzene	(2)	7.557	78	1257600	50.366
61) 1,2-Dichloroethane	(2)	7.628	62	402413	48.203
61) 1,2-Dichloroethane	(2)	7.631	98	41023	53.655
65) t-Amyl methyl ether	(2)	7.737	73	958411	50.558
67) n-Heptane	(2)	7.956	43	421644	48.516
66)*Fluorobenzene	(2)	7.956	96	1333909	50.000
69) n-Butanol	(1)	8.323	56	432939	1254.231
71) Trichloroethene	(2)	8.429	95	315426	50.181
72) Methylcyclohexane	(2)	8.728	83	530856	50.339
72) Methylcyclohexane	(2)	8.728	98	238088	50.058
73) 1,2-Dichloropropane	(2)	8.766	63	325683	50.207
76) Methyl Methacrylate	(2)	8.840	69	318548	51.437
75) 1,4-Dioxane	(1)	8.856	88	55994M	608.966
74) Dibromomethane	(2)	8.872	93	213029	50.499
78) Bromodichloromethane	(2)	9.107	83	388240	51.481
79) 2-Nitropropane	(2)	9.380	41	249223	107.415
80) 2-Chloroethyl Vinyl Ether	(2)	9.454	63	242690	51.034
81) cis-1,3-Dichloropropene	(2)	9.634	75	519900	51.456
82) 4-Methyl-2-pentanone	(2)	9.802	43	1045430	103.837
83)\$Toluene-d8	(3)	9.927	98	1332054	49.973
83)\$Toluene-d8	(3)	9.930	100	865324	49.953
88) Toluene	(3)	10.004	92	800403	50.537
90) 1,3-Dichloropropene (total)	(3)		100	1012715	103.674

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 2 of 4

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on 02/25/2020 at 18:06.

Target 3.5 esignature user ID: mec29284

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20feb24i.b/1f24i03.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 17:01

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 25-FEB-2020 12:44

Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD050

Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
89) trans-1,3-Dichloropropene	(3)	10.255	75	492815	52.218
91) Ethyl Methacrylate	(3)	10.306	69	555027	51.361
92) 1,1,2-Trichloroethane	(3)	10.454	97	312292	50.028
93) Tetrachloroethene	(3)	10.535	166	344216	51.212
94) 1,3-Dichloropropane	(3)	10.615	76	522911	50.185
96) 2-Hexanone	(3)	10.663	43	767002	105.077
97) Dibromochloromethane	(3)	10.821	129	329752	52.266
99) 1,2-Dibromoethane	(3)	10.933	107	343591	50.589
100) *Chlorobenzene-d5	(3)	11.358	117	1014578	50.000
101) 1-Chlorohexane	(3)	11.361	91	426705	48.328
102) Chlorobenzene	(3)	11.384	112	891791	50.107
103) 1,1,1,2-Tetrachloroethane	(3)	11.461	131	308661	51.879
104) Ethylbenzene	(3)	11.464	91	1537496	50.816
106) m+p-Xylene	(3)	11.576	106	1211864	102.050
108) Xylene (Total)	(3)		106	1812716	153.095
107) o-Xylene	(3)	11.904	106	600852	51.045
109) Styrene	(3)	11.920	104	1027067	51.876
110) Bromoform	(3)	12.078	173	244020	49.968
111) Isopropylbenzene	(3)	12.200	105	1530200	50.736
112) Cyclohexanone	(1)	12.284	55	234295	635.251
114) \$4-Bromofluorobenzene	(3)	12.345	95	499424	49.684
114) \$4-Bromofluorobenzene	(3)	12.345	174	412780	49.678
116) 1,1,2,2-Tetrachloroethane	(4)	12.445	83	523251M	49.917
115) Bromobenzene	(4)	12.461	156	392380	50.298
118) trans-1,4-Dichloro-2-butene	(4)	12.470	53	388497	129.380
117) 1,2,3-Trichloropropane	(4)	12.493	110	154171	49.560
119) n-Propylbenzene	(4)	12.528	91	1772530	50.375
120) 2-Chlorotoluene	(4)	12.605	126	364180	49.821
122) 1,3,5-Trimethylbenzene	(4)	12.660	105	1314784	50.790
121) 4-Chlorotoluene	(4)	12.699	126	378574	49.922
124) tert-Butylbenzene	(4)	12.901	134	266591M	50.054
125) Pentachloroethane	(4)	12.937	167	223558	52.500
126) 1,2,4-Trimethylbenzene	(4)	12.943	105	1374538	50.726
127) sec-Butylbenzene	(4)	13.065	105	1607746	50.549
129) 1,3-Dichlorobenzene	(4)	13.165	146	732357	49.794
130) p-Isopropyltoluene	(4)	13.171	119	1397829	51.016
131) *1,4-Dichlorobenzene-d4	(4)	13.219	152	551907	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	753314	49.453

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 3 of 4

Digitally signed by Miranda E. Campbell
on 02/25/2020 at 18:06.

Target 3.5 esignature user ID: mec29284

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20feb24i.b/lf24i03.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 17:01

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 25-FEB-2020 12:44

Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD050

Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
134) 1,2,3-Trimethylbenzene	(4)	13.248	105	1364273	50.361
135) Benzyl Chloride	(4)	13.316	91	1057085	53.314
136) 1,3-Diethylbenzene	(4)	13.367	119	832451	50.146
141) Diethylbenzene (total)	(4)		100	2406610	150.606
137) 1,4-Diethylbenzene	(4)	13.441	119	870376	50.051
139) n-Butylbenzene	(4)	13.461	92	680471	49.264
138) 1,2-Dichlorobenzene	(4)	13.499	146	722688	49.375
140) 1,2-Diethylbenzene	(4)	13.515	119	703783	50.409
142) 1,2-Dibromo-3-chloropropane	(4)	14.039	75	119891	52.483
144) 1,3,5-Trichlorobenzene	(4)	14.162	180	539488	49.006
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	513474	48.574
147) Hexachlorobutadiene	(4)	14.666	225	219854	47.297
148) Naphthalene	(4)	14.769	128	1817743	50.941
149) 1,2,3-Trichlorobenzene	(4)	14.914	180	491700	49.156
150) 2-Methylnaphthalene	(4)	15.560	142	1024822	53.550

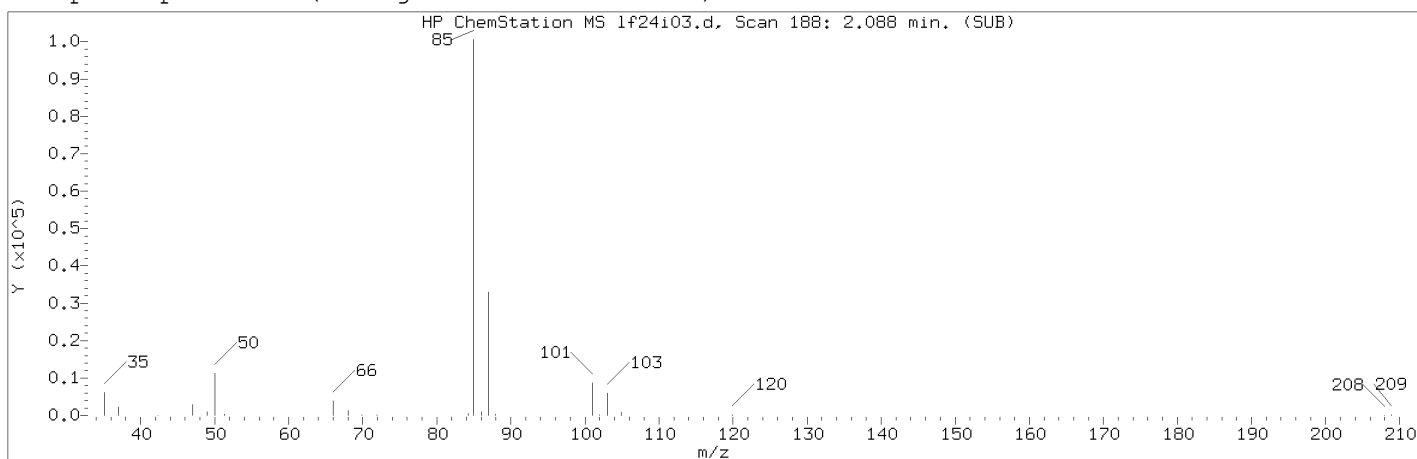
page 4 of 4

Digitally signed by Miranda E. Campbell
on 02/25/2020 at 18:06.

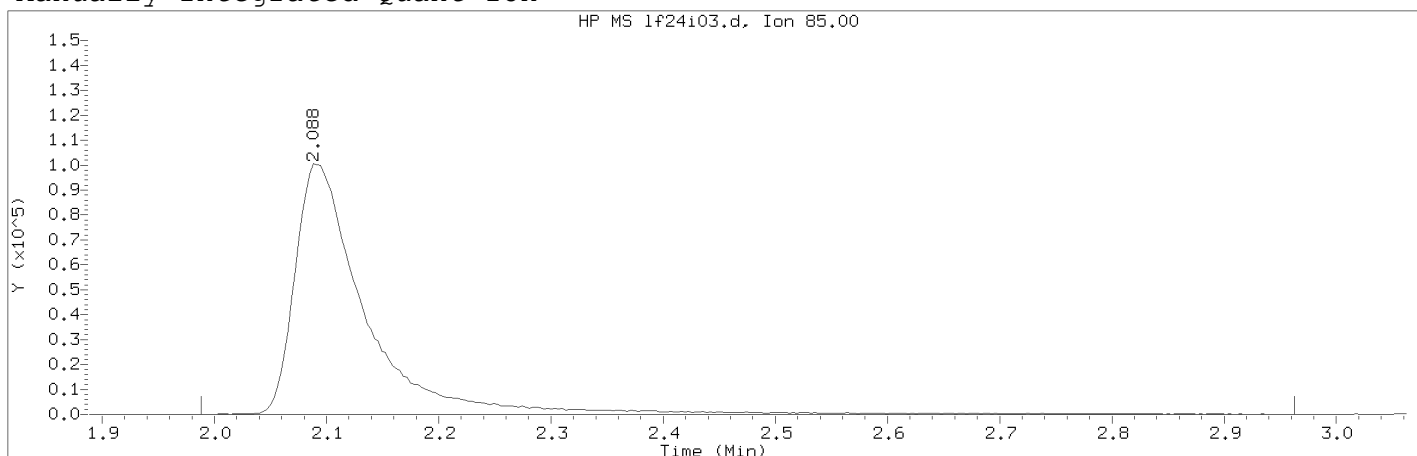
Target 3.5 esignature user ID: mec29284

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Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i03.d Instrument ID: HP09915.i
 Injection date and time: 24-FEB-2020 17:01 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 25-FEB-2020 12:44
 Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD050

Lab Sample ID: VSTD050

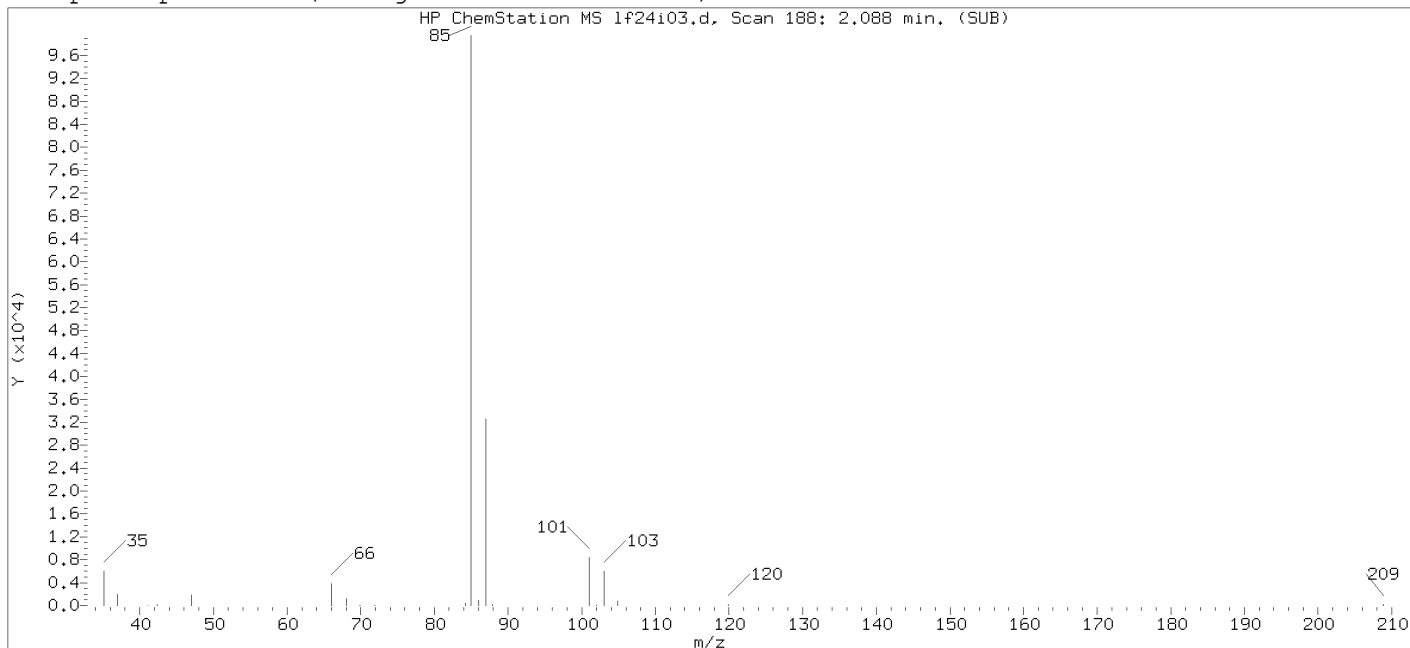
Compound Number : 3
 Compound Name : Dichlorodifluoromethane
 Scan Number : 188
 Retention Time (minutes): 2.088
 Quant Ion : 85.00
 Area (flag) : 444007M
 On-Column Amount (ng) : 52.7669
 Integration start scan : 156 Integration stop scan: 459
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

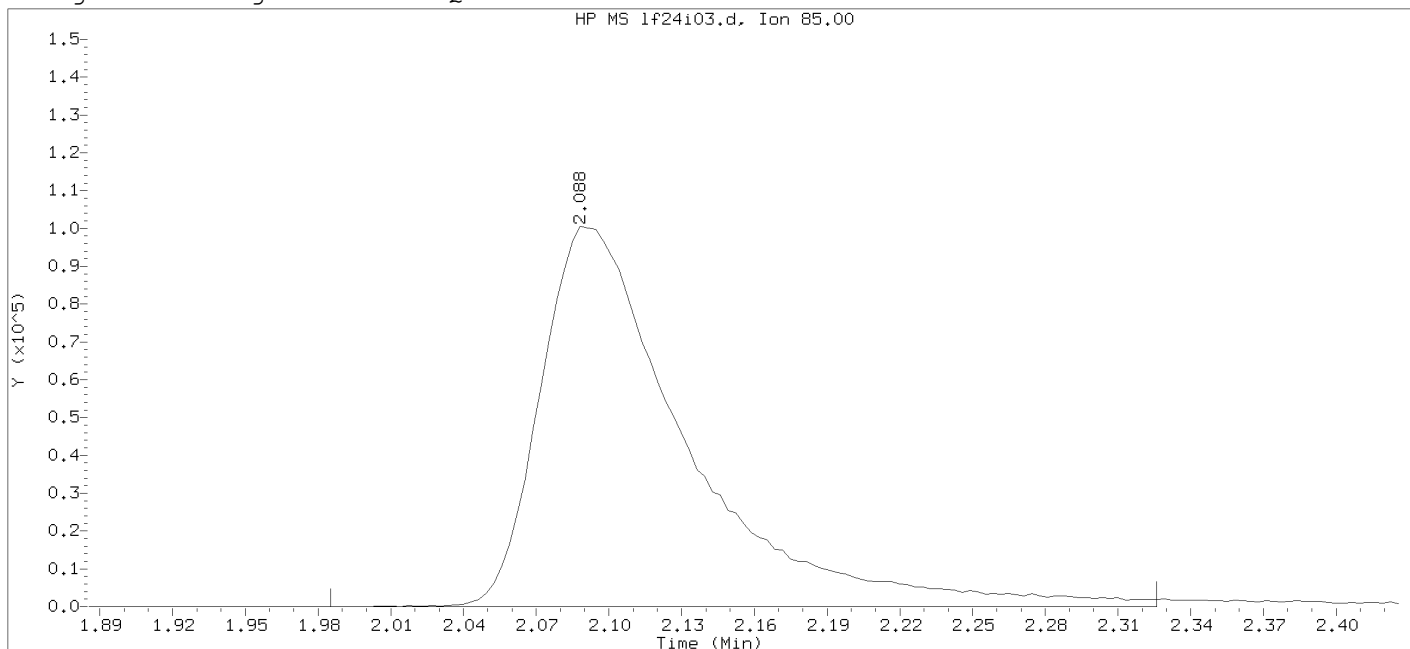
Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.
 Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:49.
 PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i03.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 17:01

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:49

Date, time and analyst ID of latest file update: 24-Feb-2020 20:49 mec29284

Sample Name: VSTD050

Lab Sample ID: VSTD050

Compound Number : 3

Compound Name : Dichlorodifluoromethane

Scan Number : 188

Retention Time (minutes): 2.088

Quant Ion : 85.00

Area : 423753

On-column Amount (ng) : 6.1607

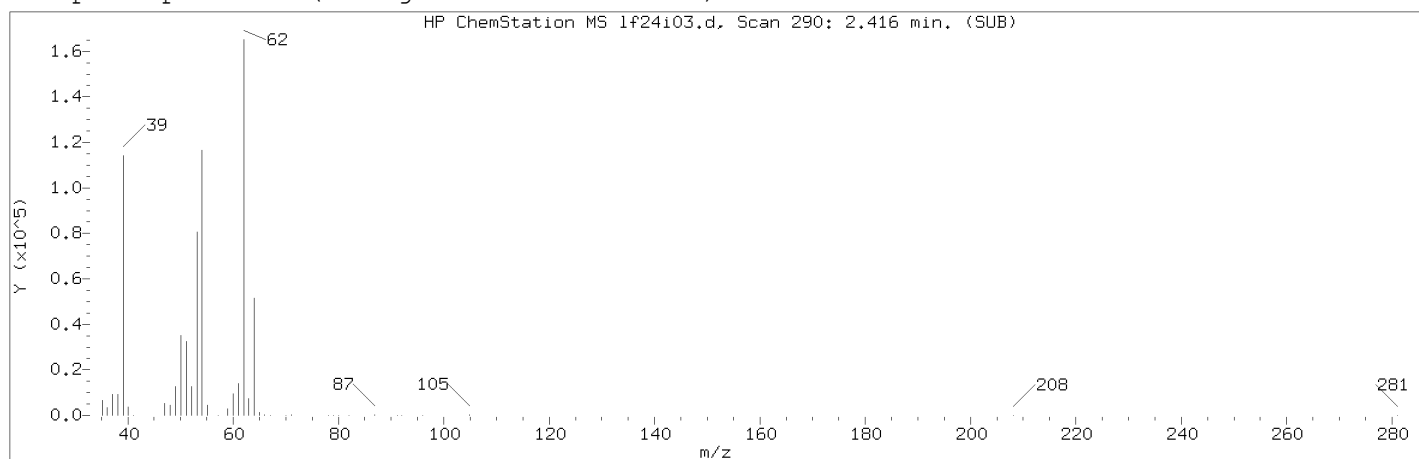
Integration start scan : 155 Integration stop scan: 261

Y at integration start : 0 Y at integration end: 0

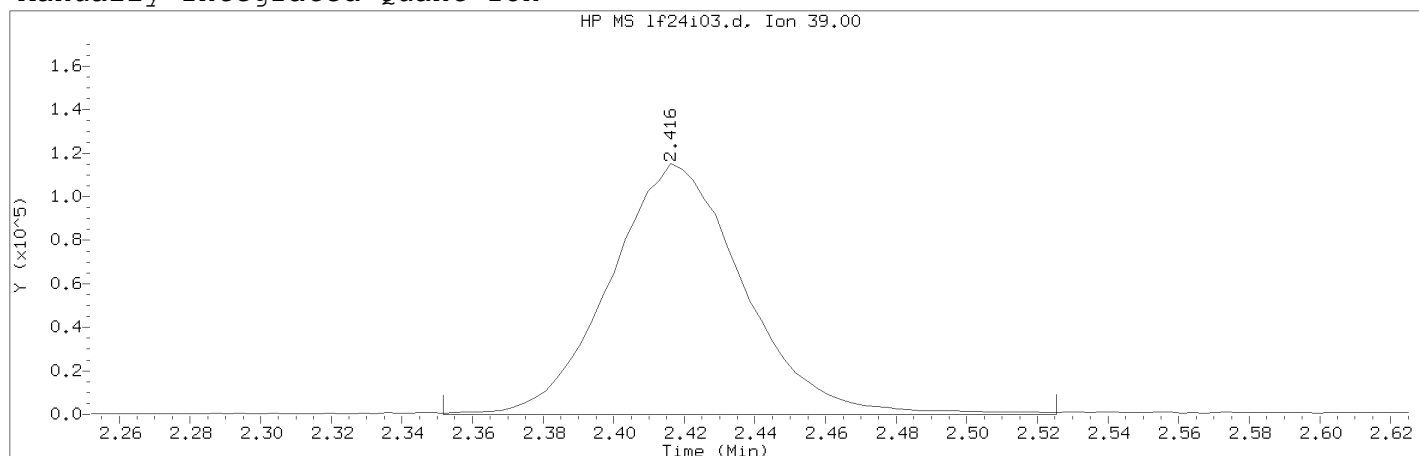
Digitally signed by Miranda E. Campbell on 02/25/2020 at 18:06.

Target 3.5 esignature user KR421m Page 164 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i03.d Instrument ID: HP09915.i
 Injection date and time: 24-FEB-2020 17:01 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 25-FEB-2020 12:44
 Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

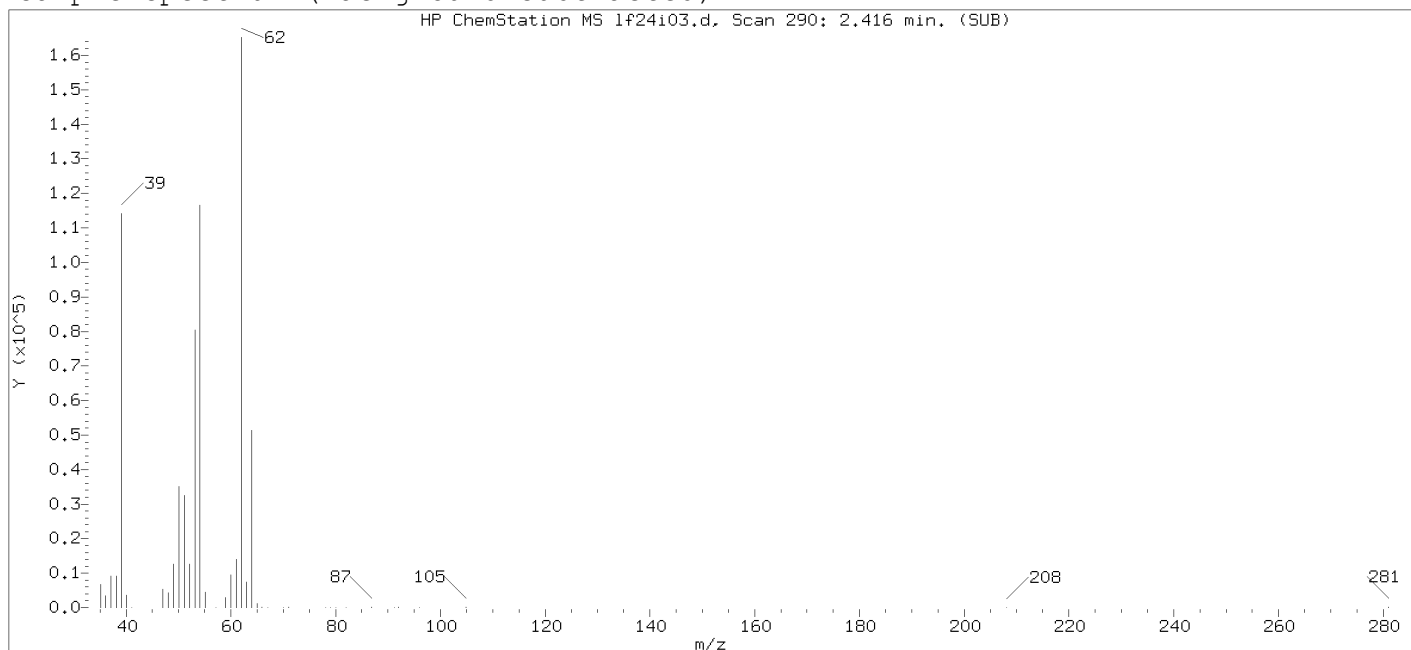
Compound Number : 5
 Compound Name : 1,3-Butadiene
 Scan Number : 290
 Retention Time (minutes): 2.416
 Quant Ion : 39.00
 Area (flag) : 302785M
 On-Column Amount (ng) : 48.0438
 Integration start scan : 269 Integration stop scan: 323
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

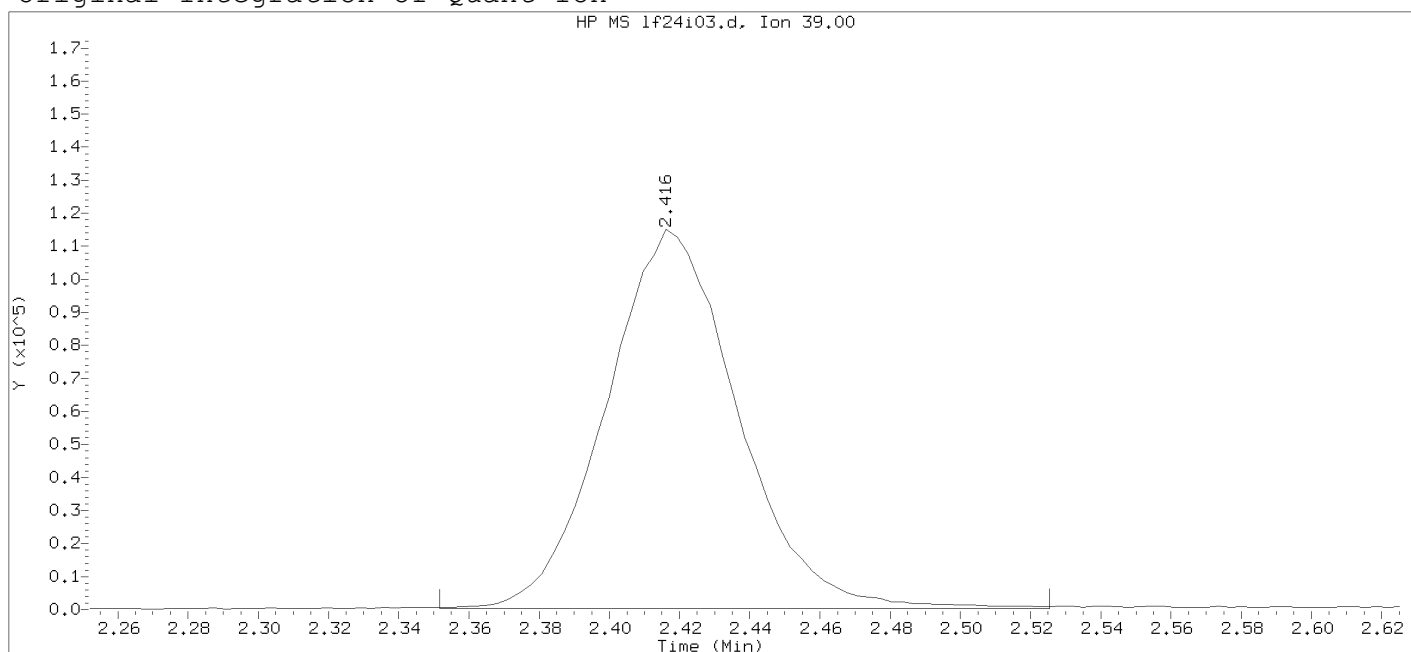
Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.
 Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:49.
 PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i03.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 17:01

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:49

Date, time and analyst ID of latest file update: 24-Feb-2020 20:49 mec29284

Sample Name: VSTD050

Lab Sample ID: VSTD050

Compound Number : 5

Compound Name : 1,3-Butadiene

Scan Number : 290

Retention Time (minutes): 2.416

Quant Ion : 39.00

Area : 298929

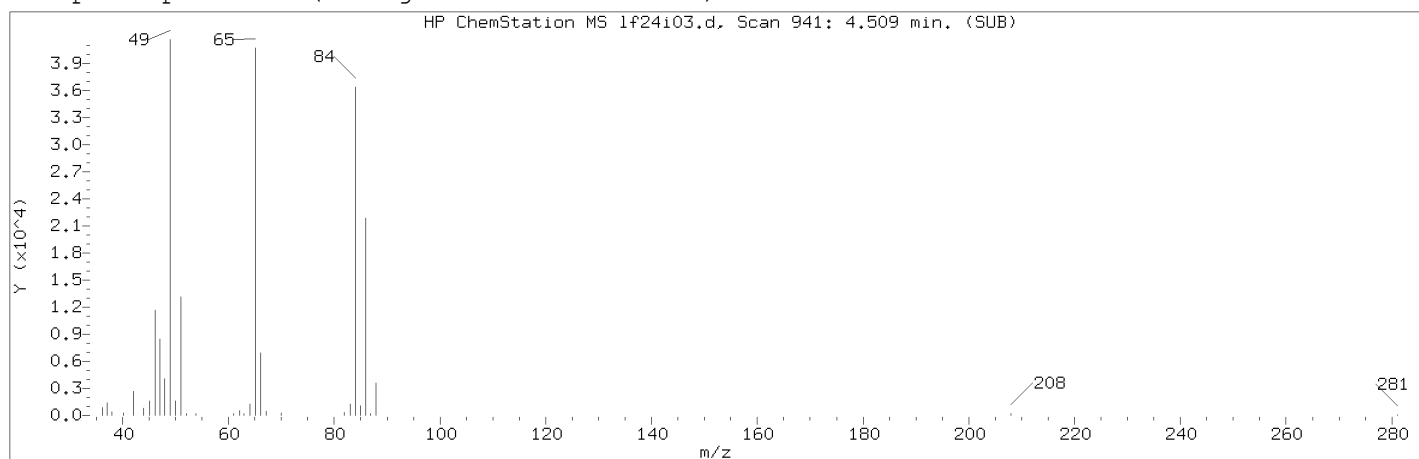
On-column Amount (ng) : 6.1090

Integration start scan : 269 Integration stop scan: 323

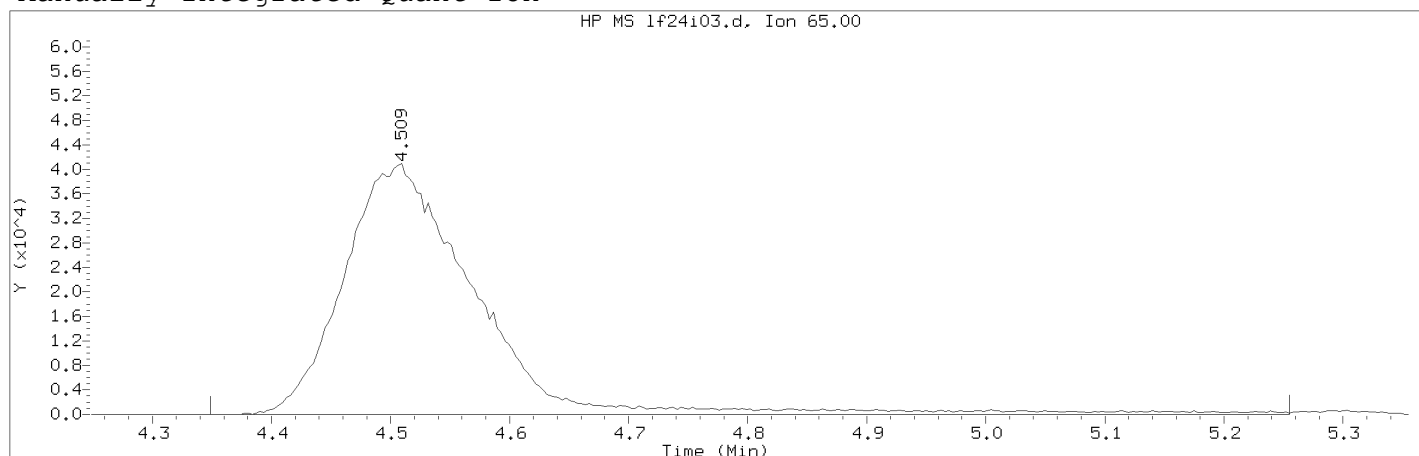
Y at integration start : 314 Y at integration end: 396

Digitally signed by Miranda E. Campbell on 02/25/2020 at 18:06.
 Target 3.5 esignature user KR421m Page 166 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i03.d Instrument ID: HP09915.i
 Injection date and time: 24-FEB-2020 17:01 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 25-FEB-2020 12:44
 Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD050

Lab Sample ID: VSTD050

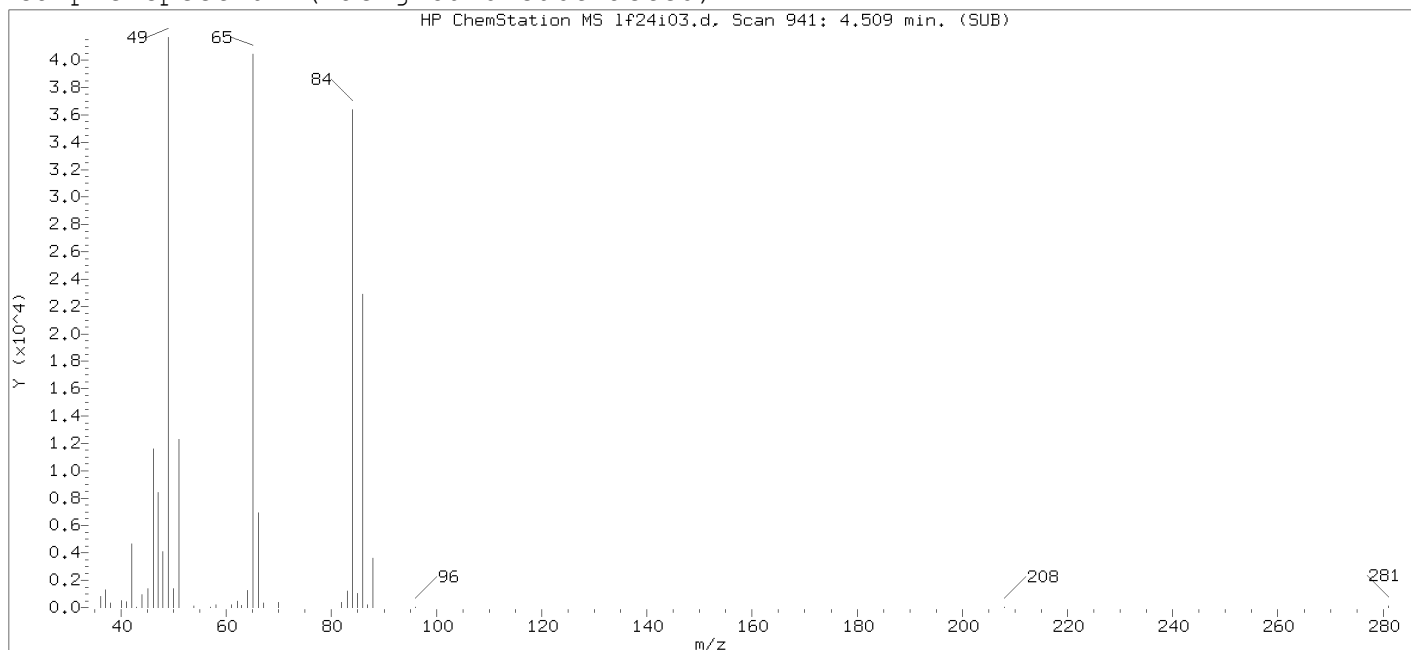
Compound Number : 29
 Compound Name : t-Butyl alcohol-d10
 Scan Number : 941
 Retention Time (minutes): 4.509
 Quant Ion : 65.00
 Area (flag) : 313738M
 On-Column Amount (ng) : 250.0000
 Integration start scan : 890 Integration stop scan: 1172
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

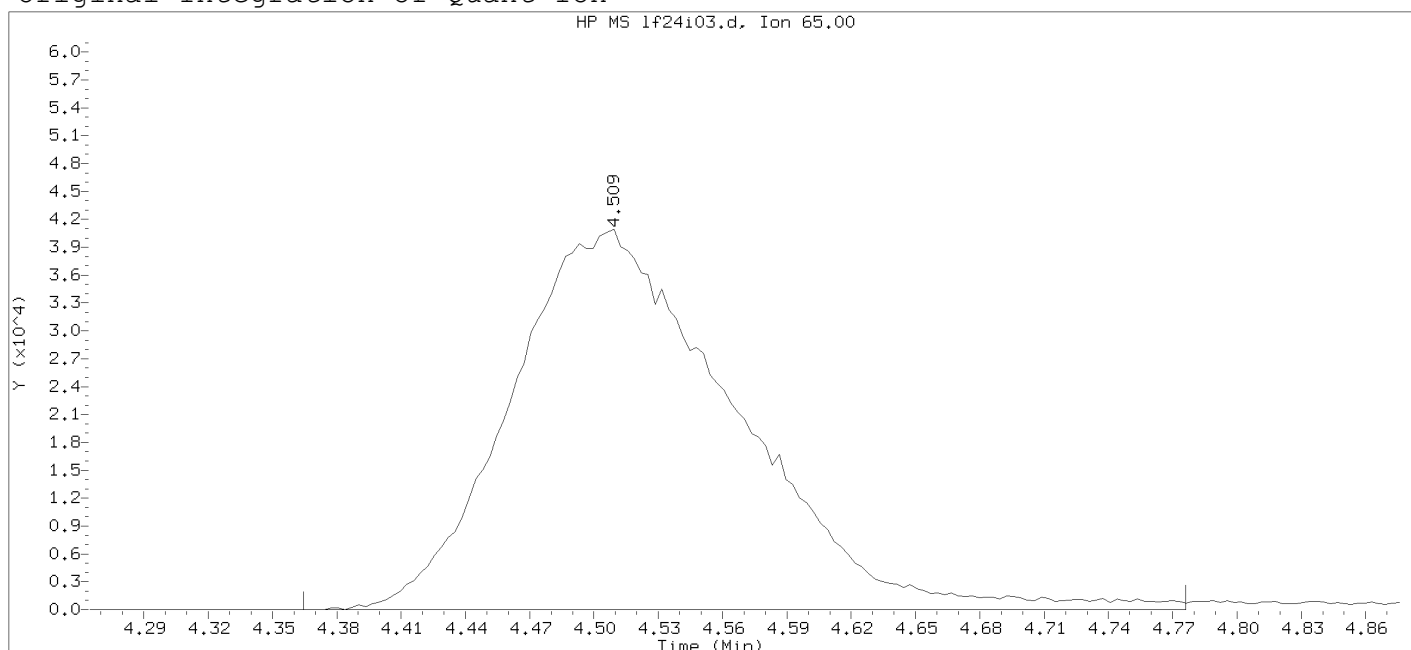
Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.
 Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:49.
 PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i03.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 17:01

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:49

Date, time and analyst ID of latest file update: 24-Feb-2020 20:49 mec29284

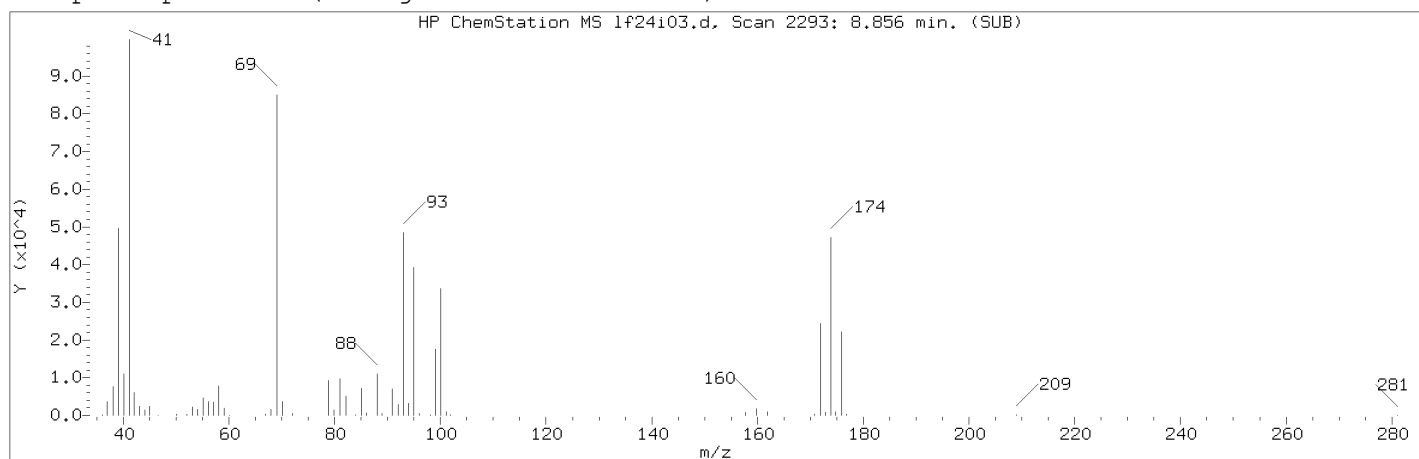
Sample Name: VSTD050

Lab Sample ID: VSTD050

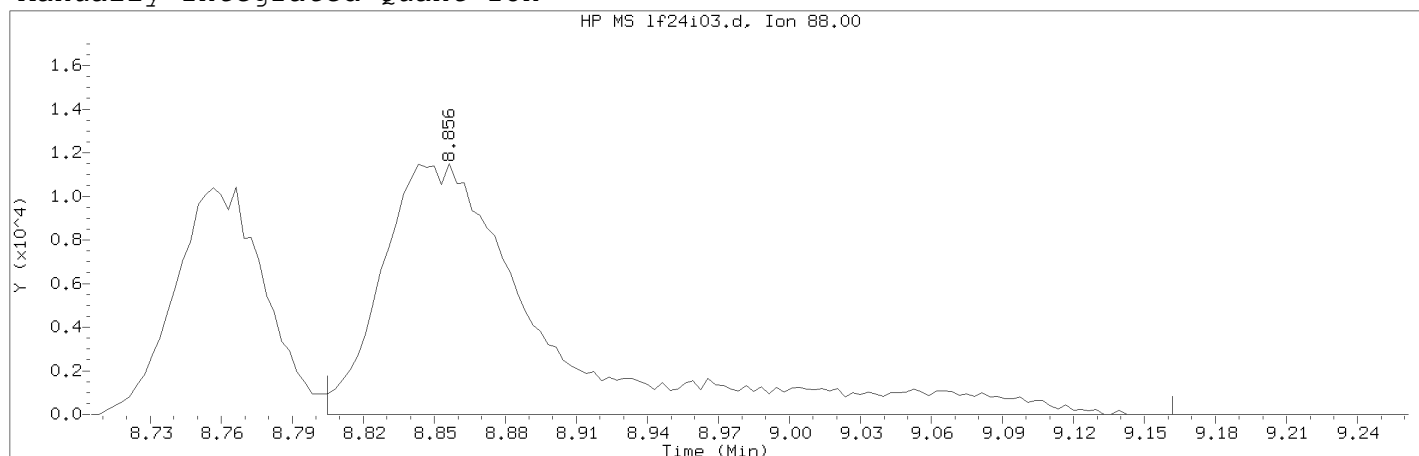
Compound Number	: 29
Compound Name	: t-Butyl alcohol-d10
Scan Number	: 941
Retention Time (minutes)	: 4.509
Quant Ion	: 65.00
Area	: 298104
On-column Amount (ng)	: 250.0000
Integration start scan	: 895
Integration stop scan	: 1023
Y at integration start	: 0
Y at integration end	: 0

Digitally signed by Miranda E. Campbell on 02/25/2020 at 18:06.
 Target 3.5 esignature user KR421m Page 168 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i03.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 17:01

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 25-FEB-2020 12:44

Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD050

Lab Sample ID: VSTD050

Compound Number	: 75
Compound Name	: 1,4-Dioxane
Scan Number	: 2293
Retention Time (minutes)	: 8.856
Quant Ion	: 88.00
Area (flag)	: 55994M
On-Column Amount (ng)	: 608.9663
Integration start scan	: 2276
Integration stop scan	: 2387
Y at integration start	: 0
Y at integration end	: 0

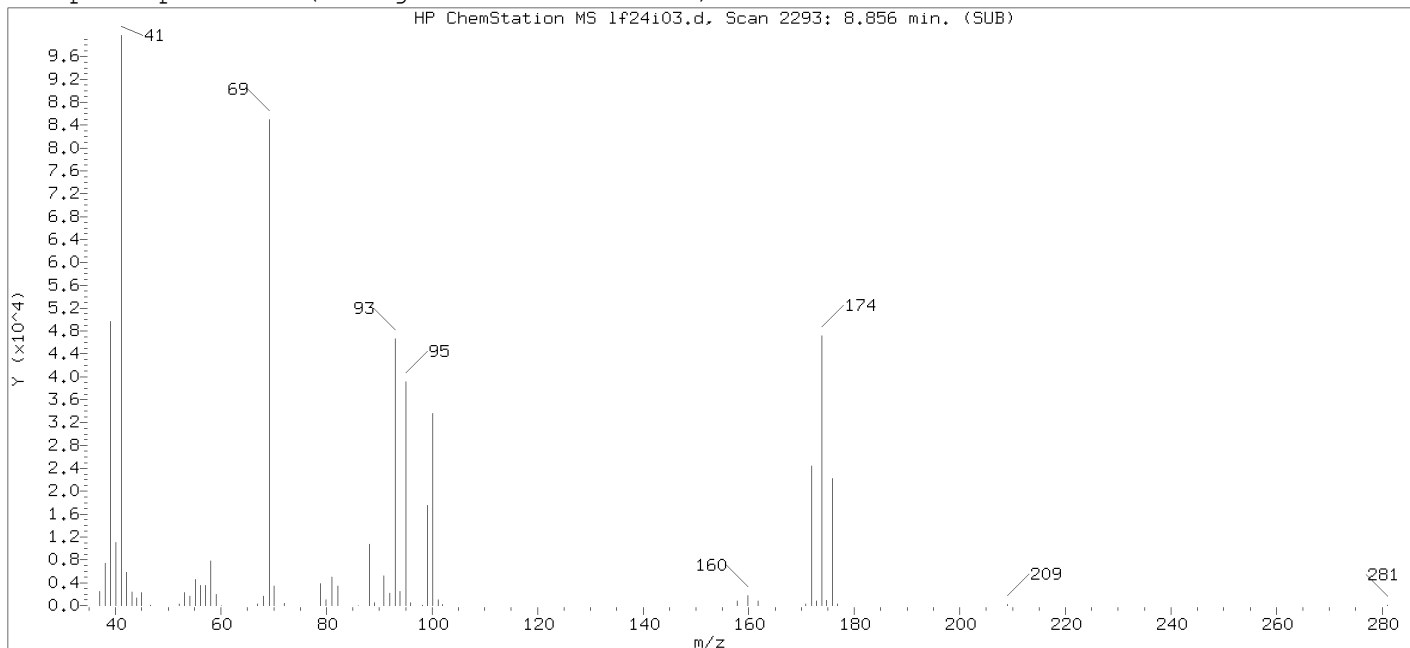
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Miranda E. Campbell
on 02/25/2020 at 18:06.
Target 3.5 esignature user ID: mec29284

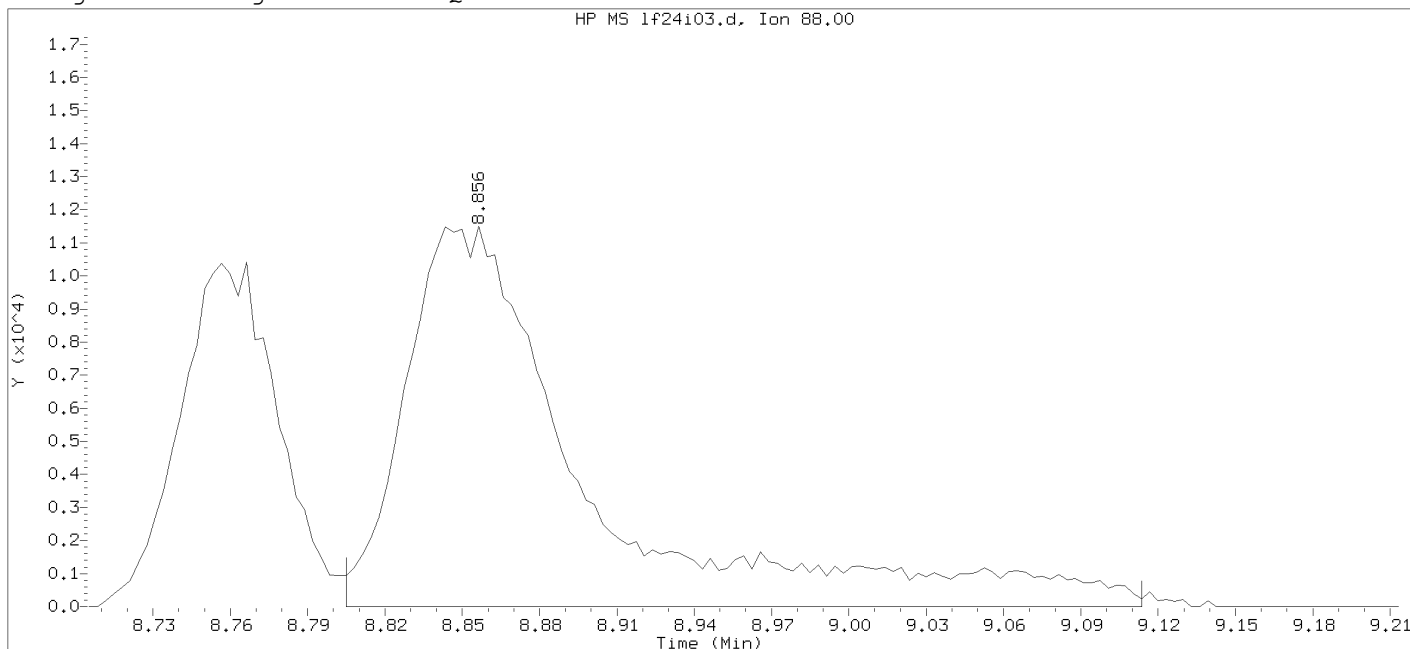
Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:49.

PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i03.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 17:01

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:49

Date, time and analyst ID of latest file update: 24-Feb-2020 20:49 mec29284

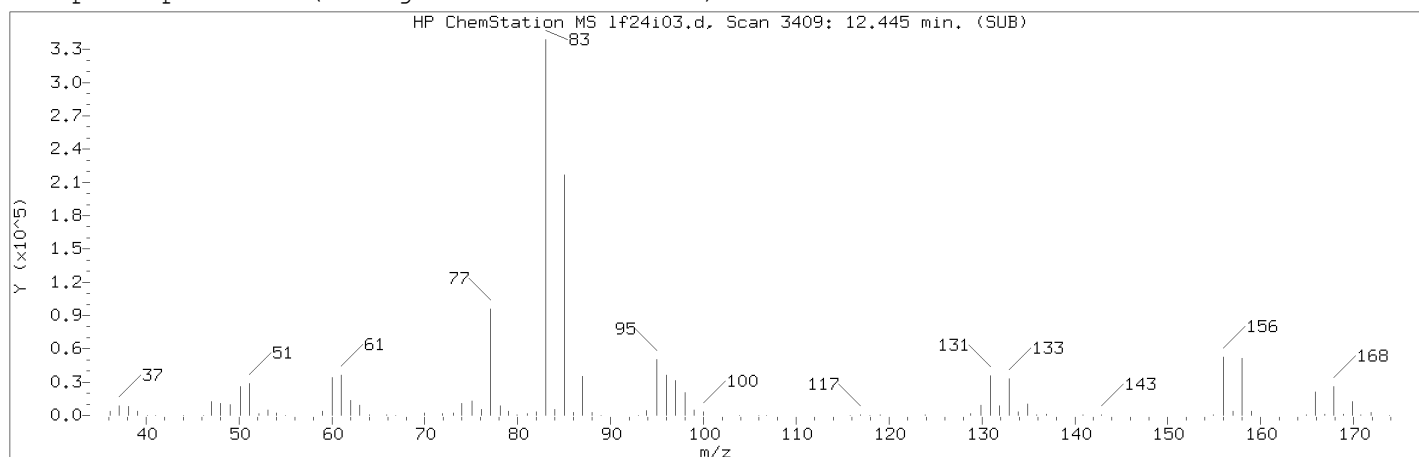
Sample Name: VSTD050

Lab Sample ID: VSTD050

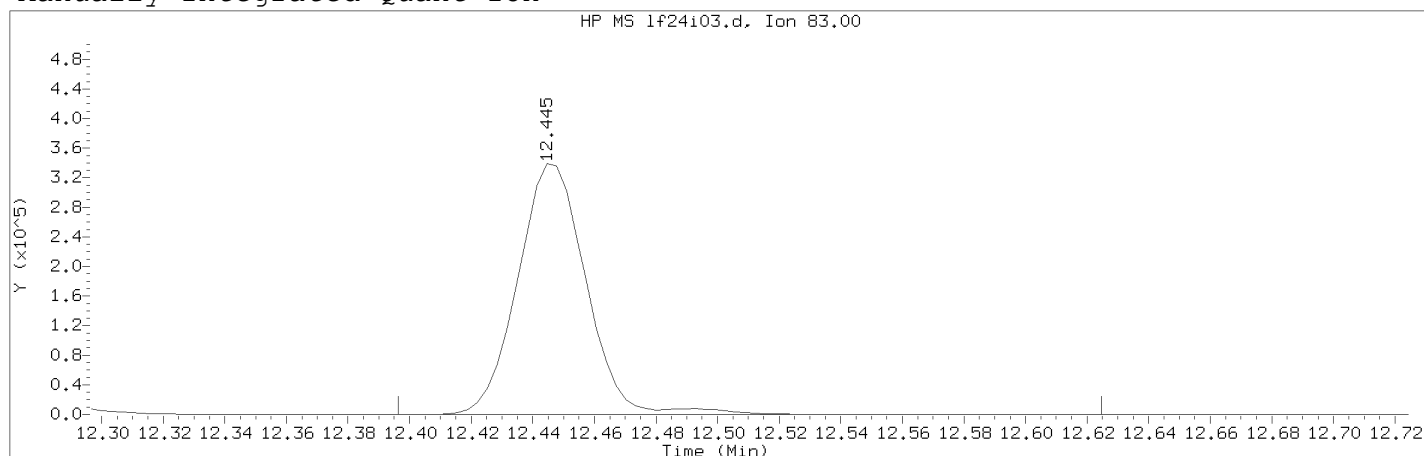
Compound Number	: 75
Compound Name	: 1,4-Dioxane
Scan Number	: 2293
Retention Time (minutes)	: 8.856
Quant Ion	: 88.00
Area	: 55610
On-column Amount (ng)	: 225.6954
Integration start scan	: 2276
Integration stop scan	: 2372
Y at integration start	: 0
Y at integration end	: 0

Digitally signed by Miranda E. Campbell on 02/25/2020 at 18:06.
 Target 3.5 esignature user KR421m Page 170 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i03.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 17:01

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 25-FEB-2020 12:44

Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD050

Lab Sample ID: VSTD050

Compound Number : 116
 Compound Name : 1,1,2,2-Tetrachloroethane
 Scan Number : 3409
 Retention Time (minutes): 12.445
 Quant Ion : 83.00
 Area (flag) : 523251M
 On-Column Amount (ng) : 49.9166
 Integration start scan : 3393 Integration stop scan: 3464
 Y at integration start : 0 Y at integration end: 0

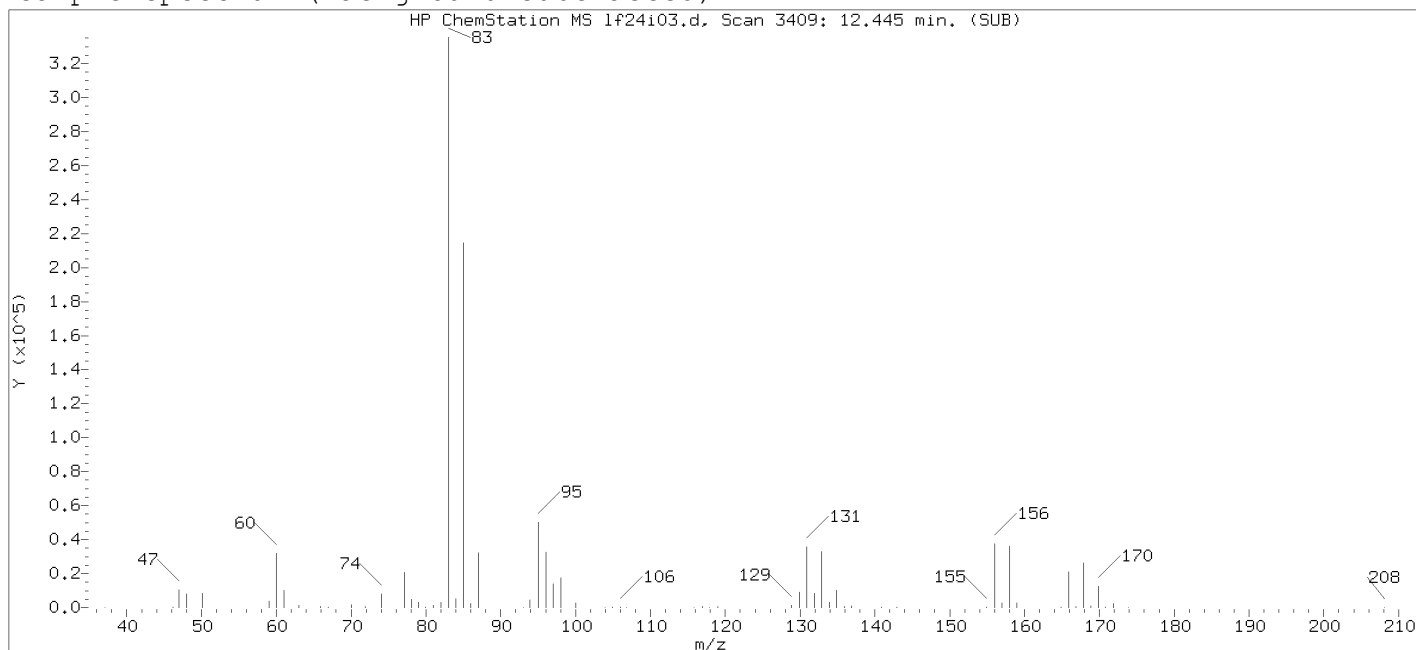
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.
 Target 3.5 esignature user ID: mec29284

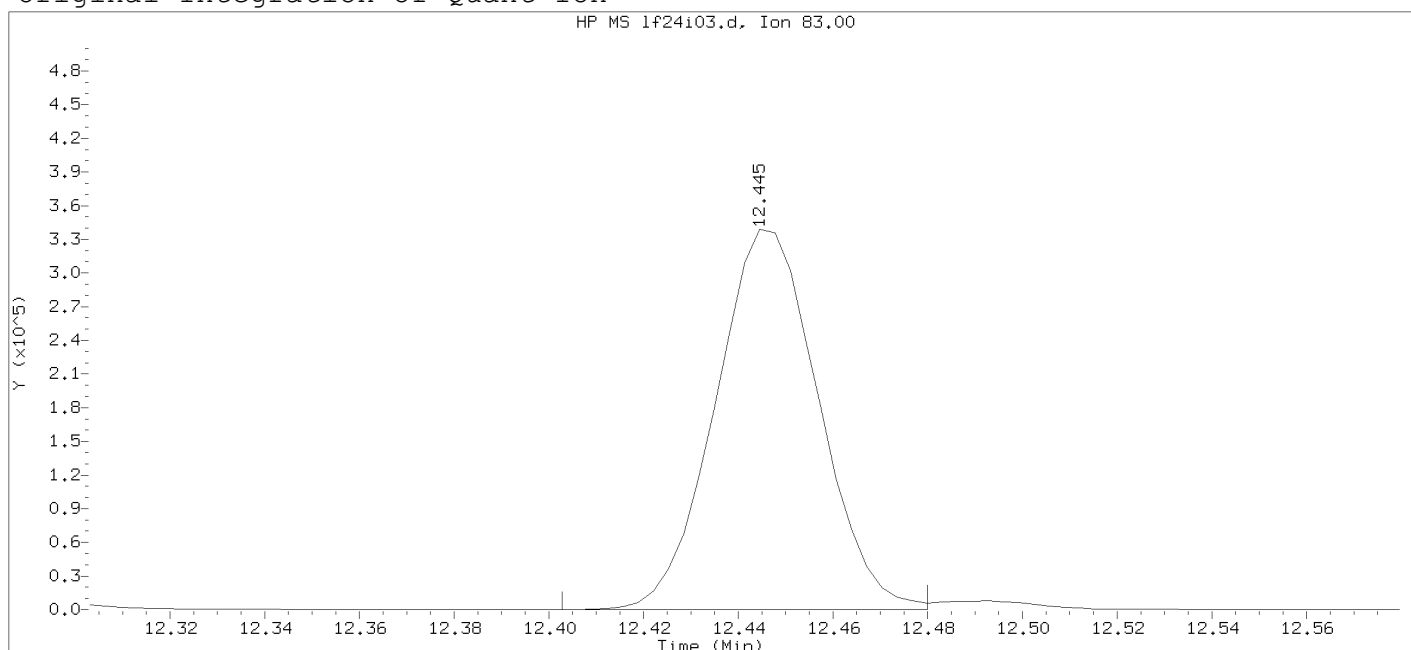
Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:49.

PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i03.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 17:01

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:49

Date, time and analyst ID of latest file update: 24-Feb-2020 20:49 mec29284

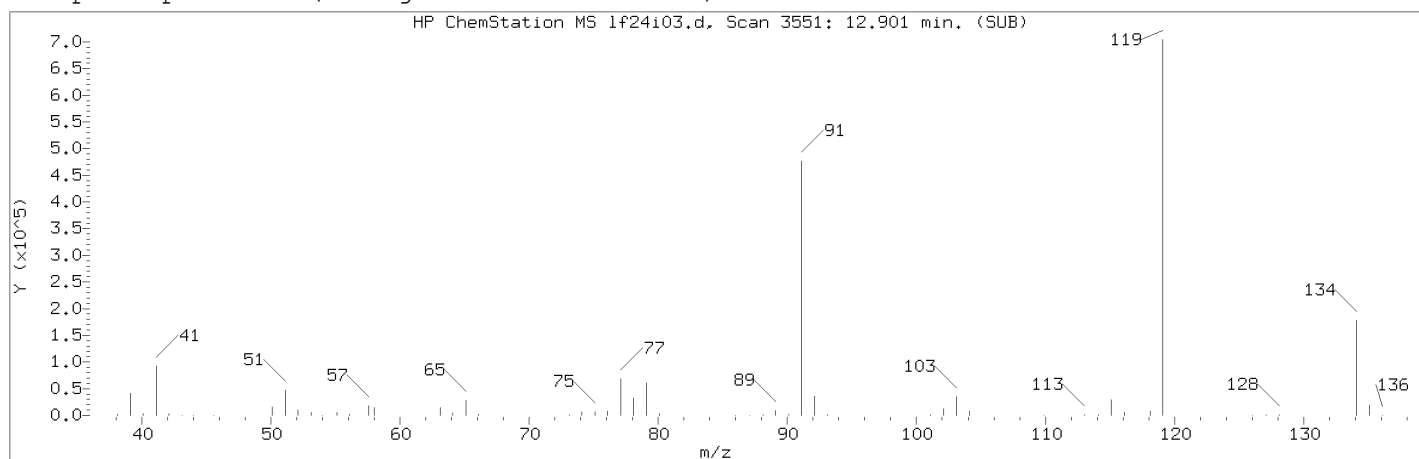
Sample Name: VSTD050

Lab Sample ID: VSTD050

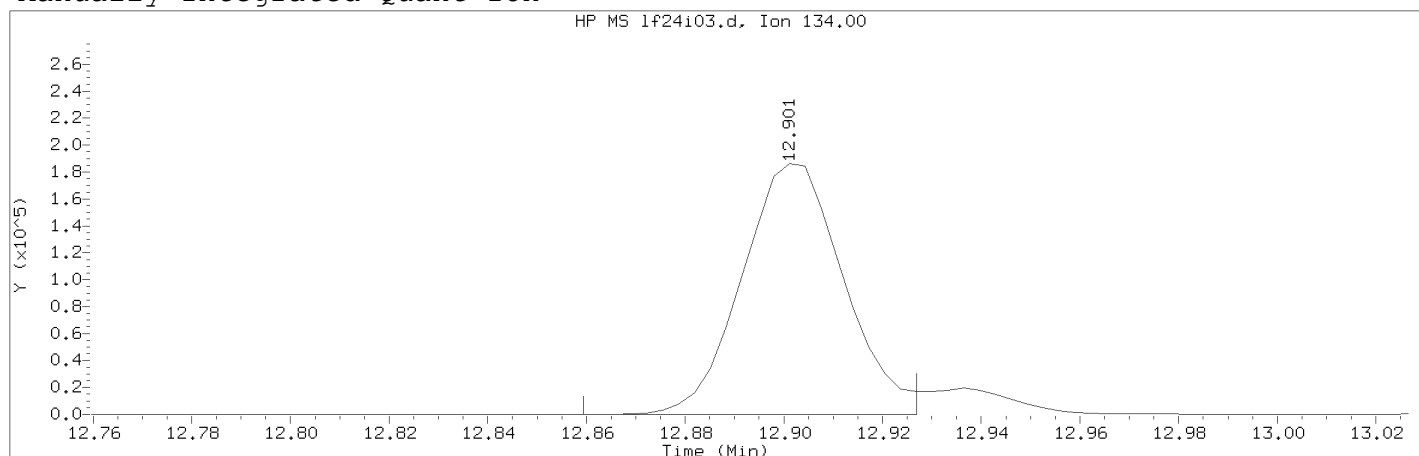
Compound Number	: 116	
Compound Name	: 1,1,2,2-Tetrachloroethane	
Scan Number	: 3409	
Retention Time (minutes)	: 12.445	
Quant Ion	: 83.00	
Area	: 510916	
On-column Amount (ng)	: 6.2194	
Integration start scan	: 3395	Integration stop scan: 3419
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Miranda E. Campbell on 02/25/2020 at 18:06.
 Target 3.5 esignature user KR421m Page 172 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i03.d Instrument ID: HP09915.i
 Injection date and time: 24-FEB-2020 17:01 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 25-FEB-2020 12:44
 Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD050 Lab Sample ID: VSTD050

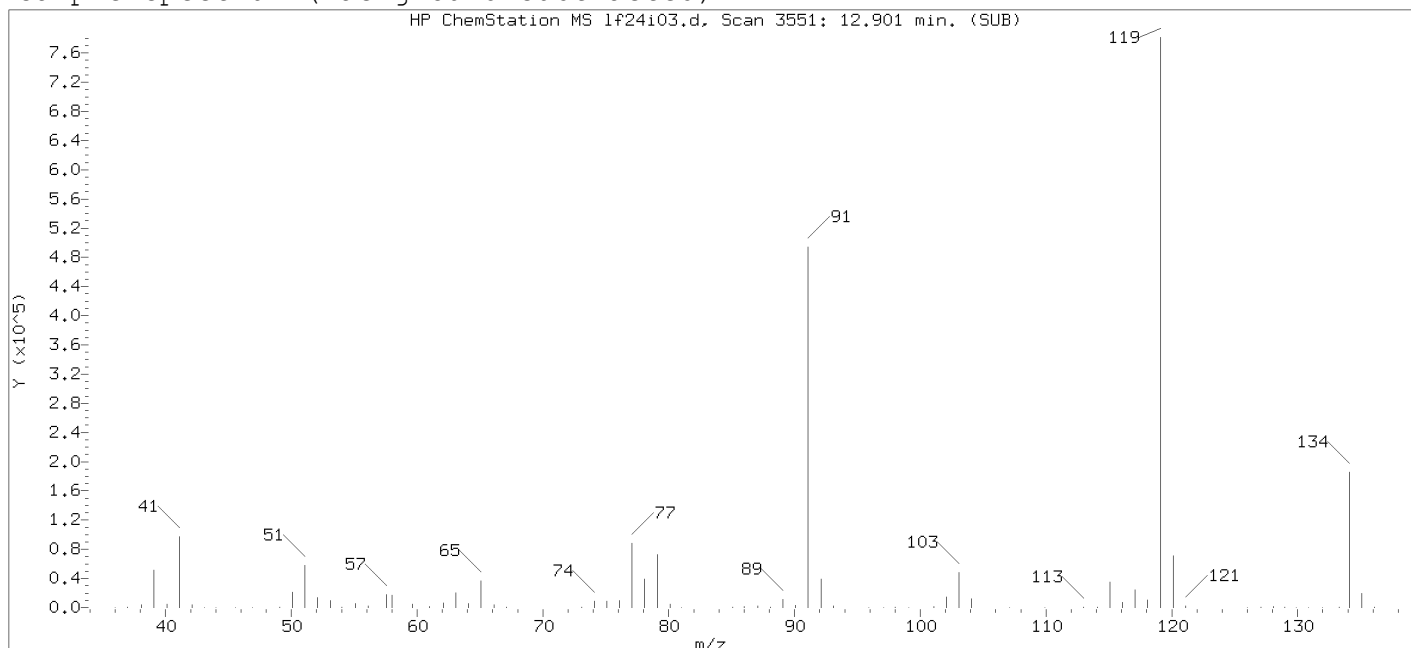
Compound Number : 124
 Compound Name : tert-Butylbenzene
 Scan Number : 3551
 Retention Time (minutes): 12.901
 Quant Ion : 134.00
 Area (flag) : 266591M
 On-Column Amount (ng) : 50.0535
 Integration start scan : 3537 Integration stop scan: 3558
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

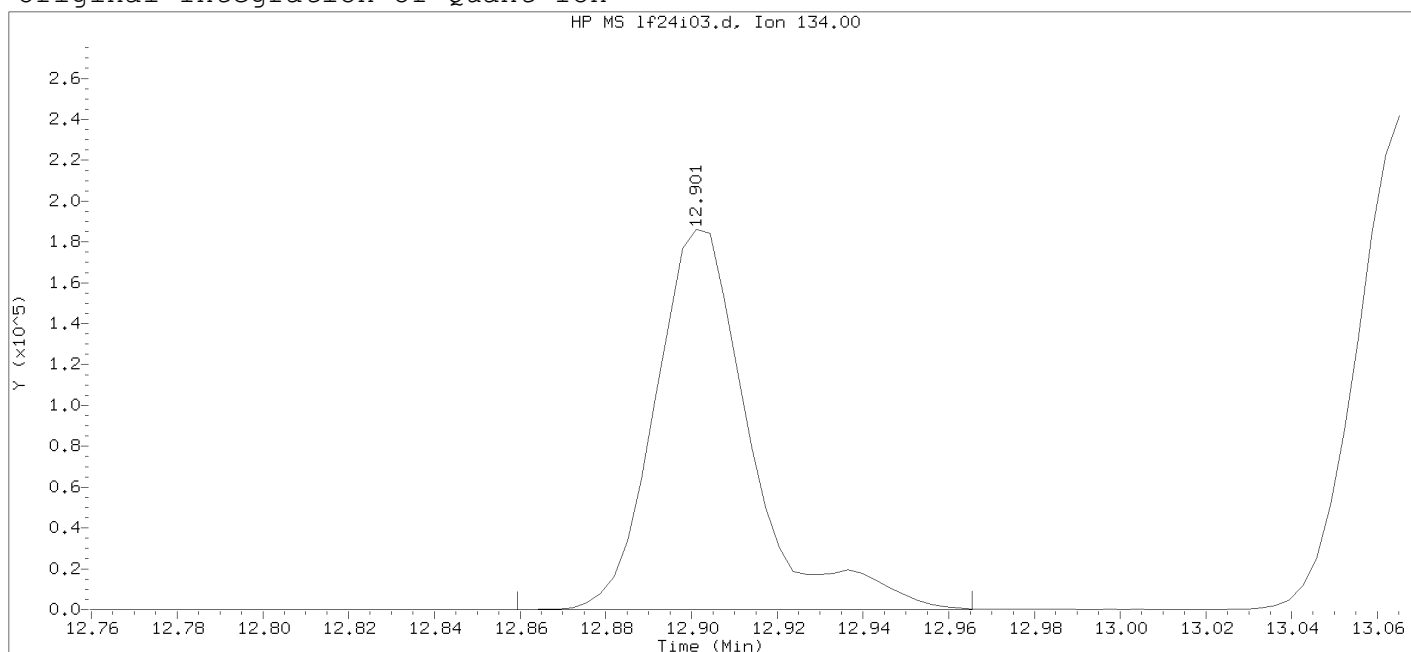
Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.
 Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:49.
 PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i03.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 17:01

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:49

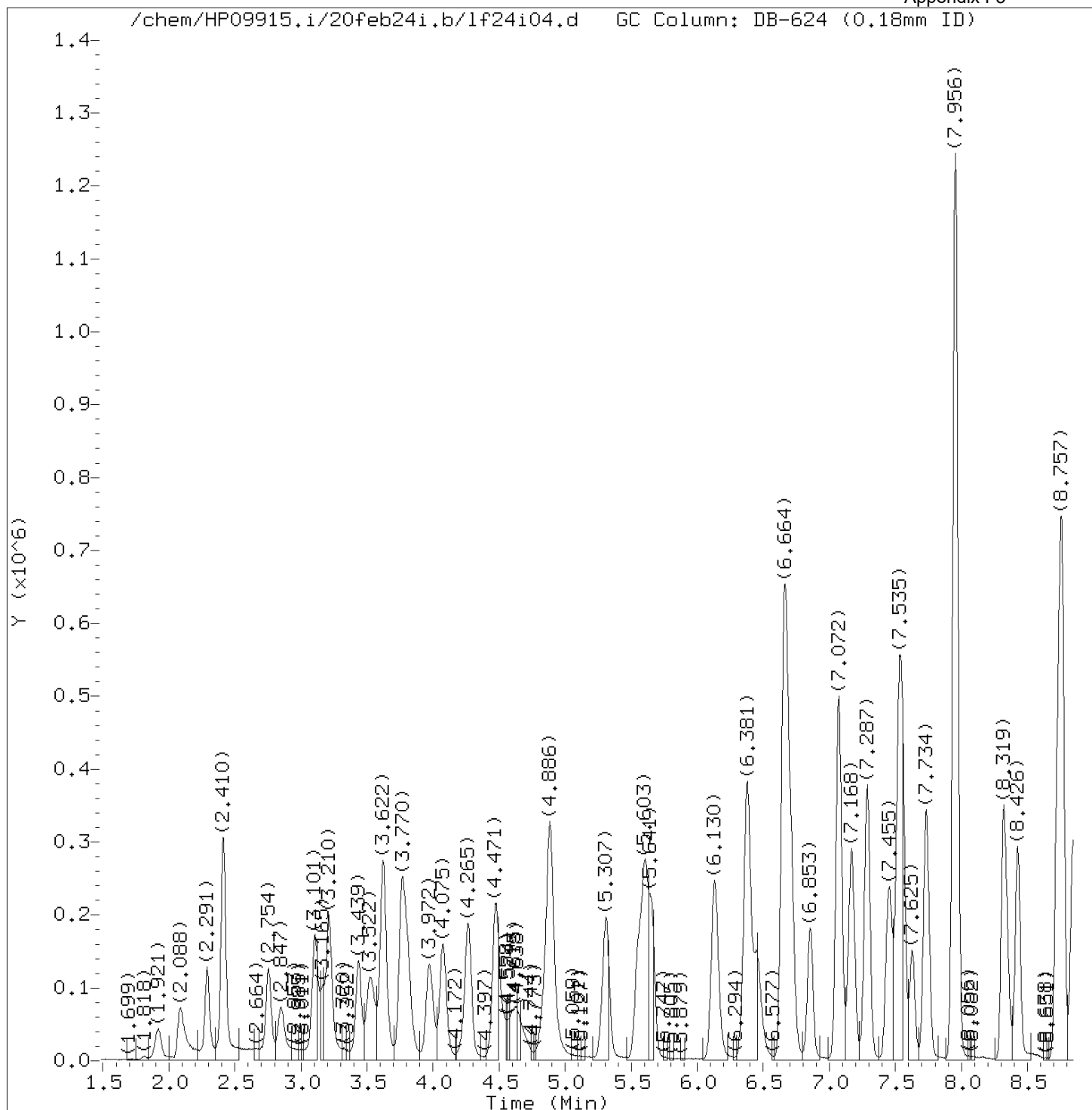
Date, time and analyst ID of latest file update: 24-Feb-2020 20:49 mec29284

Sample Name: VSTD050

Lab Sample ID: VSTD050

Compound Number	: 124	
Compound Name	: tert-Butylbenzene	
Scan Number	: 3551	
Retention Time (minutes)	: 12.901	
Quant Ion	: 134.00	
Area	: 288877	
On-column Amount (ng)	: 6.2747	
Integration start scan	: 3537	Integration stop scan: 3570
Y at integration start	: 0	Y at integration end: 0

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 Target 3.5 esignature user KR421m Page 174 of 592



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20feb24i.b/1f24i04.d
 Injection date and time: 24-FEB-2020 17:23

Instrument ID: HP09915.i
 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m
 Calibration date and time: 25-FEB-2020 12:44

Sublist used: 8260W

Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD020

Lab Sample ID: VSTD020

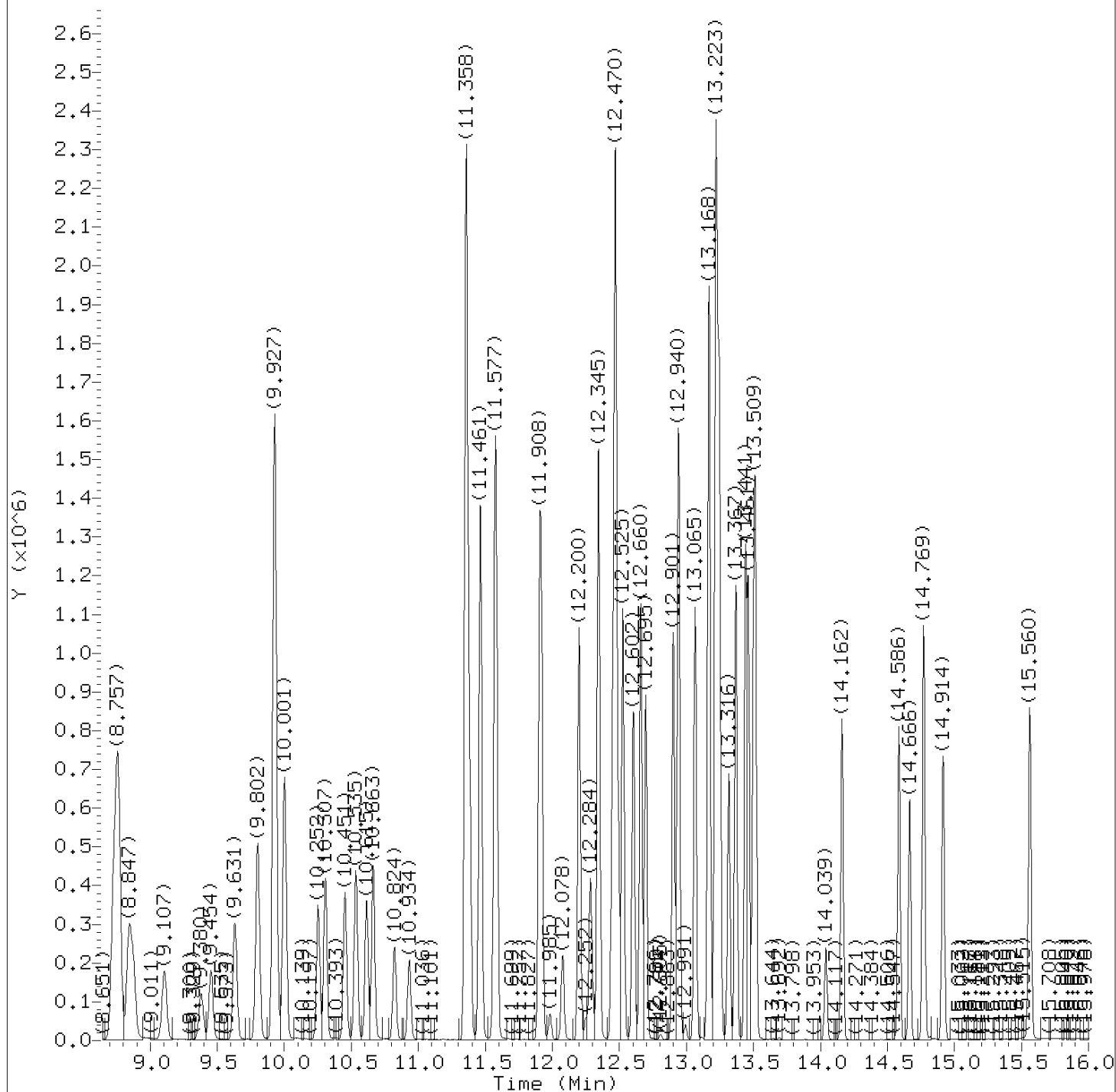
Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.

Target 3.5 esignature user ID: msc29284

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/chem/HP09915.i/20feb24i.b/1f24i04.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20feb24i.b/1f24i04.d
 Injection date and time: 24-FEB-2020 17:23

Instrument ID: HP09915.i
 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m
 Calibration date and time: 25-FEB-2020 12:44

Sublist used: 8260W

Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD020

Lab Sample ID: VSTD020

Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.

Target 3.5 esignature user ID: msc29284

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20feb24i.b/1f24i04.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 17:23

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 25-FEB-2020 12:44

Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD020

Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
3) Dichlorodifluoromethane	(2)	2.088	85	171578M	20.351
4) Chloromethane	(2)	2.288	50	170971	20.290
5) 1,3-Butadiene	(2)	2.413	39	130828M	20.718
6) Vinyl Chloride	(2)	2.413	62	161974	20.375
8) Bromomethane	(2)	2.754	94	114170	20.463
9) Chloroethane	(2)	2.844	64	88161	20.085
10) Dichlorofluoromethane	(2)	3.101	67	193147	19.842
12) Trichlorofluoromethane	(2)	3.159	101	166680	20.228
11) n-Pentane	(2)	3.214	43	192094	20.619
14) Ethyl ether	(2)	3.435	59	125291	21.306
15) Freon 123a	(2)	3.532	67	139665	21.099
16) Acrolein	(1)	3.622	56	445372	202.417
17) 1,1-Dichloroethene	(2)	3.763	96	113749	20.181
17) 1,1-Dichloroethene	(2)	3.763	63	55305	20.770
19) Freon 113	(2)	3.799	101	112553	20.993
18) Acetone	(1)	3.805	58	39705	40.804
22) Methyl Iodide	(2)	3.969	142	216053	21.679
21) 2-Propanol	(1)	3.992	45	142249	209.826
23) Carbon Disulfide	(2)	4.075	76	381848	21.447
27) Methyl Acetate	(2)	4.242	43	139058	19.767
25) Allyl Chloride	(2)	4.268	41	184534	20.345
28) Methylene Chloride	(2)	4.471	84	132995	21.134
29) *t-Butyl alcohol-d10	(1)	4.506	65	301250M	250.000
30) t-Butyl alcohol	(1)	4.632	59	252688	216.845
31) Acrylonitrile	(2)	4.828	53	78140	20.492
32) trans-1,2-Dichloroethene	(2)	4.886	96	128468	20.780
33) Methyl Tertiary Butyl Ether	(2)	4.886	73	397015	21.080
34) n-Hexane	(2)	5.307	57	191263	21.509
36) 1,1-Dichloroethane	(2)	5.548	63	225121	21.756
38) di-Isopropyl ether	(2)	5.599	45	430199	21.635
39) 2-Chloro-1,3-butadiene	(2)	5.654	53	189602	21.425
40) Ethyl t-butyl ether	(2)	6.130	59	411144	21.772
43) 1,2-Dichloroethene (Total)	(2)		96	274470	41.897
44) 2-Butanone	(2)	6.355	43	197008	40.405
42) cis-1,2-Dichloroethene	(2)	6.381	96	146002	21.117
45) 2,2-Dichloropropane	(2)	6.390	77	177699	21.581
47) Propionitrile	(1)	6.455	54	315183	208.697
48) Methacrylonitrile	(2)	6.664	67	412371	105.729

M = Compound was manually integrated.

* = Compound is an internal standard.

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Digitally signed by Miranda E. Campbell
on 02/25/2020 at 18:06.

Target 3.5 esignature user ID: mec29284

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20feb24i.b/1f24i04.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 17:23

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 25-FEB-2020 12:44

Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD020

Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
49) Bromochloromethane	(2)	6.712	128	71668	20.859
50) Tetrahydrofuran	(1)	6.721	71	54186	39.906
51) Chloroform	(2)	6.856	83	215254	21.468
52)\$Dibromofluoromethane	(2)	7.069	113	310768	49.175
52)\$Dibromofluoromethane	(2)	7.069	111	316556	49.029
53) 1,1,1-Trichloroethane	(2)	7.078	97	188125	21.399
54) Cyclohexane	(2)	7.168	56	231834	21.414
54) Cyclohexane	(2)	7.168	84	195922	21.433
54) Cyclohexane	(2)	7.168	69	70747	21.306
56) Carbon Tetrachloride	(2)	7.281	117	153976	21.436
55) 1,1-Dichloropropene	(2)	7.291	75	174445	21.271
58) Isobutyl Alcohol	(1)	7.458	41	213201	538.470
57)\$1,2-Dichloroethane-d4	(2)	7.529	102	79917	48.759
57)\$1,2-Dichloroethane-d4	(2)	7.522	65	356496	48.727
57)\$1,2-Dichloroethane-d4	(2)	7.522	104	50741	48.770
60) Benzene	(2)	7.554	78	542965	21.703
61) 1,2-Dichloroethane	(2)	7.631	62	172758	20.653
61) 1,2-Dichloroethane	(2)	7.622	98	17592	22.964
65) t-Amyl methyl ether	(2)	7.734	73	412670	21.726
67) n-Heptane	(2)	7.956	43	187457	21.527
66)*Fluorobenzene	(2)	7.956	96	1336522	50.000
69) n-Butanol	(1)	8.319	56	368714	1112.450
71) Trichloroethene	(2)	8.429	95	134563	21.366
72) Methylcyclohexane	(2)	8.728	83	226538	21.440
72) Methylcyclohexane	(2)	8.728	98	99584	20.897
73) 1,2-Dichloropropane	(2)	8.763	63	139479	21.460
76) Methyl Methacrylate	(2)	8.837	69	132304M	21.322
75) 1,4-Dioxane	(1)	8.847	88	47707M	540.348
74) Dibromomethane	(2)	8.872	93	89832	21.253
78) Bromodichloromethane	(2)	9.104	83	162673	21.528
79) 2-Nitropropane	(2)	9.380	41	92681M	39.867
80) 2-Chloroethyl Vinyl Ether	(2)	9.454	63	98224	20.615
81) cis-1,3-Dichloropropene	(2)	9.631	75	220301	21.761
82) 4-Methyl-2-pentanone	(2)	9.802	43	418988	41.535
83)\$Toluene-d8	(3)	9.927	98	1323783	50.145
83)\$Toluene-d8	(3)	9.927	100	861219	50.199
88) Toluene	(3)	10.001	92	342963	21.865
90) 1,3-Dichloropropene (total)	(3)		100	424254	43.582

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 2 of 4

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on 02/25/2020 at 18:06.

Target 3.5 esignature user ID: mec29284

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20feb24i.b/1f24i04.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 17:23

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 25-FEB-2020 12:44

Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD020

Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
89) trans-1,3-Dichloropropene	(3)	10.252	75	203953	21.820
91) Ethyl Methacrylate	(3)	10.307	69	236083	22.059
92) 1,1,2-Trichloroethane	(3)	10.451	97	133735	21.632
93) Tetrachloroethene	(3)	10.535	166	142354	21.385
94) 1,3-Dichloropropane	(3)	10.615	76	224190	21.725
96) 2-Hexanone	(3)	10.663	43	305248	42.224
97) Dibromochloromethane	(3)	10.824	129	135720	21.720
99) 1,2-Dibromoethane	(3)	10.934	107	146646	21.801
100) *Chlorobenzene-d5	(3)	11.355	117	1004822	50.000
101) 1-Chlorohexane	(3)	11.358	91	184553	21.105
102) Chlorobenzene	(3)	11.380	112	386583	21.932
103) 1,1,1,2-Tetrachloroethane	(3)	11.461	131	130544	22.155
104) Ethylbenzene	(3)	11.464	91	660481	22.041
106) m+p-Xylene	(3)	11.577	106	526098	44.733
108) Xylene (Total)	(3)		106	784400	66.889
107) o-Xylene	(3)	11.905	106	258302	22.157
109) Styrene	(3)	11.917	104	440589	22.470
110) Bromoform	(3)	12.078	173	98611	20.389
111) Isopropylbenzene	(3)	12.200	105	667594	22.350
112) Cyclohexanone	(1)	12.284	55	185521	523.860
114) \$4-Bromofluorobenzene	(3)	12.345	95	495167	49.738
114) \$4-Bromofluorobenzene	(3)	12.345	174	411358	49.987
116) 1,1,2,2-Tetrachloroethane	(4)	12.448	83	231603	22.133
115) Bromobenzene	(4)	12.461	156	170393	21.880
118) trans-1,4-Dichloro-2-butene	(4)	12.470	53	331106	110.459
117) 1,2,3-Trichloropropane	(4)	12.493	110	67957M	21.884
119) n-Propylbenzene	(4)	12.525	91	775453	22.077
120) 2-Chlorotoluene	(4)	12.605	126	160660	22.017
122) 1,3,5-Trimethylbenzene	(4)	12.660	105	572983	22.173
121) 4-Chlorotoluene	(4)	12.695	126	165245	21.829
124) tert-Butylbenzene	(4)	12.901	134	117306M	22.063
125) Pentachloroethane	(4)	12.937	167	95367	22.435
126) 1,2,4-Trimethylbenzene	(4)	12.943	105	603959	22.327
127) sec-Butylbenzene	(4)	13.065	105	705778	22.229
129) 1,3-Dichlorobenzene	(4)	13.165	146	324149	22.078
130) p-Isopropyltoluene	(4)	13.168	119	615109	22.488
131) *1,4-Dichlorobenzene-d4	(4)	13.220	152	550949	50.000
133) 1,4-Dichlorobenzene	(4)	13.236	146	333994	21.964

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 3 of 4

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on 02/25/2020 at 18:06.

Target 3.5 esignature user ID: mec29284

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20feb24i.b/1f24i04.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 17:23

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 25-FEB-2020 12:44

Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD020

Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
134) 1,2,3-Trimethylbenzene	(4)	13.249	105	584657	21.620
135) Benzyl Chloride	(4)	13.316	91	443387	22.401
136) 1,3-Diethylbenzene	(4)	13.367	119	360174	21.734
141) Diethylbenzene (total)	(4)		100	1042089	65.316
137) 1,4-Diethylbenzene	(4)	13.441	119	377945	21.771
139) n-Butylbenzene	(4)	13.461	92	303771	22.030
138) 1,2-Dichlorobenzene	(4)	13.499	146	321248	21.986
140) 1,2-Diethylbenzene	(4)	13.515	119	303970	21.810
142) 1,2-Dibromo-3-chloropropane	(4)	14.039	75	49747	21.815
144) 1,3,5-Trichlorobenzene	(4)	14.162	180	240033	21.842
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	229778	21.774
147) Hexachlorobutadiene	(4)	14.666	225	102623	22.116
148) Naphthalene	(4)	14.769	128	793796	22.284
149) 1,2,3-Trichlorobenzene	(4)	14.914	180	218717	21.904
150) 2-Methylnaphthalene	(4)	15.560	142	426099	22.304

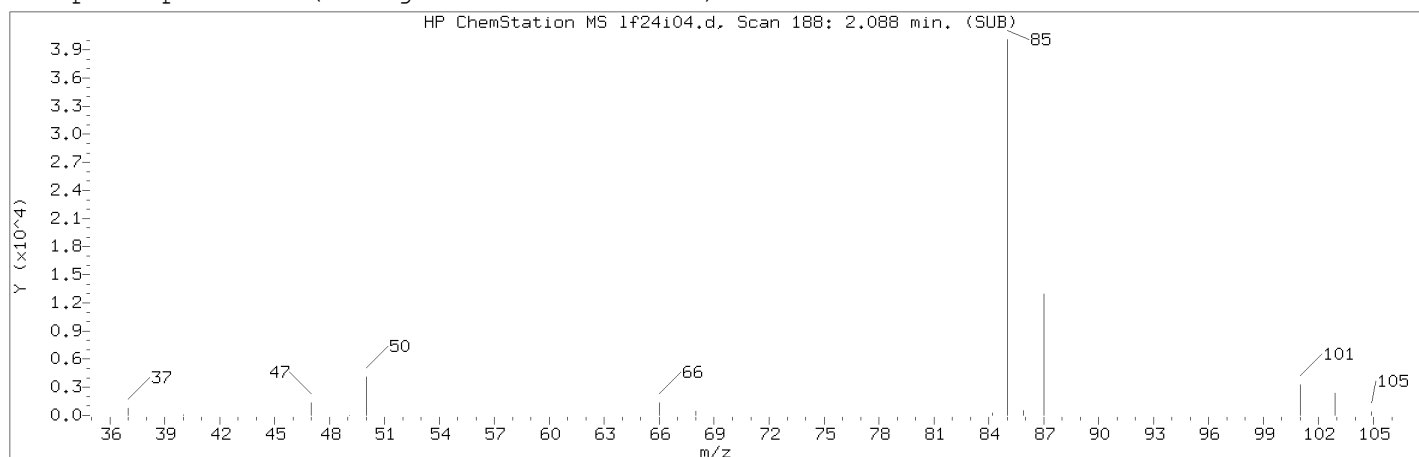
page 4 of 4

Digitally signed by Miranda E. Campbell
on 02/25/2020 at 18:06.

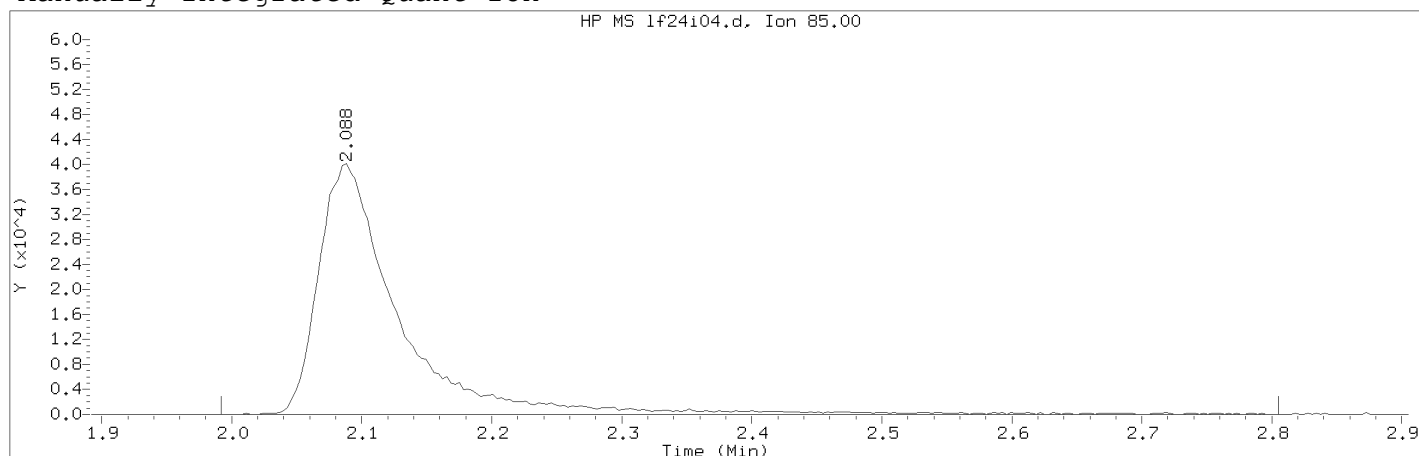
Target 3.5 esignature user ID: mec29284

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Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i04.d Instrument ID: HP09915.i
 Injection date and time: 24-FEB-2020 17:23 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 25-FEB-2020 12:44
 Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD020

Lab Sample ID: VSTD020

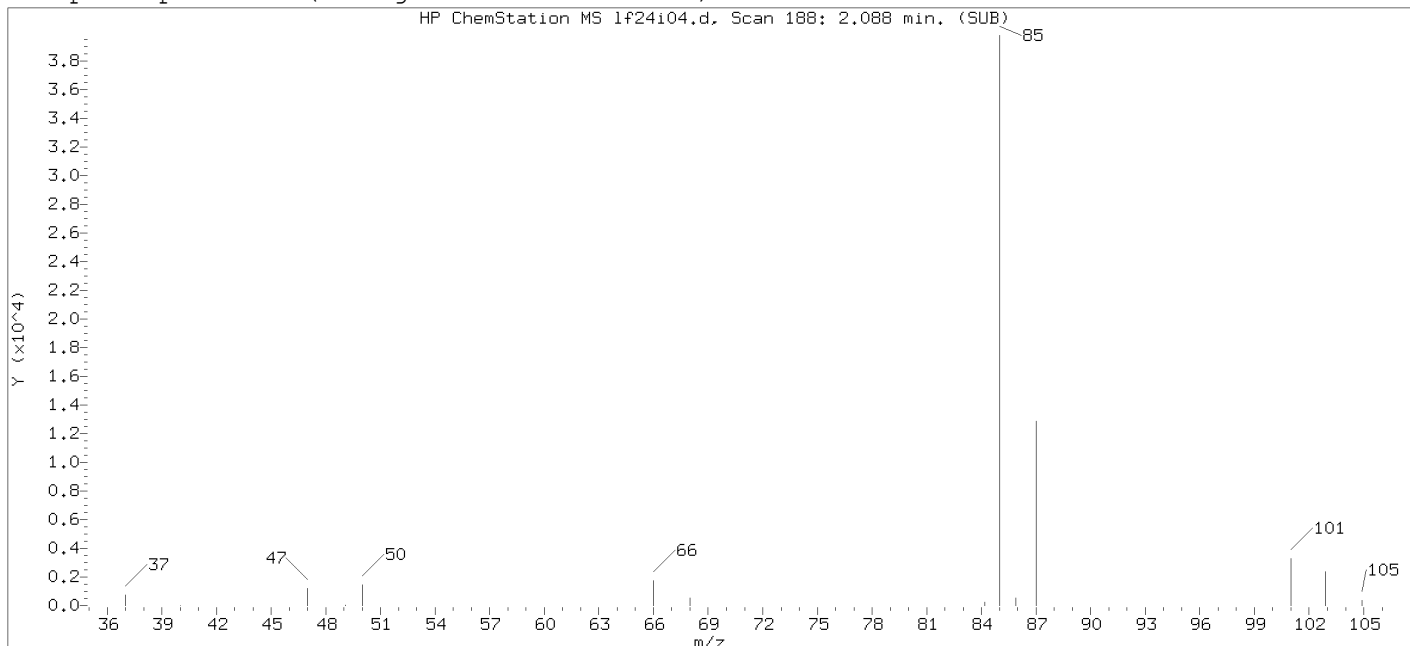
Compound Number : 3
 Compound Name : Dichlorodifluoromethane
 Scan Number : 188
 Retention Time (minutes): 2.088
 Quant Ion : 85.00
 Area (flag) : 171578M
 On-Column Amount (ng) : 20.3509
 Integration start scan : 157 Integration stop scan: 410
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

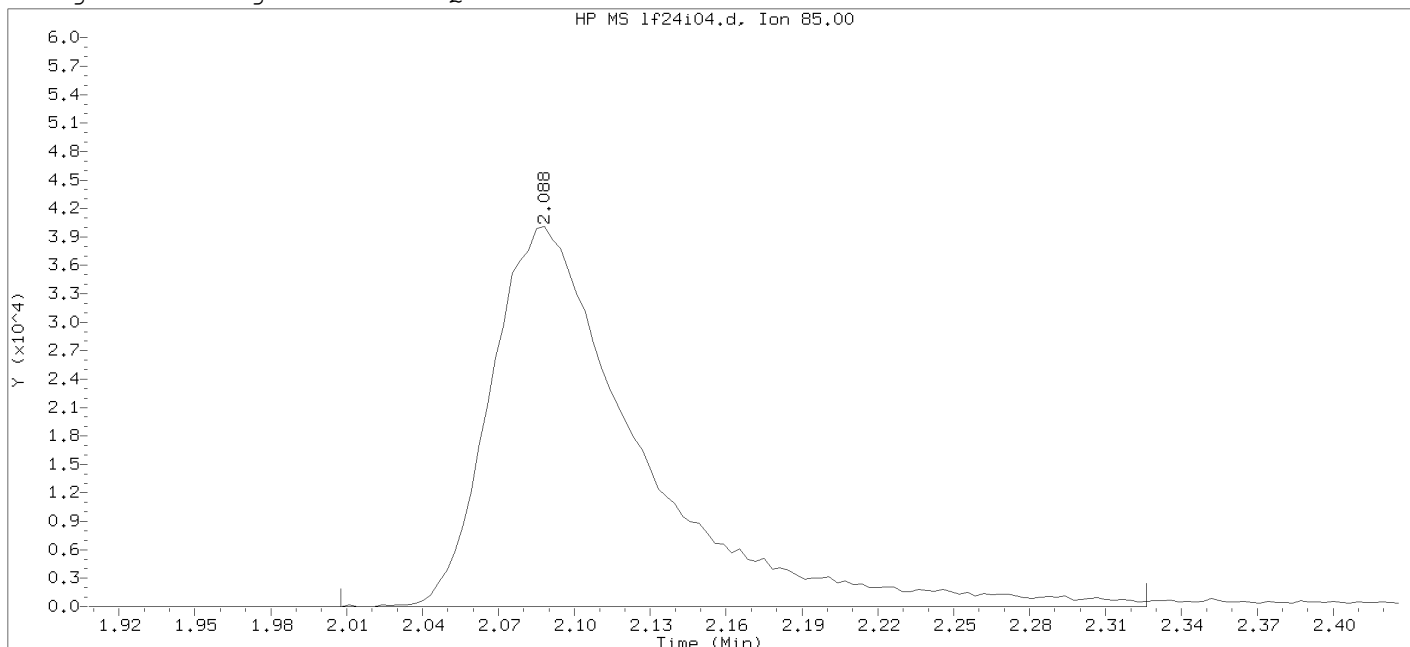
Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.
 Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:49.
 PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i04.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 17:23

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:55

Date, time and analyst ID of latest file update: 24-Feb-2020 20:55 mec29284

Sample Name: VSTD020

Lab Sample ID: VSTD020

Compound Number : 3

Compound Name : Dichlorodifluoromethane

Scan Number : 188

Retention Time (minutes): 2.088

Quant Ion : 85.00

Area : 164366

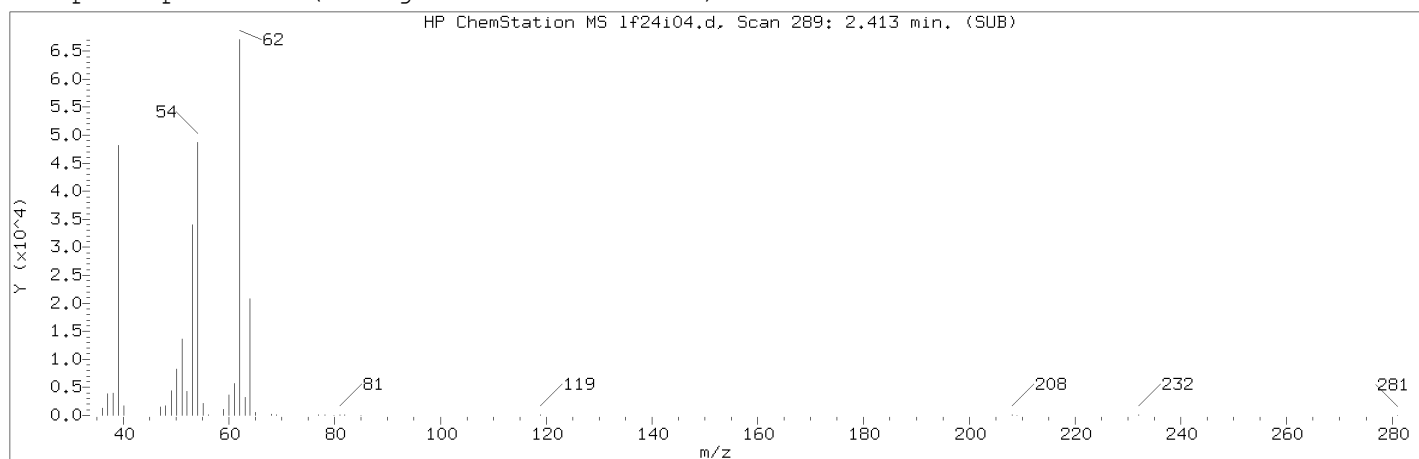
On-column Amount (ng) : 1.0000

Integration start scan : 162 Integration stop scan: 261

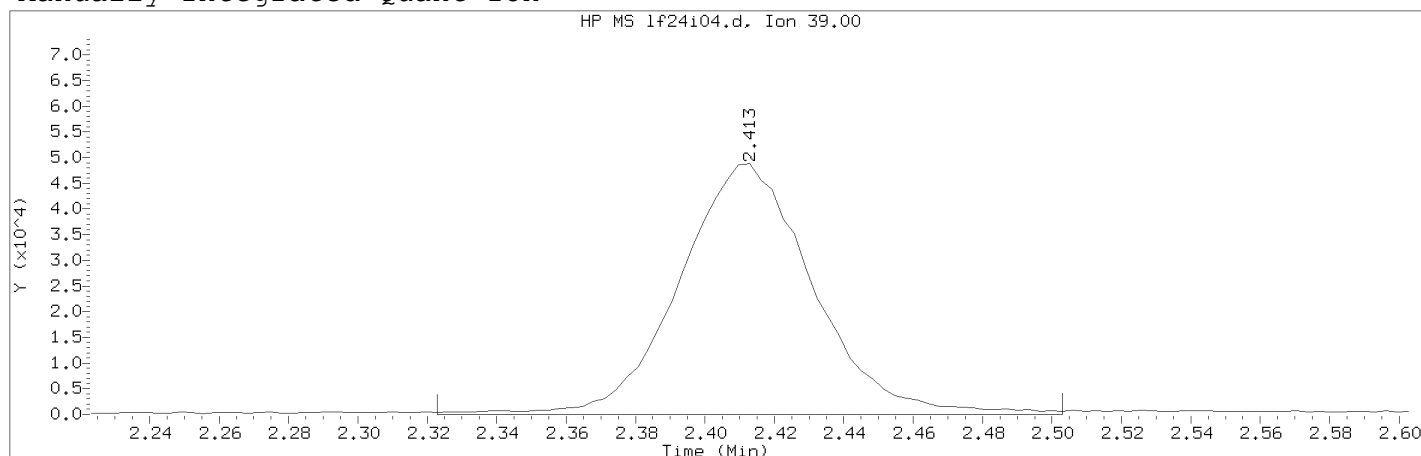
Y at integration start : 0 Y at integration end: 0

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 Target 3.5 esignature user KR421m Page 182 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i04.d Instrument ID: HP09915.i
 Injection date and time: 24-FEB-2020 17:23 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 25-FEB-2020 12:44
 Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD020

Lab Sample ID: VSTD020

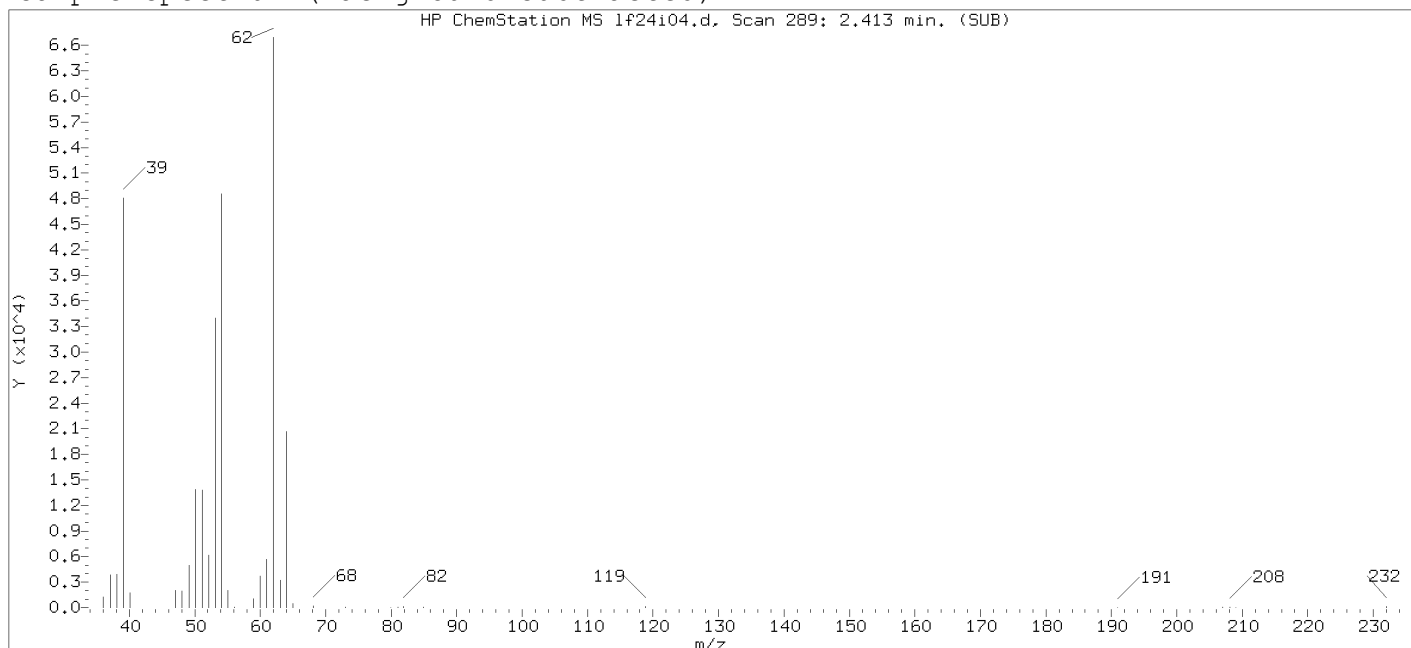
Compound Number : 5
 Compound Name : 1,3-Butadiene
 Scan Number : 289
 Retention Time (minutes): 2.413
 Quant Ion : 39.00
 Area (flag) : 130828M
 On-Column Amount (ng) : 20.7183
 Integration start scan : 260 Integration stop scan: 316
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

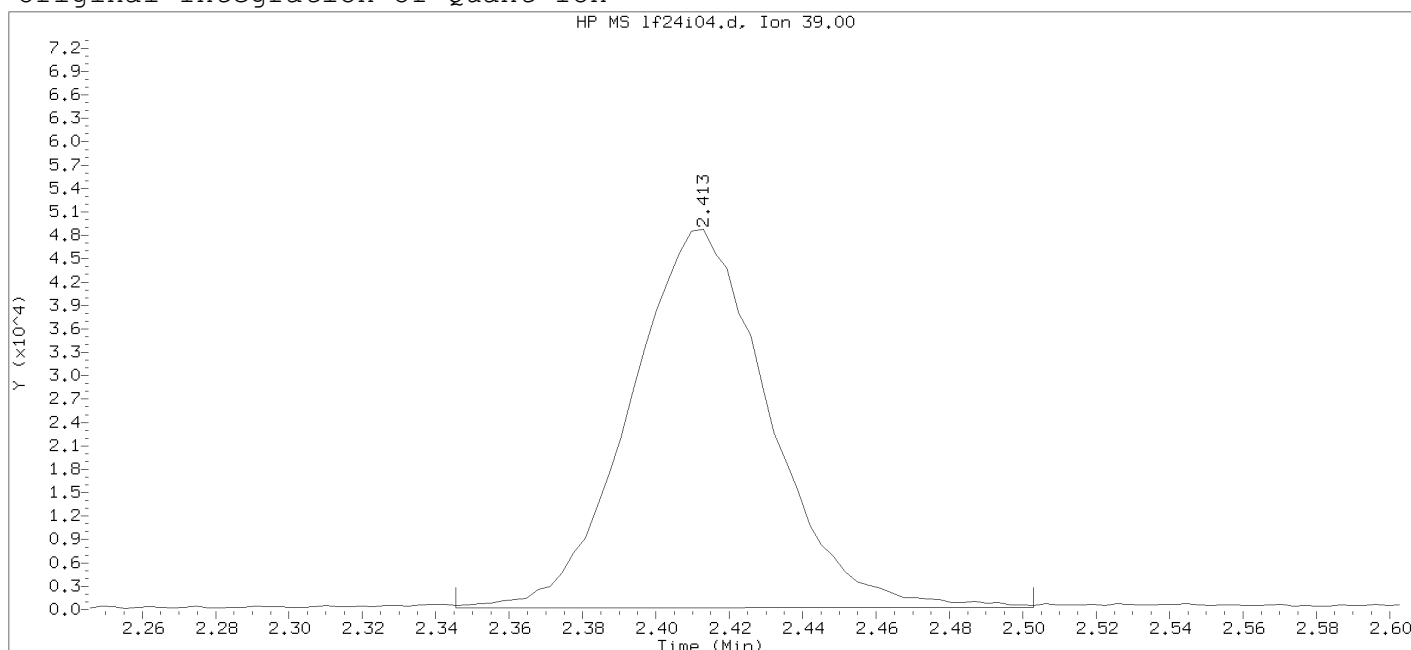
Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.
 Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:49.
 PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i04.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 17:23

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:55

Date, time and analyst ID of latest file update: 24-Feb-2020 20:55 mec29284

Sample Name: VSTD020

Lab Sample ID: VSTD020

Compound Number : 5

Compound Name : 1,3-Butadiene

Scan Number : 289

Retention Time (minutes): 2.413

Quant Ion : 39.00

Area : 127563

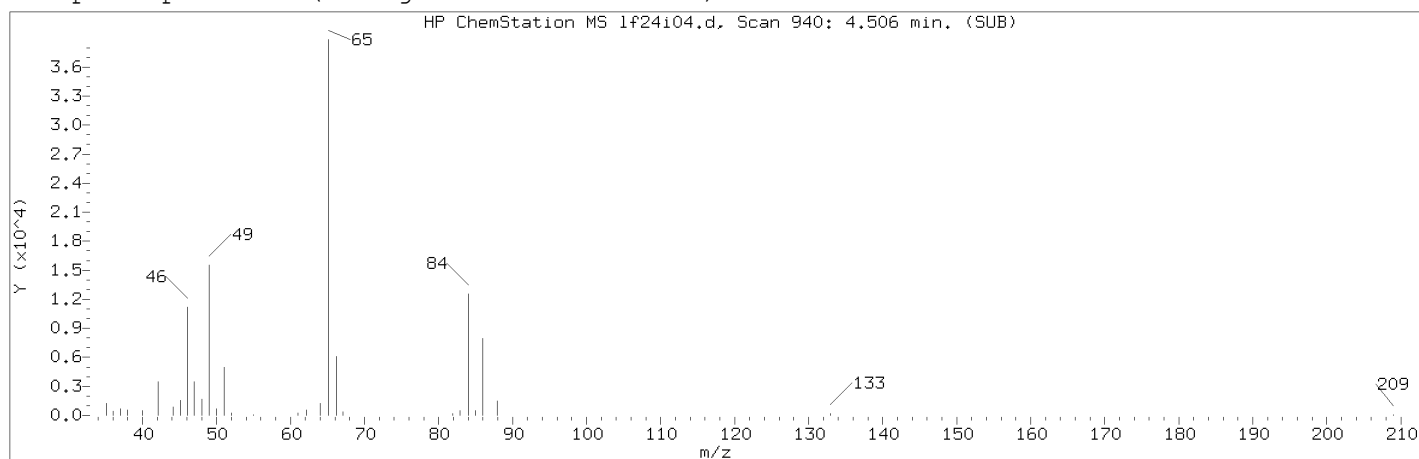
On-column Amount (ng) : 1.0000

Integration start scan : 267 Integration stop scan: 316

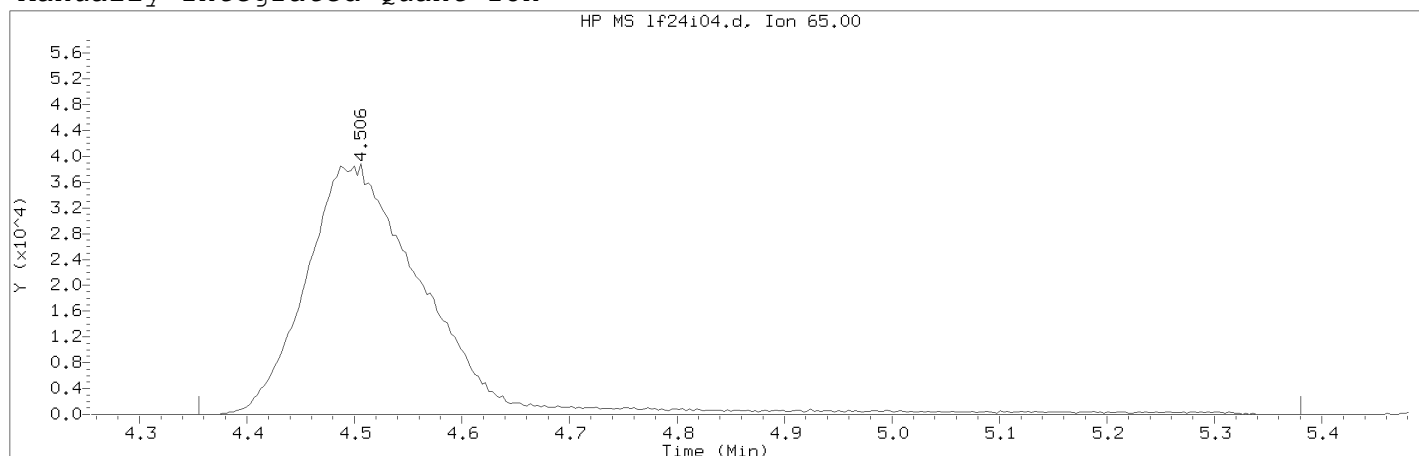
Y at integration start : 221 Y at integration end: 291

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 Target 3.5 esignature user KR421m Page 184 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i04.d Instrument ID: HP09915.i
 Injection date and time: 24-FEB-2020 17:23 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 25-FEB-2020 12:44
 Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD020

Lab Sample ID: VSTD020

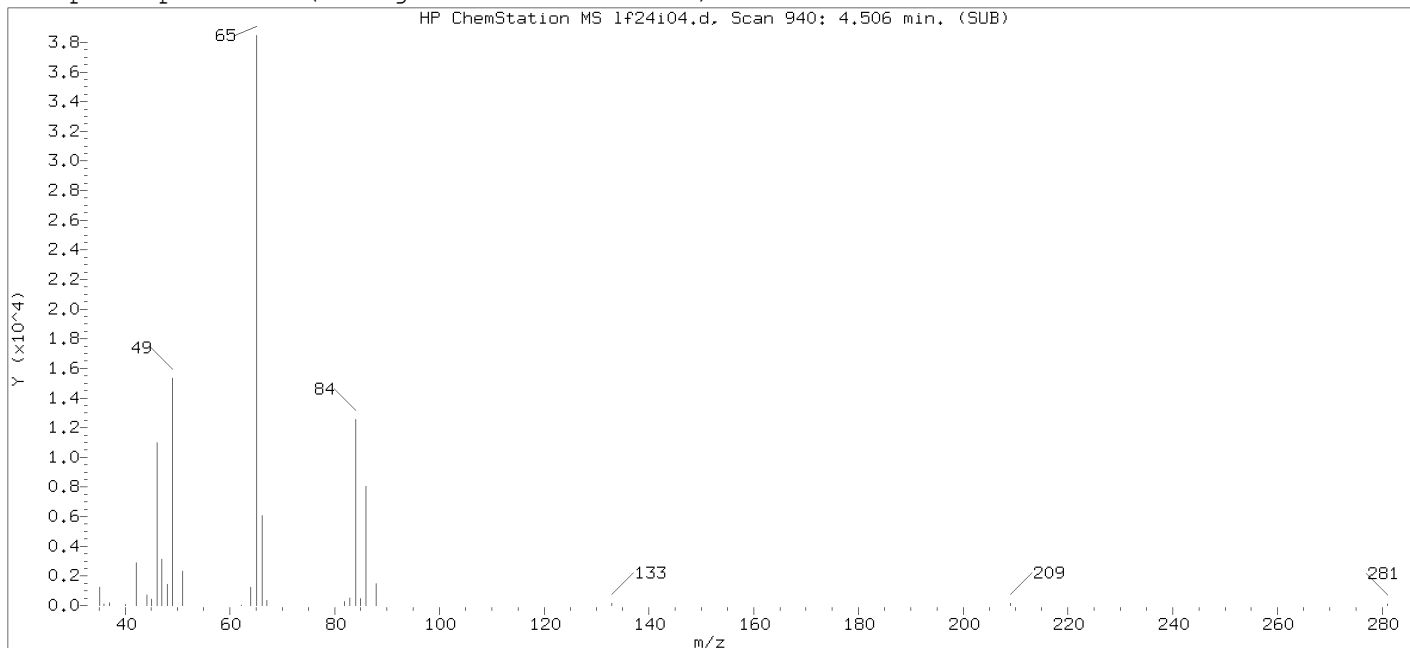
Compound Number : 29
 Compound Name : t-Butyl alcohol-d10
 Scan Number : 940
 Retention Time (minutes): 4.506
 Quant Ion : 65.00
 Area (flag) : 301250M
 On-Column Amount (ng) : 250.0000
 Integration start scan : 892 Integration stop scan: 1211
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

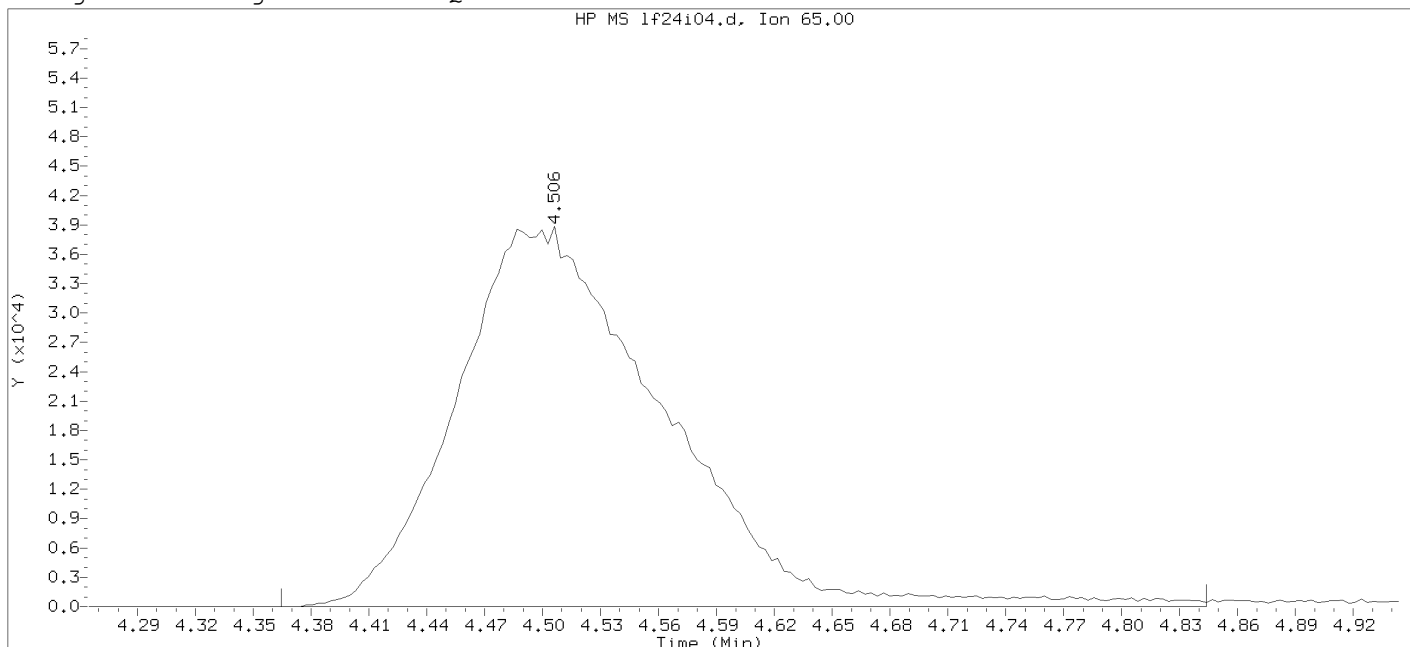
Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.
 Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:49.
 PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i04.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 17:23

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:55

Date, time and analyst ID of latest file update: 24-Feb-2020 20:55 mec29284

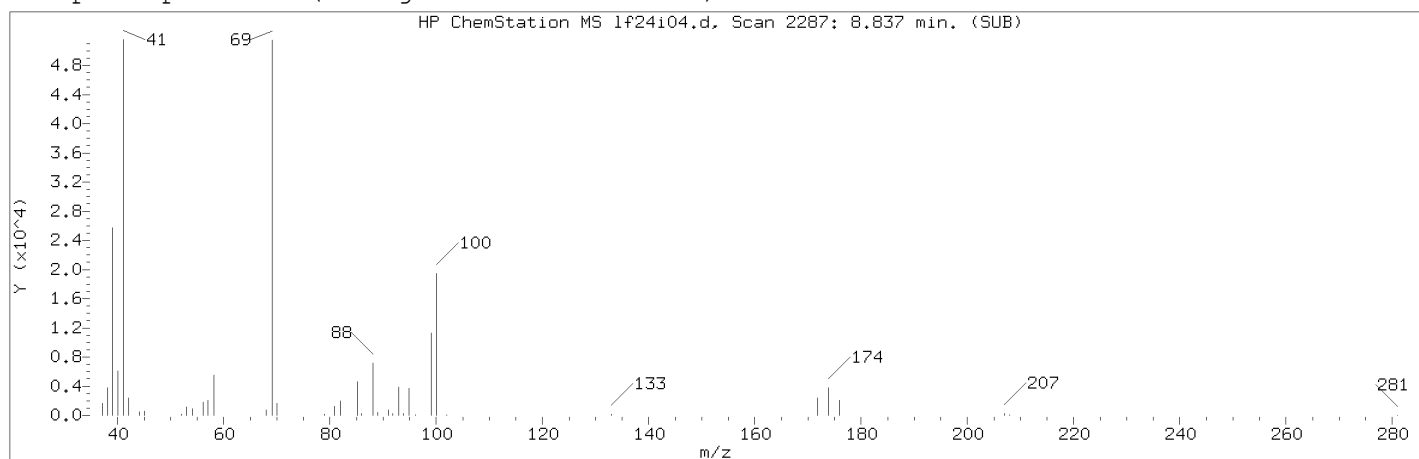
Sample Name: VSTD020

Lab Sample ID: VSTD020

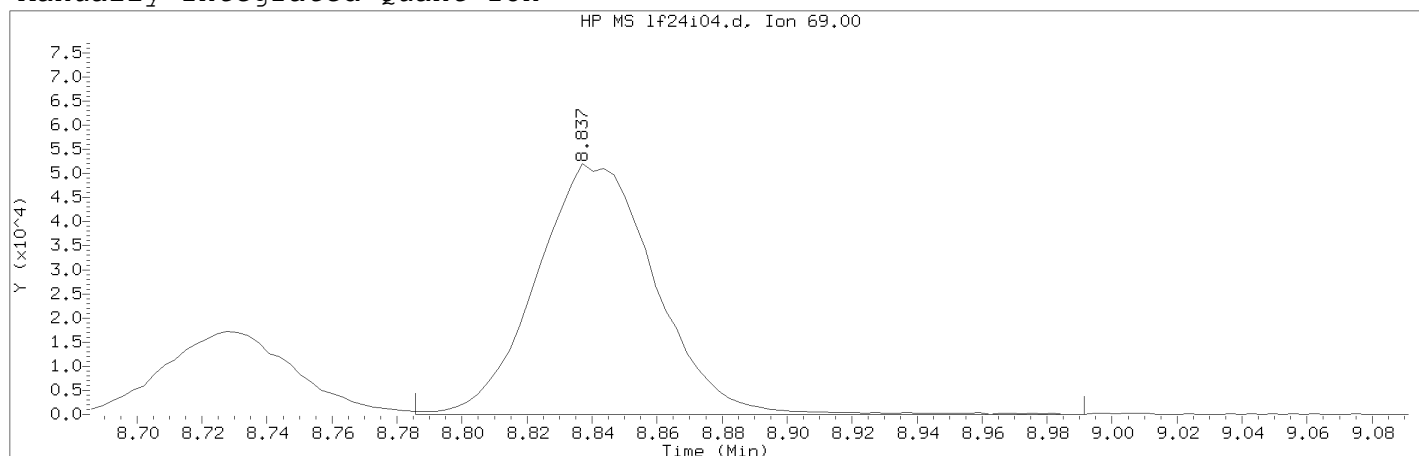
Compound Number	: 29
Compound Name	: t-Butyl alcohol-d10
Scan Number	: 940
Retention Time (minutes)	: 4.506
Quant Ion	: 65.00
Area	: 289209
On-column Amount (ng)	: 250.0000
Integration start scan	: 895
Integration stop scan	: 1044
Y at integration start	: 0
Y at integration end	: 0

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 Target 3.5 esignature user KR421m Page 186 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i04.d Instrument ID: HP09915.i
 Injection date and time: 24-FEB-2020 17:23 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 25-FEB-2020 12:44
 Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD020

Lab Sample ID: VSTD020

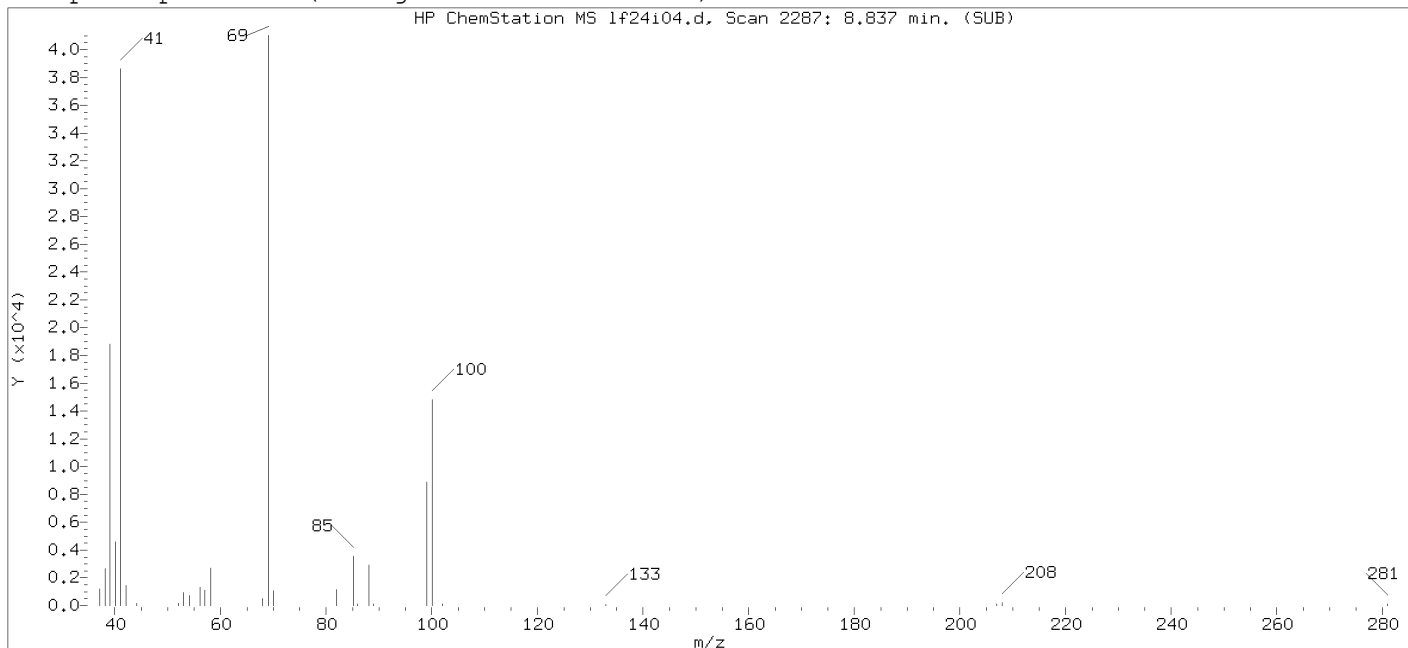
Compound Number : 76
 Compound Name : Methyl Methacrylate
 Scan Number : 2287
 Retention Time (minutes): 8.837
 Quant Ion : 69.00
 Area (flag) : 132304M
 On-Column Amount (ng) : 21.3219
 Integration start scan : 2270 Integration stop scan: 2334
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

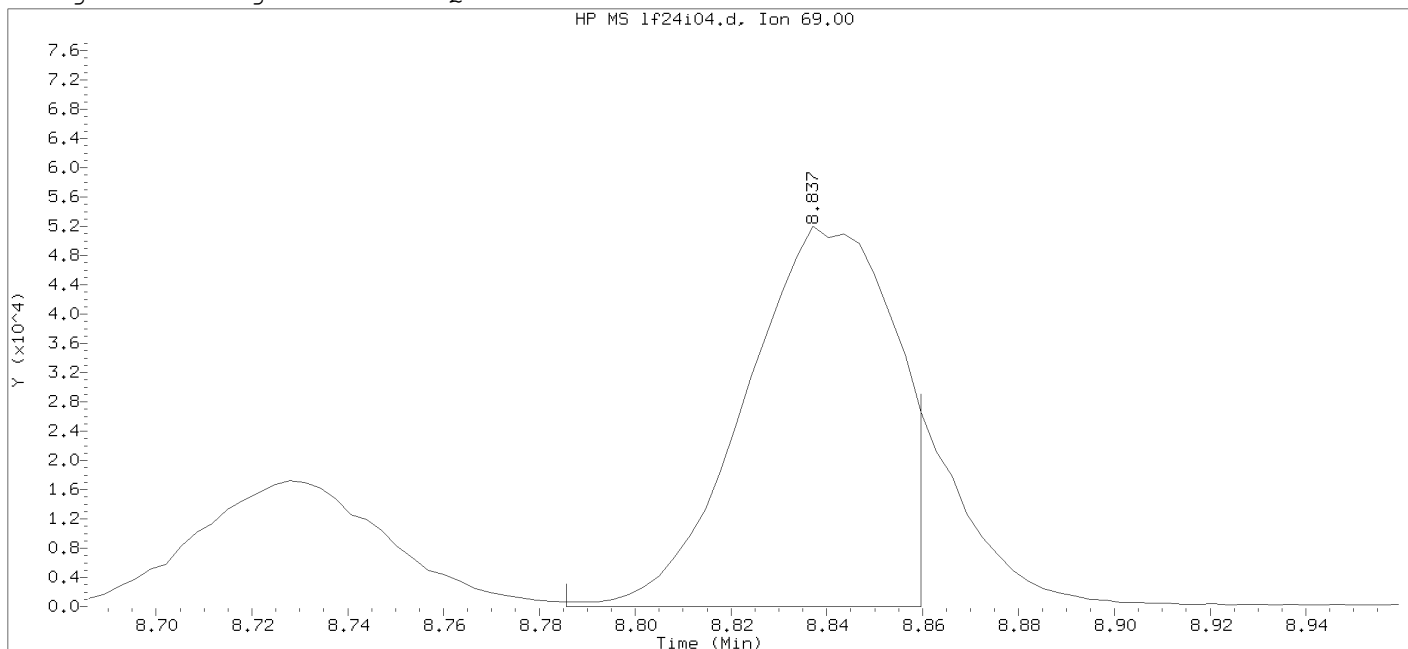
Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.
 Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:49.
 PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i04.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 17:23

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:55

Date, time and analyst ID of latest file update: 24-Feb-2020 20:55 mec29284

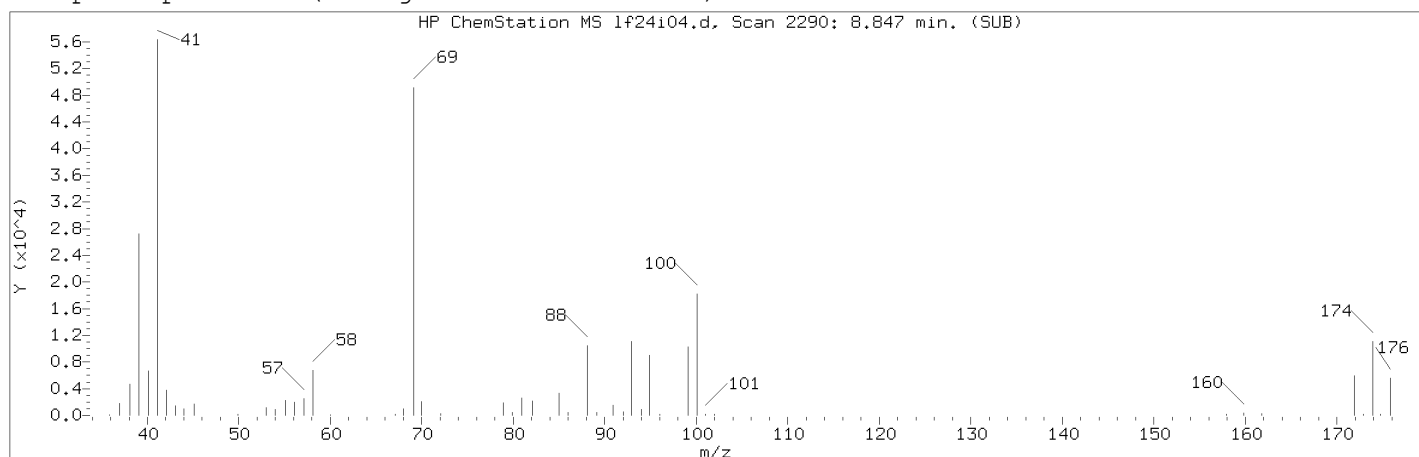
Sample Name: VSTD020

Lab Sample ID: VSTD020

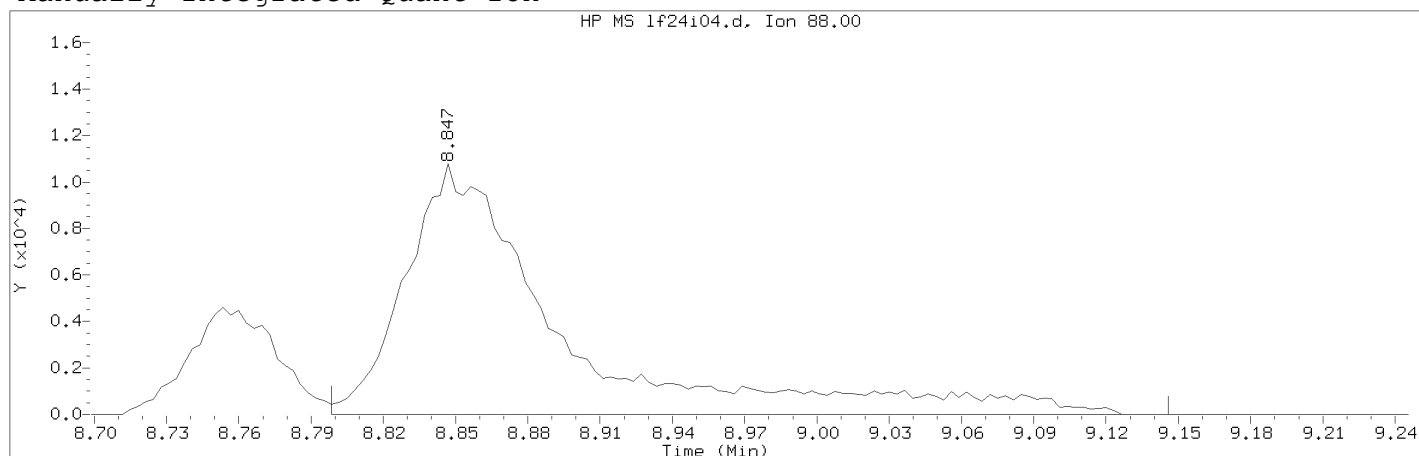
Compound Number	: 76	
Compound Name	: Methyl Methacrylate	
Scan Number	: 2287	
Retention Time (minutes)	: 8.837	
Quant Ion	: 69.00	
Area	: 111925	
On-column Amount (ng)	: 1.0000	
Integration start scan	: 2270	Integration stop scan: 2293
Y at integration start	: 0	Y at integration end: 0

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 Target 3.5 esignature user KR421m Page 188 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i04.d Instrument ID: HP09915.i
 Injection date and time: 24-FEB-2020 17:23 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 25-FEB-2020 12:44
 Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD020

Lab Sample ID: VSTD020

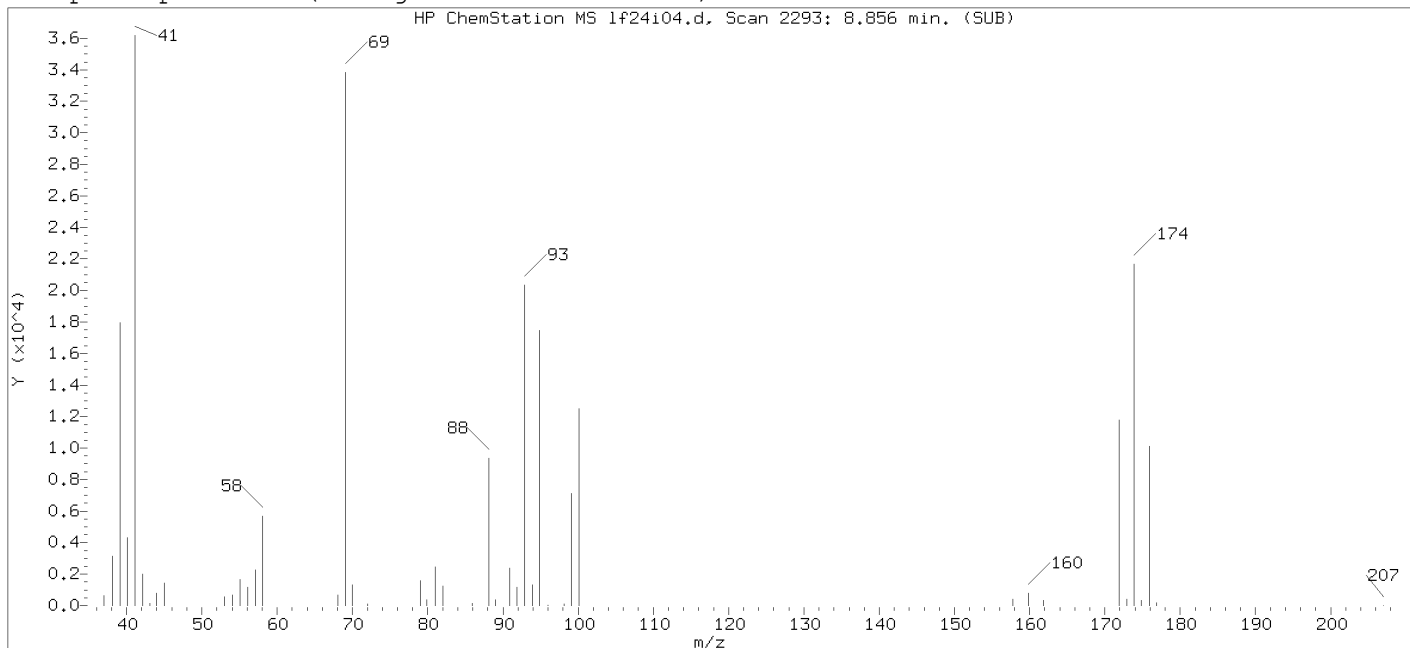
Compound Number : 75
 Compound Name : 1,4-Dioxane
 Scan Number : 2290
 Retention Time (minutes): 8.847
 Quant Ion : 88.00
 Area (flag) : 47707M
 On-Column Amount (ng) : 540.3484
 Integration start scan : 2274 Integration stop scan: 2382
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

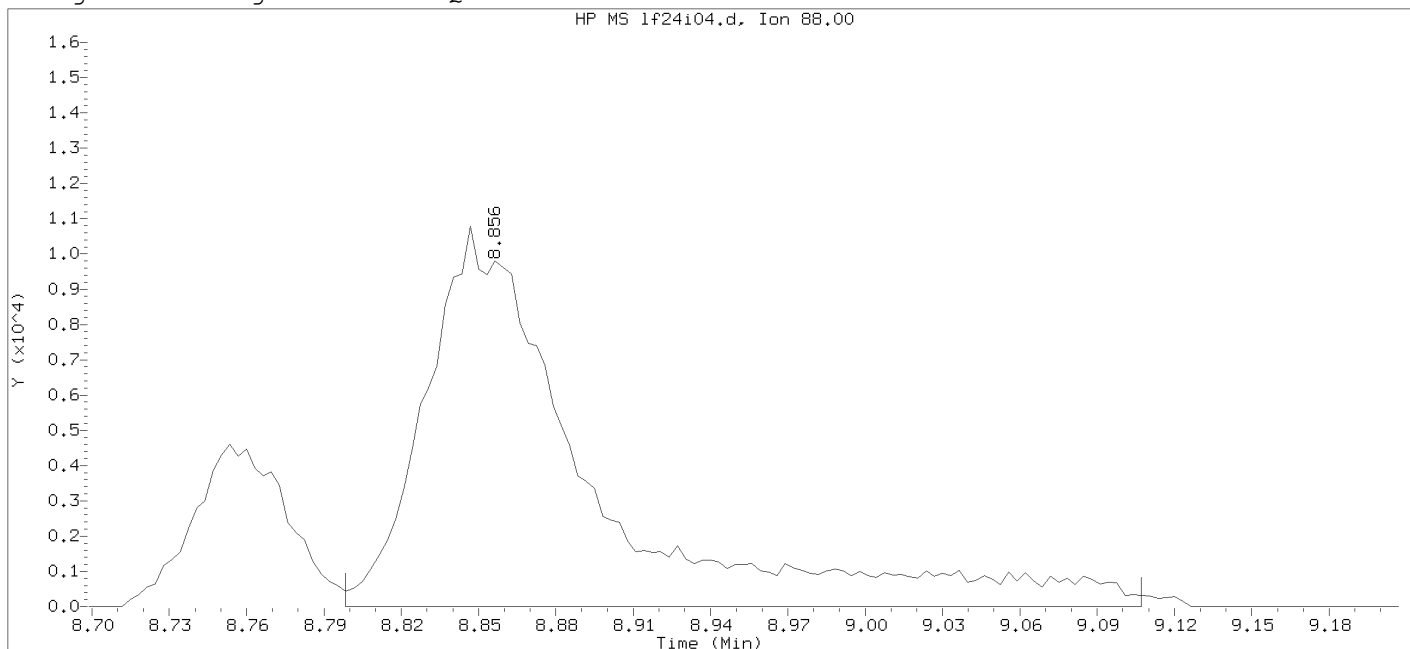
Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.
 Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:49.
 PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i04.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 17:23

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:55

Date, time and analyst ID of latest file update: 24-Feb-2020 20:55 mec29284

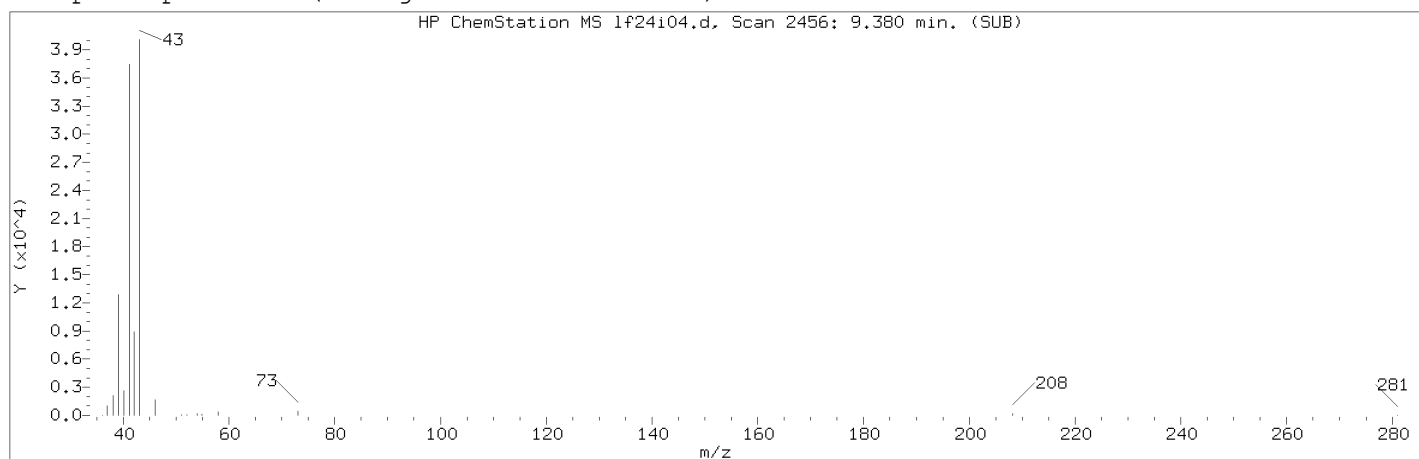
Sample Name: VSTD020

Lab Sample ID: VSTD020

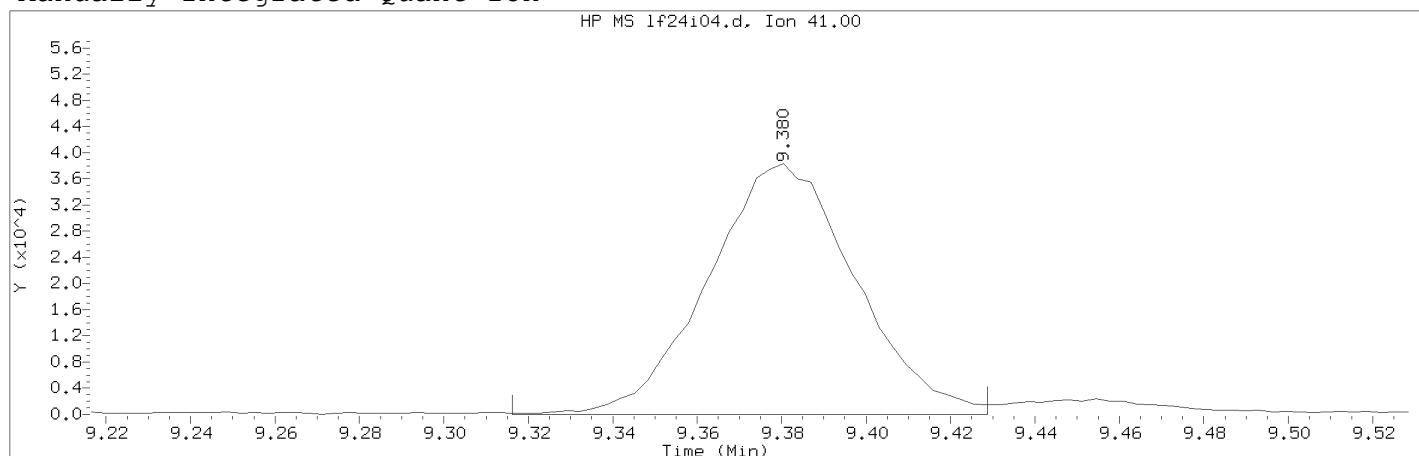
Compound Number	: 75	
Compound Name	: 1,4-Dioxane	
Scan Number	: 2293	
Retention Time (minutes)	: 8.856	
Quant Ion	: 88.00	
Area	: 47395	
On-column Amount (ng)	: 50.0000	
Integration start scan	: 2274	Integration stop scan: 2370
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Miranda E. Campbell on 02/25/2020 at 18:06.
 Target 3.5 esignature user KR421m Page 190 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i04.d Instrument ID: HP09915.i
 Injection date and time: 24-FEB-2020 17:23 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 25-FEB-2020 12:44
 Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD020 Lab Sample ID: VSTD020

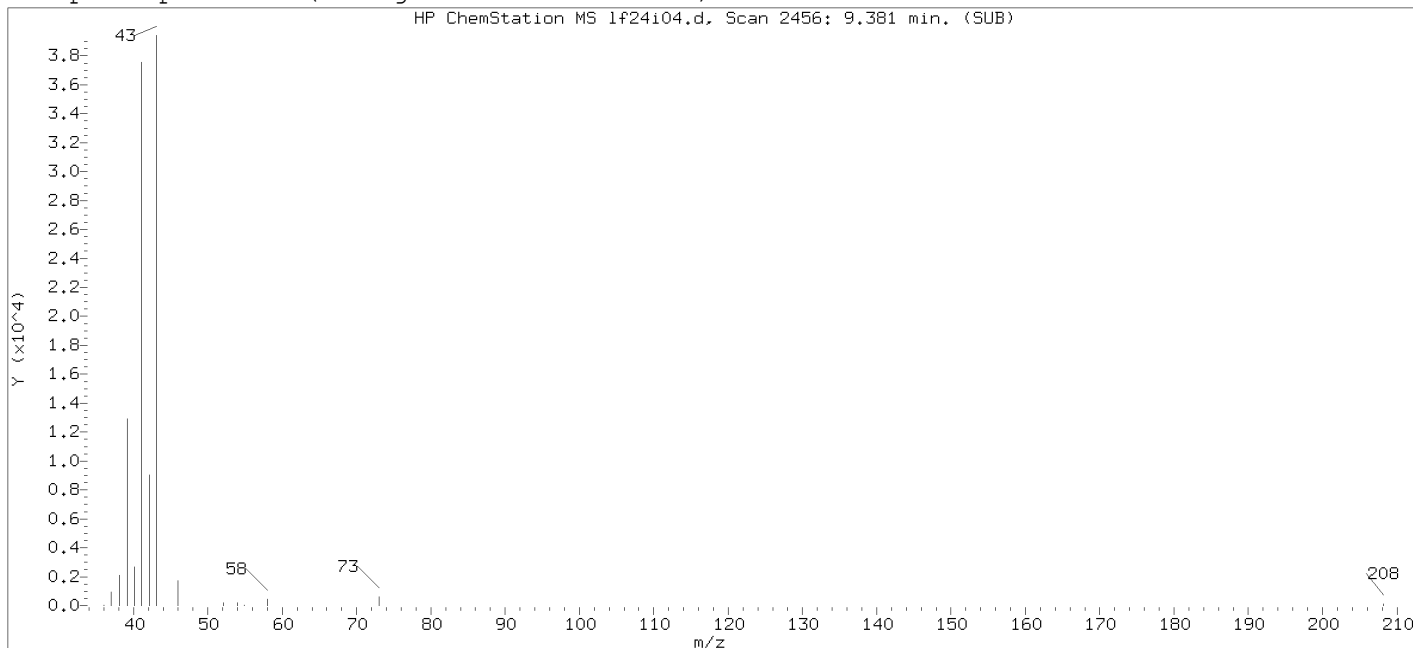
Compound Number : 79
 Compound Name : 2-Nitropropane
 Scan Number : 2456
 Retention Time (minutes): 9.380
 Quant Ion : 41.00
 Area (flag) : 92681M
 On-Column Amount (ng) : 39.8673
 Integration start scan : 2435 Integration stop scan: 2470
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

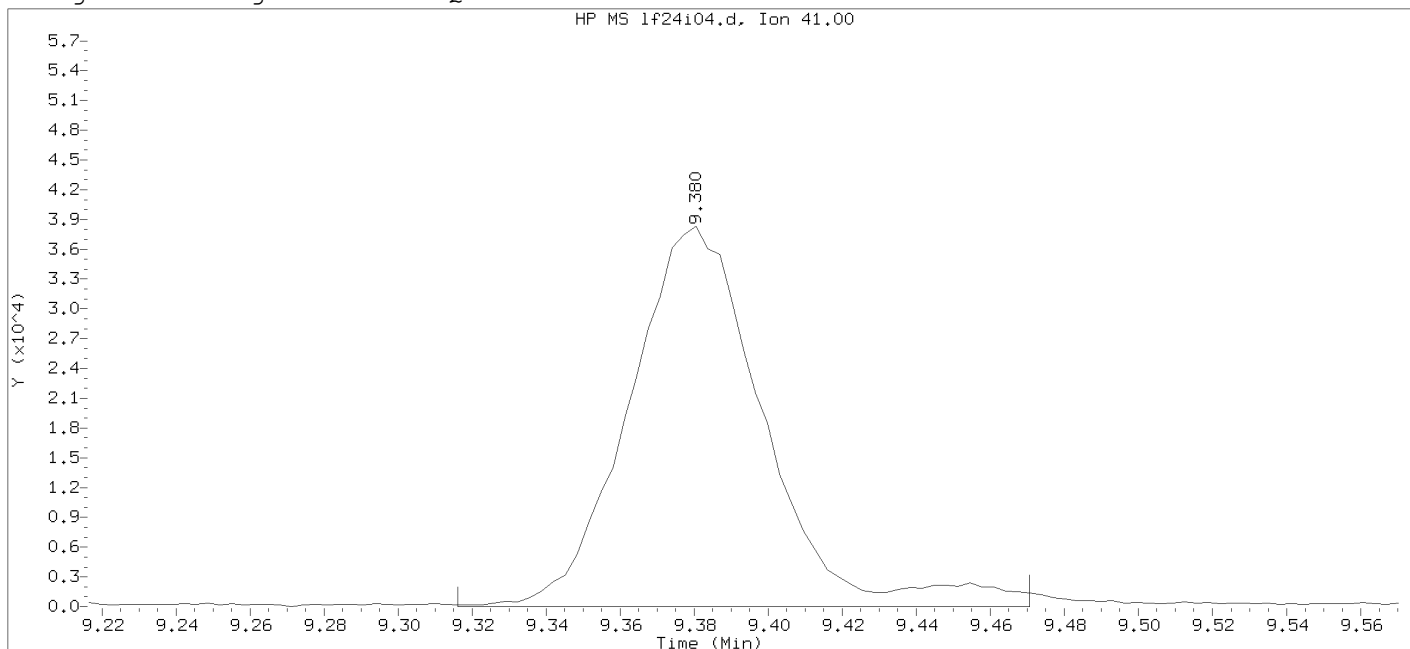
Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.
 Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:49.
 PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i04.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 17:23

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:55

Date, time and analyst ID of latest file update: 24-Feb-2020 20:55 mec29284

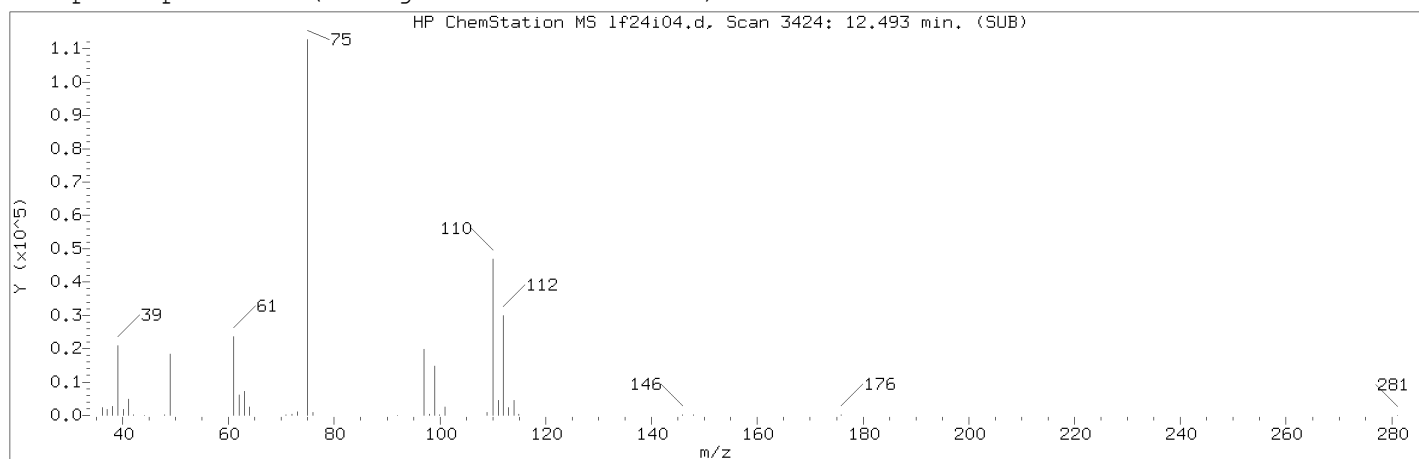
Sample Name: VSTD020

Lab Sample ID: VSTD020

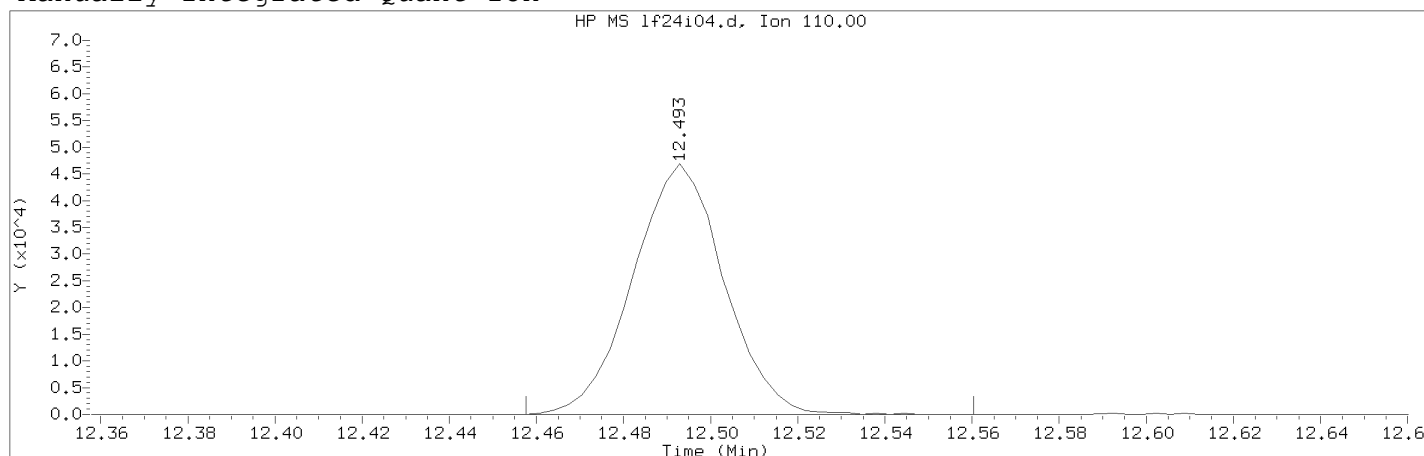
Compound Number	: 79	
Compound Name	: 2-Nitropropane	
Scan Number	: 2456	
Retention Time (minutes)	: 9.380	
Quant Ion	: 41.00	
Area	: 97188	
On-column Amount (ng)	: 2.0000	
Integration start scan	: 2435	Integration stop scan: 2483
Y at integration start	: 0	Y at integration end: 0

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 Target 3.5 esignature user KR421m Page 192 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i04.d Instrument ID: HP09915.i
 Injection date and time: 24-FEB-2020 17:23 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 25-FEB-2020 12:44
 Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD020

Lab Sample ID: VSTD020

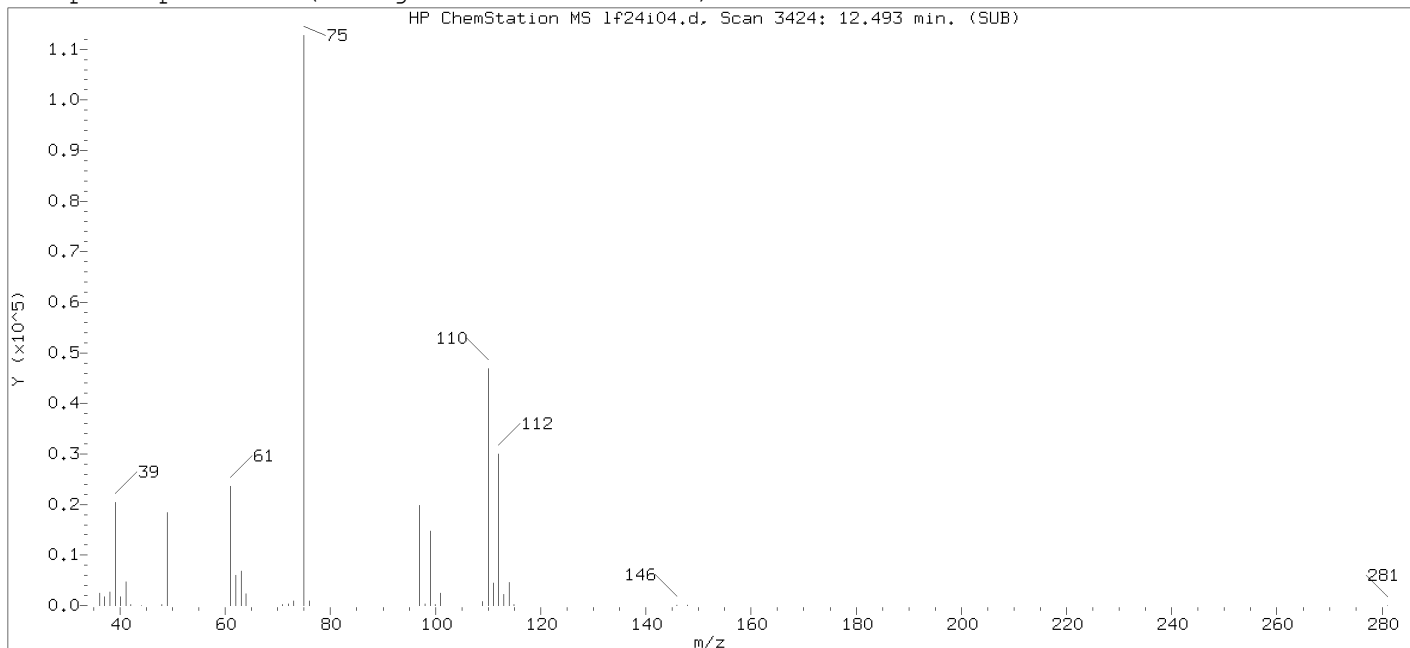
Compound Number : 117
 Compound Name : 1,2,3-Trichloropropane
 Scan Number : 3424
 Retention Time (minutes): 12.493
 Quant Ion : 110.00
 Area (flag) : 67957M
 On-Column Amount (ng) : 21.8836
 Integration start scan : 3412 Integration stop scan: 3444
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

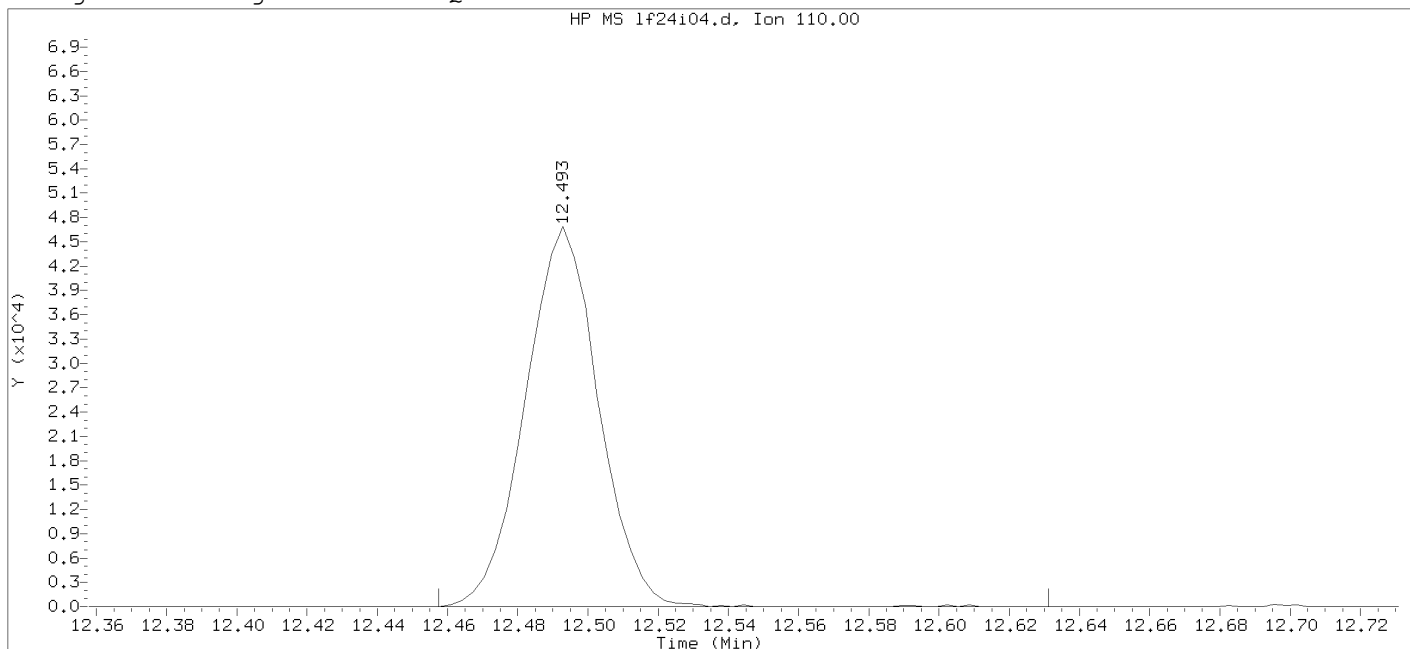
Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.
 Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:49.
 PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i04.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 17:23

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:55

Date, time and analyst ID of latest file update: 24-Feb-2020 20:55 mec29284

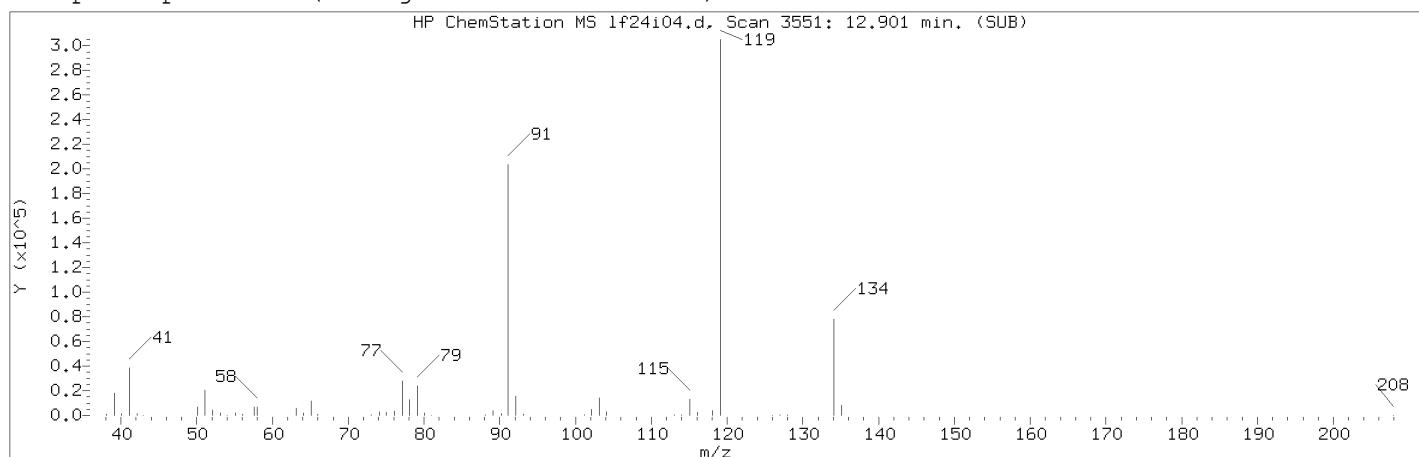
Sample Name: VSTD020

Lab Sample ID: VSTD020

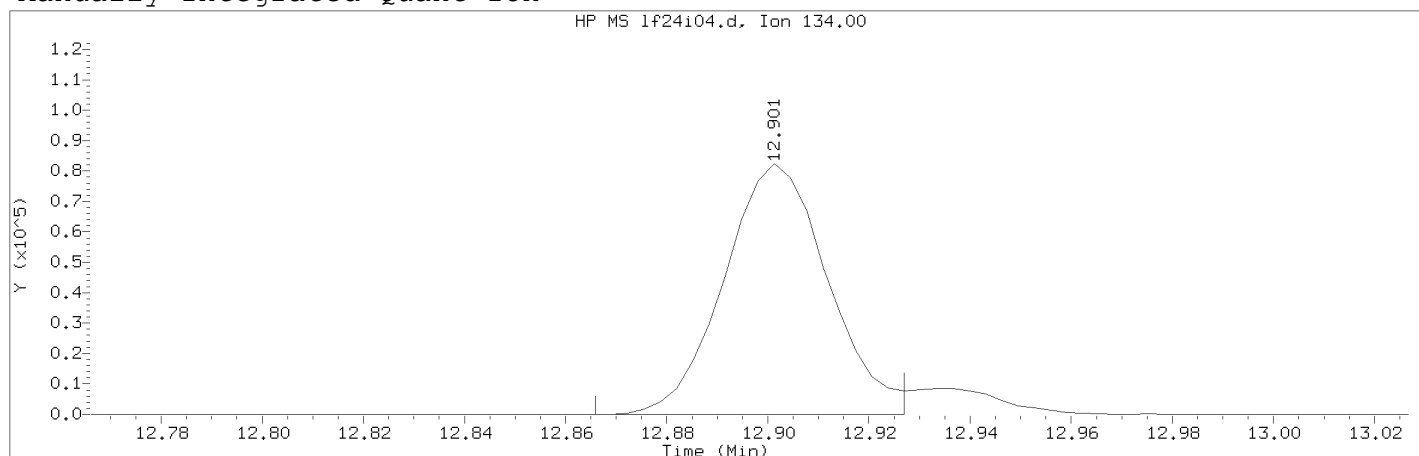
Compound Number	: 117	
Compound Name	: 1,2,3-Trichloropropane	
Scan Number	: 3424	
Retention Time (minutes)	: 12.493	
Quant Ion	: 110.00	
Area	: 68097	
On-column Amount (ng)	: 1.0000	
Integration start scan	: 3412	Integration stop scan: 3466
Y at integration start	: 0	Y at integration end: 0

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 Target 3.5 esignature user KR421m Page 194 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i04.d Instrument ID: HP09915.i
 Injection date and time: 24-FEB-2020 17:23 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 25-FEB-2020 12:44
 Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD020

Lab Sample ID: VSTD020

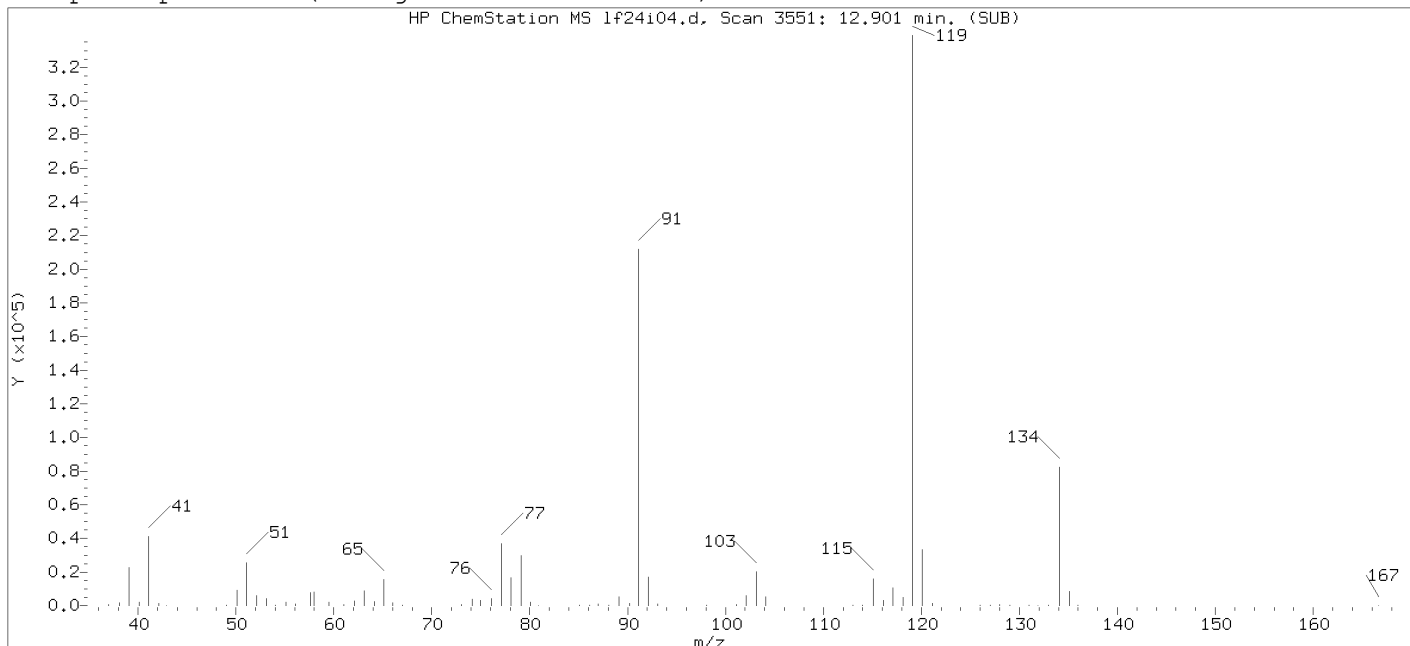
Compound Number : 124
 Compound Name : tert-Butylbenzene
 Scan Number : 3551
 Retention Time (minutes): 12.901
 Quant Ion : 134.00
 Area (flag) : 117306M
 On-Column Amount (ng) : 22.0630
 Integration start scan : 3539 Integration stop scan: 3558
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

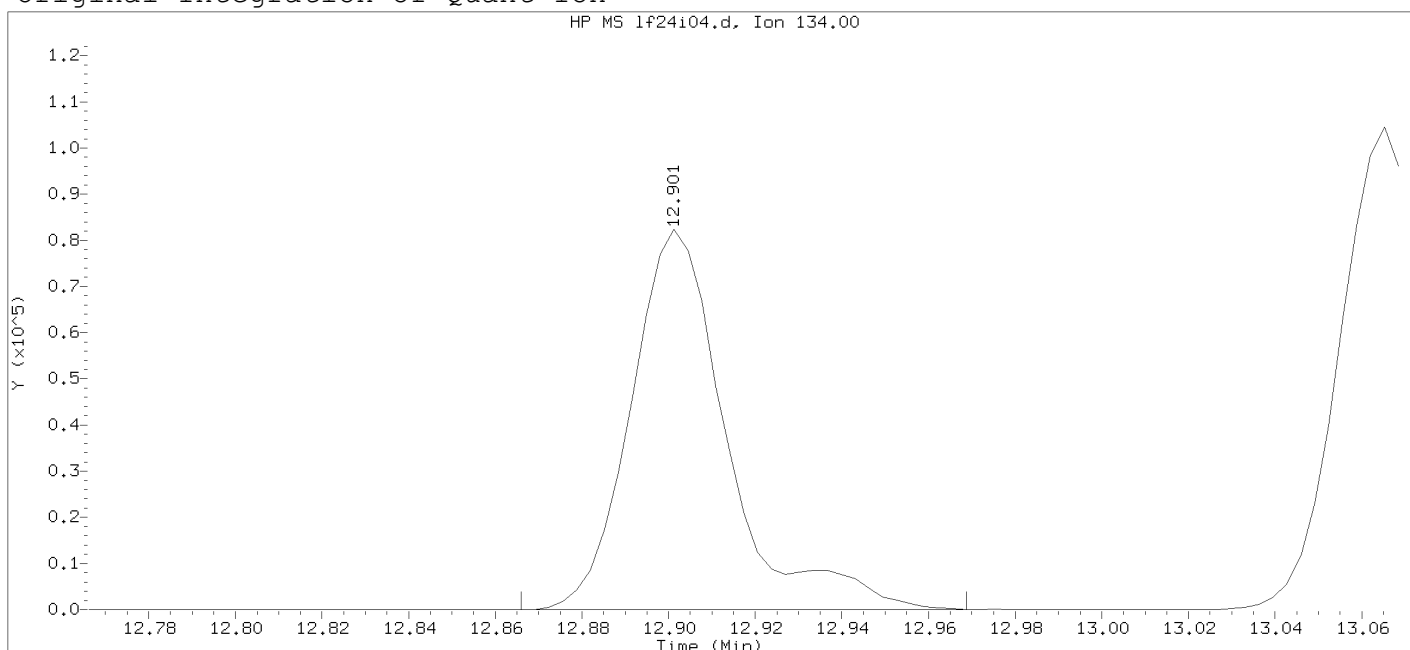
Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.
 Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:49.
 PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i04.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 17:23

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:55

Date, time and analyst ID of latest file update: 24-Feb-2020 20:55 mec29284

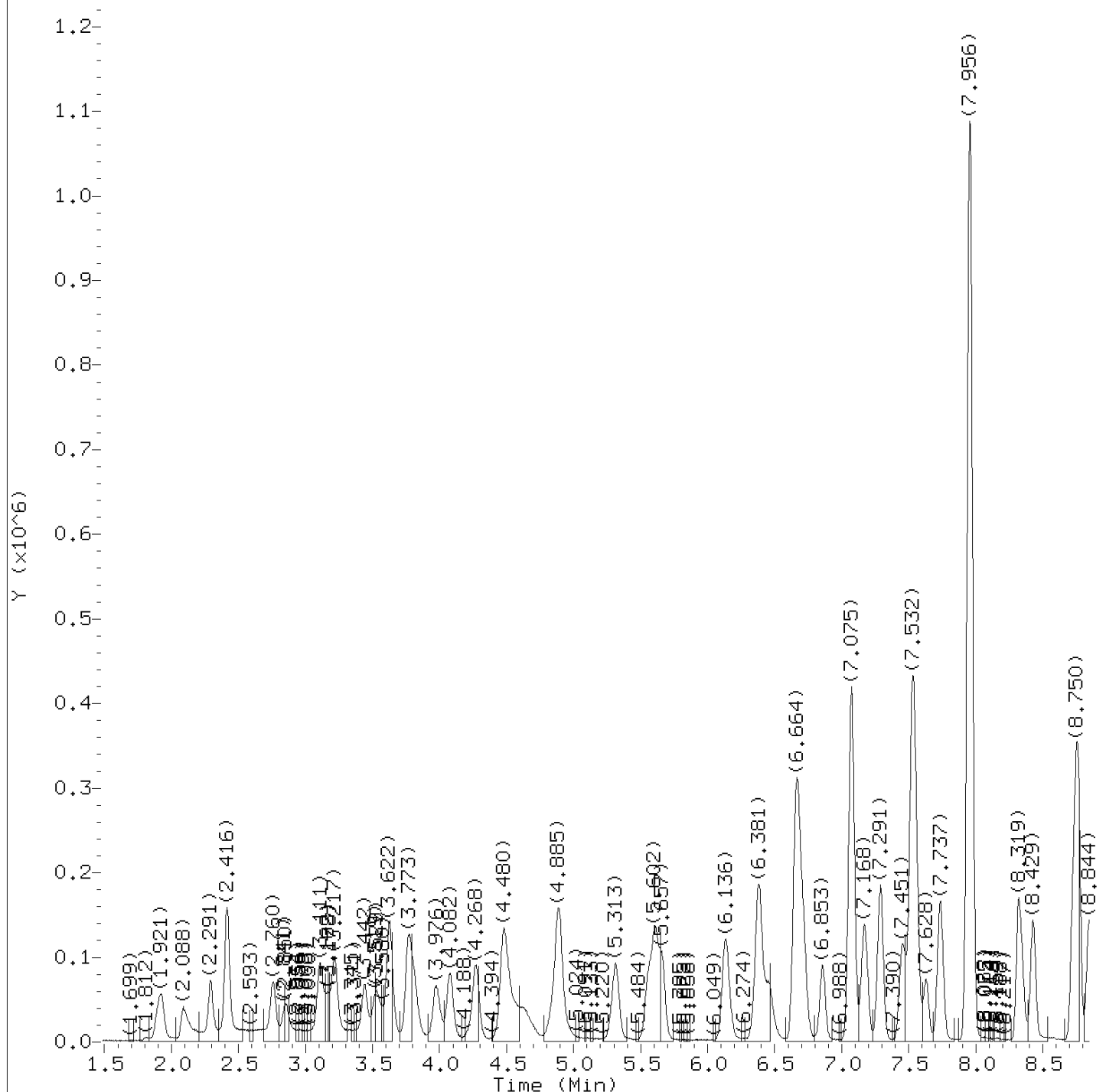
Sample Name: VSTD020

Lab Sample ID: VSTD020

Compound Number	: 124	
Compound Name	: tert-Butylbenzene	
Scan Number	: 3551	
Retention Time (minutes)	: 12.901	
Quant Ion	: 134.00	
Area	: 127265	
On-column Amount (ng)	: 1.0000	
Integration start scan	: 3539	Integration stop scan: 3571
Y at integration start	: 0	Y at integration end: 0

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 Target 3.5 esignature user KR421m Page 196 of 592

/chem/HP09915.i/20feb24i.b/1f24i05.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20feb24i.b/1f24i05.d
 Injection date and time: 24-FEB-2020 17:45

Instrument ID: HP09915.i
 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m
 Calibration date and time: 25-FEB-2020 12:44

Sublist used: 8260W

Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD010

Lab Sample ID: VSTD010

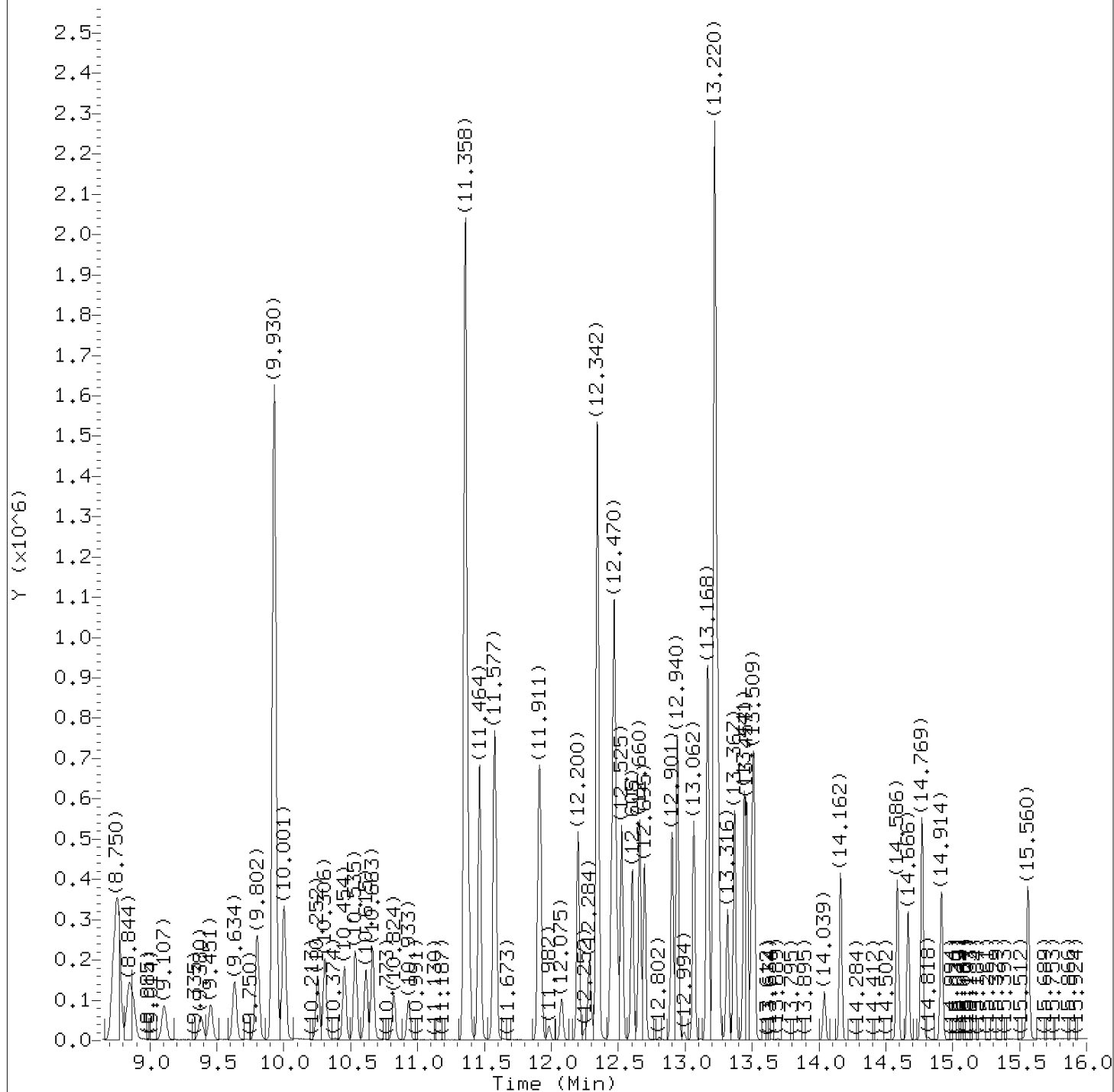
Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.

Target 3.5 esignature user ID: msc29284

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/chem/HP09915.i/20feb24i.b/1f24i05.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20feb24i.b/1f24i05.d
 Injection date and time: 24-FEB-2020 17:45

Instrument ID: HP09915.i
 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m
 Calibration date and time: 25-FEB-2020 12:44

Sublist used: 8260W

Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD010

Lab Sample ID: VSTD010

Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.

Target 3.5 esignature user ID: msc29284

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20feb24i.b/1f24i05.d
 Injection date and time: 24-FEB-2020 17:45

Instrument ID: HP09915.i
 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 25-FEB-2020 12:44

Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
3) Dichlorodifluoromethane	(2)	2.088	85	88915M	10.450
4) Chloromethane	(2)	2.291	50	90995	10.700
6) Vinyl Chloride	(2)	2.413	62	85610	10.670
5) 1,3-Butadiene	(2)	2.416	39	65937M	10.346
8) Bromomethane	(2)	2.760	94	60794	10.797
9) Chloroethane	(2)	2.853	64	47882	10.809
10) Dichlorofluoromethane	(2)	3.104	67	103857	10.572
12) Trichlorofluoromethane	(2)	3.162	101	87195	10.485
11) n-Pentane	(2)	3.217	43	93049	9.897
14) Ethyl ether	(2)	3.445	59	60429	10.182
15) Freon 123a	(2)	3.525	67	69177	10.355
16) Acrolein	(1)	3.622	56	229463	107.905
17) 1,1-Dichloroethene	(2)	3.763	96	57394	10.089
17) 1,1-Dichloroethene	(2)	3.770	63	27801	10.345
19) Freon 113	(2)	3.795	101	56383	10.420
18) Acetone	(1)	3.812	58	20369M	21.658
22) Methyl Iodide	(2)	3.969	142	105181	10.458
21) 2-Propanol	(1)	4.004	45	70252	107.219
23) Carbon Disulfide	(2)	4.078	76	185795	10.340
27) Methyl Acetate	(2)	4.252	43	69701	9.817
25) Allyl Chloride	(2)	4.275	41	90806	9.920
28) Methylene Chloride	(2)	4.477	84	65567	10.324
29) *t-Butyl alcohol-d10	(1)	4.506	65	291154M	250.000
30) t-Butyl alcohol	(1)	4.628	59	123482	109.641
31) Acrylonitrile	(2)	4.831	53	40135	10.429
33) Methyl Tertiary Butyl Ether	(2)	4.882	73	192951	10.152
32) trans-1,2-Dichloroethene	(2)	4.889	96	64232	10.295
34) n-Hexane	(2)	5.313	57	91220	10.165
36) 1,1-Dichloroethane	(2)	5.554	63	108042	10.346
38) di-Isopropyl ether	(2)	5.612	45	208453	10.388
39) 2-Chloro-1,3-butadiene	(2)	5.664	53	90997	10.189
40) Ethyl t-butyl ether	(2)	6.133	59	201058	10.550
43) 1,2-Dichloroethene (Total)	(2)		96	135258	20.474
44) 2-Butanone	(2)	6.365	43	101331	20.592
42) cis-1,2-Dichloroethene	(2)	6.377	96	71026	10.179
45) 2,2-Dichloropropane	(2)	6.390	77	86066	10.357
47) Propionitrile	(1)	6.458	54	149745	102.591
48) Methacrylonitrile	(2)	6.667	67	197622	50.206

M = Compound was manually integrated.

* = Compound is an internal standard.

page 1 of 4

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 on 02/25/2020 at 18:06.

Target 3.5 esignature user ID: mec29284

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20feb24i.b/1f24i05.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 17:45

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 25-FEB-2020 12:44

Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
49) Bromochloromethane	(2)	6.709	128	34720	10.013
50) Tetrahydrofuran	(1)	6.721	71	27667	21.082
51) Chloroform	(2)	6.856	83	104924	10.369
52)\$Dibromofluoromethane	(2)	7.072	113	317600	49.797
52)\$Dibromofluoromethane	(2)	7.075	111	323284	49.613
53) 1,1,1-Trichloroethane	(2)	7.075	97	91287	10.289
54) Cyclohexane	(2)	7.175	56	110965	10.156
54) Cyclohexane	(2)	7.172	84	94006	10.190
54) Cyclohexane	(2)	7.168	69	34170	10.197
56) Carbon Tetrachloride	(2)	7.281	117	73571	10.149
55) 1,1-Dichloropropene	(2)	7.291	75	84786	10.244
58) Isobutyl Alcohol	(1)	7.458	41	105788	276.448
57)\$1,2-Dichloroethane-d4	(2)	7.525	102	81623	49.344
57)\$1,2-Dichloroethane-d4	(2)	7.528	65	364118	49.314
57)\$1,2-Dichloroethane-d4	(2)	7.525	104	51440	48.990
60) Benzene	(2)	7.554	78	264476	10.475
61) 1,2-Dichloroethane	(2)	7.631	62	84508	10.011
61) 1,2-Dichloroethane	(2)	7.622	98	8335	10.781
65) t-Amyl methyl ether	(2)	7.737	73	198903	10.376
67) n-Heptane	(2)	7.959	43	88984	10.125
66)*Fluorobenzene	(2)	7.959	96	1348858	50.000
69) n-Butanol	(1)	8.323	56	178576	557.466
71) Trichloroethene	(2)	8.429	95	66767	10.504
72) Methylcyclohexane	(2)	8.731	83	104598	9.809
72) Methylcyclohexane	(2)	8.728	98	47495	9.875
73) 1,2-Dichloropropane	(2)	8.770	63	67686	10.319
76) Methyl Methacrylate	(2)	8.844	69	62130M	9.921
75) 1,4-Dioxane	(1)	8.853	88	22348	261.900
74) Dibromomethane	(2)	8.872	93	43342	10.160
78) Bromodichloromethane	(2)	9.104	83	76898	10.084
79) 2-Nitropropane	(2)	9.384	41	45539	19.410
80) 2-Chloroethyl Vinyl Ether	(2)	9.458	63	47493	9.876
81) cis-1,3-Dichloropropene	(2)	9.631	75	102518	10.034
82) 4-Methyl-2-pentanone	(2)	9.798	43	213410	20.962
83)\$Toluene-d8	(3)	9.930	98	1337623	50.318
83)\$Toluene-d8	(3)	9.930	100	870066	50.363
88) Toluene	(3)	10.001	92	169423	10.726
90) 1,3-Dichloropropene (total)	(3)		100	197218	20.096

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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on 02/25/2020 at 18:06.

Target 3.5 esignature user ID: mec29284

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20feb24i.b/1f24i05.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 17:45

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 25-FEB-2020 12:44

Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
89) trans-1,3-Dichloropropene	(3)	10.252	75	94700	10.062
91) Ethyl Methacrylate	(3)	10.306	69	111584	10.354
92) 1,1,2-Trichloroethane	(3)	10.454	97	63974	10.276
93) Tetrachloroethene	(3)	10.535	166	72327	10.790
94) 1,3-Dichloropropane	(3)	10.615	76	107043	10.301
96) 2-Hexanone	(3)	10.663	43	153802	21.128
97) Dibromochloromethane	(3)	10.824	129	63182	10.042
99) 1,2-Dibromoethane	(3)	10.930	107	69451	10.253
100) *Chlorobenzene-d5	(3)	11.355	117	1011830	50.000
101) 1-Chlorohexane	(3)	11.358	91	88905	10.097
102) Chlorobenzene	(3)	11.384	112	190591	10.738
103) 1,1,1,2-Tetrachloroethane	(3)	11.461	131	62850	10.592
104) Ethylbenzene	(3)	11.464	91	321478	10.654
106) m+p-Xylene	(3)	11.577	106	254984	21.530
108) Xylene (Total)	(3)		106	381515	32.309
107) o-Xylene	(3)	11.904	106	126531	10.779
109) Styrene	(3)	11.917	104	213445	10.810
110) Bromoform	(3)	12.075	173	45205	9.282
111) Isopropylbenzene	(3)	12.200	105	322554	10.724
112) Cyclohexanone	(1)	12.284	55	89264	260.797
114) \$4-Bromofluorobenzene	(3)	12.342	95	499022	49.778
114) \$4-Bromofluorobenzene	(3)	12.345	174	414461	50.015
116) 1,1,2,2-Tetrachloroethane	(4)	12.445	83	117142M	11.180
115) Bromobenzene	(4)	12.461	156	83897	10.759
118) trans-1,4-Dichloro-2-butene	(4)	12.470	53	158969	52.964
117) 1,2,3-Trichloropropane	(4)	12.493	110	34326	11.039
119) n-Propylbenzene	(4)	12.525	91	378323	10.757
120) 2-Chlorotoluene	(4)	12.605	126	77973	10.672
122) 1,3,5-Trimethylbenzene	(4)	12.660	105	276333	10.679
121) 4-Chlorotoluene	(4)	12.695	126	81228	10.716
124) tert-Butylbenzene	(4)	12.901	134	56517M	10.616
125) Pentachloroethane	(4)	12.937	167	40720	9.567
126) 1,2,4-Trimethylbenzene	(4)	12.943	105	294888	10.887
127) sec-Butylbenzene	(4)	13.062	105	343089	10.792
129) 1,3-Dichlorobenzene	(4)	13.165	146	161503	10.986
130) p-Isopropyltoluene	(4)	13.171	119	297531	10.864
131) *1,4-Dichlorobenzene-d4	(4)	13.220	152	551668	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	167625	11.009

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 3 of 4

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Target 3.5 esignature user ID: mec29284

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20feb24i.b/lf24i05.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 17:45

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 25-FEB-2020 12:44

Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
134) 1,2,3-Trimethylbenzene	(4)	13.248	105	282463	10.431
135) Benzyl Chloride	(4)	13.316	91	209665	10.579
136) 1,3-Diethylbenzene	(4)	13.367	119	172301	10.384
141) Diethylbenzene (total)	(4)		100	500098	31.299
137) 1,4-Diethylbenzene	(4)	13.441	119	182203	10.482
139) n-Butylbenzene	(4)	13.461	92	147383	10.675
138) 1,2-Dichlorobenzene	(4)	13.499	146	160675	10.982
140) 1,2-Diethylbenzene	(4)	13.515	119	145594	10.433
142) 1,2-Dibromo-3-chloropropane	(4)	14.039	75	25261	11.063
144) 1,3,5-Trichlorobenzene	(4)	14.162	180	118377	10.758
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	114597	10.845
147) Hexachlorobutadiene	(4)	14.666	225	51512	11.087
148) Naphthalene	(4)	14.769	128	397016	11.131
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	109067	10.908
150) 2-Methylnaphthalene	(4)	15.560	142	190618	9.965

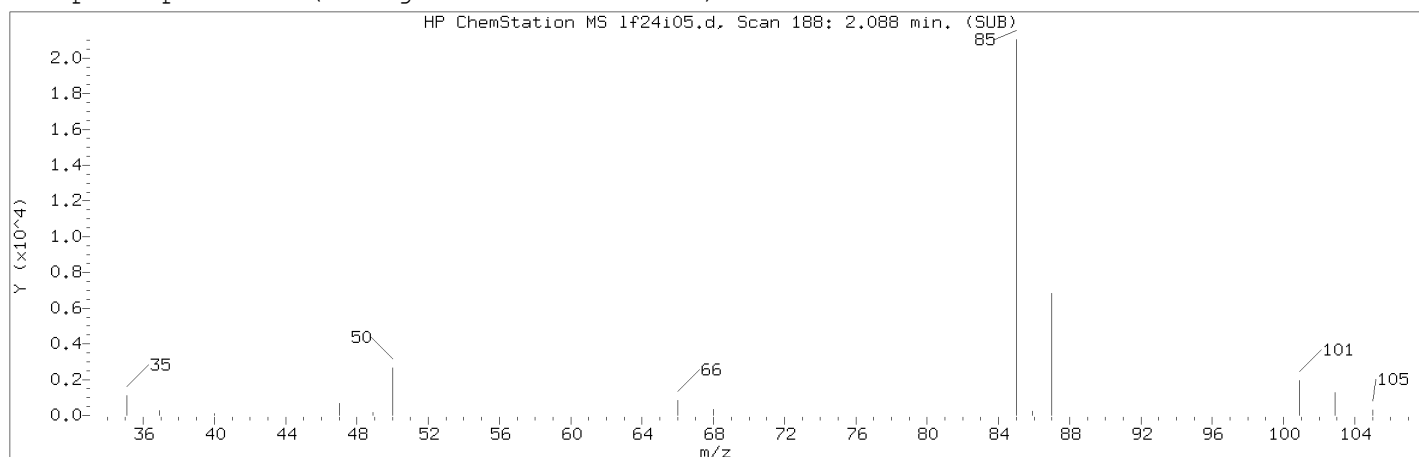
page 4 of 4

Digitally signed by Miranda E. Campbell
on 02/25/2020 at 18:06.

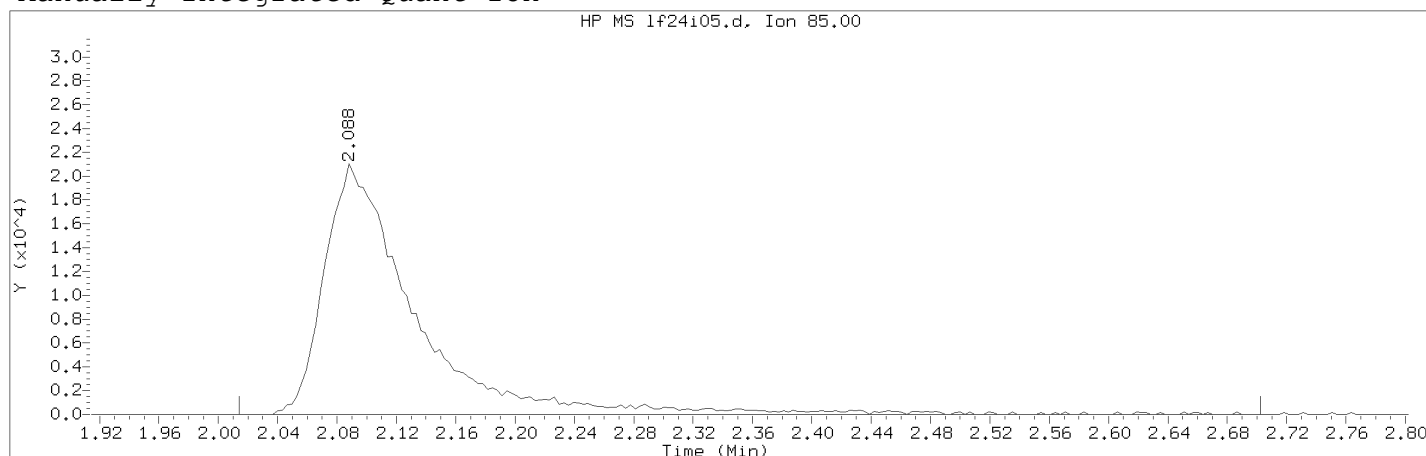
Target 3.5 esignature user ID: mec29284

KR421 Page 202 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i05.d Instrument ID: HP09915.i
 Injection date and time: 24-FEB-2020 17:45 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 25-FEB-2020 12:44
 Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD010

Lab Sample ID: VSTD010

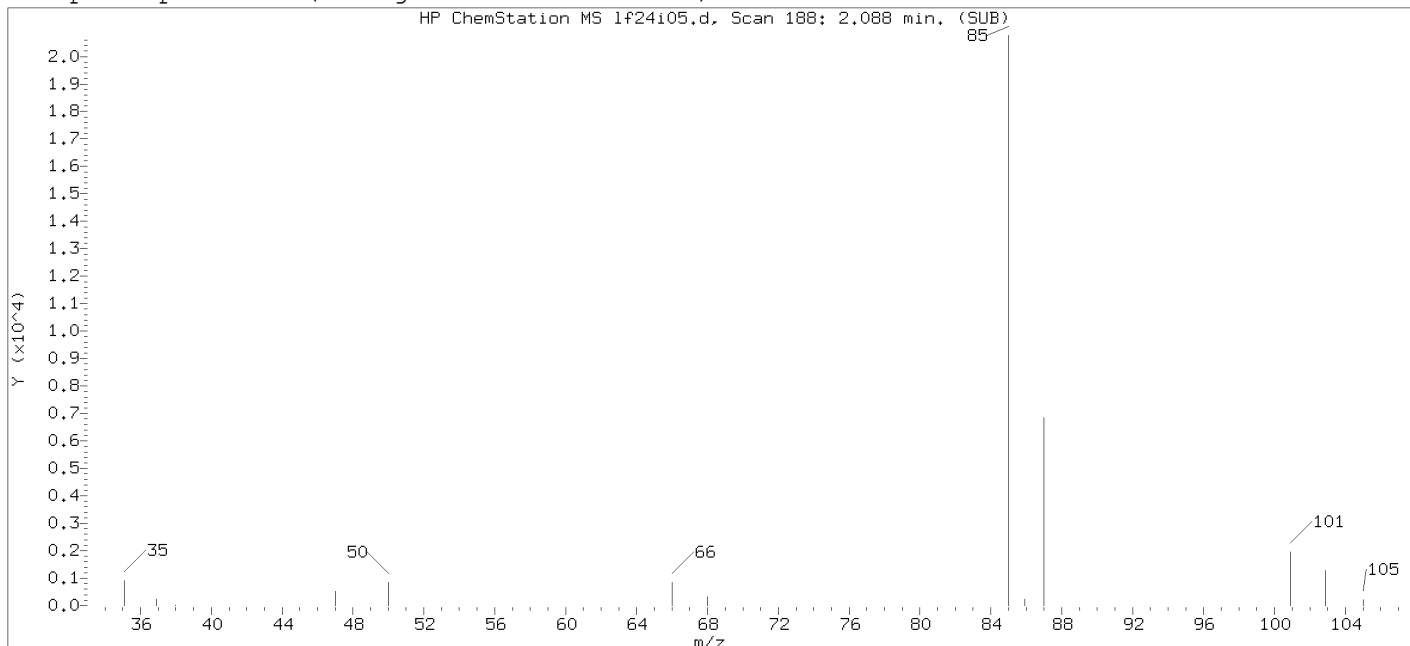
Compound Number : 3
 Compound Name : Dichlorodifluoromethane
 Scan Number : 188
 Retention Time (minutes): 2.088
 Quant Ion : 85.00
 Area (flag) : 88915M
 On-Column Amount (ng) : 10.4498
 Integration start scan : 164 Integration stop scan: 378
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

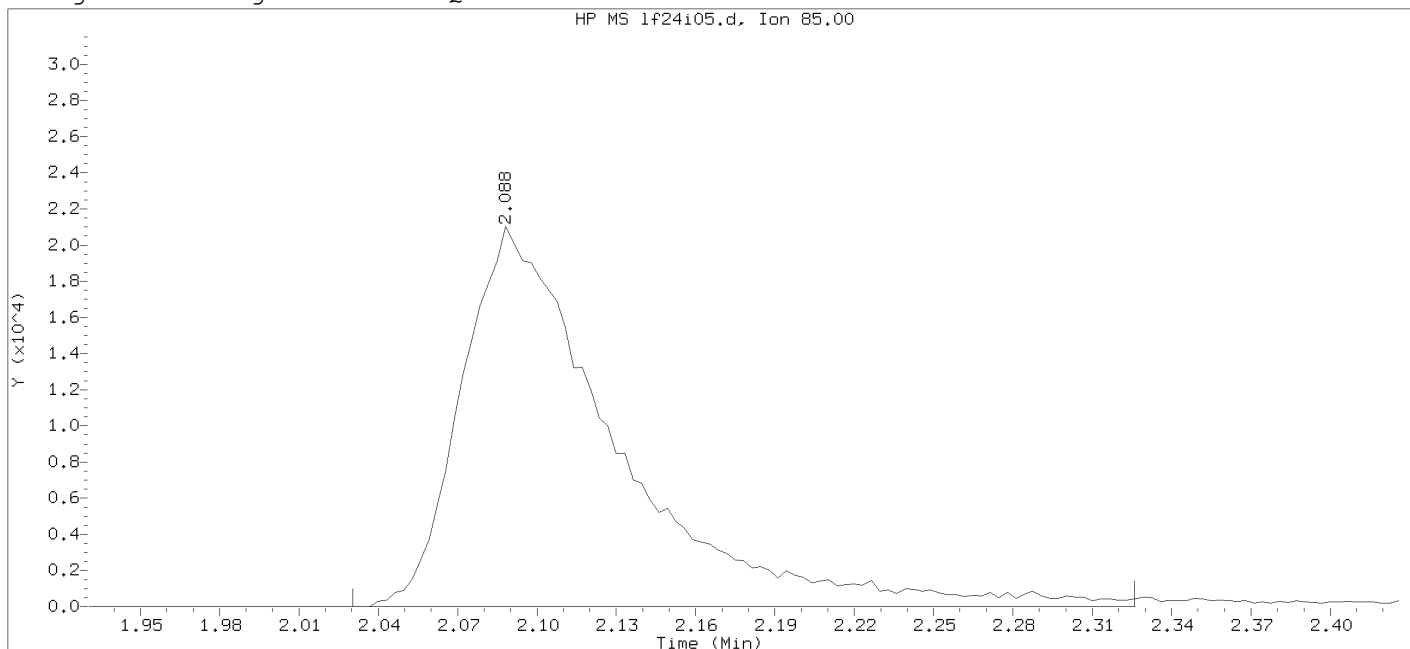
Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.
 Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:49.
 PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i05.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 17:45

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:55

Date, time and analyst ID of latest file update: 24-Feb-2020 20:55 mec29284

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compound Number : 3

Compound Name : Dichlorodifluoromethane

Scan Number : 188

Retention Time (minutes): 2.088

Quant Ion : 85.00

Area : 85566

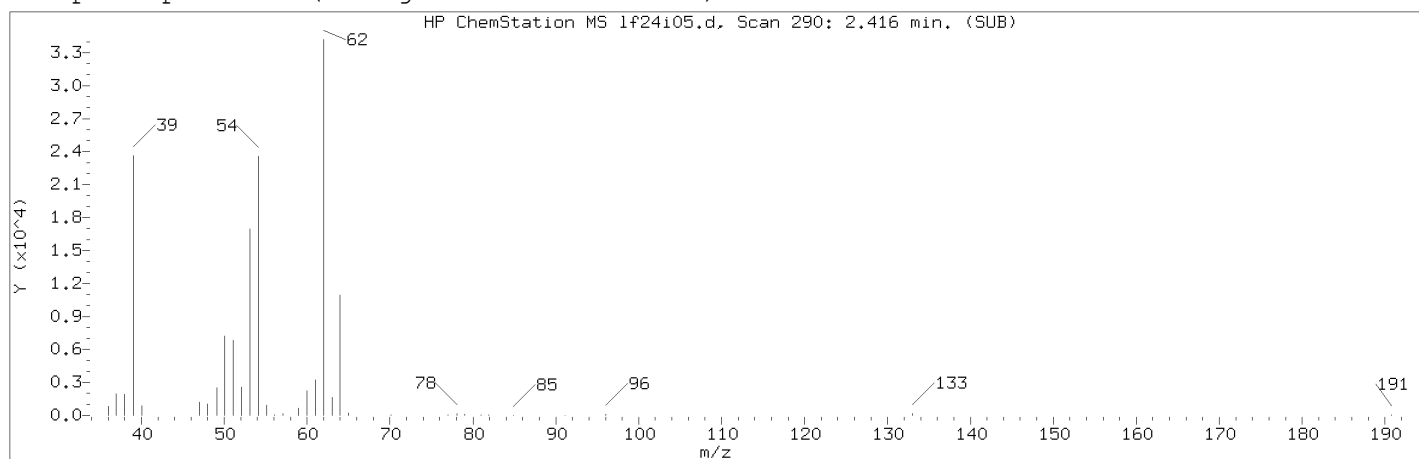
On-column Amount (ng) : 1.0000

Integration start scan : 169 Integration stop scan: 261

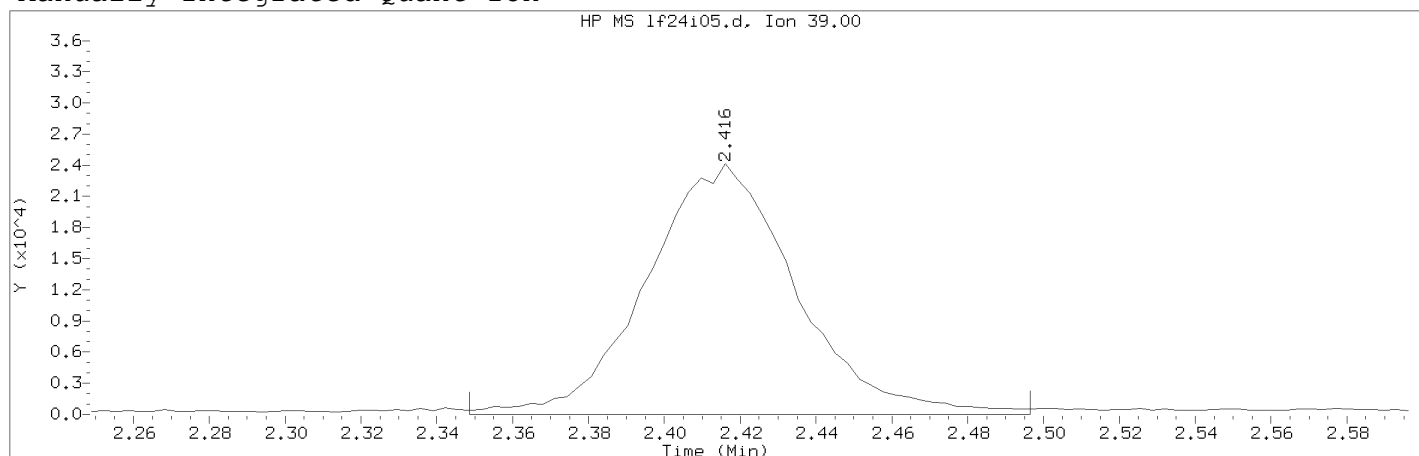
Y at integration start : 0 Y at integration end: 0

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 Target 3.5 esignature user KR421m Page 204 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i05.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 17:45

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 25-FEB-2020 12:44

Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compound Number : 5
 Compound Name : 1,3-Butadiene
 Scan Number : 290
 Retention Time (minutes): 2.416
 Quant Ion : 39.00
 Area (flag) : 65937M
 On-Column Amount (ng) : 10.3465
 Integration start scan : 268 Integration stop scan: 314
 Y at integration start : 0 Y at integration end: 0

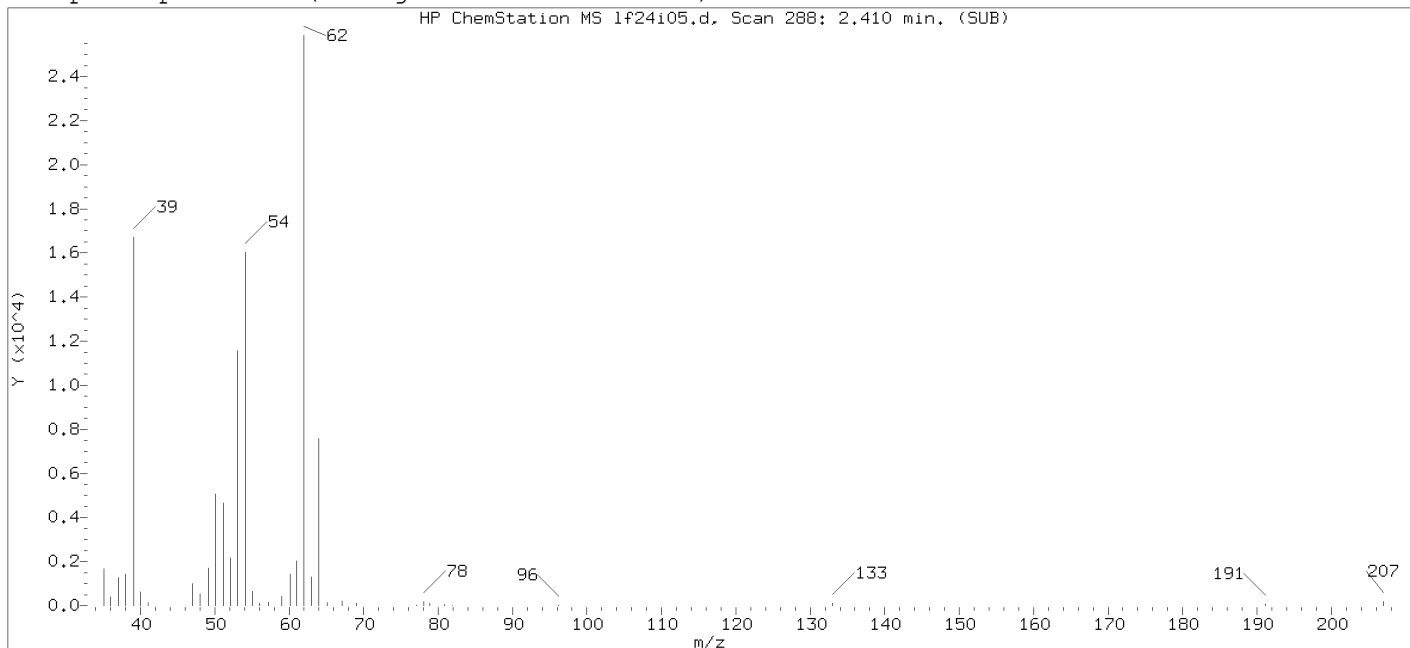
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.
 Target 3.5 esignature user ID: mec29284

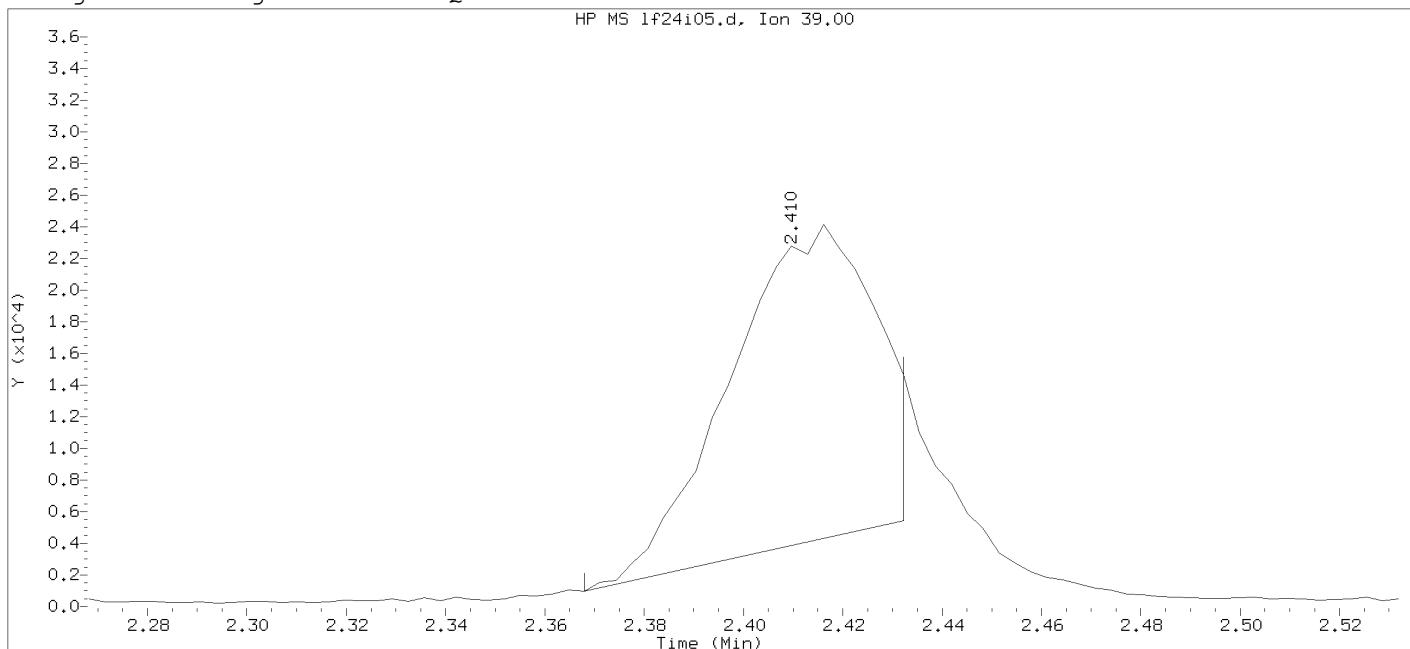
Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:49.

PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i05.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 17:45

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:55

Date, time and analyst ID of latest file update: 24-Feb-2020 20:55 mec29284

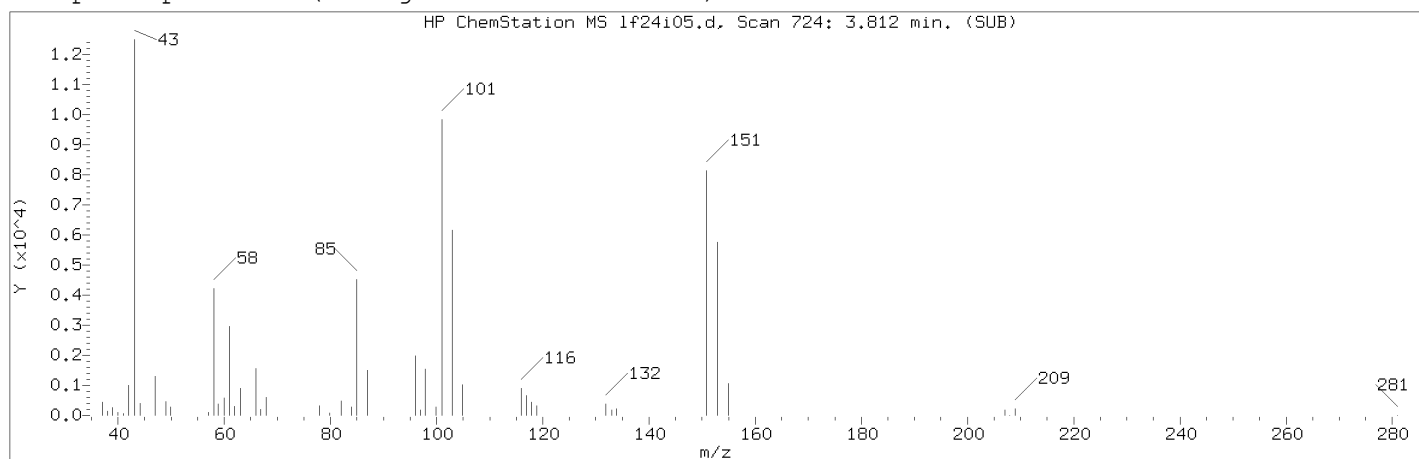
Sample Name: VSTD010

Lab Sample ID: VSTD010

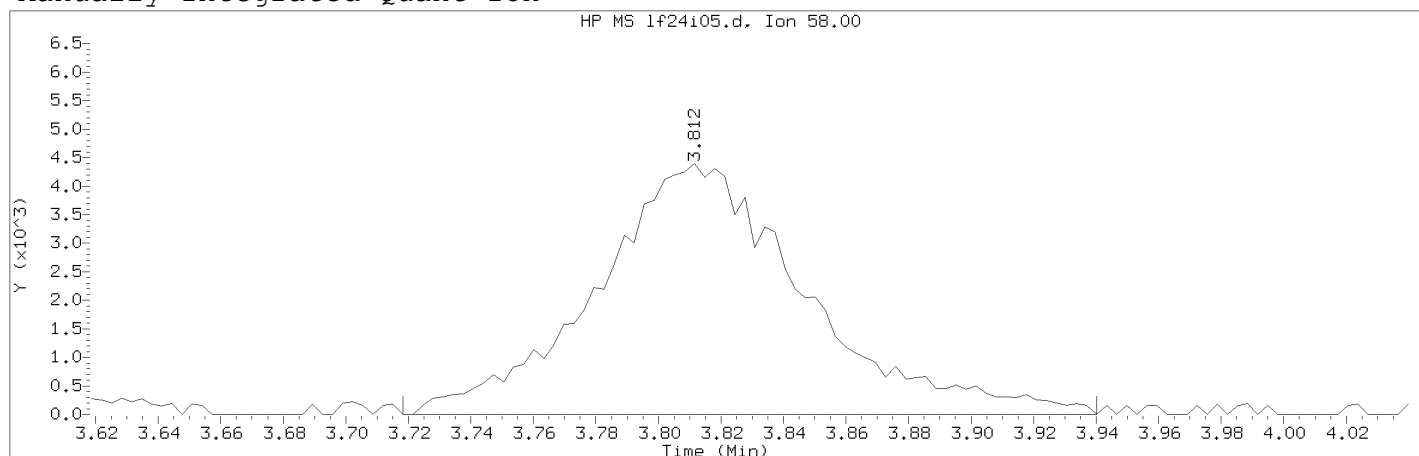
Compound Number	: 5	
Compound Name	: 1,3-Butadiene	
Scan Number	: 288	
Retention Time (minutes)	: 2.410	
Quant Ion	: 39.00	
Area	: 39972	
On-column Amount (ng)	: 1.0000	
Integration start scan	: 274	Integration stop scan: 294
Y at integration start	: 990	Y at integration end: 5430

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 Target 3.5 esignature user KR421m Page 206 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i05.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 17:45

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 25-FEB-2020 12:44

Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compound Number : 18
 Compound Name : Acetone
 Scan Number : 724
 Retention Time (minutes): 3.812
 Quant Ion : 58.00
 Area (flag) : 20369M
 On-Column Amount (ng) : 21.6585
 Integration start scan : 694
 Y at integration start : 0

Integration stop scan: 763
 Y at integration end: 0

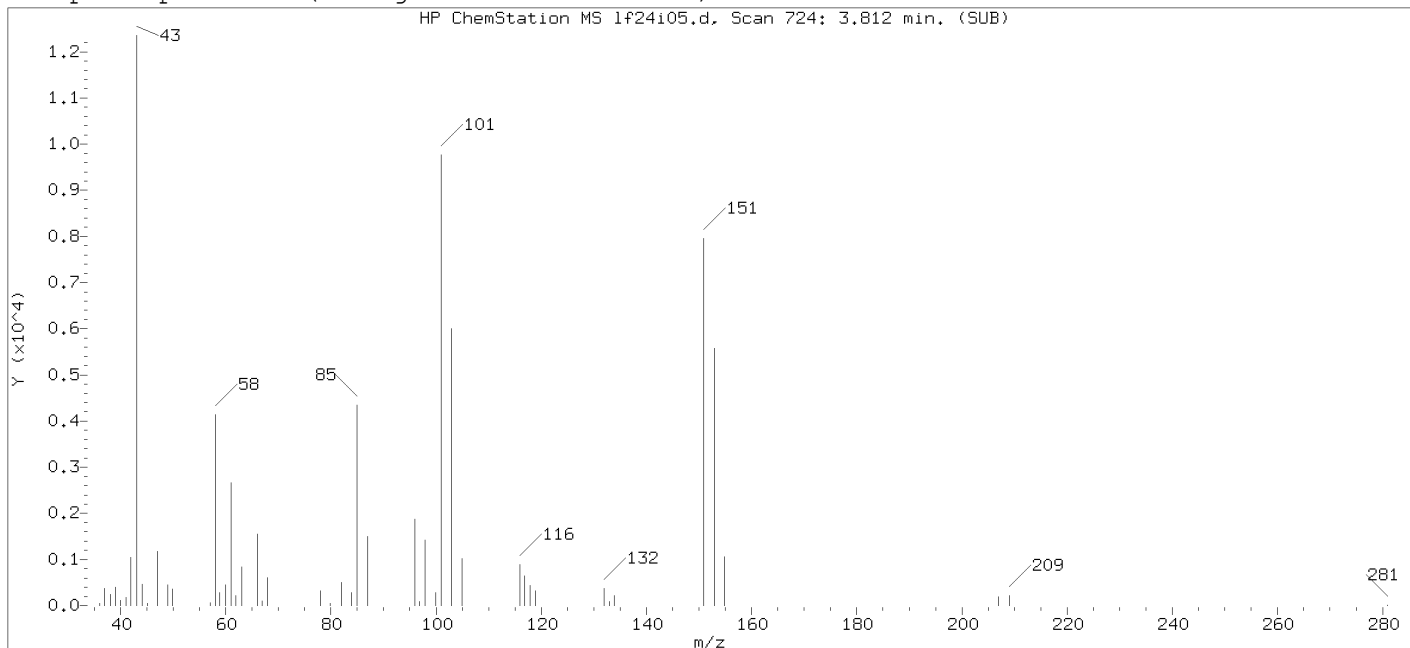
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.
 Target 3.5 esignature user ID: mec29284

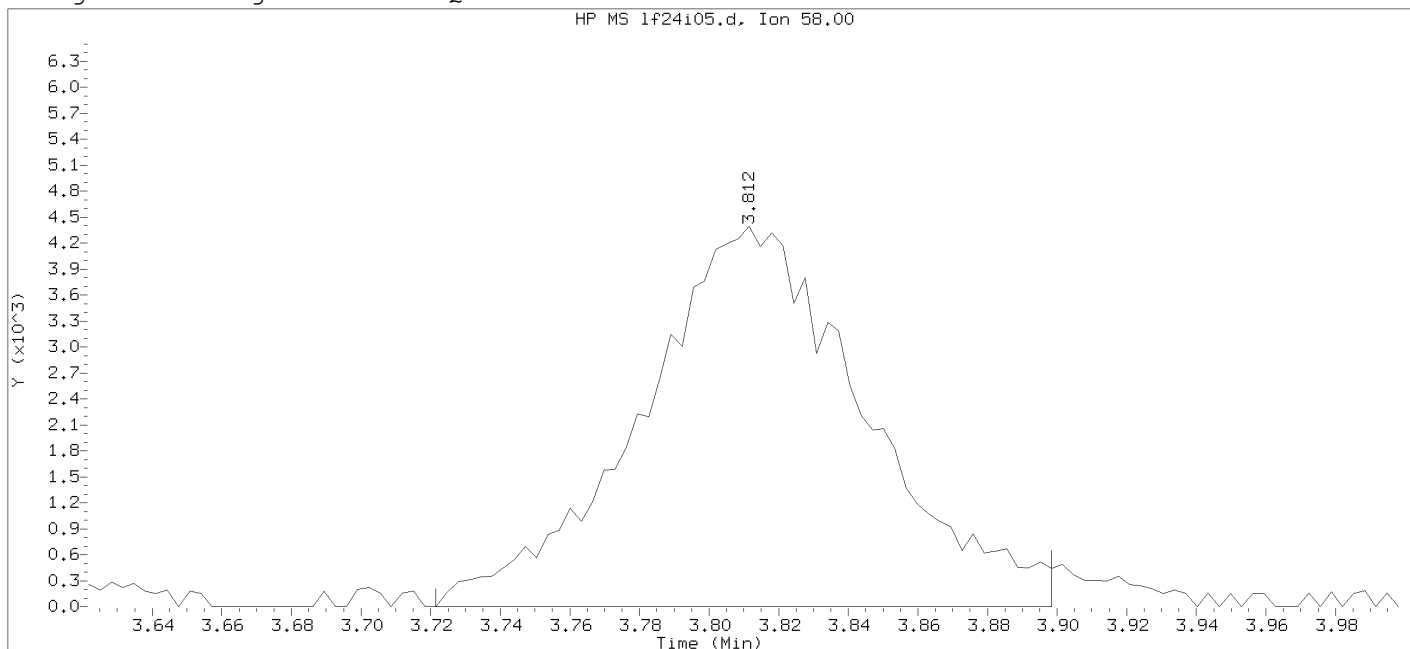
Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:49.

PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i05.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 17:45

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:55

Date, time and analyst ID of latest file update: 24-Feb-2020 20:55 mec29284

Sample Name: VSTD010

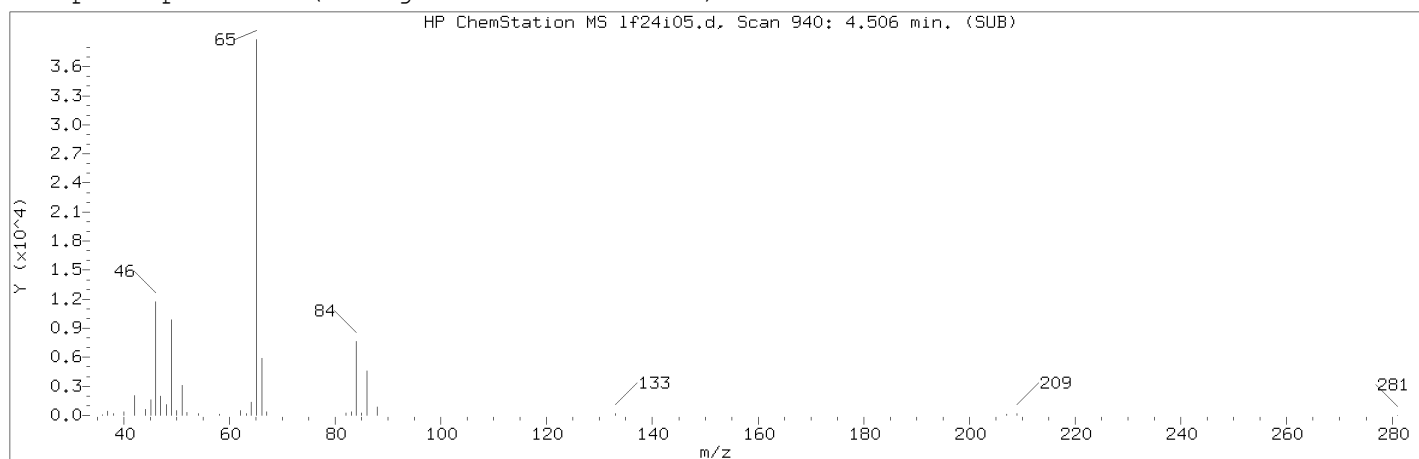
Lab Sample ID: VSTD010

Compound Number : 18
 Compound Name : Acetone
 Scan Number : 724
 Retention Time (minutes): 3.812
 Quant Ion : 58.00
 Area : 19686
 On-column Amount (ng) : 2.0000
 Integration start scan : 695
 Y at integration start : 0

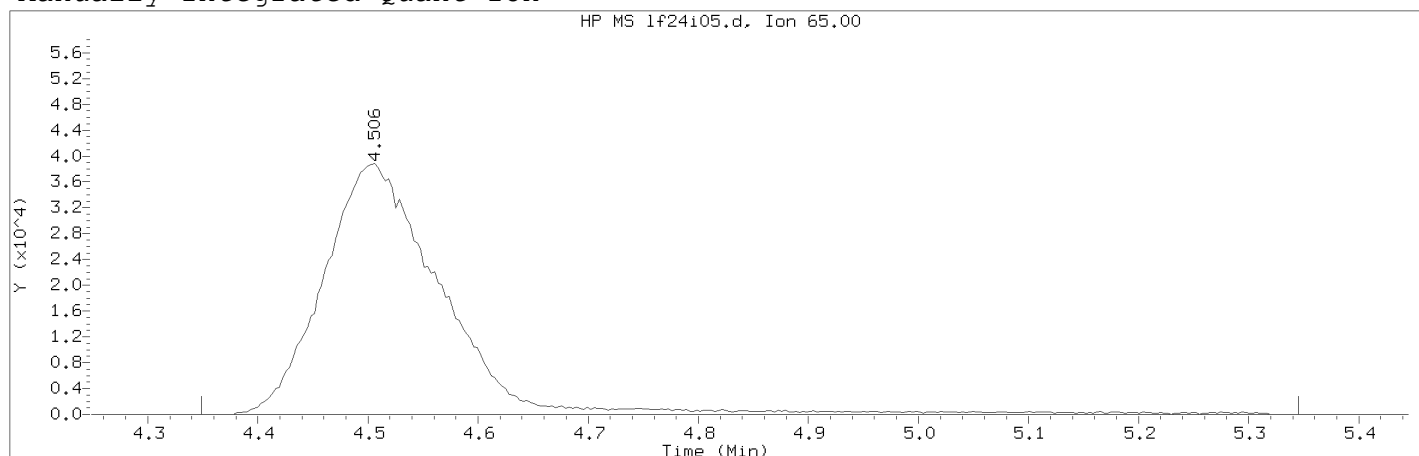
Integration stop scan: 750
 Y at integration end: 0

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 Target 3.5 esignature user KR421m Page 208 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i05.d Instrument ID: HP09915.i
 Injection date and time: 24-FEB-2020 17:45 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 25-FEB-2020 12:44
 Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

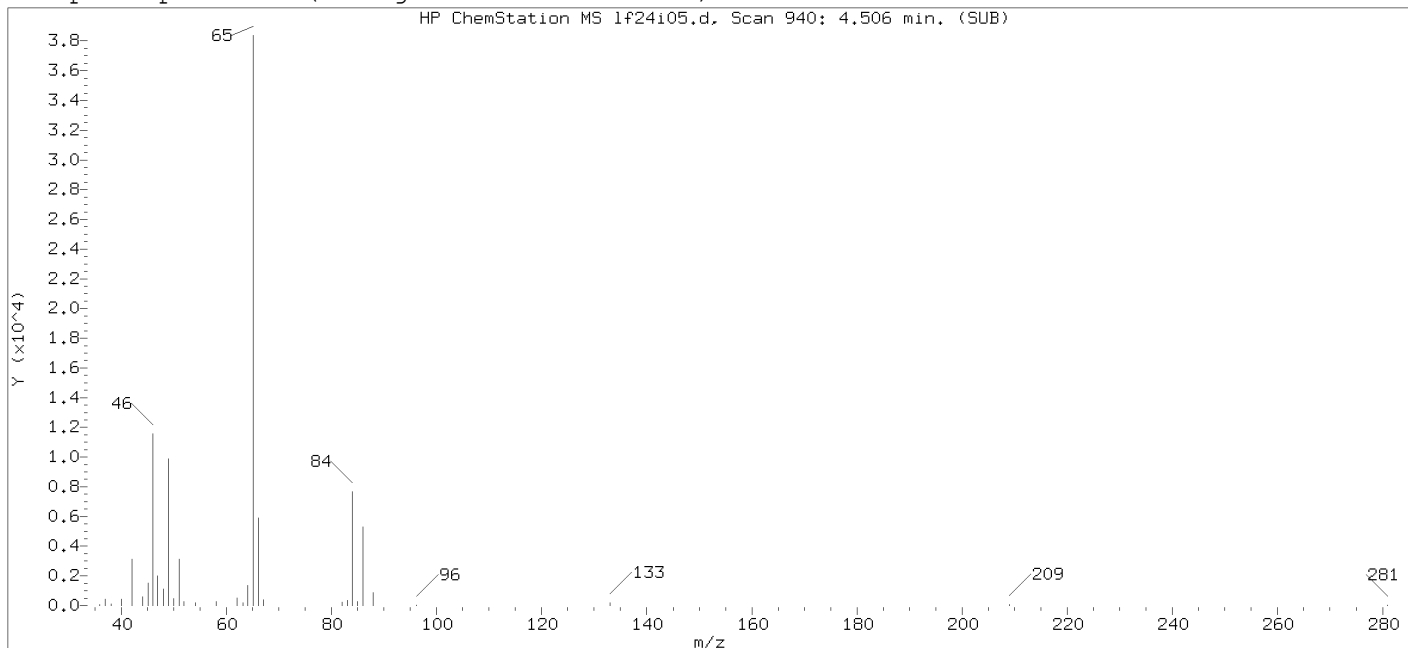
Compound Number : 29
 Compound Name : t-Butyl alcohol-d10
 Scan Number : 940
 Retention Time (minutes): 4.506
 Quant Ion : 65.00
 Area (flag) : 291154M
 On-Column Amount (ng) : 250.0000
 Integration start scan : 890 Integration stop scan: 1200
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

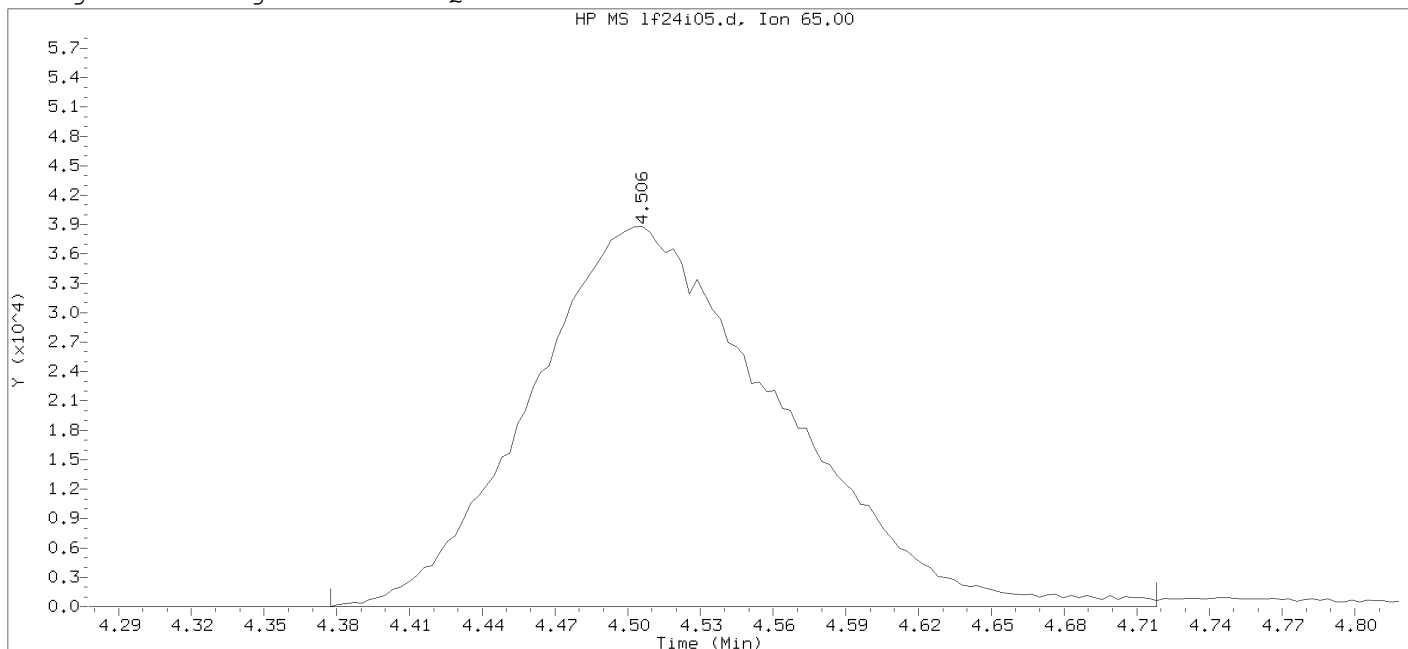
Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.
 Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:49.
 PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i05.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 17:45

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:55

Date, time and analyst ID of latest file update: 24-Feb-2020 20:55 mec29284

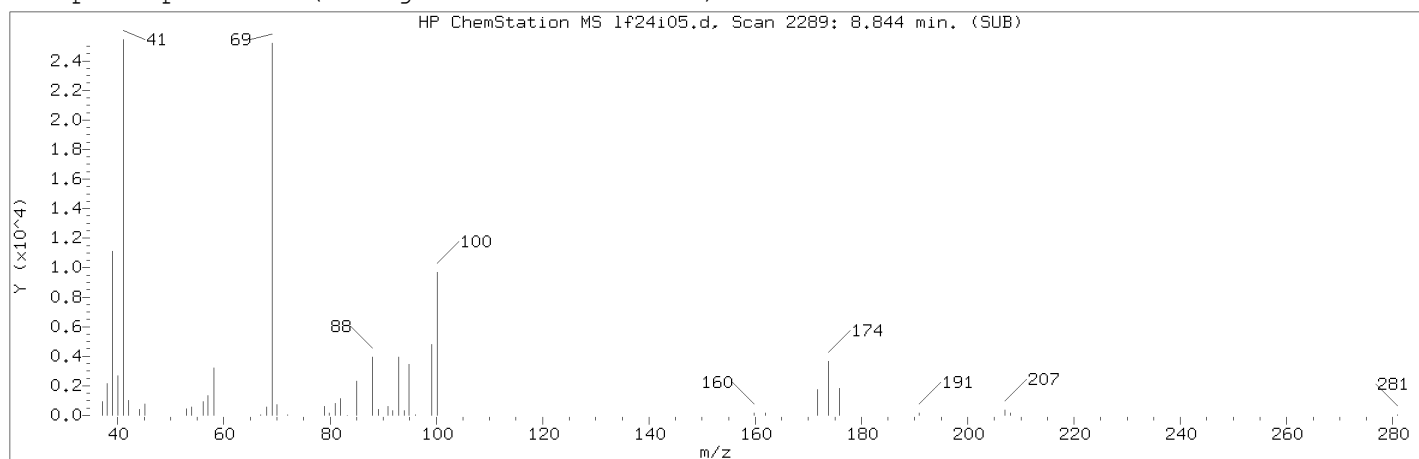
Sample Name: VSTD010

Lab Sample ID: VSTD010

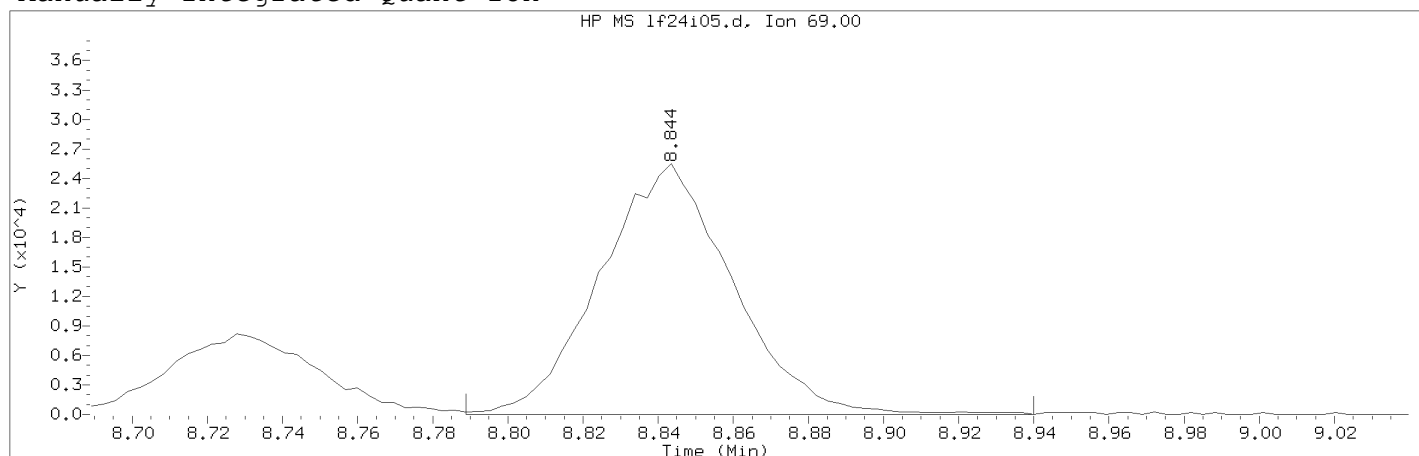
Compound Number	: 29
Compound Name	: t-Butyl alcohol-d10
Scan Number	: 940
Retention Time (minutes)	: 4.506
Quant Ion	: 65.00
Area	: 276493
On-column Amount (ng)	: 250.0000
Integration start scan	: 899
Integration stop scan	: 1005
Y at integration start	: 0
Y at integration end	: 0

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 Target 3.5 esignature user KR421m Page 210 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i05.d Instrument ID: HP09915.i
 Injection date and time: 24-FEB-2020 17:45 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 25-FEB-2020 12:44
 Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD010

Lab Sample ID: VSTD010

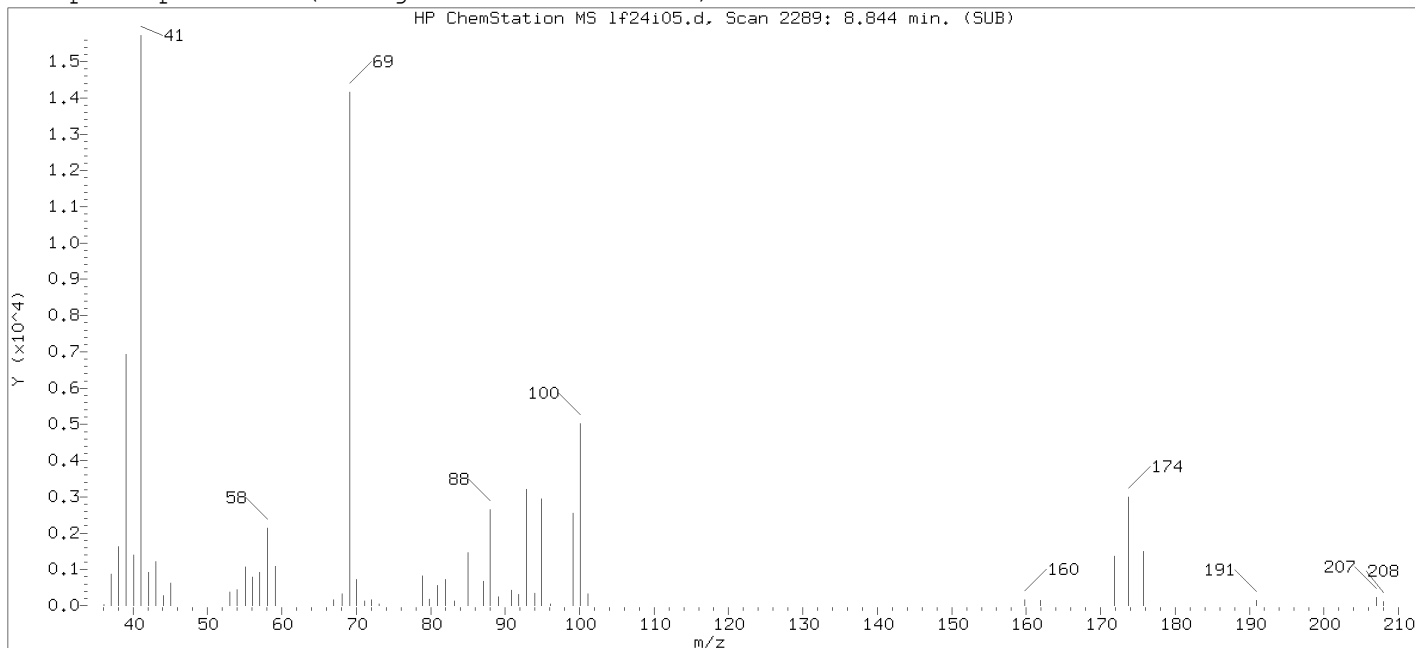
Compound Number : 76
 Compound Name : Methyl Methacrylate
 Scan Number : 2289
 Retention Time (minutes): 8.844
 Quant Ion : 69.00
 Area (flag) : 62130M
 On-Column Amount (ng) : 9.9212
 Integration start scan : 2271 Integration stop scan: 2318
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

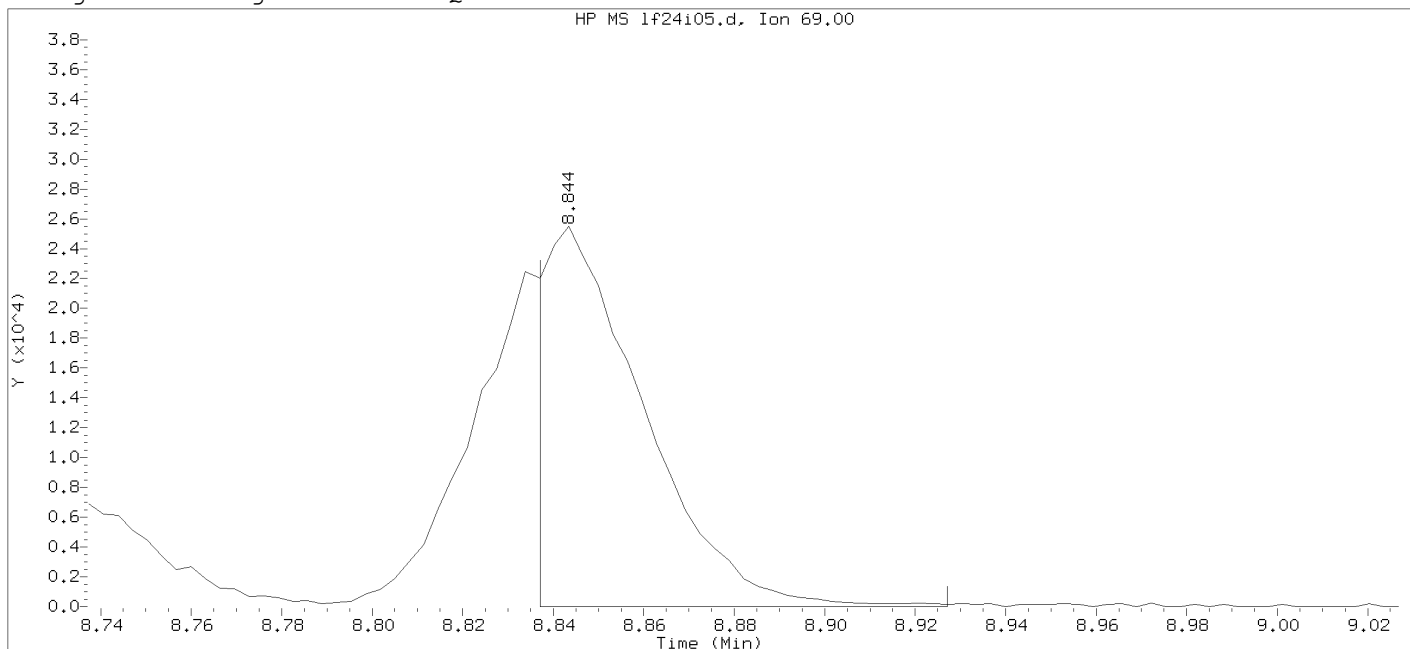
Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.
 Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:49.
 PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i05.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 17:45

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:55

Date, time and analyst ID of latest file update: 24-Feb-2020 20:55 mec29284

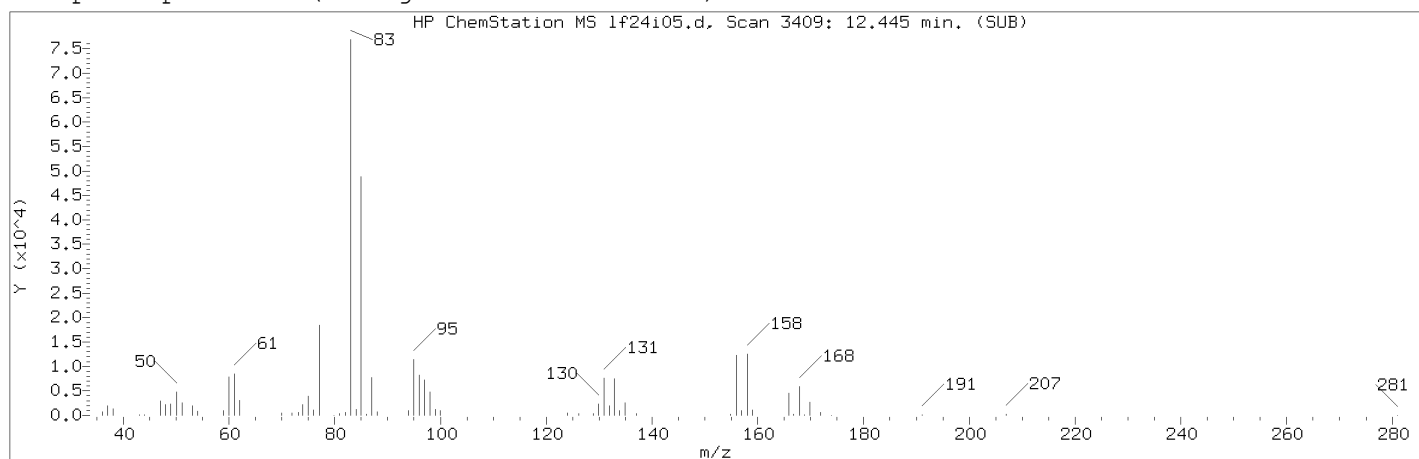
Sample Name: VSTD010

Lab Sample ID: VSTD010

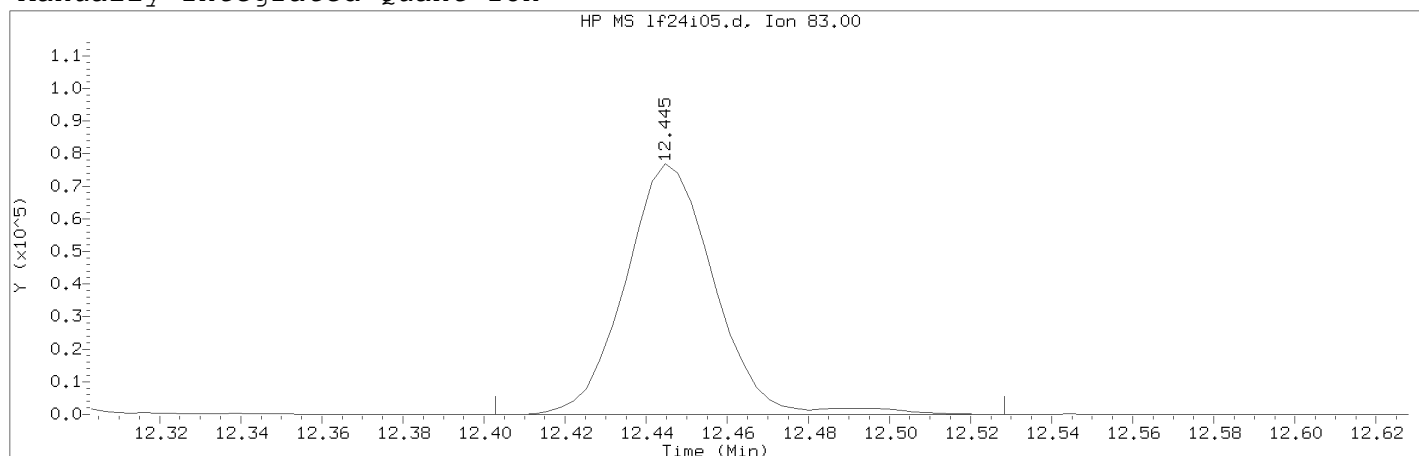
Compound Number	: 76	
Compound Name	: Methyl Methacrylate	
Scan Number	: 2289	
Retention Time (minutes)	: 8.844	
Quant Ion	: 69.00	
Area	: 38697	
On-column Amount (ng)	: 1.0000	
Integration start scan	: 2286	Integration stop scan: 2314
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Miranda E. Campbell on 02/25/2020 at 18:06.
 Target 3.5 esignature user KR421m Page 212 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i05.d Instrument ID: HP09915.i
 Injection date and time: 24-FEB-2020 17:45 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 25-FEB-2020 12:44
 Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD010

Lab Sample ID: VSTD010

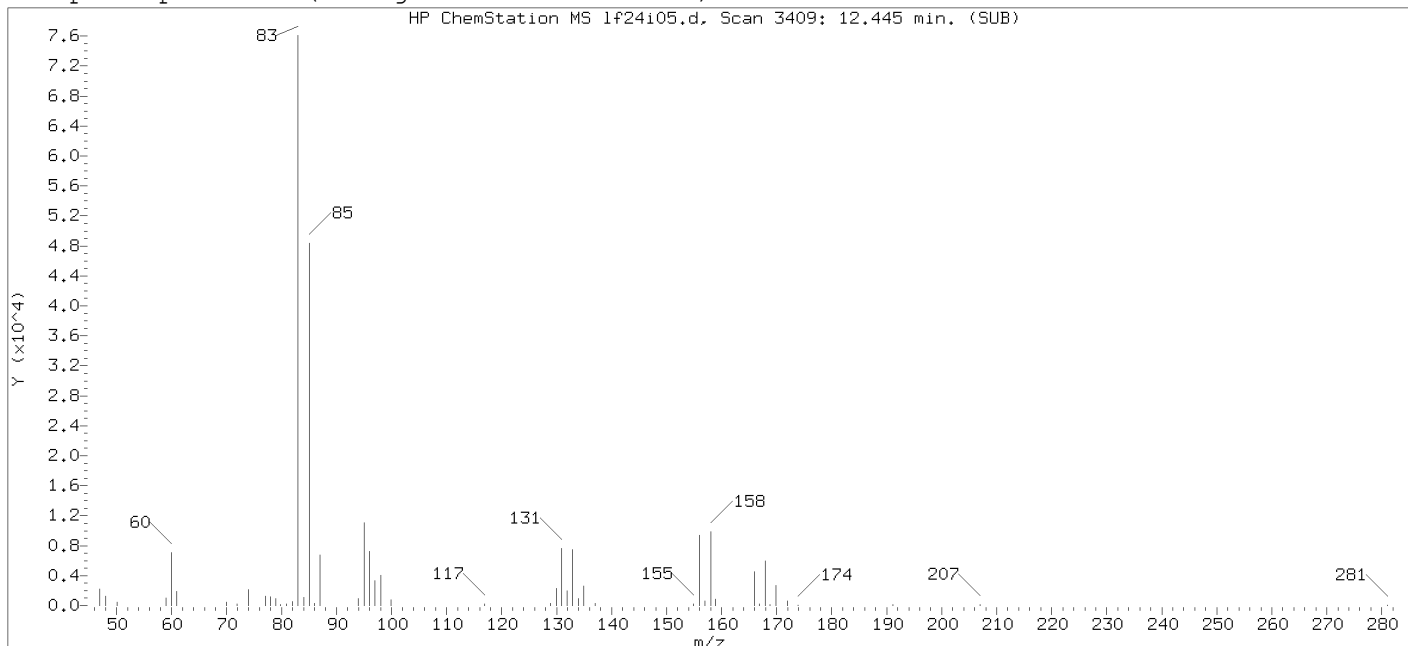
Compound Number : 116
 Compound Name : 1,1,2,2-Tetrachloroethane
 Scan Number : 3409
 Retention Time (minutes): 12.445
 Quant Ion : 83.00
 Area (flag) : 117142M
 On-Column Amount (ng) : 11.1798
 Integration start scan : 3395 Integration stop scan: 3434
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

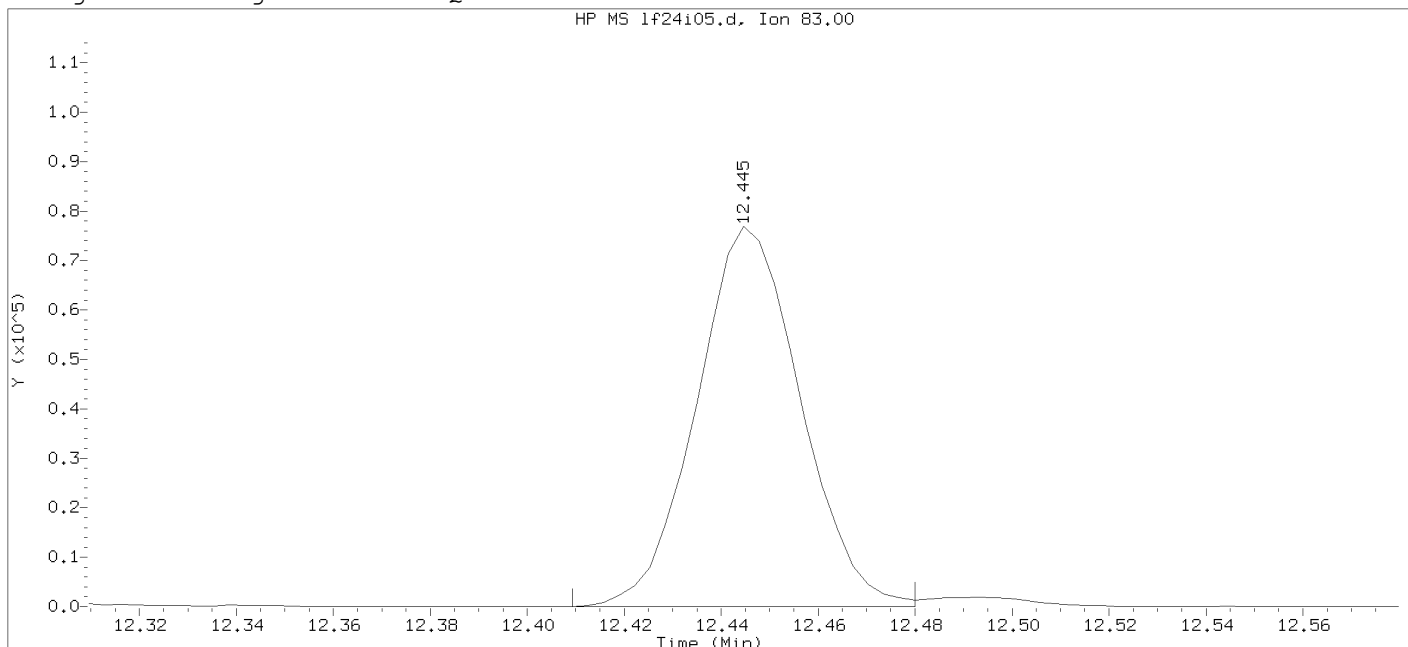
Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.
 Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:49.
 PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i05.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 17:45

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:55

Date, time and analyst ID of latest file update: 24-Feb-2020 20:55 mec29284

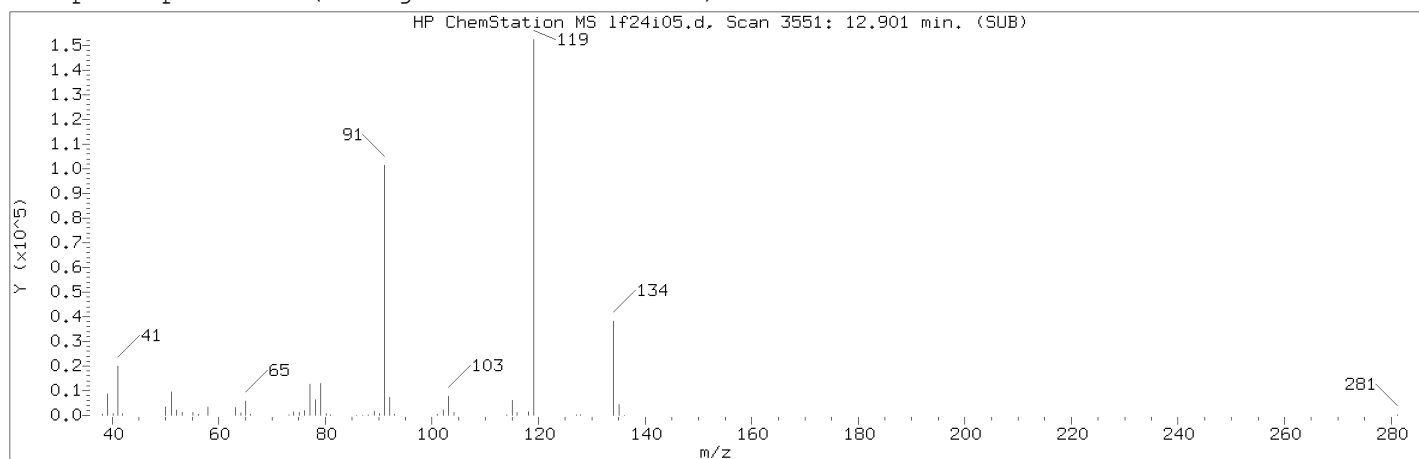
Sample Name: VSTD010

Lab Sample ID: VSTD010

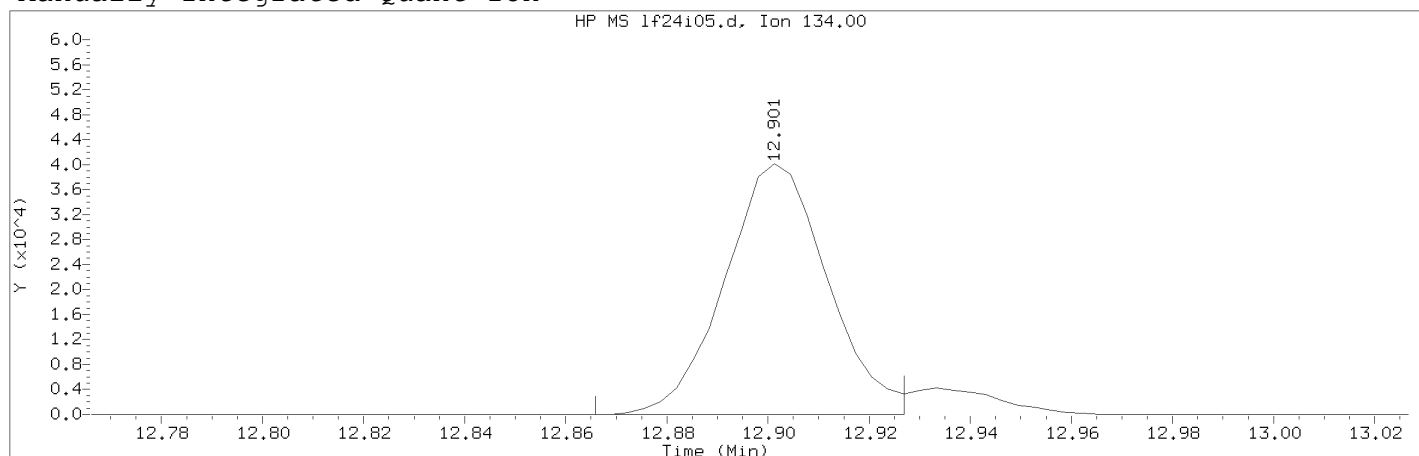
Compound Number	: 116	
Compound Name	: 1,1,2,2-Tetrachloroethane	
Scan Number	: 3409	
Retention Time (minutes)	: 12.445	
Quant Ion	: 83.00	
Area	: 114288	
On-column Amount (ng)	: 1.0000	
Integration start scan	: 3397	Integration stop scan: 3419
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Miranda E. Campbell on 02/25/2020 at 18:06.
 Target 3.5 esignature user KR421m Page 214 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i05.d Instrument ID: HP09915.i
 Injection date and time: 24-FEB-2020 17:45 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 25-FEB-2020 12:44
 Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD010

Lab Sample ID: VSTD010

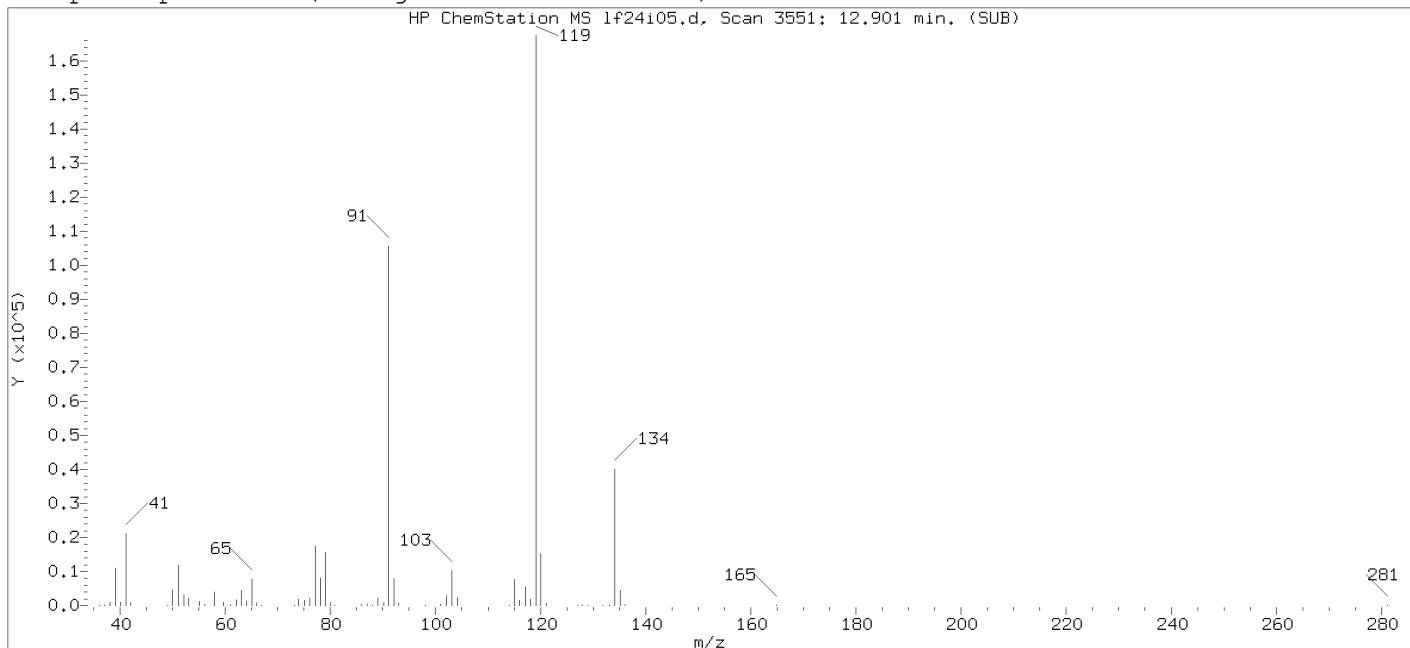
Compound Number : 124
 Compound Name : tert-Butylbenzene
 Scan Number : 3551
 Retention Time (minutes): 12.901
 Quant Ion : 134.00
 Area (flag) : 56517M
 On-Column Amount (ng) : 10.6159
 Integration start scan : 3539 Integration stop scan: 3558
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

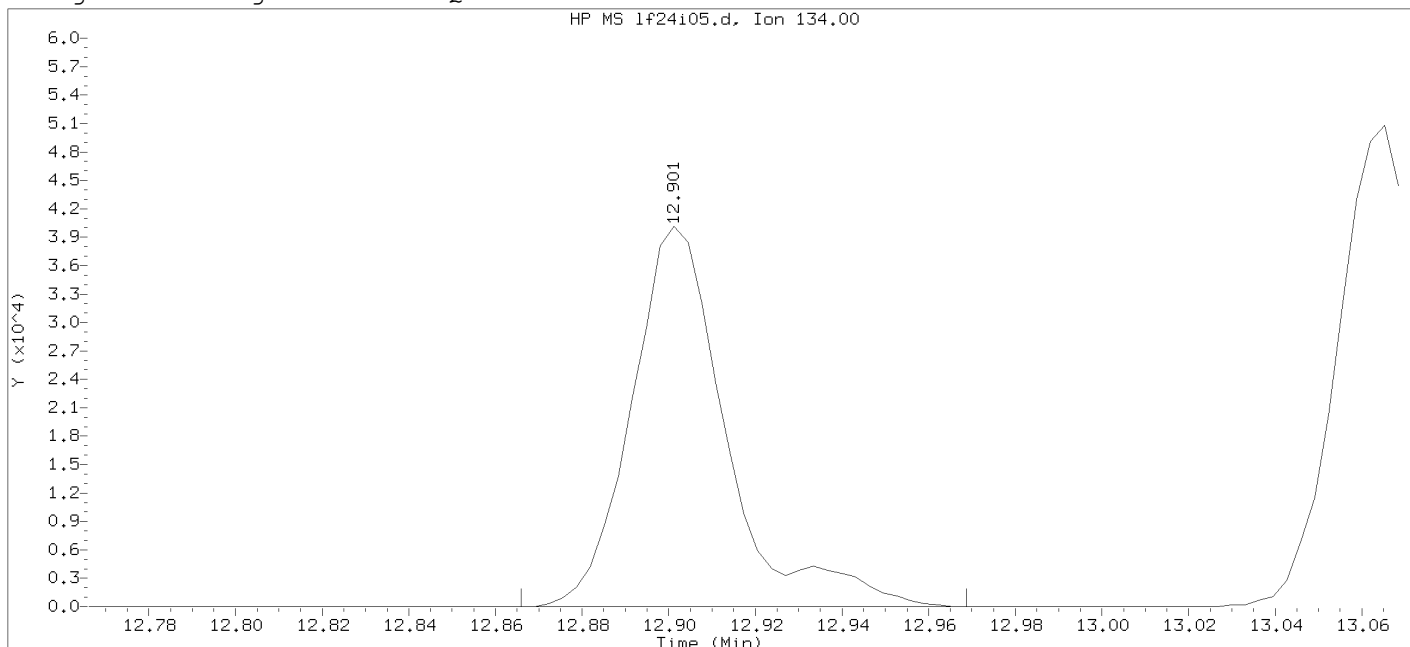
Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.
 Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:49.
 PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i05.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 17:45

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:55

Date, time and analyst ID of latest file update: 24-Feb-2020 20:55 mec29284

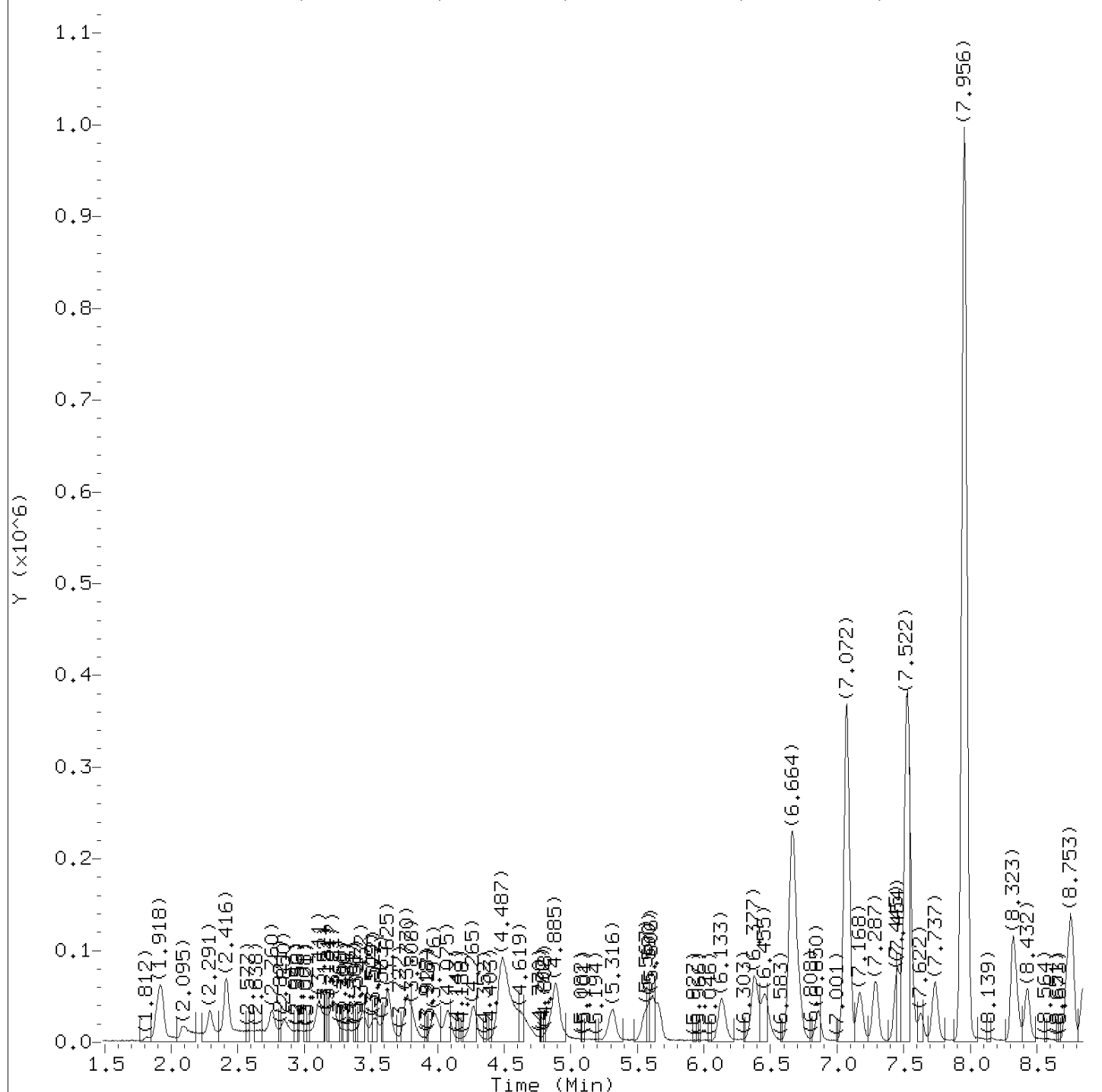
Sample Name: VSTD010

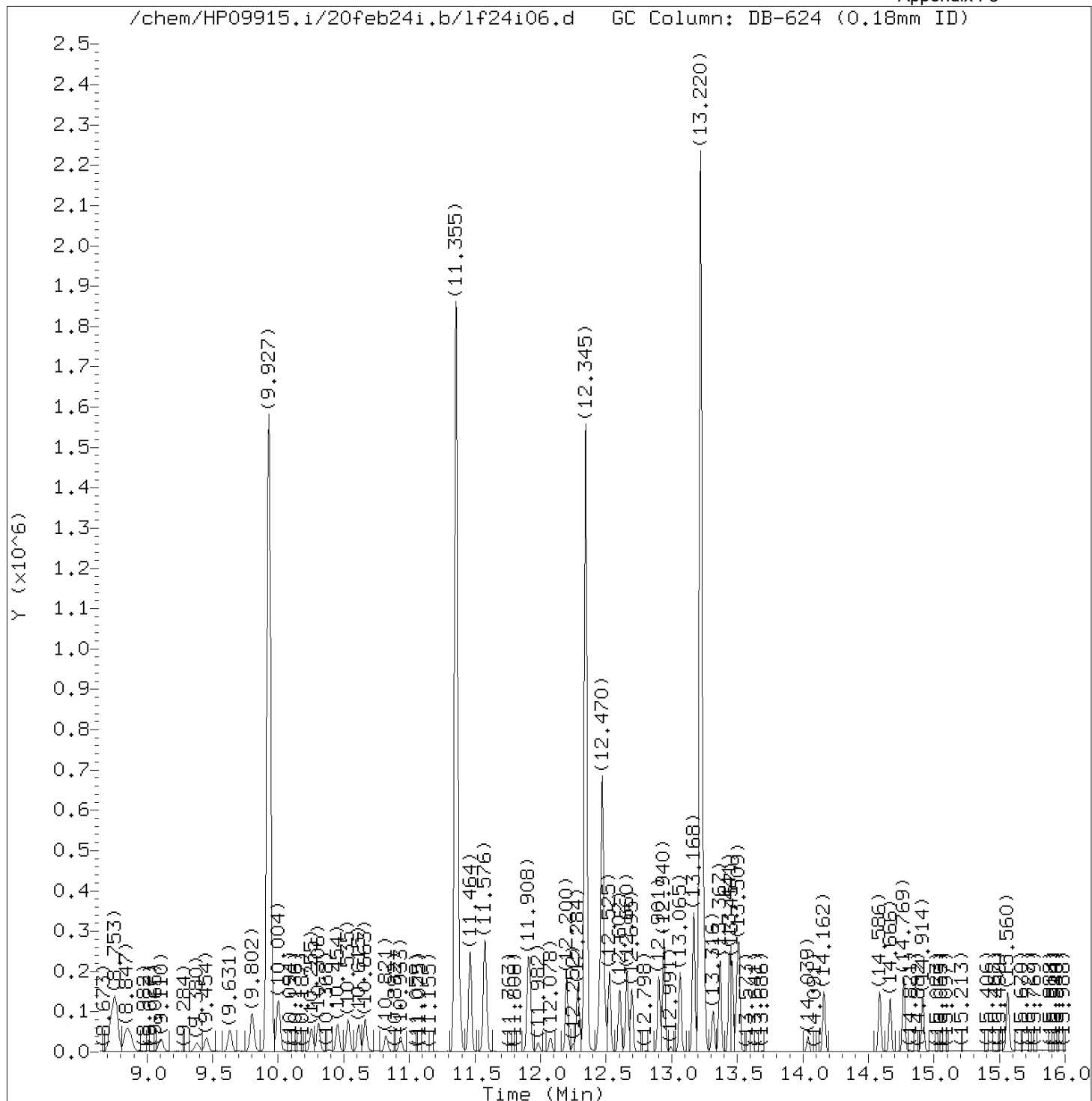
Lab Sample ID: VSTD010

Compound Number	: 124	
Compound Name	: tert-Butylbenzene	
Scan Number	: 3551	
Retention Time (minutes)	: 12.901	
Quant Ion	: 134.00	
Area	: 61253	
On-column Amount (ng)	: 1.0000	
Integration start scan	: 3539	Integration stop scan: 3571
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Miranda E. Campbell on 02/25/2020 at 18:06.
 Target 3.5 esignature user KR421m Page 216 of 592

/chem/HP09915.i/20feb24i.b/1f24i06.d GC Column: DB-624 (0.18mm ID)





Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20feb24i.b/1f24i06.d
 Injection date and time: 24-FEB-2020 18:07

Instrument ID: HP09915.i
 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m
 Calibration date and time: 25-FEB-2020 12:44

Sublist used: 8260W

Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD004

Lab Sample ID: VSTD004

Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.

Target 3.5 esignature user ID: msc29284

KR421 Page 218 of 592

page 2 of 2

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20feb24i.b/1f24i06.d
 Injection date and time: 24-FEB-2020 18:07

Instrument ID: HP09915.i
 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 25-FEB-2020 12:44

Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD004

Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
3) Dichlorodifluoromethane	(2)	2.091	85	34812M	4.150
4) Chloromethane	(2)	2.294	50	35504	4.235
5) 1,3-Butadiene	(2)	2.413	39	26529M	4.223
6) Vinyl Chloride	(2)	2.416	62	34047	4.305
8) Bromomethane	(2)	2.757	94	23790	4.286
9) Chloroethane	(2)	2.850	64	18867	4.320
10) Dichlorofluoromethane	(2)	3.104	67	41617	4.297
12) Trichlorofluoromethane	(2)	3.165	101	35150	4.288
11) n-Pentane	(2)	3.213	43	37027	3.995
14) Ethyl ether	(2)	3.439	59	23479	4.013
15) Freon 123a	(2)	3.538	67	26663	4.049
16) Acrolein	(1)	3.625	56	84893	39.338
17) 1,1-Dichloroethene	(2)	3.770	96	22743	4.056
17) 1,1-Dichloroethene	(2)	3.770	63	10884	4.109
19) Freon 113	(2)	3.799	101	21079	3.952
18) Acetone	(1)	3.808	58	7770M	8.141
22) Methyl Iodide	(2)	3.969	142	38987	3.932
21) 2-Propanol	(1)	4.001	45	53537	80.515
23) Carbon Disulfide	(2)	4.075	76	67612	3.817
27) Methyl Acetate	(2)	4.249	43	28586	4.084
25) Allyl Chloride	(2)	4.278	41	38236	4.237
28) Methylene Chloride	(2)	4.477	84	24589	3.927
29) *t-Butyl alcohol-d10	(1)	4.500	65	295469M	250.000
30) t-Butyl alcohol	(1)	4.635	59	90372	79.070
31) Acrylonitrile	(2)	4.844	53	14922	3.934
33) Methyl Tertiary Butyl Ether	(2)	4.879	73	75584	4.034
32) trans-1,2-Dichloroethene	(2)	4.885	96	24691	4.014
34) n-Hexane	(2)	5.316	57	34374	3.886
36) 1,1-Dichloroethane	(2)	5.557	63	40263	3.911
38) di-Isopropyl ether	(2)	5.609	45	76503	3.867
39) 2-Chloro-1,3-butadiene	(2)	5.657	53	34786	3.951
40) Ethyl t-butyl ether	(2)	6.133	59	74491	3.965
43) 1,2-Dichloroethene (Total)	(2)		96	51336	7.888
44) 2-Butanone	(2)	6.364	43	37482	7.727
42) cis-1,2-Dichloroethene	(2)	6.384	96	26645	3.874
45) 2,2-Dichloropropane	(2)	6.393	77	31672	3.866
47) Propionitrile	(1)	6.461	54	115352	77.874
48) Methacrylonitrile	(2)	6.664	67	148823	38.354

M = Compound was manually integrated.

* = Compound is an internal standard.

page 1 of 4

Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.

Target 3.5 esignature user ID: mec29284

KR421 Page 219 of 592

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20feb24i.b/1f24i06.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 18:07

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 25-FEB-2020 12:44

Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD004

Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
49) Bromochloromethane	(2)	6.705	128	14215	4.159
50) Tetrahydrofuran	(1)	6.725	71	10470	7.862
51) Chloroform	(2)	6.860	83	38852	3.895
52)\$Dibromofluoromethane	(2)	7.072	113	315776	50.225
52)\$Dibromofluoromethane	(2)	7.072	111	321178	50.001
53) 1,1,1-Trichloroethane	(2)	7.078	97	34212	3.912
54) Cyclohexane	(2)	7.168	56	41021	3.809
54) Cyclohexane	(2)	7.165	84	34603	3.805
54) Cyclohexane	(2)	7.172	69	12703	3.845
56) Carbon Tetrachloride	(2)	7.284	117	26488	3.707
55) 1,1-Dichloropropene	(2)	7.287	75	31585	3.871
58) Isobutyl Alcohol	(1)	7.454	41	74535	191.932
57)\$1,2-Dichloroethane-d4	(2)	7.522	102	82502	50.596
57)\$1,2-Dichloroethane-d4	(2)	7.522	65	366980	50.419
57)\$1,2-Dichloroethane-d4	(2)	7.525	104	51968	50.207
60) Benzene	(2)	7.554	78	96772	3.888
61) 1,2-Dichloroethane	(2)	7.628	62	32874	3.950
61) 1,2-Dichloroethane	(2)	7.622	98	1409	1.849
65) t-Amyl methyl ether	(2)	7.737	73	75085	3.973
66)*Fluorobenzene	(2)	7.956	96	1329669	50.000
67) n-Heptane	(2)	7.959	43	33337	3.848
69) n-Butanol	(1)	8.323	56	119038	366.177
71) Trichloroethene	(2)	8.425	95	24003	3.831
72) Methylcyclohexane	(2)	8.725	83	42551	4.048
72) Methylcyclohexane	(2)	8.731	98	19233	4.057
73) 1,2-Dichloropropane	(2)	8.763	63	24970	3.862
76) Methyl Methacrylate	(2)	8.840	69	23341M	3.781
75) 1,4-Dioxane	(1)	8.843	88	17034	196.709
74) Dibromomethane	(2)	8.879	93	16476	3.918
78) Bromodichloromethane	(2)	9.101	83	27142	3.611
79) 2-Nitropropane	(2)	9.380	41	15497	6.700
80) 2-Chloroethyl Vinyl Ether	(2)	9.451	63	18465	3.895
81) cis-1,3-Dichloropropene	(2)	9.631	75	36542	3.628
82) 4-Methyl-2-pentanone	(2)	9.798	43	76005	7.573
83)\$Toluene-d8	(3)	9.930	98	1319025	49.858
83)\$Toluene-d8	(3)	9.927	100	853333	49.633
88) Toluene	(3)	10.004	92	60215	3.831
90) 1,3-Dichloropropene (total)	(3)		100	69771	7.176

M = Compound was manually integrated.

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\$ = Compound is a surrogate standard.

page 2 of 4

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Target 3.5 esignature user ID: mec29284

KR421 Page 220 of 592

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20feb24i.b/1f24i06.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 18:07

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 25-FEB-2020 12:44

Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD004

Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
89) trans-1,3-Dichloropropene	(3)	10.252	75	33229	3.548
91) Ethyl Methacrylate	(3)	10.306	69	38544	3.594
92) 1,1,2-Trichloroethane	(3)	10.454	97	24039	3.880
93) Tetrachloroethene	(3)	10.535	166	25376	3.804
94) 1,3-Dichloropropane	(3)	10.615	76	39485	3.818
96) 2-Hexanone	(3)	10.663	43	54188	7.480
97) Dibromochloromethane	(3)	10.821	129	21499	3.433
99) 1,2-Dibromoethane	(3)	10.933	107	25251	3.746
100) *Chlorobenzene-d5	(3)	11.355	117	1006965	50.000
101) 1-Chlorohexane	(3)	11.361	91	33658	3.841
102) Chlorobenzene	(3)	11.380	112	68058	3.853
103) 1,1,1,2-Tetrachloroethane	(3)	11.461	131	21994	3.725
104) Ethylbenzene	(3)	11.464	91	116223	3.870
106) m+p-Xylene	(3)	11.576	106	90324	7.664
108) Xylene (Total)	(3)		106	134754	11.467
107) o-Xylene	(3)	11.904	106	44430	3.803
109) Styrene	(3)	11.921	104	73687	3.750
110) Bromoform	(3)	12.078	173	15178	3.131
111) Isopropylbenzene	(3)	12.200	105	115590	3.862
112) Cyclohexanone	(1)	12.284	55	70762	203.722
114) \$4-Bromofluorobenzene	(3)	12.345	95	502865	50.404
114) \$4-Bromofluorobenzene	(3)	12.345	174	414613	50.275
116) 1,1,2,2-Tetrachloroethane	(4)	12.445	83	39878	3.807
115) Bromobenzene	(4)	12.464	156	30508	3.913
118) trans-1,4-Dichloro-2-butene	(4)	12.470	53	112330	37.435
117) 1,2,3-Trichloropropane	(4)	12.493	110	11950	3.844
119) n-Propylbenzene	(4)	12.525	91	137203	3.902
120) 2-Chlorotoluene	(4)	12.602	126	27778	3.803
122) 1,3,5-Trimethylbenzene	(4)	12.660	105	99251	3.837
121) 4-Chlorotoluene	(4)	12.695	126	29031	3.831
124) tert-Butylbenzene	(4)	12.901	134	20000M	3.758
125) Pentachloroethane	(4)	12.937	167	16078	3.778
126) 1,2,4-Trimethylbenzene	(4)	12.943	105	103424	3.819
127) sec-Butylbenzene	(4)	13.065	105	122230	3.846
129) 1,3-Dichlorobenzene	(4)	13.165	146	58015	3.947
130) p-Isopropyltoluene	(4)	13.168	119	106376	3.885
131) *1,4-Dichlorobenzene-d4	(4)	13.220	152	551524	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	60266	3.959

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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on 02/25/2020 at 18:06.

Target 3.5 esignature user ID: mec29284

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20feb24i.b/lf24i06.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 18:07

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 25-FEB-2020 12:44

Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD004

Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
134) 1,2,3-Trimethylbenzene	(4)	13.248	105	111950	4.135
135) Benzyl Chloride	(4)	13.313	91	65890	3.325
136) 1,3-Diethylbenzene	(4)	13.367	119	68462	4.127
141) Diethylbenzene (total)	(4)		100	198792	12.448
137) 1,4-Diethylbenzene	(4)	13.441	119	72244	4.157
139) n-Butylbenzene	(4)	13.461	92	55014	3.986
138) 1,2-Dichlorobenzene	(4)	13.499	146	57187	3.910
140) 1,2-Diethylbenzene	(4)	13.515	119	58086	4.163
142) 1,2-Dibromo-3-chloropropane	(4)	14.039	75	7776	3.406
144) 1,3,5-Trichlorobenzene	(4)	14.162	180	43772	3.979
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	41722	3.950
147) Hexachlorobutadiene	(4)	14.666	225	21182	4.560
148) Naphthalene	(4)	14.769	128	135603	3.803
149) 1,2,3-Trichlorobenzene	(4)	14.914	180	39483	3.950
150) 2-Methylnaphthalene	(4)	15.563	142	73037	3.819

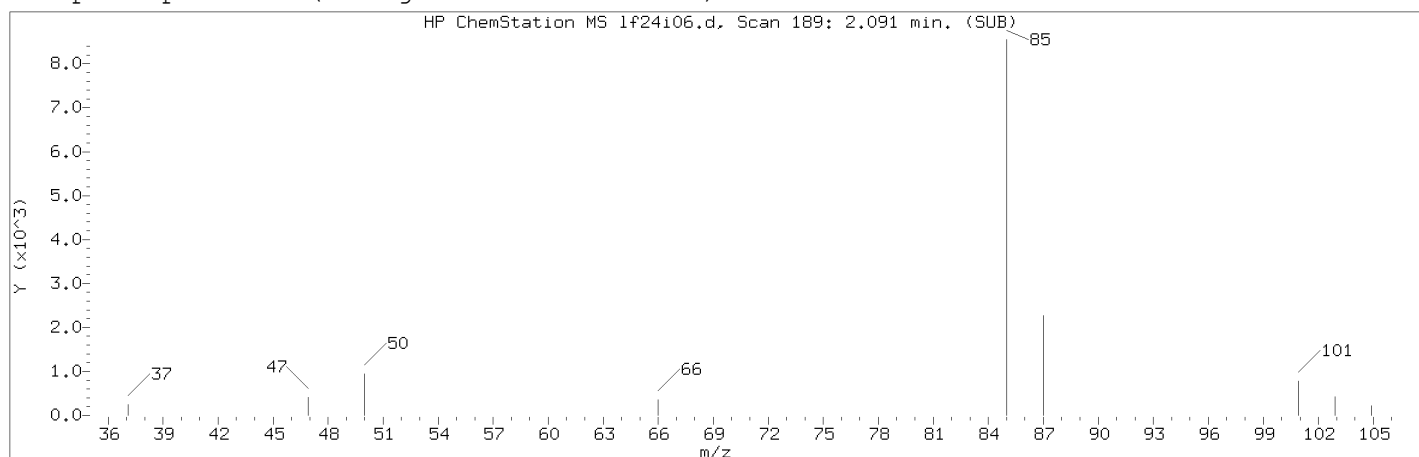
page 4 of 4

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on 02/25/2020 at 18:06.

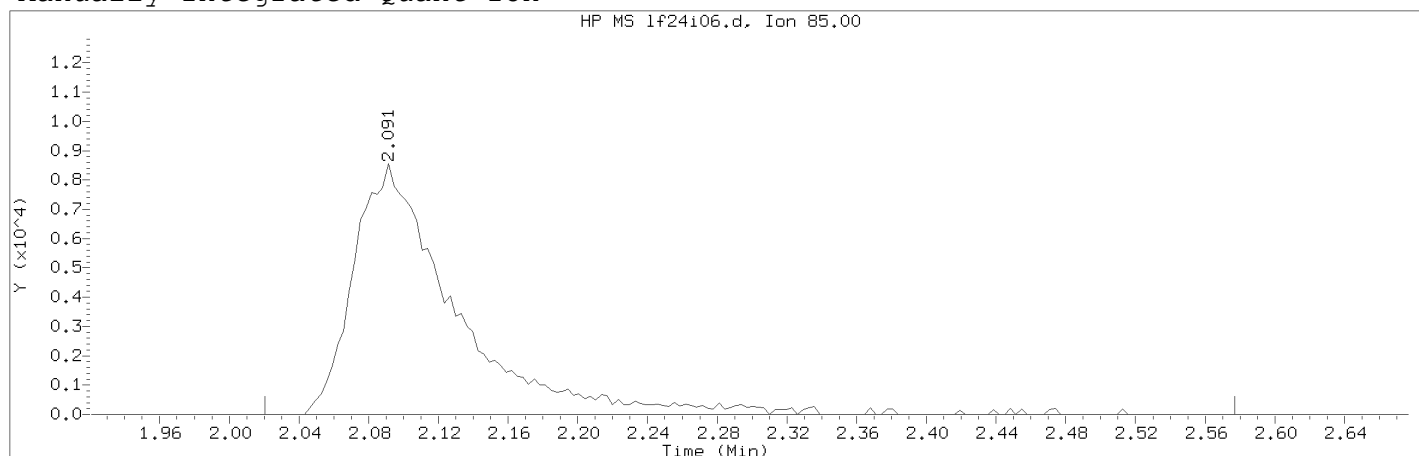
Target 3.5 esignature user ID: mec29284

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Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i06.d Instrument ID: HP09915.i
 Injection date and time: 24-FEB-2020 18:07 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 25-FEB-2020 12:44
 Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD004 Lab Sample ID: VSTD004

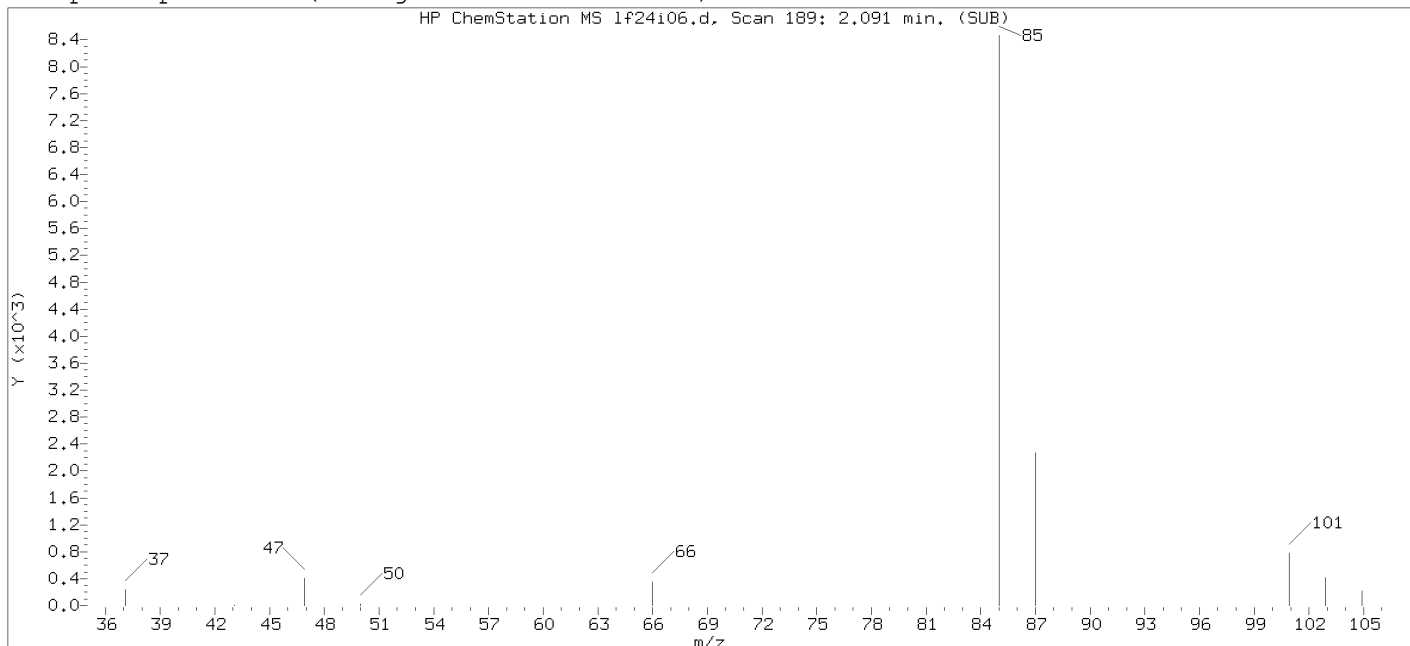
Compound Number : 3
 Compound Name : Dichlorodifluoromethane
 Scan Number : 189
 Retention Time (minutes): 2.091
 Quant Ion : 85.00
 Area (flag) : 34812M
 On-Column Amount (ng) : 4.1503
 Integration start scan : 166 Integration stop scan: 339
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

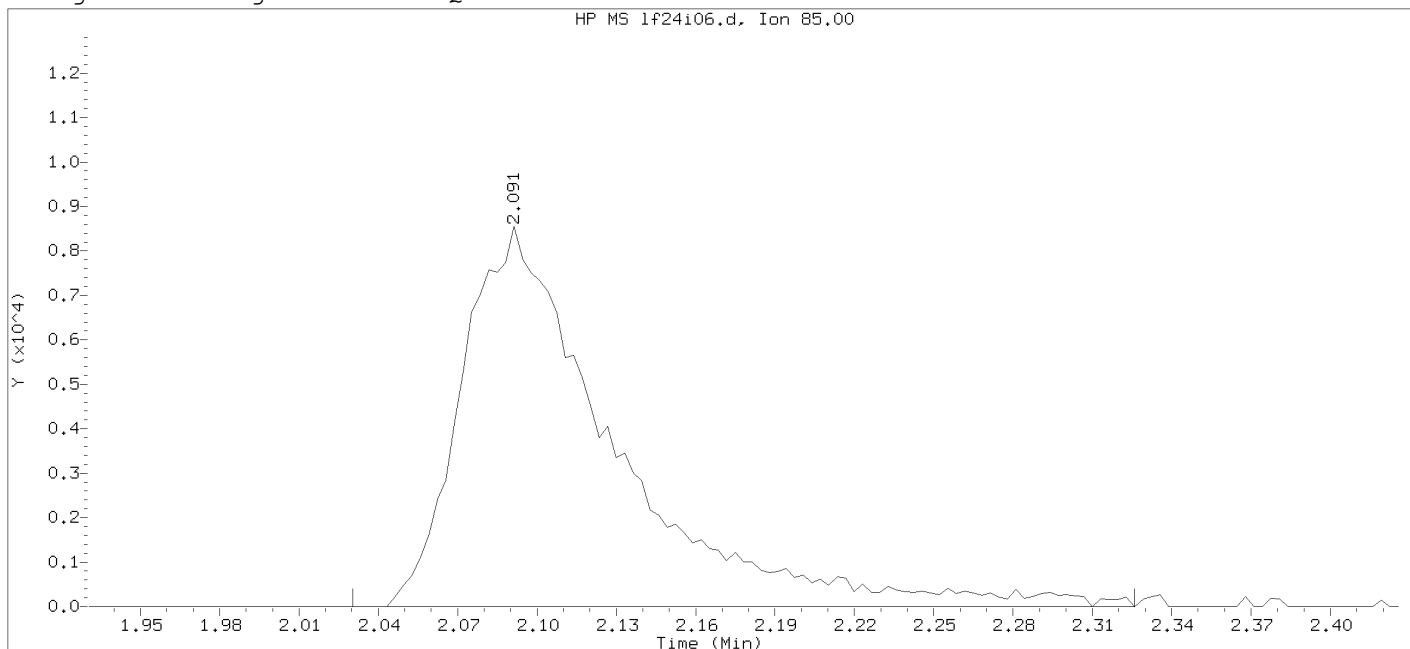
Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.
 Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:49.
 PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i06.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 18:07

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:55

Date, time and analyst ID of latest file update: 24-Feb-2020 20:55 mec29284

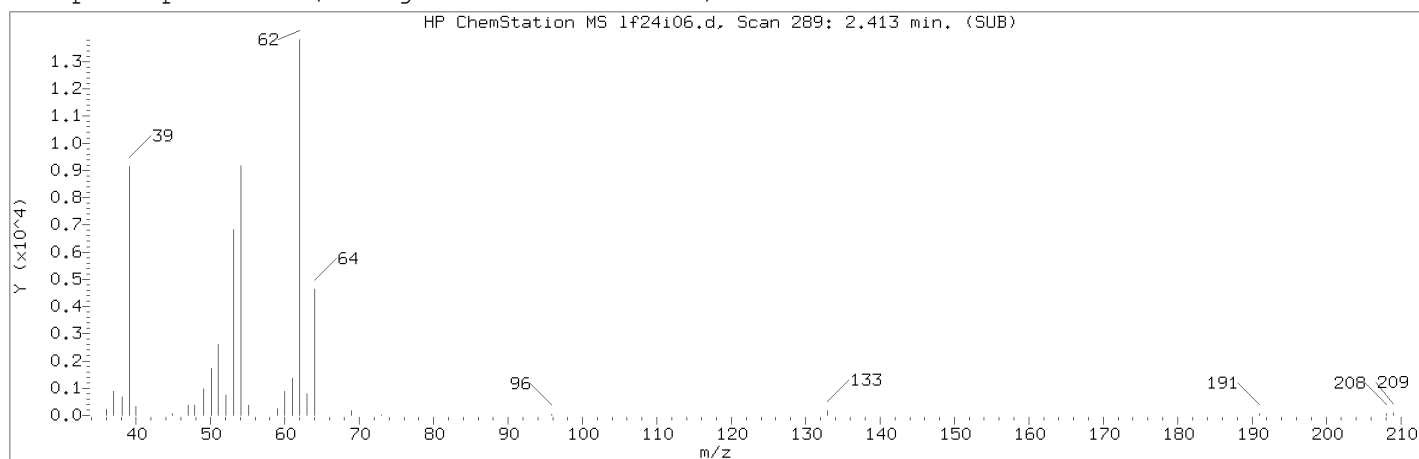
Sample Name: VSTD004

Lab Sample ID: VSTD004

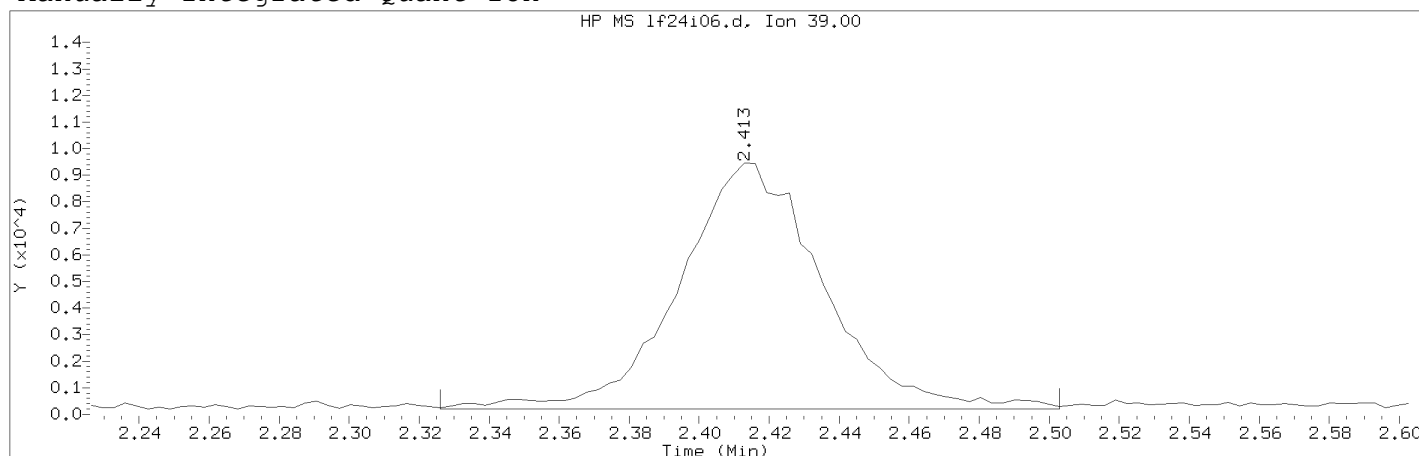
Compound Number	: 3	
Compound Name	: Dichlorodifluoromethane	
Scan Number	: 189	
Retention Time (minutes)	: 2.091	
Quant Ion	: 85.00	
Area	: 34322	
On-column Amount (ng)	: 1.0000	
Integration start scan	: 169	Integration stop scan: 261
Y at integration start	: 0	Y at integration end: 0

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 Target 3.5 esignature user KR421m Page 224 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i06.d Instrument ID: HP09915.i
 Injection date and time: 24-FEB-2020 18:07 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 25-FEB-2020 12:44
 Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD004

Lab Sample ID: VSTD004

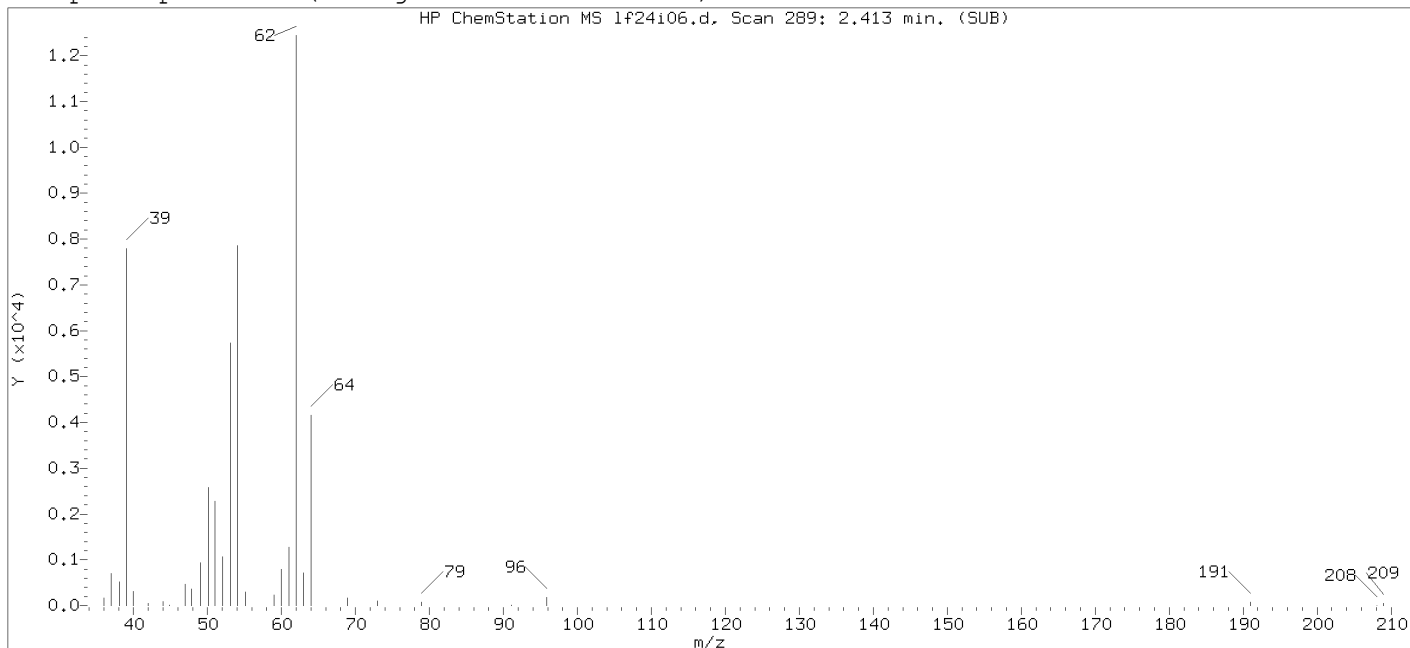
Compound Number : 5
 Compound Name : 1,3-Butadiene
 Scan Number : 289
 Retention Time (minutes): 2.413
 Quant Ion : 39.00
 Area (flag) : 26529M
 On-Column Amount (ng) : 4.2229
 Integration start scan : 261 Integration stop scan: 316
 Y at integration start : 201 Y at integration end: 201

Reason for manual integration: improper integration

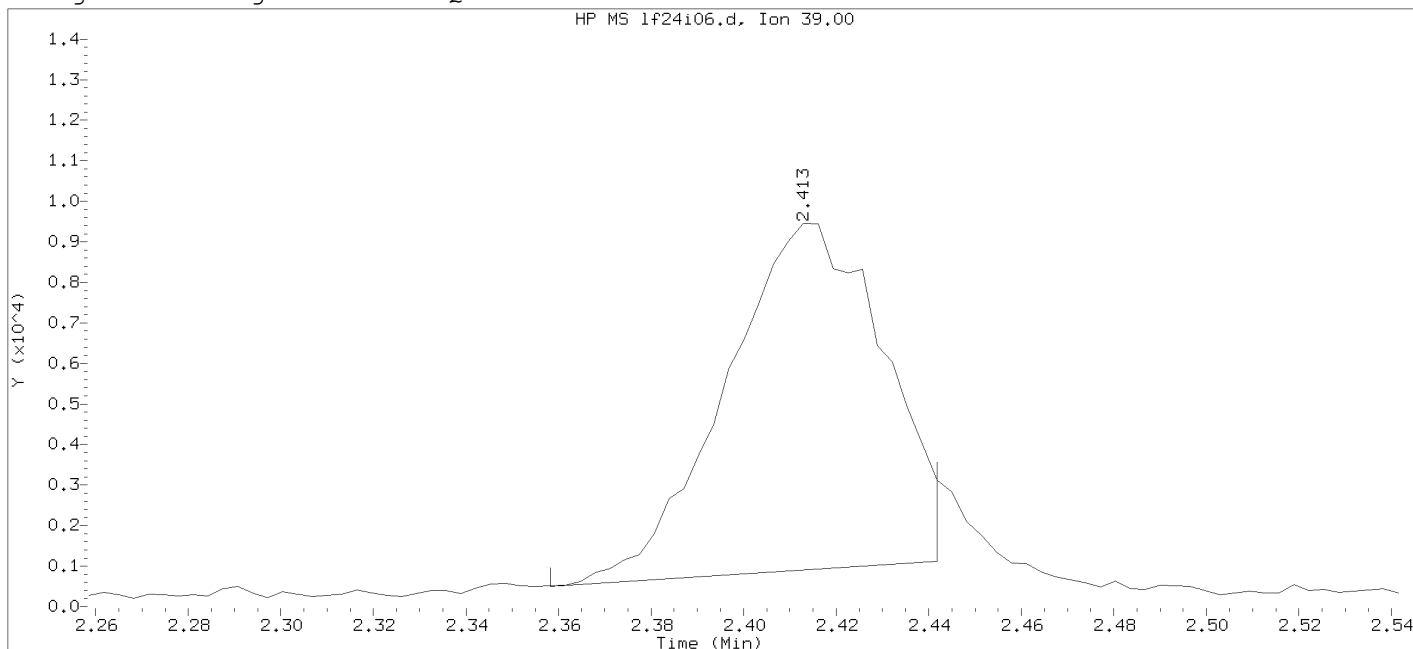
Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.
 Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:49.
 PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i06.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 18:07

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:55

Date, time and analyst ID of latest file update: 24-Feb-2020 20:55 mec29284

Sample Name: VSTD004

Lab Sample ID: VSTD004

Compound Number : 5

Compound Name : 1,3-Butadiene

Scan Number : 289

Retention Time (minutes): 2.413

Quant Ion : 39.00

Area : 20138

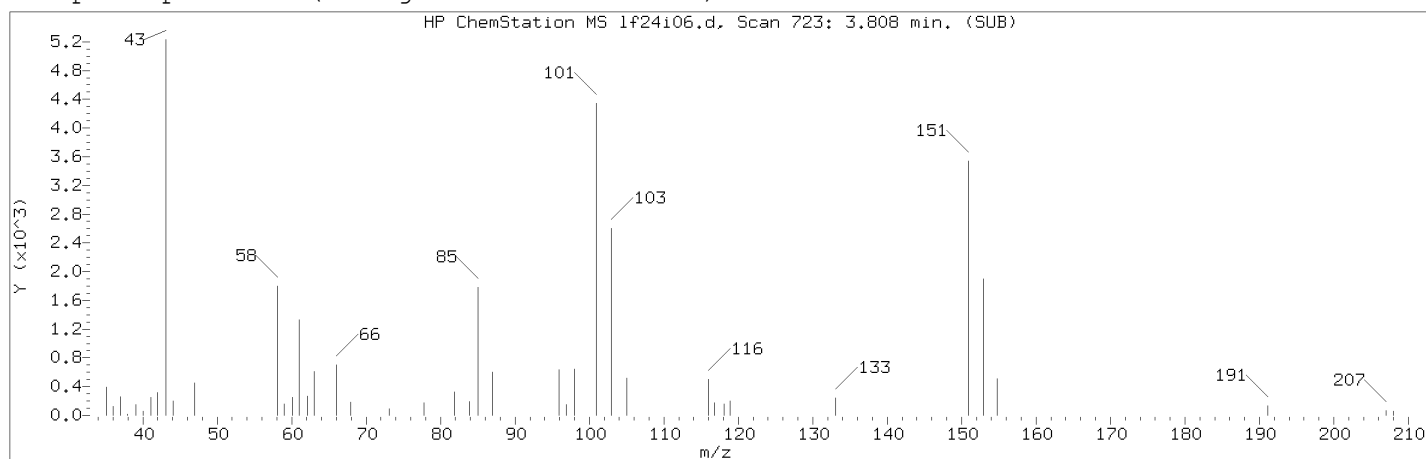
On-column Amount (ng) : 1.0000

Integration start scan : 271 Integration stop scan: 297

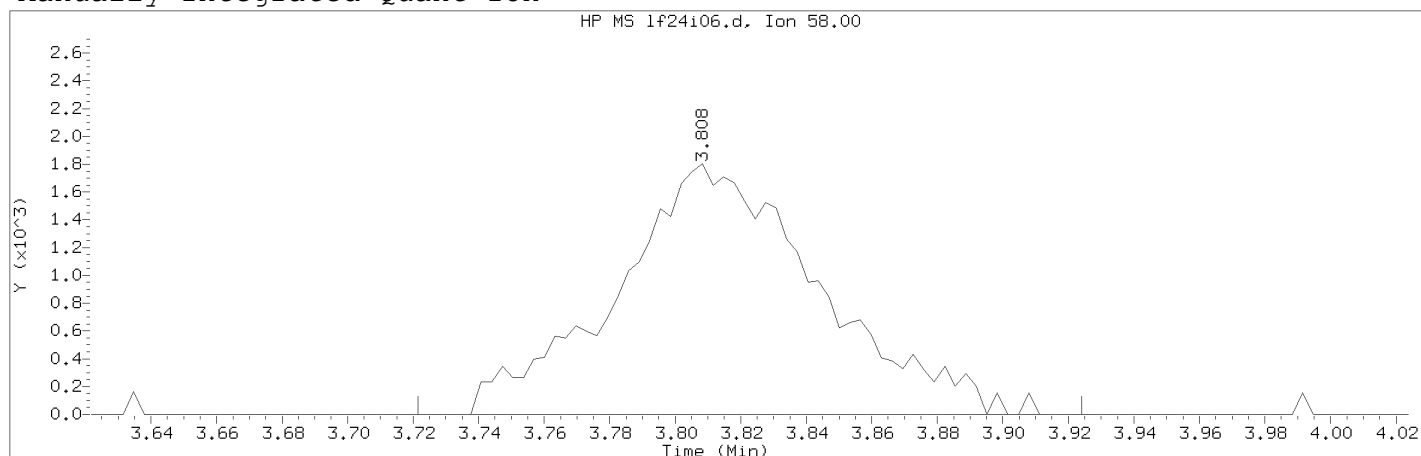
Y at integration start : 496 Y at integration end: 1123

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 Target 3.5 esignature user KR421m Page 226 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i06.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 18:07

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 25-FEB-2020 12:44

Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD004

Lab Sample ID: VSTD004

Compound Number : 18
 Compound Name : Acetone
 Scan Number : 723
 Retention Time (minutes): 3.808
 Quant Ion : 58.00
 Area (flag) : 7770M
 On-Column Amount (ng) : 8.1412
 Integration start scan : 695 Integration stop scan: 758
 Y at integration start : 0 Y at integration end: 0

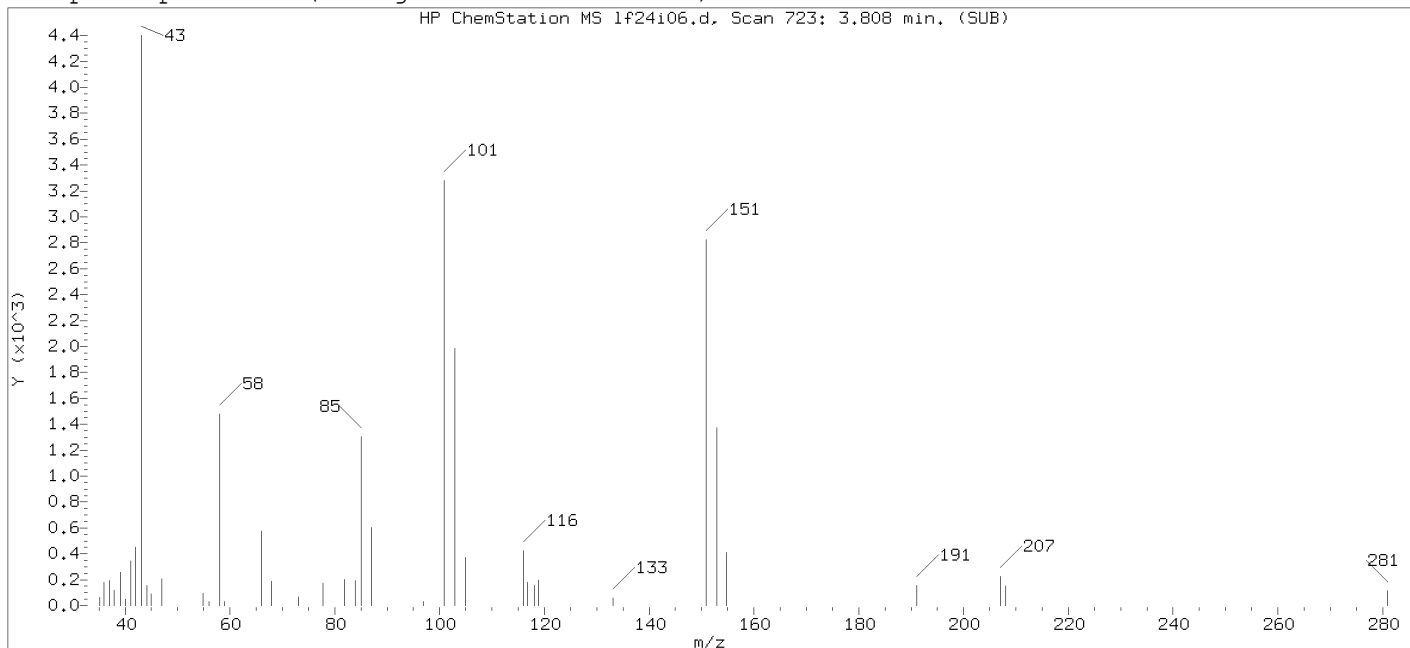
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.
 Target 3.5 esignature user ID: mec29284

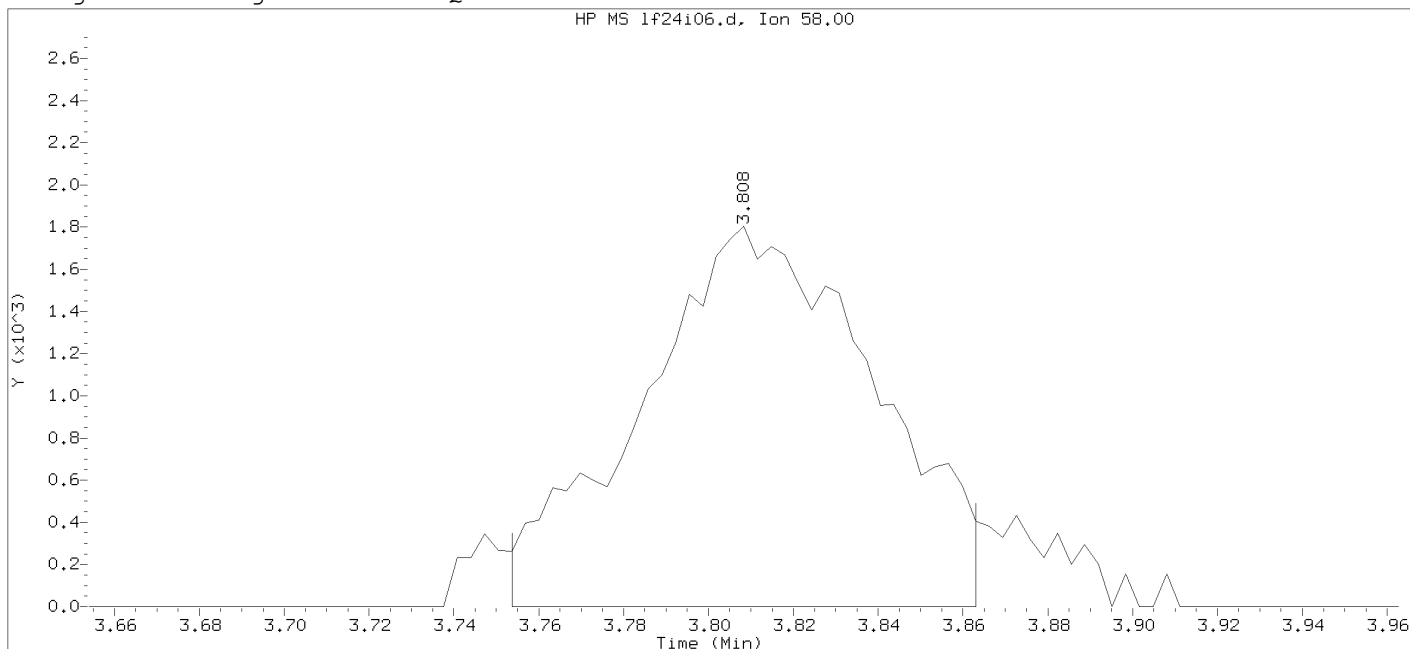
Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:49.

PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i06.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 18:07

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:55

Date, time and analyst ID of latest file update: 24-Feb-2020 20:55 mec29284

Sample Name: VSTD004

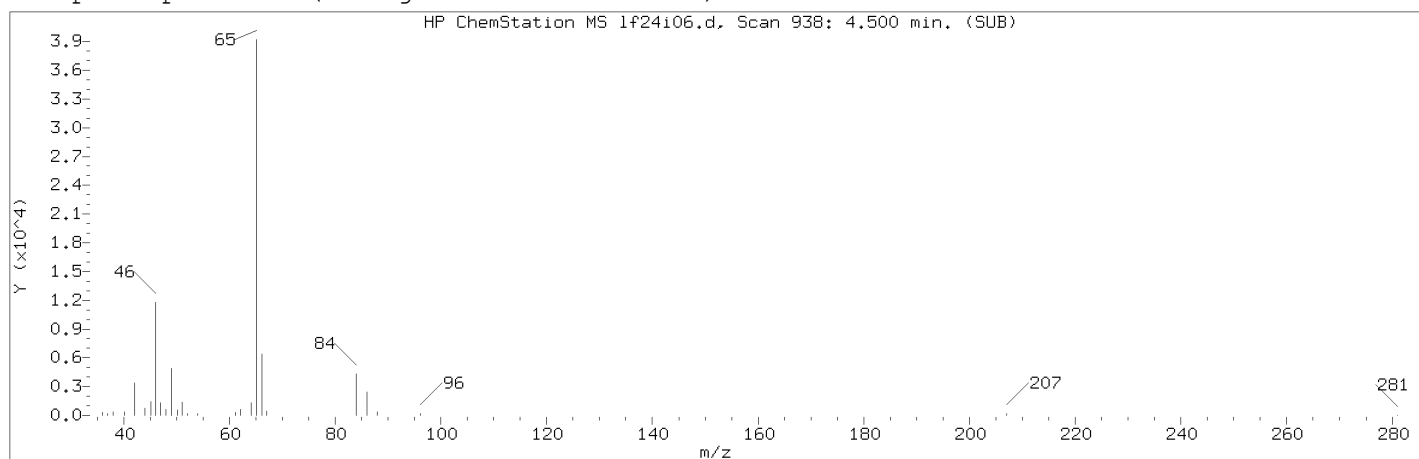
Lab Sample ID: VSTD004

Compound Number : 18
 Compound Name : Acetone
 Scan Number : 723
 Retention Time (minutes): 3.808
 Quant Ion : 58.00
 Area : 6909
 On-column Amount (ng) : 2.0000
 Integration start scan : 705
 Y at integration start : 0

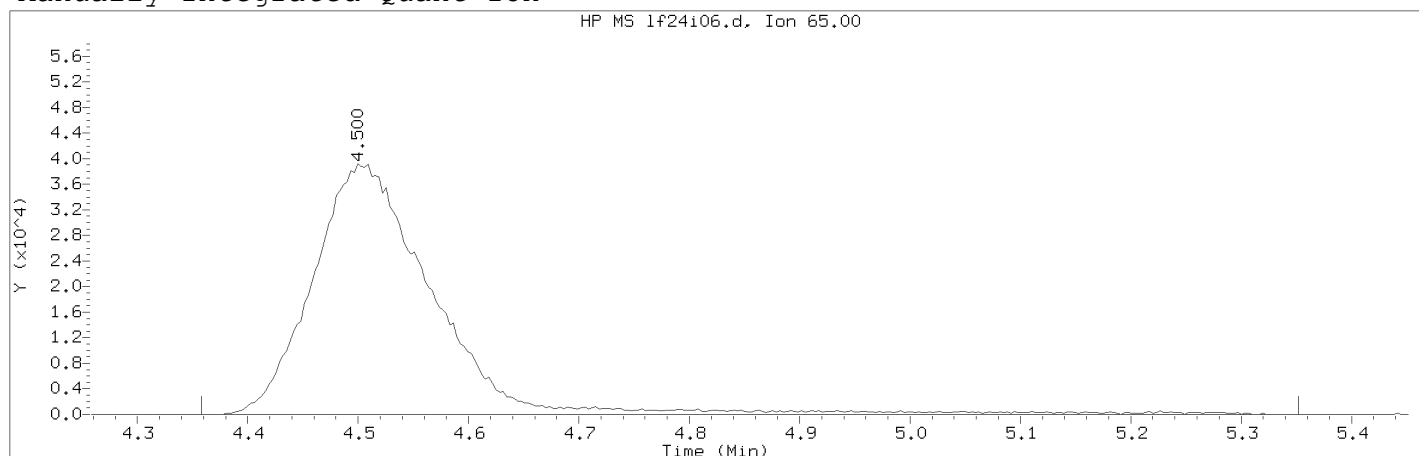
Integration stop scan: 739
 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 02/25/2020 at 18:06.
 Target 3.5 esignature user KR421m Page 228 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i06.d Instrument ID: HP09915.i
 Injection date and time: 24-FEB-2020 18:07 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 25-FEB-2020 12:44
 Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD004

Lab Sample ID: VSTD004

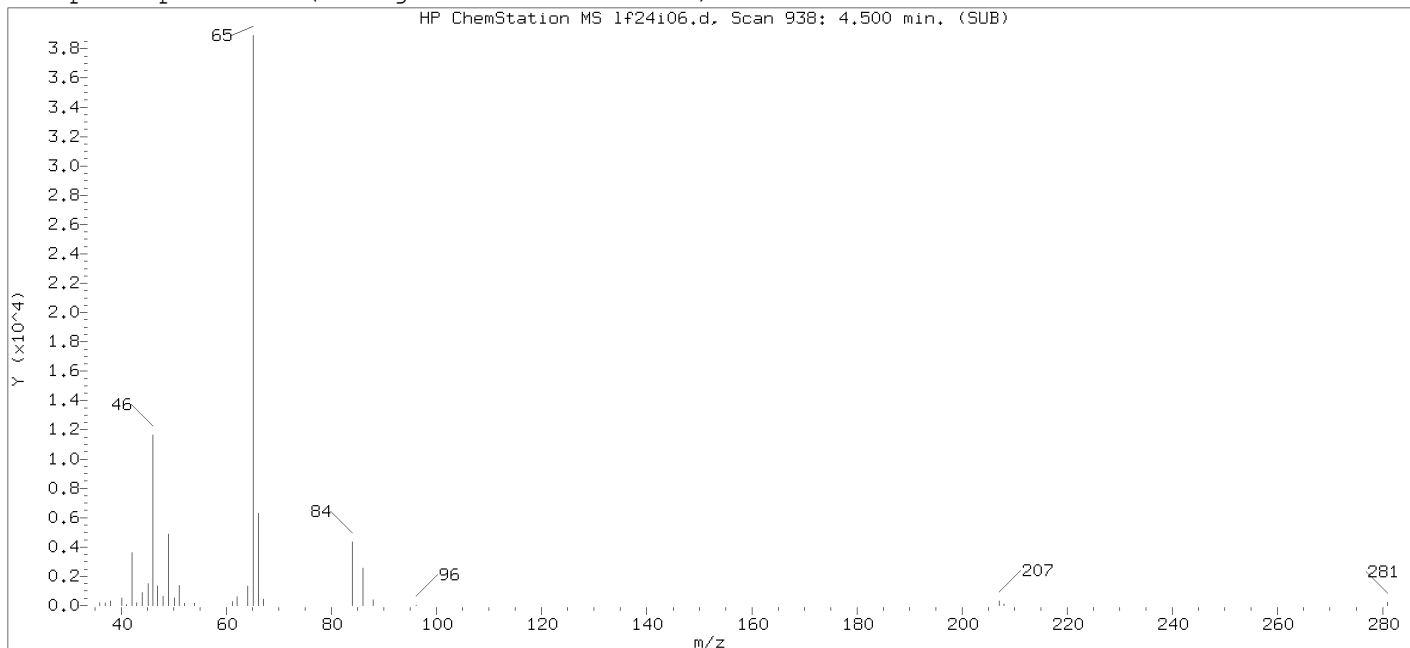
Compound Number : 29
 Compound Name : t-Butyl alcohol-d10
 Scan Number : 938
 Retention Time (minutes): 4.500
 Quant Ion : 65.00
 Area (flag) : 295469M
 On-Column Amount (ng) : 250.0000
 Integration start scan : 893 Integration stop scan: 1202
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

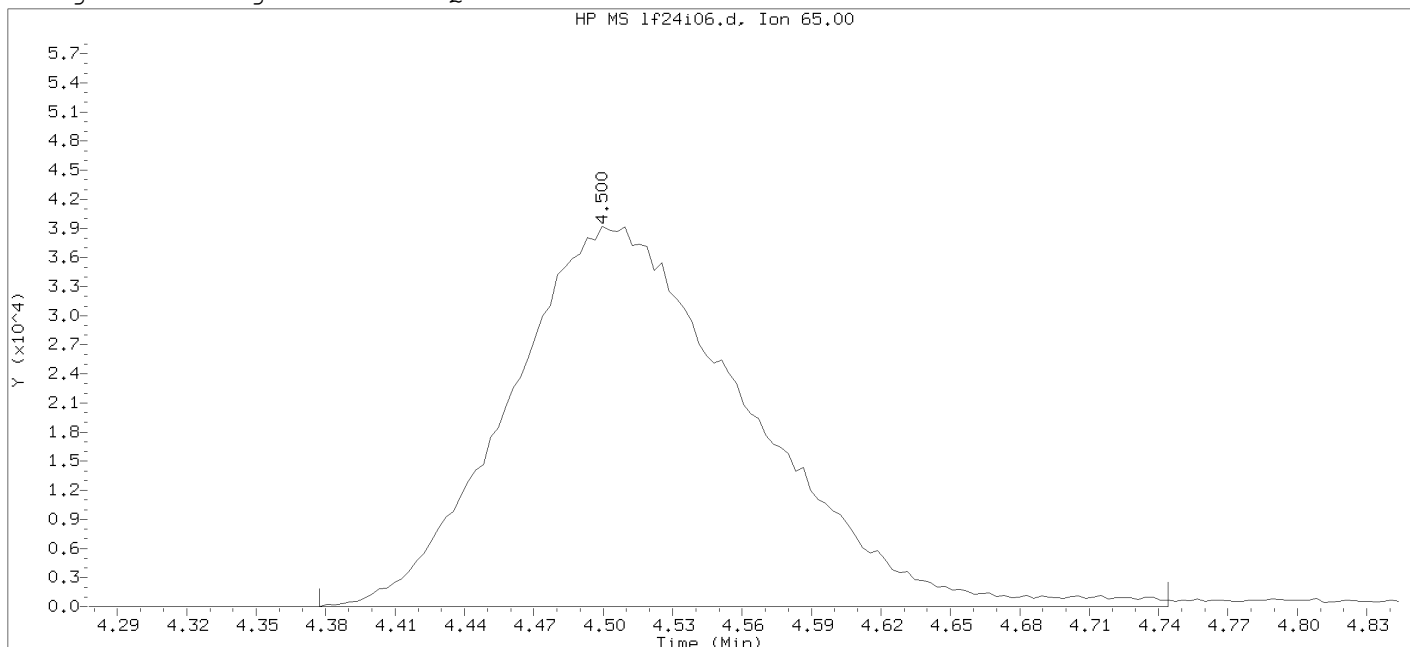
Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.
 Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:49.
 PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i06.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 18:07

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:55

Date, time and analyst ID of latest file update: 24-Feb-2020 20:55 mec29284

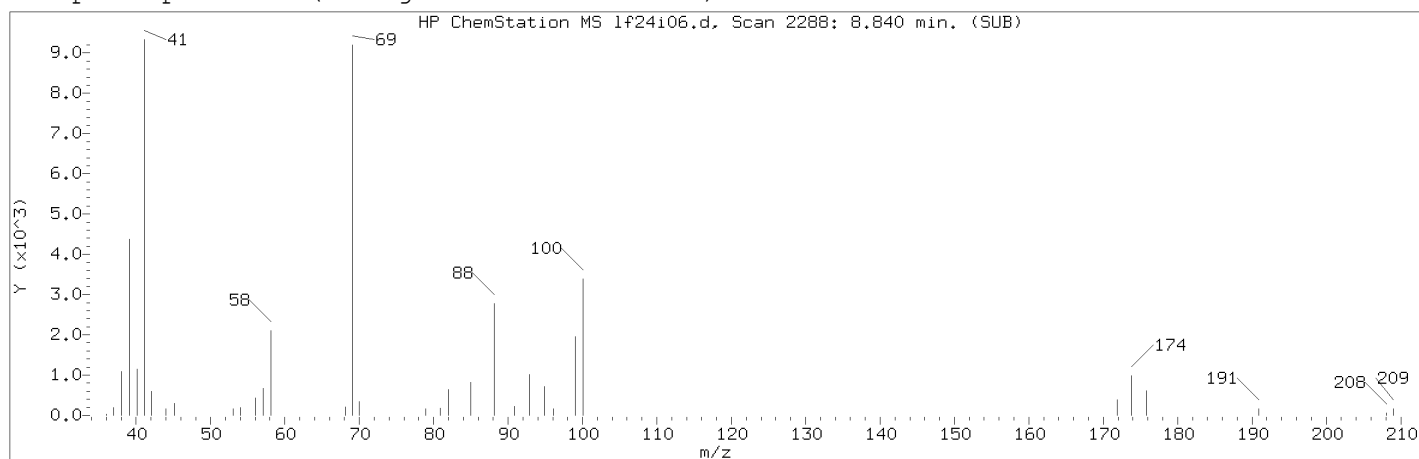
Sample Name: VSTD004

Lab Sample ID: VSTD004

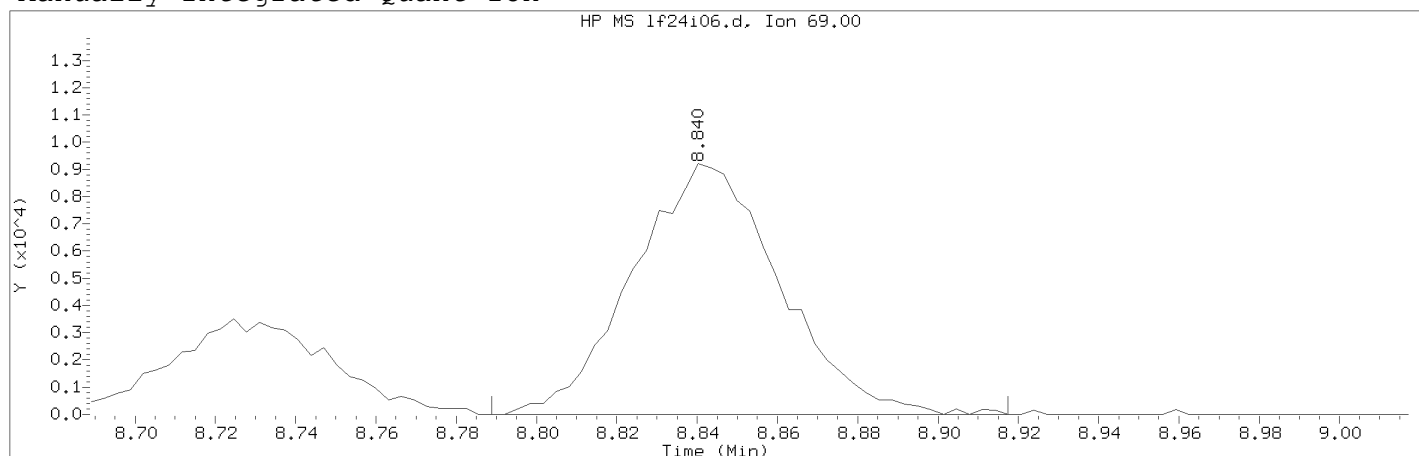
Compound Number	: 29
Compound Name	: t-Butyl alcohol-d10
Scan Number	: 938
Retention Time (minutes)	: 4.500
Quant Ion	: 65.00
Area	: 282103
On-column Amount (ng)	: 250.0000
Integration start scan	: 899
Integration stop scan	: 1013
Y at integration start	: 0
Y at integration end	: 0

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 Target 3.5 esignature user KR421m Page 230 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i06.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 18:07

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 25-FEB-2020 12:44

Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD004

Lab Sample ID: VSTD004

Compound Number	: 76	
Compound Name	: Methyl Methacrylate	
Scan Number	: 2288	
Retention Time (minutes)	: 8.840	
Quant Ion	: 69.00	
Area (flag)	: 23341M	
On-Column Amount (ng)	: 3.7810	
Integration start scan	: 2271	Integration stop scan: 2311
Y at integration start	: 0	Y at integration end: 0

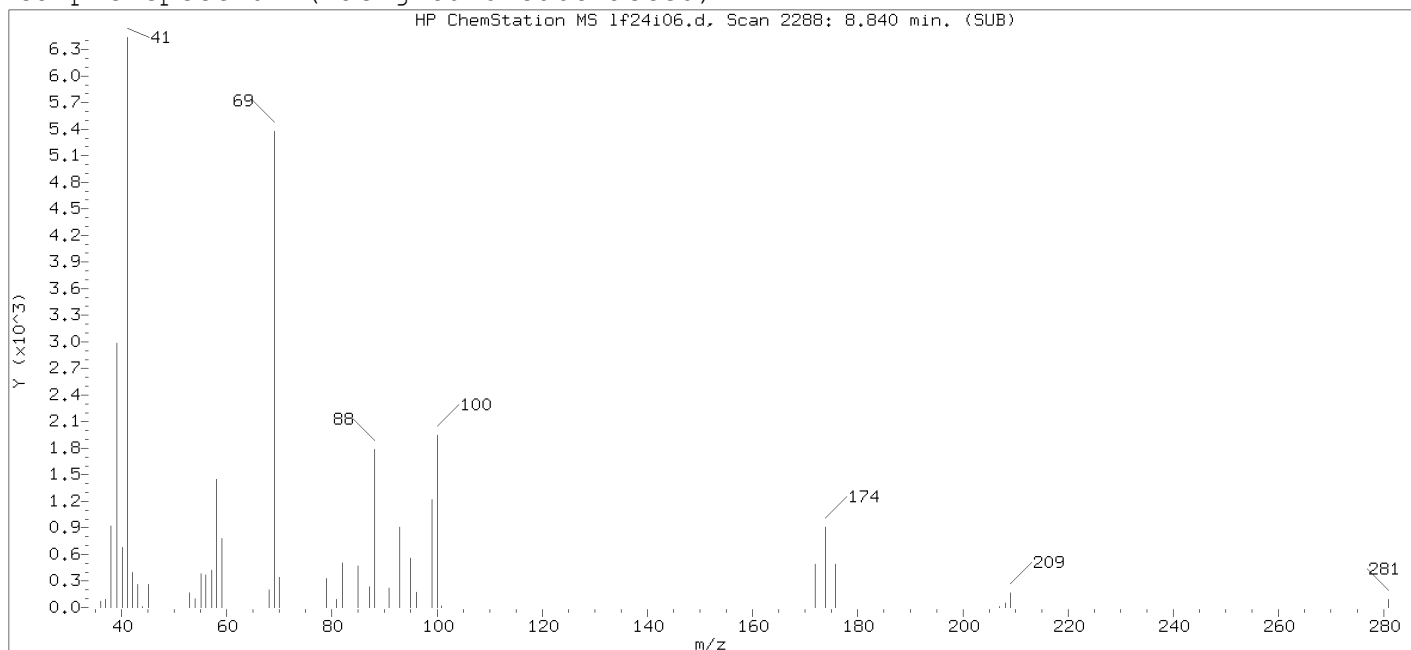
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Miranda E. Campbell
on 02/25/2020 at 18:06.
Target 3.5 esignature user ID: mec29284

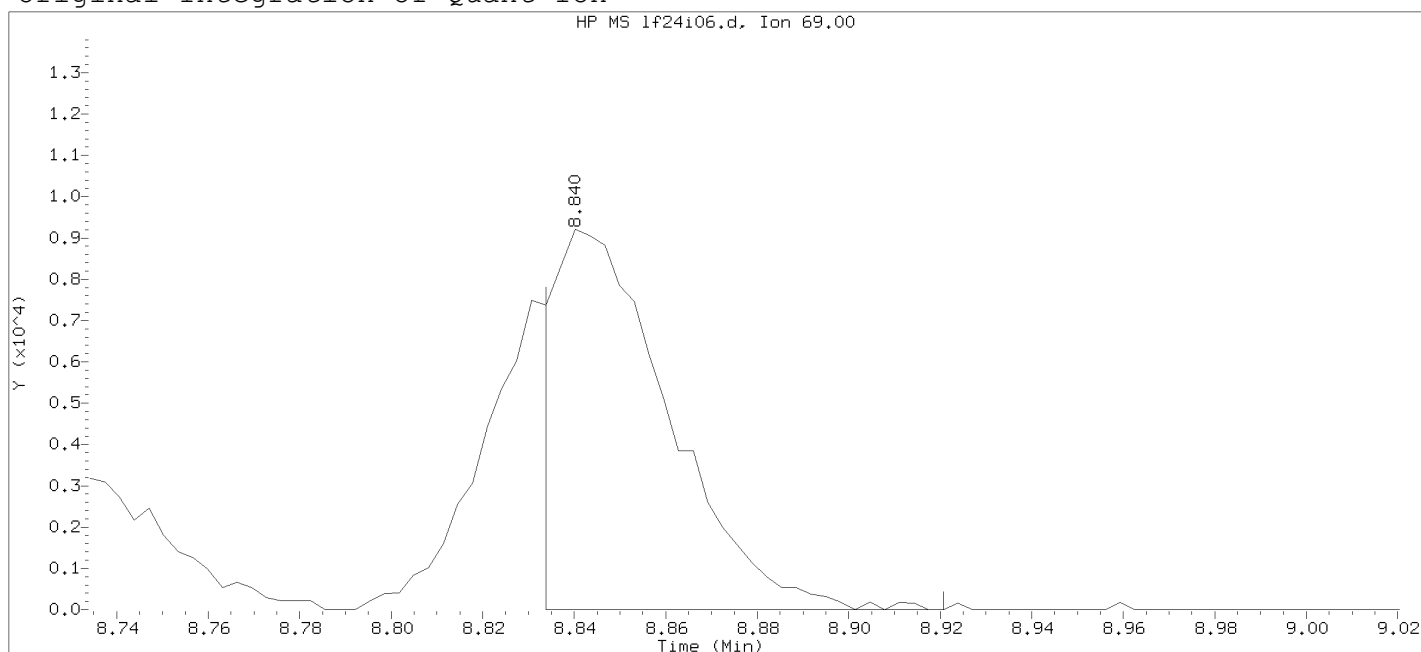
Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:49.

PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i06.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 18:07

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:55

Date, time and analyst ID of latest file update: 24-Feb-2020 20:55 mec29284

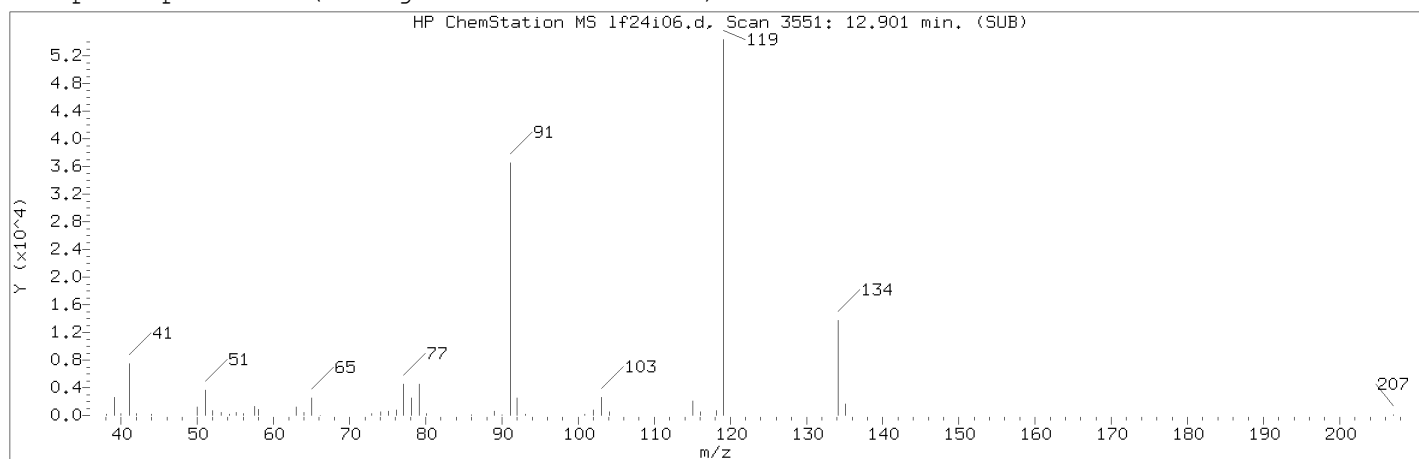
Sample Name: VSTD004

Lab Sample ID: VSTD004

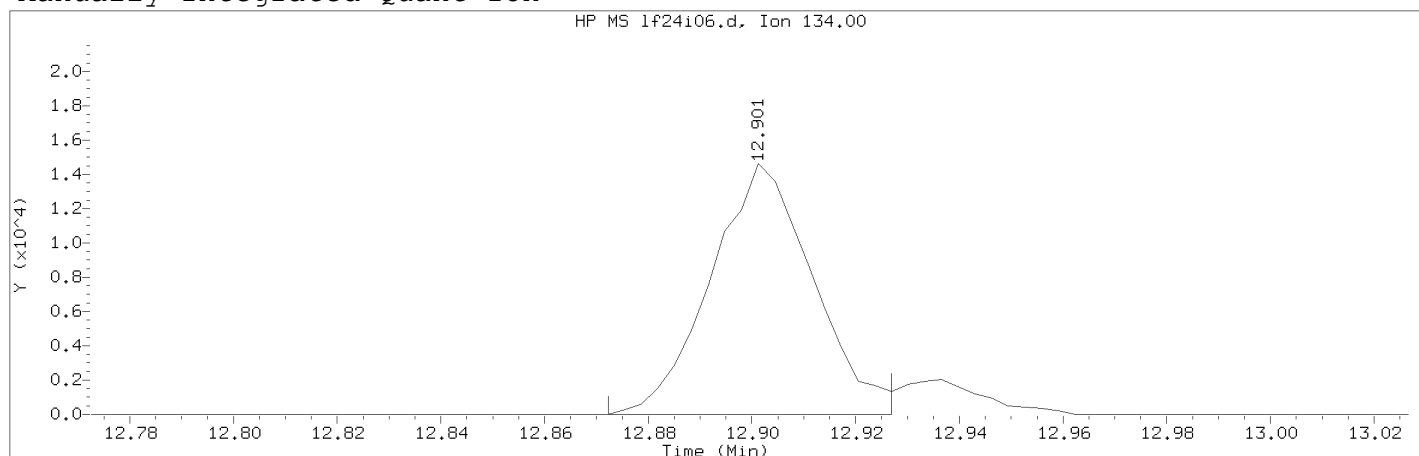
Compound Number	: 76
Compound Name	: Methyl Methacrylate
Scan Number	: 2288
Retention Time (minutes)	: 8.840
Quant Ion	: 69.00
Area	: 16191
On-column Amount (ng)	: 1.0000
Integration start scan	: 2285
Integration stop scan	: 2312
Y at integration start	: 0
Y at integration end	: 0

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 Target 3.5 esignature user KR421m Page 232 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i06.d Instrument ID: HP09915.i
 Injection date and time: 24-FEB-2020 18:07 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 25-FEB-2020 12:44
 Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD004

Lab Sample ID: VSTD004

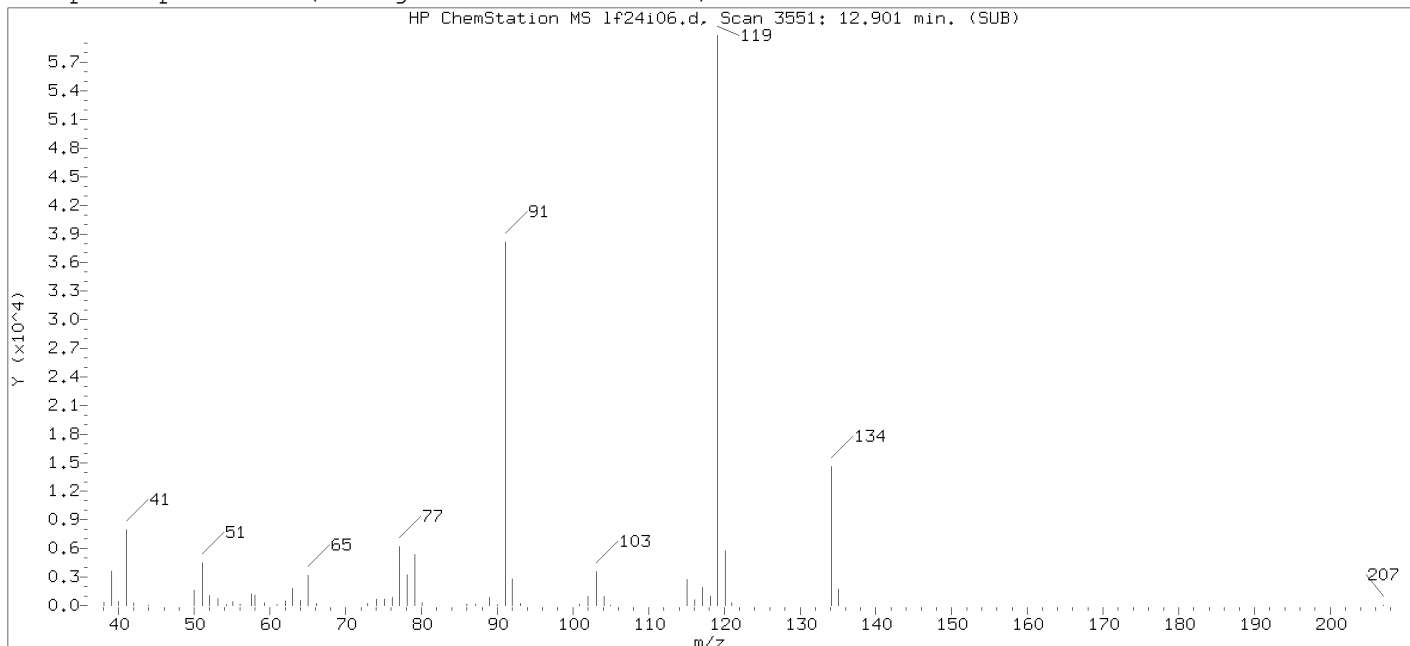
Compound Number : 124
 Compound Name : tert-Butylbenzene
 Scan Number : 3551
 Retention Time (minutes): 12.901
 Quant Ion : 134.00
 Area (flag) : 20000M
 On-Column Amount (ng) : 3.7577
 Integration start scan : 3541 Integration stop scan: 3558
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

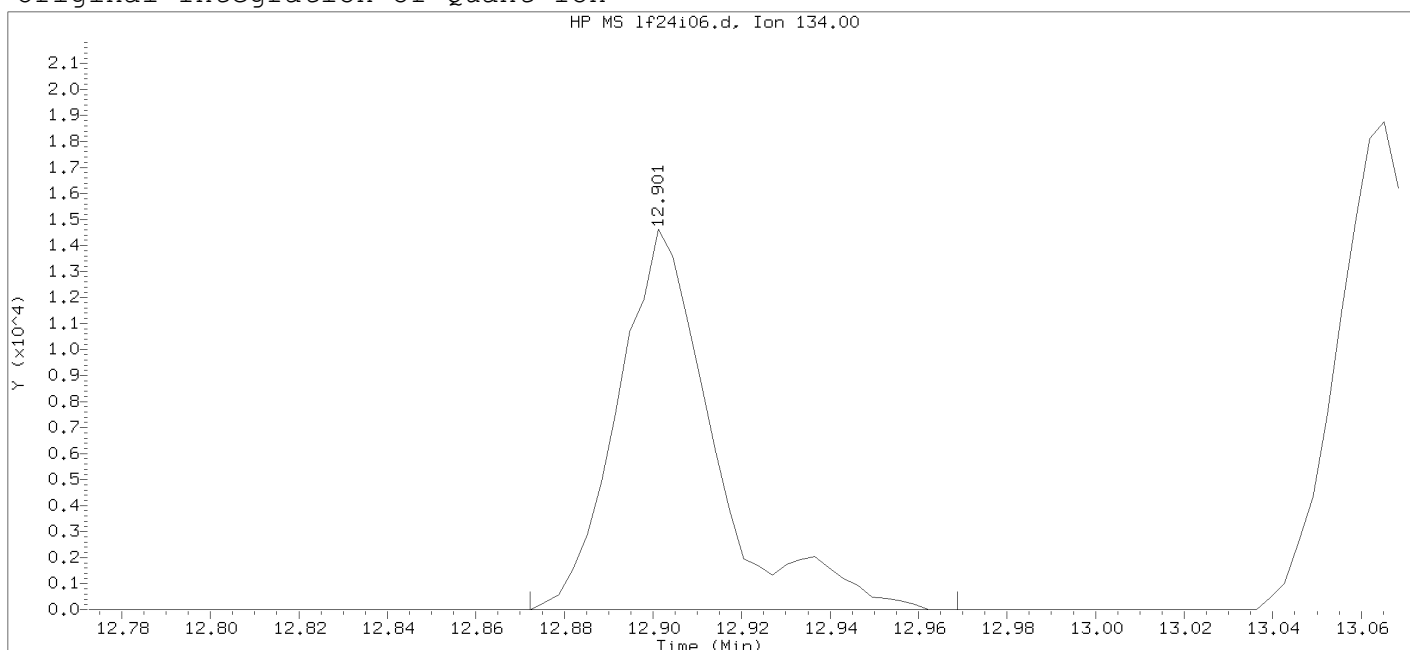
Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.
 Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:49.
 PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i06.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 18:07

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:55

Date, time and analyst ID of latest file update: 24-Feb-2020 20:55 mec29284

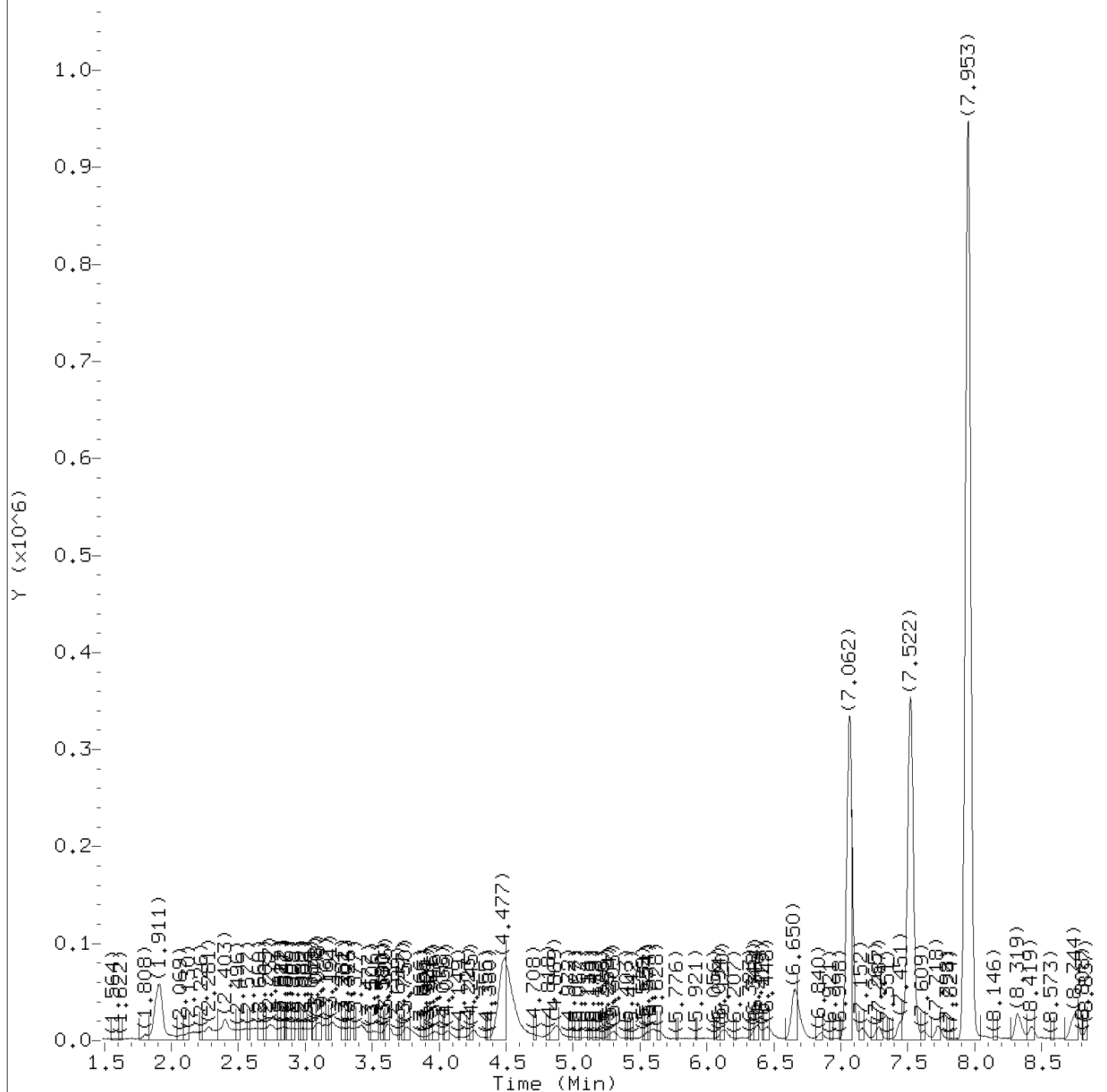
Sample Name: VSTD004

Lab Sample ID: VSTD004

Compound Number	: 124	
Compound Name	: tert-Butylbenzene	
Scan Number	: 3551	
Retention Time (minutes)	: 12.901	
Quant Ion	: 134.00	
Area	: 22109	
On-column Amount (ng)	: 1.0000	
Integration start scan	: 3541	Integration stop scan: 3571
Y at integration start	: 0	Y at integration end: 0

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 Target 3.5 esignature user KR421m Page 234 of 592

/chem/HP09915.i/20feb24i.b/1f24i07.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20feb24i.b/1f24i07.d
 Injection date and time: 24-FEB-2020 18:29

Instrument ID: HP09915.i
 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m
 Calibration date and time: 25-FEB-2020 12:44

Sublist used: 8260W

Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD001

Lab Sample ID: VSTD001

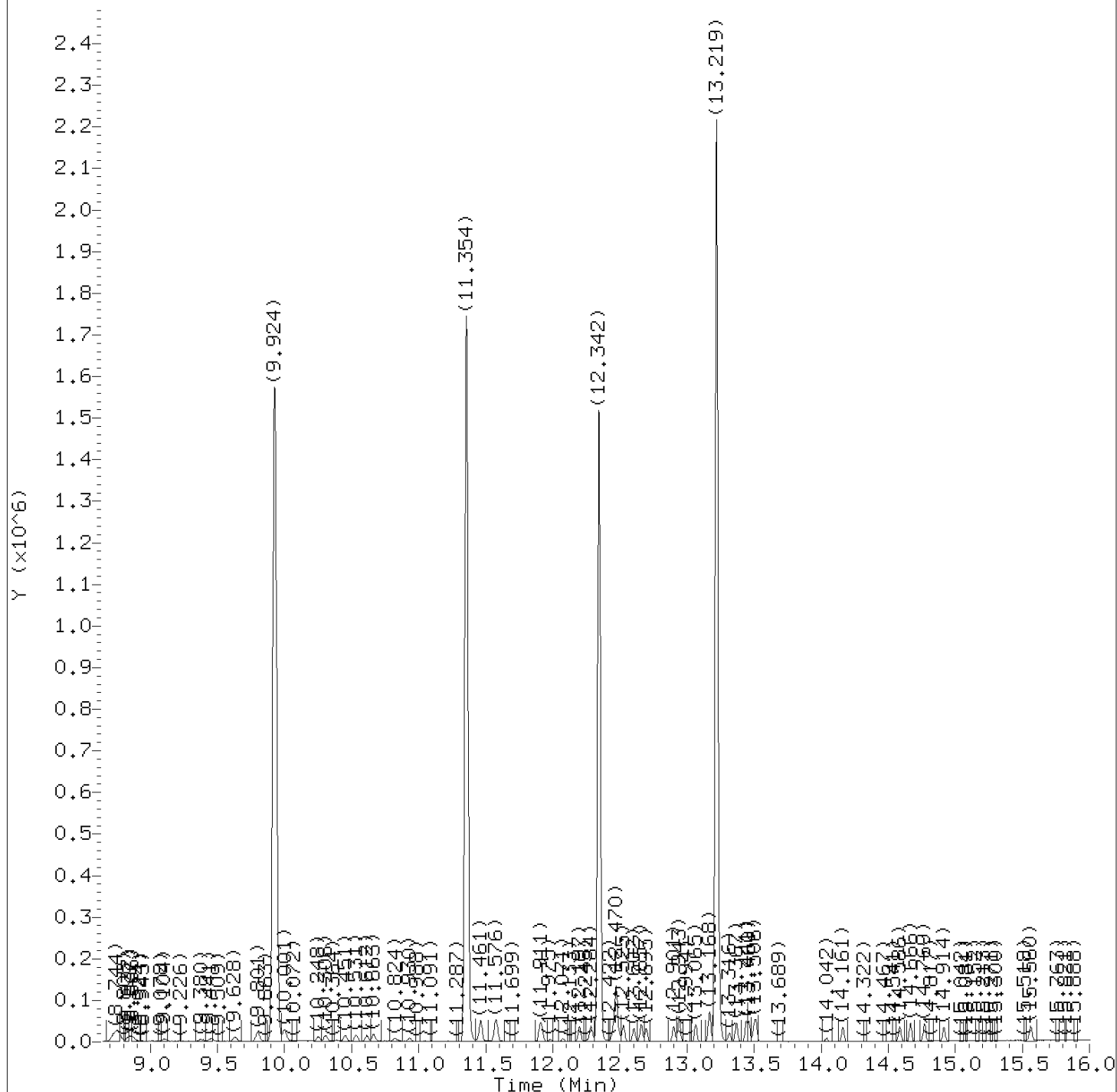
Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.

Target 3.5 esignature user ID: msc29284

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page 1 of 2

/chem/HP09915.i/20feb24i.b/1f24i07.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20feb24i.b/1f24i07.d
 Injection date and time: 24-FEB-2020 18:29

Instrument ID: HP09915.i
 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m
 Calibration date and time: 25-FEB-2020 12:44

Sublist used: 8260W

Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD001

Lab Sample ID: VSTD001

Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.

Target 3.5 esignature user ID: msc29284

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20feb24i.b/1f24i07.d
 Injection date and time: 24-FEB-2020 18:29

Instrument ID: HP09915.i
 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 25-FEB-2020 12:44

Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD001

Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
3) Dichlorodifluoromethane	(2)	2.082	85	5945	0.709
4) Chloromethane	(2)	2.278	50	7081M	0.845
5) 1,3-Butadiene	(2)	2.400	39	5630M	0.896
6) Vinyl Chloride	(2)	2.400	62	6244	0.789
8) Bromomethane	(2)	2.750	94	4790	0.863
9) Chloroethane	(2)	2.837	64	3902	0.894
10) Dichlorofluoromethane	(2)	3.098	67	9385	0.969
12) Trichlorofluoromethane	(2)	3.146	101	6114	0.746
11) n-Pentane	(2)	3.210	43	9062	0.978
14) Ethyl ether	(2)	3.429	59	4928	0.842
15) Freon 123a	(2)	3.506	67	5301	0.805
16) Acrolein	(1)	3.615	56	20460	8.359
17) 1,1-Dichloroethene	(2)	3.750	96	5546	0.989
17) 1,1-Dichloroethene	(2)	3.757	63	2133	0.805
19) Freon 113	(2)	3.779	101	3711	0.696
18) Acetone	(1)	3.789	58	1925	1.778
22) Methyl Iodide	(2)	3.966	142	7447	0.751
21) 2-Propanol	(1)	3.982	45	13712	18.183
23) Carbon Disulfide	(2)	4.069	76	12959	0.732
27) Methyl Acetate	(2)	4.242	43	7456M	1.065
25) Allyl Chloride	(2)	4.262	41	8461M	0.938
28) Methylene Chloride	(2)	4.458	84	5198M	0.830
29) *t-Butyl alcohol-d10	(1)	4.493	65	335105M	250.000
30) t-Butyl alcohol	(1)	4.615	59	22108	17.055
31) Acrylonitrile	(2)	4.834	53	3486	0.919
33) Methyl Tertiary Butyl Ether	(2)	4.869	73	17242	0.920
32) trans-1,2-Dichloroethene	(2)	4.885	96	5544	0.901
34) n-Hexane	(2)	5.306	57	6878	0.777
36) 1,1-Dichloroethane	(2)	5.538	63	7977	0.775
38) di-Isopropyl ether	(2)	5.606	45	15620M	0.790
39) 2-Chloro-1,3-butadiene	(2)	5.657	53	6114	0.694
40) Ethyl t-butyl ether	(2)	6.120	59	15078	0.803
43) 1,2-Dichloroethene (Total)	(2)		96	11776	1.807
44) 2-Butanone	(2)	6.355	43	9430	1.944
42) cis-1,2-Dichloroethene	(2)	6.380	96	6232	0.906
45) 2,2-Dichloropropane	(2)	6.393	77	5980M	0.730
47) Propionitrile	(1)	6.454	54	27633	16.449
48) Methacrylonitrile	(2)	6.660	67	33031	8.512

M = Compound was manually integrated.

* = Compound is an internal standard.

page 1 of 4

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 on 02/25/2020 at 18:06.

Target 3.5 esignature user ID: mec29284

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20feb24i.b/1f24i07.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 18:29

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 25-FEB-2020 12:44

Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD001

Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
49) Bromochloromethane	(2)	6.699	128	2917	0.853
50) Tetrahydrofuran	(1)	6.705	71	2531	1.676
51) Chloroform	(2)	6.850	83	7448	0.747
52)\$Dibromofluoromethane	(2)	7.062	113	312192	49.653
52)\$Dibromofluoromethane	(2)	7.068	111	319410	49.724
53) 1,1,1-Trichloroethane	(2)	7.068	97	6221	0.711
54) Cyclohexane	(2)	7.162	56	7955	0.739
54) Cyclohexane	(2)	7.162	84	6570	0.722
54) Cyclohexane	(2)	7.168	69	2406	0.728
55) 1,1-Dichloropropene	(2)	7.281	75	6190	0.759
56) Carbon Tetrachloride	(2)	7.287	117	4956	0.693
58) Isobutyl Alcohol	(1)	7.448	41	18037	40.953
57)\$1,2-Dichloroethane-d4	(2)	7.522	102	82374	50.515
57)\$1,2-Dichloroethane-d4	(2)	7.519	65	369054	50.702
57)\$1,2-Dichloroethane-d4	(2)	7.515	104	52200	50.429
60) Benzene	(2)	7.548	78	18557	0.746
61) 1,2-Dichloroethane	(2)	7.628	62	8015	0.963
61) 1,2-Dichloroethane	(2)	7.625	98	719	0.943
65) t-Amyl methyl ether	(2)	7.734	73	15763	0.834
67) n-Heptane	(2)	7.946	43	7886	0.910
66)*Fluorobenzene	(2)	7.953	96	1329719	50.000
69) n-Butanol	(1)	8.319	56	26714	72.456
71) Trichloroethene	(2)	8.425	95	4754	0.759
72) Methylcyclohexane	(2)	8.731	83	7986	0.760
72) Methylcyclohexane	(2)	8.724	98	3782	0.798
73) 1,2-Dichloropropane	(2)	8.763	63	5155	0.797
76) Methyl Methacrylate	(2)	8.837	69	4726M	0.766
75) 1,4-Dioxane	(1)	8.853	88	3865M	39.354
74) Dibromomethane	(2)	8.875	93	3255	0.774
78) Bromodichloromethane	(2)	9.110	83	5291	0.704
79) 2-Nitropropane	(2)	9.374	41	4163	1.800
80) 2-Chloroethyl Vinyl Ether	(2)	9.461	63	3661	0.772
81) cis-1,3-Dichloropropene	(2)	9.628	75	7287	0.723
82) 4-Methyl-2-pentanone	(2)	9.798	43	17736	1.767
83)\$Toluene-d8	(3)	9.927	98	1318368	49.931
83)\$Toluene-d8	(3)	9.924	100	854794	49.816
88) Toluene	(3)	10.001	92	11770	0.750
90) 1,3-Dichloropropene (total)	(3)		100	13795	1.420

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 2 of 4

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on 02/25/2020 at 18:06.

Target 3.5 esignature user ID: mec29284

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20feb24i.b/1f24i07.d
 Injection date and time: 24-FEB-2020 18:29

Instrument ID: HP09915.i
 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 25-FEB-2020 12:44

Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD001

Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
89) trans-1,3-Dichloropropene	(3)	10.248	75	6508	0.696
91) Ethyl Methacrylate	(3)	10.306	69	7916	0.740
92) 1,1,2-Trichloroethane	(3)	10.451	97	4876	0.789
93) Tetrachloroethene	(3)	10.535	166	5030	0.755
94) 1,3-Dichloropropane	(3)	10.612	76	8101	0.785
96) 2-Hexanone	(3)	10.663	43	12359	1.709
97) Dibromochloromethane	(3)	10.821	129	4212	0.674
99) 1,2-Dibromoethane	(3)	10.930	107	5154	0.766
100) *Chlorobenzene-d5	(3)	11.354	117	1005001	50.000
101) 1-Chlorohexane	(3)	11.361	91	8360	0.956
102) Chlorobenzene	(3)	11.380	112	13453	0.763
103) 1,1,1,2-Tetrachloroethane	(3)	11.454	131	3928	0.666
104) Ethylbenzene	(3)	11.464	91	22491	0.750
106) m+p-Xylene	(3)	11.580	106	17668	1.502
108) Xylene (Total)	(3)		106	26615	2.269
107) o-Xylene	(3)	11.904	106	8947	0.767
109) Styrene	(3)	11.917	104	13601	0.694
110) Bromoform	(3)	12.078	173	2833	0.586
111) Isopropylbenzene	(3)	12.197	105	22059	0.738
112) Cyclohexanone	(1)	12.284	55	15330	38.914
114) \$4-Bromofluorobenzene	(3)	12.342	95	500090	50.224
114) \$4-Bromofluorobenzene	(3)	12.345	174	413294	50.213
116) 1,1,2,2-Tetrachloroethane	(4)	12.444	83	8330	0.795
115) Bromobenzene	(4)	12.461	156	5986	0.768
118) trans-1,4-Dichloro-2-butene	(4)	12.470	53	22808	7.599
117) 1,2,3-Trichloropropane	(4)	12.496	110	2504	0.805
119) n-Propylbenzene	(4)	12.528	91	27104	0.771
120) 2-Chlorotoluene	(4)	12.602	126	5667	0.776
122) 1,3,5-Trimethylbenzene	(4)	12.657	105	19419	0.751
121) 4-Chlorotoluene	(4)	12.698	126	5898	0.778
124) tert-Butylbenzene	(4)	12.901	134	4281M	0.804
125) Pentachloroethane	(4)	12.933	167	2854	0.671
126) 1,2,4-Trimethylbenzene	(4)	12.943	105	20488	0.756
127) sec-Butylbenzene	(4)	13.065	105	25132	0.791
130) p-Isopropyltoluene	(4)	13.168	119	21531	0.786
129) 1,3-Dichlorobenzene	(4)	13.168	146	12179	0.828
131) *1,4-Dichlorobenzene-d4	(4)	13.219	152	551645	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	12644	0.830

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 3 of 4

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Target 3.5 esignature user ID: mec29284

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20feb24i.b/lf24i07.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 18:29

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 25-FEB-2020 12:44

Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD001

Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
134) 1,2,3-Trimethylbenzene	(4)	13.245	105	22313	0.824
135) Benzyl Chloride	(4)	13.316	91	12591	0.635
136) 1,3-Diethylbenzene	(4)	13.370	119	13516	0.815
141) Diethylbenzene (total)	(4)		100	39120	2.448
137) 1,4-Diethylbenzene	(4)	13.441	119	14280	0.822
139) n-Butylbenzene	(4)	13.460	92	11910M	0.863
138) 1,2-Dichlorobenzene	(4)	13.502	146	12283	0.840
140) 1,2-Diethylbenzene	(4)	13.515	119	11324	0.811
142) 1,2-Dibromo-3-chloropropane	(4)	14.042	75	1756	0.769
144) 1,3,5-Trichlorobenzene	(4)	14.165	180	10304	0.936
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	10212	0.966
147) Hexachlorobutadiene	(4)	14.666	225	7065	1.521
148) Naphthalene	(4)	14.769	128	30369	0.851
149) 1,2,3-Trichlorobenzene	(4)	14.917	180	9502	0.950
150) 2-Methylnaphthalene	(4)	15.560	142	17051	0.891

M = Compound was manually integrated.

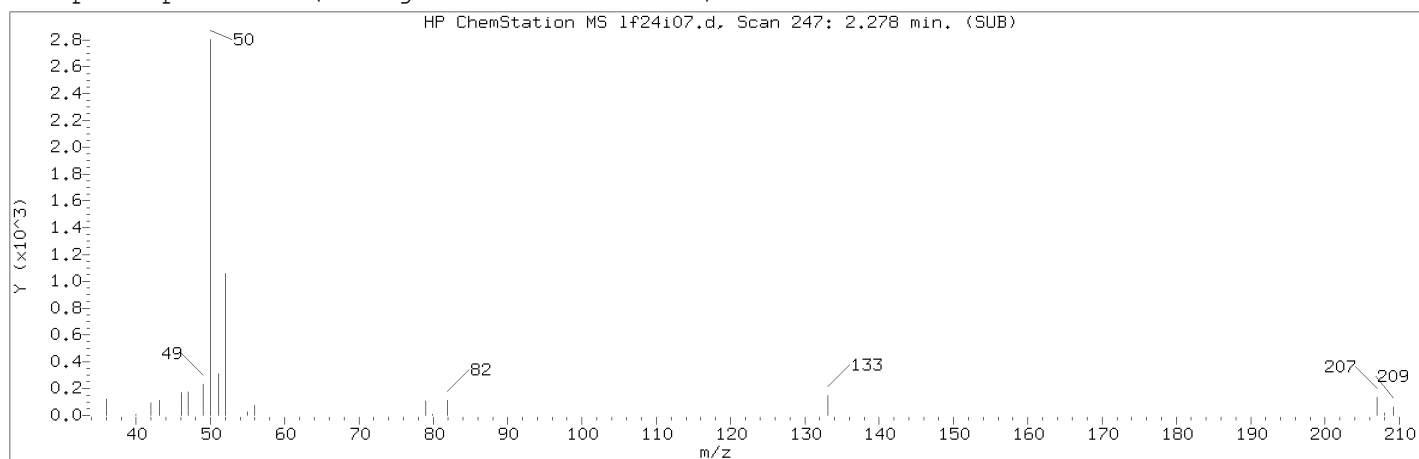
page 4 of 4

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on 02/25/2020 at 18:06.

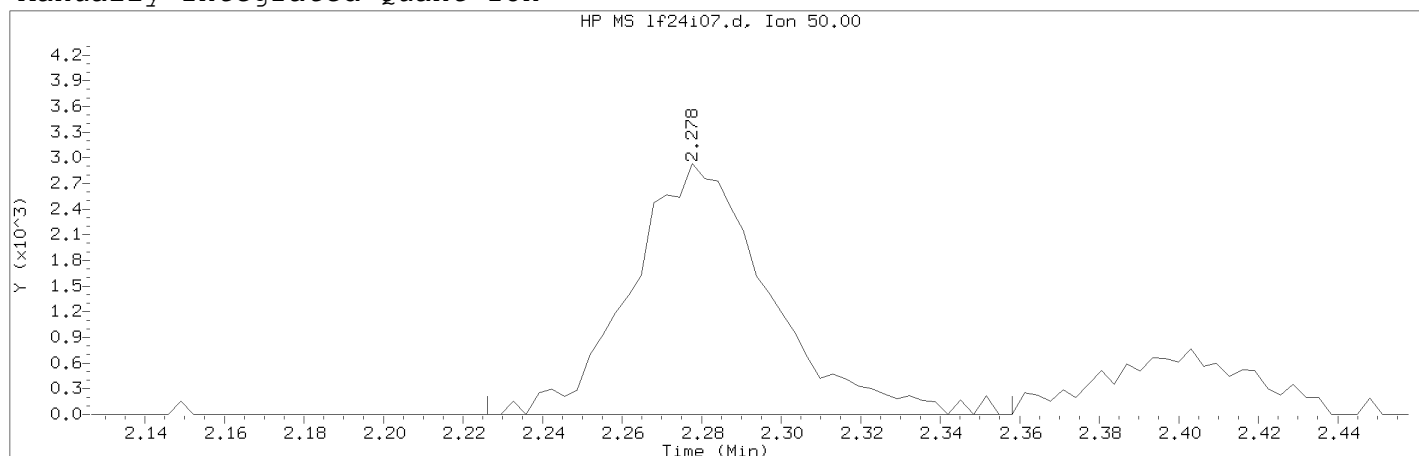
Target 3.5 esignature user ID: mec29284

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Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i07.d Instrument ID: HP09915.i
 Injection date and time: 24-FEB-2020 18:29 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 25-FEB-2020 12:44
 Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD001 Lab Sample ID: VSTD001

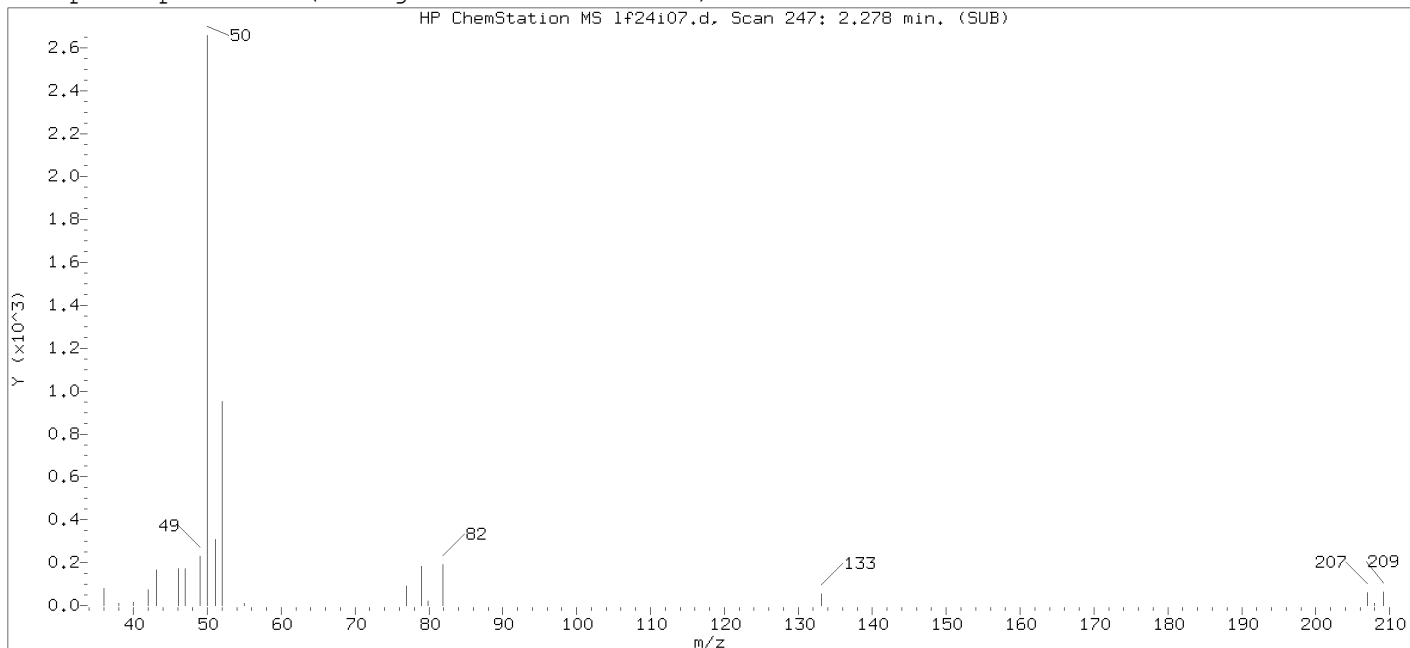
Compound Number : 4
 Compound Name : Chloromethane
 Scan Number : 247
 Retention Time (minutes): 2.278
 Quant Ion : 50.00
 Area (flag) : 7081M
 On-Column Amount (ng) : 0.8446
 Integration start scan : 230 Integration stop scan: 271
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

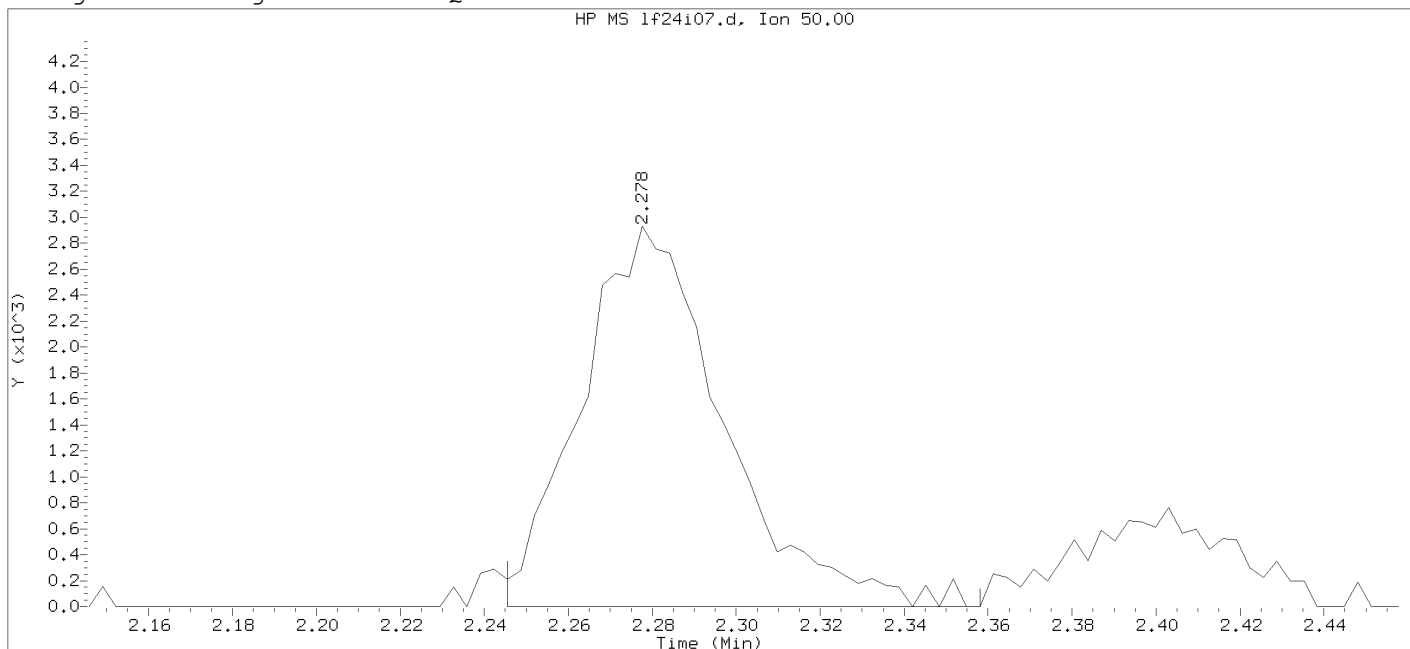
Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.
 Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:49.
 PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i07.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 18:29

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:55

Date, time and analyst ID of latest file update: 24-Feb-2020 20:55 mec29284

Sample Name: VSTD001

Lab Sample ID: VSTD001

Compound Number : 4

Compound Name : Chloromethane

Scan Number : 247

Retention Time (minutes): 2.278

Quant Ion : 50.00

Area : 6925

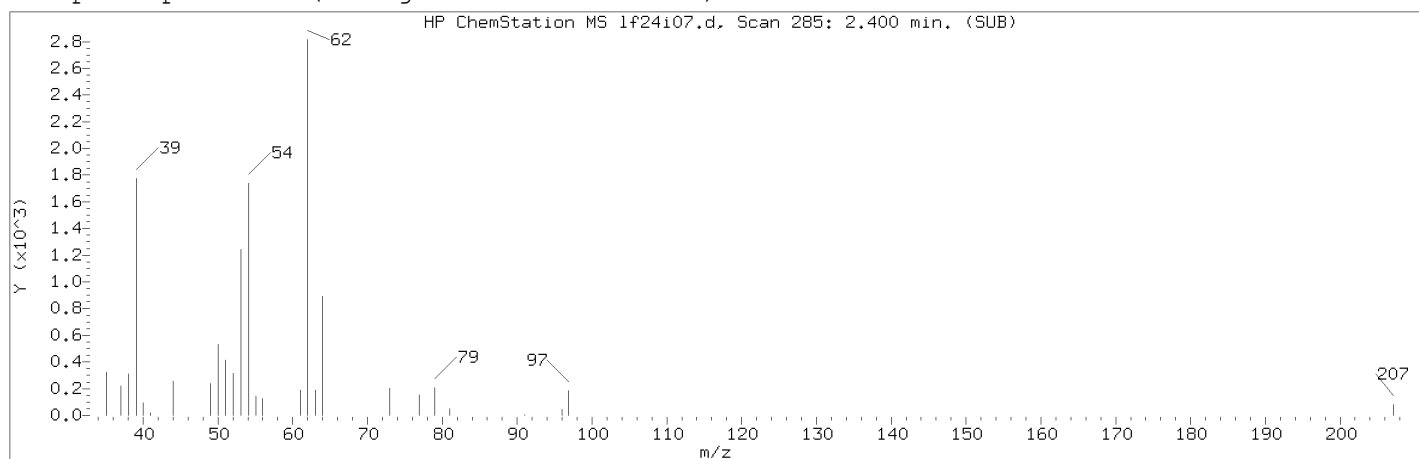
On-column Amount (ng) : 1.0000

Integration start scan : 236 Integration stop scan: 271

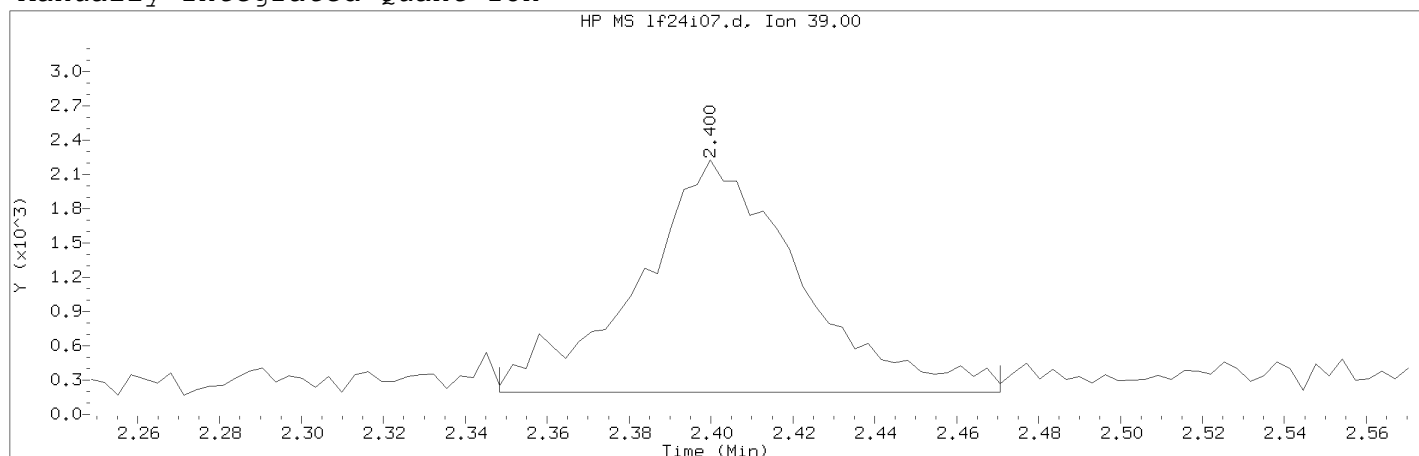
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 02/25/2020 at 18:06.
 Target 3.5 esignature user KR421m Page 242 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i07.d Instrument ID: HP09915.i
 Injection date and time: 24-FEB-2020 18:29 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 25-FEB-2020 12:44
 Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD001 Lab Sample ID: VSTD001

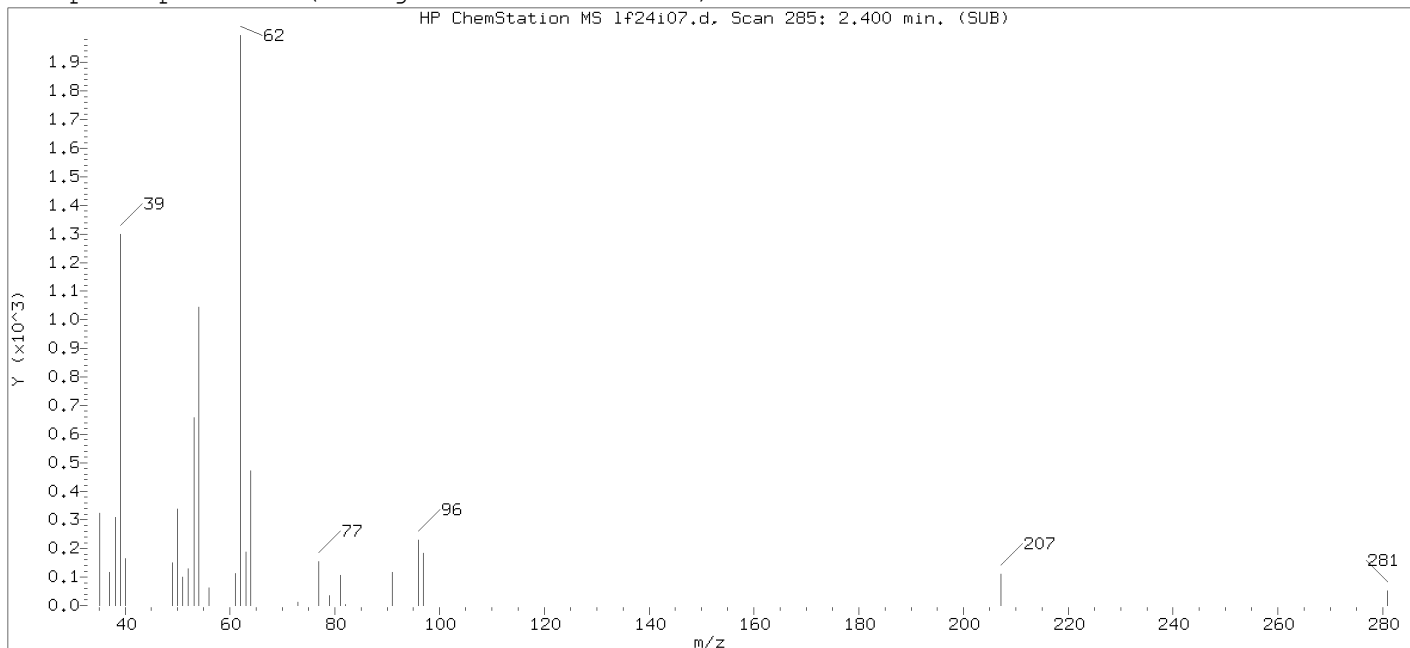
Compound Number : 5
 Compound Name : 1,3-Butadiene
 Scan Number : 285
 Retention Time (minutes): 2.400
 Quant Ion : 39.00
 Area (flag) : 5630M
 On-Column Amount (ng) : 0.8961
 Integration start scan : 268 Integration stop scan: 306
 Y at integration start : 193 Y at integration end: 193

Reason for manual integration: improper integration

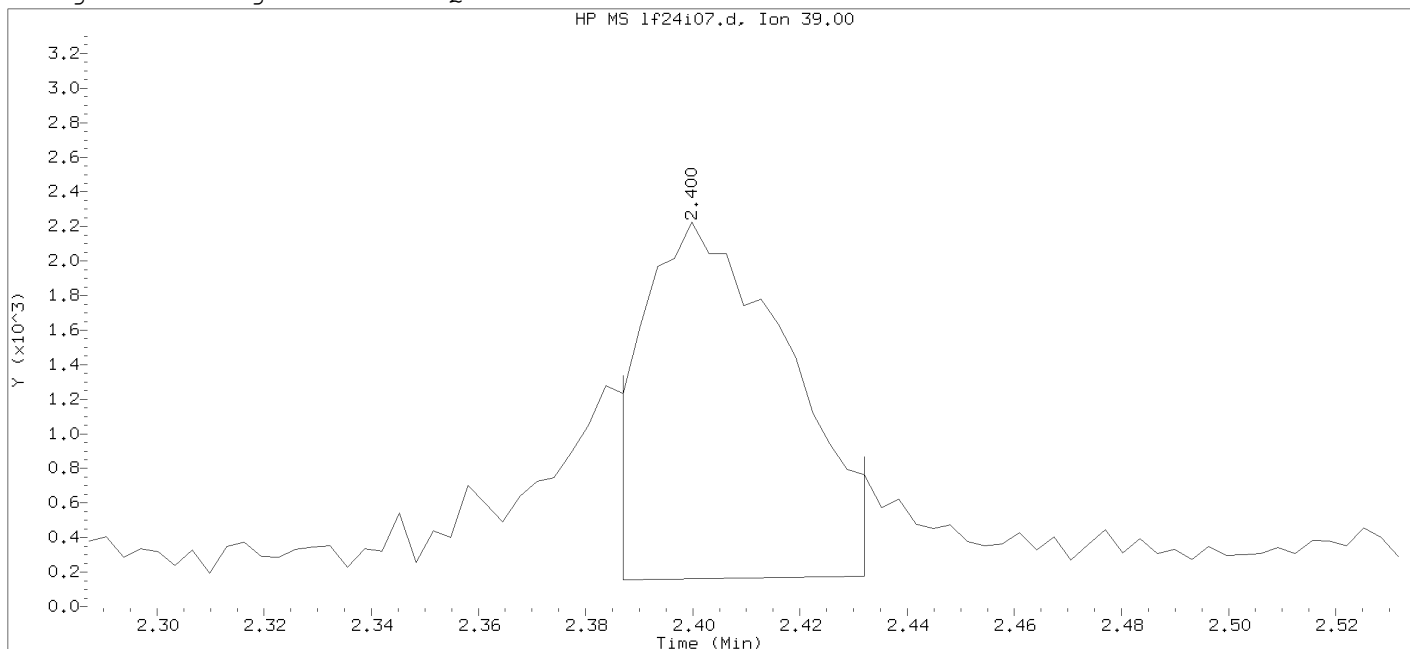
Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.
 Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:49.
 PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i07.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 18:29

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:55

Date, time and analyst ID of latest file update: 24-Feb-2020 20:55 mec29284

Sample Name: VSTD001

Lab Sample ID: VSTD001

Compound Number : 5

Compound Name : 1,3-Butadiene

Scan Number : 285

Retention Time (minutes): 2.400

Quant Ion : 39.00

Area : 3870

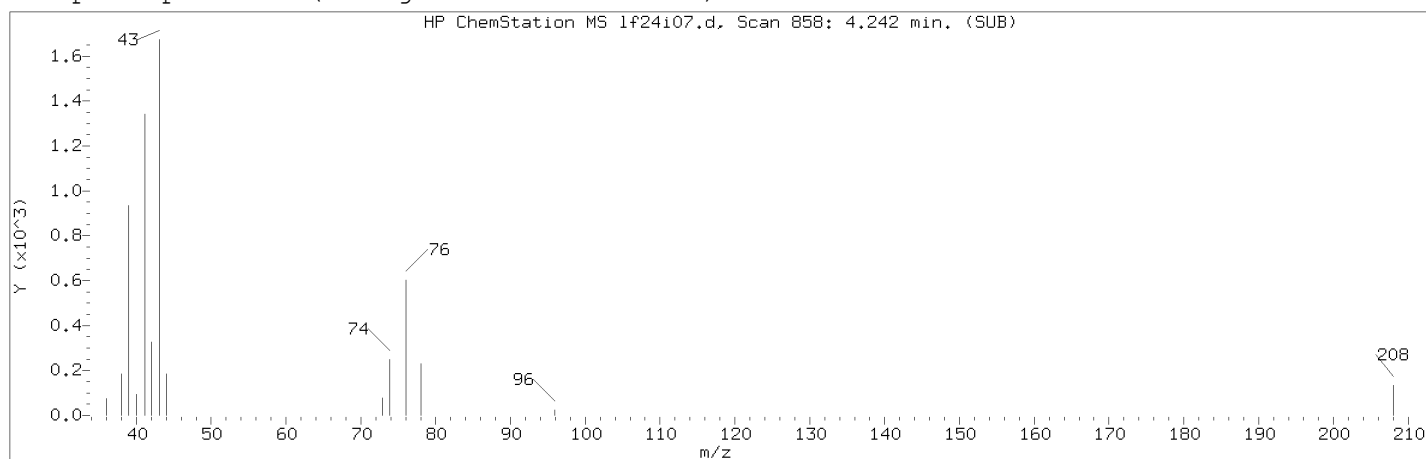
On-column Amount (ng) : 1.0000

Integration start scan : 280 Integration stop scan: 294

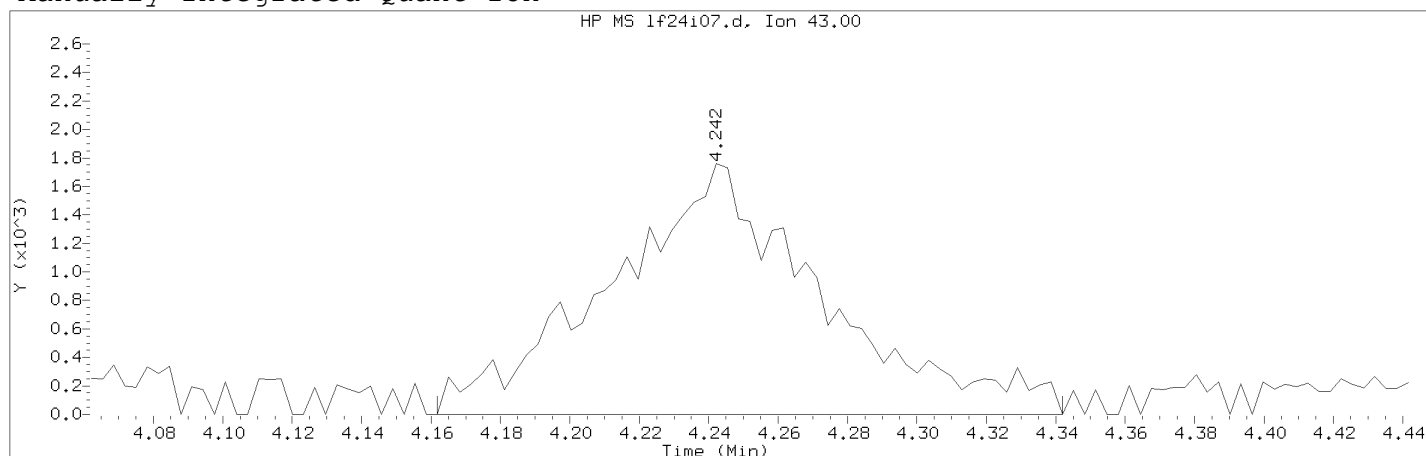
Y at integration start : 156 Y at integration end: 175

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 Target 3.5 esignature user KR421m Page 244 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i07.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 18:29

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 25-FEB-2020 12:44

Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD001

Lab Sample ID: VSTD001

Compound Number : 27

Compound Name : Methyl Acetate

Scan Number : 858

Retention Time (minutes): 4.242

Quant Ion : 43.00

Area (flag) : 7456M

On-Column Amount (ng) : 1.0653

Integration start scan : 832 Integration stop scan: 888

Y at integration start : 0 Y at integration end: 0

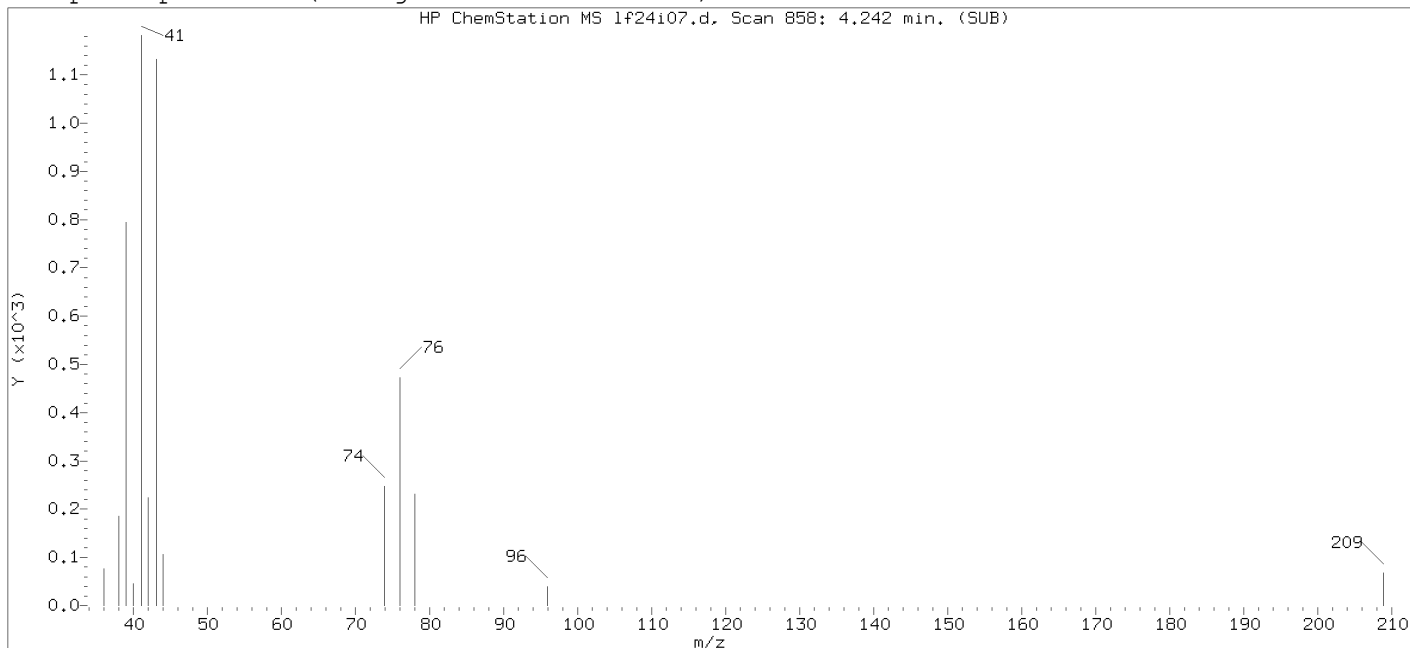
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Miranda E. Campbell
on 02/25/2020 at 18:06.
Target 3.5 esignature user ID: mec29284

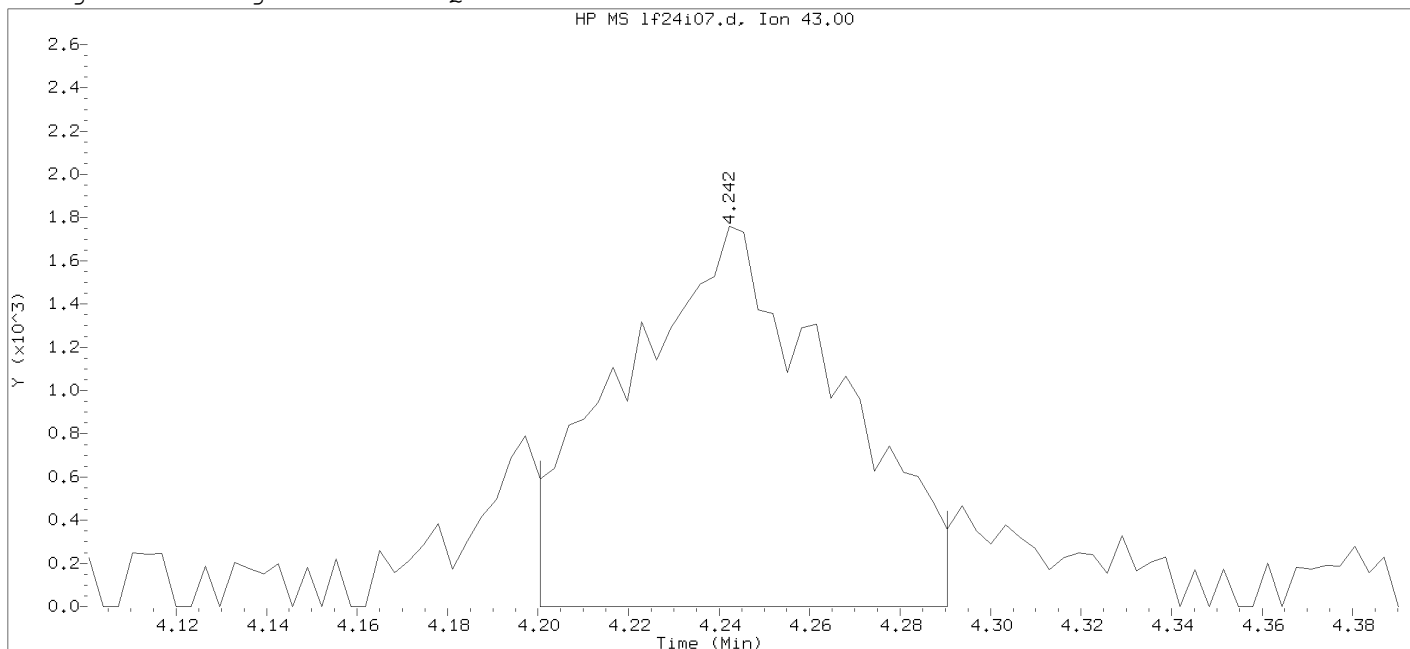
Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:49.

PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i07.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 18:29

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:55

Date, time and analyst ID of latest file update: 24-Feb-2020 20:55 mec29284

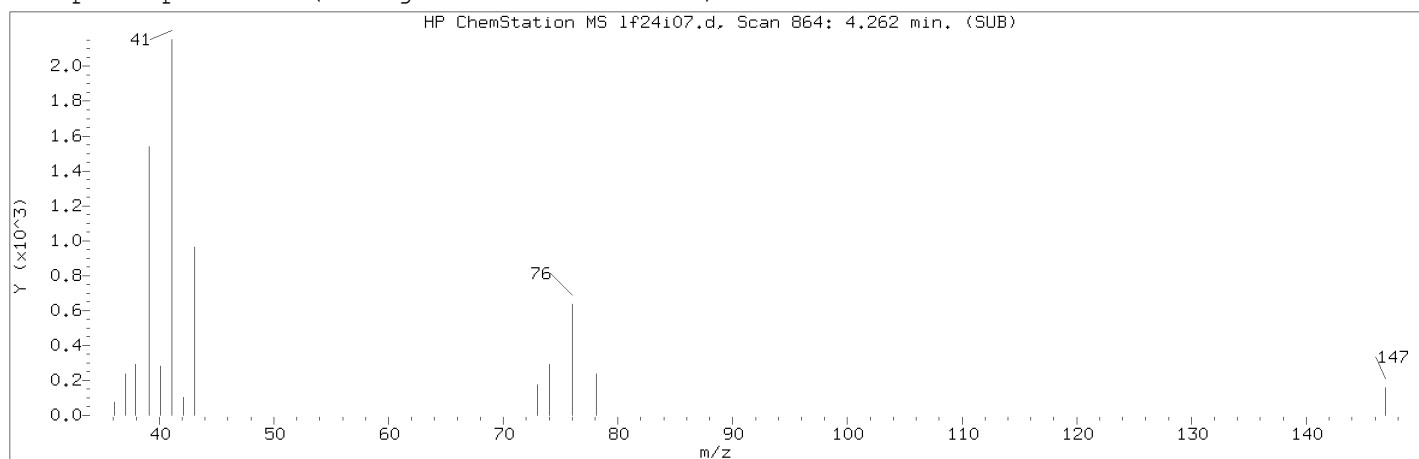
Sample Name: VSTD001

Lab Sample ID: VSTD001

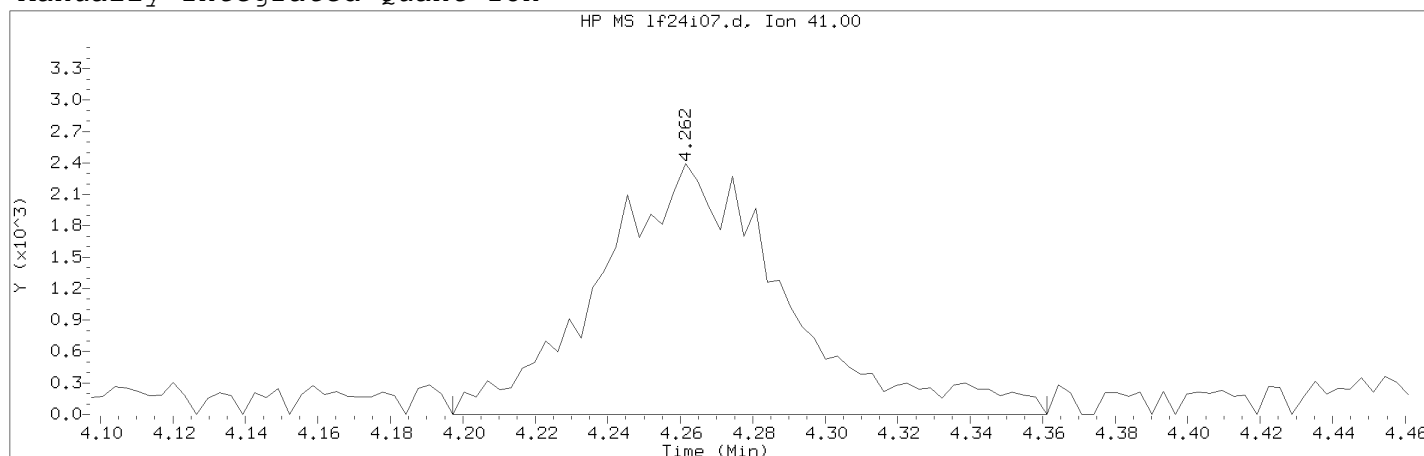
Compound Number	: 27	
Compound Name	: Methyl Acetate	
Scan Number	: 858	
Retention Time (minutes)	: 4.242	
Quant Ion	: 43.00	
Area	: 5779	
On-column Amount (ng)	: 1.0000	
Integration start scan	: 844	Integration stop scan: 872
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Miranda E. Campbell on 02/25/2020 at 18:06.
 Target 3.5 esignature user KR421m Page 246 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i07.d Instrument ID: HP09915.i
 Injection date and time: 24-FEB-2020 18:29 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 25-FEB-2020 12:44
 Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD001

Lab Sample ID: VSTD001

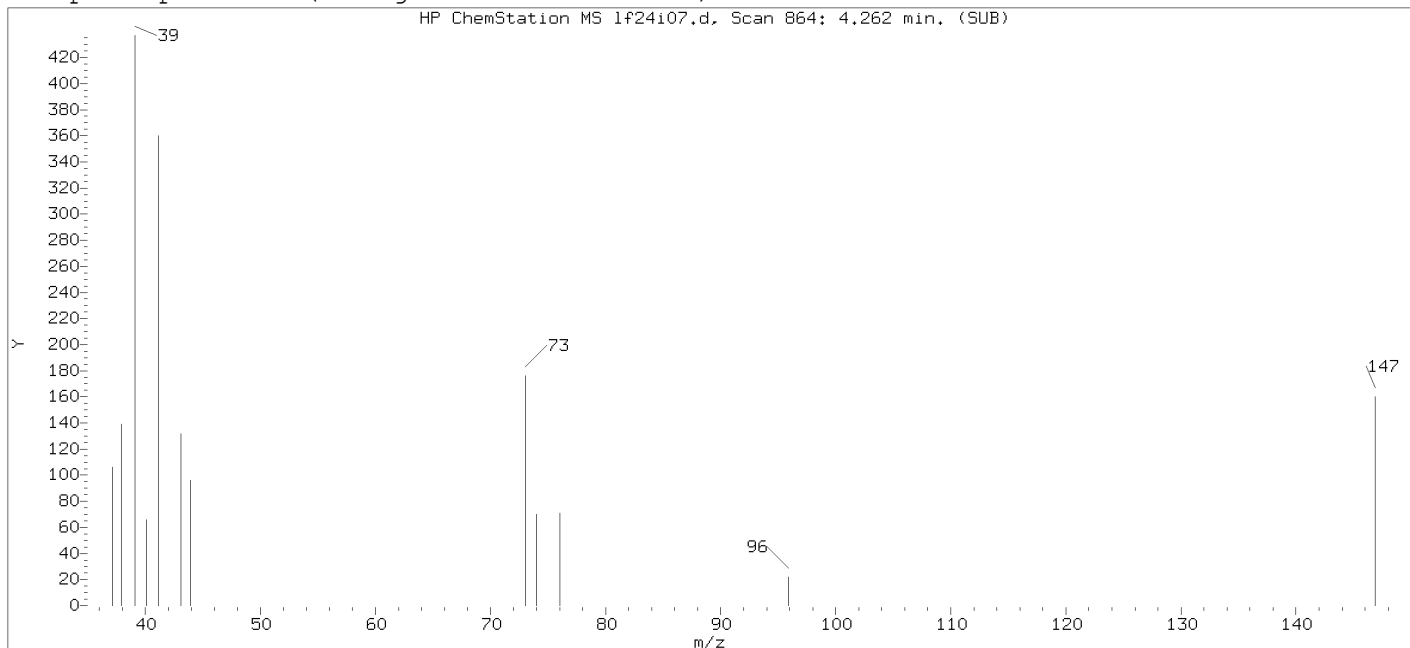
Compound Number : 25
 Compound Name : Allyl Chloride
 Scan Number : 864
 Retention Time (minutes): 4.262
 Quant Ion : 41.00
 Area (flag) : 8461M
 On-Column Amount (ng) : 0.9376
 Integration start scan : 843 Integration stop scan: 894
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

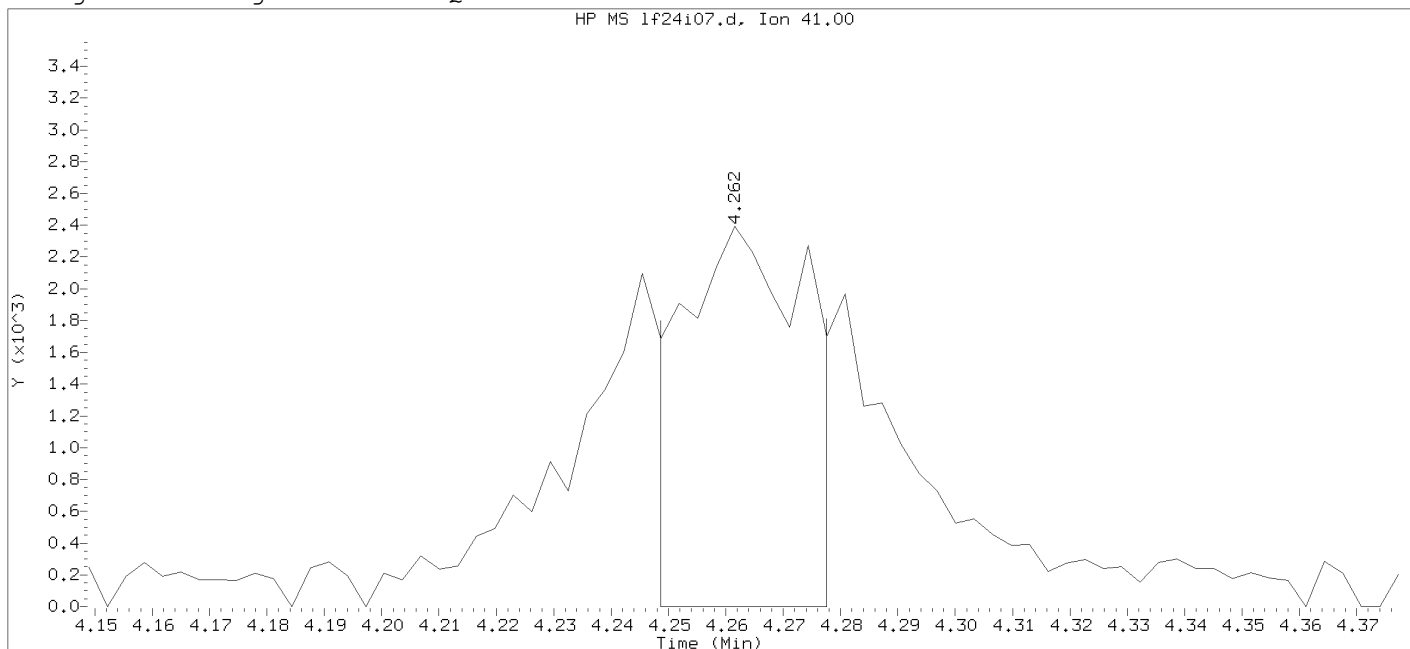
Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.
 Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:49.
 PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i07.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 18:29

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:55

Date, time and analyst ID of latest file update: 24-Feb-2020 20:55 mec29284

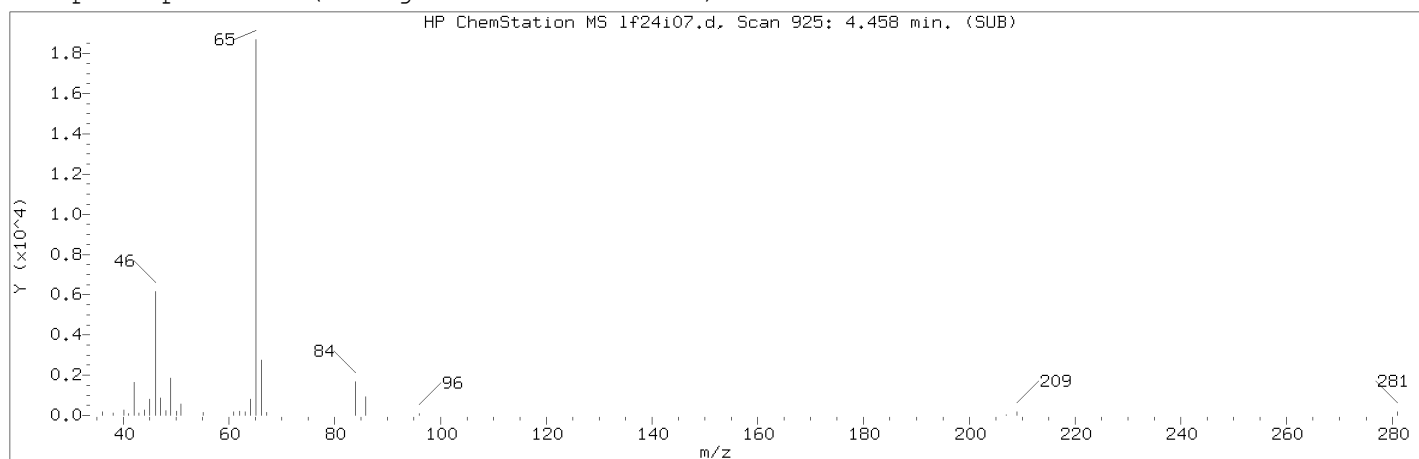
Sample Name: VSTD001

Lab Sample ID: VSTD001

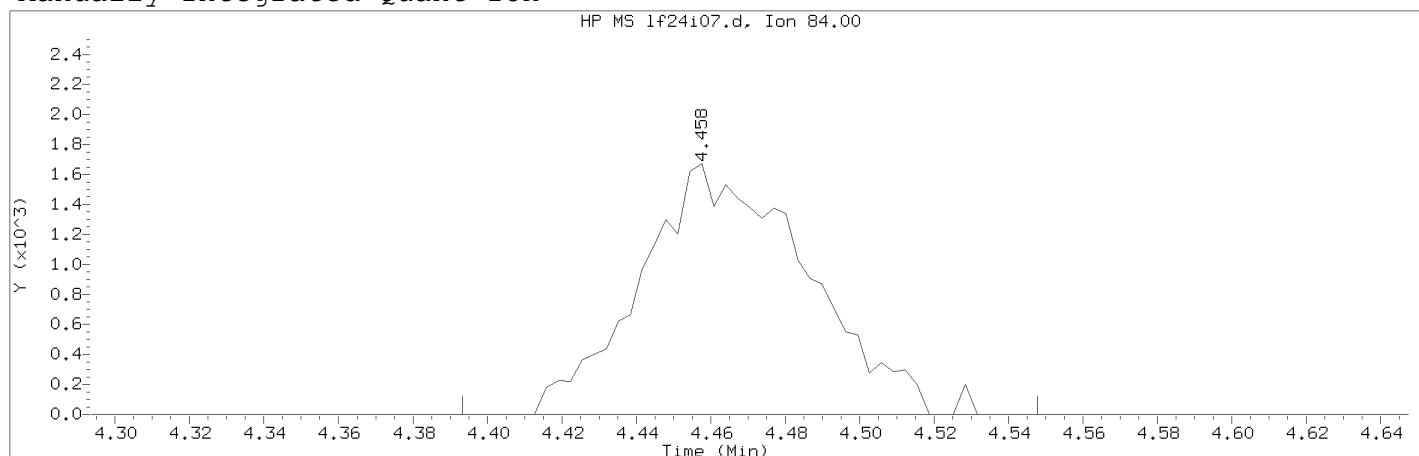
Compound Number	: 25	
Compound Name	: Allyl Chloride	
Scan Number	: 864	
Retention Time (minutes)	: 4.262	
Quant Ion	: 41.00	
Area	: 3507	
On-column Amount (ng)	: 1.0000	
Integration start scan	: 859	Integration stop scan: 868
Y at integration start	: 0	Y at integration end: 0

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 Target 3.5 esignature user KR421m Page 248 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i07.d Instrument ID: HP09915.i
 Injection date and time: 24-FEB-2020 18:29 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 25-FEB-2020 12:44
 Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD001

Lab Sample ID: VSTD001

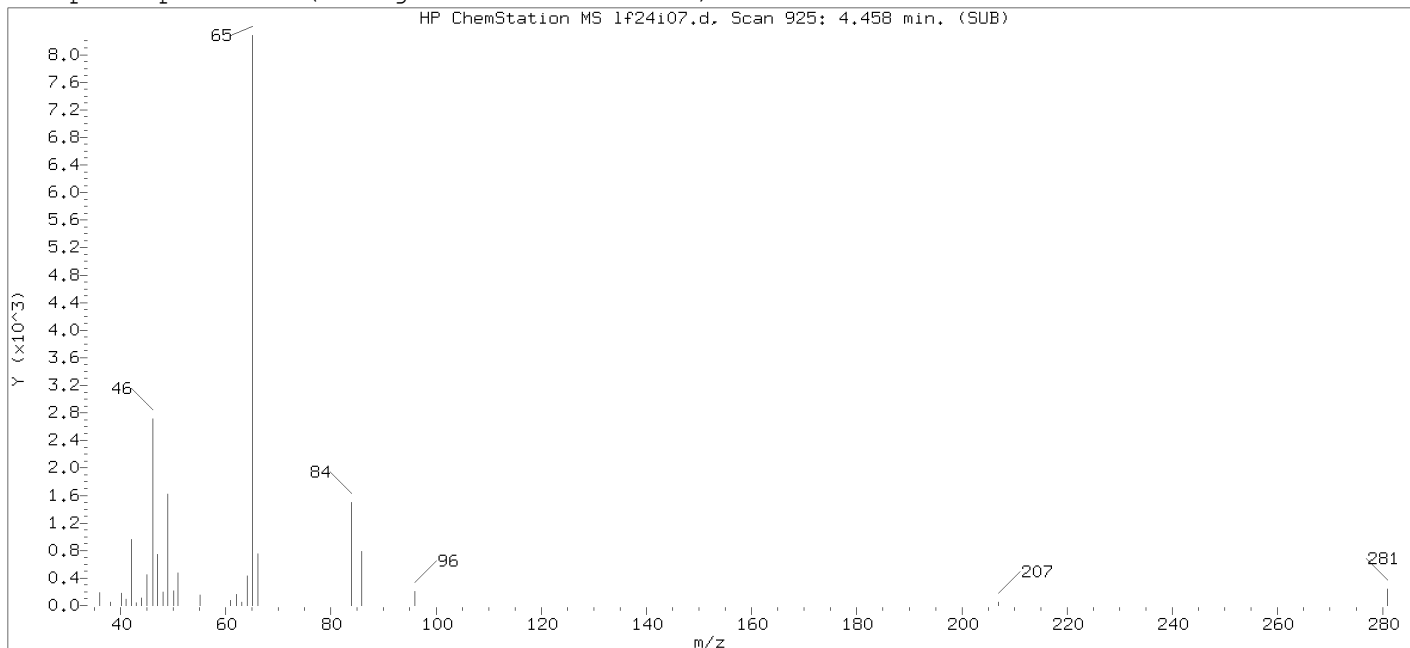
Compound Number : 28
 Compound Name : Methylene Chloride
 Scan Number : 925
 Retention Time (minutes): 4.458
 Quant Ion : 84.00
 Area (flag) : 5198M
 On-Column Amount (ng) : 0.8302
 Integration start scan : 904 Integration stop scan: 952
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

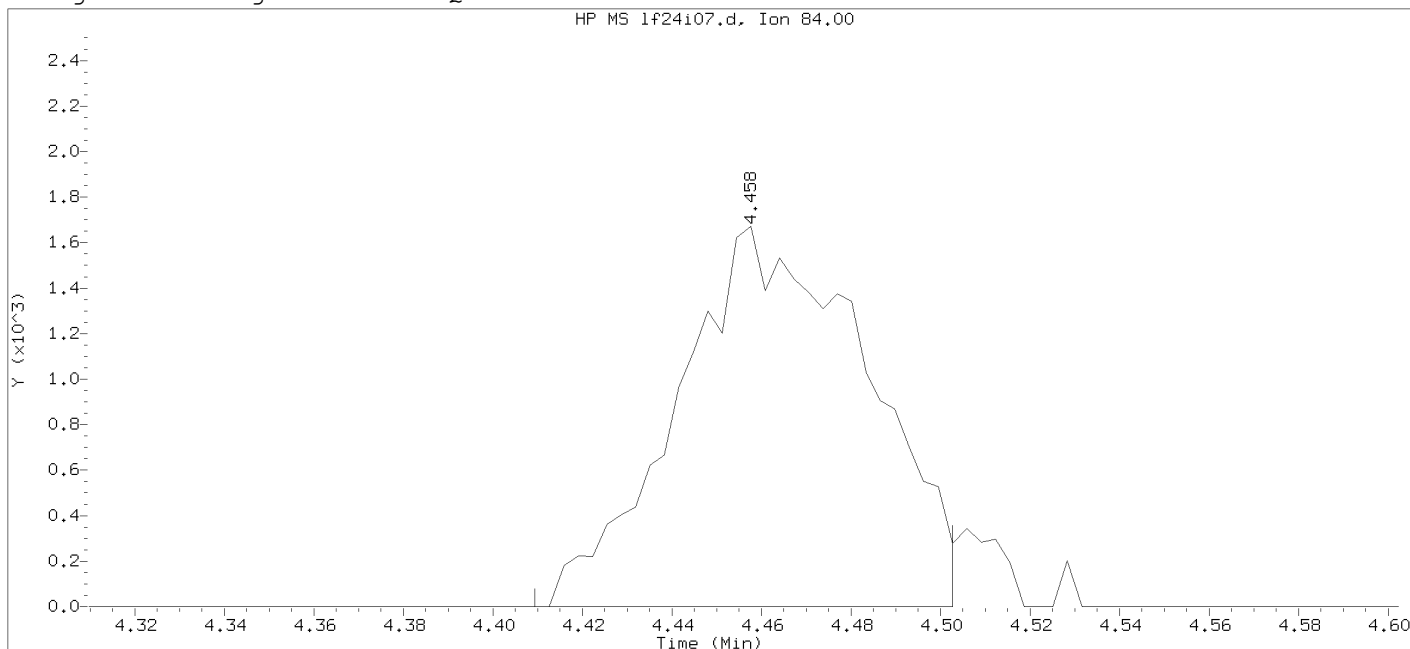
Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.
 Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:49.
 PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i07.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 18:29

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:55

Date, time and analyst ID of latest file update: 24-Feb-2020 20:55 mec29284

Sample Name: VSTD001

Lab Sample ID: VSTD001

Compound Number : 28

Compound Name : Methylene Chloride

Scan Number : 925

Retention Time (minutes): 4.458

Quant Ion : 84.00

Area : 4917

On-column Amount (ng) : 1.0000

Integration start scan : 909

Integration stop scan: 938

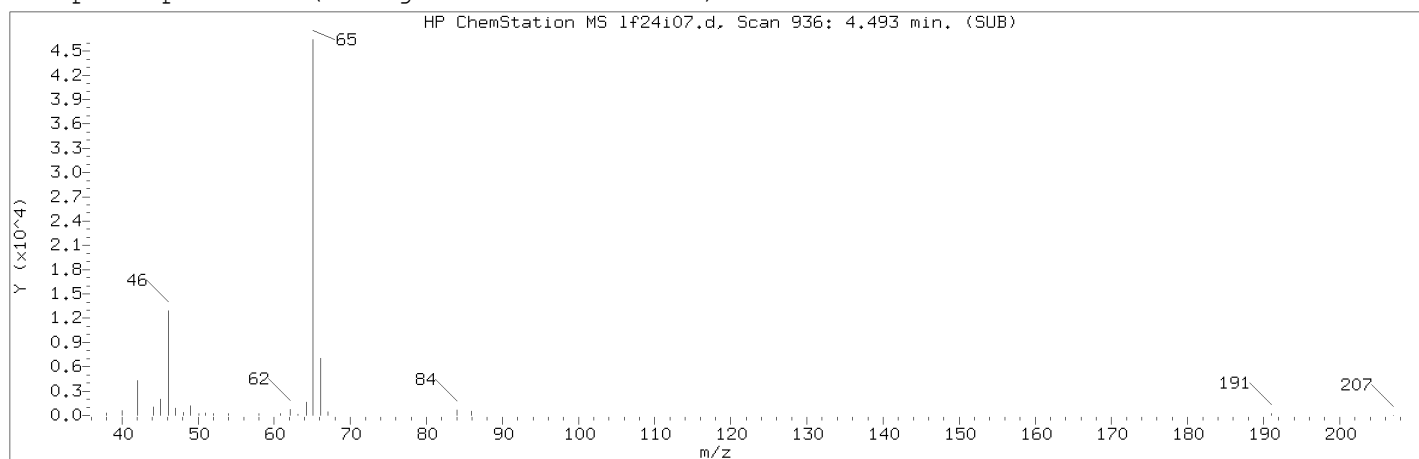
Y at integration start : 0

Y at integration end: 0

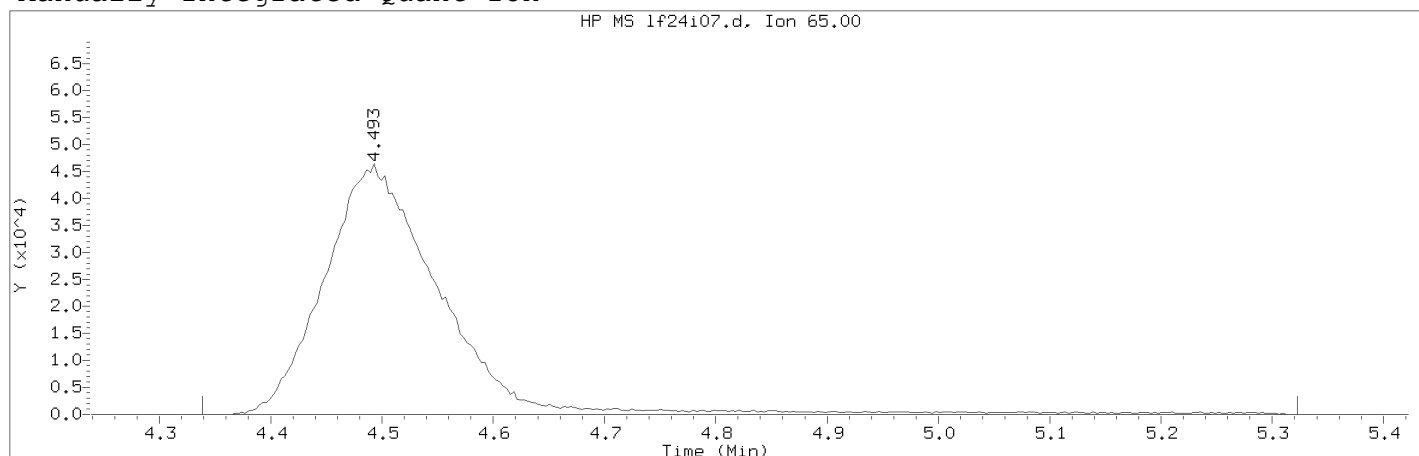
Digitally signed by Miranda E. Campbell on 02/25/2020 at 18:06.

Target 3.5 esignature user KR421m Page 250 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i07.d Instrument ID: HP09915.i
 Injection date and time: 24-FEB-2020 18:29 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 25-FEB-2020 12:44
 Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD001 Lab Sample ID: VSTD001

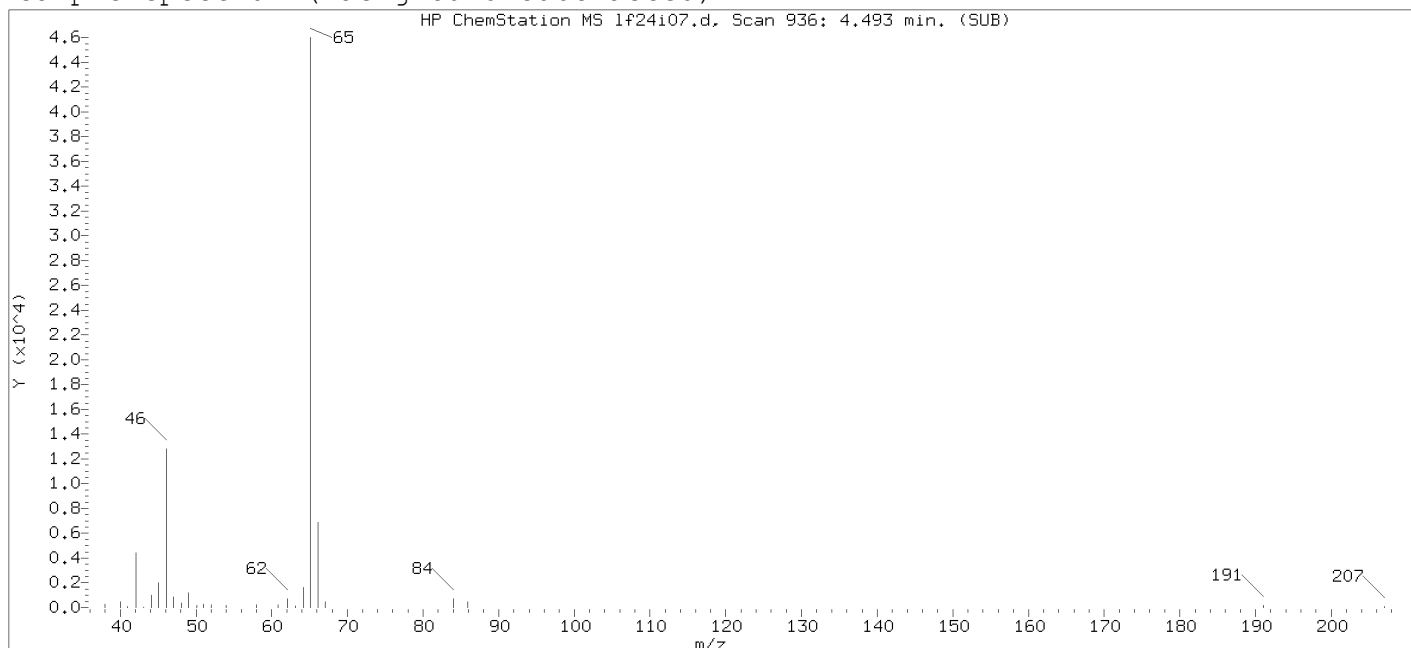
Compound Number : 29
 Compound Name : t-Butyl alcohol-d10
 Scan Number : 936
 Retention Time (minutes): 4.493
 Quant Ion : 65.00
 Area (flag) : 335105M
 On-Column Amount (ng) : 250.0000
 Integration start scan : 887 Integration stop scan: 1193
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

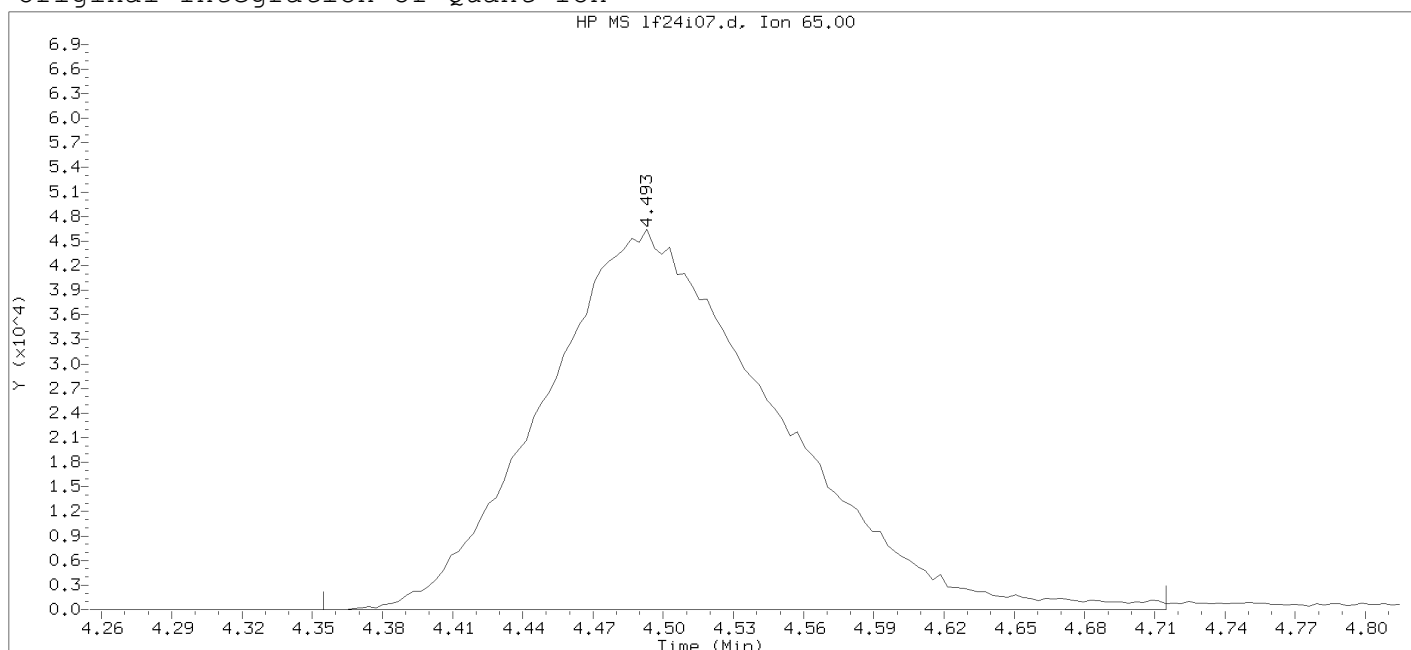
Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.
 Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:49.
 PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i07.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 18:29

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:55

Date, time and analyst ID of latest file update: 24-Feb-2020 20:55 mec29284

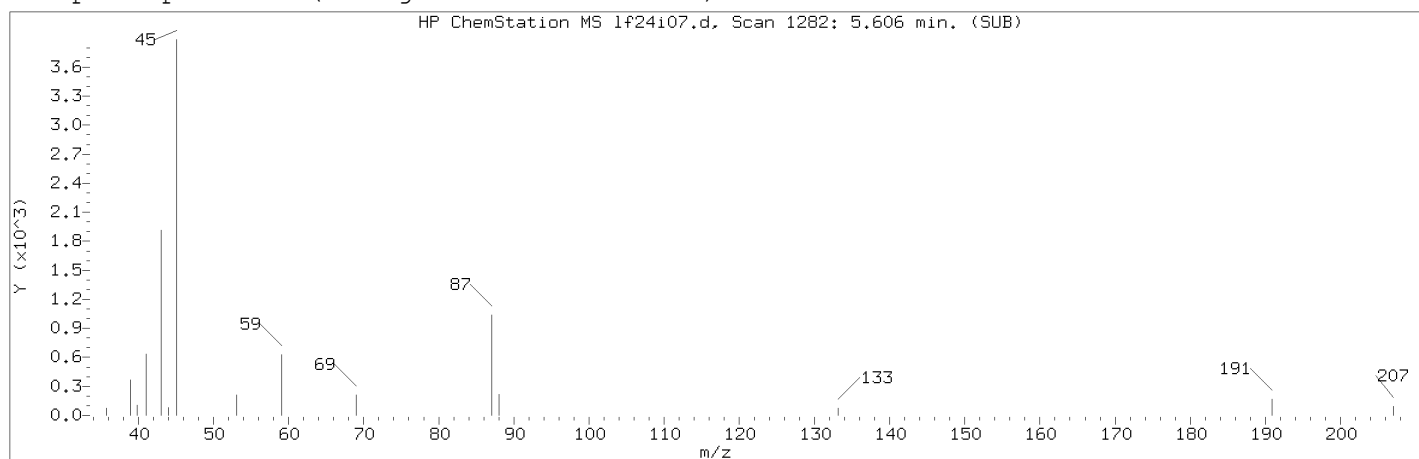
Sample Name: VSTD001

Lab Sample ID: VSTD001

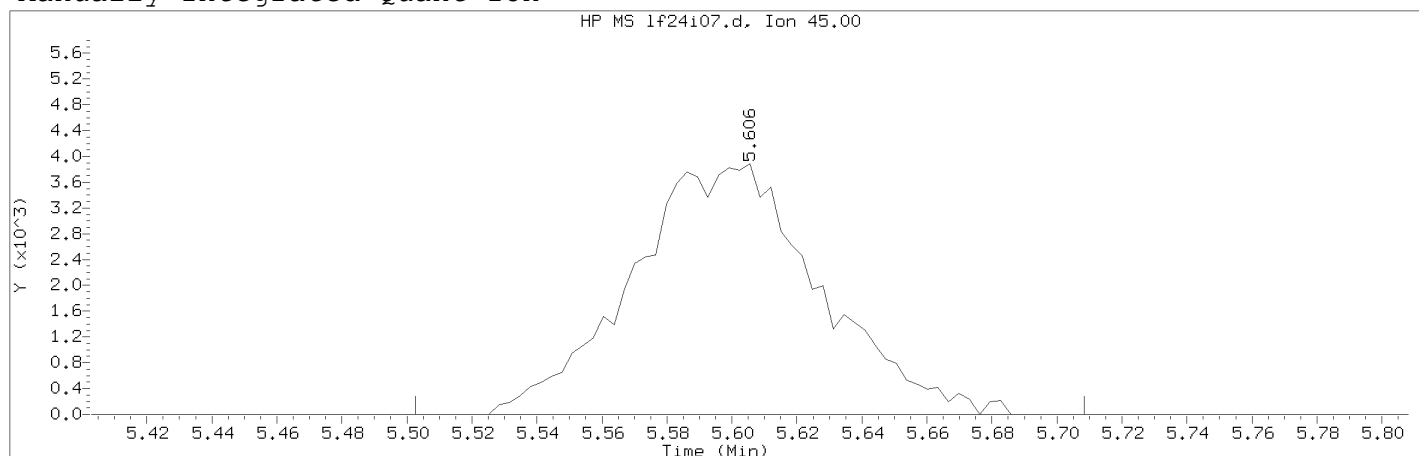
Compound Number	: 29
Compound Name	: t-Butyl alcohol-d10
Scan Number	: 936
Retention Time (minutes)	: 4.493
Quant Ion	: 65.00
Area	: 319898
On-column Amount (ng)	: 250.0000
Integration start scan	: 892
Integration stop scan	: 1004
Y at integration start	: 0
Y at integration end	: 0

Digitally signed by Miranda E. Campbell on 02/25/2020 at 18:06.
 Target 3.5 esignature user KR421m Page 252 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i07.d Instrument ID: HP09915.i
 Injection date and time: 24-FEB-2020 18:29 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 25-FEB-2020 12:44
 Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD001 Lab Sample ID: VSTD001

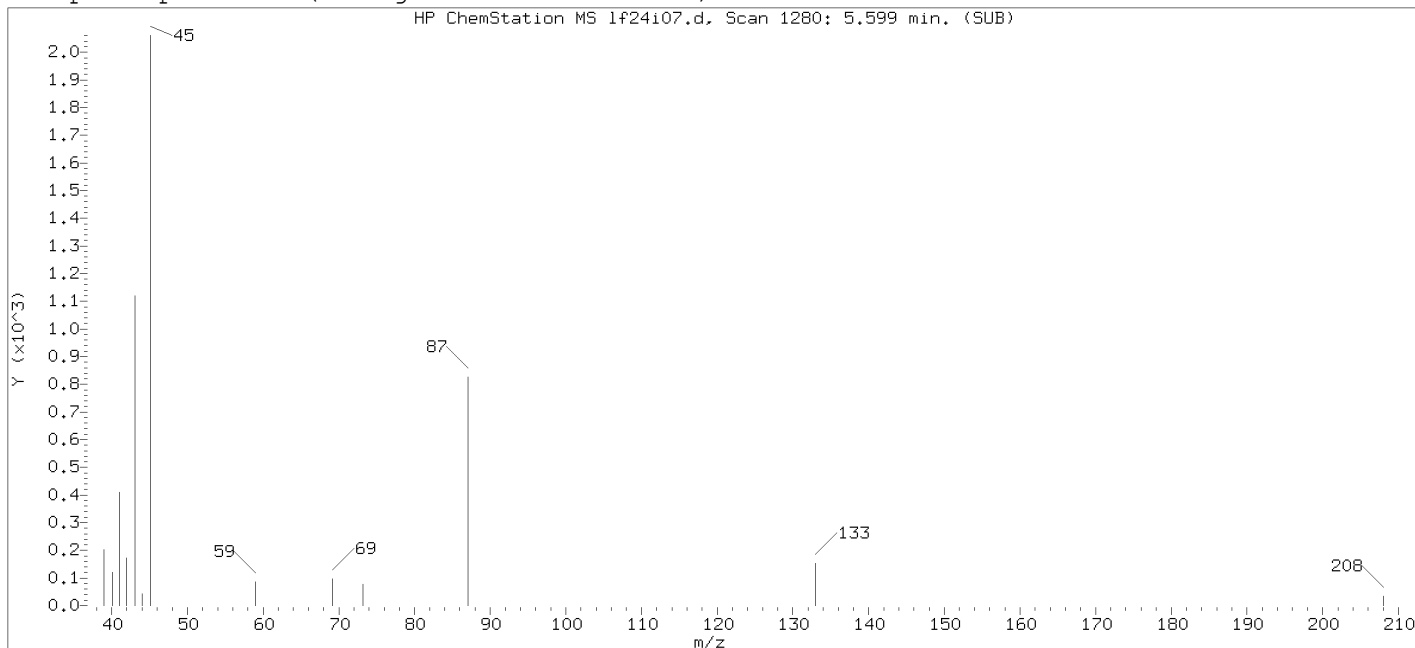
Compound Number : 38
 Compound Name : di-Isopropyl ether
 Scan Number : 1282
 Retention Time (minutes): 5.606
 Quant Ion : 45.00
 Area (flag) : 15620M
 On-Column Amount (ng) : 0.7896
 Integration start scan : 1249 Integration stop scan: 1313
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

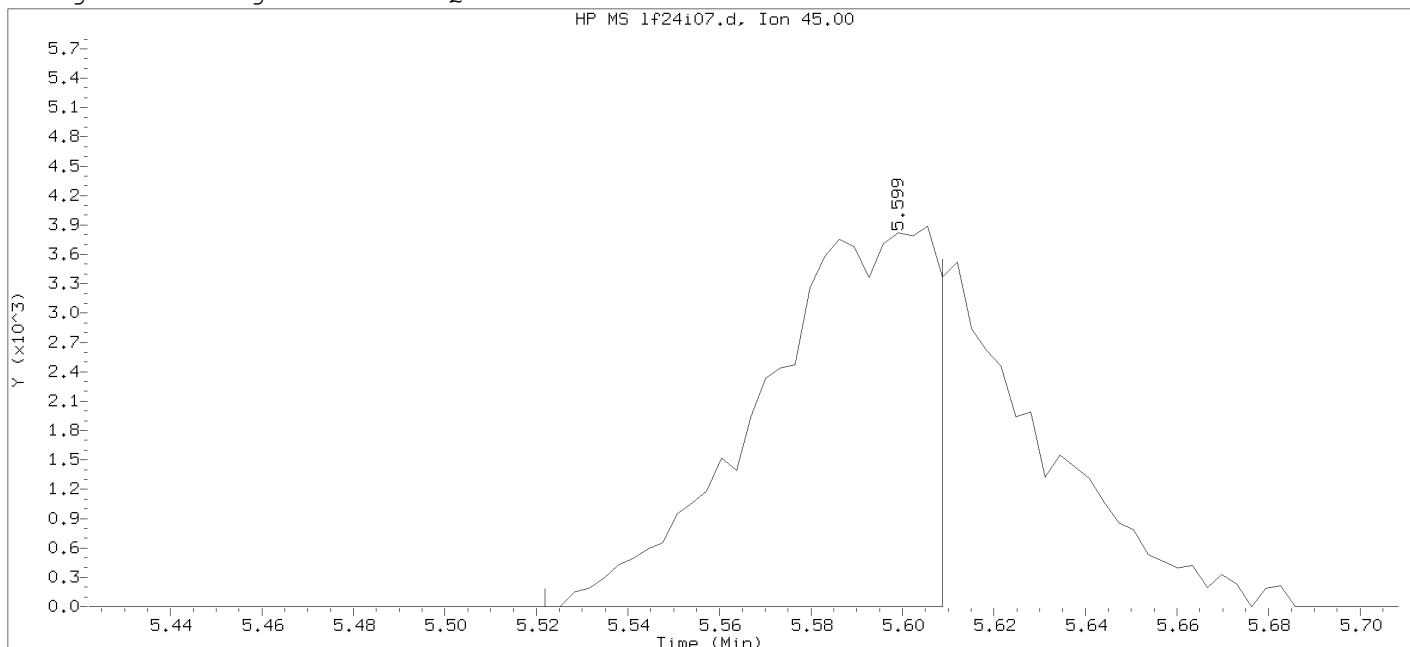
Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.
 Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:49.
 PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i07.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 18:29

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:55

Date, time and analyst ID of latest file update: 24-Feb-2020 20:55 mec29284

Sample Name: VSTD001

Lab Sample ID: VSTD001

Compound Number : 38

Compound Name : di-Isopropyl ether

Scan Number : 1280

Retention Time (minutes): 5.599

Quant Ion : 45.00

Area : 10151

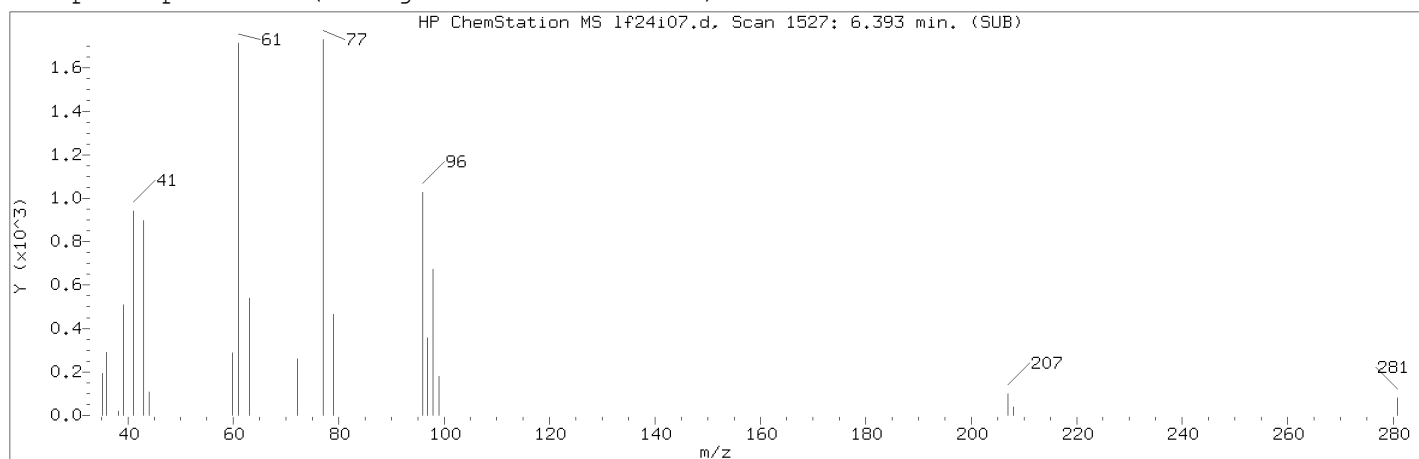
On-column Amount (ng) : 1.0000

Integration start scan : 1255 Integration stop scan: 1282

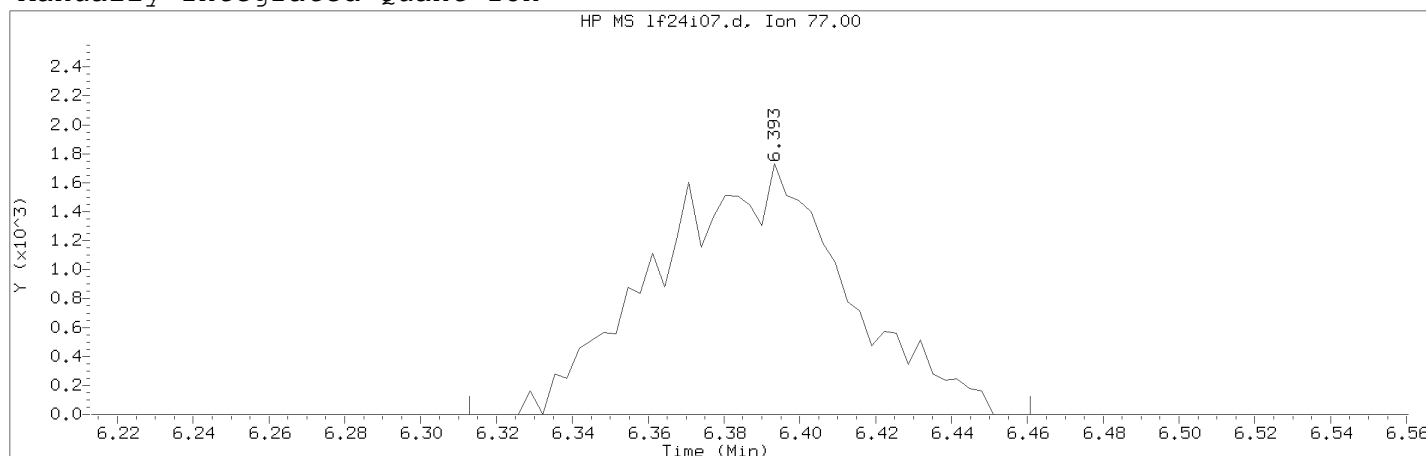
Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 02/25/2020 at 18:06.
 Target 3.5 esignature user KR421m Page 254 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i07.d Instrument ID: HP09915.i
 Injection date and time: 24-FEB-2020 18:29 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 25-FEB-2020 12:44
 Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD001

Lab Sample ID: VSTD001

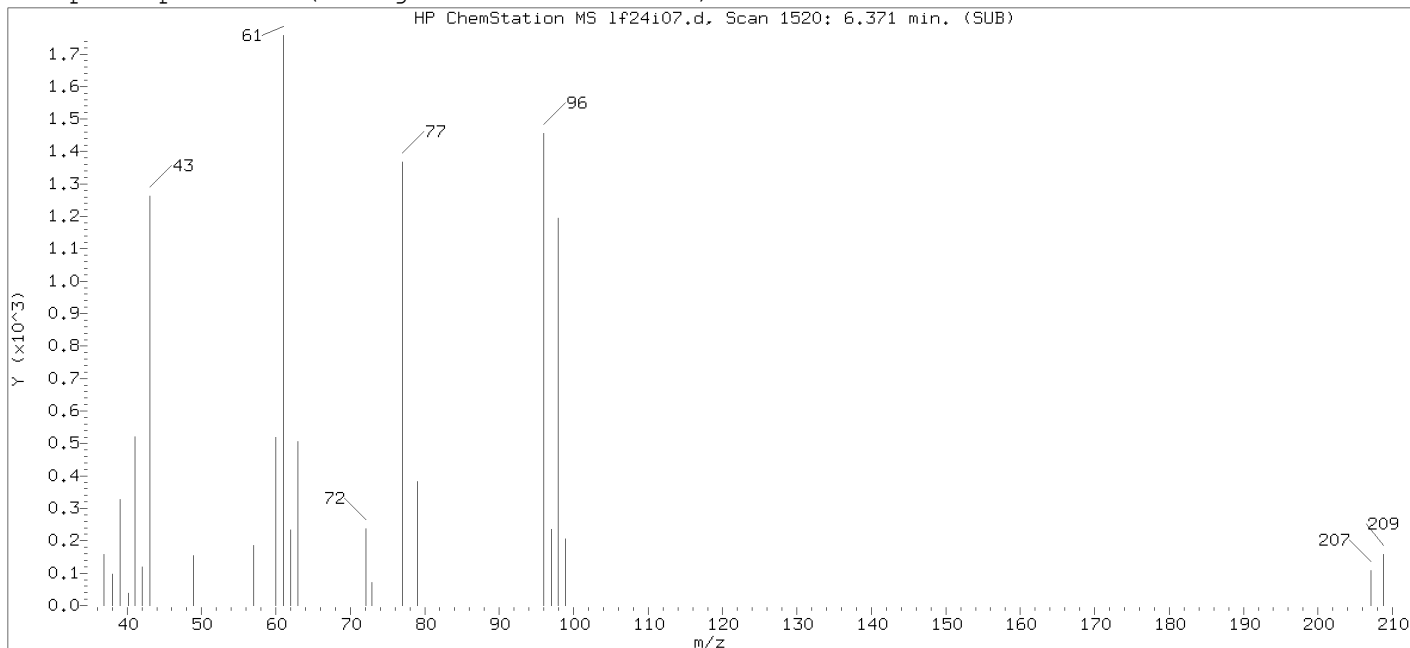
Compound Number : 45
 Compound Name : 2,2-Dichloropropane
 Scan Number : 1527
 Retention Time (minutes): 6.393
 Quant Ion : 77.00
 Area (flag) : 5980M
 On-Column Amount (ng) : 0.7300
 Integration start scan : 1501 Integration stop scan: 1547
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

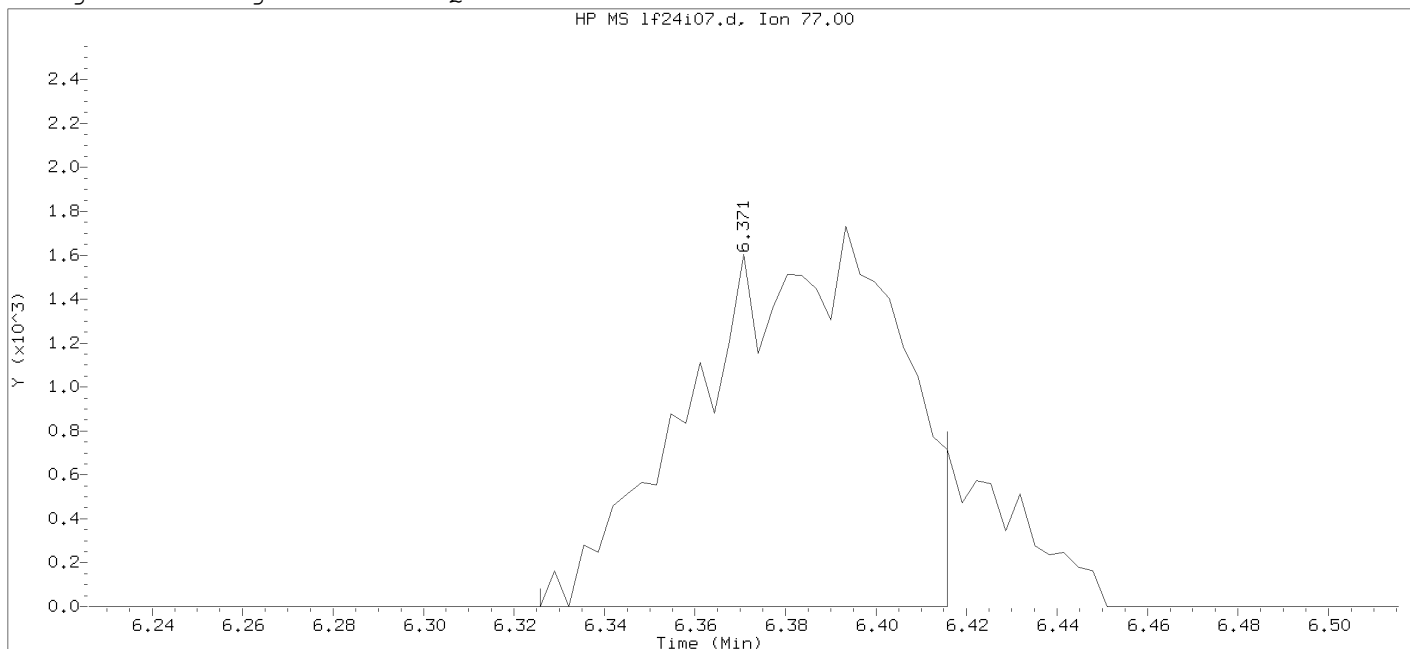
Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.
 Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:49.
 PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i07.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 18:29

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:55

Date, time and analyst ID of latest file update: 24-Feb-2020 20:55 mec29284

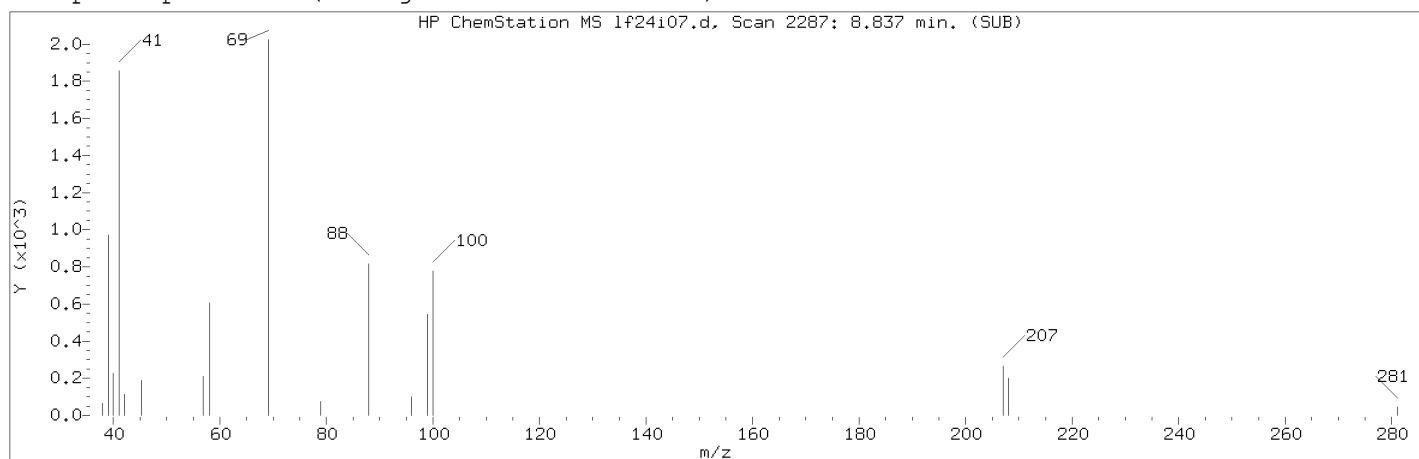
Sample Name: VSTD001

Lab Sample ID: VSTD001

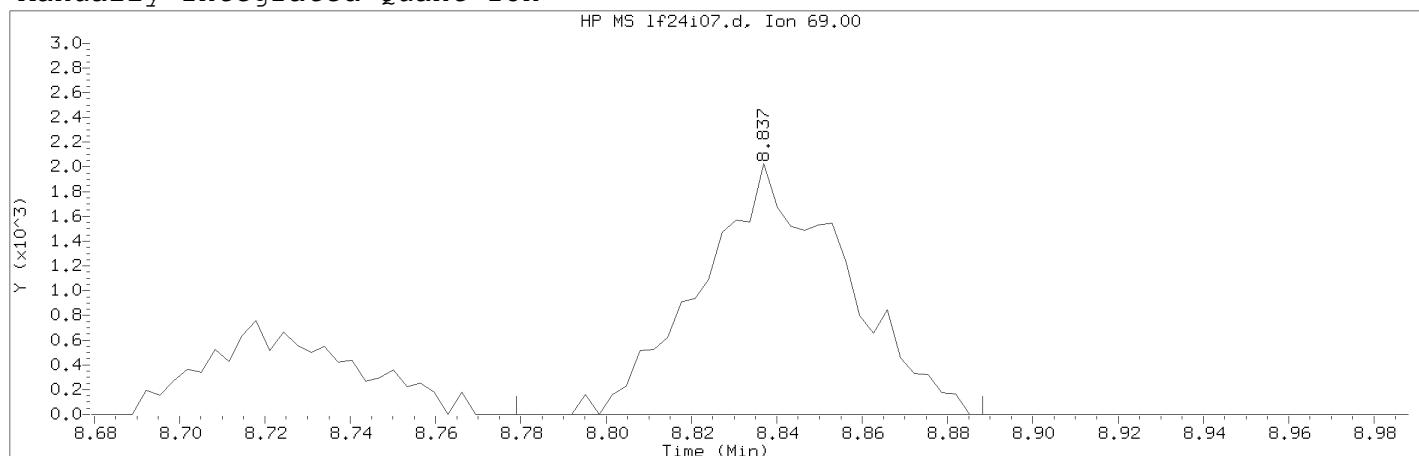
Compound Number	: 45	
Compound Name	: 2,2-Dichloropropane	
Scan Number	: 1520	
Retention Time (minutes)	: 6.371	
Quant Ion	: 77.00	
Area	: 5223	
On-column Amount (ng)	: 1.0000	
Integration start scan	: 1505	Integration stop scan: 1533
Y at integration start	: 0	Y at integration end: 0

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 Target 3.5 esignature user KR421m Page 256 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i07.d Instrument ID: HP09915.i
 Injection date and time: 24-FEB-2020 18:29 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 25-FEB-2020 12:44
 Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD001 Lab Sample ID: VSTD001

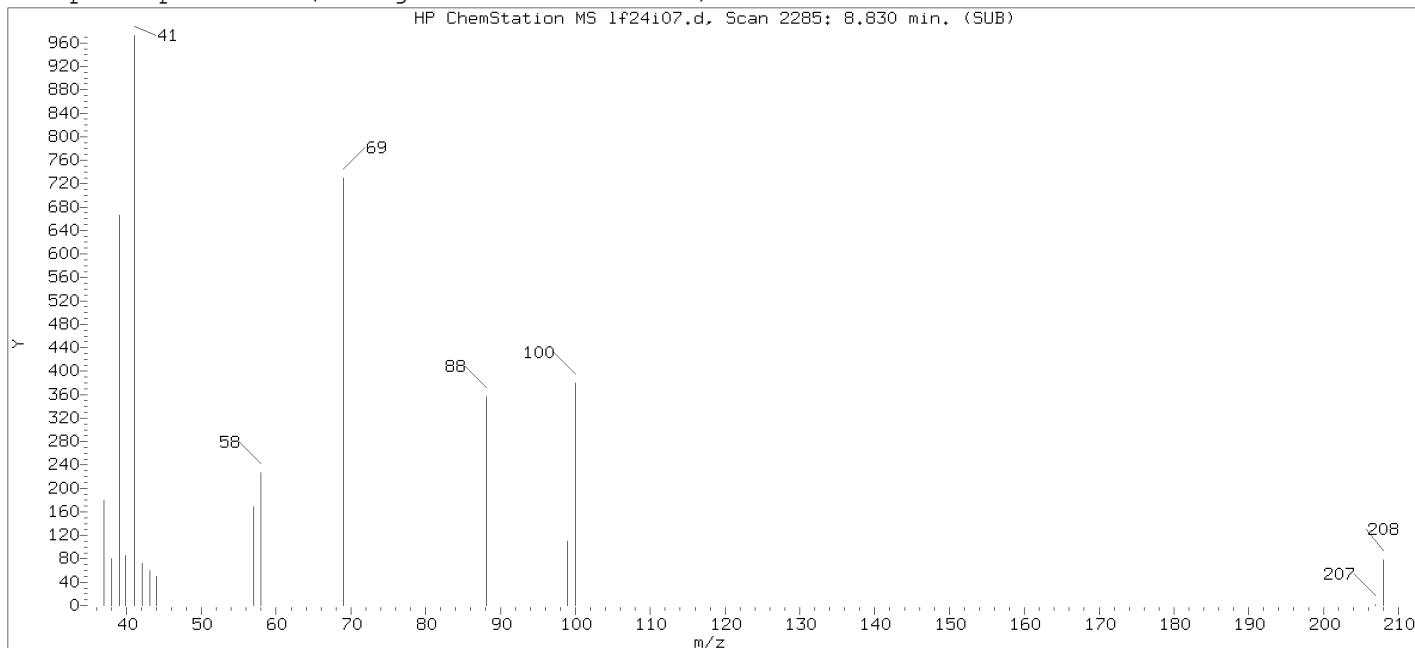
Compound Number : 76
 Compound Name : Methyl Methacrylate
 Scan Number : 2287
 Retention Time (minutes): 8.837
 Quant Ion : 69.00
 Area (flag) : 4726M
 On-Column Amount (ng) : 0.7655
 Integration start scan : 2268 Integration stop scan: 2302
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

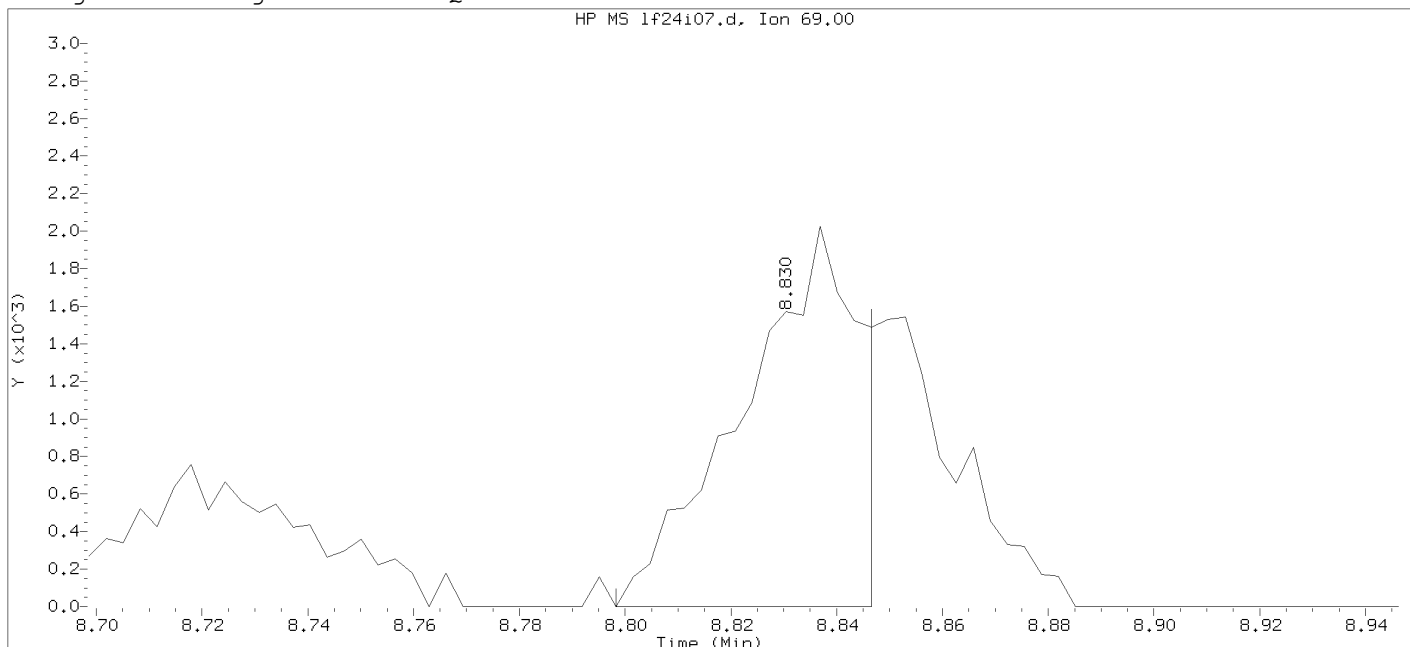
Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.
 Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:49.
 PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i07.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 18:29

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:55

Date, time and analyst ID of latest file update: 24-Feb-2020 20:55 mec29284

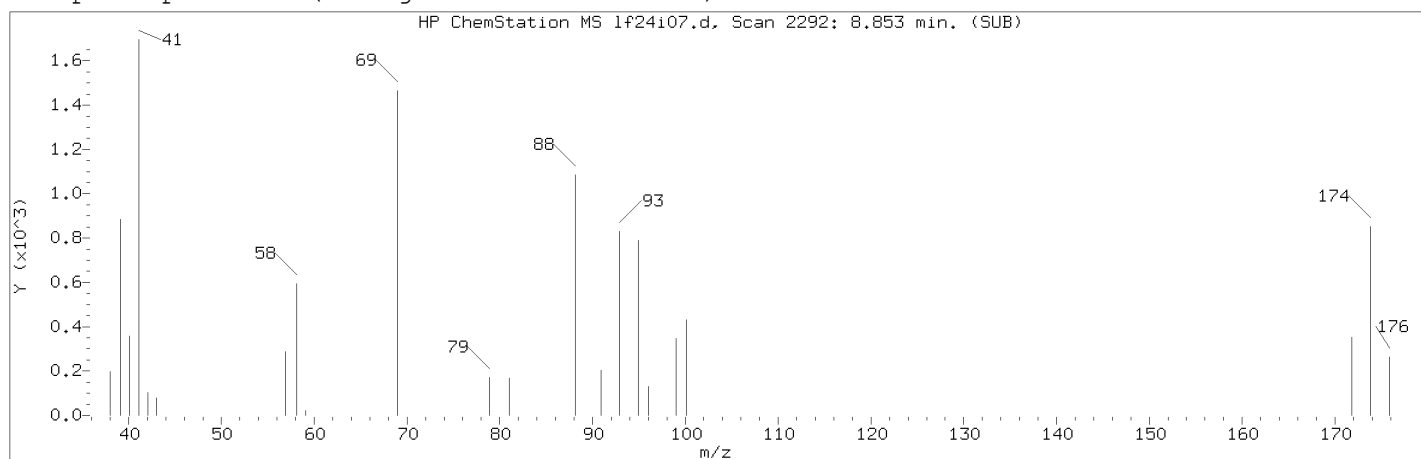
Sample Name: VSTD001

Lab Sample ID: VSTD001

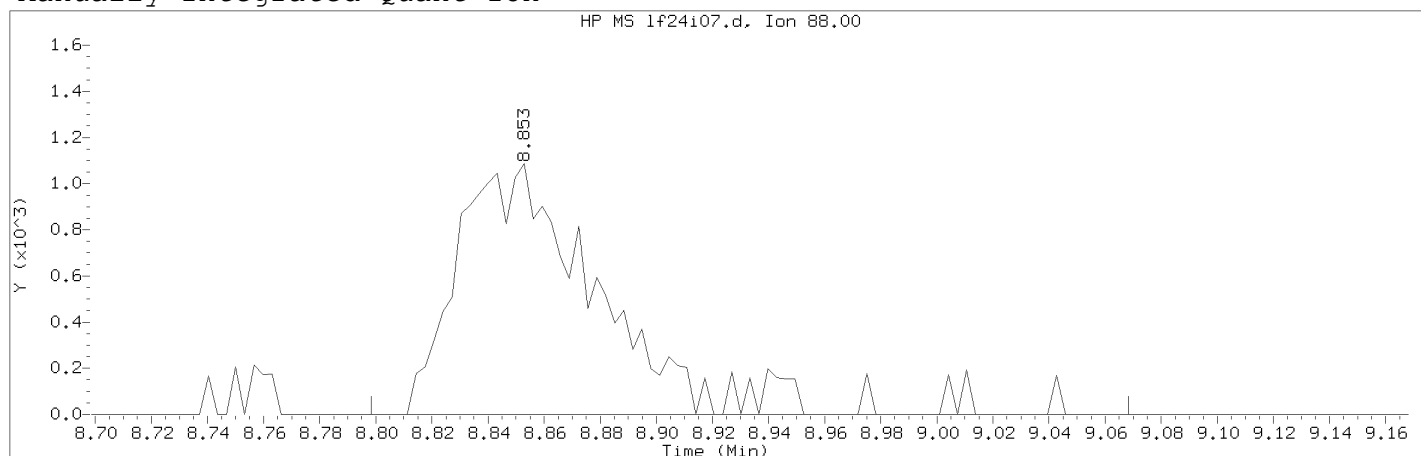
Compound Number	: 76
Compound Name	: Methyl Methacrylate
Scan Number	: 2285
Retention Time (minutes)	: 8.830
Quant Ion	: 69.00
Area	: 2998
On-column Amount (ng)	: 1.0000
Integration start scan	: 2274
Integration stop scan	: 2289
Y at integration start	: 0
Y at integration end	: 0

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 Target 3.5 esignature user KR421m Page 258 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i07.d Instrument ID: HP09915.i
 Injection date and time: 24-FEB-2020 18:29 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 25-FEB-2020 12:44
 Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD001

Lab Sample ID: VSTD001

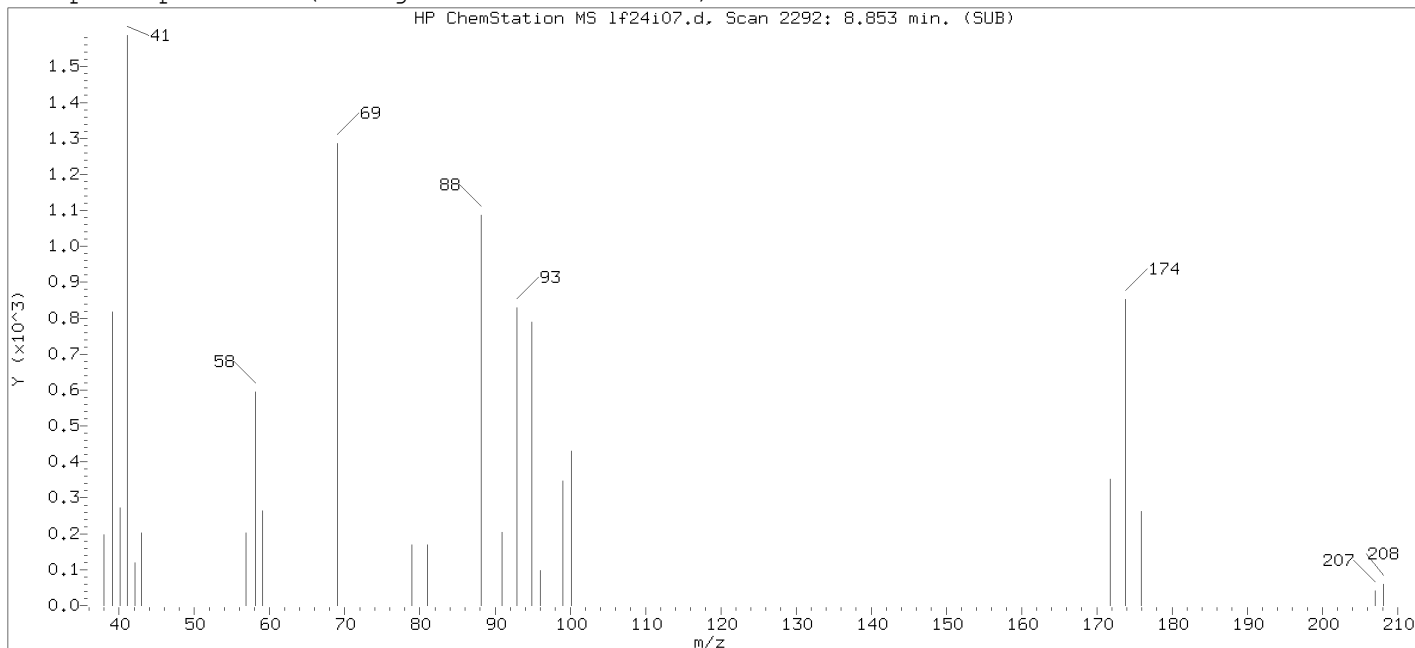
Compound Number : 75
 Compound Name : 1,4-Dioxane
 Scan Number : 2292
 Retention Time (minutes): 8.853
 Quant Ion : 88.00
 Area (flag) : 3865M
 On-Column Amount (ng) : 39.3539
 Integration start scan : 2274 Integration stop scan: 2358
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

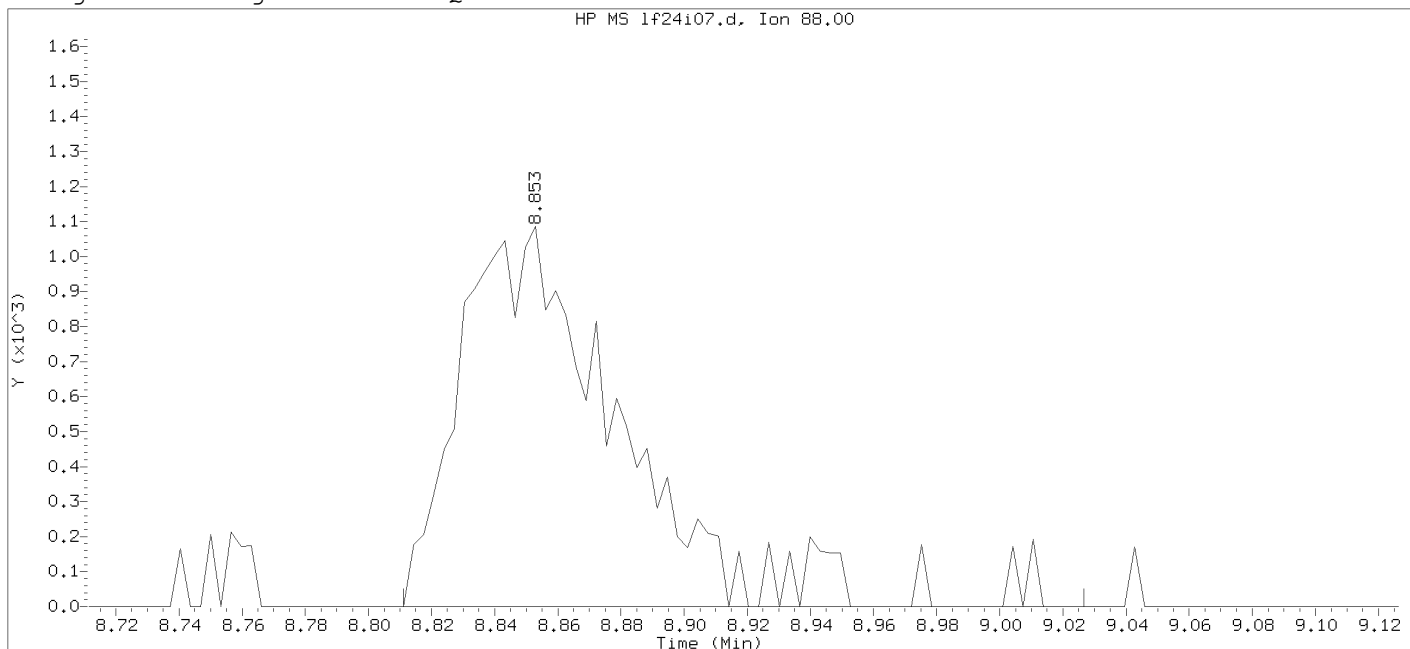
Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.
 Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:49.
 PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i07.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 18:29

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:55

Date, time and analyst ID of latest file update: 24-Feb-2020 20:55 mec29284

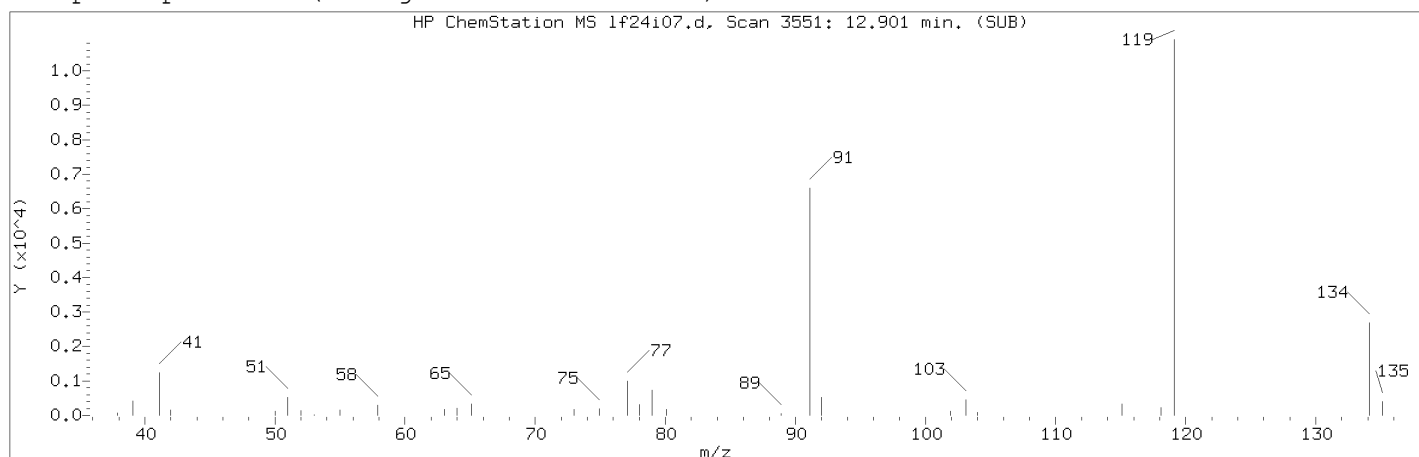
Sample Name: VSTD001

Lab Sample ID: VSTD001

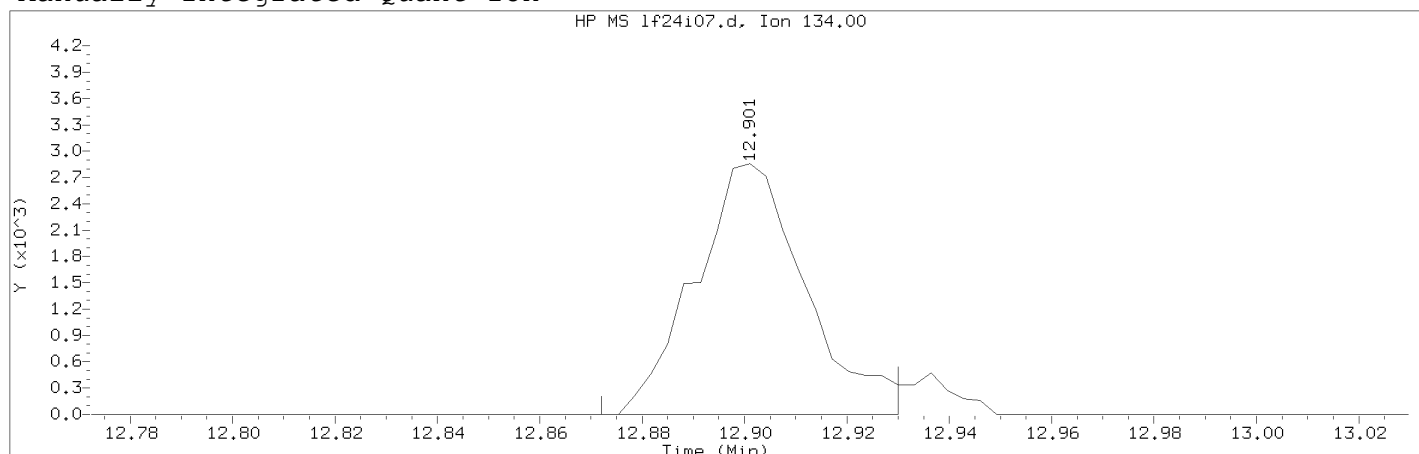
Compound Number	: 75
Compound Name	: 1,4-Dioxane
Scan Number	: 2292
Retention Time (minutes)	: 8.853
Quant Ion	: 88.00
Area	: 3832
On-column Amount (ng)	: 50.0000
Integration start scan	: 2278
Integration stop scan	: 2345
Y at integration start	: 0
Y at integration end	: 0

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 Target 3.5 esignature user KR421m Page 260 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i07.d Instrument ID: HP09915.i
 Injection date and time: 24-FEB-2020 18:29 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 25-FEB-2020 12:44
 Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD001 Lab Sample ID: VSTD001

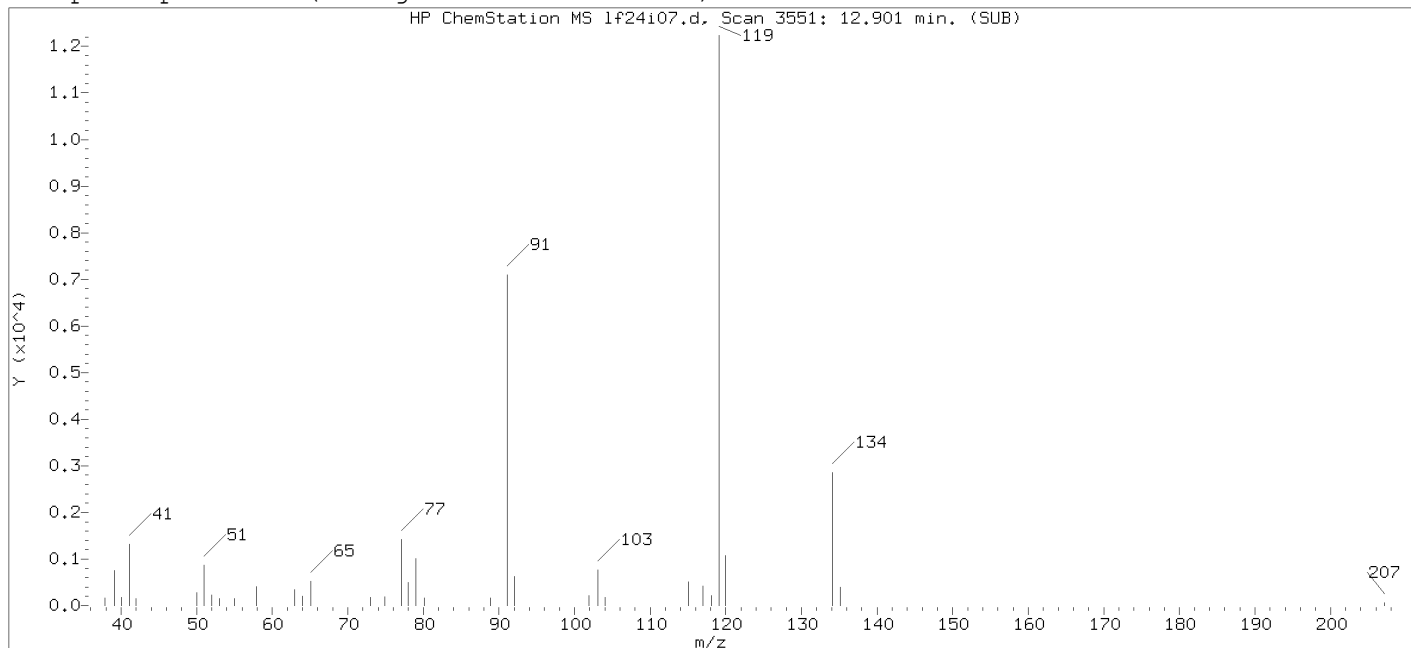
Compound Number : 124
 Compound Name : tert-Butylbenzene
 Scan Number : 3551
 Retention Time (minutes): 12.901
 Quant Ion : 134.00
 Area (flag) : 4281M
 On-Column Amount (ng) : 0.8042
 Integration start scan : 3541 Integration stop scan: 3559
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

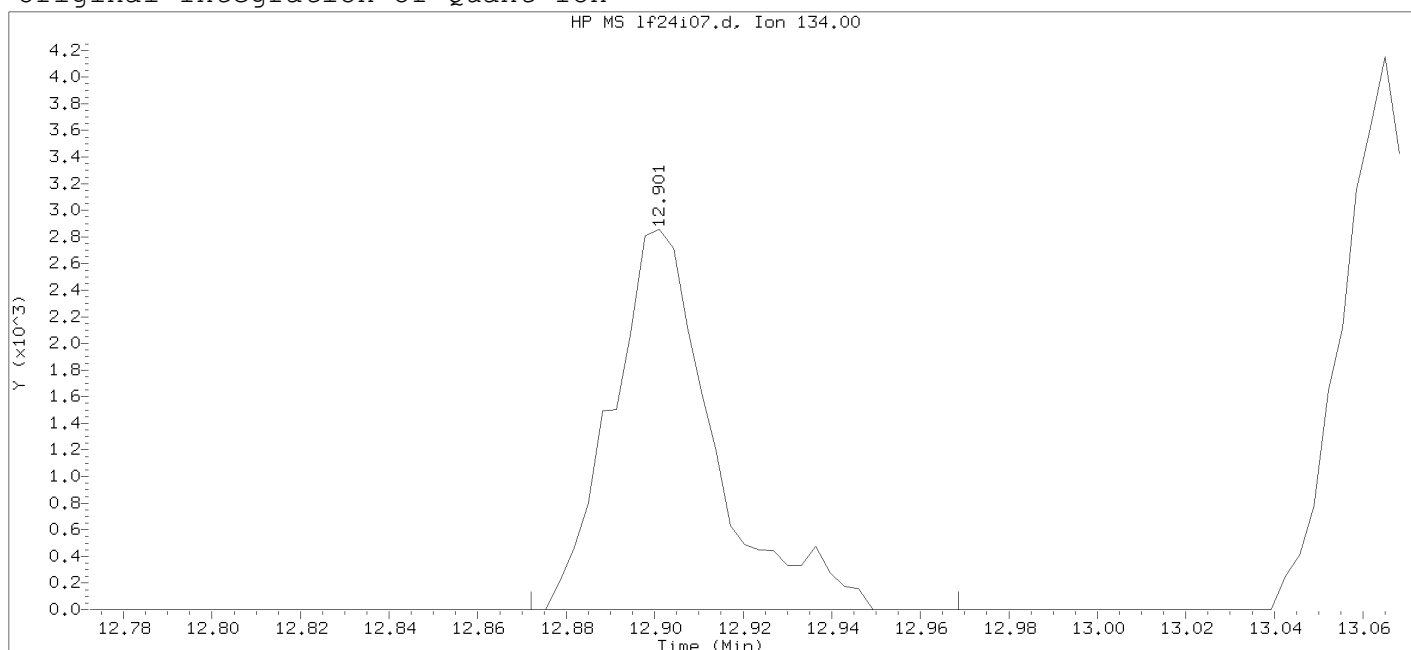
Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.
 Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:49.
 PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i07.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 18:29

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:55

Date, time and analyst ID of latest file update: 24-Feb-2020 20:55 mec29284

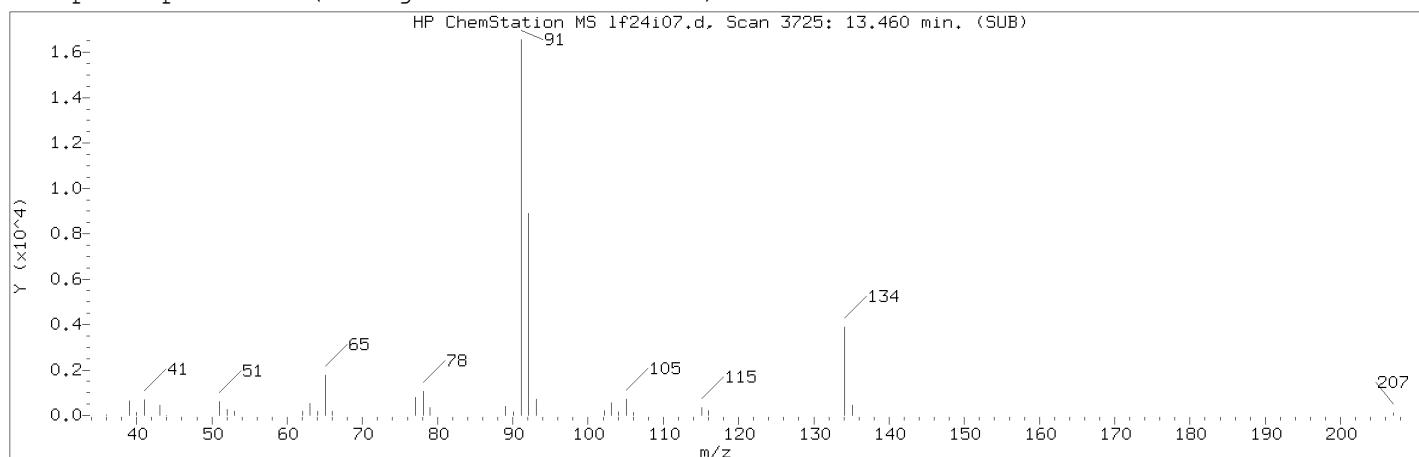
Sample Name: VSTD001

Lab Sample ID: VSTD001

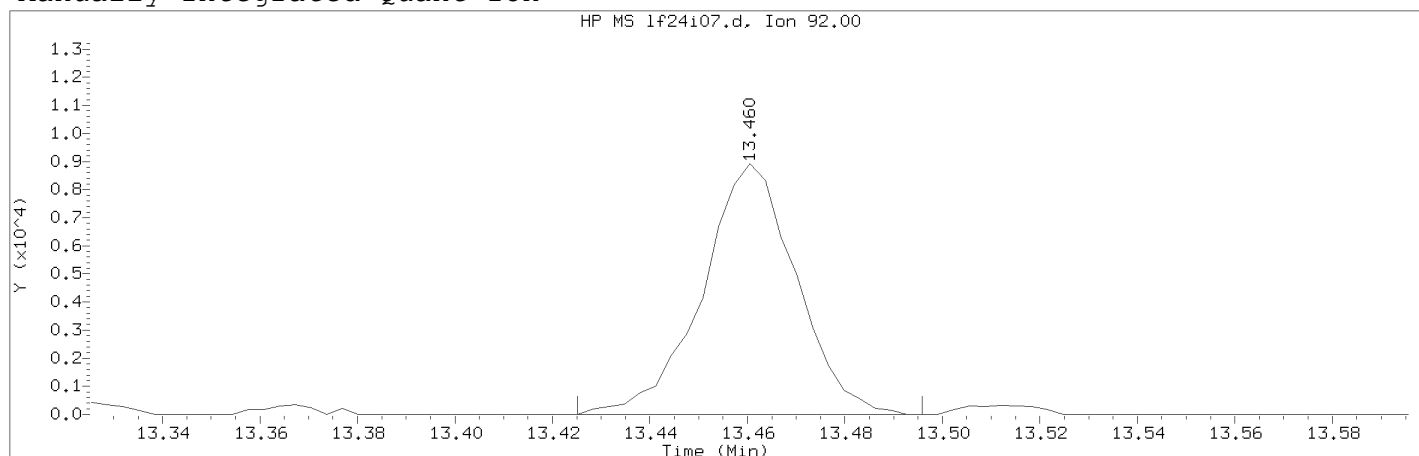
Compound Number	: 124	
Compound Name	: tert-Butylbenzene	
Scan Number	: 3551	
Retention Time (minutes)	: 12.901	
Quant Ion	: 134.00	
Area	: 4554	
On-column Amount (ng)	: 1.0000	
Integration start scan	: 3541	Integration stop scan: 3571
Y at integration start	: 0	Y at integration end: 0

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 Target 3.5 esignature user KR421m Page 262 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i07.d Instrument ID: HP09915.i
 Injection date and time: 24-FEB-2020 18:29 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 25-FEB-2020 12:44
 Date, time and analyst ID of latest file update: 25-Feb-2020 12:44 dvv10203

Sample Name: VSTD001

Lab Sample ID: VSTD001

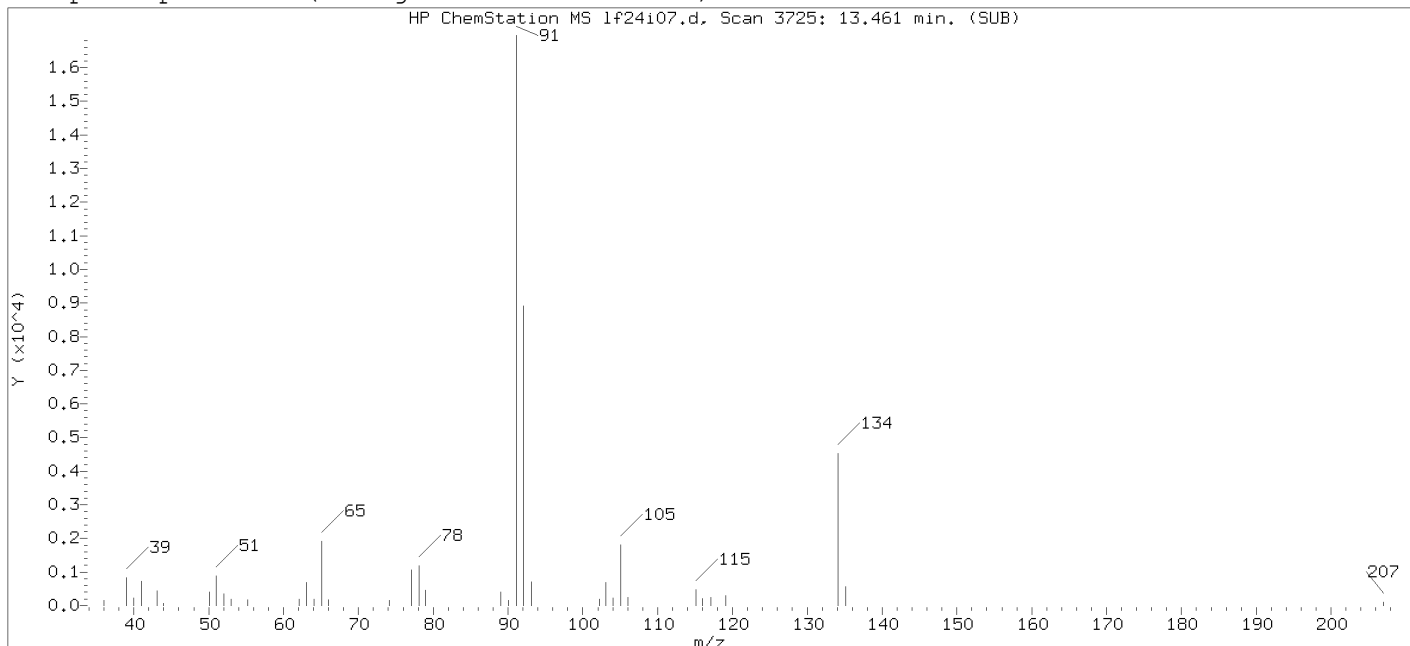
Compound Number : 139
 Compound Name : n-Butylbenzene
 Scan Number : 3725
 Retention Time (minutes): 13.460
 Quant Ion : 92.00
 Area (flag) : 11910M
 On-Column Amount (ng) : 0.8627
 Integration start scan : 3713 Integration stop scan: 3735
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

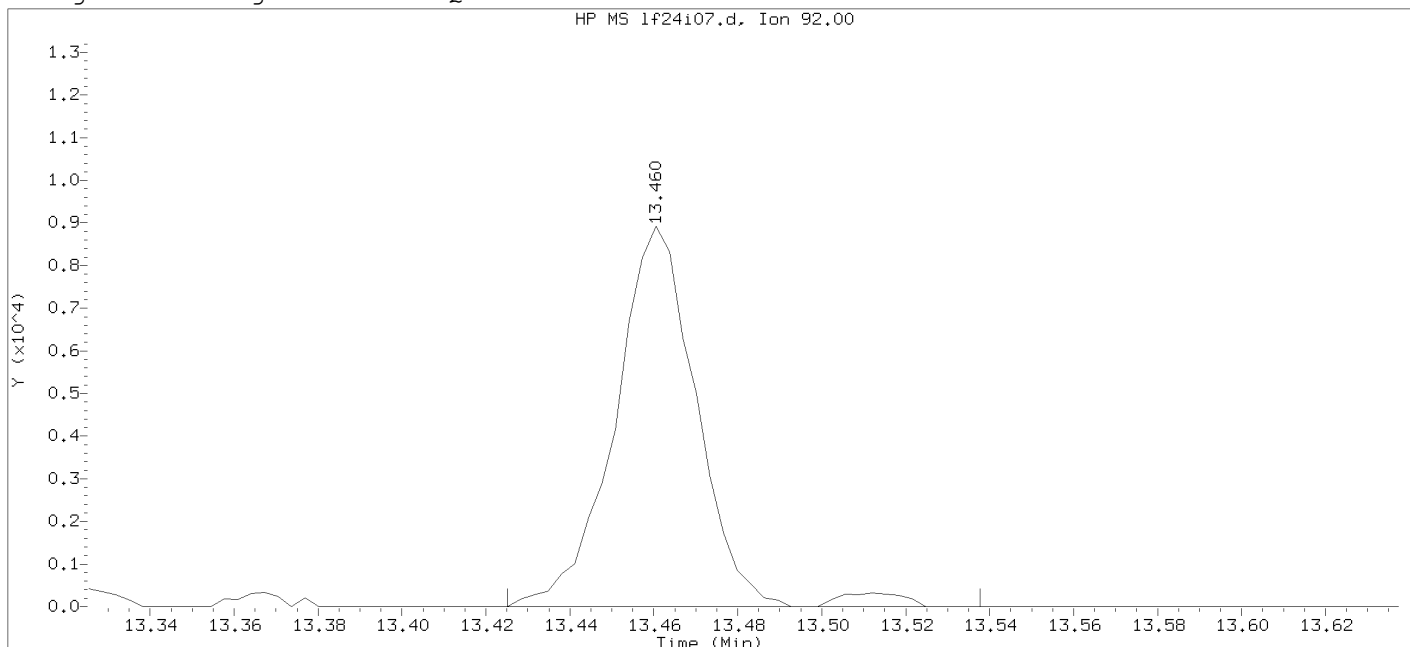
Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.
 Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:49.
 PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24i07.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 18:29

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:55

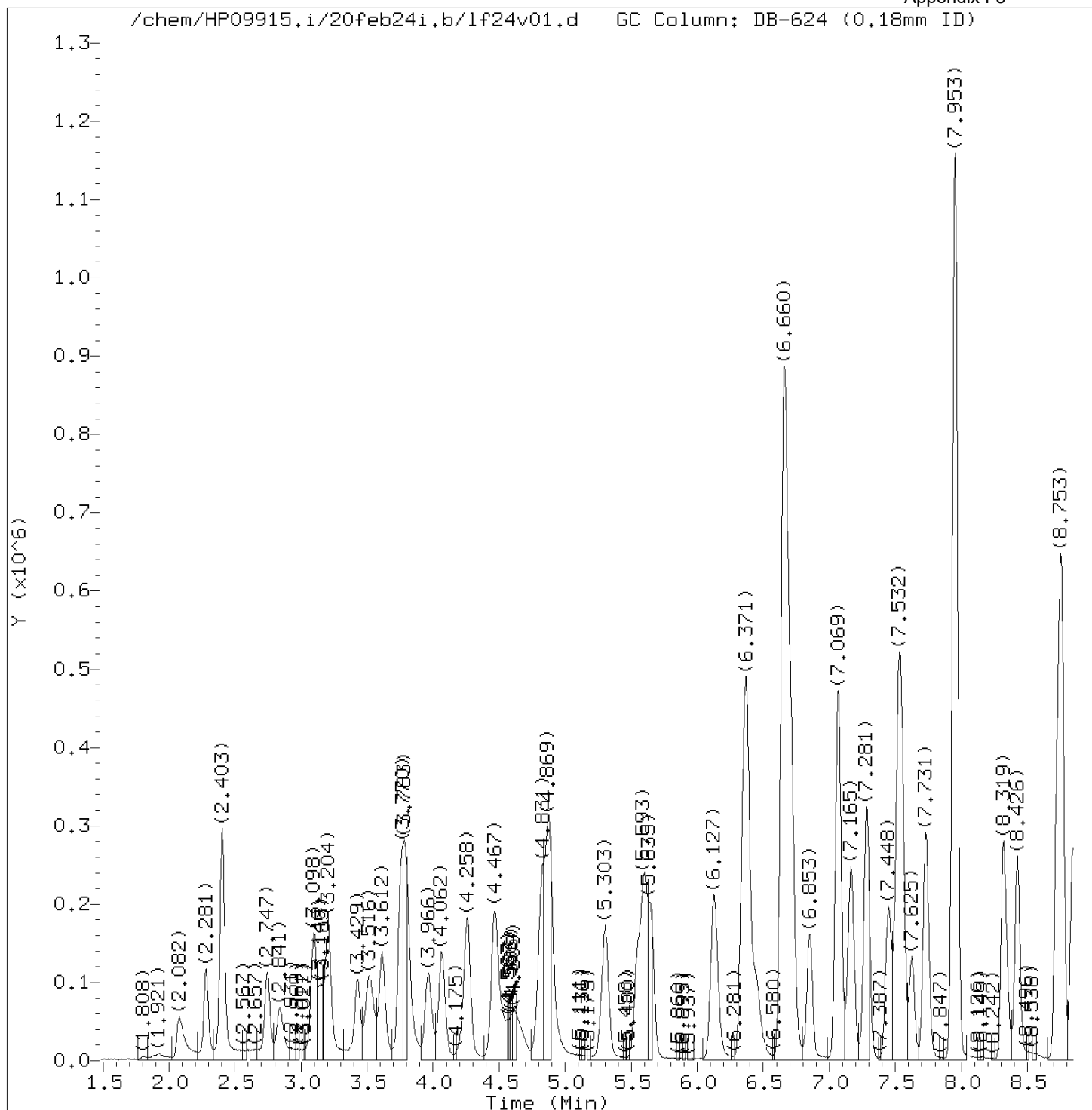
Date, time and analyst ID of latest file update: 24-Feb-2020 20:55 mec29284

Sample Name: VSTD001

Lab Sample ID: VSTD001

Compound Number	: 139	
Compound Name	: n-Butylbenzene	
Scan Number	: 3725	
Retention Time (minutes)	: 13.460	
Quant Ion	: 92.00	
Area	: 12258	
On-column Amount (ng)	: 1.0000	
Integration start scan	: 3713	Integration stop scan: 3748
Y at integration start	: 0	Y at integration end: 0

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 Target 3.5 esignature user KR421m Page 264 of 592



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20feb24i.b/1f24v01.d
 Injection date and time: 24-FEB-2020 19:13

Instrument ID: HP09915.i
 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m
 Calibration date and time: 25-FEB-2020 17:58

Sublist used: 8260W

Date, time and analyst ID of latest file update: 25-Feb-2020 18:00 mec29284

Sample Name: ICVLLG

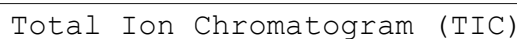
Lab Sample ID: ICVLLG

Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.

Target 3.5 esignature user ID: mec29284

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September 2020

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20feb24i.b/1f24v01.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 19:13

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 25-FEB-2020 17:58

Date, time and analyst ID of latest file update: 25-Feb-2020 18:00 mec29284

Sample Name: ICVLLG

Lab Sample ID: ICVLLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
3) Dichlorodifluoromethane	(2)	2.082	85	130889M	15.792
4) Chloromethane	(2)	2.278	50	157966	19.070
5) 1,3-Butadiene	(2)	2.403	39	123188	19.845
6) Vinyl Chloride	(2)	2.403	62	153999	19.705
8) Bromomethane	(2)	2.744	94	103965	18.955
9) Chloroethane	(2)	2.841	64	82389	19.094
10) Dichlorofluoromethane	(2)	3.098	67	182748	19.097
12) Trichlorofluoromethane	(2)	3.156	101	169365	20.908
11) n-Pentane	(2)	3.204	43	172487	18.834
14) Ethyl ether	(2)	3.429	59	89394	15.464
15) Freon 123a	(2)	3.522	67	127704	19.624
16) Acrolein	(1)	3.612	56	217725	100.450
17) 1,1-Dichloroethene	(2)	3.754	96	99399	17.939
19) Freon 113	(2)	3.783	101	101865	19.327
18) Acetone	(1)	3.802	58	130332	135.963
22) Methyl Iodide	(2)	3.966	142	184208	18.803
21) 2-Propanol	(1)	3.979	45	83028	124.323
23) Carbon Disulfide	(2)	4.062	76	326674	18.664
27) Methyl Acetate	(2)	4.230	43	135774	19.633
25) Allyl Chloride	(2)	4.265	41	181594	20.366
28) Methylene Chloride	(2)	4.467	84	115364	18.648
29) *t-Butyl alcohol-d10	(1)	4.484	65	296762M	250.000
30) t-Butyl alcohol	(1)	4.619	59	206251	179.671
31) Acrylonitrile	(2)	4.824	53	350357	93.466
32) trans-1,2-Dichloroethene	(2)	4.876	96	112871	18.572
33) Methyl Tertiary Butyl Ether	(2)	4.879	73	337793	18.245
34) n-Hexane	(2)	5.303	57	165438	18.926
36) 1,1-Dichloroethane	(2)	5.545	63	191130	18.790
38) di-Isopropyl ether	(2)	5.599	45	369118	18.884
39) 2-Chloro-1,3-butadiene	(2)	5.651	53	169228	19.453
40) Ethyl t-butyl ether	(2)	6.130	59	347894	18.740
43) 1,2-Dichloroethene (Total)	(2)		96	244526	37.942
44) 2-Butanone	(2)	6.352	43	684084	142.721
42) cis-1,2-Dichloroethene	(2)	6.377	96	131655	19.370
45) 2,2-Dichloropropane	(2)	6.387	77	155876	19.257
47) Propionitrile	(1)	6.448	54	213868	143.753
48) Methacrylonitrile	(2)	6.657	67	563909	147.075
49) Bromochloromethane	(2)	6.699	128	64821	19.191

M = Compound was manually integrated.

* = Compound is an internal standard.

page 1 of 4

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on 02/25/2020 at 18:06.

Target 3.5 esignature user ID: mec29284

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20feb24i.b/1f24v01.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 19:13

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 25-FEB-2020 17:58

Date, time and analyst ID of latest file update: 25-Feb-2020 18:00 mec29284

Sample Name: ICVLLG

Lab Sample ID: ICVLLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
50) Tetrahydrofuran	(1)	6.715	71	125760	94.018
51) Chloroform	(2)	6.853	83	186849	18.957
52)\$Dibromofluoromethane	(2)	7.065	113	307166	49.443
53) 1,1,1-Trichloroethane	(2)	7.072	97	160881	18.616
54) Cyclohexane	(2)	7.165	56	197639	18.570
56) Carbon Tetrachloride	(2)	7.281	117	133462	18.900
55) 1,1-Dichloropropene	(2)	7.287	75	152489	18.914
58) Isobutyl Alcohol	(1)	7.448	41	173806	445.610
57)\$1,2-Dichloroethane-d4	(2)	7.522	102	80147	49.742
60) Benzene	(2)	7.551	78	468259	19.040
61) 1,2-Dichloroethane	(2)	7.628	62	152107	18.498
65) t-Amyl methyl ether	(2)	7.731	73	348523	18.666
66)*Fluorobenzene	(2)	7.953	96	1313870	50.000
67) n-Heptane	(2)	7.956	43	146994	17.172
69) n-Butanol	(1)	8.316	56	286274	876.780
71) Trichloroethene	(2)	8.422	95	118392	19.122
72) Methylcyclohexane	(2)	8.725	83	204850	19.721
73) 1,2-Dichloropropane	(2)	8.760	63	121745	19.054
76) Methyl Methacrylate	(2)	8.840	69	119715	19.626
75) 1,4-Dioxane	(1)	8.847	88	41178M	473.456
74) Dibromomethane	(2)	8.869	93	76981	18.527
78) Bromodichloromethane	(2)	9.104	83	135084	18.185
79) 2-Nitropropane	(2)	9.377	41	37652	16.475
80) 2-Chloroethyl Vinyl Ether	(2)	9.451	63	86142	18.391
81) cis-1,3-Dichloropropene	(2)	9.631	75	184547	18.544
82) 4-Methyl-2-pentanone	(2)	9.798	43	933278	94.111
83)\$Toluene-d8	(3)	9.927	98	1311685	50.038
88) Toluene	(3)	10.001	92	298598	19.171
90) 1,3-Dichloropropene (total)	(3)		100	349448	36.311
89) trans-1,3-Dichloropropene	(3)	10.252	75	164901	17.767
91) Ethyl Methacrylate	(3)	10.306	69	187584	17.651
92) 1,1,2-Trichloroethane	(3)	10.451	97	116178	18.925
93) Tetrachloroethene	(3)	10.532	166	126984	19.211
94) 1,3-Dichloropropane	(3)	10.615	76	189984	18.541
96) 2-Hexanone	(3)	10.663	43	697672	97.191
97) Dibromochloromethane	(3)	10.821	129	113305	18.262
99) 1,2-Dibromoethane	(3)	10.933	107	124141	18.586
100)*Chlorobenzene-d5	(3)	11.355	117	997760	50.000

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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on 02/25/2020 at 18:06.

Target 3.5 esignature user ID: mec29284

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20feb24i.b/1f24v01.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 19:13

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 25-FEB-2020 17:58

Date, time and analyst ID of latest file update: 25-Feb-2020 18:00 mec29284

Sample Name: ICVLLG

Lab Sample ID: ICVLLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
101) 1-Chlorohexane	(3)	11.358	91	155254	17.880
102) Chlorobenzene	(3)	11.380	112	335122	19.147
103) 1,1,1,2-Tetrachloroethane	(3)	11.461	131	107595	18.389
104) Ethylbenzene	(3)	11.464	91	574264	19.300
106) m+p-Xylene	(3)	11.577	106	458329	39.246
108) Xylene (Total)	(3)		106	681289	58.507
107) o-Xylene	(3)	11.904	106	222960	19.261
109) Styrene	(3)	11.917	104	374027	19.210
110) Bromoform	(3)	12.078	173	76998	16.033
111) Isopropylbenzene	(3)	12.200	105	577313	19.464
112) Cyclohexanone	(1)	12.284	55	147613	423.121
114) \$4-Bromofluorobenzene	(3)	12.342	95	489425	49.510
116) 1,1,2,2-Tetrachloroethane	(4)	12.445	83	191153	18.317
115) Bromobenzene	(4)	12.461	156	146003	18.799
118) trans-1,4-Dichloro-2-butene	(4)	12.470	53	290398	97.143
117) 1,2,3-Trichloropropane	(4)	12.490	110	57437	18.546
119) n-Propylbenzene	(4)	12.525	91	673195	19.218
120) 2-Chlorotoluene	(4)	12.605	126	138835	19.078
122) 1,3,5-Trimethylbenzene	(4)	12.657	105	485993	18.858
121) 4-Chlorotoluene	(4)	12.695	126	141305	18.717
124) tert-Butylbenzene	(4)	12.901	134	98582M	18.592
125) Pentachloroethane	(4)	12.937	167	83954	19.804
126) 1,2,4-Trimethylbenzene	(4)	12.943	105	500886	18.567
127) sec-Butylbenzene	(4)	13.065	105	593690	18.750
129) 1,3-Dichlorobenzene	(4)	13.165	146	275234	18.797
130) p-Isopropyltoluene	(4)	13.168	119	515502	18.898
131) *1,4-Dichlorobenzene-d4	(4)	13.220	152	549451	50.000
133) 1,4-Dichlorobenzene	(4)	13.239	146	284640	18.769
134) 1,2,3-Trimethylbenzene	(4)	13.248	105	537720	19.938
135) Benzyl Chloride	(4)	13.316	91	316794	16.049
136) 1,3-Diethylbenzene	(4)	13.371	119	321795	19.471
141) Diethylbenzene (total)	(4)		100	933649	58.710
137) 1,4-Diethylbenzene	(4)	13.441	119	337131	19.473
139) n-Butylbenzene	(4)	13.461	92	245973	17.887
138) 1,2-Dichlorobenzene	(4)	13.499	146	271305	18.619
140) 1,2-Diethylbenzene	(4)	13.515	119	274723	19.765
142) 1,2-Dibromo-3-chloropropane	(4)	14.039	75	41105	18.074
144) 1,3,5-Trichlorobenzene	(4)	14.162	180	188307	17.182

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 3 of 4

Digitally signed by Miranda E. Campbell
on 02/25/2020 at 18:06.

Target 3.5 esignature user ID: mec29284

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20feb24i.b/lf24v01.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 19:13

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 25-FEB-2020 17:58

Date, time and analyst ID of latest file update: 25-Feb-2020 18:00 mec29284

Sample Name: ICVLLG

Lab Sample ID: ICVLLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	179809	17.086
147) Hexachlorobutadiene	(4)	14.666	225	70634	15.263
148) Naphthalene	(4)	14.769	128	630194	17.740
149) 1,2,3-Trichlorobenzene	(4)	14.914	180	168012	16.872
150) 2-Methylnaphthalene	(4)	15.560	142	343414	18.025

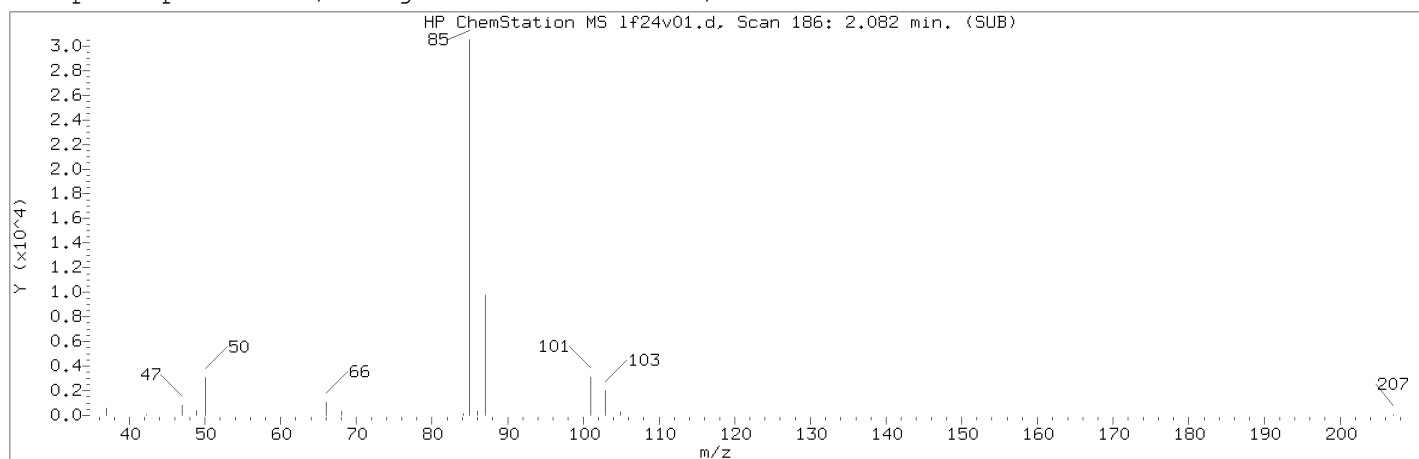
page 4 of 4

Digitally signed by Miranda E. Campbell
on 02/25/2020 at 18:06.

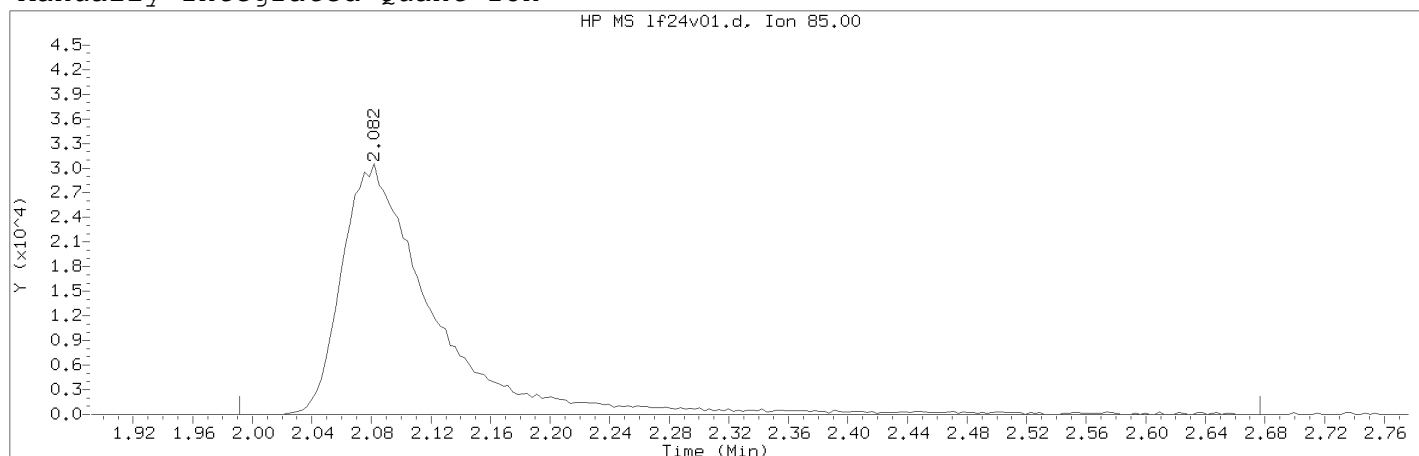
Target 3.5 esignature user ID: mec29284

KR421 Page 270 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24v01.d Instrument ID: HP09915.i
 Injection date and time: 24-FEB-2020 19:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 25-FEB-2020 17:58
 Date, time and analyst ID of latest file update: 25-Feb-2020 18:00 mec29284

Sample Name: ICVLLG

Lab Sample ID: ICVLLG

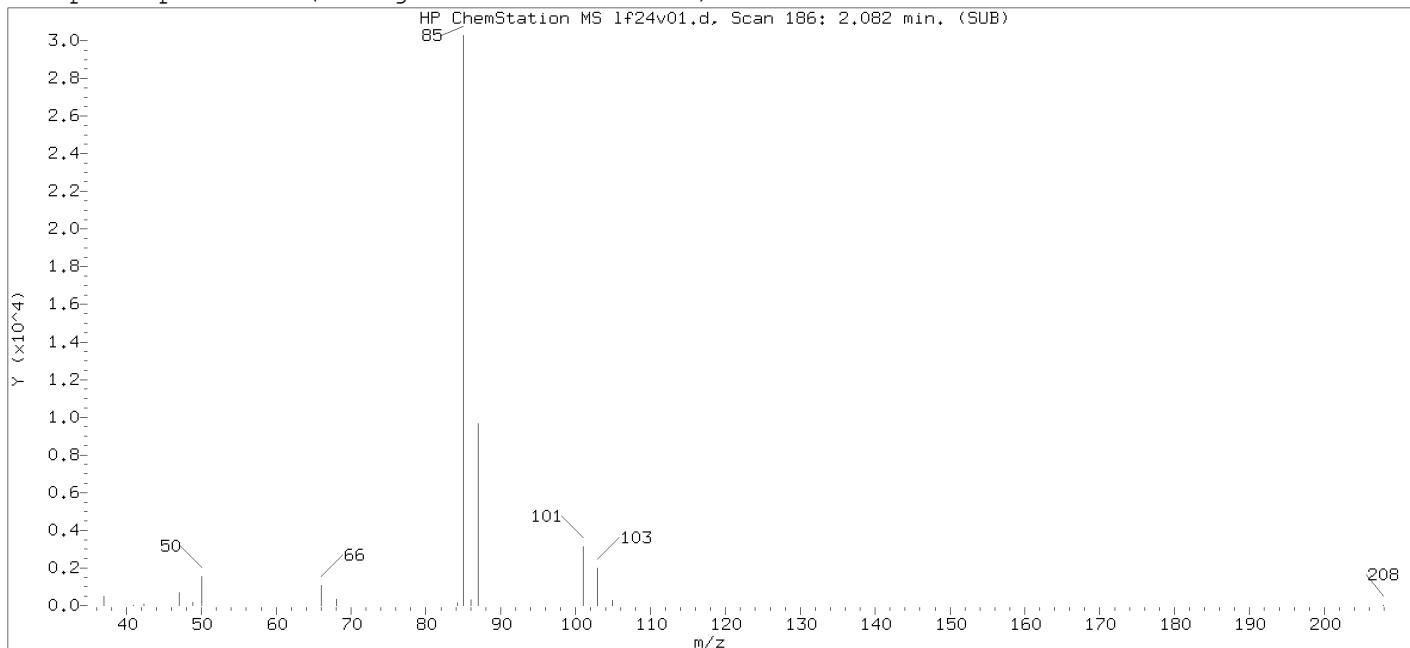
Compound Number : 3
 Compound Name : Dichlorodifluoromethane
 Scan Number : 186
 Retention Time (minutes): 2.082
 Quant Ion : 85.00
 Area (flag) : 130889M
 On-Column Amount (ng) : 15.7924
 Integration start scan : 157 Integration stop scan: 370
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

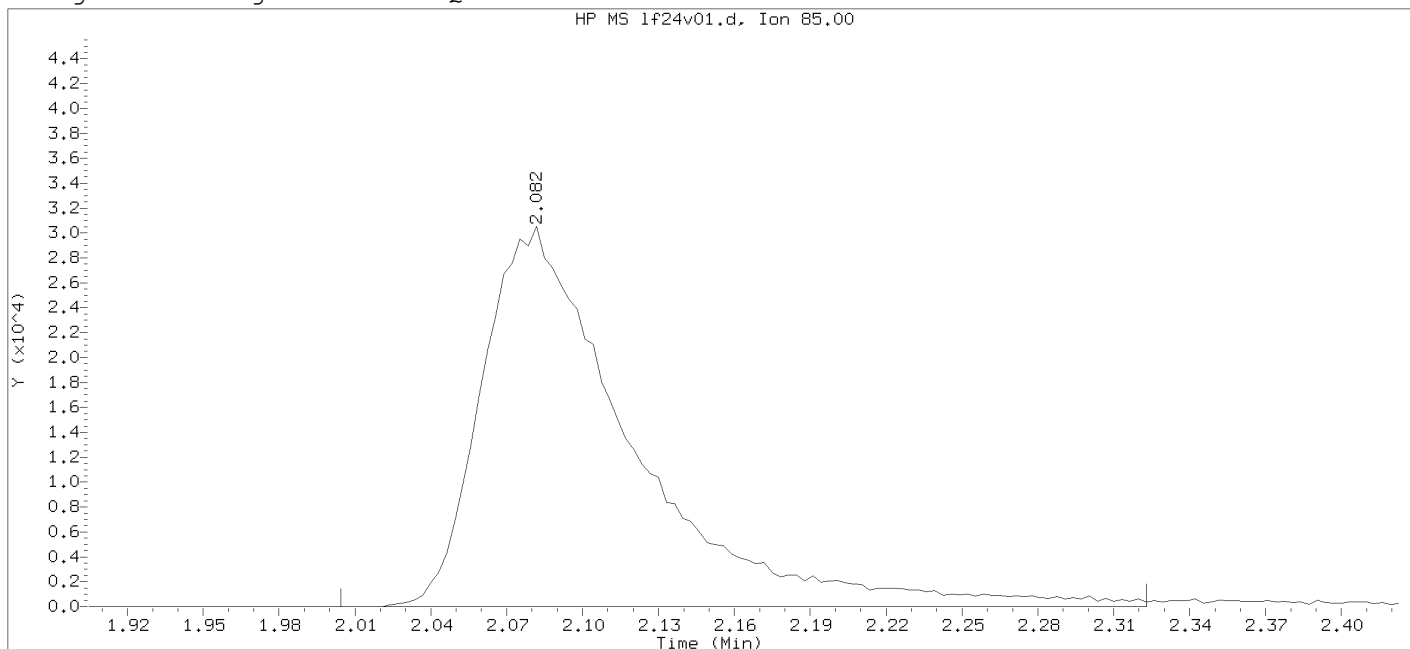
Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.
 Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:52.
 PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24v01.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 19:13

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:49

Date, time and analyst ID of latest file update: 24-Feb-2020 20:49 mec29284

Sample Name: ICVLLG

Lab Sample ID: ICVLLG

Compound Number : 3

Compound Name : Dichlorodifluoromethane

Scan Number : 186

Retention Time (minutes): 2.082

Quant Ion : 85.00

Area : 126247

On-column Amount (ng) : 14.0868

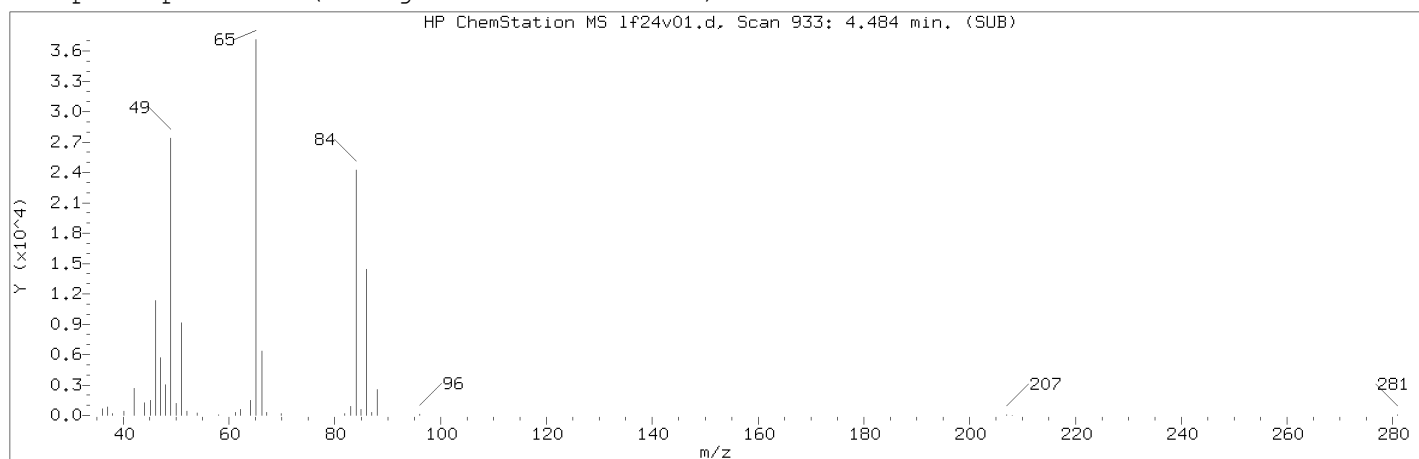
Integration start scan : 161 Integration stop scan: 260

Y at integration start : 0 Y at integration end: 0

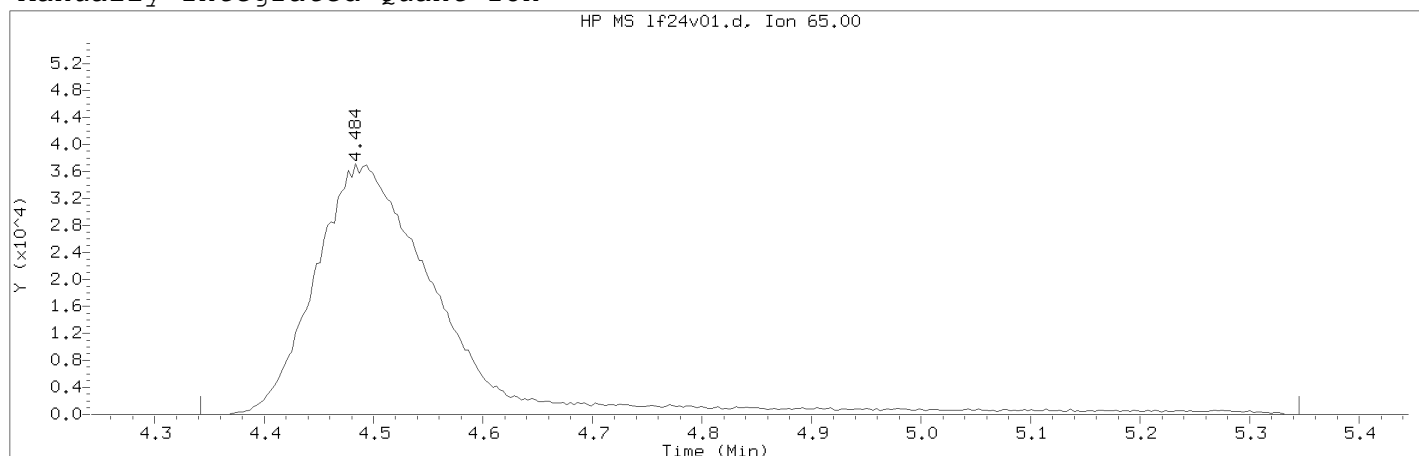
Digitally signed by Miranda E. Campbell on 02/25/2020 at 18:06.

Target 3.5 esignature user KR421m Page 272 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24v01.d Instrument ID: HP09915.i
 Injection date and time: 24-FEB-2020 19:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 25-FEB-2020 17:58
 Date, time and analyst ID of latest file update: 25-Feb-2020 18:00 mec29284

Sample Name: ICVLLG

Lab Sample ID: ICVLLG

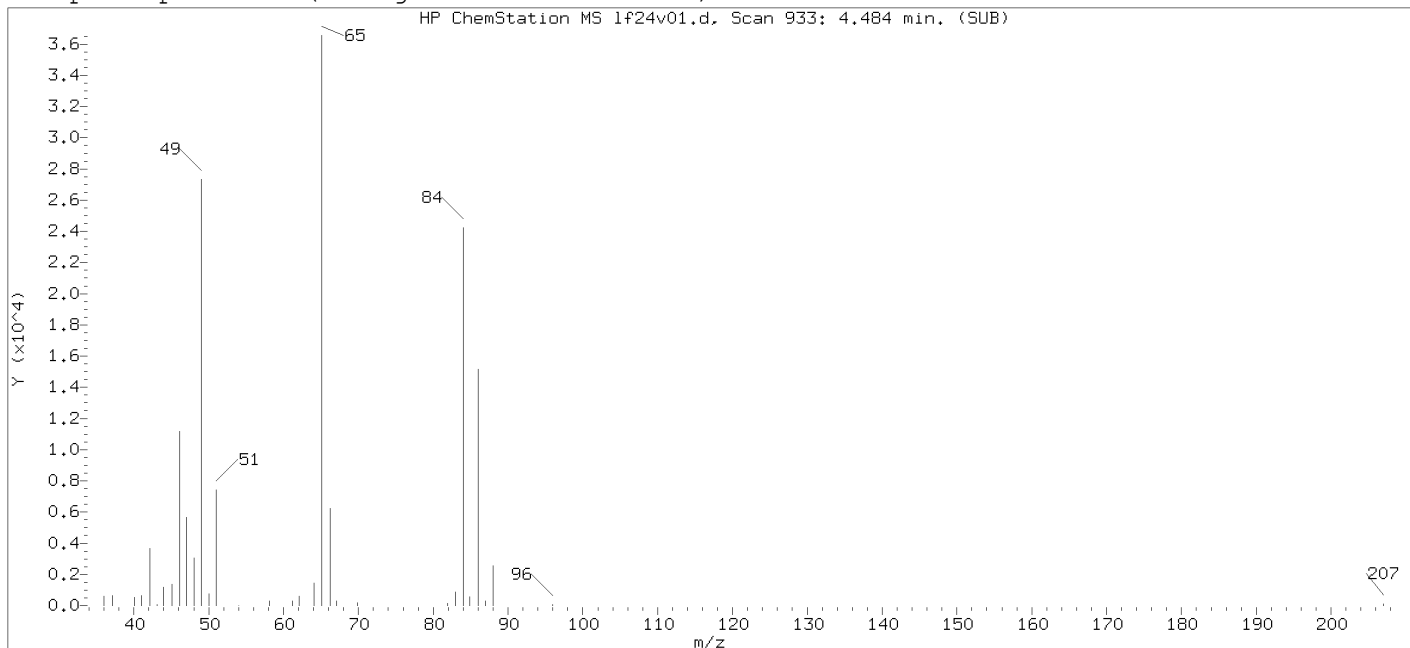
Compound Number : 29
 Compound Name : t-Butyl alcohol-d10
 Scan Number : 933
 Retention Time (minutes): 4.484
 Quant Ion : 65.00
 Area (flag) : 296762M
 On-Column Amount (ng) : 250.0000
 Integration start scan : 888 Integration stop scan: 1200
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

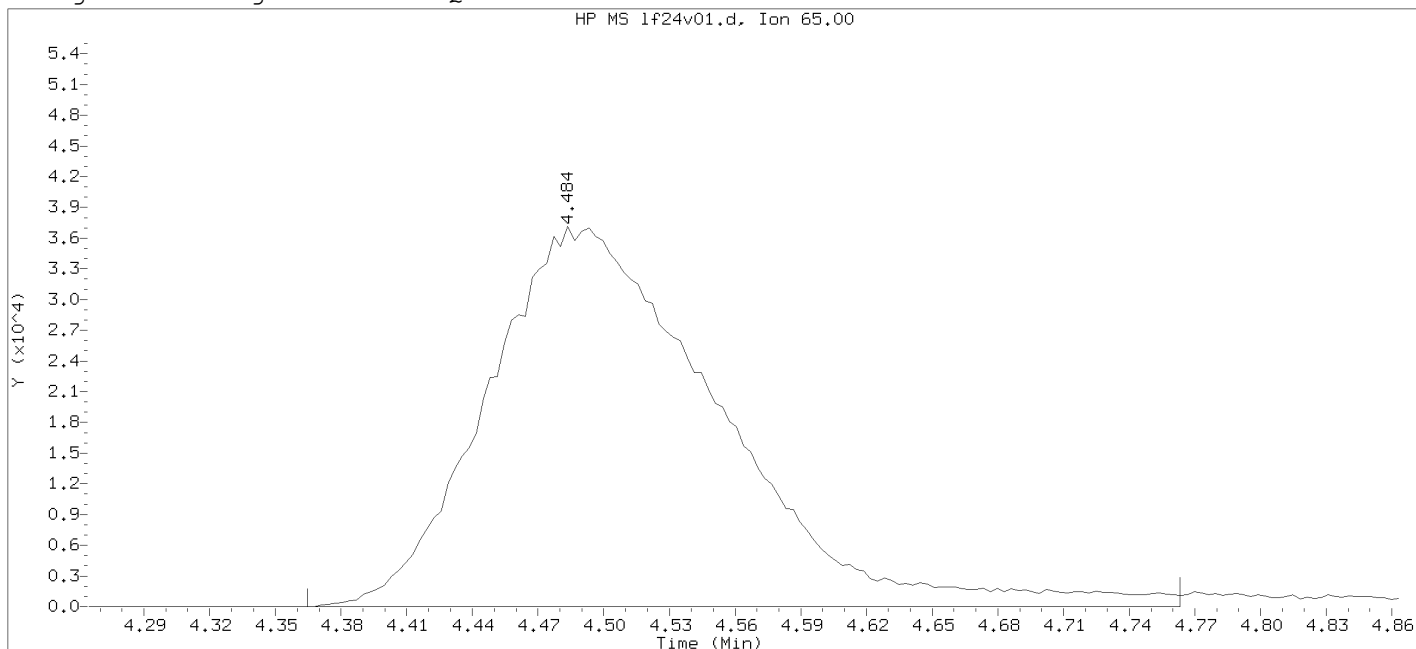
Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.
 Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:52.
 PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24v01.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 19:13

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:49

Date, time and analyst ID of latest file update: 24-Feb-2020 20:49 mec29284

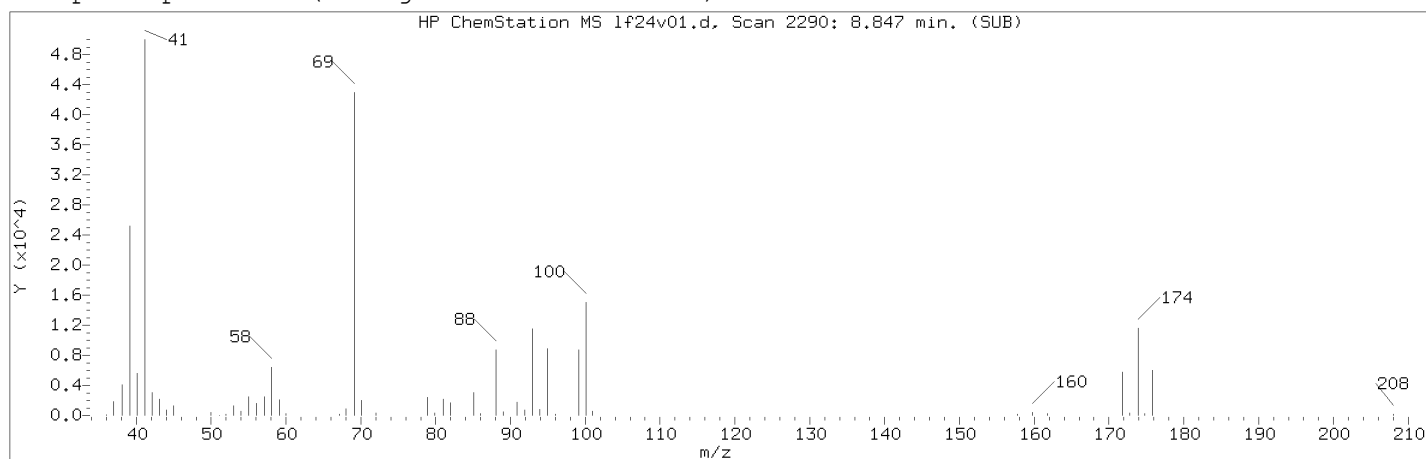
Sample Name: ICVLLG

Lab Sample ID: ICVLLG

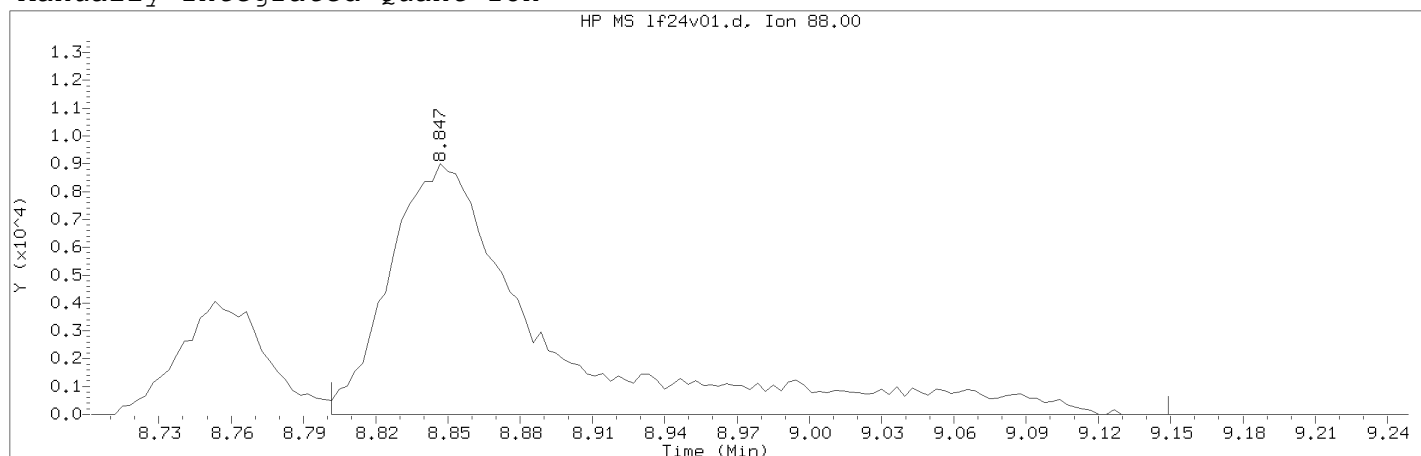
Compound Number : 29
 Compound Name : t-Butyl alcohol-d10
 Scan Number : 933
 Retention Time (minutes): 4.484
 Quant Ion : 65.00
 Area : 273375
 On-column Amount (ng) : 250.0000
 Integration start scan : 895 Integration stop scan: 1019
 Y at integration start : 0 Y at integration end: 0

Digitally signed by Miranda E. Campbell on 02/25/2020 at 18:06.
 Target 3.5 esignature user KR421m Page 274 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24v01.d Instrument ID: HP09915.i
 Injection date and time: 24-FEB-2020 19:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 25-FEB-2020 17:58
 Date, time and analyst ID of latest file update: 25-Feb-2020 18:00 mec29284

Sample Name: ICVLLG

Lab Sample ID: ICVLLG

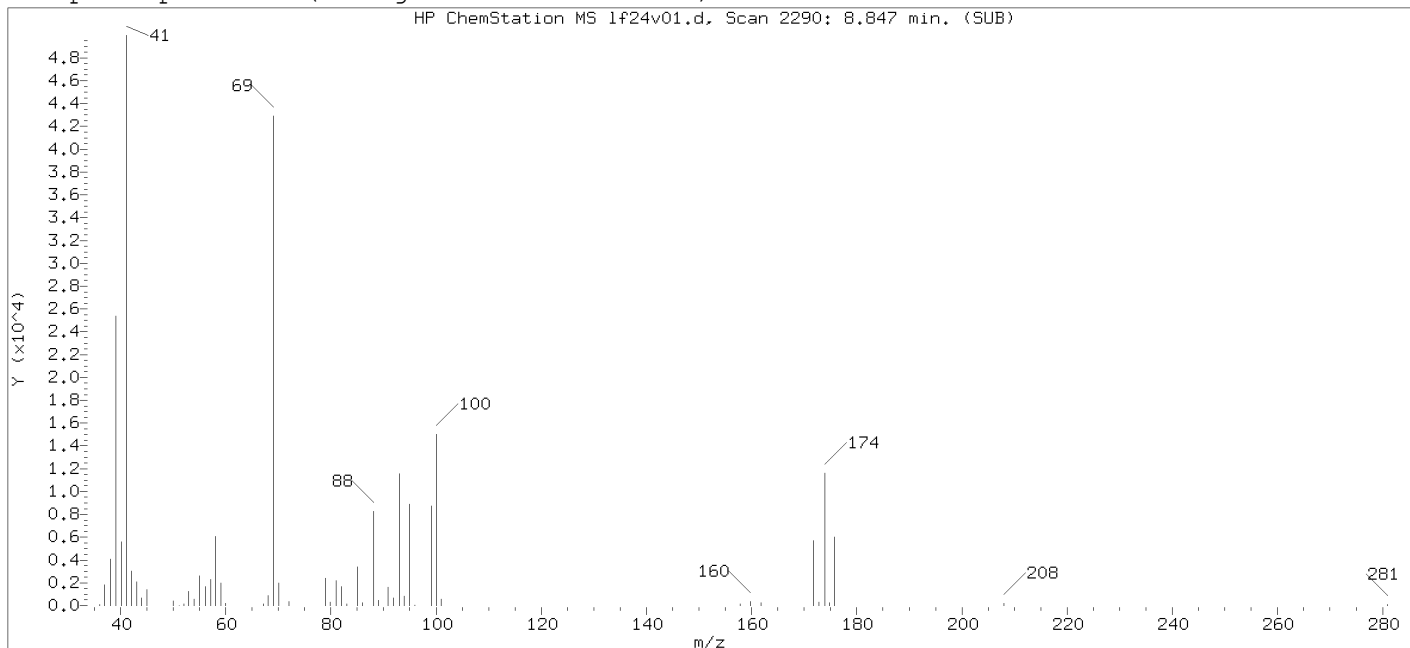
Compound Number : 75
 Compound Name : 1,4-Dioxane
 Scan Number : 2290
 Retention Time (minutes): 8.847
 Quant Ion : 88.00
 Area (flag) : 41178M
 On-Column Amount (ng) : 473.4558
 Integration start scan : 2275 Integration stop scan: 2383
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

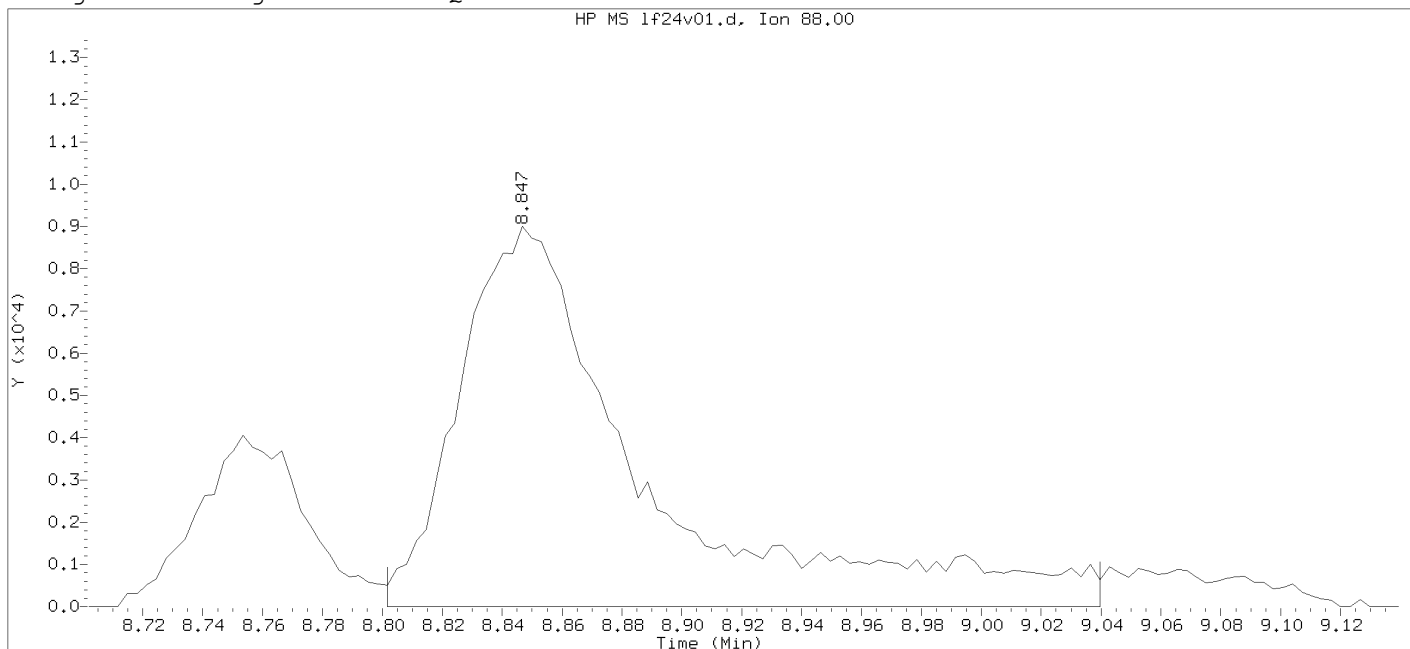
Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.
 Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:52.
 PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24v01.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 19:13

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:49

Date, time and analyst ID of latest file update: 24-Feb-2020 20:49 mec29284

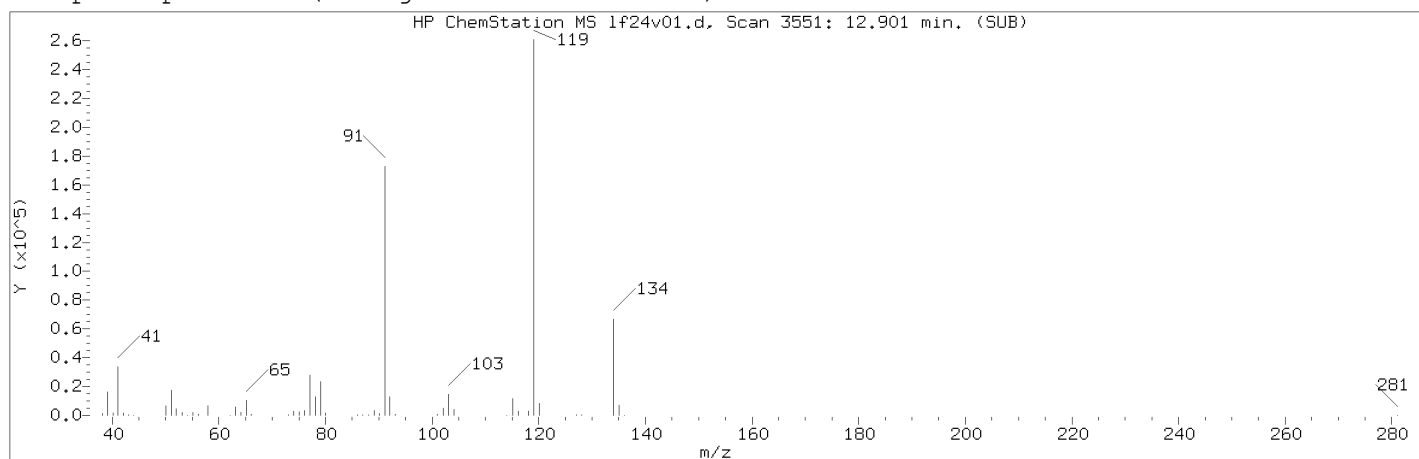
Sample Name: ICVLLG

Lab Sample ID: ICVLLG

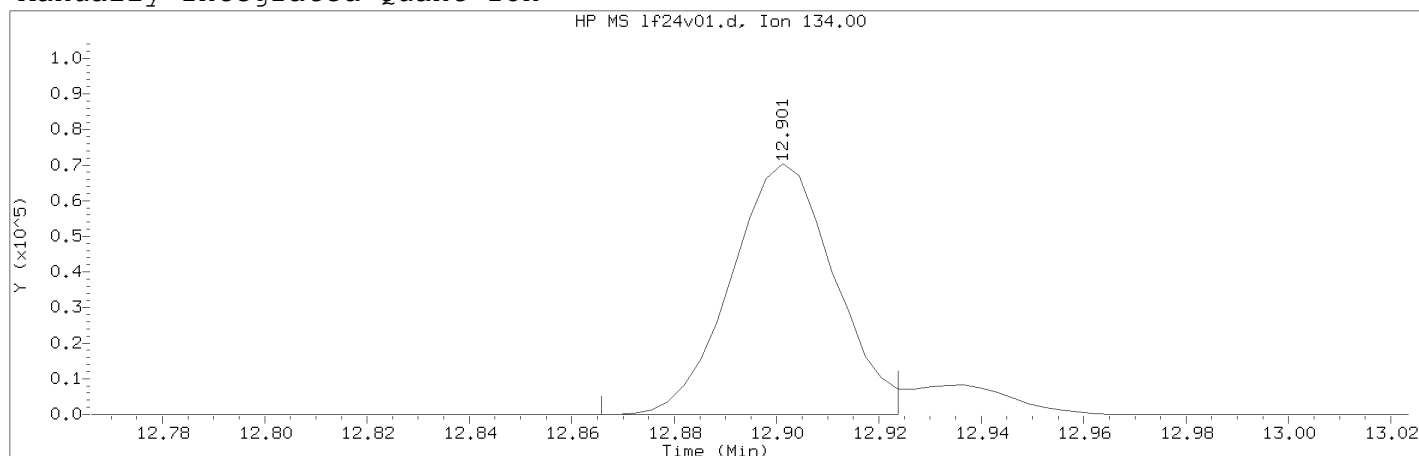
Compound Number	: 75
Compound Name	: 1,4-Dioxane
Scan Number	: 2290
Retention Time (minutes)	: 8.847
Quant Ion	: 88.00
Area	: 38143
On-column Amount (ng)	: 425.6742
Integration start scan	: 2275
Integration stop scan	: 2349
Y at integration start	: 0
Y at integration end	: 0

Digitally signed by Miranda E. Campbell on 02/25/2020 at 18:06.
 Target 3.5 esignature user KR421m Page 276 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24v01.d Instrument ID: HP09915.i
 Injection date and time: 24-FEB-2020 19:13 Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 25-FEB-2020 17:58
 Date, time and analyst ID of latest file update: 25-Feb-2020 18:00 mec29284

Sample Name: ICVLLG

Lab Sample ID: ICVLLG

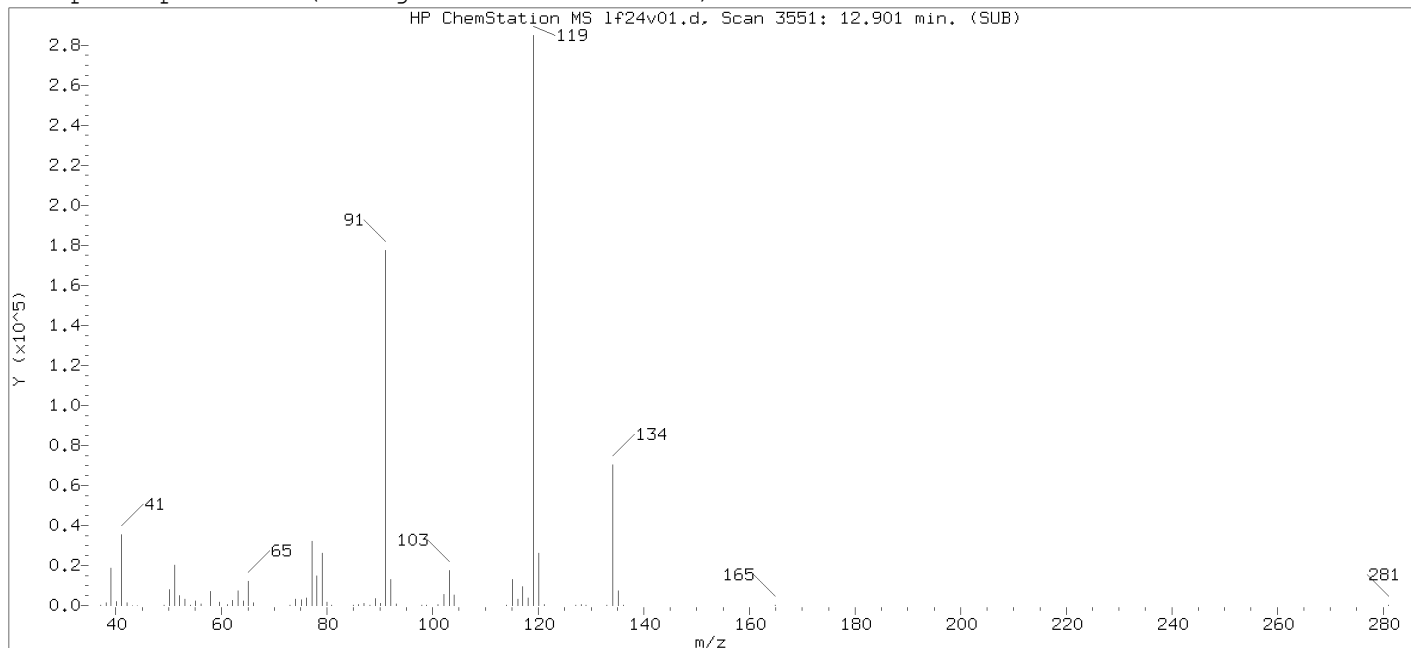
Compound Number : 124
 Compound Name : tert-Butylbenzene
 Scan Number : 3551
 Retention Time (minutes): 12.901
 Quant Ion : 134.00
 Area (flag) : 98582M
 On-Column Amount (ng) : 18.5920
 Integration start scan : 3539 Integration stop scan: 3557
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

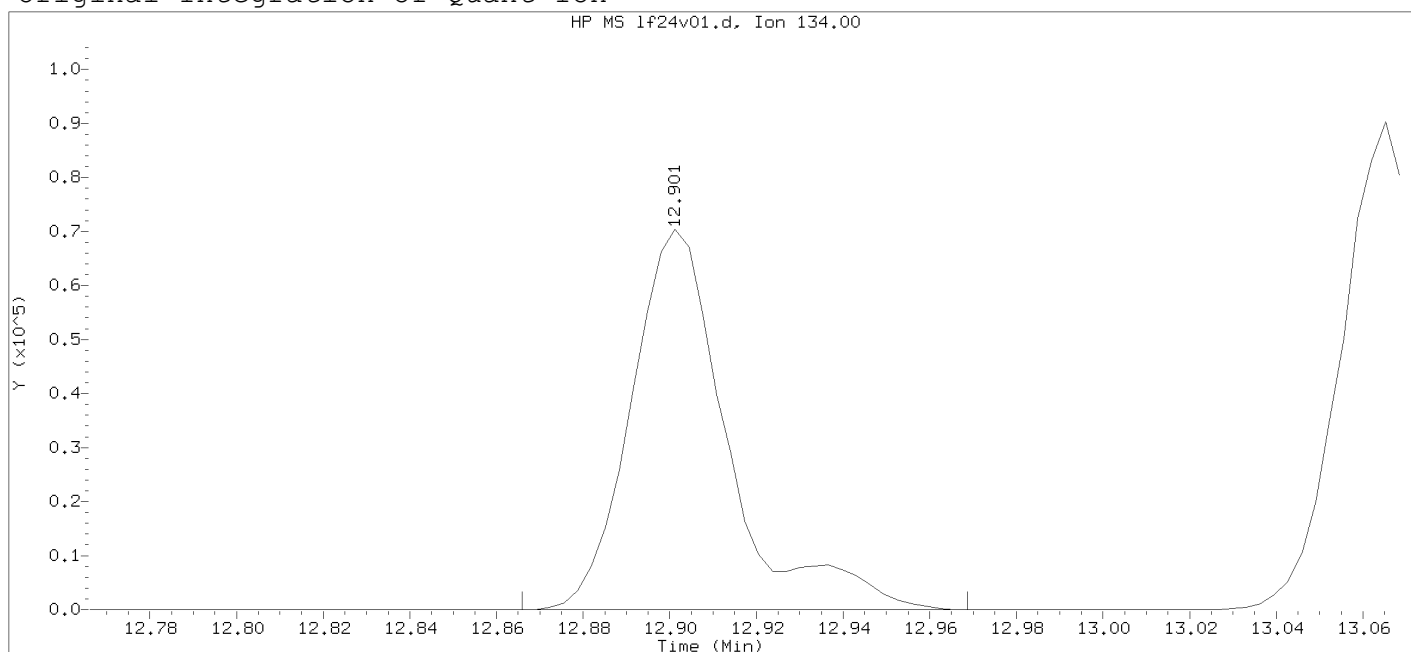
Analyst responsible for change: Digitally signed by Miranda E. Campbell
 on 02/25/2020 at 18:06.
 Target 3.5 esignature user ID: mec29284

Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:52.
 PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb24i.b/1f24v01.d

Instrument ID: HP09915.i

Injection date and time: 24-FEB-2020 19:13

Analyst ID: KAS02648

Method used: /chem/HP09915.i/20feb24i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 24-FEB-2020 20:49

Date, time and analyst ID of latest file update: 24-Feb-2020 20:49 mec29284

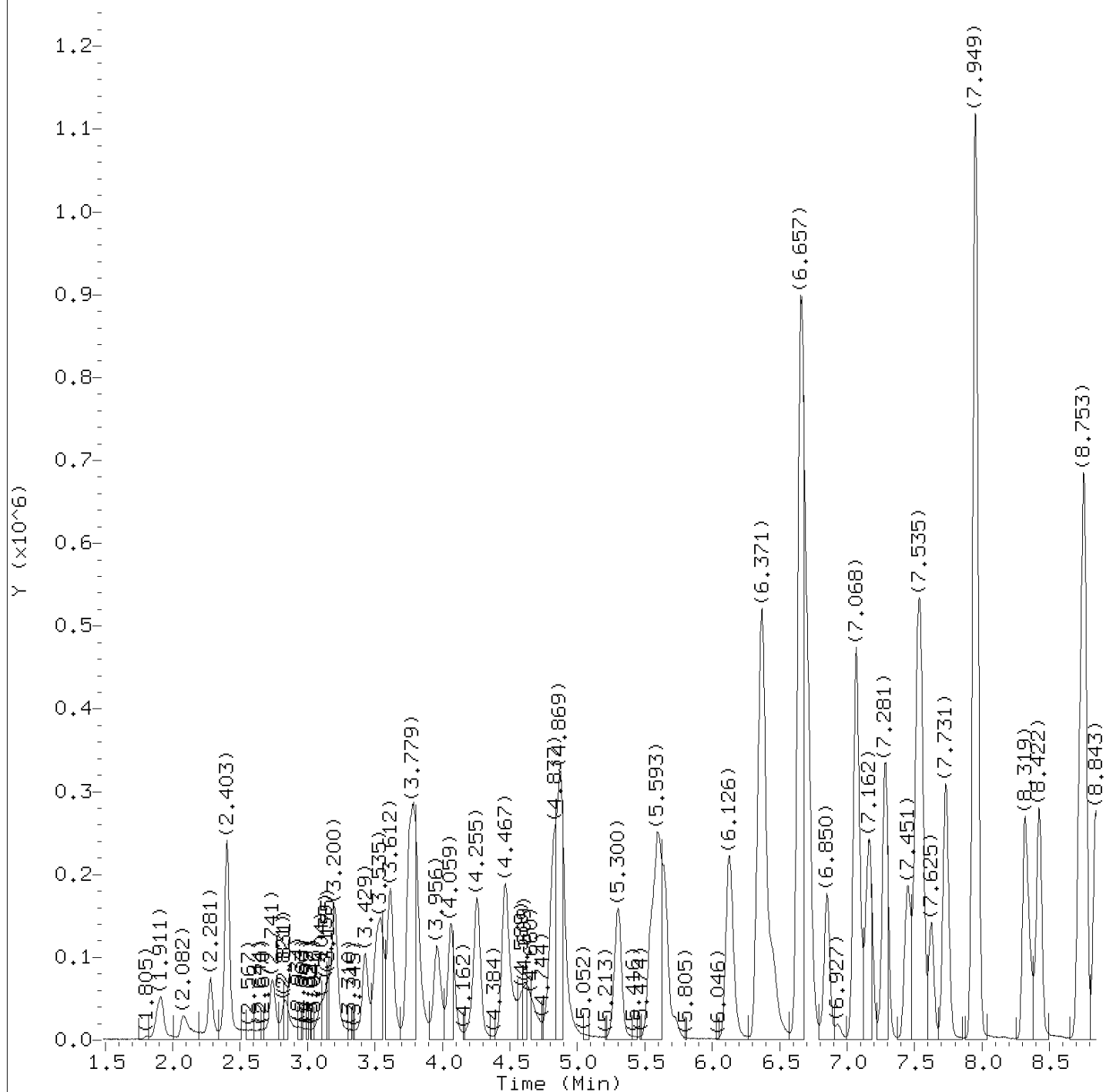
Sample Name: ICVLLG

Lab Sample ID: ICVLLG

Compound Number	: 124
Compound Name	: tert-Butylbenzene
Scan Number	: 3551
Retention Time (minutes)	: 12.901
Quant Ion	: 134.00
Area	: 109417
On-column Amount (ng)	: 20.2721
Integration start scan	: 3539
Integration stop scan	: 3571
Y at integration start	: 0
Y at integration end	: 0

Digitally signed by Miranda E. Campbell on 02/25/2020 at 18:06.
 Target 3.5 esignature user KR421m Page 278 of 592

/chem/HP09915.i/20feb26a.b/1f26s99.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20feb26a.b/1f26s99.d
 Injection date and time: 26-FEB-2020 09:06

Instrument ID: HP09915.i
 Analyst ID: DVV10203

Method used: /chem/HP09915.i/20feb26a.b/m8260c5.m
 Calibration date and time: 26-FEB-2020 09:44

Sublist used: ACRO

Date, time and analyst ID of latest file update: 26-Feb-2020 11:21 dvv10203

Sample Name: ACRO

Lab Sample ID: ACRO

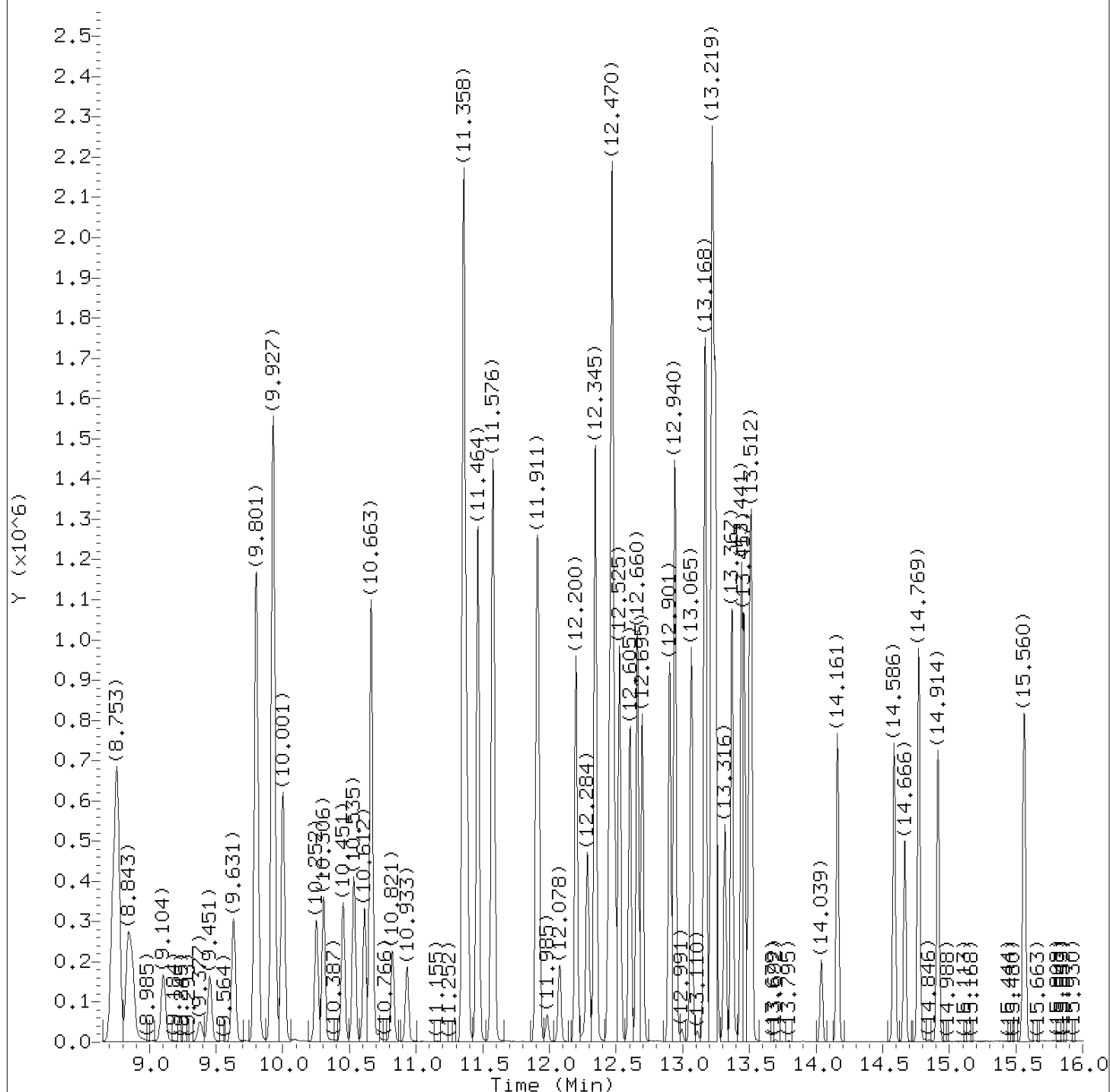
Digitally signed by Don V. Viray
 on 02/26/2020 at 11:22.

Target 3.5 esignature user ID: dvv10203

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page 1 of 2

/chem/HP09915.i/20feb26a.b/1f26s99.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20feb26a.b/1f26s99.d
 Injection date and time: 26-FEB-2020 09:06

Instrument ID: HP09915.i
 Analyst ID: DVV10203

Method used: /chem/HP09915.i/20feb26a.b/m8260c5.m
 Calibration date and time: 26-FEB-2020 09:44

Sublist used: ACRO

Date, time and analyst ID of latest file update: 26-Feb-2020 11:21 dvv10203

Sample Name: ACRO

Lab Sample ID: ACRO

Digitally signed by Don V. Viray
 on 02/26/2020 at 11:22.

Target 3.5 esignature user ID: dvv10203

KR421 Page 280 of 592

page 2 of 2

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20feb26a.b/lf26s99.d

Instrument ID: HP09915.i

Injection date and time: 26-FEB-2020 09:06

Analyst ID: DVV10203

Method used: /chem/HP09915.i/20feb26a.b/m8260c5.m

Sublist used: ACRO

Calibration date and time: 26-FEB-2020 09:44

Date, time and analyst ID of latest file update: 26-Feb-2020 11:21 dvv10203

Sample Name: ACRO

Lab Sample ID: ACRO

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
16) Acrolein	(1)	3.612	56	292205	142.615
29) *t-Butyl alcohol-d10	(1)	4.499	65	280526M	250.000
52) \$Dibromofluoromethane	(2)	7.068	113	297640	50.046
57) \$1,2-Dichloroethane-d4	(2)	7.519	102	76529	49.615
66) *Fluorobenzene	(2)	7.949	96	1257785	50.000
83) \$Toluene-d8	(3)	9.927	98	1265719	50.194
100) *Chlorobenzene-d5	(3)	11.358	117	959810	50.000
114) \$4-Bromofluorobenzene	(3)	12.342	95	472428	49.680
131) *1,4-Dichlorobenzene-d4	(4)	13.219	152	534018	50.000

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

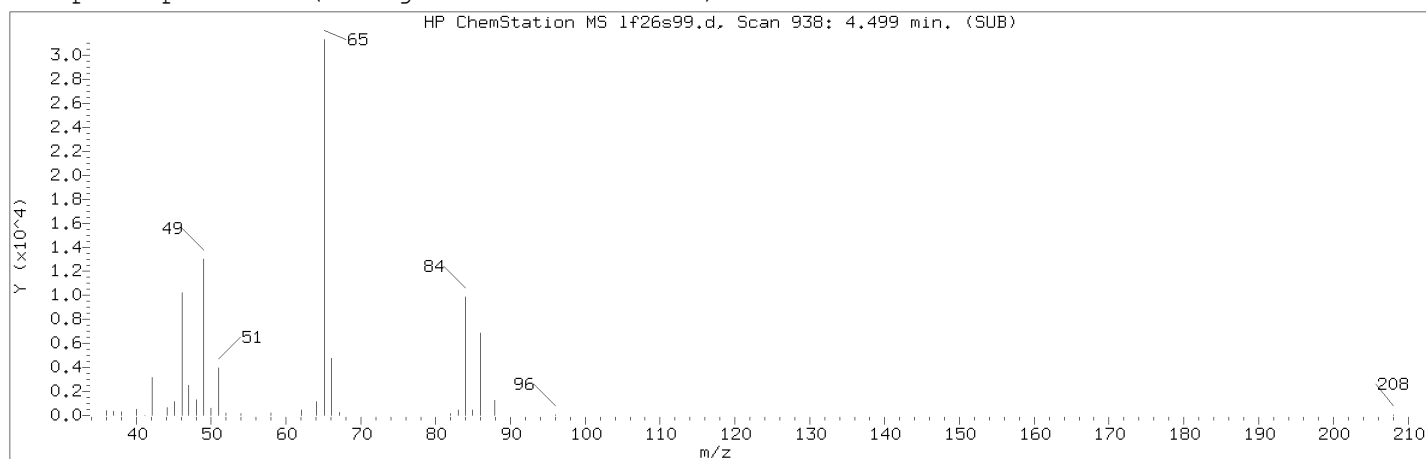
page 1 of 1

Digitally signed by Don V. Viray
on 02/26/2020 at 11:22.

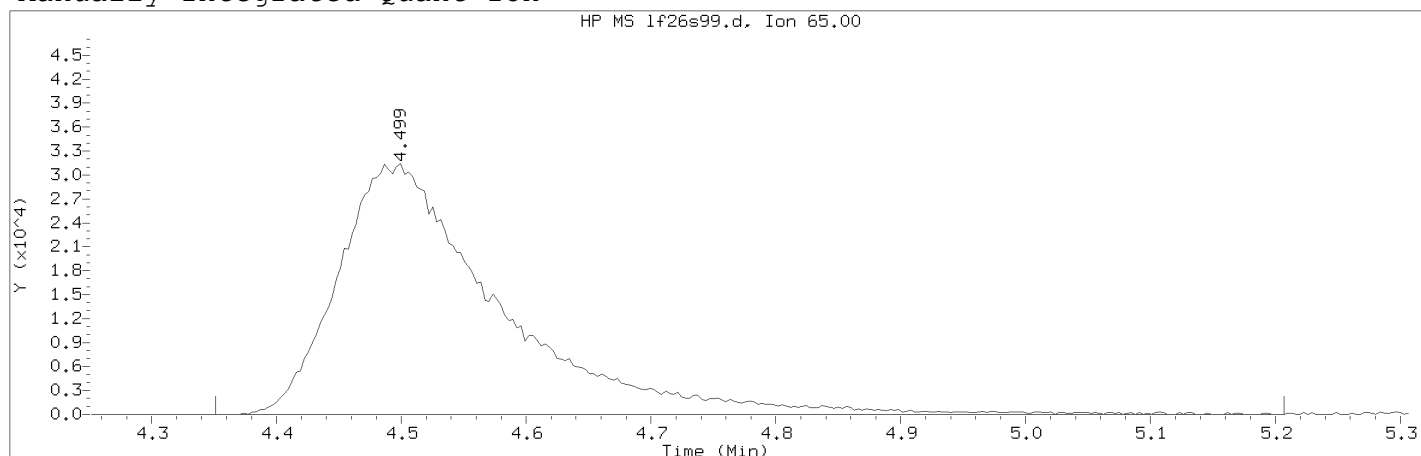
Target 3.5 esignature user ID: dvv10203

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Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20feb26a.b/1f26s99.d

Instrument ID: HP09915.i

Injection date and time: 26-FEB-2020 09:06

Analyst ID: DVV10203

Method used: /chem/HP09915.i/20feb26a.b/m8260c5.m

Sublist used: ACRO

Calibration date and time: 26-FEB-2020 09:44

Date, time and analyst ID of latest file update: 26-Feb-2020 11:21 dvv10203

Sample Name: ACRO

Lab Sample ID: ACRO

Compound Number : 29
 Compound Name : t-Butyl alcohol-d10
 Scan Number : 938
 Retention Time (minutes): 4.499
 Quant Ion : 65.00
 Area (flag) : 280526M
 On-Column Amount (ng) : 250.0000
 Integration start scan : 891 Integration stop scan: 1157
 Y at integration start : 0 Y at integration end: 0

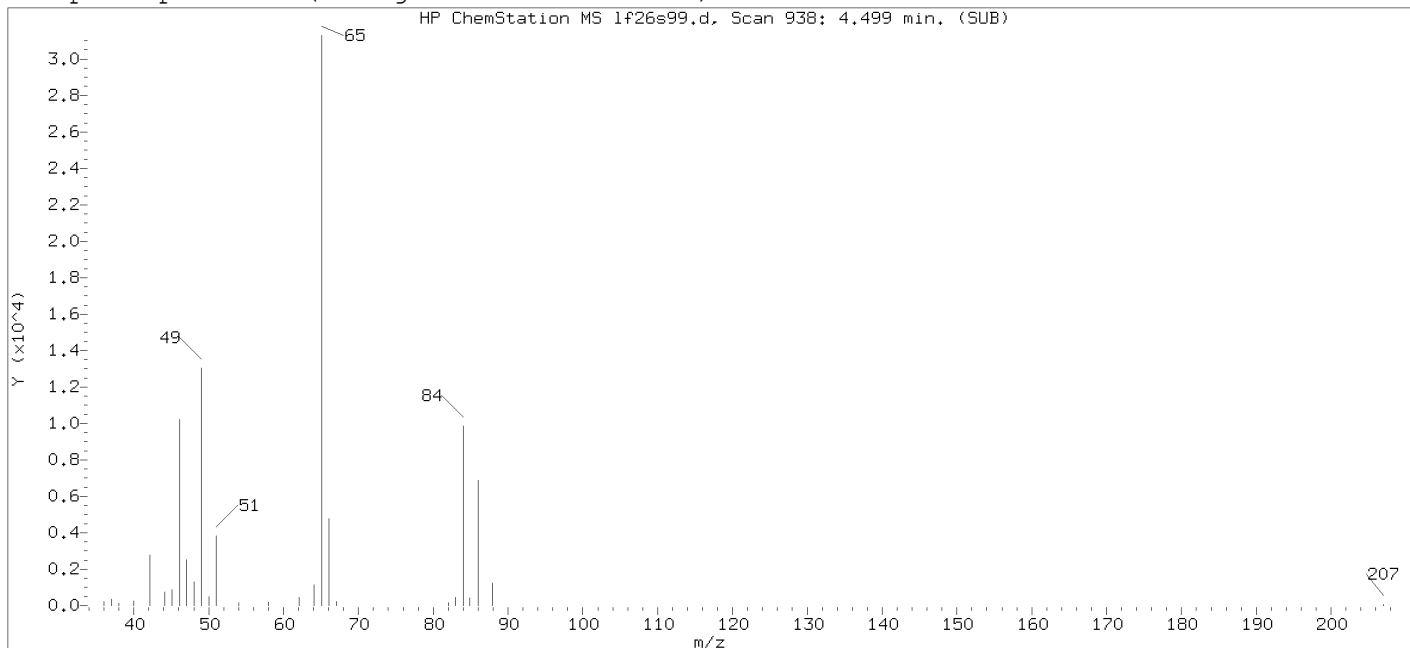
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Don V. Viray
 on 02/26/2020 at 11:22.
 Target 3.5 esignature user ID: dvv10203

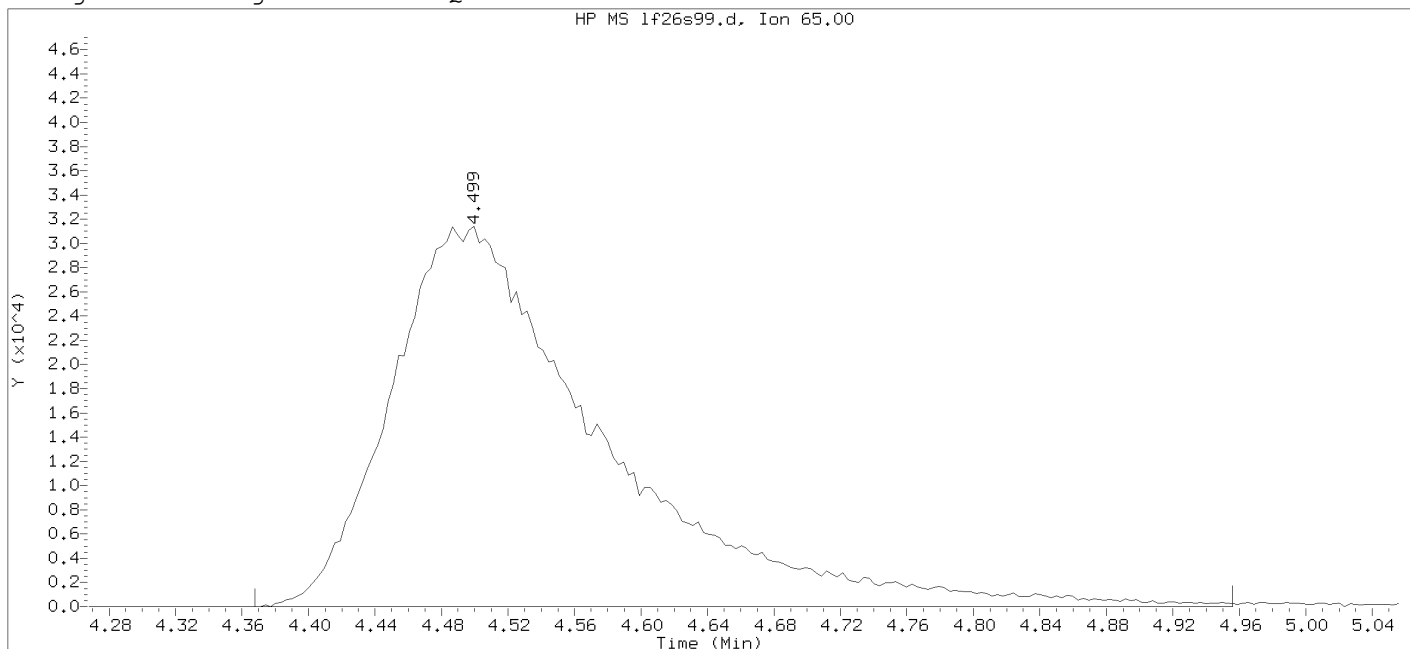
Secondary review performed and digitally signed by Kelly E. Keller on 02/28/2020 at 08:51.

PARALLAX ID: kek01027

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20feb26a.b/1f26s99.d

Instrument ID: HP09915.i

Injection date and time: 26-FEB-2020 09:06

Analyst ID: DVV10203

Method used: /chem/HP09915.i/20feb26a.b/m8260c5.m

Sublist used: ACRO

Calibration date and time: 26-FEB-2020 09:44

Date, time and analyst ID of latest file update: 26-Feb-2020 11:21 dvv10203

Sample Name: ACRO

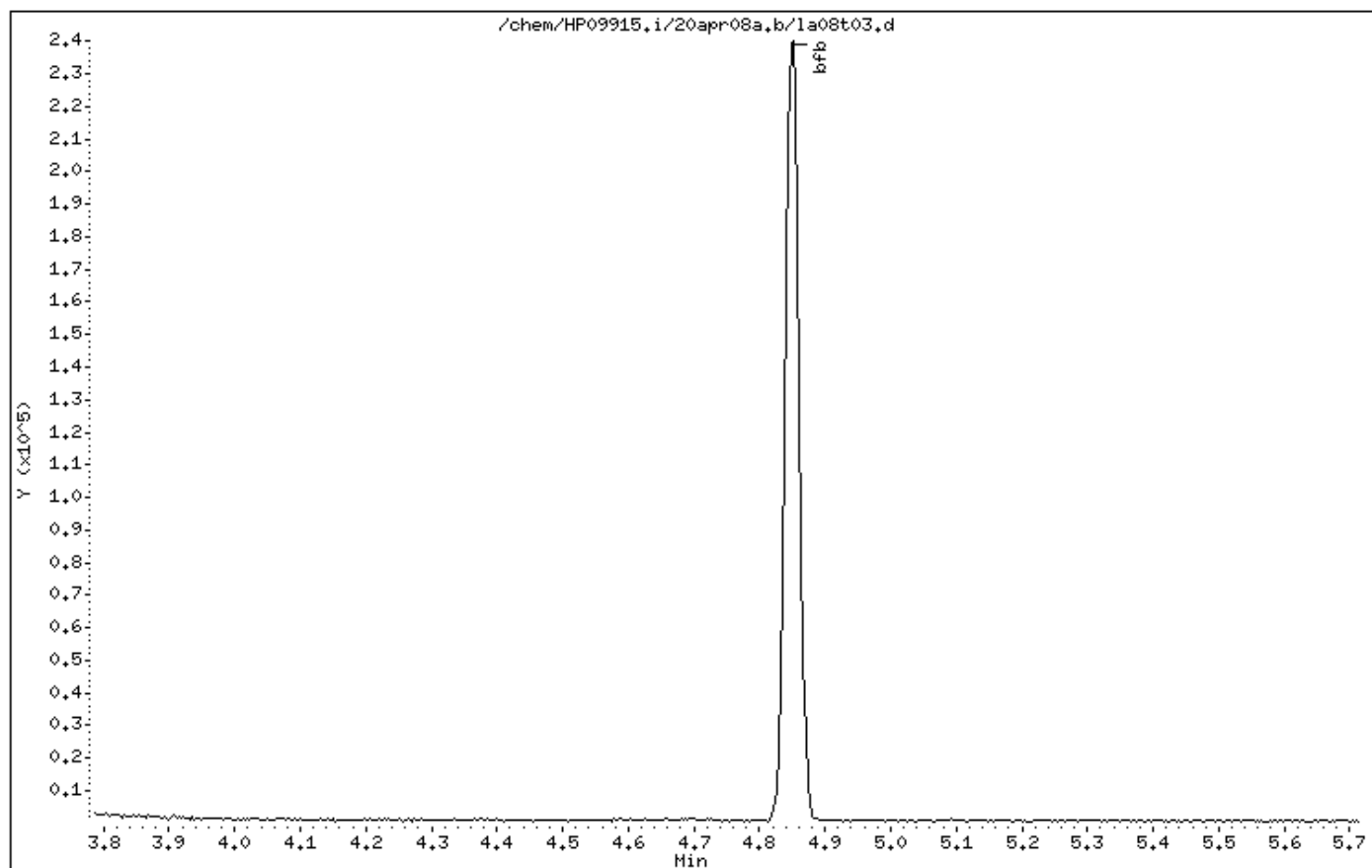
Lab Sample ID: ACRO

Compound Number	: 29
Compound Name	: t-Butyl alcohol-d10
Scan Number	: 938
Retention Time (minutes)	: 4.499
Quant Ion	: 65.00
Area	: 278295
On-column Amount (ng)	: 250.0000
Integration start scan	: 896
Integration stop scan	: 1079
Y at integration start	: 0
Y at integration end	: 0

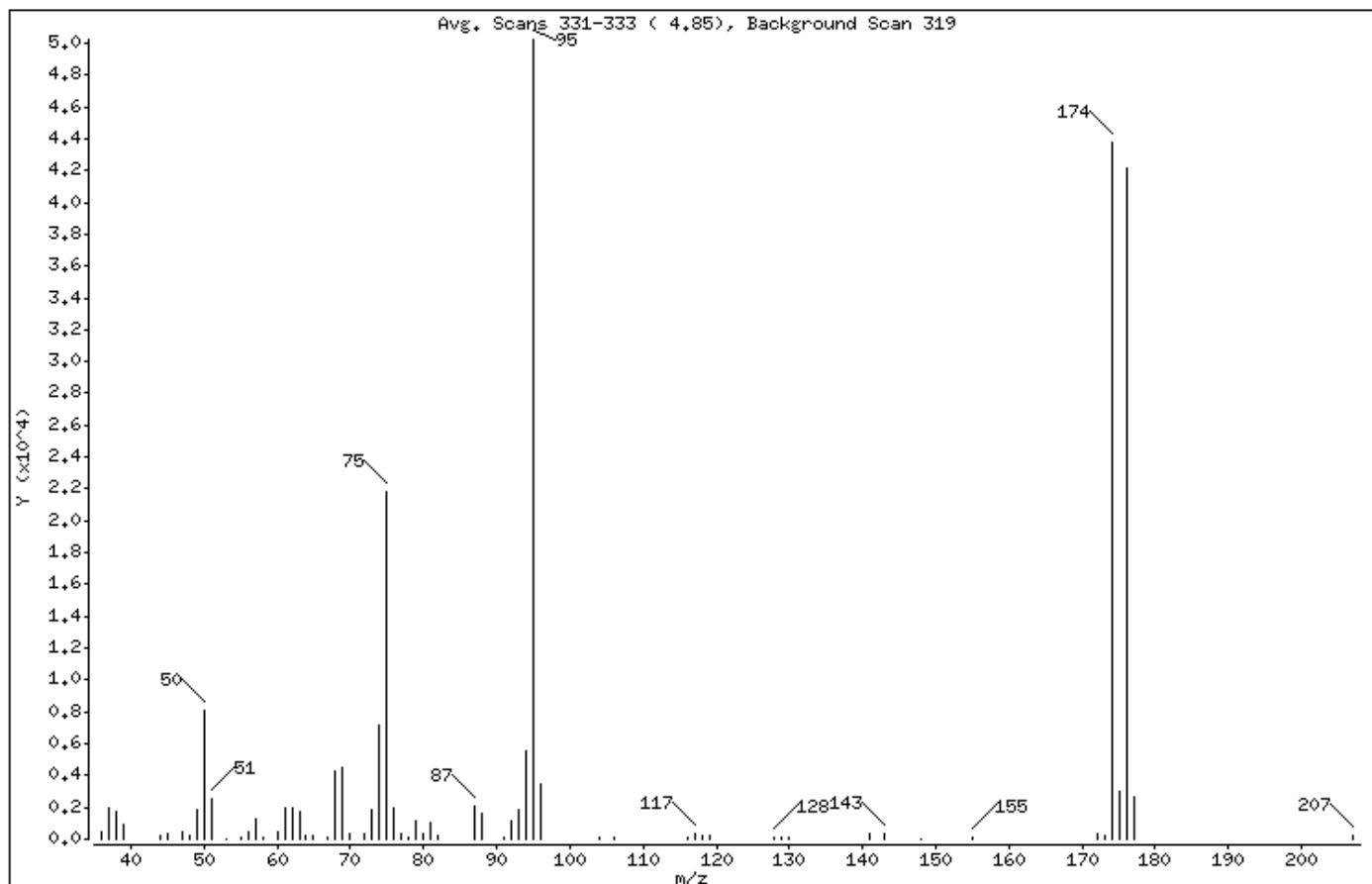
Digitally signed by Don V. Viray on 02/26/2020 at 11:22.

Target 3.5 esignature user KR421 on Page 283 of 592

Column diameter: 0.25



1 bfb

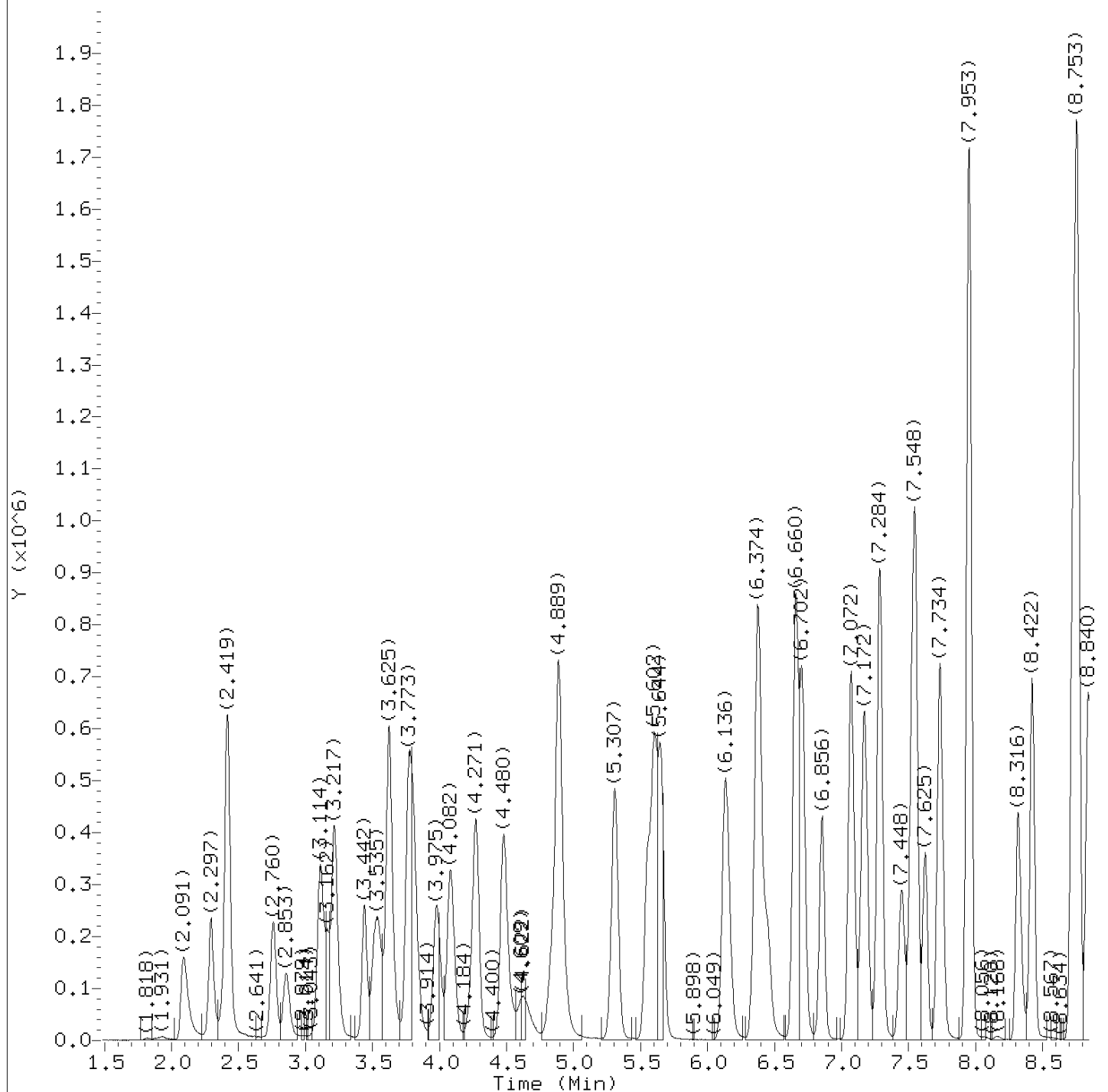


m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.08
75	30.00 - 60.00% of mass 95	43.55
96	5.00 - 9.00% of mass 95	6.95
173	Less than 2.00% of mass 174	0.50 (0.57)
174	50.00 - 100.00% of mass 95	87.21
175	5.00 - 9.00% of mass 174	5.99 (6.86)
176	95.00 - 101.00% of mass 174	83.97 (96.29)
177	5.00 - 9.00% of mass 176	5.31 (6.33)

Column diameter: 0.25

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36,00	432	61,00	1966	80,00	334	128,00	142
37,00	1933	62,00	2002	81,00	1013	129,00	58
38,00	1740	63,00	1682	82,00	284	130,00	132
39,00	886	64,00	224	87,00	2080	141,00	358
44,00	224	65,00	188	88,00	1618	143,00	385
45,00	375	67,00	100	91,00	106	148,00	56
47,00	501	68,00	4229	92,00	1148	155,00	138
48,00	279	69,00	4555	93,00	1859	172,00	312
49,00	1820	70,00	319	94,00	5493	173,00	250
50,00	8074	72,00	305	95,00	50224	174,00	43800
51,00	2512	73,00	1889	96,00	3491	175,00	3006
53,00	54	74,00	7153	104,00	134	176,00	42168
55,00	70	75,00	21872	106,00	122	177,00	2669
56,00	516	76,00	1919	116,00	156	207,00	176
57,00	1254	77,00	340	117,00	297		
58,00	58	78,00	128	118,00	181		
60,00	410	79,00	1156	119,00	265		

/chem/HP09915.i/20apr08a.b/1a08c01.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20apr08a.b/1a08c01.d
 Injection date and time: 08-APR-2020 09:17

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m
 Calibration date and time: 08-APR-2020 09:59

Sublist used: 8260W

Date, time and analyst ID of latest file update: 08-Apr-2020 09:59 clm27445

Sample Name: VSTD050

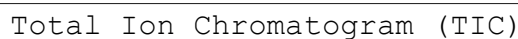
Lab Sample ID: VSTD050

Digitally signed by Corie L. Mellinger
 on 04/08/2020 at 10:01.

Target 3.5 esignature user ID: clm27445

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page 1 of 2



September 2020

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20apr08a.b/1a08c01.d
 Injection date and time: 08-APR-2020 09:17

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 08-APR-2020 09:59

Date, time and analyst ID of latest file update: 08-Apr-2020 09:59 clm27445

Sample Name: VSTD050

Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
3) Dichlorodifluoromethane	(2)	2.088	85	381671	48.125
4) Chloromethane	(2)	2.294	50	379618	47.892
5) 1,3-Butadiene	(2)	2.416	39	347919	58.572
6) Vinyl Chloride	(2)	2.419	62	367540	49.148
8) Bromomethane	(2)	2.760	94	253978	48.392
9) Chloroethane	(2)	2.857	64	205003	49.649
10) Dichlorofluoromethane	(2)	3.114	67	431708	47.146
12) Trichlorofluoromethane	(2)	3.165	101	414302	53.450
11) n-Pentane	(2)	3.217	43	427406	48.771
14) Ethyl ether	(2)	3.439	59	220579	39.876
15) Freon 123a	(2)	3.532	67	329853	52.972
16) Acrolein	(1)	3.625	56	969900	475.516
17) 1,1-Dichloroethene	(2)	3.773	96	259944	49.027
17) 1,1-Dichloroethene	(2)	3.773	63	126952	50.683
19) Freon 113	(2)	3.802	101	268186	53.174
18) Acetone	(1)	3.805	58	89460	99.174
22) Methyl Iodide	(2)	3.975	142	506313	54.009
21) 2-Propanol	(1)	3.988	45	160993	256.172
23) Carbon Disulfide	(2)	4.085	76	905761	54.081
27) Methyl Acetate	(2)	4.246	43	328235	49.600
25) Allyl Chloride	(2)	4.274	41	417170	48.895
28) Methylene Chloride	(2)	4.480	84	304657	51.465
29) *t-Butyl alcohol-d10	(1)	4.493	65	279262M	250.000
30) t-Butyl alcohol	(1)	4.628	59	261073	241.681
31) Acrylonitrile	(2)	4.831	53	177320	49.435
32) trans-1,2-Dichloroethene	(2)	4.885	96	294997	50.726
33) Methyl Tertiary Butyl Ether	(2)	4.889	73	831513	46.935
34) n-Hexane	(2)	5.313	57	449841	53.779
36) 1,1-Dichloroethane	(2)	5.554	63	511547	52.554
38) di-Isopropyl ether	(2)	5.602	45	939485	50.228
39) 2-Chloro-1,3-butadiene	(2)	5.657	53	425925	51.165
40) Ethyl t-butyl ether	(2)	6.136	59	835515	47.035
43) 1,2-Dichloroethene (Total)	(2)		96	623614	101.252
44) 2-Butanone	(2)	6.352	43	437323	95.349
42) cis-1,2-Dichloroethene	(2)	6.377	96	328617	50.527
45) 2,2-Dichloropropane	(2)	6.393	77	390105	50.364
47) Propionitrile	(1)	6.448	54	371532	265.377
48) Methacrylonitrile	(2)	6.657	67	475495	129.602

M = Compound was manually integrated.

* = Compound is an internal standard.

page 1 of 4

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Target 3.5 esignature user ID: clm27445

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20apr08a.b/1a08c01.d
 Injection date and time: 08-APR-2020 09:17

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 08-APR-2020 09:59

Date, time and analyst ID of latest file update: 08-Apr-2020 09:59 clm27445

Sample Name: VSTD050

Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
49) Bromochloromethane	(2)	6.705	128	171220	52.976
50) Tetrahydrofuran	(1)	6.715	71	120765	95.942
51) Chloroform	(2)	6.856	83	489953	51.947
52)\$Dibromofluoromethane	(2)	7.065	113	312247	52.525
52)\$Dibromofluoromethane	(2)	7.069	111	320236	52.727
53) 1,1,1-Trichloroethane	(2)	7.075	97	426812	51.611
54) Cyclohexane	(2)	7.172	56	521245	51.183
54) Cyclohexane	(2)	7.172	84	440100	51.182
54) Cyclohexane	(2)	7.172	69	155645	49.831
55) 1,1-Dichloropropene	(2)	7.287	75	400938	51.971
56) Carbon Tetrachloride	(2)	7.287	117	369649	54.706
58) Isobutyl Alcohol	(1)	7.448	41	233284	635.583
57)\$1,2-Dichloroethane-d4	(2)	7.522	102	81539	52.886
57)\$1,2-Dichloroethane-d4	(2)	7.522	65	352303	51.191
57)\$1,2-Dichloroethane-d4	(2)	7.519	104	51081	52.193
60) Benzene	(2)	7.551	78	1211362	51.473
61) 1,2-Dichloroethane	(2)	7.625	62	394366	50.120
61) 1,2-Dichloroethane	(2)	7.625	98	39800	55.230
65) t-Amyl methyl ether	(2)	7.734	73	860586	48.166
66)*Fluorobenzene	(2)	7.950	96	1257238	50.000
67) n-Heptane	(2)	7.953	43	470036	57.382
69) n-Butanol	(1)	8.316	56	398602	1297.315
71) Trichloroethene	(2)	8.422	95	303311	51.196
72) Methylcyclohexane	(2)	8.728	83	537426	54.070
72) Methylcyclohexane	(2)	8.728	98	242887	54.181
73) 1,2-Dichloropropane	(2)	8.760	63	317005	51.850
76) Methyl Methacrylate	(2)	8.840	69	291167	49.883
75) 1,4-Dioxane	(1)	8.850	88	63906M	780.816
74) Dibromomethane	(2)	8.872	93	209766	52.758
78) Bromodichloromethane	(2)	9.104	83	372235	52.368
79) 2-Nitropropane	(2)	9.377	41	226949	103.780
80) 2-Chloroethyl Vinyl Ether	(2)	9.451	63	230872	51.509
81) cis-1,3-Dichloropropene	(2)	9.628	75	498825	52.381
82) 4-Methyl-2-pentanone	(2)	9.798	43	900383	94.884
83)\$Toluene-d8	(3)	9.927	98	1257529	49.308
83)\$Toluene-d8	(3)	9.927	100	820142	49.484
88) Toluene	(3)	9.998	92	764669	50.462
90) 1,3-Dichloropropene (total)	(3)		100	968606	104.407

M = Compound was manually integrated.

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\$ = Compound is a surrogate standard.

page 2 of 4

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Target 3.5 esignature user ID: clm27445

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20apr08a.b/1a08c01.d
 Injection date and time: 08-APR-2020 09:17

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 08-APR-2020 09:59

Date, time and analyst ID of latest file update: 08-Apr-2020 09:59 clm27445

Sample Name: VSTD050

Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
89) trans-1,3-Dichloropropene	(3)	10.252	75	469781	52.026
91) Ethyl Methacrylate	(3)	10.303	69	503458	48.694
92) 1,1,2-Trichloroethane	(3)	10.451	97	303452	50.808
93) Tetrachloroethene	(3)	10.531	166	334075	51.948
94) 1,3-Dichloropropane	(3)	10.612	76	511483	51.306
96) 2-Hexanone	(3)	10.660	43	661347	94.696
97) Dibromochloromethane	(3)	10.821	129	327740	54.293
99) 1,2-Dibromoethane	(3)	10.930	107	332212	51.123
100) *Chlorobenzene-d5	(3)	11.351	117	970727	50.000
101) 1-Chlorohexane	(3)	11.358	91	410001	48.534
102) Chlorobenzene	(3)	11.380	112	888925	52.202
103) 1,1,1,2-Tetrachloroethane	(3)	11.461	131	307285	53.981
104) Ethylbenzene	(3)	11.461	91	1468502	50.728
106) m+p-Xylene	(3)	11.576	106	1171707	103.126
108) Xylene (Total)	(3)		106	1740443	153.625
107) o-Xylene	(3)	11.901	106	568736	50.499
109) Styrene	(3)	11.917	104	951966	50.255
110) Bromoform	(3)	12.075	173	243028	52.013
111) Isopropylbenzene	(3)	12.197	105	1463294	50.709
112) Cyclohexanone	(1)	12.281	55	205942	627.310
114) \$4-Bromofluorobenzene	(3)	12.342	95	463361	48.178
114) \$4-Bromofluorobenzene	(3)	12.342	174	397440	49.992
116) 1,1,2,2-Tetrachloroethane	(4)	12.445	83	487101	48.544
115) Bromobenzene	(4)	12.461	156	390035	52.231
118) trans-1,4-Dichloro-2-butene	(4)	12.467	53	264725	92.099
117) 1,2,3-Trichloropropane	(4)	12.490	110	150164	50.429
119) n-Propylbenzene	(4)	12.525	91	1746222	51.845
120) 2-Chlorotoluene	(4)	12.602	126	363815	51.995
122) 1,3,5-Trimethylbenzene	(4)	12.657	105	1277920	51.571
121) 4-Chlorotoluene	(4)	12.695	126	379851	52.328
124) tert-Butylbenzene	(4)	12.901	134	269611M	52.882
125) Pentachloroethane	(4)	12.933	167	228035	55.944
126) 1,2,4-Trimethylbenzene	(4)	12.943	105	1353911	52.197
127) sec-Butylbenzene	(4)	13.062	105	1622878	53.305
129) 1,3-Dichlorobenzene	(4)	13.165	146	730819	51.909
130) p-Isopropyltoluene	(4)	13.168	119	1407807	53.675
131) *1,4-Dichlorobenzene-d4	(4)	13.216	152	528305	50.000
133) 1,4-Dichlorobenzene	(4)	13.236	146	751532	51.540

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 3 of 4

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 on 04/08/2020 at 10:01.

Target 3.5 esignature user ID: clm27445

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20apr08a.b/1a08c01.d

Instrument ID: HP09915.i

Injection date and time: 08-APR-2020 09:17

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 08-APR-2020 09:59

Date, time and analyst ID of latest file update: 08-Apr-2020 09:59 clm27445

Sample Name: VSTD050

Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
134) 1,2,3-Trimethylbenzene	(4)	13.245	105	1325440	51.114
135) Benzyl Chloride	(4)	13.313	91	1021203	53.805
136) 1,3-Diethylbenzene	(4)	13.367	119	837865	52.727
141) Diethylbenzene (total)	(4)		100	2423974	158.409
137) 1,4-Diethylbenzene	(4)	13.438	119	881194	52.937
139) n-Butylbenzene	(4)	13.461	92	682544	51.622
138) 1,2-Dichlorobenzene	(4)	13.496	146	711698	50.797
140) 1,2-Diethylbenzene	(4)	13.512	119	704915	52.745
142) 1,2-Dibromo-3-chloropropane	(4)	14.039	75	108786	49.749
144) 1,3,5-Trichlorobenzene	(4)	14.158	180	544585	51.679
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	505386	49.944
147) Hexachlorobutadiene	(4)	14.663	225	211652	47.567
148) Naphthalene	(4)	14.769	128	1767117	51.734
149) 1,2,3-Trichlorobenzene	(4)	14.914	180	499926	52.211
150) 2-Methylnaphthalene	(4)	15.560	142	975297	53.239

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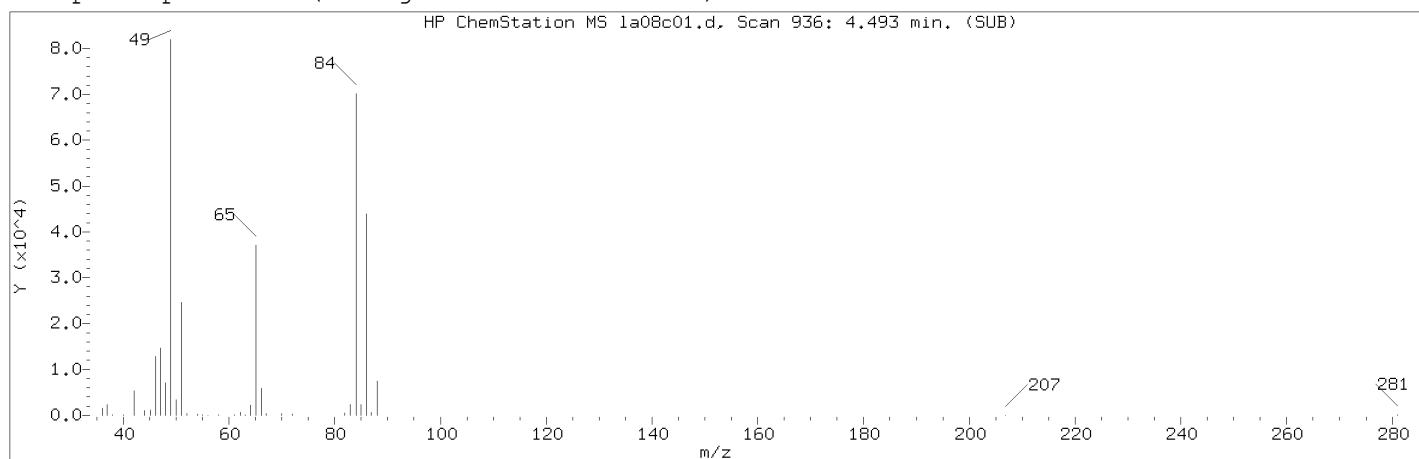
Digitally signed by Corie L. Mellinger

on 04/08/2020 at 10:01.

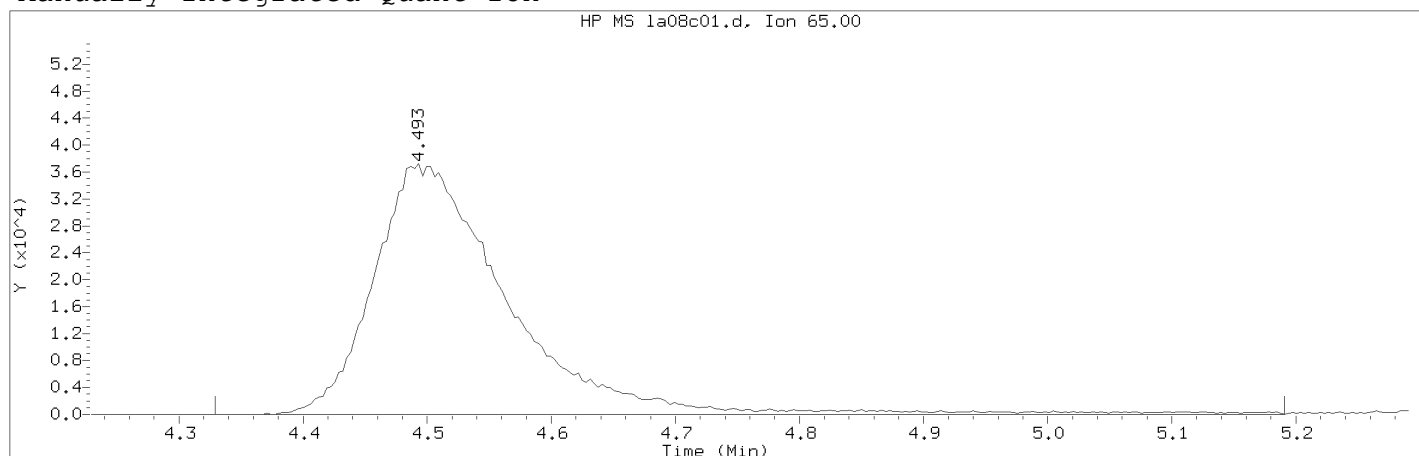
Target 3.5 esignature user ID: clm27445

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Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20apr08a.b/1a08c01.d Instrument ID: HP09915.i
 Injection date and time: 08-APR-2020 09:17 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 08-APR-2020 09:59
 Date, time and analyst ID of latest file update: 08-Apr-2020 09:59 clm27445

Sample Name: VSTD050

Lab Sample ID: VSTD050

Compound Number : 29
 Compound Name : t-Butyl alcohol-d10
 Scan Number : 936
 Retention Time (minutes): 4.493
 Quant Ion : 65.00
 Area (flag) : 279262M
 On-Column Amount (ng) : 250.0000
 Integration start scan : 884 Integration stop scan: 1152
 Y at integration start : 0 Y at integration end: 0

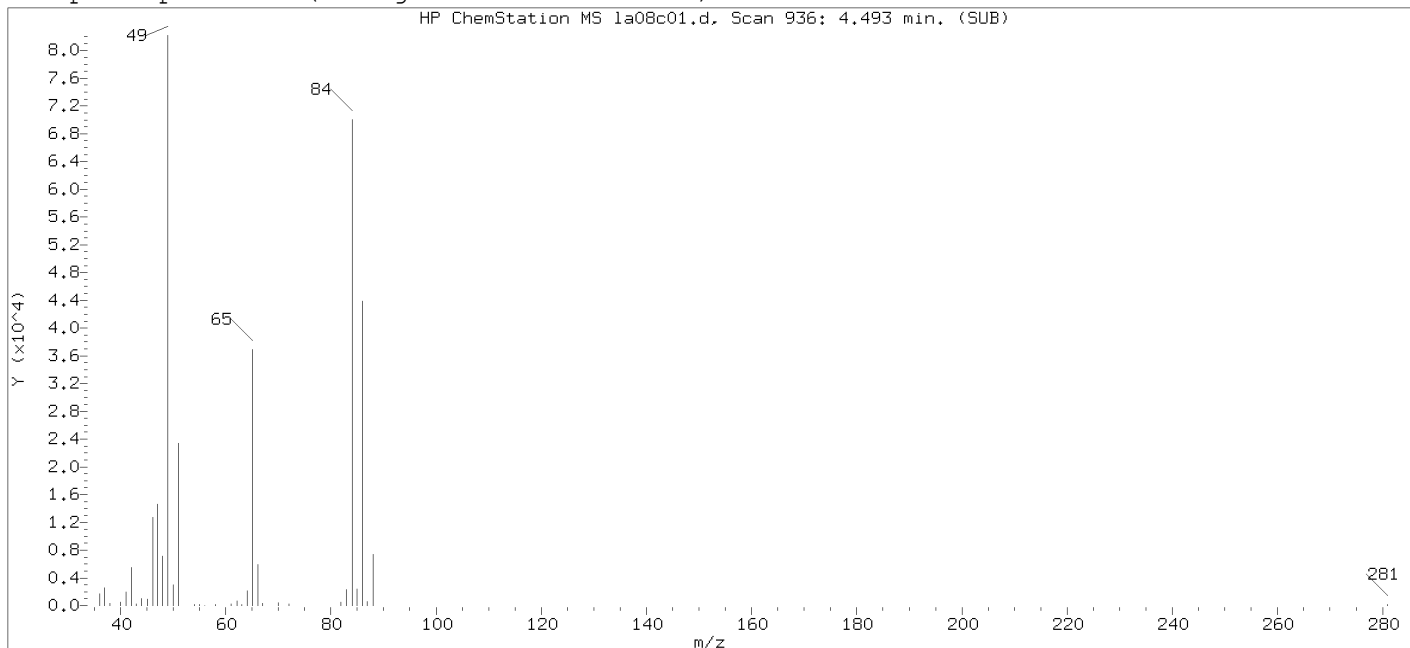
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Corie L. Mellinger
 on 04/08/2020 at 10:01.
 Target 3.5 esignature user ID: clm27445

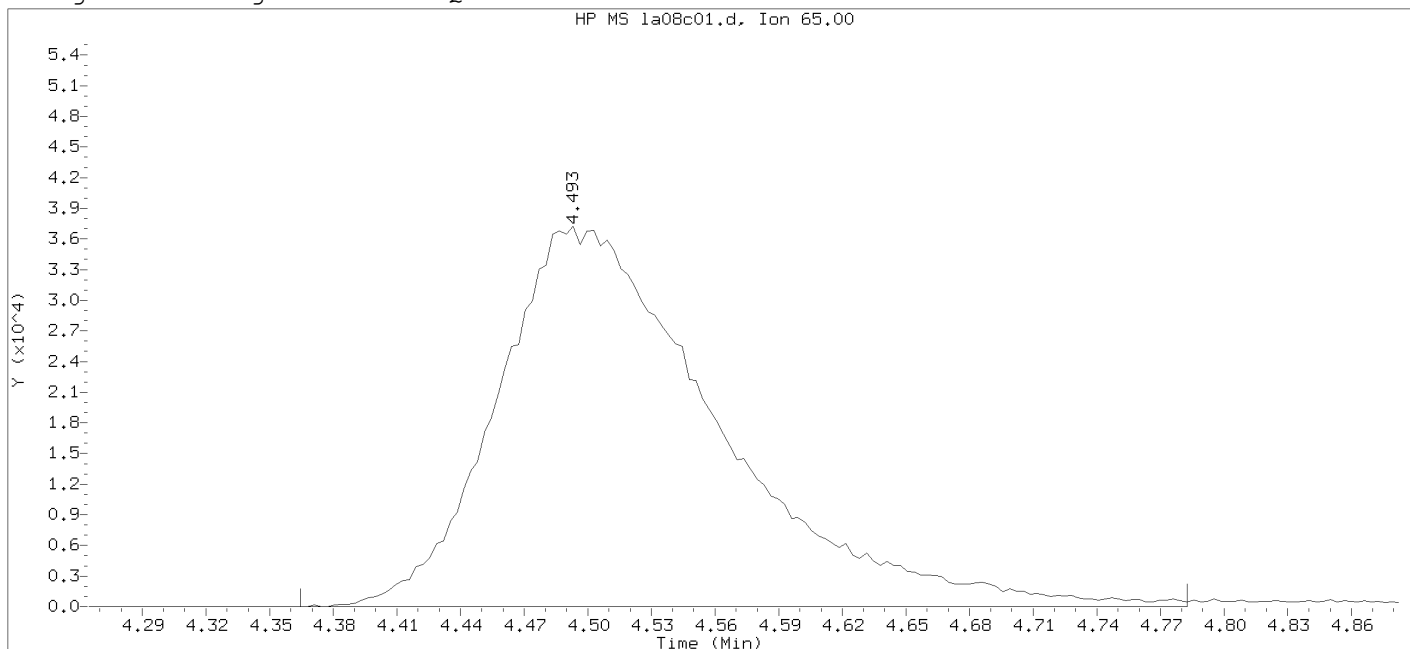
Secondary review performed and digitally signed by Kari Becker on 04/08/2020 at 18:49.

PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20apr08a.b/1a08c01.d

Instrument ID: HP09915.i

Injection date and time: 08-APR-2020 09:17

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 08-APR-2020 09:34

Date, time and analyst ID of latest file update: 08-Apr-2020 09:34 Automation

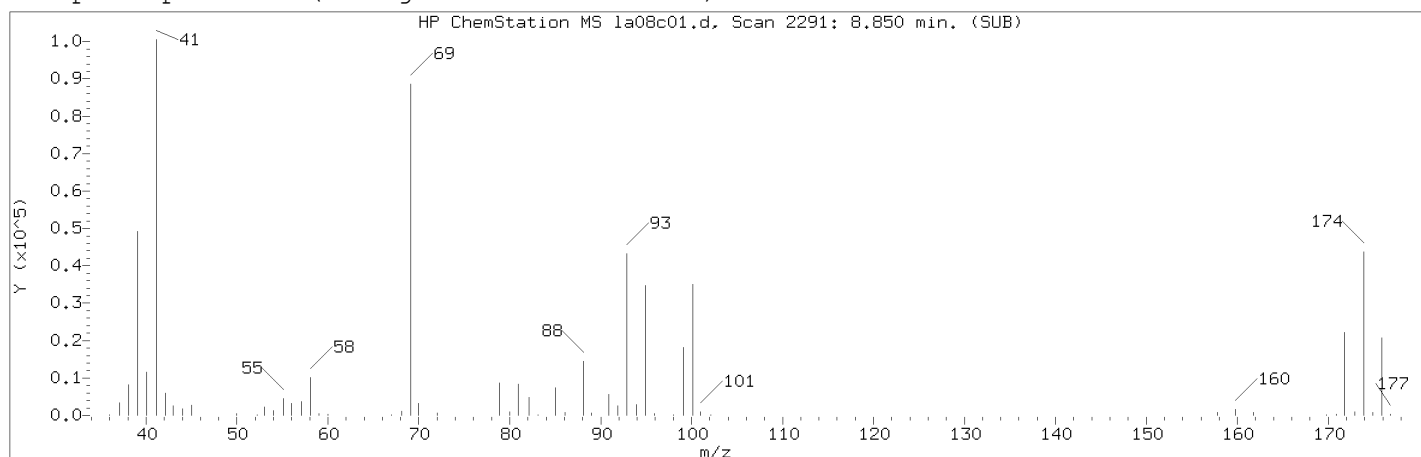
Sample Name: VSTD050

Lab Sample ID: VSTD050

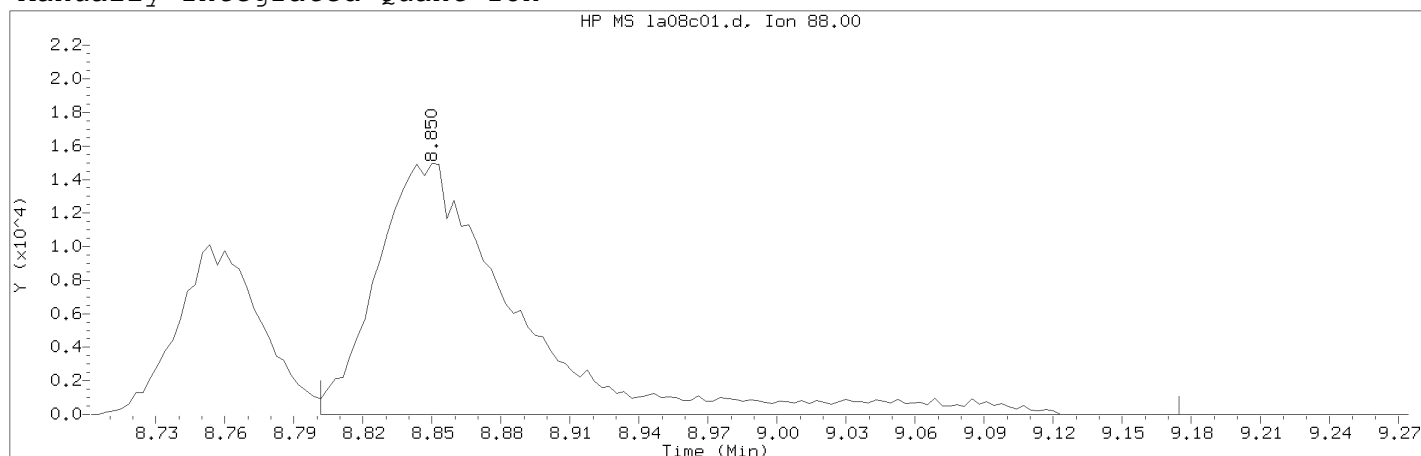
Compound Number	: 29
Compound Name	: t-Butyl alcohol-d10
Scan Number	: 936
Retention Time (minutes)	: 4.493
Quant Ion	: 65.00
Area	: 270235
On-column Amount (ng)	: 250.0000
Integration start scan	: 895
Integration stop scan	: 1025
Y at integration start	: 0
Y at integration end	: 0

Digitally signed by Corie L. Mellinger on 04/08/2020 at 10:01.
 Target 3.5 esignature user KR421c Page 294 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20apr08a.b/1a08c01.d Instrument ID: HP09915.i
 Injection date and time: 08-APR-2020 09:17 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 08-APR-2020 09:59
 Date, time and analyst ID of latest file update: 08-Apr-2020 09:59 clm27445

Sample Name: VSTD050

Lab Sample ID: VSTD050

Compound Number : 75
 Compound Name : 1,4-Dioxane
 Scan Number : 2291
 Retention Time (minutes): 8.850
 Quant Ion : 88.00
 Area (flag) : 63906M
 On-Column Amount (ng) : 780.8159
 Integration start scan : 2275 Integration stop scan: 2391
 Y at integration start : 0 Y at integration end: 0

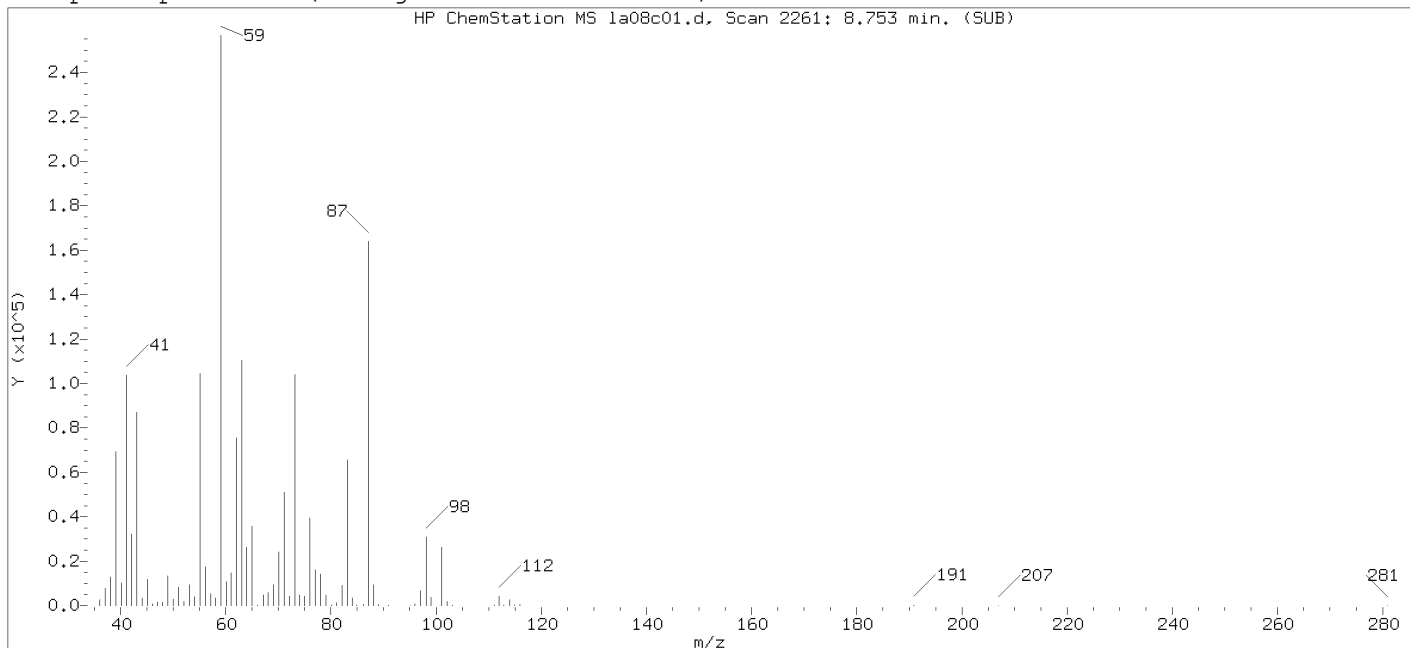
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Corie L. Mellinger
 on 04/08/2020 at 10:01.
 Target 3.5 esignature user ID: clm27445

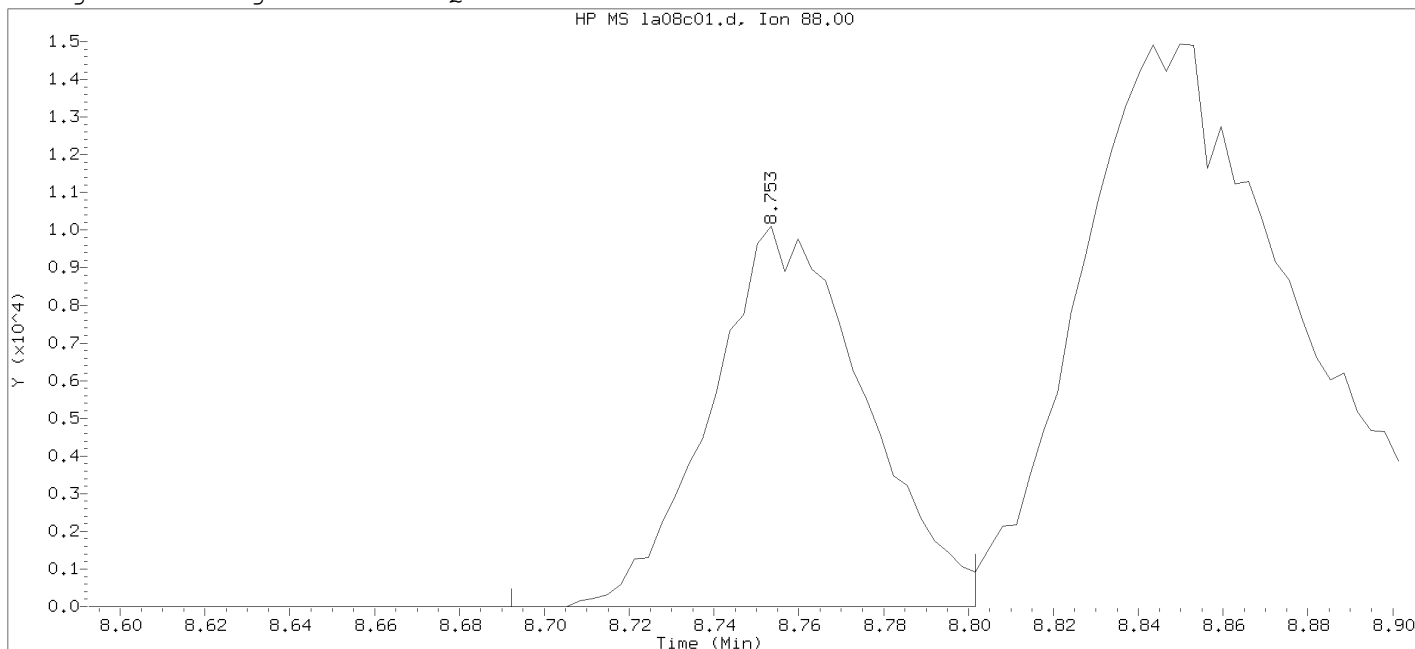
Secondary review performed and digitally signed by Kari Becker on 04/08/2020 at 18:49.

PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20apr08a.b/1a08c01.d

Instrument ID: HP09915.i

Injection date and time: 08-APR-2020 09:17

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 08-APR-2020 09:34

Date, time and analyst ID of latest file update: 08-Apr-2020 09:34 Automation

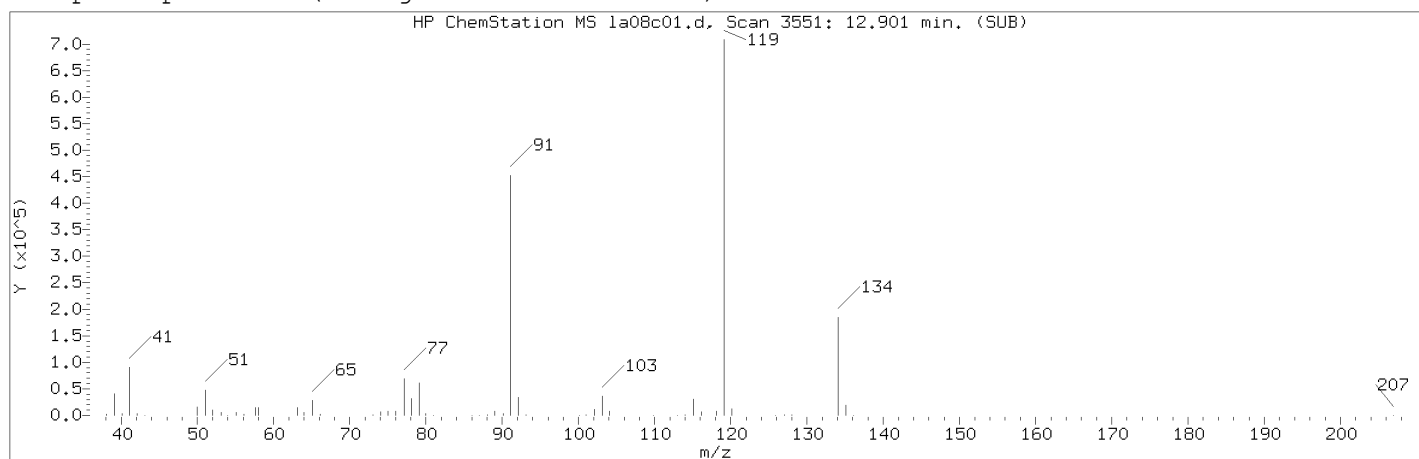
Sample Name: VSTD050

Lab Sample ID: VSTD050

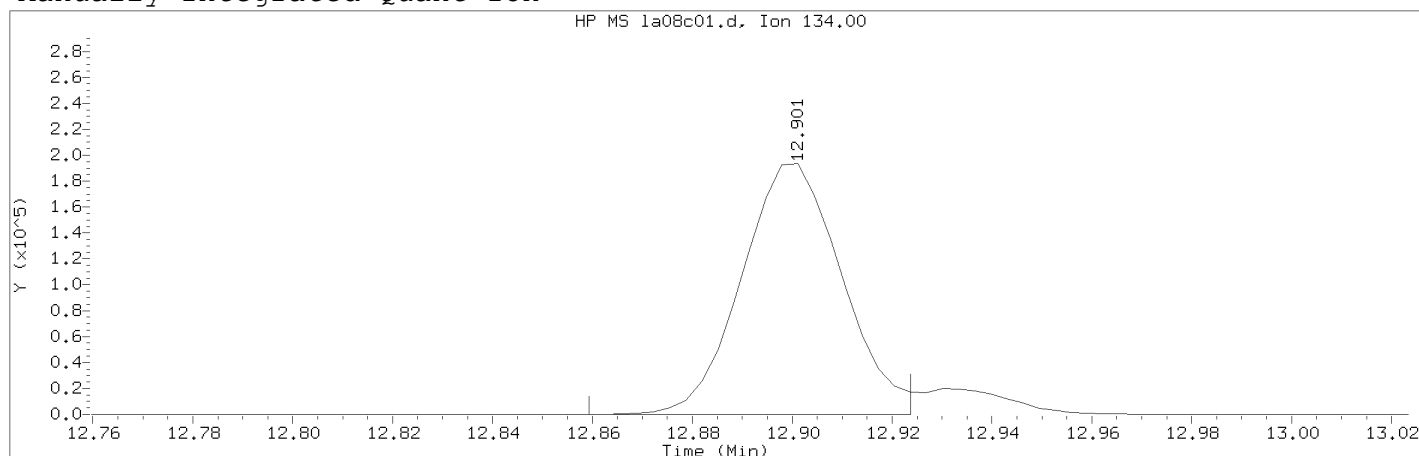
Compound Number	: 75
Compound Name	: 1,4-Dioxane
Scan Number	: 2261
Retention Time (minutes)	: 8.753
Quant Ion	: 88.00
Area	: 25414
On-column Amount (ng)	: 320.8971
Integration start scan	: 2241
Integration stop scan	: 2275
Y at integration start	: 0
Y at integration end	: 0

Digitally signed by Corie L. Mellinger on 04/08/2020 at 10:01.
 Target 3.5 esignature user KR421c Page 296 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20apr08a.b/1a08c01.d Instrument ID: HP09915.i
 Injection date and time: 08-APR-2020 09:17 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 08-APR-2020 09:59
 Date, time and analyst ID of latest file update: 08-Apr-2020 09:59 clm27445

Sample Name: VSTD050

Lab Sample ID: VSTD050

Compound Number : 124
 Compound Name : tert-Butylbenzene
 Scan Number : 3551
 Retention Time (minutes): 12.901
 Quant Ion : 134.00
 Area (flag) : 269611M
 On-Column Amount (ng) : 52.8820
 Integration start scan : 3537 Integration stop scan: 3557
 Y at integration start : 0 Y at integration end: 0

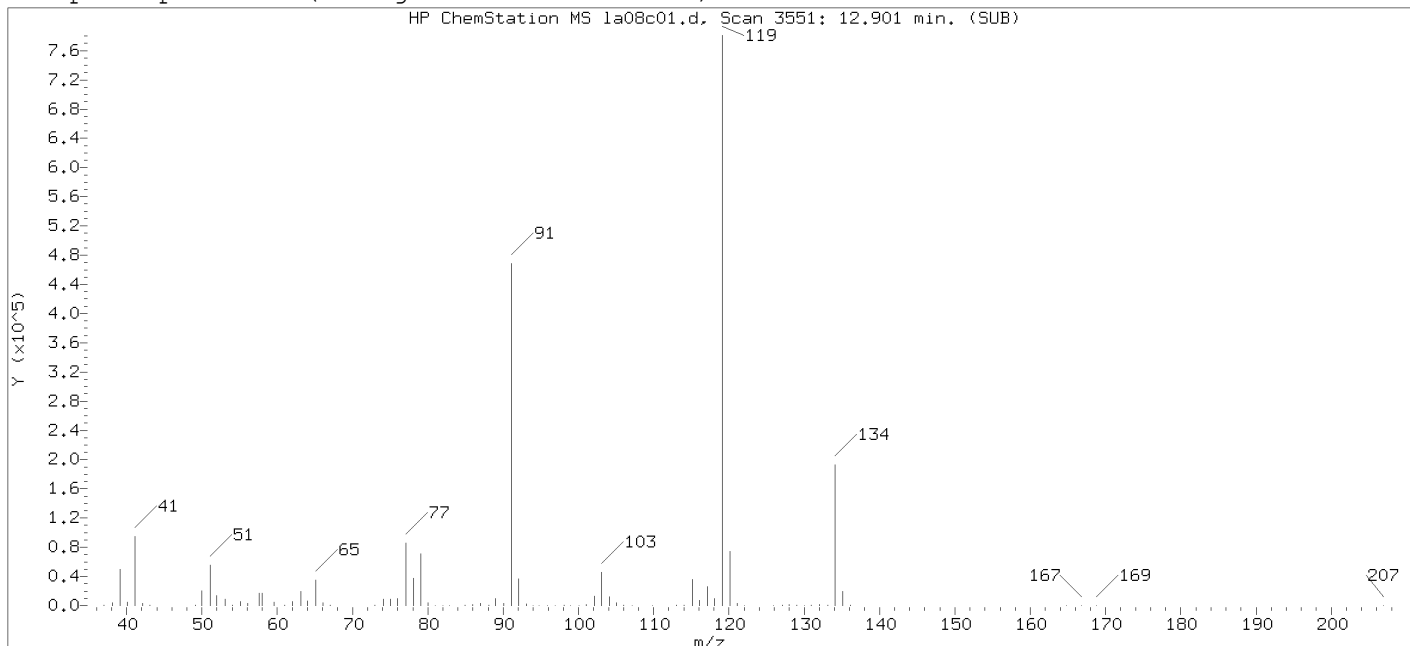
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Corie L. Mellinger
 on 04/08/2020 at 10:01.
 Target 3.5 esignature user ID: clm27445

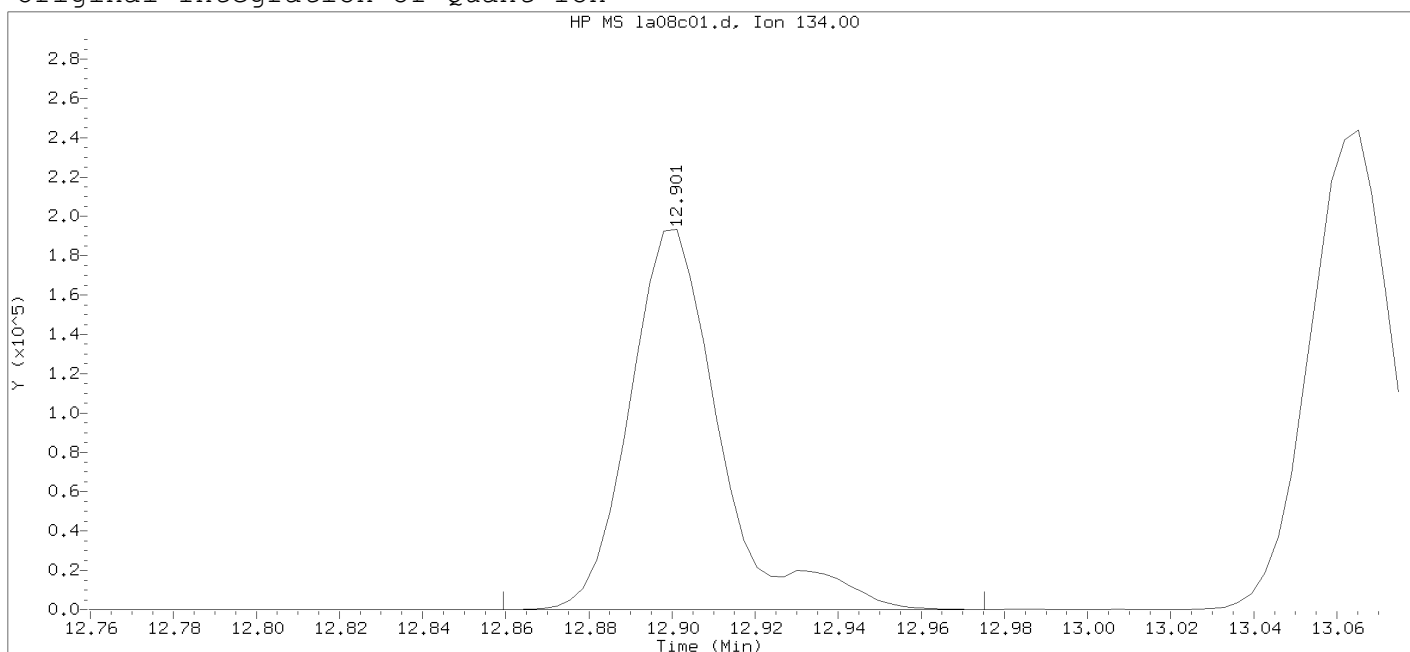
Secondary review performed and digitally signed by Kari Becker on 04/08/2020 at 18:49.

PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20apr08a.b/1a08c01.d

Instrument ID: HP09915.i

Injection date and time: 08-APR-2020 09:17

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 08-APR-2020 09:34

Date, time and analyst ID of latest file update: 08-Apr-2020 09:34 Automation

Sample Name: VSTD050

Lab Sample ID: VSTD050

Compound Number	: 124	
Compound Name	: tert-Butylbenzene	
Scan Number	: 3551	
Retention Time (minutes)	: 12.901	
Quant Ion	: 134.00	
Area	: 293212	
On-column Amount (ng)	: 57.5113	
Integration start scan	: 3537	Integration stop scan: 3573
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Corie L. Mellinger on 04/08/2020 at 10:01.
 Target 3.5 esignature user KR421 Page 298 of 592

SECC050

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

SECC050

Data file: /chem/HP09915.i/20apr08a.b/la08ec5.d

Injection date and time: 08-APR-2020 20:14

Data file Sample Info. Line: SECC050;SECC050;1;3;LCS;;DODWW;;la08b01; Instrument ID: HP09915.i Batch: L200991AA

Date, time and analyst ID of latest file update: 08-Apr-2020 20:39 sej02002

Blank Data file reference: /chem/HP09915.i/20apr08a.b/la08b01.d

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m Sublist used: L200991-SM

Calibration date and time (Last Method Edit): 08-APR-2020 10:49

Mid Level Daily Calibration Standard Reference: /chem/HP09915.i/20apr08a.b/la08c01.d

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.493 (0.000)	936	65	200964 (-28)	250.00	
66) Fluorobenzene	7.949 (0.000)	2011	96	1115256 (-11)	50.00	
100) Chlorobenzene-d5	11.354 (-0.003)	3070	117	870165 (-10)	50.00	
131) 1,4-Dichlorobenzene-d4	13.219 (-0.003)	3650	152	490828 (-7)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.065 (0.000)	113	275547	52.253	105%		80 - 119
57) 1,2-Dichloroethane-d4	(2)	7.512 (0.001)	102	69489	50.808	102%		81 - 118
83) Toluene-d8	(3)	9.924 (0.001)	98	1116141	48.822	98%		89 - 112
114) 4-Bromofluorobenzene	(3)	12.342 (0.000)	95	418712	48.567	97%		85 - 114

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)	2.082 (0.000)	85	361539	51.390	51.39			0.2	1
4) Chloromethane	(2)	2.284 (0.001)	50	346063	49.217	49.22			0.2	1
6) Vinyl Chloride	(2)	2.406 (0.001)	62	338203	50.983	50.98			0.2	1
8) Bromomethane	(2)	2.754 (0.000)	94	240658	51.692	51.69			0.3	1
9) Chloroethane	(2)	2.844 (0.001)	64	189282	51.678	51.68			0.2	1
12) Trichlorofluoromethane	(2)	3.159 (0.000)	101	396790	57.708	57.71			0.2	1
17) 1,1-Dichloroethene	(2)	3.757 (0.002)	96	231686	49.260	49.26			0.2	1
18) Acetone	(1)	3.805 (0.000)	58	78740	121.299	121.30			0.7	20
19) Freon 113	(2)	3.795 (0.000)	101	247569	55.336	55.34			0.2	10
23) Carbon Disulfide	(2)	4.075 (0.001)	76	823357	55.419	55.42			0.2	5
27) Methyl Acetate	(2)	4.236 (0.001)	43	292312	49.795	49.80			0.3	5
28) Methylene Chloride	(2)	4.470 (0.001)	84	276293	52.615	52.62			0.3	1
32) trans-1,2-Dichloroethene	(2)	4.882 (0.000)	96	267447	51.843	51.84			0.2	1
33) Methyl Tertiary Butyl Ether	(2)	4.882 (0.000)	73	719605	45.790	45.79			0.2	1
36) 1,1-Dichloroethane	(2)	5.544 (0.001)	63	462960	53.618	53.62			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.374 (0.000)	96	297496	51.565	51.56			0.2	1
43) 1,2-Dichloroethene (Total)	(2)		96	564943	103.408	103.41			0.4	2
44) 2-Butanone	(2)	6.348 (0.000)	43	383848	94.344	94.34			0.3	10
45) 2,2-Dichloropropane	(2)	6.384 (0.001)	77	344776	50.179	50.18			0.3	1
49) Bromochloromethane	(2)	6.699 (0.000)	128	156427	54.560	54.56			0.2	5
51) Chloroform	(2)	6.850 (0.000)	83	454034	54.267	54.27			0.2	1
53) 1,1,1-Trichloroethane	(2)	7.075 (0.000)	97	391642	53.387	53.39			0.3	1
54) Cyclohexane	(2)	7.168 (0.000)	56	466753	51.667	51.67			1	5
55) 1,1-Dichloropropene	(2)	7.284 (0.000)	75	362845	53.021	53.02			0.2	5
56) Carbon Tetrachloride	(2)	7.281 (0.000)	117	344293	57.441	57.44			0.2	1
60) Benzene	(2)	7.548 (0.000)	78	1115151	53.417	53.42			0.2	1
61) 1,2-Dichloroethane	(2)	7.618 (0.000)	62	370307	53.053	53.05			0.3	1
71) Trichloroethene	(2)	8.422 (-0.000)	95	277834	52.866	52.87			0.2	1
72) Methylcyclohexane	(2)	8.728 (-0.000)	83	478069	54.221	54.22			0.5	5
73) 1,2-Dichloropropane	(2)	8.760 (-0.000)	63	290689	53.598	53.60			0.2	1
74) Dibromomethane	(2)	8.869 (0.000)	93	192142	54.478	54.48			0.2	1

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SECC050

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

SECC050

Data file: /chem/HP09915.i/20apr08a.b/la08ec5.d

Injection date and time: 08-APR-2020 20:14

Data file Sample Info. Line: SECC050;SECC050;1;3;LCS;;DODWW;;la08b01;

Instrument ID: HP09915.i Batch: L200991AA

Date, time and analyst ID of latest file update: 08-Apr-2020 20:39 sej02002

Blank Data file reference: /chem/HP09915.i/20apr08a.b/la08b01.d

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m

Sublist used: L200991-SM

Calibration date and time (Last Method Edit): 08-APR-2020 10:49

Mid Level Daily Calibration Standard Reference: /chem/HP09915.i/20apr08a.b/la08c01.d

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo)

VOA Prep Factor: 1.00

Volume Purged (Vt): 5 ml

Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
78) Bromodichloromethane	(2)	9.100 (0.000)	83	342739	54.357	54.36			0.2	1
80) 2-Chloroethyl Vinyl Ether	(2)	9.448 (0.000)	63	201050	50.566	50.57			0.2	10
81) cis-1,3-Dichloropropene	(2)	9.628 (-0.000)	75	440854	52.187	52.19			0.2	1
82) 4-Methyl-2-pentanone	(2)	9.798 (-0.000)	43	807237	95.898	95.90			0.5	10
88) Toluene	(3)	10.001 (-0.000)	92	695390	51.193	51.19			0.2	1
89) trans-1,3-Dichloropropene	(3)	10.248 (0.000)	75	417597	51.591	51.59			0.2	1
92) 1,1,2-Trichloroethane	(3)	10.451 (0.000)	97	278775	52.070	52.07			0.2	1
93) Tetrachloroethene	(3)	10.531 (0.000)	166	336328	58.343	58.34			0.2	1
94) 1,3-Dichloropropane	(3)	10.608 (0.000)	76	472116	52.830	52.83			0.2	1
96) 2-Hexanone	(3)	10.660 (0.000)	43	597493	95.440	95.44			0.3	10
97) Dibromochloromethane	(3)	10.821 (0.000)	129	298552	55.174	55.17			0.2	1
99) 1,2-Dibromoethane	(3)	10.930 (0.000)	107	298598	51.261	51.26			0.2	1
102) Chlorobenzene	(3)	11.380 (0.000)	112	815315	53.413	53.41			0.2	1
103) 1,1,1,2-Tetrachloroethane	(3)	11.461 (0.000)	131	285197	55.891	55.89			0.2	1
104) Ethylbenzene	(3)	11.461 (0.000)	91	1354196	52.185	52.19			0.4	1
106) m+p-Xylene	(3)	11.573 (0.000)	106	1082198	106.255	106.26			1	5
107) o-Xylene	(3)	11.901 (0.000)	106	521838	51.690	51.69			0.4	1
108) Xylene (Total)	(3)		106	1604036	157.945	157.95			1	6
109) Styrene	(3)	11.917 (0.000)	104	871295	51.312	51.31			0.2	5
110) Bromoform	(3)	12.075 (0.000)	173	216782	51.757	51.76			1	4
111) Isopropylbenzene	(3)	12.197 (0.000)	105	1351644	52.253	52.25			0.2	5
115) Bromobenzene	(4)	12.460 (0.000)	156	363187	52.350	52.35			0.2	5
116) 1,1,2,2-Tetrachloroethane	(4)	12.444 (0.000)	83	446017	47.843	47.84			0.2	1
117) 1,2,3-Trichloropropane	(4)	12.490 (0.000)	110	140543	50.801	50.80			0.2	5
119) n-Propylbenzene	(4)	12.525 (0.000)	91	1614837	51.605	51.60			0.2	5
120) 2-Chlorotoluene	(4)	12.602 (0.000)	126	338462	52.065	52.06			0.2	5
121) 4-Chlorotoluene	(4)	12.695 (0.000)	126	350674	51.997	52.00			0.2	5
122) 1,3,5-Trimethylbenzene	(4)	12.657 (0.000)	105	1181454	51.319	51.32			0.3	5
124) tert-Butylbenzene	(4)	12.901 (0.000)	134	248512M	52.465	52.47			0.3	5
126) 1,2,4-Trimethylbenzene	(4)	12.940 (0.000)	105	1253611	52.020	52.02			1	5
127) sec-Butylbenzene	(4)	13.062 (0.000)	105	1501173	53.072	53.07			0.2	5
129) 1,3-Dichlorobenzene	(4)	13.162 (0.000)	146	691337	52.854	52.85			0.2	5
130) p-Isopropyltoluene	(4)	13.168 (0.000)	119	1311884	53.837	53.84			0.2	5
133) 1,4-Dichlorobenzene	(4)	13.235 (0.000)	146	706891	52.181	52.18			0.2	5
138) 1,2-Dichlorobenzene	(4)	13.496 (0.000)	146	670170	51.485	51.48			0.2	5
139) n-Butylbenzene	(4)	13.460 (0.000)	92	633507	51.571	51.57			0.2	5
142) 1,2-Dibromo-3-chloropropane	(4)	14.036 (0.000)	75	97858	48.169	48.17			0.3	5
146) 1,2,4-Trichlorobenzene	(4)	14.586 (0.000)	180	470167	50.012	50.01			0.3	5
147) Hexachlorobutadiene	(4)	14.663 (0.000)	225	197622	47.805	47.81			2	5
148) Naphthalene	(4)	14.769 (0.000)	128	1621503	51.096	51.10			1	5
149) 1,2,3-Trichlorobenzene	(4)	14.914 (0.000)	180	472930	53.163	53.16			0.4	5

M = Compound was manually integrated.

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SECC050

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

SECC050

Data file: /chem/HP09915.i/20apr08a.b/la08ec5.d Injection date and time: **08-APR-2020 20:14**
Data file Sample Info. Line: SECC050;SECC050;1;3;LCS;;DODWW;;la08b01; Instrument ID: **HP09915.i** Batch: **L200991AA**
Date, time and analyst ID of latest file update: 08-Apr-2020 20:39 sej02002

Blank Data file reference: /chem/HP09915.i/20apr08a.b/la08b01.d

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m Sublist used: **L200991-SM**
Calibration date and time (Last Method Edit): 08-APR-2020 10:49
Mid Level Daily Calibration Standard Reference: /chem/HP09915.i/20apr08a.b/la08c01.d

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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Total number of targets = 72

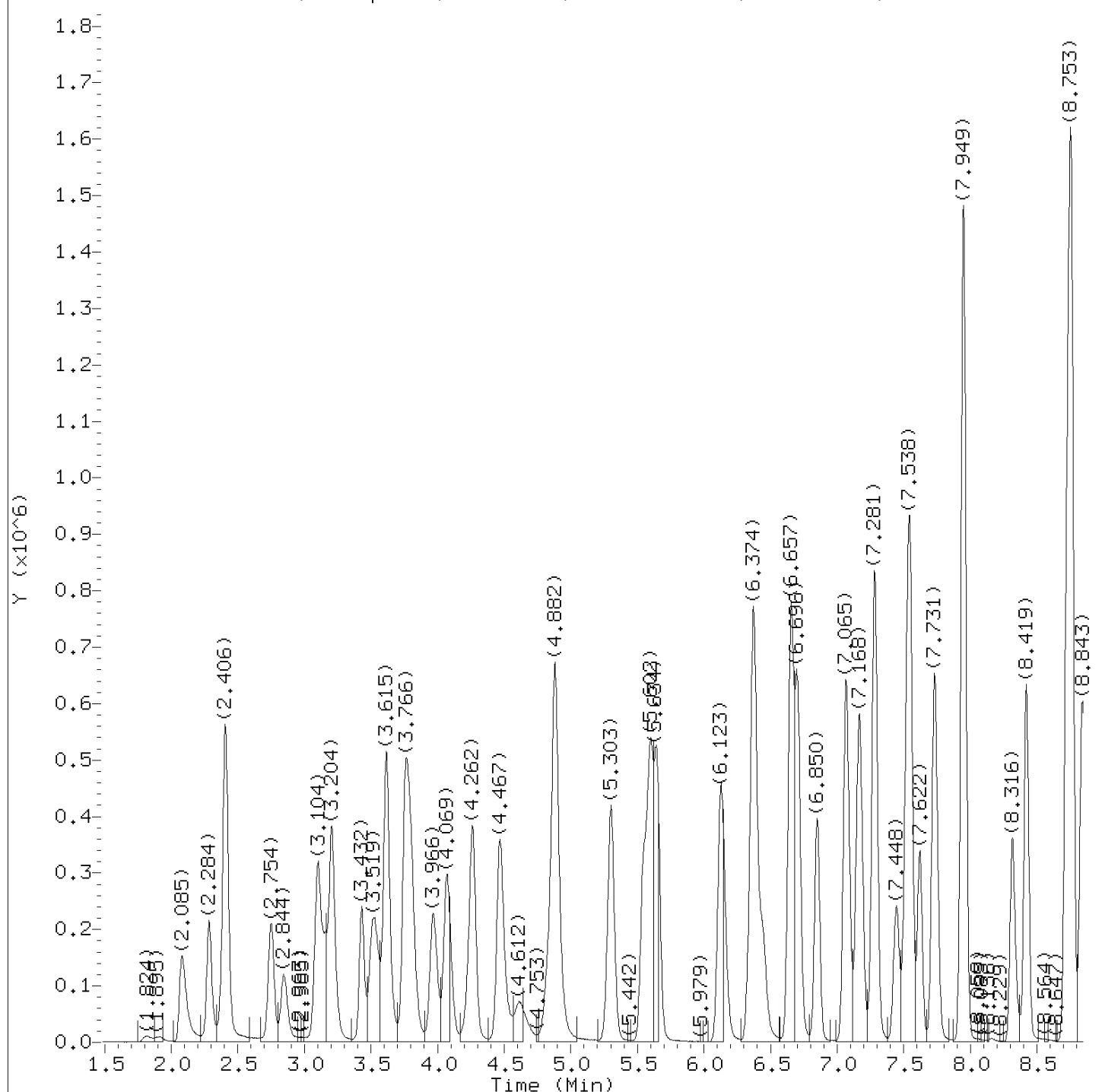
Digitally signed by Sara E. Johnson on 04/08/2020 at 20:39. Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 04/08/2020 at 21:36. PARALLAX ID: kmb29664

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/chem/HP09915.i/20apr08a.b/1a08ec5.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20apr08a.b/1a08ec5.d
 Injection date and time: 08-APR-2020 20:14

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m
 Calibration date and time: 08-APR-2020 10:49

Sublist used: L200991-SM

Date, time and analyst ID of latest file update: 08-Apr-2020 20:39 sej02002

Sample Name: SECC050

Lab Sample ID: SECC050

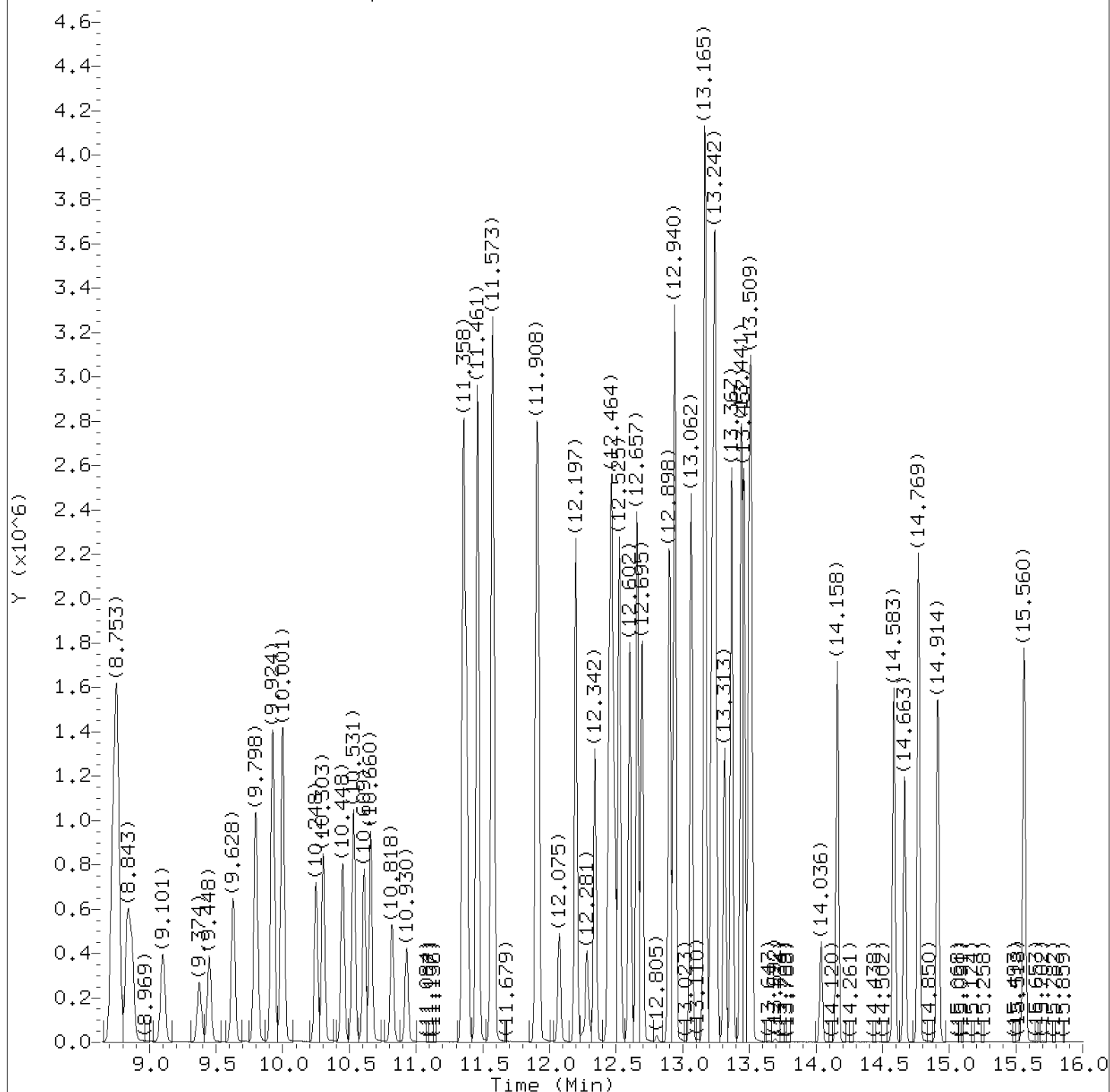
Digitally signed by Sara E. Johnson
 on 04/08/2020 at 20:39.

Target 3.5 esignature user ID: sej02002

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page 1 of 2

/chem/HP09915.i/20apr08a.b/1a08ec5.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20apr08a.b/1a08ec5.d
 Injection date and time: 08-APR-2020 20:14

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m
 Calibration date and time: 08-APR-2020 10:49

Sublist used: L200991-SM

Date, time and analyst ID of latest file update: 08-Apr-2020 20:39 sej02002

Sample Name: SECC050

Lab Sample ID: SECC050

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 on 04/08/2020 at 20:39.

Target 3.5 esignature user ID: sej02002

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20apr08a.b/1a08ec5.d

Instrument ID: HP09915.i

Injection date and time: 08-APR-2020 20:14

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m

Sublist used: L200991-SM

Calibration date and time: 08-APR-2020 10:49

Date, time and analyst ID of latest file update: 08-Apr-2020 20:39 sej02002

Sample Name: SECC050

Lab Sample ID: SECC050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
3) Dichlorodifluoromethane	(2)	2.082	85	361539	51.390
4) Chloromethane	(2)	2.284	50	346063	49.217
6) Vinyl Chloride	(2)	2.406	62	338203	50.983
8) Bromomethane	(2)	2.754	94	240658	51.692
9) Chloroethane	(2)	2.844	64	189282	51.678
12) Trichlorofluoromethane	(2)	3.159	101	396790	57.708
17) 1,1-Dichloroethene	(2)	3.757	96	231686	49.260
19) Freon 113	(2)	3.795	101	247569	55.336
18) Acetone	(1)	3.805	58	78740	121.299
23) Carbon Disulfide	(2)	4.075	76	823357	55.419
27) Methyl Acetate	(2)	4.236	43	292312	49.795
28) Methylene Chloride	(2)	4.471	84	276293	52.615
29) *t-Butyl alcohol-d10	(1)	4.493	65	200964	250.000
32) trans-1,2-Dichloroethene	(2)	4.882	96	267447	51.843
33) Methyl Tertiary Butyl Ether	(2)	4.882	73	719605	45.790
36) 1,1-Dichloroethane	(2)	5.544	63	462960	53.618
43) 1,2-Dichloroethene (Total)	(2)		96	564943	103.408
44) 2-Butanone	(2)	6.348	43	383848	94.344
42) cis-1,2-Dichloroethene	(2)	6.374	96	297496	51.565
45) 2,2-Dichloropropane	(2)	6.384	77	344776	50.179
49) Bromochloromethane	(2)	6.699	128	156427	54.560
51) Chloroform	(2)	6.850	83	454034	54.267
52) \$Dibromofluoromethane	(2)	7.065	113	275547	52.253
53) 1,1,1-Trichloroethane	(2)	7.075	97	391642	53.387
54) Cyclohexane	(2)	7.168	56	466753	51.667
56) Carbon Tetrachloride	(2)	7.281	117	344293	57.441
55) 1,1-Dichloropropene	(2)	7.284	75	362845	53.021
57) \$1,2-Dichloroethane-d4	(2)	7.512	102	69489	50.808
60) Benzene	(2)	7.548	78	1115151	53.417
61) 1,2-Dichloroethane	(2)	7.618	62	370307	53.053
66) *Fluorobenzene	(2)	7.949	96	1115256	50.000
71) Trichloroethene	(2)	8.422	95	277834	52.866
72) Methylcyclohexane	(2)	8.728	83	478069	54.221
73) 1,2-Dichloropropane	(2)	8.760	63	290689	53.598
74) Dibromomethane	(2)	8.869	93	192142	54.478
78) Bromodichloromethane	(2)	9.101	83	342739	54.357
80) 2-Chloroethyl Vinyl Ether	(2)	9.448	63	201050	50.566
81) cis-1,3-Dichloropropene	(2)	9.628	75	440854	52.187

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 1 of 3

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on 04/08/2020 at 20:39.

Target 3.5 esignature user ID: sej02002

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20apr08a.b/1a08ec5.d
 Injection date and time: 08-APR-2020 20:14

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m

Sublist used: L200991-SM

Calibration date and time: 08-APR-2020 10:49

Date, time and analyst ID of latest file update: 08-Apr-2020 20:39 sej02002

Sample Name: SECC050

Lab Sample ID: SECC050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
82) 4-Methyl-2-pentanone	(2)	9.798	43	807237	95.898
83) \$Toluene-d8	(3)	9.924	98	1116141	48.822
88) Toluene	(3)	10.001	92	695390	51.193
89) trans-1,3-Dichloropropene	(3)	10.248	75	417597	51.591
92) 1,1,2-Trichloroethane	(3)	10.451	97	278775	52.070
93) Tetrachloroethene	(3)	10.531	166	336328	58.343
94) 1,3-Dichloropropane	(3)	10.609	76	472116	52.830
96) 2-Hexanone	(3)	10.660	43	597493	95.440
97) Dibromochloromethane	(3)	10.821	129	298552	55.174
99) 1,2-Dibromoethane	(3)	10.930	107	298598	51.261
100) *Chlorobenzene-d5	(3)	11.354	117	870165	50.000
102) Chlorobenzene	(3)	11.380	112	815315	53.413
104) Ethylbenzene	(3)	11.461	91	1354196	52.185
103) 1,1,1,2-Tetrachloroethane	(3)	11.461	131	285197	55.891
106) m+p-Xylene	(3)	11.573	106	1082198	106.255
108) Xylene (Total)	(3)		106	1604036	157.945
107) o-Xylene	(3)	11.901	106	521838	51.690
109) Styrene	(3)	11.917	104	871295	51.312
110) Bromoform	(3)	12.075	173	216782	51.757
111) Isopropylbenzene	(3)	12.197	105	1351644	52.253
114) \$4-Bromofluorobenzene	(3)	12.342	95	418712	48.567
116) 1,1,2,2-Tetrachloroethane	(4)	12.444	83	446017	47.843
115) Bromobenzene	(4)	12.461	156	363187	52.350
117) 1,2,3-Trichloropropane	(4)	12.489	110	140543	50.801
119) n-Propylbenzene	(4)	12.525	91	1614837	51.605
120) 2-Chlorotoluene	(4)	12.602	126	338462	52.065
122) 1,3,5-Trimethylbenzene	(4)	12.657	105	1181454	51.319
121) 4-Chlorotoluene	(4)	12.695	126	350674	51.997
124) tert-Butylbenzene	(4)	12.901	134	248512M	52.465
126) 1,2,4-Trimethylbenzene	(4)	12.940	105	1253611	52.020
127) sec-Butylbenzene	(4)	13.062	105	1501173	53.072
129) 1,3-Dichlorobenzene	(4)	13.162	146	691337	52.854
130) p-Isopropyltoluene	(4)	13.168	119	1311884	53.837
131) *1,4-Dichlorobenzene-d4	(4)	13.219	152	490828	50.000
133) 1,4-Dichlorobenzene	(4)	13.235	146	706891	52.181
139) n-Butylbenzene	(4)	13.461	92	633507	51.571
138) 1,2-Dichlorobenzene	(4)	13.496	146	670170	51.485
142) 1,2-Dibromo-3-chloropropane	(4)	14.036	75	97858	48.169

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 2 of 3

Digitally signed by Sara E. Johnson
 on 04/08/2020 at 20:39.

Target 3.5 esignature user ID: sej02002

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20apr08a.b/1a08ec5.d

Instrument ID: HP09915.i

Injection date and time: 08-APR-2020 20:14

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m

Sublist used: L200991-SM

Calibration date and time: 08-APR-2020 10:49

Date, time and analyst ID of latest file update: 08-Apr-2020 20:39 sej02002

Sample Name: SECC050

Lab Sample ID: SECC050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	470167	50.012
147) Hexachlorobutadiene	(4)	14.663	225	197622	47.805
148) Naphthalene	(4)	14.769	128	1621503	51.096
149) 1,2,3-Trichlorobenzene	(4)	14.914	180	472930	53.163

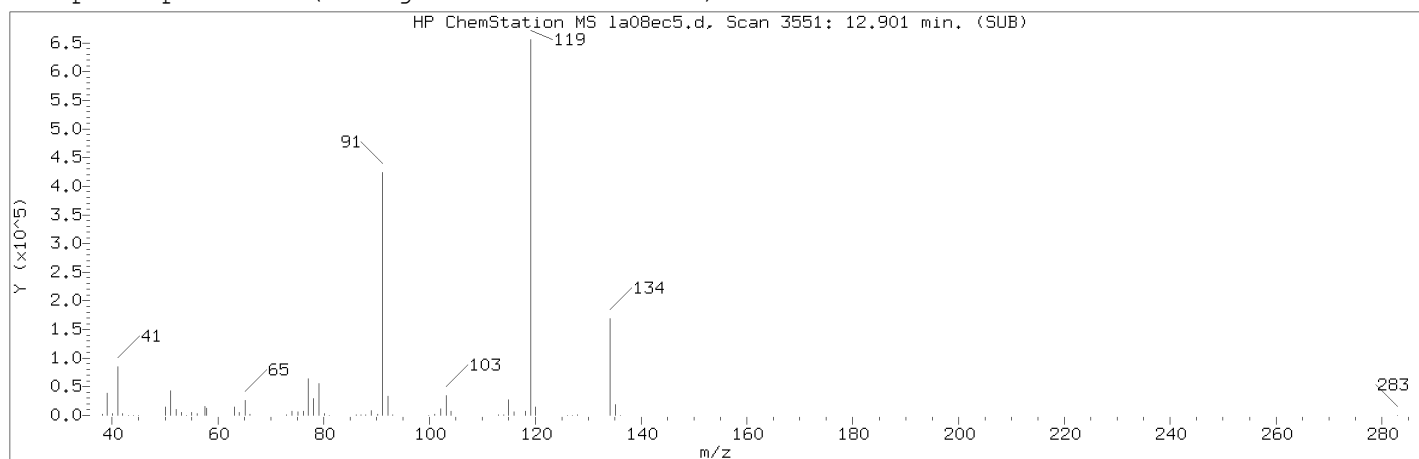
page 3 of 3

Digitally signed by Sara E. Johnson
on 04/08/2020 at 20:39.

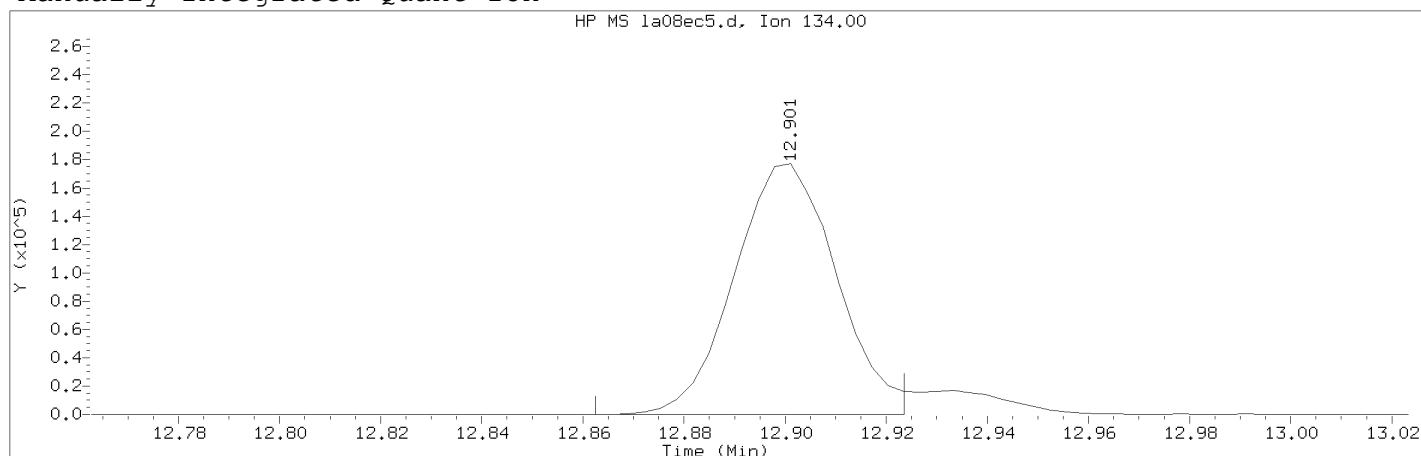
Target 3.5 esignature user ID: sej02002

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Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20apr08a.b/1a08ec5.d Instrument ID: HP09915.i
 Injection date and time: 08-APR-2020 20:14 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m Sublist used: L200991-SM
 Calibration date and time: 08-APR-2020 10:49
 Date, time and analyst ID of latest file update: 08-Apr-2020 20:39 sej02002

Sample Name: SECC050

Lab Sample ID: SECC050

Compound Number : 124
 Compound Name : tert-Butylbenzene
 Scan Number : 3551
 Retention Time (minutes): 12.901
 Quant Ion : 134.00
 Area (flag) : 248512M
 On-Column Amount (ng) : 52.4654
 Integration start scan : 3538 Integration stop scan: 3557
 Y at integration start : 0 Y at integration end: 0

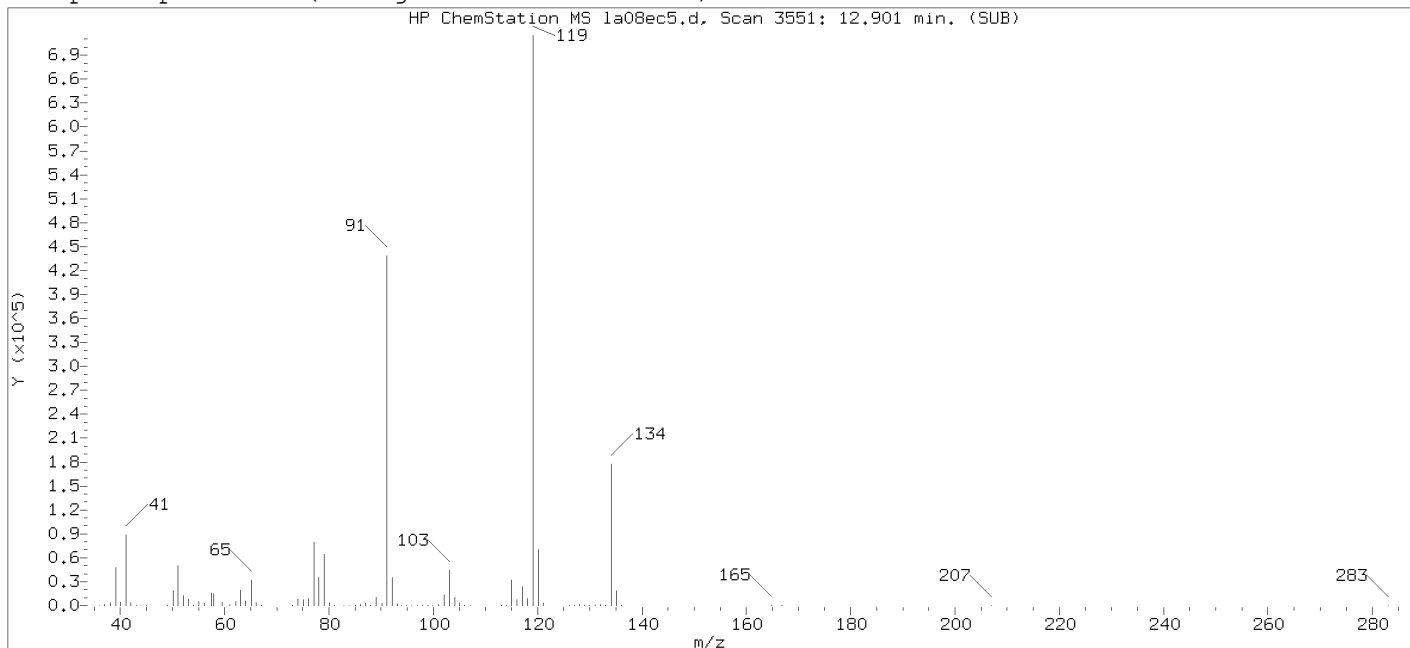
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Sara E. Johnson
 on 04/08/2020 at 20:39.
 Target 3.5 esignature user ID: sej02002

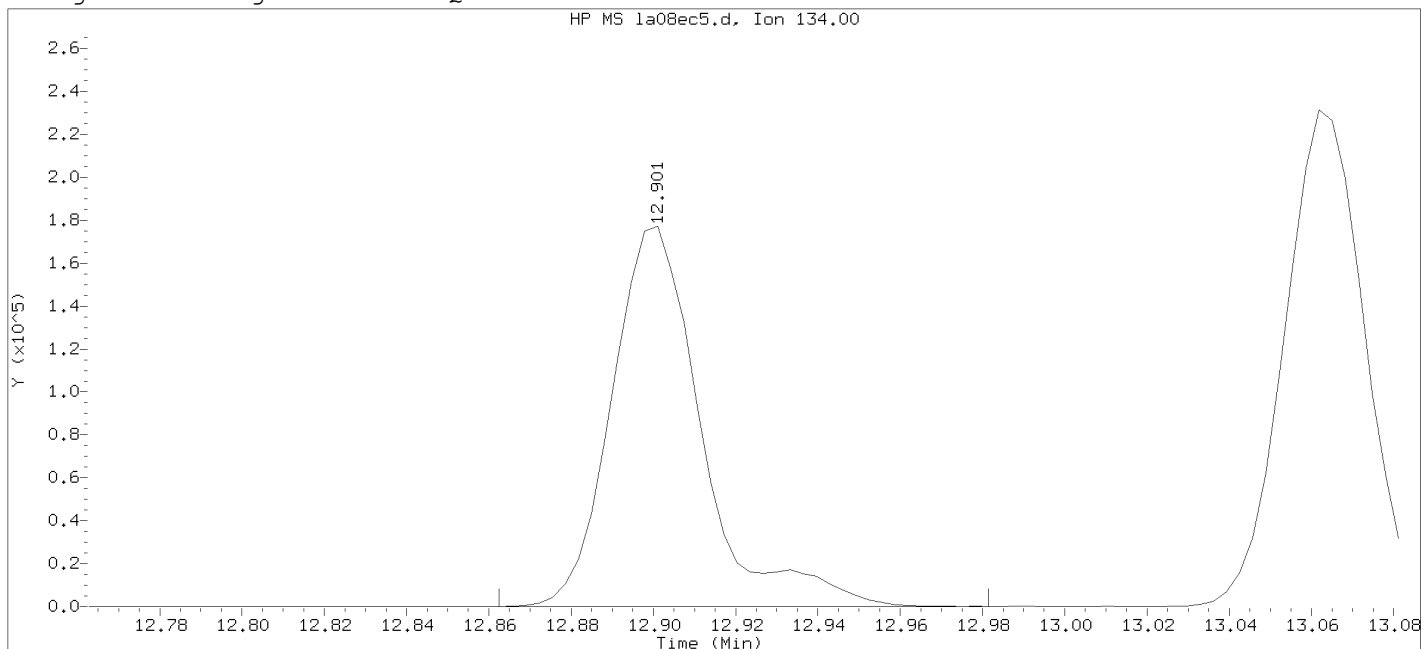
Secondary review performed and digitally signed by Kari Becker on 04/08/2020 at 21:36.

PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20apr08a.b/1a08ec5.d

Instrument ID: HP09915.i

Injection date and time: 08-APR-2020 20:14

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m

Sublist used: L200991-SM

Calibration date and time: 08-APR-2020 10:49

Date, time and analyst ID of latest file update: 08-Apr-2020 20:31 Automation

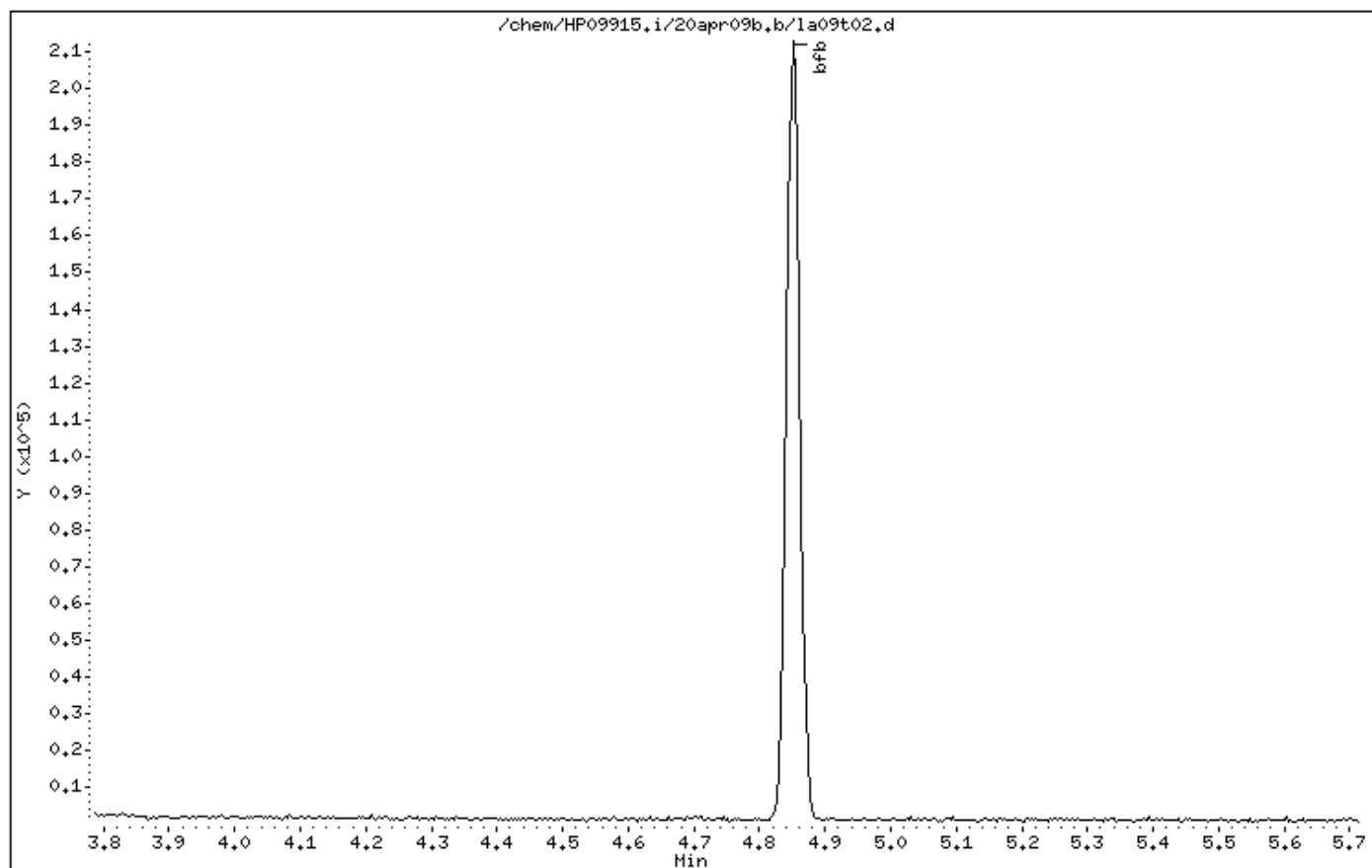
Sample Name: SECC050

Lab Sample ID: SECC050

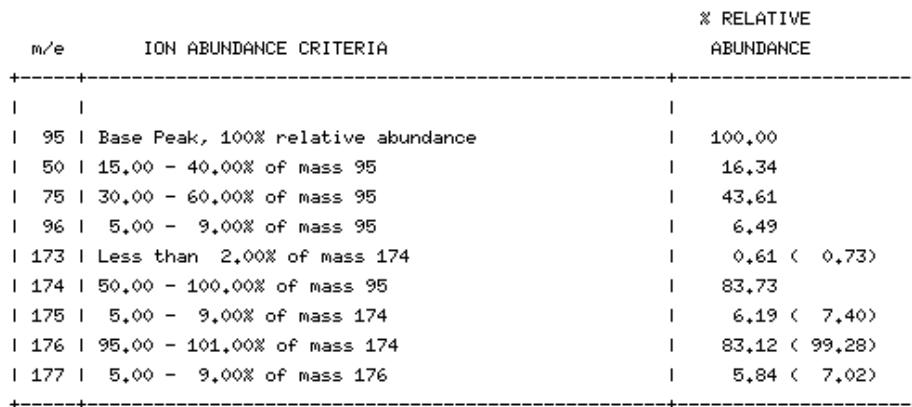
Compound Number	: 124	
Compound Name	: tert-Butylbenzene	
Scan Number	: 3551	
Retention Time (minutes)	: 12.901	
Quant Ion	: 134.00	
Area	: 269566	
On-column Amount (ng)	: 56.9103	
Integration start scan	: 3538	Integration stop scan: 3575
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Sara E. Johnson on 04/08/2020 at 20:39.
 Target 3.5 esignature user KR421s Page 308 of 592

Column diameter: 0.25



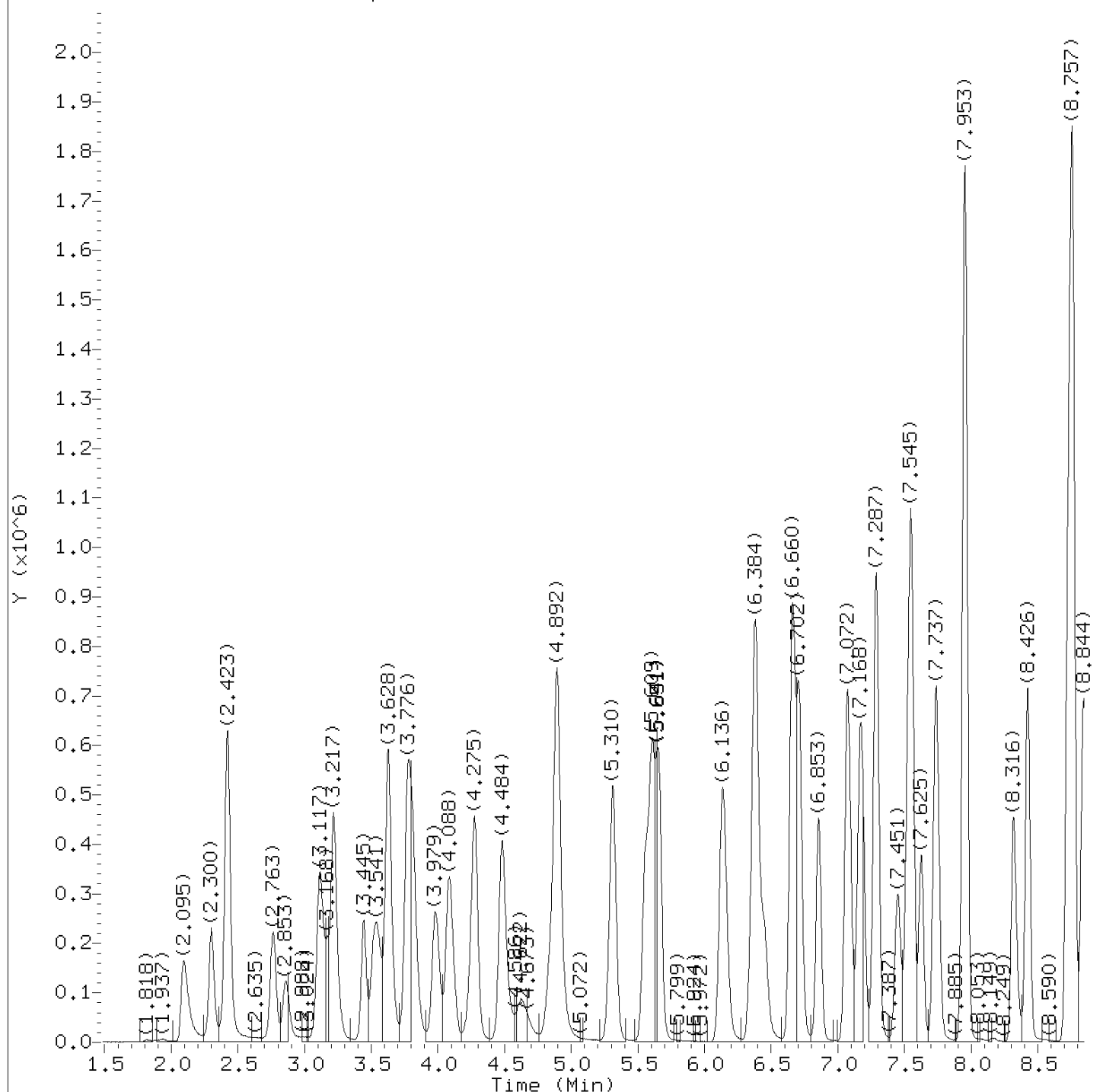
1 bfb



Column diameter: 0.25

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36,00	529	61,00	1832	79,00	1021	118,00	65
37,00	2014	62,00	1834	80,00	311	119,00	245
38,00	1660	63,00	1427	81,00	906	130,00	106
39,00	723	64,00	138	82,00	219	131,00	51
40,00	3	65,00	124	87,00	1921	141,00	289
44,00	117	67,00	55	88,00	1693	143,00	436
45,00	376	68,00	3620	91,00	111	172,00	299
47,00	578	69,00	4396	92,00	1079	173,00	270
48,00	227	70,00	357	93,00	1769	174,00	36832
49,00	1597	72,00	239	94,00	4733	175,00	2724
50,00	7189	73,00	1833	95,00	43992	176,00	36568
51,00	2272	74,00	6278	96,00	2857	177,00	2569
55,00	54	75,00	19184	97,00	125	178,00	68
56,00	559	76,00	1710	104,00	211	281,00	53
57,00	898	77,00	295	116,00	81		
60,00	326	78,00	122	117,00	247		

/chem/HP09915.i/20apr09b.b/1a09c02.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20apr09b.b/1a09c02.d
 Injection date and time: 09-APR-2020 09:36

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr09b.b/m8260c5.m
 Calibration date and time: 09-APR-2020 10:00

Sublist used: 8260W

Date, time and analyst ID of latest file update: 09-Apr-2020 10:00 clm27445

Sample Name: VSTD050

Lab Sample ID: VSTD050

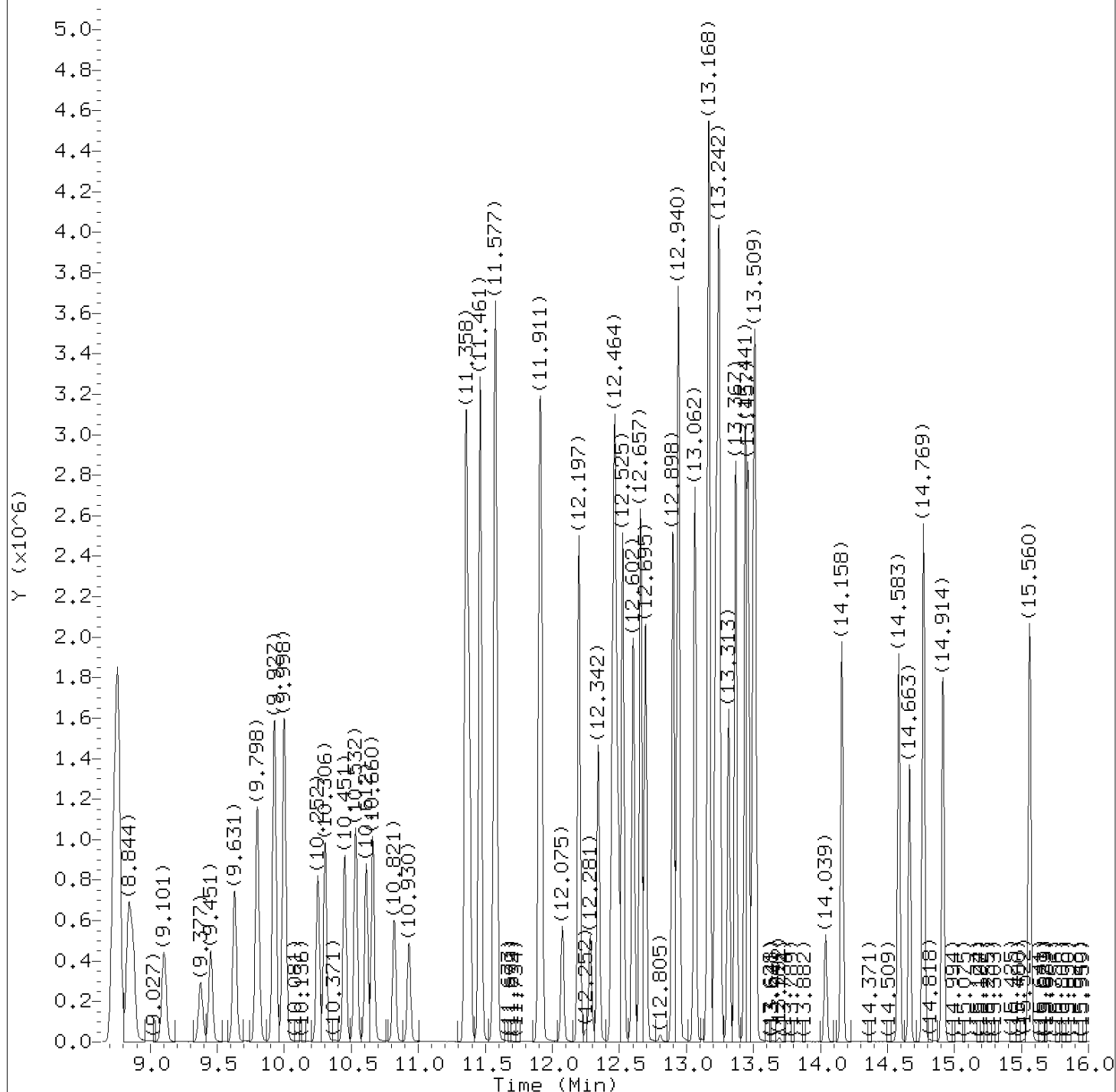
Digitally signed by Corie L. Mellinger
 on 04/09/2020 at 10:02.

Target 3.5 esignature user ID: clm27445

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/chem/HP09915.i/20apr09b.b/1a09c02.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20apr09b.b/1a09c02.d
 Injection date and time: 09-APR-2020 09:36

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr09b.b/m8260c5.m
 Calibration date and time: 09-APR-2020 10:00

Sublist used: 8260W

Date, time and analyst ID of latest file update: 09-Apr-2020 10:00 clm27445

Sample Name: VSTD050

Lab Sample ID: VSTD050

Digitally signed by Corie L. Mellinger
 on 04/09/2020 at 10:02.

Target 3.5 esignature user ID: clm27445

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20apr09b.b/1a09c02.d
 Injection date and time: 09-APR-2020 09:36

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr09b.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 09-APR-2020 10:00

Date, time and analyst ID of latest file update: 09-Apr-2020 10:00 clm27445

Sample Name: VSTD050

Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
3) Dichlorodifluoromethane	(2)	2.095	85	403976	51.202
4) Chloromethane	(2)	2.300	50	378156	47.956
6) Vinyl Chloride	(2)	2.419	62	361653	48.612
5) 1,3-Butadiene	(2)	2.423	39	341094	57.722
8) Bromomethane	(2)	2.763	94	253971	48.643
9) Chloroethane	(2)	2.857	64	198653	48.362
10) Dichlorofluoromethane	(2)	3.111	67	457348	50.206
12) Trichlorofluoromethane	(2)	3.168	101	413357	53.605
11) n-Pentane	(2)	3.217	43	469407	53.843
14) Ethyl ether	(2)	3.442	59	206719	37.565
15) Freon 123a	(2)	3.532	67	343403	55.435
16) Acrolein	(1)	3.628	56	940132	484.554
17) 1,1-Dichloroethene	(2)	3.767	96	271059	51.389
17) 1,1-Dichloroethene	(2)	3.773	63	134933	54.150
18) Acetone	(1)	3.808	58	86907	101.283
19) Freon 113	(2)	3.812	101	285508	56.904
22) Methyl Iodide	(2)	3.976	142	529771	56.805
21) 2-Propanol	(1)	4.001	45	157358	263.226
23) Carbon Disulfide	(2)	4.088	76	959646	57.596
27) Methyl Acetate	(2)	4.249	43	347709	52.817
25) Allyl Chloride	(2)	4.278	41	447216	52.689
28) Methylene Chloride	(2)	4.480	84	316891	53.810
29) *t-Butyl alcohol-d10	(1)	4.500	65	265642M	250.000
30) t-Butyl alcohol	(1)	4.622	59	252215	245.452
31) Acrylonitrile	(2)	4.831	53	175783	49.262
32) trans-1,2-Dichloroethene	(2)	4.892	96	304292	52.596
33) Methyl Tertiary Butyl Ether	(2)	4.892	73	833999	47.321
34) n-Hexane	(2)	5.313	57	473506	56.903
36) 1,1-Dichloroethane	(2)	5.551	63	532989	55.042
38) di-Isopropyl ether	(2)	5.609	45	980621	52.700
39) 2-Chloro-1,3-butadiene	(2)	5.660	53	442943	53.486
40) Ethyl t-butyl ether	(2)	6.133	59	838313	47.438
43) 1,2-Dichloroethene (Total)	(2)		96	642096	104.806
44) 2-Butanone	(2)	6.355	43	430456	94.340
42) cis-1,2-Dichloroethene	(2)	6.381	96	337804	52.210
45) 2,2-Dichloropropane	(2)	6.393	77	375113	48.681
47) Propionitrile	(1)	6.451	54	379550	285.005
48) Methacrylonitrile	(2)	6.660	67	488972	133.969

M = Compound was manually integrated.

* = Compound is an internal standard.

page 1 of 4

Digitally signed by Corie L. Mellinger
 on 04/09/2020 at 10:02.

Target 3.5 esignature user ID: clm27445

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20apr09b.b/1a09c02.d

Instrument ID: HP09915.i

Injection date and time: 09-APR-2020 09:36

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr09b.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 09-APR-2020 10:00

Date, time and analyst ID of latest file update: 09-Apr-2020 10:00 clm27445

Sample Name: VSTD050

Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
49) Bromochloromethane	(2)	6.709	128	176955	55.035
50) Tetrahydrofuran	(1)	6.718	71	117858	98.433
51) Chloroform	(2)	6.853	83	512180	54.586
52)\$Dibromofluoromethane	(2)	7.069	113	311075	52.601
52)\$Dibromofluoromethane	(2)	7.069	111	318984	52.794
53) 1,1,1-Trichloroethane	(2)	7.082	97	435578	52.945
54) Cyclohexane	(2)	7.168	56	540801	53.380
54) Cyclohexane	(2)	7.175	84	459895	53.763
54) Cyclohexane	(2)	7.175	69	163834	52.725
56) Carbon Tetrachloride	(2)	7.287	117	387052	57.580
55) 1,1-Dichloropropene	(2)	7.291	75	416432	54.260
58) Isobutyl Alcohol	(1)	7.448	41	243725	698.076
57)\$1,2-Dichloroethane-d4	(2)	7.519	102	78226	51.001
57)\$1,2-Dichloroethane-d4	(2)	7.519	65	357027	52.147
57)\$1,2-Dichloroethane-d4	(2)	7.522	104	50506	51.874
60) Benzene	(2)	7.551	78	1262167	53.911
61) 1,2-Dichloroethane	(2)	7.628	62	415686	53.104
61) 1,2-Dichloroethane	(2)	7.628	98	40770	56.871
65) t-Amyl methyl ether	(2)	7.737	73	852554	47.965
67) n-Heptane	(2)	7.953	43	495803	60.843
66)*Fluorobenzene	(2)	7.953	96	1250728	50.000
69) n-Butanol	(1)	8.319	56	403662	1381.144
71) Trichloroethene	(2)	8.422	95	316866	53.762
72) Methylcyclohexane	(2)	8.728	83	565168	57.157
72) Methylcyclohexane	(2)	8.728	98	254044	56.965
73) 1,2-Dichloropropane	(2)	8.757	63	328808	54.060
76) Methyl Methacrylate	(2)	8.837	69	300293	51.714
75) 1,4-Dioxane	(1)	8.853	88	65262M	838.267
74) Dibromomethane	(2)	8.872	93	217868	55.081
78) Bromodichloromethane	(2)	9.104	83	388033	54.875
79) 2-Nitropropane	(2)	9.374	41	225371	103.595
80) 2-Chloroethyl Vinyl Ether	(2)	9.451	63	232918	52.236
81) cis-1,3-Dichloropropene	(2)	9.631	75	509238	53.753
82) 4-Methyl-2-pentanone	(2)	9.798	43	892876	94.583
83)\$Toluene-d8	(3)	9.927	98	1258544	49.226
83)\$Toluene-d8	(3)	9.927	100	810720	48.794
88) Toluene	(3)	9.998	92	790587	52.043
90) 1,3-Dichloropropene (total)	(3)		100	992556	107.145

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 2 of 4

Digitally signed by Corie L. Mellinger
on 04/09/2020 at 10:02.

Target 3.5 esignature user ID: clm27445

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20apr09b.b/1a09c02.d

Instrument ID: HP09915.i

Injection date and time: 09-APR-2020 09:36

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr09b.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 09-APR-2020 10:00

Date, time and analyst ID of latest file update: 09-Apr-2020 10:00 clm27445

Sample Name: VSTD050

Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
89) trans-1,3-Dichloropropene	(3)	10.252	75	483318	53.393
91) Ethyl Methacrylate	(3)	10.306	69	520903	50.256
92) 1,1,2-Trichloroethane	(3)	10.451	97	318392	53.177
93) Tetrachloroethene	(3)	10.535	166	347290	53.870
94) 1,3-Dichloropropane	(3)	10.612	76	535059	53.538
96) 2-Hexanone	(3)	10.660	43	658489	94.053
97) Dibromochloromethane	(3)	10.821	129	343598	56.780
99) 1,2-Dibromoethane	(3)	10.930	107	341523	52.426
100) *Chlorobenzene-d5	(3)	11.355	117	973135	50.000
101) 1-Chlorohexane	(3)	11.358	91	421458	49.766
102) Chlorobenzene	(3)	11.380	112	919734	53.878
103) 1,1,1,2-Tetrachloroethane	(3)	11.461	131	322478	56.510
104) Ethylbenzene	(3)	11.461	91	1536448	52.943
106) m+p-Xylene	(3)	11.577	106	1221108	107.208
108) Xylene (Total)	(3)		106	1817765	160.055
107) o-Xylene	(3)	11.901	106	596657	52.847
109) Styrene	(3)	11.917	104	998029	52.556
110) Bromoform	(3)	12.075	173	256954	54.857
111) Isopropylbenzene	(3)	12.197	105	1534376	53.041
112) Cyclohexanone	(1)	12.281	55	209191	669.878
114) \$4-Bromofluorobenzene	(3)	12.342	95	466049	48.338
114) \$4-Bromofluorobenzene	(3)	12.342	174	395997	49.687
116) 1,1,2,2-Tetrachloroethane	(4)	12.445	83	519508	51.102
115) Bromobenzene	(4)	12.461	156	407515	53.865
118) trans-1,4-Dichloro-2-butene	(4)	12.467	53	335769	115.301
117) 1,2,3-Trichloropropane	(4)	12.490	110	157077	52.066
119) n-Propylbenzene	(4)	12.525	91	1816946	53.245
120) 2-Chlorotoluene	(4)	12.602	126	384934	54.300
122) 1,3,5-Trimethylbenzene	(4)	12.657	105	1331466	53.035
121) 4-Chlorotoluene	(4)	12.695	126	395916	53.834
124) tert-Butylbenzene	(4)	12.901	134	277437M	53.711
125) Pentachloroethane	(4)	12.933	167	238786	57.822
126) 1,2,4-Trimethylbenzene	(4)	12.943	105	1407674	53.566
127) sec-Butylbenzene	(4)	13.062	105	1686649	54.681
129) 1,3-Dichlorobenzene	(4)	13.162	146	772545	54.161
130) p-Isopropyltoluene	(4)	13.168	119	1474045	55.472
131) *1,4-Dichlorobenzene-d4	(4)	13.216	152	535245	50.000
133) 1,4-Dichlorobenzene	(4)	13.236	146	788960	53.406

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 3 of 4

Digitally signed by Corie L. Mellinger
on 04/09/2020 at 10:02.

Target 3.5 esignature user ID: clm27445

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20apr09b.b/la09c02.d

Instrument ID: HP09915.i

Injection date and time: 09-APR-2020 09:36

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr09b.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 09-APR-2020 10:00

Date, time and analyst ID of latest file update: 09-Apr-2020 10:00 clm27445

Sample Name: VSTD050

Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
134) 1,2,3-Trimethylbenzene	(4)	13.245	105	1362533	51.863
135) Benzyl Chloride	(4)	13.313	91	1051677	54.693
136) 1,3-Diethylbenzene	(4)	13.367	119	864098	53.673
141) Diethylbenzene (total)	(4)		100	2493440	160.885
137) 1,4-Diethylbenzene	(4)	13.438	119	901299	53.442
139) n-Butylbenzene	(4)	13.461	92	715404	53.406
138) 1,2-Dichlorobenzene	(4)	13.496	146	748927	52.761
140) 1,2-Diethylbenzene	(4)	13.512	119	728043	53.770
142) 1,2-Dibromo-3-chloropropane	(4)	14.039	75	113668	51.308
144) 1,3,5-Trichlorobenzene	(4)	14.158	180	572893	53.661
146) 1,2,4-Trichlorobenzene	(4)	14.583	180	540570	52.729
147) Hexachlorobutadiene	(4)	14.663	225	221706	49.181
148) Naphthalene	(4)	14.769	128	1850210	53.464
149) 1,2,3-Trichlorobenzene	(4)	14.914	180	534504	55.099
150) 2-Methylnaphthalene	(4)	15.560	142	1021056	55.014

page 4 of 4

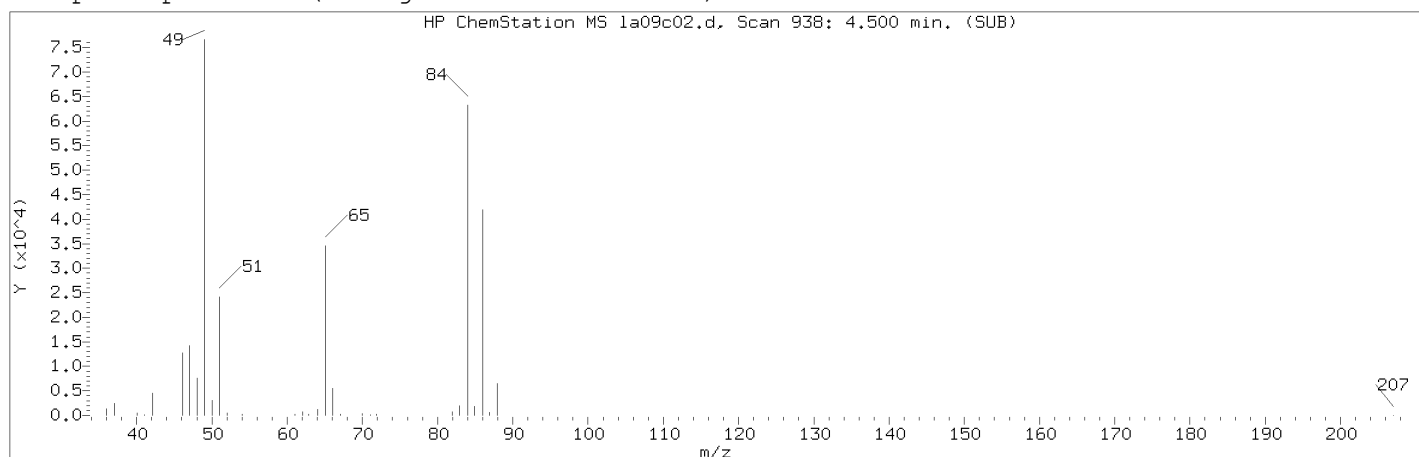
Digitally signed by Corie L. Mellinger

on 04/09/2020 at 10:02.

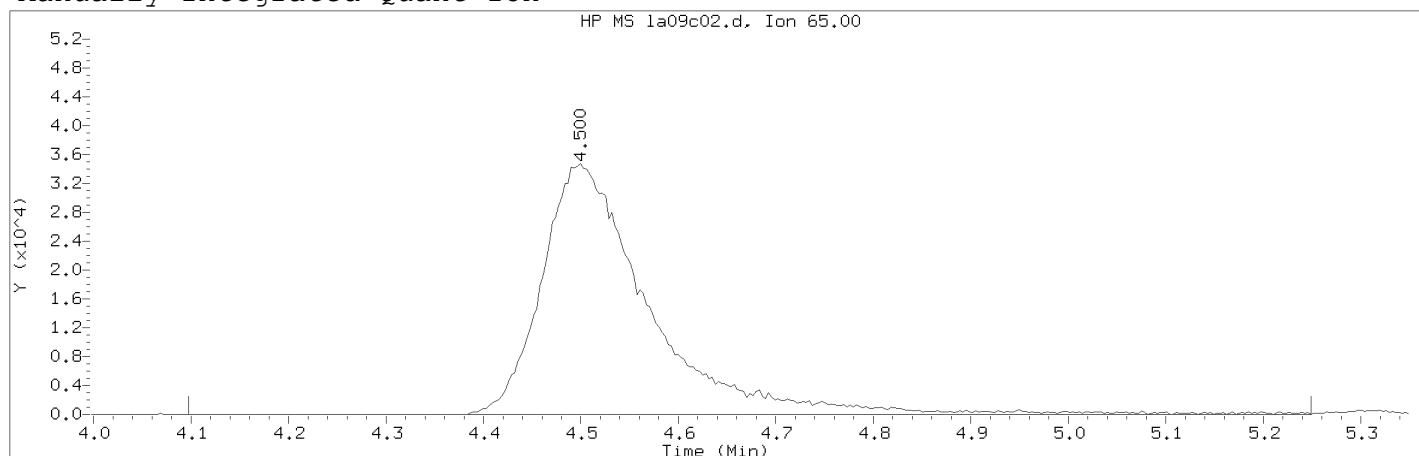
Target 3.5 esignature user ID: clm27445

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Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20apr09b.b/1a09c02.d Instrument ID: HP09915.i
 Injection date and time: 09-APR-2020 09:36 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr09b.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 09-APR-2020 10:00
 Date, time and analyst ID of latest file update: 09-Apr-2020 10:00 clm27445

Sample Name: VSTD050

Lab Sample ID: VSTD050

Compound Number : 29
 Compound Name : t-Butyl alcohol-d10
 Scan Number : 938
 Retention Time (minutes): 4.500
 Quant Ion : 65.00
 Area (flag) : 265642M
 On-Column Amount (ng) : 250.0000
 Integration start scan : 812 Integration stop scan: 1170
 Y at integration start : 0 Y at integration end: 0

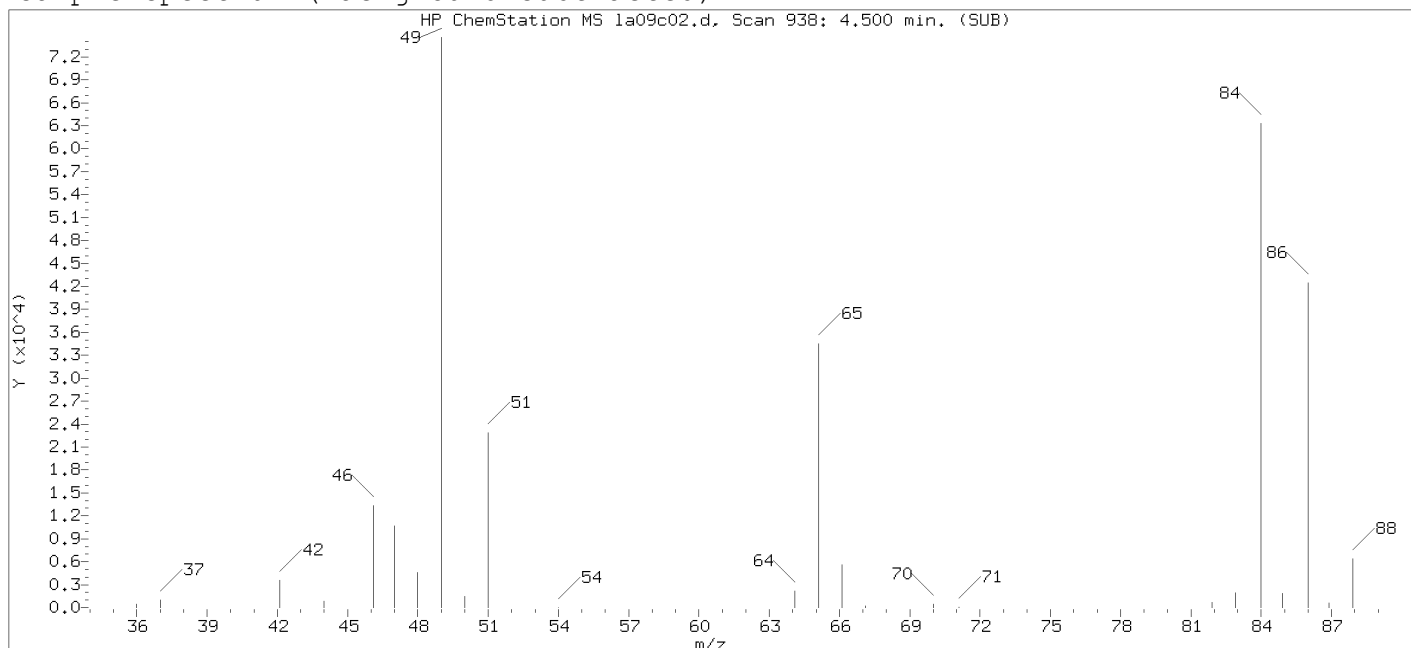
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Corie L. Mellinger
 on 04/09/2020 at 10:02.
 Target 3.5 esignature user ID: clm27445

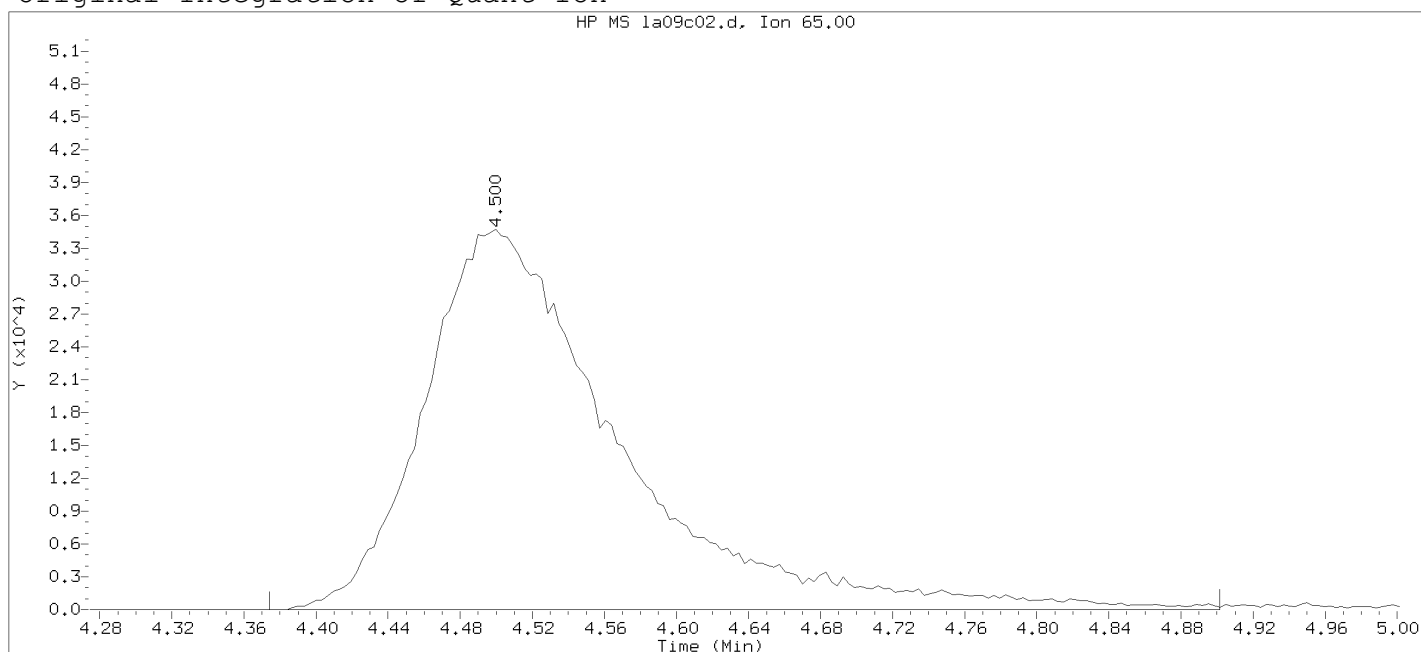
Secondary review performed and digitally signed by Kari Becker on 04/13/2020 at 18:18.

PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20apr09b.b/1a09c02.d

Instrument ID: HP09915.i

Injection date and time: 09-APR-2020 09:36

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr09b.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 09-APR-2020 09:53

Date, time and analyst ID of latest file update: 09-Apr-2020 09:53 Automation

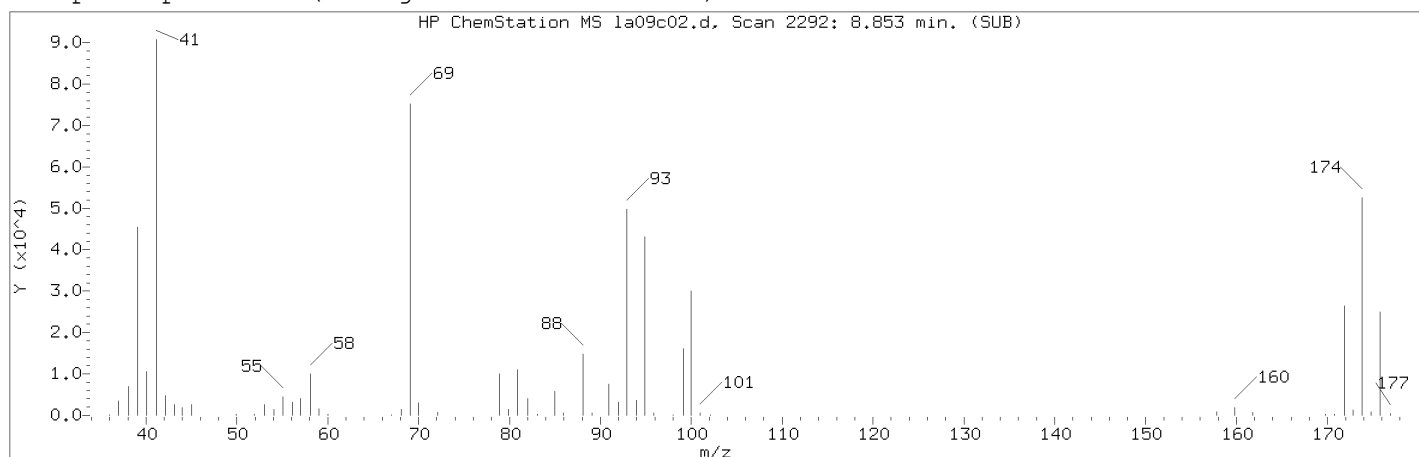
Sample Name: VSTD050

Lab Sample ID: VSTD050

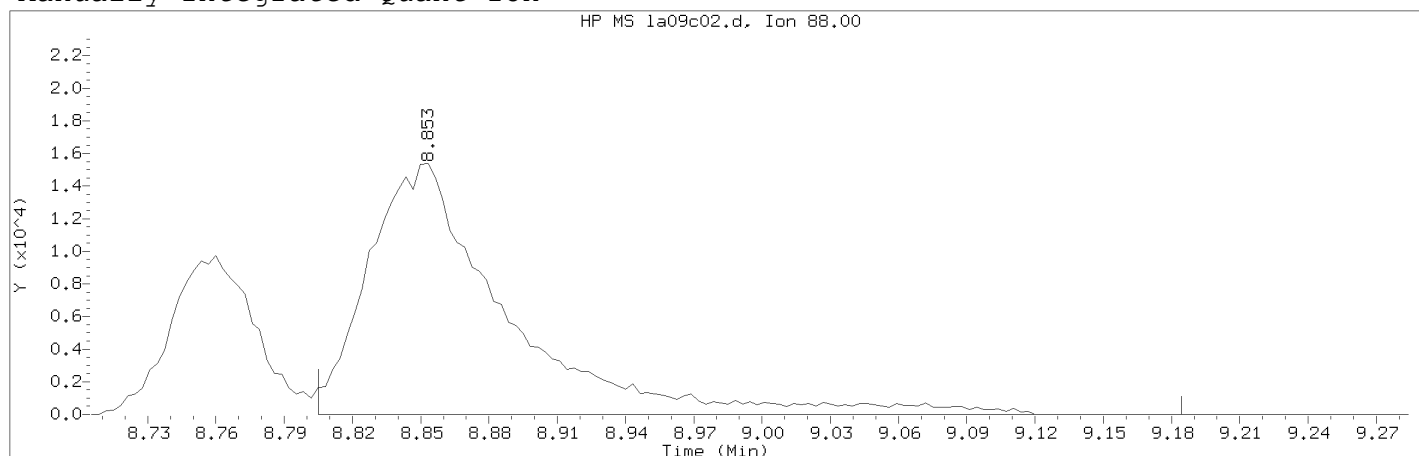
Compound Number : 29
 Compound Name : t-Butyl alcohol-d10
 Scan Number : 938
 Retention Time (minutes): 4.500
 Quant Ion : 65.00
 Area : 260460
 On-column Amount (ng) : 250.0000
 Integration start scan : 898 Integration stop scan: 1062
 Y at integration start : 0 Y at integration end: 0

Digitally signed by Corie L. Mellinger on 04/09/2020 at 10:02.
 Target 3.5 esignature user KR421c Page 419 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20apr09b.b/1a09c02.d Instrument ID: HP09915.i
 Injection date and time: 09-APR-2020 09:36 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr09b.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 09-APR-2020 10:00
 Date, time and analyst ID of latest file update: 09-Apr-2020 10:00 clm27445

Sample Name: VSTD050

Lab Sample ID: VSTD050

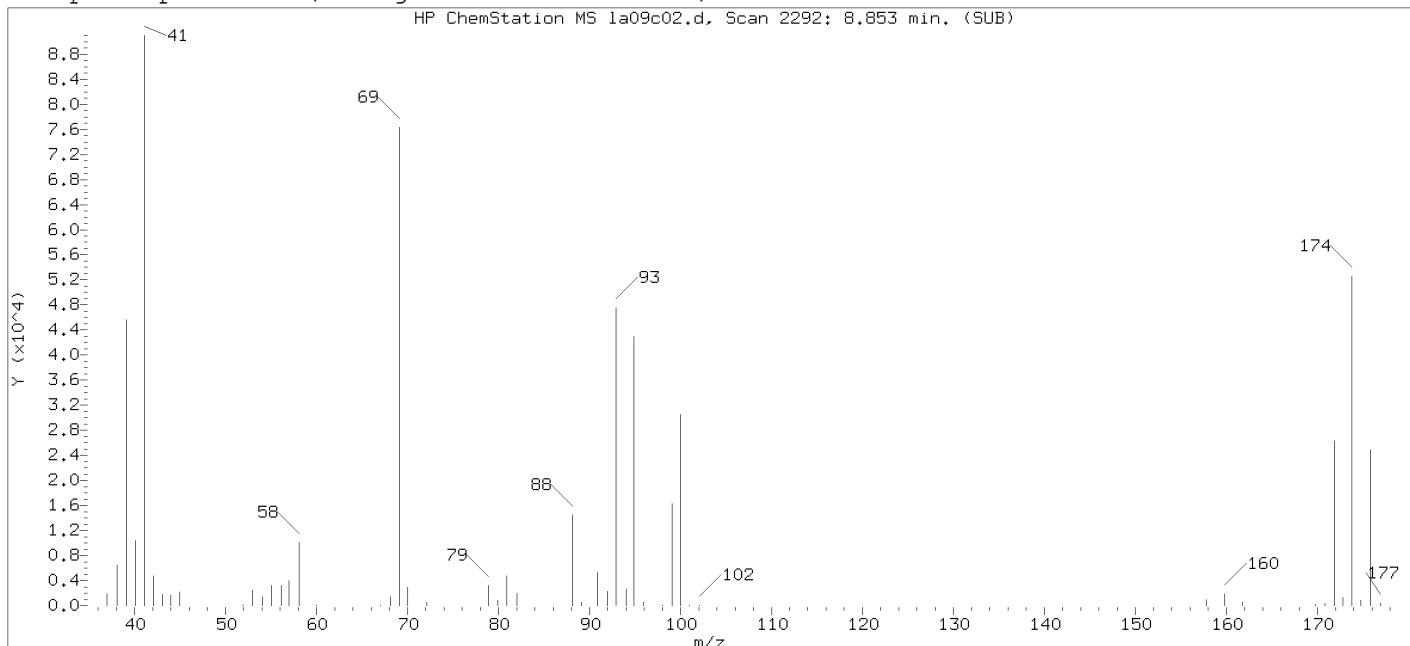
Compound Number : 75
 Compound Name : 1,4-Dioxane
 Scan Number : 2292
 Retention Time (minutes): 8.853
 Quant Ion : 88.00
 Area (flag) : 65262M
 On-Column Amount (ng) : 838.2672
 Integration start scan : 2276 Integration stop scan: 2394
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

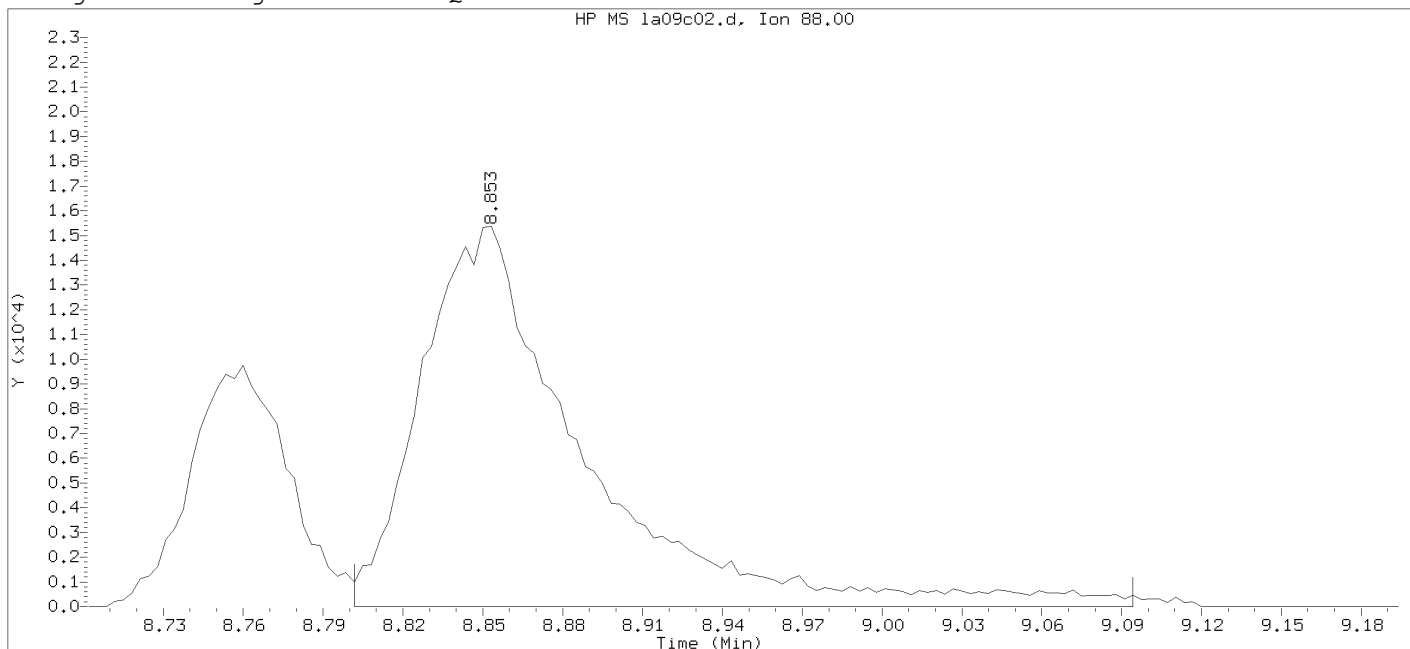
Analyst responsible for change: Digitally signed by Corie L. Mellinger
 on 04/09/2020 at 10:02.
 Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kari Becker on 04/13/2020 at 18:18.
 PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20apr09b.b/1a09c02.d

Instrument ID: HP09915.i

Injection date and time: 09-APR-2020 09:36

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr09b.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 09-APR-2020 09:53

Date, time and analyst ID of latest file update: 09-Apr-2020 09:53 Automation

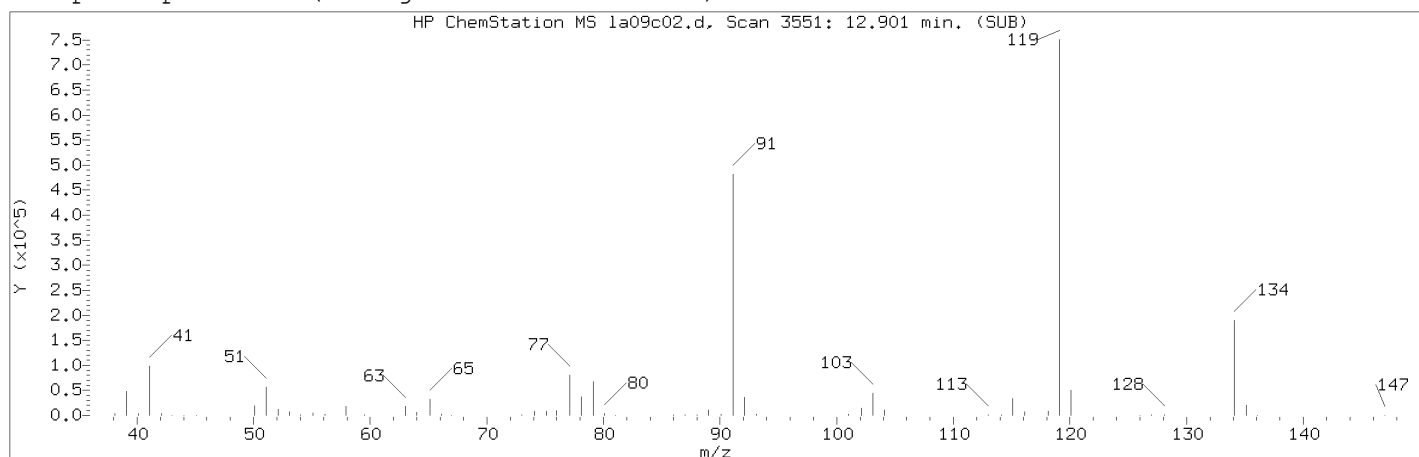
Sample Name: VSTD050

Lab Sample ID: VSTD050

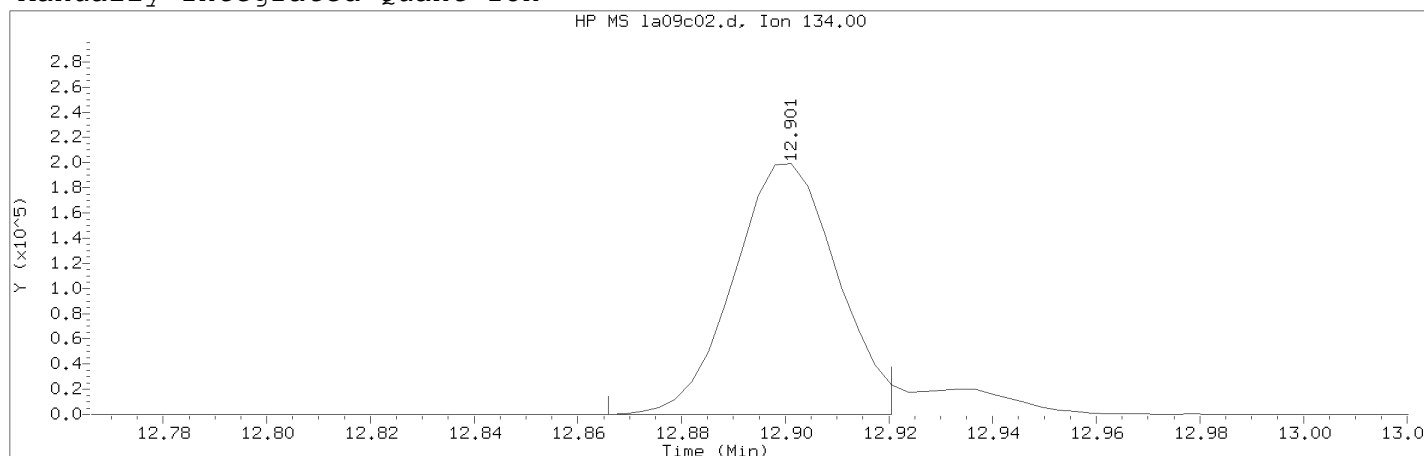
Compound Number	: 75
Compound Name	: 1,4-Dioxane
Scan Number	: 2292
Retention Time (minutes)	: 8.853
Quant Ion	: 88.00
Area	: 64967
On-column Amount (ng)	: 851.0909
Integration start scan	: 2275
Integration stop scan	: 2366
Y at integration start	: 0
Y at integration end	: 0

Digitally signed by Corie L. Mellinger on 04/09/2020 at 10:02.
 Target 3.5 esignature user KR421

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20apr09b.b/1a09c02.d Instrument ID: HP09915.i
 Injection date and time: 09-APR-2020 09:36 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr09b.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 09-APR-2020 10:00
 Date, time and analyst ID of latest file update: 09-Apr-2020 10:00 clm27445

Sample Name: VSTD050

Lab Sample ID: VSTD050

Compound Number : 124
 Compound Name : tert-Butylbenzene
 Scan Number : 3551
 Retention Time (minutes): 12.901
 Quant Ion : 134.00
 Area (flag) : 277437M
 On-Column Amount (ng) : 53.7114
 Integration start scan : 3539 Integration stop scan: 3556
 Y at integration start : 0 Y at integration end: 0

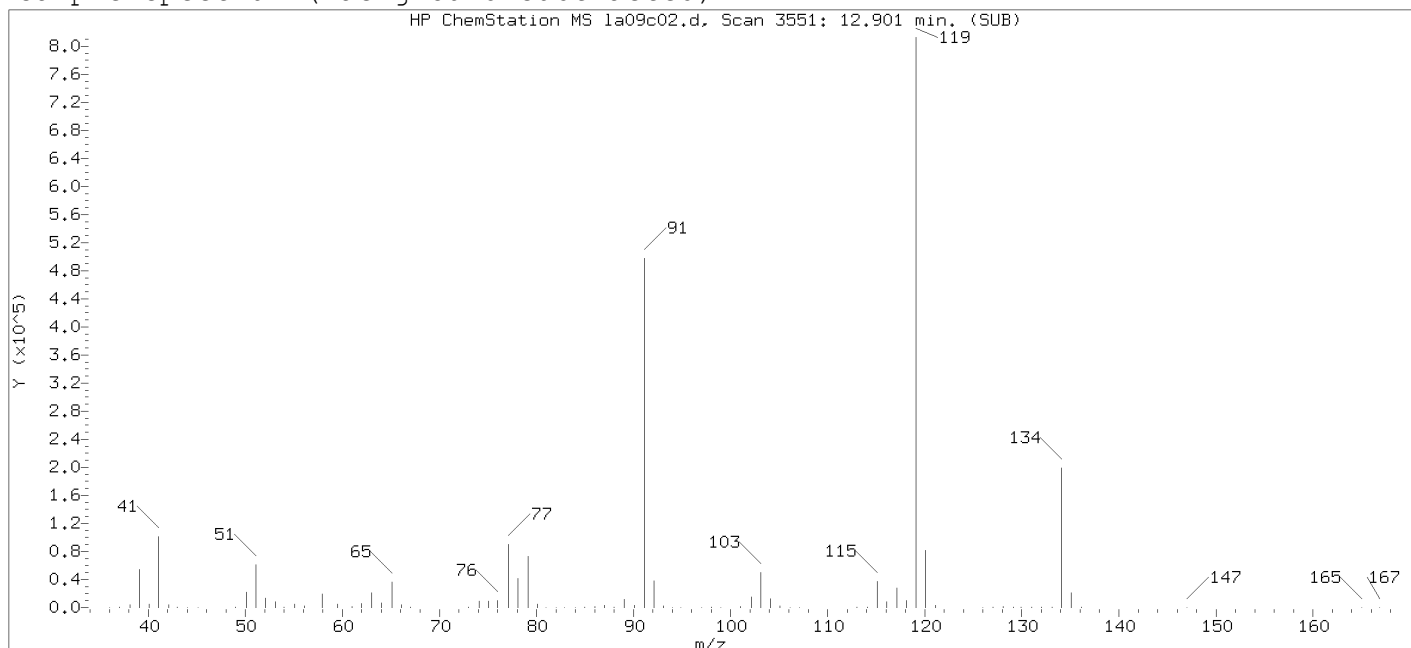
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Corie L. Mellinger
 on 04/09/2020 at 10:02.
 Target 3.5 esignature user ID: clm27445

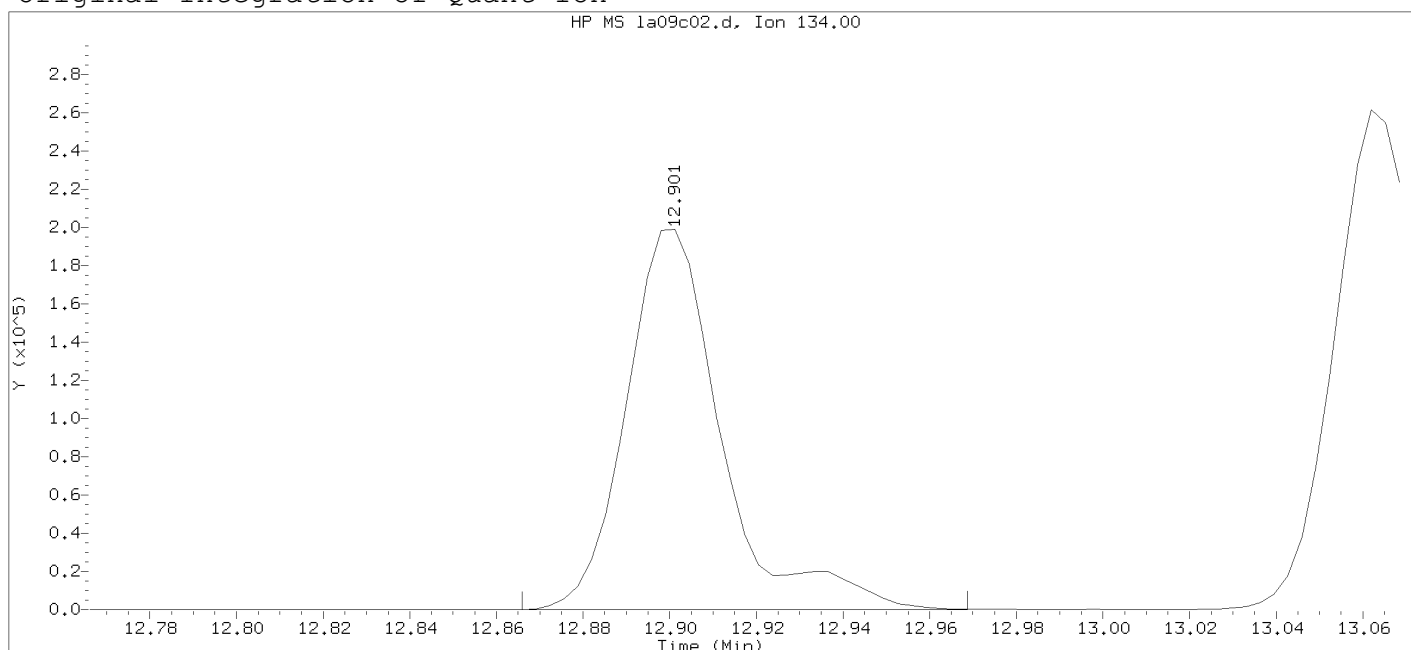
Secondary review performed and digitally signed by Kari Becker on 04/13/2020 at 18:18.

PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20apr09b.b/1a09c02.d

Instrument ID: HP09915.i

Injection date and time: 09-APR-2020 09:36

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr09b.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 09-APR-2020 09:53

Date, time and analyst ID of latest file update: 09-Apr-2020 09:53 Automation

Sample Name: VSTD050

Lab Sample ID: VSTD050

Compound Number	: 124	
Compound Name	: tert-Butylbenzene	
Scan Number	: 3551	
Retention Time (minutes)	: 12.901	
Quant Ion	: 134.00	
Area	: 305787	
On-column Amount (ng)	: 59.1999	
Integration start scan	: 3539	Integration stop scan: 3571
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Corie L. Mellinger on 04/09/2020 at 10:02.
 Target 3.5 esignature user KR421 Page 423 of 592

SECC050

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

SECC050

Data file: /chem/HP09915.i/20apr09b.b/la09ec5.d Injection date and time: **09-APR-2020 21:07**
 Data file Sample Info. Line: SECC050;SECC050;1;3;LCS;;DODWW;;la09b05; Instrument ID: **HP09915.i** Batch: **L201002AA**
 Date, time and analyst ID of latest file update: 09-Apr-2020 21:24 Automation

Blank Data file reference: /chem/HP09915.i/20apr09b.b/la09b05.d

Method used: /chem/HP09915.i/20apr09b.b/m8260c5.m Sublist used: **L201002**
 Calibration date and time (Last Method Edit): 09-APR-2020 10:00
 Mid Level Daily Calibration Standard Reference: /chem/HP09915.i/20apr09b.b/la09c02.d

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.493 (0.007)	936	65	233741 (-12)	250.00	
66) Fluorobenzene	7.946 (0.007)	2010	96	1187692 (-5)	50.00	
100) Chlorobenzene-d5	11.351 (0.003)	3069	117	922069 (-5)	50.00	
131) 1,4-Dichlorobenzene-d4	13.216 (0.000)	3649	152	513088 (-4)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.059 (0.001)	113	292085	52.011	104%		80 - 119
57) 1,2-Dichloroethane-d4	(2)	7.519 (-0.001)	102	73631	50.553	101%		81 - 118
83) Toluene-d8	(3)	9.924 (0.000)	98	1190708	49.152	98%		89 - 112
114) 4-Bromofluorobenzene	(3)	12.342 (0.000)	95	440670	48.237	96%		85 - 114

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)	2.410 (0.000)	62	354362	50.161	50.16			0.2	1
17) 1,1-Dichloroethene	(2)	3.760 (0.000)	96	265278	52.962	52.96			0.2	1
32) trans-1,2-Dichloroethene	(2)	4.882 (0.000)	96	297830	54.212	54.21			0.2	1
36) 1,1-Dichloroethane	(2)	5.541 (0.000)	63	528305	57.454	57.45			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.371 (0.000)	96	331430	53.943	53.94			0.2	1
51) Chloroform	(2)	6.847 (0.000)	83	503397	56.497	56.50			0.2	1
53) 1,1,1-Trichloroethane	(2)	7.072 (0.000)	97	430643	55.124	55.12			0.3	1
60) Benzene	(2)	7.544 (0.000)	78	1238723	55.718	55.72			0.2	1
61) 1,2-Dichloroethane	(2)	7.618 (0.000)	62	408107	54.903	54.90			0.3	1
71) Trichloroethene	(2)	8.419 (-0.000)	95	307179	54.885	54.89			0.2	1
78) Bromodichloromethane	(2)	9.100 (-0.000)	83	380874	56.722	56.72			0.2	1
88) Toluene	(3)	9.998 (-0.000)	92	773541	53.741	53.74			0.2	1
93) Tetrachloroethene	(3)	10.531 (0.000)	166	342791	56.117	56.12			0.2	1
104) Ethylbenzene	(3)	11.460 (-0.000)	91	1505145	54.737	54.74			0.4	1
106) m+p-Xylene	(3)	11.573 (-0.000)	106	1198776	111.076	111.08			1	5
107) o-Xylene	(3)	11.901 (-0.000)	106	581543	54.361	54.36			0.4	1
108) Xylene (Total)	(3)		106	1780319	165.437	165.44			1	6

Digitally signed by Linda C. Pape on 04/10/2020 at 09:01. Target 3.5 esignature user ID: lcp00895

SECC050

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

SECC050

Data file: /chem/HP09915.i/20apr09b.b/la09ec5.d Injection date and time: **09-APR-2020 21:07**
Data file Sample Info. Line: SECC050;SECC050;1;3;LCS;;DODWW;;la09b05; Instrument ID: **HP09915.i** Batch: **L201002AA**
Date, time and analyst ID of latest file update: 09-Apr-2020 21:24 Automation

Blank Data file reference: /chem/HP09915.i/20apr09b.b/la09b05.d

Method used: /chem/HP09915.i/20apr09b.b/m8260c5.m Sublist used: **L201002**
Calibration date and time (Last Method Edit): 09-APR-2020 10:00
Mid Level Daily Calibration Standard Reference: /chem/HP09915.i/20apr09b.b/la09c02.d

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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Total number of targets = 17

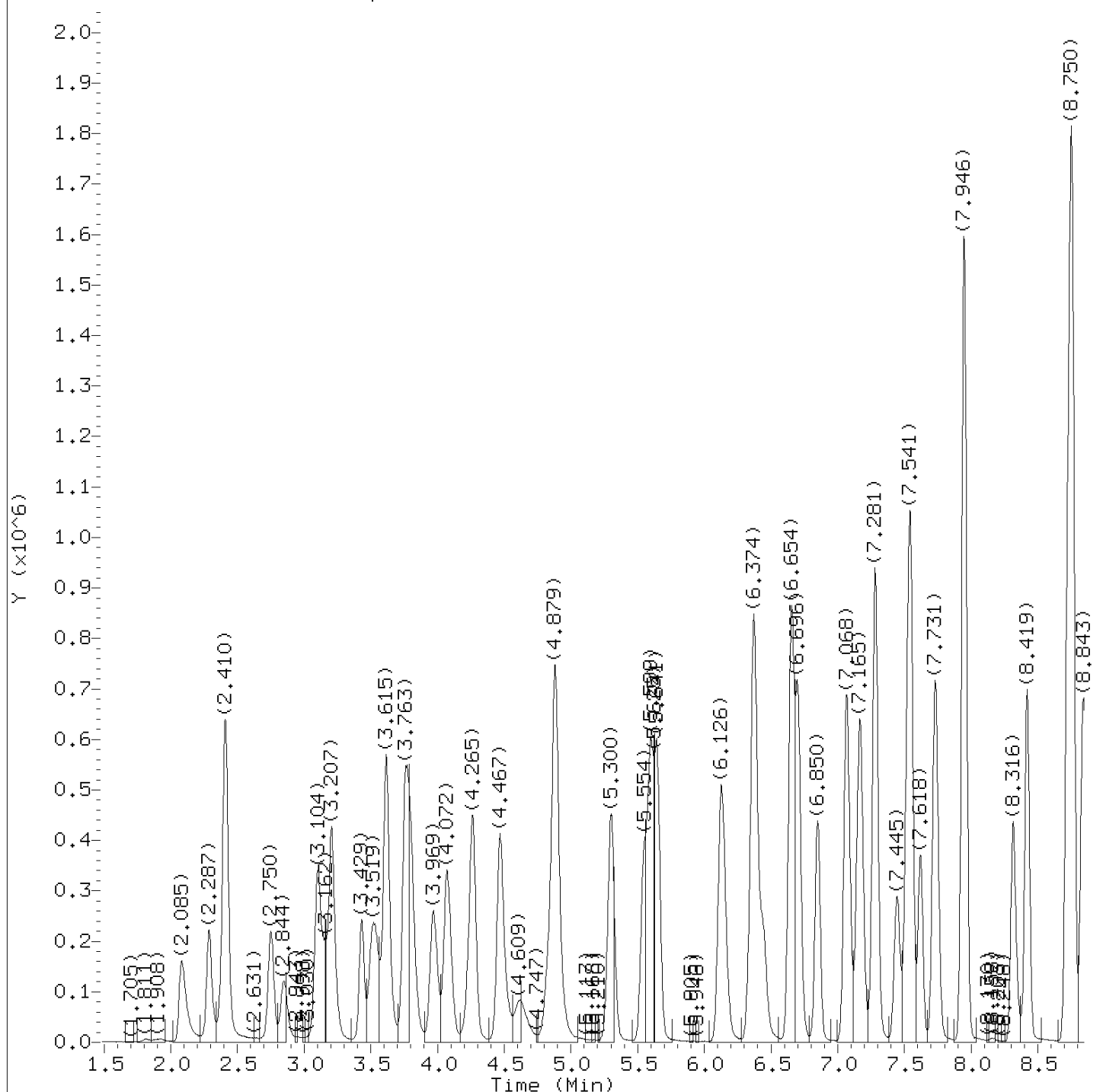
Digitally signed by Linda C. Pape on 04/10/2020 at 09:01. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Kari Becker on 04/13/2020 at 18:26. PARALLAX ID: kmb29664

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/chem/HP09915.i/20apr09b.b/1a09ec5.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20apr09b.b/1a09ec5.d
 Injection date and time: 09-APR-2020 21:07

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr09b.b/m8260c5.m
 Calibration date and time: 09-APR-2020 10:00

Sublist used: L201002

Date, time and analyst ID of latest file update: 09-Apr-2020 21:24 Automation

Sample Name: SECC050

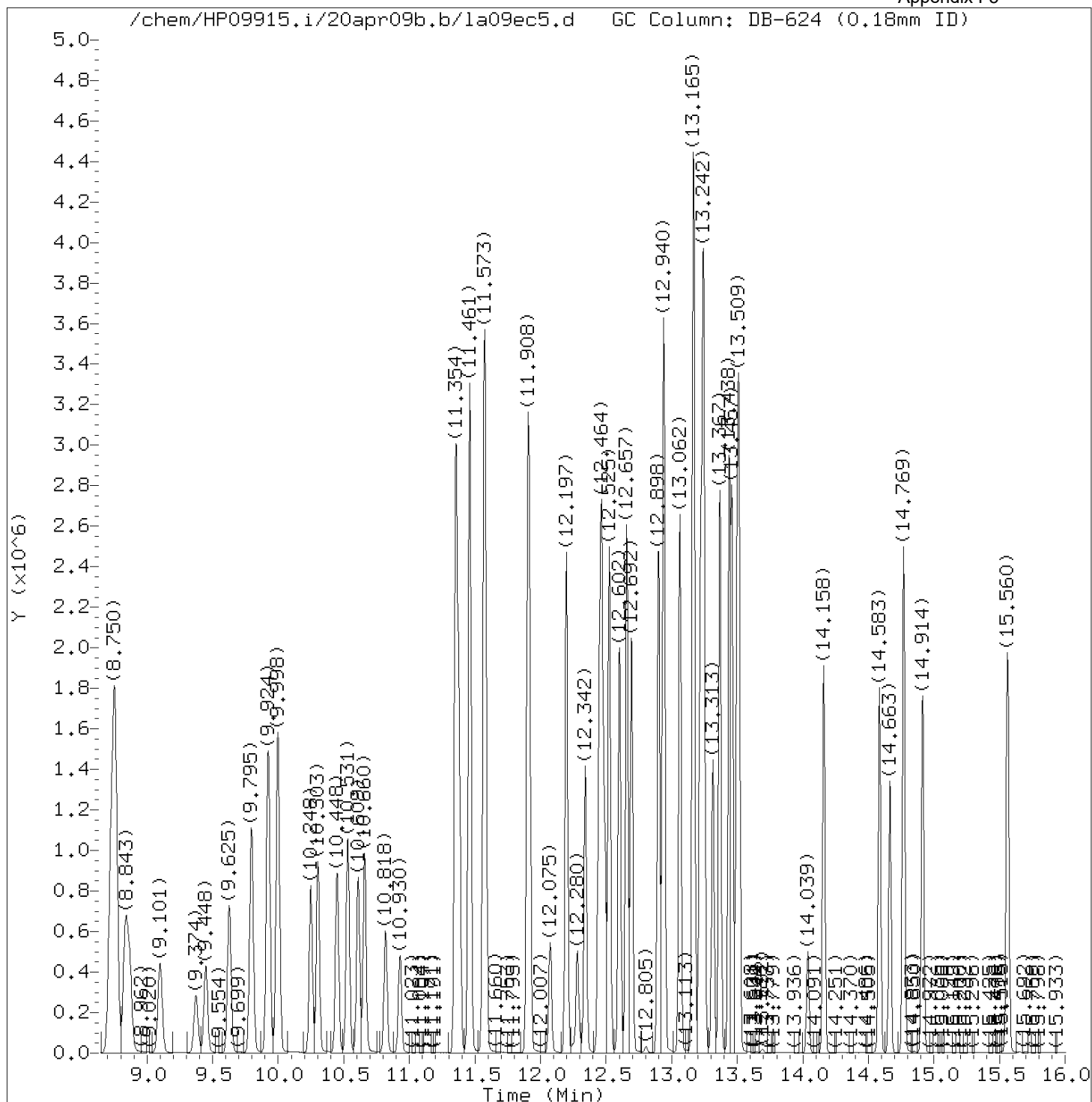
Lab Sample ID: SECC050

Digitally signed by Linda C. Pape
 on 04/10/2020 at 09:01.

Target 3.5 esignature user ID: lcp00895

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Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20apr09b.b/1a09ec5.d
 Injection date and time: 09-APR-2020 21:07

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr09b.b/m8260c5.m
 Calibration date and time: 09-APR-2020 10:00

Sublist used: L201002

Date, time and analyst ID of latest file update: 09-Apr-2020 21:24 Automation

Sample Name: SECC050

Lab Sample ID: SECC050

Digitally signed by Linda C. Pape
 on 04/10/2020 at 09:01.

Target 3.5 esignature user ID: lcp00895

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page 2 of 2

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20apr09b.b/la09ec5.d
 Injection date and time: 09-APR-2020 21:07

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr09b.b/m8260c5.m

Sublist used: L201002

Calibration date and time: 09-APR-2020 10:00

Date, time and analyst ID of latest file update: 09-Apr-2020 21:24 Automation

Sample Name: SECC050

Lab Sample ID: SECC050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
6) Vinyl Chloride	(2)	2.410	62	354362	50.161
17) 1,1-Dichloroethene	(2)	3.760	96	265278	52.962
29) *t-Butyl alcohol-d10	(1)	4.493	65	233741	250.000
32) trans-1,2-Dichloroethene	(2)	4.882	96	297830	54.212
36) 1,1-Dichloroethane	(2)	5.541	63	528305	57.454
42) cis-1,2-Dichloroethene	(2)	6.371	96	331430	53.943
51) Chloroform	(2)	6.847	83	503397	56.497
52) \$Dibromofluoromethane	(2)	7.059	113	292085	52.011
53) 1,1,1-Trichloroethane	(2)	7.072	97	430643	55.124
57) \$1,2-Dichloroethane-d4	(2)	7.519	102	73631	50.553
60) Benzene	(2)	7.544	78	1238723	55.718
61) 1,2-Dichloroethane	(2)	7.618	62	408107	54.903
66) *Fluorobenzene	(2)	7.946	96	1187692	50.000
71) Trichloroethene	(2)	8.419	95	307179	54.885
78) Bromodichloromethane	(2)	9.101	83	380874	56.722
83) \$Toluene-d8	(3)	9.924	98	1190708	49.152
88) Toluene	(3)	9.998	92	773541	53.741
93) Tetrachloroethene	(3)	10.531	166	342791	56.117
100) *Chlorobenzene-d5	(3)	11.351	117	922069	50.000
104) Ethylbenzene	(3)	11.461	91	1505145	54.737
106) m+p-Xylene	(3)	11.573	106	1198776	111.076
108) Xylene (Total)	(3)		106	1780319	165.437
107) o-Xylene	(3)	11.901	106	581543	54.361
114) \$4-Bromofluorobenzene	(3)	12.342	95	440670	48.237
131) *1,4-Dichlorobenzene-d4	(4)	13.216	152	513088	50.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 1 of 1

Digitally signed by Linda C. Pape
 on 04/10/2020 at 09:01.

Target 3.5 esignature user ID: lcp00895

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Raw QC Data

Volatiles by GC/MS

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VBLKL01

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKL01

Data file: /chem/HP09915.i/20apr08a.b/la08b01.d

Injection date and time: 08-APR-2020 11:29

Data file Sample Info. Line: VBLKL01;VBLKL01;1;3;;;DODWW;;;

Instrument ID: HP09915.i Batch: L200991AA

Date, time and analyst ID of latest file update: 08-Apr-2020 11:48 clm27445

Blank Data file reference: /chem/HP09915.i/20apr08a.b/la08b01.d

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m Sublist used: L200991

Calibration date and time (Last Method Edit): 08-APR-2020 10:49

Mid Level Daily Calibration Standard Reference: /chem/HP09915.i/20apr08a.b/la08c01.d

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.493 (0.000)	936	65	231173 (-17)	250.00	
66) Fluorobenzene	7.946 (0.003)	2010	96	1192812 (-5)	50.00	
100) Chlorobenzene-d5	11.351 (0.000)	3069	117	912702 (-6)	50.00	
131) 1,4-Dichlorobenzene-d4	13.219 (-0.003)	3650	152	495416 (-6)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.065 (0.000)	113	290873	51.573	103%		80 - 119
57) 1,2-Dichloroethane-d4	(2)	7.515 (0.000)	102	76177	52.077	104%		81 - 118
83) Toluene-d8	(3)	9.924 (0.000)	98	1167293	48.680	97%		89 - 112
114) 4-Bromofluorobenzene	(3)	12.342 (0.000)	95	423859	46.873	94%		85 - 114

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)			Not Detected					0.2	1
4) Chloromethane	(2)			Not Detected					0.2	1
6) Vinyl Chloride	(2)			Not Detected					0.2	1
8) Bromomethane	(2)			Not Detected					0.3	1
9) Chloroethane	(2)			Not Detected					0.2	1
12) Trichlorofluoromethane	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
27) Methyl Acetate	(2)			Not Detected					0.3	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
33) Methyl Tertiary Butyl Ether	(2)			Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.2	1
37) Vinyl Acetate	(2)			Not Detected					0.7	10
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.2	1
43) 1,2-Dichloroethene (Total)	(2)			Not Detected					0.4	2
44) 2-Butanone	(2)			Not Detected					0.3	10
45) 2,2-Dichloropropane	(2)			Not Detected					0.3	1
49) Bromochloromethane	(2)			Not Detected					0.2	5
51) Chloroform	(2)			Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.3	1
54) Cyclohexane	(2)			Not Detected					1	5
55) 1,1-Dichloropropene	(2)			Not Detected					0.2	5
56) Carbon Tetrachloride	(2)			Not Detected					0.2	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)			Not Detected					0.2	1
72) Methylcyclohexane	(2)			Not Detected					0.5	5
73) 1,2-Dichloropropane	(2)			Not Detected					0.2	1

Digitally signed by Corie L. Mellinger on 04/08/2020 at 11:49. Target 3.5 esignature user ID: clm27445

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VBLKL01 Lancaster Laboratories VBLKL01

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/20apr08a.b/la08b01.d Injection date and time: **08-APR-2020 11:29**
 Data file Sample Info. Line: VBLKL01;VBLKL01;1;3;;;DODWW;;; Instrument ID: **HP09915.i** Batch: **L200991AA**
 Date, time and analyst ID of latest file update: 08-Apr-2020 11:48 c1m27445

Blank Data file reference: /chem/HP09915.i/20apr08a.b/la08b01.d

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m Sublist used: **L200991**
 Calibration date and time (Last Method Edit): 08-APR-2020 10:49
 Mid Level Daily Calibration Standard Reference: /chem/HP09915.i/20apr08a.b/la08c01.d

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit LOQ (in sample)	
74) Dibromomethane	(2)			Not Detected					0.2	1
78) Bromodichloromethane	(2)			Not Detected					0.2	1
80) 2-Chloroethyl Vinyl Ether	(2)			Not Detected					0.2	10
81) cis-1,3-Dichloropropene	(2)			Not Detected					0.2	1
82) 4-Methyl-2-pentanone	(2)			Not Detected					0.5	10
88) Toluene	(3)			Not Detected					0.2	1
89) trans-1,3-Dichloropropene	(3)			Not Detected					0.2	1
92) 1,1,2-Trichloroethane	(3)			Not Detected					0.2	1
93) Tetrachloroethene	(3)			Not Detected					0.2	1
94) 1,3-Dichloropropane	(3)			Not Detected					0.2	1
96) 2-Hexanone	(3)			Not Detected					0.3	10
97) Dibromochloromethane	(3)			Not Detected					0.2	1
99) 1,2-Dibromoethane	(3)			Not Detected					0.2	1
102) Chlorobenzene	(3)			Not Detected					0.2	1
103) 1,1,1,2-Tetrachloroethane	(3)			Not Detected					0.2	1
104) Ethylbenzene	(3)			Not Detected					0.4	1
106) m+p-Xylene	(3)			Not Detected					1	5
107) o-Xylene	(3)			Not Detected					0.4	1
108) Xylene (Total)	(3)			Not Detected					1	6
109) Styrene	(3)			Not Detected					0.2	5
110) Bromoform	(3)			Not Detected					1	4
111) Isopropylbenzene	(3)			Not Detected					0.2	5
115) Bromobenzene	(4)			Not Detected					0.2	5
116) 1,1,2,2-Tetrachloroethane	(4)			Not Detected					0.2	1
117) 1,2,3-Trichloropropane	(4)			Not Detected					0.2	5
119) n-Propylbenzene	(4)			Not Detected					0.2	5
120) 2-Chlorotoluene	(4)			Not Detected					0.2	5
121) 4-Chlorotoluene	(4)			Not Detected					0.2	5
122) 1,3,5-Trimethylbenzene	(4)			Not Detected					0.3	5
124) tert-Butylbenzene	(4)			Not Detected					0.3	5
126) 1,2,4-Trimethylbenzene	(4)			Not Detected					1	5
127) sec-Butylbenzene	(4)			Not Detected					0.2	5
129) 1,3-Dichlorobenzene	(4)			Not Detected					0.2	5
130) p-Isopropyltoluene	(4)			Not Detected					0.2	5
133) 1,4-Dichlorobenzene	(4)			Not Detected					0.2	5
138) 1,2-Dichlorobenzene	(4)			Not Detected					0.2	5
139) n-Butylbenzene	(4)			Not Detected					0.2	5
142) 1,2-Dibromo-3-chloropropane	(4)			Not Detected					0.3	5
146) 1,2,4-Trichlorobenzene	(4)			Not Detected					0.3	5
147) Hexachlorobutadiene	(4)			Not Detected					2	5
148) Naphthalene	(4)			Not Detected					1	5
149) 1,2,3-Trichlorobenzene	(4)			Not Detected					0.4	5

Digitally signed by Corie L. Mellinger on 04/08/2020 at 11:49. Target 3.5 esignature user ID: c1m27445

VBLKL01

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKL01

Data file: /chem/HP09915.i/20apr08a.b/la08b01.d Injection date and time: 08-APR-2020 11:29
Data file Sample Info. Line: VBLKL01;VBLKL01;1;3;;;DODWW;;; Instrument ID: HP09915.i Batch: L200991AA
Date, time and analyst ID of latest file update: 08-Apr-2020 11:48 clm27445

Blank Data file reference: /chem/HP09915.i/20apr08a.b/la08b01.d

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m Sublist used: L200991
Calibration date and time (Last Method Edit): 08-APR-2020 10:49
Mid Level Daily Calibration Standard Reference: /chem/HP09915.i/20apr08a.b/la08c01.d

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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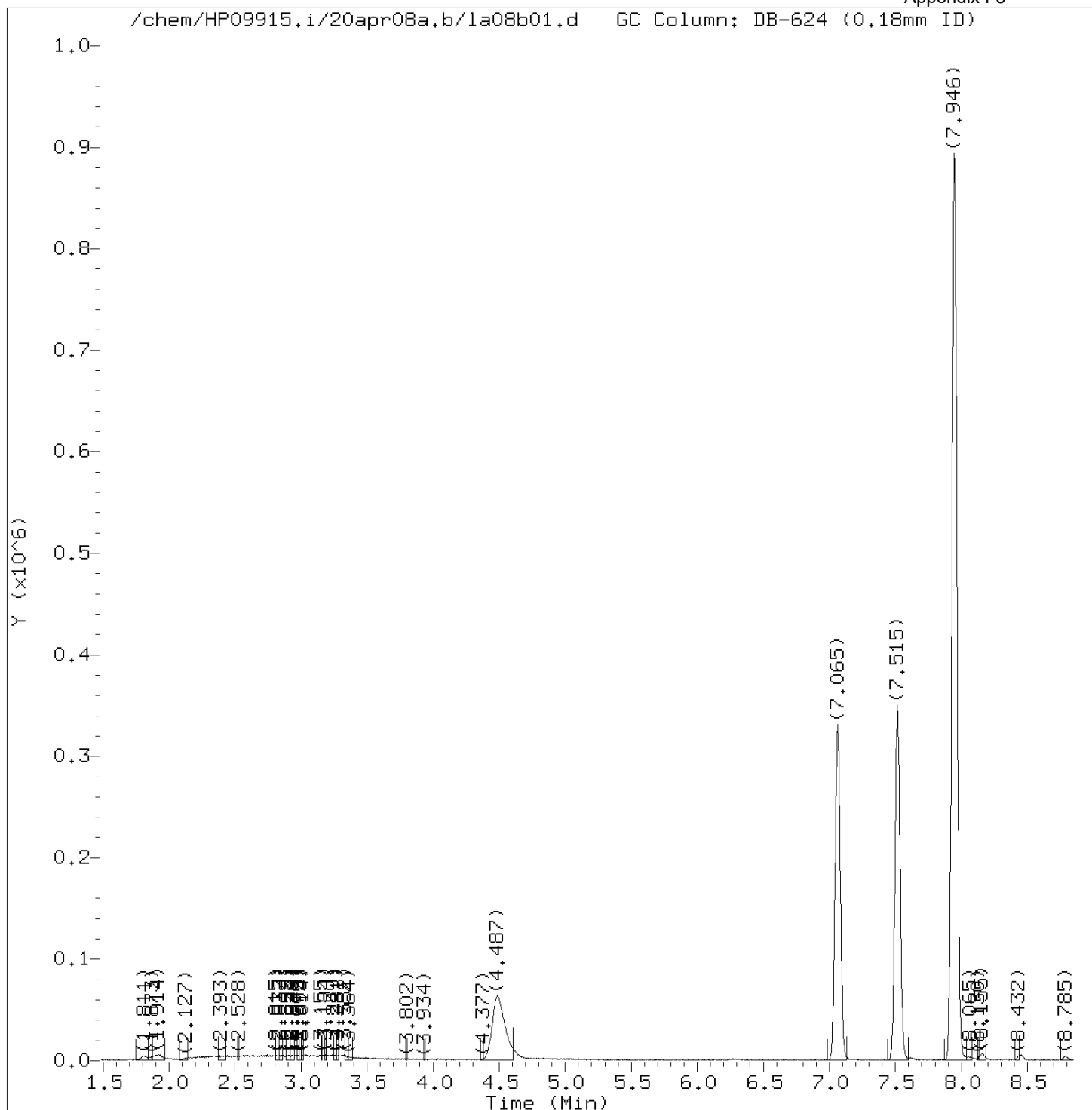
Total number of targets = 73

Digitally signed by Corie L. Mellinger on 04/08/2020 at 11:49. Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kari Becker on 04/08/2020 at 18:49. PARALLAX ID: kmb29664

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Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20apr08a.b/1a08b01.d
 Injection date and time: 08-APR-2020 11:29

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m
 Calibration date and time: 08-APR-2020 10:49

Sublist used: L200991

Date, time and analyst ID of latest file update: 08-Apr-2020 11:48 clm27445

Sample Name: VBLKL01

Lab Sample ID: VBLKL01

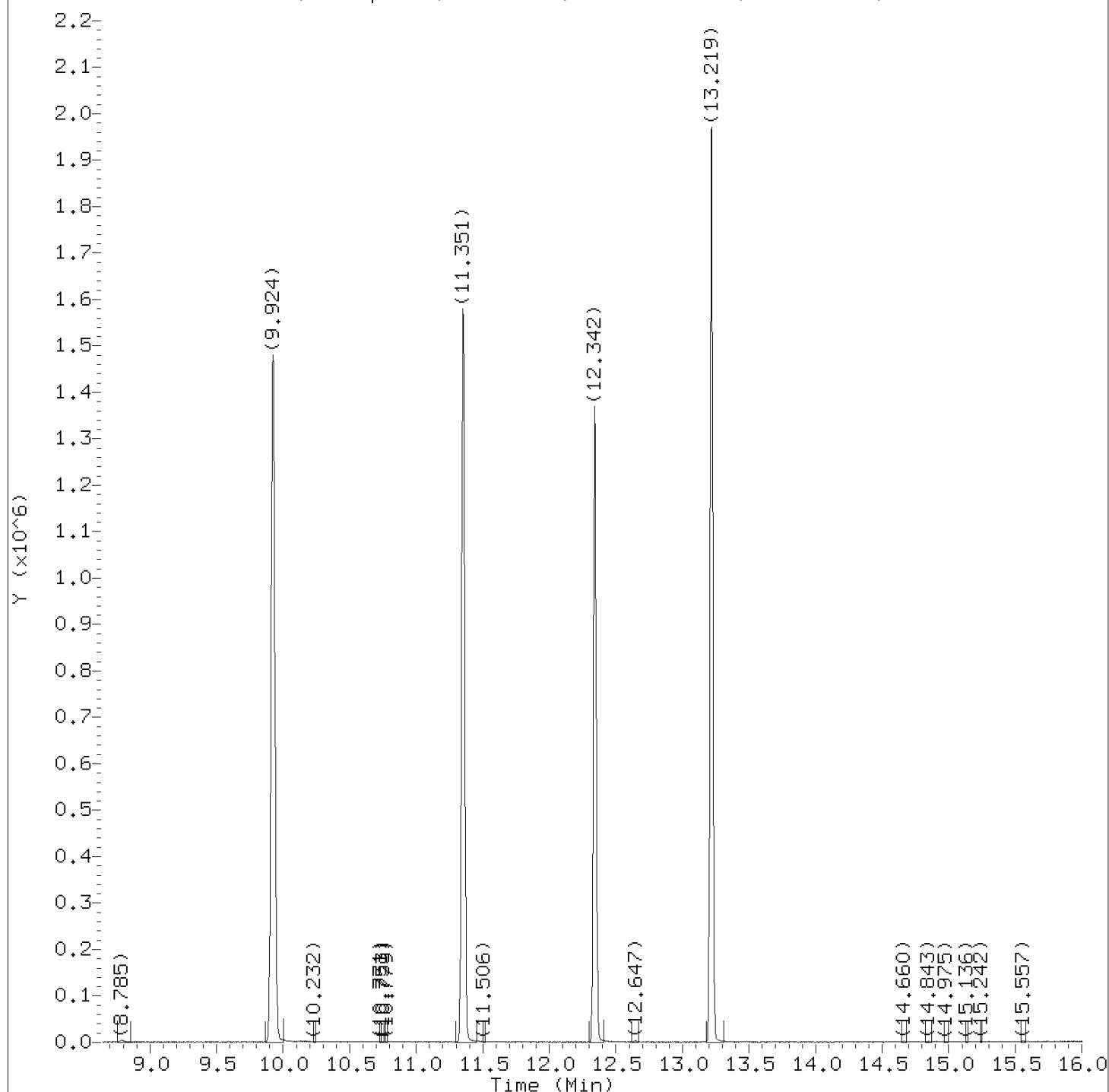
Digitally signed by Corie L. Mellinger
 on 04/08/2020 at 11:49.

Target 3.5 esignature user ID: clm27445

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/chem/HP09915.i/20apr08a.b/1a08b01.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20apr08a.b/1a08b01.d
 Injection date and time: 08-APR-2020 11:29

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m
 Calibration date and time: 08-APR-2020 10:49

Sublist used: L200991

Date, time and analyst ID of latest file update: 08-Apr-2020 11:48 clm27445

Sample Name: VBLKL01

Lab Sample ID: VBLKL01

Digitally signed by Corie L. Mellinger
 on 04/08/2020 at 11:49.

Target 3.5 esignature user ID: clm27445

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20apr08a.b/la08b01.d

Instrument ID: HP09915.i

Injection date and time: 08-APR-2020 11:29

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m

Sublist used: L200991

Calibration date and time: 08-APR-2020 10:49

Date, time and analyst ID of latest file update: 08-Apr-2020 11:48 clm27445

Sample Name: VBLKL01

Lab Sample ID: VBLKL01

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
29) *t-Butyl alcohol-d10	(1)	4.493	65	231173	250.000
52) \$Dibromofluoromethane	(2)	7.065	113	290873	51.573
57) \$1,2-Dichloroethane-d4	(2)	7.515	102	76177	52.077
66) *Fluorobenzene	(2)	7.946	96	1192812	50.000
83) \$Toluene-d8	(3)	9.924	98	1167293	48.680
100) *Chlorobenzene-d5	(3)	11.351	117	912702	50.000
114) \$4-Bromofluorobenzene	(3)	12.342	95	423859	46.873
131) *1,4-Dichlorobenzene-d4	(4)	13.219	152	495416	50.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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on 04/08/2020 at 11:49.

Target 3.5 esignature user ID: clm27445

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VBLKL05

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKL05

Data file: /chem/HP09915.i/20apr09b.b/la09b05.d

Injection date and time: 09-APR-2020 11:48

Data file Sample Info. Line: VBLKL05;VBLKL05;1;3;;;DODWW;;;

Instrument ID: HP09915.i Batch: L201002AA

Date, time and analyst ID of latest file update: 09-Apr-2020 12:08 clm27445

Blank Data file reference: /chem/HP09915.i/20apr09b.b/la09b05.d

Method used: /chem/HP09915.i/20apr09b.b/m8260c5.m Sublist used: L201002

Calibration date and time (Last Method Edit): 09-APR-2020 10:00

Mid Level Daily Calibration Standard Reference: /chem/HP09915.i/20apr09b.b/la09c02.d

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.500 (0.000)	938	65	246341 (-7)	250.00	
66) Fluorobenzene	7.946 (0.007)	2010	96	1211929 (-3)	50.00	
100) Chlorobenzene-d5	11.351 (0.003)	3069	117	939253 (-3)	50.00	
131) 1,4-Dichlorobenzene-d4	13.216 (0.000)	3649	152	504013 (-6)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.065 (0.000)	113	303180	52.907	106%		80 - 119
57) 1,2-Dichloroethane-d4	(2)	7.522 (-0.001)	102	76300	51.339	103%		81 - 118
83) Toluene-d8	(3)	9.924 (0.000)	98	1196695	48.495	97%		89 - 112
114) 4-Bromofluorobenzene	(3)	12.342 (0.000)	95	434542	46.696	93%		85 - 114

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)			Not Detected				0.2	1
17) 1,1-Dichloroethene	(2)			Not Detected				0.2	1
32) trans-1,2-Dichloroethene	(2)			Not Detected				0.2	1
36) 1,1-Dichloroethane	(2)			Not Detected				0.2	1
42) cis-1,2-Dichloroethene	(2)			Not Detected				0.2	1
51) Chloroform	(2)			Not Detected				0.2	1
53) 1,1,1-Trichloroethane	(2)			Not Detected				0.3	1
60) Benzene	(2)			Not Detected				0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected				0.3	1
71) Trichloroethene	(2)			Not Detected				0.2	1
78) Bromodichloromethane	(2)			Not Detected				0.2	1
88) Toluene	(3)			Not Detected				0.2	1
93) Tetrachloroethene	(3)			Not Detected				0.2	1
104) Ethylbenzene	(3)			Not Detected				0.4	1
106) m+p-Xylene	(3)			Not Detected				1	5
107) o-Xylene	(3)			Not Detected				0.4	1
108) Xylene (Total)	(3)			Not Detected				1	6

Digitally signed by Corie L. Mellinger on 04/09/2020 at 12:08. Target 3.5 esignature user ID: clm27445

VBLKL05

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKL05

Data file: /chem/HP09915.i/20apr09b.b/la09b05.d

Injection date and time: 09-APR-2020 11:48

Data file Sample Info. Line: VBLKL05;VBLKL05;1;3;;;DODWW;;;

Instrument ID: HP09915.i Batch: L201002AA

Date, time and analyst ID of latest file update: 09-Apr-2020 12:08 clm27445

Blank Data file reference: /chem/HP09915.i/20apr09b.b/la09b05.d

Method used: /chem/HP09915.i/20apr09b.b/m8260c5.m

Sublist used: L201002

Calibration date and time (Last Method Edit): 09-APR-2020 10:00

Mid Level Daily Calibration Standard Reference: /chem/HP09915.i/20apr09b.b/la09c02.d

Bottle Code:

Matrix: WATER

Level: Low

On-Column Amount units: ng

In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo)

VOA Prep Factor: 1.00

Volume Purged (Vt): 5 ml

Sample Volume (Vo): 5 ml

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Total number of targets = 17

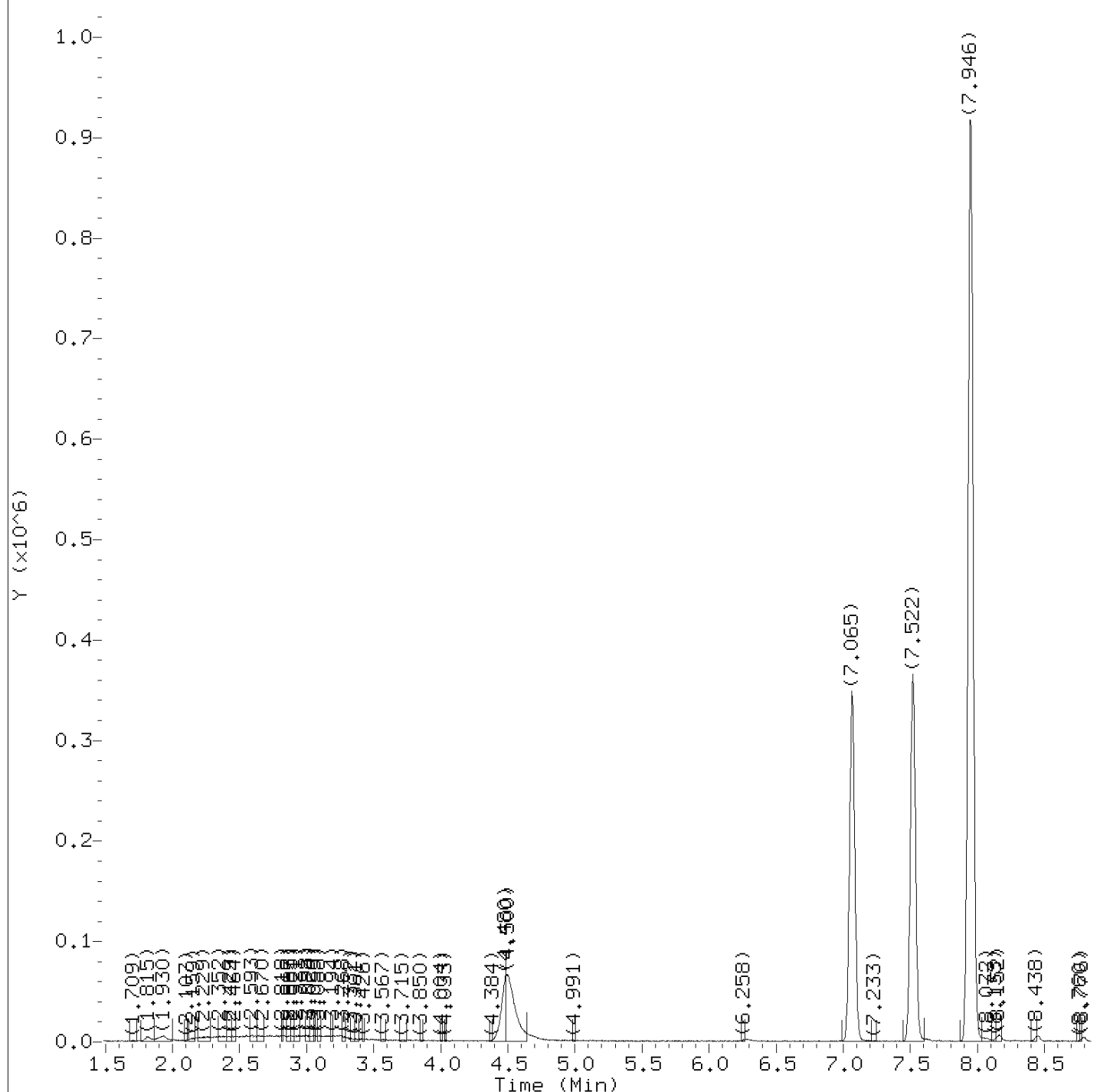
Digitally signed by Corie L. Mellinger on 04/09/2020 at 12:08. Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kari Becker on 04/13/2020 at 18:18. PARALLAX ID: kmb29664

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/chem/HP09915.i/20apr09b.b/1a09b05.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20apr09b.b/1a09b05.d
 Injection date and time: 09-APR-2020 11:48

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr09b.b/m8260c5.m
 Calibration date and time: 09-APR-2020 10:00

Sublist used: L201002

Date, time and analyst ID of latest file update: 09-Apr-2020 12:08 clm27445

Sample Name: VBLKL05

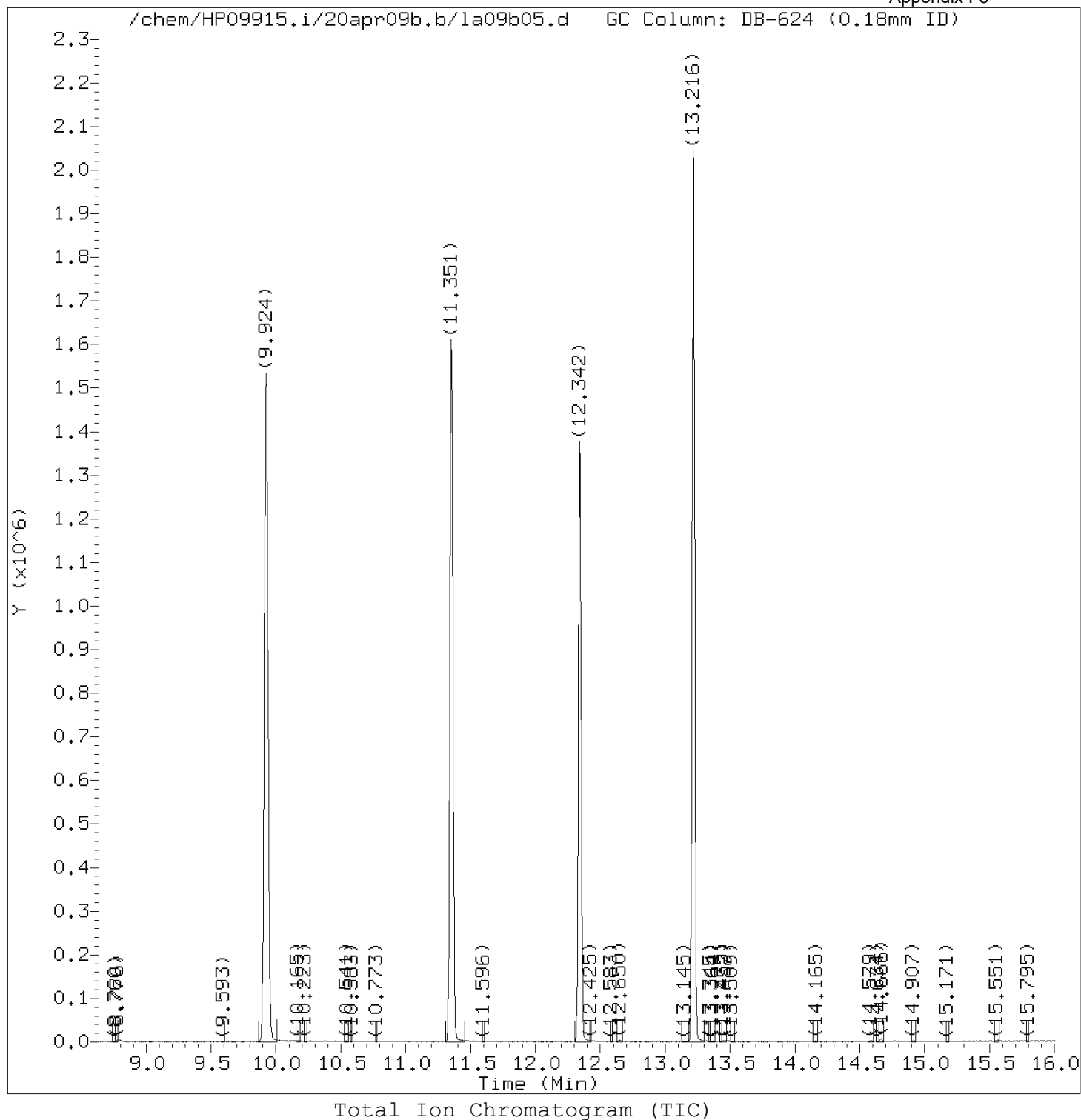
Lab Sample ID: VBLKL05

Digitally signed by Corie L. Mellinger
 on 04/09/2020 at 12:08.

Target 3.5 esignature user ID: clm27445

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Target Revision 3.5

Data File: /chem/HP09915.i/20apr09b.b/1a09b05.d
 Injection date and time: 09-APR-2020 11:48

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr09b.b/m8260c5.m
 Calibration date and time: 09-APR-2020 10:00

Sublist used: L201002

Date, time and analyst ID of latest file update: 09-Apr-2020 12:08 clm27445

Sample Name: VBLKL05

Lab Sample ID: VBLKL05

Digitally signed by Corie L. Mellinger
 on 04/09/2020 at 12:08.

Target 3.5 esignature user ID: clm27445

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20apr09b.b/la09b05.d

Instrument ID: HP09915.i

Injection date and time: 09-APR-2020 11:48

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr09b.b/m8260c5.m

Sublist used: L201002

Calibration date and time: 09-APR-2020 10:00

Date, time and analyst ID of latest file update: 09-Apr-2020 12:08 clm27445

Sample Name: VBLKL05

Lab Sample ID: VBLKL05

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
29) *t-Butyl alcohol-d10	(1)	4.500	65	246341	250.000
52) \$Dibromofluoromethane	(2)	7.065	113	303180	52.907
57) \$1,2-Dichloroethane-d4	(2)	7.522	102	76300	51.339
66) *Fluorobenzene	(2)	7.946	96	1211929	50.000
83) \$Toluene-d8	(3)	9.924	98	1196695	48.495
100) *Chlorobenzene-d5	(3)	11.351	117	939253	50.000
114) \$4-Bromofluorobenzene	(3)	12.342	95	434542	46.696
131) *1,4-Dichlorobenzene-d4	(4)	13.216	152	504013	50.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 1 of 1

Digitally signed by Corie L. Mellinger

on 04/09/2020 at 12:08.

Target 3.5 esignature user ID: clm27445

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42106MS

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1292529MS

Data file: /chem/HP09915.i/20apr08a.b/la08s08.d Injection date and time: **08-APR-2020 13:58**
 Data file Sample Info. Line: 42106MS;1292529MS;1;3;MS;KR421;DODWW;;la08b01; Instrument ID: **HP09915.i** Batch: **L200991AA**
 Date, time and analyst ID of latest file update: 08-Apr-2020 17:30 sej02002

Blank Data file reference: /chem/HP09915.i/20apr08a.b/la08b01.d

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m Sublist used: **17639**
 Calibration date and time (Last Method Edit): 08-APR-2020 10:49
 Mid Level Daily Calibration Standard Reference: /chem/HP09915.i/20apr08a.b/la08c01.d

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.487 (0.006)	934	65	259597 (-7)	250.00	
66) Fluorobenzene	7.943 (0.006)	2009	96	1222690 (-3)	50.00	
100) Chlorobenzene-d5	11.351 (0.000)	3069	117	955240 (-2)	50.00	
131) 1,4-Dichlorobenzene-d4	13.216 (0.000)	3649	152	532828 (1)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.062 (0.000)	113	302717	52.361	105%		80 - 119
57) 1,2-Dichloroethane-d4	(2)	7.519 (0.000)	102	77758	51.859	104%		81 - 118
83) Toluene-d8	(3)	9.924 (0.000)	98	1231901	49.086	98%		89 - 112
114) 4-Bromofluorobenzene	(3)	12.339 (0.000)	95	461500	48.763	98%		85 - 114

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Reporting Limit LOQ (in sample)
60) Benzene	(2)	7.544 (0.000)	78	507859	22.190	22.19		0.2 1
88) Toluene	(3)	9.998 (0.000)	92	319984	21.459	21.46		0.2 1
104) Ethylbenzene	(3)	11.461 (0.000)	91	611903	21.480	21.48		0.4 1
106) m+p-Xylene	(3)	11.573 (0.000)	106	493930	44.177	44.18		1 5
107) o-Xylene	(3)	11.901 (0.000)	106	231525	20.891	20.89		0.4 1
108) Xylene (Total)	(3)		106	725455	65.068	65.07		1 6

Total number of targets = 6

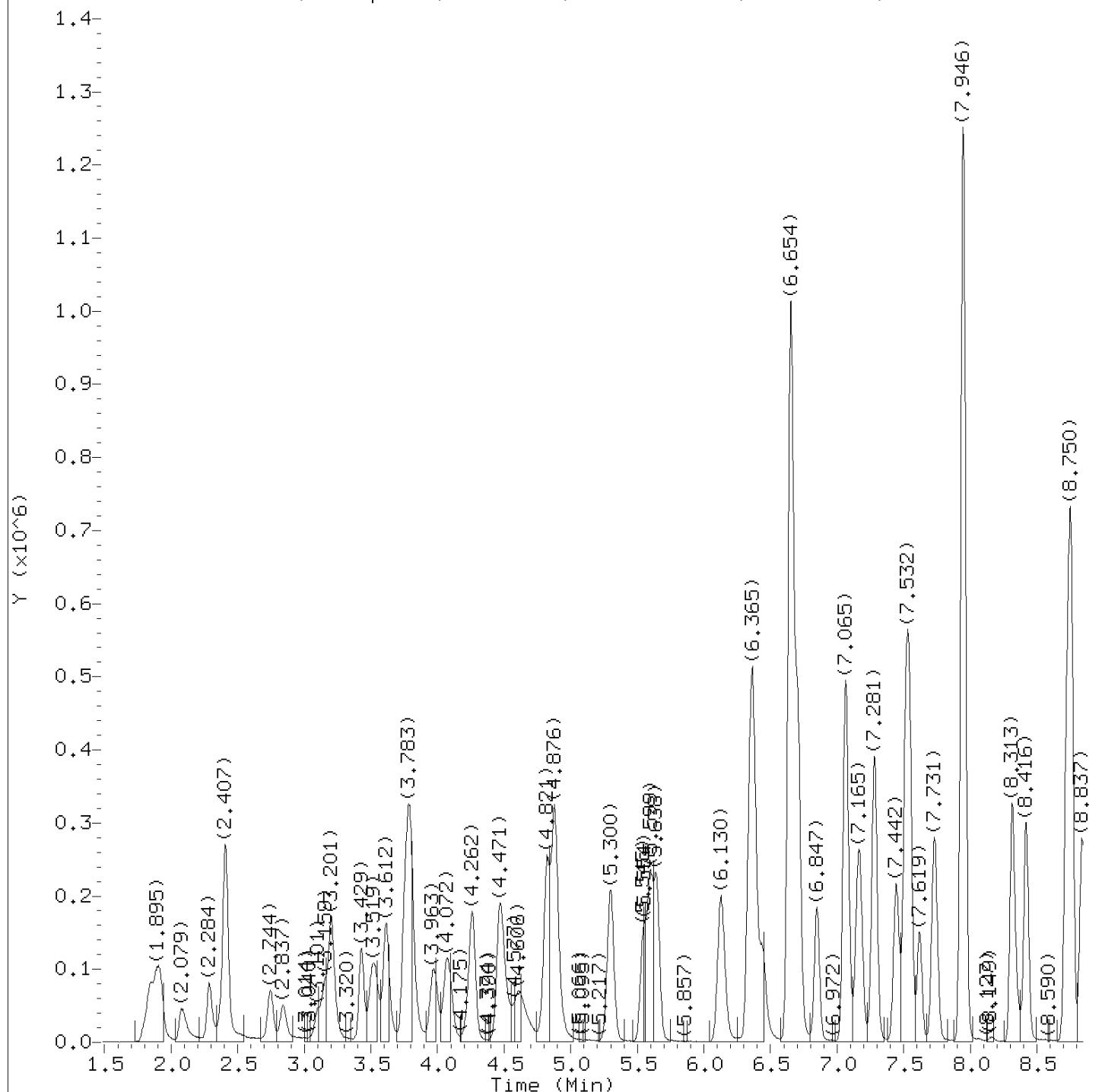
Digitally signed by Sara E. Johnson on 04/08/2020 at 17:30. Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Kari Becker on 04/08/2020 at 21:36. PARALLAX ID: kmb29664

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/chem/HP09915.i/20apr08a.b/1a08s08.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20apr08a.b/1a08s08.d
 Injection date and time: 08-APR-2020 13:58

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m
 Calibration date and time: 08-APR-2020 10:49

Sublist used: 17639

Date, time and analyst ID of latest file update: 08-Apr-2020 17:30 sej02002

Sample Name: 42106MS

Lab Sample ID: 1292529MS

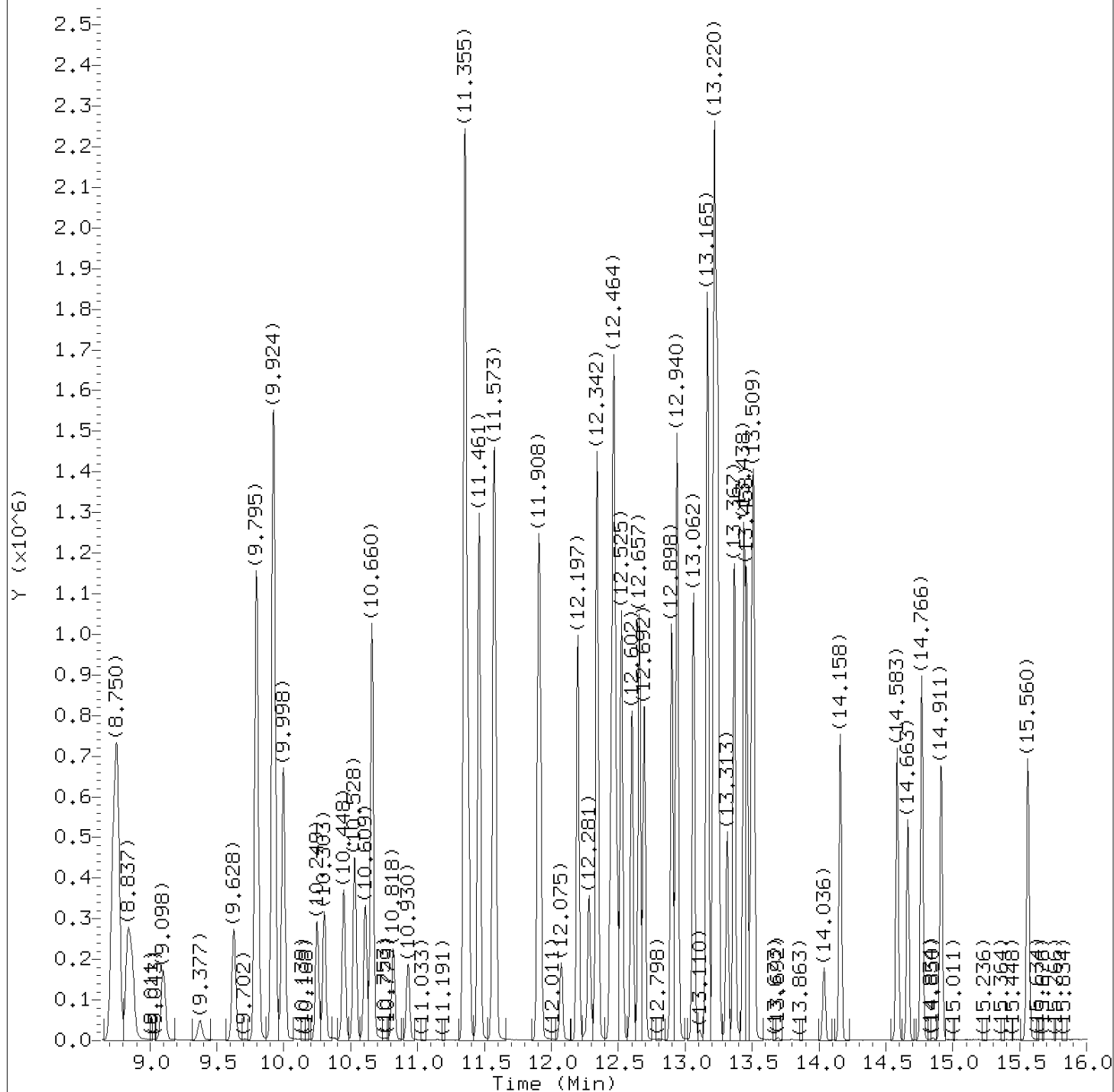
Digitally signed by Sara E. Johnson
 on 04/08/2020 at 17:30.

Target 3.5 esignature user ID: sej02002

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page 1 of 2

/chem/HP09915.i/20apr08a.b/1a08s08.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20apr08a.b/1a08s08.d
 Injection date and time: 08-APR-2020 13:58

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m
 Calibration date and time: 08-APR-2020 10:49

Sublist used: 17639

Date, time and analyst ID of latest file update: 08-Apr-2020 17:30 sej02002

Sample Name: 42106MS

Lab Sample ID: 1292529MS

Digitally signed by Sara E. Johnson
 on 04/08/2020 at 17:30.

Target 3.5 esignature user ID: sej02002

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20apr08a.b/la08s08.d

Instrument ID: HP09915.i

Injection date and time: 08-APR-2020 13:58

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m

Sublist used: 17639

Calibration date and time: 08-APR-2020 10:49

Date, time and analyst ID of latest file update: 08-Apr-2020 17:30 sej02002

Sample Name: 42106MS

Lab Sample ID: 1292529MS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
29) *t-Butyl alcohol-d10	(1)	4.487	65	259597	250.000
52) \$Dibromofluoromethane	(2)	7.062	113	302717	52.361
57) \$1,2-Dichloroethane-d4	(2)	7.519	102	77758	51.859
60) Benzene	(2)	7.545	78	507859	22.190
66) *Fluorobenzene	(2)	7.943	96	1222690	50.000
83) \$Toluene-d8	(3)	9.924	98	1231901	49.086
88) Toluene	(3)	9.998	92	319984	21.459
100) *Chlorobenzene-d5	(3)	11.351	117	955240	50.000
104) Ethylbenzene	(3)	11.461	91	611903	21.480
106) m+p-Xylene	(3)	11.573	106	493930	44.177
108) Xylene (Total)	(3)		106	725455	65.068
107) o-Xylene	(3)	11.901	106	231525	20.891
114) \$4-Bromofluorobenzene	(3)	12.339	95	461500	48.763
131) *1,4-Dichlorobenzene-d4	(4)	13.216	152	532828	50.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 1 of 1

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Target 3.5 esignature user ID: sej02002

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42106MSD

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1292530MSD

Data file: /chem/HP09915.i/20apr08a.b/la08s09.d

Injection date and time: 08-APR-2020 14:20

Data file Sample Info. Line: 42106MSD;1292530MSD;1;3;MSD;KR421;DODWW;;la08b01; Instrument ID: HP09915.i Batch: L200991/

Date, time and analyst ID of latest file update: 08-Apr-2020 17:30 sej02002

Blank Data file reference: /chem/HP09915.i/20apr08a.b/la08b01.d

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m Sublist used: 17639

Calibration date and time (Last Method Edit): 08-APR-2020 10:49

Mid Level Daily Calibration Standard Reference: /chem/HP09915.i/20apr08a.b/la08c01.d

Bottle Code: 038A Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.496 (-0.003)	937	65	260999 (-7)	250.00	
66) Fluorobenzene	7.949 (0.000)	2011	96	1226754 (-2)	50.00	
100) Chlorobenzene-d5	11.354 (-0.003)	3070	117	953145 (-2)	50.00	
131) 1,4-Dichlorobenzene-d4	13.216 (0.000)	3649	152	526874 (0)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.068 (0.000)	113	302854	52.211	104%		80 - 119
57) 1,2-Dichloroethane-d4	(2)	7.522 (0.000)	102	78019	51.860	104%		81 - 118
83) Toluene-d8	(3)	9.924 (0.001)	98	1232154	49.204	98%		89 - 112
114) 4-Bromofluorobenzene	(3)	12.342 (0.000)	95	459377	48.645	97%		85 - 114

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Reporting Limit LOQ (in sample)
60) Benzene	(2)	7.548 (0.000)	78	504284	21.960	21.96		0.2 1
88) Toluene	(3)	10.001 (-0.000)	92	318973	21.438	21.44		0.2 1
104) Ethylbenzene	(3)	11.460 (0.000)	91	613225	21.574	21.57		0.4 1
106) m+p-Xylene	(3)	11.576 (0.000)	106	495024	44.372	44.37		1 5
107) o-Xylene	(3)	11.901 (0.000)	106	232782	21.050	21.05		0.4 1
108) Xylene (Total)	(3)		106	727806	65.423	65.42		1 6

Total number of targets = 6

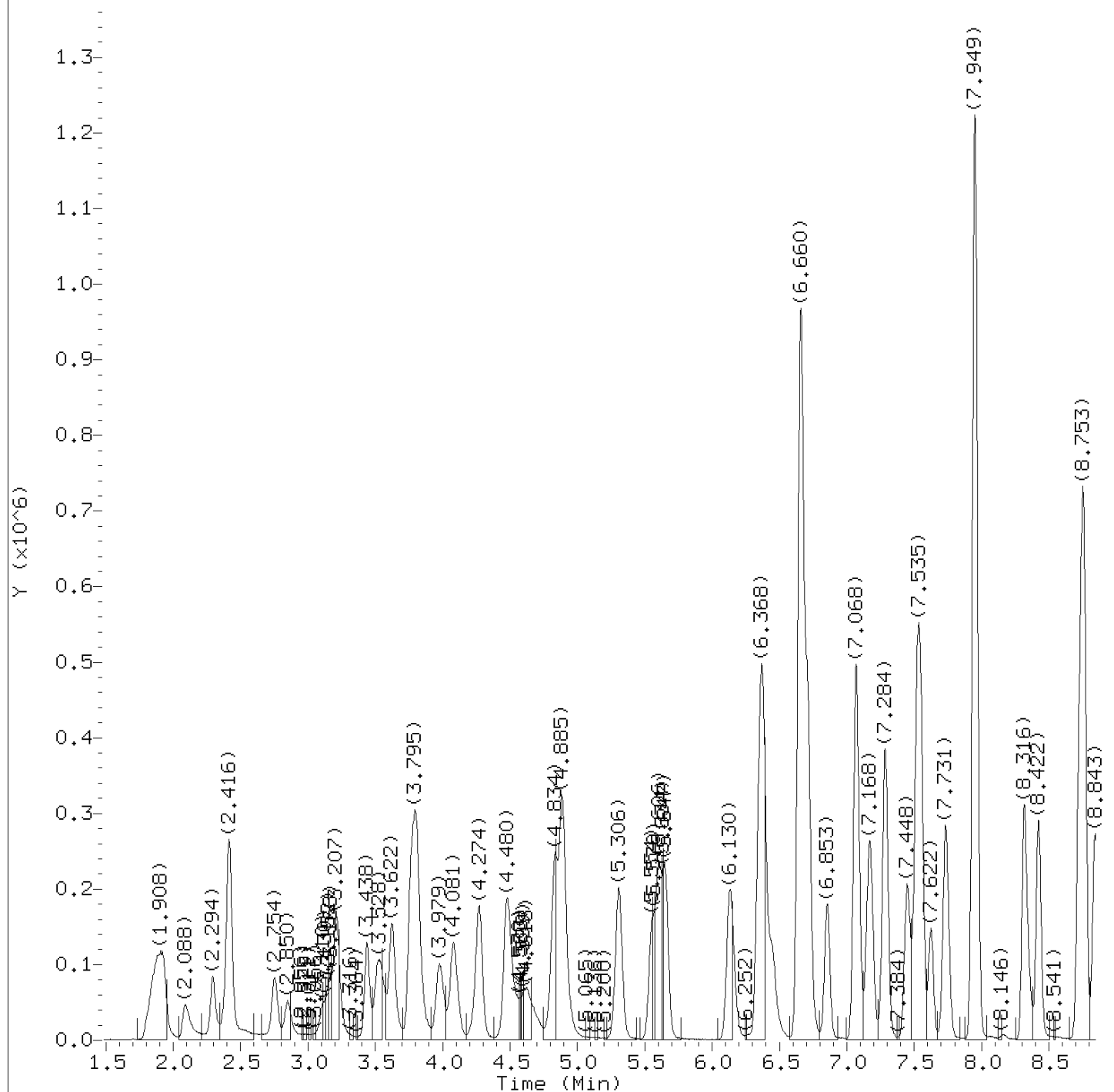
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Secondary review performed and digitally signed by Kari Becker on 04/08/2020 at 21:36. PARALLAX ID: kmb29664

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/chem/HP09915.i/20apr08a.b/1a08s09.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20apr08a.b/1a08s09.d
 Injection date and time: 08-APR-2020 14:20

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m
 Calibration date and time: 08-APR-2020 10:49

Sublist used: 17639

Date, time and analyst ID of latest file update: 08-Apr-2020 17:30 sej02002

Sample Name: 42106MSD

Lab Sample ID: 1292530MSD

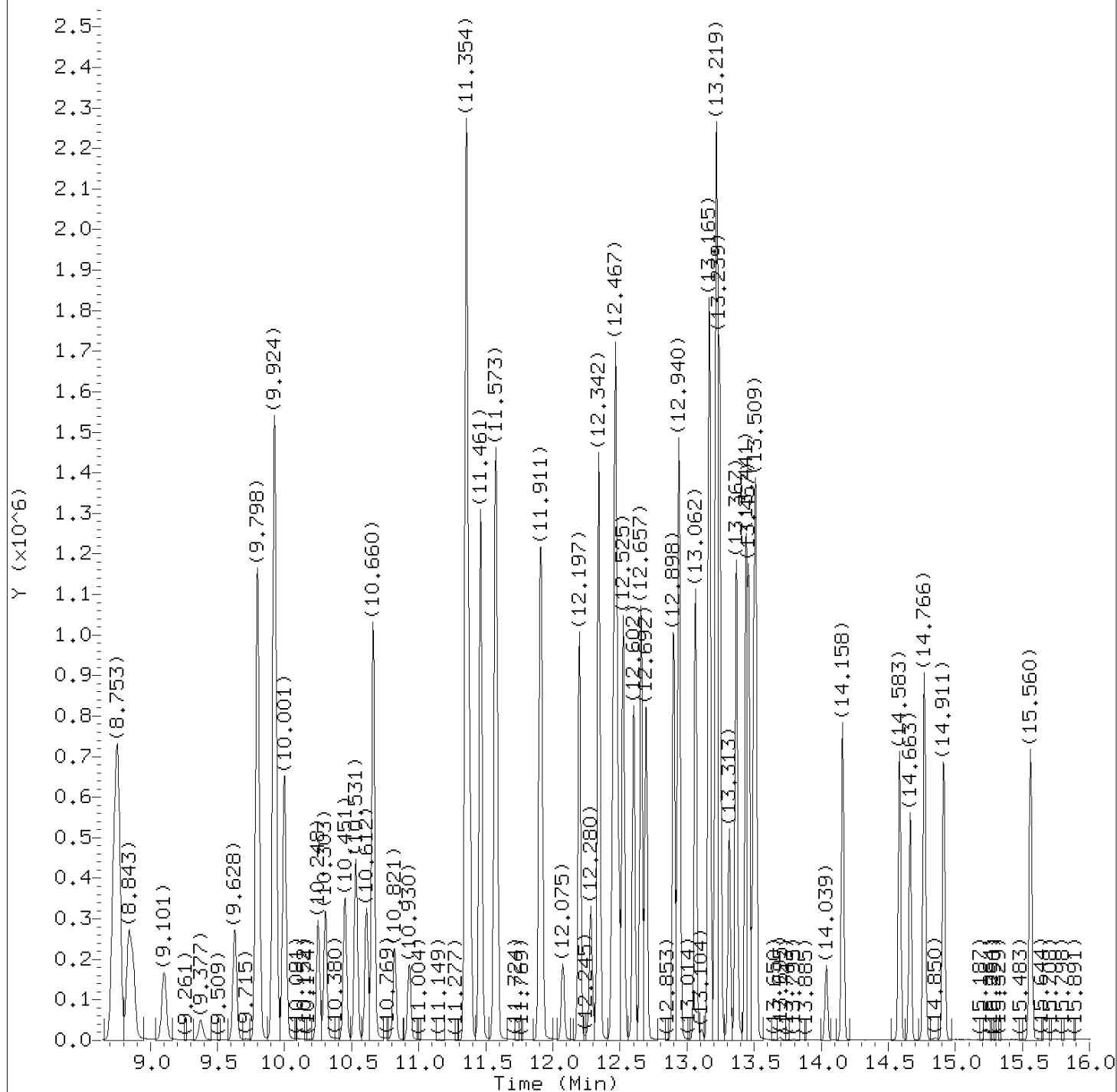
Digitally signed by Sara E. Johnson
 on 04/08/2020 at 17:30.

Target 3.5 esignature user ID: sej02002

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/chem/HP09915.i/20apr08a.b/1a08s09.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20apr08a.b/1a08s09.d
 Injection date and time: 08-APR-2020 14:20

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m
 Calibration date and time: 08-APR-2020 10:49

Sublist used: 17639

Date, time and analyst ID of latest file update: 08-Apr-2020 17:30 sej02002

Sample Name: 42106MSD

Lab Sample ID: 1292530MSD

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 on 04/08/2020 at 17:30.

Target 3.5 esignature user ID: sej02002

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page 2 of 2

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20apr08a.b/la08s09.d

Instrument ID: HP09915.i

Injection date and time: 08-APR-2020 14:20

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m

Sublist used: 17639

Calibration date and time: 08-APR-2020 10:49

Date, time and analyst ID of latest file update: 08-Apr-2020 17:30 sej02002

Sample Name: 42106MSD

Lab Sample ID: 1292530MSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
29) *t-Butyl alcohol-d10	(1)	4.496	65	260999	250.000
52) \$Dibromofluoromethane	(2)	7.068	113	302854	52.211
57) \$1,2-Dichloroethane-d4	(2)	7.522	102	78019	51.860
60) Benzene	(2)	7.548	78	504284	21.960
66) *Fluorobenzene	(2)	7.949	96	1226754	50.000
83) \$Toluene-d8	(3)	9.924	98	1232154	49.204
88) Toluene	(3)	10.001	92	318973	21.438
100) *Chlorobenzene-d5	(3)	11.354	117	953145	50.000
104) Ethylbenzene	(3)	11.461	91	613225	21.574
106) m+p-Xylene	(3)	11.576	106	495024	44.372
108) Xylene (Total)	(3)		106	727806	65.423
107) o-Xylene	(3)	11.901	106	232782	21.050
114) \$4-Bromofluorobenzene	(3)	12.342	95	459377	48.645
131) *1,4-Dichlorobenzene-d4	(4)	13.216	152	526874	50.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 1 of 1

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on 04/08/2020 at 17:30.

Target 3.5 esignature user ID: sej02002

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LCSL01 Lancaster Laboratories LCSL01

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/20apr08a.b/la08s01.d Injection date and time: **08-APR-2020 10:23**
 Data file Sample Info. Line: LCSL01;LCSL01;1;3;LCS;;DODWW;;la08b01; Instrument ID: **HP09915.i** Batch: **L200991AA**
 Date, time and analyst ID of latest file update: 08-Apr-2020 11:49 c1m27445

Blank Data file reference: /chem/HP09915.i/20apr08a.b/la08b01.d

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m Sublist used: **L200991-SM**
 Calibration date and time (Last Method Edit): 08-APR-2020 10:49
 Mid Level Daily Calibration Standard Reference: /chem/HP09915.i/20apr08a.b/la08c01.d

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.490 (0.003)	935	65	261964M (-6)	250.00	
66) Fluorobenzene	7.950 (0.000)	2011	96	1245956 (-1)	50.00	
100) Chlorobenzene-d5	11.355 (-0.003)	3070	117	958203 (-1)	50.00	
131) 1,4-Dichlorobenzene-d4	13.216 (0.000)	3649	152	528024 (0)	50.00	

M = Internal Standard was manually integrated

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.062 (0.000)	113	304671	51.715	103%		80 - 119
57) 1,2-Dichloroethane-d4	(2)	7.519 (0.000)	102	77161	50.499	101%		81 - 118
83) Toluene-d8	(3)	9.924 (0.001)	98	1248302	49.586	99%		89 - 112
114) 4-Bromofluorobenzene	(3)	12.342 (0.000)	95	459992	48.453	97%		85 - 114

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)	2.082 (0.000)	85	97935	12.460	12.46			0.2	1
4) Chloromethane	(2)	2.291 (0.000)	50	123018	15.660	15.66			0.2	1
6) Vinyl Chloride	(2)	2.406 (0.001)	62	120946	16.320	16.32			0.2	1
8) Bromomethane	(2)	2.744 (0.002)	94	83562	16.066	16.07			0.3	1
9) Chloroethane	(2)	2.847 (0.001)	64	66823M	16.330	16.33			0.2	1
12) Trichlorofluoromethane	(2)	3.159 (0.000)	101	149836	19.506	19.51			0.2	1
17) 1,1-Dichloroethene	(2)	3.757 (0.002)	96	99757	18.985	18.98			0.2	1
18) Acetone	(1)	3.799 (0.000)	58	126046	148.959	148.96			0.7	20
19) Freon 113	(2)	3.789 (0.001)	101	102019	20.411	20.41			0.2	10
23) Carbon Disulfide	(2)	4.075 (0.001)	76	320688	19.321	19.32			0.2	5
27) Methyl Acetate	(2)	4.239 (0.000)	43	129560	19.755	19.76			0.3	5
28) Methylene Chloride	(2)	4.477 (0.000)	84	120370	20.518	20.52			0.3	1
32) trans-1,2-Dichloroethene	(2)	4.885 (0.000)	96	115178	19.985	19.98			0.2	1
33) Methyl Tertiary Butyl Ether	(2)	4.879 (0.001)	73	320213	18.238	18.24			0.2	1
36) 1,1-Dichloroethane	(2)	5.544 (0.001)	63	203395	21.085	21.09			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.374 (0.000)	96	137323	21.305	21.31			0.2	1
43) 1,2-Dichloroethene (Total)	(2)		96	252501	41.290	41.29			0.4	2
44) 2-Butanone	(2)	6.348 (0.000)	43	656371	144.403	144.40			0.3	10
45) 2,2-Dichloropropane	(2)	6.387 (0.000)	77	154193	20.087	20.09			0.3	1
49) Bromochloromethane	(2)	6.702 (0.000)	128	65649	20.496	20.50			0.2	5
51) Chloroform	(2)	6.850 (0.000)	83	195816	20.949	20.95			0.2	1
53) 1,1,1-Trichloroethane	(2)	7.075 (0.000)	97	163436	19.942	19.94			0.3	1
54) Cyclohexane	(2)	7.168 (0.000)	56	190992	18.924	18.92			1	5
55) 1,1-Dichloropropene	(2)	7.284 (0.000)	75	155939	20.396	20.40			0.2	5
56) Carbon Tetrachloride	(2)	7.281 (0.000)	117	143729	21.464	21.46			0.2	1
60) Benzene	(2)	7.548 (0.000)	78	481298	20.636	20.64			0.2	1
61) 1,2-Dichloroethane	(2)	7.625 (0.000)	62	158975	20.387	20.39			0.3	1
71) Trichloroethene	(2)	8.419 (0.000)	95	120567	20.535	20.53			0.2	1
72) Methylcyclohexane	(2)	8.724 (0.000)	83	209448	21.263	21.26			0.5	5
73) 1,2-Dichloropropane	(2)	8.753 (0.000)	63	127907	21.110	21.11			0.2	1

M = Compound was manually integrated.

Digitally signed by Corie L. Mellinger on 04/08/2020 at 12:17. Target 3.5 esignature user ID: c1m27445

LCSL01

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

LCSL01

Data file: /chem/HP09915.i/20apr08a.b/la08s01.d

Injection date and time: 08-APR-2020 10:23

Data file Sample Info. Line: LCSL01;LCSL01;1;3;LCS;;DODWW;;la08b01;

Instrument ID: HP09915.i Batch: L200991AA

Date, time and analyst ID of latest file update: 08-Apr-2020 11:49 c1m27445

Blank Data file reference: /chem/HP09915.i/20apr08a.b/la08b01.d

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m Sublist used: L200991-SM

Calibration date and time (Last Method Edit): 08-APR-2020 10:49

Mid Level Daily Calibration Standard Reference: /chem/HP09915.i/20apr08a.b/la08c01.d

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
74) Dibromomethane	(2)	8.866(0.000)	93	82055	20.824	20.82			0.2	1
78) Bromodichloromethane	(2)	9.101(0.000)	83	140465	19.940	19.94			0.2	1
80) 2-Chloroethyl Vinyl Ether	(2)	9.448(0.000)	63	81743	18.403	18.40			0.2	10
81) cis-1,3-Dichloropropene	(2)	9.628(-0.000)	75	187569	19.875	19.87			0.2	1
82) 4-Methyl-2-pentanone	(2)	9.798(-0.000)	43	894982	95.169	95.17			0.5	10
88) Toluene	(3)	9.998(0.000)	92	307265	20.542	20.54			0.2	1
89) trans-1,3-Dichloropropene	(3)	10.248(0.000)	75	169403	19.006	19.01			0.2	1
92) 1,1,2-Trichloroethane	(3)	10.448(0.000)	97	120860	20.500	20.50			0.2	1
93) Tetrachloroethene	(3)	10.531(0.000)	166	134296	21.156	21.16			0.2	1
94) 1,3-Dichloropropane	(3)	10.612(0.000)	76	198932	20.215	20.22			0.2	1
96) 2-Hexanone	(3)	10.660(0.000)	43	667044	96.760	96.76			0.3	10
97) Dibromochloromethane	(3)	10.821(0.000)	129	124017	20.813	20.81			0.2	1
99) 1,2-Dibromoethane	(3)	10.930(0.000)	107	125850	19.620	19.62			0.2	1
102) Chlorobenzene	(3)	11.380(0.000)	112	355960	21.177	21.18			0.2	1
103) 1,1,1,2-Tetrachloroethane	(3)	11.457(0.000)	131	116766	20.780	20.78			0.2	1
104) Ethylbenzene	(3)	11.461(0.000)	91	582023	20.368	20.37			0.4	1
106) m+p-Xylene	(3)	11.576(0.000)	106	472764	42.153	42.15			1	5
107) o-Xylene	(3)	11.901(0.000)	106	224300	20.176	20.18			0.4	1
108) Xylene (Total)	(3)		106	697064	62.330	62.33			1	6
109) Styrene	(3)	11.917(0.000)	104	371158	19.850	19.85			0.2	5
110) Bromoform	(3)	12.075(0.000)	173	84728	18.370	18.37			1	4
111) Isopropylbenzene	(3)	12.197(0.000)	105	581648	20.420	20.42			0.2	5
115) Bromobenzene	(4)	12.461(-0.000)	156	156545	20.975	20.97			0.2	5
116) 1,1,2,2-Tetrachloroethane	(4)	12.444(0.000)	83	195531	19.497	19.50			0.2	1
117) 1,2,3-Trichloropropane	(4)	12.490(0.000)	110	58676	19.715	19.72			0.2	5
119) n-Propylbenzene	(4)	12.525(0.000)	91	705138	20.946	20.95			0.2	5
120) 2-Chlorotoluene	(4)	12.602(0.000)	126	145329	20.781	20.78			0.2	5
121) 4-Chlorotoluene	(4)	12.695(-0.000)	126	151010	20.814	20.81			0.2	5
122) 1,3,5-Trimethylbenzene	(4)	12.657(-0.000)	105	502279	20.281	20.28			0.3	5
124) tert-Butylbenzene	(4)	12.901(0.000)	134	102599M	20.135	20.13			0.3	5
126) 1,2,4-Trimethylbenzene	(4)	12.940(0.000)	105	520931	20.094	20.09			1	5
127) sec-Butylbenzene	(4)	13.062(0.000)	105	632980	20.802	20.80			0.2	5
129) 1,3-Dichlorobenzene	(4)	13.162(0.000)	146	296048	21.039	21.04			0.2	5
130) p-Isopropyltoluene	(4)	13.168(-0.000)	119	548212	20.913	20.91			0.2	5
133) 1,4-Dichlorobenzene	(4)	13.236(-0.000)	146	309362	21.228	21.23			0.2	5
138) 1,2-Dichlorobenzene	(4)	13.499(-0.000)	146	292247	20.870	20.87			0.2	5
139) n-Butylbenzene	(4)	13.457(0.000)	92	268085	20.286	20.29			0.2	5
142) 1,2-Dibromo-3-chloropropane	(4)	14.039(-0.000)	75	39052	17.868	17.87			0.3	5
146) 1,2,4-Trichlorobenzene	(4)	14.583(0.000)	180	198493	19.626	19.63			0.3	5
147) Hexachlorobutadiene	(4)	14.663(-0.000)	225	82932	18.648	18.65			2	5
148) Naphthalene	(4)	14.766(0.000)	128	660305	19.341	19.34			1	5
149) 1,2,3-Trichlorobenzene	(4)	14.914(-0.000)	180	202588	21.169	21.17			0.4	5

M = Compound was manually integrated.

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LCSL01

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

LCSL01

Data file: /chem/HP09915.i/20apr08a.b/la08s01.d Injection date and time: **08-APR-2020 10:23**
Data file Sample Info. Line: LCSL01;LCSL01;1;3;LCS;;DODWW;;la08b01; Instrument ID: **HP09915.i** Batch: **L200991AA**
Date, time and analyst ID of latest file update: 08-Apr-2020 11:49 clm27445

Blank Data file reference: /chem/HP09915.i/20apr08a.b/la08b01.d

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m Sublist used: **L200991-SM**
Calibration date and time (Last Method Edit): 08-APR-2020 10:49
Mid Level Daily Calibration Standard Reference: /chem/HP09915.i/20apr08a.b/la08c01.d

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 72

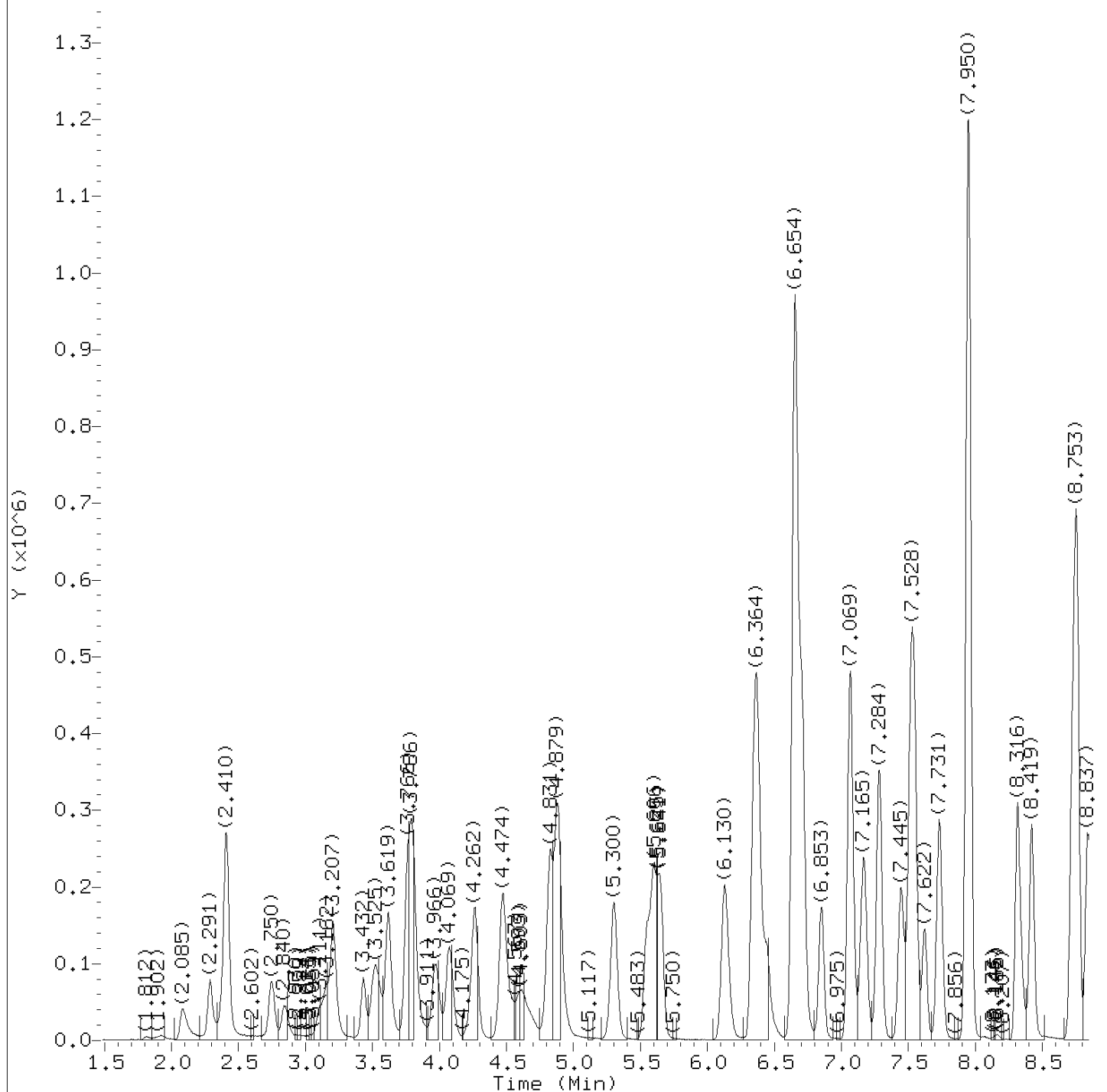
Digitally signed by Corie L. Mellinger on 04/08/2020 at 12:17. Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kari Becker on 04/08/2020 at 18:49. PARALLAX ID: kmb29664

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page 3 of 3

/chem/HP09915.i/20apr08a.b/1a08s01.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20apr08a.b/1a08s01.d
 Injection date and time: 08-APR-2020 10:23

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m
 Calibration date and time: 08-APR-2020 10:49

Sublist used: L200991-SM

Date, time and analyst ID of latest file update: 08-Apr-2020 11:49 clm27445

Sample Name: LCSL01

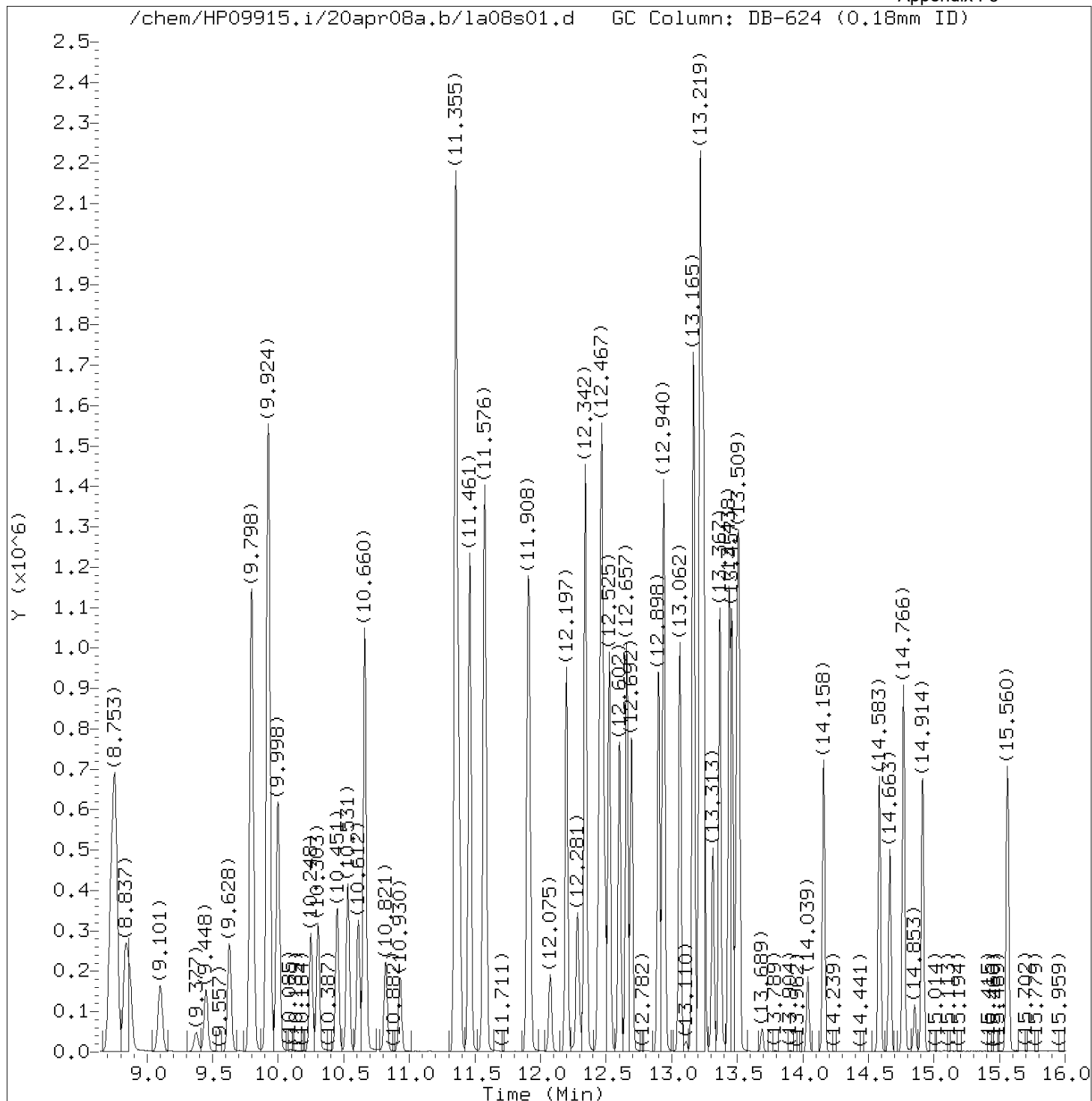
Lab Sample ID: LCSL01

Digitally signed by Corie L. Mellinger
 on 04/08/2020 at 12:17.

Target 3.5 esignature user ID: clm27445

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page 1 of 2



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20apr08a.b/1a08s01.d
 Injection date and time: 08-APR-2020 10:23

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m
 Calibration date and time: 08-APR-2020 10:49

Sublist used: L200991-SM

Date, time and analyst ID of latest file update: 08-Apr-2020 11:49 clm27445

Sample Name: LCSL01

Lab Sample ID: LCSL01

Digitally signed by Corie L. Mellinger
 on 04/08/2020 at 12:17.

Target 3.5 esignature user ID: clm27445

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page 2 of 2

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20apr08a.b/1a08s01.d
 Injection date and time: 08-APR-2020 10:23

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m

Sublist used: L200991-SM

Calibration date and time: 08-APR-2020 10:49

Date, time and analyst ID of latest file update: 08-Apr-2020 11:49 clm27445

Sample Name: LCSL01

Lab Sample ID: LCSL01

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
3) Dichlorodifluoromethane	(2)	2.082	85	97935	12.460
4) Chloromethane	(2)	2.291	50	123018	15.660
6) Vinyl Chloride	(2)	2.406	62	120946	16.320
8) Bromomethane	(2)	2.744	94	83562	16.066
9) Chloroethane	(2)	2.847	64	66823M	16.330
12) Trichlorofluoromethane	(2)	3.159	101	149836	19.506
17) 1,1-Dichloroethene	(2)	3.757	96	99757	18.985
19) Freon 113	(2)	3.789	101	102019	20.411
18) Acetone	(1)	3.799	58	126046	148.959
23) Carbon Disulfide	(2)	4.075	76	320688	19.321
27) Methyl Acetate	(2)	4.239	43	129560	19.755
28) Methylene Chloride	(2)	4.477	84	120370	20.518
29)*t-Butyl alcohol-d10	(1)	4.490	65	261964M	250.000
33) Methyl Tertiary Butyl Ether	(2)	4.879	73	320213	18.238
32) trans-1,2-Dichloroethene	(2)	4.885	96	115178	19.985
36) 1,1-Dichloroethane	(2)	5.545	63	203395	21.085
43) 1,2-Dichloroethene (Total)	(2)		96	252501	41.290
44) 2-Butanone	(2)	6.348	43	656371	144.403
42) cis-1,2-Dichloroethene	(2)	6.374	96	137323	21.305
45) 2,2-Dichloropropane	(2)	6.387	77	154193	20.087
49) Bromochloromethane	(2)	6.702	128	65649	20.496
51) Chloroform	(2)	6.850	83	195816	20.949
52)\$Dibromofluoromethane	(2)	7.062	113	304671	51.715
53) 1,1,1-Trichloroethane	(2)	7.075	97	163436	19.942
54) Cyclohexane	(2)	7.168	56	190992	18.924
56) Carbon Tetrachloride	(2)	7.281	117	143729	21.464
55) 1,1-Dichloropropene	(2)	7.284	75	155939	20.396
57)\$1,2-Dichloroethane-d4	(2)	7.519	102	77161	50.499
60) Benzene	(2)	7.548	78	481298	20.636
61) 1,2-Dichloroethane	(2)	7.625	62	158975	20.387
66)*Fluorobenzene	(2)	7.950	96	1245956	50.000
71) Trichloroethene	(2)	8.419	95	120567	20.535
72) Methylcyclohexane	(2)	8.724	83	209448	21.263
73) 1,2-Dichloropropane	(2)	8.753	63	127907	21.110
74) Dibromomethane	(2)	8.866	93	82055	20.824
78) Bromodichloromethane	(2)	9.101	83	140465	19.940
80) 2-Chloroethyl Vinyl Ether	(2)	9.448	63	81743	18.403
81) cis-1,3-Dichloropropene	(2)	9.628	75	187569	19.875

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 1 of 3

Digitally signed by Corie L. Mellinger
 on 04/08/2020 at 12:17.

Target 3.5 esignature user ID: clm27445

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20apr08a.b/1a08s01.d
 Injection date and time: 08-APR-2020 10:23

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m

Sublist used: L200991-SM

Calibration date and time: 08-APR-2020 10:49

Date, time and analyst ID of latest file update: 08-Apr-2020 11:49 clm27445

Sample Name: LCSL01

Lab Sample ID: LCSL01

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
82) 4-Methyl-2-pentanone	(2)	9.798	43	894982	95.169
83) \$Toluene-d8	(3)	9.924	98	1248302	49.586
88) Toluene	(3)	9.998	92	307265	20.542
89) trans-1,3-Dichloropropene	(3)	10.248	75	169403	19.006
92) 1,1,2-Trichloroethane	(3)	10.448	97	120860	20.500
93) Tetrachloroethene	(3)	10.531	166	134296	21.156
94) 1,3-Dichloropropane	(3)	10.612	76	198932	20.215
96) 2-Hexanone	(3)	10.660	43	667044	96.760
97) Dibromochloromethane	(3)	10.821	129	124017	20.813
99) 1,2-Dibromoethane	(3)	10.930	107	125850	19.620
100) *Chlorobenzene-d5	(3)	11.355	117	958203	50.000
102) Chlorobenzene	(3)	11.380	112	355960	21.177
103) 1,1,1,2-Tetrachloroethane	(3)	11.457	131	116766	20.780
104) Ethylbenzene	(3)	11.461	91	582023	20.368
106) m+p-Xylene	(3)	11.576	106	472764	42.153
108) Xylene (Total)	(3)		106	697064	62.330
107) o-Xylene	(3)	11.901	106	224300	20.176
109) Styrene	(3)	11.917	104	371158	19.850
110) Bromoform	(3)	12.075	173	84728	18.370
111) Isopropylbenzene	(3)	12.197	105	581648	20.420
114) \$4-Bromofluorobenzene	(3)	12.342	95	459992	48.453
116) 1,1,2,2-Tetrachloroethane	(4)	12.445	83	195531	19.497
115) Bromobenzene	(4)	12.461	156	156545	20.975
117) 1,2,3-Trichloropropane	(4)	12.490	110	58676	19.715
119) n-Propylbenzene	(4)	12.525	91	705138	20.946
120) 2-Chlorotoluene	(4)	12.602	126	145329	20.781
122) 1,3,5-Trimethylbenzene	(4)	12.657	105	502279	20.281
121) 4-Chlorotoluene	(4)	12.695	126	151010	20.814
124) tert-Butylbenzene	(4)	12.901	134	102599M	20.135
126) 1,2,4-Trimethylbenzene	(4)	12.940	105	520931	20.094
127) sec-Butylbenzene	(4)	13.062	105	632980	20.802
129) 1,3-Dichlorobenzene	(4)	13.162	146	296048	21.039
130) p-Isopropyltoluene	(4)	13.168	119	548212	20.913
131) *1,4-Dichlorobenzene-d4	(4)	13.216	152	528024	50.000
133) 1,4-Dichlorobenzene	(4)	13.236	146	309362	21.228
139) n-Butylbenzene	(4)	13.457	92	268085	20.286
138) 1,2-Dichlorobenzene	(4)	13.499	146	292247	20.870
142) 1,2-Dibromo-3-chloropropane	(4)	14.039	75	39052	17.868

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 2 of 3

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 on 04/08/2020 at 12:17.

Target 3.5 esignature user ID: clm27445

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20apr08a.b/la08s01.d

Instrument ID: HP09915.i

Injection date and time: 08-APR-2020 10:23

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m

Sublist used: L200991-SM

Calibration date and time: 08-APR-2020 10:49

Date, time and analyst ID of latest file update: 08-Apr-2020 11:49 clm27445

Sample Name: LCSL01

Lab Sample ID: LCSL01

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
146) 1,2,4-Trichlorobenzene	(4)	14.583	180	198493	19.626
147) Hexachlorobutadiene	(4)	14.663	225	82932	18.648
148) Naphthalene	(4)	14.766	128	660305	19.341
149) 1,2,3-Trichlorobenzene	(4)	14.914	180	202588	21.169

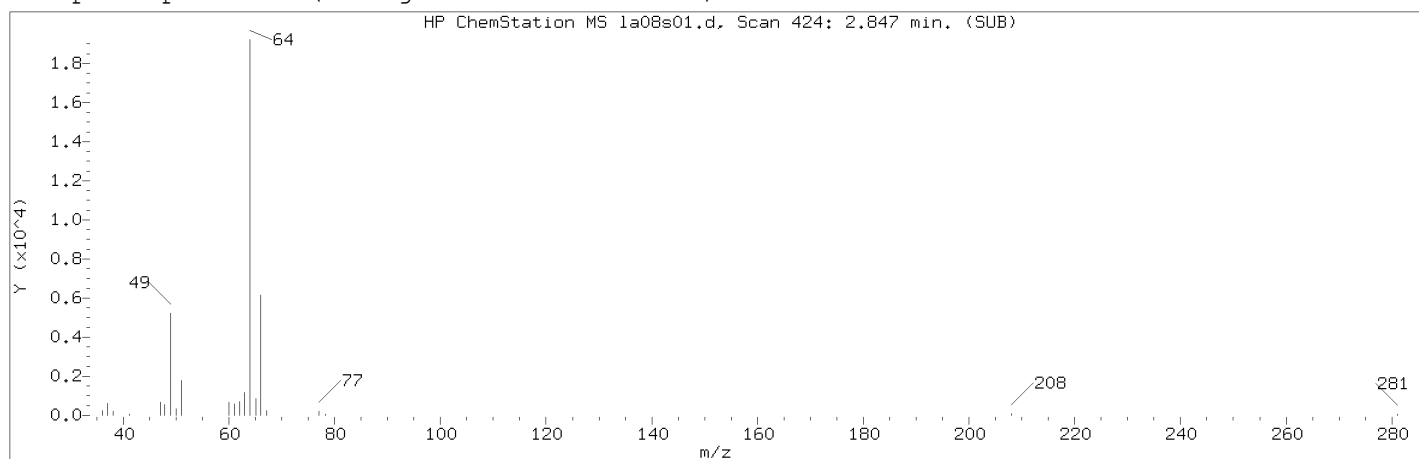
page 3 of 3

Digitally signed by Corie L. Mellinger
on 04/08/2020 at 12:17.

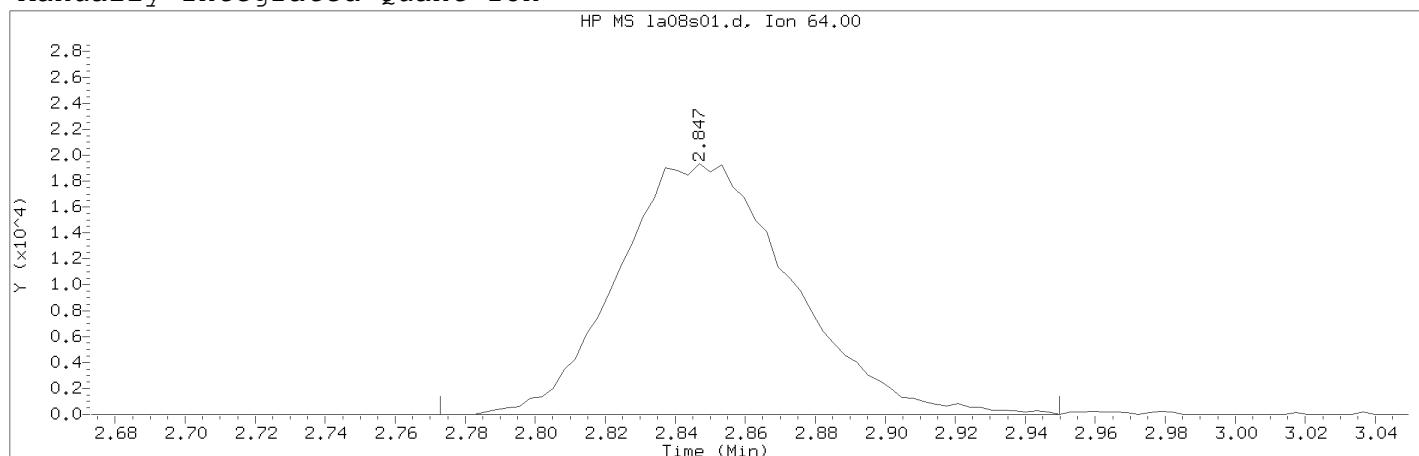
Target 3.5 esignature user ID: clm27445

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Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20apr08a.b/1a08s01.d Instrument ID: HP09915.i
 Injection date and time: 08-APR-2020 10:23 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m Sublist used: L200991-SM
 Calibration date and time: 08-APR-2020 10:49
 Date, time and analyst ID of latest file update: 08-Apr-2020 11:49 clm27445

Sample Name: LCSL01

Lab Sample ID: LCSL01

Compound Number : 9
 Compound Name : Chloroethane
 Scan Number : 424
 Retention Time (minutes): 2.847
 Quant Ion : 64.00
 Area (flag) : 66823M
 On-Column Amount (ng) : 16.3303
 Integration start scan : 400 Integration stop scan: 455
 Y at integration start : 0 Y at integration end: 0

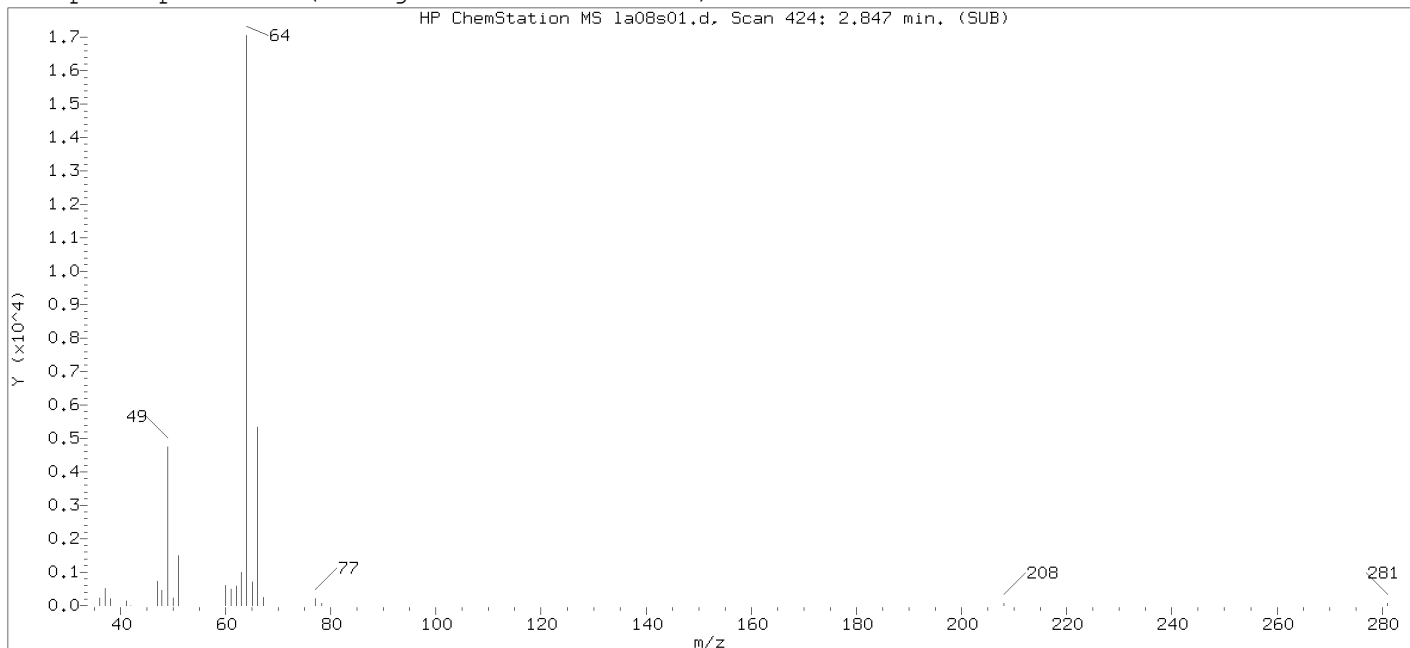
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Corie L. Mellinger
 on 04/08/2020 at 12:17.
 Target 3.5 esignature user ID: clm27445

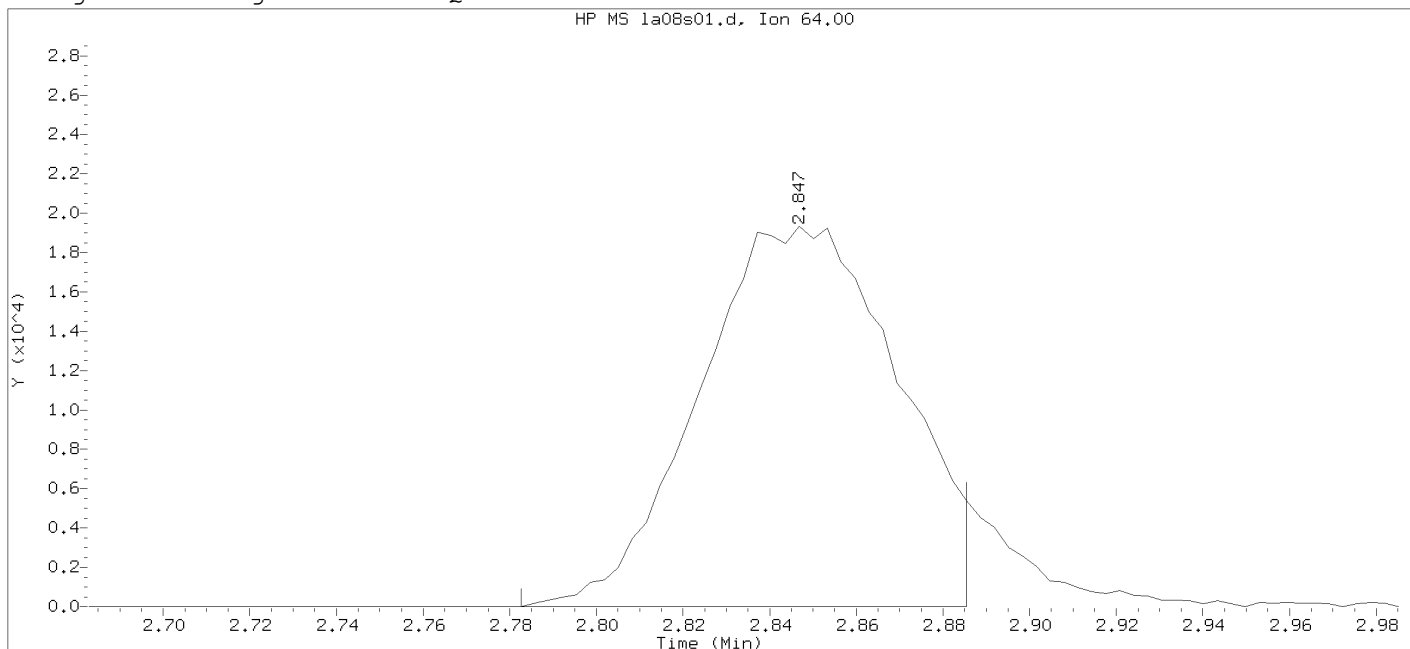
Secondary review performed and digitally signed by Kari Becker on 04/08/2020 at 18:49.

PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20apr08a.b/1a08s01.d

Instrument ID: HP09915.i

Injection date and time: 08-APR-2020 10:23

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m

Sublist used: L200991-SM

Calibration date and time: 08-APR-2020 10:49

Date, time and analyst ID of latest file update: 08-Apr-2020 10:50 clm27445

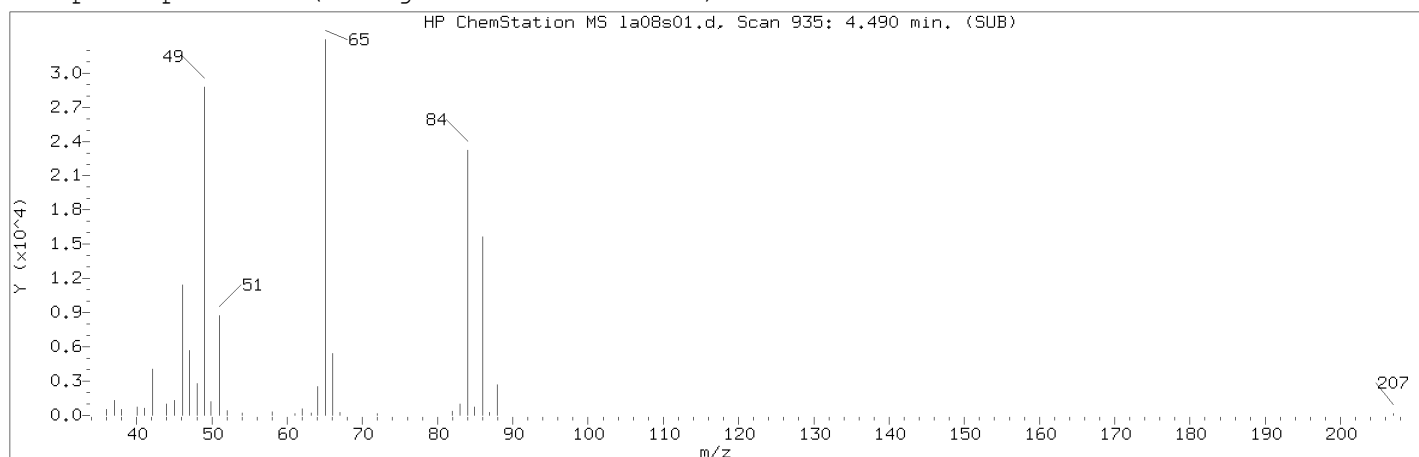
Sample Name: LCSL01

Lab Sample ID: LCSL01

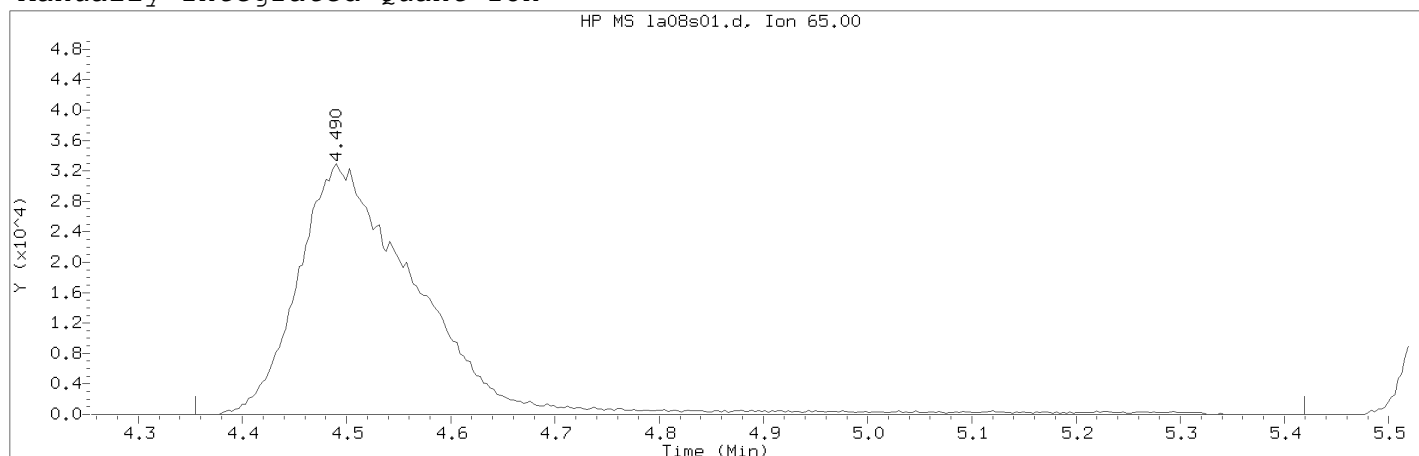
Compound Number	:	9	
Compound Name	:	Chloroethane	
Scan Number	:	424	
Retention Time (minutes)	:	2.847	
Quant Ion	:	64.00	
Area	:	61530	
On-column Amount (ng)	:	15.0369	
Integration start scan	:	403	Integration stop scan: 435
Y at integration start	:	0	Y at integration end: 0

Digitally signed by Corie L. Mellinger on 04/08/2020 at 12:17.
 Target 3.5 esignature user KR421c Page 358 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20apr08a.b/1a08s01.d Instrument ID: HP09915.i
 Injection date and time: 08-APR-2020 10:23 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m Sublist used: L200991-SM
 Calibration date and time: 08-APR-2020 10:49
 Date, time and analyst ID of latest file update: 08-Apr-2020 11:49 clm27445

Sample Name: LCSL01

Lab Sample ID: LCSL01

Compound Number : 29
 Compound Name : t-Butyl alcohol-d10
 Scan Number : 935
 Retention Time (minutes): 4.490
 Quant Ion : 65.00
 Area (flag) : 261964M
 On-Column Amount (ng) : 250.0000
 Integration start scan : 892 Integration stop scan: 1223
 Y at integration start : 0 Y at integration end: 0

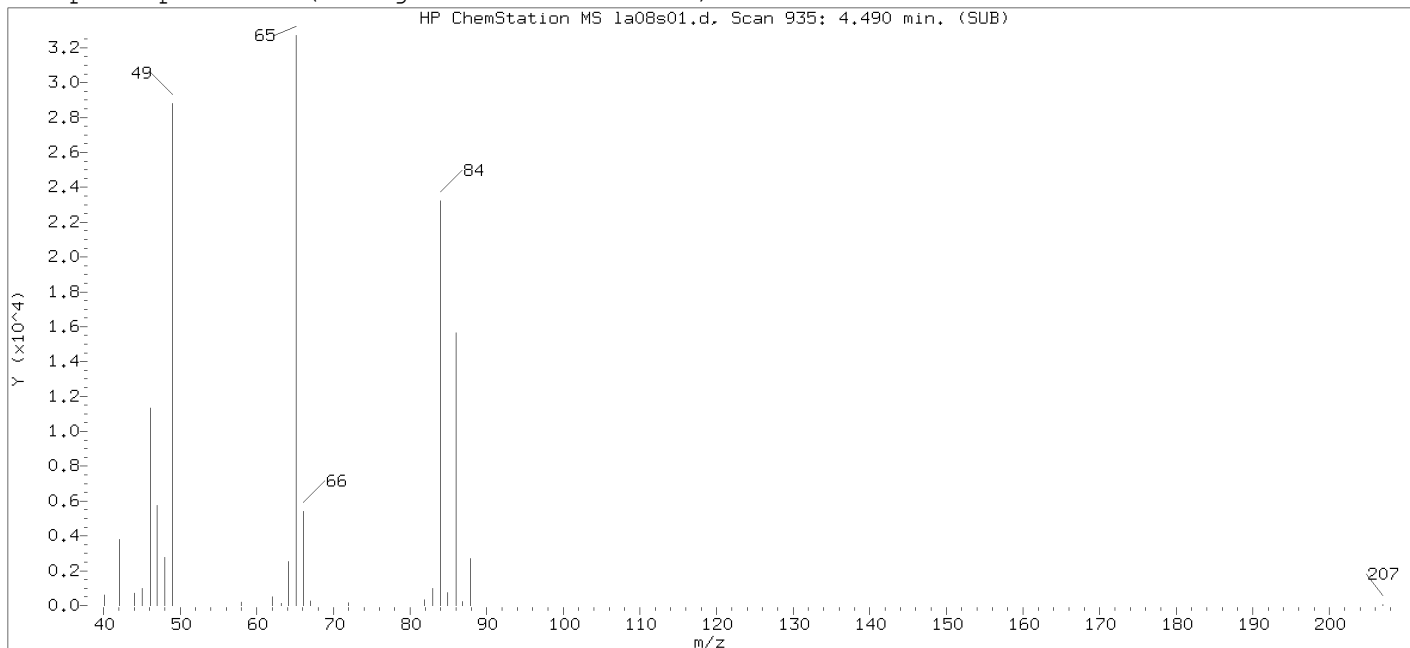
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Corie L. Mellinger
 on 04/08/2020 at 12:17.
 Target 3.5 esignature user ID: clm27445

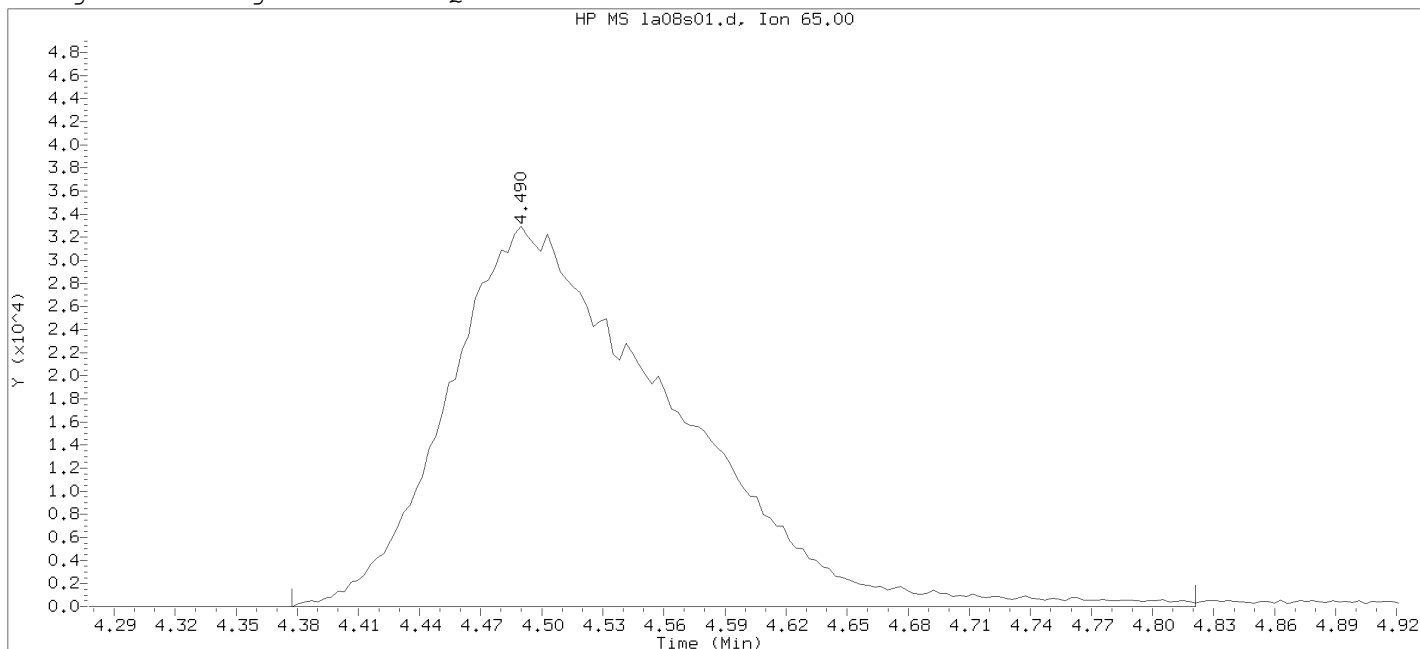
Secondary review performed and digitally signed by Kari Becker on 04/08/2020 at 18:49.

PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20apr08a.b/1a08s01.d

Instrument ID: HP09915.i

Injection date and time: 08-APR-2020 10:23

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m

Sublist used: L200991-SM

Calibration date and time: 08-APR-2020 10:49

Date, time and analyst ID of latest file update: 08-Apr-2020 10:50 clm27445

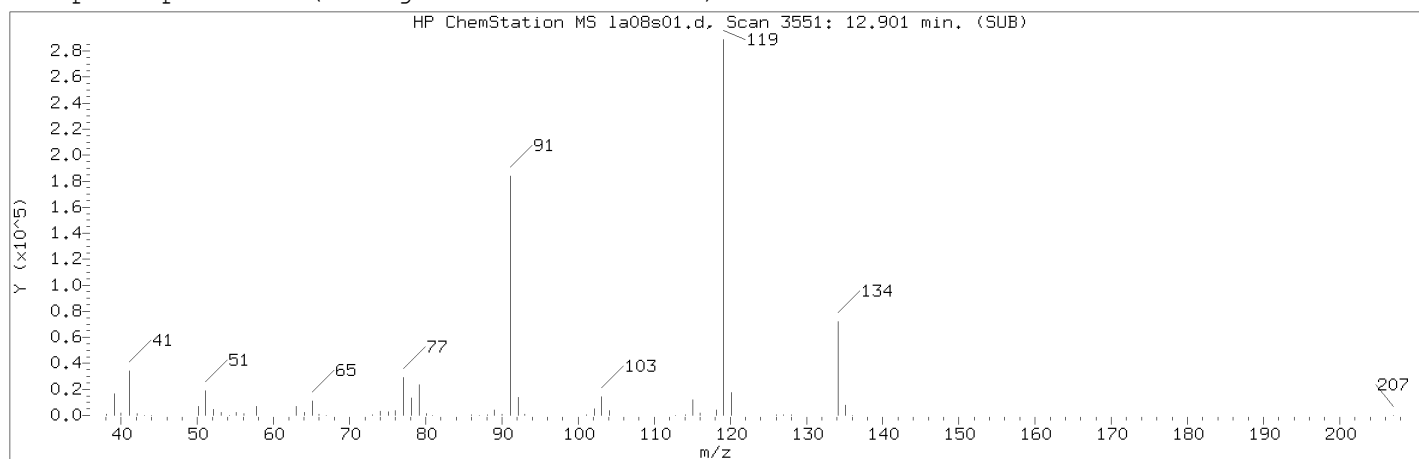
Sample Name: LCSL01

Lab Sample ID: LCSL01

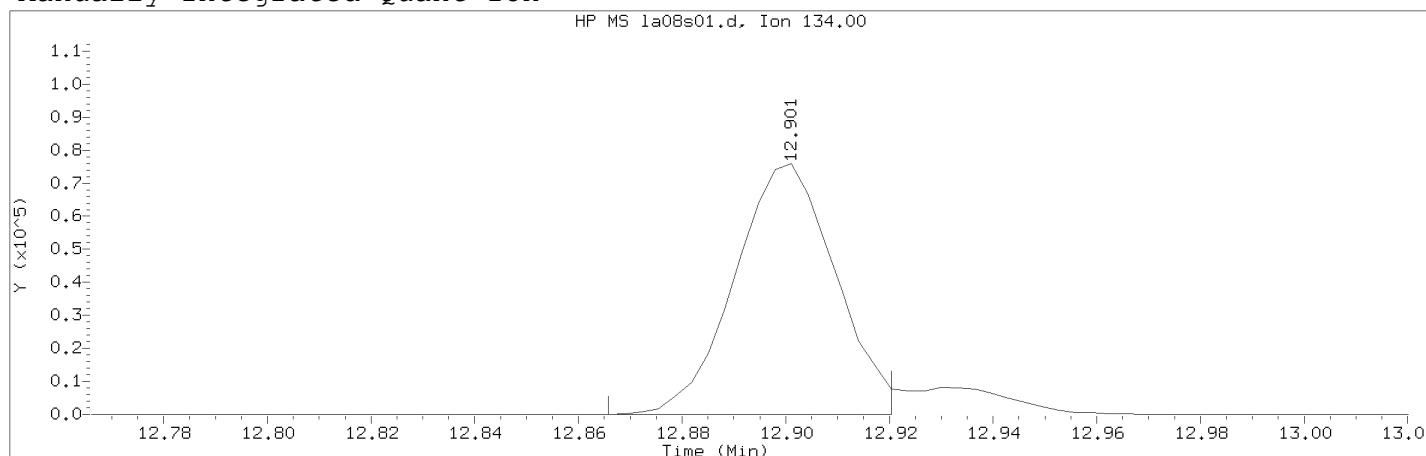
Compound Number : 29
 Compound Name : t-Butyl alcohol-d10
 Scan Number : 935
 Retention Time (minutes): 4.490
 Quant Ion : 65.00
 Area : 252310
 On-column Amount (ng) : 250.0000
 Integration start scan : 899 Integration stop scan: 1037
 Y at integration start : 0 Y at integration end: 0

Digitally signed by Corie L. Mellinger on 04/08/2020 at 12:17.
 Target 3.5 esignature user KR421c Page 360 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20apr08a.b/1a08s01.d Instrument ID: HP09915.i
 Injection date and time: 08-APR-2020 10:23 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m Sublist used: L200991-SM
 Calibration date and time: 08-APR-2020 10:49
 Date, time and analyst ID of latest file update: 08-Apr-2020 11:49 clm27445

Sample Name: LCSL01

Lab Sample ID: LCSL01

Compound Number : 124
 Compound Name : tert-Butylbenzene
 Scan Number : 3551
 Retention Time (minutes): 12.901
 Quant Ion : 134.00
 Area (flag) : 102599M
 On-Column Amount (ng) : 20.1347
 Integration start scan : 3539 Integration stop scan: 3556
 Y at integration start : 0 Y at integration end: 0

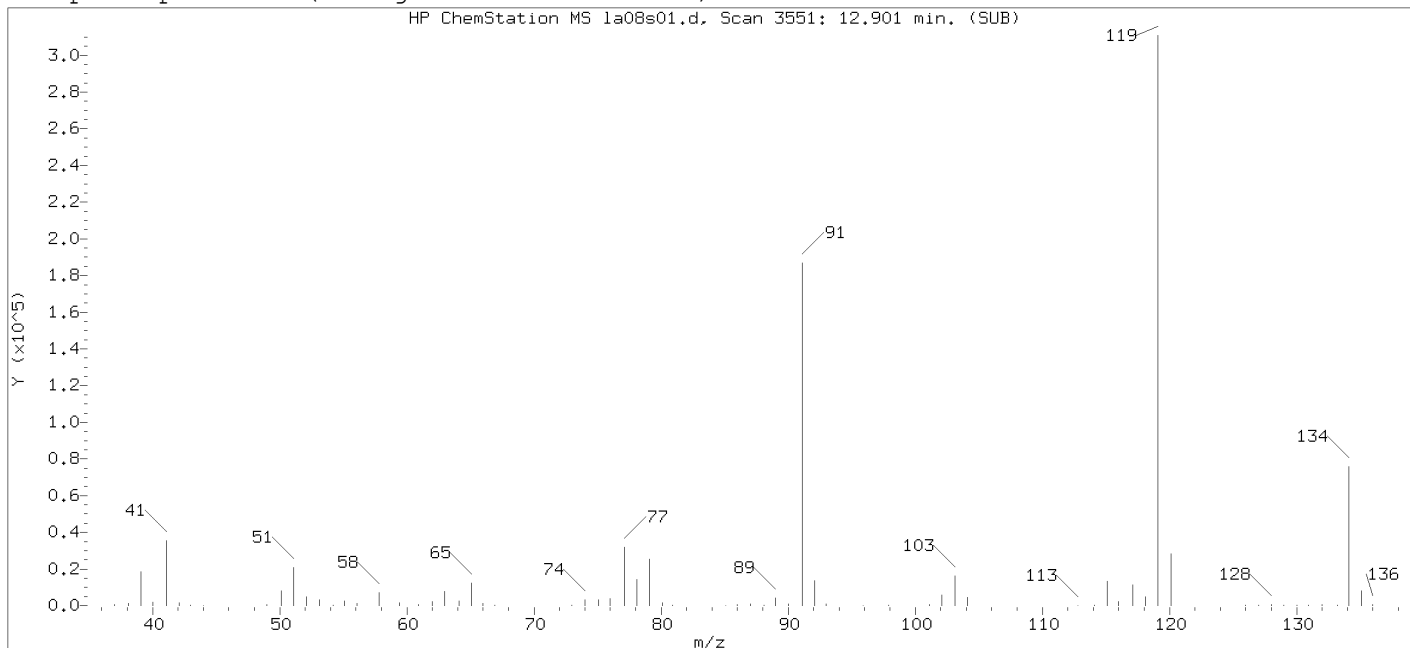
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Corie L. Mellinger
 on 04/08/2020 at 12:17.
 Target 3.5 esignature user ID: clm27445

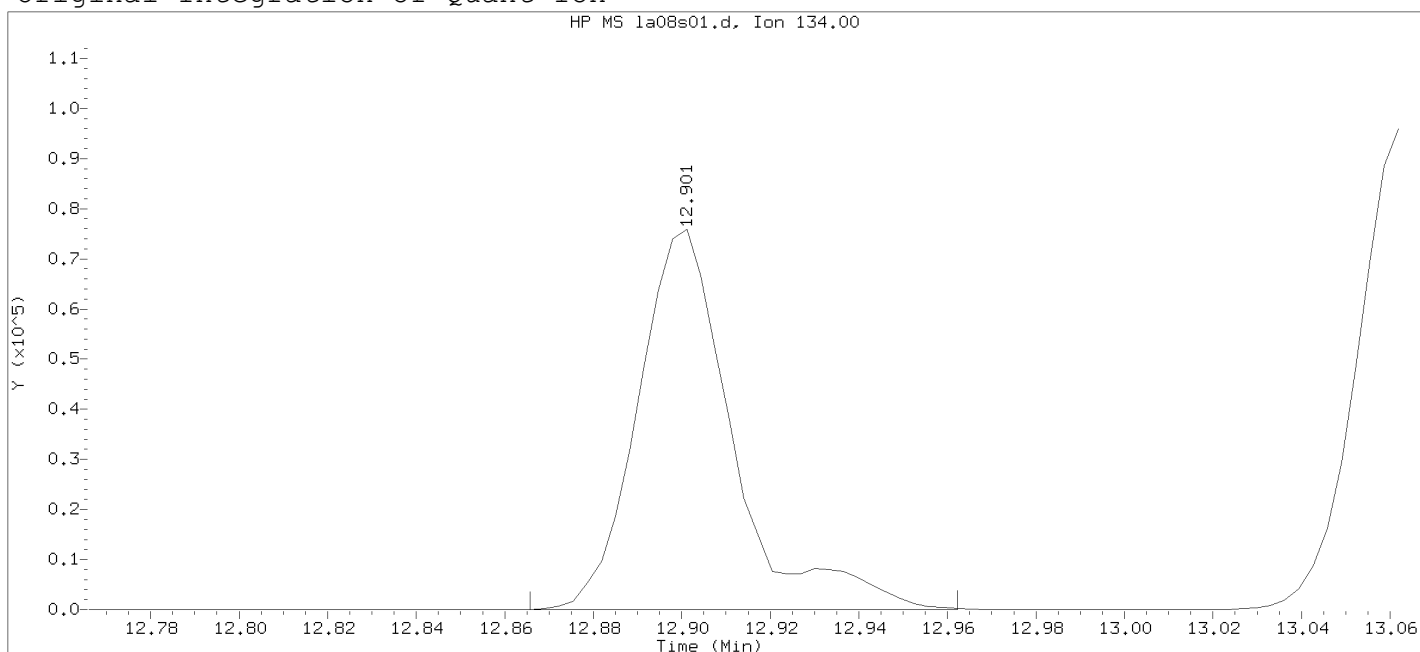
Secondary review performed and digitally signed by Kari Becker on 04/08/2020 at 18:49.

PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20apr08a.b/1a08s01.d

Instrument ID: HP09915.i

Injection date and time: 08-APR-2020 10:23

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr08a.b/m8260c5.m

Sublist used: L200991-SM

Calibration date and time: 08-APR-2020 10:49

Date, time and analyst ID of latest file update: 08-Apr-2020 10:50 clm27445

Sample Name: LCSL01

Lab Sample ID: LCSL01

Compound Number	: 124
Compound Name	: tert-Butylbenzene
Scan Number	: 3551
Retention Time (minutes)	: 12.901
Quant Ion	: 134.00
Area	: 113703
On-column Amount (ng)	: 22.3140
Integration start scan	: 3539
Integration stop scan	: 3569
Y at integration start	: 0
Y at integration end	: 0

Digitally signed by Corie L. Mellinger on 04/08/2020 at 12:17.
 Target 3.5 esignature user KR421 Page 362 of 592

LCSL05

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

LCSL05

Data file: /chem/HP09915.i/20apr09b.b/la09s31.d

Injection date and time: 09-APR-2020 10:20

Data file Sample Info. Line: LCSL05;LCSL05;1;3;LCS;;DODWW;;la09b05;

Instrument ID: HP09915.i Batch: L201002AA

Date, time and analyst ID of latest file update: 09-Apr-2020 12:08 c1m27445

Blank Data file reference: /chem/HP09915.i/20apr09b.b/la09b05.d

Method used: /chem/HP09915.i/20apr09b.b/m8260c5.m

Sublist used: L201002

Calibration date and time (Last Method Edit): 09-APR-2020 10:00

Mid Level Daily Calibration Standard Reference: /chem/HP09915.i/20apr09b.b/la09c02.d

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo)

VOA Prep Factor: 1.00

Volume Purged (Vt): 5 ml

Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.493(0.006)	936	65	259495M (-2)	250.00	
66) Fluorobenzene	7.950(0.003)	2011	96	1234215 (-1)	50.00	
100) Chlorobenzene-d5	11.351(0.003)	3069	117	957216 (-2)	50.00	
131) 1,4-Dichlorobenzene-d4	13.216(0.000)	3649	152	531754 (-1)	50.00	

M = Internal Standard was manually integrated

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.062(0.000)	113	307443	52.682	105%		80 - 119
57) 1,2-Dichloroethane-d4	(2)	7.516(0.000)	102	78008	51.539	103%		81 - 118
83) Toluene-d8	(3)	9.924(0.000)	98	1245605	49.530	99%		89 - 112
114) 4-Bromofluorobenzene	(3)	12.342(0.000)	95	464606	48.990	98%		85 - 114

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)	2.410(0.001)	62	149862	20.414	20.41			0.2	1
17) 1,1-Dichloroethene	(2)	3.757(0.001)	96	102842	19.758	19.76			0.2	1
32) trans-1,2-Dichloroethene	(2)	4.879(0.001)	96	118389	20.737	20.74			0.2	1
36) 1,1-Dichloroethane	(2)	5.545(0.000)	63	209491	21.924	21.92			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.374(0.000)	96	140292	21.973	21.97			0.2	1
51) Chloroform	(2)	6.850(0.000)	83	201257	21.736	21.74			0.2	1
53) 1,1,1-Trichloroethane	(2)	7.075(0.000)	97	163741	20.169	20.17			0.3	1
60) Benzene	(2)	7.541(0.000)	78	492598	21.322	21.32			0.2	1
61) 1,2-Dichloroethane	(2)	7.622(0.000)	62	165364	21.408	21.41			0.3	1
71) Trichloroethene	(2)	8.419(0.000)	95	122648	21.088	21.09			0.2	1
78) Bromodichloromethane	(2)	9.101(0.000)	83	147696	21.166	21.17			0.2	1
88) Toluene	(3)	9.995(0.000)	92	310692	20.792	20.79			0.2	1
93) Tetrachloroethene	(3)	10.528(0.000)	166	134761	21.251	21.25			0.2	1
104) Ethylbenzene	(3)	11.461(0.000)	91	592104	20.742	20.74			0.4	1
106) m+p-Xylene	(3)	11.573(0.000)	106	477358	42.607	42.61			1	5
107) o-Xylene	(3)	11.901(0.000)	106	226687	20.412	20.41			0.4	1
108) Xylene (Total)	(3)		106	704045	63.019	63.02			1	6

Digitally signed by Corie L. Mellinger on 04/09/2020 at 12:44. Target 3.5 esignature user ID: c1m27445

LCSL05

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

LCSL05

Data file: /chem/HP09915.i/20apr09b.b/la09s31.d

Injection date and time: 09-APR-2020 10:20

Data file Sample Info. Line: LCSL05;LCSL05;1;3;LCS;;DODWW;;la09b05;

Instrument ID: HP09915.i Batch: L201002AA

Date, time and analyst ID of latest file update: 09-Apr-2020 12:08 clm27445

Blank Data file reference: /chem/HP09915.i/20apr09b.b/la09b05.d

Method used: /chem/HP09915.i/20apr09b.b/m8260c5.m

Sublist used: L201002

Calibration date and time (Last Method Edit): 09-APR-2020 10:00

Mid Level Daily Calibration Standard Reference: /chem/HP09915.i/20apr09b.b/la09c02.d

Bottle Code:

Matrix: WATER

Level: Low

On-Column Amount units: ng

In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo)

VOA Prep Factor: 1.00

Volume Purged (Vt): 5 ml

Sample Volume (Vo): 5 ml

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Total number of targets = 17

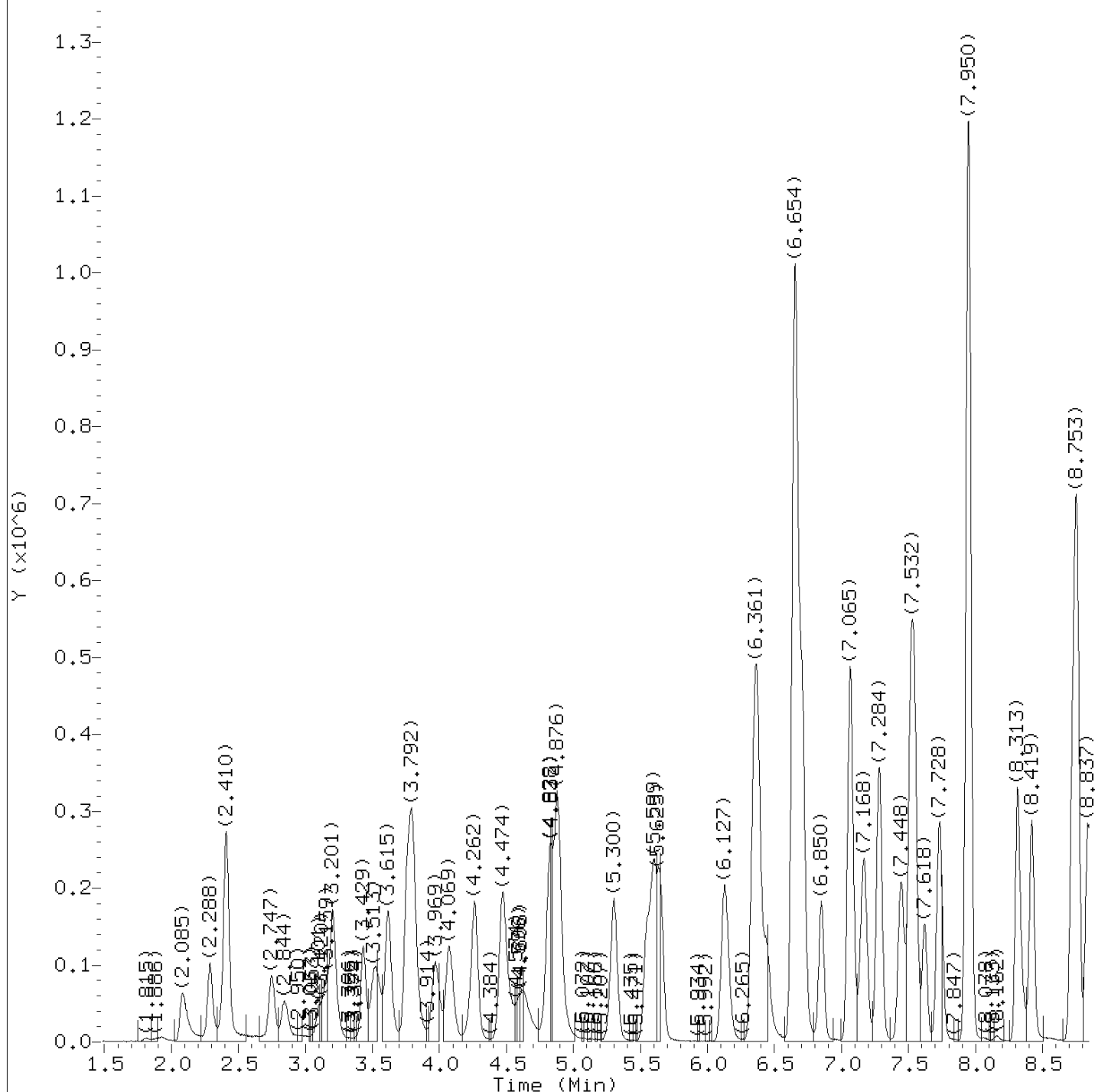
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Secondary review performed and digitally signed by Kari Becker on 04/13/2020 at 18:18. PARALLAX ID: kmb29664

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/chem/HP09915.i/20apr09b.b/1a09s31.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20apr09b.b/1a09s31.d
 Injection date and time: 09-APR-2020 10:20

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr09b.b/m8260c5.m
 Calibration date and time: 09-APR-2020 10:00

Sublist used: L201002

Date, time and analyst ID of latest file update: 09-Apr-2020 12:08 clm27445

Sample Name: LCSL05

Lab Sample ID: LCSL05

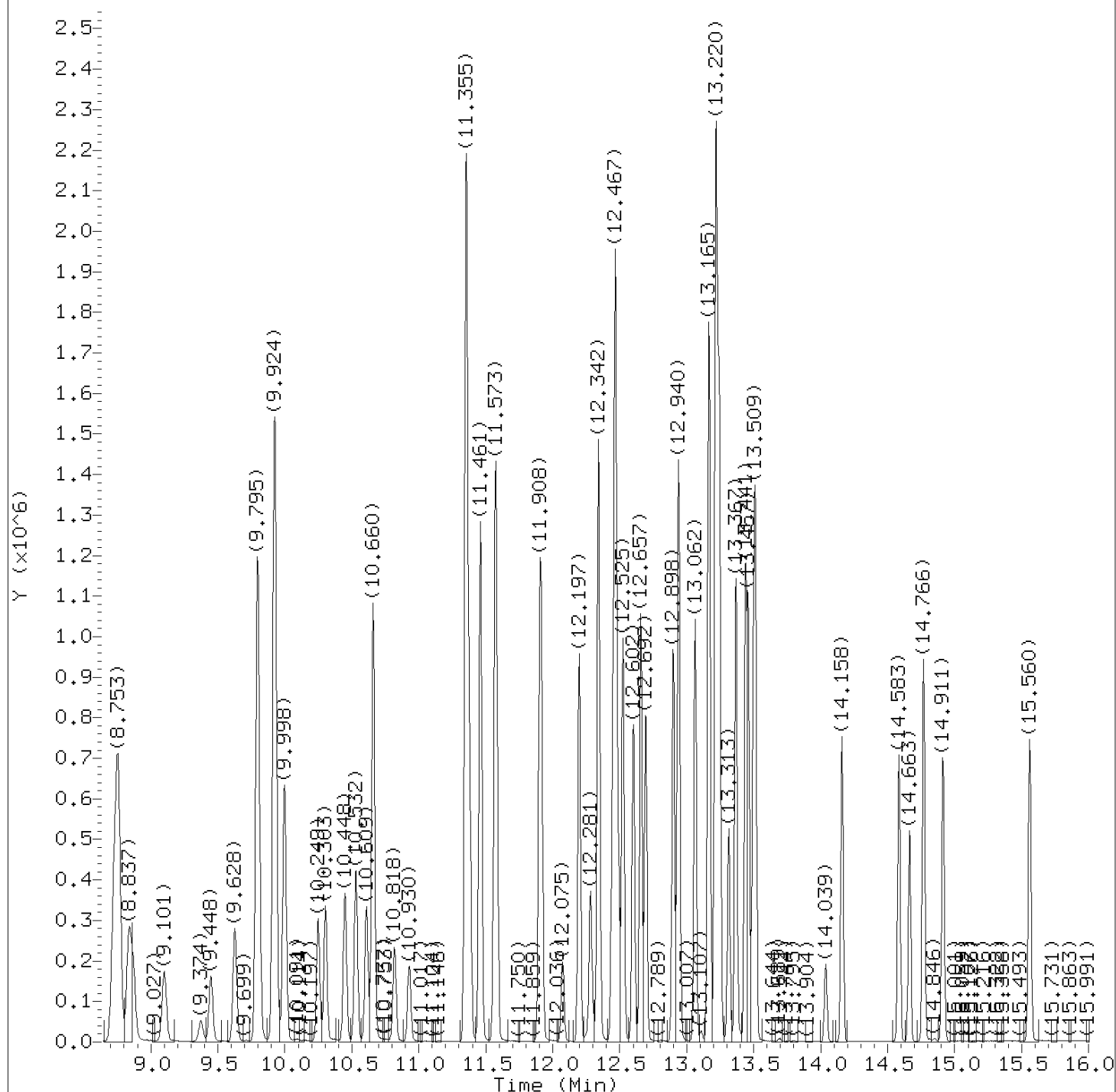
Digitally signed by Corie L. Mellinger
 on 04/09/2020 at 12:44.

Target 3.5 esignature user ID: clm27445

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page 1 of 2

/chem/HP09915.i/20apr09b.b/1a09s31.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20apr09b.b/1a09s31.d
 Injection date and time: 09-APR-2020 10:20

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr09b.b/m8260c5.m
 Calibration date and time: 09-APR-2020 10:00

Sublist used: L201002

Date, time and analyst ID of latest file update: 09-Apr-2020 12:08 clm27445

Sample Name: LCSL05

Lab Sample ID: LCSL05

Digitally signed by Corie L. Mellinger
 on 04/09/2020 at 12:44.

Target 3.5 esignature user ID: clm27445

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page 2 of 2

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20apr09b.b/la09s31.d
 Injection date and time: 09-APR-2020 10:20

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr09b.b/m8260c5.m Sublist used: L201002
 Calibration date and time: 09-APR-2020 10:00
 Date, time and analyst ID of latest file update: 09-Apr-2020 12:08 clm27445

Sample Name: LCSL05

Lab Sample ID: LCSL05

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
6) Vinyl Chloride	(2)	2.410	62	149862	20.414
17) 1,1-Dichloroethene	(2)	3.757	96	102842	19.758
29) *t-Butyl alcohol-d10	(1)	4.493	65	259495M	250.000
32) trans-1,2-Dichloroethene	(2)	4.879	96	118389	20.737
36) 1,1-Dichloroethane	(2)	5.545	63	209491	21.924
42) cis-1,2-Dichloroethene	(2)	6.374	96	140292	21.973
51) Chloroform	(2)	6.850	83	201257	21.736
52) \$Dibromofluoromethane	(2)	7.062	113	307443	52.682
53) 1,1,1-Trichloroethane	(2)	7.075	97	163741	20.169
57) \$1,2-Dichloroethane-d4	(2)	7.516	102	78008	51.539
60) Benzene	(2)	7.541	78	492598	21.322
61) 1,2-Dichloroethane	(2)	7.622	62	165364	21.408
66) *Fluorobenzene	(2)	7.950	96	1234215	50.000
71) Trichloroethene	(2)	8.419	95	122648	21.088
78) Bromodichloromethane	(2)	9.101	83	147696	21.166
83) \$Toluene-d8	(3)	9.924	98	1245605	49.530
88) Toluene	(3)	9.995	92	310692	20.792
93) Tetrachloroethene	(3)	10.528	166	134761	21.251
100) *Chlorobenzene-d5	(3)	11.351	117	957216	50.000
104) Ethylbenzene	(3)	11.461	91	592104	20.742
106) m+p-Xylene	(3)	11.573	106	477358	42.607
108) Xylene (Total)	(3)		106	704045	63.019
107) o-Xylene	(3)	11.901	106	226687	20.412
114) \$4-Bromofluorobenzene	(3)	12.342	95	464606	48.990
131) *1,4-Dichlorobenzene-d4	(4)	13.216	152	531754	50.000

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

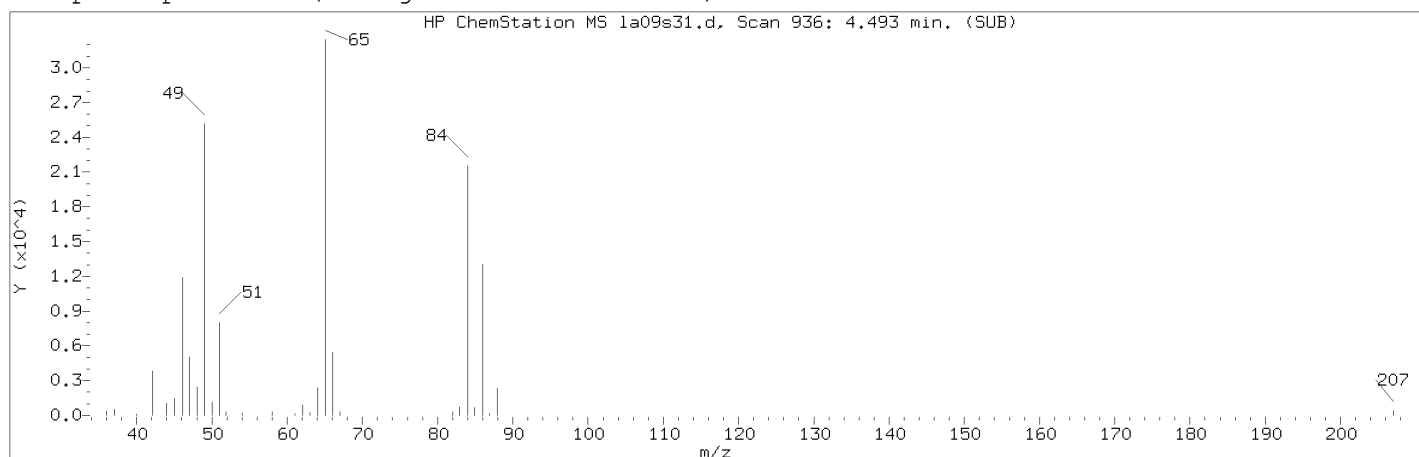
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Digitally signed by Corie L. Mellinger
 on 04/09/2020 at 12:44.

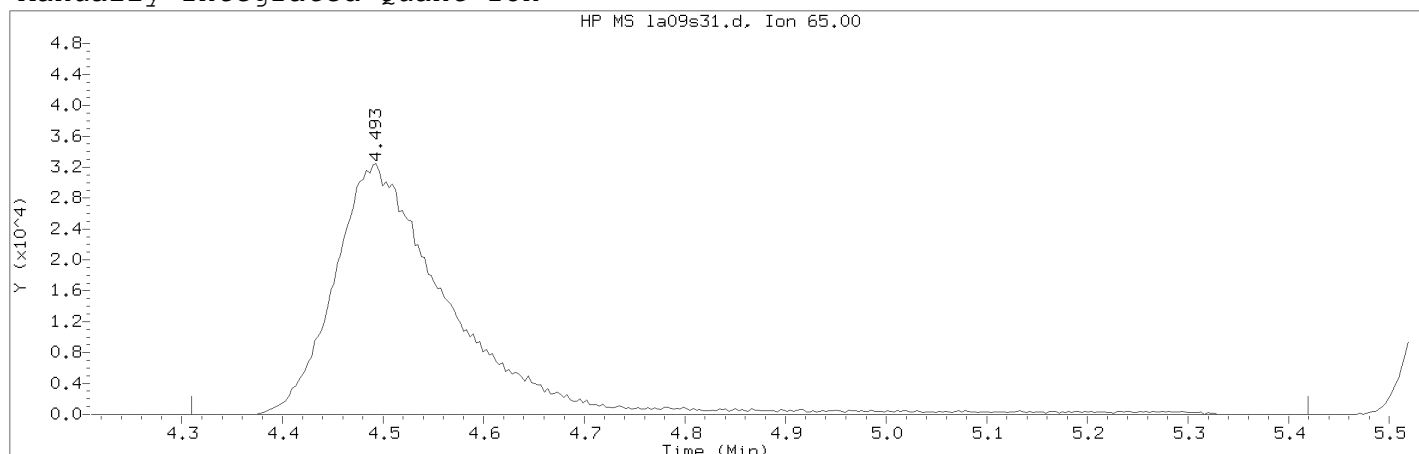
Target 3.5 esignature user ID: clm27445

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Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20apr09b.b/1a09s31.d Instrument ID: HP09915.i
 Injection date and time: 09-APR-2020 10:20 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr09b.b/m8260c5.m Sublist used: L201002
 Calibration date and time: 09-APR-2020 10:00
 Date, time and analyst ID of latest file update: 09-Apr-2020 12:08 clm27445

Sample Name: LCSL05

Lab Sample ID: LCSL05

Compound Number : 29
 Compound Name : t-Butyl alcohol-d10
 Scan Number : 936
 Retention Time (minutes): 4.493
 Quant Ion : 65.00
 Area (flag) : 259495M
 On-Column Amount (ng) : 250.0000
 Integration start scan : 878 Integration stop scan: 1223
 Y at integration start : 0 Y at integration end: 0

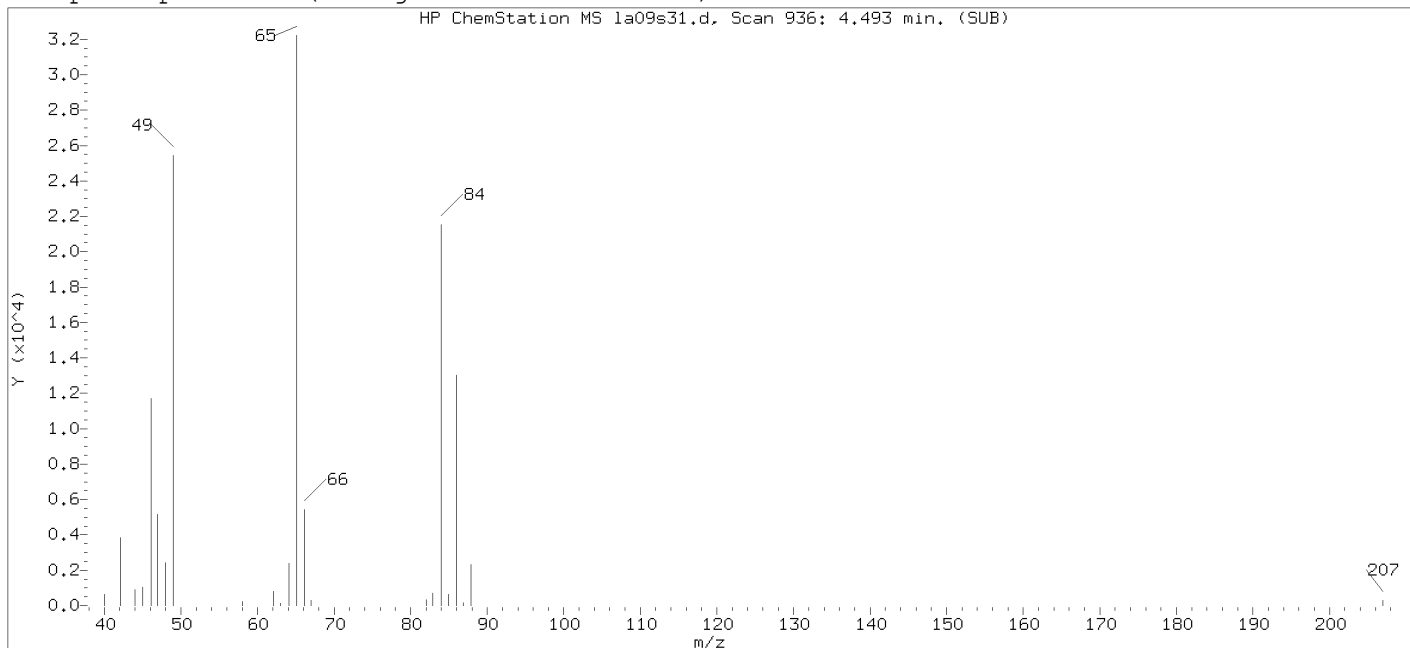
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Corie L. Mellinger
 on 04/09/2020 at 12:44.
 Target 3.5 esignature user ID: clm27445

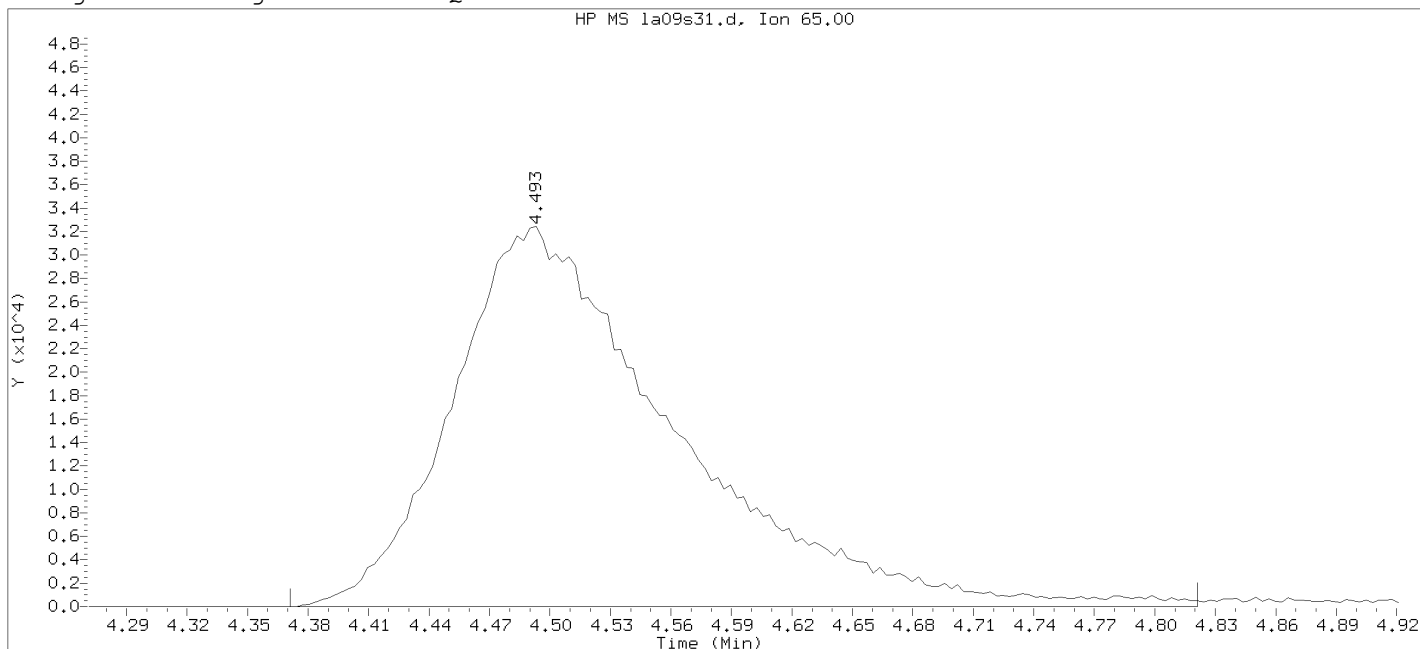
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PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20apr09b.b/1a09s31.d

Instrument ID: HP09915.i

Injection date and time: 09-APR-2020 10:20

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr09b.b/m8260c5.m

Sublist used: L201002

Calibration date and time: 09-APR-2020 10:00

Date, time and analyst ID of latest file update: 09-Apr-2020 10:52 clm27445

Sample Name: LCSL05

Lab Sample ID: LCSL05

Compound Number : 29
 Compound Name : t-Butyl alcohol-d10
 Scan Number : 936
 Retention Time (minutes): 4.493
 Quant Ion : 65.00
 Area : 248171
 On-column Amount (ng) : 250.0000
 Integration start scan : 897 Integration stop scan: 1037
 Y at integration start : 0 Y at integration end: 0

Digitally signed by Corie L. Mellinger on 04/09/2020 at 12:44.
 Target 3.5 esignature user KR421c Page 369 of 592

LCDL05

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

LCDL05

Data file: /chem/HP09915.i/20apr09b.b/la09s32.d

Injection date and time: 09-APR-2020 11:04

Data file Sample Info. Line: LCDL05;LCDL05;1;3;LCSD;;DODWW;;la09b05;

Instrument ID: HP09915.i Batch: L201002AA

Date, time and analyst ID of latest file update: 09-Apr-2020 12:09 c1m27445

Blank Data file reference: /chem/HP09915.i/20apr09b.b/la09b05.d

Method used: /chem/HP09915.i/20apr09b.b/m8260c5.m Sublist used: L201002

Calibration date and time (Last Method Edit): 09-APR-2020 10:00

Mid Level Daily Calibration Standard Reference: /chem/HP09915.i/20apr09b.b/la09c02.d

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.490 (0.010)	935	65	266497M (0)	250.00	
66) Fluorobenzene	7.946 (0.006)	2010	96	1231000 (-2)	50.00	
100) Chlorobenzene-d5	11.351 (0.003)	3069	117	954533 (-2)	50.00	
131) 1,4-Dichlorobenzene-d4	13.216 (0.000)	3649	152	526199 (-2)	50.00	

M = Internal Standard was manually integrated

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.059 (0.001)	113	303116	52.076	104%		80 - 119
57) 1,2-Dichloroethane-d4	(2)	7.512 (0.000)	102	78188	51.793	104%		81 - 118
83) Toluene-d8	(3)	9.924 (0.000)	98	1234240	49.216	98%		89 - 112
114) 4-Bromofluorobenzene	(3)	12.342 (0.000)	95	458748	48.508	97%		85 - 114

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
6) Vinyl Chloride	(2)	2.406 (0.001)	62	150375	20.537	20.54			0.2	1
17) 1,1-Dichloroethene	(2)	3.754 (0.001)	96	102757	19.793	19.79			0.2	1
32) trans-1,2-Dichloroethene	(2)	4.882 (0.000)	96	119838	21.046	21.05			0.2	1
36) 1,1-Dichloroethane	(2)	5.541 (0.000)	63	213023	22.352	22.35			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.368 (0.000)	96	140108	22.002	22.00			0.2	1
51) Chloroform	(2)	6.850 (-0.000)	83	202955	21.977	21.98			0.2	1
53) 1,1,1-Trichloroethane	(2)	7.072 (0.000)	97	167486	20.684	20.68			0.3	1
60) Benzene	(2)	7.544 (0.000)	78	497210	21.578	21.58			0.2	1
61) 1,2-Dichloroethane	(2)	7.622 (0.000)	62	165872	21.530	21.53			0.3	1
71) Trichloroethene	(2)	8.422 (-0.000)	95	123874	21.354	21.35			0.2	1
78) Bromodichloromethane	(2)	9.101 (-0.000)	83	147709	21.224	21.22			0.2	1
88) Toluene	(3)	9.995 (0.000)	92	312085	20.944	20.94			0.2	1
93) Tetrachloroethene	(3)	10.532 (0.000)	166	134895	21.332	21.33			0.2	1
104) Ethylbenzene	(3)	11.461 (-0.000)	91	595072	20.905	20.90			0.4	1
106) m+p-Xylene	(3)	11.573 (-0.000)	106	478798	42.856	42.86			1	5
107) o-Xylene	(3)	11.901 (-0.000)	106	229515	20.725	20.72			0.4	1
108) Xylene (Total)	(3)		106	708313	63.580	63.58			1	6

Digitally signed by Corie L. Mellinger on 04/09/2020 at 12:45. Target 3.5 esignature user ID: c1m27445

LCDL05

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

LCDL05

Data file: /chem/HP09915.i/20apr09b.b/la09s32.d Injection date and time: **09-APR-2020 11:04**
Data file Sample Info. Line: LCDL05;LCDL05;1;3;LCSD;;DODWW;;la09b05; Instrument ID: **HP09915.i** Batch: **L201002AA**
Date, time and analyst ID of latest file update: 09-Apr-2020 12:09 clm27445

Blank Data file reference: /chem/HP09915.i/20apr09b.b/la09b05.d

Method used: /chem/HP09915.i/20apr09b.b/m8260c5.m Sublist used: **L201002**
Calibration date and time (Last Method Edit): 09-APR-2020 10:00
Mid Level Daily Calibration Standard Reference: /chem/HP09915.i/20apr09b.b/la09c02.d

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

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Total number of targets = 17

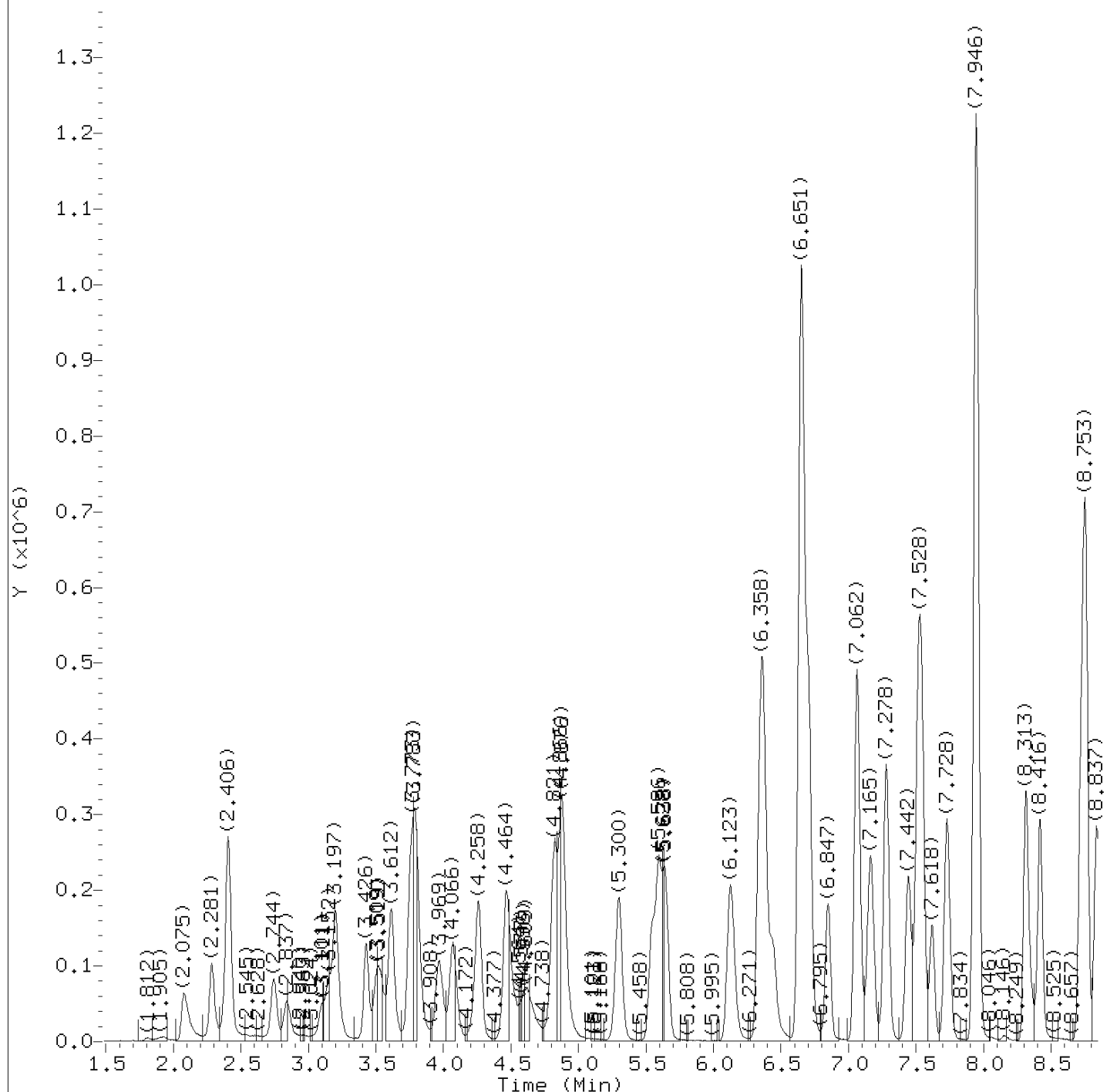
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Secondary review performed and digitally signed by Kari Becker on 04/13/2020 at 18:18. PARALLAX ID: kmb29664

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page 2 of 2

/chem/HP09915.i/20apr09b.b/1a09s32.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20apr09b.b/1a09s32.d
 Injection date and time: 09-APR-2020 11:04

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr09b.b/m8260c5.m
 Calibration date and time: 09-APR-2020 10:00

Sublist used: L201002

Date, time and analyst ID of latest file update: 09-Apr-2020 12:09 clm27445

Sample Name: LCDL05

Lab Sample ID: LCDL05

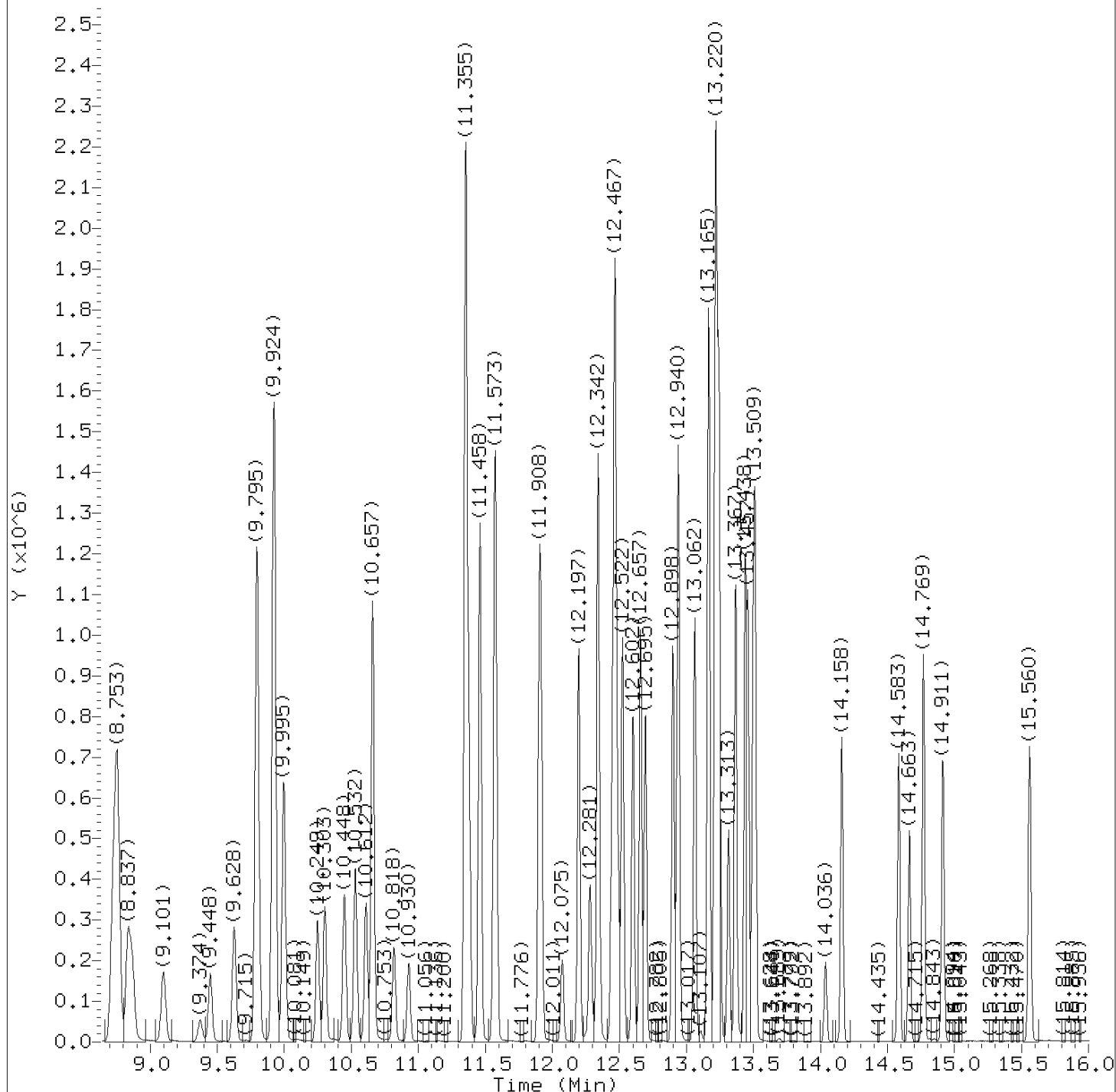
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 on 04/09/2020 at 12:45.

Target 3.5 esignature user ID: clm27445

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page 1 of 2

/chem/HP09915.i/20apr09b.b/1a09s32.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20apr09b.b/1a09s32.d
 Injection date and time: 09-APR-2020 11:04

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr09b.b/m8260c5.m
 Calibration date and time: 09-APR-2020 10:00

Sublist used: L201002

Date, time and analyst ID of latest file update: 09-Apr-2020 12:09 clm27445

Sample Name: LCDL05

Lab Sample ID: LCDL05

Digitally signed by Corie L. Mellinger
 on 04/09/2020 at 12:45.

Target 3.5 esignature user ID: clm27445

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page 2 of 2

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20apr09b.b/la09s32.d
 Injection date and time: 09-APR-2020 11:04

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr09b.b/m8260c5.m Sublist used: L201002
 Calibration date and time: 09-APR-2020 10:00
 Date, time and analyst ID of latest file update: 09-Apr-2020 12:09 clm27445

Sample Name: LCDL05

Lab Sample ID: LCDL05

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
6) Vinyl Chloride	(2)	2.406	62	150375	20.537
17) 1,1-Dichloroethene	(2)	3.754	96	102757	19.793
29) *t-Butyl alcohol-d10	(1)	4.490	65	266497M	250.000
32) trans-1,2-Dichloroethene	(2)	4.882	96	119838	21.046
36) 1,1-Dichloroethane	(2)	5.541	63	213023	22.352
42) cis-1,2-Dichloroethene	(2)	6.368	96	140108	22.002
51) Chloroform	(2)	6.850	83	202955	21.977
52) \$Dibromofluoromethane	(2)	7.059	113	303116	52.076
53) 1,1,1-Trichloroethane	(2)	7.072	97	167486	20.684
57) \$1,2-Dichloroethane-d4	(2)	7.512	102	78188	51.793
60) Benzene	(2)	7.545	78	497210	21.578
61) 1,2-Dichloroethane	(2)	7.622	62	165872	21.530
66) *Fluorobenzene	(2)	7.946	96	1231000	50.000
71) Trichloroethene	(2)	8.422	95	123874	21.354
78) Bromodichloromethane	(2)	9.101	83	147709	21.224
83) \$Toluene-d8	(3)	9.924	98	1234240	49.216
88) Toluene	(3)	9.995	92	312085	20.944
93) Tetrachloroethene	(3)	10.532	166	134895	21.332
100) *Chlorobenzene-d5	(3)	11.351	117	954533	50.000
104) Ethylbenzene	(3)	11.461	91	595072	20.905
106) m+p-Xylene	(3)	11.573	106	478798	42.856
108) Xylene (Total)	(3)		106	708313	63.580
107) o-Xylene	(3)	11.901	106	229515	20.725
114) \$4-Bromofluorobenzene	(3)	12.342	95	458748	48.508
131) *1,4-Dichlorobenzene-d4	(4)	13.216	152	526199	50.000

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

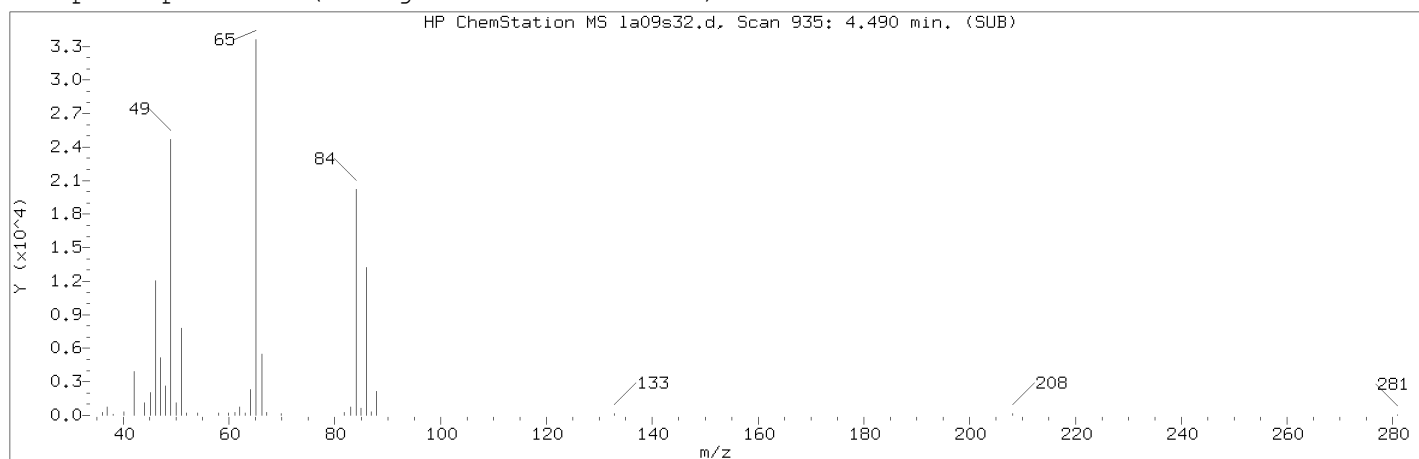
page 1 of 1

Digitally signed by Corie L. Mellinger
 on 04/09/2020 at 12:45.

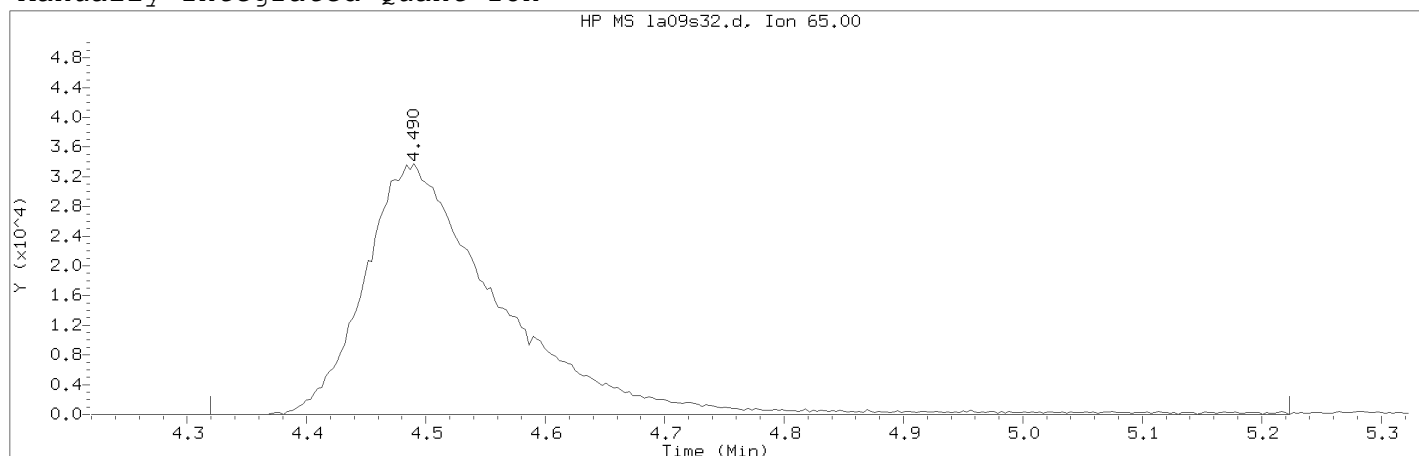
Target 3.5 esignature user ID: clm27445

KR421 Page 374 of 592

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20apr09b.b/1a09s32.d Instrument ID: HP09915.i
 Injection date and time: 09-APR-2020 11:04 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr09b.b/m8260c5.m Sublist used: L201002
 Calibration date and time: 09-APR-2020 10:00
 Date, time and analyst ID of latest file update: 09-Apr-2020 12:09 clm27445

Sample Name: LCDL05

Lab Sample ID: LCDL05

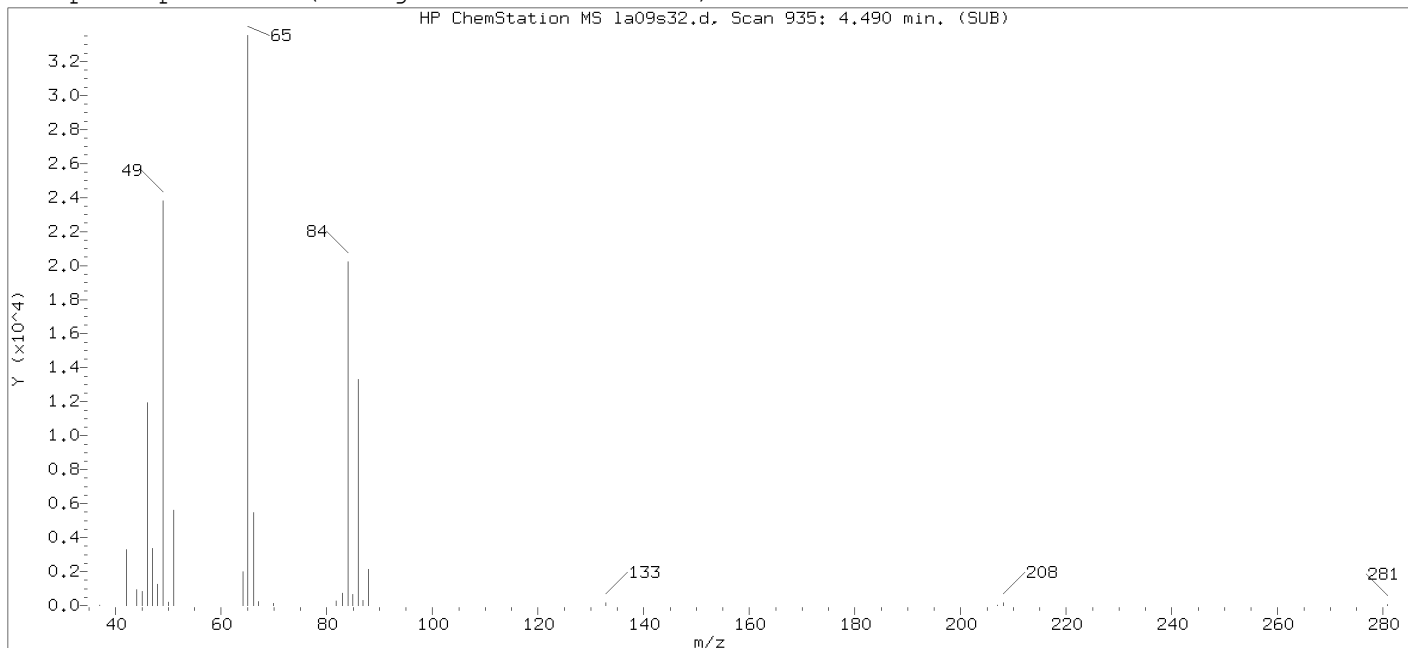
Compound Number : 29
 Compound Name : t-Butyl alcohol-d10
 Scan Number : 935
 Retention Time (minutes): 4.490
 Quant Ion : 65.00
 Area (flag) : 266497M
 On-Column Amount (ng) : 250.0000
 Integration start scan : 881 Integration stop scan: 1162
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

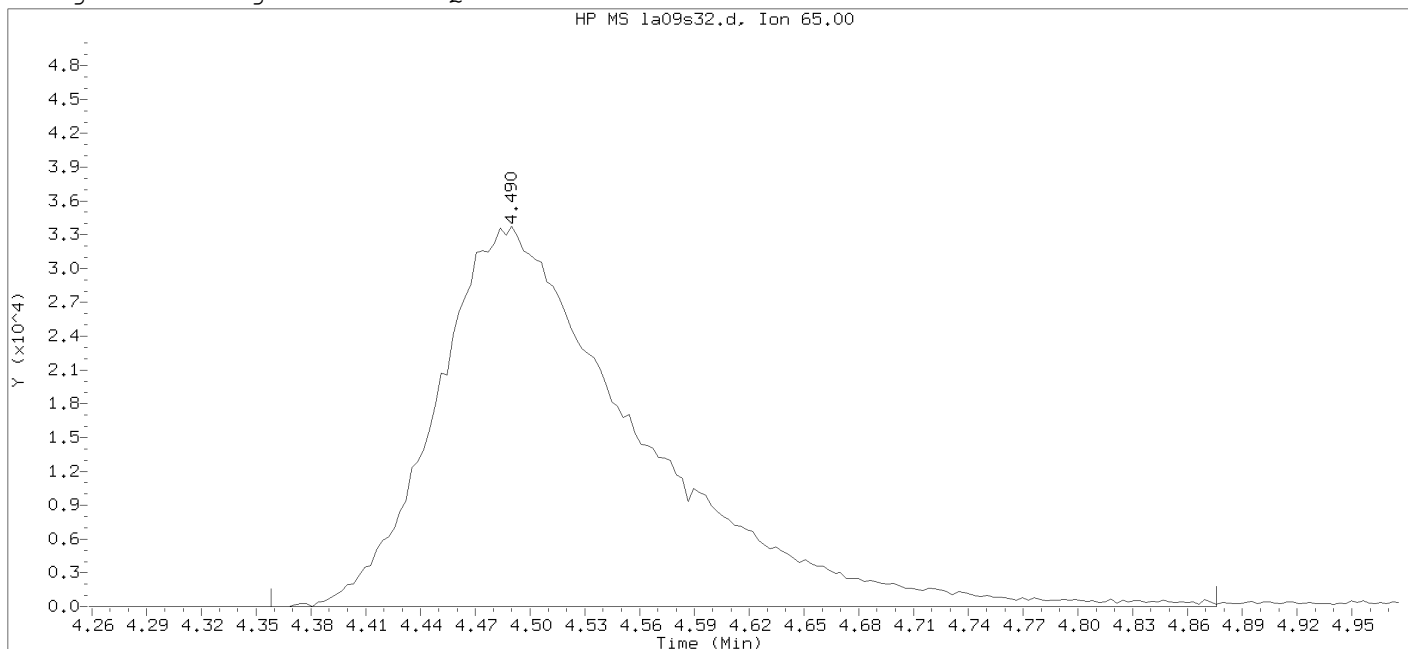
Analyst responsible for change: Digitally signed by Corie L. Mellinger
 on 04/09/2020 at 12:45.
 Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Kari Becker on 04/13/2020 at 18:18.
 PARALLAX ID: kmb29664

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20apr09b.b/1a09s32.d

Instrument ID: HP09915.i

Injection date and time: 09-APR-2020 11:04

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20apr09b.b/m8260c5.m

Sublist used: L201002

Calibration date and time: 09-APR-2020 10:00

Date, time and analyst ID of latest file update: 09-Apr-2020 11:25 clm27445

Sample Name: LCDL05

Lab Sample ID: LCDL05

Compound Number : 29
 Compound Name : t-Butyl alcohol-d10
 Scan Number : 935
 Retention Time (minutes): 4.490
 Quant Ion : 65.00
 Area : 260772
 On-column Amount (ng) : 250.0000
 Integration start scan : 893 Integration stop scan: 1054
 Y at integration start : 0 Y at integration end: 0

Digitally signed by Corie L. Mellinger on 04/09/2020 at 12:45.
 Target 3.5 esignature user KR421c Page 376 of 592

EDB/DBCP Data

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Case Narrative/Conformance Summary

EDB/DBCP

KR421 Page 378 of 592

Case Narrative/Conformance Summary

CLIENT: EA Engineering, Science & Tech
SDG: KR421

Pesticide Residue Analysis

Fraction: EDB/DBCP

Sample #	Client ID	Matrix		DF	Comments
		Liquid	Solid		
1292523	GWTS-EFF1-040220	X		1	
1292524	GWTS-EFF1DUP-040220	X		1	Field Duplicate Sample
1292525	GWTS-GAC1-040220	X		1	
1292526	GWTS-INF1-040220	X		1	
1292527	GWTS-TB01-040220	X		1	Trip Blank
1292528	GWTS-EFF2-040220	X		1	Unspiked
1292529	GWTS-EFF2-040220 MS	X		1	Matrix Spike
1292530	GWTS-EFF2-040220 MSD	X		1	Matrix Spike Duplicate
1292532	GWTS-GAC2-040220	X		1	
1292533	GWTS-INF2-040220	X		1	
1292534	GWTS-FB02-040220	X		1	Field Blank

All analyses have been performed in accordance with DOD QSM Version 5.1.1 unless otherwise noted below.
See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

(Sample number(s): 1292523-1292530, 1292532-1292534: Analysis: 10398)
For dual column analyses in which the calibration (initial and/or continuing) response is outside the acceptance criteria on one column and within criteria on the second column affected analytes are reported from the compliant column. The sample raw data identifies the column used to report each analyte.

Case Narrative/Conformance Summary

CLIENT: EA Engineering, Science & Tech
SDG: KR421

Pesticide Residue Analysis

Fraction: EDB/DBCP

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

MS/MSD

Batch#: 200940024A (Sample number(s): 1292523-1292530, 1292532-1292534, UNSPK: 1292528)
The recovery(ies) for the following analyte(s) in the MS and MSD exceeded the acceptance window indicating a positive bias: Ethylene dibromide

Surrogate

Surrogate recoveries that are noncompliant are confirmed unless attributed to a dilution or otherwise noted.

Batch#: 200940024A (Sample number(s): 1292523-1292530, 1292532-1292534, UNSPK: 1292528)
The recovery(ies) for the following surrogate(s) exceeded the acceptance window: 1,1,2,2-Tetrachloroethane-D1 (1292532)

(Sample number(s): 1292532: Analysis: 10398)

The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and no target analytes were detected, the data is reported.

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
+MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

Quality Control and Calibration Summary Forms

EDB/DBCP

KR421 Page 381 of 592

Quality Control Reference List Pesticide Residue Analysis

CLIENT: EA Engineering, Science & Tech
SDG: KR421

Fraction: EDB/DBCP

Analysis	Batch Number	Sample Number	Analysis Date
EDB 8011 Water	200940024A	PBLK24094	04/07/2020 22:30
		LCS24094	04/07/2020 22:47
		LCSD24094	04/07/2020 23:04
		1292523	04/08/2020 02:09
		1292524	04/08/2020 02:26
		1292525	04/08/2020 02:43
		1292526	04/08/2020 03:00
		1292527	04/08/2020 03:17
		1292528 UNSPK	04/08/2020 03:33
		1292529 MS	04/08/2020 04:24
		1292530 MSD	04/08/2020 04:41
		1292532	04/08/2020 04:57
		1292533	04/08/2020 05:14
		1292534	04/08/2020 05:31

Quality Control Summary
Method Blank
Pesticide Residue Analysis
SDG: KR421
Matrix: LIQUID**Fraction: EDB/DBCP**

200940024A / PBLK24094 Analyte	Analysis Date	Blank Results	Units	DL	LOD	LOQ
Ethylene dibromide	04/07/20	N.D.	ug/l	0.010	0.020	0.030

Quality Control Summary
Surrogates
Pesticide Residue Analysis
SDG: KR421
Matrix: LIQUID

Fraction: EDB/DBCP

Sample	1,1,2,2-Tetrachloroethane-D1		1,1,2,2-Tetrachloroethane-D2	
	Spike Added	0.070428 ug/l	Spike Added	0.070428 ug/l
	% Recovery	Limits	% Recovery	Limits
PBLK24094	115	46 - 136	97	46 - 136
LCS24094	115	46 - 136	104	46 - 136
LCSD24094	113	46 - 136	103	46 - 136
1292523	108	46 - 136	93	46 - 136
1292524	81	46 - 136	95	46 - 136
1292525	125	46 - 136	104	46 - 136
1292526	112	46 - 136	99	46 - 136
1292527	111	46 - 136	99	46 - 136
1292528 UNSPK	117	46 - 136	97	46 - 136
1292529 MS	118	46 - 136	96	46 - 136
1292530 MSD	102	46 - 136	102	46 - 136
1292532	151 *	46 - 136	103	46 - 136
1292533	110	46 - 136	96	46 - 136
1292534	110	46 - 136	95	46 - 136

Surrogate recoveries that are noncompliant are confirmed unless attributed to a dilution or otherwise noted.

Quality Control Summary
Matrix Spike/Matrix Spike Duplicate

SDG: KR421
Matrix: LIQUID

Pesticide Residue Analysis

Fraction: EDB/DBCP

UNSPK: 1292528 MS: 1292529 MSD: 1292530 Analyte	Batch: 200940024A (Sample number(s): 1292523-1292530, 1292532-1292534)								
	Spike Added ug/l MS/MSD	Unspiked Conc ug/l	MS Conc ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	%Rec Limits	%RPD	%RPD Limits
Ethylene dibromide	0.122 / 0.121	N.D.	0.183	0.184	149 *	153 *	60-140	1	20

Comments:

(2) The unspiked sample result is greater than four times the spike added.

* = Out of Specification

Results are being reported on an as received basis.

4/23/2020 11:59:28 AM

Page 1 of 1

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: KR421
Matrix: LIQUID

Pesticide Residue Analysis
Fraction: EDB/DBCP

LCS: LCS24094 LCSD: LCSD24094	Batch: 200940024A (Sample number(s): 1292523-1292530, 1292532-1292534)							
Analyte	Spike Added ug/l	LCS Conc ug/l	LCSD Conc ug/l	LCS %Rec	LCSD %Rec	%Rec Limits	%RPD	%RPD Limits
Ethylene dibromide	0.128	0.171	0.170	134	133	60-140	1	20

LOQ/MDL Summary
Pesticide Residue Analysis

SDG: KR421

Fraction: EDB/DBCP

10398: EDB 8011 Water Analyte Name	Default DL	Default LOD	Default LOQ	Units
Ethylene dibromide	.01	.02	0.030	ug/l

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 19853ACalibration File: 16EDBS2008701GC Column (1): DB CLP1ID: 0.32 (mm)

ICAL

16EDBS2008701ICAL Date(s) Analyzed: 3/27/2020 3/27/2020

COMPOUND	RT OF STANDARDS						MIDPOINT	RT WINDOW	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	RT	FROM	TO
ETHYLENE DIBROMIDE	3.82	3.81	3.81	3.82	3.81	3.81	3.82	3.79	3.85
1,1,2,2-TETRACHLOROETHANE	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.28	5.34
1,2,3-Trichloropropane	5.45	5.46	5.46	5.46	5.46	5.45	5.46	5.43	5.49
1,2-DIBROMO-3-CHLOROPROPA	8.22	8.22	8.22	8.22	8.22	8.22	8.22	8.19	8.25

level 4

5/16/20
3/27/20

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 19853ACalibration File: 16EDBS2008701GC Column (1): DB CLP1ID: 0.32 (mm)ICAL 16EDBS2008701ICAL Date(s) Analyzed: 3/27/2020 3/27/2020

COMPOUND	CALIBRATION FACTORS							%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN	
ETHYLENE DIBROMIDE	1.19E+04	1.34E+04	1.27E+04	1.01E+04	1.07E+04	1.00E+04	1.15E+04	12
1,1,2,2-TETRACHLOROETHANE	2.03E+04	2.05E+04	1.94E+04	1.58E+04	1.82E+04	1.68E+04	1.85E+04	10
1,2,3-Trichloropropane	3.71E+03	2.66E+03	2.59E+03	2.19E+03	2.48E+03	2.34E+03	2.66E+03	20
1,2-DIBROMO-3-CHLOROPROPA	2.86E+04	3.29E+04	2.92E+04	2.72E+04	2.75E+04	2.49E+04	2.84E+04	9

2316346
3/27/20

Chrom Perfect Calibration File

File Name: V:\CP16\16EDBS2008701.CAL
Version: 24

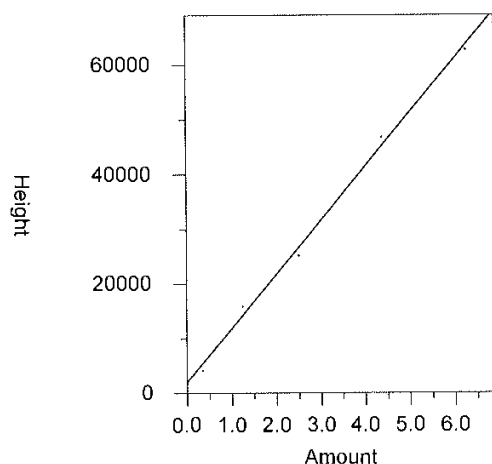
Creator:
Description:
Reason for change:

External standard calibration
Standard injection volume: 1
No sample weight correction
Area reject threshold: 100
Reference peak area reject threshold: 1000
Amount units:
No default component

Method of calculating data point averages: Current update equal to cal data
No calibration update report

All levels are normal data points.

1 EDB



Expected retention time: 3.817 minutes
Search window: 0.03 minutes
No retention time reference component
No response proxy component
Group number: 0
High alarm limit: 0
Low alarm limit: 0
Component constant: 0

Single peak quantification by height

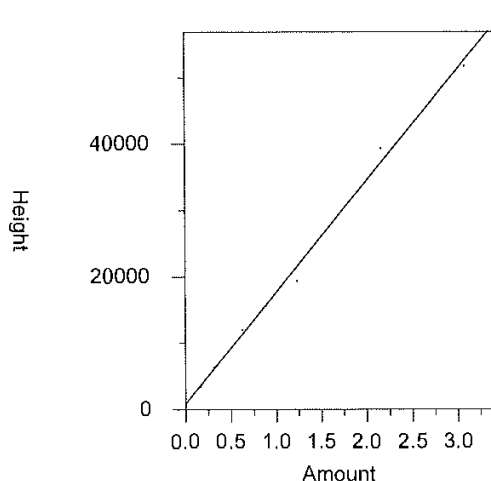
$$Y = 9863.92 X + 1946.169$$

Linear fit with equal weighting
Coefficient of determination: 0.9963474
Average error: 7.973%
Average CF: 11464.63
RSD: 12.352%

Level	Amount	Response	Cal Factor	Error, %	Source
1	0.35	4167.631	11907.52	-22.801	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20087001.003.BNE
2	0.63	8433.077	13385.84	3.341	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20087001.004.BNE
3	1.25	15881.27	12705.02	11.244	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20087001.005.BNE
4	2.5	25163.72	10065.49	-5.421	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20087001.006.BNE
5	4.38	46809.99	10687.21	3.676	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20087001.007.BNE
6	6.26	62829.78	10036.71	-1.357	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20087001.008.BNE

2 1,1,2,2-PCA

Chrom Perfect Calibration File



Expected retention time: 5.307 minutes
 Search window: 0.03 minutes
 No retention time reference component
 No response proxy component
 Group number: 0

High alarm limit: 0
 Low alarm limit: 0
 Component constant: 0

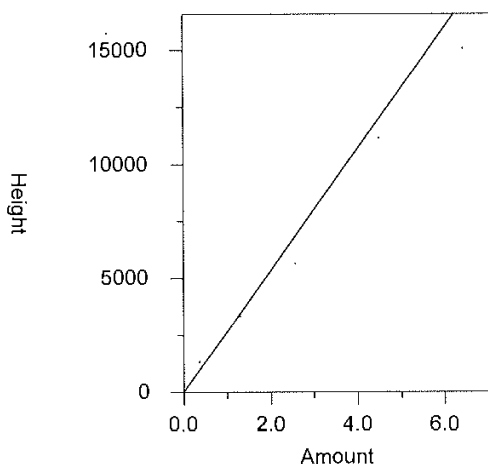
Single peak quantification by height

$$Y = 16807.35 X + 845.7489$$

Linear fit with equal weighting
 Coefficient of determination: 0.9943155
 Average error: 5.985%
 Average CF: 18498.7
 RSD: 10.452%

Level	Amount	Response	Cal Factor	Error, %	Source
1	0.17	3452.757	20310.34	-6.758	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16eds20087001.00
2	0.31	6365.969	20535.38	5.118	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16eds20087001.00
3	0.62	12016.66	19381.71	6.660	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16eds20087001.00
4	1.23	19374.04	15751.25	-9.967	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16eds20087001.00
5	2.16	39314.37	18201.1	5.827	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16eds20087001.00
6	3.08	51782.33	16812.45	-1.578	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16eds20087001.00

3 1,2,3-TCP



Expected retention time: 5.456 minutes
 Search window: 0.03 minutes
 No retention time reference component
 No response proxy component
 Group number: 0

High alarm limit: 0
 Low alarm limit: 0
 Component constant: 0

Single peak quantification by height

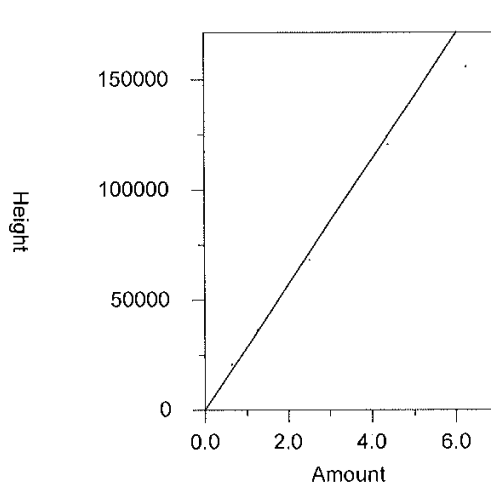
$$Y = 2663.602 X + 0$$

Average CF fit with equal weighting, forced to origin
 Coefficient of determination: 0.9580967
 Average error: 13.134%
 Average CF: 2663.602
 RSD: 20.314%

Level	Amount	Response	Cal Factor	Error, %	Source
1	0.36	1336.734	3713.15	39.403	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16eds20087001.00
2	0.64	1701.723	2658.942	-0.175	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16eds20087001.00
3	1.29	3343.6	2591.938	-2.690	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16eds20087001.00
4	2.57	5636.187	2193.069	-17.665	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16eds20087001.00
5	4.5	11162.49	2480.553	-6.872	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16eds20087001.00
6	6.43	15071.66	2343.96	-12.000	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16eds20087001.00

4 DBCP

Chrom Perfect Calibration File



Expected retention time: 8.218 minutes
 Search window: 0.03 minutes
 No retention time reference component
 No response proxy component
 Group number: 0

High alarm limit: 0
 Low alarm limit: 0
 Component constant: 0

Single peak quantification by height

$$Y = 28366.47 X + 0$$

Average CF fit with equal weighting, forced to origin

Coefficient of determination: 0.9695421
 Average error: 6.587%
 Average CF: 28366.47
 RSD: 9.415%

Level	Amount	Response	Cal Factor	Error, %	Source
1	0.35	10017.49	28621.4	0.899	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20087001.00\
2	0.63	20708.69	32870.94	15.880	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20087001.00\
3	1.25	36516.22	29212.97	2.984	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20087001.00\
4	2.51	68204.49	27173.11	-4.207	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20087001.00\
5	4.39	120594.8	27470.34	-3.159	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20087001.00\
6	6.27	155810	24850.08	-12.396	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20087001.00\

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code: Case No.:

SAS No.:

SDG No.:

Instrument: 19853BCalibration File: 16EDBS2008701BGC Column (2) : DB CLP2ID: 0.32 (mm)ICAL 16EDBS2008701BICAL Date(s) Analyzed: 3/27/2020 3/27/2020

COMPOUND	RT OF STANDARDS						MIDPOINT RT	RT WINDOW	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6		FROM	TO
ETHYLENE DIBROMIDE	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.61	4.67
1,1,2,2-TETRACHLOROETHANE	6.32	6.32	6.32	6.32	6.32	6.32	6.32	6.29	6.35
1,2,3-Trichloropropane	6.43	6.43	6.44	6.44	6.44	6.44	6.44	6.41	6.47
1,2-DIBROMO-3-CHLOROPROPA	9.08	9.07	9.08	9.08	9.08	9.08	9.08	9.05	9.11

Level 4
28/6/46
3/27/20

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code: Case No.:

SAS No.:

SDG No.:

Instrument: 19853BCalibration File: 16EDBS2008701BGC Column (2): DB CLP2ID: 0.32 (mm)ICAL 16EDBS2008701BICAL Date(s) Analyzed: 3/27/2020 3/27/2020

COMPOUND	CALIBRATION FACTORS							%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN	
ETHYLENE DIBROMIDE	2.42E+04	2.53E+04	2.33E+04	1.90E+04	2.08E+04	1.96E+04	2.21E+04	12
1,1,2,2-TETRACHLOROETHANE	3.26E+04	3.27E+04	3.04E+04	2.74E+04	3.03E+04	2.72E+04	3.01E+04	8
1,2,3-Trichloropropane	5.51E+03	5.24E+03	4.97E+03	3.99E+03	4.24E+03	3.94E+03	4.65E+03	15
1,2-DIBROMO-3-CHLOROPROPA	5.45E+04	6.24E+04	5.57E+04	5.24E+04	5.19E+04	4.93E+04	5.44E+04	8

BLWHL
3/27/20

Chrom Perfect Calibration File

File Name: V:\CPI6\16EDBS2008701b.CAL
Version: 24

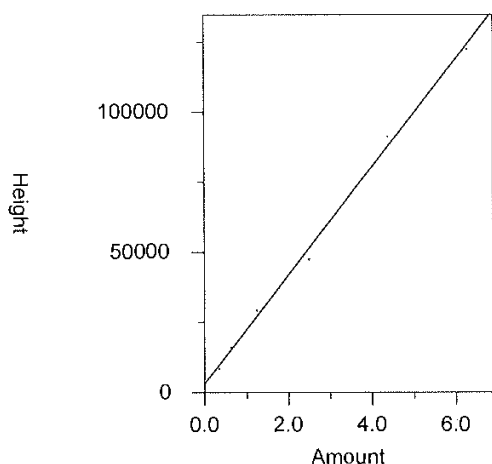
Creator:
Description:
Reason for change:

External standard calibration
Standard injection volume: 1
No sample weight correction
Area reject threshold: 100
Reference peak area reject threshold: 1000
Amount units:
No default component

Method of calculating data point averages: Current update equal to cal data
No calibration update report

All levels are normal data points.

1 EDB

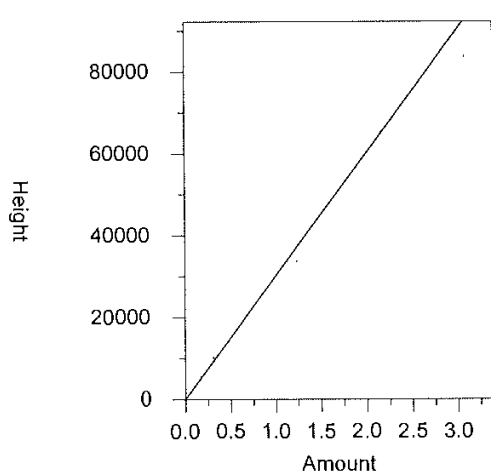


Expected retention time: 4.643 minutes
Search window: 0.03 minutes
No retention time reference component
No response proxy component
Group number: 0
High alarm limit: 0
Low alarm limit: 0
Component constant: 0
Single peak quantification by height
 $Y = 19320.01 X + 2979.018$
Linear fit with equal weighting
Coefficient of determination: 0.9965025
Average error: 6.398%
Average CF: 22050.63
RSD: 11.848%

Level	Amount	Response	Cal Factor	Error, %	Source
1	0.35	8485.491	24244.26	-12.889	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CPI6\16edbs20087001B.003.BN
2	0.63	15949.42	25316.54	5.272	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CPI6\16edbs20087001B.004.BN
3	1.25	29186.52	23349.21	7.584	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CPI6\16edbs20087001B.005.BN
4	2.5	47508.27	19003.31	-7.353	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CPI6\16edbs20087001B.006.BN
5	4.38	91213.99	20825.11	4.125	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CPI6\16edbs20087001B.007.BN
6	6.26	122479	19565.33	-1.165	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CPI6\16edbs20087001B.008.BN

2 1,1,2,2-PCA

Chrom Perfect Calibration File



Expected retention time: 6.322 minutes
 Search window: 0.03 minutes
 No retention time reference component
 No response proxy component
 Group number: 0

High alarm limit: 0
 Low alarm limit: 0
 Component constant: 0

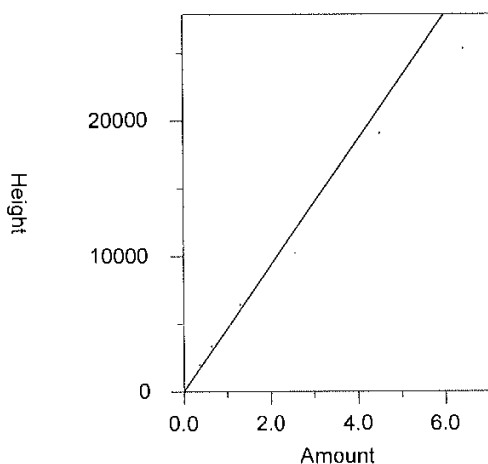
Single peak quantification by height

$$Y = 30100.7 X + 0$$

Average CF fit with equal weighting, forced to origin
 Coefficient of determination: 0.9821637
 Average error: 6.151%
 Average CF: 30100.7
 RSD: 7.908%

Level	Amount	Response	Cal Factor	Error, %	Source
1	0.17	5535.433	32561.37	8.175	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16eds20087001B.0
2	0.31	10133.67	32689.26	8.600	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16eds20087001B.0
3	0.62	18846.71	30397.92	0.987	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16eds20087001B.0
4	1.23	33723.51	27417.49	-8.914	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16eds20087001B.0
5	2.16	65467.56	30309.05	0.692	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16eds20087001B.0
6	3.08	83865.61	27229.09	-9.540	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16eds20087001B.0

3 1,2,3-TCP



Expected retention time: 6.436 minutes
 Search window: 0.03 minutes
 No retention time reference component
 No response proxy component
 Group number: 0

High alarm limit: 0
 Low alarm limit: 0
 Component constant: 0

Single peak quantification by height

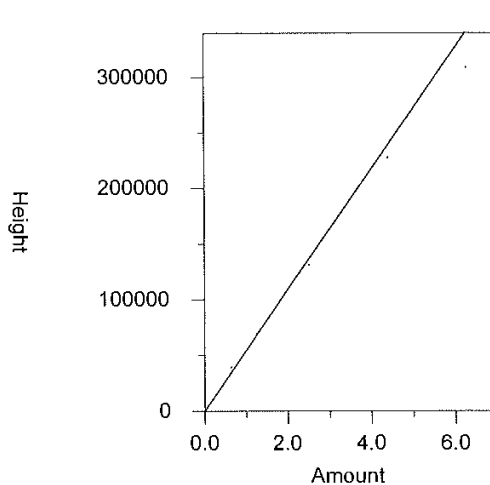
$$Y = 4646.95 X + 0$$

Average CF fit with equal weighting, forced to origin
 Coefficient of determination: 0.9366989
 Average error: 12.734%
 Average CF: 4646.95
 RSD: 14.581%

Level	Amount	Response	Cal Factor	Error, %	Source
1	0.36	1982.262	5506.283	18.492	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16eds20087001B.0
2	0.64	3353.009	5239.077	12.742	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16eds20087001B.0
3	1.29	6412.195	4970.694	6.967	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16eds20087001B.0
4	2.57	10248.91	3987.903	-14.182	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16eds20087001B.0
5	4.5	19070.57	4237.904	-8.802	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16eds20087001B.0
6	6.43	25333.18	3939.841	-15.217	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16eds20087001B.0

4 DBCP

Chrom Perfect Calibration File



Expected retention time: 9.076 minutes
 Search window: 0.03 minutes

No retention time reference component

No response proxy component

Group number: 0

High alarm limit: 0

Low alarm limit: 0

Component constant: 0

Single peak quantification by height

$$Y = 54361.09 X + 0$$

Average CF fit with equal weighting, forced to origin

Coefficient of determination: 0.9819252

Average error: 5.839%

Average CF: 54361.09

RSD: 8.313%

Level	Amount	Response	Cal Factor	Error, %	Source
1	0.35	19081.99	54519.97	0.292	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20087001B.0
2	0.63	39304.56	62388.19	14.766	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20087001B.0
3	1.25	69621.43	55697.14	2.458	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20087001B.0
4	2.51	131445	52368.53	-3.665	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20087001B.0
5	4.39	227957.3	51926.49	-4.479	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20087001B.0
6	6.27	308899	49266.19	-9.372	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20087001B.0

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 19853A

Date Analyzed: 03/27/20

GC Column (1): DB CLP1

ID: .32 (mm)

Time Analyzed: 21:58

Lab File ID: 16EDBS20087001.013.RAW

Initial Calibration: 16EDBS2008701

Lab Standard ID: ICEBXFU

Init. Calib Date(s): 03/27/20

03/27/20

Calibration: 16EDBS2008701

COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
ETHYLENE DIBROMIDE	3.81	3.79	3.85	1.36	1.25	8
1,1,2,2-TETRACHLOROETHANE	5.31	5.28	5.34	0.66	0.62	7
1,2,3-Trichloropropane	5.46	5.43	5.49	1.32	1.25	6
1,2-DIBROMO-3-CHLOROPROPANE	8.22	8.19	8.25	1.31	1.25	5

Compounds 4

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 19853B

Date Analyzed: 03/27/20

GC Column (2): DB CLP2 ID: .32 (mm)

Time Analyzed: 21:58

Lab File ID: 16EDBS20087001B.013.RAW

Initial Calibration: 16EDBS2008701B

Lab Standard ID: ICEBXFU

Init. Calib Date(s): 03/27/20 03/27/20

Calibration: 16EDBS2008701B

COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
ETHYLENE DIBROMIDE	4.64	4.61	4.67	1.39	1.25	11
1,1,2,2-TETRACHLOROETHANE	6.32	6.29	6.35	0.64	0.62	3
1,2,3-Trichloropropane	6.44	6.41	6.47	1.30	1.25	4
1,2-DIBROMO-3-CHLOROPROPANE	9.08	9.05	9.11	1.28	1.25	3

Compounds 4

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 19853A

Date Analyzed: 04/07/20

GC Column (1): DB CLP1 ID: .32 (mm)

Time Analyzed: 21:06

Lab File ID: 16EDBS20087005.014.RAW

Initial Calibration: 16EDBS2008701

Lab Standard ID: EDB_4AC

Init. Calib Date(s): 03/27/20 03/27/20

Calibration: 16EDBS2008701

COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
ETHYLENE DIBROMIDE	3.82	3.78	3.84	2.61	2.50	4
1,1,2,2-TETRACHLOROETHANE	5.31	5.28	5.34	1.26	1.23	2
1,2,3-Trichloropropane	5.45	5.42	5.48	2.54	2.57	-1
1,2-DIBROMO-3-CHLOROPROPANE	8.22	8.19	8.25	3.04	2.51	21

Compounds 4

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 19853B

Date Analyzed: 04/07/20

GC Column (2) : DB CLP2 ID: .32 (mm)

Time Analyzed: 21:06

Lab File ID: 16EDBS20087005B.014.RAW

Initial Calibration: 16EDBS2008701B

Lab Standard ID: EDB_4AC

Init. Calib Date(s): 03/27/20

03/27/20

Calibration: 16EDBS2008701B

COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
ETHYLENE DIBROMIDE	4.64	4.61	4.67	2.33	2.50	-7
1,1,2,2-TETRACHLOROETHANE	6.32	6.29	6.35	1.08	1.23	-12
1,2,3-Trichloropropane	6.43	6.41	6.47	2.13	2.57	-17
1,2-DIBROMO-3-CHLOROPROPANE	9.08	9.05	9.11	2.74	2.51	9

Compounds 4

Eurofins Lancaster Laboratories Single Component Data Summary

Sample Name: EIBKX2024A **PIBLKCO ID: CO** **Batchnumber:** 209799999
Sample Amount: 35 **Total Volume:** 2 ml **Analyst:** 2306 **SDG:** **State:**
Analyses: 10398

Analysis Report (A)

Injected on : Apr 07, 2020 21:23:40
 Instrument : CP16--19853A
 Result file : 16EDBS20087005.015.RAW
 Calibration file : 16EDBS2008701.CAL
 Method file : 16EDBS.MET

%SSR(1,1,2,2-PCA) : 124% (46-136) Conc.: 0.083781

Peak name	Min	R.T.	Max	Height	Amount
EDB	3.78	3.80	3.84	563	-0.008014
1,1,2,2-PCA	5.28	5.31	5.34	25488	0.083781
1,2,3-TCP	5.42	5.47	5.48	603	0.012945

Analysis Report (B)

Injected on : Apr 07, 2020 21:23:40
 Instrument : CP16--19853B
 Result file : 16EDBS20087005B.015.RAW
 Calibration file : 16EDBS2008701B.CAL
 Method file : 16EDBSB.MET

%SSR(1,1,2,2-PCA) : 112% (46-136) Conc.: 0.075771

Peak name	Min	R.T.	Max	Height	Amount
1,1,2,2-PCA	6.29	6.32	6.35	39913	0.075771
1,2,3-TCP	6.41	6.44	6.47	2447	0.030091
DBCP	9.05	9.05	9.11	1553	0.001633

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☒ EDB			<0.03	<0.01			
☐ 1,1,2,2-PCA	A	0.083781				10.04	
☒ 1,2,3-TCP			<0.27	<0.1			
☒ DBCP			<0.03	<0.01			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 4/8/2020 07:11:37

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7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 19853A

Date Analyzed: 04/08/20

GC Column (1): DB CLP1 ID: .32 (mm)

Time Analyzed: 0:28

Lab File ID: 16EDBS20087005.026.RAW

Initial Calibration: 16EDBS2008701

Lab Standard ID: EDB_4AD

Init. Calib Date(s): 03/27/20 03/27/20

Calibration: 16EDBS2008701

COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT	NOM AMOUNT	%D
ETHYLENE DIBROMIDE	3.82	3.78	3.84	2.46	2.50	-2
1,1,2,2-TETRACHLOROETHANE	5.31	5.28	5.34	1.25	1.23	1
1,2,3-Trichloropropane	5.46	5.42	5.48	2.40	2.57	-7
1,2-DIBROMO-3-CHLOROPROPANE	8.22	8.19	8.25	3.32	2.51	32

Compounds 4

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 19853B

Date Analyzed: 04/08/20

GC Column (2): DB CLP2 ID: .32 (mm)

Time Analyzed: 0:28

Lab File ID: 16EDBS20087005B.026.RAW

Initial Calibration: 16EDBS2008701B

Lab Standard ID: EDB_4AD

Init. Calib Date(s): 03/27/20 03/27/20

Calibration: 16EDBS2008701B

COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT	NOM AMOUNT	%D
ETHYLENE DIBROMIDE	4.64	4.61	4.67	2.43	2.50	-3
1,1,2,2-TETRACHLOROETHANE	6.32	6.29	6.35	1.11	1.23	-10
1,2,3-Trichloropropane	6.43	6.41	6.47	2.25	2.57	-13
1,2-DIBROMO-3-CHLOROPROPANE	9.08	9.05	9.11	3.02	2.51	21

Compounds 4

Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: EIBKX2024A **PIBLKCP ID:** CP **Batchnumber:** 209799999
Sample Amount: 35 **Total Volume:** 2 ml **Analyst:** 2306 **SDG:** **State:**
Analyses: 10398

Analysis Report (A)

Injected on : Apr 08, 2020 00:45:34
 Instrument : CP16--19853A
 Result file : 16EDBS20087005.027.RAW
 Calibration file : 16EDBS2008701.CAL
 Method file : 16EDBS.MET

%SSR(1,1,2,2-PCA) : 125% (46-136) Conc.: 0.084779

Peak name	Min	R.T.	Max	Height	Amount
1,1,2,2-PCA	5.28	5.31	5.34	25782	0.084779
DBCP	8.19	8.22	8.25	604	0.001217

Analysis Report (B)

Injected on : Apr 08, 2020 00:45:34
 Instrument : CP16--19853B
 Result file : 16EDBS20087005B.027.RAW
 Calibration file : 16EDBS2008701B.CAL
 Method file : 16EDBSB.MET

%SSR(1,1,2,2-PCA) : 115% (46-136) Conc.: 0.077967

Peak name	Min	R.T.	Max	Height	Amount
1,1,2,2-PCA	6.29	6.32	6.35	41070	0.077967
1,2,3-TCP	6.41	6.43	6.47	2375	0.029204
DBCP	9.05	9.05	9.11	1994	0.002096

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☒ EDB			<0.03	<0.01			
☐ 1,1,2,2-PCA	A	0.084779				8.37	
☒ 1,2,3-TCP			<0.27	<0.1			
☒ DBCP			<0.03	<0.01			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 4/8/2020 07:12:44

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7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 19853A

Date Analyzed: 04/08/20

GC Column (1): DB CLP1 ID: .32 (mm)

Time Analyzed: 3:50

Lab File ID: 16EDBS20087005.038.RAW

Initial Calibration: 16EDBS2008701

Lab Standard ID: EDB_4AE

Init. Calib Date(s): 03/27/20 03/27/20

Calibration: 16EDBS2008701

COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT	NOM AMOUNT	%D
ETHYLENE DIBROMIDE	3.82	3.78	3.84	2.61	2.50	4
1,1,2,2-TETRACHLOROETHANE	5.31	5.28	5.34	1.29	1.23	5
1,2,3-Trichloropropane	5.46	5.42	5.48	2.46	2.57	-4
1,2-DIBROMO-3-CHLOROPROPANE	8.22	8.19	8.25	3.30	2.51	31

Compounds 4

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 19853B

Date Analyzed: 04/08/20

GC Column (2): DB CLP2 ID: .32 (mm)

Time Analyzed: 3:50

Lab File ID: 16EDBS20087005B.038.RAW

Initial Calibration: 16EDBS2008701B

Lab Standard ID: EDB_4AE

Init. Calib Date(s): 03/27/20 03/27/20

Calibration: 16EDBS2008701B

COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT	NOM AMOUNT	%D
ETHYLENE DIBROMIDE	4.64	4.61	4.67	2.39	2.50	-4
1,1,2,2-TETRACHLOROETHANE	6.32	6.29	6.35	1.13	1.23	-8
1,2,3-Trichloropropane	6.43	6.41	6.47	2.22	2.57	-14
1,2-DIBROMO-3-CHLOROPROPANE	9.07	9.05	9.11	2.92	2.51	17

Compounds 4

Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: EIBKX2024A **PIBLKCC ID: CQ** **Batchnumber: 209799999**
Sample Amount: 35 **Total Volume:** 2 ml **Analyst:** 2306 **SDG:** **State:**
Analyses: 10398

Analysis Report (A)

Injected on : Apr 08, 2020 04:07:22
 Instrument : CP16--19853A
 Result file : 16EDBS20087005.039.RAW
 Calibration file : 16EDBS2008701.CAL
 Method file : 16EDBS.MET

%SSR(1,1,2,2-PCA) : 125% (46-136) Conc.: 0.08477

Peak name	Min	R.T.	Max	Height	Amount
EDB	3.78	3.80	3.84	372	-0.009118
1,1,2,2-PCA	5.28	5.31	5.34	25779	0.084770

Analysis Report (B)

Injected on : Apr 08, 2020 04:07:22
 Instrument : CP16--19853B
 Result file : 16EDBS20087005B.039.RAW
 Calibration file : 16EDBS2008701B.CAL
 Method file : 16EDBSB.MET

%SSR(1,1,2,2-PCA) : 118% (46-136) Conc.: 0.079656

Peak name	Min	R.T.	Max	Height	Amount
1,1,2,2-PCA	6.29	6.32	6.35	41960	0.079656
1,2,3-TCP	6.41	6.44	6.47	2543	0.031276
DBCP	9.05	9.06	9.11	1852	0.001947

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☒ EDB			<0.03	<0.01			
☐ 1,1,2,2-PCA	A	0.084770				6.22	
☒ 1,2,3-TCP			<0.27	<0.1			
☒ DBCP			<0.03	<0.01			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 4/8/2020 07:13:58

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7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 19853A

Date Analyzed: 04/08/20

GC Column (1): DB CLP1 ID: .32 (mm)

Time Analyzed: 5:48

Lab File ID: 16EDBS20087005.045.RAW

Initial Calibration: 16EDBS2008701

Lab Standard ID: EDB_4AF

Init. Calib Date(s): 03/27/20 03/27/20

Calibration: 16EDBS2008701

COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT	NOM AMOUNT	%D
ETHYLENE DIBROMIDE	3.82	3.78	3.84	2.59	2.50	4
1,1,2,2-TETRACHLOROETHANE	5.31	5.28	5.34	1.19	1.23	-4
1,2,3-Trichloropropane	5.46	5.42	5.48	2.35	2.57	-9
1,2-DIBROMO-3-CHLOROPROPANE	8.22	8.19	8.25	3.10	2.51	24

Compounds 4

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 19853B

Date Analyzed: 04/08/20

GC Column (2): DB CLP2 ID: .32 (mm)

Time Analyzed: 5:48

Lab File ID: 16EDBS20087005B.045.RAW

Initial Calibration: 16EDBS2008701B

Lab Standard ID: EDB_4AF

Init. Calib Date(s): 03/27/20

03/27/20

Calibration: 16EDBS2008701B

COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT	NOM AMOUNT	%D
ETHYLENE DIBROMIDE	4.64	4.61	4.67	2.25	2.50	-10
1,1,2,2-TETRACHLOROETHANE	6.32	6.29	6.35	1.08	1.23	-12
1,2,3-Trichloropropane	6.43	6.41	6.47	2.14	2.57	-17
1,2-DIBROMO-3-CHLOROPROPANE	9.07	9.05	9.11	2.83	2.51	13

Compounds 4

Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: EIBKX2024A **PBLCR ID:** CR **Batchnumber:** 209799999
Sample Amount: 35 **Total Volume:** 2 ml **Analyst:** 2306 **SDG:** **State:**
Analyses: 10398

Analysis Report (A)

Injected on : Apr 08, 2020 06:05:10
 Instrument : CP16--19853A
 Result file : 16EDBS20087005.046.RAW
 Calibration file : 16EDBS2008701.CAL
 Method file : 16EDBS.MET

%SSR(1,1,2,2-PCA) : 126% (46-136) Conc.: 0.085127

Peak name	Min	R.T.	Max	Height	Amount
EDB	3.78	3.81	3.84	517	-0.008281
1,1,2,2-PCA	5.28	5.31	5.34	25884	0.085127
1,2,3-TCP	5.42	5.47	5.48	471	0.010105

Analysis Report (B)

Injected on : Apr 08, 2020 06:05:10
 Instrument : CP16--19853B
 Result file : 16EDBS20087005B.046.RAW
 Calibration file : 16EDBS2008701B.CAL
 Method file : 16EDBSB.MET

%SSR(1,1,2,2-PCA) : 116% (46-136) Conc.: 0.078271

Peak name	Min	R.T.	Max	Height	Amount
1,1,2,2-PCA	6.29	6.32	6.35	41230	0.078271
1,2,3-TCP	6.41	6.43	6.47	2545	0.031289
DBCP	9.05	9.06	9.11	1759	0.001849

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☒ EDB			<0.03	<0.01			
☐ 1,1,2,2-PCA	A	0.085127				8.39	
☒ 1,2,3-TCP			<0.27	<0.1			
☒ DBCP			<0.03	<0.01			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 4/8/2020 07:14:39

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Eurofins Lancaster Laboratories
Pesticide Residue Analysis
Runlog for 16EDBS20087001
Instrument CP16--19853A

Data Directory Path is - \\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\

Operator	File	LLI#	Client ID	Analysis Date	Batch	Dilution Factor
13378	16EDBS20087001.001	CONDITIONER		3/27/20 17:32	208699999	1.00
13378	16EDBS20087001.002	EIBKX2024A	PIBLKAA	3/27/20 17:48	208699999	2.00
13378	16EDBS20087001.003	EDB_12024O	EDB_1AA	3/27/20 18:05	208699999	1.00
13378	16EDBS20087001.004	EDB_22024O	EDB_2AA	3/27/20 18:32	208699999	1.00
13378	16EDBS20087001.005	EDB_32024X	EDB_3AA	3/27/20 18:49	208699999	1.00
13378	16EDBS20087001.006	EDB_42024AB	EDB_4AA	3/27/20 19:06	208699999	1.00
13378	16EDBS20087001.007	EDB_52024O	EDB_5AA	3/27/20 19:23	208699999	1.00
13378	16EDBS20087001.008	EDB_62024O	EDB_6AA	3/27/20 19:39	208699999	1.00
13378	16EDBS20087001.009	MDEDX2024R	MDEDXAA	3/27/20 19:56	208699999	1.00
13378	16EDBS20087001.010	DBCMX1924B	DBCMXAA	3/27/20 20:13	208699999	1.00
13378	16EDBS20087001.011	ICEBX2024S	ICEBXAA	3/27/20 20:30	208699999	1.00
13378	16EDBS20087001.012	CONDITIONER		3/27/20 21:41	208699999	1.00
13378	16EDBS20087001.013	ICEBX2024T	ICEBXFU	3/27/20 21:58	208699999	1.00
13378	16EDBS20087001.014	BLANKA 3/27/20	PBLK14086	3/27/20 22:32	200860014A	2.00
13378	16EDBS20087001.015	LCSA 3/27/20	LCS14086	3/27/20 22:49	200860014A	2.00
13378	16EDBS20087001.016	LCSDA 3/27/20	LCSD14086	3/27/20 23:06	200860014A	2.00
13378	16EDBS20087001.017	BLANKA 3/27/20	PBLK15086	3/27/20 23:22	200860015A	2.00
13378	16EDBS20087001.018	LCSA 3/27/20	LCS15086	3/27/20 23:39	200860015A	2.00
13378	16EDBS20087001.019	LCSDA 3/27/20	LCSD15086	3/27/20 23:56	200860015A	2.00
13378	16EDBS20087001.020	1286860 RI	03703	3/28/20 0:13	200840026A	2.00
13378	16EDBS20087001.021	1286862 RI	03701	3/28/20 0:30	200840026A	2.00
13378	16EDBS20087001.022	CONDITIONER		3/28/20 0:46	200840026A	2.00
13378	16EDBS20087001.023	EDB_42024AB	EDB_4YU	3/28/20 1:03	208699999	1.00
13378	16EDBS20087001.024	EIBKX2024A	PIBLKYM	3/28/20 1:20	208699999	2.00
13378	16EDBS20087001.025	1286859R	03702	3/28/20 1:37	200860014A	2.00
13378	16EDBS20087001.026	1287238	62C01	3/28/20 1:53	200860014A	2.00
13378	16EDBS20087001.027	1287239	62C02	3/28/20 2:10	200860014A	2.00
13378	16EDBS20087001.028	1287239MS	62C02MS	3/28/20 2:27	200860014A	2.00
13378	16EDBS20087001.029	1287242	62C01	3/28/20 2:44	200860014A	2.00
13378	16EDBS20087001.030	1287242DUP	62C01DUP	3/28/20 3:00	200860014A	2.00
13378	16EDBS20087001.031	1287244	62C03	3/28/20 3:17	200860014A	2.00
13378	16EDBS20087001.032	1287246	62C05	3/28/20 3:34	200860014A	2.00
13378	16EDBS20087001.033	1287248	62C07	3/28/20 3:51	200860014A	2.00
13378	16EDBS20087001.034	CONDITIONER		3/28/20 4:07	200860014A	2.00
13378	16EDBS20087001.035	EDB_42024AB	EDB_4YV	3/28/20 4:24	208699999	1.00
13378	16EDBS20087001.036	EIBKX2024A	PIBLKYN	3/28/20 4:41	208699999	2.00
13378	16EDBS20087001.037	1287250	62C-9	3/28/20 4:58	200860014A	2.00
13378	16EDBS20087001.038	1288095	64C01	3/28/20 5:14	200860014A	2.00
13378	16EDBS20087001.039	1288707	420M1	3/28/20 5:31	200860014A	2.00
13378	16EDBS20087001.040	1288708	420M2	3/28/20 5:48	200860014A	2.00
13378	16EDBS20087001.041	1288709	420M3	3/28/20 6:05	200860014A	2.00
13378	16EDBS20087001.042	1288710	420M4	3/28/20 6:21	200860014A	2.00
13378	16EDBS20087001.043	1288711	420M5	3/28/20 6:38	200860014A	2.00
13378	16EDBS20087001.044	1288712	420M7	3/28/20 6:55	200860014A	2.00
13378	16EDBS20087001.045	1288713	420M9	3/28/20 7:11	200860014A	2.00
13378	16EDBS20087001.046	1288714	42010	3/28/20 7:28	200860014A	2.00
13378	16EDBS20087001.047	EDB_42024AB	EDB_4YW	3/28/20 7:45	208699999	1.00
13378	16EDBS20087001.048	EIBKX2024A	PIBLKYO	3/28/20 8:02	208699999	2.00
13378	16EDBS20087001.049	1288715	420MA	3/28/20 8:18	200860014A	2.00
13378	16EDBS20087001.050	1288716	420MB	3/28/20 8:35	200860014A	2.00
13378	16EDBS20087001.051	1288096	64C02	3/28/20 8:52	200860015A	2.00
13378	16EDBS20087001.052	1288096MS	64C02MS	3/28/20 9:08	200860015A	2.00
13378	16EDBS20087001.053	1288097	64C03	3/28/20 9:25	200860015A	2.00
13378	16EDBS20087001.054	1288097DUP	64C03DUP	3/28/20 9:42	200860015A	2.00
13378	16EDBS20087001.055	1288098	64C04	3/28/20 9:59	200860015A	2.00
13378	16EDBS20087001.056	1288099	64C05	3/28/20 10:15	200860015A	2.00

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Operator	File	LLI#	Client ID	Analysis Date	Batch	Dilution Factor
13378	16EDBS20087001.057	1288100	CUN65	3/28/20 10:32	200860015A	2.00
13378	16EDBS20087001.058	EDB_42024AB	EDB_4YX	3/28/20 10:49	208699999	1.00
13378	16EDBS20087001.059	EIBKX2024A	PIBLKYP	3/28/20 11:05	208699999	2.00

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Eurofins Lancaster Laboratories
Pesticide Residue Analysis
Runlog for 16EDBS20087005
Instrument CP16--19853A

Data Directory Path is - \\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\

Operator	File	LLI#	Client ID	Analysis Date	Batch	Dilution Factor
2306	16EDBS20087005.001	CONDITIONER	AA	4/7/20 17:03	209799999	1.00
2306	16EDBS20087005.002	CONDITIONER	AA	4/7/20 17:20	209799999	1.00
2306	16EDBS20087005.003	CONDITIONER		4/7/20 17:37	209799999	1.00
2306	16EDBS20087005.004	CONDITIONER		4/7/20 17:54	209799999	1.00
2306	16EDBS20087005.005	EDB_42024AD	EDB_4AB	4/7/20 18:10	209799999	1.00
2306	16EDBS20087005.006	EIBKX2024A	PIBLKCN	4/7/20 18:27	209799999	2.00
2306	16EDBS20087005.007	CONDITIONER	AA	4/7/20 19:09	209799999	1.00
2306	16EDBS20087005.008	1289806 DF50	04774	4/7/20 19:26	200910014A	100.00
2306	16EDBS20087005.009	1289816 DF20	04784	4/7/20 19:42	200910014A	40.00
2306	16EDBS20087005.010	1289781 DF10	04749	4/7/20 19:59	200910013A	20.00
2306	16EDBS20087005.011	1289782 DF50	04750	4/7/20 20:16	200910013A	100.00
2306	16EDBS20087005.012	1289786 DF50	04754	4/7/20 20:33	200910013A	100.00
2306	16EDBS20087005.013	CONDITIONER	AA	4/7/20 20:50	209799999	1.00
2306	16EDBS20087005.014	EDB_42024AD	EDB_4AC	4/7/20 21:06	209799999	1.00
2306	16EDBS20087005.015	EIBKX2024A	PIBLKCO	4/7/20 21:23	209799999	2.00
2306	16EDBS20087005.016	BLANKA 4/4/20	PBLK16094	4/7/20 21:40	200940016A	2.00
2306	16EDBS20087005.017	LCSA 4/4/20	LCS16094	4/7/20 21:57	200940016A	2.00
2306	16EDBS20087005.018	LCSDA 4/4/20	LCSD16094	4/7/20 22:14	200940016A	2.00
2306	16EDBS20087005.019	BLANKA 4/4/20	PBLK24094	4/7/20 22:30	200940024A	2.00
2306	16EDBS20087005.020	LCSA 4/4/20	LCS24094	4/7/20 22:47	200940024A	2.00
2306	16EDBS20087005.021	LCSDA 4/4/20	LCSD24094	4/7/20 23:04	200940024A	2.00
2306	16EDBS20087005.022	1291155	SSG05	4/7/20 23:21	200940016A	2.00
2306	16EDBS20087005.023	1291155MS	SSG05MS	4/7/20 23:38	200940016A	2.00
2306	16EDBS20087005.024	1291156	SSGTB	4/7/20 23:55	200940016A	2.00
2306	16EDBS20087005.025	1291156DUP	SSGTBDUP	4/8/20 0:11	200940016A	2.00
2306	16EDBS20087005.026	EDB_42024AD	EDB_4AD	4/8/20 0:28	209799999	1.00
2306	16EDBS20087005.027	EIBKX2024A	PIBLKCP	4/8/20 0:45	209799999	2.00
2306	16EDBS20087005.028	1291626	CJS01	4/8/20 1:02	200940016A	2.00
2306	16EDBS20087005.029	1291627	CJS02	4/8/20 1:19	200940016A	2.00
2306	16EDBS20087005.030	1291628	CJS03	4/8/20 1:36	200940016A	2.00
2306	16EDBS20087005.031	1291838	N6702	4/8/20 1:52	200940016A	2.00
2306	16EDBS20087005.032	1292523	42101	4/8/20 2:09	200940024A	2.00
2306	16EDBS20087005.033	1292524	42102	4/8/20 2:26	200940024A	2.00
2306	16EDBS20087005.034	1292525	42103	4/8/20 2:43	200940024A	2.00
2306	16EDBS20087005.035	1292526	42104	4/8/20 3:00	200940024A	2.00
2306	16EDBS20087005.036	1292527	42105	4/8/20 3:17	200940024A	2.00
2306	16EDBS20087005.037	1292528	42106	4/8/20 3:33	200940024A	2.00
2306	16EDBS20087005.038	EDB_42024AD	EDB_4AE	4/8/20 3:50	209799999	1.00
2306	16EDBS20087005.039	EIBKX2024A	PIBLKCQ	4/8/20 4:07	209799999	2.00
2306	16EDBS20087005.040	1292529MS	42106	4/8/20 4:24	200940024A	2.00
2306	16EDBS20087005.041	1292530MSD	42106	4/8/20 4:41	200940024A	2.00
2306	16EDBS20087005.042	1292532	42107	4/8/20 4:57	200940024A	2.00
2306	16EDBS20087005.043	1292533	42108	4/8/20 5:14	200940024A	2.00
2306	16EDBS20087005.044	1292534	42109	4/8/20 5:31	200940024A	2.00
2306	16EDBS20087005.045	EDB_42024AD	EDB_4AF	4/8/20 5:48	209799999	1.00
2306	16EDBS20087005.046	EIBKX2024A	PIBLKCR	4/8/20 6:05	209799999	2.00
2306	16EDBS20087005.047	BLANKA 4/6/20	PBLK11097	4/8/20 6:22	200970011A	2.00
2306	16EDBS20087005.048	LCSA 4/6/20	LCS11097	4/8/20 6:38	200970011A	2.00
2306	16EDBS20087005.049	LCSDA 4/6/20	LCSD11097	4/8/20 6:55	200970011A	2.00
2306	16EDBS20087005.050	1289769R	04737	4/8/20 7:12	200970011A	2.00
2306	16EDBS20087005.051	1289781R DF10	04749	4/8/20 7:29	200970011A	20.00
2306	16EDBS20087005.052	1289782R DF50	04750	4/8/20 7:46	200970011A	100.00
2306	16EDBS20087005.053	1289786R DF50	04754	4/8/20 8:03	200970011A	100.00
2306	16EDBS20087005.054	1289806R DF50	04774	4/8/20 8:19	200970011A	100.00
2306	16EDBS20087005.055	1289816R DF20	04784	4/8/20 8:36	200970011A	40.00
2306	16EDBS20087005.056	CONDITIONER	AA	4/8/20 8:53	209799999	1.00

Operator	File	LLI#	Client ID	Analysis Date	Batch	Dilution Factor
2306	16EDBS20087005.057	EDB_42024AD	EDB_4AG	4/8/20 9:10	209799999	1.00
2306	16EDBS20087005.058	EIBKX2024A	PIBLKCS	4/8/20 9:27	209799999	2.00
13378	16EDBS20087005.059	CONDITIONER		4/8/20 11:03	209799999	2.00
13378	16EDBS20087005.060	1291628 DF10	CJS03	4/8/20 11:20	200940016A	20.00
13378	16EDBS20087005.061	CONDITIONER		4/8/20 11:37	200940016A	20.00
13378	16EDBS20087005.062	BLANKA 4/8/20	PBLK21098	4/8/20 11:53	200980021A	2.00
13378	16EDBS20087005.063	LCSA 4/8/20	LCS21098	4/8/20 12:10	200980021A	2.00
13378	16EDBS20087005.064	LCSDA 4/8/20	LCSD21098	4/8/20 12:27	200980021A	2.00
13378	16EDBS20087005.065	1293752	49422	4/8/20 12:44	200980021A	2.00
13378	16EDBS20087005.066	1293753MS	49422	4/8/20 13:01	200980021A	2.00
13378	16EDBS20087005.067	1293754MSD	49422	4/8/20 13:18	200980021A	2.00
13378	16EDBS20087005.068	EDB_42024AD	EDB_4AH	4/8/20 13:35	209899999	1.00
13378	16EDBS20087005.069	EIBKX2024A	PIBLKCY	4/8/20 13:51	209899999	2.00
13378	16EDBS20087005.070	BLANKA 4/8/20	PBLK22098	4/8/20 14:08	200980022A	2.00
13378	16EDBS20087005.071	LCSA 4/8/20	LCS22098	4/8/20 14:25	200980022A	2.00
13378	16EDBS20087005.072	LCSDA 4/8/20	LCSD22098	4/8/20 14:42	200980022A	2.00
13378	16EDBS20087005.073	1293704	42201	4/8/20 14:59	200980022A	2.00
13378	16EDBS20087005.074	1293704MS	42201MS	4/8/20 15:16	200980022A	2.00
13378	16EDBS20087005.075	1293706	42203	4/8/20 15:33	200980022A	2.00
13378	16EDBS20087005.076	1293706DUP	42203DUP	4/8/20 15:50	200980022A	2.00
13378	16EDBS20087005.077	1293733	30422	4/8/20 16:06	200980021A	2.00
13378	16EDBS20087005.078	1293734	31422	4/8/20 16:23	200980021A	2.00
13378	16EDBS20087005.079	1293736	33422	4/8/20 16:40	200980021A	2.00
13378	16EDBS20087005.080	EDB_42024AD	EDB_4AI	4/8/20 16:57	209899999	1.00
13378	16EDBS20087005.081	EIBKX2024A	PIBLKCY	4/8/20 17:14	209899999	2.00
13378	16EDBS20087005.082	1293738	35422	4/8/20 17:31	200980021A	2.00
13378	16EDBS20087005.083	1293739	36422	4/8/20 17:48	200980021A	2.00
13378	16EDBS20087005.084	1293741	38422	4/8/20 18:05	200980021A	2.00
13378	16EDBS20087005.085	1293743	40422	4/8/20 18:22	200980021A	2.00
13378	16EDBS20087005.086	1293744	41422	4/8/20 18:39	200980021A	2.00
13378	16EDBS20087005.087	1293746	43422	4/8/20 18:56	200980021A	2.00
13378	16EDBS20087005.088	1293747	44422	4/8/20 19:13	200980021A	2.00
13378	16EDBS20087005.089	1293749	46422	4/8/20 19:30	200980021A	2.00
13378	16EDBS20087005.090	1293751	48422	4/8/20 19:46	200980021A	2.00
13378	16EDBS20087005.091	1293760	51422	4/8/20 20:03	200980021A	2.00
13378	16EDBS20087005.092	EDB_42024AD	EDB_4AJ	4/8/20 20:20	209899999	1.00
13378	16EDBS20087005.093	EIBKX2024A	PIBLKDA	4/8/20 20:37	209899999	2.00
13378	16EDBS20087005.094	1293761	52422	4/8/20 20:54	200980021A	2.00
13378	16EDBS20087005.095	1293763	54422	4/8/20 21:11	200980021A	2.00
13378	16EDBS20087005.096	1293765	56422	4/8/20 21:28	200980021A	2.00
13378	16EDBS20087005.097	1293766	42301	4/8/20 21:45	200980021A	2.00
13378	16EDBS20087005.098	1293708	42205	4/8/20 22:02	200980022A	2.00
13378	16EDBS20087005.099	1293709	42206	4/8/20 22:18	200980022A	2.00
13378	16EDBS20087005.100	1293711	42208	4/8/20 22:35	200980022A	2.00
13378	16EDBS20087005.101	1293713	42210	4/8/20 22:52	200980022A	2.00
13378	16EDBS20087005.102	1293714	42211	4/8/20 23:09	200980022A	2.00
13378	16EDBS20087005.103	1293716	42213	4/8/20 23:26	200980022A	2.00
13378	16EDBS20087005.104	EDB_42024AE	EDB_4AM	4/8/20 23:43	209899999	1.00
13378	16EDBS20087005.105	EIBKX2024A	PIBLKDB	4/9/20 0:00	209899999	2.00
13378	16EDBS20087005.106	1293718	42215	4/9/20 0:16	200980022A	2.00
13378	16EDBS20087005.107	1293719	42216	4/9/20 0:33	200980022A	2.00
13378	16EDBS20087005.108	1293721	42218	4/9/20 0:50	200980022A	2.00
13378	16EDBS20087005.109	1293723	42220	4/9/20 1:07	200980022A	2.00
13378	16EDBS20087005.110	1293724	42221	4/9/20 1:24	200980022A	2.00
13378	16EDBS20087005.111	1293726	42223	4/9/20 1:41	200980022A	2.00
13378	16EDBS20087005.112	1293728	42225	4/9/20 1:58	200980022A	2.00
13378	16EDBS20087005.113	1293729	42226	4/9/20 2:15	200980022A	2.00
13378	16EDBS20087005.114	1293731	42228	4/9/20 2:31	200980022A	2.00
13378	16EDBS20087005.115	EDB_42024AE	EDB_4AN	4/9/20 2:48	209899999	1.00
13378	16EDBS20087005.116	EIBKX2024A	PIBLKDC	4/9/20 3:05	209899999	2.00

Sample Data

EDB/DBCP

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Lancaster Laboratories
Environmental

Data Summary

Sample Name: 1292523 42101 Sample ID: AA Batchnumber: 200940024A
Sample Amount: 36.34 mL Total Volume: 2 ml Analyst: 13378 SDG: KR421 State: NM
Analyses: 10398

Analysis Report (A)

Injected on Apr 08, 2020 02:09:43
Instrument 19853A
Result file 16EDBS20087005.032.RAW
Calibration file 16EDBS2008701
Method file 16EDBS
%SSR(PCA) 108% (46 - 136) Conc: 0.073063

Single Component Data

Compound	Min	RT	Max	Height
1,1,2,2-TETRACHLORO	5.28	5.31	5.34	23159
1,2-Dibromo-3-chloroproj	8.19	8.24	8.25	2386

Analysis Report (B)

Injected on Apr 08, 2020 02:09:43
Instrument 19853B
Result file 16EDBS20087005B.032.RAW
Calibration file 16EDBS2008701B
Method file 16EDBSB
%SSR(PCA) 93% (46 - 136) Conc: 0.062871

Amount	Compound	Min	RT	Max	Height	Amount
0.073063	1,1,2,2-TETRACHLORO	6.29	6.32	6.35	34386	0.062871
0.004629	1,2,3-Trichloropropane	6.41	6.41	6.47	3111	0.036847
	1,2-Dibromo-3-chloroproj	9.05	9.10	9.11	5442	0.00551

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
☒ Ethylene dibromide			<0.0096	<0.0193	<0.0289	D1		
☐ 1,1,2,2-TETRACHLORO	A	0.073063	0.0034	0.0067	0.0067		15.00	
☒ 1,1,2,2-TETRACHLORO	A	0.073063	0.0034	0.0067	0.0067			
☒ 1,1,2,2-TETRACHLORO	B	0.062871	0.0034	0.0067	0.0067			
☐ 1,2,3-Trichloropropane			<0.0963	<0.1926	<0.26			
☐ 1,2-Dibromo-3-chloroprop			<0.0096	<0.0193	<0.0289			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Charles T. Beasley
Charles T. Beasley
Manager

APR 08 2020

Reviewed and digitally signed by Rachel Umberger on 4/8/2020 07:47:51

4/8/2020

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Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: 1292523 42101 ID: AA **Batchnumber:** 200940024A
Sample Amount: 36.34 mL **Total Volume:** 2 mL **Analyst:** 2306 **SDG:** KR421 **State:** NM
Analyses: 10398

Analysis Report (A)

Injected on : Apr 08, 2020 02:09:43
 Instrument : CP16--19853A
 Result file : 16EDBS20087005.032.RAW
 Calibration file : 16EDBS2008701.CAL
 Method file : 16EDBS.MET

%SSR(1,1,2,2-PCA) : 108% (46-136) Conc.: 0.073063

Peak name	Min	R.T.	Max	Height	Amount
1,1,2,2-PCA	5.28	5.31	5.34	23159	0.073063
DBCP	8.19	8.24	8.25	2386	0.004629

Analysis Report (B)

Injected on : Apr 08, 2020 02:09:43
 Instrument : CP16--19853B
 Result file : 16EDBS20087005B.032.RAW
 Calibration file : 16EDBS2008701B.CAL
 Method file : 16EDBSB.MET

%SSR(1,1,2,2-PCA) : 93% (46-136) Conc.: 0.062871

Peak name	Min	R.T.	Max	Height	Amount
1,1,2,2-PCA	6.29	6.32	6.35	34386	0.062871
1,2,3-TCP	6.41	6.41	6.47	3111	0.036847
DBCP	9.05	9.10	9.11	5442	0.005510

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☒ EDB			<0.0289	<0.0096			
☐ 1,1,2,2-PCA	A	0.073063				15.00	
☐ 1,2,3-TCP			<0.26	<0.0963			
☐ DBCP			<0.0289	<0.0096			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

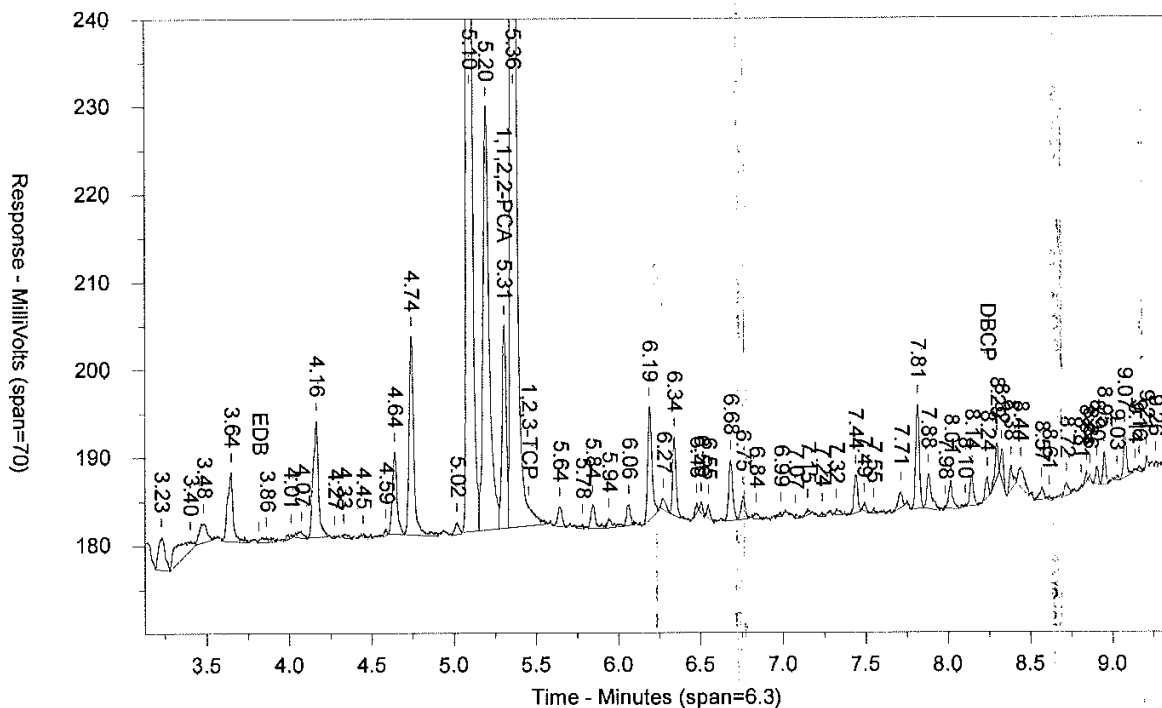
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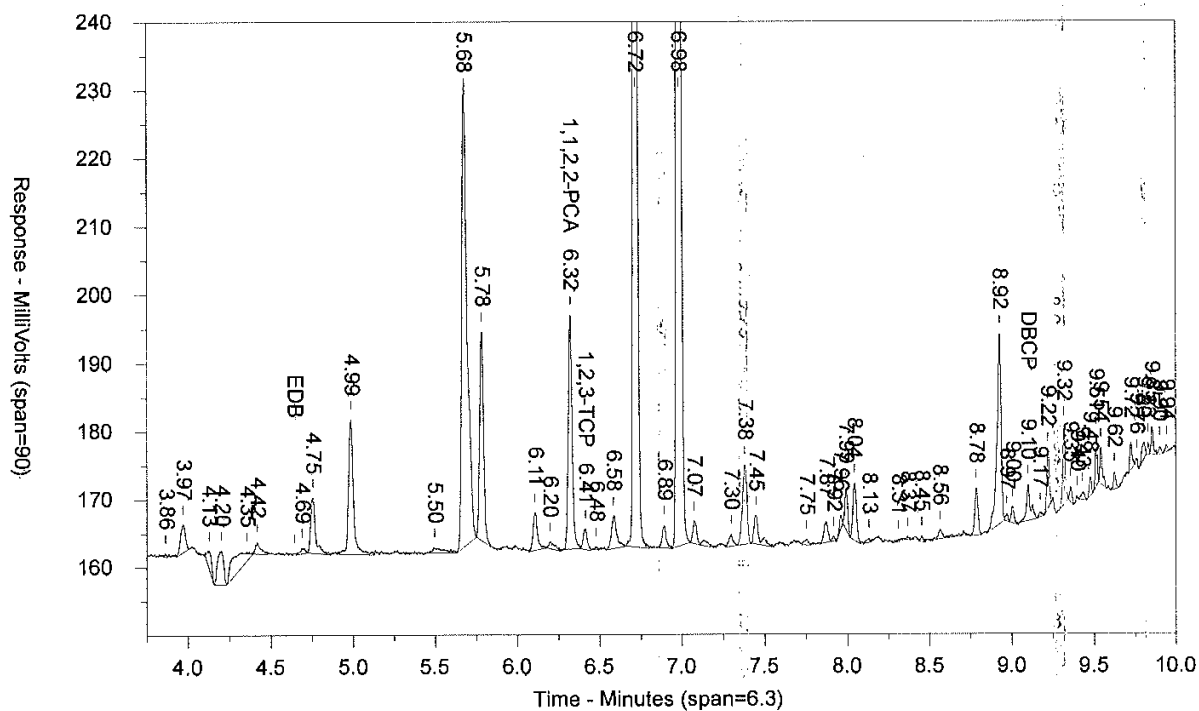
Chrom Perfect Chromatogram Report

1292523 AA42101 T 200940024A 10398 SW-846 8011

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\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20087005B.032.RAW



Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: 1292523 AA42101 T 200940024A 10398
Injected On: 4/8/2020 2:09:43 AM
Instrument ID: CP16-19853
Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min
Column A ID: DB CLP1 30m x 0.32mm x 0.25um
Column B ID: DB CLP2 30m x 0.32mm x 0.5um
Injection Volume: 1 ul

SW-846 8011

Sample Weight: 36.34
Dilution Factor: 2

Threshold: 1
Calibration Type: external
Quantitation: Height

Analyst: 2306

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
5.306	23159	.073	1,1,2,2-PCA	6.32	34386	.063	1,1,2,2-PCA
	0		1,2,3-TCP	6.411	3111	.037	1,2,3-TCP
8.237	2386	.005	DBCP	9.096	5442	.006	DBCP

Files:

Area File: 16edbs20087005.032.RAW
Area File: 16edbs20087005B.032.RAW
Method A: 16EDBS.MET
Method B: 16EDBSB.MET
Calibration File A: 16EDBS2008701.CAL
Calibration File B: 16EDBS2008701B.CAL
Format A: EDB16.FMTA
Format B: EDB16.FMTB
Area File Created On: 4/8/2020 2:19:46 AM
File Reported On: 4/8/2020 at 7:06:36 AM



Lancaster Laboratories
Environmental

Data Summary

Sample Name: 1292524 42102 Sample ID: AA Batchnumber: 200940024A
Sample Amount: 35.76 mL Total Volume: 2 ml Analyst: 13378 SDG: KR421 State: NM
Analyses: 10398

Analysis Report (A)

Injected on Apr 08, 2020 02:26:34
Instrument 19853A
Result file 16EDBS20087005.033.RAW
Calibration file 16EDBS2008701
Method file 16EDBS
%SSR(PCA) 81% (46 - 136) Conc: 0.055578

Single Component Data

Compound	Min	RT	Max	Height
1,1,2,2-TETRACHLORO	5.28	5.31	5.34	17548
1,2-Dibromo-3-chloroproj	8.19	8.23	8.25	2254

Analysis Report (B)

Injected on Apr 08, 2020 02:26:34
Instrument 19853B
Result file 16EDBS20087005B.033.RAW
Calibration file 16EDBS2008701B
Method file 16EDBSB
%SSR(PCA) 95% (46 - 136) Conc: 0.065389

Amount	Compound	Min	RT	Max	Height	Amount
0.055578	1,1,2,2-TETRACHLORO	6.29	6.32	6.35	35192	0.065389
0.004444	1,2,3-Trichloropropane	6.41	6.41	6.47	2756	0.033167
	1,2-Dibromo-3-chloroproj	9.05	9.09	9.11	3565	0.003668

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
☒ Ethylene dibromide			<0.0098	<0.0196	<0.0294	D1		
☐ 1,1,2,2-TETRACHLORO	A	0.055578	0.0034	0.0069	0.0069		16.22	
☒ 1,1,2,2-TETRACHLORO	A	0.055578	0.0034	0.0069	0.0069			
☒ 1,1,2,2-TETRACHLORO	B	0.065389	0.0034	0.0069	0.0069			
☐ 1,2,3-Trichloropropane			<0.0979	<0.1957	<0.2643			
☐ 1,2-Dibromo-3-chloroprope			<0.0098	<0.0196	<0.0294			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Charles T. Beasley
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Manager

APR 08 2020

Reviewed and digitally signed by Rachel Umberger on 4/8/2020 07:47:55

4/8/2020

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Eurofins Lancaster Laboratories Single Component Data Summary

Sample Name: 1292524 42102 ID: AA **Batchnumber:** 200940024A
Sample Amount: 35.76 mL **Total Volume:** 2 mL **Analyst:** 2306 **SDG:** KR421 **State:** NM
Analyses: 10398

Analysis Report (A)

Injected on : Apr 08, 2020 02:26:34
 Instrument : CP16--19853A
 Result file : 16EDBS20087005.033.RAW
 Calibration file : 16EDBS2008701.CAL
 Method file : 16EDBS.MET

%SSR(1,1,2,2-PCA) : 81% (46-136) Conc.: 0.055578

Peak name	Min	R.T.	Max	Height	Amount
1,1,2,2-PCA	5.28	5.31	5.34	17548	0.055578
DBCP	8.19	8.23	8.25	2254	0.004444

Analysis Report (B)

Injected on : Apr 08, 2020 02:26:34
 Instrument : CP16--19853B
 Result file : 16EDBS20087005B.033.RAW
 Calibration file : 16EDBS2008701B.CAL
 Method file : 16EDBSB.MET

%SSR(1,1,2,2-PCA) : 95% (46-136) Conc.: 0.065389

Peak name	Min	R.T.	Max	Height	Amount
1,1,2,2-PCA	6.29	6.32	6.35	35192	0.065389
1,2,3-TCP	6.41	6.41	6.47	2756	0.033167
DBCP	9.05	9.09	9.11	3565	0.003668

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☒ EDB			<0.0294	<0.0098			
☐ 1,1,2,2-PCA	A	0.055578				16.22	
☐ 1,2,3-TCP			<0.2643	<0.0979			
☐ DBCP			<0.0294	<0.0098			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

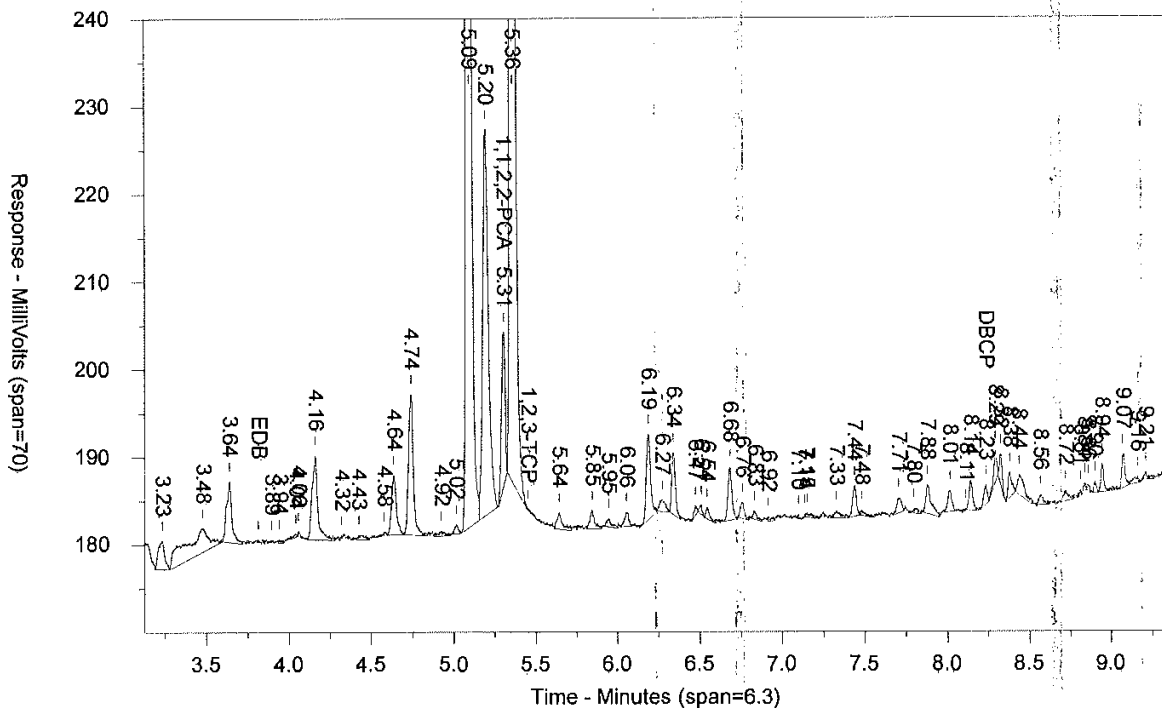
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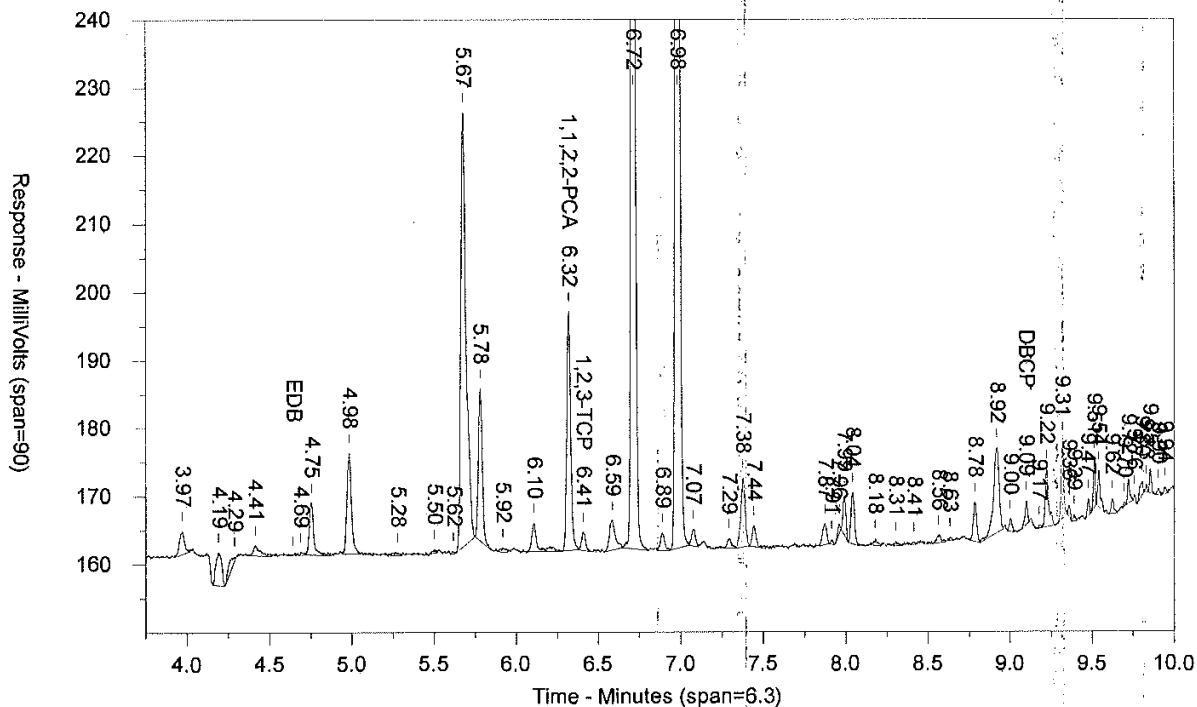
Chrom Perfect Chromatogram Report

1292524 AA42102 T 200940024A 10398 SW-846 8011

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: 1292524 AA42102 T 200940024A 10398

SW-846 8011

Injected On: 4/8/2020 2:26:34 AM

Sample Weight: 35.76

Instrument ID: CP16-19853

Dilution Factor: 2

Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min

Column A ID: DB CLP1 30m x 0.32mm x 0.25um

Column B ID: DB CLP2 30m x 0.32mm x 0.5um

Injection Volume: 1 ul

Threshold: 1

Calibration Type: external

Quantitation: Height

Analyst: 2306

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
5.306	17548	.056	1,1,2,2-PCA	6.319	35192	.065	1,1,2,2-PCA
	0		1,2,3-TCP	6.407	2756	.033	1,2,3-TCP
8.235	2254	.004	DBCP	9.095	3565	.004	DBCP

Files:

Area File: 16edbs20087005.033.RAW

Area File: 16edbs20087005B.033.RAW

Method A: 16EDBS.MET

Method B: 16EDBSB.MET

Calibration File A: 16EDBS2008701.CAL

Calibration File B: 16EDBS2008701B.CAL

Format A: EDB16.FMTA

Format B: EDB16.FMTB

Area File Created On: 4/8/2020 2:36:35 AM

File Reported On: 4/8/2020 at 7:06:52 AM



Lancaster Laboratories
Environmental

Data Summary

Sample Name: **1292525** 42103 Sample ID: AA Batchnumber: 200940024A
Sample Amount: 37.02 mL Total Volume: 2 ml Analyst: 13378 SDG: KR421 State: NM
Analyses: 10398

Analysis Report (A)

Injected on Apr 08, 2020 02:43:19
Instrument 19853A
Result file 16EDBS20087005.034.RAW
Calibration file 16EDBS2008701
Method file 16EDBS
%SSR(PCA) 125% (46 - 136) Conc: 0.083303

Single Component Data

Compound	Min	RT	Max	Height
Ethylene dibromide	3.78	3.81	3.84	2201
1,1,2,2-TETRACHLORO	5.28	5.31	5.34	26762
1,2-Dibromo-3-chloropro	8.19	8.23	8.25	2179

Analysis Report (B)

Injected on Apr 08, 2020 02:43:19
Instrument 19853B
Result file 16EDBS20087005B.034.RAW
Calibration file 16EDBS2008701B
Method file 16EDBSB
%SSR(PCA) 104% (46 - 136) Conc: 0.069113

Amount	Compound	Min	RT	Max	Height	Amount
0.001395	Ethylene dibromide	4.61	4.64	4.67	4594	0.004517
0.083303	1,1,2,2-TETRACHLORO	6.29	6.32	6.35	38507	0.069113
0.004151	1,2,3-Trichloropropane	6.41	6.41	6.47	2828	0.032873
	1,2-Dibromo-3-chloropro	9.05	9.10	9.11	3432	0.003411

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
☒ Ethylene dibromide			<0.0095	<0.0189	<0.0284	D1		
☐ 1,1,2,2-TETRACHLORO	A	0.083303	0.0033	0.0066	0.0066		18.62	
☒ 1,1,2,2-TETRACHLORO	A	0.083303	0.0033	0.0066	0.0066			
☒ 1,1,2,2-TETRACHLORO	B	0.069113	0.0033	0.0066	0.0066			
☐ 1,2,3-Trichloropropane			<0.0945	<0.1891	<0.2553			
☐ 1,2-Dibromo-3-chloropro			<0.0095	<0.0189	<0.0284			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

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Manager

APR 08 2020

Reviewed and digitally signed by Rachel Umberger on 4/8/2020 07:47:59

4/8/2020

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Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: 1292525 42103 ID: AA **Batchnumber:** 200940024A
Sample Amount: 37.02 mL **Total Volume:** 2 mL **Analyst:** 2306 **SDG:** KR421 **State:** NM
Analyses: 10398

Analysis Report (A)

Injected on : Apr 08, 2020 02:43:19
 Instrument : CP16--19853A
 Result file : 16EDBS20087005.034.RAW
 Calibration file : 16EDBS2008701.CAL
 Method file : 16EDBS.MET

%SSR(1,1,2,2-PCA) : 125% (46-136) Conc.: 0.083303

Peak name	Min	R.T.	Max	Height	Amount
EDB	3.78	3.81	3.84	2201	0.001395
1,1,2,2-PCA	5.28	5.31	5.34	26762	0.083303
DBCP	8.19	8.23	8.25	2179	0.004151

Analysis Report (B)

Injected on : Apr 08, 2020 02:43:19
 Instrument : CP16--19853B
 Result file : 16EDBS20087005B.034.RAW
 Calibration file : 16EDBS2008701B.CAL
 Method file : 16EDBSB.MET

%SSR(1,1,2,2-PCA) : 104% (46-136) Conc.: 0.069113

Peak name	Min	R.T.	Max	Height	Amount
EDB	4.01	4.64	4.67	4594	0.004517
1,1,2,2-PCA	6.29	6.32	6.35	38507	0.069113
1,2,3-TCP	6.41	6.41	6.47	2828	0.032873
DBCP	9.05	9.10	9.11	3432	0.003411

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☒ EDB			<0.0284	<0.0095			
☐ 1,1,2,2-PCA	A	0.083303				18.62	
☐ 1,2,3-TCP			<0.2553	<0.0945			
☐ DBCP			<0.0284	<0.0095			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

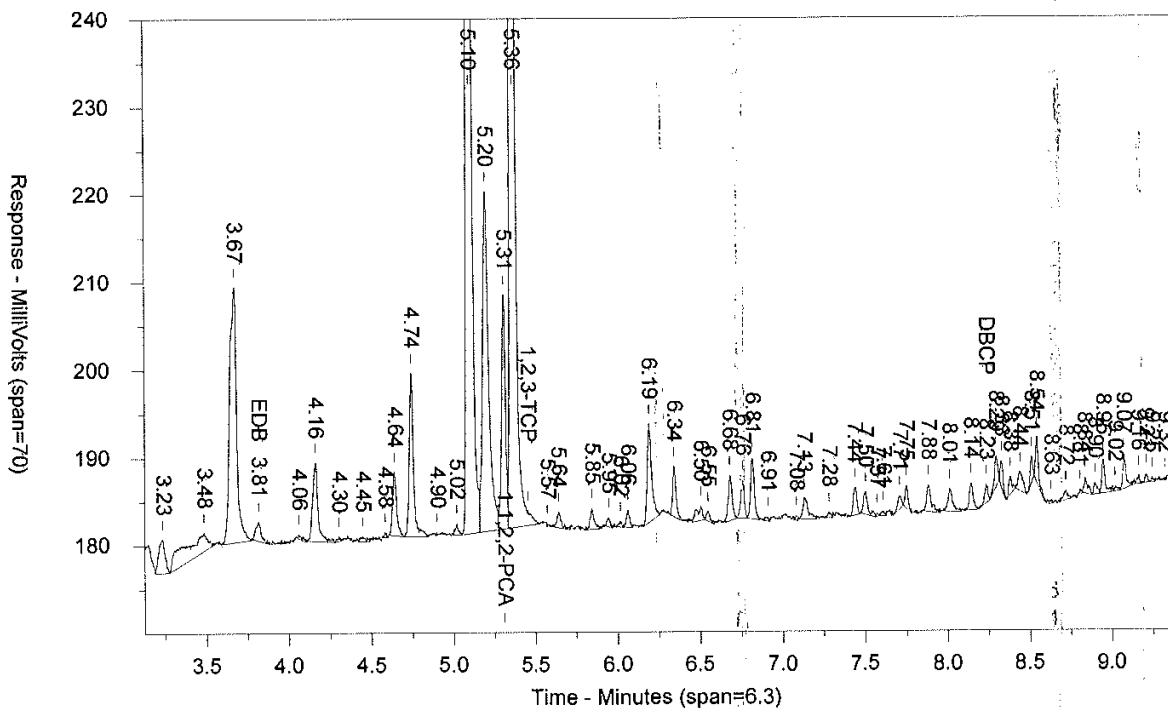
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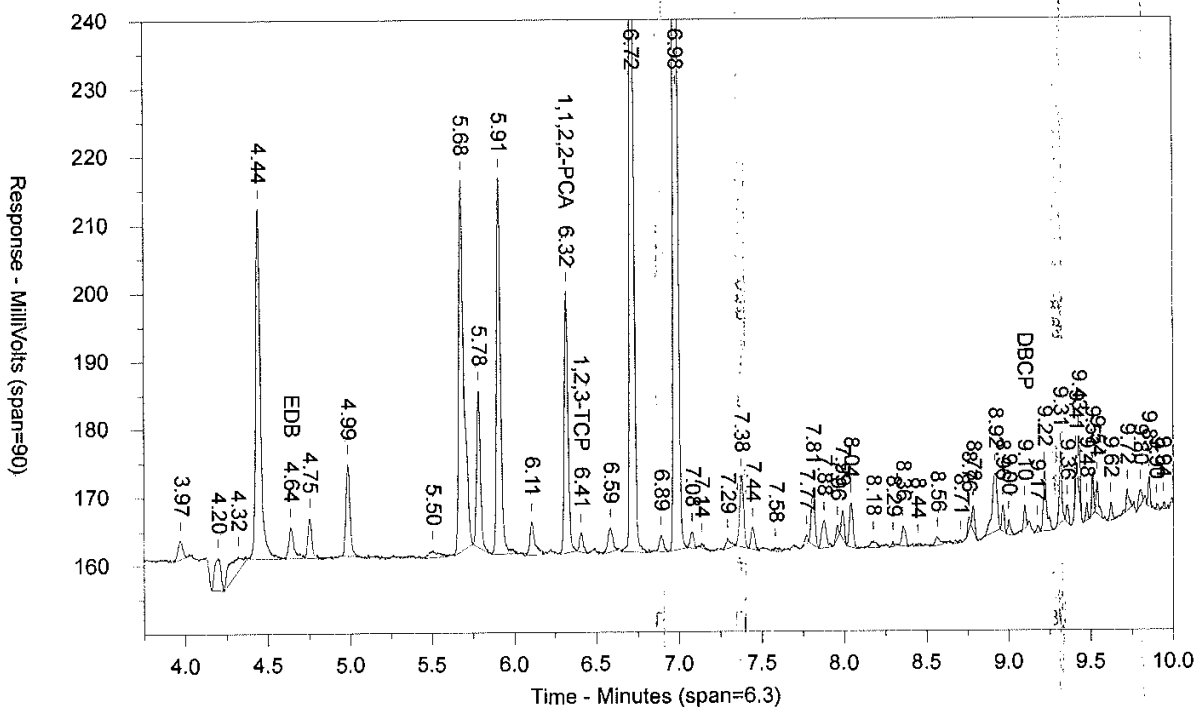
Chrom Perfect Chromatogram Report

1292525 AA42103 T 200940024A 10398 SW-846 8011

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: 1292525 AA42103 T 200940024A 10398
Injected On: 4/8/2020 2:43:19 AM
Instrument ID: CP16-19853
Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min
Column A ID: DB CLP1 30m x 0.32mm x 0.25um
Column B ID: DB CLP2 30m x 0.32mm x 0.5um
Injection Volume: 1 ul

SW-846 8011
Sample Weight: 37.02
Dilution Factor: 2

Threshold: 1
Calibration Type: external
Quantitation: Height

Analyst: 2306

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.814	2201	.001	EDB	4.638	4594	.005	EDB
5.307	26762	.083	1,1,2,2-PCA	6.32	38507	.069	1,1,2,2-PCA
	0		1,2,3-TCP	6.408	2828	.033	1,2,3-TCP
8.233	2179	.004	DBCP	9.096	3432	.003	DBCP

Files:

Area File: 16edbs20087005.034.RAW
Area File: 16edbs20087005B.034.RAW
Method A: 16EDBS.MET
Method B: 16EDBSB.MET
Calibration File A: 16EDBS2008701.CAL
Calibration File B: 16EDBS2008701B.CAL
Format A: EDB16.FMTA
Format B: EDB16.FMTB
Area File Created On: 4/8/2020 2:53:22 AM
File Reported On: 4/8/2020 at 7:07:08 AM



Lancaster Laboratories
Environmental

Data Summary

Sample Name: **1292526** 42104 Sample ID: AA Batchnumber: **200940024A**
Sample Amount: 36.34 mL Total Volume: 2 ml Analyst: 13378 SDG: KR421 State: NM
Analyses: 10398

Analysis Report (A)

Injected on Apr 08, 2020 03:00:06
Instrument 19853A
Result file 16EDBS20087005.035.RAW
Calibration file 16EDBS2008701
Method file 16EDBS
%SSR(PCA) 112% (46 - 136) Conc: 0.075787

Single Component Data

Compound	Min	RT	Max	Height
Ethylene dibromide	3.78	3.81	3.84	1646
1,1,2,2-TETRACHLORO	5.28	5.31	5.34	23990
1,2-Dibromo-3-chloropropan	8.19	8.23	8.25	2168

Analysis Report (B)

Injected on Apr 08, 2020 03:00:06
Instrument 19853B
Result file 16EDBS20087005B.035.RAW
Calibration file 16EDBS2008701B
Method file 16EDBSB
%SSR(PCA) 99% (46 - 136) Conc: 0.067436

Amount	Compound	Min	RT	Max	Height	Amount
0	Ethylene dibromide	4.61	4.64	4.67	6146	0.009022
0.075787	1,1,2,2-TETRACHLORO	6.29	6.32	6.35	36883	0.067436
0.004206	1,2,3-Trichloropropane	6.41	6.41	6.47	3022	0.035796
	1,2-Dibromo-3-chloropropan	9.05	9.10	9.11	2982	0.003019

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
☒ Ethylene dibromide			<0.0096	<0.0193	<0.0289	D1		
☐ 1,1,2,2-TETRACHLORO	A	0.075787	0.0034	0.0067	0.0067		11.66	
☒ 1,1,2,2-TETRACHLORO	A	0.075787	0.0034	0.0067	0.0067			
☒ 1,1,2,2-TETRACHLORO	B	0.067436	0.0034	0.0067	0.0067			
☐ 1,2,3-Trichloropropane			<0.0963	<0.1926	<0.26			
☐ 1,2-Dibromo-3-chloropropan			<0.0096	<0.0193	<0.0289			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Charles T. Beasley
Charles T. Beasley
Manager

APR 08 2020

Reviewed and digitally signed by Rachel Umberger on 4/8/2020 07:48:03

4/8/2020

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Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: 1292526 42104 ID: AA **Batchnumber:** 200940024A
Sample Amount: 36.34 mL **Total Volume:** 2 ml **Analyst:** 2306 **SDG:** KR421 **State:** NM
Analyses: 10398

Analysis Report (A)

Injected on : Apr 08, 2020 03:00:06
 Instrument : CP16--19853A
 Result file : 16EDBS20087005.035.RAW
 Calibration file : 16EDBS2008701.CAL
 Method file : 16EDBS.MET

%SSR(1,1,2,2-PCA) : 112% (46-136) Conc.: 0.075787

Peak name	Min	R.T.	Max	Height	Amount
EDB	3.78	3.81	3.84	1646	-0.001676
1,1,2,2-PCA	5.28	5.31	5.34	23990	0.075787
DBCP	8.19	8.23	8.25	2168	0.004206

Analysis Report (B)

Injected on : Apr 08, 2020 03:00:06
 Instrument : CP16--19853B
 Result file : 16EDBS20087005B.035.RAW
 Calibration file : 16EDBS2008701B.CAL
 Method file : 16EDBSB.MET

%SSR(1,1,2,2-PCA) : 99% (46-136) Conc.: 0.067436

Peak name	Min	R.T.	Max	Height	Amount
EDB	4.61	4.64	4.67	6146	0.009022
1,1,2,2-PCA	6.29	6.32	6.35	36883	0.067436
1,2,3-TCP	6.41	6.41	6.47	3022	0.035796
DBCP	9.05	9.10	9.11	2982	0.003019

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☒ EDB			<0.0289	<0.0096			
☐ 1,1,2,2-PCA	A	0.075787				11.66	
☐ 1,2,3-TCP			<0.26	<0.0963			
☐ DBCP			<0.0289	<0.0096			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

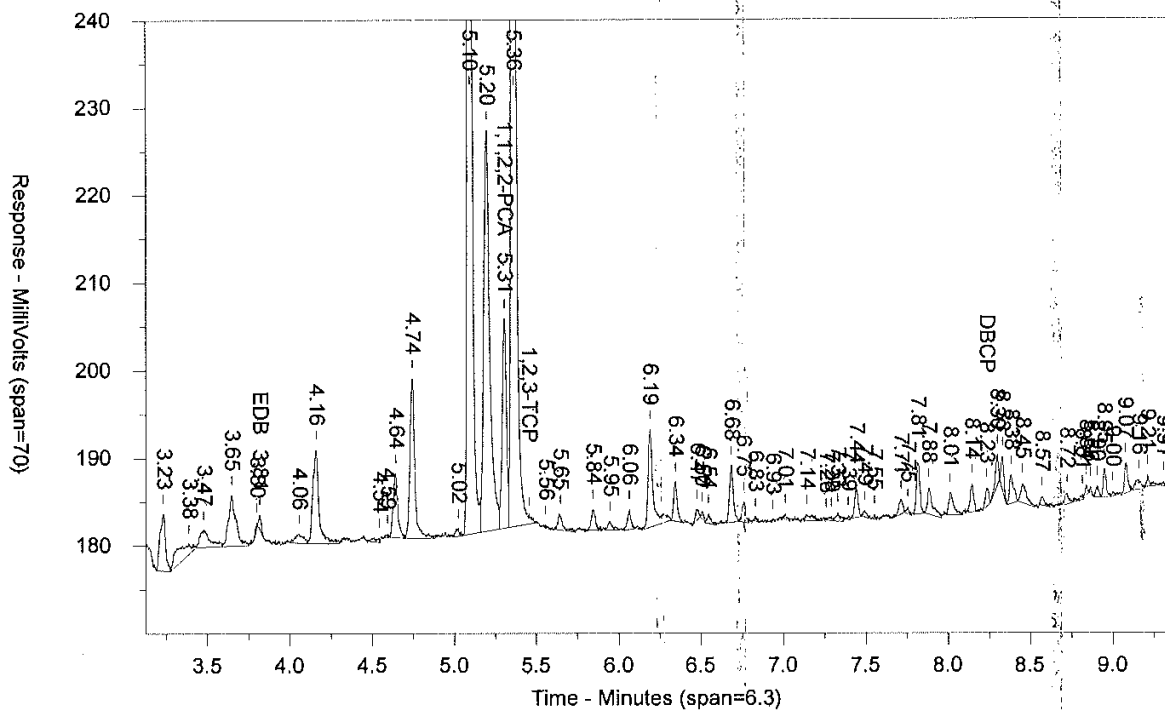
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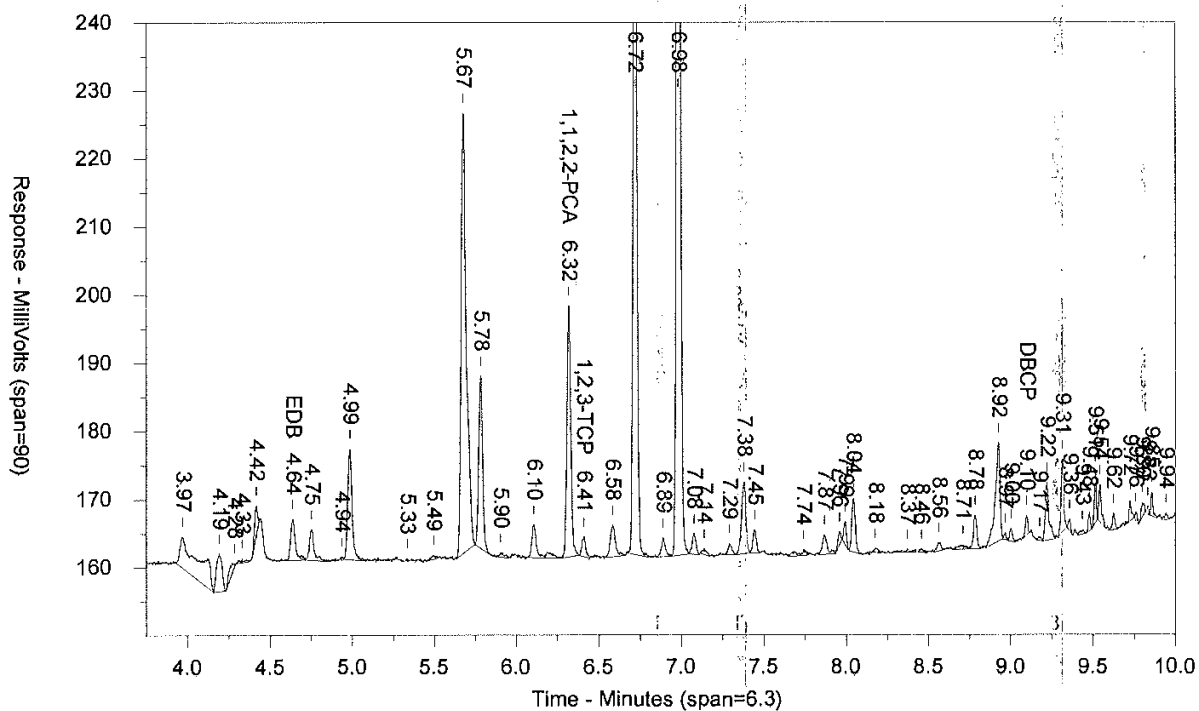
Chrom Perfect Chromatogram Report

1292526 AA42104 T 200940024A 10398 SW-846 8011

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Printed on 4/8/2020 7:07:28 AM

Page 1 of 2

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: 1292526 AA42104 T 200940024A 10398
 Injected On: 4/8/2020 3:00:06 AM
 Instrument ID: CP16-19853
 Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min
 Column A ID: DB CLP1 30m x 0.32mm x 0.25um
 Column B ID: DB CLP2 30m x 0.32mm x 0.5um
 Injection Volume: 1 µl

SW-846 8011
 Sample Weight: 36.34
 Dilution Factor: 2

Threshold: 1
 Calibration Type: external
 Quantitation: Height

Analyst: 2306

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.814	1646	.002	EDB	4.638	6146	.009	EDB
5.305	23990	.076	1,1,2,2-PCA	6.319	36883	.067	1,1,2,2-PCA
	0		1,2,3-TCP	6.411	3022	.036	1,2,3-TCP
8.231	2168	.004	DBCP	9.096	2982	.003	DBCP

Files:

Area File: 16edbs20087005.035.RAW
 Area File: 16edbs20087005B.035.RAW
 Method A: 16EDBS.MET
 Method B: 16EDBSB.MET
 Calibration File A: 16EDBS2008701.CAL
 Calibration File B: 16EDBS2008701B.CAL
 Format A: EDB16.FMTA
 Format B: EDB16.FMTB
 Area File Created On: 4/8/2020 3:10:09 AM
 File Reported On: 4/8/2020 at 7:07:26 AM



Lancaster Laboratories
Environmental

Data Summary

Sample Name: 1292527 42105 Sample ID: AA Batchnumber: 200940024A
Sample Amount: 37.12 mL Total Volume: 2 ml Analyst: 13378 SDG: KR421 State: NM
Analyses: 10398

Analysis Report (A)

Injected on Apr 08, 2020 03:17:01
Instrument 19853A
Result file 16EDBS20087005.036.RAW
Calibration file 16EDBS2008701
Method file 16EDBS

%SSR(PCA) 111% (46 - 136) Conc: 0.073534

Single Component Data

Compound	Min	RT	Max	Height
Ethylene dibromide	3.78	3.84	3.84	511
1,1,2,2-TETRACHLORO	5.28	5.31	5.34	23784

Analysis Report (B)

Injected on Apr 08, 2020 03:17:01
Instrument 19853B
Result file 16EDBS20087005B.036.RAW
Calibration file 16EDBS2008701B
Method file 16EDBSB

%SSR(PCA) 99% (46 - 136) Conc: 0.065949

Amount	Compound	Min	RT	Max	Height	Amount
0	Ethylene dibromide	4.61	4.67	4.67	377	0
0.073534	1,1,2,2-TETRACHLORO	6.29	6.32	6.35	36844	0.065949

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
☒ Ethylene dibromide			<0.0094	<0.0189	<0.0283	D1		
☐ 1,1,2,2-TETRACHLORO	A	0.073534	0.0033	0.0066	0.0066		10.88	
☒ 1,1,2,2-TETRACHLORO	A	0.073534	0.0033	0.0066	0.0066			
☒ 1,1,2,2-TETRACHLORO	B	0.065949	0.0033	0.0066	0.0066			
☐ 1,2,3-Trichloropropane			<0.0943	<0.1886	<0.2546			
☐ 1,2-Dibromo-3-chloropropane			<0.0094	<0.0189	<0.0283			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Charles T. Beasley
Charles T. Beasley
Manager

APR 08 2020

Reviewed and digitally signed by Rachel Umberger on 4/8/2020 07:48:07

4/8/2020

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Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: 1292527 42105 ID: AA Batchnumber: 200940024A
 Sample Amount: 37.12 mL Total Volume: 2 ml Analyst: 2306 SDG: KR421 State: NM
 Analyses: 10398

Analysis Report (A)

Injected on : Apr 08, 2020 03:17:01
 Instrument : CP16--19853A
 Result file : 16EDBS20087005.036.RAW
 Calibration file : 16EDBS2008701.CAL
 Method file : 16EDBS.MET

%SSR(1,1,2,2-PCA) : 111% (46-136) Conc.: 0.073534

Peak name	Min	R.T.	Max	Height	Amount
EDB	3.78	3.84	3.84	511	-0.007841
1,1,2,2-PCA	5.28	5.31	5.34	23784	0.073534

Analysis Report (B)

Injected on : Apr 08, 2020 03:17:01
 Instrument : CP16--19853B
 Result file : 16EDBS20087005B.036.RAW
 Calibration file : 16EDBS2008701B.CAL
 Method file : 16EDBSB.MET

%SSR(1,1,2,2-PCA) : 99% (46-136) Conc.: 0.065949

Peak name	Min	R.T.	Max	Height	Amount
EDB	4.61	4.67	4.67	377	-0.007255
1,1,2,2-PCA	6.29	6.32	6.35	36844	0.065949

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☒ EDB			<0.0283	<0.0094			
☐ 1,1,2,2-PCA	A	0.073534				10.88	
☐ 1,2,3-TCP			<0.2546	<0.0943			
☐ DBCP			<0.0283	<0.0094			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

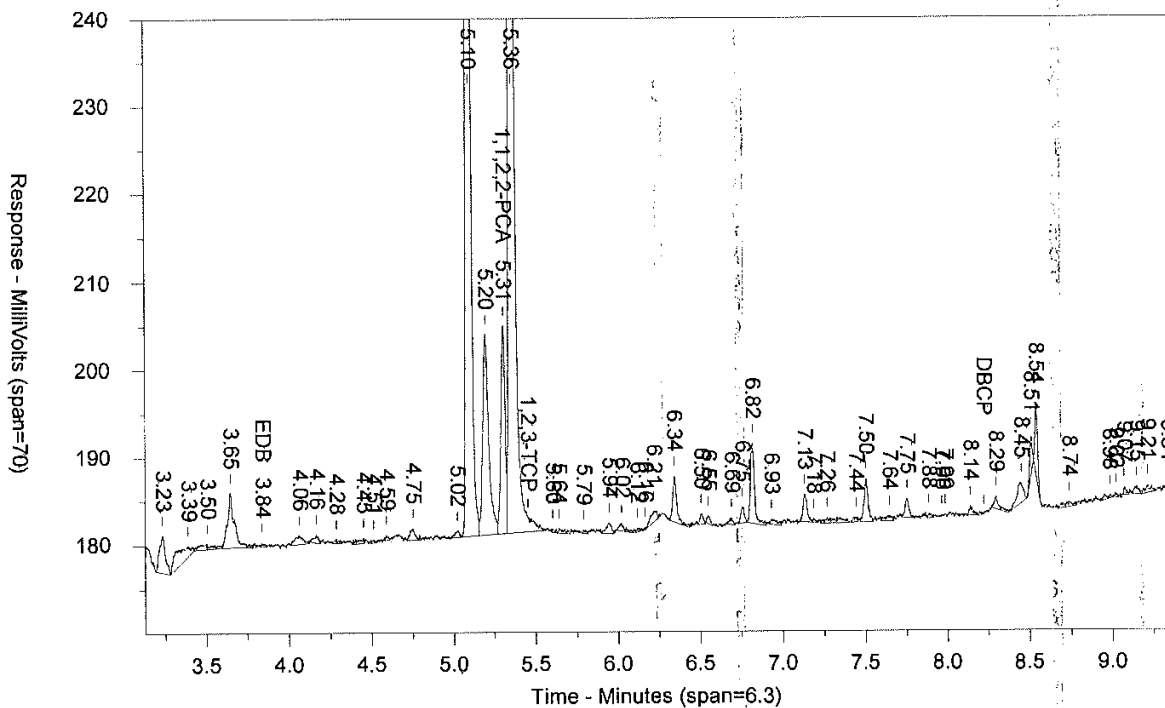
Printed on: 4/8/2020 07:13:40

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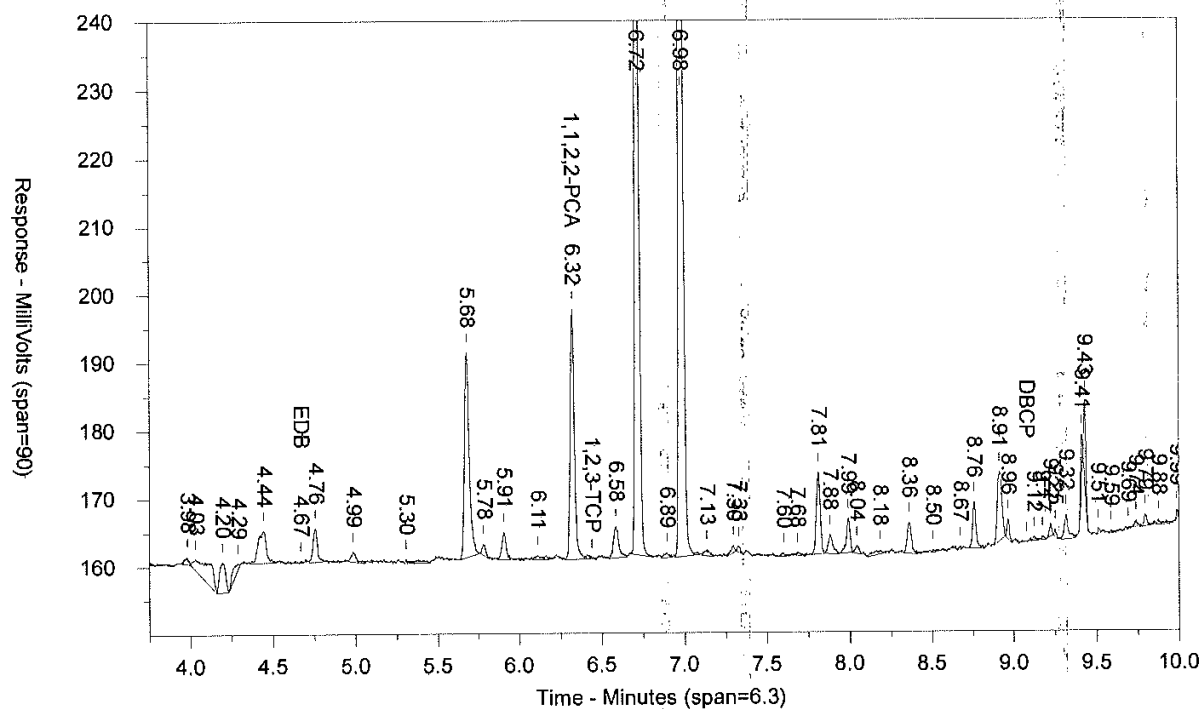
Chrom Perfect Chromatogram Report

1292527 AA42105 T 200940024A 10398 SW-846 8011

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\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20087005B.036.RAW



Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: 1292527 AA42105 T 200940024A 10398
Injected On: 4/8/2020 3:17:01 AM
Instrument ID: CP16-19853
Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min
Column A ID: DB CLP1 30m x 0.32mm x 0.25um
Column B ID: DB CLP2 30m x 0.32mm x 0.5um
Injection Volume: 1 ul

SW-846 8011

Sample Weight: 37.12
Dilution Factor: 2

Threshold: 1
Calibration Type: external
Quantitation: Height

Analyst: 2306

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.838	511	-.008	EDB	4.667	377	-.007	EDB
5.308	23784	.074	1,1,2,2-PCA	6.321	36844	.066	1,1,2,2-PCA

Files:

Area File: 16edbs20087005.036.RAW
Area File: 16edbs20087005B.036.RAW
Method A: 16EDBS.MET
Method B: 16EDBSB.MET
Calibration File A: 16EDBS2008701.CAL
Calibration File B: 16EDBS2008701B.CAL
Format A: EDB16.FMTA
Format B: EDB16.FMTB
Area File Created On: 4/8/2020 3:27:02 AM
File Reported On: 4/8/2020 at 7:07:42 AM



Lancaster Laboratories
Environmental

Data Summary

Sample Name: 1292528

42106

Sample ID: AA Batchnumber: 200940024A

Sample Amount: 36.9

mL

Total Volume:

2 ml Analyst: 13378

SDG: KR421

State: NM

Analyses: 10398

Analysis Report (A)

Injected on Apr 08, 2020 03:33:45
Instrument 19853A
Result file 16EDBS20087005.037.RAW
Calibration file 16EDBS2008701
Method file 16EDBS

%SSR(PCA) 117% (46 - 136) Conc: 0.078316

Analysis Report (B)

Injected on Apr 08, 2020 03:33:45
Instrument 19853B
Result file 16EDBS20087005B.037.RAW
Calibration file 16EDBS2008701B
Method file 16EDBSB

%SSR(PCA) 97% (46 - 136) Conc: 0.064902

Single Component Data

Compound	Min	RT	Max	Height	Amount	Compound	Min	RT	Max	Height	Amount
Ethylene dibromide	3.78	3.79	3.84	450	0	1,1,2,2-TETRACHLORO	6.29	6.32	6.35	36044	0.064902
1,1,2,2-TETRACHLORO	5.28	5.31	5.34	25131	0.078316	1,2,3-Trichloropropane	6.41	6.41	6.47	3368	0.039287
1,2-Dibromo-3-chloropropan	8.19	8.23	8.25	3612	0.006901	1,2-Dibromo-3-chloropropan	9.05	9.10	9.11	5853	0.005835

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
☒ Ethylene dibromide			<0.0095	<0.019	<0.0285	D1		
☒ 1,1,2,2-TETRACHLORO	A	0.078316	0.0033	0.0066	0.0066		18.73	
☒ 1,1,2,2-TETRACHLORO	A	0.078316	0.0033	0.0066	0.0066			
☒ 1,1,2,2-TETRACHLORO	B	0.064902	0.0033	0.0066	0.0066			
☐ 1,2,3-Trichloropropane			<0.0949	<0.1897	<0.2561			
☐ 1,2-Dibromo-3-chloropropane			<0.0095	<0.019	<0.0285			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Charles T. Beasley
Charles T. Beasley
Manager

APR 08 2020

Reviewed and digitally signed by Rachel Umberger on 4/8/2020 07:48:15

4/8/2020

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Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: 1292528 42106 ID: AA **Batchnumber:** 200940024A
Sample Amount: 36.9 mL **Total Volume:** 2 ml **Analyst:** 2306 **SDG:** KR421 **State:** NM
Analyses: 10398

Analysis Report (A)

Injected on : Apr 08, 2020 03:33:45
 Instrument : CP16--19853A
 Result file : 16EDBS20087005.037.RAW
 Calibration file : 16EDBS2008701.CAL
 Method file : 16EDBS.MET

%SSR(1,1,2,2-PCA) : 117% (46-136) Conc.: 0.078316

Peak name	Min	R.T.	Max	Height	Amount
EDB	3.78	3.79	3.84	450	-0.008219
1,1,2,2-PCA	5.28	5.31	5.34	25131	0.078316
DBCP	8.19	8.23	8.25	3612	0.006901

Analysis Report (B)

Injected on : Apr 08, 2020 03:33:45
 Instrument : CP16--19853B
 Result file : 16EDBS20087005B.037.RAW
 Calibration file : 16EDBS2008701B.CAL
 Method file : 16EDBSB.MET

%SSR(1,1,2,2-PCA) : 97% (46-136) Conc.: 0.064902

Peak name	Min	R.T.	Max	Height	Amount
1,1,2,2-PCA	6.29	6.32	6.35	36044	0.064902
1,2,3-TCP	6.41	6.41	6.47	3368	0.039287
DBCP	9.05	9.10	9.11	5853	0.005835

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☒ EDB			<0.0285	<0.0095			
☐ 1,1,2,2-PCA	A	0.078316				18.73	
☐ 1,2,3-TCP			<0.2561	<0.0949			
☐ DBCP			<0.0285	<0.0095			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

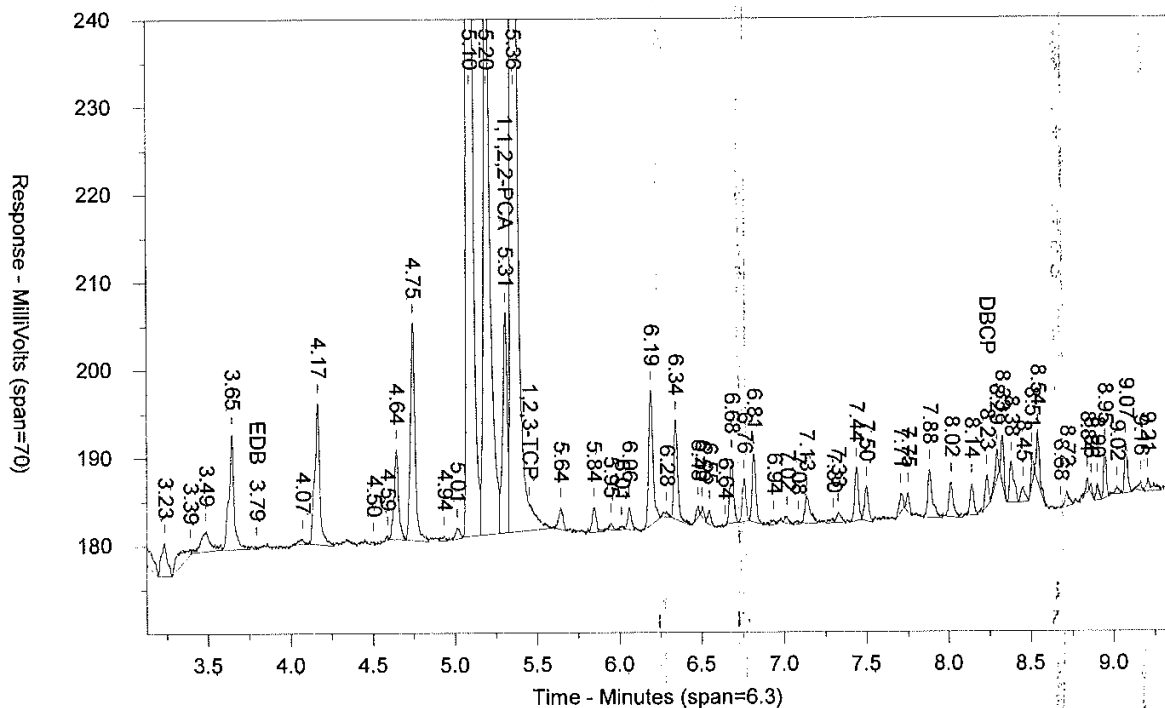
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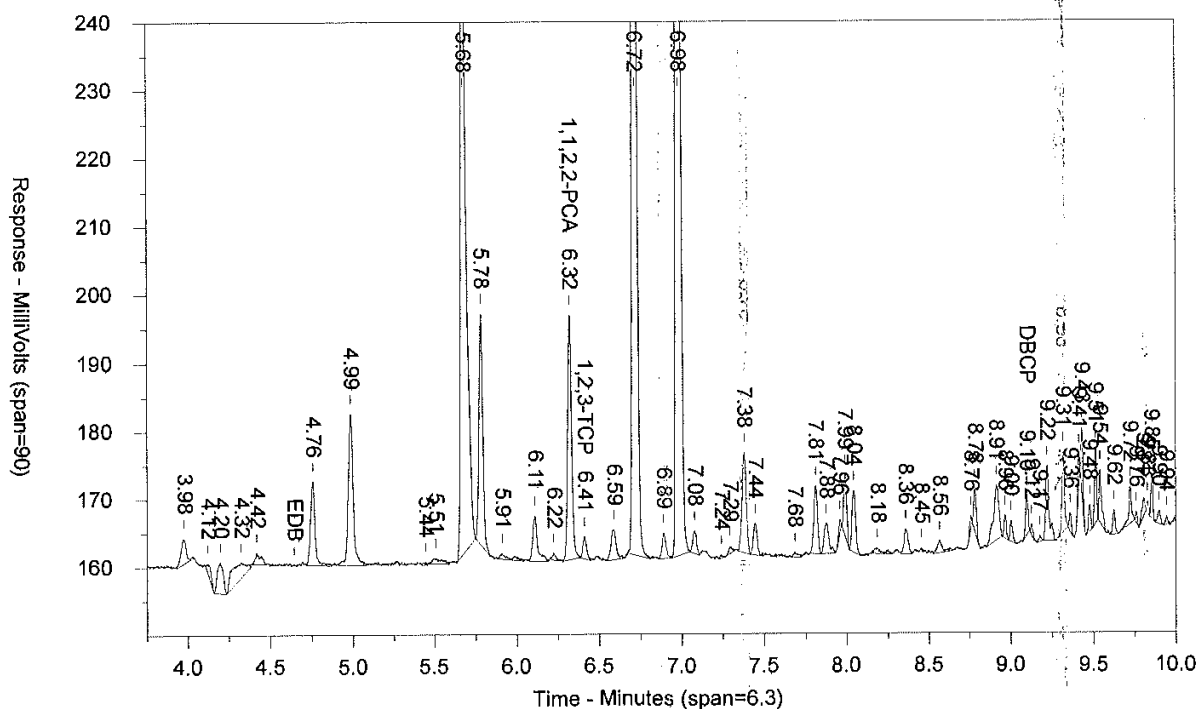
Chrom Perfect Chromatogram Report

1292528 AA42106 T 200940024A 10398 SW-846 8011

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: 1292528 AA42106 T 200940024A 10398
Injected On: 4/8/2020 3:33:45 AM
Instrument ID: CP16-19853
Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min
Column A ID: DB CLP1 30m x 0.32mm x 0.25um
Column B ID: DB CLP2 30m x 0.32mm x 0.5um
Injection Volume: 1 ul

SW-846 8011
Sample Weight: 36.9
Dilution Factor: 2

Threshold: 1
Calibration Type: external
Quantitation: Height

Analyst: 2306

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.793	450	-.008	EDB		0		EDB
5.309	25131	.078	1,1,2,2-PCA	6.32	36044	.065	1,1,2,2-PCA
	0		1,2,3-TCP	6.411	3368	.039	1,2,3-TCP
8.234	3612	.007	DBCP	9.096	5853	.006	DBCP

Files:

Area File: 16edbs20087005.037.RAW
Area File: 16edbs20087005B.037.RAW
Method A: 16EDBS.MET
Method B: 16EDBSB.MET
Calibration File A: 16EDBS2008701.CAL
Calibration File B: 16EDBS2008701B.CAL
Format A: EDB16.FMTA
Format B: EDB16.FMTB
Area File Created On: 4/8/2020 3:43:49 AM
File Reported On: 4/8/2020 at 7:07:58 AM



Lancaster Laboratories
Environmental

Data Summary

Sample Name: 1292532 42107 **Sample ID:** AA **Batchnumber:** 200940024A
Sample Amount: 36.88 mL **Total Volume:** 2 ml **Analyst:** 13378 **SDG:** KR421 **State:** NM
Analyses: 10398

Analysis Report (A)

Injected on Apr 08, 2020 04:57:51
Instrument 19853A
Result file 16EDBS20087005.042.RAW
Calibration file 16EDBS2008701
Method file 16EDBS
%SSR(PCA) * 151% (46 - 136) **Conc:** 0.10065

Single Component Data

Compound	Min	RT	Max	Height
Ethylene dibromide	3.78	3.81	3.84	870
1,1,2,2-TETRACHLORO	5.28	5.31	5.34	32040
1,2-Dibromo-3-chloropropan	8.19	8.23	8.25	2888

Analysis Report (B)

Injected on Apr 08, 2020 04:57:51
Instrument 19853B
Result file 16EDBS20087005B.042.RAW
Calibration file 16EDBS2008701B
Method file 16EDBSB
%SSR(PCA) 103% (46 - 136) **Conc:** 0.068989

Amount	Compound	Min	RT	Max	Height	Amount
0	Ethylene dibromide	4.61	4.64	4.67	2953	0
0.10065	1,1,2,2-TETRACHLORO	6.29	6.32	6.35	38293	0.068989
0.005521	1,2,3-Trichloropropane	6.41	6.41	6.47	2187	0.025527
	1,2-Dibromo-3-chloropropan	9.05	9.10	9.11	6344	0.006328

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
☒ Ethylene dibromide			<0.0095	<0.019	<0.0285	D1		
☐ 1,1,2,2-TETRACHLORO	A	0.10065	0.0033	0.0066	0.0066		37.33	
☒ 1,1,2,2-TETRACHLORO	A	0.10065	0.0033	0.0066	0.0066			
☒ 1,1,2,2-TETRACHLORO	B	0.068989	0.0033	0.0066	0.0066			
☐ 1,2,3-Trichloropropane			<0.0949	<0.1898	<0.2562			
☐ 1,2-Dibromo-3-chloropropan			<0.0095	<0.019	<0.0285			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Charles T. Baeley
Manager

APR 08 2020

Reviewed and digitally signed by Rachel Umberger on 4/8/2020 07:48:28

4/8/2020

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Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: 1292532 42107 ID: AA Batchnumber: 200940024A
 Sample Amount: 36.88 mL Total Volume: 2 ml Analyst: 2306 SDG: KR421 State: NM
 Analyses: 10398

Analysis Report (A)

Injected on : Apr 08, 2020 04:57:51
 Instrument : CP16--19853A
 Result file : 16EDBS20087005.042.RAW
 Calibration file : 16EDBS2008701B.CAL
 Method file : 16EDBS.MET

%SSR(1,1,2,2-PCA) : *151% (46-136) Conc.: 0.10065

Peak name	Min	R.T.	Max	Height	Amount
EDB	3.78	3.81	3.84	870	-0.005919
1,1,2,2-PCA	5.28	5.31	5.34	32040	0.100650
DBCP	8.19	8.23	8.25	2888	0.005521

Analysis Report (B)

Injected on : Apr 08, 2020 04:57:51
 Instrument : CP16--19853B
 Result file : 16EDBS20087005B.042.RAW
 Calibration file : 16EDBS2008701B.CAL
 Method file : 16EDBSB.MET

%SSR(1,1,2,2-PCA) : 103% (46-136) Conc.: 0.068989

Peak name	Min	R.T.	Max	Height	Amount
EDB	4.61	4.64	4.67	2953	-0.000072
1,1,2,2-PCA	6.29	6.32	6.35	38293	0.068989
1,2,3-TCP	6.41	6.41	6.47	2187	0.025527
DBCP	9.05	9.10	9.11	6344	0.006328

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☒ EDB			<0.0285	<0.0095	<MDL	(A) (B)	RU 13378 4/8/20
☐ 1,1,2,2-PCA	A	0.100650				37.33	
☐ 1,2,3-TCP			<0.2562	<0.0949			
☐ DBCP			<0.0285	<0.0095			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

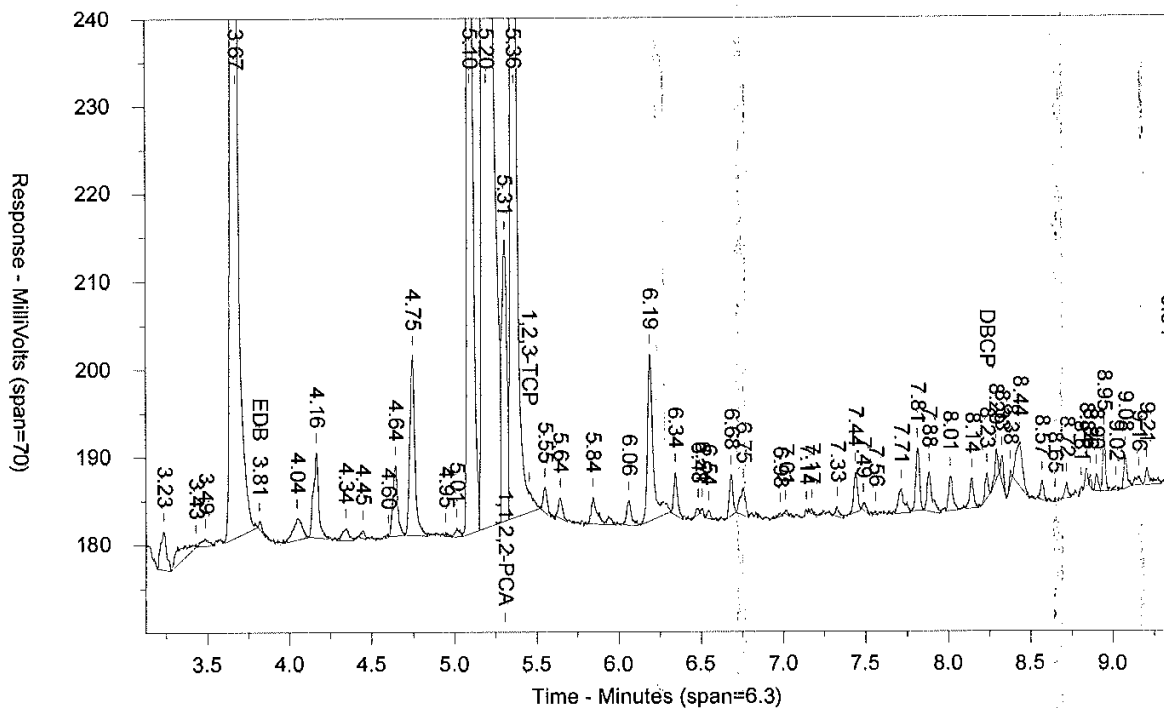
Printed on: 4/8/2020 07:14:16

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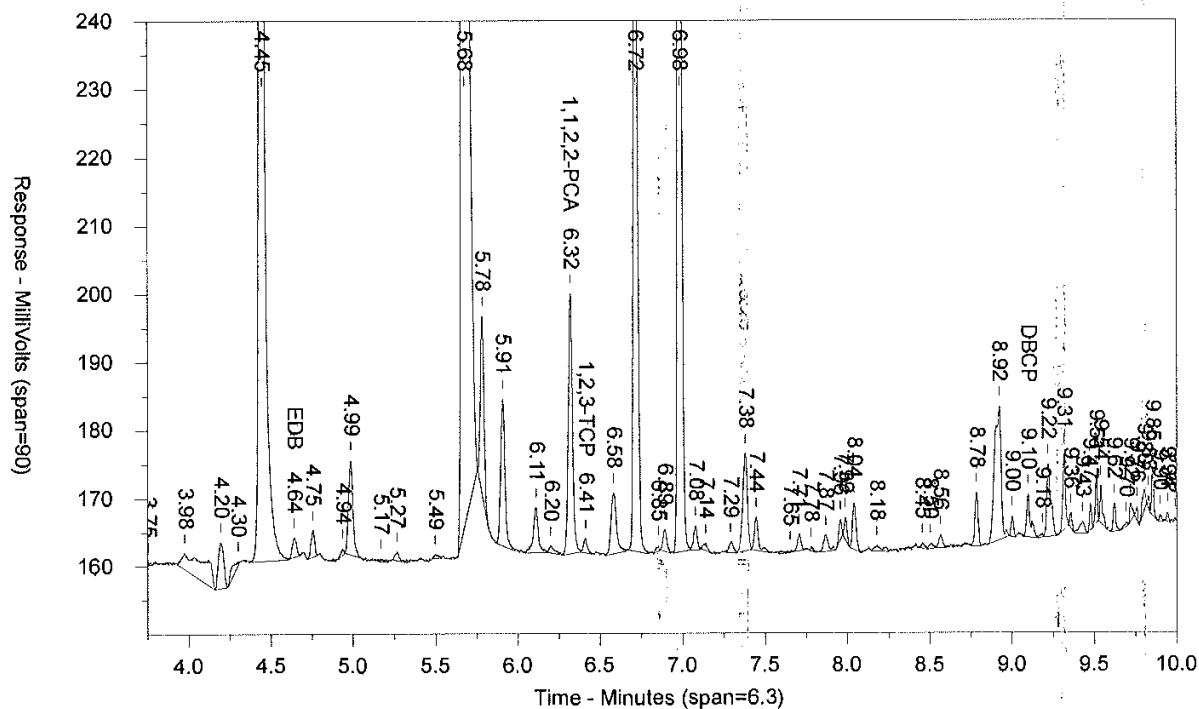
Chrom Perfect Chromatogram Report

1292532 AA42107 T 200940024A 10398 SW-846' 8011

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\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20087005B.042.RAW



Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: 1292532 AA42107 T 200940024A 10398
Injected On: 4/8/2020 4:57:51 AM
Instrument ID: CP16-19853
Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min
Column A ID: DB CLP1 30m x 0.32mm x 0.25µm
Column B ID: DB CLP2 30m x 0.32mm x 0.5µm
Injection Volume: 1 ul

SW-846 8011
Sample Weight: 36.88
Dilution Factor: 2

Threshold: 1
Calibration Type: external
Quantitation: Height

Analyst: 2306

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.815	870	-.006	EDB	4.641	2953		EDB
5.306	32040	.101	1,1,2,2-PCA	6.319	38293	.069	1,1,2,2-PCA
	0		1,2,3-TCP	6.411	2187	.026	1,2,3-TCP
8.234	2888	.006	DBCP	9.096	6344	.006	DBCP

Files:

Area File: 16edbs20087005.042.RAW
Area File: 16edbs20087005B.042.RAW
Method A: 16EDBS.MET
Method B: 16EDBSB.MET
Calibration File A: 16EDBS2008701.CAL
Calibration File B: 16EDBS2008701B.CAL
Format A: EDB16.FMTA
Format B: EDB16.FMTB
Area File Created On: 4/8/2020 5:07:54 AM
File Reported On: 4/8/2020 at 7:09:18 AM



Lancaster Laboratories
Environmental

Data Summary

Sample Name: 1292533 42108 Sample ID: AA Batchnumber: 200940024A
Sample Amount: 36.3 mL Total Volume: 2 ml Analyst: 13378 SDG KR421 State: NM
Analyses: 10398

Analysis Report (A)

Injected on Apr 08, 2020 05:14:40
Instrument 19853A
Result file 16EDBS20087005.043.RAW
Calibration file 16EDBS2008701
Method file 16EDBS
%SSR(PCA) 110% (46 - 136) Conc: 0.074865

Single Component Data

Compound	Min	RT	Max	Height
Ethylene dibromide	3.78	3.82	3.84	3800
1,1,2,2-TETRACHLORO	5.28	5.31	5.34	23684

Analysis Report (B)

Injected on Apr 08, 2020 05:14:40
Instrument 19853B
Result file 16EDBS20087005B.043.RAW
Calibration file 16EDBS2008701B
Method file 16EDBSB
%SSR(PCA) 96% (46 - 136) Conc: 0.065398

Amount	Compound	Min	RT	Max	Height	Amount
0.010353	Ethylene dibromide	4.61	4.64	4.67	8320	0.015231
0.074865	1,1,2,2-TETRACHLORO	6.29	6.32	6.35	35729	0.065398
	1,2,3-Trichloropropane	6.41	6.42	6.47	8301	0.098421
	1,2-Dibromo-3-chloropro	9.05	9.07	9.11	17547	0.017784

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
☒ Ethylene dibromide	A	0.010353	0.0096	<0.0193	<0.0289	JD1	38.13	
☒ 1,1,2,2-TETRACHLORO	A	0.074865	0.0034	0.0067	0.0067		13.50	
☒ 1,1,2,2-TETRACHLORO	A	0.074865	0.0034	0.0067	0.0067			
☒ 1,1,2,2-TETRACHLORO	B	0.065398	0.0034	0.0067	0.0067			
☐ 1,2,3-Trichloropropane			<0.0964	<0.1928	<0.2603			
☐ 1,2-Dibromo-3-chloropro			<0.0096	<0.0193	<0.0289			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Charles T. Beasley
Manager

APR 08 2020

Reviewed and digitally signed by Rachel Umberger on 4/8/2020 07:48:32

4/8/2020

KR421 Page 445 of 592

Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: 1292533 42108 ID: AA **Batchnumber:** 200940024A
Sample Amount: 36.3 mL Total Volume: 2 mL Analyst: 2306 SDG: KR421 State: NM
Analyses: 10398

Analysis Report (A)

Injected on : Apr 08, 2020 05:14:40
 Instrument : CP16--19853A
 Result file : 16EDBS20087005.043.RAW
 Calibration file : 16EDBS2008701.CAL
 Method file : 16EDBS.MET

%SSR(1,1,2,2-PCA) : 110% (46-136) Conc.: 0.074865

Peak name	Min	R.T.	Max	Height	Amount
EDB	3.78	3.82	3.84	3800	0.010353
1,1,2,2-PCA	5.28	5.31	5.34	23684	0.074865

Analysis Report (B)

Injected on : Apr 08, 2020 05:14:40
 Instrument : CP16--19853B
 Result file : 16EDBS20087005B.043.RAW
 Calibration file : 16EDBS2008701B.CAL
 Method file : 16EDBSB.MET

%SSR(1,1,2,2-PCA) : 96% (46-136) Conc.: 0.065398

Peak name	Min	R.T.	Max	Height	Amount
EDB	4.81	4.64	4.67	8320	0.015231
1,1,2,2-PCA	6.29	6.32	6.35	35729	0.065398
1,2,3-TCP	6.41	6.42	6.47	8301	0.098421
DBCP	9.05	9.07	9.11	17547	0.017784

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☒ EDB	A	0.010353	<0.0289	0.0096	J	38.13	
☐ 1,1,2,2-PCA	A	0.074865				13.50	
☐ 1,2,3-TCP			<0.2603	<0.0964			
☐ DBCP			<0.0289	<0.0096			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

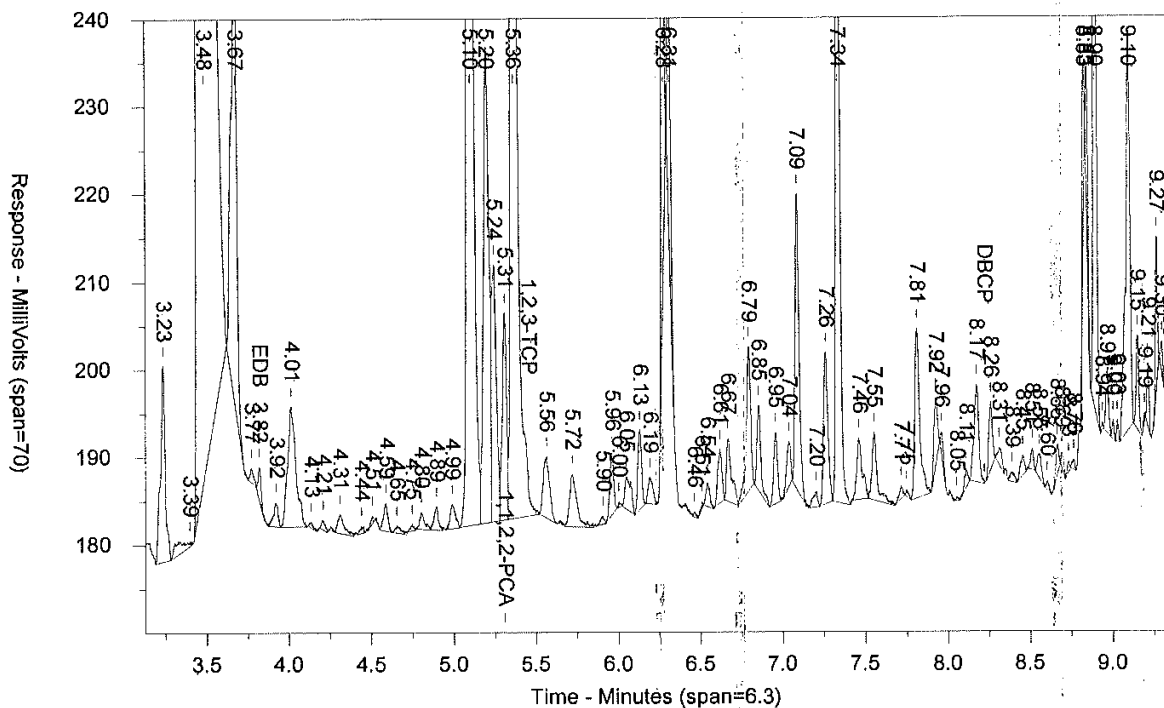
Printed on: 4/8/2020 07:14:22

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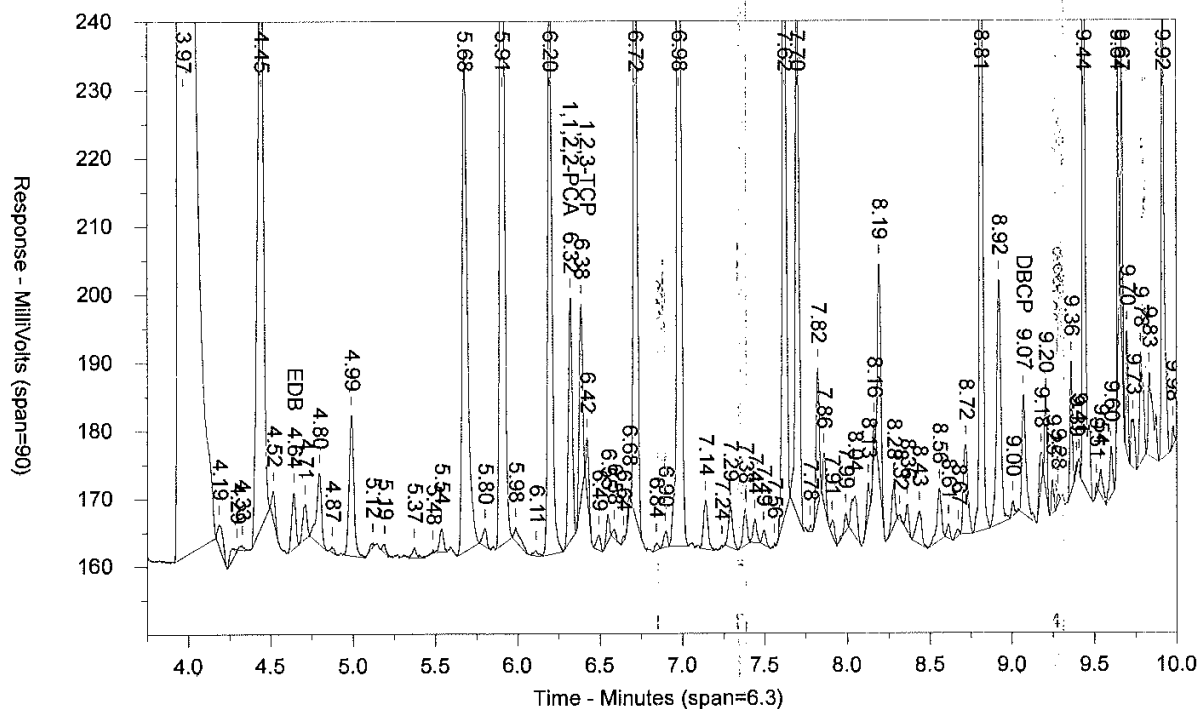
Chrom Perfect Chromatogram Report

1292533 AA42108 T 200940024A 10398 SW-846 8011

\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20087005.043.RAW



\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20087005B.043.RAW



Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: 1292533 AA42108 T 200940024A 10398

SW-846 8011

Injected On: 4/8/2020 5:14:40 AM

Sample Weight: 36.3

Instrument ID: CP16-19853

Dilution Factor: 2

Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min

Column A ID: DB CLP1 30m x 0.32mm x 0.25um

Column B ID: DB CLP2 30m x 0.32mm x 0.5um

Injection Volume: 1 ul

Threshold: 1

Calibration Type: external

Quantitation: Height

Analyst: 2306

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.818	3800	.01	EDB	4.643	8320	.015	EDB
5.308	23684	.075	1,1,2,2-PCA	6.321	35729	.065	1,1,2,2-PCA
	0		1,2,3-TCP	6.42	8301	.098	1,2,3-TCP
	0		DBCP	9.069	17547	.018	DBCP

Files:

Area File: 16edbs20087005.043.RAW

Area File: 16edbs20087005B.043.RAW

Method A: 16EDBS.MET

Method B: 16EDBSB.MET

Calibration File A: 16EDBS2008701.CAL

Calibration File B: 16EDBS2008701B.CAL

Format A: EDB16.FMTA

Format B: EDB16.FMTB

Area File Created On: 4/8/2020 5:24:44 AM

File Reported On: 4/8/2020 at 7:09:36 AM



Lancaster Laboratories
Environmental

Data Summary

Sample Name: 1292534 42109 Sample ID: AA Batchnumber: 200940024A
Sample Amount: 37 mL Total Volume: 2 ml Analyst: 13378 SDG KR421 State: NM
Analyses: 10398

Analysis Report (A)

Injected on Apr 08, 2020 05:31:33
Instrument 19853A
Result file 16EDBS20087005.044.RAW
Calibration file 16EDBS2008701
Method file 16EDBS

%SSR(PCA) 110% (46 - 136) Conc: 0.073111

Single Component Data

Compound	Min	RT	Max	Height
1,1,2,2-TETRACHLORO	5.28	5.31	5.34	23578
1,2-Dibromo-3-chloropropane	8.19	8.21	8.25	475

Analysis Report (B)

Injected on Apr 08, 2020 05:31:33
Instrument 19853B
Result file 16EDBS20087005B.044.RAW
Calibration file 16EDBS2008701B
Method file 16EDBSB

%SSR(PCA) 95% (46 - 136) Conc: 0.063411

Amount	Compound	Min	RT	Max	Height	Amount
0.073111	1,1,2,2-TETRACHLORO	6.29	6.32	6.35	35311	0.063411
0.000904						

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
☒ Ethylene dibromide			<0.0095	<0.0189	<0.0284	D1		
☐ 1,1,2,2-TETRACHLORO	A	0.073111	0.0033	0.0066	0.0066		14.21	
☒ 1,1,2,2-TETRACHLORO	A	0.073111	0.0033	0.0066	0.0066			
☒ 1,1,2,2-TETRACHLORO	B	0.063411	0.0033	0.0066	0.0066			
☐ 1,2,3-Trichloropropane			<0.0946	<0.1892	<0.2554			
☐ 1,2-Dibromo-3-chloropropane			<0.0095	<0.0189	<0.0284			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Charles T. Beasley
Charles T. Beasley
Manager

APR 08 2020

Reviewed and digitally signed by Rachel Umberger on 4/8/2020 07:48:35

4/8/2020

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Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: 1292534 42109 ID: AA **Batchnumber:** 200940024A
Sample Amount: 37 mL Total Volume: 2 mL Analyst: 2306 SDG: KR421 State: NM
Analyses: 10398

Analysis Report (A)

Injected on : Apr 08, 2020 05:31:33
 Instrument : CP16--19853A
 Result file : 16EDBS20087005.044.RAW
 Calibration file : 16EDBS2008701.CAL
 Method file : 16EDBS.MET

%SSR(1,1,2,2-PCA) : 110% (46-136) Conc.: 0.073111

Peak name	Min	R.T.	Max	Height	Amount
1,1,2,2-PCA	5.28	5.31	5.34	23578	0.073111
DBCP	8.19	8.21	8.25	475	0.000904

Analysis Report (B)

Injected on : Apr 08, 2020 05:31:33
 Instrument : CP16--19853B
 Result file : 16EDBS20087005B.044.RAW
 Calibration file : 16EDBS2008701B.CAL
 Method file : 16EDBSB.MET

%SSR(1,1,2,2-PCA) : 95% (46-136) Conc.: 0.063411

Peak name	Min	R.T.	Max	Height	Amount
1,1,2,2-PCA	6.29	6.32	6.35	35311	0.063411

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☒ EDB			<0.0284	<0.0095			
☐ 1,1,2,2-PCA	A	0.073111				14.21	
☐ 1,2,3-TCP			<0.2554	<0.0946			
☐ DBCP			<0.0284	<0.0095			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

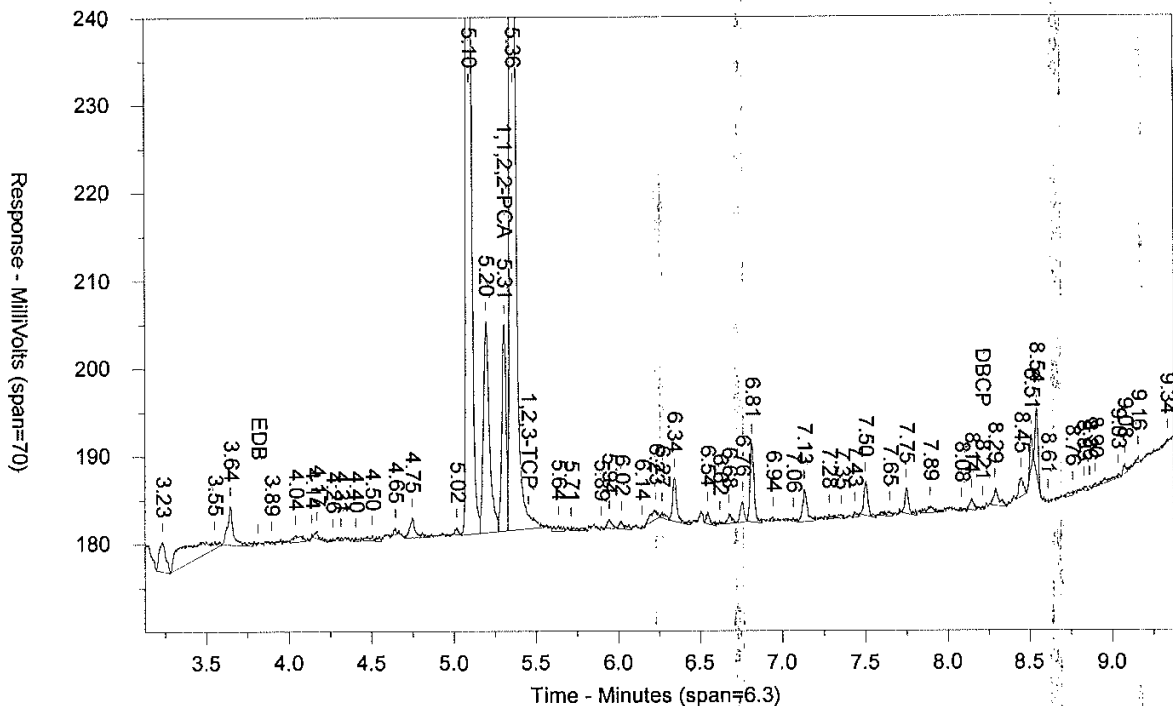
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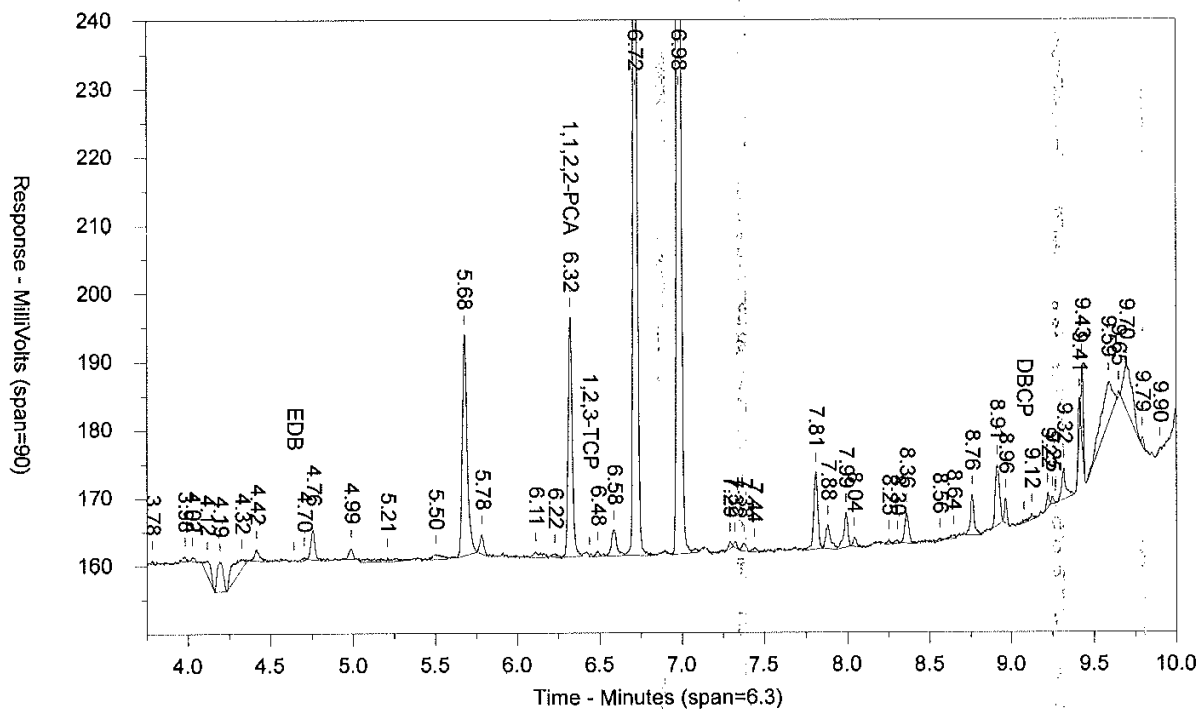
Chrom Perfect Chromatogram Report

1292534 AA42109 T 200940024A 10398 SW-846 8011

\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20087005.044.RAW



\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20087005B.044.RAW



Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: 1292534 AA42109 T 200940024A 10398 SW-846 8011
Injected On: 4/8/2020 5:31:33 AM
Instrument ID: CP16-19853
Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min
Column A ID: DB CLP1 30m x 0.32mm x 0.25um
Column B ID: DB CLP2 30m x 0.32mm x 0.5um
Injection Volume: 1 ul

Sample Weight: 37
Dilution Factor: 2

Threshold: 1
Calibration Type: external
Quantitation: Height

Analyst: 2306

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
5.309	23578	.073	1,1,2,2-PCA	6.321	35311	.063	1,1,2,2-PCA
8.211	475	.001	DBCP		0		DBCP

Files:

Area File: 16edbs20087005.044.RAW
Area File: 16edbs20087005B.044.RAW
Method A: 16EDBS.MET
Method B: 16EDBSB.MET
Calibration File A: 16EDBS2008701.CAL
Calibration File B: 16EDBS2008701B.CAL
Format A: EDB16.FMTA
Format B: EDB16.FMTB
Area File Created On: 4/8/2020 5:41:36 AM
File Reported On: 4/8/2020 at 7:09:54 AM

Standards Data

EDB/DBCP

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Eurofins Lancaster Laboratories

CHROM PERFECT SEQUENCE FILE

Sequence File: \\Usan-chromperfect\chromperfect-data\Dept-24\Active\CP16\16edbs20087001.seq

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Method Directory: \\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16

Number of Entries: 59

Samplename	VP	Code	ID	Method	Samp Amt	DF	Int Std	C	Batch Number	Analysis
1 CONDITIONER	1	MISC	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	1	1	1	0	208699999	10398
2 EIBKX2024A	2	PIBLK	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	35	2	1	0	208699999	10398
3 EDB_12024O	3	ICAL	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	1	1	1	1	208699999	10398
4 EDB_22024O	4	ICAL	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	1	1	1	2	208699999	10398
5 EDB_32024X	5	ICAL	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	1	1	1	3	208699999	10398
6 EDB_42024AB	6	ICAL	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	1	1	1	4	208699999	10398
7 EDB_52024O	7	ICAL	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	1	1	1	5	208699999	10398
8 EDB_62024O	8	ICAL	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	1	1	1	6	208699999	10398
9 MDEDX2024R	9	ICAL	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	1	1	1	0	208699999	10398
10 DBCMX1924B	10	MISC	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	1	1	1	0	208699999	10398
11 ICEBX2024S	11	CCAL	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	1	1	1	0	208699999	10398
12 CONDITIONER	12	CCAL	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	1	1	1	0	208699999	10398
13 ICEBX2024T	13	CCAL	FU	EPT-24\ACTIVE\CP16\16EDBS.MET	1	1	1	0	208699999	10398
14 BLANKA 3/27/20	14	BLK	AA	16EDBS.MET	35	2	1	0	200860014A	10398
15 LCSA 3/27/20	15	LCS	AA	16EDBS.MET	35	2	1	0	200860014A	10398
16 LCSDA 3/27/20	16	LCSD	AA	16EDBS.MET	35	2	1	0	200860014A	10398
17 BLANKA 3/27/20	17	BLK	AA	16EDBS.MET	35	2	1	0	200860015A	10398
18 LCSA 3/27/20	18	LCS	AA	16EDBS.MET	35	2	1	0	200860015A	10398
19 LCSDA 3/27/20	19	LCSD	AA	16EDBS.MET	35	2	1	0	200860015A	10398
20 1286860 RI	20	T	AA	16EDBS.MET	36.79	2	1	0	200840026A	10398
21 1286862 RI	21	T	AA	16EDBS.MET	36.55	2	1	0	200840026A	10398
22 CONDITIONER	22	T	AA	16EDBS.MET	36.55	2	1	0	200840026A	10398
23 EDB_42024AB	23	CCAL	YU	16EDBS.MET	1	1	1	0	208699999	10398
24 EIBKX2024A	24	PIBLK	YM	16EDBS.MET	35	2	1	0	208699999	10398
25 1286859R	25	T	AA	16EDBS.MET	36.77	2	1	0	200860014A	10398
26 1287238	26	T	AA	16EDBS.MET	36.79	2	1	0	200860014A	10398
27 1287239	27	T	AA	16EDBS.MET	36.51	2	1	0	200860014A	10398
28 1287239MS	28	MS	AA	16EDBS.MET	36.14	2	1	0	200860014A	10398
29 1287242	29	T	AA	16EDBS.MET	36.29	2	1	0	200860014A	10398
30 1287242DUP	30	DUP	AA	16EDBS.MET	35.94	2	1	0	200860014A	10398
31 1287244	31	T	AA	16EDBS.MET	36.39	2	1	0	200860014A	10398
32 1287246	32	T	AA	16EDBS.MET	36.91	2	1	0	200860014A	10398
33 1287248	33	T	AA	16EDBS.MET	36.03	2	1	0	200860014A	10398
34 CONDITIONER	34	T	AA	16EDBS.MET	36.03	2	1	0	200860014A	10398
35 EDB_42024AB	35	CCAL	YV	16EDBS.MET	1	1	1	0	208699999	10398
36 EIBKX2024A	36	PIBLK	YN	16EDBS.MET	35	2	1	0	208699999	10398
37 1287250	37	T	AA	16EDBS.MET	35.99	2	1	0	200860014A	10398
38 1288095	38	T	AA	16EDBS.MET	36.43	2	1	0	200860014A	10398
39 1288707	39	T	AA	16EDBS.MET	36.41	2	1	0	200860014A	10398
40 1288708	40	T	AA	16EDBS.MET	36.53	2	1	0	200860014A	10398
41 1288709	41	T	AA	16EDBS.MET	36.46	2	1	0	200860014A	10398
42 1288710	42	T	AA	16EDBS.MET	35.99	2	1	0	200860014A	10398
43 1288711	43	T	AA	16EDBS.MET	36.56	2	1	0	200860014A	10398
44 1288712	44	T	AA	16EDBS.MET	37.04	2	1	0	200860014A	10398
45 1288713	45	T	AA	16EDBS.MET	36.67	2	1	0	200860014A	10398
46 1288714	46	T	AA	16EDBS.MET	36.35	2	1	0	200860014A	10398
47 EDB_42024AB	47	CCAL	YW	16EDBS.MET	1	1	1	0	208699999	10398
48 EIBKX2024A	48	PIBLK	YO	16EDBS.MET	35	2	1	0	208699999	10398
49 1288715	49	T	AA	16EDBS.MET	36.56	2	1	0	200860014A	10398
50 1288716	50	T	AA	16EDBS.MET	36.41	2	1	0	200860014A	10398

S16edbs20087001

Eurofins Lancaster Laboratories
CHROM PERFECT SEQUENCE FILE

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Method Directory: \\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16

Number of Entries: 59

<u>Samplename</u>	<u>VP</u>	<u>Code</u>	<u>ID</u>	<u>Method</u>	<u>Samp Amt</u>	<u>DF</u>	<u>Int Std</u>	<u>C</u>	<u>Batch Number</u>	<u>Analysis</u>
51 1288096	51	T	AA	16EDBS.MET	36.11	2	1	0	200860015A	10398
52 1288096MS	52	MS	AA	16EDBS.MET	36.22	2	1	0	200860015A	10398
53 1288097	53	T	AA	16EDBS.MET	36.48	2	1	0	200860015A	10398
54 1288097DUP	54	DUP	AA	16EDBS.MET	36.2	2	1	0	200860015A	10398
55 1288098	55	T	AA	16EDBS.MET	36.36	2	1	0	200860015A	10398
56 1288099	56	T	AA	16EDBS.MET	35.92	2	1	0	200860015A	10398
57 1288100	57	T	AA	16EDBS.MET	36.54	2	1	0	200860015A	10398
58 EDB_42024AB	58	CCAL	YX	16EDBS.MET	1	1	1	0	208699999	10398
59 EIBKX2024A	59	PIBLK	YP	16EDBS.MET	35	2	1	0	208699999	10398

Set-up by:

JB16346

Date:

3/27/20

3/27/2020

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S16edbs20087001

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Eurofins Lancaster Laboratories

CHROM PERFECT SEQUENCE FILE

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Method Directory: \\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16

Number of Entries: 116

Samplename	VP	Code	ID	Method	Samp Amt	DF	Int Std	C	Batch Number	Analysis
1 CONDITIONER	1	MISC	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	1	1	1	0	209799999	
2 CONDITIONER	2	MISC	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	1	1	1	0	209799999	
3 CONDITIONER	3	MISC	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	1	1	1	0	209799999	
4 CONDITIONER	4	MISC	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	1	1	1	0	209799999	
5 EDB_42024AD	5	CCAL	AB	EPT-24\ACTIVE\CP16\16EDBS.MET	1	1	1	0	209799999	10398
6 EIBKX2024A	6	PIBLK	CN	EPT-24\ACTIVE\CP16\16EDBS.MET	35	2	1	0	209799999	10398
7 CONDITIONER	7	MISC	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	1	1	1	0	209799999	10398
8 1289806 DF50	8	T	AC	EPT-24\ACTIVE\CP16\16EDBS.MET	36.68	100	1	0	200910014A	10398
9 1289816 DF20	9	T	AC	EPT-24\ACTIVE\CP16\16EDBS.MET	36.15	40	1	0	200910014A	10398
10 1289781 DF10	10	T	AC	EPT-24\ACTIVE\CP16\16EDBS.MET	36.73	20	1	0	200910013A	10398
11 1289782 DF50	11	T	AC	EPT-24\ACTIVE\CP16\16EDBS.MET	36.43	100	1	0	200910013A	10398
12 1289786 DF50	12	T	AC	EPT-24\ACTIVE\CP16\16EDBS.MET	36.04	100	1	0	200910013A	10398
13 CONDITIONER	13	MISC	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	1	1	1	0	209799999	10398
14 EDB_42024AD	14	CCAL	AC	EPT-24\ACTIVE\CP16\16EDBS.MET	1	1	1	0	209799999	10398
15 EIBKX2024A	15	PIBLK	CO	EPT-24\ACTIVE\CP16\16EDBS.MET	35	2	1	0	209799999	10398
16 BLANKA 4/4/20	16	BLK	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	35	2	1	0	200940016A	10398
17 LCSA 4/4/20	17	LCS	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	35	2	1	0	200940016A	10398
18 LCSDA 4/4/20	18	LCSD	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	35	2	1	0	200940016A	10398
19 BLANKA 4/4/20	19	BLK	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	35	2	1	0	200940024A	10398
20 LCSA 4/4/20	20	LCS	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	35	2	1	0	200940024A	10398
21 LCSDA 4/4/20	21	LCSD	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	35	2	1	0	200940024A	10398
22 1291155	22	T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.11	2	1	0	200940016A	10398
23 1291155MS	23	MS	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.33	2	1	0	200940016A	10398
24 1291156	24	T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.21	2	1	0	200940016A	10398
25 1291156DUP	25	DUP	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.76	2	1	0	200940016A	10398
26 EDB_42024AD	26	CCAL	AD	EPT-24\ACTIVE\CP16\16EDBS.MET	1	1	1	0	209799999	10398
27 EIBKX2024A	27	PIBLK	CP	EPT-24\ACTIVE\CP16\16EDBS.MET	35	2	1	0	209799999	10398
28 1291626	28	T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.49	2	1	0	200940016A	10398
29 1291627	29	T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.26	2	1	0	200940016A	10398
30 1291628	30	T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.74	2	1	0	200940016A	10398
31 1291838	31	T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	35.94	2	1	0	200940016A	10398
32 1292523	32	T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.34	2	1	0	200940024A	10398
33 1292524	33	T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	35.76	2	1	0	200940024A	10398
34 1292525	34	T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	37.02	2	1	0	200940024A	10398
35 1292526	35	T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.34	2	1	0	200940024A	10398
36 1292527	36	T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	37.12	2	1	0	200940024A	10398
37 1292528	37	T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.9	2	1	0	200940024A	10398
38 EDB_42024AD	38	CCAL	AE	EPT-24\ACTIVE\CP16\16EDBS.MET	1	1	1	0	209799999	10398
39 EIBKX2024A	39	PIBLK	CQ	EPT-24\ACTIVE\CP16\16EDBS.MET	35	2	1	0	209799999	10398
40 1292529MS	40	MS	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.58	2	1	0	200940024A	10398
41 1292530MSD	41	MSD	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	37.16	2	1	0	200940024A	10398
42 1292532	42	T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.88	2	1	0	200940024A	10398
43 1292533	43	T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.3	2	1	0	200940024A	10398
44 1292534	44	T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	37	2	1	0	200940024A	10398
45 EDB_42024AD	45	CCAL	AF	EPT-24\ACTIVE\CP16\16EDBS.MET	1	1	1	0	209799999	10398
46 EIBKX2024A	46	PIBLK	CR	EPT-24\ACTIVE\CP16\16EDBS.MET	35	2	1	0	209799999	10398
47 BLANKA 4/6/20	47	BLK	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	35	2	1	0	200970011A	10398
48 LCSA 4/6/20	48	LCS	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	35	2	1	0	200970011A	10398
49 LCSDA 4/6/20	49	LCSD	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	35	2	1	0	200970011A	10398
50 1289769R	50	T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.69	2	1	0	200970011A	10398

S16edbs20087005

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CHROM PERFECT SEQUENCE FILE

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Method Directory: \\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16

Number of Entries: 116

Samplename	VP	Code	ID	Method	Samp Amt	DF	Int Std	C	Batch Number	Analysis
51 1289781R DF10	51	T	AC	EPT-24\ACTIVE\CP16\16EDBS.MET	36.41	20	1	0	200970011A	10398
52 1289782R DF50	52	T	AC	EPT-24\ACTIVE\CP16\16EDBS.MET	36.17	100	1	0	200970011A	10398
53 1289786R DF50	53	T	AC	EPT-24\ACTIVE\CP16\16EDBS.MET	36.42	100	1	0	200970011A	10398
54 1289806R DF50	54	T	AC	EPT-24\ACTIVE\CP16\16EDBS.MET	36.15	100	1	0	200970011A	10398
55 1289816R DF20	55	T	AC	EPT-24\ACTIVE\CP16\16EDBS.MET	35.83	40	1	0	200970011A	10398
56 CONDITIONER	56	MISC	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	1	1	1	0	209799999	10398
57 EDB_42024AD	57	CCAL	AG	EPT-24\ACTIVE\CP16\16EDBS.MET	1	1	1	0	209799999	10398
58 EIBKX2024A	58	PIBLK	CS	EPT-24\ACTIVE\CP16\16EDBS.MET	35	2	1	0	209799999	10398
59 CONDITIONER	59	PIBLK	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	35	2	1	0	209799999	10398
60 1291628 DF10	60	T	AC	EPT-24\ACTIVE\CP16\16EDBS.MET	36.74	20	1	0	200940016A	10398
61 CONDITIONER	61	T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.74	20	1	0	200940016A	10398
62 BLANKA 4/8/20	62	BLK	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	35	2	1	0	200980021A	10398
63 LCSA 4/8/20	63	LCS	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	35	2	1	0	200980021A	10398
64 LCSDA 4/8/20	64	LCSD	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	35	2	1	0	200980021A	10398
65 1293752	65	T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.36	2	1	0	200980021A	10398
66 1293753MS	66	MS	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.9	2	1	0	200980021A	10398
67 1293754MSD	67	MSD	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	37	2	1	0	200980021A	10398
68 EDB_42024AD	68	CCAL	AH	EPT-24\ACTIVE\CP16\16EDBS.MET	1	1	1	0	209899999	10398
69 EIBKX2024A	69	PIBLK	CY	EPT-24\ACTIVE\CP16\16EDBS.MET	35	2	1	0	209899999	10398
70 BLANKA 4/8/20	70	BLK	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	35	2	1	0	200980022A	10398
71 LCSA 4/8/20	71	LCS	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	35	2	1	0	200980022A	10398
72 LCSDA 4/8/20	72	LCSD	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	35	2	1	0	200980022A	10398
73 1293704	73	T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.96	2	1	0	200980022A	10398
74 1293704MS	74	MS	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.65	2	1	0	200980022A	10398
75 1293706	75	T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.88	2	1	0	200980022A	10398
76 1293706DUP	76	DUP	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.78	2	1	0	200980022A	10398
77 1293733	77	T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.37	2	1	0	200980021A	10398
78 1293734	78	T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.5	2	1	0	200980021A	10398
79 1293736	79	T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.9	2	1	0	200980021A	10398
80 EDB_42024AD	80	CCAL	AI	EPT-24\ACTIVE\CP16\16EDBS.MET	1	1	1	0	209899999	10398
81 EIBKX2024A	81	PIBLK	CZ	EPT-24\ACTIVE\CP16\16EDBS.MET	35	2	1	0	209899999	10398
82 1293738	82	T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.44	2	1	0	200980021A	10398
83 1293739	83	T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.72	2	1	0	200980021A	10398
84 1293741	84	T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.65	2	1	0	200980021A	10398
85 1293743	85	T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.42	2	1	0	200980021A	10398
86 1293744	86	T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	37	2	1	0	200980021A	10398
87 1293746	87	T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.22	2	1	0	200980021A	10398
88 1293747	88	T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.47	2	1	0	200980021A	10398
89 1293749	89	T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.88	2	1	0	200980021A	10398
90 1293751	90	T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.75	2	1	0	200980021A	10398
91 1293760	91	T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.61	2	1	0	200980021A	10398
92 EDB_42024AD	92	CCAL	AJ	EPT-24\ACTIVE\CP16\16EDBS.MET	1	1	1	0	209899999	10398
93 EIBKX2024A	93	PIBLK	DA	EPT-24\ACTIVE\CP16\16EDBS.MET	35	2	1	0	209899999	10398
94 1293761	94	T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.6	2	1	0	200980021A	10398
95 1293763	95	T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.73	2	1	0	200980021A	10398
96 1293765	96	T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.39	2	1	0	200980021A	10398
97 1293766	97	T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	37.02	2	1	0	200980021A	10398
98 1293708	98	T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.76	2	1	0	200980022A	10398
99 1293709	99	T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.5	2	1	0	200980022A	10398
100 1293711	100	T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.79	2	1	0	200980022A	10398

S16edbs20087005

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CHROM PERFECT SEQUENCE FILE

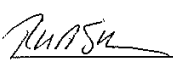
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Method Directory: \\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16

Number of Entries: 116

<u>Samplename</u>	<u>VP Code</u>	<u>ID</u>	<u>Method</u>	<u>Samp Amt</u>	<u>DF</u>	<u>Int Std</u>	<u>C</u>	<u>Batch Number</u>	<u>Analysis</u>
101 1293713	101 T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.54	2	1	0	200980022A	10398
102 1293714	102 T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.33	2	1	0	200980022A	10398
103 1293716	103 T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.86	2	1	0	200980022A	10398
104 EDB_42024AE	104 CCAL	AM	EPT-24\ACTIVE\CP16\16EDBS.MET	1	1	1	0	209899999	10398
105 EIBKX2024A	105 PIBLK	DB	EPT-24\ACTIVE\CP16\16EDBS.MET	35	2	1	0	209899999	10398
106 1293718	106 T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.28	2	1	0	200980022A	10398
107 1293719	107 T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.64	2	1	0	200980022A	10398
108 1293721	108 T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.58	2	1	0	200980022A	10398
109 1293723	109 T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.2	2	1	0	200980022A	10398
110 1293724	110 T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.8	2	1	0	200980022A	10398
111 1293726	111 T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.76	2	1	0	200980022A	10398
112 1293728	112 T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.51	2	1	0	200980022A	10398
113 1293729	113 T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.83	2	1	0	200980022A	10398
114 1293731	114 T	AA	EPT-24\ACTIVE\CP16\16EDBS.MET	36.45	2	1	0	200980022A	10398
115 EDB_42024AE	115 CCAL	AN	EPT-24\ACTIVE\CP16\16EDBS.MET	1	1	1	0	209899999	10398
116 EIBKX2024A	116 PIBLK	DC	EPT-24\ACTIVE\CP16\16EDBS.MET	35	2	1	0	209899999	10398

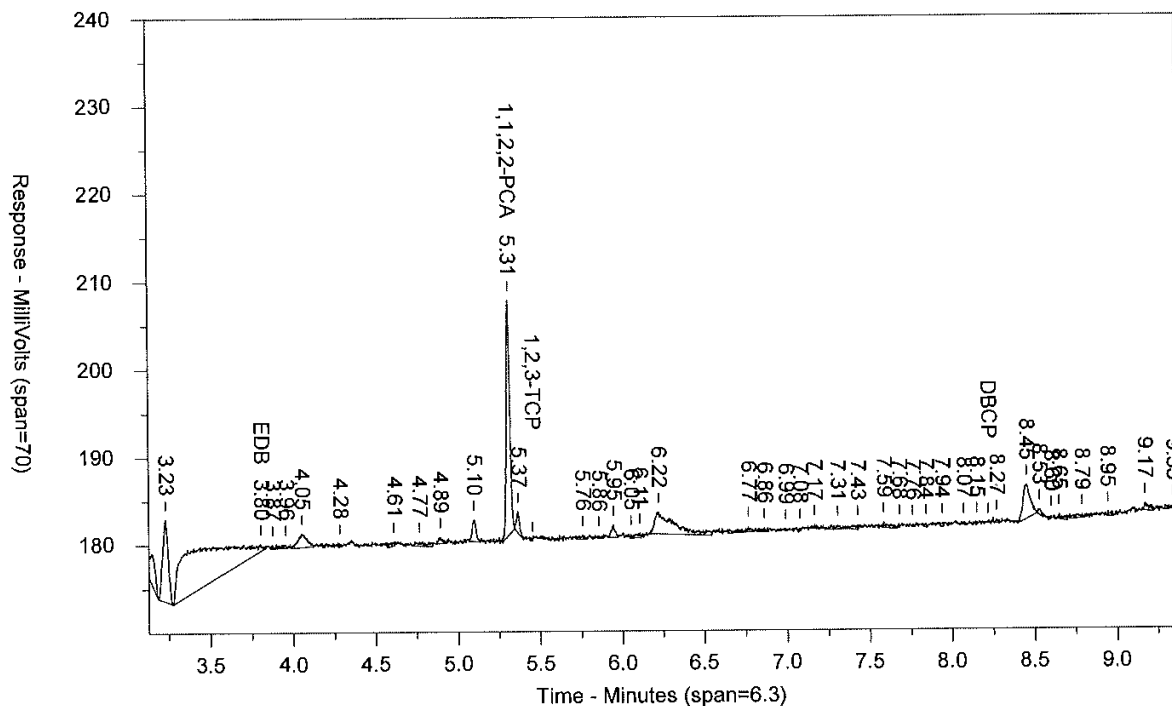
Set-up by: 
4/9/2020Date: 4/9/20
KR421 Page 458 of 592

S16edbs20087005

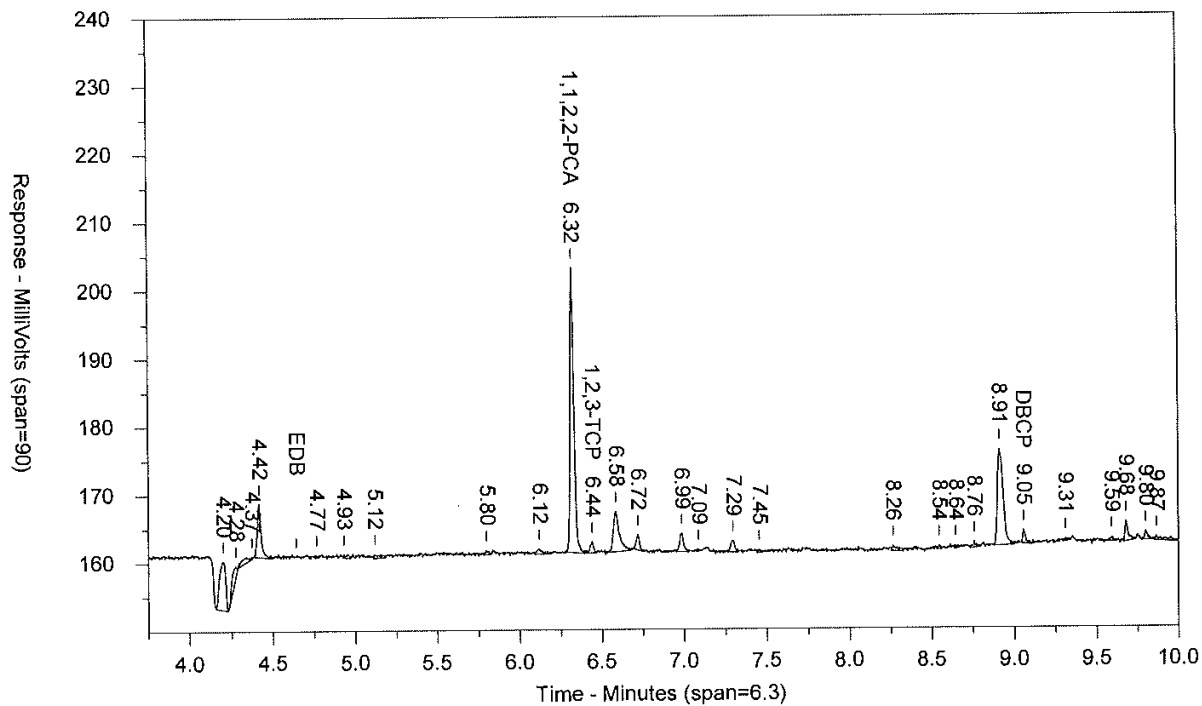
Page 3 of 3

Chrom Perfect Chromatogram Report

EIBKX2024A AAPIBLKAA PIBLK208699999 10398 SW-846 8011
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— \\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20087001B.002.RAW



Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: EIBKX2024A AAPIBLKAA PIBLK208699999 10398 SW-846 8011
 Injected On: 3/27/2020 5:48:50 PM Sample Weight: 35
 Instrument ID: CP16-19853 Dilution Factor: 2
 Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min
 Column A ID: DB CLP1 30m x 0.32mm x 0.25um
 Column B ID: DB CLP2 30m x 0.32mm x 0.5um
 Injection Volume: 1 ul

Threshold: 1
 Calibration Type: external
 Quantitation: Height

Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.803	775	.007	EDB		0		EDB
5.308	26830	.088	1,1,2,2-PCA	6.321	41893	.08	1,1,2,2-PCA
	0		1,2,3-TCP	6.439	1680	.021	1,2,3-TCP
	0		DBCP	9.055	1969	.002	DBCP

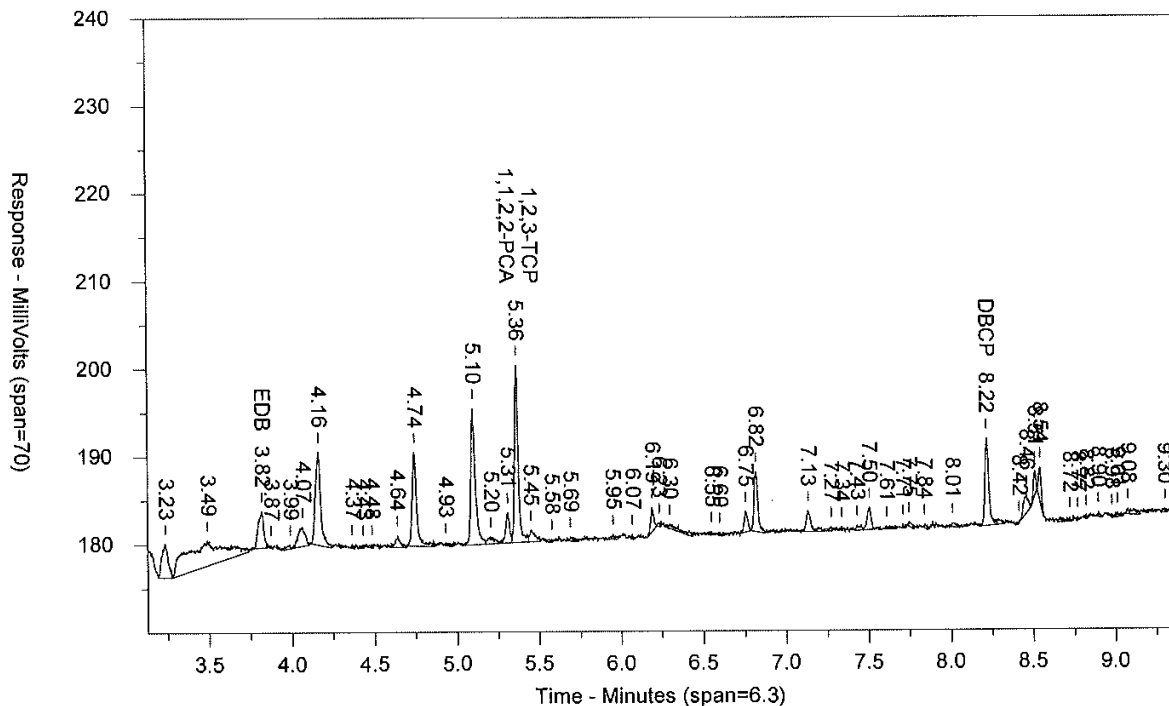
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 Calibration File B: 16EDBS2008701B.CAL
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 Format B: EDB16.FMTB
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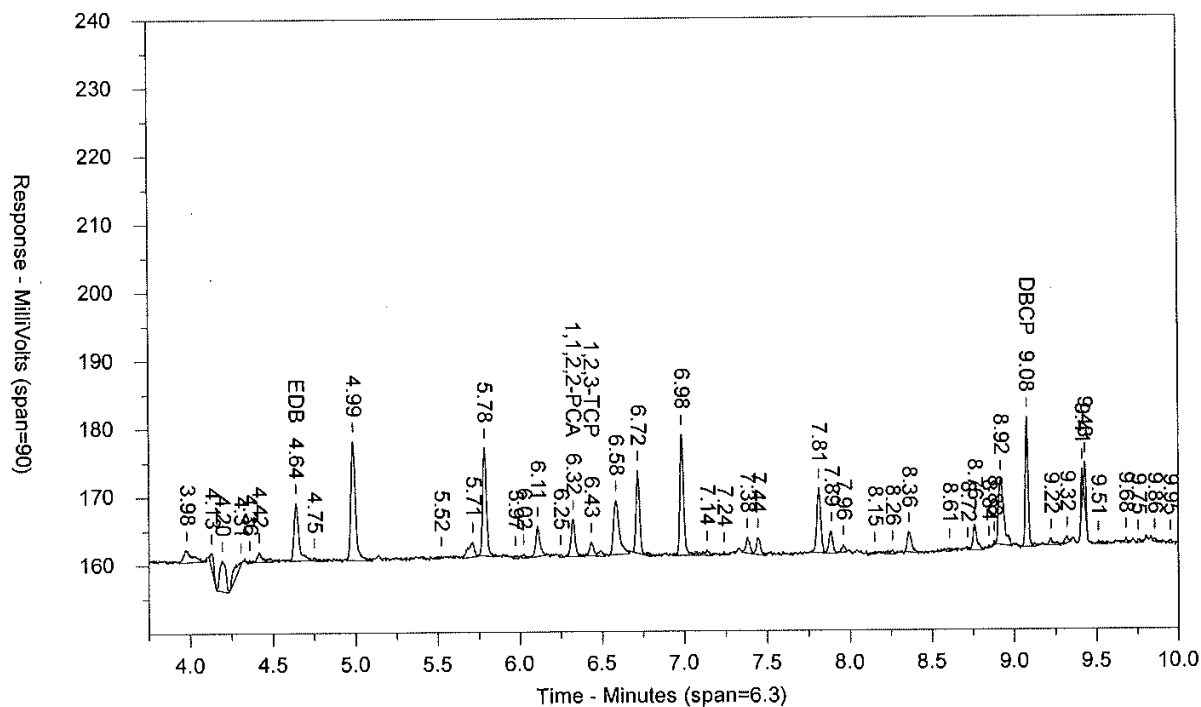
Chrom Perfect Chromatogram Report

EDB_120240 AAEDB_1AA ICAL 208699999 10398 SW-846 8011

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: EDB_120240 AAEDB_1AA ICAL 208699999 10398 SW-846 8011
 Injected On: 3/27/2020 6:05:42 PM Sample Weight: 1
 Instrument ID: CP16-19853 Dilution Factor: 1
 Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min
 Column A ID: DB CLP1 30m x 0.32mm x 0.25um
 Column B ID: DB CLP2 30m x 0.32mm x 0.5um
 Injection Volume: 1 ul

Threshold: 1
 Calibration Type: external
 Quantitation: Height

Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.818	4168	.225	EDB	4.641	8485	.285	EDB
5.308	3453	.155	1,1,2,2-PCA	6.322	5535	.184	1,1,2,2-PCA
5.451	1337	.502	1,2,3-TCP	6.433	1982	.427	1,2,3-TCP
8.218	10017	.353	DBCP	9.077	19082	.351	DBCP

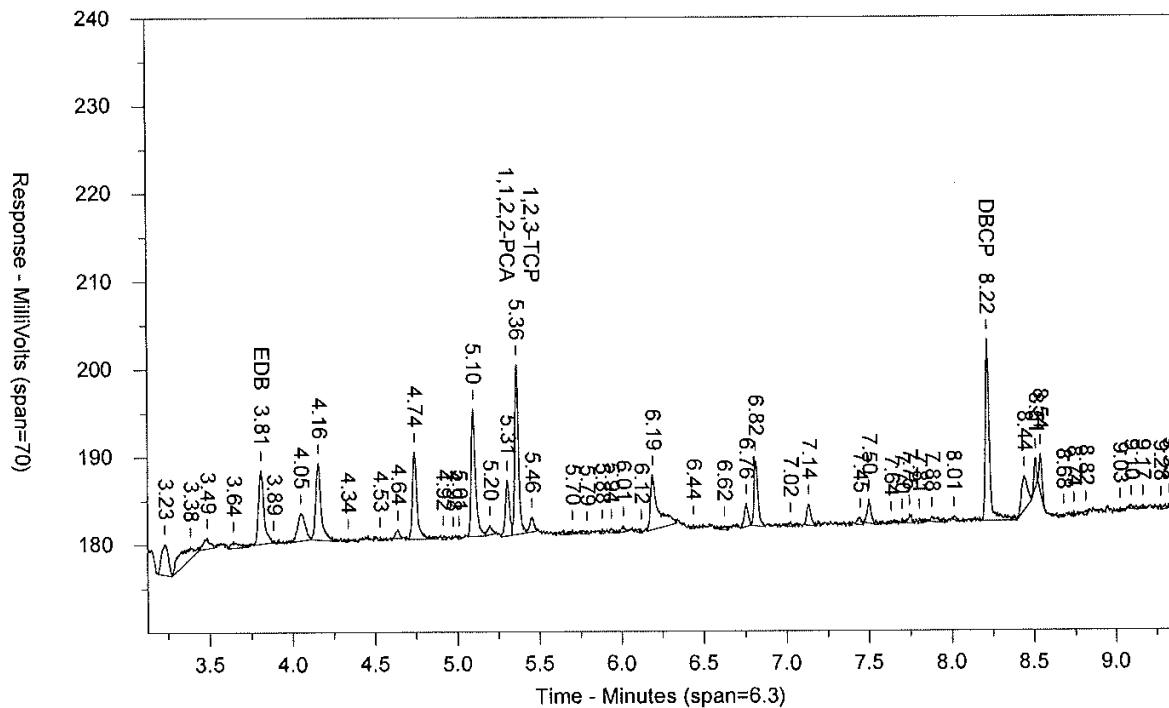
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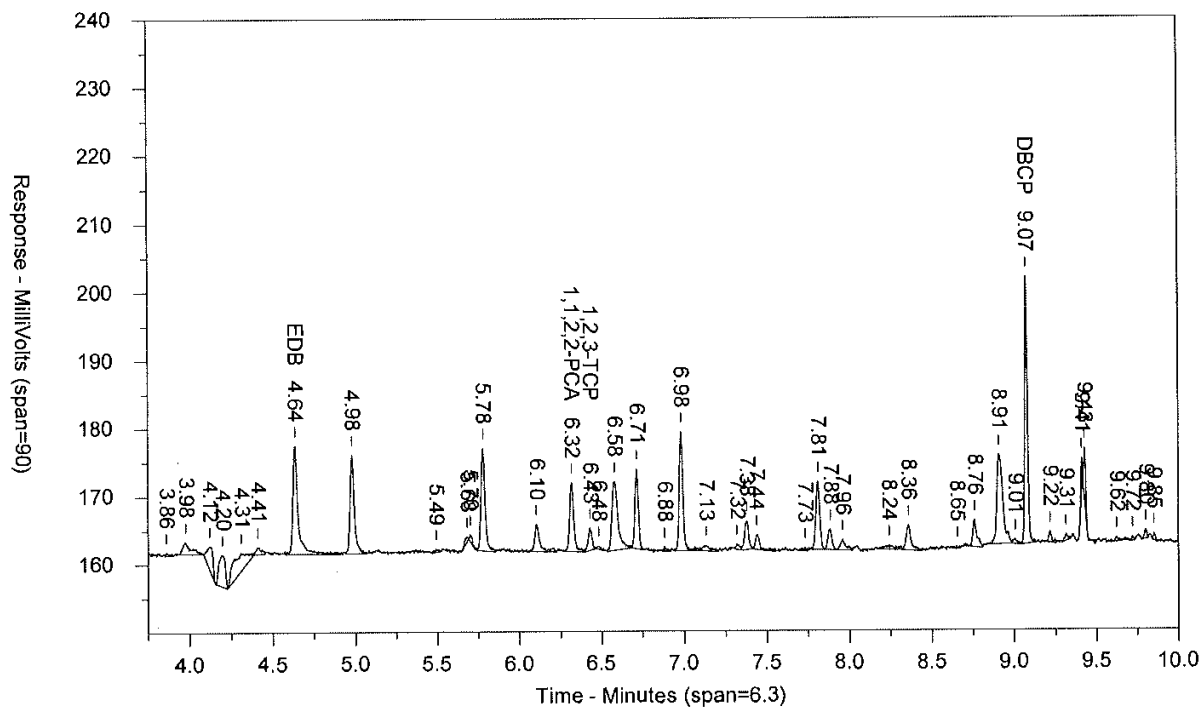
Chrom Perfect Chromatogram Report

EDB_220240 AAEDB_2AA ICAL 208699999 10398 SW-846 8011

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: EDB_220240 AAEDB_2AA ICAL 208699999 10398 Sample Weight: 1 SW-846 8011
 Injected On: 3/27/2020 6:32:34 PM Dilution Factor: 1
 Instrument ID: CP16-19853
 Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min
 Column A ID: DB CLP1 30m x 0.32mm x 0.25um
 Column B ID: DB CLP2 30m x 0.32mm x 0.5um
 Injection Volume: 1 ul

Threshold: 1
 Calibration Type: external
 Quantitation: Height

Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.81	8433	.658	EDB	4.637	15949	.671	EDB
5.306	6366	.328	1,1,2,2-PCA	6.317	10134	.337	1,1,2,2-PCA
5.455	1702	.639	1,2,3-TCP	6.429	3353	.722	1,2,3-TCP
8.218	20709	.73	DBCP	9.074	39305	.723	DBCP

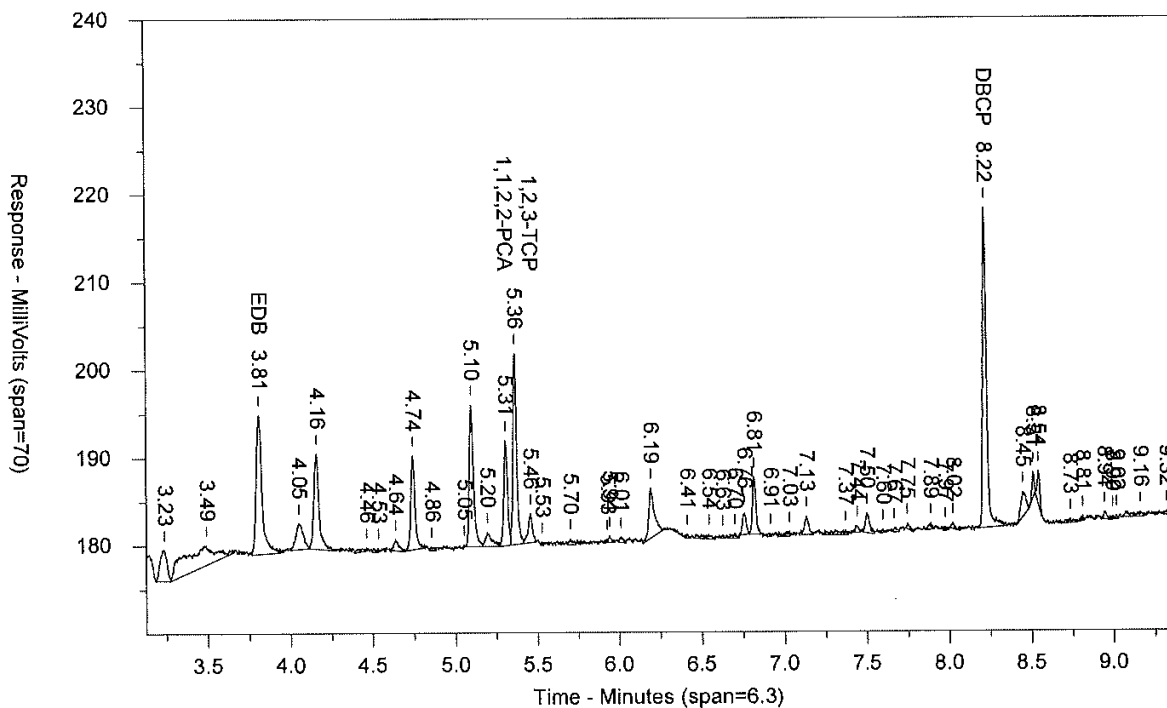
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 Calibration File B: 16EDBS2008701B.CAL
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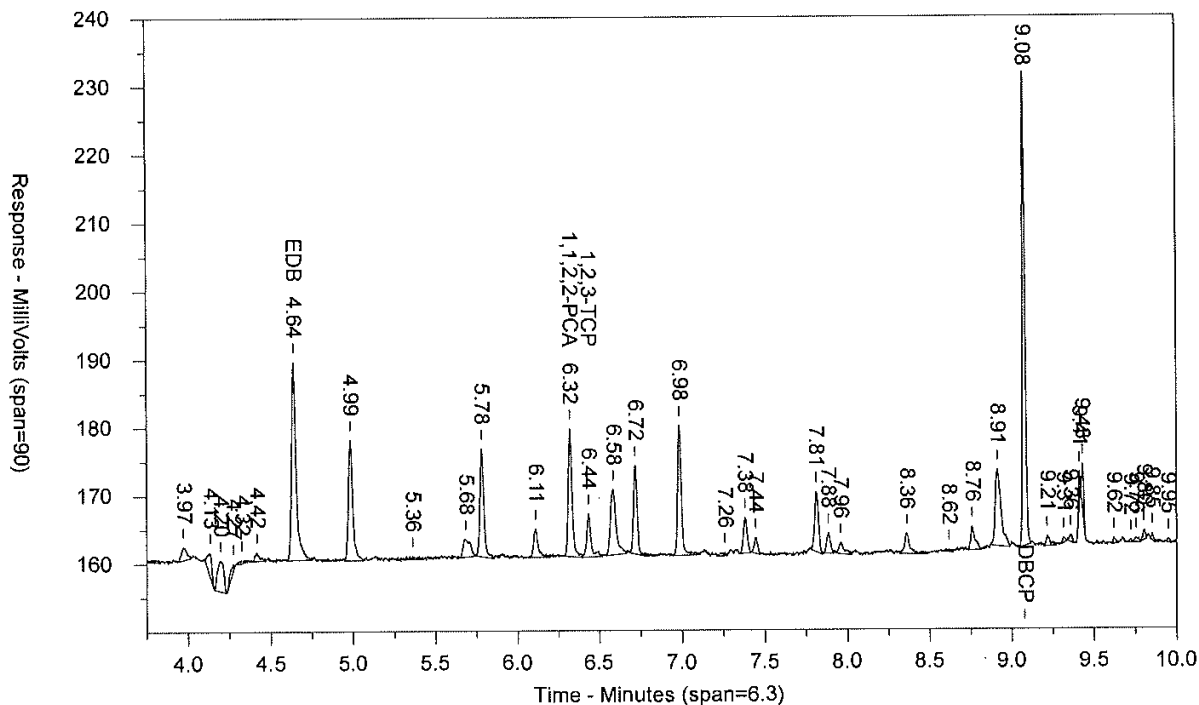
Chrom Perfect Chromatogram Report

EDB_32024X AAEDB_3AA ICAL 208699999 10398 SW-846 8011

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: EDB_32024X AAEDB_3AA ICAL 208699999 10398 SW-846 8011
 Injected On: 3/27/2020 6:49:21 PM Sample Weight: 1
 Instrument ID: CP16-19853 Dilution Factor: 1
 Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min
 Column A ID: DB CLP1 30m x 0.32mm x 0.25um
 Column B ID: DB CLP2 30m x 0.32mm x 0.5um
 Injection Volume: 1 ul

Threshold: 1
 Calibration Type: external
 Quantitation: Height

Analyst: 13378

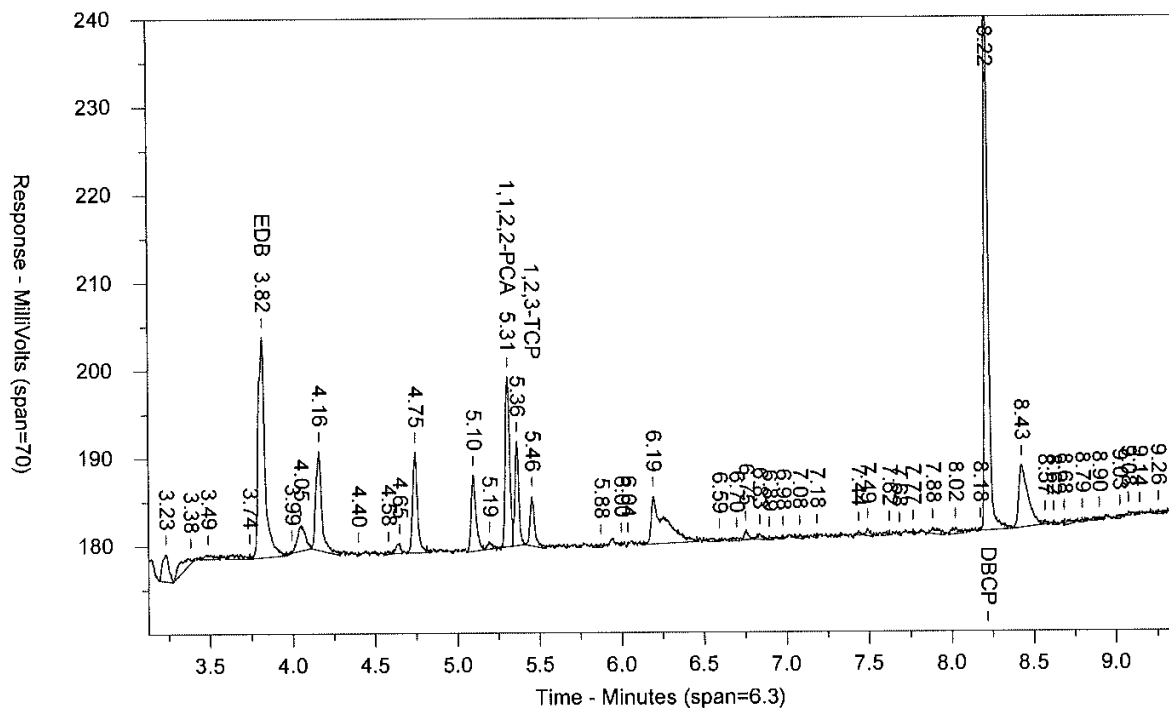
RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.81	15881	1.413	EDB	4.64	29187	1.356	EDB
5.306	12017	.665	1,1,2,2-PCA	6.321	18847	.626	1,1,2,2-PCA
5.457	3344	1.255	1,2,3-TCP	6.435	6412	1.38	1,2,3-TCP
8.219	36516	1.287	DBCP	9.076	69621	1.281	DBCP

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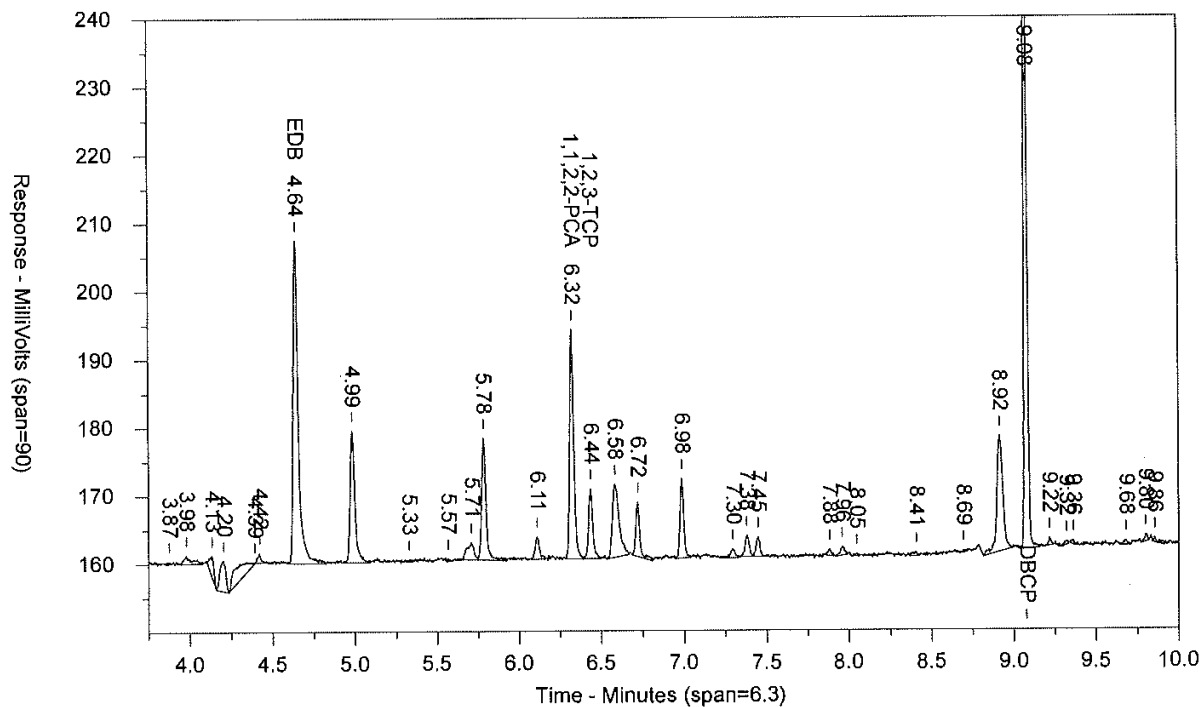
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 Format B: EDB16.FMTB
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Chrom Perfect Chromatogram Report

EDB_42024AB AAEDB_4AA ICAL 208699999 10398 SW-846 8011
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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: EDB_42024AB AAEDB_4AA ICAL 208699999 10398 SW-846 8011
 Injected On: 3/27/2020 7:06:10 PM Sample Weight: 1
 Instrument ID: CP16-19853 Dilution Factor: 1
 Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min
 Column A ID: DB CLP1 30m x 0.32mm x 0.25um
 Column B ID: DB CLP2 30m x 0.32mm x 0.5um
 Injection Volume: 1 ul

Threshold: 1
 Calibration Type: external
 Quantitation: Height

Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.817	25164	2.354	EDB	4.643	47508	2.305	EDB
5.307	19374	1.102	1,1,2,2-PCA	6.322	33724	1.12	1,1,2,2-PCA
5.456	5636	2.116	1,2,3-TCP	6.436	10249	2.206	1,2,3-TCP
8.218	68204	2.404	DBCP	9.076	131445	2.418	DBCP

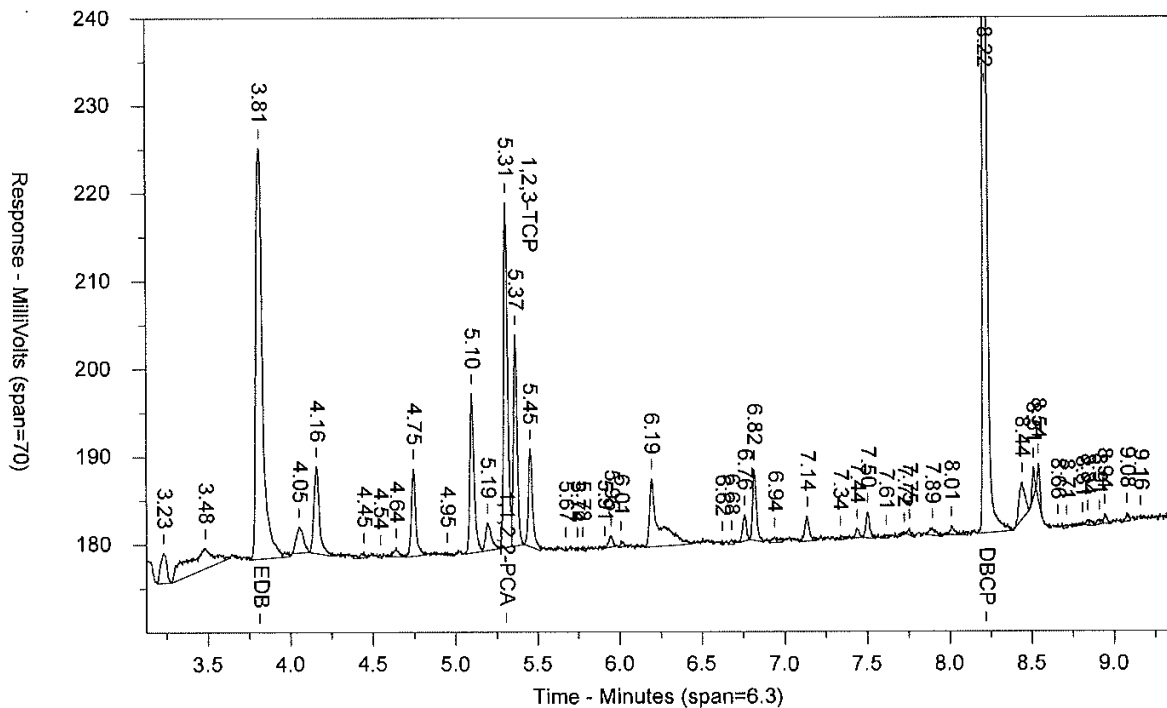
Files:

Area File: 16edbs20087001.006.RAW
 Area File: 16edbs20087001B.006.RAW
 Method A: 16EDBS.MET
 Method B: 16EDBSB.MET
 Calibration File A: 16EDBS2008701.CAL
 Calibration File B: 16EDBS2008701B.CAL
 Format A: EDB16.FMTA
 Format B: EDB16.FMTB
 Area File Created On: 3/27/2020 7:16:27 PM
 File Reported On: 3/28/2020 at 1:49:24 PM

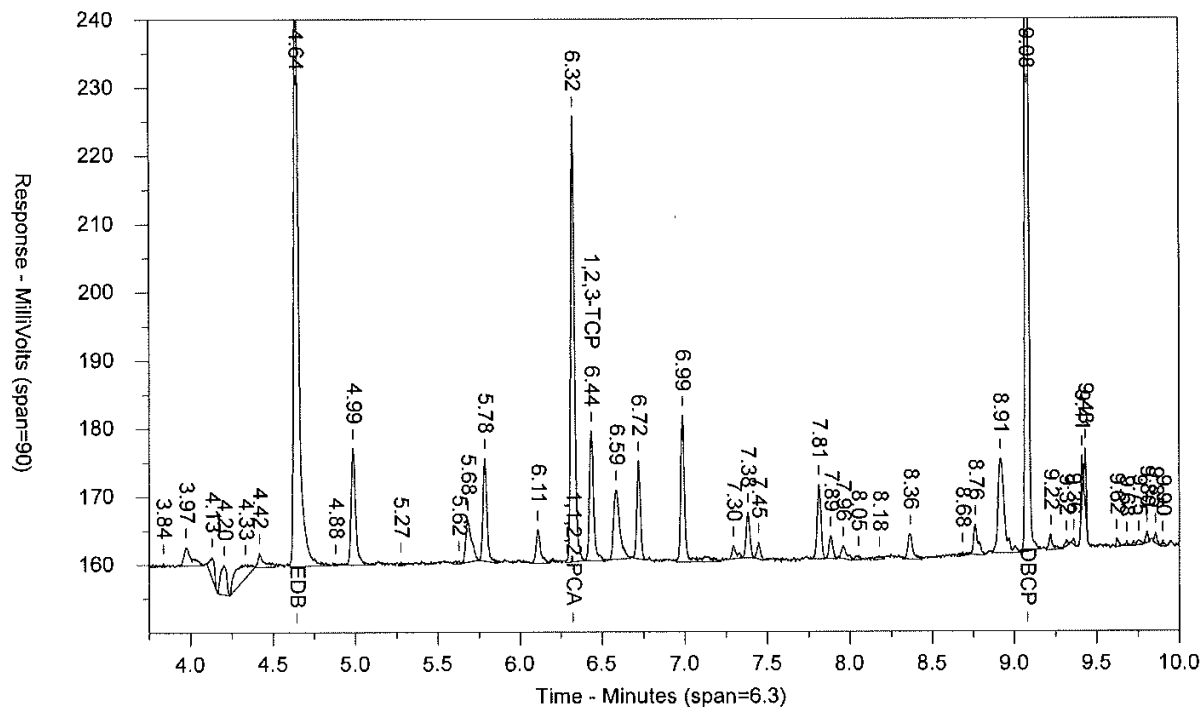
Chrom Perfect Chromatogram Report

EDB_520240 AAEDB_5AA ICAL 208699999 10398 SW-846 8011

\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20087001.007.RAW



\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20087001B.007.RAW



Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: EDB_520240 AAEDB_5AA ICAL 208699999 10398 SW-846 8011
 Injected On: 3/27/2020 7:23:00 PM Sample Weight: 1
 Instrument ID: CP16-19853 Dilution Factor: 1
 Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min
 Column A ID: DB CLP1 30m x 0.32mm x 0.25um
 Column B ID: DB CLP2 30m x 0.32mm x 0.5um
 Injection Volume: 1 ul

Threshold: 1
 Calibration Type: external
 Quantitation: Height

Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.813	46810	4.548	EDB	4.643	91214	4.567	EDB
5.307	39314	2.289	1,1,2,2-PCA	6.323	65468	2.175	1,1,2,2-PCA
5.455	11162	4.191	1,2,3-TCP	6.435	19071	4.104	1,2,3-TCP
8.219	120595	4.251	DBCP	9.077	227957	4.193	DBCP

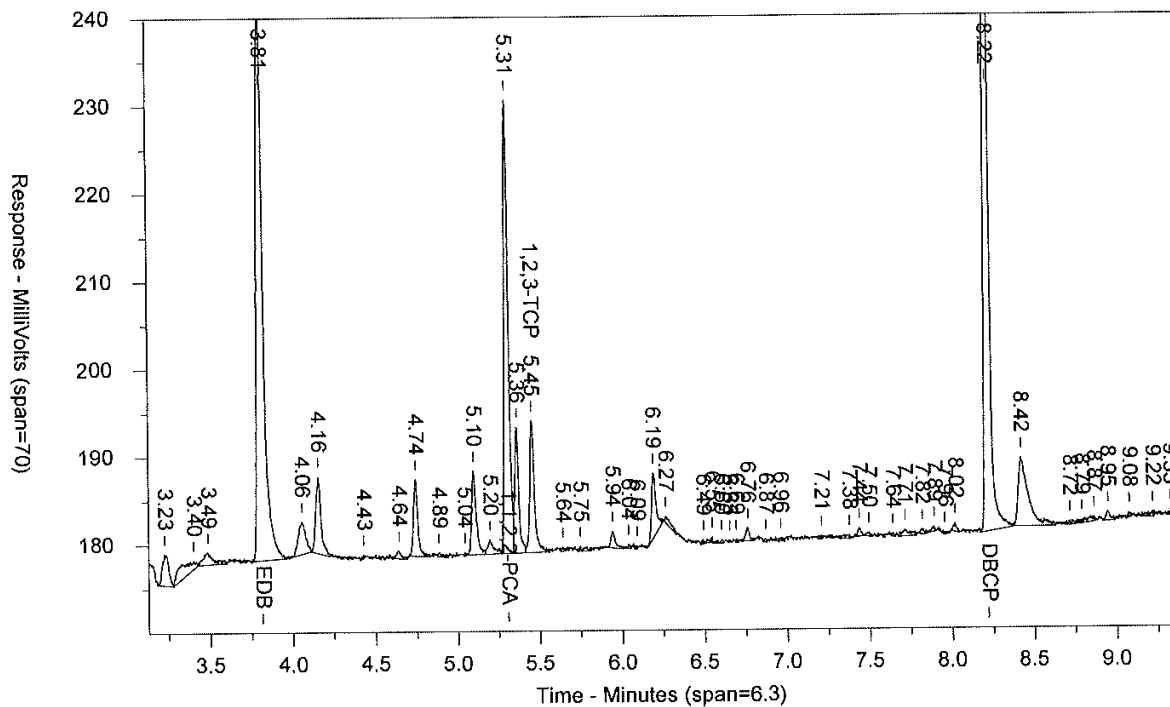
Files:

Area File: 16edbs20087001.007.RAW
 Area File: 16edbs20087001B.007.RAW
 Method A: 16EDBS.MET
 Method B: 16EDBSB.MET
 Calibration File A: 16EDBS2008701.CAL
 Calibration File B: 16EDBS2008701B.CAL
 Format A: EDB16.FMTA
 Format B: EDB16.FMTB
 Area File Created On: 3/27/2020 7:49:58 PM
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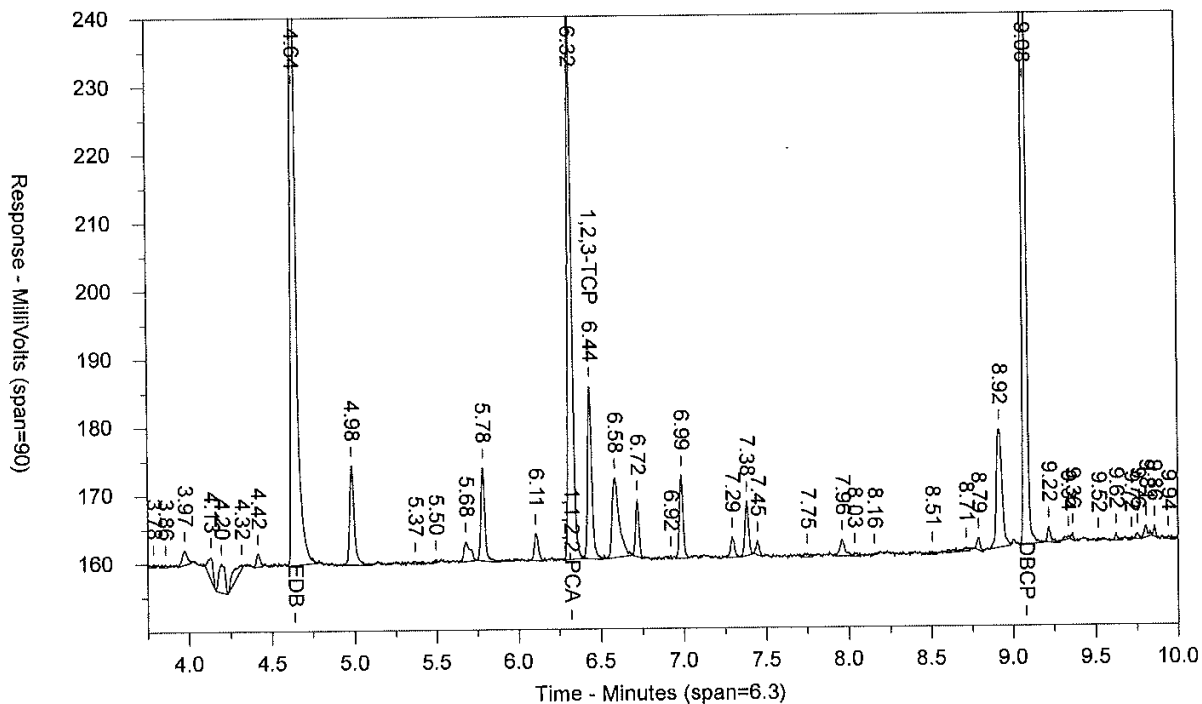
Chrom Perfect Chromatogram Report

EDB_620240 AAEDB_6AA ICAL 208699999 10398 SW-846 8011

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\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20087001B.008.RAW



Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: EDB_620240 AAEDB_6AA ICAL 208699999 10398 SW-846 8011
 Injected On: 3/27/2020 7:39:55 PM Sample Weight: 1
 Instrument ID: CP16-19853 Dilution Factor: 1
 Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min
 Column A ID: DB CLP1 30m x 0.32mm x 0.25um
 Column B ID: DB CLP2 30m x 0.32mm x 0.5um
 Injection Volume: 1 ul

Threshold: 1
 Calibration Type: external
 Quantitation: Height

Analyst: 13378

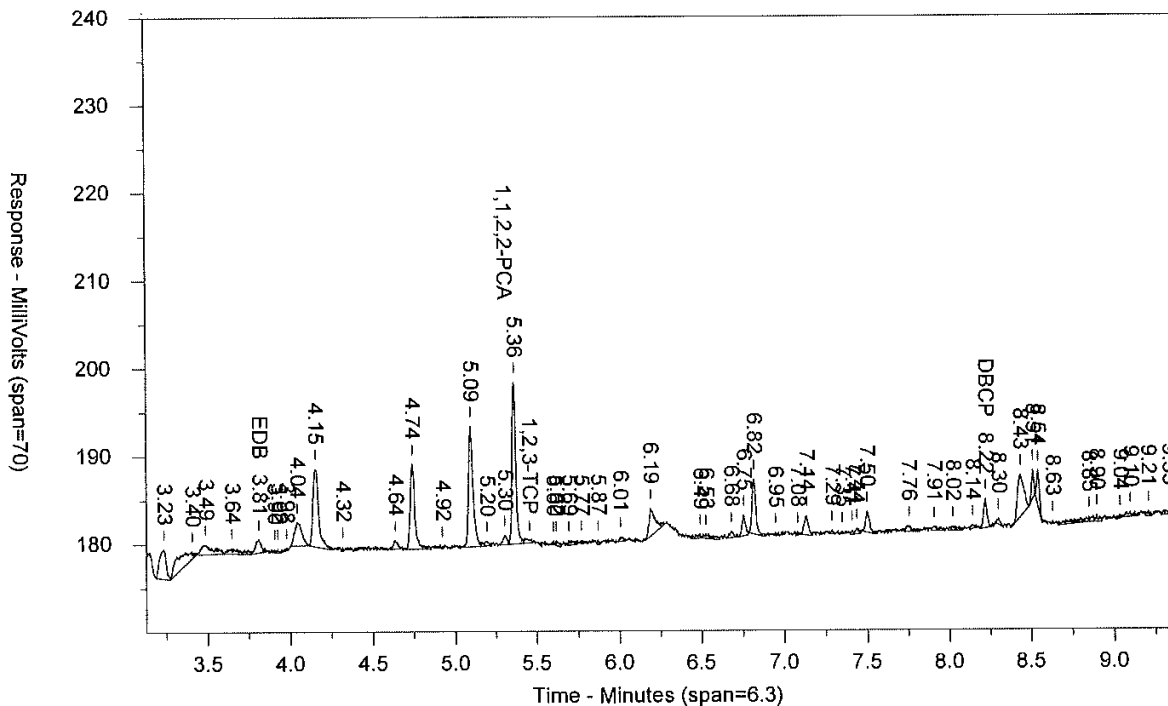
RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.813	62830	6.172	EDB	4.641	122479	6.185	EDB
5.307	51782	3.031	1,1,2,2-PCA	6.321	83866	2.786	1,1,2,2-PCA
5.453	15072	5.658	1,2,3-TCP	6.435	25333	5.452	1,2,3-TCP
8.219	155810	5.493	DBCP	9.077	308899	5.682	DBCP

Files:

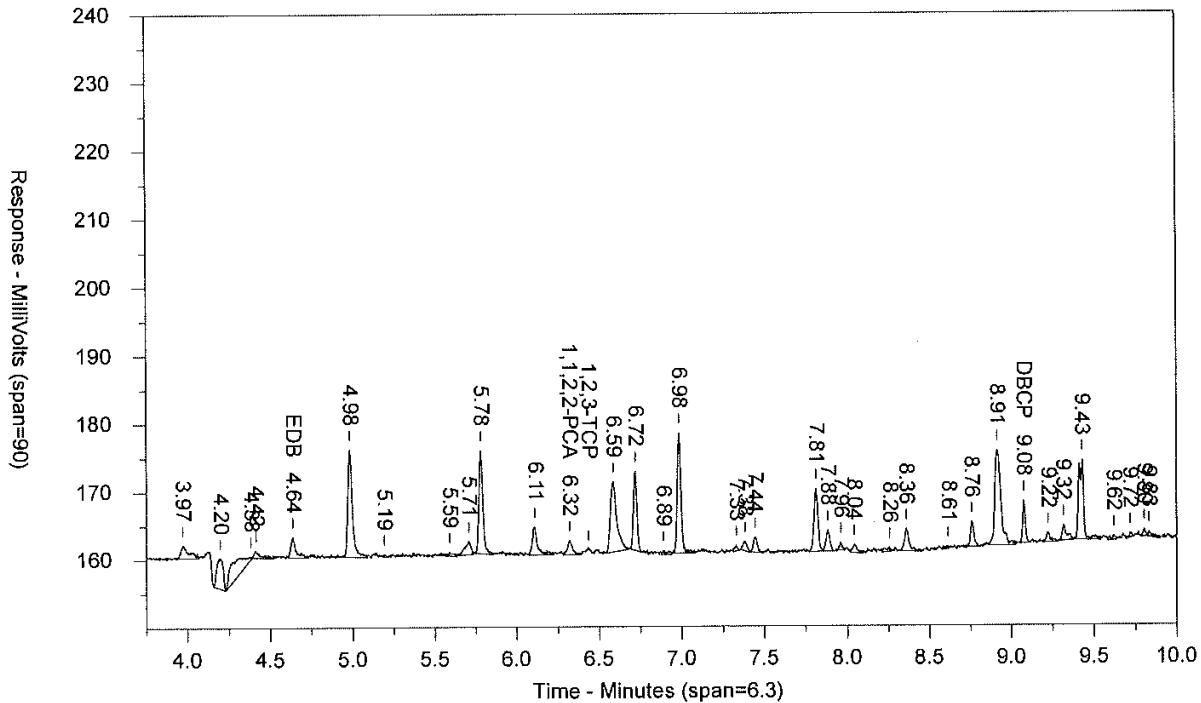
Area File: 16edbs20087001.008.RAW
 Area File: 16edbs20087001B.008.RAW
 Method A: 16EDBS.MET
 Method B: 16EDBSB.MET
 Calibration File A: 16EDBS2008701.CAL
 Calibration File B: 16EDBS2008701B.CAL
 Format A: EDB16.FMTA
 Format B: EDB16.FMTB
 Area File Created On: 3/27/2020 7:50:00 PM
 File Reported On: 3/28/2020 at 1:49:56 PM

Chrom Perfect Chromatogram Report

MDDEX2024R AAMEDXAA ICAL 208699999 10398 SW-846 8011
\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20087001.009.RAW



\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20087001B.009.RAW



Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: MDEDX2024R AAMDEDXAA ICAL 208699999 10398 SW-846 8011
Injected On: 3/27/2020 7:56:45 PM Sample Weight: 1
Instrument ID: CP16-19853 Dilution Factor: 1
Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min
Column A ID: DB CLP1 30m x 0.32mm x 0.25um
Column B ID: DB CLP2 30m x 0.32mm x 0.5um
Injection Volume: 1 ul

Threshold: 1
Calibration Type: external
Quantitation: Height

Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.81	1550	-.04	EDB	4.639	3007	.001	EDB
5.303	1101	.015	1,1,2,2-PCA	6.321	2114	.07	1,1,2,2-PCA
8.22	3341	.118	DBCP	9.076	6316	.116	DBCP

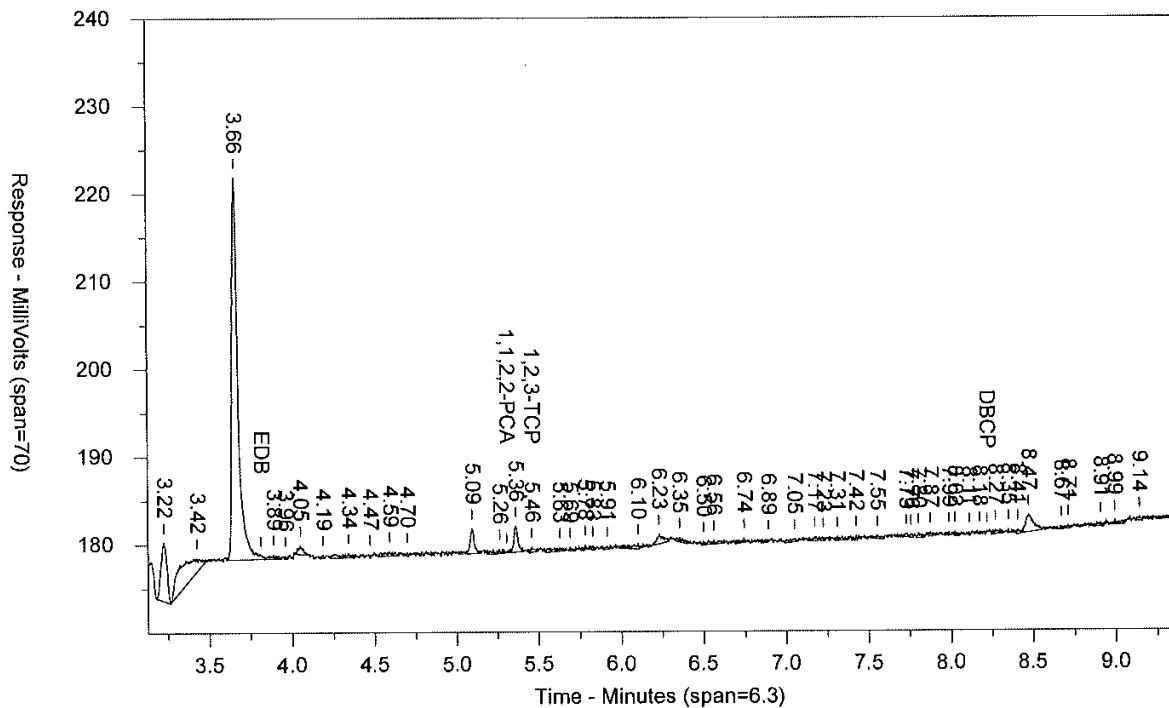
Files:

Area File: 16edbs20087001.009.RAW
Area File: 16edbs20087001B.009.RAW
Method A: 16EDBS.MET
Method B: 16EDBSB.MET
Calibration File A: 16EDBS2008701.CAL
Calibration File B: 16EDBS2008701B.CAL
Format A: EDB16.FMTA
Format B: EDB16.FMTB
Area File Created On: 3/27/2020 8:06:46 PM
File Reported On: 3/28/2020 at 1:52:06 PM

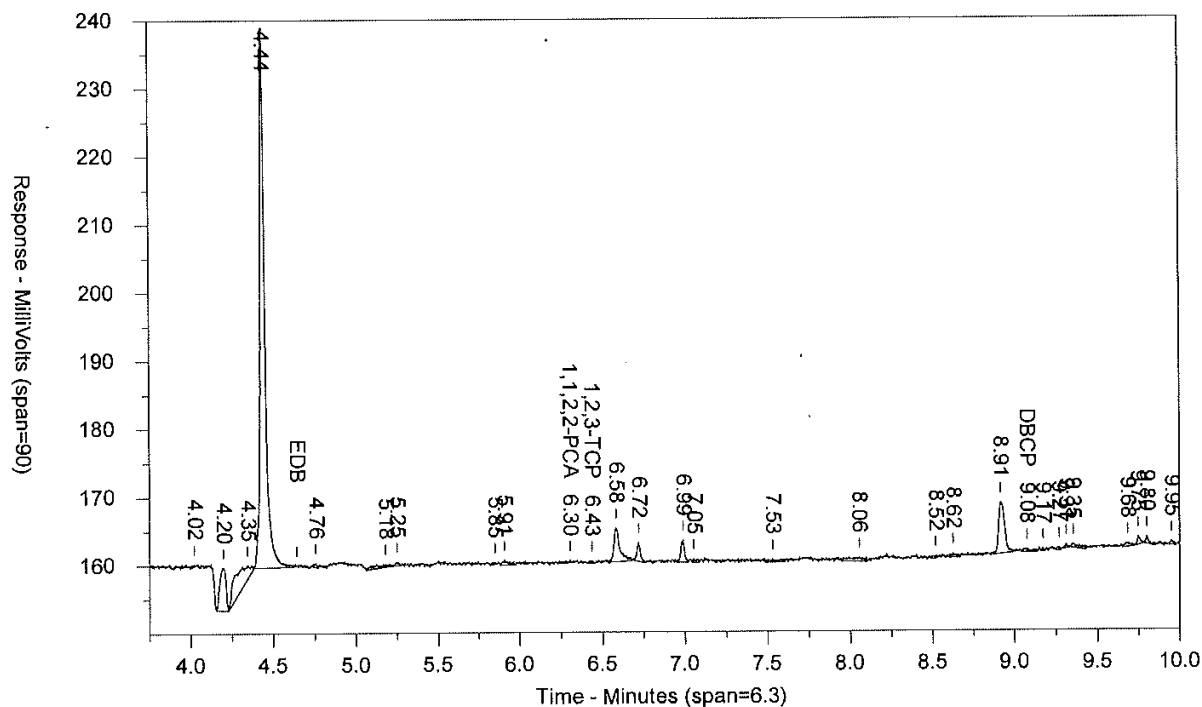
Chrom Perfect Chromatogram Report

DBCMX1924B AADBCMXAA MISC 208699999 10398 SW-846 8011

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\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20087001B.010.RAW



Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: DBCMX1924B AADBCMXAA MISC 208699999 10398 SW-846 8011
 Injected On: 3/27/2020 8:13:33 PM Sample Weight: 1
 Instrument ID: CP16-19853 Dilution Factor: 1
 Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min
 Column A ID: DB CLP1 30m x 0.32mm x 0.25um
 Column B ID: DB CLP2 30m x 0.32mm x 0.5um
 Injection Volume: 1 ul

Threshold: 1
 Calibration Type: external
 Quantitation: Height

Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
5.462	605	.227	1,2,3-TCP	6.434	416	.09	1,2,3-TCP
	0		1,1,2,2-PCA	6.303	408	.014	1,1,2,2-PCA
	0		DBCP	9.076	491	.009	DBCP

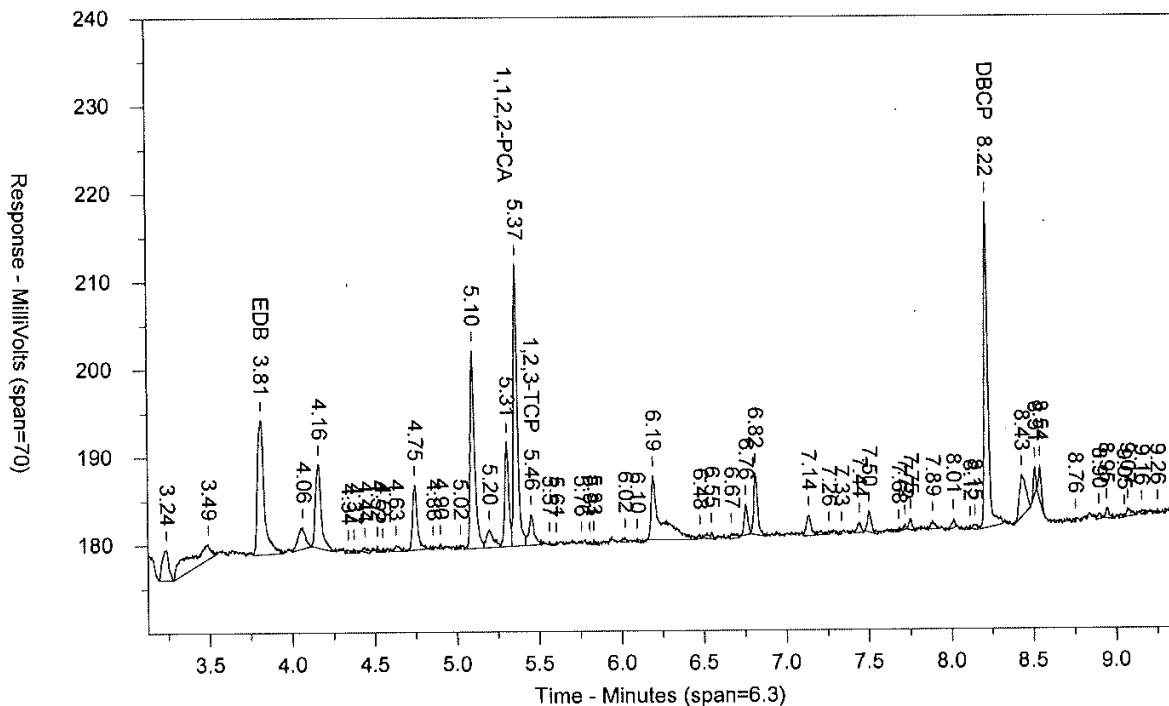
Files:

Area File: 16edbs20087001.010.RAW
 Area File: 16edbs20087001B.010.RAW
 Method A: 16EDBS.MET
 Method B: 16EDBSB.MET
 Calibration File A: 16EDBS2008701.CAL
 Calibration File B: 16EDBS2008701B.CAL
 Format A: EDB16.FMTA
 Format B: EDB16.FMTB
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 File Reported On: 3/28/2020 at 1:52:23 PM

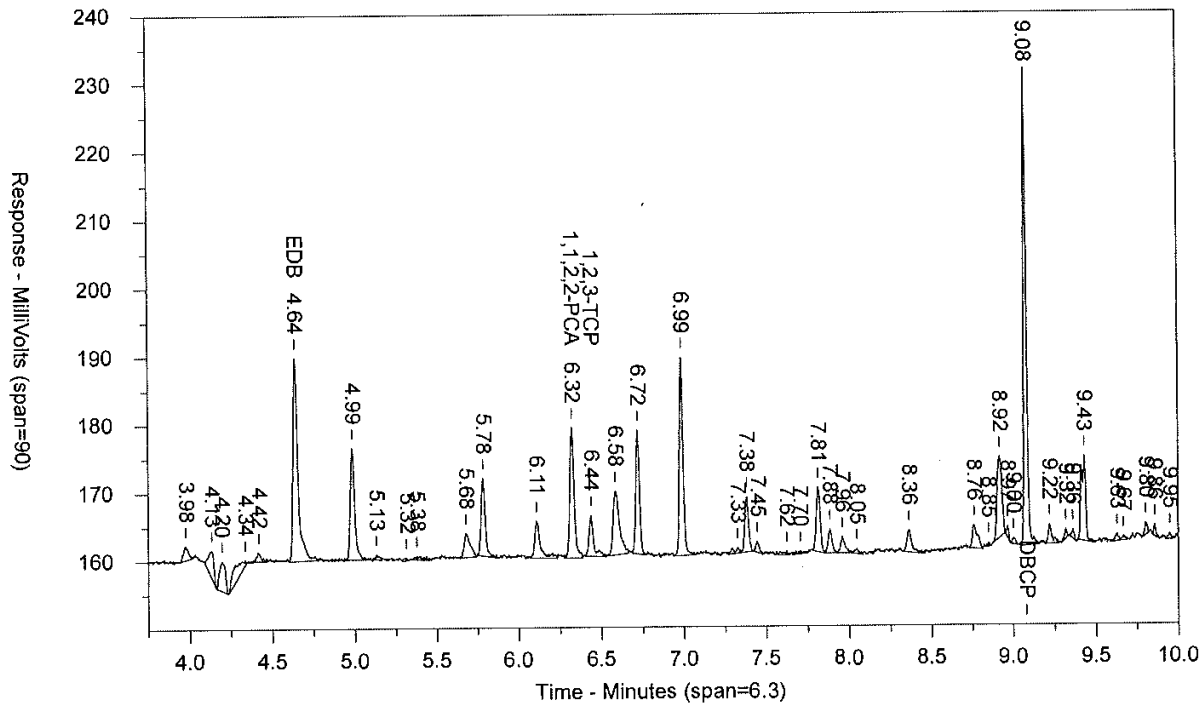
Chrom Perfect Chromatogram Report

ICEBX2024T FUICEBXFU CCAL 208699999 10398 SW-846 8011

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20087001.013.RAW



\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20087001B.013.RAW



Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: ICEBX2024T FUICEBXFU CCAL 208699999 10398 SW-846 8011
 Injected On: 3/27/2020 9:58:20 PM Sample Weight: 1
 Instrument ID: CP16-19853 Dilution Factor: 1
 Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min
 Column A ID: DB CLP1 30m x 0.32mm x 0.25um
 Column B ID: DB CLP2 30m x 0.32mm x 0.5um
 Injection Volume: 1 ul

Threshold: 1
 Calibration Type: external
 Quantitation: Height

Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.815	15312	1.355	EDB	4.641	29880	1.392	EDB
5.308	11940	.66	1,1,2,2-PCA	6.322	19179	.637	1,1,2,2-PCA
5.456	3519	1.321	1,2,3-TCP	6.437	6038	1.299	1,2,3-TCP
8.219	37267	1.314	DBCP	9.077	69760	1.283	DBCP

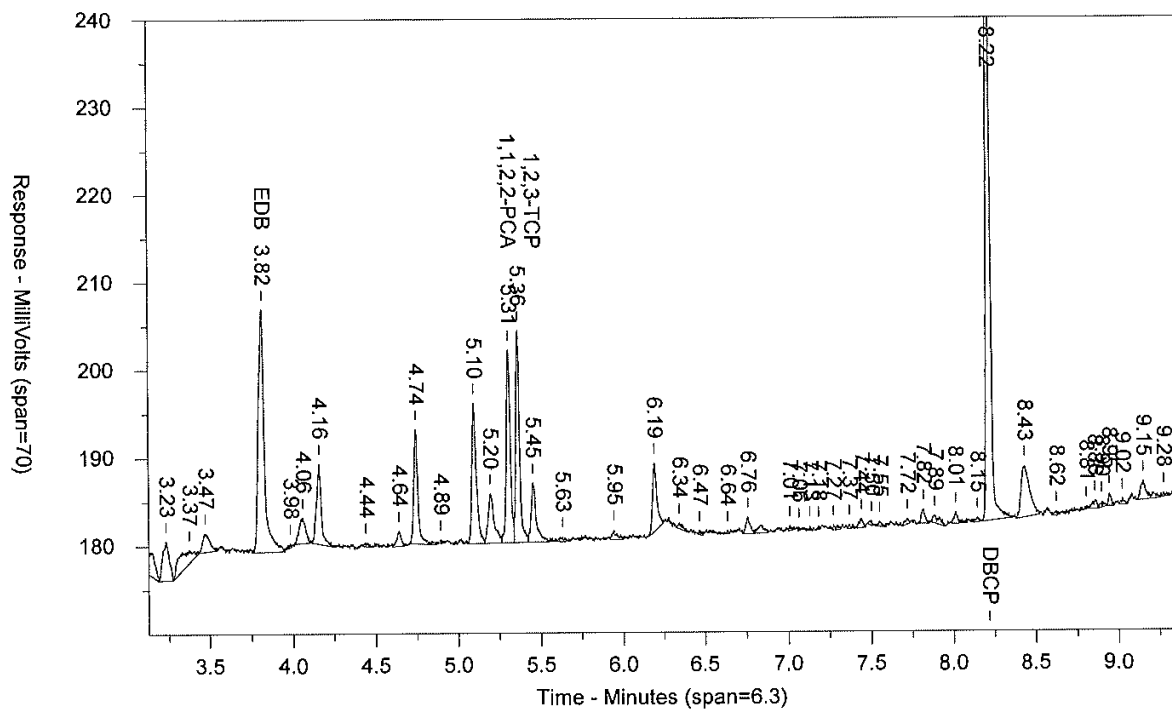
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Area File: 16edbs20087001.013.RAW
 Area File: 16edbs20087001B.013.RAW
 Method A: 16EDBS.MET
 Method B: 16EDBSB.MET
 Calibration File A: 16EDBS2008701.CAL
 Calibration File B: 16EDBS2008701B.CAL
 Format A: EDB16.FMTA
 Format B: EDB16.FMTB
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 File Reported On: 3/28/2020 at 1:53:04 PM

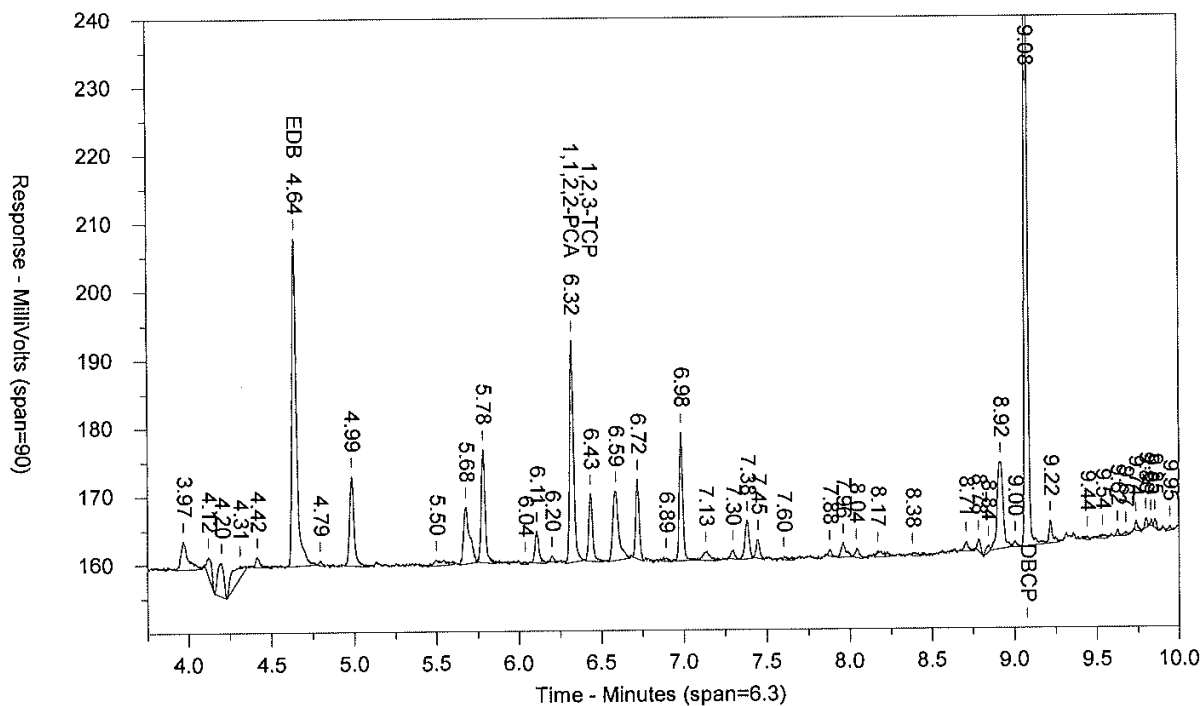
Chrom Perfect Chromatogram Report

EDB_42024AD ACEDB_4AC CCAL 209799999 10398 SW-846 8011

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20087005.014.RAW



\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20087005B.014.RAW



Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: EDB_42024AD ACEDB_4AC CCAL 209799999 10398 SW-846 8011
Injected On: 4/7/2020 9:06:50 PM Sample Weight: 1
Instrument ID: CP16-19853 Dilution Factor: 1
Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min
Column A ID: DB CLP1 30m x 0.32mm x 0.25um
Column B ID: DB CLP2 30m x 0.32mm x 0.5um
Injection Volume: 1 ul

Threshold: 1
Calibration Type: external
Quantitation: Height

Analyst: 2306

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.816	27659	2.607	EDB	4.642	48056	2.333	EDB
5.308	21980	1.257	1,1,2,2-PCA	6.32	32655	1.085	1,1,2,2-PCA
5.454	6762	2.539	1,2,3-TCP	6.433	9909	2.132	1,2,3-TCP
8.218	86215	3.039	DBCP	9.076	149094	2.743	DBCP

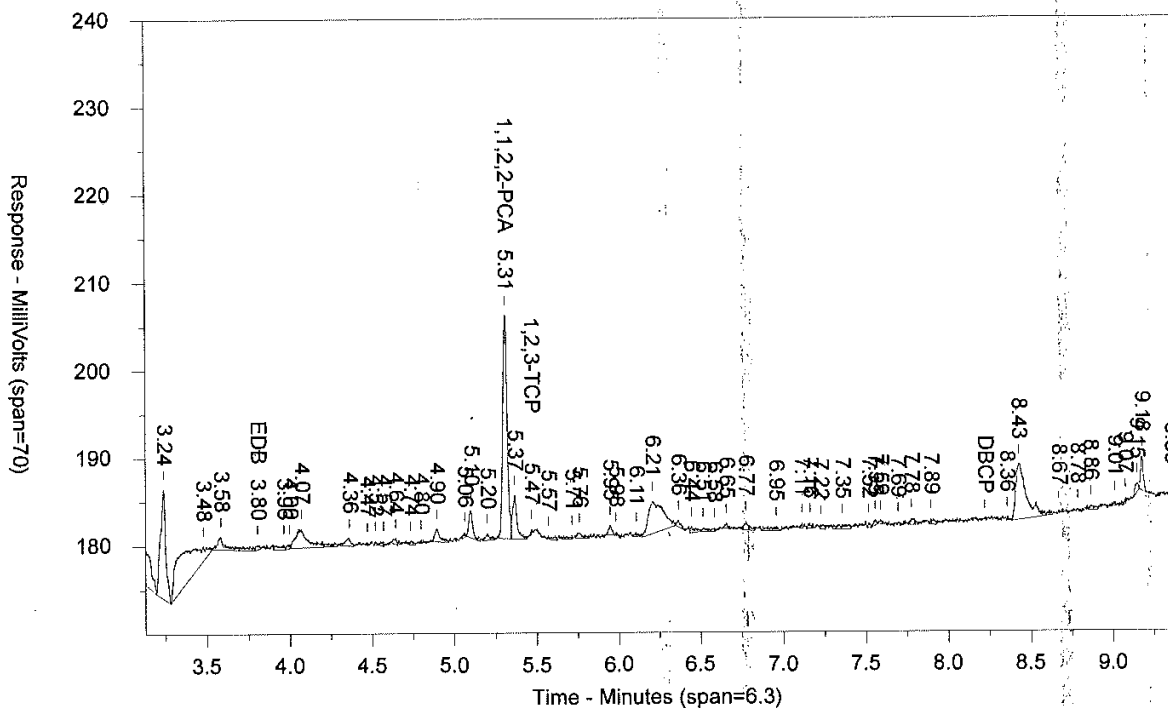
Files:

Area File: 16edbs20087005.014.RAW
Area File: 16edbs20087005B.014.RAW
Method A: 16EDBS.MET
Method B: 16EDBSB.MET
Calibration File A: 16EDBS2008701.CAL
Calibration File B: 16EDBS2008701B.CAL
Format A: EDB16.FMTA
Format B: EDB16.FMTB
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File Reported On: 4/7/2020 at 9:22:49 PM

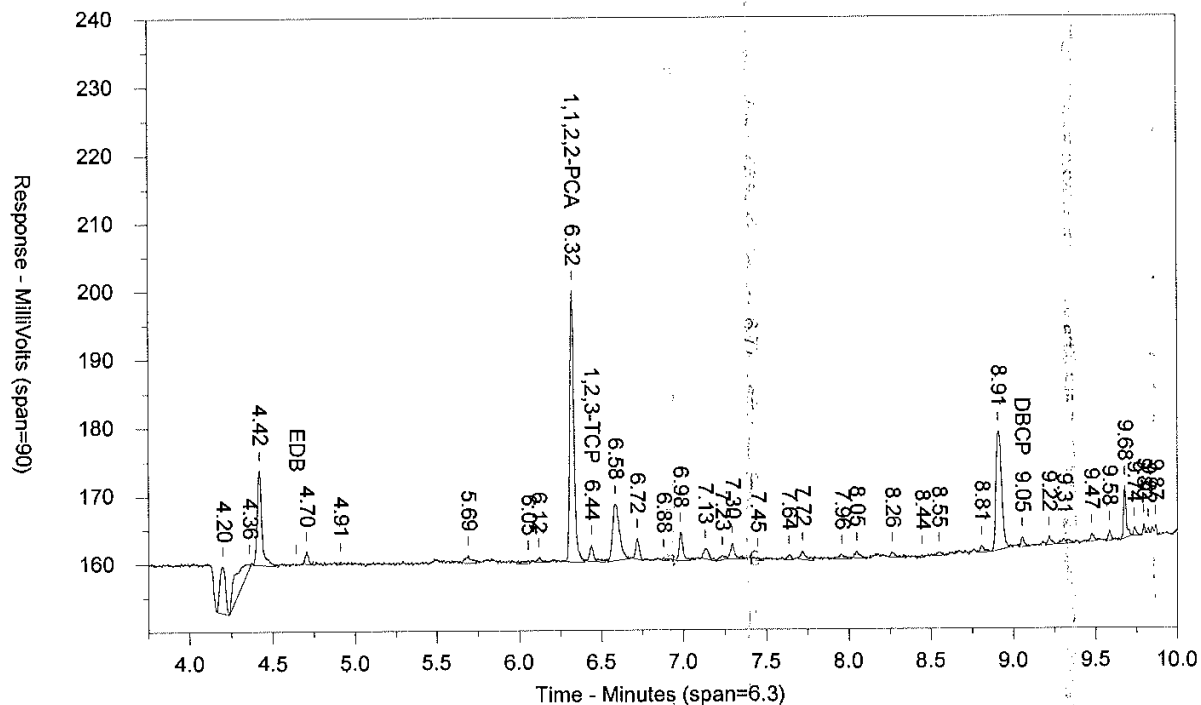
Chrom Perfect Chromatogram Report

EIBKX2024A COPIBLKCO PIBLK209799999 10398 SW-846 8011

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\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20087005B.015.RAW



Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: EIBKX2024A COPIBLKCO PIBLK209799999 10398
 Injected On: 4/7/2020 9:23:40 PM
 Instrument ID: CP16-19853
 Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min
 Column A ID: DB CLP1 30m x 0.32mm x 0.25um
 Column B ID: DB CLP2 30m x 0.32mm x 0.5um
 Injection Volume: 1 ul

Sample Weight: 35
 Dilution Factor: 2

SW-846 8011

Threshold: 1
 Calibration Type: external
 Quantitation: Height

Analyst: 2306

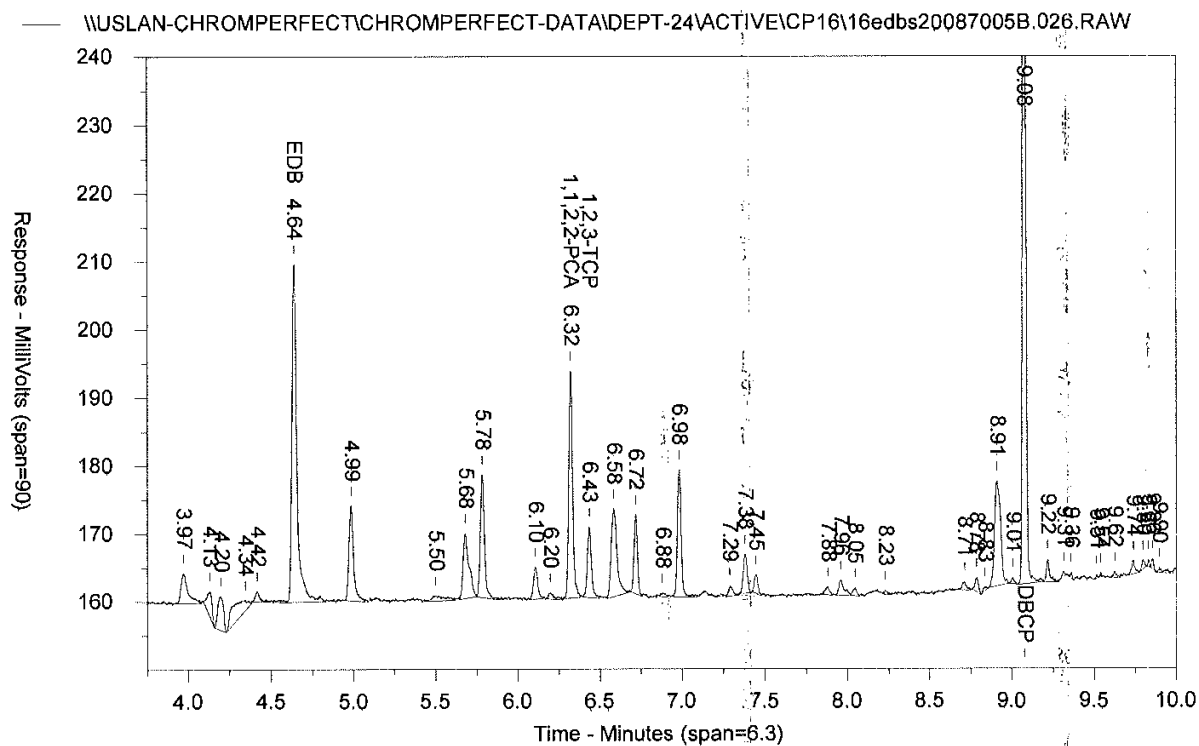
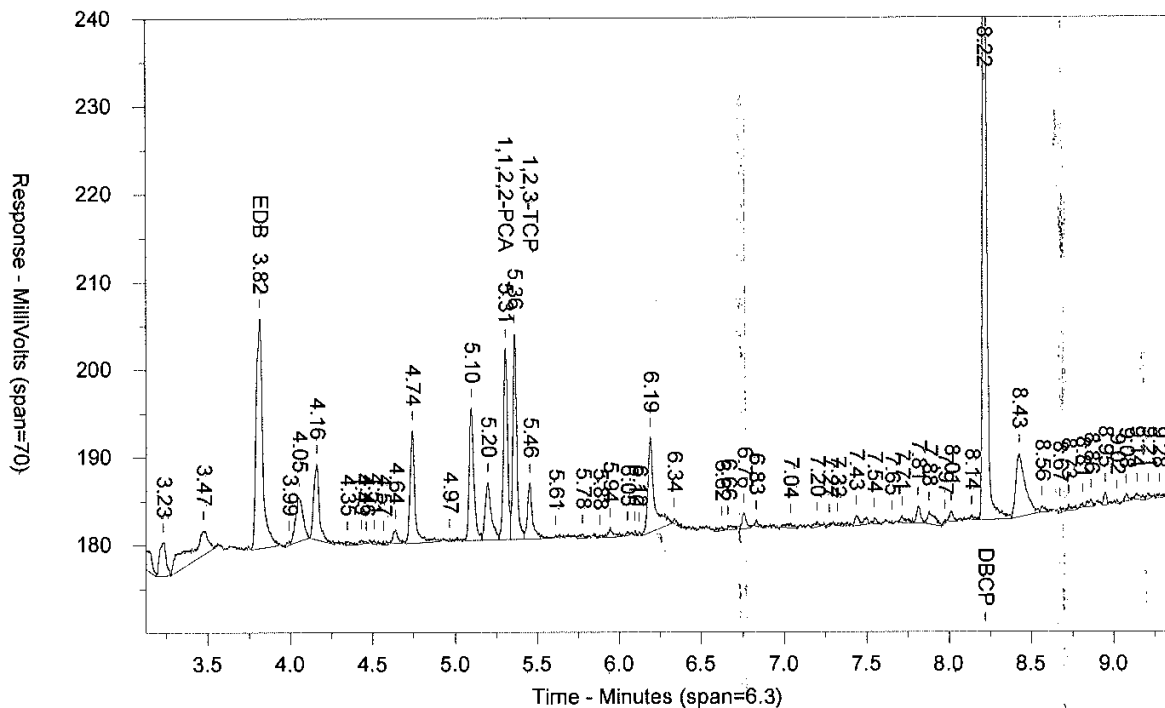
RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.803	563	-.008	EDB	6.322	0	0	EDB
5.311	25488	.084	1,1,2,2-PCA	6.438	39913	.076	1,1,2,2-PCA
5.467	603	.013	1,2,3-TCP	9.054	2447	.03	1,2,3-TCP
	0		DBCP		1553	.002	DBCP

Files:

Area File: 16edbs20087005.015.RAW
 Area File: 16edbs20087005B.015.RAW
 Method A: 16EDBS.MET
 Method B: 16EDBSB.MET
 Calibration File A: 16EDBS2008701.CAL
 Calibration File B: 16EDBS2008701B.CAL
 Format A: EDB16.FMTA
 Format B: EDB16.FMTB
 Area File Created On: 4/7/2020 9:33:44 PM
 File Reported On: 4/8/2020 at 7:01:52 AM

Chrom Perfect Chromatogram Report

EDB_42024AD ADEDB_4AD CCAL 209799999 10398 SW-846 8011
\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20087005.026.RAW



Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: EDB_42024AD ADEDB_4AD CCAL 209799999 10398 SW:846 8011
 Injected On: 4/8/2020 12:28:48 AM
 Instrument ID: CP16-19853 Sample Weight: 1
 Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min Dilution Factor: 1
 Column A ID: DB CLP1 30m x 0.32mm x 0.25um
 Column B ID: DB CLP2 30m x 0.32mm x 0.5um
 Injection Volume: 1 ul

Threshold: 1
 Calibration Type: external
 Quantitation: Height

Analyst: 2306

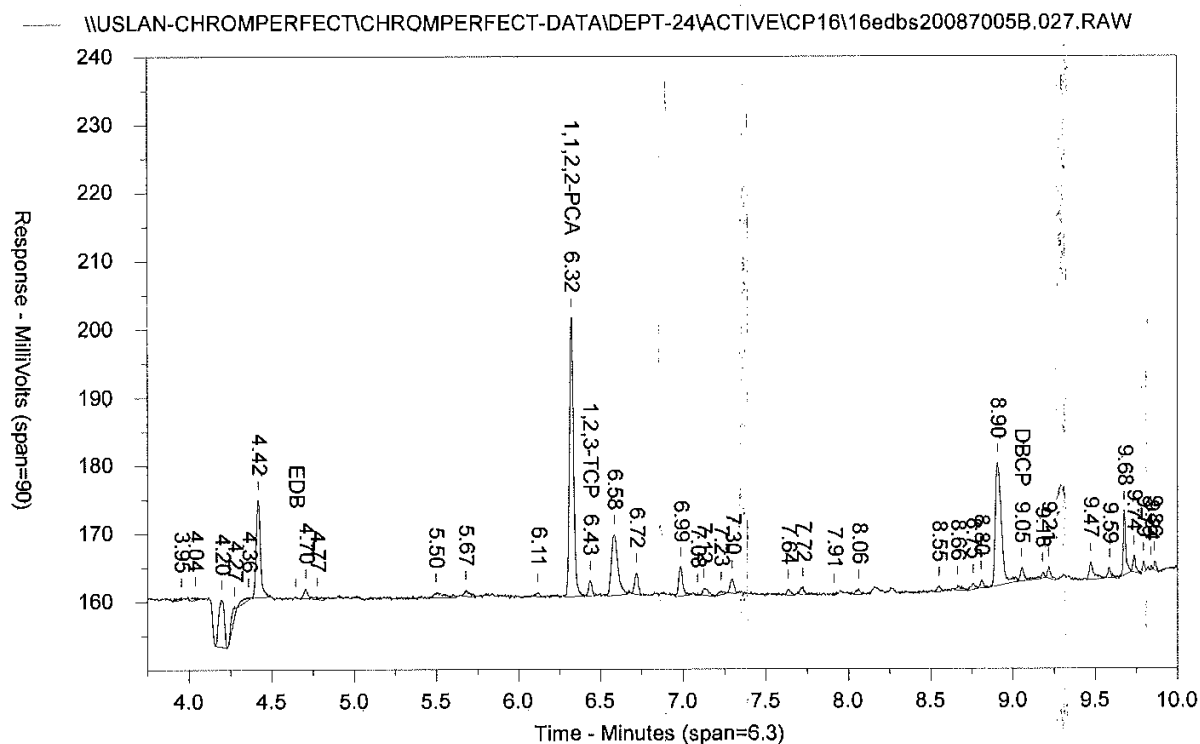
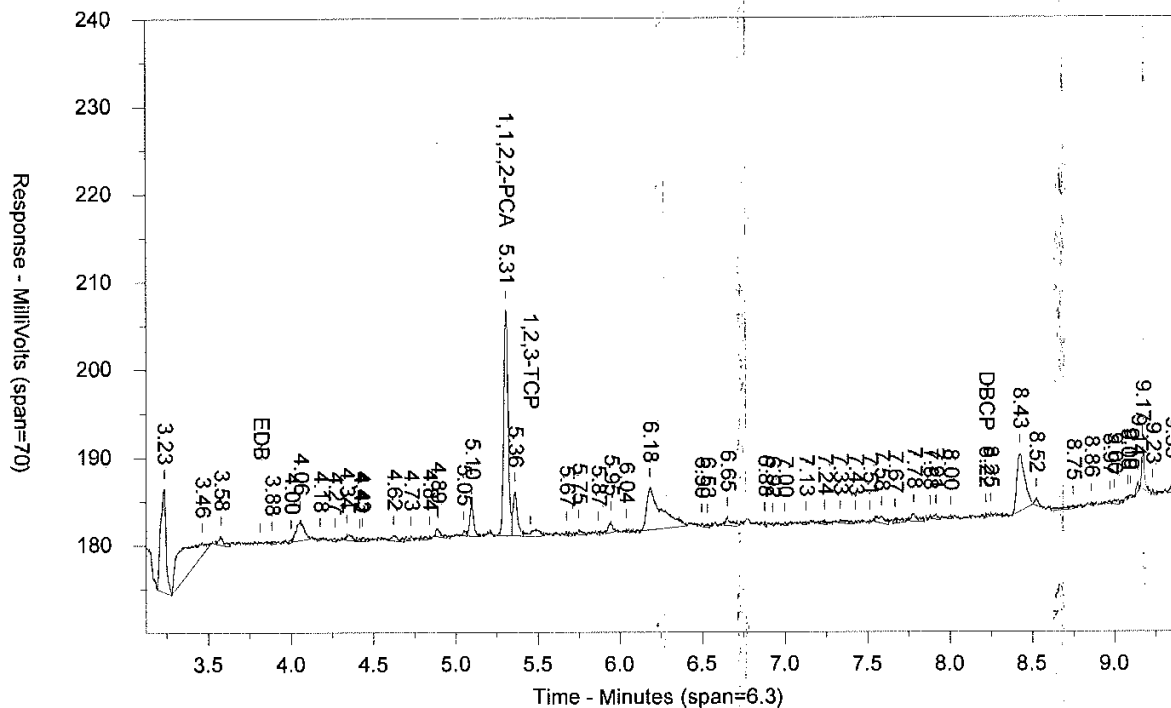
RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.815	26240	2.463	EDB	4.64	49835	2.425	EDB
5.306	21827	1.248	1,1,2,2-PCA	6.32	33525	1.114	1,1,2,2-PCA
5.456	6385	2.397	1,2,3-TCP	6.433	10435	2.246	1,2,3-TCP
8.218	94213	3.321	DBCP	9.075	164327	3.023	DBCP

Files:

Area File: 16edbs20087005.026.RAW
 Area File: 16edbs20087005B.026.RAW
 Method A: 16EDBS.MET
 Method B: 16EDBSB.MET
 Calibration File A: 16EDBS2008701.CAL
 Calibration File B: 16EDBS2008701B.CAL
 Format A: EDB16.FMTA
 Format B: EDB16.FMTB
 Area File Created On: 4/8/2020 12:38:50 AM
 File Reported On: 4/8/2020 at 7:04:54 AM

Chrom Perfect Chromatogram Report

EIBKX2024A CPPIBLKCP PIBLK209799999 10398 SW-846 8011
\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20087005.027.RAW



Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: EIBKX2024A CPP1BLKCP PIBLK209799999 10398 SW-846 8011
Injected On: 4/8/2020 12:45:34 AM Sample Weight: 35
Instrument ID: CP16-19853 Dilution Factor: 2
Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min
Column A ID: DB CLP1 30m x 0.32mm x 0.25um
Column B ID: DB CLP2 30m x 0.32mm x 0.5um
Injection Volume: 1 ul

Threshold: 1
Calibration Type: external
Quantitation: Height

Analyst: 2306

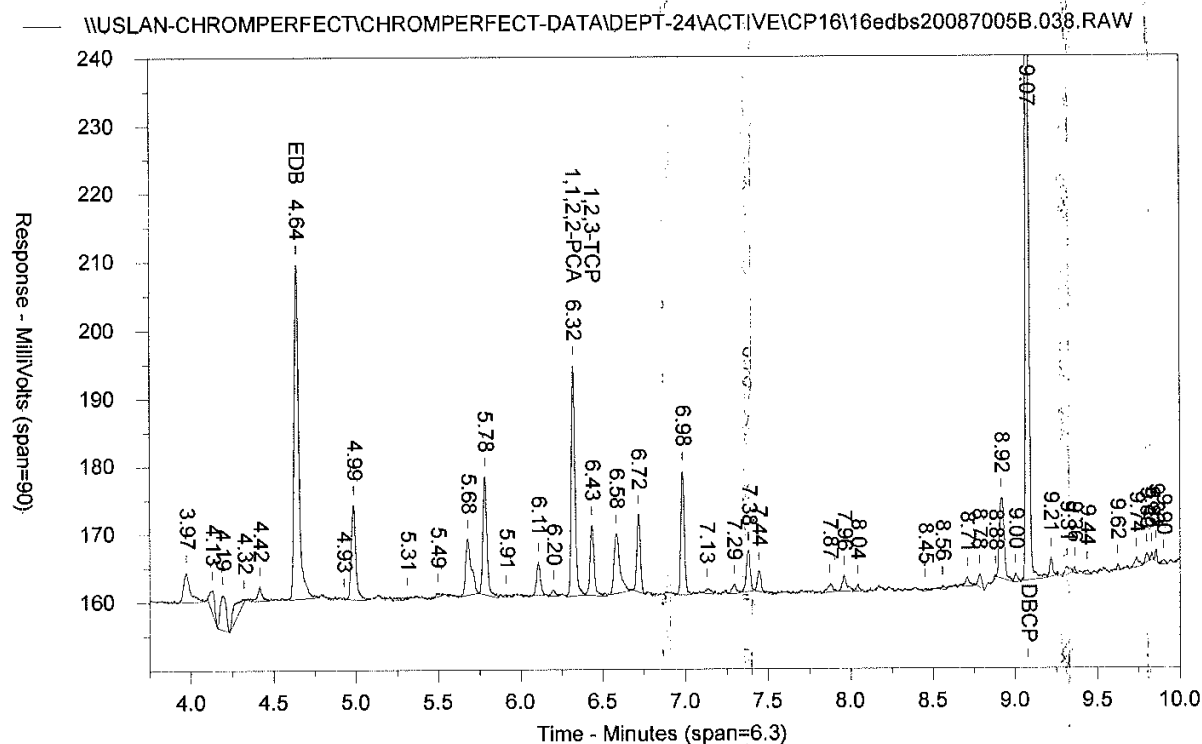
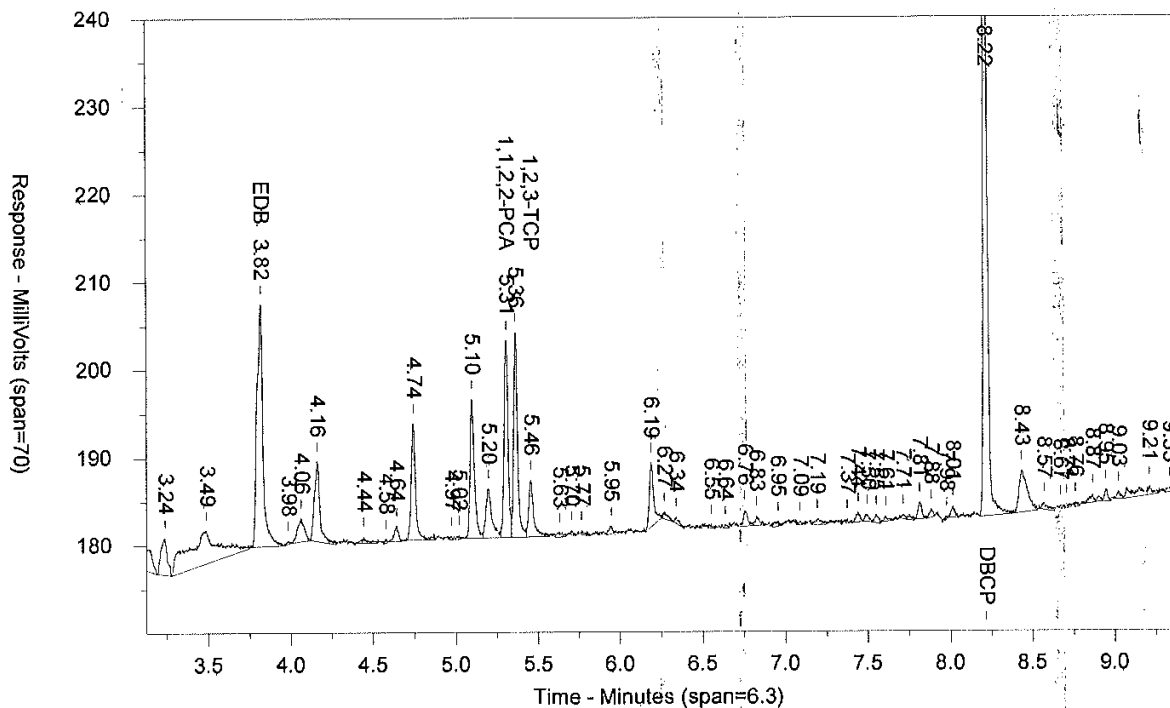
RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
5.307	25782	.085	1,1,2,2-PCA	6.32	41070	.078	1,1,2,2-PCA
	0		1,2,3-TCP	6.433	2375	.029	1,2,3-TCP
8.217	604	.001	DBCP	9.053	1994	.002	DBCP

Files:

Area File: 16edbs20087005.027.RAW
Area File: 16edbs20087005B.027.RAW
Method A: 16EDBS.MET
Method B: 16EDBSB.MET
Calibration File A: 16EDBS2008701.CAL
Calibration File B: 16EDBS2008701B.CAL
Format A: EDB16.FMTA
Format B: EDB16.FMTB
Area File Created On: 4/8/2020 12:55:37 AM
File Reported On: 4/8/2020 at 7:05:10 AM

Chrom Perfect Chromatogram Report

EDB_42024AD AEEDB_4AE CCAL 209799999 10398 SW-846 8011
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Printed on 4/8/2020 7:08:16 AM

Page 1 of 2

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: EDB_42024AD AEEDB_4AE CCAL 209799999

10398

SW-846 8011

Injected On: 4/8/2020 3:50:34 AM

Sample Weight: 1

Instrument ID: CP16-19853

Dilution Factor: 1

Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min

Column A ID: DB CLP1 30m x 0.32mm x 0.25um

Column B ID: DB CLP2 30m x 0.32mm x 0.5um

Injection Volume: 1 ul

Threshold: 1

Calibration Type: external

Quantitation: Height

Analyst: 2306

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.818	27671	2.608	EDB	4.641	49188	2.392	EDB
5.306	22531	1.29	1,1,2,2-PCA	6.32	34022	1.13	1,1,2,2-PCA
5.456	6549	2.459	1,2,3-TCP	6.433	10316	2.22	1,2,3-TCP
8.217	93518	3.297	DBCP	9.075	158960	2.924	DBCP

Files:

Area File: 16edbs20087005.038.RAW

Area File: 16edbs20087005B.038.RAW

Method A: 16EDBS.MET

Method B: 16EDBSB.MET

Calibration File A: 16EDBS2008701.CAL

Calibration File B: 16EDBS2008701B.CAL

Format A: EDB16.FMTA

Format B: EDB16.FMTB

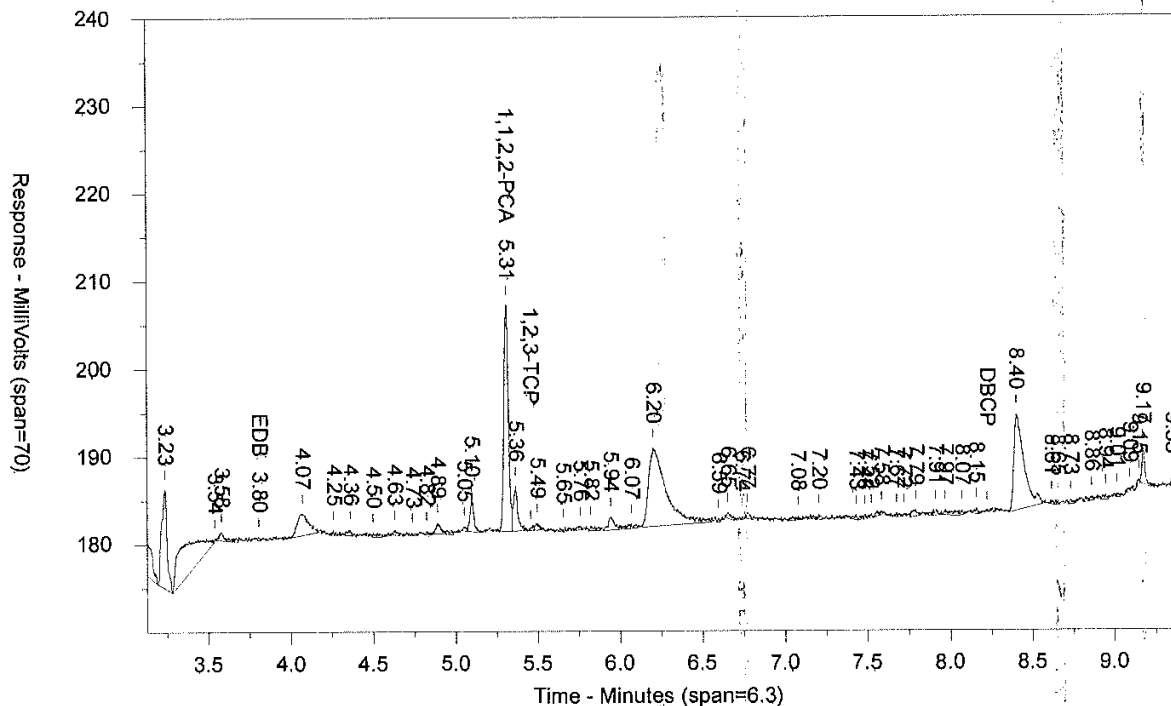
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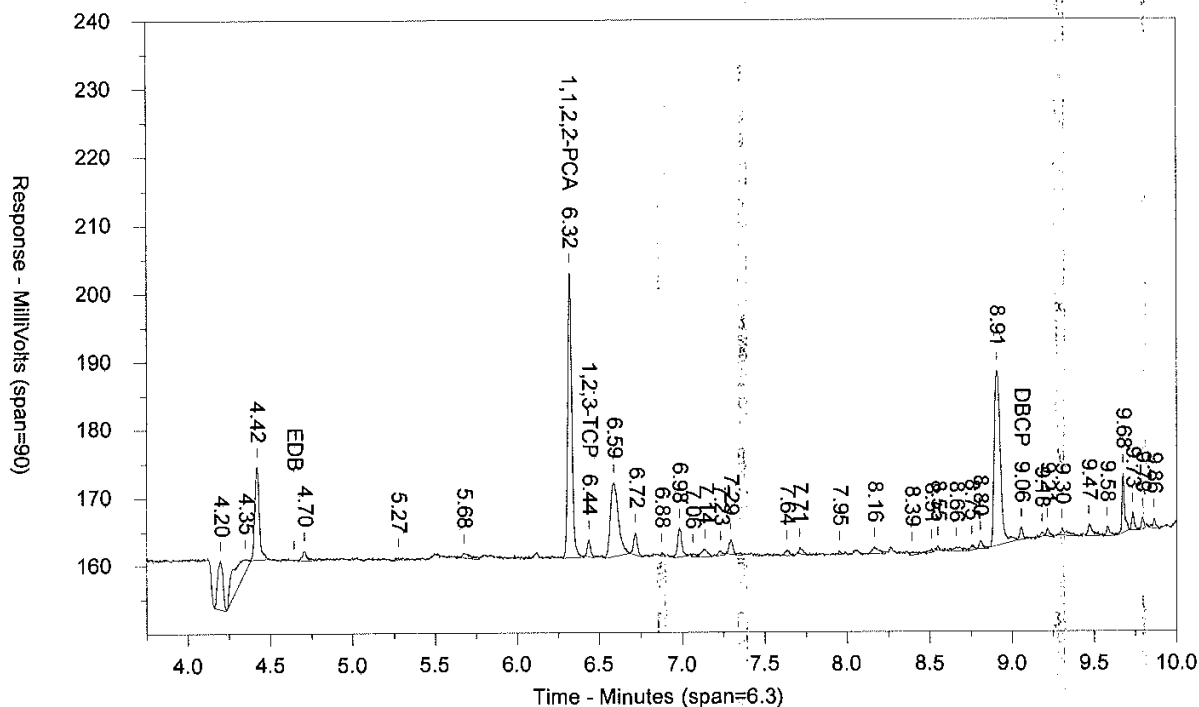
Chrom Perfect Chromatogram Report

EIBKX2024A CQPIBLKQ PIBLK209799999 10398 SW-846 8011

\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20087005.039.RAW



\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20087005B.039.RAW



Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: EIBKX2024A CQPIBLKCQ PIBLK209799999

10398

SW-846 8011

Injected On: 4/8/2020 4:07:22 AM

Sample Weight: 35

Instrument ID: CP16-19853

Dilution Factor: 2

Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min

Column A ID: DB CLP1 30m x 0.32mm x 0.25um

Column B ID: DB CLP2 30m x 0.32mm x 0.5um

Injection Volume: 1 µl

Threshold: 1

Calibration Type: external

Quantitation: Height

Analyst: 2306

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.803	372	-.009	EDB		0		EDB
5.307	25779	.085	1,1,2,2-PCA	6.319	41960	.08	1,1,2,2-PCA
	0		1,2,3-TCP	6.436	2543	.031	1,2,3-TCP
	0		DBCP	9.056	1852	.002	DBCP

Files:

Area File: 16edbs20087005.039.RAW

Area File: 16edbs20087005B.039.RAW

Method A: 16EDBS.MET

Method B: 16EDBSB.MET

Calibration File A: 16EDBS2008701.CAL

Calibration File B: 16EDBS2008701B.CAL

Format A: EDB16.FMTA

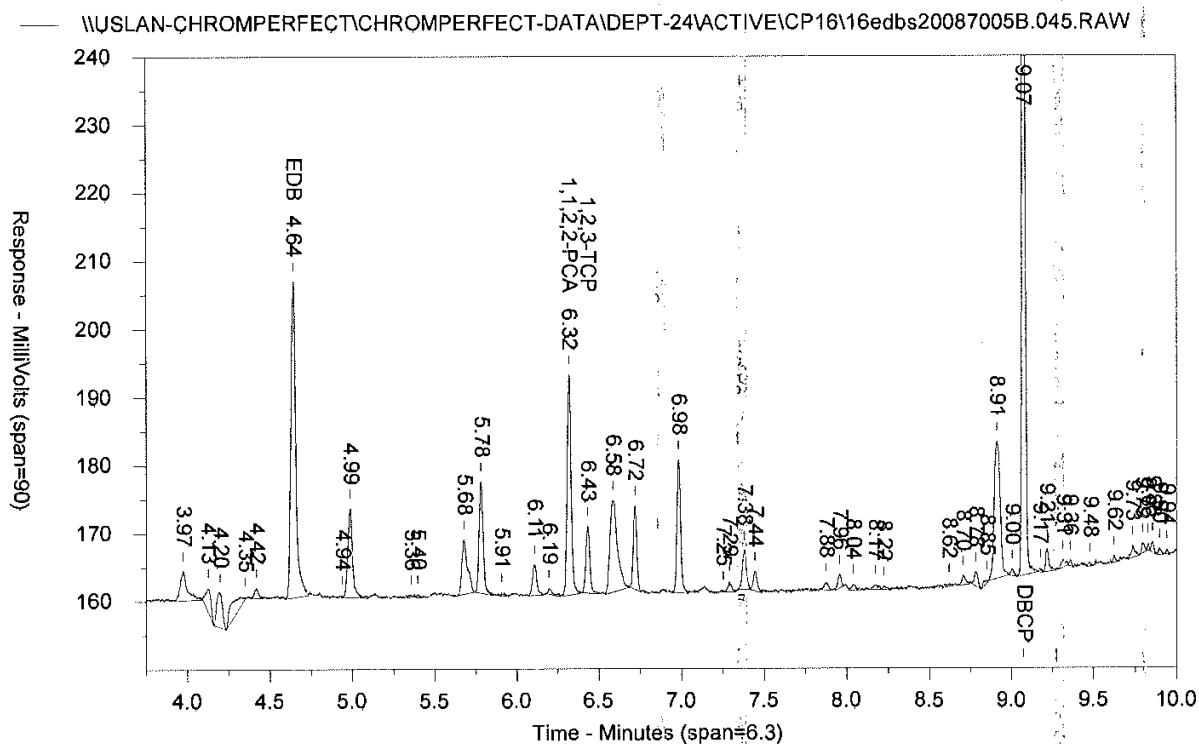
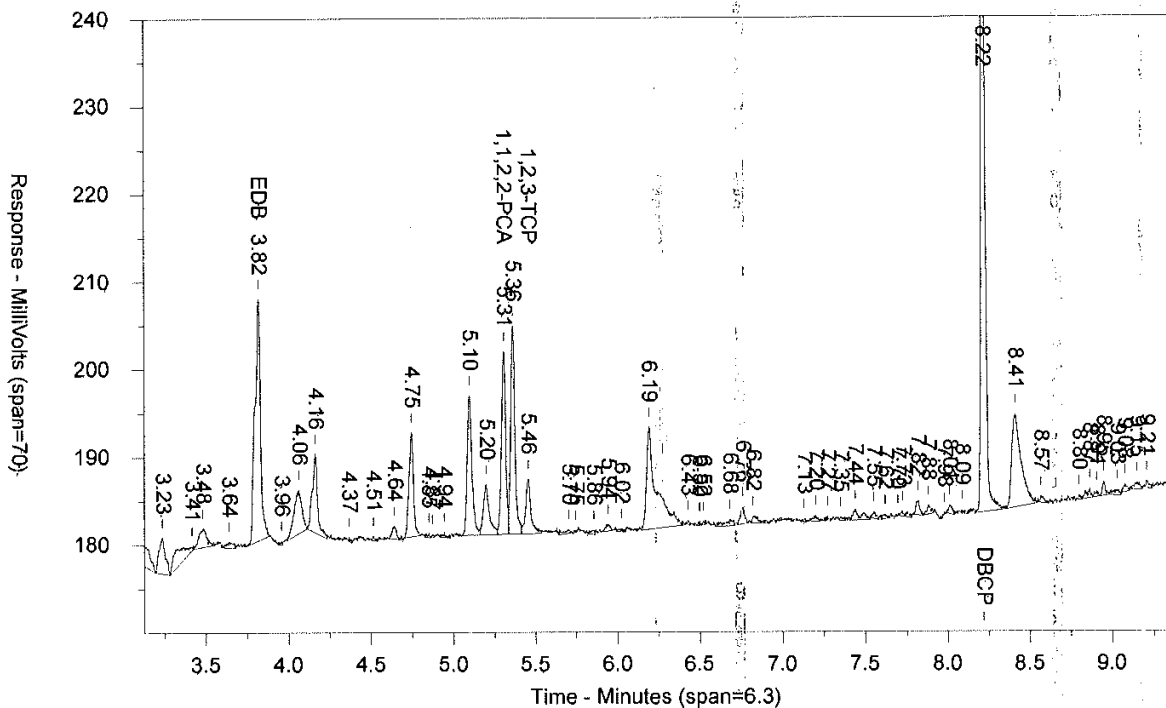
Format B: EDB16.FMTB

Area File Created On: 4/8/2020 4:17:26 AM

File Reported On: 4/8/2020 at 7:08:30 AM

Chrom Perfect Chromatogram Report

EDB_42024AD AFEDB_4AF CCAL 209799999 10398 SW-846 8011
\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20087005.045.RAW



Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: EDB_42024AD AFEDB_4AF CCAL 209799999

10398

SW-846 8011

Injected On: 4/8/2020 5:48:22 AM

Instrument ID: CP16-19853

Sample Weight: 1

Dilution Factor: 1

Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min

Column A ID: DB CLP1 30m x 0.32mm x 0.25um

Column B ID: DB CLP2 30m x 0.32mm x 0.5um

Injection Volume: 1 ul

Threshold: 1

Calibration Type: external

Quantitation: Height

Analyst: 2306

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.818	27536	2.594	EDB	4.642	46508	2.253	EDB
5.308	20795	1.187	1,1,2,2-PCA	6.32	32478	1.079	1,1,2,2-PCA
5.458	6250	2.346	1,2,3-TCP	6.433	9927	2.136	1,2,3-TCP
8.216	87931	3.1	DBCP	9.074	153681	2.827	DBCP

Files:

Area File: 16edbs20087005.045.RAW

Area File: 16edbs20087005B.045.RAW

Method A: 16EDBS.MET

Method B: 16EDBSB.MET

Calibration File A: 16EDBS2008701.CAL

Calibration File B: 16EDBS2008701B.CAL

Format A: EDB16.FMTA

Format B: EDB16.FMTB

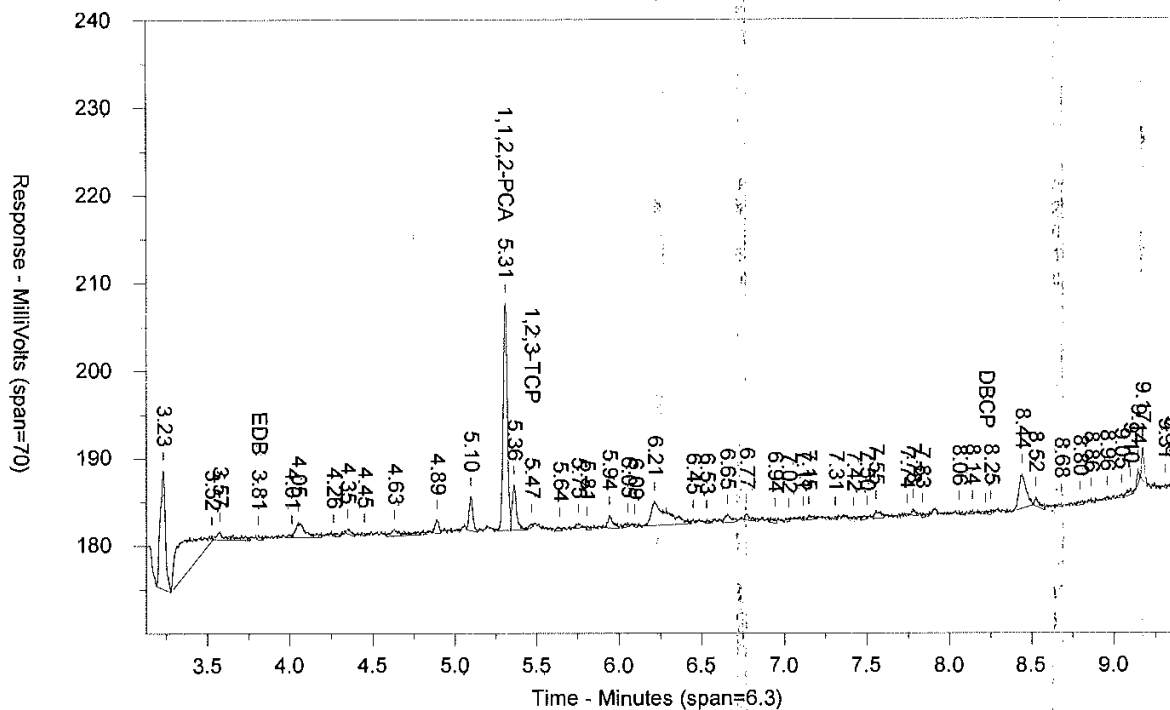
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File Reported On: 4/8/2020 at 7:10:10 AM

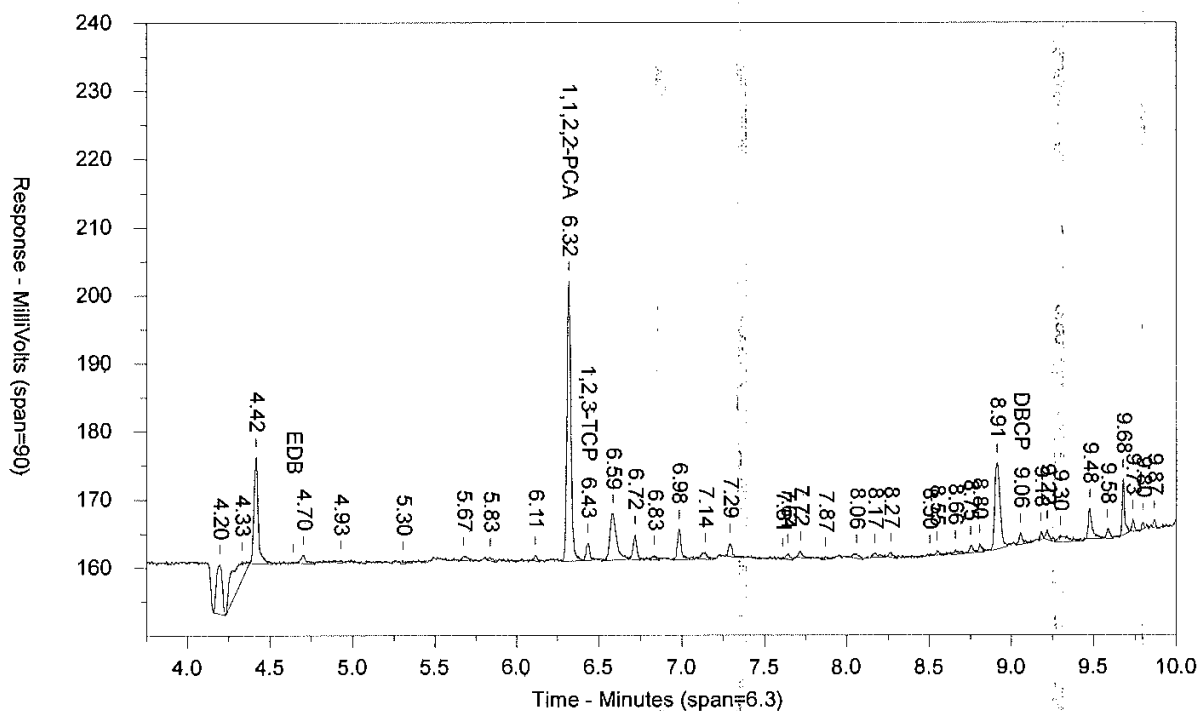
Chrom Perfect Chromatogram Report

EIBKX2024A CRPIBLKCR PIBLK209799999 10398 SW-846 8011

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\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20087005B.046.RAW



Printed on 4/8/2020 7:10:28 AM

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: EIBKX2024A CRPIBLKCR PIBLK209799999

10398

SW-846 8011

Injected On: 4/8/2020 6:05:10 AM

Sample Weight: 35

Instrument ID: CP16-19853

Dilution Factor: 2

Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min

Column A ID: DB CLP1 30m x 0.32mm x 0.25um

Column B ID: DB CLP2 30m x 0.32mm x 0.5um

Injection Volume: 1 ul

Threshold: 1

Calibration Type: external

Quantitation: Height

Analyst: 2306

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.807	517	-.008	EDB		0		EDB
5.306	25884	.085	1,1,2,2-PCA	6.319	41230	.078	1,1,2,2-PCA
5.468	471	.01	1,2,3-TCP	6.433	2545	.031	1,2,3-TCP
	0		DBCP	9.055	1759	.002	DBCP

Files:

Area File: 16edbs20087005.046.RAW

Area File: 16edbs20087005B.046.RAW

Method A: 16EDBS.MET

Method B: 16EDBSB.MET

Calibration File A: 16EDBS2008701.CAL

Calibration File B: 16EDBS2008701B.CAL

Format A: EDB16.FMTA

Format B: EDB16.FMTB

Area File Created On: 4/8/2020 6:15:14 AM

File Reported On: 4/8/2020 at 7:10:26 AM

Raw QC Data

EDB/DBCP

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Lancaster Laboratories
Environmental

Data Summary

Sample Name: **BLANKA** 4/4/20 PBLK24094 BLK Sample ID: AA Batchnumber: 200940024A
Sample Amount: 35 mL Total Volume: 2 ml Analyst: 13378 SDG State:
Analyses: 10398

Analysis Report (A)

Injected on Apr 07, 2020 22:30:59
Instrument 19853A
Result file 16EDBS20087005.019.RAW
Calibration file 16EDBS2008701
Method file 16EDBS
%SSR(PCA) 115% (46 - 136) Conc: 0.080844

Single Component Data

Compound	Min	RT	Max	Height
Ethylene dibromide	3.78	3.83	3.84	561
1,1,2,2-TETRACHLORO	5.28	5.31	5.34	24624
1,2-Dibromo-3-chloropro	8.19	8.24	8.25	359

Analysis Report (B)

Injected on Apr 07, 2020 22:30:59
Instrument 19853B
Result file 16EDBS20087005B.019.RAW
Calibration file 16EDBS2008701B
Method file 16EDBSB
%SSR(PCA) 97% (46 - 136) Conc: 0.068524

Amount	Compound	Min	RT	Max	Height	Amount
0	1,1,2,2-TETRACHLORO	6.29	6.32	6.35	36096	0.068524
0.080844	1,2,3-Trichloropropane	6.41	6.41	6.47	825	0.010141
0.000724	1,2-Dibromo-3-chloropro	9.05	9.10	9.11	580	0.00061

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
☐ Ethylene dibromide			<0.01	<0.02	<0.03			
☐ 1,1,2,2-TETRACHLORO	A	0.080844	0.0035	0.007	0.007		16.50	
☐ 1,1,2,2-TETRACHLORO	A	0.080844	0.0035	0.007	0.007			
☐ 1,1,2,2-TETRACHLORO	B	0.068524	0.0035	0.007	0.007			
☐ 1,2,3-Trichloropropane			<0.1	<0.2	<0.27			
☐ 1,2-Dibromo-3-chloroprop			<0.01	<0.02	<0.03			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Charles T. Beasley
Charles T. Beasley
Manager

APR 08 2020

Reviewed and digitally signed by Rachel Umberger on 4/8/2020 07:47:39

4/8/2020

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Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: BLANKA 4/4/20 **PBLK24094 ID: AA** **Batchnumber: 200940024A**
Sample Amount: 35 mL **Total Volume:** 2 mL **Analyst:** 2306 **SDG:** **State:**
Analyses: 10398

Analysis Report (A)

Injected on : Apr 07, 2020 22:30:59
 Instrument : CP16--19853A
 Result file : 16EDBS20087005.019.RAW
 Calibration file : 16EDBS2008701.CAL
 Method file : 16EDBS.MET

%SSR(1,1,2,2-PCA) : 115% (46-136) Conc.: 0.080844

Peak name	Min	R.T.	Max	Height	Amount
EDB	3.78	3.83	3.84	561	-0.008025
1,1,2,2-PCA	5.28	5.31	5.34	24624	0.080844
DBCP	8.19	8.24	8.25	359	0.000724

Analysis Report (B)

Injected on : Apr 07, 2020 22:30:59
 Instrument : CP16--19853B
 Result file : 16EDBS20087005B.019.RAW
 Calibration file : 16EDBS2008701B.CAL
 Method file : 16EDBSB.MET

%SSR(1,1,2,2-PCA) : 97% (46-136) Conc.: 0.068524

Peak name	Min	R.T.	Max	Height	Amount
1,1,2,2-PCA	6.29	6.32	6.35	36096	0.068524
1,2,3-TCP	6.41	6.41	6.47	825	0.010141
DBCP	9.05	9.10	9.11	580	0.000610

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☒ EDB			<0.03	<0.01			
☐ 1,1,2,2-PCA	A	0.080844				16.50	
☒ 1,2,3-TCP			<0.27	<0.1			
☒ DBCP			<0.03	<0.01			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

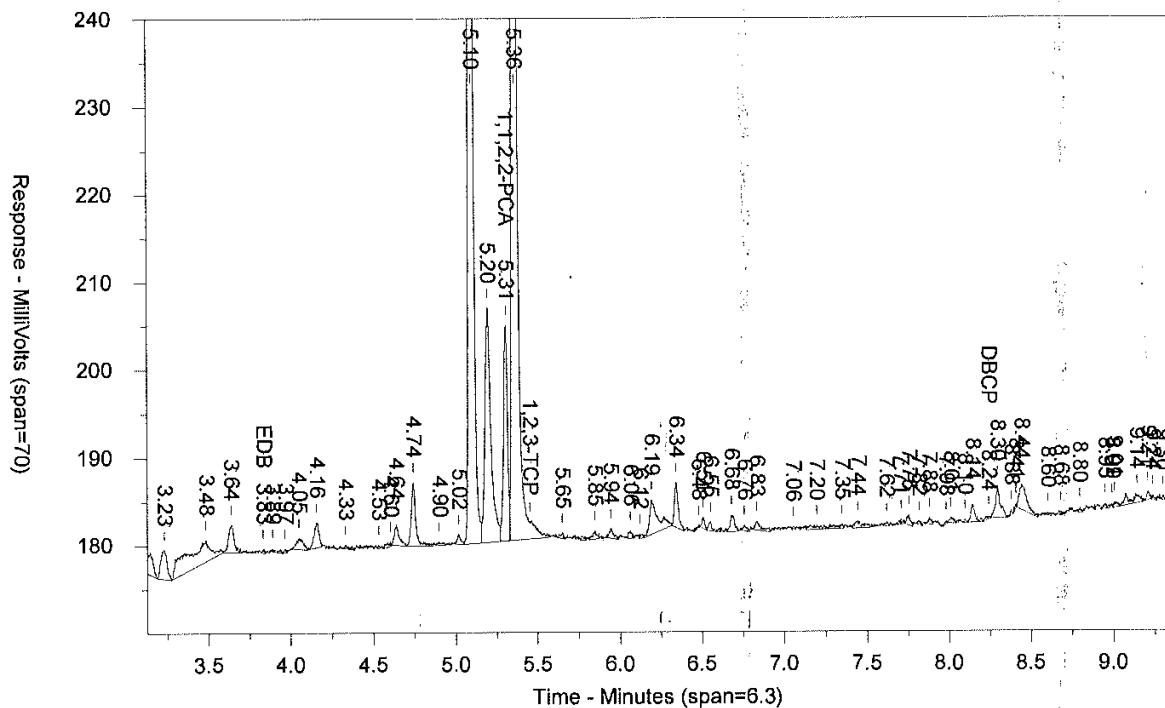
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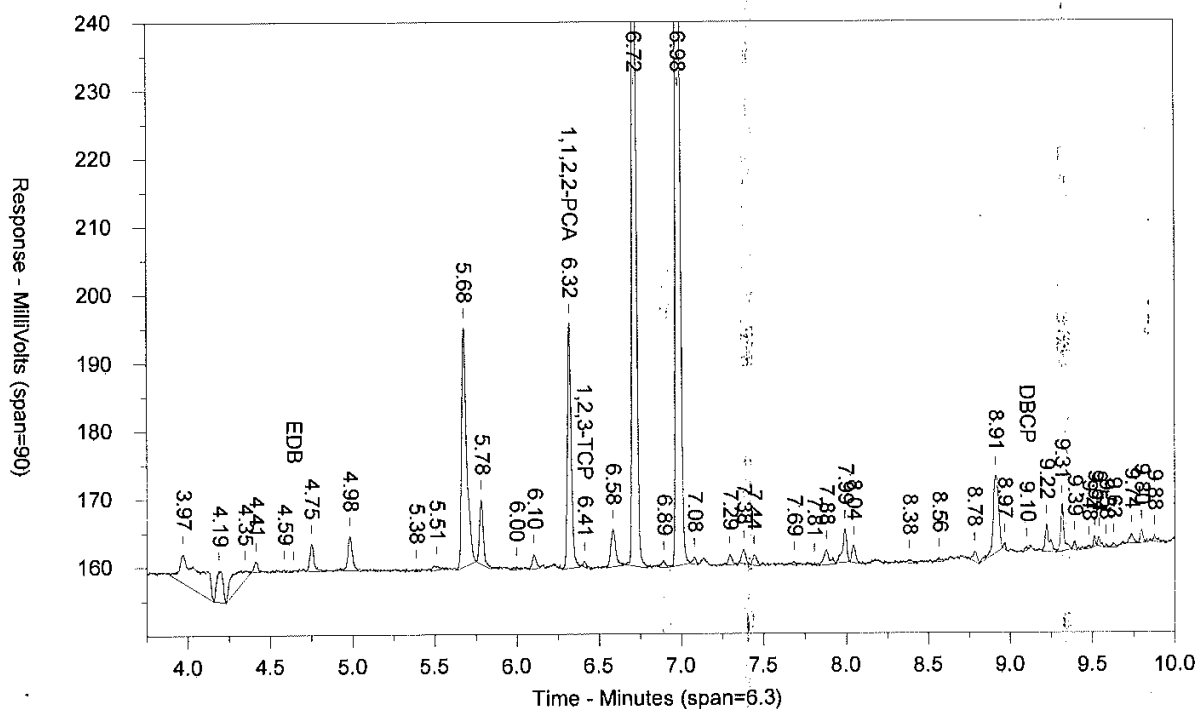
Chrom Perfect Chromatogram Report

BLANKA 4/4/20 AAPBLK24094 BLK 200940024A 10398 SW-846 8011

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: BLANKA 4/4/20 AAPBLK24094 BLK 200940024A 10398

SW-846 8011

Injected On: 4/7/2020 10:30:59 PM

Sample Weight: 35

Instrument ID: CP16-19853

Dilution Factor: 2

Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min

Column A ID: DB CLP1 30m x 0.32mm x 0.25um

Column B ID: DB CLP2 30m x 0.32mm x 0.5um

Injection Volume: 1 ul

Threshold: 1

Calibration Type: external

Quantitation: Height

Analyst: 2306

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.831	561	-.008	EDB		0		EDB
5.308	24624	.081	1,1,2,2-PCA	6.32	36096	.069	1,1,2,2-PCA
	0		1,2,3-TCP	6.409	825	.01	1,2,3-TCP
8.242	359	.001	DBCP	9.1	580	.001	DBCP

Files:

Area File: 16edbs20087005.019.RAW

Area File: 16edbs20087005B.019.RAW

Method A: 16EDBS.MET

Method B: 16EDBSB.MET

Calibration File A: 16EDBS2008701.CAL

Calibration File B: 16EDBS2008701B.CAL

Format A: EDB16.FMTA

Format B: EDB16.FMTB

Area File Created On: 4/7/2020 10:41:03 PM

File Reported On: 4/8/2020 at 7:02:58 AM



Lancaster Laboratories
Environmental

Data Summary

Sample Name: 1292529 MS 42106 MS Sample ID: AA Batchnumber: 200940024A
Sample Amount: 36.58 mL Total Volume: 2 ml Analyst: 13378 SDG KR421 State: NM
Analyses: 10398

Analysis Report (A)

Injected on Apr 08, 2020 04:24:13
Instrument 19853A
Result file 16EDBS20087005.040.RAW
Calibration file 16EDBS2008701
Method file 16EDBS

%SSR(PCA) 118% (46 - 136) Conc: 0.079694

Single Component Data

Compound	Min	RT	Max	Height
Ethylene dibromide	3.78	3.82	3.84	34910
1,1,2,2-TETRACHLORO	5.28	5.31	5.34	25344
1,2,3-Trichloropropane	5.42	5.46	5.48	9048
1,2-Dibromo-3-chloropropan	8.19	8.22	8.25	89487

Analysis Report (B)

Injected on Apr 08, 2020 04:24:13
Instrument 19853B
Result file 16EDBS20087005B.040.RAW
Calibration file 16EDBS2008701B
Method file 16EDBSB

%SSR(PCA) 96% (46 - 136) Conc: 0.064956

Amount	Compound	Min	RT	Max	Height	Amount
0.182713	Ethylene dibromide	4.61	4.64	4.67	55800	0.14948
0.079694	1,1,2,2-TETRACHLORO	6.29	6.32	6.35	35761	0.064956
0.185735	1,2,3-Trichloropropane	6.41	6.43	6.47	10300	0.121192
0.172482	1,2-Dibromo-3-chloropropan	9.05	9.07	9.11	158548	0.159462

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
☐ Ethylene dibromide	A	0.182713	0.0096	0.0191	0.0287		20.01	
☐ 1,1,2,2-TETRACHLORO	A	0.079694	0.0033	0.0067	0.0067		20.38	
☐ 1,1,2,2-TETRACHLORO	A	0.079694	0.0033	0.0067	0.0067			
☐ 1,1,2,2-TETRACHLORO	B	0.064956	0.0033	0.0067	0.0067			
☐ 1,2,3-Trichloropropane	A	0.185735	0.0957	<0.1914	<0.2583	J	42.06	
☐ 1,2-Dibromo-3-chloropropan	A	0.172482	0.0096	0.0191	0.0287		7.84	

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Charles T. Beasley
Charles T. Beasley
Manager

APR 08 2020

Reviewed and digitally signed by Rachel Umberger on 4/8/2020 07:48:20

4/8/2020

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Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: 1292529 MS 42106 ID: AA **Batchnumber:** 200940024A
Sample Amount: 36.58 mL **Total Volume:** 2 ml **Analyst:** 2306 **SDG:** KR421 **State:** NM
Analyses: 10398

Analysis Report (A)

Injected on : Apr 08, 2020 04:24:13
 Instrument : CP16--19853A
 Result file : 16EDBS20087005.040.RAW
 Calibration file : 16EDBS2008701.CAL
 Method file : 16EDBS.MET

%SSR(1,1,2,2-PCA) : 118% (46-136) Conc.: 0.079694

Analysis Report (B)

Injected on : Apr 08, 2020 04:24:13
 Instrument : CP16--19853B
 Result file : 16EDBS20087005B.040.RAW
 Calibration file : 16EDBS2008701B.CAL
 Method file : 16EDBSB.MET

%SSR(1,1,2,2-PCA) : 96% (46-136) Conc.: 0.064956

Peak name	Min	R.T.	Max	Height	Amount
EDB	3.78	3.82	3.84	34910	0.182713
1,1,2,2-PCA	5.28	5.31	5.34	25344	0.079694
1,2,3-TCP	5.42	5.46	5.48	9048	0.185735
DBCP	8.19	8.22	8.25	89487	0.172482

Peak name	Min	R.T.	Max	Height	Amount
EDB	4.61	4.64	4.67	55800	0.149480
1,1,2,2-PCA	6.29	6.32	6.35	35761	0.064956
1,2,3-TCP	6.41	6.43	6.47	10300	0.121192
DBCP	9.05	9.07	9.11	158548	0.159462

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☒ EDB	A	0.182713	0.0287	0.0096		20.01	
☐ 1,1,2,2-PCA	A	0.079694				20.38	
☐ 1,2,3-TCP	A	0.185735	<0.2583	0.0957	J	42.06	
☐ DBCP	A	0.172482	0.0287	0.0096	I	7.84	

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

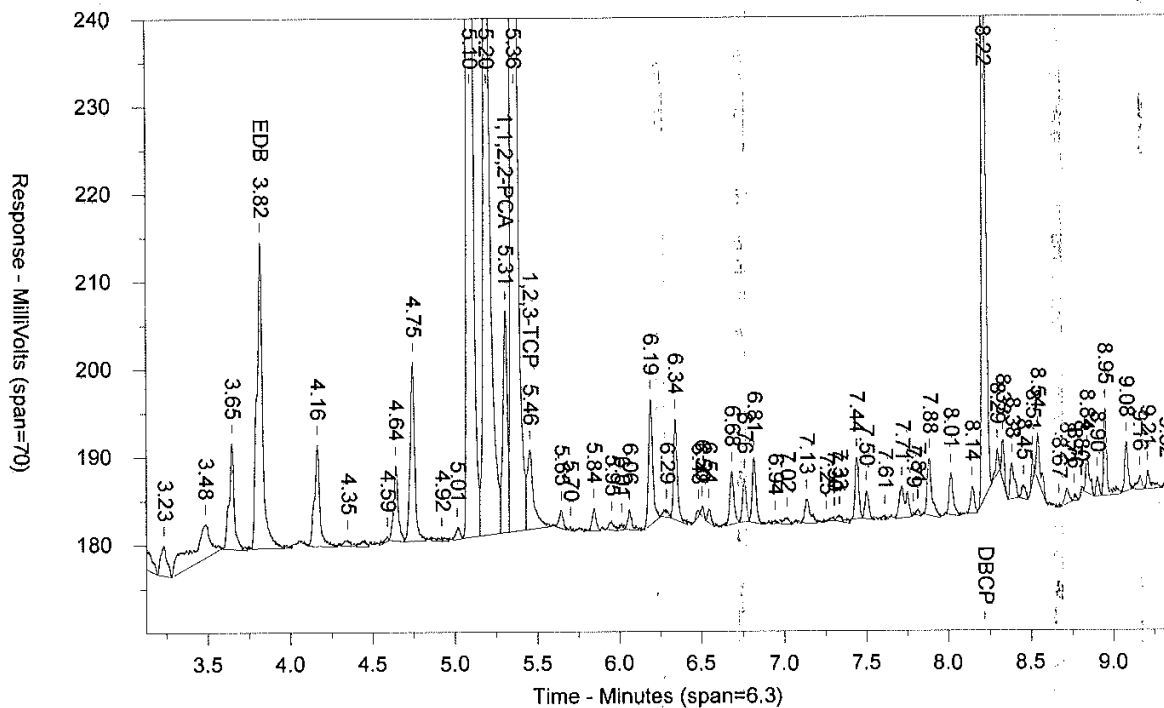
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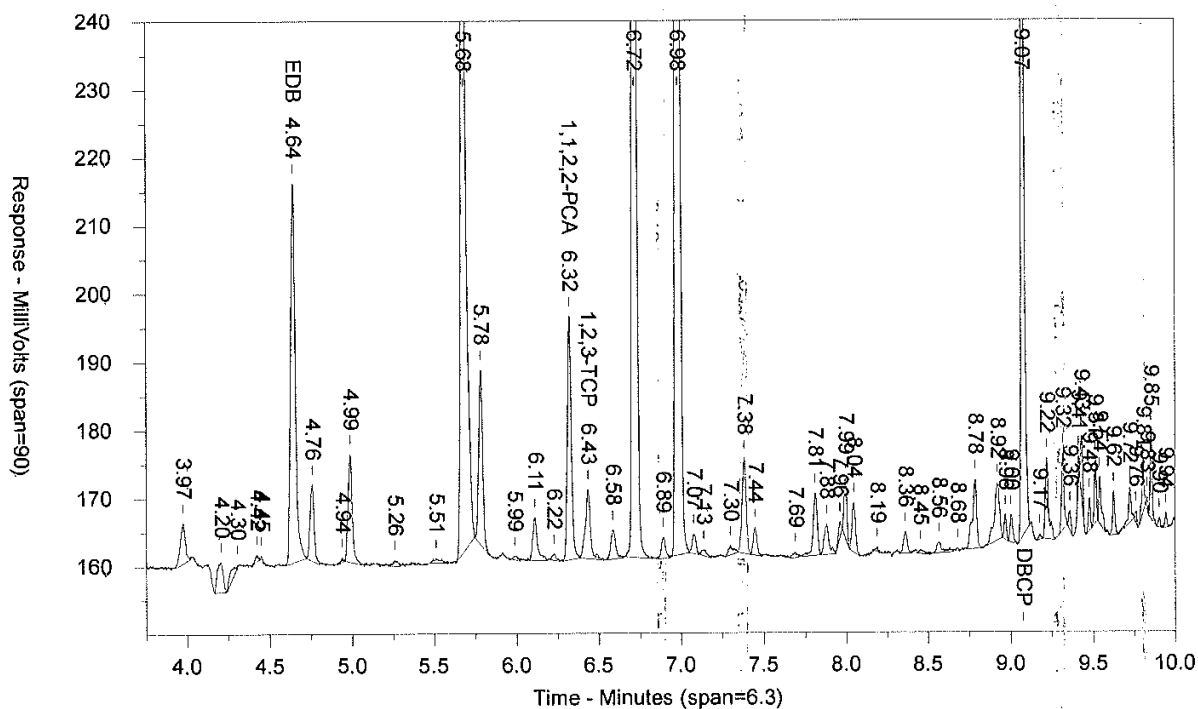
Chrom Perfect Chromatogram Report

1292529MS AA42106 MS 200940024A 10398 SW-846 8011

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: 1292529MS AA42106 MS 200940024A 10398
Injected On: 4/8/2020 4:24:13 AM
Instrument ID: CP16-19853
Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min
Column A ID: DB CLP1 30m x 0.32mm x 0.25um
Column B ID: DB CLP2 30m x 0.32mm x 0.5um
Injection Volume: 1 µl

SW-846 8011

Sample Weight: 36.58
Dilution Factor: 2

Threshold: 1
Calibration Type: external
Quantitation: Height

Analyst: 2306

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.82	34910	.183	EDB	4.644	55800	.149	EDB
5.309	25344	.08	1,1,2,2-PCA	6.321	35761	.065	1,1,2,2-PCA
5.456	9048	.186	1,2,3-TCP	6.433	10300	.121	1,2,3-TCP
8.217	89487	.172	DBCP	9.074	158548	.159	DBCP

Files:

Area File: 16edbs20087005.040.RAW
Area File: 16edbs20087005B.040.RAW
Method A: 16EDBS.MET
Method B: 16EDBSB.MET
Calibration File A: 16EDBS2008701.CAL
Calibration File B: 16EDBS2008701B.CAL
Format A: EDB16.FMTA
Format B: EDB16.FMTB
Area File Created On: 4/8/2020 4:34:17 AM
File Reported On: 4/8/2020 at 7:08:46 AM



Lancaster Laboratories
Environmental

Data Summary

Sample Name: 1292530 **MSD** 42106 **MSD** **Sample ID:** AA **Batchnumber:** 200940024A
Sample Amount: 37.16 mL **Total Volume:** 2 ml **Analyst:** 13378 **SDG:** KR421 **State:** NM
Analyses: 10398

Analysis Report (A)

Injected on Apr 08, 2020 04:41:02
Instrument 19853A
Result file 16EDBS20087005.041.RAW
Calibration file 16EDBS2008701
Method file 16EDBS
%SSR(PCA) 102% (46 - 136) **Conc:** 0.067366

Single Component Data

Compound	Min	RT	Max	Height
Ethylene dibromide	3.78	3.82	3.84	35687
1,1,2,2-TETRACHLORO	5.28	5.31	5.34	21883
1,2,3-Trichloropropane	5.42	5.46	5.48	4937
1,2-Dibromo-3-chloropropan	8.19	8.22	8.25	91759

Analysis Report (B)

Injected on Apr 08, 2020 04:41:02
Instrument 19853B
Result file 16EDBS20087005B.041.RAW
Calibration file 16EDBS2008701B
Method file 16EDBSB
%SSR(PCA) 102% (46 - 136) **Conc:** 0.067687

Amount	Compound	Min	RT	Max	Height	Amount
0.184105	Ethylene dibromide	4.61	4.64	4.67	58419	0.154444
0.067366	1,1,2,2-TETRACHLORO	6.29	6.32	6.35	37855	0.067687
0.099757	1,2,3-Trichloropropane	6.41	6.43	6.47	10827	0.1254
0.1741	1,2-Dibromo-3-chloropropan	9.05	9.07	9.11	165407	0.163764

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
☐ Ethylene dibromide	A	0.184105	0.0094	0.0188	0.0283		17.52	
☐ 1,1,2,2-TETRACHLORO	A	0.067366	0.0033	0.0066	0.0066		0.48	
☐ 1,1,2,2-TETRACHLORO	A	0.067366	0.0033	0.0066	0.0066			
☐ 1,1,2,2-TETRACHLORO	B	0.067687	0.0033	0.0066	0.0066			
☐ 1,2,3-Trichloropropane	A	0.099757	0.0942	<0.1884	<0.2543	J	22.78	
☐ 1,2-Dibromo-3-chloropropan	A	0.1741	0.0094	0.0188	0.0283		6.12	

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Charles T. Beasley
 Charles T. Beasley
 Manager

APR 08 2020

Reviewed and digitally signed by Rachel Umberger on 4/8/2020 07:48:24

4/8/2020

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Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: 1292530 MSD 42106 ID: AA **Batchnumber:** 200940024A
Sample Amount: 37.16 mL **Total Volume:** 2 ml **Analyst:** 2306 **SDG:** KR421 **State:** NM
Analyses: 10398

Analysis Report (A)

Injected on : Apr 08, 2020 04:41:02
 Instrument : CP16--19853A
 Result file : 16EDBS20087005.041.RAW
 Calibration file : 16EDBS2008701.CAL
 Method file : 16EDBS.MET

%SSR(1,1,2,2-PCA) : 102% (46-136) Conc.: 0.067366

Peak name	Min	R.T.	Max	Height	Amount
EDB	3.78	3.82	3.84	35687	0.184105
1,1,2,2-PCA	5.28	5.31	5.34	21883	0.067366
1,2,3-TCP	5.42	5.46	5.48	4937	0.099757
DBCP	8.19	8.22	8.25	91759	0.174100

Analysis Report (B)

Injected on : Apr 08, 2020 04:41:02
 Instrument : CP16--19853B
 Result file : 16EDBS20087005B.041.RAW
 Calibration file : 16EDBS2008701B.CAL
 Method file : 16EDBSB.MET

%SSR(1,1,2,2-PCA) : 102% (46-136) Conc.: 0.067687

Peak name	Min	R.T.	Max	Height	Amount
EDB	4.81	4.64	4.67	58419	0.154444
1,1,2,2-PCA	6.29	6.32	6.35	37855	0.067687
1,2,3-TCP	6.41	6.43	6.47	10827	0.125400
DBCP	9.05	9.07	9.11	165407	0.163764

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☒ EDB	A	0.184105	0.0283	0.0094		17.52	
☐ 1,1,2,2-PCA	A	0.067366				0.48	
☐ 1,2,3-TCP	A	0.099757	<0.2543	0.0942	J	22.78	
☐ DBCP	A	0.174100	0.0283	0.0094		6.12	

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

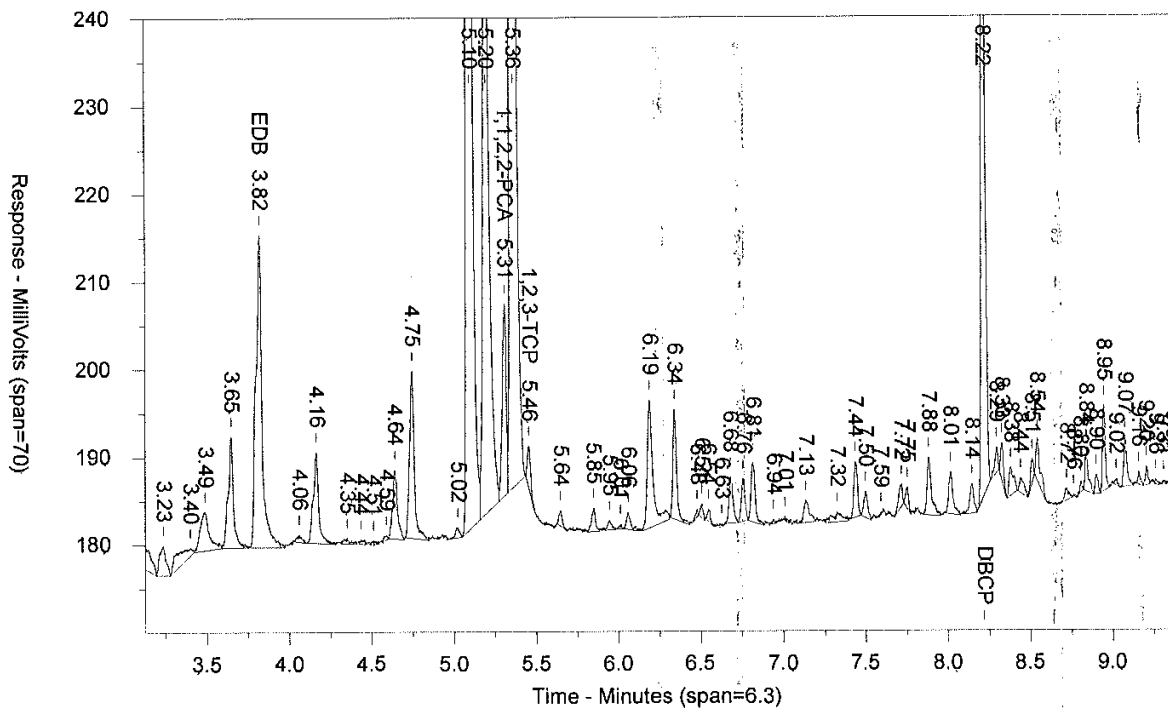
Printed on: 4/8/2020 07:14:10

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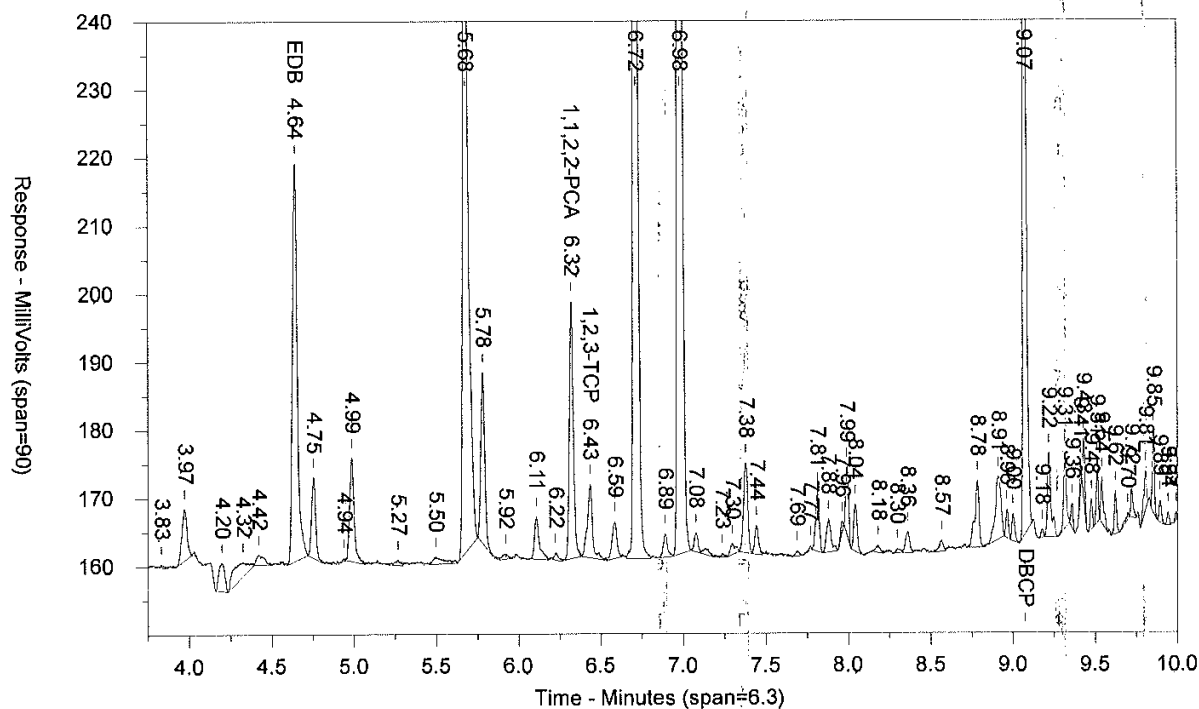
Chrom Perfect Chromatogram Report

1292530MSD AA42106 MSD 200940024A 10398 SW-846 8011

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20087005.041.RAW



\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20087005B.041.RAW



Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: 1292530MSD AA42106 MSD 200940024A 10398

SW-846 8011

Injected On: 4/8/2020 4:41:02 AM

Sample Weight: 37.16

Instrument ID: CP16-19853

Dilution Factor: 2

Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min

Column A ID: DB CLP1 30m x 0.32mm x 0.25um

Column B ID: DB CLP2 30m x 0.32mm x 0.5um

Injection Volume: 1 ul

Threshold: 1

Calibration Type: external

Quantitation: Height

Analyst: 2306

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.82	35687	.184	EDB	4.644	58419	.154	EDB
5.308	21883	.067	1,1,2,2-PCA	6.32	37855	.068	1,1,2,2-PCA
5.456	4937	.1	1,2,3-TCP	6.434	10827	.125	1,2,3-TCP
8.216	91759	.174	DBCP	9.074	165407	.164	DBCP

Files:

Area File: 16edbs20087005.041.RAW

Area File: 16edbs20087005B.041.RAW

Method A: 16EDBS.MET

Method B: 16EDBSB.MET

Calibration File A: 16EDBS2008701.CAL

Calibration File B: 16EDBS2008701B.CAL

Format A: EDB16.FMTA

Format B: EDB16.FMTB

Area File Created On: 4/8/2020 4:51:06 AM

File Reported On: 4/8/2020 at 7:09:02 AM



Lancaster Laboratories
Environmental

Data Summary

Sample Name: LCSA 4/4/20 LCS24094 LCS Sample ID: AA Batchnumber: 200940024A
Sample Amount: 35 mL **Total Volume:** 2 ml **Analyst:** 13378 **SDG:** **State:**
Analyses: 10398

Analysis Report (A)

Injected on Apr 07, 2020 22:47:55
Instrument 19853A
Result file 16EDBS20087005.020.RAW
Calibration file 16EDBS2008701
Method file 16EDBS
%SSR(PCA) 115% (46 - 136) **Conc:** 0.081136

Single Component Data

Compound	Min	RT	Max	Height
Ethylene dibromide	3.78	3.81	3.84	31522
1,1,2,2-TETRACHLORO	5.28	5.31	5.34	24710
1,2,3-Trichloropropane	5.42	5.45	5.48	8245
1,2-Dibromo-3-chloropropanol	8.19	8.22	8.25	91018

Analysis Report (B)

Injected on Apr 07, 2020 22:47:55
Instrument 19853B
Result file 16EDBS20087005B.020.RAW
Calibration file 16EDBS2008701B
Method file 16EDBSB
%SSR(PCA) 104% (46 - 136) **Conc:** 0.072927

Amount	Compound	Min	RT	Max	Height	Amount
0.171335	Ethylene dibromide	4.61	4.64	4.67	57634	0.161653
0.081136	1,1,2,2-TETRACHLORO	6.29	6.32	6.35	38415	0.072927
0.17688	1,2,3-Trichloropropane	6.41	6.43	6.47	10227	0.125759
0.183351	1,2-Dibromo-3-chloropropanol	9.05	9.07	9.11	156844	0.164871

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
☐ Ethylene dibromide	A	0.171335	0.01	0.02	0.03		5.82	
☐ 1,1,2,2-TETRACHLORO	A	0.081136	0.0035	0.007	0.007		10.66	
☐ 1,1,2,2-TETRACHLORO	A	0.081136	0.0035	0.007	0.007			
☐ 1,1,2,2-TETRACHLORO	B	0.072927	0.0035	0.007	0.007			
☐ 1,2,3-Trichloropropane	A	0.17688	0.1	<0.2	<0.27	J	33.78	
☐ 1,2-Dibromo-3-chloropropanol	A	0.183351	0.01	0.02	0.03		10.61	

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Charles T. Beasley
 Charles T. Beasley
 Manager

APR 08 2020

Reviewed and digitally signed by Rachel Umberger on 4/8/2020 07:47:43

4/8/2020

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Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: LCSA 4/4/20 LCS24094 ID: AA **Batchnumber:** 200940024A
Sample Amount: 35 mL **Total Volume:** 2 mL **Analyst:** 2306 **SDG:** **State:**
Analyses: 10398

Analysis Report (A)

Injected on : Apr 07, 2020 22:47:55
 Instrument : CP16--19853A
 Result file : 16EDBS20087005.020.RAW
 Calibration file : 16EDBS2008701.CAL
 Method file : 16EDBS.MET

%SSR(1,1,2,2-PCA) : 115% (46-136) Conc.: 0.081136

Peak name	Min	R.T.	Max	Height	Amount
EDB	3.78	3.81	3.84	31522	0.171335
1,1,2,2-PCA	5.28	5.31	5.34	24710	0.081136
1,2,3-TCP	5.42	5.45	5.48	8245	0.176880
DBCP	8.19	8.22	8.25	91018	0.183351

Analysis Report (B)

Injected on : Apr 07, 2020 22:47:55
 Instrument : CP16--19853B
 Result file : 16EDBS20087005B.020.RAW
 Calibration file : 16EDBS2008701B.CAL
 Method file : 16EDBSB.MET

%SSR(1,1,2,2-PCA) : 104% (46-136) Conc.: 0.072927

Peak name	Min	R.T.	Max	Height	Amount
EDB	4.61	4.64	4.67	57634	0.161653
1,1,2,2-PCA	6.29	6.32	6.35	38415	0.072927
1,2,3-TCP	6.41	6.43	6.47	10227	0.125759
DBCP	9.05	9.07	9.11	156844	0.164871

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☒ EDB	A	0.171335	0.03	0.01		5.82	
☐ 1,1,2,2-PCA	A	0.081136				10.66	
☒ 1,2,3-TCP	A	0.176880	<0.27	0.1	J	33.78	
☒ DBCP	A	0.183351	0.03	0.01	F	10.61	

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

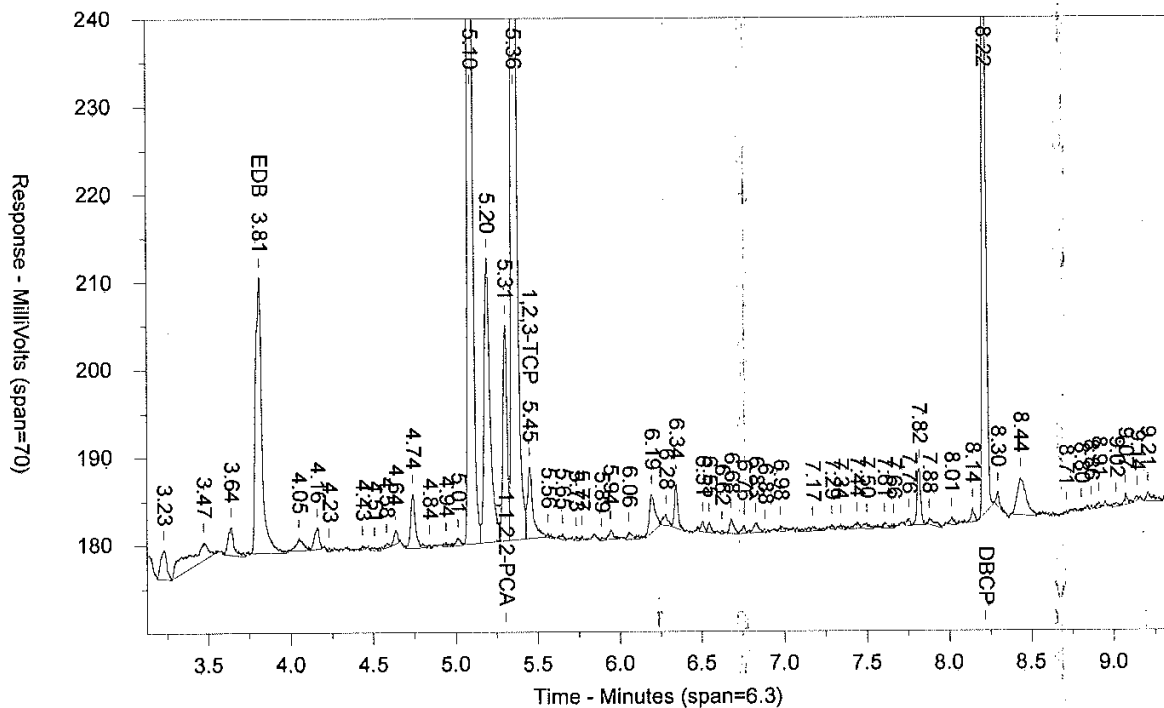
* Recovery outside QC Limits

Printed on: 4/8/2020 07:12:04

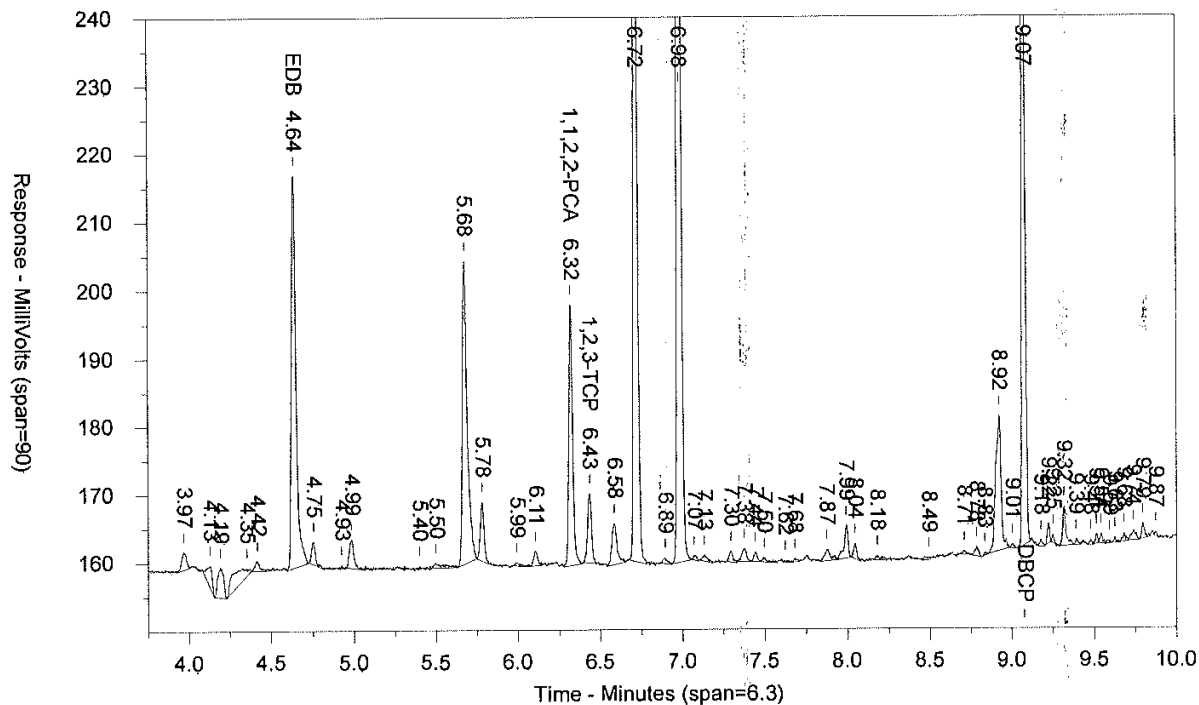
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Chrom Perfect Chromatogram Report

LCSA 4/4/20 AALCS24094 LCS 200940024A 10398 SW-846 8011
\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20087005.020.RAW



\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20087005B.020.RAW



Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: LCSA 4/4/20 AALCS24094 LCS 200940024A 10398
Injected On: 4/7/2020 10:47:55 PM
Instrument ID: CP16-19853
Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min
Column A ID: DB CLP1 30m x 0.32mm x 0.25um
Column B ID: DB CLP2 30m x 0.32mm x 0.5um
Injection Volume: 1 µl

Sample Weight: 35
Dilution Factor: 2

SW-846 8011

Threshold: 1
Calibration Type: external
Quantitation: Height

Analyst: 2306

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.815	31522	.171	EDB	4.639	57634	.162	EDB
5.306	24710	.081	1,1,2,2-PCA	6.319	38415	.073	1,1,2,2-PCA
5.452	8245	.177	1,2,3-TCP	6.434	10227	.126	1,2,3-TCP
8.217	91018	.183	DBCP	9.075	156844	.165	DBCP

Files:

Area File: 16edbs20087005.020.RAW
Area File: 16edbs20087005B.020.RAW
Method A: 16EDBS.MET
Method B: 16EDBSB.MET
Calibration File A: 16EDBS2008701.CAL
Calibration File B: 16EDBS2008701B.CAL
Format A: EDB16.FMTA
Format B: EDB16.FMTB
Area File Created On: 4/7/2020 10:57:59 PM
File Reported On: 4/8/2020 at 7:03:16 AM



Lancaster Laboratories
Environmental

Data Summary

Sample Name: LCSDA 4/4/20 LCSD24094 LCSD Sample ID: AA Batchnumber: 200940024A
Sample Amount: 35 mL Total Volume: 2 ml Analyst: 13378 SDG: State:
Analyses: 10398

Analysis Report (A)

Injected on Apr 07, 2020 23:04:44
Instrument 19853A
Result file 16EDBS20087005.021.RAW
Calibration file 16EDBS2008701
Method file 16EDBS
%SSR(PCA) 113% (46 - 136) Conc: 0.079764

Analysis Report (B)

Injected on Apr 07, 2020 23:04:44
Instrument 19853B
Result file 16EDBS20087005B.021.RAW
Calibration file 16EDBS2008701B
Method file 16EDBSB
%SSR(PCA) 103% (46 - 136) Conc: 0.072875

Single Component Data

Compound	Min	RT	Max	Height	Amount	Compound	Min	RT	Max	Height	Amount
Ethylene dibromide	3.78	3.82	3.84	31358	0.170384	Ethylene dibromide	4.61	4.64	4.67	57250	0.160516
1,1,2,2-TETRACHLORO	5.28	5.31	5.34	24307	0.079764	1,1,2,2-TETRACHLORO	6.29	6.32	6.35	38388	0.072875
1,2,3-Trichloropropane	5.42	5.45	5.48	8209	0.176099	1,2,3-Trichloropropane	6.41	6.43	6.47	10549	0.129719
1,2-Dibromo-3-chloropropan	8.19	8.22	8.25	92815	0.186971	1,2-Dibromo-3-chloropropan	9.05	9.08	9.11	167837	0.176425

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
Ethylene dibromide	A	0.170384	0.01	0.02	0.03		5.96	
1,1,2,2-TETRACHLORO	A	0.079764	0.0035	0.007	0.007		9.03	
1,1,2,2-TETRACHLORO	A	0.079764	0.0035	0.007	0.007			
1,1,2,2-TETRACHLORO	B	0.072875	0.0035	0.007	0.007			
1,2,3-Trichloropropane	A	0.176099	0.1	<0.2	<0.27	J	30.33	
1,2-Dibromo-3-chloropropan	A	0.186971	0.01	0.02	0.03		5.80	

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Charles T. Bosley
Charles T. Bosley
Manager

APR 08 2020

Reviewed and digitally signed by Rachel Umberger on 4/8/2020 07:47:47

4/8/2020

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Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: LCSDA 4/4/20 LCSD24094 ID: AA **Batchnumber:** 200940024A
Sample Amount: 35 mL Total Volume: 2 mL Analyst: 2306 SDG: State:
Analyses: 10398

Analysis Report (A)

Injected on : Apr 07, 2020 23:04:44
 Instrument : CP16--19853A
 Result file : 16EDBS20087005.021.RAW
 Calibration file : 16EDBS2008701.CAL
 Method file : 16EDBS.MET

%SSR(1,1,2,2-PCA) : 113% (46-136) Conc.: 0.079764

Peak name	Min	R.T.	Max	Height	Amount
EDB	3.78	3.82	3.84	31358	0.170385
1,1,2,2-PCA	5.28	5.31	5.34	24307	0.079764
1,2,3-TCP	5.42	5.45	5.48	8209	0.176099
DBCP	8.19	8.22	8.25	92815	0.186971

Analysis Report (B)

Injected on : Apr 07, 2020 23:04:44
 Instrument : CP16--19853B
 Result file : 16EDBS20087005B.021.RAW
 Calibration file : 16EDBS2008701B.CAL
 Method file : 16EDBSB.MET

%SSR(1,1,2,2-PCA) : 103% (46-136) Conc.: 0.072875

Peak name	Min	R.T.	Max	Height	Amount
EDB	4.61	4.64	4.67	57250	0.160516
1,1,2,2-PCA	6.29	6.32	6.35	38388	0.072875
1,2,3-TCP	6.41	6.43	6.47	10549	0.129719
DBCP	9.05	9.08	9.11	167837	0.176425

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☒ EDB	A	0.170385	0.03	0.01		5.96	
☐ 1,1,2,2-PCA	A	0.079764				9.03	
☒ 1,2,3-TCP	A	0.176099	<0.27	0.1	J	30.33	
☒ DBCP	A	0.186971	0.03	0.01		5.80	

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

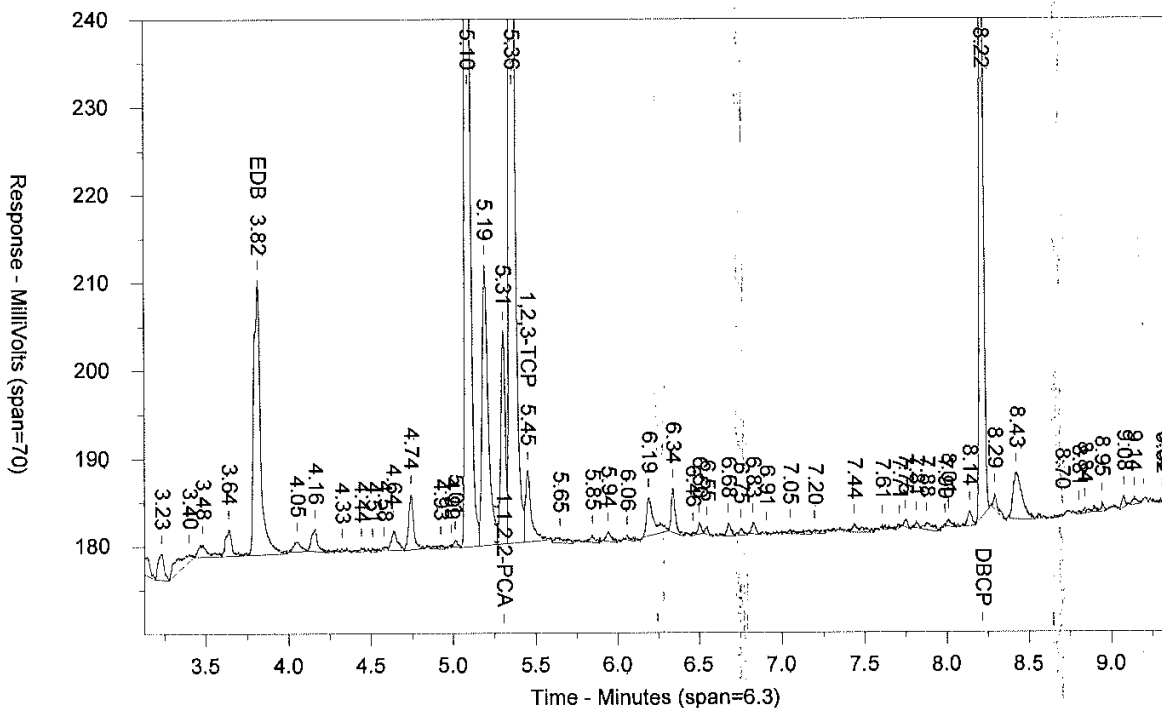
Printed on: 4/8/2020 07:12:10

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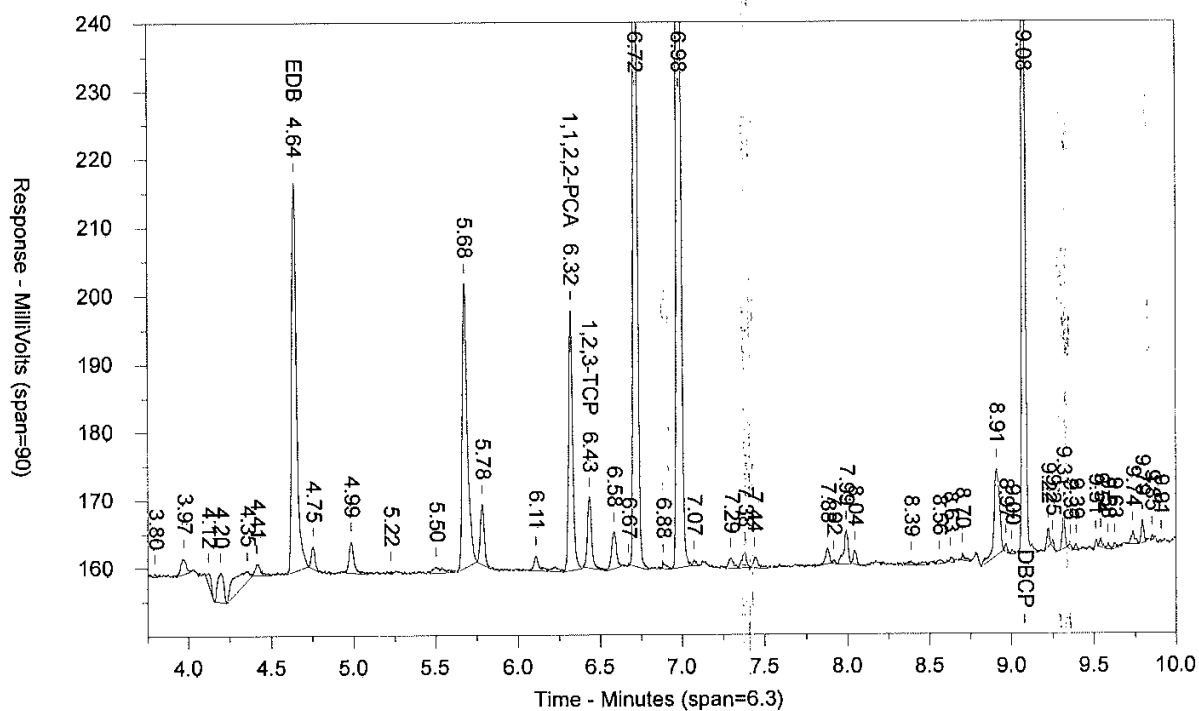
Chrom Perfect Chromatogram Report

LCSDA 4/4/20 AALCSD24094 LCSD 200940024A 10398 SW-846 8011

\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20087005.021.RAW



\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20087005B.021.RAW



Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: LCSDA 4/4/20 AALCSD24094 LCSD 200940024A

10398

SW-846 8011

Injected On: 4/7/2020 11:04:44 PM

Sample Weight: 35

Instrument ID: CP16-19853

Dilution Factor: 2

Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min

Column A ID: DB CLP1 30m x 0.32mm x 0.25um

Column B ID: DB CLP2 30m x 0.32mm x 0.5um

Injection Volume: 1 ul

Threshold: 1

Calibration Type: external

Quantitation: Height

Analyst: 2306

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.817	31358	.17	EDB	4.64	57250	.161	EDB
5.305	24307	.08	1,1,2,2-PCA	6.32	38388	.073	1,1,2,2-PCA
5.455	8209	.176	1,2,3-TCP	6.432	10549	.13	1,2,3-TCP
8.217	92815	.187	DBCP	9.075	167837	.176	DBCP

Files:

Area File: 16edbs20087005.021.RAW

Area File: 16edbs20087005B.021.RAW

Method A: 16EDBS.MET

Method B: 16EDBSB.MET

Calibration File A: 16EDBS2008701.CAL

Calibration File B: 16EDBS2008701B.CAL

Format A: EDB16.FMTA

Format B: EDB16.FMTB

Area File Created On: 4/7/2020 11:14:47 PM

File Reported On: 4/8/2020 at 7:03:32 AM

Extraction/Distillation/Digestion Logs

EDB/DBCP

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Organic Extraction Batchlog

200940024A

Assigned to: 1383 Mathias Okpo

Reviewed by: *[Signature]*Tech 1: *1013830*

Start Date: 04/04/2020 Start Time: 03:00

Start Date: 04/06/2020 Start Time: 00:00

Tech 2: *LAB 2057*

8011 Master Master										Solvent Used		Lot No.
QC	Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	Cl-	pH	BC	Comments	
1292529MS	42106	36.58	SS2008524B	.1	MS2007624A	.07	2	N	2	057a		200226
1292530MSD	42106	37.16	SS2008524B	.1	MS2007624A	.07	2	N	2	057a		20042A
BLANKA	PBLK24094	35	SS2008524B	.1			2	N	2			20083A
LCSDA	LCSD24094	35	SS2008524B	.1	MS2007624A	.07	2	N	2			0417701E
LCSDA	LCSD24094	35	SS2008524B	.1	MS2007624A	.07	2	N	2			59072

⑧ *uploaded twice, LAB 2057 4/7/20*

Spike Solutions: Witness:

MS2007624A EDB SPIKE

SS2008524B EDB surrogate

⑧ *Descriptions lost due to Perotax issues during extraction. LAB 2057 4/7/20*

Sample #	Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	FV (mL)	Cl-	pH	BC	Comments	Analyses	List	Due Date	Prio
11292523	42101	36.35	SS2008524B	0.10	2.00	N	2	057a		10398	17641	04/14/2020	N
21292524	42102	35.76	SS2008524B	0.10	2.00	N	2	057a		10398	17641	04/14/2020	N
31292525	42103	37.02	SS2008524B	0.10	2.00	N	2	057a		10398	17641	04/14/2020	N
41292526	42104	36.34	SS2008524B	0.10	2.00	N	2	057a		10398	17641	04/14/2020	N
51292527	42105	37.12	SS2008524B	0.10	2.00	N	2	057a		10398	17641	04/14/2020	N
61292528KG	42106	36.91	SS2008524B	0.10	2.00	N	2	057a		10398	17641	04/14/2020	N
71292532	42107	36.88	SS2008524B	0.10	2.00	N	2	057a		10398	17641	04/14/2020	N
81292533	42108	36.30	SS2008524B	0.10	2.00	N	2	057a		10398	17641	04/14/2020	N
91292534	42109	37.00	SS2008524B	0.10	2.00	N	2	057a		10398	17641	04/14/2020	N

4/7/20
NA LAB 2057

Tumbler ID 1

Rack ID:	Work Station	9330
Internal Standard	Balance #	9330

S-bath ID	C	S-bath ID	C	N-Evap	C	M-Evap	C	200940024A
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Documented temps are NIST corrected.



DF = Dilution Factor FV = Final Volume

Page 4 of 4

Metals in Liquid Data

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Case Narrative/Conformance Summary

Metals in Liquid

KR421 Page 519 of 592

Case Narrative/Conformance Summary

CLIENT: EA Engineering, Science & Tech

SDG: KR421

ICP Metals

Fraction: Metals in Liquid

Sample #	Client ID	Matrix		DF	Comments
		Liquid	Solid		
1292523	GWTS-EFF1-040220	X		1	
1292524	GWTS-EFF1DUP-040220	X		1	Field Duplicate Sample
1292525	GWTS-GAC1-040220	X		1	
1292526	GWTS-INF1-040220	X		1	
1292528	GWTS-EFF2-040220	X		1	Background/Unspiked
1292529	GWTS-EFF2-040220 MS	X		1	Matrix Spike
1292530	GWTS-EFF2-040220 MSD	X		1	Matrix Spike Duplicate
1292531	GWTS-EFF2-040220 DUP	X		1	Duplicate
1292532	GWTS-GAC2-040220	X		1	
1292533	GWTS-INF2-040220	X		1	

All analyses have been performed in accordance with DOD QSM Version 5.1.1 unless otherwise noted below.
See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

MS/MSD

All QC is within specification.

SAMPLE ANALYSIS:

Case Narrative/Conformance Summary

CLIENT: EA Engineering, Science & Tech

SDG: KR421

ICP Metals

Fraction: Metals in Liquid

The instrument detection limits (IDLs) are used for determining the U flags on the initial and continuing calibration blanks. The highest IDL is selected when multiple instruments are used for an analysis. The method detection limits (MDLs) are used for determining all other U flags.

No problems were encountered with the analysis of the samples.

Abbreviation Key

BKG – Background	AF - Cold Vapor Atomic Fluorescence
DUP – Duplicate	U - Below MDL
MS - Matrix Spike	B - Below LOQ
MSD - Matrix Spike Dup	N - Matrix Spike out of specifications
B – Blank	* - Duplicate out of specifications
Q - Laboratory Control Sample	E - Matrix Effects exist as proven by Serial Dilution or Spiked Dilution
Y - Laboratory Control Sample Duplicate	A - Post Digestion Spike
P - ICP Atomic Emission Spectrometer	L - Serial Dilution
MS - ICP Mass Spectrometry	R - Internal Standard Relative Intensity OOS
CV - Cold Vapor	NR - Not Required

Sample Data

Metals in Liquid

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QUALITY ASSURANCE SUMMARY

FORM 1

INORGANIC ANALYSIS DATA SHEET

SDG No.: KR421

Matrix: WATER Level (low/med): LOW

Lab Sample ID: 1292523

% Solids: 0.0

Concentration Units: UG/L

Date Received: 04/03/2020

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	41.2	U		P
7439-96-5	Manganese	3.1	U		P

Comments:

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:

U = Below MDL,
B = Below LOQ



QUALITY ASSURANCE SUMMARY

FORM 1

INORGANIC ANALYSIS DATA SHEET

SDG No.: KR421

Matrix: WATER Level (low/med): LOW

Lab Sample ID: 1292524

% Solids: 0.0

Concentration Units: UG/L

Date Received: 04/03/2020

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	41.2	U		P
7439-96-5	Manganese	3.1	U		P

Comments:

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:

U = Below MDL,
B = Below LOQ



QUALITY ASSURANCE SUMMARY

FORM 1

INORGANIC ANALYSIS DATA SHEET

SDG No.: KR421

Matrix: WATER Level (low/med): LOW

Lab Sample ID: 1292525
Concentration Units: UG/L

% Solids: 0.0
Date Received: 04/03/2020

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	41.2	U		P
7439-96-5	Manganese	3.1	U		P

Comments:

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:

U = Below MDL,
B = Below LOQ

QUALITY ASSURANCE SUMMARY

FORM 1

INORGANIC ANALYSIS DATA SHEET

SDG No.: KR421

Matrix: WATER Level (low/med): LOW

Lab Sample ID: 1292526

% Solids: 0.0

Concentration Units: UG/L

Date Received: 04/03/2020

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	41.2	U		P
7439-96-5	Manganese	3.1	U		P

Comments:

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:

U = Below MDL,
B = Below LOQ



QUALITY ASSURANCE SUMMARY

FORM 1

INORGANIC ANALYSIS DATA SHEET

SDG No.: KR421

Matrix: WATER Level (low/med): LOW

Lab Sample ID: 1292528BKG

% Solids: 0.0

Concentration Units: UG/L

Date Received: 04/03/2020

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	41.2	U		P
7439-96-5	Manganese	3.1	U		P

Comments:

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:

U = Below MDL,
B = Below LOQ



QUALITY ASSURANCE SUMMARY

FORM 1

INORGANIC ANALYSIS DATA SHEET

SDG No.: KR421

Matrix: WATER Level (low/med): LOW

Lab Sample ID: 1292529MS

% Solids: 0.0

Concentration Units: UG/L

Date Received: 04/03/2020

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	412			P
7439-96-5	Manganese	20.8			P

Comments:

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:

U = Below MDL,
B = Below LOQ



QUALITY ASSURANCE SUMMARY

FORM 1

INORGANIC ANALYSIS DATA SHEET

SDG No.: KR421

Matrix: WATER Level (low/med): LOW

Lab Sample ID: 1292530MSD

% Solids: 0.0

Concentration Units: UG/L

Date Received: 04/03/2020

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	418			P
7439-96-5	Manganese	21.5			P

Comments:

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:

U = Below MDL,
B = Below LOQ



QUALITY ASSURANCE SUMMARY

FORM 1

INORGANIC ANALYSIS DATA SHEET

SDG No.: KR421

Matrix: WATER Level (low/med): LOW

Lab Sample ID: 1292531DUP

% Solids: 0.0

Concentration Units: UG/L

Date Received: 04/03/2020

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	41.2	U		P
7439-96-5	Manganese	3.1	U		P

Comments:

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:

U = Below MDL,
B = Below LOQ



QUALITY ASSURANCE SUMMARY

FORM 1

INORGANIC ANALYSIS DATA SHEET

SDG No.: KR421

Matrix: WATER Level (low/med): LOW

Lab Sample ID: 1292532

% Solids: 0.0

Concentration Units: UG/L

Date Received: 04/03/2020

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	41.2	U		P
7439-96-5	Manganese	3.1	U		P

Comments:

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:

U = Below MDL,
B = Below LOQ

QUALITY ASSURANCE SUMMARY

FORM 1

INORGANIC ANALYSIS DATA SHEET

SDG No.: KR421

Matrix: WATER Level (low/med): LOW

Lab Sample ID: 1292533

% Solids: 0.0

Concentration Units: UG/L

Date Received: 04/03/2020

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	41.2	U		P
7439-96-5	Manganese	25.8			P

Comments:

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:

U = Below MDL,
B = Below LOQ

Quality Control and Calibration Summary Forms

Metals in Liquid

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QUALITY CONTROL REFERENCE LIST

SDG No.: KR421

Matrix: WATER

<u>Analyte</u>	<u>Batch Number</u>	<u>Lab Sample ID</u>
Iron	200971486601	1292523
Manganese		1292524
		1292525
		1292526
		1292528BKG
		1292529MS
		1292530MSD
		1292531DUP
		1292532
		1292533
		P09786AB
		P09786AQ

LEGEND:

BKG = Background	B = Blank
DUP = Duplicate	Q = Laboratory Control Sample
MS = Matrix Spike	Y = Laboratory Control Sample Duplicate
MSD = Matrix Spike Duplicate	

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QUALITY ASSURANCE SUMMARY

FORM 2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

SDG No.: KR421

Method: P

Run Name: 2009705T70

Calibration Date(s): 4/6/2020 - 04/07/2020

Concentration Units: UG/L

Analyte	Mass	Initial Calibration			Continuing Calibration					
		True	Found	%R(1)	True	Found	%R(2)	True	Found	%R(2)
Iron		30000.0	29366.65	97.9	25000.0	24606.32	98.4	25000.0	24666.67	98.7
Manganese		600.0	584.24	97.4	500.0	488.25	97.7	500.0	484.76	97.0

(1) Control Limits: 90 - 110

(2) Control Limits: 90 - 110

* Outside Limits. If Continuing Calibration is outside limits, high, only ND samples are accepted.

METHODS:

P = ICP Atomic Emission Spectrometer

MS = ICP Mass Spectrometry

CV = Cold Vapor

AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY

FORM 2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

SDG No.: KR421

Method: P

Run Name: 2009705T70

Calibration Date(s): 4/6/2020 - 04/07/2020

Concentration Units: UG/L

Analyte	Mass	Initial Calibration			Continuing Calibration					
		True	Found	%R(1)	True	Found	%R(2)	True	Found	%R(2)
Iron					25000.0	23757.59	95.0	25000.0	24001.42	96.0
Manganese					500.0	477.18	95.4	500.0	483.19	96.6

(1) Control Limits: 90 - 110

(2) Control Limits: 90 - 110

* Outside Limits. If Continuing Calibration is outside limits, high, only ND samples are accepted.

METHODS:

P = ICP Atomic Emission Spectrometer

MS = ICP Mass Spectrometry

CV = Cold Vapor

AF = Cold Vapor Atomic Fluorescence

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Lancaster Laboratories
Environmental

QUALITY ASSURANCE SUMMARY
FORM 2B
LOW LEVEL CHECK STANDARD
SDG No.: KR421

Method: P

Run Name: 2009705T70

Calibration Date(s): 4/6/2020 - 04/07/2020

Concentration Units: UG/L

Analyte	Mass	Initial			Final	
		True	Found	%R	Found	%R
Iron		200.0	196.09	98.0		
Manganese		10.0	10.29	102.9		

Control limits: 80% - 120%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.

For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY

FORM 3

BLANKS

SDG No.: KR421

Method: P

Run Name: 2009705T70

Calibration Date(s): 04/06/2020 - 04/07/2020

Preparation Blank Matrix: WATER

Analyte	Mass	Initial Calibration Blank (ug/L)	Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)		
			C	1	C	2	C	3	C	Mass	Batch Number
Iron		33.4	U	33.4	U	33.4	U	33.4	U	41.200	200971486601
Manganese		0.83	U	0.83	U	0.83	U	0.83	U	3.100	200971486601

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:

U= Below IDL/MDL
B= Below LOQ



QUALITY ASSURANCE SUMMARY

FORM 3

BLANKS

SDG No.: KR421

Method: P

Run Name: 2009705T70

Calibration Date(s): 04/06/2020 - 04/07/2020

Analyte	Mass	Initial Calibration Blank (ug/L)	Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)		
			C	1	C	2	C	3	C	Mass	Batch Number
Iron				33.4U							
Manganese				0.83U							

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:

U= Below IDL/MDL
B= Below LOQ



Lancaster Laboratories
Environmental

QUALITY ASSURANCE SUMMARY

FORM 4A

ICP-AES INTERFERENCE CHECK SAMPLE

SDG No.: KR421

Instrument ID: 11016

Run Name: 2009705T70

Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum	500000	500000	496274	99.3	499606.1	99.9				
Calcium	500000	500000	500284	100.1	502915.1	100.6				
Iron	200000	200000	197800	98.9	198602.3	99.3				
Magnesium	500000	500000	505898	101.2	508941.8	101.8				
Manganese	0	500	0		476.3	95.3				

Control Limits: All Metals 80%-120%



Lancaster Laboratories
Environmental

QUALITY ASSURANCE SUMMARY

FORM 5A (MS/MSD)

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

SDG No.: KR421

Matrix: WATER Level (low/med): LOW

Background Lab Sample ID: 1292528BKG Matrix Spike Lab Sample ID: 1292529MS Matrix Spike Duplicate Lab Sample ID: 1292530MSD
Batch Number(s): 200971486601

Analyte	Mass	BKG Sample		MS Sample		MSD Sample		MS Spike Added	MSD Spike Added	Units	MS		MSD		RPD	Control Limit		
		Result	C	Result	C	Result	C				%R	Q	%R	Q		%R	RPD	M
Iron		41.2000	U	411.8998		417.5582		417.6000	417.6000	UG/L	99		100		1	87 - 115	20	P
Manganese		3.0900	U	20.7756		21.4646		20.8800	20.8800	UG/L	100		103		3	90 - 114	20	P

Note: Results shown are reported on an as-received basis.

If Matrix Spike/ Matrix Spike Duplicate were out of specification, see Post Digestion Spike form.

METHODS:

P = ICP Atomic Emission Spectrometer

CV = Cold Vapor

MS = ICP Mass Spectrometry

AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:

U= Below MDL, B= Below LOQ

FLAGS:

N = Matrix Spike OOS, * = Duplicate OOS

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Lancaster Laboratories
Environmental

Appendix I-5

QUALITY ASSURANCE SUMMARY

FORM 6

DUPLICATES

SDG No.: KR421

Matrix: WATER Level (low/med): LOW

Background Lab Sample ID: 1292528BKG

1292531DUP

Batch Number(s): 2009714866
01

Concentration Units: UG/L

Analyte	Mass	Control Limit	Samples (S)	C	Duplicate (D)	C	RPD	Max RPD	Q	M
Iron			41.2000	U	41.2000	U		20		P
Manganese			3.0900	U	3.0900	U		20		P

NOTE: An asterisk (*) in column "Q" indicates poor duplicate precision (RPD > Max OR $| (S) - (D) | > LOQ$ for values < 5x LOQ).

The data are considered to be valid because the laboratory control sample is within the control limits. See the Laboratory Control Sample.

Note: Results shown are reported on an as-received basis.

METHODS: P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	CONCENTRATION QUALIFIERS: U= Below MDL B= Below LOQ FLAGS: * = Duplicate Out of Spec
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Lancaster Laboratories
Environmental

QUALITY ASSURANCE SUMMARY
FORM 7
LABORATORY CONTROL SAMPLE
SDG No.: KR421
Matrix: WATER

Analyte	Mass	Batch Number	Units	True	Found	C	Control Limits (%)	%R	M	In Spec
Iron		200971486601	UG/L	400.000	388.950		87 - 115	97	P	Yes
Manganese		200971486601	UG/L	20.000	20.520		90 - 114	103	P	Yes

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:

U= Below MDL
B= Below LOQ

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QUALITY ASSURANCE SUMMARY

FORM 9

SERIAL DILUTIONS

SDG No.: KR421

Matrix: WATER

Level (low/med): LOW

Background Lab Sample ID: 1292528BKG

Serial Dilution Lab Sample ID: 1292528L

Batch Number(s): 200971486601

Concentration Units: UG/L

Analyte	Mass	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Diff.	Q	M
Iron		41.2000	U	206.0000	U			P
Manganese		3.0900	U	15.4500	U			P

NOTE: An E in column Q indicates the presence of a chemical or physical interference in the matrix when the % difference is greater than 10%. This applies only when (I) is greater than or equal to 50x MDL for ICP, 100x MDL for ICP-MS (6020), 50x MDL for ICP-MS (200.8), or 25x MDL for GFAA.

METHODS: P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry	CONCENTRATION QUALIFIERS: U= Below MDL B= Below LOQ FLAGS: E = Matrix Effects exist as proven by Serial Dilution or Spiked Dilution
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QUALITY ASSURANCE SUMMARY
FORM 10
INSTRUMENT DETECTION LIMITS
SDG No.: KR421

Method: P
Instrument ID: 11016
Date: 07/2018

Analyte	Wavelength (nm)	Background	IDL (UG/L)
Iron	261.19		33.4
Manganese	257.61		0.83

Comments:

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10 MDL
METHOD DETECTION LIMITS (ANNUALLY)
SDG No.: KR421
Matrix: WATER

Method: P
Date: 09/2019

Analyte	Wavelength (nm)	Background	LOQ (UG/L)	MDL (UG/L)
Iron	261.19		200	40.0
Manganese	257.61		10.0	3.0

The LOQ/MDL must be adjusted for % Solids and Sample Weight for samples reporting in mg/kg and ug/L.

Comments:

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

QUALITY ASSURANCE SUMMARY
FORM 12
LINEAR RANGES
SDG No.: KR421

Method: P
Instrument ID: 11016
Date: 01/2020

Analyte	Wavelength (nm)	Integration Time (Sec.)	Concentration (ug/L)
Iron	261.19	10.00	300000.0
Manganese	257.61	10.00	20000.0

Comments:

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

QUALITY ASSURANCE SUMMARY
FORM 13
PREPARATION LOG
SDG No.: KR421

Method: P
Batch Number: 200971486601

Lab Sample ID	Date	Initial Volume(ml)	Final Volume(ml)
1292523	04/06/2020	50.00	51.5
1292524	04/06/2020	50.00	51.5
1292525	04/06/2020	50.00	51.5
1292526	04/06/2020	50.00	51.5
1292532	04/06/2020	50.00	51.5
1292533	04/06/2020	50.00	51.5
1292528BKG	04/06/2020	50.00	51.5
1292531DUP	04/06/2020	50.00	51.5
1292530MSD	04/06/2020	50.00	52.20000000000000 3
1292529MS	04/06/2020	50.00	52.20000000000000 3
P09786AB	04/06/2020	50.00	51.5
P09786AQ	04/06/2020	50.00	50

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:

BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KR421

Method: P
Instrument ID: 11016
Run Name: 2009705T70

Run Start Date: 04/06/2020
Run End Date: 04/07/2020

Lab Sample ID	D/F	Time	Analytes																									
			F	M																								
S0	1.00	22:24	X	X																								
S	1.00	22:27	X																									
S	1.00	22:30		X																								
S	1.00	22:34																										
ICV	1.00	22:37	X	X																								
ICB	1.00	22:40	X	X																								
LLC	1.00	22:43	X	X																								
ICSA	1.00	22:47	X	X																								
ICSAB	1.00	22:50	X	X																								
CCV	1.00	22:54	X	X																								
CCB	1.00	22:57	X	X																								
LRS2	1.00	23:00	X	X																								
LRS4	1.00	23:04	X	X																								
LRS3	1.00	23:07	X	X																								
LRS5	1.00	23:11	X	X																								
CCV	1.00	23:14	X	X																								
CCB	1.00	23:18	X	X																								
P09786AB	1.00	23:21	X	X																								
P09786AQ	1.00	23:24	X	X																								
1292528BKG	1.00	23:28	X	X																								
1292528A	1.00	23:31																										
1292531DUP	1.00	23:34	X	X																								
1292529MS	1.00	23:37	X	X																								
1292530MSD	1.00	23:40	X	X																								
1292528L	5.00	23:44	X	X																								
1292523	1.00	23:47	X	X																								
1292524	1.00	23:50	X	X																								
CCV	1.00	23:54	X	X																								
CCB	1.00	23:57	X	X																								
1292525	1.00	00:00	X	X																								
1292526	1.00	00:04	X	X																								
1292532	1.00	00:07	X	X																								
1292533	1.00	00:10	X	X																								
ZZZZZZ	1.00	00:14																										
CCV	1.00	00:17	X	X																								
CCB	1.00	00:20	X	X																								

METHODS: P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	LEGEND: BKG = Background DUP = Duplicate MS = Matrix Spike MSD = Matrix Spike Duplicate A = Post Digest Spike L = Serial Dilution B = Blank Q = Laboratory Control Sample Y = Laboratory Control Sample Duplicate
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Raw Data

Metals in Liquid

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ICP Data

Metals in Liquid

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ICP-AES Run Data Report



Reviewed By
Christina Termini

Reviewed Date
04/07/2020 6:06AM

Data File Name 2009705T70.TXT
Run Name: 2009705T70

Verified By:
Tshina Alamos

Verified Date
04/14/2020 2:44PM

Method Reference Name(s):

Analyst Employee: 463

Instrument Parameters:

Individual Integration Time: 10.00 sec

Total Integration Time: 30.00 sec

<u>Element</u>	<u>Analyte Name</u>	<u>Wavelength Value</u>
AG	Silver	328.06
AL	Aluminum	308.21
AS	Arsenic	189.04
AU	Gold	242.80
B	Boron	249.67
BA	Barium	455.40
BE	Beryllium	313.04
CA	Calcium	317.93
CD	Cadmium	226.50
CO	Cobalt	228.62
CR	Chromium	267.72
CU	Copper	327.40
FE	Iron	261.19
K	Potassium	766.49
LI	Lithium	670.78
MG	Magnesium	285.21
MN	Manganese	257.61
MO	Molybdenum	202.03
NA	Sodium	589.59
NI	Nickel	231.60
P	Phosphorus	177.49
PB	Lead	220.35
SB	Antimony	206.83
SE	Selenium	196.09
SI	Silicon	251.60
SN	Tin	189.99
SR	Strontium	421.55
TE	Tellurium	214.28
TH	Thorium	401.91
TI	Titanium	334.94
TL	Thallium	190.86
V	Vanadium	292.40
W	Tungsten	207.91
Y1	Yttrium	224.31
Y2	Yttrium	371.03
ZN	Zinc	213.86
ZR	Zirconium	339.19

The TRACE ICP utilizes Yttrium as an internal standard to compensate for fluctuations in nebulization and plasma conditions. All Yttrium readings are expressed in counts.

LANCASTER LABORATORIES

Run Name: 2009705T70

Instrument ID: 11016

Tube: 1

Date/Time: 04/06/2020 22:24

Sample Number: S0

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS		
				#1	#2	#3
AG	0.000	-102.71667	8.896	-0.01844	-0.02186	-0.02125
AL	0.000	6.91664	64.935	0.01774	0.03141	0.00712
ALA	0.000	-2163.48333	1.344	-0.43319	-0.42600	-0.43749
AS	0.000	-1.38255	51.891	-0.00959	-0.00363	-0.00491
B	0.000	0.00000	3549.517	0.00000	0.00001	0.00000
BA	0.000	69.53333	51.886	0.00024	0.00043	0.00015
BE	0.000	-548.21667	1.133	-0.10920	-0.10848	-0.11090
CA	0.000	51.07845	10.510	0.00285	0.00245	0.00301
CD	0.000	-22.80174	6.302	-0.09864	-0.09415	-0.10657
CO	0.000	-4.21121	37.291	-0.01892	-0.02502	-0.01131
CR	0.000	10.35000	43.273	0.00005	0.00002	0.00005
CU	0.000	21.47976	17.824	0.00415	0.00361	0.00512
FE	0.000	18.32233	17.622	0.00092	0.00119	0.00086
K	0.000	49.39635	28.584	0.11926	0.10542	0.17764
LI	0.000	165.88606	6.953	0.00891	0.00842	0.00966
MG	0.000	-0.74904	536.405	-0.00015	0.00020	-0.00017
MN	0.000	37.93333	21.658	0.00757	0.00921	0.00593
MO	0.000	0.01960	770.530	0.00012	-0.00059	0.00074
NA	0.000	-252.67136	10.071	-0.01266	-0.01528	-0.01320
NI	0.000	21.58423	16.760	0.11023	0.09441	0.07859
P	0.000	1.34886	77.687	0.00015	0.00002	0.00019
PB	0.000	2.05957	37.315	0.00545	0.00948	0.01213
S	0.000	0.95952	41.373	0.00008	0.00012	0.00005
SB	0.000	-0.87614	20.142	-0.00007	-0.00009	-0.00007
SE	0.000	1.25621	79.061	0.00582	0.00966	0.00099
SI	0.000	5.79449	9.918	0.00032	0.00034	0.00028
SN	0.000	3.04440	29.832	0.01020	0.01199	0.01781
SR	0.000	-144.71508	6.994	-0.00055	-0.00056	-0.00063
TH	0.000	-0.56646	459.823	-0.00018	0.00004	0.00005
TI	0.000	1.80000	321.322	-0.00087	0.00141	0.00053
TL	0.000	-2.83483	26.695	-0.00885	-0.01540	-0.01298
V	0.000	-6.51333	103.097	-0.00242	0.00019	-0.00168
W	0.000	4.30398	8.454	0.00041	0.00035	0.00037
Y1	0.000	11426.44661	0.355	11467.56473	11425.39738	11386.37771
Y2A	0.000	250286.35105	0.638	250261.54485	251894.43522	248703.07309
Y2R	0.000	18443.31851	1.949	18857.82748	18256.23255	18215.89549
ZN	0.000	46.57083	2.276	0.20207	0.20903	0.20024
ZR	0.000	-21.26330	38.838	-0.00082	-0.00167	-0.00099

LANCASTER LABORATORIES

Run Name: 2009705T70

Instrument ID: 11016

Tube: 2

Date/Time: 04/06/2020 22:27

Sample Number: S1

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS		
				#1	#2	#3
AL	50.000	10776.63610	0.534	29.92518	29.62562	29.86928
ALA	50.000	103965.15816	1.079	21.67184	21.29868	21.72624
CA	50.000	77716.44576	0.127	4.29280	4.30249	4.30196
FE	50.000	31796.93231	0.214	1.75766	1.75598	1.76316
K	50.000	21395.10416	0.263	59.35297	59.06221	59.11150
MG	50.000	56866.30033	0.286	3.13589	3.14779	3.15350
NA	50.000	77321.73632	0.169	4.26952	4.27839	4.28387
S	50.000	8009.17219	0.656	0.72766	0.72009	0.71895
SI	50.000	18511.59456	0.118	1.02277	1.02519	1.02408
Y1	50.000	11089.20172	0.716	11155.11630	11111.49925	11000.98960
Y2A	50.000	241057.54260	0.866	239208.63848	243321.01329	240642.97603
Y2R	50.000	18077.51864	0.599	18178.51804	18091.00199	17963.03589

LANCASTER LABORATORIES

Run Name: 2009705T70

Instrument ID: 11016

Tube: 3

Date/Time: 04/06/2020 22:30

Sample Number: S2

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS		
				#1	#2	#3
AG	1.000	16601.28989	1.268	3.43934	3.38100	3.46599
AS	1.000	486.92731	1.038	2.18676	2.21603	2.17125
B	1.000	9286.12247	1.544	0.03852	0.03770	0.03885
BA	1.000	923566.84433	2.009	3.74992	3.79653	3.89973
BE	1.000	390484.29871	1.143	79.87808	80.40803	81.67248
CD	1.000	13840.09618	0.325	62.32965	62.46116	62.06422
CO	1.000	9952.31148	0.215	44.84436	44.84425	44.67733
CU	1.000	14740.78503	0.996	3.05290	3.01084	3.06972
LI	1.000	11569.89758	0.564	0.63377	0.64034	0.63456
MN	1.000	72203.15680	1.593	14.95807	14.65577	15.12450
NI	1.000	6016.92951	0.424	27.11058	27.17342	26.95059
P	1.000	319.51840	0.626	0.02879	0.02892	0.02856
PB	1.000	1446.74340	0.204	6.52429	6.51047	6.49768
SE	1.000	333.38970	0.865	1.48845	1.51420	1.49844
SR	1.000	658883.38912	1.079	2.68880	2.73138	2.74513
TH	1.000	225.08933	1.772	0.01263	0.01227	0.01223
TL	1.000	332.91479	0.982	1.49354	1.51472	1.48645
W	1.000	1556.47360	0.161	0.14026	0.14018	0.13984
Y1	1.000	11110.32735	0.137	11104.60809	11098.82224	11127.55173
Y2A	1.000	242095.24333	0.995	244410.44157	242272.25914	239603.02929
Y2R	1.000	18185.16289	1.439	18415.45364	18239.33200	17900.70303
ZN	1.000	9171.70680	0.247	41.26451	41.38284	41.17968

LANCASTER LABORATORIES

Run Name: 2009705T70

Instrument ID: 11016

Tube: 4

Date/Time: 04/06/2020 22:34

Sample Number: **S3**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS		
				#1	#2	#3
CR	1.000	10821.29691	1.064	0.04316	0.04385	0.04404
MO	1.000	2323.14376	0.130	10.18618	10.21203	10.19439
SB	1.000	677.63296	0.401	0.05935	0.05976	0.05936
SN	1.000	1351.73817	0.221	5.93218	5.94721	5.92111
TI	1.000	56264.40706	0.955	11.23310	11.39643	11.43824
V	1.000	7110.16354	1.500	1.41124	1.44095	1.45308
Y1	1.000	11390.70599	0.148	11392.86855	11406.39413	11372.85529
Y2A	1.000	247742.58029	0.700	249715.86379	247046.92691	246464.95017
Y2R	1.000	17888.28622	0.061	17892.51545	17896.37073	17875.97247
ZR	1.000	3554.29217	0.816	0.19895	0.20017	0.19696

LANCASTER LABORATORIES

Run Name: 2009705T70

Instrument ID: 11016

Tube: 5

Date/Time: 04/06/2020 22:37

Sample Number: ICV

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	0.60120	9 687.75	0.685	0.59809	0.59963	0.60587
___ AL	29.85850	6 422.26	0.359	29.79890	29.79432	29.98228
___ AL A>	29.24418	60 967.29	0.595	29.10663	29.18611	29.43981
___ AS	0.59402	289.35	0.518	0.59074	0.59447	0.59684
___ B	0.60650	5 771.98	0.644	0.60272	0.60625	0.61052
___ BA	0.58032	534 780.79	0.991	0.57844	0.57574	0.58677
___ BE	0.56772	221 313.29	0.625	0.56607	0.56531	0.57179
___ CA	30.52885	45 425.22	0.307	30.44927	30.50533	30.63196
___ CD	0.58419	8 184.07	0.224	0.58536	0.58277	0.58443
___ CO	0.58641	5 896.13	0.146	0.58728	0.58638	0.58557
___ CR	0.57755	6 093.30	0.741	0.57478	0.57540	0.58249
___ CU	0.59645	8 748.38	0.596	0.59272	0.59682	0.59980
___ FE	29.36665	18 676.89	0.353	29.26215	29.36815	29.46964
___ K	29.39919	12 547.08	0.460	29.34974	29.29554	29.55229
___ LI	0.59833	6 916.06	0.823	0.59301	0.60273	0.59926
___ MG	29.19194	33 200.99	0.225	29.25532	29.12406	29.19643
___ MN	0.58424	42 309.06	0.658	0.58363	0.58074	0.58835
___ MO	0.59107	1 349.74	0.325	0.59325	0.58966	0.59030
___ NA	29.16213	44 605.62	0.130	29.15805	29.12649	29.20186
___ NI	0.58740	3 558.65	0.084	0.58778	0.58759	0.58684
___ P	0.60097	194.04	0.691	0.60247	0.59627	0.60416
___ PB	0.58032	853.07	0.263	0.58204	0.57912	0.57981
___ S	31.15097	5 038.42	0.108	31.11261	31.16587	31.17442
___ SB	0.60232	400.71	0.521	0.59894	0.60288	0.60514
___ SE	0.58575	194.87	0.194	0.58557	0.58697	0.58472
___ SI	30.78511	11 352.83	0.166	30.73898	30.77646	30.83990
___ SN	0.57704	767.97	0.196	0.57806	0.57583	0.57722
___ SR	0.58968	387 869.36	0.219	0.59059	0.59025	0.58820
___ TH	0.59587	132.17	3.465	0.60399	0.57239	0.61122
___ TI	0.59434	32 579.91	0.730	0.59234	0.59135	0.59932
___ TL	0.58237	184.79	0.489	0.57913	0.58445	0.58354
___ V	0.59626	4 133.08	0.578	0.59488	0.59372	0.60018
___ W	0.59471	934.31	0.395	0.59649	0.59559	0.59205
___ Y1	11196.58487	11 196.58	0.182	11177.88106	11218.35532	11193.51824
___ Y2A	241363.17629	241 363.18	0.618	242037.90451	242398.21904	239653.40532
___ Y2R	17997.05323	17 997.05	0.488	18015.25669	18074.38635	17901.51666
___ ZN	0.58165	5 417.89	0.087	0.58222	0.58148	0.58125
___ ZR	0.62700	2 285.92	0.373	0.62724	0.62920	0.62455

LANCASTER LABORATORIES

Run Name: 2009705T70

Instrument ID: 11016

Tube: 6

Date/Time: 04/06/2020 22:40

Sample Number: ICB

ELEMENT	AVERAGE		%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	-0.00111	-97.17	53.842	-0.00044	-0.00131	-0.00157
___ AL	-0.02207	2.36	87.338	0.00001	-0.03551	-0.03070
___ AL A)	-0.61251	-2 156.84	1.983	-0.60046	-0.61230	-0.62475
___ AS	-0.00409	-1.46	40.480	-0.00294	-0.00598	-0.00334
___ B	0.00144	13.53	32.635	0.00146	0.00096	0.00190
___ BA	0.00004	105.98	32.191	0.00006	0.00004	0.00003
___ BE	-0.00097	-498.40	1.611	-0.00096	-0.00099	-0.00096
___ CA	0.00003	52.48	3479.869	-0.00244	0.00083	0.00171
___ CD	-0.00038	-21.21	8.429	-0.00037	-0.00036	-0.00042
___ CO	-0.00131	-3.05	10.631	-0.00134	-0.00143	-0.00116
___ CR	0.00056	16.20	99.135	0.00032	0.00120	0.00017
___ CU	-0.00027	24.82	61.768	-0.00008	-0.00041	-0.00033
___ FE	-0.00258	16.19	252.351	0.00487	-0.00717	-0.00543
___ K	-0.03201	34.66	129.470	-0.04946	0.01531	-0.06189
___ LI	0.00112	174.25	219.513	-0.00141	0.00127	0.00351
___ MG	0.00055	-0.07	543.974	-0.00290	0.00258	0.00198
___ MN	0.00005	39.95	192.714	0.00002	0.00015	-0.00003
___ MO	0.00051	1.19	77.284	0.00079	0.00006	0.00067
___ NA	0.29284	-242.92	2.721	0.28694	0.28967	0.30191
___ NI	-0.00052	18.18	17.463	-0.00050	-0.00044	-0.00062
___ P	-0.00089	1.02	61.909	-0.00038	-0.00147	-0.00082
___ PB	0.00071	3.14	160.812	0.00087	-0.00050	0.00177
___ S	0.00809	2.27	25.958	0.00580	0.00993	0.00855
___ SB	0.00021	-0.72	160.120	0.00031	-0.00017	0.00049
___ SE	0.00210	1.95	73.726	0.00387	0.00140	0.00102
___ SI	0.01127	9.78	59.447	0.01355	0.00373	0.01653
___ SN	0.00016	3.22	776.403	0.00154	-0.00049	-0.00059
___ SR	0.00006	-101.24	34.981	0.00007	0.00007	0.00004
___ TH	0.01938	3.01	73.225	0.02185	0.00411	0.03217
___ TI	0.00002	2.70	389.122	-0.00005	0.00001	0.00009
___ TL	0.00298	-2.62	45.422	0.00416	0.00327	0.00150
___ V	0.00059	-2.09	127.805	0.00090	0.00114	-0.00027
___ W	0.00023	4.55	343.836	-0.00066	0.00056	0.00078
___ Y1	11314.32640	11 314.33	0.104	11323.88284	11301.18964	11317.90672
___ Y2A	245675.88594	245 675.89	0.949	247781.14618	246078.15615	243168.35548
___ Y2R	17954.91790	17 954.92	0.568	17837.53494	18004.73674	18022.48201
___ ZN	-0.00367	12.21	4.450	-0.00368	-0.00350	-0.00382
___ ZR	-0.00109	-23.01	148.924	0.00033	-0.00074	-0.00285

LANCASTER LABORATORIES

Run Name: 2009705T70

Instrument ID: 11016

Tube: 7

Date/Time: 04/06/2020 22:43

Sample Number: LLC

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	0.00934	81.71	4.111	0.00889	0.00956	0.00955
___ AL	0.17029	52.62	13.032	0.14607	0.18966	0.17513
___ AL A>	-0.39301	-1 638.49	3.536	-0.37704	-0.40234	-0.39965
___ AS	0.02874	14.80	2.753	0.02824	0.02965	0.02833
___ B	0.03037	289.50	0.664	0.03043	0.03015	0.03054
___ BA	0.00490	4 727.53	1.899	0.00479	0.00497	0.00493
___ BE	0.00374	1 384.71	1.192	0.00369	0.00378	0.00374
___ CA	0.20744	366.97	0.548	0.20787	0.20615	0.20829
___ CD	0.00469	50.86	2.538	0.00481	0.00457	0.00469
___ CO	0.00386	49.64	2.421	0.00388	0.00393	0.00375
___ CR	0.01530	175.75	3.225	0.01577	0.01535	0.01479
___ CU	0.01789	475.80	2.121	0.01761	0.01774	0.01832
___ FE	0.19609	145.65	0.988	0.19776	0.19655	0.19397
___ K	0.27489	168.34	8.234	0.28990	0.28590	0.24885
___ LI	0.04912	728.53	2.223	0.04847	0.04851	0.05038
___ MG	0.10503	121.64	1.515	0.10347	0.10495	0.10665
___ MN	0.01029	778.93	0.755	0.01024	0.01038	0.01024
___ MO	0.01032	23.94	2.987	0.01054	0.01045	0.00997
___ NA	1.29173	1 330.54	2.134	1.30195	1.26052	1.31274
___ NI	0.00998	82.69	1.483	0.00982	0.01004	0.01010
___ P	0.09938	32.98	0.454	0.09890	0.09980	0.09942
___ PB	0.01457	23.76	17.648	0.01614	0.01160	0.01595
___ S	0.53314	88.46	0.952	0.52855	0.53859	0.53227
___ SB	0.05068	33.22	7.516	0.04941	0.04767	0.05496
___ SE	0.04969	18.12	9.376	0.05156	0.04439	0.05313
___ SI	0.53362	205.78	0.275	0.53208	0.53500	0.53377
___ SN	0.04951	69.65	1.582	0.04951	0.05030	0.04873
___ SR	0.00501	3 241.63	1.828	0.00491	0.00508	0.00505
___ TH	0.48022	108.08	2.754	0.48898	0.46501	0.48667
___ TI	0.01006	567.71	1.559	0.00988	0.01016	0.01014
___ TL	0.03434	7.93	7.161	0.03567	0.03584	0.03150
___ V	0.01131	76.91	4.734	0.01075	0.01182	0.01137
___ W	0.02990	51.51	0.946	0.03021	0.02982	0.02966
___ Y1	11364.07612	11 364.08	0.367	11409.58658	11354.90509	11327.73668
___ Y2A	247755.28793	247 755.29	1.220	250909.55150	244882.89037	247473.42193
___ Y2R	18302.52733	18 302.53	0.235	18344.22424	18258.27682	18305.08094
___ ZN	0.01741	208.60	1.093	0.01720	0.01745	0.01758
___ ZR	0.05006	204.21	1.228	0.05043	0.04935	0.05039

LANCASTER LABORATORIES

Run Name: 2009705T70

Instrument ID: 11016

Tube: 8

Date/Time: 04/06/2020 22:47

Sample Number: ICSA

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	0.00917	-1 578.69	9.083	0.00820	0.00961	0.00968
___ AL	496.27432	106 252.27	0.513	493.33525	497.80057	497.68713
___ AL A>	478.39461	942 504.42	0.622	479.85457	474.97259	480.35667
___ AS	-0.00735	-2.81	11.466	-0.00832	-0.00690	-0.00683
___ B	0.00190	1 205.29	52.361	0.00106	0.00164	0.00299
___ BA	0.00129	1 147.72	0.968	0.00130	0.00128	0.00128
___ BE	-0.00179	-710.48	1.656	-0.00183	-0.00177	-0.00178
___ CA	500.28405	720 694.64	0.326	501.83572	500.43454	498.58189
___ CD	-0.01554	45.48	1.145	-0.01541	-0.01548	-0.01574
___ CO	-0.00141	9.17	14.583	-0.00125	-0.00164	-0.00134
___ CR	-0.00226	-12.65	8.541	-0.00238	-0.00204	-0.00236
___ CU	0.00826	89.70	16.910	0.00668	0.00932	0.00878
___ FE	197.79953	117 708.37	0.458	196.75497	198.37236	198.27125
___ K	-0.07611	82.15	73.106	-0.07946	-0.13000	-0.01887
___ LI	0.00456	206.86	52.089	0.00423	0.00709	0.00237
___ MG	505.89802	501 357.32	0.363	503.79317	506.70798	507.19291
___ MN	-0.00020	1 477.29	73.878	-0.00007	-0.00017	-0.00036
___ MO	-0.00110	-2.31	54.643	-0.00110	-0.00050	-0.00170
___ NA	0.39027	-89.35	2.426	0.39390	0.37952	0.39737
___ NI	0.00205	-43.18	14.634	0.00202	0.00177	0.00237
___ P	0.01553	5.57	18.469	0.01880	0.01345	0.01433
___ PB	0.01519	-34.23	27.245	0.01308	0.01252	0.01995
___ S	0.01512	3.14	57.612	0.01815	0.02190	0.00530
___ SB	-0.00554	-4.21	124.179	-0.00165	-0.00149	-0.01349
___ SE	0.00249	-13.36	559.546	0.00498	0.01502	-0.01253
___ SI	0.03686	18.63	14.606	0.03414	0.03338	0.04306
___ SN	0.00645	10.69	11.468	0.00729	0.00592	0.00613
___ SR	-0.00038	7 782.93	14.343	-0.00045	-0.00036	-0.00035
___ TH	0.19550	41.17	3.309	0.20208	0.19526	0.18915
___ TI	0.00007	5.14	10.610	0.00007	0.00008	0.00007
___ TL	0.00521	-2.51	74.195	0.00967	0.00302	0.00294
___ V	0.06345	434.61	1.595	0.06408	0.06229	0.06400
___ W	0.00101	5.76	85.093	0.00199	0.00051	0.00051
___ Y1	10386.70855	10 386.71	0.147	10370.53179	10388.81947	10400.77438
___ Y2A	221409.16169	221 409.16	0.336	221702.52500	221961.28694	220563.67312
___ Y2R	17442.79093	17 442.79	0.224	17468.38822	17462.25050	17397.73406
___ ZN	0.02347	380.48	1.105	0.02374	0.02347	0.02322
___ ZR	-0.00094	-7.07	236.581	-0.00292	-0.00139	0.00148

LANCASTER LABORATORIES

Run Name: 2009705T70

Instrument ID: 11016

Tube: 9

Date/Time: 04/06/2020 22:50

Sample Number: ICSAB

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	0.22375	1 711.28	0.823	0.22247	0.22290	0.22586
___ AL	499.60608	109 576.45	0.299	498.54544	498.95661	501.31620
___ AL A)	475.22534	949 489.35	0.838	470.82596	478.58913	476.26092
___ AS	0.09033	40.27	6.398	0.09130	0.08413	0.09557
___ B	0.00205	1 225.48	29.656	0.00176	0.00274	0.00164
___ BA	0.49157	421 090.16	0.562	0.48877	0.49429	0.49165
___ BE	0.48797	176 953.33	0.465	0.48577	0.48782	0.49030
___ CA	502.91510	741 897.49	1.086	501.65499	498.19245	508.89786
___ CD	0.89194	11 976.52	0.693	0.89532	0.89570	0.88481
___ CO	0.45578	4 322.27	0.666	0.45769	0.45736	0.45228
___ CR	0.46904	4 604.70	0.170	0.46848	0.46869	0.46996
___ CU	0.53834	7 126.03	0.254	0.53975	0.53703	0.53823
___ FE	198.60229	121 014.24	0.431	198.14232	198.07547	199.58908
___ K	-0.16193	48.02	67.136	-0.21425	-0.23458	-0.03695
___ LI	0.00489	215.60	33.846	0.00601	0.00566	0.00299
___ MG	508.94176	516 094.51	1.850	508.41545	499.80218	518.60765
___ MN	0.47633	33 414.24	0.439	0.47418	0.47647	0.47835
___ MO	-0.00125	-2.67	49.583	-0.00196	-0.00095	-0.00084
___ NA	0.40079	-75.05	4.673	0.39668	0.42123	0.38445
___ NI	0.90667	5 101.77	0.674	0.90857	0.91161	0.89983
___ P	0.01362	5.67	19.262	0.01331	0.01116	0.01638
___ PB	0.51072	644.48	1.175	0.51468	0.51366	0.50382
___ S	0.01617	3.35	42.195	0.01840	0.00851	0.02160
___ SB	0.59794	373.91	1.365	0.60582	0.58953	0.59845
___ SE	0.50506	144.74	2.614	0.50275	0.51926	0.49316
___ SI	0.02134	13.41	20.282	0.02598	0.01741	0.02063
___ SN	0.00706	11.62	10.498	0.00791	0.00676	0.00652
___ SR	-0.00032	7 974.48	26.150	-0.00031	-0.00024	-0.00041
___ TH	0.19171	41.27	19.220	0.16251	0.17952	0.23311
___ TI	0.00077	48.43	30.752	0.00105	0.00066	0.00061
___ TL	0.08896	18.52	4.286	0.08805	0.09314	0.08568
___ V	0.57139	3 742.86	0.655	0.56963	0.56885	0.57568
___ W	-0.00102	19.36	73.544	-0.00110	-0.00023	-0.00172
___ Y1	10540.58517	10 540.59	0.676	10511.66334	10488.28617	10621.80601
___ Y2A	224504.78668	224 504.79	0.560	225948.58227	223656.17512	223909.60265
___ Y2R	17863.69761	17 863.70	1.229	17915.04491	18053.01896	17623.02894
___ ZN	0.96781	8 557.77	0.783	0.97338	0.97087	0.95918
___ ZR	-0.00229	-12.36	35.952	-0.00150	-0.00223	-0.00314

LANCASTER LABORATORIES

Run Name: 2009705T70

Instrument ID: 11016

Tube: 10

Date/Time: 04/06/2020 22:54

Sample Number: CCV

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	0.49574	8 140.47	0.363	0.49778	0.49504	0.49438
___ AL	24.94417	5 574.70	0.363	24.94937	25.03206	24.85108
___ AL A>	24.31282	51 620.57	0.336	24.37359	24.34479	24.22009
___ AS	0.48148	241.39	0.450	0.48383	0.47955	0.48107
___ B	0.49818	4 845.22	0.121	0.49887	0.49791	0.49776
___ BA	0.48662	457 992.55	0.707	0.49050	0.48396	0.48539
___ BE	0.47883	190 618.72	0.163	0.47949	0.47796	0.47902
___ CA	25.57371	39 547.69	0.018	25.57004	25.57903	25.57206
___ CD	0.48178	6 943.21	0.215	0.48279	0.48184	0.48071
___ CO	0.48134	4 982.35	0.134	0.48187	0.48153	0.48062
___ CR	0.48425	5 219.36	0.509	0.48618	0.48147	0.48511
___ CU	0.49777	7 467.45	0.079	0.49798	0.49732	0.49801
___ FE	24.60632	16 279.28	0.106	24.62509	24.61723	24.57663
___ K	24.76380	10 989.56	0.314	24.77267	24.83669	24.68204
___ LI	0.48732	5 884.00	0.717	0.48417	0.48670	0.49108
___ MG	24.74848	29 274.22	0.193	24.79551	24.74987	24.70005
___ MN	0.48825	36 115.94	0.204	0.48938	0.48787	0.48749
___ MO	0.48709	1 144.62	0.327	0.48888	0.48657	0.48582
___ NA	24.80679	39 317.82	0.239	24.86876	24.80113	24.75050
___ NI	0.48483	3 026.23	0.216	0.48439	0.48603	0.48407
___ P	0.48234	160.49	1.199	0.47955	0.47847	0.48899
___ PB	0.47886	724.70	0.371	0.47928	0.48039	0.47691
___ S	25.34159	4 218.03	0.589	25.44228	25.17007	25.41241
___ SB	0.47758	326.92	0.123	0.47759	0.47816	0.47698
___ SE	0.48781	167.19	1.033	0.48283	0.49291	0.48769
___ SI	25.36269	9 719.62	0.289	25.43844	25.35777	25.29187
___ SN	0.47406	649.79	0.609	0.47739	0.47245	0.47232
___ SR	0.49799	334 491.00	0.208	0.49697	0.49795	0.49904
___ TH	0.51682	118.94	1.078	0.51262	0.51471	0.52314
___ TI	0.49622	27 780.67	0.031	0.49627	0.49604	0.49634
___ TL	0.48905	158.92	0.608	0.48927	0.48597	0.49190
___ V	0.51179	3 623.78	0.289	0.51148	0.51049	0.51340
___ W	0.48130	779.17	0.175	0.48102	0.48224	0.48063
___ Y1	11521.80070	11 521.80	0.037	11519.69152	11526.70029	11519.01029
___ Y2A	246494.96124	246 494.96	0.270	246815.94684	246938.70432	245730.23256
___ Y2R	18700.00791	18 700.01	0.509	18793.77247	18603.39753	18702.85372
___ ZN	0.48381	4 645.27	0.323	0.48513	0.48421	0.48208
___ ZR	0.51152	1 936.48	0.700	0.50791	0.51157	0.51507

LANCASTER LABORATORIES

Run Name: 2009705T70

Instrument ID: 11016

Tube: 11

Date/Time: 04/06/2020 22:57

Sample Number: CCB

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	-0.00055	-91.27	15.086	-0.00064	-0.00055	-0.00047
___ AL	-0.00893	4.98	124.529	-0.00006	-0.00532	-0.02142
___ AL A>	-0.58685	-2 189.34	2.439	-0.59791	-0.59196	-0.57068
___ AS	-0.00418	-1.55	41.830	-0.00490	-0.00546	-0.00219
___ B	0.00109	10.65	54.507	0.00160	0.00124	0.00044
___ BA	0.00002	88.33	159.458	0.00003	-0.00001	0.00004
___ BE	-0.00096	-512.00	4.140	-0.00100	-0.00094	-0.00093
___ CA	0.00361	60.28	161.765	0.00814	0.00568	-0.00298
___ CD	-0.00014	-18.22	229.565	-0.00025	-0.00038	0.00022
___ CO	-0.00129	-2.95	22.133	-0.00144	-0.00147	-0.00096
___ CR	0.00044	15.53	124.590	0.00053	-0.00015	0.00094
___ CU	0.00080	32.54	61.029	0.00081	0.00129	0.00031
___ FE	-0.00126	17.80	272.155	0.00086	-0.00521	0.00057
___ K	-0.00351	48.57	3111.155	0.09604	0.01359	-0.12015
___ LI	-0.00040	163.95	372.724	0.00114	-0.00179	-0.00053
___ MG	0.00610	6.54	42.257	0.00395	0.00539	0.00896
___ MN	-0.00006	34.65	79.637	-0.00011	-0.00003	-0.00003
___ MO	0.00074	1.76	33.272	0.00050	0.00099	0.00071
___ NA	0.30293	-237.24	5.452	0.28392	0.31112	0.31375
___ NI	-0.00035	19.73	115.577	-0.00035	-0.00075	0.00006
___ P	-0.00149	0.89	182.803	0.00041	-0.00027	-0.00461
___ PB	0.00019	2.42	633.700	-0.00113	0.00048	0.00121
___ S	0.01336	3.20	135.489	0.00249	0.00334	0.03426
___ SB	0.00158	0.21	197.928	0.00228	0.00431	-0.00184
___ SE	0.00012	1.32	1528.707	0.00230	-0.00096	-0.00097
___ SI	0.01037	9.87	65.332	0.01530	0.00265	0.01317
___ SN	0.00059	3.90	165.631	0.00105	-0.00053	0.00126
___ SR	0.00008	-90.84	13.729	0.00007	0.00008	0.00009
___ TH	-0.00366	-2.23	72.279	-0.00208	-0.00672	-0.00219
___ TI	0.00005	4.80	200.414	0.00017	0.00000	-0.00001
___ TL	0.00409	-2.31	68.256	0.00132	0.00405	0.00691
___ V	0.00058	-2.43	21.733	0.00049	0.00073	0.00053
___ W	-0.00009	4.15	735.478	-0.00007	-0.00077	0.00057
___ Y1	11604.19122	11 604.19	0.710	11661.44512	11641.41117	11509.71737
___ Y2A	255510.76966	255 510.77	0.634	254424.25249	254734.30233	257373.75415
___ Y2R	18747.34746	18 747.35	0.674	18611.22204	18770.00899	18860.81135
___ ZN	-0.00357	13.49	3.818	-0.00365	-0.00364	-0.00341
___ ZR	0.00069	-19.43	229.076	0.00145	0.00177	-0.00113

LANCASTER LABORATORIES

Run Name: 2009705T70

Instrument ID: 11016

Tube: 12

Date/Time: 04/06/2020 23:00

Sample Number: **LRS2**

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	2.88315	49 693.77	0.371	2.88514	2.87161	2.89270
___ AL	0.02109	459.98	248.404	-0.02517	0.01046	0.07796
___ AL A)	0.29369	15 722.53	13.182	0.30232	0.25139	0.32736
___ AS	19.41922	9 504.00	5.211	20.13347	19.86290	18.26130
___ B	4.92023	45 967.90	0.693	4.95460	4.91964	4.88645
___ BA	4.75257	4 447 051.38	1.548	4.72497	4.69681	4.83593
___ BE	4.84999	1 926 009.26	0.690	4.86019	4.81263	4.87715
___ CA	0.02383	88.56	21.457	0.02177	0.02965	0.02007
___ CD	19.67467	276 759.60	4.614	20.32969	20.05591	18.63843
___ CO	19.93717	201 482.77	5.429	20.68161	20.43432	18.69559
___ CR	20.15974	215 191.02	0.670	20.31554	20.08818	20.07550
___ CU	20.71587	300 818.78	0.687	20.86393	20.70343	20.58025
___ FE	-0.00428	15.27	143.179	0.00279	-0.00776	-0.00787
___ K	-0.22905	72.97	20.723	-0.28380	-0.19946	-0.20389
___ LI	20.46303	232 709.04	0.264	20.41686	20.44977	20.52246
___ MG	0.83671	1 022.91	0.788	0.84257	0.82957	0.83797
___ MN	19.39120	1 414 535.95	0.856	19.55738	19.22544	19.39078
___ MO	19.69505	45 295.11	5.522	20.43209	20.20712	18.44594
___ NA	0.39271	-88.97	2.181	0.38770	0.40259	0.38782
___ NI	20.16588	122 749.67	5.349	20.90765	20.66153	18.92844
___ P	19.22418	6 238.18	5.136	19.90559	19.67509	18.09186
___ PB	19.96132	29 263.22	5.047	20.65524	20.42292	18.80579
___ S	-0.47766	-76.86	5.199	-0.49973	-0.48247	-0.45077
___ SB	19.93729	13 393.30	5.281	20.66835	20.41306	18.73046
___ SE	19.06863	6 430.97	4.933	19.69710	19.52168	17.98712
___ SI	1.30112	615.10	11.344	1.16691	1.27725	1.45919
___ SN	19.12660	25 541.17	5.393	19.84896	19.58545	17.94538
___ SR	4.93221	3 283 783.64	1.155	4.95115	4.86819	4.97730
___ TH	3.03953	684.27	0.377	3.05259	3.03478	3.03120
___ TI	19.65883	1 091 985.86	0.854	19.79745	19.47223	19.70680
___ TL	20.01517	6 506.30	4.439	20.61906	20.43147	18.99499
___ V	21.39446	150 333.48	0.665	21.53903	21.38974	21.25459
___ W	19.71839	30 874.28	5.397	20.45961	20.19662	18.49895
___ Y1	11292.66607	11 292.67	3.900	11001.39804	11077.26909	11799.33107
___ Y2A	244588.87395	244 588.87	0.877	243573.15246	247052.99003	243140.47936
___ Y2R	18118.24481	18 118.24	0.431	18179.18498	18145.32967	18030.21978
___ ZN	9.13707	85 349.55	5.293	9.47433	9.35395	8.58293
___ ZR	21.15656	76 849.76	0.259	21.09800	21.16520	21.20649

LANCASTER LABORATORIES

Run Name: 2009705T70

Instrument ID: 11016

Tube: 13

Date/Time: 04/06/2020 23:04

Sample Number: **LRS4**

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	0.02212	-2 252.85	4.357	0.02316	0.02126	0.02193
___ AL	515.18002	106 927.29	0.086	514.68905	515.54148	515.30954
___ AL A)	486.86924	926 686.66	0.733	482.83185	489.60580	488.17007
___ AS	-0.01049	-4.13	16.558	-0.01184	-0.00853	-0.01110
___ B	0.02738	1 841.33	7.607	0.02978	0.02616	0.02619
___ BA	0.00321	2 687.41	66.271	0.00566	0.00199	0.00197
___ BE	-0.00034	-164.82	618.653	0.00208	-0.00154	-0.00156
___ CA	511.90306	713 951.80	1.086	508.08224	518.27933	509.34761
___ CD	-0.02191	111.03	2.266	-0.02135	-0.02212	-0.02228
___ CO	-0.00153	15.49	27.093	-0.00115	-0.00197	-0.00148
___ CR	-0.00208	-10.30	341.282	0.00610	-0.00677	-0.00557
___ CU	0.01639	163.02	60.210	0.02779	0.01050	0.01089
___ FE	312.13064	175 561.04	0.196	311.50799	312.73197	312.15196
___ K	528.60795	210 872.85	0.073	528.37443	529.05158	528.39785
___ LI	0.01537	314.61	18.194	0.01779	0.01600	0.01231
___ MG	534.87826	509 716.95	0.996	528.73414	538.17534	537.72530
___ MN	-0.00991	1 623.56	85.889	-0.00008	-0.01488	-0.01475
___ MO	0.00383	7.93	12.442	0.00329	0.00405	0.00416
___ NA	498.57976	726 181.46	0.332	500.38523	498.21552	497.13852
___ NI	0.00023	-93.84	171.635	-0.00010	0.00012	0.00067
___ P	0.01671	5.65	18.365	0.01329	0.01760	0.01923
___ PB	0.00698	15.64	35.800	0.00924	0.00741	0.00430
___ S	211.33184	30 876.72	0.751	211.96878	212.50219	209.52453
___ SB	-0.00613	-4.46	77.091	-0.00173	-0.00553	-0.01112
___ SE	0.01518	-17.77	11.929	0.01448	0.01382	0.01724
___ SI	205.63080	71 106.22	0.159	205.25433	205.84220	205.79587
___ SN	0.01052	15.29	22.357	0.01320	0.00880	0.00956
___ SR	0.00227	9 248.96	96.966	0.00481	0.00086	0.00115
___ TH	0.29071	59.85	10.795	0.27322	0.32694	0.27197
___ TI	0.02450	1 192.30	35.204	0.03445	0.01955	0.01948
___ TL	0.00282	-3.62	83.473	0.00529	0.00061	0.00255
___ V	0.09685	645.01	8.456	0.10616	0.09074	0.09366
___ W	0.00401	9.50	33.745	0.00248	0.00504	0.00452
___ Y1	10116.06965	10 116.07	0.652	10068.90811	10087.80074	10191.50010
___ Y2A	213785.12183	213 785.12	0.717	215418.00379	213562.73670	212374.62500
___ Y2R	16888.26261	16 888.26	0.706	16911.19143	16759.19081	16994.40559
___ ZN	0.00507	296.82	11.546	0.00526	0.00553	0.00441
___ ZR	0.00779	30.37	14.131	0.00813	0.00655	0.00867

LANCASTER LABORATORIES

Run Name: 2009705T70

Instrument ID: 11016

Tube: 14

Date/Time: 04/06/2020 23:07

Sample Number: **LRS3**

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	2.39950	41 629.88	0.985	2.40535	2.37348	2.41968
___ AL	0.09442	365.65	14.185	0.09402	0.08123	0.10801
___ AL A)	-0.37373	6 935.40	10.744	-0.36847	-0.33646	-0.41624
___ AS	9.40947	4 638.98	1.481	9.49503	9.48472	9.24867
___ B	2.34182	22 260.07	1.217	2.34696	2.31110	2.36740
___ BA	2.35861	2 245 349.00	2.348	2.33741	2.31696	2.42145
___ BE	2.35890	953 066.82	1.270	2.33640	2.34738	2.39291
___ CA	0.06777	154.90	7.337	0.07299	0.06724	0.06309
___ CD	9.69805	137 360.33	1.519	9.78213	9.78407	9.52795
___ CO	9.66236	98 350.78	1.595	9.75259	9.75008	9.48442
___ CR	9.59820	104 260.28	0.955	9.62004	9.49763	9.67691
___ CU	9.68709	145 965.34	0.998	9.72235	9.57775	9.76117
___ FE	0.03074	37.94	15.536	0.03316	0.03383	0.02524
___ K	0.12220	159.21	44.514	0.18473	0.08579	0.09608
___ LI	9.65666	110 350.48	0.247	9.67340	9.62934	9.66724
___ MG	0.44284	539.77	1.335	0.44967	0.43957	0.43929
___ MN	9.57964	710 851.42	0.734	9.56464	9.51800	9.65629
___ MO	9.61542	22 272.60	1.638	9.71425	9.69825	9.43376
___ NA	0.50374	84.95	2.327	0.51253	0.50824	0.49043
___ NI	9.84579	60 370.73	1.582	9.93839	9.93306	9.66592
___ P	9.31664	3 033.81	1.551	9.40099	9.39911	9.14982
___ PB	9.56800	14 126.59	1.481	9.65448	9.64503	9.40449
___ S	-0.13951	-22.00	85.556	-0.00207	-0.21715	-0.19931
___ SB	9.68622	6 551.61	1.559	9.77470	9.77216	9.51180
___ SE	9.40257	3 194.03	1.417	9.48502	9.47380	9.24888
___ SI	0.78549	360.51	3.237	0.75924	0.78721	0.81001
___ SN	9.31704	12 532.21	1.636	9.40298	9.40709	9.14106
___ SR	2.44687	1 657 877.35	1.067	2.41708	2.45788	2.46566
___ TH	8.41553	1 904.59	0.059	8.41151	8.41396	8.42113
___ TI	9.54035	539 286.06	0.768	9.48789	9.50913	9.62403
___ TL	9.84213	3 224.35	1.148	9.91261	9.90196	9.71182
___ V	10.19405	72 911.11	1.042	10.21923	10.07749	10.28543
___ W	9.48867	14 968.89	1.575	9.58402	9.56556	9.31643
___ Y1	11359.03431	11 359.03	1.290	11283.92964	11265.22607	11527.94721
___ Y2A	248907.19823	248 907.20	1.441	248595.09967	252638.87043	245487.62458
___ Y2R	18191.90353	18 191.90	0.582	18073.48682	18225.00000	18277.22377
___ ZN	4.57765	43 068.52	1.586	4.62246	4.61662	4.49386
___ ZR	9.96331	36 938.41	0.213	9.97243	9.93902	9.97849

LANCASTER LABORATORIES

Run Name: 2009705T70

Instrument ID: 11016

Tube: 15

Date/Time: 04/06/2020 23:11

Sample Number: LRS5

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
AG	0.00880	-1 241.17	8.039	0.00961	0.00830	0.00848
AL	257.07495	55 231.92	0.149	256.94558	257.50694	256.77233
AL A>	251.87232	507 930.56	0.319	252.80066	251.43771	251.37860
AS	-0.00400	-1.33	136.091	-0.00971	0.00112	-0.00341
B	0.02562	1 061.80	1.129	0.02550	0.02540	0.02595
BA	0.00106	1 003.49	1.880	0.00109	0.00106	0.00105
BE	-0.00118	-519.07	0.234	-0.00118	-0.00118	-0.00118
CA	258.10716	379 017.88	1.869	256.34551	254.41067	263.56531
CD	-0.01116	42.28	0.687	-0.01120	-0.01107	-0.01121
CO	-0.00137	6.89	32.758	-0.00101	-0.00123	-0.00188
CR	-0.00266	-17.15	21.791	-0.00320	-0.00205	-0.00273
CU	0.00546	63.78	0.738	0.00542	0.00550	0.00545
FE	151.34728	92 697.57	0.189	151.65499	151.29626	151.09060
K	261.79809	109 977.19	0.115	262.14411	261.63607	261.61409
LI	0.00857	255.59	20.837	0.01041	0.00846	0.00684
MG	264.71983	282 604.57	0.305	263.92345	264.69610	265.53993
MN	-0.00666	734.83	1.357	-0.00656	-0.00673	-0.00669
MO	0.00291	6.39	30.303	0.00220	0.00262	0.00389
NA	248.88528	381 294.21	0.941	246.75918	248.50228	251.39438
NI	-0.00078	-43.05	10.141	-0.00084	-0.00069	-0.00081
P	0.00805	3.53	34.061	0.00502	0.01036	0.00876
PB	0.00182	6.97	164.778	-0.00073	0.00512	0.00107
S	105.80780	16 414.67	1.426	106.97160	106.34934	104.10244
SB	-0.00465	-3.78	26.595	-0.00550	-0.00520	-0.00323
SE	0.00685	-8.71	39.716	0.00889	0.00791	0.00376
SI	105.65380	38 466.98	0.083	105.73315	105.66788	105.56036
SN	0.00596	10.44	12.530	0.00521	0.00671	0.00596
SR	0.00066	4 636.16	24.728	0.00077	0.00073	0.00047
TH	0.14849	31.57	4.769	0.15266	0.15250	0.14032
TI	0.01178	616.04	0.394	0.01179	0.01183	0.01174
TL	0.00401	-2.77	21.208	0.00455	0.00303	0.00445
V	0.04591	325.76	1.483	0.04617	0.04513	0.04642
W	0.00296	8.44	40.379	0.00385	0.00341	0.00160
Y1	10741.35088	10 741.35	0.711	10729.96603	10671.29574	10822.79088
Y2A	229656.13235	229 656.13	0.358	228717.57500	230255.97848	229994.84356
Y2R	17780.18648	17 780.19	0.412	17796.60340	17843.90609	17700.04995
ZN	0.00119	164.15	29.270	0.00156	0.00111	0.00088
ZR	0.01331	39.43	9.419	0.01265	0.01475	0.01252

LANCASTER LABORATORIES

Run Name: 2009705T70

Instrument ID: 11016

Tube: 16

Date/Time: 04/06/2020 23:14

Sample Number: CCV

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	0.48199	7 967.63	1.010	0.48643	0.48275	0.47678
___ AL	25.21016	5 459.13	0.167	25.22603	25.16250	25.24194
___ AL A>	23.98848	51 326.87	0.777	24.20127	23.91068	23.85349
___ AS	0.47138	239.68	0.471	0.46883	0.47288	0.47243
___ B	0.50072	4 906.67	0.699	0.50454	0.49998	0.49765
___ BA	0.47304	448 674.62	0.336	0.47123	0.47419	0.47371
___ BE	0.48041	192 734.70	0.755	0.48444	0.47938	0.47741
___ CA	25.95150	38 886.04	0.137	25.97043	25.97361	25.91047
___ CD	0.48234	7 051.25	0.267	0.48246	0.48356	0.48099
___ CO	0.46970	4 932.12	0.254	0.46987	0.47080	0.46844
___ CR	0.48645	5 283.45	0.829	0.49020	0.48695	0.48218
___ CU	0.48691	7 356.75	1.011	0.49258	0.48443	0.48372
___ FE	24.66667	15 812.71	0.075	24.66749	24.64767	24.68484
___ K	25.23628	10 850.86	0.201	25.17910	25.25418	25.27555
___ LI	0.48724	5 700.57	0.580	0.48451	0.49016	0.48706
___ MG	25.80251	29 567.52	0.306	25.76111	25.75287	25.89356
___ MN	0.48476	36 137.58	0.829	0.48934	0.48310	0.48183
___ MO	0.49234	1 173.58	0.170	0.49299	0.49263	0.49140
___ NA	25.07231	38 513.29	0.165	25.06260	25.03660	25.11775
___ NI	0.48315	3 059.18	0.135	0.48372	0.48330	0.48244
___ P	0.47115	159.07	0.546	0.46865	0.47379	0.47100
___ PB	0.46871	719.88	0.612	0.46904	0.47140	0.46569
___ S	25.40604	4 289.58	0.457	25.28756	25.41096	25.51962
___ SB	0.46857	325.42	0.637	0.46560	0.47157	0.46853
___ SE	0.47983	166.80	1.124	0.47517	0.48574	0.47859
___ SI	25.97002	9 643.37	0.083	25.94982	25.96758	25.99266
___ SN	0.46827	651.13	0.491	0.46581	0.46862	0.47037
___ SR	0.50522	341 977.25	0.904	0.50565	0.50955	0.50045
___ TH	0.49594	110.54	3.114	0.50331	0.50632	0.47819
___ TI	0.49098	27 699.90	0.957	0.49624	0.48954	0.48717
___ TL	0.48645	160.06	0.388	0.48835	0.48458	0.48642
___ V	0.52685	3 760.08	0.636	0.53015	0.52697	0.52345
___ W	0.47235	775.69	0.266	0.47355	0.47245	0.47104
___ Y1	11687.45824	11 687.46	0.382	11683.55638	11644.85015	11733.96821
___ Y2A	248402.82392	248 402.82	0.352	247403.40532	248786.62791	249018.43854
___ Y2R	18119.85758	18 119.86	0.497	18189.64314	18018.20994	18151.71966
___ ZN	0.47173	4 596.67	0.253	0.47256	0.47226	0.47036
___ ZR	0.51323	1 880.79	0.303	0.51215	0.51252	0.51501

LANCASTER LABORATORIES

Run Name: 2009705T70

Instrument ID: 11016

Tube: 17

Date/Time: 04/06/2020 23:18

Sample Number: CCB

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	-0.00020	-84.65	223.738	0.00025	-0.00066	-0.00021
___ AL	-0.01709	3.34	84.428	-0.00049	-0.02416	-0.02663
___ AL A>	-0.57821	-2 154.66	0.297	-0.57975	-0.57852	-0.57636
___ AS	-0.00373	-1.34	10.609	-0.00416	-0.00368	-0.00337
___ B	0.00349	33.98	7.773	0.00322	0.00376	0.00350
___ BA	0.00004	106.90	40.880	0.00005	0.00002	0.00004
___ BE	-0.00096	-508.97	0.890	-0.00096	-0.00095	-0.00096
___ CA	0.00875	68.12	13.446	0.01006	0.00780	0.00838
___ CD	-0.00025	-20.21	91.547	-0.00033	-0.00041	0.00001
___ CO	-0.00126	-2.62	14.413	-0.00127	-0.00143	-0.00107
___ CR	-0.00015	8.83	589.567	0.00079	-0.00030	-0.00093
___ CU	0.00033	29.07	425.118	0.00128	0.00098	-0.00127
___ FE	-0.00211	17.18	286.313	-0.00747	0.00442	-0.00327
___ K	0.07842	84.86	42.222	0.07490	0.04721	0.11314
___ LI	0.00077	177.26	174.625	-0.00057	0.00075	0.00213
___ MG	0.00964	10.72	3.528	0.01001	0.00957	0.00934
___ MN	0.00004	41.02	346.990	0.00019	0.00000	-0.00007
___ MO	-0.00007	-0.15	376.871	-0.00008	-0.00032	0.00019
___ NA	0.34918	-162.12	1.199	0.35329	0.34932	0.34492
___ NI	-0.00074	17.68	82.395	-0.00121	-0.00096	-0.00005
___ P	-0.00310	0.34	44.809	-0.00352	-0.00424	-0.00155
___ PB	0.00012	2.38	399.728	0.00034	-0.00043	0.00045
___ S	0.01478	3.53	41.377	0.01009	0.01255	0.02170
___ SB	0.00299	1.19	32.454	0.00350	0.00187	0.00361
___ SE	0.00356	2.57	36.950	0.00370	0.00218	0.00481
___ SI	0.03819	20.52	20.296	0.04709	0.03459	0.03290
___ SN	0.00049	3.85	169.649	0.00142	0.00027	-0.00021
___ SR	0.00009	-83.19	1.905	0.00009	0.00009	0.00009
___ TH	0.00588	-0.01	365.535	-0.00790	-0.00510	0.03062
___ TI	0.00009	6.90	67.283	0.00010	0.00014	0.00002
___ TL	0.00398	-2.39	45.195	0.00318	0.00604	0.00272
___ V	-0.00001	-6.63	5106.906	0.00028	0.00001	-0.00031
___ W	0.00036	4.98	152.100	0.00010	-0.00001	0.00099
___ Y1	11855.27842	11 855.28	0.200	11881.17065	11834.69459	11849.97001
___ Y2A	253757.05980	253 757.06	0.670	252051.41196	253769.93355	255449.83389
___ Y2R	18703.81705	18 703.82	0.776	18864.41311	18582.16992	18664.86811
___ ZN	-0.00374	12.09	1.024	-0.00378	-0.00374	-0.00370
___ ZR	-0.00051	-23.01	284.298	0.00035	0.00031	-0.00220

LANCASTER LABORATORIES

Run Name: 2009705T70

Instrument ID: 11016

Tube: 18

Date/Time: 04/06/2020 23:21

Sample Number: **PBW**

Class: ****

Batch: 200971486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 1.00

Protocol Symbol: UA

ELEMENT	AVERAGE		%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	-0.00072	-95.93	79.381	-0.00024	-0.00134	-0.00057
___ AL	-0.04424	-2.76	38.365	-0.06021	-0.02642	-0.04608
___ AL A)	-0.55985	-2 167.91	1.210	-0.55453	-0.55754	-0.56747
___ AS	0.00044	0.83	485.892	0.00142	-0.00201	0.00190
___ B	0.00257	25.58	25.588	0.00330	0.00202	0.00238
___ BA	0.00000	73.43	253.968	0.00000	0.00001	0.00000
___ BE	-0.00098	-533.52	2.277	-0.00096	-0.00100	-0.00099
___ CA	0.00980	70.00	61.605	0.00620	0.01678	0.00643
___ CD	-0.00044	-23.41	48.485	-0.00019	-0.00055	-0.00057
___ CO	-0.00133	-3.45	5.790	-0.00141	-0.00131	-0.00126
___ CR	0.00041	15.50	215.469	0.00126	-0.00052	0.00050
___ CU	-0.00012	21.65	559.053	0.00038	-0.00091	0.00016
___ FE	-0.01271	10.20	29.860	-0.01014	-0.01091	-0.01706
___ K	-0.01103	45.54	201.658	0.01448	-0.02118	-0.02640
___ LI	0.00070	177.22	267.074	0.00228	0.00120	-0.00137
___ MG	-0.00113	-2.09	132.529	-0.00265	0.00033	-0.00106
___ MN	0.00003	41.42	247.605	0.00005	0.00008	-0.00005
___ MO	0.00028	0.70	91.185	0.00013	0.00057	0.00014
___ NA	0.31024	-225.77	1.678	0.30890	0.31598	0.30584
___ NI	-0.00052	19.38	97.217	0.00005	-0.00069	-0.00091
___ P	-0.00252	0.55	91.508	-0.00275	-0.00011	-0.00470
___ PB	-0.00008	2.09	589.434	-0.00015	-0.00052	0.00042
___ S	0.01271	3.22	31.689	0.01381	0.00825	0.01607
___ SB	0.00140	0.07	78.246	0.00049	0.00261	0.00110
___ SE	0.00280	2.33	107.348	0.00409	-0.00063	0.00494
___ SI	0.01027	9.84	32.169	0.01323	0.00671	0.01087
___ SN	0.00047	3.88	38.996	0.00050	0.00064	0.00028
___ SR	0.00005	-118.38	28.328	0.00006	0.00004	0.00004
___ TH	0.00291	-0.70	490.555	-0.00960	0.01845	-0.00013
___ TI	-0.00006	-1.72	176.763	0.00006	-0.00014	-0.00010
___ TL	0.00400	-2.42	60.485	0.00659	0.00179	0.00363
___ V	0.00060	-2.29	81.533	0.00061	0.00011	0.00109
___ W	-0.00068	3.33	103.124	-0.00021	-0.00034	-0.00148
___ Y1	12024.26145	12 024.26	0.290	12061.78029	11992.72455	12018.27952
___ Y2A	260215.17165	260 215.17	1.191	262849.16944	260994.68439	256801.66113
___ Y2R	18769.75687	18 769.76	0.669	18860.55201	18822.22278	18626.49581
___ ZN	-0.00366	13.08	1.214	-0.00370	-0.00365	-0.00361
___ ZR	-0.00195	-28.78	50.791	-0.00306	-0.00115	-0.00164

LANCASTER LABORATORIES

Run Name: 2009705T70

Instrument ID: 11016

Tube: 19

Date/Time: 04/06/2020 23:24

Sample Number: LCSW

Class: ****

Batch: 200971486601

Initial Vol: 50.00

Final Vol: 50.00

DF: 1.00

Protocol Symbol: UA

ELEMENT	AVERAGE		%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	0.01894	247.54	2.445	0.01947	0.01874	0.01861
___ AL	0.39331	93.63	5.526	0.40323	0.40832	0.36839
___ AL A)	-0.18828	-1 252.72	1.226	-0.18597	-0.18829	-0.19059
___ AS	0.05443	29.14	1.251	0.05480	0.05365	0.05486
___ B	0.05949	569.00	0.748	0.05953	0.05992	0.05903
___ BA	0.00953	9 160.94	0.125	0.00954	0.00953	0.00952
___ BE	0.00876	3 410.77	0.209	0.00874	0.00877	0.00877
___ CA	0.42254	696.25	0.200	0.42189	0.42349	0.42224
___ CD	0.00959	127.75	1.027	0.00970	0.00957	0.00950
___ CO	0.00843	101.99	2.530	0.00857	0.00818	0.00854
___ CR	0.03101	346.64	1.475	0.03091	0.03150	0.03060
___ CU	0.03873	597.00	2.104	0.03801	0.03961	0.03856
___ FE	0.38895	272.61	1.167	0.39339	0.38432	0.38914
___ K	0.59703	309.72	12.910	0.51411	0.61047	0.66650
___ LI	0.09952	1 315.01	0.073	0.09949	0.09947	0.09960
___ MG	0.21277	248.64	1.703	0.20923	0.21648	0.21260
___ MN	0.02052	1 561.54	0.730	0.02060	0.02061	0.02035
___ MO	0.01972	48.42	2.178	0.01991	0.02002	0.01923
___ NA	2.24611	2 855.35	0.534	2.25352	2.23228	2.25253
___ NI	0.01986	151.68	1.776	0.01953	0.01981	0.02023
___ P	0.17870	63.11	1.254	0.18092	0.17875	0.17644
___ PB	0.02889	47.72	3.816	0.02839	0.03015	0.02813
___ S	1.02258	178.74	0.828	1.01513	1.02082	1.03179
___ SB	0.09472	66.57	2.693	0.09742	0.09438	0.09236
___ SE	0.09580	35.75	3.008	0.09302	0.09877	0.09559
___ SI	1.05380	403.16	1.178	1.04160	1.05337	1.06642
___ SN	0.09401	137.16	0.668	0.09345	0.09389	0.09469
___ SR	0.01037	6 882.19	0.709	0.01031	0.01045	0.01036
___ TH	0.01627	2.38	46.629	0.02502	0.01174	0.01204
___ TI	0.01988	1 124.13	1.757	0.01988	0.02022	0.01952
___ TL	0.06340	18.76	3.869	0.06285	0.06608	0.06127
___ V	0.02208	151.12	3.607	0.02143	0.02297	0.02185
___ W	0.05566	97.67	1.119	0.05631	0.05558	0.05507
___ Y1	12033.94014	12 033.94	0.184	12025.87224	12059.04824	12016.89993
___ Y2A	248592.24806	248 592.25	0.556	248608.72093	247200.74751	249967.27575
___ Y2R	18412.82345	18 412.82	0.671	18445.33746	18516.79477	18276.33813
___ ZN	0.03384	383.19	0.522	0.03364	0.03392	0.03397
___ ZR	0.09136	316.26	4.976	0.08722	0.09062	0.09622

LANCASTER LABORATORIES

Run Name: 2009705T70

Instrument ID: 11016

Tube: 20

Date/Time: 04/06/2020 23:28

Sample Number: 1292528

Class: U***

Batch: 200971486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 1.00

Protocol Symbol: DU

ELEMENT	AVERAGE		%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	-0.00074	-92.99	37.724	-0.00106	-0.00052	-0.00064
___ AL	-0.03150	0.03	62.216	-0.05249	-0.02834	-0.01368
___ AL A>	-0.59201	-2 155.68	0.107	-0.59128	-0.59245	-0.59229
___ AS	-0.00070	0.23	25.341	-0.00087	-0.00052	-0.00072
___ B	0.05472	510.00	0.959	0.05470	0.05526	0.05421
___ BA	0.09336	89 367.60	0.398	0.09315	0.09314	0.09378
___ BE	-0.00103	-528.52	0.649	-0.00103	-0.00102	-0.00103
___ CA	40.37085	61 222.08	0.235	40.46431	40.37374	40.27448
___ CD	-0.00026	-20.65	52.624	-0.00017	-0.00042	-0.00019
___ CO	-0.00146	-4.83	12.796	-0.00167	-0.00132	-0.00139
___ CR	0.00082	19.31	55.911	0.00117	0.00030	0.00098
___ CU	0.00151	41.51	46.314	0.00076	0.00215	0.00163
___ FE	0.00364	20.62	186.370	0.00391	-0.00328	0.01028
___ K	2.17788	996.93	1.999	2.13097	2.18564	2.21702
___ LI	0.01427	329.24	9.689	0.01330	0.01585	0.01365
___ MG	5.83174	6 794.22	0.474	5.85443	5.83984	5.80094
___ MN	0.00031	61.47	5.737	0.00033	0.00029	0.00031
___ MO	0.00369	9.03	2.662	0.00367	0.00380	0.00361
___ NA	24.30375	37 779.62	0.134	24.33862	24.29846	24.27417
___ NI	-0.00141	13.50	21.697	-0.00172	-0.00140	-0.00111
___ P	0.00255	2.30	110.118	0.00236	-0.00016	0.00544
___ PB	-0.00089	5.68	116.751	-0.00159	0.00030	-0.00138
___ S	11.82506	2 045.39	0.900	11.79631	11.94296	11.73590
___ SB	0.00084	-0.32	252.461	-0.00151	0.00142	0.00261
___ SE	0.00074	1.58	63.249	0.00122	0.00028	0.00073
___ SI	14.98540	5 634.96	0.294	15.01625	15.00504	14.93490
___ SN	0.00082	4.35	110.705	0.00088	-0.00012	0.00169
___ SR	0.26312	180 192.68	0.454	0.26233	0.26253	0.26449
___ TH	-0.00595	-2.71	342.734	0.00414	0.00743	-0.02941
___ TI	0.00206	119.00	6.603	0.00192	0.00219	0.00207
___ TL	0.00591	-1.81	21.129	0.00580	0.00721	0.00472
___ V	0.00637	39.60	8.298	0.00697	0.00619	0.00595
___ W	0.00015	4.85	486.081	-0.00041	-0.00010	0.00095
___ Y1	11970.21039	11 970.21	0.100	11978.74213	11975.31234	11956.57671
___ Y2A	250722.05280	250 722.05	0.768	248522.80293	252110.46512	251532.89037
___ Y2R	18347.47292	18 347.47	0.319	18301.94383	18326.96343	18413.51149
___ ZN	0.00532	100.66	1.930	0.00531	0.00542	0.00521
___ ZR	-0.00096	-25.28	61.366	-0.00162	-0.00048	-0.00079

LANCASTER LABORATORIES

Run Name: 2009705T70

Instrument ID: 11016

Tube: 21

Date/Time: 04/06/2020 23:31

Sample Number: 1292528

Class: UP**

Batch: 200971486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 1.00

Protocol Symbol: DU

ELEMENT	AVERAGE		%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	0.02155	363.02	3.519	0.02216	0.02179	0.02070
___ AL	1.03906	241.54	1.451	1.04031	1.02340	1.05347
___ AL A)	0.43396	163.09	0.222	0.43498	0.43385	0.43306
___ AS	0.48331	252.34	0.649	0.48560	0.47973	0.48458
___ B	0.25386	2 453.14	0.527	0.25324	0.25295	0.25540
___ BA	0.14096	136 945.97	0.282	0.14074	0.14071	0.14141
___ BE	0.01903	7 731.18	0.405	0.01895	0.01903	0.01911
___ CA	40.45600	62 858.29	0.085	40.46453	40.41834	40.48512
___ CD	0.05051	736.50	0.119	0.05056	0.05051	0.05044
___ CO	0.09566	1 033.82	0.080	0.09575	0.09562	0.09561
___ CR	0.20576	2 285.50	0.405	0.20534	0.20522	0.20672
___ CU	0.50414	7 578.16	0.268	0.50272	0.50430	0.50540
___ FE	0.50951	358.79	0.094	0.50969	0.50896	0.50986
___ K	4.23282	1 939.54	1.199	4.18441	4.22846	4.28560
___ LI	1.00835	12 058.18	0.347	1.01130	1.00449	1.00925
___ MG	6.81869	8 140.76	0.385	6.84899	6.80277	6.80430
___ MN	0.06172	4 706.99	0.229	0.06161	0.06167	0.06188
___ MO	0.20838	507.49	0.237	0.20834	0.20791	0.20889
___ NA	25.76026	41 070.81	0.300	25.74785	25.68996	25.84299
___ NI	0.15104	998.23	0.249	0.15109	0.15139	0.15064
___ P	0.97603	336.25	0.690	0.96873	0.98201	0.97734
___ PB	0.47981	752.02	0.405	0.47859	0.48205	0.47879
___ S	12.63790	2 180.53	0.170	12.64542	12.65464	12.61363
___ SB	0.39824	281.14	0.372	0.39993	0.39759	0.39719
___ SE	0.77065	276.39	0.101	0.76975	0.77112	0.77107
___ SI	15.66186	6 035.10	0.192	15.65590	15.63518	15.69450
___ SN	0.58410	829.00	0.370	0.58509	0.58558	0.58162
___ SR	0.27503	190 302.86	0.583	0.27319	0.27613	0.27577
___ TH	0.00122	-1.10	1534.126	0.02143	-0.01553	-0.00224
___ TI	0.10437	6 009.05	0.152	0.10444	0.10419	0.10448
___ TL	1.01204	357.90	0.151	1.01104	1.01380	1.01127
___ V	0.11795	842.55	0.755	0.11693	0.11861	0.11829
___ W	-0.00097	5.31	66.239	-0.00156	-0.00029	-0.00105
___ Y1	11940.75569	11 940.76	0.204	11968.38926	11922.31331	11931.56450
___ Y2A	253358.25028	253 358.25	0.259	253506.72757	253927.15947	252640.86379
___ Y2R	18798.16486	18 798.16	0.475	18812.82409	18879.16251	18702.50798
___ ZN	0.12197	1 250.36	0.107	0.12182	0.12206	0.12203
___ ZR	1.03210	3 855.76	0.232	1.02935	1.03376	1.03319

LANCASTER LABORATORIES

Run Name: 2009705T70

Instrument ID: 11016

Tube: 22

Date/Time: 04/06/2020 23:34

Sample Number: 1292531

Class: D***

Batch: 200971486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 1.00

Protocol Symbol: DU

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	-0.00052	-88.45	28.937	-0.00069	-0.00042	-0.00044
___ AL	-0.04272	-2.44	63.106	-0.02765	-0.02666	-0.07385
___ AL A>	-0.58413	-2 125.44	0.238	-0.58532	-0.58446	-0.58260
___ AS	-0.00323	-1.08	80.675	-0.00041	-0.00555	-0.00371
___ B	0.05414	501.13	1.121	0.05401	0.05480	0.05361
___ BA	0.09259	88 075.81	0.249	0.09233	0.09266	0.09277
___ BE	-0.00099	-509.38	1.410	-0.00099	-0.00097	-0.00100
___ CA	40.47588	61 819.08	0.135	40.43603	40.45337	40.53823
___ CD	-0.00040	-22.30	20.032	-0.00047	-0.00031	-0.00042
___ CO	-0.00152	-5.35	16.016	-0.00178	-0.00130	-0.00147
___ CR	0.00124	23.80	35.231	0.00161	0.00135	0.00076
___ CU	0.00172	43.50	14.563	0.00145	0.00177	0.00195
___ FE	0.00498	21.63	103.776	0.00171	0.01094	0.00230
___ K	2.19678	1 012.40	2.337	2.25524	2.17611	2.15899
___ LI	0.01193	304.39	10.379	0.01050	0.01272	0.01256
___ MG	5.88072	6 899.88	0.699	5.84447	5.87232	5.92537
___ MN	0.00036	65.08	9.728	0.00040	0.00034	0.00035
___ MO	0.00352	8.46	6.099	0.00377	0.00339	0.00340
___ NA	24.36228	38 142.72	0.086	24.35525	24.38594	24.34564
___ NI	-0.00081	17.06	81.526	-0.00060	-0.00028	-0.00155
___ P	0.00431	2.86	53.960	0.00691	0.00244	0.00357
___ PB	-0.00079	5.77	18.005	-0.00067	-0.00074	-0.00094
___ S	11.72185	1 992.04	0.384	11.69389	11.69783	11.77382
___ SB	0.00045	-0.58	331.164	0.00013	0.00208	-0.00086
___ SE	0.00567	3.28	24.573	0.00695	0.00418	0.00587
___ SI	15.06321	5 704.50	0.400	14.99556	15.08268	15.11140
___ SN	0.00102	4.56	75.566	0.00166	0.00017	0.00123
___ SR	0.26277	178 826.49	0.311	0.26187	0.26348	0.26296
___ TH	-0.00793	-3.19	95.709	-0.01641	-0.00562	-0.00176
___ TI	0.00219	125.38	6.773	0.00205	0.00234	0.00216
___ TL	0.00492	-2.13	41.121	0.00448	0.00713	0.00315
___ V	0.00633	39.05	13.787	0.00687	0.00680	0.00532
___ W	0.00029	5.01	196.052	0.00036	0.00083	-0.00031
___ Y1	11760.52687	11 760.53	0.366	11751.30856	11722.81078	11807.46127
___ Y2A	249152.21484	249 152.21	0.291	249976.16279	248612.95681	248867.52492
___ Y2R	18478.41496	18 478.41	1.010	18673.88811	18459.04914	18302.30762
___ ZN	0.00537	99.40	1.985	0.00547	0.00536	0.00526
___ ZR	0.00179	-15.46	108.072	0.00106	0.00399	0.00032

LANCASTER LABORATORIES

Run Name: 2009705T70

Instrument ID: 11016

Tube: 23

Date/Time: 04/06/2020 23:37

Sample Number: 1292529

Class: R***

Batch: 200971486601

Initial Vol: 50.00

Final Vol: 52.20

DF: 1.00

Protocol Symbol: DU

ELEMENT	AVERAGE		%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	0.01889	248.70	0.975	0.01872	0.01909	0.01885
___ AL	0.38978	93.38	1.711	0.38532	0.38657	0.39744
___ AL A)	-0.18120	-1 241.94	0.383	-0.18200	-0.18074	-0.18087
___ AS	0.05416	28.96	4.211	0.05460	0.05620	0.05170
___ B	0.11276	1 067.32	0.085	0.11268	0.11286	0.11273
___ BA	0.10192	97 372.88	0.383	0.10220	0.10208	0.10147
___ BE	0.00873	3 423.94	0.578	0.00869	0.00879	0.00872
___ CA	40.57505	62 152.81	0.374	40.51608	40.46146	40.74763
___ CD	0.00940	124.76	0.839	0.00949	0.00934	0.00937
___ CO	0.00785	95.65	1.282	0.00797	0.00779	0.00780
___ CR	0.03062	344.58	2.807	0.03160	0.03002	0.03024
___ CU	0.04022	619.17	0.963	0.04012	0.04064	0.03989
___ FE	0.39454	278.06	1.185	0.38956	0.39521	0.39884
___ K	2.79394	1 277.35	0.616	2.81019	2.79570	2.77592
___ LI	0.10772	1 418.73	1.797	0.10676	0.10645	0.10994
___ MG	6.04003	7 108.11	0.265	6.05382	6.02244	6.04384
___ MN	0.01990	1 525.35	0.513	0.02001	0.01989	0.01980
___ MO	0.02304	56.48	0.969	0.02313	0.02320	0.02278
___ NA	26.08060	41 003.52	0.393	26.07396	25.98158	26.18626
___ NI	0.01838	141.92	0.809	0.01822	0.01840	0.01852
___ P	0.18928	66.69	0.887	0.18807	0.18856	0.19119
___ PB	0.02663	48.98	2.406	0.02658	0.02602	0.02730
___ S	12.70993	2 207.22	0.267	12.69192	12.68877	12.74909
___ SB	0.09559	67.11	3.021	0.09230	0.09677	0.09770
___ SE	0.09444	35.22	2.166	0.09308	0.09344	0.09679
___ SI	15.93373	6 051.86	0.306	15.93855	15.88269	15.97996
___ SN	0.09405	137.03	0.694	0.09372	0.09480	0.09362
___ SR	0.27356	186 855.23	0.562	0.27424	0.27465	0.27180
___ TH	0.00775	0.40	489.170	0.03606	-0.03530	0.02248
___ TI	0.02200	1 251.28	0.633	0.02194	0.02215	0.02189
___ TL	0.06376	18.78	3.376	0.06129	0.06525	0.06474
___ V	0.02756	191.61	2.138	0.02688	0.02796	0.02783
___ W	0.05498	96.57	1.957	0.05622	0.05429	0.05442
___ Y1	12018.26532	12 018.27	0.692	11973.81262	11966.79976	12114.18358
___ Y2A	250096.45626	250 096.46	0.607	251475.74751	248469.18605	250344.43522
___ Y2R	18533.05608	18 533.06	0.884	18588.95094	18661.68262	18348.53469
___ ZN	0.04178	460.48	0.577	0.04173	0.04157	0.04204
___ ZR	0.10146	355.01	1.300	0.10120	0.10029	0.10289

LANCASTER LABORATORIES

Run Name: 2009705T70

Instrument ID: 11016

Tube: 24

Date/Time: 04/06/2020 23:40

Sample Number: 1292530

Class: M***

Batch: 200971486601

Initial Vol: 50.00

Final Vol: 52.20

DF: 1.00

Protocol Symbol: DU

ELEMENT	AVERAGE		%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	0.01875	245.88	5.298	0.01767	0.01962	0.01896
___ AL	0.37987	90.82	4.338	0.36182	0.38368	0.39411
___ AL A)	-0.17897	-1 233.77	3.822	-0.18643	-0.17298	-0.17751
___ AS	0.05434	28.88	2.672	0.05268	0.05539	0.05495
___ B	0.11374	1 074.12	0.289	0.11411	0.11364	0.11348
___ BA	0.10117	96 429.51	0.571	0.10136	0.10163	0.10052
___ BE	0.00893	3 496.99	0.675	0.00899	0.00894	0.00887
___ CA	40.49729	61 795.22	0.138	40.52390	40.53504	40.43293
___ CD	0.00972	128.79	1.982	0.00993	0.00956	0.00967
___ CO	0.00795	96.11	3.585	0.00811	0.00811	0.00762
___ CR	0.03221	361.05	2.860	0.03208	0.03319	0.03137
___ CU	0.04183	639.69	1.204	0.04125	0.04210	0.04215
___ FE	0.39996	280.55	0.944	0.40200	0.39560	0.40226
___ K	2.78643	1 269.11	0.726	2.78526	2.80722	2.76680
___ LI	0.10976	1 436.97	0.516	0.11033	0.10974	0.10920
___ MG	6.06784	7 113.27	0.379	6.05617	6.09434	6.05301
___ MN	0.02056	1 570.84	0.486	0.02067	0.02053	0.02048
___ MO	0.02420	58.99	0.608	0.02433	0.02404	0.02421
___ NA	26.07416	40 835.55	0.170	26.09483	26.10441	26.02324
___ NI	0.01875	143.43	1.620	0.01857	0.01857	0.01910
___ P	0.19115	66.95	0.296	0.19140	0.19050	0.19154
___ PB	0.02698	49.26	3.931	0.02818	0.02654	0.02620
___ S	12.71723	2 195.59	0.237	12.68509	12.72186	12.74475
___ SB	0.09727	67.90	1.708	0.09710	0.09901	0.09570
___ SE	0.09712	35.97	1.793	0.09511	0.09806	0.09819
___ SI	16.02239	6 061.94	0.554	16.09950	16.04242	15.92525
___ SN	0.09611	139.15	0.432	0.09649	0.09567	0.09616
___ SR	0.27241	185 624.11	0.898	0.27132	0.27521	0.27070
___ TH	0.00330	-0.62	525.582	0.02321	-0.00821	-0.00511
___ TI	0.02236	1 269.00	0.949	0.02258	0.02236	0.02215
___ TL	0.06269	18.26	3.049	0.06222	0.06106	0.06479
___ V	0.02884	200.31	0.965	0.02854	0.02909	0.02889
___ W	0.05662	98.78	0.866	0.05661	0.05712	0.05614
___ Y1	11948.29335	11 948.29	0.225	11978.89922	11937.68478	11928.29604
___ Y2A	249497.36967	249 497.37	0.234	249242.60797	249083.13953	250166.36152
___ Y2R	18461.47086	18 461.47	0.771	18309.67726	18482.72074	18592.01458
___ ZN	0.04447	484.07	0.285	0.04450	0.04458	0.04433
___ ZR	0.10359	361.16	0.948	0.10249	0.10438	0.10391

LANCASTER LABORATORIES

Run Name: 2009705T70

Instrument ID: 11016

Tube: 25

Date/Time: 04/06/2020 23:44

Sample Number: 1292528

Class: UL**

Batch: 200971486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 5.00

Protocol Symbol: DU

ELEMENT	AVERAGE		%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	-0.00087	-95.55	34.124	-0.00062	-0.00120	-0.00080
___ AL	0.00056	7.44	5626.541	-0.01505	0.03695	-0.02021
___ AL A)	-0.55936	-2 096.03	1.632	-0.54882	-0.56468	-0.56459
___ AS	-0.00226	-0.59	77.175	-0.00093	-0.00162	-0.00424
___ B	0.01164	109.31	1.690	0.01154	0.01150	0.01186
___ BA	0.01761	17 006.06	0.753	0.01746	0.01769	0.01769
___ BE	-0.00094	-499.18	1.965	-0.00092	-0.00096	-0.00094
___ CA	7.66429	11 752.84	0.055	7.66246	7.66130	7.66910
___ CD	-0.00041	-22.86	5.700	-0.00039	-0.00042	-0.00043
___ CO	-0.00143	-4.51	3.217	-0.00140	-0.00148	-0.00141
___ CR	0.00074	18.54	46.875	0.00059	0.00049	0.00113
___ CU	0.00005	30.25	362.437	0.00001	-0.00011	0.00025
___ FE	-0.01068	11.37	71.281	-0.00858	-0.01911	-0.00433
___ K	0.39548	223.03	9.283	0.43523	0.38838	0.36284
___ LI	0.00099	177.76	79.482	0.00061	0.00189	0.00046
___ MG	1.14453	1 344.08	0.834	1.15414	1.13505	1.14440
___ MN	0.00016	49.55	29.618	0.00021	0.00011	0.00017
___ MO	0.00072	1.77	76.808	0.00110	0.00009	0.00097
___ NA	4.87396	7 059.16	0.815	4.82888	4.88928	4.90372
___ NI	-0.00026	20.88	64.194	-0.00028	-0.00041	-0.00008
___ P	-0.00072	1.13	135.914	0.00039	-0.00144	-0.00109
___ PB	-0.00053	2.30	231.323	-0.00142	-0.00103	0.00087
___ S	2.23661	386.49	0.494	2.24265	2.22386	2.24332
___ SB	-0.00103	-1.64	106.319	0.00017	-0.00129	-0.00198
___ SE	0.00244	2.18	69.971	0.00432	0.00098	0.00203
___ SI	2.86077	1 088.42	0.386	2.86144	2.84942	2.87146
___ SN	0.00074	4.23	110.599	0.00149	-0.00014	0.00087
___ SR	0.05026	34 487.90	0.940	0.04974	0.05067	0.05037
___ TH	0.01925	3.07	54.249	0.03121	0.01196	0.01457
___ TI	0.00081	47.95	5.243	0.00085	0.00076	0.00081
___ TL	0.00375	-2.52	90.795	-0.00013	0.00624	0.00513
___ V	0.00228	10.16	5.245	0.00236	0.00233	0.00214
___ W	-0.00023	4.09	407.182	-0.00075	-0.00077	0.00084
___ Y1	11933.39754	11 933.40	0.197	11916.97294	11960.33656	11922.88314
___ Y2A	252101.17886	252 101.18	0.360	253107.52330	251850.24917	251345.76412
___ Y2R	18483.61546	18 483.62	0.151	18505.40770	18493.36989	18452.06879
___ ZN	-0.00167	32.34	4.878	-0.00177	-0.00162	-0.00163
___ ZR	0.00002	-19.59	4111.249	-0.00084	0.00298	-0.00208

LANCASTER LABORATORIES

Run Name: 2009705T70

Instrument ID: 11016

Tube: 26

Date/Time: 04/06/2020 23:47

Sample Number: 1292523

Class: ****

Batch: 200971486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 1.00

Protocol Symbol: DU

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	-0.00071	-92.12	29.037	-0.00047	-0.00084	-0.00081
___ AL	-0.02860	1.08	78.078	-0.02561	-0.00791	-0.05227
___ AL A)	-0.57399	-2 110.87	1.830	-0.56631	-0.56969	-0.58596
___ AS	-0.00207	-0.50	67.635	-0.00117	-0.00369	-0.00136
___ B	0.05536	515.15	0.571	0.05570	0.05507	0.05530
___ BA	0.07714	73 778.39	0.462	0.07677	0.07717	0.07748
___ BE	-0.00102	-524.82	0.506	-0.00102	-0.00103	-0.00101
___ CA	52.69961	81 402.84	0.144	52.61708	52.76670	52.71505
___ CD	-0.00032	-21.45	15.270	-0.00032	-0.00027	-0.00036
___ CO	-0.00146	-4.77	1.906	-0.00143	-0.00148	-0.00146
___ CR	0.00232	35.76	43.844	0.00124	0.00327	0.00245
___ CU	0.00054	36.07	165.654	-0.00048	0.00113	0.00096
___ FE	-0.00804	13.23	73.188	-0.00152	-0.01297	-0.00964
___ K	2.63346	1 217.16	2.134	2.58626	2.61847	2.69563
___ LI	0.01444	337.47	3.927	0.01485	0.01380	0.01468
___ MG	7.61197	9 031.65	0.273	7.60788	7.63451	7.59352
___ MN	0.00004	40.41	38.273	0.00006	0.00003	0.00004
___ MO	0.00316	7.73	12.113	0.00318	0.00277	0.00354
___ NA	25.81140	40 921.49	0.193	25.79258	25.86785	25.77377
___ NI	-0.00091	16.69	66.878	-0.00071	-0.00160	-0.00043
___ P	0.00383	2.70	35.589	0.00534	0.00345	0.00270
___ PB	-0.00135	5.05	84.623	-0.00003	-0.00205	-0.00196
___ S	19.05815	3 291.51	0.456	19.15285	19.03949	18.98210
___ SB	0.00002	-0.89	3761.941	-0.00127	-0.00016	0.00148
___ SE	0.00444	2.90	15.305	0.00480	0.00486	0.00365
___ SI	15.26349	5 847.16	0.259	15.30887	15.24495	15.23667
___ SN	0.00047	3.85	135.140	-0.00005	0.00028	0.00117
___ SR	0.33191	227 136.66	0.831	0.33457	0.33210	0.32906
___ TH	0.01657	2.48	57.000	0.02250	0.02154	0.00568
___ TI	0.00262	150.77	7.764	0.00273	0.00239	0.00274
___ TL	0.00415	-2.45	70.000	0.00715	0.00393	0.00136
___ V	0.00697	44.07	12.717	0.00682	0.00791	0.00616
___ W	-0.00056	3.63	133.779	0.00031	-0.00101	-0.00098
___ Y1	11954.29250	11 954.29	0.413	11966.11194	11996.67067	11900.09490
___ Y2A	250451.65355	250 451.65	0.819	251291.61130	251949.75083	248113.59854
___ Y2R	18691.91289	18 691.91	0.512	18601.99341	18681.17026	18792.57500
___ ZN	0.00259	73.95	3.739	0.00267	0.00262	0.00248
___ ZR	0.00019	-19.42	343.828	0.00031	-0.00051	0.00076

LANCASTER LABORATORIES

Run Name: 2009705T70

Instrument ID: 11016

Tube: 27

Date/Time: 04/06/2020 23:50

Sample Number: **1292524**

Class: ****

Batch: 200971486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 1.00

Protocol Symbol: DU

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	-0.00041	-87.46	73.807	-0.00074	-0.00015	-0.00034
___ AL	-0.04132	-1.98	36.308	-0.02454	-0.05344	-0.04599
___ AL A)	-0.57338	-2 126.81	1.727	-0.57913	-0.56195	-0.57907
___ AS	-0.00112	0.00	62.196	-0.00037	-0.00176	-0.00124
___ B	0.05498	515.30	1.062	0.05487	0.05445	0.05561
___ BA	0.07687	74 045.25	0.918	0.07754	0.07613	0.07693
___ BE	-0.00101	-522.91	2.861	-0.00101	-0.00103	-0.00098
___ CA	52.12940	79 696.36	0.516	52.27103	51.81909	52.29809
___ CD	-0.00043	-23.57	24.352	-0.00040	-0.00035	-0.00055
___ CO	-0.00135	-3.74	7.477	-0.00126	-0.00146	-0.00134
___ CR	0.00186	30.86	22.567	0.00210	0.00137	0.00209
___ CU	0.00109	39.16	68.439	0.00024	0.00163	0.00140
___ FE	-0.00817	13.01	59.735	-0.00309	-0.01282	-0.00859
___ K	2.64203	1 208.19	2.397	2.64373	2.57787	2.70448
___ LI	0.01450	334.77	8.696	0.01305	0.01520	0.01527
___ MG	7.60842	8 934.87	0.604	7.65813	7.56756	7.59958
___ MN	0.00012	47.19	24.657	0.00014	0.00014	0.00009
___ MO	0.00372	9.23	9.235	0.00367	0.00341	0.00409
___ NA	25.51027	40 020.75	0.607	25.54893	25.33971	25.64216
___ NI	-0.00107	15.94	22.665	-0.00081	-0.00111	-0.00129
___ P	0.00587	3.47	17.894	0.00702	0.00496	0.00563
___ PB	0.00052	8.03	44.928	0.00050	0.00076	0.00030
___ S	19.00063	3 332.41	0.368	19.06676	19.00780	18.92735
___ SB	0.00059	-0.50	79.285	0.00008	0.00070	0.00099
___ SE	0.00350	2.60	36.033	0.00470	0.00361	0.00219
___ SI	15.13304	5 737.79	0.583	15.17536	15.03167	15.19209
___ SN	0.00019	3.51	387.604	0.00059	-0.00067	0.00065
___ SR	0.32861	226 480.05	0.986	0.33178	0.32873	0.32530
___ TH	0.00330	-0.62	462.236	0.01962	-0.01060	0.00088
___ TI	0.00234	135.82	3.763	0.00239	0.00224	0.00239
___ TL	0.00519	-2.10	58.219	0.00237	0.00481	0.00837
___ V	0.00652	41.01	15.349	0.00591	0.00598	0.00768
___ W	-0.00047	3.84	55.013	-0.00017	-0.00061	-0.00063
___ Y1	12139.63438	12 139.63	0.411	12090.29485	12138.52729	12190.08099
___ Y2A	252260.06515	252 260.07	0.810	250104.27763	254168.77497	252507.14286
___ Y2R	18500.70971	18 500.71	0.892	18380.88353	18688.87061	18432.37500
___ ZN	0.00273	76.42	4.193	0.00269	0.00263	0.00285
___ ZR	0.00247	-11.90	131.173	0.00124	0.00615	0.00002

LANCASTER LABORATORIES

Run Name: 2009705T70

Instrument ID: 11016

Tube: 28

Date/Time: 04/06/2020 23:54

Sample Number: CCV

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	0.47226	7 990.56	0.289	0.47340	0.47263	0.47075
___ AL	24.93863	5 640.38	0.334	24.91885	25.03014	24.86688
___ AL A>	23.59061	51 651.17	0.230	23.61141	23.63146	23.52895
___ AS	0.44816	236.87	0.131	0.44749	0.44855	0.44846
___ B	0.50013	5 006.92	0.494	0.49912	0.50294	0.49832
___ BA	0.46008	446 379.92	0.895	0.45835	0.46478	0.45711
___ BE	0.48488	199 001.40	0.189	0.48506	0.48569	0.48389
___ CA	25.52850	39 947.30	0.298	25.53124	25.60320	25.45106
___ CD	0.48047	7 303.21	0.230	0.47945	0.48164	0.48032
___ CO	0.44730	4 885.23	0.165	0.44669	0.44812	0.44709
___ CR	0.49356	5 483.33	0.257	0.49231	0.49485	0.49354
___ CU	0.47296	7 317.24	0.117	0.47301	0.47349	0.47239
___ FE	23.75759	15 907.99	0.125	23.77838	23.72358	23.77080
___ K	25.06997	11 257.08	0.233	25.00722	25.12278	25.07991
___ LI	0.46875	5 733.54	0.671	0.46757	0.46636	0.47231
___ MG	27.32244	32 684.75	0.286	27.23566	27.34447	27.38718
___ MN	0.47718	36 382.79	0.255	0.47685	0.47853	0.47617
___ MO	0.49908	1 237.16	0.212	0.49833	0.50029	0.49862
___ NA	24.55011	39 365.62	0.082	24.53211	24.54647	24.57175
___ NI	0.47666	3 139.23	0.159	0.47620	0.47753	0.47624
___ P	0.44719	157.04	1.485	0.43986	0.44890	0.45281
___ PB	0.44686	714.14	0.248	0.44641	0.44813	0.44606
___ S	25.22461	4 428.98	0.655	25.03421	25.32890	25.31073
___ SB	0.45386	327.90	0.341	0.45217	0.45522	0.45417
___ SE	0.46725	168.98	0.585	0.46410	0.46905	0.46860
___ SI	26.00383	10 083.49	0.231	25.93849	26.05702	26.01599
___ SN	0.45803	662.38	0.984	0.45541	0.46323	0.45543
___ SR	0.52390	362 704.18	1.098	0.52745	0.52698	0.51726
___ TH	0.50010	116.40	4.444	0.47748	0.50093	0.52190
___ TI	0.48636	28 067.28	0.438	0.48473	0.48877	0.48557
___ TL	0.47491	161.63	0.555	0.47254	0.47775	0.47443
___ V	0.56506	4 127.63	0.404	0.56432	0.56762	0.56324
___ W	0.45086	770.21	0.417	0.45070	0.45282	0.44907
___ Y1	12154.28275	12 154.28	0.317	12196.20803	12120.38296	12146.25725
___ Y2A	254085.82503	254 085.83	0.430	254066.11296	253003.32226	255188.03987
___ Y2R	18922.29823	18 922.30	0.677	19067.30961	18875.32494	18824.26015
___ ZN	0.45103	4 573.76	0.152	0.45040	0.45176	0.45094
___ ZR	0.54089	2 069.00	0.647	0.53686	0.54310	0.54271

LANCASTER LABORATORIES

Run Name: 2009705T70

Instrument ID: 11016

Tube: 29

Date/Time: 04/06/2020 23:57

Sample Number: CCB

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	-0.00024	-87.45	144.070	-0.00006	-0.00002	-0.00064
___ AL	-0.04169	-2.21	56.338	-0.05945	-0.05056	-0.01506
___ AL A)	-0.52912	-2 099.58	7.071	-0.55870	-0.54160	-0.48706
___ AS	-0.00218	-0.56	23.467	-0.00248	-0.00159	-0.00248
___ B	0.00250	25.00	49.346	0.00148	0.00215	0.00388
___ BA	0.00033	403.18	160.356	0.00001	0.00004	0.00095
___ BE	-0.00053	-342.48	103.887	-0.00084	-0.00085	0.00011
___ CA	0.01490	81.01	37.022	0.01048	0.02109	0.01314
___ CD	-0.00027	-21.23	29.252	-0.00027	-0.00019	-0.00035
___ CO	-0.00132	-3.36	13.402	-0.00151	-0.00117	-0.00127
___ CR	0.00052	16.68	161.723	-0.00030	0.00047	0.00138
___ CU	0.00006	26.04	716.802	-0.00024	0.00053	-0.00012
___ FE	-0.00410	16.56	162.623	-0.00719	0.00355	-0.00866
___ K	-0.01521	45.40	159.291	-0.02079	-0.03615	0.01132
___ LI	-0.00086	165.07	449.987	-0.00413	0.00340	-0.00184
___ MG	0.00321	3.21	137.809	0.00150	0.00824	-0.00010
___ MN	0.00029	61.68	168.882	0.00002	0.00000	0.00086
___ MO	0.00002	0.07	529.400	0.00008	0.00008	-0.00010
___ NA	0.33148	-198.99	6.317	0.35514	0.32392	0.31536
___ NI	-0.00072	18.38	37.827	-0.00097	-0.00074	-0.00043
___ P	-0.00432	-0.08	36.573	-0.00348	-0.00334	-0.00615
___ PB	-0.00028	1.81	214.768	0.00009	0.00004	-0.00096
___ S	0.00562	2.02	51.459	0.00563	0.00850	0.00272
___ SB	0.00133	0.03	35.484	0.00108	0.00188	0.00104
___ SE	0.00086	1.65	267.673	0.00285	0.00136	-0.00164
___ SI	0.01665	12.79	69.609	0.01286	0.02967	0.00743
___ SN	0.00064	4.19	88.216	0.00033	0.00030	0.00129
___ SR	0.00052	216.63	140.747	0.00010	0.00010	0.00136
___ TH	0.00667	0.20	215.369	0.01894	-0.00914	0.01021
___ TI	0.00036	22.87	179.524	0.00003	-0.00006	0.00109
___ TL	0.00295	-2.85	32.999	0.00388	0.00302	0.00194
___ V	0.00096	0.50	64.088	0.00030	0.00105	0.00152
___ W	-0.00036	3.91	184.962	0.00019	-0.00111	-0.00018
___ Y1	12225.24367	12 225.24	0.178	12204.55362	12223.22677	12247.95061
___ Y2A	260415.39313	260 415.39	0.174	260032.30897	260915.69767	260298.17276
___ Y2R	19525.83653	19 525.84	0.451	19626.37007	19488.85891	19462.28061
___ ZN	-0.00387	11.22	3.542	-0.00371	-0.00394	-0.00395
___ ZR	0.00005	-21.75	2692.045	0.00016	0.00139	-0.00139

LANCASTER LABORATORIES

Run Name: 2009705T70

Instrument ID: 11016

Tube: 30

Date/Time: 04/07/2020 00:00

Sample Number: 1292525

Class: ****

Batch: 200971486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 1.00

Protocol Symbol: DU

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	-0.00094	-97.51	43.266	-0.00061	-0.00081	-0.00139
___ AL	-0.02428	1.93	70.797	-0.00768	-0.02315	-0.04200
___ AL A)	-0.55985	-2 110.78	2.665	-0.54455	-0.56064	-0.57435
___ AS	-0.00005	0.58	1144.108	0.00125	-0.00218	0.00079
___ B	0.05279	497.42	0.869	0.05226	0.05309	0.05301
___ BA	0.08028	77 853.28	1.237	0.07966	0.07975	0.08142
___ BE	-0.00098	-514.69	1.512	-0.00097	-0.00097	-0.00099
___ CA	52.50984	82 601.00	0.183	52.53664	52.40311	52.58978
___ CD	-0.00031	-21.78	39.626	-0.00038	-0.00039	-0.00017
___ CO	-0.00133	-3.51	16.812	-0.00110	-0.00155	-0.00136
___ CR	0.00135	25.46	38.173	0.00089	0.00190	0.00126
___ CU	0.00066	35.15	181.443	-0.00040	0.00042	0.00197
___ FE	-0.00142	17.97	126.688	0.00010	-0.00095	-0.00341
___ K	2.67413	1 257.92	2.611	2.67274	2.74463	2.60500
___ LI	0.01345	331.85	6.880	0.01244	0.01366	0.01425
___ MG	7.73300	9 343.62	0.447	7.76549	7.69673	7.73677
___ MN	0.00025	56.88	14.076	0.00024	0.00022	0.00029
___ MO	0.00234	5.84	11.150	0.00205	0.00240	0.00256
___ NA	25.68099	41 459.82	0.145	25.67967	25.64433	25.71896
___ NI	-0.00098	16.59	18.951	-0.00119	-0.00091	-0.00084
___ P	0.00377	2.75	10.121	0.00340	0.00375	0.00416
___ PB	-0.00015	7.04	82.147	-0.00002	-0.00026	-0.00015
___ S	19.11964	3 369.07	0.281	19.09903	19.18052	19.07937
___ SB	0.00054	-0.54	274.011	0.00169	-0.00112	0.00104
___ SE	0.00411	2.84	20.439	0.00319	0.00484	0.00429
___ SI	15.21731	5 936.74	0.304	15.27050	15.19476	15.18669
___ SN	0.00002	3.28	4700.794	0.00085	-0.00057	-0.00023
___ SR	0.33366	231 524.42	0.290	0.33264	0.33378	0.33457
___ TH	0.00855	0.67	296.612	-0.00280	0.03759	-0.00915
___ TI	0.00256	149.22	3.634	0.00259	0.00245	0.00263
___ TL	0.00590	-1.85	35.978	0.00345	0.00702	0.00723
___ V	0.00654	41.55	5.495	0.00694	0.00642	0.00625
___ W	-0.00101	3.41	74.825	-0.00069	-0.00186	-0.00047
___ Y1	12196.71177	12 196.71	0.060	12204.67752	12190.14887	12195.30891
___ Y2A	253969.08608	253 969.09	0.387	255094.09245	253533.53862	253279.62716
___ Y2R	19035.82306	19 035.82	1.029	18931.97942	19261.75000	18913.73977
___ ZN	0.02514	299.90	0.339	0.02524	0.02508	0.02510
___ ZR	-0.00017	-21.86	695.843	-0.00097	-0.00069	0.00116

LANCASTER LABORATORIES

Run Name: 2009705T70

Instrument ID: 11016

Tube: 31

Date/Time: 04/07/2020 00:04

Sample Number: 1292526

Class: ****

Batch: 200971486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 1.00

Protocol Symbol: DU

ELEMENT	AVERAGE		%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	-0.00070	-94.17	48.717	-0.00104	-0.00036	-0.00070
___ AL	-0.05116	-3.90	23.965	-0.05425	-0.06158	-0.03765
___ AL A)	-0.55131	-2 109.17	1.619	-0.55172	-0.56002	-0.54218
___ AS	-0.00203	-0.48	45.442	-0.00098	-0.00269	-0.00241
___ B	0.05311	504.93	1.554	0.05296	0.05401	0.05238
___ BA	0.08846	86 547.58	0.787	0.08833	0.08921	0.08784
___ BE	-0.00097	-517.64	1.485	-0.00096	-0.00097	-0.00099
___ CA	52.83222	82 342.51	0.134	52.86162	52.75138	52.88366
___ CD	-0.00031	-21.84	49.747	-0.00015	-0.00045	-0.00032
___ CO	-0.00145	-4.80	1.745	-0.00145	-0.00147	-0.00142
___ CR	0.00225	35.74	9.436	0.00249	0.00213	0.00212
___ CU	0.00016	32.99	510.401	-0.00050	0.00111	-0.00011
___ FE	-0.00098	18.06	921.376	0.00486	-0.01136	0.00356
___ K	2.66581	1 242.55	1.860	2.61794	2.71697	2.66251
___ LI	0.01371	331.88	5.691	0.01287	0.01384	0.01442
___ MG	7.81778	9 359.10	0.177	7.83266	7.81545	7.80523
___ MN	0.00027	58.30	4.080	0.00028	0.00026	0.00027
___ MO	0.00276	6.93	18.096	0.00231	0.00330	0.00268
___ NA	25.66494	41 051.41	0.309	25.72137	25.57427	25.69918
___ NI	-0.00117	15.42	9.659	-0.00111	-0.00130	-0.00111
___ P	0.00576	3.44	36.241	0.00432	0.00482	0.00816
___ PB	-0.00066	6.31	143.619	-0.00007	-0.00174	-0.00016
___ S	19.16964	3 397.80	0.507	19.08966	19.14146	19.27780
___ SB	-0.00109	-1.72	187.708	-0.00197	0.00125	-0.00256
___ SE	0.00519	3.25	59.857	0.00715	0.00682	0.00161
___ SI	15.33985	5 929.45	0.264	15.29313	15.36385	15.36257
___ SN	0.00039	3.83	208.587	-0.00028	0.00016	0.00128
___ SR	0.33499	234 525.65	0.994	0.33533	0.33813	0.33150
___ TH	0.02076	3.46	108.799	0.03777	-0.00486	0.02936
___ TI	0.00250	147.55	6.672	0.00252	0.00233	0.00266
___ TL	0.00663	-1.59	20.354	0.00624	0.00813	0.00552
___ V	0.00654	41.94	2.185	0.00638	0.00664	0.00661
___ W	-0.00046	3.97	132.742	-0.00115	-0.00018	-0.00004
___ Y1	12268.59503	12 268.60	0.250	12283.90076	12233.25182	12288.63250
___ Y2A	256245.82714	256 245.83	0.635	257565.61462	254428.17909	256743.68771
___ Y2R	18860.42670	18 860.43	0.741	18756.61970	19019.35178	18805.30863
___ ZN	0.00578	107.84	1.996	0.00592	0.00573	0.00571
___ ZR	0.00053	-17.90	485.205	-0.00245	0.00198	0.00208

LANCASTER LABORATORIES

Run Name: 2009705T70

Instrument ID: 11016

Tube: 32

Date/Time: 04/07/2020 00:07

Sample Number: 1292532

Class: ****

Batch: 200971486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 1.00

Protocol Symbol: DU

ELEMENT	AVERAGE		%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
AG	-0.00060	-91.87	105.633	-0.00038	-0.00131	-0.00011
AL	-0.03272	-0.10	39.899	-0.02177	-0.02922	-0.04716
AL A)	-0.56434	-2 131.92	0.914	-0.55899	-0.56474	-0.56928
AS	-0.00193	-0.43	107.549	-0.00150	-0.00419	-0.00011
B	0.05389	510.66	0.691	0.05355	0.05383	0.05429
BA	0.09360	91 181.57	0.353	0.09322	0.09385	0.09372
BE	-0.00098	-519.35	0.394	-0.00098	-0.00098	-0.00099
CA	39.96376	61 965.75	0.217	40.04430	39.97507	39.87192
CD	-0.00031	-21.72	29.712	-0.00023	-0.00041	-0.00028
CO	-0.00142	-4.45	8.225	-0.00129	-0.00152	-0.00144
CR	0.00272	40.81	8.114	0.00267	0.00252	0.00296
CU	0.00120	41.02	83.462	0.00232	0.00084	0.00043
FE	-0.01035	11.75	48.706	-0.00470	-0.01439	-0.01197
K	2.16005	1 011.34	4.893	2.06599	2.13973	2.27444
LI	0.01115	300.02	15.461	0.00917	0.01225	0.01204
MG	6.07286	7 233.69	0.191	6.07305	6.08439	6.06115
MN	-0.00006	33.62	76.076	-0.00009	-0.00001	-0.00010
MO	0.00338	8.43	9.235	0.00373	0.00314	0.00325
NA	23.95760	38 067.05	0.072	23.95994	23.93922	23.97365
NI	-0.00069	18.54	34.816	-0.00091	-0.00044	-0.00072
P	0.00402	2.84	46.831	0.00231	0.00603	0.00371
PB	-0.00002	7.21	1166.952	0.00009	-0.00025	0.00010
S	11.74831	2 073.07	0.146	11.76737	11.74360	11.73398
SB	-0.00100	-1.64	76.067	-0.00162	-0.00015	-0.00122
SE	0.00376	2.71	55.325	0.00143	0.00442	0.00544
SI	15.07270	5 794.97	0.505	15.15692	15.05252	15.00865
SN	0.00093	4.60	69.915	0.00024	0.00154	0.00101
SR	0.26868	187 240.06	0.985	0.26886	0.27124	0.26595
TH	0.00266	-0.75	706.507	-0.01897	0.01464	0.01230
TI	0.00240	141.14	5.542	0.00244	0.00252	0.00226
TL	0.00357	-2.69	83.463	0.00624	0.00410	0.00036
V	0.00577	35.91	4.426	0.00607	0.00562	0.00564
W	-0.00029	4.28	203.057	-0.00025	-0.00089	0.00028
Y1	12211.42574	12 211.43	0.507	12281.33187	12189.53070	12163.41463
Y2A	255155.71851	255 155.72	0.521	256360.79734	255378.41212	253727.94607
Y2R	18759.24967	18 759.25	0.255	18723.29636	18813.44886	18741.00379
ZN	0.00844	133.80	2.487	0.00833	0.00868	0.00830
ZR	0.00124	-16.82	45.750	0.00116	0.00183	0.00071

LANCASTER LABORATORIES

Run Name: 2009705T70

Instrument ID: 11016

Tube: 33

Date/Time: 04/07/2020 00:10

Sample Number: 1292533

Class: ****

Batch: 200971486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 1.00

Protocol Symbol: DU

ELEMENT	AVERAGE		%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	-0.00052	-89.92	78.821	-0.00006	-0.00086	-0.00064
___ AL	-0.00746	5.46	89.715	-0.00288	-0.01514	-0.00436
___ AL A)	-0.57217	-2 132.66	2.067	-0.56492	-0.58582	-0.56578
___ AS	-0.00104	0.04	192.577	0.00043	-0.00023	-0.00333
___ B	0.05388	506.41	1.314	0.05417	0.05440	0.05307
___ BA	0.10546	101 893.87	0.618	0.10559	0.10603	0.10475
___ BE	-0.00095	-501.97	2.546	-0.00097	-0.00096	-0.00092
___ CA	40.62474	63 656.74	0.083	40.66134	40.59538	40.61750
___ CD	-0.00048	-24.36	16.306	-0.00057	-0.00043	-0.00044
___ CO	-0.00122	-2.24	14.761	-0.00115	-0.00142	-0.00108
___ CR	0.00257	38.92	22.485	0.00308	0.00194	0.00271
___ CU	0.00146	41.70	49.698	0.00229	0.00101	0.00107
___ FE	0.00218	20.31	43.639	0.00163	0.00328	0.00163
___ K	2.18972	1 035.38	1.413	2.22526	2.16886	2.17502
___ LI	0.01040	294.30	14.556	0.01208	0.01001	0.00913
___ MG	6.16089	7 416.06	0.416	6.17898	6.13153	6.17216
___ MN	0.02501	1 926.52	1.226	0.02511	0.02525	0.02467
___ MO	0.00399	9.94	9.290	0.00357	0.00410	0.00429
___ NA	24.17137	38 820.13	0.126	24.16466	24.20465	24.14478
___ NI	-0.00062	18.95	130.406	-0.00047	0.00010	-0.00150
___ P	0.00636	3.67	16.559	0.00581	0.00757	0.00570
___ PB	0.00053	8.08	156.343	0.00143	0.00035	-0.00020
___ S	11.92036	2 100.95	0.195	11.94708	11.90914	11.90486
___ SB	-0.00071	-1.43	405.812	-0.00159	0.00250	-0.00304
___ SE	0.00341	2.58	45.624	0.00502	0.00329	0.00191
___ SI	15.13642	5 881.15	0.546	15.23064	15.10234	15.07627
___ SN	0.00041	3.84	277.968	0.00078	0.00130	-0.00086
___ SR	0.27263	188 449.31	0.532	0.27116	0.27406	0.27265
___ TH	-0.00435	-2.43	287.327	-0.01328	-0.00971	0.00994
___ TI	0.00233	135.78	5.573	0.00244	0.00219	0.00236
___ TL	0.00504	-2.14	40.194	0.00270	0.00616	0.00626
___ V	0.00582	35.71	9.374	0.00525	0.00587	0.00634
___ W	-0.00008	4.49	473.771	-0.00052	0.00024	0.00003
___ Y1	12197.13282	12 197.13	0.030	12193.09260	12198.06597	12200.23990
___ Y2A	253090.91497	253 090.91	0.481	252551.59787	252237.37542	254483.77164
___ Y2R	18957.88800	18 957.89	0.524	19007.87794	19022.24830	18843.53775
___ ZN	0.00195	69.07	9.734	0.00176	0.00214	0.00194
___ ZR	0.00061	-20.01	166.979	0.00008	-0.00004	0.00179

LANCASTER LABORATORIES

Run Name: 2009705T70

Instrument ID: 11016

Tube: 34

Date/Time: 04/07/2020 00:14

Sample Number: **1293040**

Class: ****

Batch: 200971486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 1.00

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	0.00015	-188.38	296.880	0.00064	-0.00006	-0.00014
___ AL	-0.03811	-1.03	53.957	-0.01833	-0.03663	-0.05938
___ AL A>	-0.59311	-2 198.09	1.020	-0.59427	-0.59850	-0.58657
___ AS	-0.00150	-0.19	127.190	-0.00027	-0.00371	-0.00053
___ B	0.05629	628.01	0.617	0.05591	0.05659	0.05637
___ BA	0.11011	107 748.98	0.873	0.10962	0.11122	0.10949
___ BE	-0.00087	-476.18	3.287	-0.00086	-0.00090	-0.00085
___ CA	35.19519	55 983.69	0.206	35.22571	35.24737	35.11250
___ CD	-0.00097	-14.34	6.858	-0.00103	-0.00090	-0.00097
___ CO	0.00413	57.56	1.044	0.00409	0.00418	0.00413
___ CR	-0.00026	7.77	248.360	0.00006	-0.00099	0.00016
___ CU	0.00015	26.59	583.320	0.00110	-0.00007	-0.00058
___ FE	11.30487	7 727.10	0.363	11.26210	11.30855	11.34397
___ K	2.00117	971.33	1.695	2.03918	1.97400	1.99033
___ LI	-0.00299	137.09	59.067	-0.00413	-0.00096	-0.00387
___ MG	20.20509	24 615.36	0.036	20.20387	20.19847	20.21292
___ MN	1.23229	94 351.87	0.850	1.22869	1.24408	1.22409
___ MO	0.00023	0.59	116.800	0.00053	0.00005	0.00010
___ NA	49.96475	82 246.04	0.110	49.96654	50.01886	49.90886
___ NI	0.00397	44.58	5.484	0.00414	0.00405	0.00372
___ P	0.00213	2.17	54.299	0.00283	0.00278	0.00080
___ PB	0.00031	4.72	271.444	0.00040	0.00109	-0.00057
___ S	3.59065	639.51	0.470	3.59076	3.60746	3.57374
___ SB	0.00101	-0.21	246.018	-0.00184	0.00220	0.00267
___ SE	0.00544	2.32	6.577	0.00505	0.00574	0.00554
___ SI	3.98087	1 574.42	0.453	3.96012	3.99258	3.98990
___ SN	0.00056	4.09	109.739	0.00035	0.00124	0.00008
___ SR	0.15043	105 489.13	0.695	0.15001	0.15162	0.14966
___ TH	0.02270	4.02	36.551	0.02834	0.01317	0.02658
___ TI	0.00220	129.82	8.012	0.00211	0.00240	0.00209
___ TL	0.00264	-2.19	70.507	0.00478	0.00171	0.00142
___ V	0.00334	10.85	4.696	0.00334	0.00350	0.00319
___ W	-0.00034	4.02	116.972	0.00011	-0.00065	-0.00050
___ Y1	12311.56365	12 311.56	0.272	12274.33337	12339.31889	12321.03869
___ Y2A	256342.23418	256 342.23	0.814	256962.13382	254016.97736	258047.59136
___ Y2R	19242.40372	19 242.40	0.787	19078.15926	19272.43014	19376.62176
___ ZN	-0.00132	46.58	15.483	-0.00128	-0.00154	-0.00113
___ ZR	-0.00050	-22.08	274.429	0.00103	-0.00159	-0.00092

LANCASTER LABORATORIES

Run Name: 2009705T70

Instrument ID: 11016

Tube: 35

Date/Time: 04/07/2020 00:17

Sample Number: **CCV**

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	0.47011	7 750.21	0.272	0.46870	0.47120	0.47042
___ AL	25.25010	5 516.19	0.258	25.18891	25.31878	25.24260
___ AL A>	23.78090	50 779.94	0.146	23.75496	23.76725	23.82049
___ AS	0.45311	234.02	1.072	0.44768	0.45704	0.45461
___ B	0.50442	4 923.16	0.117	0.50434	0.50387	0.50504
___ BA	0.45977	434 889.29	0.460	0.45789	0.45935	0.46206
___ BE	0.49332	197 394.63	0.087	0.49367	0.49284	0.49344
___ CA	25.92468	39 181.85	0.138	25.94774	25.88351	25.94278
___ CD	0.49025	7 283.03	0.174	0.49087	0.49061	0.48928
___ CO	0.44990	4 802.28	0.096	0.45004	0.45024	0.44941
___ CR	0.50467	5 465.89	0.051	0.50437	0.50482	0.50481
___ CU	0.47158	7 116.85	0.181	0.47194	0.47219	0.47061
___ FE	24.00142	15 521.54	0.687	23.82710	24.02254	24.15463
___ K	25.54850	11 079.57	0.233	25.49249	25.54202	25.61098
___ LI	0.47729	5 635.88	0.374	0.47880	0.47532	0.47775
___ MG	28.32652	32 722.76	0.227	28.33639	28.25794	28.38522
___ MN	0.48319	35 915.98	0.157	0.48397	0.48313	0.48246
___ MO	0.50946	1 234.27	0.367	0.51025	0.51080	0.50733
___ NA	24.77430	38 375.77	0.247	24.72705	24.75229	24.84357
___ NI	0.48382	3 113.92	0.191	0.48476	0.48379	0.48291
___ P	0.44803	153.76	0.610	0.44491	0.44924	0.44996
___ PB	0.44969	702.46	0.395	0.44980	0.45141	0.44786
___ S	25.47875	4 372.26	0.182	25.45473	25.44930	25.53222
___ SB	0.45604	322.08	0.596	0.45831	0.45679	0.45303
___ SE	0.46846	165.56	1.278	0.47170	0.47213	0.46156
___ SI	26.57100	9 951.66	0.369	26.49376	26.53781	26.68142
___ SN	0.46376	655.45	0.138	0.46445	0.46320	0.46364
___ SR	0.53391	360 372.04	1.040	0.53522	0.52782	0.53869
___ TH	0.50951	114.57	6.244	0.48572	0.49715	0.54564
___ TI	0.49230	27 698.24	0.070	0.49269	0.49220	0.49202
___ TL	0.48510	161.35	0.567	0.48201	0.48599	0.48730
___ V	0.58264	4 149.92	0.364	0.58482	0.58059	0.58251
___ W	0.45479	759.23	0.126	0.45432	0.45463	0.45543
___ Y1	11878.80767	11 878.81	0.195	11905.32947	11862.20378	11868.88978
___ Y2A	247713.94227	247 713.94	0.286	247792.33267	248380.87500	246968.61914
___ Y2R	18276.53909	18 276.54	0.400	18342.41410	18289.31351	18197.88964
___ ZN	0.45279	4 487.74	0.132	0.45348	0.45247	0.45242
___ ZR	0.52822	1 953.00	0.310	0.52649	0.52844	0.52974

LANCASTER LABORATORIES

Run Name: 2009705T70

Instrument ID: 11016

Tube: 36

Date/Time: 04/07/2020 00:20

Sample Number: CCB

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	-0.00015	-84.08	238.293	-0.00009	0.00018	-0.00053
___ AL	-0.02314	2.05	146.133	0.00039	-0.00792	-0.06189
___ AL A)	-0.54720	-2 098.65	0.366	-0.54835	-0.54836	-0.54489
___ AS	-0.00336	-1.19	58.920	-0.00434	-0.00466	-0.00108
___ B	0.00188	18.35	16.841	0.00224	0.00165	0.00175
___ BA	-0.00002	55.42	49.188	-0.00002	-0.00001	-0.00002
___ BE	-0.00086	-473.42	2.844	-0.00085	-0.00089	-0.00085
___ CA	0.00429	61.92	136.804	0.00094	0.00087	0.01106
___ CD	-0.00021	-20.39	12.755	-0.00020	-0.00024	-0.00020
___ CO	-0.00129	-3.12	18.386	-0.00123	-0.00155	-0.00109
___ CR	0.00077	19.10	38.322	0.00045	0.00103	0.00081
___ CU	-0.00056	16.95	115.555	-0.00110	0.00016	-0.00075
___ FE	-0.00828	13.24	42.763	-0.01230	-0.00696	-0.00560
___ K	-0.02877	37.91	71.024	-0.01649	-0.01746	-0.05236
___ LI	-0.00007	169.31	831.172	0.00057	-0.00044	-0.00033
___ MG	0.00385	3.87	177.625	0.00517	0.00992	-0.00355
___ MN	-0.00005	34.47	110.508	-0.00009	0.00001	-0.00007
___ MO	0.00042	1.08	115.814	0.00004	0.00098	0.00026
___ NA	0.32131	-209.41	0.777	0.32249	0.31845	0.32300
___ NI	-0.00071	18.45	43.632	-0.00051	-0.00107	-0.00055
___ P	-0.00234	0.61	128.445	-0.00148	-0.00568	0.00014
___ PB	-0.00055	1.38	117.860	0.00011	-0.00119	-0.00056
___ S	0.00525	1.96	50.910	0.00666	0.00217	0.00691
___ SB	-0.00022	-1.09	408.439	-0.00070	-0.00079	0.00082
___ SE	0.00234	2.20	106.050	-0.00052	0.00365	0.00390
___ SI	0.00964	9.67	19.743	0.01097	0.00746	0.01049
___ SN	-0.00004	3.21	1491.877	0.00062	-0.00022	-0.00052
___ SR	0.00005	-110.29	18.754	0.00006	0.00004	0.00006
___ TH	0.00854	0.61	171.244	0.02380	-0.00534	0.00716
___ TI	-0.00004	-0.53	55.943	-0.00007	-0.00004	-0.00002
___ TL	0.00593	-1.76	20.294	0.00631	0.00689	0.00458
___ V	0.00109	1.40	38.603	0.00061	0.00138	0.00127
___ W	-0.00073	3.29	137.668	-0.00103	0.00039	-0.00156
___ Y1	12245.41804	12 245.42	0.355	12208.98730	12233.74988	12293.51694
___ Y2A	255376.95323	255 376.95	0.352	255856.27497	255933.30565	254341.27907
___ Y2R	18909.97679	18 909.98	0.497	18808.68111	18926.88349	18994.36578
___ ZN	-0.00390	10.89	4.371	-0.00397	-0.00370	-0.00402
___ ZR	0.00026	-20.10	260.518	0.00088	-0.00048	0.00039

Extraction/Distillation/Digestion Logs

Metals in Liquid

KR421 Page 589 of 592

LLENS Worksheet for ICP-ICPMS filtered no-digest

Batch# 20 097 14866 01

Start Time: 4/6/20 16:20

End Time: 4/6/20 16:25

Hot Block:

Pipette ID: P049 /200

<u>Spike/Reagent</u>	<u>Lot#</u>	<u>Volume Added(mL)</u>
1:1 HCL	P20-051B	0.50
1:1 HNO3	P20-073B	1.00
ICP LLC	1928338ILB	0.20
LCS ICP LLC	1928338ILB	0.20

Method Ref:

Method Ref:										Vessel	Location
SampleID	Date Due	ST	P	H	Method	PH<2	BC	Lot#	ID	Comments	
1) PBW	.							1909231		Filtered Reagent lot# P20-097A	
2) LCSW	.							1909231		Filtered Reagent lot# P20-097A	
3) 1292528U	04/14/20 10:00	WW	N7		SW-846 6010C	Y	800A	1906257	WMET37/D2		
4) 1292531D	04/14/20 10:00	WW	N7		SW-846 6010C	Y	800A	1906257	WMET37/C2		
5) 1292529R	04/14/20 10:00	WW	N7		SW-846 6010C	Y	800A	1906257	WMET37/F1		
6) 1292530M	04/14/20 10:00	WW	N7		SW-846 6010C	Y	800A	1906257	WMET37/E1		
7) 1292523	04/14/20 10:00	WW	N7		SW-846 6010C	Y	800A	1906257	WMET37/A2		
8) 1292524FD	04/14/20 10:00	WW	N7		SW-846 6010C	Y	800A	1906257	WMET37/D1		
9) 1292525	04/14/20 10:00	WW	N7		SW-846 6010C	Y	800A	1906257	WMET37/A1		
10) 1292526	04/14/20 10:00	WW	N7		SW-846 6010C	Y	800A	1906257	WMET37/C1		
11) 1292532	04/14/20 10:00	WW	N7		SW-846 6010C	Y	800A	1906257	WMET37/B2		
12) 1292533	04/14/20 10:00	WW	N7		SW-846 6010C	Y	800A	1906257	WMET37/B1		
13) 1293040	04/15/20 09:43	GW	P7		SW-846 6010D Rev.4, July 2014	Y	800A	1909231	WMET20/A1		

Prep Employee:1364

D/I _____

4/6/2020

v 1.2.0

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Batch# 20 097 1486 601

LLENS Batch Chronology and Change Log - ICP-ICPMS filtered no-digest

	<u>Operation</u>	<u>Instrument</u>	<u>Operation Date</u>	<u>ANALYST</u>
1)	Batch Creation		4/6/20 15:49	1364
2)	Sample Vol	CLEAR	4/6/20 16:32	1364
3)	Trial		4/6/20 16:32	1364
4)	Upload Prep	US19PCC06694	4/6/20 16:32	1364

<u>Sample ID</u>	<u>Analysis</u>	<u>D</u> <u>Operation</u>	<u>Measurement</u>	<u>Original Entry</u>				<u>Data Changed</u>	
				<u>Date/Time</u>	<u>Data</u>	<u>Units</u>	<u>Analyst</u>	<u>Date/Time</u>	<u>Analyst Reason</u>

4/6/2020

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Page 1 of 1

September 2020

Analysis: 4866 ICP-ICPMS filtered no-digest

Batch# 20 097 1486 601

<u>Sample ID</u>	<u>Due Date</u>	<u>P</u>	<u>EPA#</u>	<u>SDG#</u>	<u>Initial Volume</u>	<u>Final Volume</u>	<u>Trial</u>
PBW					50.0000	51.5000	1
LCSW					50.0000	50.0000	1
1292528U	04/14/20	N7	42106	KR421-06BKG	50.0000	51.5000	1
1292531D	04/14/20	N7	42106	KR421-06DUP	50.0000	51.5000	1
1292529R	04/14/20	N7	42106	KR421-06MS	50.0000	52.2000	1
1292530M	04/14/20	N7	42106	KR421-06MSD	50.0000	52.2000	1
1292523	04/14/20	N7	42101	KR421-01	50.0000	51.5000	1
1292524FD	04/14/20	N7	42102	KR421-02FD	50.0000	51.5000	1
1292525	04/14/20	N7	42103	KR421-03	50.0000	51.5000	1
1292526	04/14/20	N7	42104	KR421-04	50.0000	51.5000	1
1292532	04/14/20	N7	42107	KR421-07	50.0000	51.5000	1
1292533	04/14/20	N7	42108	KR421-08	50.0000	51.5000	1
1293040	04/15/20	P7	10054		50.0000	51.5000	1

DoD Type I Data Package

Prepared for:

EA Engineering, Science & Tech

Building C, Suite 100
405 State Highway 121 Bypass
Lewisville TX 75067-8192

Project: Kirtland AFB

Water Samples

Collected on 05/11/20

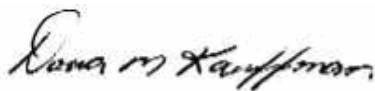
SDG# KR446

GROUP	SAMPLE NUMBERS
2099216	1313220-1313231

A2LA (DoD) Cert. # 0001.01
PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-20-35
AZ Cert. # AZ0780

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by:



Date: 06/02/2020

Dana M. Kauffman
Manager

Any questions or concerns you might have regarding this data package should be directed to your client representative, Kay Hower at (717) 556-7364.

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**Sample Reference List for SDG Number KR446
with a Data Package Type of I-DOD**

31675 - EA Engineering, Science & Tech
Project: Kirtland AFB

Lab Sample Number	Client Sample ID	Collection Date	Date Received
1313220	GWTS-EFF1-051120	05/11/2020 11:15	05/12/2020 10:29
1313221	GWTS-EFF1-051120	05/11/2020 11:15	05/12/2020 10:29
1313222	GWTS-EFF1-051120	05/11/2020 11:15	05/12/2020 10:29
1313223	GWTS-EFF1-051120	05/11/2020 11:15	05/12/2020 10:29
1313224	GWTS-GAC1-051120	05/11/2020 11:40	05/12/2020 10:29
1313225	GWTS-INF1-051120	05/11/2020 11:50	05/12/2020 10:29
1313226	GWTS-FB01-051120	05/11/2020 11:15	05/12/2020 10:29
1313227	GWTS-TB01-051120	05/11/2020 12:35	05/12/2020 10:29
1313228	GWTS-EFF2-051120	05/11/2020 12:00	05/12/2020 10:29
1313229	GWTS-EFF2DUP-051120	05/11/2020 12:00	05/12/2020 10:29
1313230	GWTS-GAC2-051120	05/11/2020 12:15	05/12/2020 10:29
1313231	GWTS-INF2-051120	05/11/2020 12:30	05/12/2020 10:29

Sample pH Log

SDG: KR446

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	*pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	**Chlorine Present?	Corrective Substance	CS Lot #	Record Date	Employee
1313220	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	5/13/2020 2:37:13AM	25804
1313220	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/21/2020 1:17:18AM	30941
1313221	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	5/13/2020 2:38:41AM	25804
1313221	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/21/2020 1:17:18AM	30941
1313222	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	5/13/2020 2:36:14AM	25804
1313222	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/21/2020 1:17:18AM	30941
1313224	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	5/13/2020 2:33:53AM	25804
1313224	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/21/2020 1:17:18AM	30941
1313225	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	5/13/2020 2:35:01AM	25804
1313225	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/21/2020 1:17:18AM	30941
1313226	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/21/2020 1:17:18AM	30941
1313227	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/21/2020 1:17:18AM	30941
1313228	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	5/13/2020 2:40:51AM	25804
1313228	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/21/2020 1:17:18AM	30941
1313229	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	5/13/2020 2:43:02AM	25804
1313229	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/21/2020 1:17:18AM	30941
1313230	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	5/13/2020 2:39:44AM	25804
1313230	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/21/2020 1:17:18AM	30941
1313231	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	5/13/2020 2:41:48AM	25804
1313231	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	5/21/2020 1:17:18AM	30941

*pH Check Code Key	**Chlorine Present Code Key
PK = Original container checked - pH is within the correct range. (No preservative was added) PA = Original container checked - pH adjusted to correct range. (Preservative was added) PV = Volatile container checked PC = pH checked (unpreserved container) SPK = Subsampled from an original container. Original container checked - pH is within correct range SPA = Subsampled from an original container. Subsample container checked - pH adjusted to correct range. SPC = Subsampled from an original container. pH checked (unpreserved container). SUP = Subsampled from original container. Unable to be preserved due to the matrix of the sample. UP = Unable to preserve due to matrix of the sample. NA = Not applicable	NA = Chlorine Not Checked Y = Chlorine Present N = Chlorine Not Present

**Method Summary/Reference
for SDG# KR446_I-DOD**

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 · 717-656-2300 Fax: 717-656-2681 · www.lancasterlabs.com**01163 GC/MS VOA Water Prep**

An undiluted aliquot of the water sample or a dilution of the sample is purged with an inert gas and the volatiles are collected on an adsorbent trap that is subsequently desorbed onto a gas chromatographic column.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 5030C, May 2003.

11997 VOCs- 5ml Water by 8260C/D

The water sample is purged and the volatile compounds are collected on a sorbent trap that is subsequently desorbed onto the GC/MS system for chromatographic and mass spectral analysis.

Reference: Volatile Organic Compounds by Gas Chromatography/ Mass Spectrometry (GC/MS), SW-846 Method 8260C, August 2006.

14866 ICP filtered no-digest SW-846

The sample is digested with nitric and hydrochloric acid.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 3010A, July 1992

01754 Iron**07058 Manganese**

The solution resulting from the metals digestion is analyzed by Trace ICP.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 6010C, February 2007.

10398 8011 Master Master

The sample is extracted with hexane using micro-extraction technique. The extract is analyzed using gas chromatography on two capillary columns (primary and confirmation) with electron capture detectors.

Reference: Test Methods for Evaluating Solid Wastes, SW846 Method 8011, July 1992.

07786 EDB Extraction (8011)

A 35ml aliquot of sample is extracted in the 40 ml sampling vial with 2 ml hexane (micro-extraction). The solvent layer is drawn off and ready for analysis.

Reference: Test Methods for Evaluating Solid Wastes, SW846 Method 8011, July 1992.

Analysis Reports / Field Chain of Custody

KR446 Page 6 of 579



ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

EA Engineering, Science & Tech
Building C, Suite 100
405 State Highway 121 Bypass
Lewisville TX 75067-8192

Report Date: May 22, 2020 19:42

Project: Kirtland AFB

Account #: 31675
Group Number: 2099216
SDG: KR446
PO Number: 14800
State of Sample Origin: NM

Electronic Copy To	EA Engineering, Science & Tech	Attn: Pamela Moss
Electronic Copy To	EA Science & Technology	Attn: Amanda Smith
Electronic Copy To	EA Engineering, Science & Tech	Attn: Bernie Bockisch
Electronic Copy To	EA Engineering, Science & Tech	Attn: Erin Sullivan

Respectfully Submitted,



Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to <https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/>. Historical copies may be requested through your project manager.



SAMPLE INFORMATION

<u>Client Sample Description</u>	<u>Sample Collection</u> <u>Date/Time</u>	<u>ELLE#</u>
GWTS-EFF1-051120 Water	05/11/2020 11:15	1313220
GWTS-EFF1-051120 Water	05/11/2020 11:15	1313221
GWTS-EFF1-051120 Water	05/11/2020 11:15	1313222
GWTS-EFF1-051120 Water	05/11/2020 11:15	1313223
GWTS-GAC1-051120 Water	05/11/2020 11:40	1313224
GWTS-INF1-051120 Water	05/11/2020 11:50	1313225
GWTS-FB01-051120 Water	05/11/2020 11:15	1313226
GWTS-TB01-051120 Water	05/11/2020 12:35	1313227
GWTS-EFF2-051120 Water	05/11/2020 12:00	1313228
GWTS-EFF2DUP-051120 Water	05/11/2020 12:00	1313229
GWTS-GAC2-051120 Water	05/11/2020 12:15	1313230
GWTS-INF2-051120 Water	05/11/2020 12:30	1313231

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Project Name: Kirtland AFB
ELLE Group #: 2099216

General Comments:

All analyses have been performed in accordance with DOD QSM Version 5.1.1 unless otherwise noted below.

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below.

Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are included in this data set.

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:

No additional comments are necessary.

Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Sample Description: GWTS-EFF1-051120 Water
Kirtland AFB Bulk Fuels Facility**EA Engineering, Science & Tech**
ELLE Sample #: WW 1313220
ELLE Group #: 2099216
Matrix: Water**Project Name:** Kirtland AFB**Submittal Date/Time:** 05/12/2020 10:29
Collection Date/Time: 05/11/2020 11:15
SDG#: KR446-01BKG

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
GC/MS Volatiles		SW-846 8260C	ug/l	ug/l	ug/l	ug/l	
11997	Benzene	71-43-2	0.5 U	0.2	0.5	1	1
11997	Ethylbenzene	100-41-4	0.8 U	0.4	0.8	1	1
11997	Toluene	108-88-3	0.5 U	0.2	0.5	1	1
11997	Xylene (Total)	1330-20-7	2 U	1	2	6	1
Volatiles by Extraction		SW-846 8011	ug/l	ug/l	ug/l	ug/l	
10398	Ethylene dibromide	106-93-4	0.019 UD1	0.0097	0.019	0.029	1
Metals Dissolved		SW-846 6010C	mg/l	mg/l	mg/l	mg/l	
01754	Iron	7439-89-6	0.103 UK4	0.0412	0.103	0.206	1
07058	Manganese	7439-96-5	0.0052 UK2	0.0031	0.0052	0.0103	1

Sample Comments

This sample was field filtered for dissolved metals.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	BTEX 8260C Water	SW-846 8260C	1	L201411AA	05/20/2020 13:48	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L201411AA	05/20/2020 13:47	Corie Mellinger	1
10398	EDB 8011 Water	SW-846 8011	1	201350023A	05/16/2020 00:48	Rachel Umberger	1
07786	EDB Extraction (8011)	SW-846 8011	1	201350023A	05/14/2020 22:00	Mathias Okpo	1
01754	Iron	SW-846 6010C	1	201351486601	05/17/2020 14:36	Elaine F Stoltzfus	1
07058	Manganese	SW-846 6010C	1	201351486601	05/17/2020 14:36	Elaine F Stoltzfus	1
14866	ICP filtered no-digest SW-846	SW-846 3010A	1	201351486601	05/14/2020 10:40	Annamaria Kuhns	1

*This limit was used in the evaluation of the final result

Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Sample Description: GWTS-EFF1-051120 Water
Kirtland AFB Bulk Fuels Facility

EA Engineering, Science & Tech
ELLE Sample #: WW 1313221
ELLE Group #: 2099216
Matrix: Water

Project Name: Kirtland AFB

Submittal Date/Time: 05/12/2020 10:29
Collection Date/Time: 05/11/2020 11:15
SDG#: KR446-01MS

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
GC/MS Volatiles		SW-846 8260C	ug/l	ug/l	ug/l	ug/l	
11997	Benzene	71-43-2	22	0.2	0.5	1	1
11997	Ethylbenzene	100-41-4	22	0.4	0.8	1	1
11997	Toluene	108-88-3	22	0.2	0.5	1	1
11997	Xylene (Total)	1330-20-7	69	1	2	6	1
Volatiles by Extraction		SW-846 8011	ug/l	ug/l	ug/l	ug/l	
10398	Ethylene dibromide	106-93-4	0.11 D1	0.0095	0.019	0.029	1
Metals Dissolved		SW-846 6010C	mg/l	mg/l	mg/l	mg/l	
01754	Iron	7439-89-6	0.411	0.0418	0.104	0.209	1
07058	Manganese	7439-96-5	0.0203	0.0031	0.0052	0.0104	1

Sample Comments

This sample was field filtered for dissolved metals.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	BTEX 8260C Water	SW-846 8260C	1	L201411AA	05/20/2020 14:09	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L201411AA	05/20/2020 14:08	Corie Mellinger	1
10398	EDB 8011 Water	SW-846 8011	1	201350023A	05/16/2020 01:05	Rachel Umberger	1
07786	EDB Extraction (8011)	SW-846 8011	1	201350023A	05/14/2020 22:00	Mathias Okpo	1
01754	Iron	SW-846 6010C	1	201351486601	05/19/2020 07:01	Lisa J Cooke	1
07058	Manganese	SW-846 6010C	1	201351486601	05/19/2020 07:01	Lisa J Cooke	1
14866	ICP filtered no-digest SW-846	SW-846 3010A	1	201351486601	05/14/2020 10:40	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Sample Description: GWTS-EFF1-051120 Water
Kirtland AFB Bulk Fuels Facility**EA Engineering, Science & Tech**
ELLE Sample #: WW 1313222
ELLE Group #: 2099216
Matrix: Water**Project Name:** Kirtland AFB**Submittal Date/Time:** 05/12/2020 10:29
Collection Date/Time: 05/11/2020 11:15
SDG#: KR446-01MSD

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
GC/MS Volatiles		SW-846 8260C	ug/l	ug/l	ug/l	ug/l	
11997	Benzene	71-43-2	20	0.2	0.5	1	1
11997	Ethylbenzene	100-41-4	21	0.4	0.8	1	1
11997	Toluene	108-88-3	21	0.2	0.5	1	1
11997	Xylene (Total)	1330-20-7	63	1	2	6	1
Volatiles by Extraction		SW-846 8011	ug/l	ug/l	ug/l	ug/l	
10398	Ethylene dibromide	106-93-4	0.11 D1	0.0098	0.020	0.029	1
Metals Dissolved		SW-846 6010C	mg/l	mg/l	mg/l	mg/l	
01754	Iron	7439-89-6	0.406	0.0418	0.104	0.209	1
07058	Manganese	7439-96-5	0.0206	0.0031	0.0052	0.0104	1

Sample Comments

This sample was field filtered for dissolved metals.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	BTEX 8260C Water	SW-846 8260C	1	L201411AA	05/20/2020 14:31	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L201411AA	05/20/2020 14:30	Corie Mellinger	1
10398	EDB 8011 Water	SW-846 8011	1	201350023A	05/16/2020 01:22	Rachel Umberger	1
07786	EDB Extraction (8011)	SW-846 8011	1	201350023A	05/14/2020 22:00	Mathias Okpo	1
01754	Iron	SW-846 6010C	1	201351486601	05/19/2020 07:04	Lisa J Cooke	1
07058	Manganese	SW-846 6010C	1	201351486601	05/19/2020 07:04	Lisa J Cooke	1
14866	ICP filtered no-digest SW-846	SW-846 3010A	1	201351486601	05/14/2020 10:40	Annamaria Kuhns	1

*This limit was used in the evaluation of the final result



Lancaster Laboratories
Environmental

Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Sample Description: GWTS-EFF1-051120 Water
Kirtland AFB Bulk Fuels Facility

EA Engineering, Science & Tech
ELLE Sample #: WW 1313223
ELLE Group #: 2099216
Matrix: Water

Project Name: Kirtland AFB

Submittal Date/Time: 05/12/2020 10:29
Collection Date/Time: 05/11/2020 11:15
SDG#: KR446-01DUP

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
Metals Dissolved		SW-846 6010C	mg/l	mg/l	mg/l	mg/l	
01754	Iron	7439-89-6	0.103 UK4	0.0412	0.103	0.206	1
07058	Manganese	7439-96-5	0.0052 UK2	0.0031	0.0052	0.0103	1

Sample Comments

This sample was field filtered for dissolved metals.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010C	1	201351486601	05/17/2020 14:42	Elaine F Stoltzfus	1
07058	Manganese	SW-846 6010C	1	201351486601	05/17/2020 14:42	Elaine F Stoltzfus	1
14866	ICP filtered no-digest SW-846	SW-846 3010A	1	201351486601	05/14/2020 10:40	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result



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Analysis Report

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Sample Description: GWTS-GAC1-051120 Water
Kirtland AFB Bulk Fuels Facility

EA Engineering, Science & Tech
ELLE Sample #: WW 1313224
ELLE Group #: 2099216
Matrix: Water

Project Name: Kirtland AFB

Submittal Date/Time: 05/12/2020 10:29
Collection Date/Time: 05/11/2020 11:40
SDG#: KR446-02

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
GC/MS Volatiles		SW-846 8260C	ug/l	ug/l	ug/l	ug/l	
11997	Benzene	71-43-2	0.5 U	0.2	0.5	1	1
11997	Ethylbenzene	100-41-4	0.8 U	0.4	0.8	1	1
11997	Toluene	108-88-3	0.5 U	0.2	0.5	1	1
11997	Xylene (Total)	1330-20-7	2 U	1	2	6	1
Volatiles by Extraction		SW-846 8011	ug/l	ug/l	ug/l	ug/l	
10398	Ethylene dibromide	106-93-4	0.019 UD1	0.0097	0.019	0.029	1
Metals Dissolved		SW-846 6010C	mg/l	mg/l	mg/l	mg/l	
01754	Iron	7439-89-6	0.103 UK4	0.0412	0.103	0.206	1
07058	Manganese	7439-96-5	0.0052 UK2	0.0031	0.0052	0.0103	1

Sample Comments

This sample was field filtered for dissolved metals.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	BTEX 8260C Water	SW-846 8260C	1	L201411AA	05/20/2020 15:59	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L201411AA	05/20/2020 15:58	Corie Mellinger	1
10398	EDB 8011 Water	SW-846 8011	1	201350023A	05/16/2020 01:39	Rachel Umberger	1
07786	EDB Extraction (8011)	SW-846 8011	1	201350023A	05/14/2020 22:00	Mathias Okpo	1
01754	Iron	SW-846 6010C	1	201351486601	05/17/2020 14:59	Elaine F Stoltzfus	1
07058	Manganese	SW-846 6010C	1	201351486601	05/17/2020 14:59	Elaine F Stoltzfus	1
14866	ICP filtered no-digest SW-846	SW-846 3010A	1	201351486601	05/14/2020 10:40	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Analysis Report

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Sample Description: GWTS-INF1-051120 Water
Kirtland AFB Bulk Fuels Facility

EA Engineering, Science & Tech
ELLE Sample #: WW 1313225
ELLE Group #: 2099216
Matrix: Water

Project Name: Kirtland AFB

Submittal Date/Time: 05/12/2020 10:29
Collection Date/Time: 05/11/2020 11:50
SDG#: KR446-03

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
GC/MS Volatiles		SW-846 8260C	ug/l	ug/l	ug/l	ug/l	
11997	Benzene	71-43-2	0.5 U	0.2	0.5	1	1
11997	Ethylbenzene	100-41-4	0.8 U	0.4	0.8	1	1
11997	Toluene	108-88-3	0.5 U	0.2	0.5	1	1
11997	Xylene (Total)	1330-20-7	2 U	1	2	6	1
Volatiles by Extraction		SW-846 8011	ug/l	ug/l	ug/l	ug/l	
10398	Ethylene dibromide	106-93-4	0.019 UD1	0.0095	0.019	0.029	1
Metals Dissolved		SW-846 6010C	mg/l	mg/l	mg/l	mg/l	
01754	Iron	7439-89-6	0.103 UK4	0.0412	0.103	0.206	1
07058	Manganese	7439-96-5	0.0052 UK2	0.0031	0.0052	0.0103	1

Sample Comments

This sample was field filtered for dissolved metals.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	BTEX 8260C Water	SW-846 8260C	1	L201411AA	05/20/2020 16:21	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L201411AA	05/20/2020 16:20	Corie Mellinger	1
10398	EDB 8011 Water	SW-846 8011	1	201350023A	05/16/2020 01:56	Rachel Umberger	1
07786	EDB Extraction (8011)	SW-846 8011	1	201350023A	05/14/2020 22:00	Mathias Okpo	1
01754	Iron	SW-846 6010C	1	201351486601	05/17/2020 15:09	Elaine F Stoltzfus	1
07058	Manganese	SW-846 6010C	1	201351486601	05/17/2020 15:09	Elaine F Stoltzfus	1
14866	ICP filtered no-digest SW-846	SW-846 3010A	1	201351486601	05/14/2020 10:40	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result



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Analysis Report

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Sample Description: GWTS-FB01-051120 Water
Kirtland AFB Bulk Fuels Facility

EA Engineering, Science & Tech
ELLE Sample #: WW 1313226
ELLE Group #: 2099216
Matrix: Water

Project Name: Kirtland AFB

Submittal Date/Time: 05/12/2020 10:29
Collection Date/Time: 05/11/2020 11:15
SDG#: KR446-04FB

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
GC/MS Volatiles		SW-846 8260C	ug/l	ug/l	ug/l	ug/l	
11997	Benzene	71-43-2	N.D.	0.2	0.5	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	0.8	1	1
11997	Toluene	108-88-3	N.D.	0.2	0.5	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	2	6	1
Volatiles by Extraction		SW-846 8011	ug/l	ug/l	ug/l	ug/l	
10398	Ethylene dibromide	106-93-4	N.D. D1	0.0097	0.019	0.029	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	BTEX 8260C Water	SW-846 8260C	1	L201411AA	05/20/2020 11:14	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L201411AA	05/20/2020 11:13	Corie Mellinger	1
10398	EDB 8011 Water	SW-846 8011	1	201350023A	05/16/2020 02:13	Rachel Umberger	1
07786	EDB Extraction (8011)	SW-846 8011	1	201350023A	05/14/2020 22:00	Mathias Okpo	1

*=This limit was used in the evaluation of the final result



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Analysis Report

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Sample Description: GWTS-TB01-051120 Water
Kirtland AFB Bulk Fuels Facility

EA Engineering, Science & Tech
ELLE Sample #: WW 1313227
ELLE Group #: 2099216
Matrix: Water

Project Name: Kirtland AFB

Submittal Date/Time: 05/12/2020 10:29
Collection Date/Time: 05/11/2020 12:35
SDG#: KR446-05TB

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
GC/MS Volatiles		SW-846 8260C	ug/l	ug/l	ug/l	ug/l	
11997	Benzene	71-43-2	0.5 U	0.2	0.5	1	1
11997	Ethylbenzene	100-41-4	0.8 U	0.4	0.8	1	1
11997	Toluene	108-88-3	0.5 U	0.2	0.5	1	1
11997	Xylene (Total)	1330-20-7	2 U	1	2	6	1
Volatiles by Extraction		SW-846 8011	ug/l	ug/l	ug/l	ug/l	
10398	Ethylene dibromide	106-93-4	0.019 UD1	0.0096	0.019	0.029	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	BTEX 8260C Water	SW-846 8260C	1	L201411AA	05/20/2020 11:36	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L201411AA	05/20/2020 11:35	Corie Mellinger	1
10398	EDB 8011 Water	SW-846 8011	1	201350023A	05/16/2020 02:29	Rachel Umberger	1
07786	EDB Extraction (8011)	SW-846 8011	1	201350023A	05/14/2020 22:00	Mathias Okpo	1

*=This limit was used in the evaluation of the final result

Analysis Report

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Sample Description: GWTS-EFF2-051120 Water
Kirtland AFB Bulk Fuels Facility

EA Engineering, Science & Tech
ELLE Sample #: WW 1313228
ELLE Group #: 2099216
Matrix: Water

Project Name: Kirtland AFB

Submittal Date/Time: 05/12/2020 10:29
Collection Date/Time: 05/11/2020 12:00
SDG#: KR446-06

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
GC/MS Volatiles		SW-846 8260C	ug/l	ug/l	ug/l	ug/l	
11997	Benzene	71-43-2	0.5 U	0.2	0.5	1	1
11997	Ethylbenzene	100-41-4	0.8 U	0.4	0.8	1	1
11997	Toluene	108-88-3	0.5 U	0.2	0.5	1	1
11997	Xylene (Total)	1330-20-7	2 U	1	2	6	1
Volatiles by Extraction		SW-846 8011	ug/l	ug/l	ug/l	ug/l	
10398	Ethylene dibromide	106-93-4	0.019 UD1	0.0096	0.019	0.029	1
Metals Dissolved		SW-846 6010C	mg/l	mg/l	mg/l	mg/l	
01754	Iron	7439-89-6	0.103 UK4	0.0412	0.103	0.206	1
07058	Manganese	7439-96-5	0.0052 UK2	0.0031	0.0052	0.0103	1

Sample Comments

This sample was field filtered for dissolved metals.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	BTEX 8260C Water	SW-846 8260C	1	L201411AA	05/20/2020 16:43	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L201411AA	05/20/2020 16:42	Corie Mellinger	1
10398	EDB 8011 Water	SW-846 8011	1	201350023A	05/16/2020 03:20	Rachel Umberger	1
07786	EDB Extraction (8011)	SW-846 8011	1	201350023A	05/14/2020 22:00	Mathias Okpo	1
01754	Iron	SW-846 6010C	1	201351486601	05/17/2020 15:18	Elaine F Stoltzfus	1
07058	Manganese	SW-846 6010C	1	201351486601	05/17/2020 15:18	Elaine F Stoltzfus	1
14866	ICP filtered no-digest SW-846	SW-846 3010A	1	201351486601	05/14/2020 10:40	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Analysis Report

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Sample Description: GWTS-EFF2DUP-051120 Water
Kirtland AFB Bulk Fuels Facility

EA Engineering, Science & Tech
ELLE Sample #: WW 1313229
ELLE Group #: 2099216
Matrix: Water

Project Name: Kirtland AFB

Submittal Date/Time: 05/12/2020 10:29
Collection Date/Time: 05/11/2020 12:00
SDG#: KR446-07FD

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
GC/MS Volatiles		SW-846 8260C	ug/l	ug/l	ug/l	ug/l	
11997	Benzene	71-43-2	0.5 U	0.2	0.5	1	1
11997	Ethylbenzene	100-41-4	0.8 U	0.4	0.8	1	1
11997	Toluene	108-88-3	0.5 U	0.2	0.5	1	1
11997	Xylene (Total)	1330-20-7	2 U	1	2	6	1
Volatiles by Extraction		SW-846 8011	ug/l	ug/l	ug/l	ug/l	
10398	Ethylene dibromide	106-93-4	0.019 UD1	0.0095	0.019	0.029	1
Metals Dissolved		SW-846 6010C	mg/l	mg/l	mg/l	mg/l	
01754	Iron	7439-89-6	0.103 UK4	0.0412	0.103	0.206	1
07058	Manganese	7439-96-5	0.0052 UK2	0.0031	0.0052	0.0103	1

Sample Comments

This sample was field filtered for dissolved metals.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	BTEX 8260C Water	SW-846 8260C	1	L201411AA	05/20/2020 17:05	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L201411AA	05/20/2020 17:04	Corie Mellinger	1
10398	EDB 8011 Water	SW-846 8011	1	201350023A	05/16/2020 03:37	Rachel Umberger	1
07786	EDB Extraction (8011)	SW-846 8011	1	201350023A	05/14/2020 22:00	Mathias Okpo	1
01754	Iron	SW-846 6010C	1	201351486601	05/17/2020 15:12	Elaine F Stoltzfus	1
07058	Manganese	SW-846 6010C	1	201351486601	05/17/2020 15:12	Elaine F Stoltzfus	1
14866	ICP filtered no-digest SW-846	SW-846 3010A	1	201351486601	05/14/2020 10:40	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result



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Analysis Report

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Sample Description: GWTS-GAC2-051120 Water
Kirtland AFB Bulk Fuels Facility

EA Engineering, Science & Tech
ELLE Sample #: WW 1313230
ELLE Group #: 2099216
Matrix: Water

Project Name: Kirtland AFB

Submittal Date/Time: 05/12/2020 10:29
Collection Date/Time: 05/11/2020 12:15
SDG#: KR446-08

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
GC/MS Volatiles		SW-846 8260C	ug/l	ug/l	ug/l	ug/l	
11997	Benzene	71-43-2	0.5 U	0.2	0.5	1	1
11997	Ethylbenzene	100-41-4	0.8 U	0.4	0.8	1	1
11997	Toluene	108-88-3	0.5 U	0.2	0.5	1	1
11997	Xylene (Total)	1330-20-7	2 U	1	2	6	1
Volatiles by Extraction		SW-846 8011	ug/l	ug/l	ug/l	ug/l	
10398	Ethylene dibromide	106-93-4	0.019 UD1	0.0095	0.019	0.028	1
Metals Dissolved		SW-846 6010C	mg/l	mg/l	mg/l	mg/l	
01754	Iron	7439-89-6	0.103 UK4	0.0412	0.103	0.206	1
07058	Manganese	7439-96-5	0.0052 UK2	0.0031	0.0052	0.0103	1

Sample Comments

This sample was field filtered for dissolved metals.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	BTEX 8260C Water	SW-846 8260C	1	L201411AA	05/20/2020 17:27	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L201411AA	05/20/2020 17:26	Corie Mellinger	1
10398	EDB 8011 Water	SW-846 8011	1	201350023A	05/16/2020 03:53	Rachel Umberger	1
07786	EDB Extraction (8011)	SW-846 8011	1	201350023A	05/14/2020 22:00	Mathias Okpo	1
01754	Iron	SW-846 6010C	1	201351486601	05/17/2020 15:15	Elaine F Stoltzfus	1
07058	Manganese	SW-846 6010C	1	201351486601	05/17/2020 15:15	Elaine F Stoltzfus	1
14866	ICP filtered no-digest SW-846	SW-846 3010A	1	201351486601	05/14/2020 10:40	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result



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Analysis Report

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Sample Description: GWTS-INF2-051120 Water
Kirtland AFB Bulk Fuels Facility

EA Engineering, Science & Tech
ELLE Sample #: WW 1313231
ELLE Group #: 2099216
Matrix: Water

Project Name: Kirtland AFB

Submittal Date/Time: 05/12/2020 10:29
Collection Date/Time: 05/11/2020 12:30
SDG#: KR446-09

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
GC/MS Volatiles		SW-846 8260C	ug/l	ug/l	ug/l	ug/l	
11997	Benzene	71-43-2	0.5 U	0.2	0.5	1	1
11997	Ethylbenzene	100-41-4	0.8 U	0.4	0.8	1	1
11997	Toluene	108-88-3	0.5 U	0.2	0.5	1	1
11997	Xylene (Total)	1330-20-7	2 U	1	2	6	1
Volatiles by Extraction		SW-846 8011	ug/l	ug/l	ug/l	ug/l	
10398	Ethylene dibromide	106-93-4	0.014 JD1	0.0096	0.019	0.029	1
Metals Dissolved		SW-846 6010C	mg/l	mg/l	mg/l	mg/l	
01754	Iron	7439-89-6	0.103 UK4	0.0412	0.103	0.206	1
07058	Manganese	7439-96-5	0.0071 J	0.0031	0.0052	0.0103	1

Sample Comments

This sample was field filtered for dissolved metals.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	BTEX 8260C Water	SW-846 8260C	1	L201411AA	05/20/2020 17:49	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L201411AA	05/20/2020 17:48	Corie Mellinger	1
10398	EDB 8011 Water	SW-846 8011	1	201350023A	05/16/2020 04:10	Rachel Umberger	1
07786	EDB Extraction (8011)	SW-846 8011	1	201350023A	05/14/2020 22:00	Mathias Okpo	1
01754	Iron	SW-846 6010C	1	201351486601	05/17/2020 15:21	Elaine F Stoltzfus	1
07058	Manganese	SW-846 6010C	1	201351486601	05/19/2020 07:14	Lisa J Cooke	1
14866	ICP filtered no-digest SW-846	SW-846 3010A	1	201351486601	05/14/2020 10:40	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result



Quality Control Summary

Client Name: EA Engineering, Science & Tech
Reported: 05/22/2020 19:42

Group Number: 2099216

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	DL**	LOD	LOQ
	ug/l	ug/l	ug/l	ug/l
Batch number: L201411AA	Sample number(s): 1313220-1313222,1313224-1313231			
Benzene	0.5 U	0.2	0.5	1
Ethylbenzene	0.8 U	0.4	0.8	1
Toluene	0.5 U	0.2	0.5	1
Xylene (Total)	2 U	1	2	6
Batch number: 201350023A	Sample number(s): 1313220-1313222,1313224-1313231			
Ethylene dibromide	0.020 U	0.010	0.020	0.030
	mg/l	mg/l	mg/l	mg/l
Batch number: 201351486601	Sample number(s): 1313220-1313225,1313228-1313231			
Iron	0.103 U	0.0412	0.103	0.206
Manganese	0.0052 U	0.0031	0.0052	0.0103

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: L201411AA	Sample number(s): 1313220-1313222,1313224-1313231								
Benzene	20	20.66			103		79-120		
Ethylbenzene	20	21.56			108		79-121		
Toluene	20	21.06			105		80-121		
Xylene (Total)	60	66.47			111		79-121		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 201350023A	Sample number(s): 1313220-1313222,1313224-1313231								
Ethylene dibromide	0.128	0.110	0.128	0.104	86	81	60-140	6	20
	mg/l	mg/l	mg/l	mg/l					
Batch number: 201351486601	Sample number(s): 1313220-1313225,1313228-1313231								
Iron	0.400	0.407			102		87-115		
Manganese	0.0200	0.0203			101		90-114		

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

(3) The surrogate spike amount was less than the LOD.

Analysis Report

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Quality Control Summary

Client Name: EA Engineering, Science & Tech
Reported: 05/22/2020 19:42

Group Number: 2099216

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: L201411AA	Sample number(s): 1313220-1313222,1313224-1313231 UNSPK: 1313220									
Benzene	0.5 U	20	21.67	20	20.22	108	101	79-120	7	20
Ethylbenzene	0.8 U	20	22.44	20	21.07	112	105	79-121	6	20
Toluene	0.5 U	20	22.34	20	21.33	112	107	80-121	5	20
Xylene (Total)	2 U	60	69.33	60	63.22	116	105	79-121	9	20
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 201350023A	Sample number(s): 1313220-1313222,1313224-1313231 UNSPK: 1313220									
Ethylene dibromide	0.019 U	0.122	0.112	0.125	0.113	92	91	60-140	2	20
	mg/l	mg/l	mg/l	mg/l	mg/l					
Batch number: 201351486601	Sample number(s): 1313220-1313225,1313228-1313231 UNSPK: 1313220									
Iron	0.103 U	0.418	0.411	0.418	0.406	98	97	87-115	1	20
Manganese	0.0052 U	0.0209	0.0203	0.0209	0.0206	97	98	90-114	1	20

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc mg/l	DUP Conc mg/l	DUP RPD	DUP RPD Max
Batch number: 201351486601	Sample number(s): 1313220-1313225,1313228-1313231 BKG: 1313220			
Iron	0.103 U	0.103 U	0 (1)	20
Manganese	0.0052 U	0.0052 U	0 (1)	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX 8260C Water

Batch number: L201411AA

	Dibromofluoromethane		1,2-Dichloroethane-d4		Toluene-d8		4-Bromofluorobenzene	
	%Rec	LOD	%Rec	LOD	%Rec	LOD	%Rec	LOD
	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)
1313220	103	1	101	1	99	1	92	1
1313221	100	1	99	1	104	1	101	1

*- Outside of specification

**-This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

(3) The surrogate spike amount was less than the LOD.



Lancaster Laboratories
Environmental

Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Quality Control Summary

Client Name: EA Engineering, Science & Tech
Reported: 05/22/2020 19:42

Group Number: 2099216

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX 8260C Water
Batch number: L201411AA

	Dibromofluoromethane		1,2-Dichloroethane-d4		Toluene-d8		4-Bromofluorobenzene	
	%Rec	LOD	%Rec	LOD	%Rec	LOD	%Rec	LOD
	(ug/l)		(ug/l)		(ug/l)		(ug/l)	
1313222	98	1	99	1	102	1	104	1
1313224	102	1	102	1	100	1	92	1
1313225	103	1	102	1	101	1	91	1
1313226	103	1	104	1	100	1	90	1
1313227	103	1	104	1	101	1	92	1
1313228	102	1	102	1	101	1	93	1
1313229	102	1	102	1	101	1	92	1
1313230	104	1	106	1	100	1	93	1
1313231	104	1	104	1	99	1	93	1
Blank	104	1	103	1	101	1	91	1
LCS	99	1	98	1	102	1	97	1
MS	100	1	99	1	104	1	101	1
MSD	98	1	99	1	102	1	104	1
Limits:	80-119		81-118		89-112		85-114	

Analysis Name: EDB 8011 Water
Batch number: 201350023A

	1,1,2,2-Tetrachloroethane-D1		1,1,2,2-Tetrachloroethane-D2	
	%Rec	LOD	%Rec	LOD
1313220	69	0.0068	62	0.0068
1313221	70	0.0067	63	0.0067
1313222	69	0.0068	63	0.0068
1313224	68	0.0068	64	0.0068
1313225	66	0.0067	62	0.0067
1313226	58	0.0068	57	0.0068
1313227	54	0.0067	54	0.0067
1313228	65	0.0067	59	0.0067
1313229	68	0.0067	57	0.0067
1313230	62	0.0066	64	0.0066
1313231	63	0.0067	64	0.0067
Blank	65	0.0070	63	0.0070
LCS	67	0.0070	65	0.0070
LCSD	63	0.0070	63	0.0070
MS	70	0.0067	63	0.0067
MSD	69	0.0068	63	0.0068
Limits:	46-136		46-136	

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.
- (3) The surrogate spike amount was less than the LOD.



Lancaster Laboratories
Environmental

Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Quality Control Summary

Client Name: EA Engineering, Science & Tech
Reported: 05/22/2020 19:42

Group Number: 2099216

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

(3) The surrogate spike amount was less than the LOD.

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Kirtland AFB BFF
Quarterly Report - April-June 2020
SWMUs ST-106/SS-111

I-5-2286

September 2020

31678 2099216 1313220-31

EA 225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 694-7000 Fax No: (410) 771-1025		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-GWTS1-051120					
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				YEAR: 2020 QUARTER: Q2					
PROJECT SITE AND PHASE: ST106/SS111				LAB PO NUMBER: 14800		LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258											
				ANALYSIS REQUIRED (Specify number of bottles)													
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (2260C)	BTEX (2260C)	BTEXN (2260C)	EDB (8011)	Total As, Pb, Cd, K, Na, Mg (6020A/6010C)	Dissolved Fe, Mn (6010C)	Chloride, bromide, sulfate (3000)	Nitrate-Nitrite (353.2)	Ammonia (SM4500NH3)	Sulfide (SM4500SCF)	Alkalinity (SM2320B)	COMMENTS	
1	GWTS-EFF1-051120	05/11/2020	1115	18	--	9	--	6	--	3*	--	--	--	--	--	--	Additional Volume Provided for MS/MSD
2	GWTS-GAC1-051120	05/11/2020	1140	6	--	3	--	2	--	1*	--	--	--	--	--	--	
3	GWTS-INF1-051120	05/11/2020	1150	6	--	3	--	2	--	1*	--	--	--	--	--	--	
4	GWTS-FB01-051120	05/11/2020	1115	5	--	3	--	2	--	--	--	--	--	--	--	--	Collected simultaneously with GWTS-EFF1-051120
5	GWTS-TB01-051120	05/11/2020	1235	4	--	2	--	2	--	--	--	--	--	--	--	--	
6																	
COMMENTS: *Dissolved Fe, Mn aliquot was field filtered.																	
SAMPLER(S): Pete Ferraro				COURIER AND SHIPPING NUMBER: Fedex: 8155 2825 6878													
RELINQUISHED BY:				DATE	TIME	RECEIVED BY:				DATE	TIME						
Printed Name and Signature: Pete Ferraro				5-11-2020	1430	Printed Name and Signature: Dylan Schmeelk				5-11-2020	1330						
Printed Name and Signature: Dylan Schmeelk				5-11-2020	1430	Printed Name and Signature:											
Printed Name and Signature:						Printed Name and Signature:											
Printed Name and Signature:						Printed Name and Signature:											
Printed Name and Signature:						Printed Name and Signature: Nicole Reiff				5/12/20	1029						

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ENR
8/24/20
5/12/20

September 2020

31675 2099216 1313220-31

 225 Schilling Circle Suite 400 Hunt Valley MD Tel No: (410) 584-7000 Fax No: (410) 771-1825		CHAIN-OF-CUSTODY RECORD										COC NUMBER COC-GWTS2-051120				
PROJECT NAME: Kirtland AFB Bulk Fuels Facility		PROJECT NUMBER: 62599DM01		LABORATORY NAME AND CONTACT: Eurofins Lancaster Laboratories 2425 New Holland Pike Lancaster PA 17601				FAX AND MAIL REPORTS/EDD TO: Tara Lamond: tlamond@eaest.com EA Amanda Smith: asmith@eaest.com EA				YEAR: 2020				
								FAX AND MAIL REPORTS/EDD TO: Pam Moss: pmoss@eaest.com EA				QUARTER: Q2				
PROJECT SITE AND PHASE: ST106/SS111				LAB PO NUMBER: 14800				LAB CONTACT: Kay Hower KayHower@eurofinsUS.com Eurofins 1 (717) 556-7258								
				ANALYSIS REQUIRED (Specify number of bottles)												
ITEM	SAMPLE IDENTIFIER	DATE COLLECTED	TIME COLLECTED	Total Number of Bottles	VOCs (8250C)	BTEX (8250C)	BTEXN (8250C)	EDB (8011)	Total As, Pb, Cd, Cr, Na, Mg (6020/6010C)	Dissolved Fe, Mn (6020/6010C)	Chloride, bromide, sulfate (300.0)	Nitrate-Nitrite (353.2)	Ammonia (SM4500NH3)	Sulfide (SM4500S2CF)	Alkalinity (SM2320B)	COMMENTS
1	GWTS-EFF2-051120	05/11/2020	1200	6	--	3	--	2	--	1*	--	--	--	--	--	
2	GWTS-EFF2DUP-051120	05/11/2020	1200	6	--	3	--	2	--	1*	--	--	--	--	--	
3	GWTS-GAC2-051120	05/11/2020	1215	6	--	3	--	2	--	1*	--	--	--	--	--	
4	GWTS-INF2-051120	05/11/2020	1230	6	--	3	--	2	--	1*	--	--	--	--	--	
5																
6																
COMMENTS: *Dissolved Fe, Mn aliquot was field filtered.																
SAMPLER(S): Peter Ferrari				COURIER AND SHIPPING NUMBER: Fedex: 8155 2825 6878												
RELINQUISHED BY:				DATE		TIME		RECEIVED BY:				DATE		TIME		
Printed Name and Signature: Peter Ferrari				5-11-2020		1430		Printed Name and Signature: Dylan Schmeelk				5-11-2020		1330		
Printed Name and Signature: Dylan Schmeelk				5-11-2020		1430		Printed Name and Signature:								
Printed Name and Signature:								Printed Name and Signature:								
Printed Name and Signature:								Printed Name and Signature: Nicole Reitt				5/12/20		1029		

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Lancaster Laboratories
Environmental

Sample Administration Receipt Documentation Log

Doc Log ID: 284236



Group Number(s): 2099216

Client: ES

Delivery and Receipt Information

Delivery Method: Fed Ex Arrival Date: 05/12/2020
Number of Packages: 1 Number of Projects: 2

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	4
Samples Chilled:	Yes	Trip Blank Type:	HCl
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Julissa Rivera-Santa

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	46730060WS	0.8	IR	Wet	Y	Loose	N

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	mL	milliliter(s)
C	degrees Celsius	MPN	Most Probable Number
cfu	colony forming units	N.D.	non-detect
CP Units	cobalt-chloroplatinate units	ng	nanogram(s)
F	degrees Fahrenheit	NTU	nephelometric turbidity units
g	gram(s)	pg/L	picogram/liter
IU	International Units	RL	Reporting Limit
kg	kilogram(s)	TNTC	Too Numerous To Count
L	liter(s)	µg	microgram(s)
lb.	pound(s)	µL	microliter(s)
m3	cubic meter(s)	umhos/cm	micromhos/cm
meq	milliequivalents	MCL	Maximum Contamination Limit
mg	milligram(s)		
<	less than		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is less than the LOQ
K2	Continuing Calibration Blank is above the QC limit and the sample result is less than the LOQ
K3	Initial Calibration Verification is above the QC limit and the sample result is less than the LOQ
K4	Continuing Calibration Verification is above the QC limit and the sample result is less than the LOQ
J (or G, I, X)	Estimated value $\geq$ the Method Detection Limit (MDL or DL) and $<$ the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported.
P [^]	Concentration difference between the primary and confirmation column $>40\%$. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.

Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Volatiles by GC/MS Data

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Case Narrative/Conformance Summary

Volatiles by GC/MS

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Case Narrative/Conformance Summary

CLIENT: EA Engineering, Science & Tech

SDG: KR446

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Sample #	Client ID	Matrix		DF	Comments
		Liquid	Solid		
1313220	GWTS-EFF1-051120	X		1	Unspiked
1313221	GWTS-EFF1-051120	X		1	Matrix Spike
1313222	GWTS-EFF1-051120	X		1	Matrix Spike Duplicate
1313224	GWTS-GAC1-051120	X		1	
1313225	GWTS-INF1-051120	X		1	
1313226	GWTS-FB01-051120	X		1	Field Blank
1313227	GWTS-TB01-051120	X		1	Trip Blank
1313228	GWTS-EFF2-051120	X		1	
1313229	GWTS-EFF2DUP-051120	X		1	Field Duplicate Sample
1313230	GWTS-GAC2-051120	X		1	
1313231	GWTS-INF2-051120	X		1	

All analyses have been performed in accordance with DOD QSM Version 5.1.1 unless otherwise noted below.

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

All QC is within specification.

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

6/2/2020 2:13:11 PM

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Case Narrative/Conformance Summary

CLIENT: EA Engineering, Science & Tech

SDG: KR446

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
+MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

Quality Control and Calibration Summary Forms

Volatiles by GC/MS

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Quality Control Reference List GC/MS Volatiles

CLIENT: EA Engineering, Science & Tech
SDG: KR446

Fraction: Volatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
BTEX 8260C Water	L201411AA	VBLKL84	05/20/2020 09:53
		LCSL84	05/20/2020 09:09
		1313220 UNSPK	05/20/2020 13:48
		1313221 MS	05/20/2020 14:09
		1313222 MSD	05/20/2020 14:31
		1313224	05/20/2020 15:59
		1313225	05/20/2020 16:21
		1313226	05/20/2020 11:14
		1313227	05/20/2020 11:36
		1313228	05/20/2020 16:43
		1313229	05/20/2020 17:05
		1313230	05/20/2020 17:27
		1313231	05/20/2020 17:49

Quality Control Summary
Method Blank
GC/MS Volatiles
SDG: KR446
Matrix: LIQUID

Fraction: Volatiles by GC/MS

L201411AA / VBLKL84						
Analyte	Analysis Date	Blank Results	Units	DL	LOD	LOQ
Benzene	05/20/20	N.D.	ug/l	0.2	0.5	1
Toluene	05/20/20	N.D.	ug/l	0.2	0.5	1
Ethylbenzene	05/20/20	N.D.	ug/l	0.4	0.8	1
Xylene (Total)	05/20/20	N.D.	ug/l	1	2	6

Quality Control Summary
Surrogates
GC/MS Volatiles
SDG: KR446
Matrix: LIQUID

Fraction: Volatiles by GC/MS

L201411AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKL84	103	81 - 118	91	85 - 114	104	80 - 119	101	89 - 112
LCSL84	98	81 - 118	97	85 - 114	99	80 - 119	102	89 - 112
1313220 UNSPK	101	81 - 118	92	85 - 114	103	80 - 119	99	89 - 112
1313221 MS	99	81 - 118	101	85 - 114	100	80 - 119	104	89 - 112
1313222 MSD	99	81 - 118	104	85 - 114	98	80 - 119	102	89 - 112
1313224	102	81 - 118	92	85 - 114	102	80 - 119	100	89 - 112
1313225	102	81 - 118	91	85 - 114	103	80 - 119	101	89 - 112
1313226	104	81 - 118	90	85 - 114	103	80 - 119	100	89 - 112
1313227	104	81 - 118	92	85 - 114	103	80 - 119	101	89 - 112
1313228	102	81 - 118	93	85 - 114	102	80 - 119	101	89 - 112
1313229	102	81 - 118	92	85 - 114	102	80 - 119	101	89 - 112
1313230	106	81 - 118	93	85 - 114	104	80 - 119	100	89 - 112
1313231	104	81 - 118	93	85 - 114	104	80 - 119	99	89 - 112

Quality Control Summary
Matrix Spike/Matrix Spike Duplicate

SDG: KR446
Matrix: LIQUID

GC/MS Volatiles

Fraction: Volatiles by GC/MS

UNSPK: 1313220 MS: 1313221 MSD: 1313222 Analyte	Batch: L201411AA (Sample number(s): 1313220-1313222, 1313224-1313231)								
	Spike Added ug/l	Unspiked Conc ug/l	MS Conc ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	%Rec Limits	%RPD	%RPD Limits
Benzene	20	N.D.	21.67	20.22	108	101	79-120	7	20
Toluene	20	N.D.	22.34	21.33	112	107	80-121	5	20
Ethylbenzene	20	N.D.	22.44	21.07	112	105	79-121	6	20
Xylene (Total)	60	N.D.	69.33	63.22	116	105	79-121	9	20

Comments:

(2) The unspiked sample result is greater than four times the spike added.

* = Out of Specification

Results are being reported on an as received basis.

6/2/2020 2:13:42 PM

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Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: KR446
Matrix: LIQUID

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSL84	Batch: L201411AA (Sample number(s): 1313220-1313222, 1313224-1313231)							
Analyte	Spike Added ug/l	LCS Conc ug/l	LCSD Conc ug/l	LCS %Rec	LCSD %Rec	%Rec Limits	%RPD	%RPD Limits
Benzene	20	20.66	NA	103	NA	79-120	NA	NA
Toluene	20	21.06	NA	105	NA	80-121	NA	NA
Ethylbenzene	20	21.56	NA	108	NA	79-121	NA	NA
Xylene (Total)	60	66.47	NA	111	NA	79-121	NA	NA

**LOQ/MDL Summary
GC/MS Volatiles**

SDG: KR446

Fraction: Volatiles by GC/MS

11997: BTEX 8260C Water Analyte Name	Default DL	Default LOD	Default LOQ	Units
Benzene	.2	.5	1	ug/l
Toluene	.2	.5	1	ug/l
Ethylbenzene	.4	.8	1	ug/l
Xylene (Total)	1.4	2	6	ug/l

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____
 Lab File ID: ly04t02.d BFB Injection Date: 05/04/20
 Instrument ID: HP09915 BFB Injection Time: 11:11
 Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.11
75	30.0 - 60.0% of mass 95	45.65
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.86
173	Less than 2.0% of mass 174	0.62 (0.72)1
174	Greater than 50.0% of mass 95	86.35
175	5.0 - 9.0% of mass 174	6.12 (7.09)1
176	Greater than 95.0%, but less than 101.0% of mass 174	83.51 (96.71)1
177	5.0 - 9.0% of mass 176	5.61 (6.72)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD300	ly04i01.d	05/04/20	12:18
02	VSTD100	ly04i02.d	05/04/20	12:40
03	VSTD50	ly04i03.d	05/04/20	13:02
04	VSTD20	ly04i04.d	05/04/20	13:24
05	VSTD10	ly04i05.d	05/04/20	13:46
06	VSTD4	ly04i06.d	05/04/20	14:08
07	VSTD1	ly04i07.d	05/04/20	14:30
08	ICVLLG	ly04v01.d	05/04/20	14:52

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____
 Lab File ID: ly20t01.d BFB Injection Date: 05/20/20
 Instrument ID: HP09915 BFB Injection Time: 07:40
 Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.53
75	30.0 - 60.0% of mass 95	46.94
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.09
173	Less than 2.0% of mass 174	0.67 (0.78)1
174	Greater than 50.0% of mass 95	86.31
175	5.0 - 9.0% of mass 174	6.16 (7.14)1
176	Greater than 95.0%, but less than 101.0% of mass 174	82.81 (95.95)1
177	5.0 - 9.0% of mass 176	5.33 (6.43)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	ly20c01.d	05/20/20	08:26
02	LCSL84	ly20s01.d	05/20/20	09:09
03	VBLKL84	ly20b01.d	05/20/20	09:53
04	1312473	ly20s02.d	05/20/20	10:52
05	1313226	ly20s03.d	05/20/20	11:14
06	1313227	ly20s04.d	05/20/20	11:36
07	1312506	ly20s05.d	05/20/20	11:58
08	1313198	ly20s06.d	05/20/20	12:20
09	1313214	ly20s07.d	05/20/20	12:42
10	1313215	ly20s08.d	05/20/20	13:04
11	1313216	ly20s09.d	05/20/20	13:26
12	1313220	ly20s10.d	05/20/20	13:48
13	1313221MS	ly20s11.d	05/20/20	14:09
14	1313222MSD	ly20s12.d	05/20/20	14:31
15	1313213	ly20s13.d	05/20/20	14:53
16	1313213MS	ly20s14.d	05/20/20	15:15
17	1312471	ly20s15.d	05/20/20	15:37
18	1313224	ly20s16.d	05/20/20	15:59
19	1313225	ly20s17.d	05/20/20	16:21
20	1313228	ly20s18.d	05/20/20	16:43
21	1313229	ly20s19.d	05/20/20	17:05
22	1313230	ly20s20.d	05/20/20	17:27

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FORM V VOA

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____
 Lab File ID: ly20t01.d BFB Injection Date: 05/20/20
 Instrument ID: HP09915 BFB Injection Time: 07:40
 Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.53
75	30.0 - 60.0% of mass 95	46.94
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.09
173	Less than 2.0% of mass 174	0.67 (0.78)1
174	Greater than 50.0% of mass 95	86.31
175	5.0 - 9.0% of mass 174	6.16 (7.14)1
176	Greater than 95.0%, but less than 101.0% of mass 174	82.81 (95.95)1
177	5.0 - 9.0% of mass 176	5.33 (6.43)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	1313231	ly20s21.d	05/20/20	17:49
24	1312500	ly20s22.d	05/20/20	18:11
25	SECC050	ly20ec5.d	05/20/20	18:33

6A
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: HP09915 Calibration Date(s): 05/04/20 05/04/20

Heated Purge: (Y/N) Y Calibration Times: 12:18 14:30

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID:	RRF 1 = 1y04i07.d	RRF 4 = 1y04i06.d	RRF 10= 1y04i05.d							
RRF 20= 1y04i04.d	RRF 50= 1y04i03.d	RRF100= 1y04i02.d	RRF300= 1y04i01.d							
COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
Dichlorodifluoromethane	#0.3072	0.3749	0.3447	0.3545	0.3366	0.3268	0.3554	0.3429	6	AVG #
Chloromethane	#0.3484	0.3928	0.3004	0.3118	0.2810	0.3014	0.3050	0.3201	12	AVG #
1,3-Butadiene	0.2177	0.2159	0.2035	0.1909	0.2017	0.1994	0.2084	0.2054	5	AVG
Vinyl Chloride	#0.3345	0.3722	0.2898	0.3057	0.2850	0.2851	0.2901	0.3089	11	AVG #
Bromomethane	#0.2618	0.2776	0.2081	0.2164	0.1931	0.1989	0.2031	0.2227	15	AVG #
Chloroethane	#0.2082	0.2129	0.1636	0.1659	0.1543	0.1485	0.1539	0.1725	15	AVG #
Dichlorofluoromethane	0.3912	0.4483	0.3730	0.3566	0.3471	0.3369	0.3514	0.3720	10	AVG
n-Pentane	0.2913	0.3255	0.3315	0.2814	0.3331	0.3148	0.3399	0.3168	7	AVG
Trichlorofluoromethane	#0.3223	0.3834	0.3290	0.3363	0.3305	0.3177	0.3426	0.3374	6	AVG #
Ethyl ether	0.2085	0.2298	0.2403	0.2495	0.2468	0.2508	0.2432	0.2384	6	AVG
Freon 123a	0.2397	0.2803	0.2761	0.2695	0.2834	0.2757	0.2886	0.2733	6	AVG
Acrolein	1.9675	1.9584	2.3526	2.1490	1.9219	2.0204	2.0271	2.0567	7	AVG
1,1-Dichloroethene	#0.2125	0.2244	0.2165	0.2075	0.2164	0.2106	0.2183	0.2152	3	AVG #
1,1-Dichloroethene (2)	#0.0844	0.1075	0.1050	0.1016	0.1063	0.1046	0.1078	0.1025	8	AVG #
Acetone	#1.1737	0.9368	0.9557	0.9252	0.8233	0.8652	0.8872	0.9381	12	AVG #
Freon 113	#0.1875	0.2308	0.2325	0.2037	0.2359	0.2271	0.2451	0.2232	9	AVG #
2-Propanol	0.6343	0.5939	0.5852	0.6111	0.5714	0.5851	0.6045	0.5979	3	AVG
Methyl Iodide	0.3705	0.4177	0.4125	0.4203	0.4260	0.4199	0.4356	0.4147	5	AVG
Carbon Disulfide	#0.6293	0.7190	0.7287	0.7248	0.7533	0.7429	0.7734	0.7245	6	AVG #
Allyl Chloride	0.3126	0.3330	0.3401	0.3598	0.3560	0.3714	0.3682	0.3487	6	AVG
Methyl Acetate	#0.2838	0.2818	0.2652	0.2744	0.2660	0.2745	0.2753	0.2744	3	AVG #
Methylene Chloride	#0.2407	0.2611	0.2575	0.2576	0.2599	0.2554	0.2595	0.2560	3	AVG #
t-Butyl alcohol	0.9840	1.0154	0.9988	1.0451	0.9821	1.0222	1.0175	1.0093	2	AVG
Acrylonitrile	0.1469	0.1480	0.1588	0.1591	0.1521	0.1474	0.1518	0.1520	3	AVG
trans-1,2-Dichloroethene	#0.2340	0.2526	0.2491	0.2486	0.2501	0.2467	0.2517	0.2475	3	AVG #
Methyl Tertiary Butyl Ether	#0.6899	0.7176	0.7259	0.7729	0.7641	0.7564	0.7387	0.7379	4	AVG #
n-Hexane	0.2488	0.2975	0.3616	0.3141	0.4006	0.3755	0.4285	0.3467	18	AVG
1,1-Dichloroethane	#0.3917	0.4392	0.4377	0.4425	0.4471	0.4408	0.4399	0.4342	4	AVG #
di-Isopropyl ether	0.6250	0.7167	0.7581	0.8043	0.8200	0.8181	0.8027	0.7635	9	AVG
2-Chloro-1,3-butadiene	0.2504	0.3270	0.3433	0.3538	0.3803	0.3769	0.3919	0.3462	14	AVG
Ethyl t-butyl ether	0.5831	0.6749	0.7049	0.7549	0.7669	0.7555	0.7257	0.7094	9	AVG
cis-1,2-Dichloroethene	#0.2571	0.2721	0.2797	0.2848	0.2857	0.2816	0.2821	0.2776	4	AVG #
2-Butanone	#0.1740	0.1778	0.1902	0.1929	0.1856	0.1830	0.1882	0.1845	4	AVG #
2,2-Dichloropropane	0.2884	0.3383	0.3276	0.3395	0.3534	0.3473	0.3544	0.3355	7	AVG
Propionitrile	1.2708	1.3533	1.3265	1.3974	1.3327	1.4224	1.4415	1.3635	4	AVG
Methacrylonitrile	0.1325	0.1512	0.1492	0.1614	0.1576	0.1581	0.1568	0.1524	6	AVG
Bromochloromethane	0.1268	0.1457	0.1435	0.1473	0.1449	0.1483	0.1461	0.1432	5	AVG
Tetrahydrofuran	1.0939	1.2175	1.2309	1.2069	1.1339	1.2158	1.2522	1.1930	5	AVG
Chloroform	#0.3949	0.4255	0.4186	0.4310	0.4353	0.4288	0.4350	0.4241	3	AVG #
1,1,1-Trichloroethane	#0.3205	0.3731	0.3563	0.3608	0.3789	0.3703	0.3873	0.3639	6	AVG #
Cyclohexane	#0.2724	0.3861	0.4199	0.3788	0.4671	0.4459	0.4812	0.4073	17	AVG #
Cyclohexane (2)	#0.2623	0.3387	0.3613	0.3246	0.3996	0.3831	0.4193	0.3555	15	AVG #
Cyclohexane (3)	#0.0911	0.1232	0.1295	0.1156	0.1414	0.1371	0.1483	0.1266	15	AVG #
1,1-Dichloropropene	0.2663	0.3431	0.3356	0.3313	0.3539	0.3450	0.3597	0.3336	9	AVG
Carbon Tetrachloride	#0.2381	0.3157	0.3037	0.2960	0.3275	0.3180	0.3351	0.3049	11	AVG #
Isobutyl Alcohol	0.3260	0.3424	0.3330	0.3489	0.3302	0.3507	0.3655	0.3424	4	AVG
Benzene	#0.9337	1.0554	1.0404	1.0552	1.0612	1.0432	1.0391	1.0326	4	AVG #
1,2-Dichloroethane	#0.3641	0.3511	0.3344	0.3464	0.3428	0.3380	0.3462	0.3461	3	AVG #
1,2-Dichloroethane (2)	#0.0281	0.0355	0.0337	0.0352	0.0346	0.0342	0.0349	0.0337	8	AVG #<-
t-Amyl methyl ether	0.6250	0.6922	0.7120	0.7698	0.7825	0.7707	0.7211	0.7247	8	AVG
n-Heptane	0.2919	0.2979	0.3961	0.3092	0.4230	0.3738	0.4314	0.3605	17	AVG
n-Butanol	0.2186	0.2666	0.2596	0.2947	0.2827	0.3159	0.3160	0.2792	12	AVG

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: HP09915 Calibration Date(s): 05/04/20 05/04/20

Heated Purge: (Y/N) Y Calibration Times: 12:18 14:30

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID:	RRF 1 = 1y04i07.d	RRF 4 = 1y04i06.d	RRF 10= 1y04i05.d	RRF 20= 1y04i04.d	RRF 50= 1y04i03.d	RRF100= 1y04i02.d	RRF300= 1y04i01.d		%	CAL.
COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	RSD	METHOD
Trichloroethene	#0.2314	0.2738	0.2568	0.2636	0.2685	0.2638	0.2713	0.2613	5	AVG #
Methylcyclohexane	#0.2885	0.3775	0.4342	0.4256	0.4691	0.4913	0.4880	0.4249	17	AVG #
Methylcyclohexane(2)	#0.1299	0.1713	0.1982	0.1902	0.2105	0.2220	0.2232	0.1922	17	AVG #
1,2-Dichloropropane	#0.2481	0.2664	0.2633	0.2760	0.2761	0.2709	0.2616	0.2661	4	AVG #
Dibromomethane	0.1562	0.1741	0.1704	0.1795	0.1796	0.1784	0.1799	0.1740	5	AVG
1,4-Dioxane	0.0712	0.0836	0.0835	0.0860	0.0869	0.0895	0.0867	0.0839	7	AVG
Methyl Methacrylate	0.1827	0.2123	0.2140	0.2362	0.2458	0.2529	0.2576	0.2288	12	AVG
Bromodichloromethane	#0.2641	0.2941	0.2982	0.3169	0.3295	0.3343	0.3465	0.3119	9	AVG #
2-Nitropropane	0.0743	0.0857	0.0951	0.0979	0.0980	0.0986	0.1052	0.0935	11	AVG
2-Chloroethyl Vinyl Ether	0.1183	0.1448	0.1627	0.1947	0.1994	0.2086	0.2116	0.1771	20	AVG
cis-1,3-Dichloropropene	#0.3089	0.3747	0.3951	0.4279	0.4420	0.4496	0.4555	0.4077	13	AVG #
4-Methyl-2-pentanone	#0.2810	0.3388	0.4261	0.4030	0.3910	0.3859	0.3899	0.3737	13	AVG #
Toluene	#0.7145	0.8626	0.8222	0.8465	0.8374	0.8251	0.8229	0.8187	6	AVG #
trans-1,3-Dichloropropene	#0.3772	0.4265	0.4447	0.4869	0.5027	0.5193	0.5309	0.4697	12	AVG #
Ethyl Methacrylate	0.3211	0.3977	0.4423	0.5102	0.5309	0.5517	0.5549	0.4727	19	AVG
1,1,2-Trichloroethane	#0.2982	0.3188	0.3085	0.3275	0.3213	0.3234	0.3261	0.3177	3	AVG #
Tetrachloroethene	#0.2723	0.3673	0.3559	0.3466	0.3684	0.3573	0.3745	0.3489	10	AVG #
1,3-Dichloropropane	0.4791	0.5230	0.5157	0.5502	0.5434	0.5534	0.5541	0.5313	5	AVG
2-Hexanone	#0.2485	0.3013	0.4213	0.3640	0.3525	0.3516	0.3639	0.3433	16	AVG #
Dibromochloromethane	#0.2440	0.3047	0.3124	0.3453	0.3551	0.3686	0.3831	0.3305	14	AVG #
1,2-Dibromoethane	#0.2855	0.3244	0.3336	0.3554	0.3560	0.3632	0.3719	0.3414	9	AVG #
1-Chlorohexane	0.3851	0.3832	0.4200	0.4024	0.4558	0.4290	0.4575	0.4190	7	AVG
Chlorobenzene	#0.8366	0.9889	0.9494	0.9763	0.9558	0.9470	0.9273	0.9402	5	AVG #
1,1,1,2-Tetrachloroethane	0.2628	0.3249	0.3142	0.3374	0.3359	0.3349	0.3210	0.3187	8	AVG
Ethylbenzene	#1.1980	1.5354	1.5535	1.5949	1.6192	1.5836	1.5237	1.5155	10	AVG #
m+p-Xylene	#0.4460	0.6043	0.6194	0.6385	0.6437	0.6277	0.5885	0.5954	12	AVG #
o-Xylene	#0.4117	0.5682	0.6009	0.6270	0.6275	0.6156	0.5799	0.5758	13	AVG #
Styrene	#0.6016	0.8862	0.9556	1.0324	1.0459	1.0431	0.9904	0.9365	17	AVG #
Bromoform	#0.1799	0.2110	0.2189	0.2495	0.2599	0.2759	0.2890	0.2406	16	AVG #
Isopropylbenzene	#0.9358	1.3619	1.5410	1.5672	1.6596	1.5754	1.5876	1.4612	17	AVG #
Cyclohexanone	0.2577	0.3055	0.3001	0.3389	0.3302	0.3416	0.3126	0.3124	9	AVG
Bromobenzene	0.6587	0.7746	0.7359	0.7664	0.7519	0.7500	0.6841	0.7317	6	AVG
1,1,2,2-Tetrachloroethane	#0.8524	0.9494	0.8835	0.9572	0.9208	0.9383	0.8790	0.9115	4	AVG #
1,2,3-Trichloropropane	0.2443	0.2882	0.2764	0.2890	0.2829	0.2899	0.2781	0.2784	6	AVG
trans-1,4-Dichloro-2-butene	0.2199	0.2612	0.2636	0.2848	0.2749	0.2847	0.2669	0.2652	8	AVG
n-Propylbenzene	2.4687	3.0300	3.3092	3.3293	3.4486	3.2920	3.2581	3.1622	10	AVG
2-Chlorotoluene	0.5357	0.6720	0.6927	0.7089	0.7183	0.7016	0.6998	0.6756	9	AVG
4-Chlorotoluene	0.5634	0.6918	0.7282	0.7444	0.7361	0.7276	0.7169	0.7012	9	AVG
1,3,5-Trimethylbenzene	1.5451	2.0898	2.4017	2.4957	2.5571	2.4536	2.4519	2.2850	16	AVG
tert-Butylbenzene	0.3304	0.4041	0.4839	0.4974	0.5371	0.5101	0.5247	0.4697	16	AVG
Pentachloroethane	0.3408	0.3819	0.4075	0.4439	0.4444	0.4739	0.4277	0.4171	11	AVG
1,2,4-Trimethylbenzene	1.5205	2.1963	2.5099	2.6437	2.6613	2.5628	2.4430	2.3625	17	AVG
sec-Butylbenzene	1.7497	2.4116	3.0315	2.9653	3.2861	3.0004	3.0298	2.7821	19	AVG
1,3-Dichlorobenzene	#1.1765	1.3970	1.4310	1.4819	1.4327	1.3931	1.2318	1.3634	8	AVG #
p-Isopropyltoluene	1.4601	2.0907	2.5969	2.6277	2.8513	2.5939	2.4662	2.3838	20	AVG
1,4-Dichlorobenzene	#1.2907	1.4922	1.4894	1.5270	1.4774	1.4358	1.3041	1.4309	7	AVG #
1,2,3-Trimethylbenzene	2.0761	2.3800	2.5083	2.6252	2.5574	2.6533	2.3826	2.4547	8	AVG
Benzyl Chloride	1.3247	1.7290	1.7424	2.0110	2.0302	2.1027	2.0613	1.8573	15	AVG
1,3-Diethylbenzene	1.1591	1.4712	1.5631	1.6678	1.6283	1.6909	1.5713	1.5359	12	AVG
1,4-Diethylbenzene	1.1634	1.5982	1.6598	1.7486	1.7167	1.7645	1.6027	1.6077	13	AVG
1,2-Dichlorobenzene	#1.2166	1.4364	1.4175	1.4718	1.4157	1.3811	1.2672	1.3723	7	AVG #
n-Butylbenzene	0.8915	1.0844	1.3461	1.2989	1.4058	1.2740	1.2726	1.2248	14	AVG

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

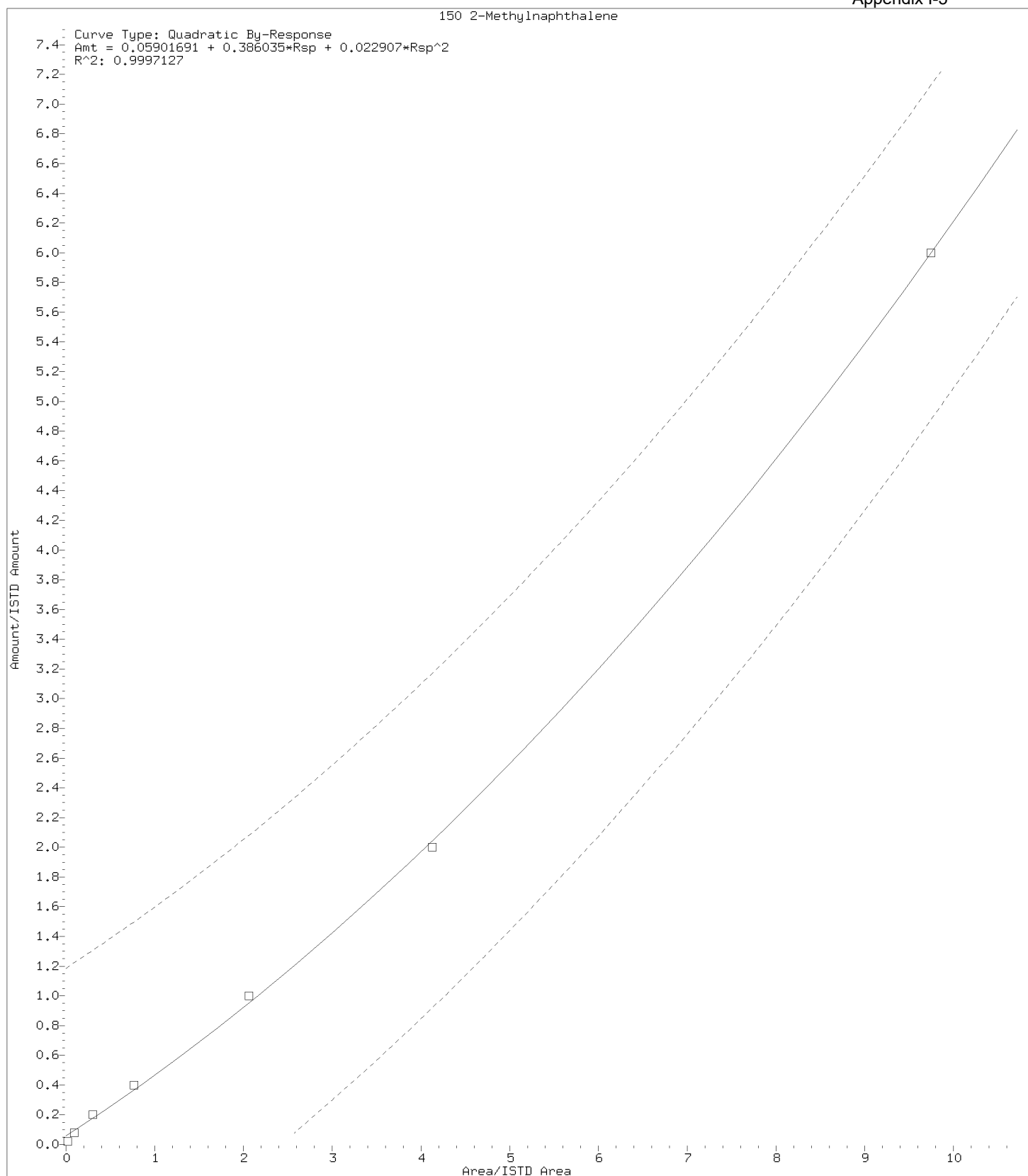
Instrument ID: HP09915 Calibration Date(s): 05/04/20 05/04/20

Heated Purge: (Y/N) Y Calibration Times: 12:18 14:30

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID:		RRF 1 = ly04i07.d		RRF 4 = ly04i06.d		RRF 10= ly04i05.d					
RRF 20= ly04i04.d		RRF 50= ly04i03.d		RRF100= ly04i02.d		RRF300= ly04i01.d					
COMPOUND		RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
=====		=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
1,2-Diethylbenzene		1.0295	1.2919	1.3577	1.4248	1.3730	1.4224	1.2789	1.3112	10	AVG
1,2-Dibromo-3-chloropropane#		0.1650	0.1952	0.1877	0.2082	0.2117	0.2210	0.2234	0.2017	10	AVG
1,3,5-Trichlorobenzene		0.9105	0.9328	1.0642	1.1130	1.1344	1.0562	1.0255	1.0338	8	AVG
1,2,4-Trichlorobenzene		#0.8186	0.8601	0.9774	1.0647	1.0739	1.0166	0.9515	0.9661	10	AVG
Hexachlorobutadiene		0.4642	0.3762	0.4840	0.4490	0.4958	0.4333	0.4173	0.4457	9	AVG
Naphthalene		2.1271	2.7842	3.1577	3.6036	3.5783	3.5111	3.1283	3.1272	17	AVG
1,2,3-Trichlorobenzene		0.8188	0.9091	0.9941	1.0776	1.0567	0.9828	0.8808	0.9600	10	AVG
2-Methylnaphthalene		0.9957	1.1581	1.5261	1.9196	2.0622	2.0644	1.6238	1.6214	26	2NDEG
=====		=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
Dibromofluoromethane		0.2505	0.2508	0.2465	0.2524	0.2528	0.2526	0.2576	0.2519	1	AVG
Dibromofluoromethane (2)		0.2560	0.2558	0.2540	0.2570	0.2584	0.2581	0.2631	0.2575	1	AVG
1,2-Dichloroethane-d4		0.0639	0.0649	0.0632	0.0643	0.0637	0.0634	0.0641	0.0639	1	AVG
1,2-Dichloroethane-d4 (2)		0.2831	0.2821	0.2786	0.2841	0.2859	0.2832	0.2889	0.2837	1	AVG
1,2-Dichloroethane-d4 (3)		0.0411	0.0407	0.0405	0.0403	0.0412	0.0403	0.0409	0.0407	1	AVG
Toluene-d8		1.2649	1.2749	1.2826	1.2779	1.2796	1.2921	1.3194	1.2845	1	AVG
Toluene-d8 (2)		0.8203	0.8238	0.8322	0.8288	0.8303	0.8382	0.8615	0.8336	2	AVG
4-Bromofluorobenzene		0.4907	0.4958	0.4937	0.4907	0.4880	0.4920	0.5088	0.4942	1	AVG
4-Bromofluorobenzene (2)		0.4227	0.4258	0.4239	0.4223	0.4176	0.4192	0.4346	0.4237	1	AVG
=====		=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
Average %RSD		9									

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.



Digitally signed by Don V. Viray on 05/06/2020 at 08:01.
Target 3.5 esignature user ID: dvv10203

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP09915.i/20may04i.b/ly04i01.d	VSTD300
/chem/HP09915.i/20may04i.b/ly04i02.d	VSTD100
/chem/HP09915.i/20may04i.b/ly04i03.d	VSTD050
/chem/HP09915.i/20may04i.b/ly04i04.d	VSTD020
/chem/HP09915.i/20may04i.b/ly04i05.d	VSTD010
/chem/HP09915.i/20may04i.b/ly04i06.d	VSTD004
/chem/HP09915.i/20may04i.b/ly04i07.d	VSTD001

Area Summary

File ID:

=====

Internal Standard Name	ly04i01.d	ly04i02.d	ly04i03.d	ly04i04.d	ly04i05.d	ly04i06.d	ly04i07.d	Avg. Area	%RSD	In Spec
t-Butyl alcohol-d10	276925	272479	302938	286065	282164	285792	294363	285818	4	Yes
Fluorobenzene	1336369	1305159	1335958	1286965	1307193	1299562	1305845	1311007	1	Yes
Chlorobenzene-d5	1059501	1042614	1078517	1031952	1036265	1041559	1044326	1047819	2	Yes
1,4-Dichlorobenzene-d4	596140	579781	608929	580388	588728	598089	599351	593058	2	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

=====

Internal Standard Name	ly04i01.d	ly04i02.d	ly04i03.d	ly04i04.d	ly04i05.d	ly04i06.d	ly04i07.d	Avg. RT
t-Butyl alcohol-d10	4.493	4.490	4.487	4.500	4.480	4.490	4.487	4.489
Fluorobenzene	7.956	7.950	7.950	7.950	7.946	7.950	7.949	7.950
Chlorobenzene-d5	11.355	11.351	11.355	11.352	11.351	11.351	11.351	11.352
1,4-Dichlorobenzene-d4	13.220	13.216	13.216	13.216	13.216	13.216	13.216	13.217

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 05/04/2020 at 20:24.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP09915 ICV Date: 05/04/20 Time: 14:52
 Lab File ID: ly04v01.d Init. Calib. Date(s): 05/04/20 05/04/20
 Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT
# Dichlorodifluoromethane	0.3429	0.3214	18.75	20	-6 #
# Chloromethane	0.3201	0.3356	20.96	20	5 #
1,3-Butadiene	0.2054	0.2400	23.37	20	17
# Vinyl Chloride	0.3089	0.3258	21.09	20	5 #
# Bromomethane	0.2227	0.2138	19.20	20	-4 #
# Chloroethane	0.1725	0.1685	19.54	20	-2 #
Dichlorofluoromethane	0.3720	0.3467	18.64	20	-7
n-Pentane	0.3168	0.2920	18.44	20	-8
# Trichlorofluoromethane	0.3374	0.3815	22.62	20	13 #
Ethyl ether	0.2384	0.2427	20.36	20	2
Freon 123a	0.2733	0.2842	20.79	20	4
Acrolein	2.0567	1.9145	139.63	150	-7
# 1,1-Dichloroethene	0.2152	0.2238	20.81	20	4 #
# Acetone	0.9381	1.2084	193.20	150	29 #
# Freon 113	0.2232	0.2160	19.35	20	-3 #
2-Propanol	0.5979	0.5997	150.46	150	0
Methyl Iodide	0.4147	0.4128	19.91	20	0
# Carbon Disulfide	0.7245	0.7565	20.88	20	4 #
Allyl Chloride	0.3487	0.3386	19.42	20	-3
# Methyl Acetate	0.2744	0.2632	19.19	20	-4 #
# Methylene Chloride	0.2560	0.2627	20.53	20	3 #
t-Butyl alcohol	1.0093	1.0232	202.75	200	1
Acrylonitrile	0.1520	0.1437	94.53	100	-5
# trans-1,2-Dichloroethene	0.2475	0.2522	20.38	20	2 #
# Methyl Tertiary Butyl Ether	0.7379	0.7082	19.19	20	-4 #
n-Hexane	0.3467	0.3630	20.94	20	5
# 1,1-Dichloroethane	0.4342	0.4377	20.16	20	1 #
di-Isopropyl ether	0.7635	0.7617	19.95	20	0
2-Chloro-1,3-butadiene	0.3462	0.3545	20.48	20	2
Ethyl t-butyl ether	0.7094	0.7036	19.83	20	-1
# cis-1,2-Dichloroethene	0.2776	0.2992	21.56	20	8 #
# 2-Butanone	0.1845	0.2032	165.20	150	10 #
2,2-Dichloropropane	0.3355	0.3414	20.35	20	2
Propionitrile	1.3635	1.3708	150.80	150	1
Methacrylonitrile	0.1524	0.1558	153.33	150	2
Bromochloromethane	0.1432	0.1393	19.46	20	-3

Compounds with required minimum RRF.
 Maximum % Drift = 30 %

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FORM VII VOA

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP09915 ICV Date: 05/04/20 Time: 14:52
 Lab File ID: ly04v01.d Init. Calib. Date(s): 05/04/20 05/04/20
 Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT
Tetrahydrofuran	1.1930	1.1661	97.74	100	-2
# Chloroform	0.4241	0.4279	20.17	20	1
# 1,1,1-Trichloroethane	0.3639	0.3607	19.82	20	-1
# Cyclohexane	0.4073	0.4374	21.47	20	7
1,1-Dichloropropene	0.3336	0.3395	20.36	20	2
# Carbon Tetrachloride	0.3049	0.3112	20.41	20	2
Isobutyl Alcohol	0.3424	0.3394	495.65	500	-1
# Benzene	1.0326	1.0345	20.04	20	0
# 1,2-Dichloroethane	0.3461	0.3416	19.74	20	-1
t-Amyl methyl ether	0.7247	0.7311	20.18	20	1
n-Heptane	0.3605	0.3680	20.42	20	2
n-Butanol	0.2792	0.2785	997.61	1000	0
# Trichloroethene	0.2613	0.2612	19.99	20	0
# Methylcyclohexane	0.4249	0.4329	20.38	20	2
# 1,2-Dichloropropane	0.2661	0.2707	20.35	20	2
Dibromomethane	0.1740	0.1735	19.95	20	0
1,4-Dioxane	0.0839	0.0858	511.19	500	2
Methyl Methacrylate	0.2288	0.2242	19.60	20	-2
# Bromodichloromethane	0.3119	0.3091	19.82	20	-1
2-Nitropropane	0.0935	0.0827	17.68	20	-12
2-Chloroethyl Vinyl Ether	0.1771	0.1812	20.46	20	2
# cis-1,3-Dichloropropene	0.4077	0.4095	20.09	20	0
# 4-Methyl-2-pentanone	0.3737	0.3719	99.52	100	0
# Toluene	0.8187	0.8182	19.99	20	0
# trans-1,3-Dichloropropene	0.4697	0.4640	19.75	20	-1
Ethyl Methacrylate	0.4727	0.4884	20.67	20	3
# 1,1,2-Trichloroethane	0.3177	0.3265	20.55	20	3
# Tetrachloroethene	0.3489	0.3623	20.77	20	4
1,3-Dichloropropane	0.5313	0.5263	19.81	20	-1
# 2-Hexanone	0.3433	0.3688	107.42	100	7
# Dibromochloromethane	0.3305	0.3353	20.29	20	1
# 1,2-Dibromoethane	0.3414	0.3377	19.78	20	-1
1-Chlorohexane	0.4190	0.4185	19.98	20	0
# Chlorobenzene	0.9402	0.9522	20.25	20	1
1,1,1,2-Tetrachloroethane	0.3187	0.3157	19.81	20	-1
# Ethylbenzene	1.5155	1.5683	20.70	20	3

Compounds with required minimum RRF.
 Maximum % Drift = 30 %

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FORM VII VOA

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP09915 ICV Date: 05/04/20 Time: 14:52
 Lab File ID: ly04v01.d Init. Calib. Date(s): 05/04/20 05/04/20
 Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT
# m+p-Xylene	0.5954	0.6363	42.74	40	7 #
# o-Xylene	0.5758	0.6111	21.22	20	6 #
# Styrene	0.9365	1.0037	21.44	20	7 #
# Bromoform	0.2406	0.2327	19.35	20	-3 #
# Isopropylbenzene	1.4612	1.5847	21.69	20	8 #
# Cyclohexanone	0.3124	0.3038	486.31	500	-3
# Bromobenzene	0.7317	0.7299	19.95	20	0
# 1,1,2,2-Tetrachloroethane	0.9115	0.8947	19.63	20	-2 #
# 1,2,3-Trichloropropane	0.2784	0.2733	19.63	20	-2
# trans-1,4-Dichloro-2-butene	0.2652	0.2704	101.96	100	2
# n-Propylbenzene	3.1622	3.3324	21.08	20	5
# 2-Chlorotoluene	0.6756	0.6871	20.34	20	2
# 4-Chlorotoluene	0.7012	0.7093	20.23	20	1
# 1,3,5-Trimethylbenzene	2.2850	2.4203	21.18	20	6
# tert-Butylbenzene	0.4697	0.4987	21.23	20	6
# Pentachloroethane	0.4171	0.4280	20.52	20	3
# 1,2,4-Trimethylbenzene	2.3625	2.4992	21.16	20	6
# sec-Butylbenzene	2.7821	3.0192	21.70	20	9
# 1,3-Dichlorobenzene	1.3634	1.4139	20.74	20	4 #
# p-Isopropyltoluene	2.3838	2.6505	22.24	20	11
# 1,4-Dichlorobenzene	1.4309	1.4574	20.37	20	2 #
# 1,2,3-Trimethylbenzene	2.4547	2.6124	21.28	20	6
# Benzyl Chloride	1.8573	1.8061	19.45	20	-3
# 1,3-Diethylbenzene	1.5359	1.6082	20.94	20	5
# 1,4-Diethylbenzene	1.6077	1.6862	20.98	20	5
# 1,2-Dichlorobenzene	1.3723	1.3876	20.22	20	1 #
# n-Butylbenzene	1.2248	1.2895	21.06	20	5
# 1,2-Diethylbenzene	1.3112	1.3708	20.91	20	5
# 1,2-Dibromo-3-chloropropane	0.2017	0.1875	18.58	20	-7 #
# 1,3,5-Trichlorobenzene	1.0338	1.0450	20.22	20	1
# 1,2,4-Trichlorobenzene	0.9661	0.9908	20.51	20	3 #
# Hexachlorobutadiene	0.4457	0.4238	19.02	20	-5
# Naphthalene	3.1272	3.2483	20.77	20	4
# 1,2,3-Trichlorobenzene	0.9600	0.9906	20.64	20	3
# 2-Methylnaphthalene	1.6214	1.6341	16.06	20	-20

Average %Drift 4

Compounds with required minimum RRF.
 Maximum % Drift = 30 %

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FORM VII VOA

Lancaster Laboratories

Continuing Calibration Internal Standard Check

Initial Calibration Standards:

```

/chem/HP09915.i/20may04i.b/ly04i07.d
/chem/HP09915.i/20may04i.b/ly04i06.d
/chem/HP09915.i/20may04i.b/ly04i05.d
/chem/HP09915.i/20may04i.b/ly04i04.d
/chem/HP09915.i/20may04i.b/ly04i03.d
/chem/HP09915.i/20may04i.b/ly04i02.d
/chem/HP09915.i/20may04i.b/ly04i01.d

```

File /chem/HP09915.i/20may04i.b/ly04i03.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

```

/chem/HP09915.i/20may20a.b/ly20c01.d

```

RT Summary

File ID:

=====

Internal Standard Name	ly20c01.d	ICAL RT	In Spec
t-Butyl alcohol-d10	4.496	4.487	Yes
Fluorobenzene	7.950	7.950	Yes
Chlorobenzene-d5	11.351	11.355	Yes
1,4-Dichlorobenzene-d4	13.216	13.216	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

File ID:

=====

Internal Standard Name	ly20c01.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl alcohol-d10	296875	302938	151469	605876	Yes
Fluorobenzene	1452026	1335958	667979	2671916	Yes
Chlorobenzene-d5	1116656	1078517	539258	2157034	Yes
1,4-Dichlorobenzene-d4	593044	608929	304464	1217858	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments:

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report generated on 05/20/2020 at 08:53

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: HP09915 Calibration Date: 05/20/20 Time: 08:26

Lab File ID: ly20c01.d Init. Calib. Date(s): 05/04/20 05/04/20

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
# Dichlorodifluoromethane	0.3429	0.3045	44.40	50	-11 #
# Chloromethane	0.3201	0.3078	48.07	50	-4 #
1,3-Butadiene	0.2054	0.2806	68.31	50	37 <-
# Vinyl Chloride	0.3089	0.2888	46.74	50	-7 #
# Bromomethane	0.2227	0.2008	45.07	50	-10 #
# Chloroethane	0.1725	0.1593	46.19	50	-8 #
Dichlorofluoromethane	0.3720	0.3508	47.14	50	-6
n-Pentane	0.3168	0.4321	68.21	50	36 <-
# Trichlorofluoromethane	0.3374	0.3083	45.69	50	-9 #
Ethyl ether	0.2384	0.1951	40.91	50	-18
Freon 123a	0.2733	0.2770	50.67	50	1
Acrolein	2.0567	2.1232	516.16	500	3
# 1,1-Dichloroethene	0.2152	0.2095	48.68	50	-3 #
# 1,1-Dichloroethene(2)	0.1025	0.1080	52.68	50	5 #
# Acetone	0.9381	0.9205	98.12	100	-2 #
# Freon 113	0.2232	0.2321	51.99	50	4 #
2-Propanol	0.5979	0.6631	277.23	250	11
Methyl Iodide	0.4147	0.3961	47.76	50	-4
# Carbon Disulfide	0.7245	0.7571	52.25	50	5 #
Allyl Chloride	0.3487	0.3597	51.58	50	3
# Methyl Acetate	0.2744	0.2763	50.35	50	1 #
# Methylene Chloride	0.2560	0.2526	49.33	50	-1 #
t-Butyl alcohol	1.0093	1.0469	259.32	250	4
Acrylonitrile	0.1520	0.1468	48.29	50	-3
# trans-1,2-Dichloroethene	0.2475	0.2424	48.95	50	-2 #
# Methyl Tertiary Butyl Ether	0.7379	0.6882	46.63	50	-7 #
n-Hexane	0.3467	0.3634	52.42	50	5
# 1,1-Dichloroethane	0.4342	0.4238	48.81	50	-2 #
di-Isopropyl ether	0.7635	0.7894	51.69	50	3
2-Chloro-1,3-butadiene	0.3462	0.3652	52.73	50	5
Ethyl t-butyl ether	0.7094	0.6833	48.16	50	-4
# cis-1,2-Dichloroethene	0.2776	0.2742	49.38	50	-1 #
# 2-Butanone	0.1845	0.1904	103.21	100	3 #
2,2-Dichloropropane	0.3355	0.3462	51.59	50	3
Propionitrile	1.3635	1.5706	287.97	250	15
Methacrylonitrile	0.1524	0.1618	132.74	125	6

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

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7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: HP09915 Calibration Date: 05/20/20 Time: 08:26

Lab File ID: ly20c01.d Init. Calib. Date(s): 05/04/20 05/04/20

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
=====	=====	=====	=====	=====	=====
Bromochloromethane	0.1432	0.1430	49.90	50	0
Tetrahydrofuran	1.1930	1.2131	101.68	100	2
# Chloroform	0.4241	0.4180	49.28	50	-1 #
# 1,1,1-Trichloroethane	0.3639	0.3591	49.35	50	-1 #
# Cyclohexane	0.4073	0.4300	52.78	50	6 #
# Cyclohexane(2)	0.3555	0.3566	50.15	50	0 #
# Cyclohexane(3)	0.1266	0.1279	50.54	50	1 #
1,1-Dichloropropene	0.3336	0.3276	49.11	50	-2
# Carbon Tetrachloride	0.3049	0.3104	50.91	50	2 #
Isobutyl Alcohol	0.3424	0.4293	783.75	625	25 <-
# Benzene	1.0326	1.0109	48.95	50	-2 #
# 1,2-Dichloroethane	0.3461	0.3408	49.23	50	-2 #
# 1,2-Dichloroethane(2)	0.0337	0.0325	48.25	50	-4 #<-
t-Amyl methyl ether	0.7247	0.6905	47.63	50	-5
n-Heptane	0.3605	0.4125	57.22	50	14
n-Butanol	0.2792	0.3540	1585.08	1250	27 <-
# Trichloroethene	0.2613	0.2593	49.61	50	-1 #
# Methylcyclohexane	0.4249	0.4369	51.41	50	3 #
# Methylcyclohexane(2)	0.1922	0.1979	51.50	50	3 #
# 1,2-Dichloropropane	0.2661	0.2726	51.24	50	2 #
Dibromomethane	0.1740	0.1758	50.52	50	1
1,4-Dioxane	0.0839	0.1132	842.69	625	35 <-
Methyl Methacrylate	0.2288	0.2334	51.01	50	2
# Bromodichloromethane	0.3119	0.3223	51.66	50	3 #
2-Nitropropane	0.0935	0.1064	113.72	100	14
2-Chloroethyl Vinyl Ether	0.1771	0.1883	53.15	50	6
# cis-1,3-Dichloropropene	0.4077	0.4181	51.28	50	3 #
# 4-Methyl-2-pentanone	0.3737	0.4309	115.30	100	15 #
# Toluene	0.8187	0.8440	51.54	50	3 #
# trans-1,3-Dichloropropene	0.4697	0.5197	55.32	50	11 #
Ethyl Methacrylate	0.4727	0.5348	56.57	50	13
# 1,1,2-Trichloroethane	0.3177	0.3302	51.97	50	4 #
# Tetrachloroethene	0.3489	0.3523	50.48	50	1 #
1,3-Dichloropropane	0.5313	0.5680	53.46	50	7
# 2-Hexanone	0.3433	0.4226	123.10	100	23 #<-
# Dibromochloromethane	0.3305	0.3628	54.89	50	10 #

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: HP09915 Calibration Date: 05/20/20 Time: 08:26

Lab File ID: ly20c01.d Init. Calib. Date(s): 05/04/20 05/04/20

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
# 1,2-Dibromoethane	0.3414	0.3558	52.11	50	4 #
1-Chlorohexane	0.4190	0.4422	52.77	50	6
# Chlorobenzene	0.9402	0.9934	52.83	50	6 #
1,1,1,2-Tetrachloroethane	0.3187	0.3532	55.40	50	11
# Ethylbenzene	1.5155	1.6543	54.58	50	9 #
# m+p-Xylene	0.5954	0.6622	111.20	100	11 #
# o-Xylene	0.5758	0.6377	55.37	50	11 #
# Styrene	0.9365	1.0678	57.01	50	14 #
# Bromoform	0.2406	0.2714	56.42	50	13 #
# Isopropylbenzene	1.4612	1.5891	54.38	50	9 #
Cyclohexanone	0.3124	0.3481	696.47	625	11
Bromobenzene	0.7317	0.8100	55.36	50	11
# 1,1,2,2-Tetrachloroethane	0.9115	1.0788	59.18	50	18 #
1,2,3-Trichloropropane	0.2784	0.3295	59.18	50	18
trans-1,4-Dichloro-2-butene	0.2652	0.3232	152.38	125	22 <-
n-Propylbenzene	3.1622	3.6143	57.15	50	14
2-Chlorotoluene	0.6756	0.7452	55.15	50	10
4-Chlorotoluene	0.7012	0.7856	56.02	50	12
1,3,5-Trimethylbenzene	2.2850	2.6292	57.53	50	15
tert-Butylbenzene	0.4697	0.5343	56.88	50	14
Pentachloroethane	0.4171	0.4657	55.82	50	12
1,2,4-Trimethylbenzene	2.3625	2.7774	58.78	50	18
sec-Butylbenzene	2.7821	3.2786	58.92	50	18
# 1,3-Dichlorobenzene	1.3634	1.5333	56.23	50	12 #
p-Isopropyltoluene	2.3838	2.8839	60.49	50	21 <-
# 1,4-Dichlorobenzene	1.4309	1.5709	54.89	50	10 #
1,2,3-Trimethylbenzene	2.4547	2.6621	54.22	50	8
Benzyl Chloride	1.8573	2.2590	60.81	50	22 <-
1,3-Diethylbenzene	1.5359	1.6876	54.94	50	10
1,4-Diethylbenzene	1.6077	1.7664	54.94	50	10
# 1,2-Dichlorobenzene	1.3723	1.5728	57.30	50	15 #
n-Butylbenzene	1.2248	1.4565	59.46	50	19
1,2-Diethylbenzene	1.3112	1.4517	55.36	50	11
# 1,2-Dibromo-3-chloropropane	0.2017	0.2446	60.61	50	21 # <-
1,3,5-Trichlorobenzene	1.0338	1.1323	54.77	50	10
# 1,2,4-Trichlorobenzene	0.9661	1.1054	57.21	50	14 #

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: HP09915 Calibration Date: 05/20/20 Time: 08:26

Lab File ID: ly20c01.d Init. Calib. Date(s): 05/04/20 05/04/20

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
Hexachlorobutadiene	0.4457	0.4463	50.07	50	0
Naphthalene	3.1272	3.9108	62.53	50	25
1,2,3-Trichlorobenzene	0.9600	1.1215	58.41	50	17
2-Methylnaphthalene	1.6214	1.9250	44.35	50	-11
Dibromofluoromethane	0.2519	0.2395	47.53	50	-5
Dibromofluoromethane(2)	0.2575	0.2455	47.68	50	-5
1,2-Dichloroethane-d4	0.0639	0.0608	47.59	50	-5
1,2-Dichloroethane-d4(2)	0.2837	0.2804	49.42	50	-1
1,2-Dichloroethane-d4(3)	0.0407	0.0377	46.36	50	-7
Toluene-d8	1.2845	1.2896	50.20	50	0
Toluene-d8(2)	0.8336	0.8326	49.94	50	0
4-Bromofluorobenzene	0.4942	0.4667	47.22	50	-6
4-Bromofluorobenzene(2)	0.4237	0.3905	46.08	50	-8

Average %Drift 9

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

Data File: /chem/HP09915.i/20may20a.b/ly20ec5.d
Report Date: 05/21/2020 01:10

Lancaster Laboratories, Inc.
Shift Ending Continuing Calibration Check Report

Instrument ID: HP09915.i Injection Date and Time: 20-MAY-2020 18:33
Client ID: SECC050 Initial Calibration Date(s): 24-FEB-2020 04-MAY-2020
Lab Sample ID: SECC050 Initial Calibration Time(s): 19:57 14:30
Sublist used: L201411.sub Method used: /chem/HP09915.i/20may20a.b/m8260c5.m

Target Compounds	ICAL Avg. RRF	SECC RRF	Min. RRF	% Diff.	Max. %Diff.
Dichlorodifluoromethane	0.34288	0.32850	0.01	-4.2	50.0
Chloromethane	0.32013	0.33137	0.01	3.5	50.0
Vinyl Chloride	0.30893	0.31304	0.01	1.3	50.0
Bromomethane	0.22273	0.21319	0.01	-4.3	50.0
Chloroethane	0.17248	0.16994	0.01	-1.5	50.0
Trichlorofluoromethane	0.33740	0.33077	0.01	-2.0	50.0
1,1-Dichloroethene	0.21517	0.22222	0.01	3.3	50.0
Acetone	0.93815	1.16340	0.01	24.0	50.0
Freon 113	0.22324	0.24950	0.01	11.8	50.0
Carbon Disulfide	0.72449	0.80516	0.01	11.1	50.0
Methyl Acetate	0.27443	0.30301	0.01	10.4	50.0
Methylene Chloride	0.25596	0.26776	0.01	4.6	50.0
trans-1,2-Dichloroethene	0.24753	0.25530	0.01	3.1	50.0
Methyl Tertiary Butyl Ether	0.73794	0.70466	0.01	-4.5	50.0
1,1-Dichloroethane	0.43415	0.45969	0.01	5.9	50.0
cis-1,2-Dichloroethene	0.27759	0.28322	0.01	2.0	50.0
2-Butanone	0.18453	0.20376	0.01	10.4	50.0
Chloroform	0.42415	0.44336	0.01	4.5	50.0
1,1,1-Trichloroethane	0.36388	0.38661	0.01	6.2	50.0
Cyclohexane	0.40733	0.46866	0.01	15.1	50.0
Carbon Tetrachloride	0.30488	0.33890	0.01	11.2	50.0
Benzene	1.03260	1.09275	0.01	5.8	50.0
1,2-Dichloroethane	0.34614	0.36997	0.01	6.9	50.0
Trichloroethene	0.26131	0.26712	0.01	2.2	50.0
Methylcyclohexane	0.42489	0.48020	0.01	13.0	50.0
1,2-Dichloropropane	0.26605	0.29559	0.01	11.1	50.0
Bromodichloromethane	0.31194	0.33776	0.01	8.3	50.0
cis-1,3-Dichloropropene	0.40767	0.42838	0.01	5.1	50.0
4-Methyl-2-pentanone	0.37368	0.43740	0.01	17.0	50.0
Toluene	0.81873	0.90717	0.01	10.8	50.0
trans-1,3-Dichloropropene	0.46975	0.54498	0.01	16.0	50.0
1,1,2-Trichloroethane	0.31769	0.35615	0.01	12.1	50.0
Tetrachloroethene	0.34891	0.46083	0.01	32.1	50.0
2-Hexanone	0.34330	0.42644	0.01	24.2	50.0
Dibromochloromethane	0.33047	0.38060	0.01	15.2	50.0
1,2-Dibromoethane	0.34143	0.37165	0.01	8.9	50.0
Chlorobenzene	0.94020	1.02710	0.01	9.2	50.0
Ethylbenzene	1.51547	1.73248	0.01	14.3	50.0
m+p-Xylene	0.59545	0.68937	0.01	15.8	50.0
o-Xylene	0.57583	0.67793	0.01	17.7	50.0
Xylene (Total)	0.58891	0.68556	0.01	16.4	50.0
Styrene	0.93648	1.14305	0.01	22.1	50.0
Bromoform	0.24058	0.27828	0.01	15.7	50.0
Isopropylbenzene	1.46122	1.74512	0.01	19.4	50.0
1,1,2,2-Tetrachloroethane	0.91153	1.04790	0.01	15.0	50.0
1,3-Dichlorobenzene	1.36343	1.56153	0.01	14.5	50.0
1,4-Dichlorobenzene	1.43094	1.61239	0.01	12.7	50.0
1,2,3-Trimethylbenzene	2.45469	2.97540	0.01	21.2	50.0

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Data File: /chem/HP09915.i/20may20a.b/ly20ec5.d
 Report Date: 05/21/2020 01:10

Lancaster Laboratories, Inc.
 Shift Ending Continuing Calibration Check Report

Instrument ID: HP09915.i Injection Date and Time: 20-MAY-2020 18:33
 Client ID: SECC050 Initial Calibration Date(s): 24-FEB-2020 04-MAY-2020
 Lab Sample ID: SECC050 Initial Calibration Time(s): 19:57 14:30
 Sublist used: L201411.sub Method used: /chem/HP09915.i/20may20a.b/m8260c5.m

Target Compounds	ICAL Avg. RRF	SECC RRF	Min. RRF	% Diff.	Max. %Diff.
1,2-Dichlorobenzene	1.37232	1.54953	0.01	12.9	50.0
1,2-Dibromo-3-chloropropane	0.20175	0.23038	0.01	14.2	50.0
1,2,4-Trichlorobenzene	0.96609	0.99903	0.01	3.4	50.0
Naphthalene	3.12719	3.55866	0.01	13.8	50.0
Surrogate Standards	ICAL Avg. RRF	SECC RRF	Min. RRF	% Diff.	Max. %Diff.
Dibromofluoromethane	0.25189	0.24481	0.01	-2.8	50.0
1,2-Dichloroethane-d4	0.06392	0.06183	0.01	-3.3	50.0
Toluene-d8	1.28448	1.32182	0.01	2.9	50.0
4-Bromofluorobenzene	0.49423	0.49421	0.01	0.0	50.0

page 2

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____
 Lab File ID (Standard): ly20c01.d Date Analyzed: 05/20/20
 Instrument ID: HP09915 Time Analyzed: 08:26
 Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

		IS1 (TBA)	RT #	IS2 (FBZ)	RT #	IS3 (CBZ)	RT #	IS4 (DCB)	RT #
		AREA #		AREA #		AREA #		AREA #	
	12 HOUR STD	296875	4.496	1452026	7.950	1116656	11.351	593044	13.216
	UPPER LIMIT	593750	4.996	2904052	8.450	2233312	11.851	1186088	13.716
	LOWER LIMIT	148438	3.996	726013	7.450	558328	10.851	296522	12.716
	LAB SAMPLE ID								
01	LCSL84	285544	4.493	1409407	7.943	1032801	11.352	573846	13.216
02	VBLKL84	268298	4.500	1325260	7.950	1001110	11.351	525453	13.216
03	1312473	293715	4.493	1385871	7.946	1031877	11.351	560383	13.216
04	1313226	258609	4.490	1278322	7.950	968252	11.351	507357	13.216
05	1313227	242314	4.506	1257879	7.953	945526	11.351	503682	13.216
06	1312506	239392	4.490	1254212	7.950	928612	11.351	507187	13.216
07	1313198	236722	4.490	1272956	7.950	945787	11.351	517636	13.216
08	1313214	240871	4.490	1324502	7.949	1008056	11.351	538150	13.216
09	1313215	230676	4.506	1254072	7.953	927523	11.354	513489	13.216
10	1313216	223926	4.496	1246965	7.953	940101	11.351	513993	13.216
11	1313220	235453	4.496	1234319	7.950	922545	11.351	506227	13.216
12	1313221MS	261594	4.506	1368858	7.950	1009358	11.351	580298	13.216
13	1313222MSD	297359	4.500	1512087	7.950	1106126	11.351	648441	13.216
14	1313213	276232	4.506	1395749	7.950	1053977	11.351	558154	13.216
15	1313213MS	305972	4.496	1528301	7.950	1130877	11.351	647632	13.216
16	1312471	260005	4.493	1345658	7.946	995348	11.351	527036	13.216
17	1313224	262687	4.493	1358300	7.946	1007411	11.351	536545	13.216
18	1313225	250145	4.503	1310012	7.950	982545	11.351	525742	13.216
19	1313228	249778	4.506	1283019	7.946	923719	11.351	505909	13.216
20	1313229	248167	4.490	1283015	7.946	913389	11.351	511381	13.216
21	1313230	246149	4.490	1246784	7.946	930748	11.351	513768	13.216
22	1313231	241195	4.493	1265262	7.946	971747	11.351	515324	13.216

IS1 (TBA)=t-Butyl alcohol-d10
 IS2 (FBZ)=Fluorobenzene
 IS3 (CBZ)=Chlorobenzene-d5
 IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
 of internal standard area.
 LOWER LIMIT = - 50%
 of internal standard area.

Column used to flag values outside QC limits with an asterisk
 * Values outside of QC limits.

page 1 of 2

FORM VIII VOA

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____
 Lab File ID (Standard): ly20c01.d Date Analyzed: 05/20/20
 Instrument ID: HP09915 Time Analyzed: 08:26
 Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)	RT #	IS2(FBZ)	RT #	IS3(CBZ)	RT #	IS4(DCB)	RT #
	AREA #		AREA #		AREA #		AREA #	
=====	=====	=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	296875	4.496	1452026	7.950	1116656	11.351	593044	13.216
UPPER LIMIT	593750	4.996	2904052	8.450	2233312	11.851	1186088	13.716
LOWER LIMIT	148438	3.996	726013	7.450	558328	10.851	296522	12.716
=====	=====	=====	=====	=====	=====	=====	=====	=====
LAB SAMPLE								
ID								
=====	=====	=====	=====	=====	=====	=====	=====	=====
23 1312500	238357	4.493	1250495	7.950	934466	11.351	500226	13.216
24 SECC050	259684	4.493	1447269	7.950	1081152	11.351	617627	13.216

IS1 (TBA)=t-Butyl alcohol-d10
 IS2 (FBZ)=Fluorobenzene
 IS3 (CBZ)=Chlorobenzene-d5
 IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
 of internal standard area.
 LOWER LIMIT = - 50%
 of internal standard area.

Column used to flag values outside QC limits with an asterisk
 * Values outside of QC limits.

page 2 of 2

FORM VIII VOA

Sample Data

Volatiles by GC/MS

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12351

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1313220

Data file: /chem/HP09915.i/20may20a.b/ly20s10.d Injection date and time: 20-MAY-2020 13:48
 Data file Sample Info. Line: 12351;1313220;1;0;;KR446;DODWW;;ly20b01; Instrument ID: HP09915.i Batch: L201411AA
 Date, time and analyst ID of latest file update: 21-May-2020 01:03 ljg30941

Blank Data file reference: /chem/HP09915.i/20may20a.b/ly20b01.d

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m Sublist used: 17639
 Calibration date and time (Last Method Edit): 20-MAY-2020 09:17
 Mid Level Daily Calibration Standard Reference: /chem/HP09915.i/20may20a.b/ly20c01.d

Bottle Code: 038A Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.496 (0.000)	937	65	235453 (-21)	250.00	
66) Fluorobenzene	7.950 (0.000)	2011	96	1234319 (-15)	50.00	
100) Chlorobenzene-d5	11.351 (0.000)	3069	117	922545 (-17)	50.00	
131) 1,4-Dichlorobenzene-d4	13.216 (0.000)	3649	152	506227 (-15)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.069 (0.000)	113	318992	51.299	103%		80 - 119
57) 1,2-Dichloroethane-d4	(2)	7.522 (0.000)	102	79981	50.690	101%		81 - 118
83) Toluene-d8	(3)	9.924 (0.000)	98	1171599	49.435	99%		89 - 112
114) 4-Bromofluorobenzene	(3)	12.342 (0.000)	95	420863	46.152	92%		85 - 114

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Reporting Limit	LOQ
60) Benzene	(2)			Not Detected				0.2	1
88) Toluene	(3)			Not Detected				0.2	1
104) Ethylbenzene	(3)			Not Detected				0.4	1
106) m+p-Xylene	(3)			Not Detected				1	5
107) o-Xylene	(3)			Not Detected				0.4	1
108) Xylene (Total)	(3)			Not Detected				1	6

Total number of targets = 6

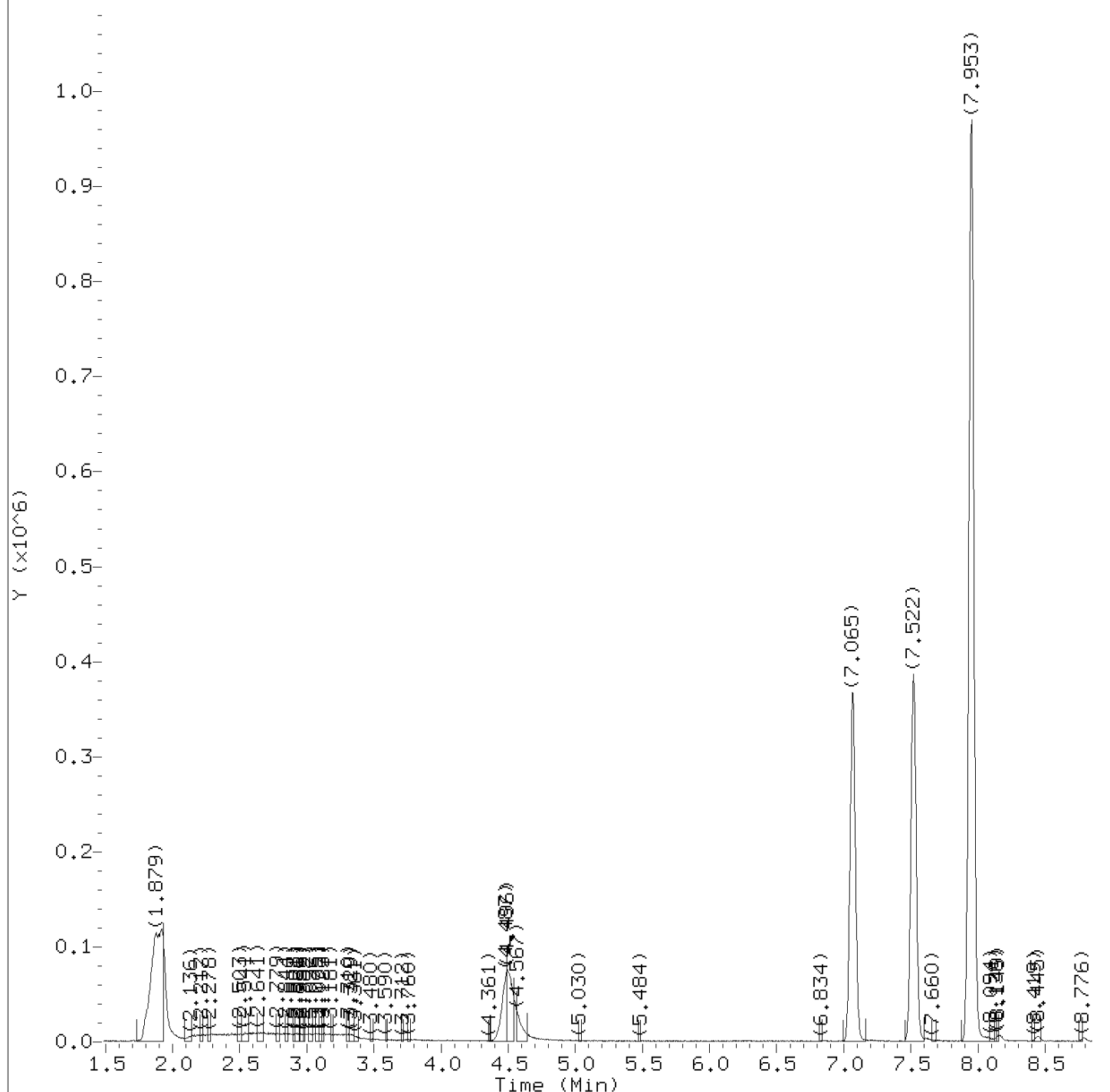
Digitally signed by Laura J. Green on 05/21/2020 at 01:04. Target 3.5 esignature user ID: ljg30941

Secondary review performed and digitally signed by Rachel Krueger on 05/21/2020 at 18:33. PARALLAX ID: rek30744

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page 1 of 1

/chem/HP09915.i/20may20a.b/ly20s10.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20may20a.b/ly20s10.d

Injection date and time: 20-MAY-2020 13:48

Instrument ID: HP09915.i

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m

Sublist used: 17639

Calibration date and time: 20-MAY-2020 09:17

Date, time and analyst ID of latest file update: 21-May-2020 01:03 ljg30941

Sample Name: 12351

Lab Sample ID: 1313220

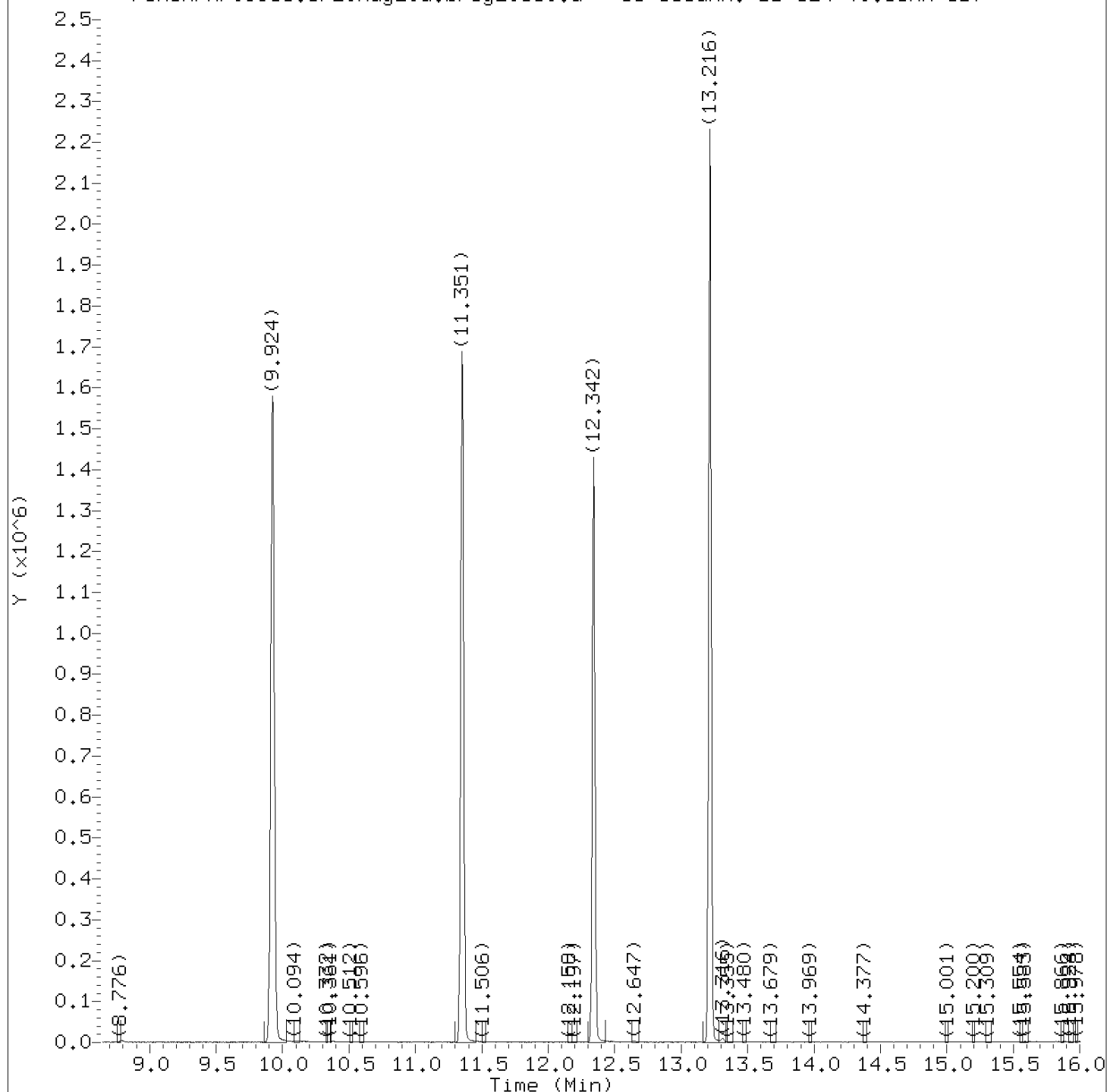
Digitally signed by Laura J. Green
on 05/21/2020 at 01:04.

Target 3.5 esignature user ID: ljg30941

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/chem/HP09915.i/20may20a.b/ly20s10.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20may20a.b/ly20s10.d
 Injection date and time: 20-MAY-2020 13:48

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m
 Calibration date and time: 20-MAY-2020 09:17

Sublist used: 17639

Date, time and analyst ID of latest file update: 21-May-2020 01:03 ljg30941

Sample Name: 12351

Lab Sample ID: 1313220

Digitally signed by Laura J. Green
 on 05/21/2020 at 01:04.

Target 3.5 esignature user ID: ljg30941

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may20a.b/ly20s10.d

Instrument ID: HP09915.i

Injection date and time: 20-MAY-2020 13:48

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m

Sublist used: 17639

Calibration date and time: 20-MAY-2020 09:17

Date, time and analyst ID of latest file update: 21-May-2020 01:03 ljg30941

Sample Name: 12351

Lab Sample ID: 1313220

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
29) *t-Butyl alcohol-d10	(1)	4.496	65	235453	250.000
52) \$Dibromofluoromethane	(2)	7.069	113	318992	51.299
57) \$1,2-Dichloroethane-d4	(2)	7.522	102	79981	50.690
66) *Fluorobenzene	(2)	7.950	96	1234319	50.000
83) \$Toluene-d8	(3)	9.924	98	1171599	49.435
100) *Chlorobenzene-d5	(3)	11.351	117	922545	50.000
114) \$4-Bromofluorobenzene	(3)	12.342	95	420863	46.152
131) *1,4-Dichlorobenzene-d4	(4)	13.216	152	506227	50.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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on 05/21/2020 at 01:04.

Target 3.5 esignature user ID: ljg30941

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12352

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1313224

Data file: /chem/HP09915.i/20may20a.b/ly20s16.d Injection date and time: 20-MAY-2020 15:59
 Data file Sample Info. Line: 12352;1313224;1;0;;KR446;DODWW;;ly20b01; Instrument ID: HP09915.i Batch: L201411AA
 Date, time and analyst ID of latest file update: 20-May-2020 16:17 Automation

Blank Data file reference: /chem/HP09915.i/20may20a.b/ly20b01.d

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m Sublist used: 17639
 Calibration date and time (Last Method Edit): 20-MAY-2020 09:17
 Mid Level Daily Calibration Standard Reference: /chem/HP09915.i/20may20a.b/ly20c01.d

Bottle Code: 038A Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.493 (0.003)	936	65	262687 (-12)	250.00	
66) Fluorobenzene	7.946 (0.003)	2010	96	1358300 (-6)	50.00	
100) Chlorobenzene-d5	11.351 (0.000)	3069	117	1007411 (-10)	50.00	
131) 1,4-Dichlorobenzene-d4	13.216 (0.000)	3649	152	536545 (-10)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.062 (0.000)	113	347353	50.761	102%		80 - 119
57) 1,2-Dichloroethane-d4	(2)	7.512 (0.000)	102	88796	51.140	102%		81 - 118
83) Toluene-d8	(3)	9.921 (0.001)	98	1297814	50.147	100%		89 - 112
114) 4-Bromofluorobenzene	(3)	12.338 (0.000)	95	456075	45.800	92%		85 - 114

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ
60) Benzene	(2)			Not Detected					0.2	1
88) Toluene	(3)			Not Detected					0.2	1
104) Ethylbenzene	(3)			Not Detected					0.4	1
106) m+p-Xylene	(3)			Not Detected					1	5
107) o-Xylene	(3)			Not Detected					0.4	1
108) Xylene (Total)	(3)			Not Detected					1	6

Total number of targets = 6

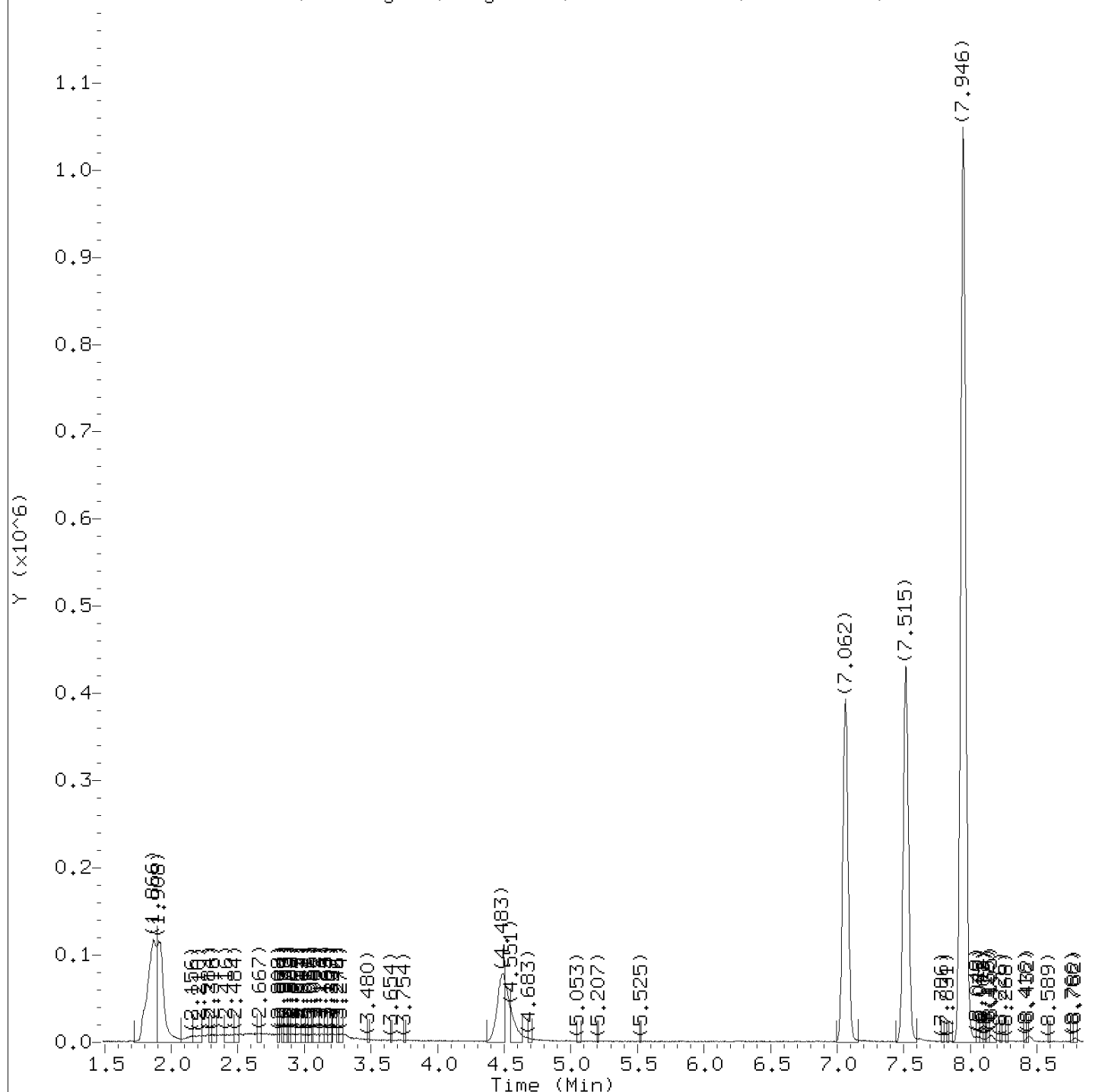
Digitally signed by Laura J. Green on 05/21/2020 at 01:09. Target 3.5 esignature user ID: ljg30941

Secondary review performed and digitally signed by Rachel Krueger on 05/21/2020 at 18:46. PARALLAX ID: rek30744

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/chem/HP09915.i/20may20a.b/ly20s16.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20may20a.b/ly20s16.d
 Injection date and time: 20-MAY-2020 15:59

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m
 Calibration date and time: 20-MAY-2020 09:17

Sublist used: 17639

Date, time and analyst ID of latest file update: 20-May-2020 16:17 Automation

Sample Name: 12352

Lab Sample ID: 1313224

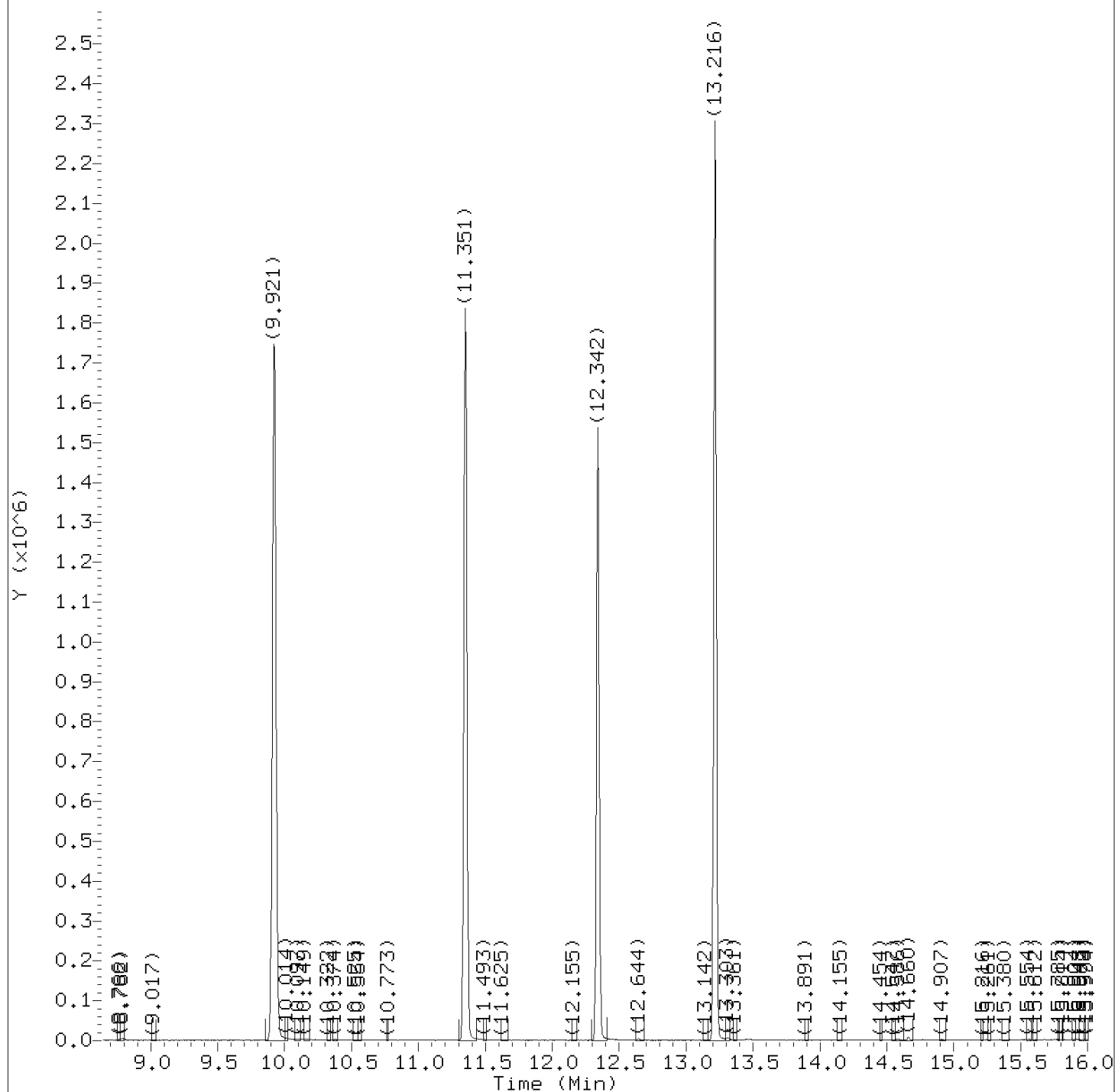
Digitally signed by Laura J. Green
 on 05/21/2020 at 01:09.

Target 3.5 esignature user ID: 13030941

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/chem/HP09915.i/20may20a.b/ly20s16.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20may20a.b/ly20s16.d
 Injection date and time: 20-MAY-2020 15:59

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m
 Calibration date and time: 20-MAY-2020 09:17

Sublist used: 17639

Date, time and analyst ID of latest file update: 20-May-2020 16:17 Automation

Sample Name: 12352

Lab Sample ID: 1313224

Digitally signed by Laura J. Green
 on 05/21/2020 at 01:09.

Target 3.5 esignature user ID: 11030941

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may20a.b/ly20s16.d

Instrument ID: HP09915.i

Injection date and time: 20-MAY-2020 15:59

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m

Sublist used: 17639

Calibration date and time: 20-MAY-2020 09:17

Date, time and analyst ID of latest file update: 20-May-2020 16:17 Automation

Sample Name: 12352

Lab Sample ID: 1313224

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
29) *t-Butyl alcohol-d10	(1)	4.493	65	262687	250.000
52) \$Dibromofluoromethane	(2)	7.062	113	347353	50.761
57) \$1,2-Dichloroethane-d4	(2)	7.512	102	88796	51.140
66) *Fluorobenzene	(2)	7.946	96	1358300	50.000
83) \$Toluene-d8	(3)	9.921	98	1297814	50.147
100) *Chlorobenzene-d5	(3)	11.351	117	1007411	50.000
114) \$4-Bromofluorobenzene	(3)	12.338	95	456075	45.800
131) *1,4-Dichlorobenzene-d4	(4)	13.216	152	536545	50.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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on 05/21/2020 at 01:09.

Target 3.5 esignature user ID: ljg30941

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12353

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1313225

Data file: /chem/HP09915.i/20may20a.b/ly20s17.d Injection date and time: 20-MAY-2020 16:21
 Data file Sample Info. Line: 12353;1313225;1;0;;KR446;DODWW;;ly20b01; Instrument ID: HP09915.i Batch: L201411AA
 Date, time and analyst ID of latest file update: 20-May-2020 16:39 Automation

Blank Data file reference: /chem/HP09915.i/20may20a.b/ly20b01.d

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m Sublist used: 17639
 Calibration date and time (Last Method Edit): 20-MAY-2020 09:17
 Mid Level Daily Calibration Standard Reference: /chem/HP09915.i/20may20a.b/ly20c01.d

Bottle Code: 038A Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.503 (-0.006)	939	65	250145 (-16)	250.00	
66) Fluorobenzene	7.950 (0.000)	2011	96	1310012 (-10)	50.00	
100) Chlorobenzene-d5	11.351 (0.000)	3069	117	982545 (-12)	50.00	
131) 1,4-Dichlorobenzene-d4	13.216 (0.000)	3649	152	525742 (-11)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.072 (-0.001)	113	341345	51.722	103%		80 - 119
57) 1,2-Dichloroethane-d4	(2)	7.519 (0.000)	102	85390	50.991	102%		81 - 118
83) Toluene-d8	(3)	9.924 (0.000)	98	1270215	50.323	101%		89 - 112
114) 4-Bromofluorobenzene	(3)	12.342 (0.000)	95	442891	45.602	91%		85 - 114

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Reporting Limit	LOQ
60) Benzene	(2)			Not Detected				0.2	1
88) Toluene	(3)			Not Detected				0.2	1
104) Ethylbenzene	(3)			Not Detected				0.4	1
106) m+p-Xylene	(3)			Not Detected				1	5
107) o-Xylene	(3)			Not Detected				0.4	1
108) Xylene (Total)	(3)			Not Detected				1	6

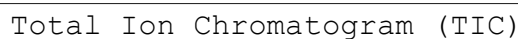
Total number of targets = 6

Digitally signed by Laura J. Green on 05/21/2020 at 01:09. Target 3.5 esignature user ID: ljg30941

Secondary review performed and digitally signed by Rachel Krueger on 05/21/2020 at 18:46. PARALLAX ID: rek30744

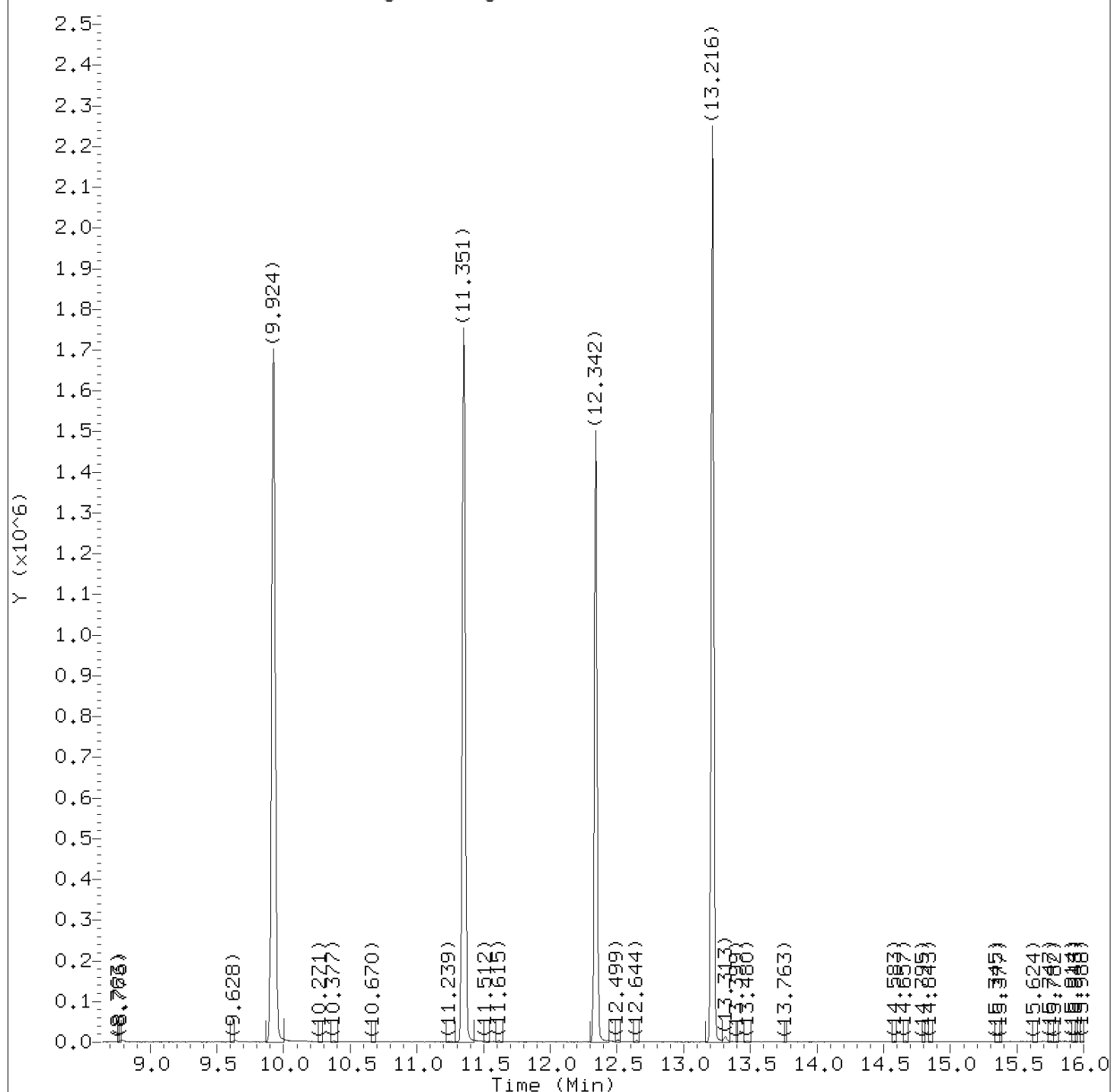
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1-5-2334

/chem/HP09915.i/20may20a.b/ly20s17.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20may20a.b/ly20s17.d
 Injection date and time: 20-MAY-2020 16:21

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m
 Calibration date and time: 20-MAY-2020 09:17

Sublist used: 17639

Date, time and analyst ID of latest file update: 20-May-2020 16:39 Automation

Sample Name: 12353

Lab Sample ID: 1313225

Digitally signed by Laura J. Green
 on 05/21/2020 at 01:09.

Target 3.5 esignature user ID: 130941

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may20a.b/ly20s17.d

Instrument ID: HP09915.i

Injection date and time: 20-MAY-2020 16:21

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m

Sublist used: 17639

Calibration date and time: 20-MAY-2020 09:17

Date, time and analyst ID of latest file update: 20-May-2020 16:39 Automation

Sample Name: 12353

Lab Sample ID: 1313225

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
29) *t-Butyl alcohol-d10	(1)	4.503	65	250145	250.000
52) \$Dibromofluoromethane	(2)	7.072	113	341345	51.722
57) \$1,2-Dichloroethane-d4	(2)	7.519	102	85390	50.991
66) *Fluorobenzene	(2)	7.950	96	1310012	50.000
83) \$Toluene-d8	(3)	9.924	98	1270215	50.323
100) *Chlorobenzene-d5	(3)	11.351	117	982545	50.000
114) \$4-Bromofluorobenzene	(3)	12.342	95	442891	45.602
131) *1,4-Dichlorobenzene-d4	(4)	13.216	152	525742	50.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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on 05/21/2020 at 01:09.

Target 3.5 esignature user ID: ljg30941

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12354

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1313226

Data file: /chem/HP09915.i/20may20a.b/ly20s03.d Injection date and time: **20-MAY-2020 11:14**
 Data file Sample Info. Line: 12354;1313226;1;0;;KR446;DODWW;;ly20b01; Instrument ID: **HP09915.i** Batch: **L201411AA**
 Date, time and analyst ID of latest file update: 20-May-2020 11:32 Automation

Blank Data file reference: /chem/HP09915.i/20may20a.b/ly20b01.d

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m Sublist used: **17639**
 Calibration date and time (Last Method Edit): 20-MAY-2020 09:17
 Mid Level Daily Calibration Standard Reference: /chem/HP09915.i/20may20a.b/ly20c01.d

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.490 (0.006)	935	65	258609 (-13)	250.00	
66) Fluorobenzene	7.950 (0.000)	2011	96	1278322 (-12)	50.00	
100) Chlorobenzene-d5	11.351 (0.000)	3069	117	968252 (-13)	50.00	
131) 1,4-Dichlorobenzene-d4	13.216 (0.000)	3649	152	507357 (-14)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.065 (0.000)	113	330312	51.291	103%		80 - 119
57) 1,2-Dichloroethane-d4	(2)	7.516 (0.000)	102	85179	52.126	104%		81 - 118
83) Toluene-d8	(3)	9.924 (0.000)	98	1244078	50.015	100%		89 - 112
114) 4-Bromofluorobenzene	(3)	12.342 (0.000)	95	431669	45.102	90%		85 - 114

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Reporting Limit	LOQ
60) Benzene	(2)			Not Detected				0.2	1
88) Toluene	(3)			Not Detected				0.2	1
104) Ethylbenzene	(3)			Not Detected				0.4	1
106) m+p-Xylene	(3)			Not Detected				1	5
107) o-Xylene	(3)			Not Detected				0.4	1
108) Xylene (Total)	(3)			Not Detected				1	6

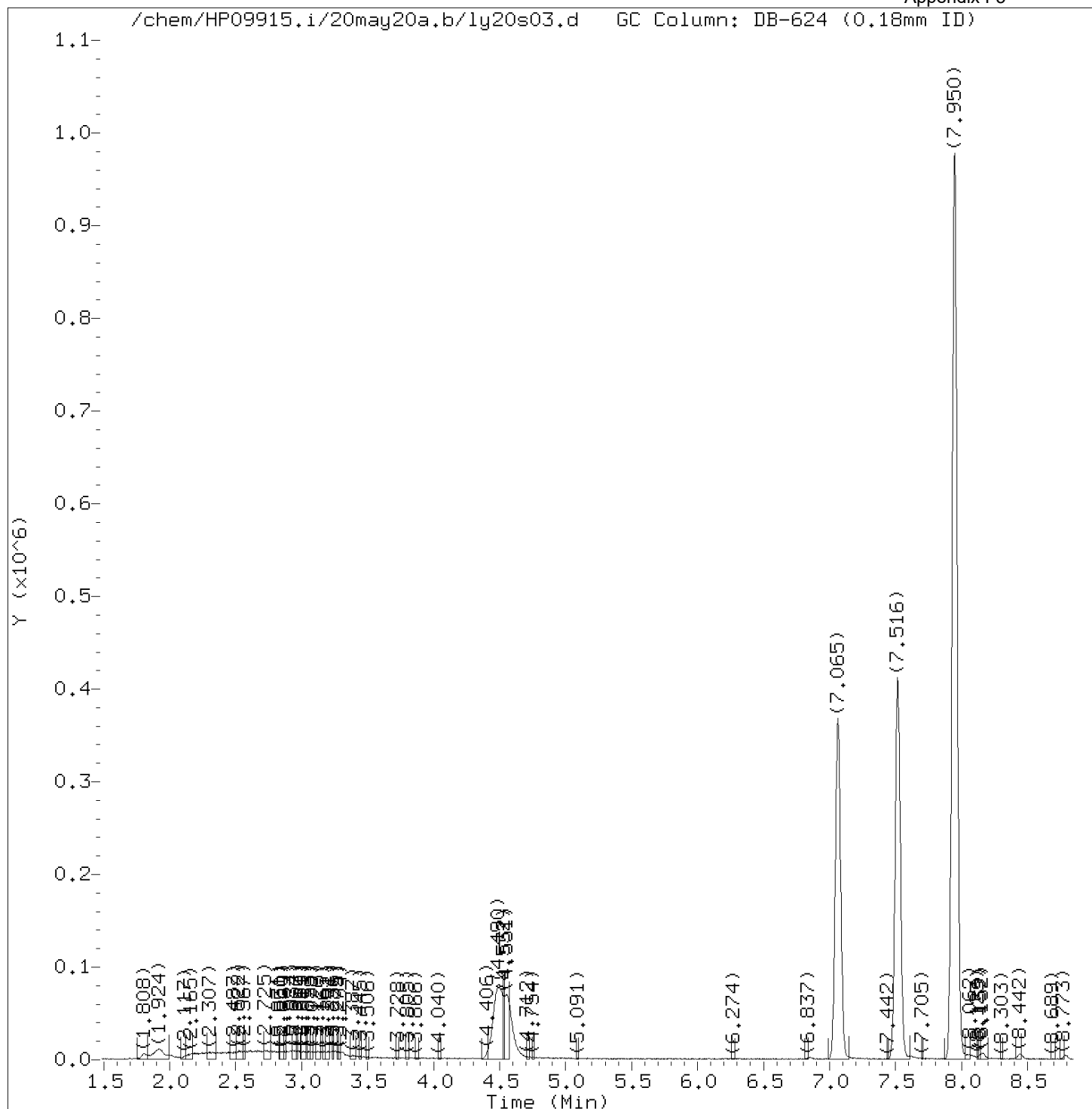
Total number of targets = 6

Digitally signed by Corie L. Mellinger on 05/20/2020 at 13:37. Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Rachel Krueger on 05/21/2020 at 18:33. PARALLAX ID: rek30744

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Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20may20a.b/ly20s03.d
 Injection date and time: 20-MAY-2020 11:14

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m
 Calibration date and time: 20-MAY-2020 09:17

Sublist used: 17639

Date, time and analyst ID of latest file update: 20-May-2020 11:32 Automation

Sample Name: 12354

Lab Sample ID: 1313226

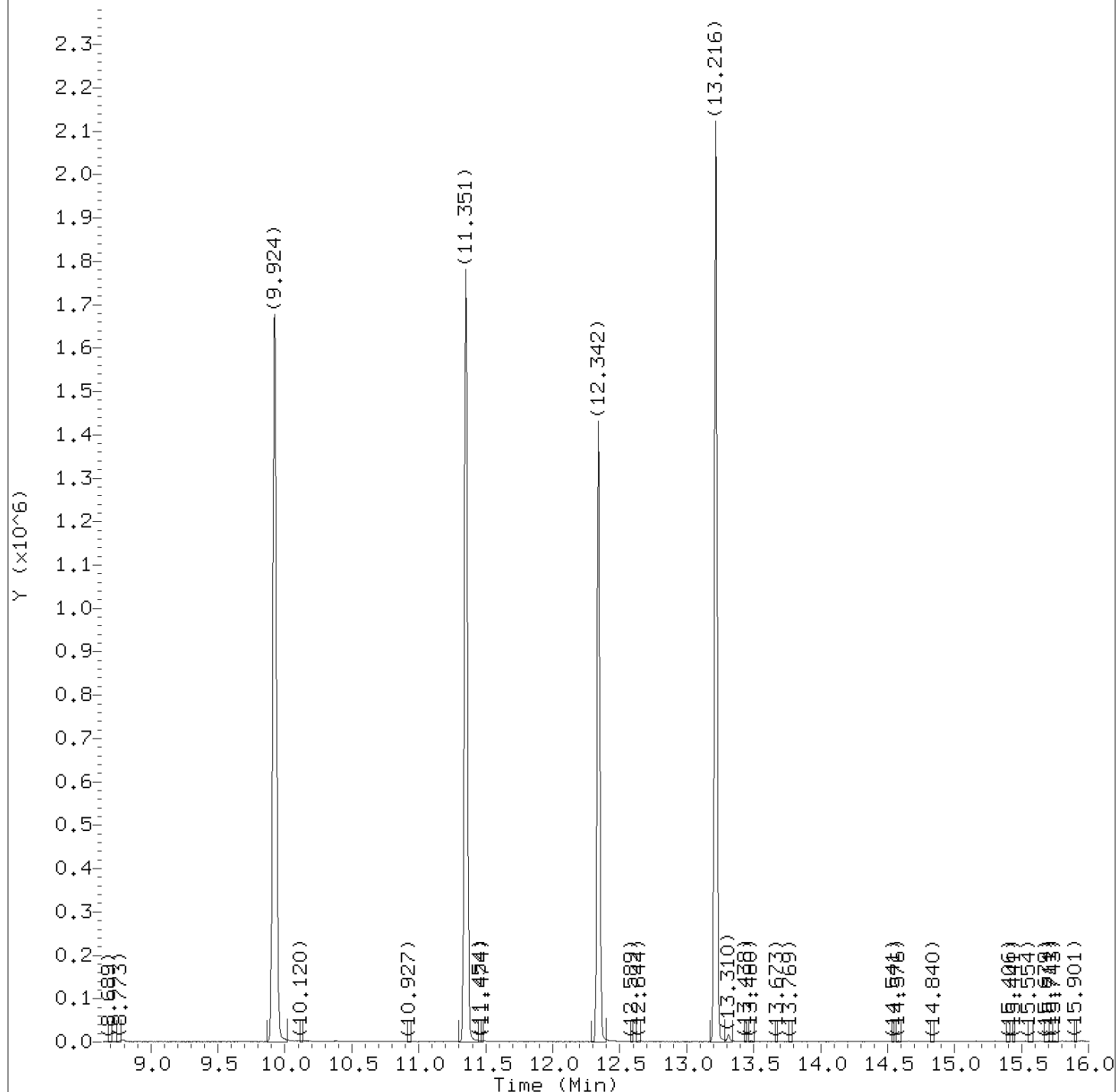
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 on 05/20/2020 at 13:37.

Target 3.5 esignature user ID: clm27445

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/chem/HP09915.i/20may20a.b/ly20s03.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20may20a.b/ly20s03.d
 Injection date and time: 20-MAY-2020 11:14

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m
 Calibration date and time: 20-MAY-2020 09:17

Sublist used: 17639

Date, time and analyst ID of latest file update: 20-May-2020 11:32 Automation

Sample Name: 12354

Lab Sample ID: 1313226

Digitally signed by Corie L. Mellinger
 on 05/20/2020 at 13:37.

Target 3.5 esignature user ID: clm27445

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may20a.b/ly20s03.d

Instrument ID: HP09915.i

Injection date and time: 20-MAY-2020 11:14

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m

Sublist used: 17639

Calibration date and time: 20-MAY-2020 09:17

Date, time and analyst ID of latest file update: 20-May-2020 11:32 Automation

Sample Name: 12354

Lab Sample ID: 1313226

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
29) *t-Butyl alcohol-d10	(1)	4.490	65	258609	250.000
52) \$Dibromofluoromethane	(2)	7.065	113	330312	51.291
57) \$1,2-Dichloroethane-d4	(2)	7.516	102	85179	52.126
66) *Fluorobenzene	(2)	7.950	96	1278322	50.000
83) \$Toluene-d8	(3)	9.924	98	1244078	50.015
100) *Chlorobenzene-d5	(3)	11.351	117	968252	50.000
114) \$4-Bromofluorobenzene	(3)	12.342	95	431669	45.102
131) *1,4-Dichlorobenzene-d4	(4)	13.216	152	507357	50.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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Digitally signed by Corie L. Mellinger

on 05/20/2020 at 13:37.

Target 3.5 esignature user ID: clm27445

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12355

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1313227

Data file: /chem/HP09915.i/20may20a.b/ly20s04.d Injection date and time: **20-MAY-2020 11:36**
 Data file Sample Info. Line: 12355;1313227;1;0;;KR446;DODWW;;ly20b01; Instrument ID: **HP09915.i** Batch: **L201411AA**
 Date, time and analyst ID of latest file update: 20-May-2020 11:53 Automation

Blank Data file reference: /chem/HP09915.i/20may20a.b/ly20b01.d

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m Sublist used: **17639**
 Calibration date and time (Last Method Edit): 20-MAY-2020 09:17
 Mid Level Daily Calibration Standard Reference: /chem/HP09915.i/20may20a.b/ly20c01.d

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.506 (-0.010)	940	65	242314 (-18)	250.00	
66) Fluorobenzene	7.953 (-0.003)	2012	96	1257879 (-13)	50.00	
100) Chlorobenzene-d5	11.351 (0.000)	3069	117	945526 (-15)	50.00	
131) 1,4-Dichlorobenzene-d4	13.216 (0.000)	3649	152	503682 (-15)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.069 (0.000)	113	327334	51.655	103%		80 - 119
57) 1,2-Dichloroethane-d4	(2)	7.519 (0.000)	102	83581	51.979	104%		81 - 118
83) Toluene-d8	(3)	9.924 (0.000)	98	1227873	50.550	101%		89 - 112
114) 4-Bromofluorobenzene	(3)	12.342 (0.000)	95	427606	45.752	92%		85 - 114

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Reporting Limit	LOQ
60) Benzene	(2)			Not Detected				0.2	1
88) Toluene	(3)			Not Detected				0.2	1
104) Ethylbenzene	(3)			Not Detected				0.4	1
106) m+p-Xylene	(3)			Not Detected				1	5
107) o-Xylene	(3)			Not Detected				0.4	1
108) Xylene (Total)	(3)			Not Detected				1	6

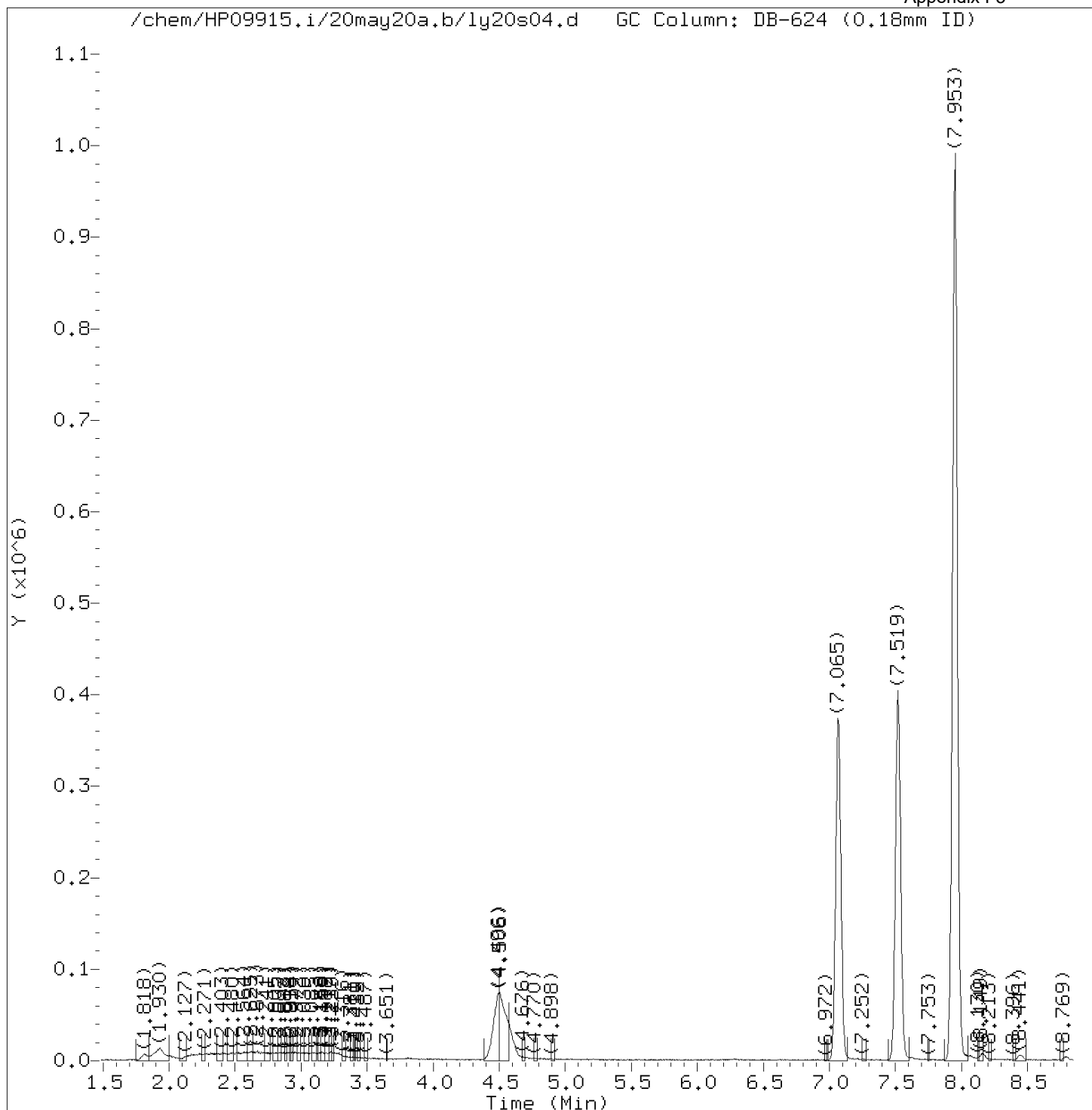
Total number of targets = 6

Digitally signed by Corie L. Mellinger on 05/20/2020 at 13:38. Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Rachel Krueger on 05/21/2020 at 18:33. PARALLAX ID: rek30744

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Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20may20a.b/ly20s04.d
 Injection date and time: 20-MAY-2020 11:36

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m
 Calibration date and time: 20-MAY-2020 09:17

Sublist used: 17639

Date, time and analyst ID of latest file update: 20-May-2020 11:53 Automation

Sample Name: 12355

Lab Sample ID: 1313227

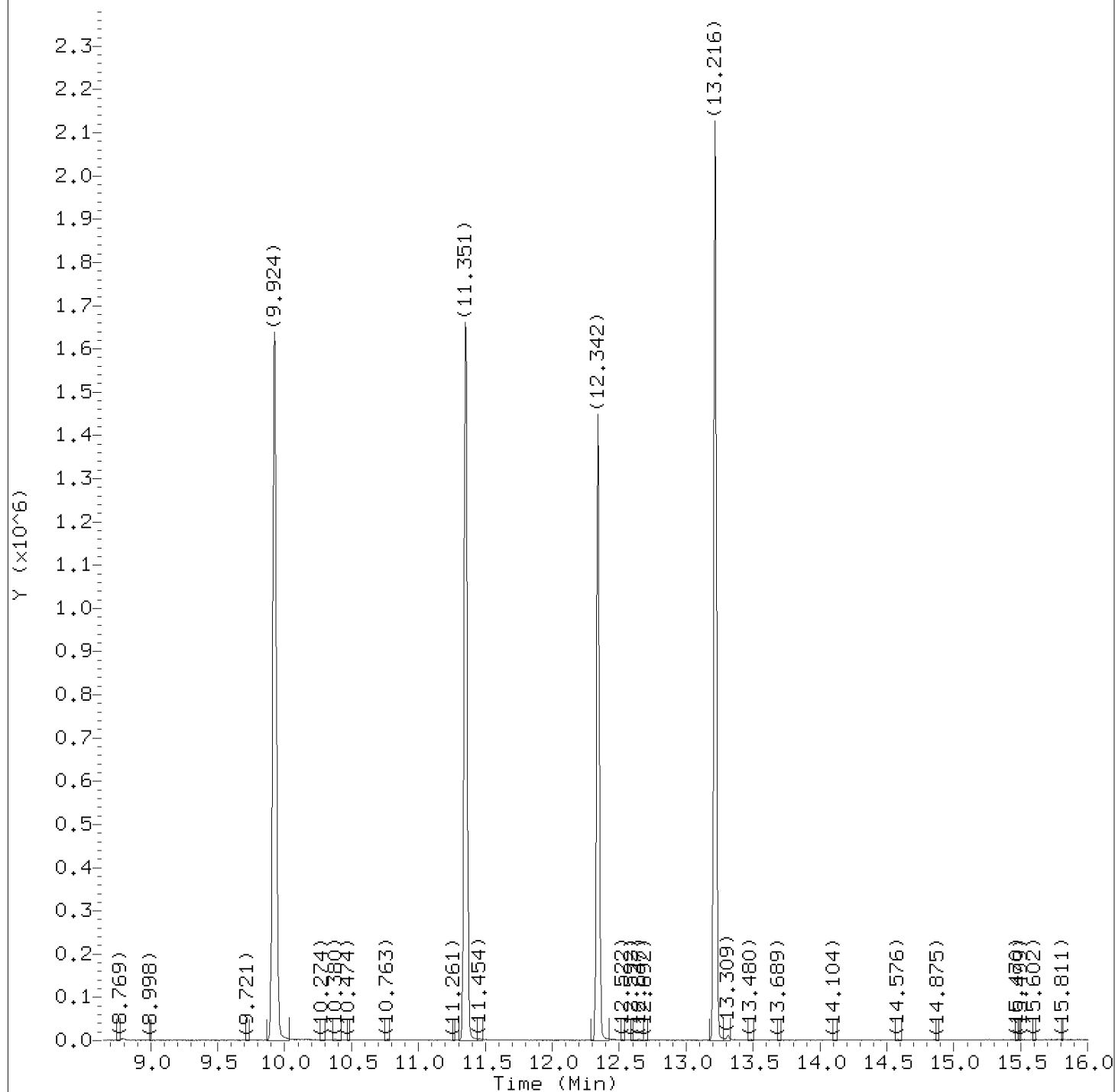
Digitally signed by Corie L. Mellinger
 on 05/20/2020 at 13:38.

Target 3.5 esignature user ID: clm27445

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/chem/HP09915.i/20may20a.b/ly20s04.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20may20a.b/ly20s04.d
 Injection date and time: 20-MAY-2020 11:36

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m
 Calibration date and time: 20-MAY-2020 09:17

Sublist used: 17639

Date, time and analyst ID of latest file update: 20-May-2020 11:53 Automation

Sample Name: 12355

Lab Sample ID: 1313227

Digitally signed by Corie L. Mellinger
 on 05/20/2020 at 13:38.

Target 3.5 esignature user ID: clm27445

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may20a.b/ly20s04.d

Instrument ID: HP09915.i

Injection date and time: 20-MAY-2020 11:36

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m

Sublist used: 17639

Calibration date and time: 20-MAY-2020 09:17

Date, time and analyst ID of latest file update: 20-May-2020 11:53 Automation

Sample Name: 12355

Lab Sample ID: 1313227

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
29) *t-Butyl alcohol-d10	(1)	4.506	65	242314	250.000
52) \$Dibromofluoromethane	(2)	7.069	113	327334	51.655
57) \$1,2-Dichloroethane-d4	(2)	7.519	102	83581	51.979
66) *Fluorobenzene	(2)	7.953	96	1257879	50.000
83) \$Toluene-d8	(3)	9.924	98	1227873	50.550
100) *Chlorobenzene-d5	(3)	11.351	117	945526	50.000
114) \$4-Bromofluorobenzene	(3)	12.342	95	427606	45.752
131) *1,4-Dichlorobenzene-d4	(4)	13.216	152	503682	50.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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on 05/20/2020 at 13:38.

Target 3.5 esignature user ID: clm27445

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12356

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1313228

Data file: /chem/HP09915.i/20may20a.b/ly20s18.d Injection date and time: **20-MAY-2020 16:43**
 Data file Sample Info. Line: 12356;1313228;1;0;;KR446;DODWW;;ly20b01; Instrument ID: **HP09915.i** Batch: **L201411AA**
 Date, time and analyst ID of latest file update: 20-May-2020 17:01 Automation

Blank Data file reference: /chem/HP09915.i/20may20a.b/ly20b01.d

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m Sublist used: **17639**
 Calibration date and time (Last Method Edit): 20-MAY-2020 09:17
 Mid Level Daily Calibration Standard Reference: /chem/HP09915.i/20may20a.b/ly20c01.d

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.506 (-0.010)	940	65	249778 (-16)	250.00	
66) Fluorobenzene	7.946 (0.003)	2010	96	1283019 (-12)	50.00	
100) Chlorobenzene-d5	11.351 (0.000)	3069	117	923719 (-17)	50.00	
131) 1,4-Dichlorobenzene-d4	13.216 (0.000)	3649	152	505909 (-15)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.068 (-0.001)	113	330496	51.132	102%		80 - 119
57) 1,2-Dichloroethane-d4	(2)	7.522 (-0.001)	102	83869	51.137	102%		81 - 118
83) Toluene-d8	(3)	9.924 (0.000)	98	1193506	50.295	101%		89 - 112
114) 4-Bromofluorobenzene	(3)	12.342 (0.000)	95	426152	46.673	93%		85 - 114

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Reporting Limit	LOQ
60) Benzene	(2)			Not Detected				0.2	1
88) Toluene	(3)			Not Detected				0.2	1
104) Ethylbenzene	(3)			Not Detected				0.4	1
106) m+p-Xylene	(3)			Not Detected				1	5
107) o-Xylene	(3)			Not Detected				0.4	1
108) Xylene (Total)	(3)			Not Detected				1	6

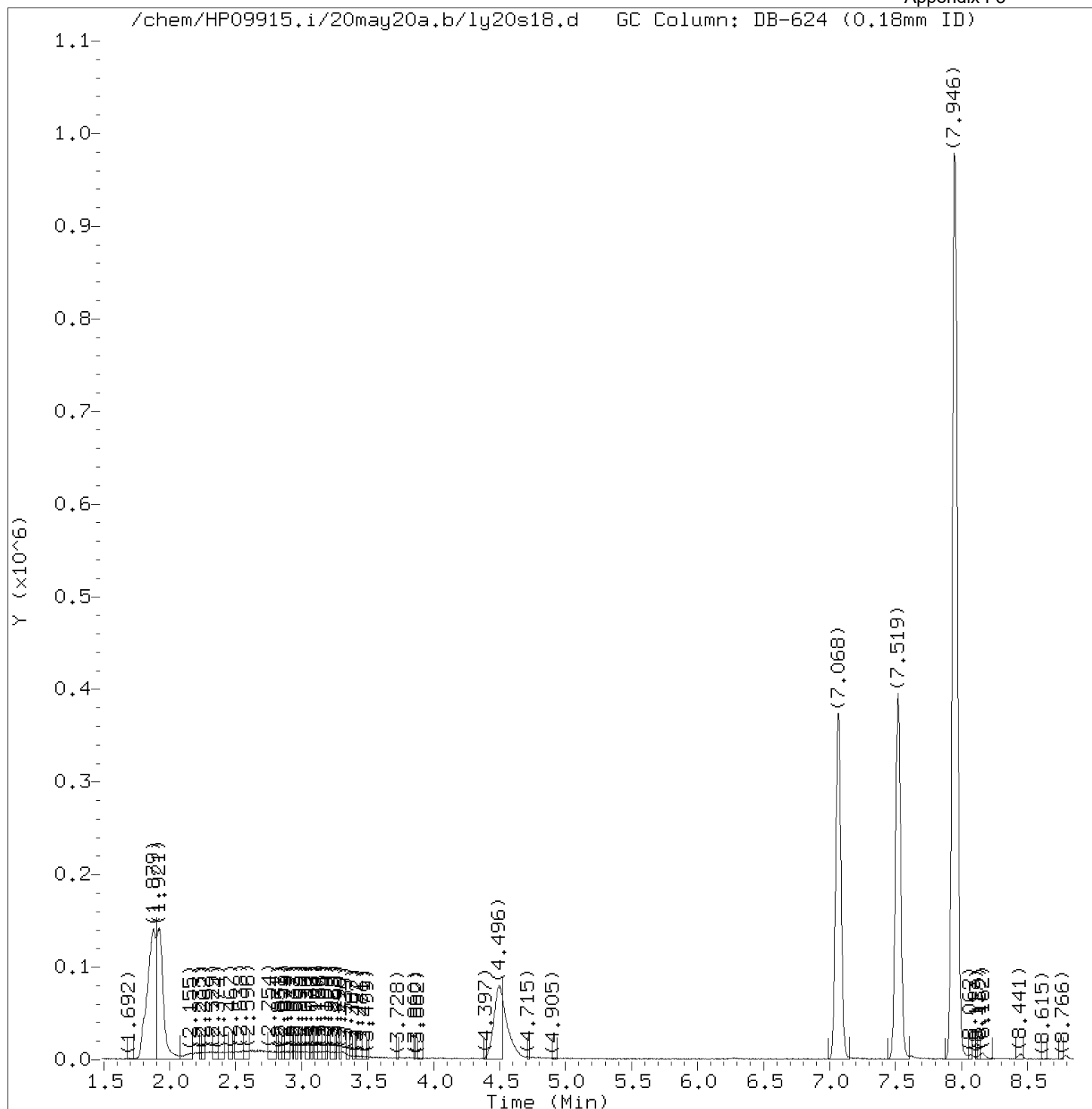
Total number of targets = 6

Digitally signed by Laura J. Green on 05/21/2020 at 01:09. Target 3.5 esignature user ID: ljg30941

Secondary review performed and digitally signed by Rachel Krueger on 05/21/2020 at 18:46. PARALLAX ID: rek30744

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Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20may20a.b/ly20s18.d
 Injection date and time: 20-MAY-2020 16:43

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m
 Calibration date and time: 20-MAY-2020 09:17

Sublist used: 17639

Date, time and analyst ID of latest file update: 20-May-2020 17:01 Automation

Sample Name: 12356

Lab Sample ID: 1313228

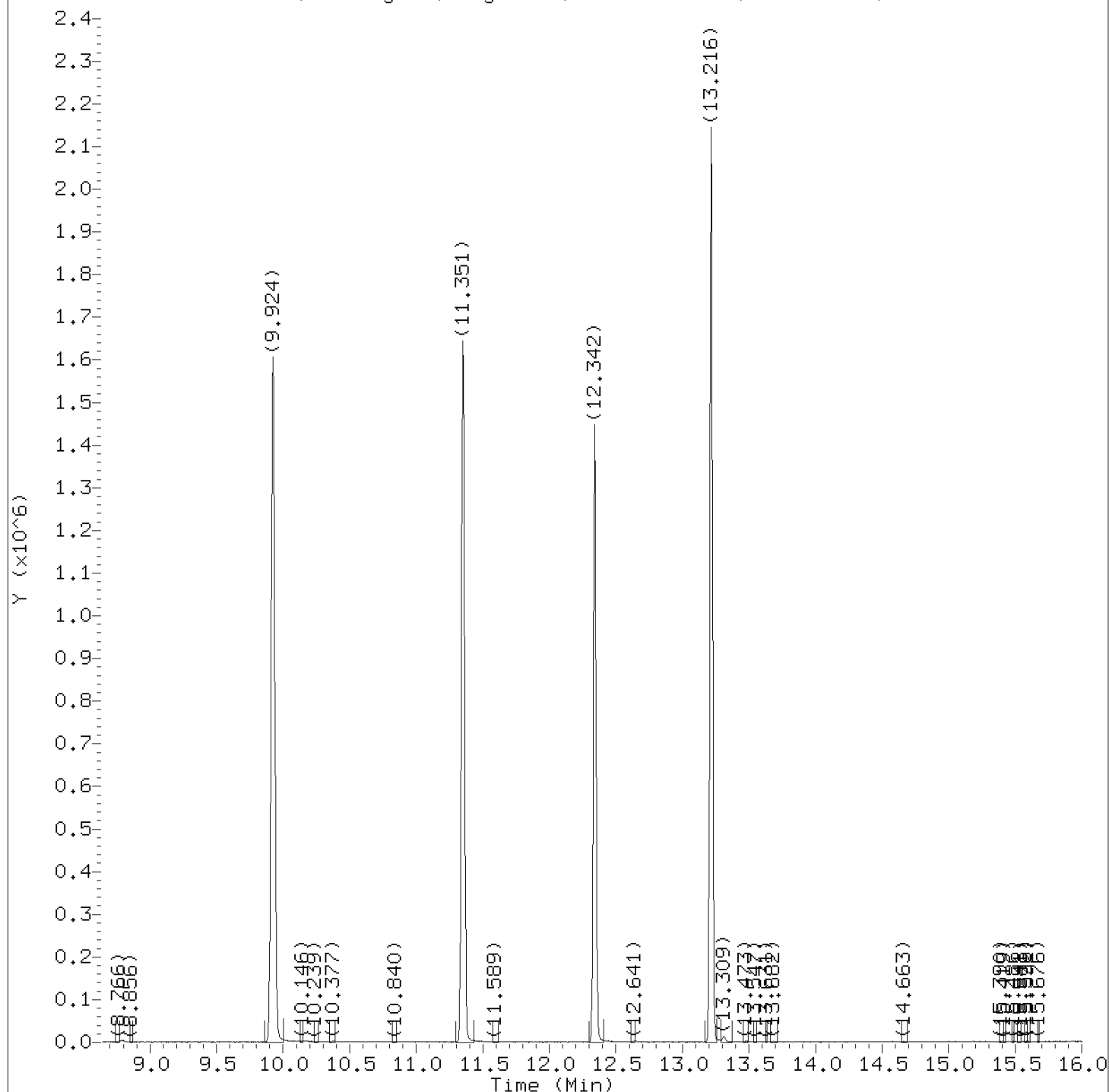
Digitally signed by Laura J. Green
 on 05/21/2020 at 01:09.

Target 3.5 esignature user ID: 130941

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/chem/HP09915.i/20may20a.b/ly20s18.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20may20a.b/ly20s18.d
 Injection date and time: 20-MAY-2020 16:43

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m
 Calibration date and time: 20-MAY-2020 09:17

Sublist used: 17639

Date, time and analyst ID of latest file update: 20-May-2020 17:01 Automation

Sample Name: 12356

Lab Sample ID: 1313228

Digitally signed by Laura J. Green
 on 05/21/2020 at 01:09.

Target 3.5 esignature user ID: 130941

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may20a.b/ly20s18.d

Instrument ID: HP09915.i

Injection date and time: 20-MAY-2020 16:43

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m

Sublist used: 17639

Calibration date and time: 20-MAY-2020 09:17

Date, time and analyst ID of latest file update: 20-May-2020 17:01 Automation

Sample Name: 12356

Lab Sample ID: 1313228

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
29) *t-Butyl alcohol-d10	(1)	4.506	65	249778	250.000
52) \$Dibromofluoromethane	(2)	7.068	113	330496	51.132
57) \$1,2-Dichloroethane-d4	(2)	7.522	102	83869	51.137
66) *Fluorobenzene	(2)	7.946	96	1283019	50.000
83) \$Toluene-d8	(3)	9.924	98	1193506	50.295
100) *Chlorobenzene-d5	(3)	11.351	117	923719	50.000
114) \$4-Bromofluorobenzene	(3)	12.342	95	426152	46.673
131) *1,4-Dichlorobenzene-d4	(4)	13.216	152	505909	50.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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on 05/21/2020 at 01:09.

Target 3.5 esignature user ID: ljg30941

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12357

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1313229

Data file: /chem/HP09915.i/20may20a.b/ly20s19.d Injection date and time: 20-MAY-2020 17:05
 Data file Sample Info. Line: 12357;1313229;1;0;;KR446;DODWW;;ly20b01; Instrument ID: HP09915.i Batch: L201411AA
 Date, time and analyst ID of latest file update: 20-May-2020 17:23 Automation

Blank Data file reference: /chem/HP09915.i/20may20a.b/ly20b01.d

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m Sublist used: 17639
 Calibration date and time (Last Method Edit): 20-MAY-2020 09:17
 Mid Level Daily Calibration Standard Reference: /chem/HP09915.i/20may20a.b/ly20c01.d

Bottle Code: 038A Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.490 (0.006)	935	65	248167 (-16)	250.00	
66) Fluorobenzene	7.946 (0.003)	2010	96	1283015 (-12)	50.00	
100) Chlorobenzene-d5	11.351 (0.000)	3069	117	913389 (-18)	50.00	
131) 1,4-Dichlorobenzene-d4	13.216 (0.000)	3649	152	511381 (-14)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.062 (0.000)	113	331177	51.237	102%		80 - 119
57) 1,2-Dichloroethane-d4	(2)	7.516 (0.000)	102	83557	50.946	102%		81 - 118
83) Toluene-d8	(3)	9.924 (0.000)	98	1188706	50.659	101%		89 - 112
114) 4-Bromofluorobenzene	(3)	12.339 (0.000)	95	415207	45.988	92%		85 - 114

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ
60) Benzene	(2)			Not Detected					0.2	1
88) Toluene	(3)			Not Detected					0.2	1
104) Ethylbenzene	(3)			Not Detected					0.4	1
106) m+p-Xylene	(3)			Not Detected					1	5
107) o-Xylene	(3)			Not Detected					0.4	1
108) Xylene (Total)	(3)			Not Detected					1	6

Total number of targets = 6

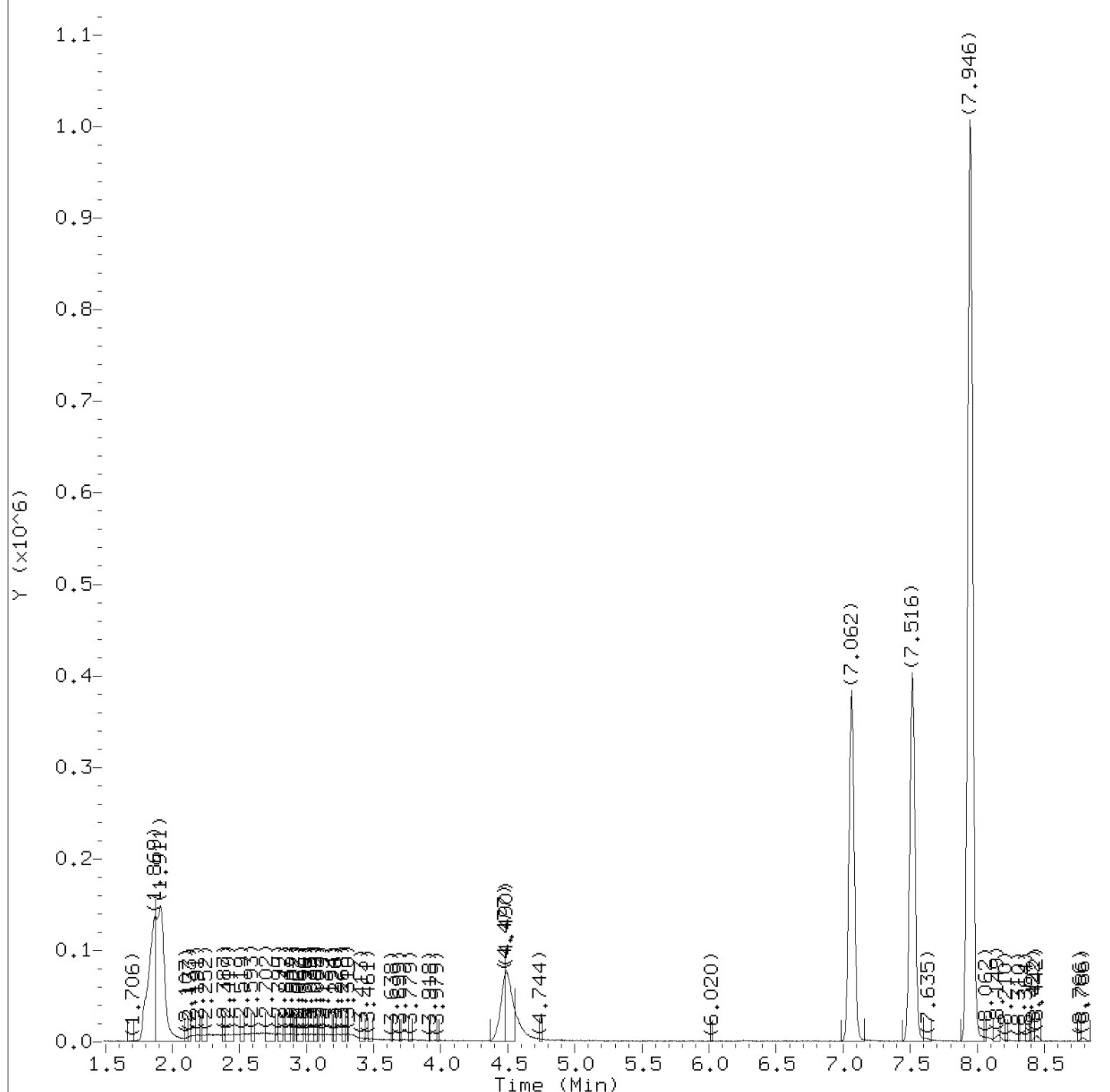
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Secondary review performed and digitally signed by Rachel Krueger on 05/21/2020 at 18:46. PARALLAX ID: rek30744

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/chem/HP09915.i/20may20a.b/ly20s19.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20may20a.b/ly20s19.d
 Injection date and time: 20-MAY-2020 17:05

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m
 Calibration date and time: 20-MAY-2020 09:17

Sublist used: 17639

Date, time and analyst ID of latest file update: 20-May-2020 17:23 Automation

Sample Name: 12357

Lab Sample ID: 1313229

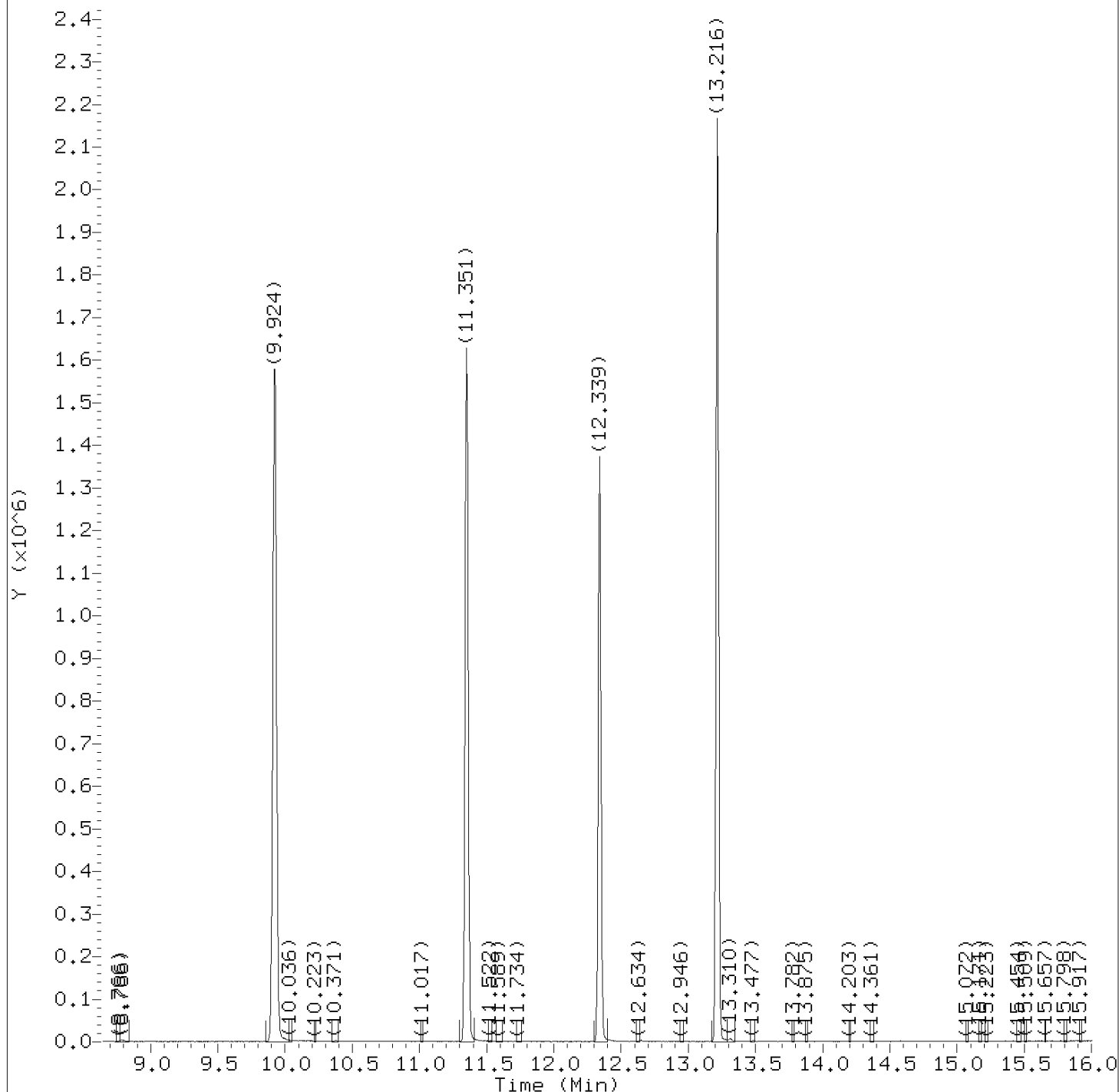
Digitally signed by Laura J. Green
 on 05/21/2020 at 01:09.

Target 3.5 esignature user ID: 130941

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/chem/HP09915.i/20may20a.b/ly20s19.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20may20a.b/ly20s19.d
 Injection date and time: 20-MAY-2020 17:05

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m
 Calibration date and time: 20-MAY-2020 09:17

Sublist used: 17639

Date, time and analyst ID of latest file update: 20-May-2020 17:23 Automation

Sample Name: 12357

Lab Sample ID: 1313229

Digitally signed by Laura J. Green
 on 05/21/2020 at 01:09.

Target 3.5 esignature user ID: 130941

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may20a.b/ly20s19.d

Instrument ID: HP09915.i

Injection date and time: 20-MAY-2020 17:05

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m

Sublist used: 17639

Calibration date and time: 20-MAY-2020 09:17

Date, time and analyst ID of latest file update: 20-May-2020 17:23 Automation

Sample Name: 12357

Lab Sample ID: 1313229

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
29) *t-Butyl alcohol-d10	(1)	4.490	65	248167	250.000
52) \$Dibromofluoromethane	(2)	7.062	113	331177	51.237
57) \$1,2-Dichloroethane-d4	(2)	7.516	102	83557	50.946
66) *Fluorobenzene	(2)	7.946	96	1283015	50.000
83) \$Toluene-d8	(3)	9.924	98	1188706	50.659
100) *Chlorobenzene-d5	(3)	11.351	117	913389	50.000
114) \$4-Bromofluorobenzene	(3)	12.339	95	415207	45.988
131) *1,4-Dichlorobenzene-d4	(4)	13.216	152	511381	50.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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on 05/21/2020 at 01:09.

Target 3.5 esignature user ID: ljg30941

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12358

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1313230

Data file: /chem/HP09915.i/20may20a.b/ly20s20.d Injection date and time: 20-MAY-2020 17:27
 Data file Sample Info. Line: 12358;1313230;1;0;;KR446;DODWW;;ly20b01; Instrument ID: HP09915.i Batch: L201411AA
 Date, time and analyst ID of latest file update: 20-May-2020 17:45 Automation

Blank Data file reference: /chem/HP09915.i/20may20a.b/ly20b01.d

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m Sublist used: 17639
 Calibration date and time (Last Method Edit): 20-MAY-2020 09:17
 Mid Level Daily Calibration Standard Reference: /chem/HP09915.i/20may20a.b/ly20c01.d

Bottle Code: 038A Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.490 (0.006)	935	65	246149 (-17)	250.00	
66) Fluorobenzene	7.946 (0.003)	2010	96	1246784 (-14)	50.00	
100) Chlorobenzene-d5	11.351 (0.000)	3069	117	930748 (-17)	50.00	
131) 1,4-Dichlorobenzene-d4	13.216 (0.000)	3649	152	513768 (-13)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.062 (0.000)	113	325458	51.816	104%		80 - 119
57) 1,2-Dichloroethane-d4	(2)	7.512 (0.000)	102	84399	52.955	106%		81 - 118
83) Toluene-d8	(3)	9.924 (0.000)	98	1200347	50.201	100%		89 - 112
114) 4-Bromofluorobenzene	(3)	12.342 (0.000)	95	426390	46.346	93%		85 - 114

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ
60) Benzene	(2)			Not Detected					0.2	1
88) Toluene	(3)			Not Detected					0.2	1
104) Ethylbenzene	(3)			Not Detected					0.4	1
106) m+p-Xylene	(3)			Not Detected					1	5
107) o-Xylene	(3)			Not Detected					0.4	1
108) Xylene (Total)	(3)			Not Detected					1	6

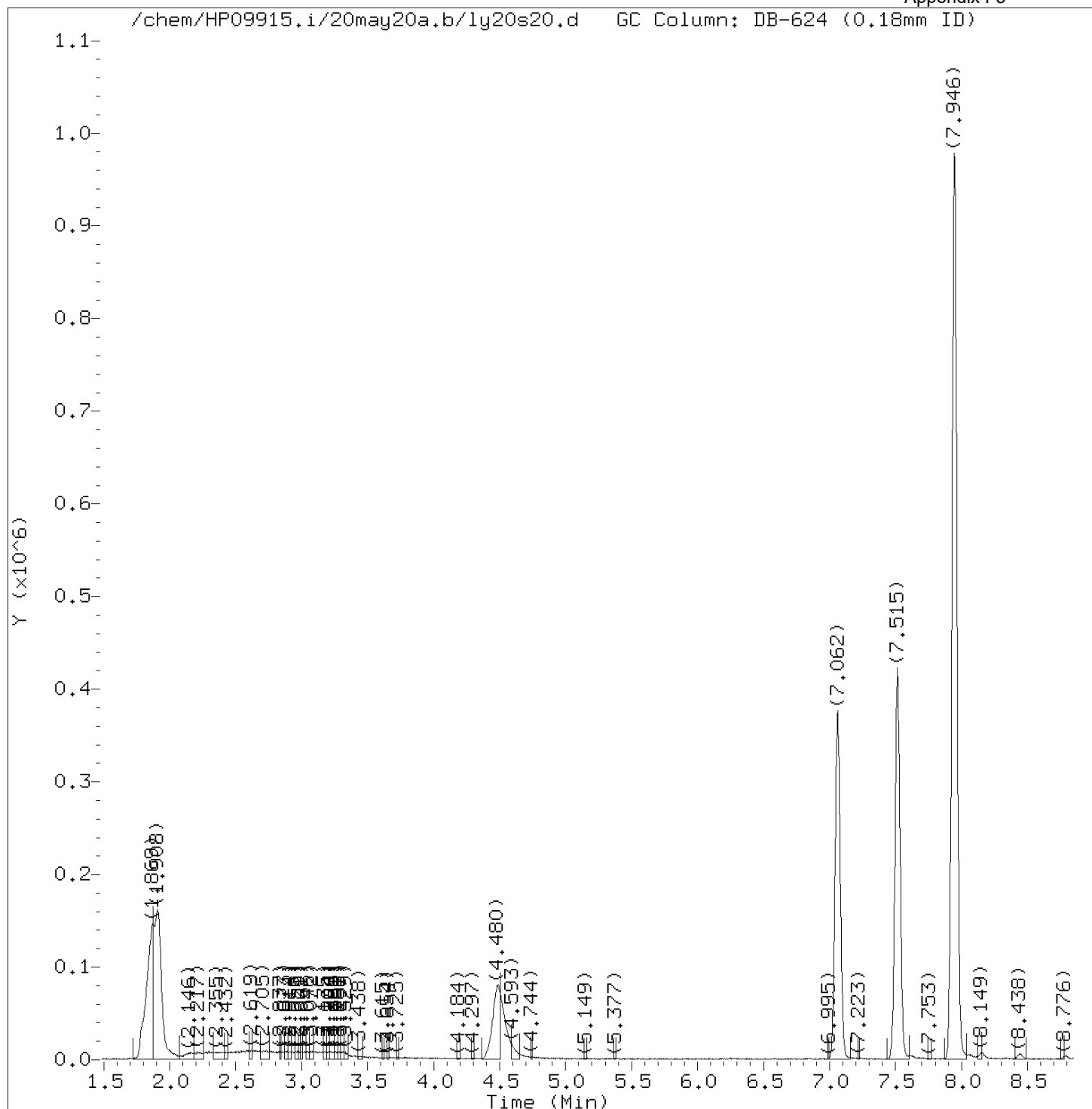
Total number of targets = 6

Digitally signed by Laura J. Green on 05/21/2020 at 01:09. Target 3.5 esignature user ID: ljg30941

Secondary review performed and digitally signed by Rachel Krueger on 05/21/2020 at 18:46. PARALLAX ID: rek30744

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Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20may20a.b/ly20s20.d
 Injection date and time: 20-MAY-2020 17:27

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m
 Calibration date and time: 20-MAY-2020 09:17

Sublist used: 17639

Date, time and analyst ID of latest file update: 20-May-2020 17:45 Automation

Sample Name: 12358

Lab Sample ID: 1313230

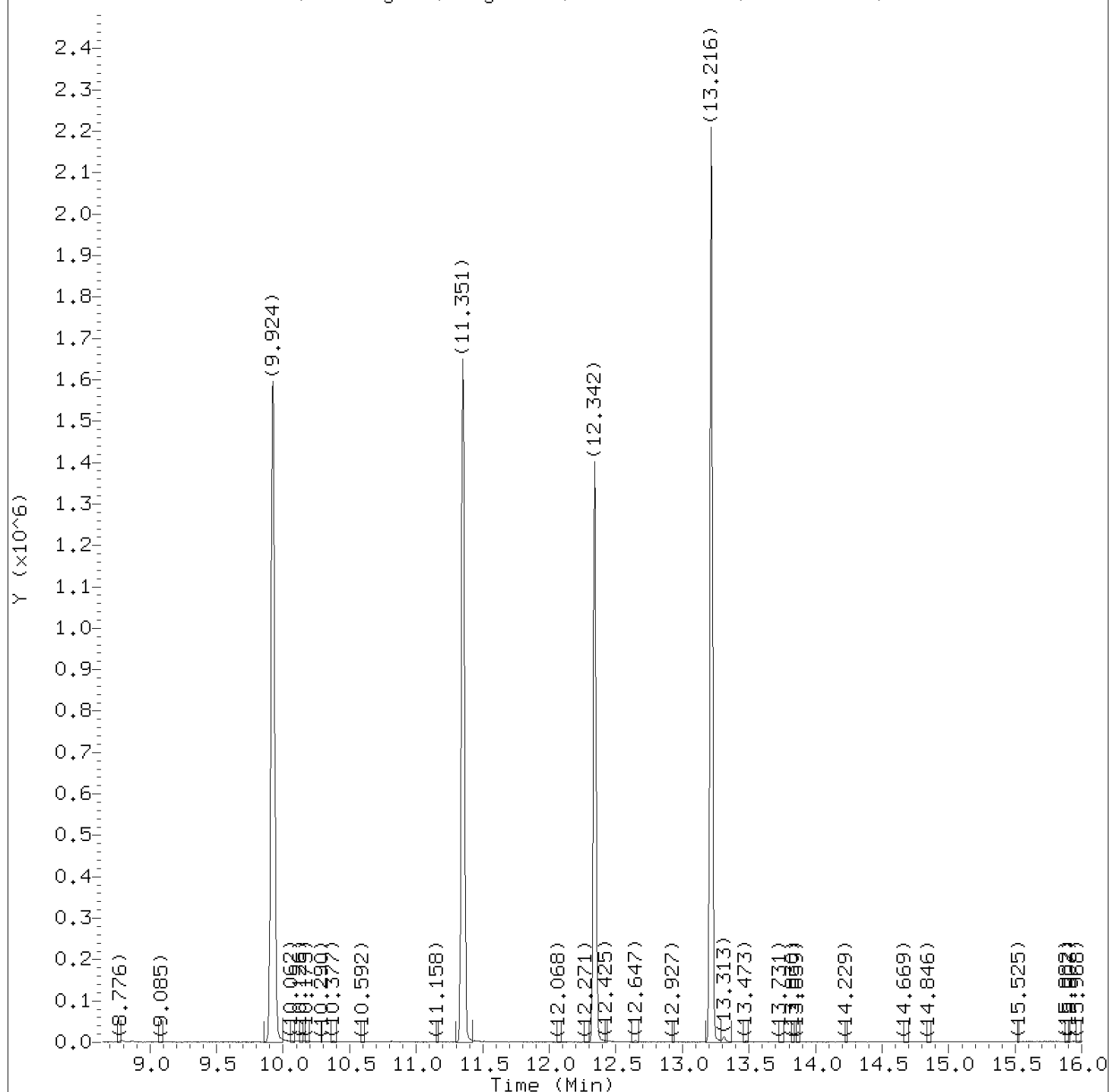
Digitally signed by Laura J. Green
 on 05/21/2020 at 01:09.

Target 3.5 esignature user ID: 130941

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/chem/HP09915.i/20may20a.b/ly20s20.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20may20a.b/ly20s20.d
 Injection date and time: 20-MAY-2020 17:27

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m
 Calibration date and time: 20-MAY-2020 09:17

Sublist used: 17639

Date, time and analyst ID of latest file update: 20-May-2020 17:45 Automation

Sample Name: 12358

Lab Sample ID: 1313230

Digitally signed by Laura J. Green
 on 05/21/2020 at 01:09.

Target 3.5 esignature user ID: 13030941

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may20a.b/ly20s20.d
 Injection date and time: 20-MAY-2020 17:27

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m

Sublist used: 17639

Calibration date and time: 20-MAY-2020 09:17

Date, time and analyst ID of latest file update: 20-May-2020 17:45 Automation

Sample Name: 12358

Lab Sample ID: 1313230

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
29) *t-Butyl alcohol-d10	(1)	4.490	65	246149	250.000
52) \$Dibromofluoromethane	(2)	7.062	113	325458	51.816
57) \$1,2-Dichloroethane-d4	(2)	7.512	102	84399	52.955
66) *Fluorobenzene	(2)	7.946	96	1246784	50.000
83) \$Toluene-d8	(3)	9.924	98	1200347	50.201
100) *Chlorobenzene-d5	(3)	11.351	117	930748	50.000
114) \$4-Bromofluorobenzene	(3)	12.342	95	426390	46.346
131) *1,4-Dichlorobenzene-d4	(4)	13.216	152	513768	50.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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 on 05/21/2020 at 01:09.

Target 3.5 esignature user ID: ljg30941

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12359

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1313231

Data file: /chem/HP09915.i/20may20a.b/ly20s21.d Injection date and time: 20-MAY-2020 17:49
 Data file Sample Info. Line: 12359;1313231;1;0;;KR446;DODWW;;ly20b01; Instrument ID: HP09915.i Batch: L201411AA
 Date, time and analyst ID of latest file update: 20-May-2020 18:07 Automation

Blank Data file reference: /chem/HP09915.i/20may20a.b/ly20b01.d

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m Sublist used: 17639
 Calibration date and time (Last Method Edit): 20-MAY-2020 09:17
 Mid Level Daily Calibration Standard Reference: /chem/HP09915.i/20may20a.b/ly20c01.d

Bottle Code: 038A Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.493 (0.003)	936	65	241195 (-19)	250.00	
66) Fluorobenzene	7.946 (0.003)	2010	96	1265262 (-13)	50.00	
100) Chlorobenzene-d5	11.351 (0.000)	3069	117	971747 (-13)	50.00	
131) 1,4-Dichlorobenzene-d4	13.216 (0.000)	3649	152	515324 (-13)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.065 (0.000)	113	331362	51.985	104%		80 - 119
57) 1,2-Dichloroethane-d4	(2)	7.519 (0.000)	102	83732	51.769	104%		81 - 118
83) Toluene-d8	(3)	9.924 (0.000)	98	1241759	49.742	99%		89 - 112
114) 4-Bromofluorobenzene	(3)	12.342 (0.000)	95	447870	46.627	93%		85 - 114

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ
60) Benzene	(2)			Not Detected					0.2	1
88) Toluene	(3)			Not Detected					0.2	1
104) Ethylbenzene	(3)			Not Detected					0.4	1
106) m+p-Xylene	(3)			Not Detected					1	5
107) o-Xylene	(3)			Not Detected					0.4	1
108) Xylene (Total)	(3)			Not Detected					1	6

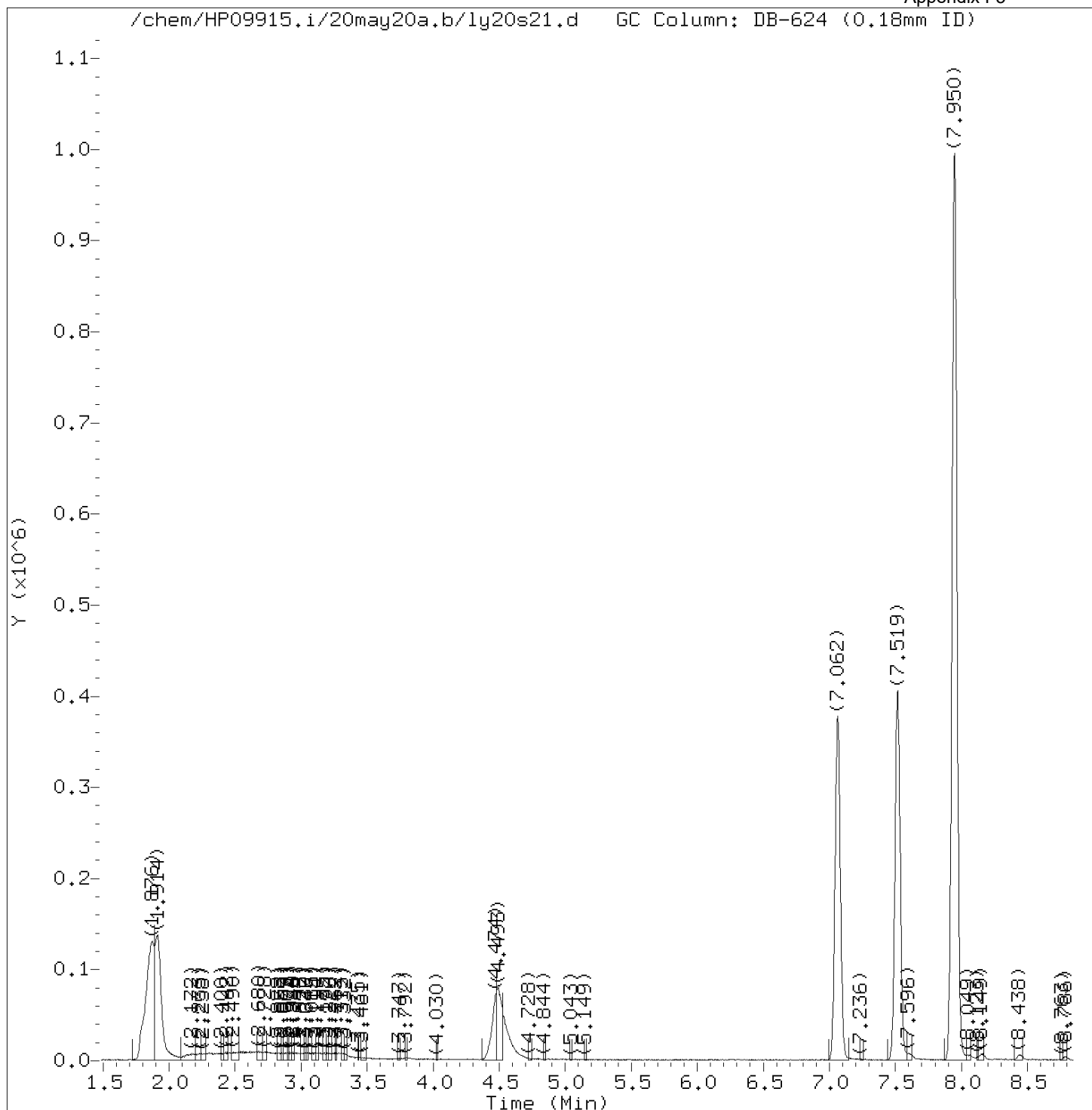
Total number of targets = 6

Digitally signed by Laura J. Green on 05/21/2020 at 01:10. Target 3.5 esignature user ID: ljg30941

Secondary review performed and digitally signed by Rachel Krueger on 05/21/2020 at 18:46. PARALLAX ID: rek30744

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page 1 of 1



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20may20a.b/ly20s21.d
 Injection date and time: 20-MAY-2020 17:49

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m
 Calibration date and time: 20-MAY-2020 09:17

Sublist used: 17639

Date, time and analyst ID of latest file update: 20-May-2020 18:07 Automation

Sample Name: 12359

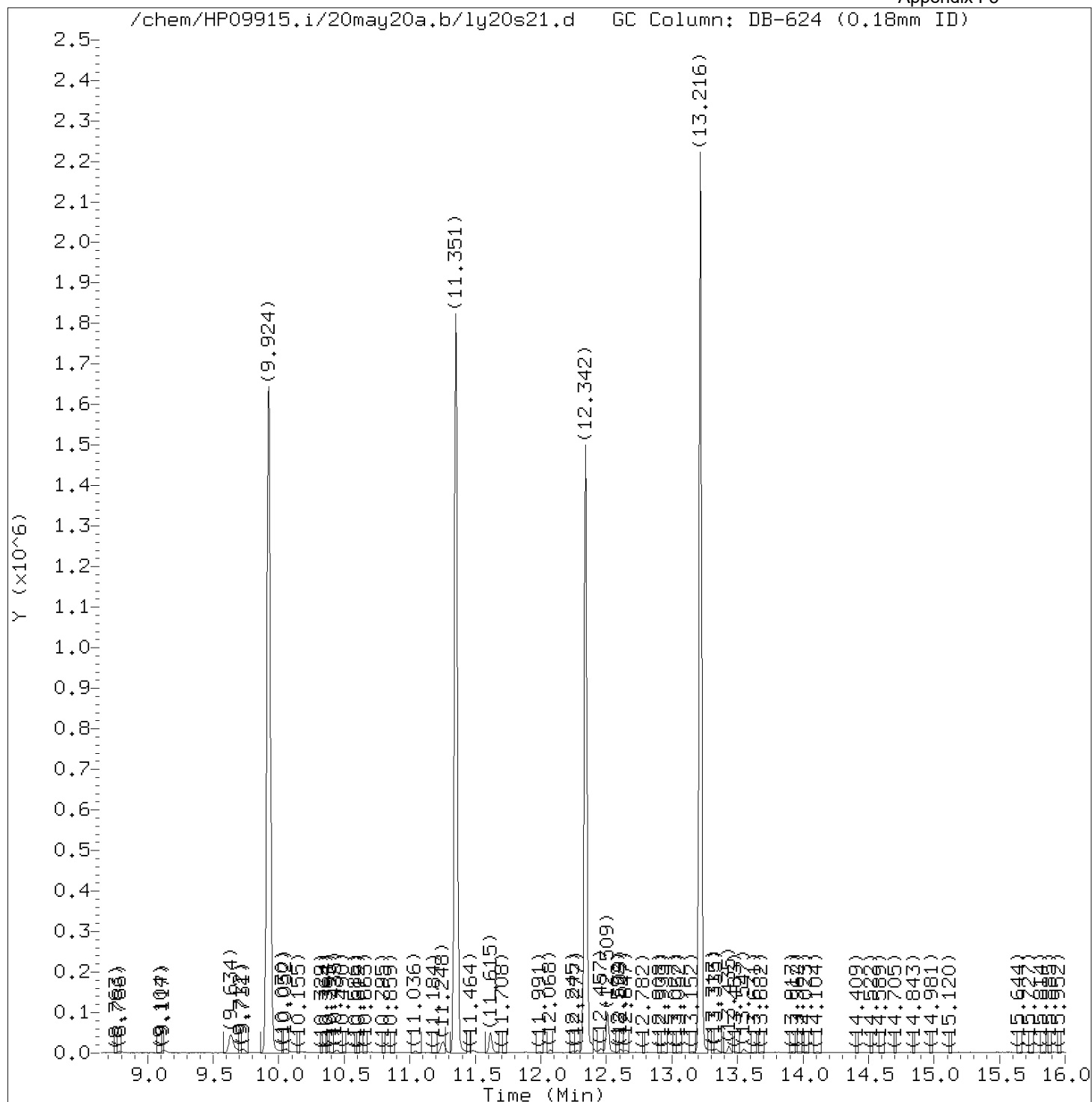
Lab Sample ID: 1313231

Digitally signed by Laura J. Green
 on 05/21/2020 at 01:10.

Target 3.5 esignature user ID: 130941

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Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20may20a.b/ly20s21.d
 Injection date and time: 20-MAY-2020 17:49

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m
 Calibration date and time: 20-MAY-2020 09:17

Sublist used: 17639

Date, time and analyst ID of latest file update: 20-May-2020 18:07 Automation

Sample Name: 12359

Lab Sample ID: 1313231

Digitally signed by Laura J. Green
 on 05/21/2020 at 01:10.

Target 3.5 esignature user ID: 1313231

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page 2 of 2

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may20a.b/ly20s21.d

Instrument ID: HP09915.i

Injection date and time: 20-MAY-2020 17:49

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m

Sublist used: 17639

Calibration date and time: 20-MAY-2020 09:17

Date, time and analyst ID of latest file update: 20-May-2020 18:07 Automation

Sample Name: 12359

Lab Sample ID: 1313231

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
29) *t-Butyl alcohol-d10	(1)	4.493	65	241195	250.000
52) \$Dibromofluoromethane	(2)	7.065	113	331362	51.985
57) \$1,2-Dichloroethane-d4	(2)	7.519	102	83732	51.769
66) *Fluorobenzene	(2)	7.946	96	1265262	50.000
83) \$Toluene-d8	(3)	9.924	98	1241759	49.742
100) *Chlorobenzene-d5	(3)	11.351	117	971747	50.000
114) \$4-Bromofluorobenzene	(3)	12.342	95	447870	46.627
131) *1,4-Dichlorobenzene-d4	(4)	13.216	152	515324	50.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 1 of 1

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on 05/21/2020 at 01:10.

Target 3.5 esignature user ID: ljg30941

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Standards Data

Volatiles by GC/MS

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Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09915 **HP #23**

Data Directory Path is - D:\DATA\20may04I\

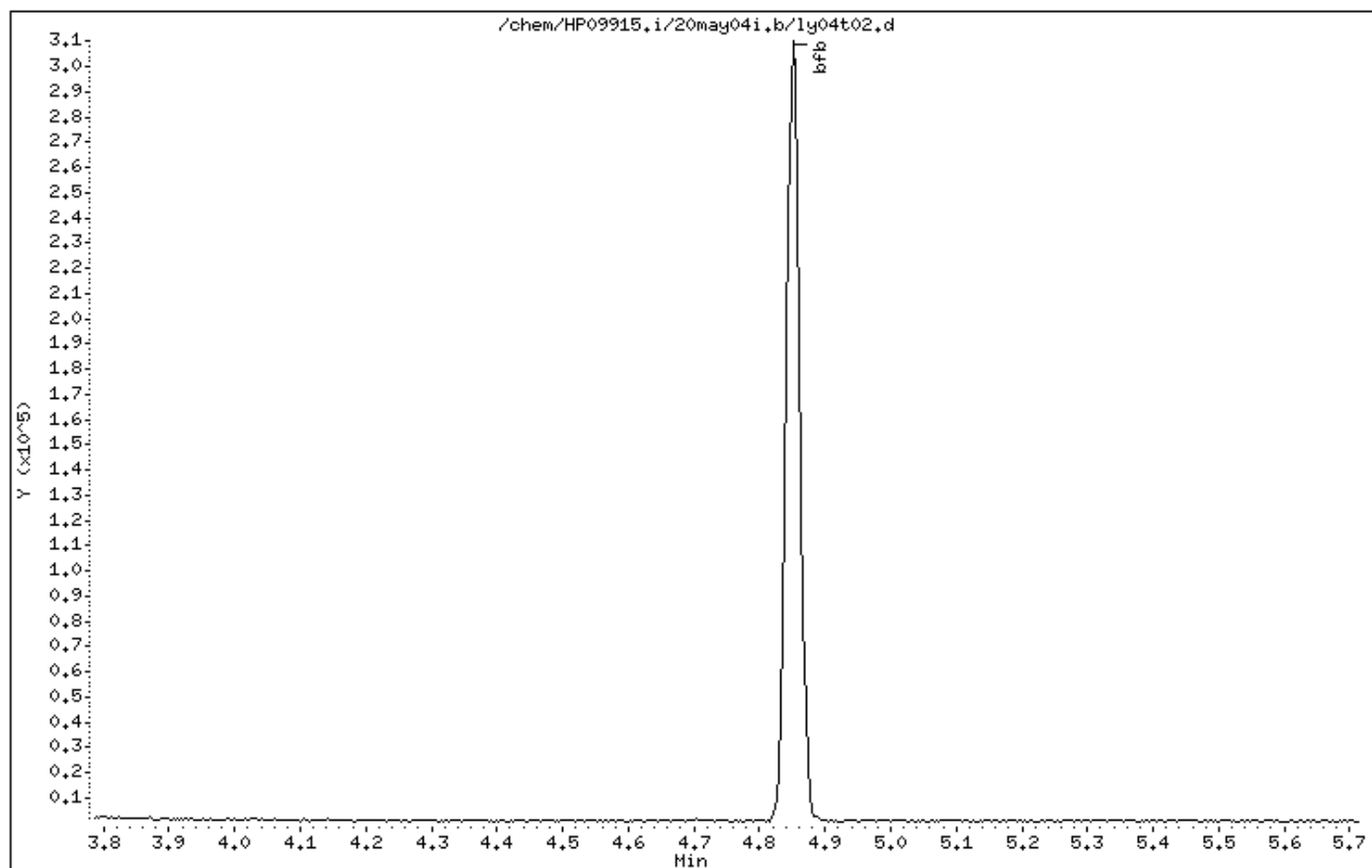
OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
LCP00895	LY04T02.D	50NGBFB	05/04/2020	11:11		
lcp00895	LY04X01.D	CLNBLK	05/04/2020	11:56		
lcp00895	LY04I01.D	VSTD300	05/04/2020	12:18		
lcp00895	LY04I02.D	VSTD100	05/04/2020	12:40		
lcp00895	LY04I03.D	VSTD050	05/04/2020	13:02		
lcp00895	LY04I04.D	VSTD020	05/04/2020	13:24		
lcp00895	LY04I05.D	VSTD010	05/04/2020	13:46		
lcp00895	LY04I06.D	VSTD004	05/04/2020	14:08		
lcp00895	LY04I07.D	VSTD001	05/04/2020	14:30		
lcp00895	LY04V01.D	ICVLLG	05/04/2020	14:52		

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09915 **HP #23**

Data Directory Path is - D:\DATA\20may20a\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
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CLM27445	LY20X00.D	VBKL84	05/20/2020	08:04	L201411AA	
CLM27445	LY20C01.D	VSTD050	05/20/2020	08:26	L201411AA	
CLM27445	LY20X01.D	VBKL84	05/20/2020	08:47	L201411AA	
CLM27445	LY20S01.D	LCSL84	05/20/2020	09:09	L201411AA	
CLM27445	LY20R01.D	RLVL84	05/20/2020	09:31	L201411AA	
CLM27445	LY20B01.D	VBKL84	05/20/2020	09:53	L201411AA	
CLM27445	LY20S02.D	1312473	05/20/2020	10:52	L201411AA	
CLM27445	LY20S03.D	1313226	05/20/2020	11:14	L201411AA	
CLM27445	LY20S04.D	1313227	05/20/2020	11:36	L201411AA	
CLM27445	LY20S05.D	1312506	05/20/2020	11:58	L201411AA	
CLM27445	LY20S06.D	1313198	05/20/2020	12:20	L201411AA	
CLM27445	LY20S07.D	1313214	05/20/2020	12:42	L201411AA	
CLM27445	LY20S08.D	1313215	05/20/2020	13:04	L201411AA	
CLM27445	LY20S09.D	1313216	05/20/2020	13:26	L201411AA	
CLM27445	LY20S10.D	1313220	05/20/2020	13:48	L201411AA	
CLM27445	LY20S11.D	1313221MS	05/20/2020	14:09	L201411AA	
CLM27445	LY20S12.D	1313222MSD	05/20/2020	14:31	L201411AA	
CLM27445	LY20S13.D	1313213	05/20/2020	14:53	L201411AA	20
CLM27445	LY20S14.D	1313213MS	05/20/2020	15:15	L201411AA	20
CLM27445	LY20S15.D	1312471	05/20/2020	15:37	L201411AA	
CLM27445	LY20S16.D	1313224	05/20/2020	15:59	L201411AA	
CLM27445	LY20S17.D	1313225	05/20/2020	16:21	L201411AA	
CLM27445	LY20S18.D	1313228	05/20/2020	16:43	L201411AA	
CLM27445	LY20S19.D	1313229	05/20/2020	17:05	L201411AA	
CLM27445	LY20S20.D	1313230	05/20/2020	17:27	L201411AA	
CLM27445	LY20S21.D	1313231	05/20/2020	17:49	L201411AA	
CLM27445	LY20S22.D	1312500	05/20/2020	18:11	L201411AA	
CLM27445	LY20EC5.D	SECC050	05/20/2020	18:33	L201411AA	

Column diameter: 0.25



Data File: /chem/HP09915.i/20may04i.b/1y04t02.d

Date : 04-MAY-2020 11:11

Client ID: JAN28-2020

Instrument: HP09915.i

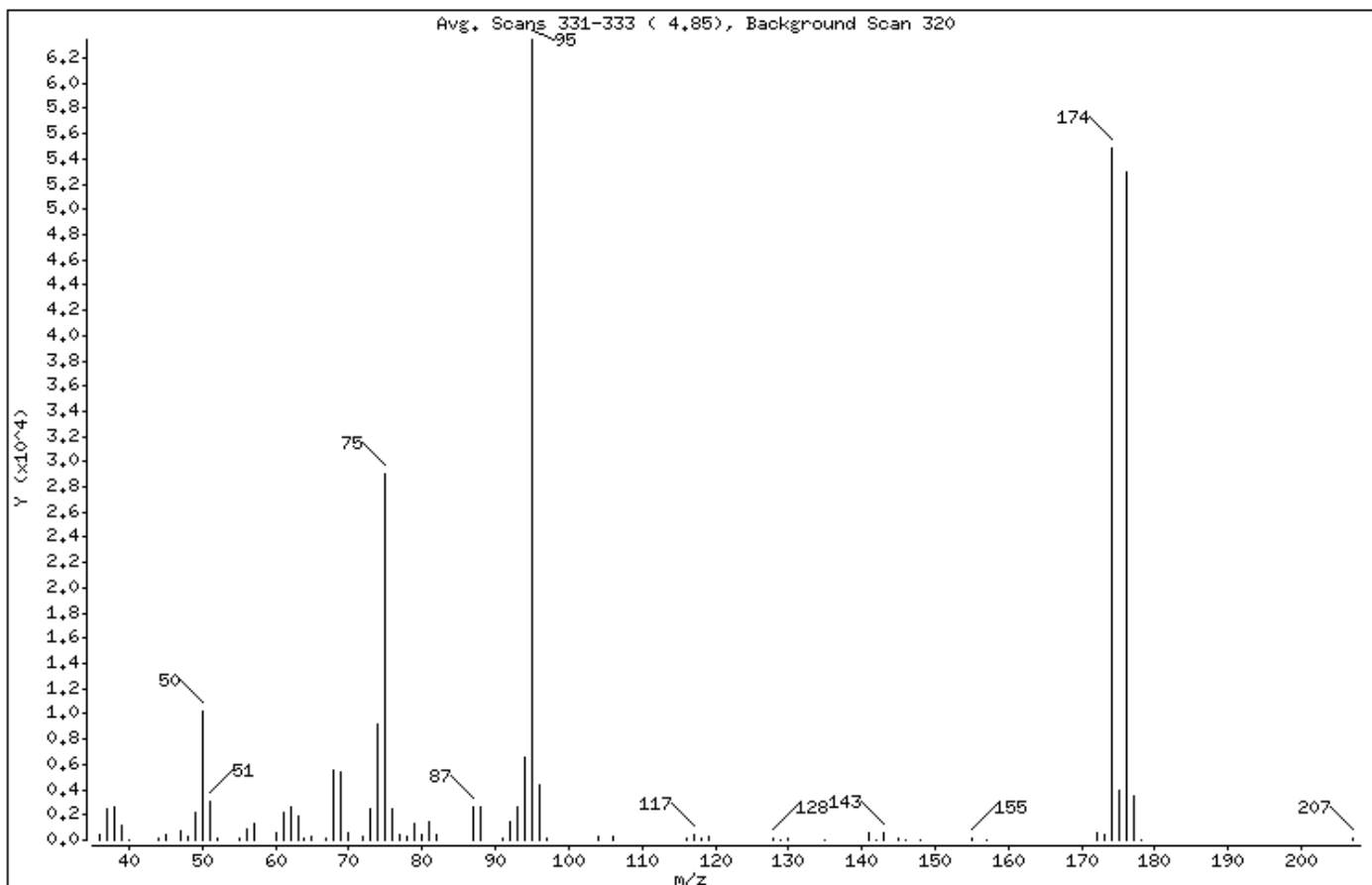
Sample Info: JAN28-2020;50NGBFB;1;3;3;3;3;3

Operator: LCP00895

Column phase: Rxi-624S11 MS

Column diameter: 0.25

1 bfb

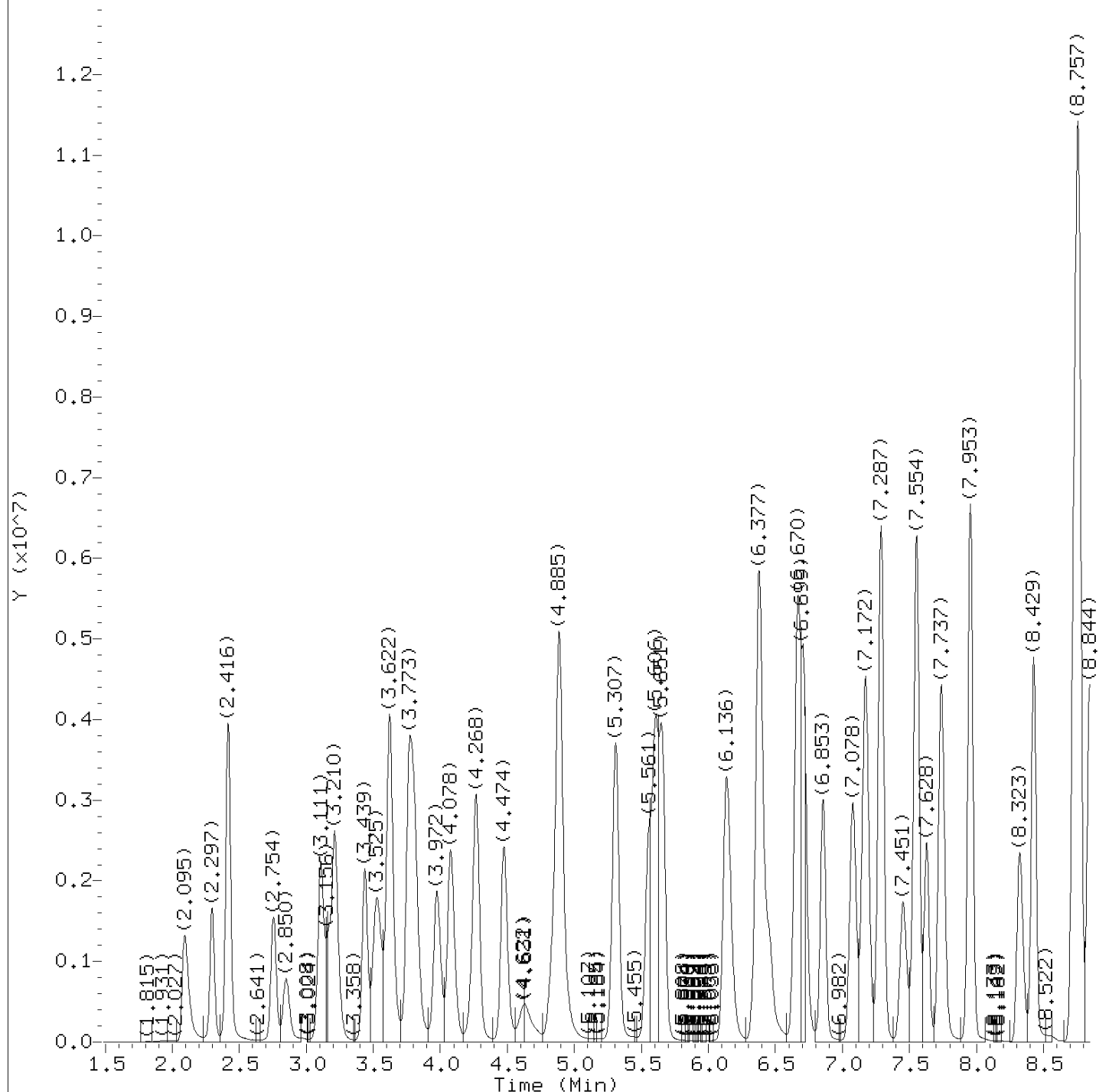


m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.11
75	30.00 - 60.00% of mass 95	45.65
96	5.00 - 9.00% of mass 95	6.86
173	Less than 2.00% of mass 174	0.62 (0.72)
174	50.00 - 100.00% of mass 95	86.35
175	5.00 - 9.00% of mass 174	6.12 (7.09)
176	95.00 - 101.00% of mass 174	83.51 (96.71)
177	5.00 - 9.00% of mass 176	5.61 (6.72)

Column diameter: 0.25

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	476	63.00	1957	88.00	2668	142.00	52
37.00	2534	64.00	142	91.00	204	143.00	605
38.00	2595	65.00	303	92.00	1519	145.00	111
39.00	1106	67.00	129	93.00	2560	146.00	66
40.00	24	68.00	5558	94.00	6611	148.00	64
44.00	212	69.00	5470	95.00	63464	155.00	179
45.00	424	70.00	517	96.00	4356	157.00	66
47.00	782	72.00	336	97.00	161	172.00	534
48.00	340	73.00	2550	104.00	267	173.00	394
49.00	2157	74.00	9180	106.00	245	174.00	54800
50.00	10227	75.00	28968	116.00	144	175.00	3885
51.00	3113	76.00	2532	117.00	442	176.00	53000
52.00	116	77.00	409	118.00	140	177.00	3561
55.00	141	78.00	281	119.00	290	178.00	53
56.00	824	79.00	1307	128.00	211	207.00	80
57.00	1289	80.00	480	129.00	61		
60.00	558	81.00	1409	130.00	177		
61.00	2232	82.00	376	135.00	50		
62.00	2640	87.00	2697	141.00	604		

/chem/HP09915.i/20may04i.b/ly04i01.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20may04i.b/ly04i01.d
 Injection date and time: 04-MAY-2020 12:18

Instrument ID: HP09915.i
 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m
 Calibration date and time: 04-MAY-2020 19:29

Sublist used: 8260W

Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD300

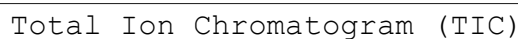
Lab Sample ID: VSTD300

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 on 05/04/2020 at 19:29.

Target 3.5 esignature user ID: sej02002

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September 2020

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may04i.b/ly04i01.d
 Injection date and time: 04-MAY-2020 12:18

Instrument ID: HP09915.i
 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 19:29

Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD300

Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
3) Dichlorodifluoromethane	(2)	2.091	85	2849449	310.933
4) Chloromethane	(2)	2.297	50	2445659	285.835
5) 1,3-Butadiene	(2)	2.416	39	1671151	304.456
6) Vinyl Chloride	(2)	2.419	62	2326215	281.733
8) Bromomethane	(2)	2.757	94	1628456	273.549
9) Chloroethane	(2)	2.847	64	1234318	267.749
10) Dichlorofluoromethane	(2)	3.107	67	2817375	283.327
12) Trichlorofluoromethane	(2)	3.165	101	2746924	304.613
11) n-Pentane	(2)	3.213	43	2725741	321.927
14) Ethyl ether	(2)	3.439	59	1949746	305.988
15) Freon 123a	(2)	3.525	67	2314368	316.788
16) Acrolein	(1)	3.622	56	6736298	2956.857
17) 1,1-Dichloroethene	(2)	3.763	96	1750450	304.377
17) 1,1-Dichloroethene	(2)	3.763	63	864563	315.653
19) Freon 113	(2)	3.799	101	1965220M	329.366
18) Acetone	(1)	3.808	58	589621	567.388
22) Methyl Iodide	(2)	3.972	142	3492933	315.159
21) 2-Propanol	(1)	3.998	45	1004357	1516.417
23) Carbon Disulfide	(2)	4.078	76	6201547	320.266
27) Methyl Acetate	(2)	4.242	43	2207320	300.940
25) Allyl Chloride	(2)	4.271	41	2951991M	316.747
28) Methylene Chloride	(2)	4.474	84	2081076	304.203
29) *t-Butyl alcohol-d10	(1)	4.493	65	276925	250.000
30) t-Butyl alcohol	(1)	4.631	59	1690701	1512.274
31) Acrylonitrile	(2)	4.831	53	1217218	299.575
33) Methyl Tertiary Butyl Ether	(2)	4.885	73	5922996	300.305
32) trans-1,2-Dichloroethene	(2)	4.889	96	2018303	305.069
34) n-Hexane	(2)	5.307	57	3435497	370.798
36) 1,1-Dichloroethane	(2)	5.551	63	3527467	303.995
38) di-Isopropyl ether	(2)	5.606	45	6436416	315.389
39) 2-Chloro-1,3-butadiene	(2)	5.657	53	3142519	339.593
40) Ethyl t-butyl ether	(2)	6.136	59	5819054	306.888
43) 1,2-Dichloroethene (Total)	(2)		96	4280297	609.947
44) 2-Butanone	(2)	6.358	43	3017645	611.860
42) cis-1,2-Dichloroethene	(2)	6.377	96	2261994	304.878
45) 2,2-Dichloropropane	(2)	6.393	77	2841421	316.832
47) Propionitrile	(1)	6.458	54	2395140	1585.804
48) Methacrylonitrile	(2)	6.667	67	3143939	771.811

M = Compound was manually integrated.

* = Compound is an internal standard.

page 1 of 4

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 on 05/04/2020 at 19:29.

Target 3.5 esignature user ID: sej02002

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may04i.b/ly04i01.d
 Injection date and time: 04-MAY-2020 12:18

Instrument ID: HP09915.i
 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 19:29

Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD300

Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
49) Bromochloromethane	(2)	6.705	128	1171429	306.006
50) Tetrahydrofuran	(1)	6.718	71	832254	629.784
51) Chloroform	(2)	6.853	83	3487929	307.674
52)\$Dibromofluoromethane	(2)	7.069	113	344246	51.133
52)\$Dibromofluoromethane	(2)	7.065	111	351617	51.092
53) 1,1,1-Trichloroethane	(2)	7.078	97	3105225	319.282
54) Cyclohexane	(2)	7.172	56	3858125	354.379
54) Cyclohexane	(2)	7.172	84	3361998	353.780
54) Cyclohexane	(2)	7.175	69	1189358	351.544
56) Carbon Tetrachloride	(2)	7.284	117	2686794	329.725
55) 1,1-Dichloropropene	(2)	7.291	75	2884427	323.528
58) Isobutyl Alcohol	(1)	7.451	41	1518165	4002.966
57)\$1,2-Dichloroethane-d4	(2)	7.522	102	85616	50.117
57)\$1,2-Dichloroethane-d4	(2)	7.522	65	386104	50.918
57)\$1,2-Dichloroethane-d4	(2)	7.528	104	54697	50.282
60) Benzene	(2)	7.554	78	8331618	301.883
61) 1,2-Dichloroethane	(2)	7.628	62	2775900	300.052
61) 1,2-Dichloroethane	(2)	7.628	98	279550	310.087
65) t-Amyl methyl ether	(2)	7.737	73	5782061	298.496
67) n-Heptane	(2)	7.953	43	3459353	359.052
66)*Fluorobenzene	(2)	7.956	96	1336369	50.000
69) n-Butanol	(1)	8.323	56	2625257	8489.394
71) Trichloroethene	(2)	8.429	95	2175307	311.470
72) Methylcyclohexane	(2)	8.728	83	3912993	344.571
72) Methylcyclohexane	(2)	8.728	98	1789837	348.458
73) 1,2-Dichloropropane	(2)	8.763	63	2097702	294.997
76) Methyl Methacrylate	(2)	8.840	69	2065513	337.817
75) 1,4-Dioxane	(1)	8.847	88	360140M	3874.180
74) Dibromomethane	(2)	8.872	93	1442276	310.134
78) Bromodichloromethane	(2)	9.104	83	2778142	333.221
79) 2-Nitropropane	(2)	9.380	41	1686406	674.629
80) 2-Chloroethyl Vinyl Ether	(2)	9.451	63	1696782	358.355
81) cis-1,3-Dichloropropene	(2)	9.631	75	3652268	335.198
82) 4-Methyl-2-pentanone	(2)	9.798	43	6253254	626.102
83)\$Toluene-d8	(3)	9.927	98	1397873	51.358
83)\$Toluene-d8	(3)	9.927	100	912756	51.674
88) Toluene	(3)	10.001	92	5231241	301.533
90) 1,3-Dichloropropene (total)	(3)		100	7027137	674.241

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 2 of 4

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 on 05/04/2020 at 19:29.

Target 3.5 esignature user ID: sej02002

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may04i.b/ly04i01.d
 Injection date and time: 04-MAY-2020 12:18

Instrument ID: HP09915.i
 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 19:29

Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD300

Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
89) trans-1,3-Dichloropropene	(3)	10.252	75	3374869	339.043
91) Ethyl Methacrylate	(3)	10.306	69	3527262	352.166
92) 1,1,2-Trichloroethane	(3)	10.454	97	2073298	307.981
93) Tetrachloroethene	(3)	10.535	166	2380389	321.959
94) 1,3-Dichloropropane	(3)	10.615	76	3522161	312.866
96) 2-Hexanone	(3)	10.660	43	4626222	635.941
97) Dibromochloromethane	(3)	10.821	129	2435189	347.755
99) 1,2-Dibromoethane	(3)	10.930	107	2364461	326.815
100) *Chlorobenzene-d5	(3)	11.355	117	1059501	50.000
101) 1-Chlorohexane	(3)	11.358	91	2908408	327.586
102) Chlorobenzene	(3)	11.380	112	5895135	295.899
103) 1,1,1,2-Tetrachloroethane	(3)	11.461	131	2040552	302.127
104) Ethylbenzene	(3)	11.464	91	9686310	301.633
106) m+p-Xylene	(3)	11.577	106	7482333	593.004
108) Xylene (Total)	(3)		106	11168702	895.120
107) o-Xylene	(3)	11.901	106	3686369	302.116
109) Styrene	(3)	11.917	104	6296133	317.282
110) Bromoform	(3)	12.075	173	1837073	360.361
111) Isopropylbenzene	(3)	12.200	105	10092328	325.945
112) Cyclohexanone	(1)	12.281	55	1298373A	3752.287
114) \$4-Bromofluorobenzene	(3)	12.342	95	539077	51.474
114) \$4-Bromofluorobenzene	(3)	12.345	174	460451	51.282
116) 1,1,2,2-Tetrachloroethane	(4)	12.445	83	3144189	289.308
115) Bromobenzene	(4)	12.461	156	2447059	280.512
118) trans-1,4-Dichloro-2-butene	(4)	12.470	53	2386999	755.035
117) 1,2,3-Trichloropropane	(4)	12.493	110	994731	299.689
119) n-Propylbenzene	(4)	12.528	91	11653592	309.091
120) 2-Chlorotoluene	(4)	12.605	126	2503021	310.746
122) 1,3,5-Trimethylbenzene	(4)	12.660	105	8770052	321.916
121) 4-Chlorotoluene	(4)	12.695	126	2564262	306.721
124) tert-Butylbenzene	(4)	12.901	134	1876803M	335.139
125) Pentachloroethane	(4)	12.933	167	1529691	307.565
126) 1,2,4-Trimethylbenzene	(4)	12.943	105	8738342	310.227
127) sec-Butylbenzene	(4)	13.065	105	10837099	326.714
129) 1,3-Dichlorobenzene	(4)	13.162	146	4405889	271.032
130) p-Isopropyltoluene	(4)	13.171	119	8821149	310.365
131) *1,4-Dichlorobenzene-d4	(4)	13.220	152	596140	50.000
133) 1,4-Dichlorobenzene	(4)	13.236	146	4664438	273.400

M = Compound was manually integrated.

A = User selected an alternate hit.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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 on 05/04/2020 at 19:29.

page 3 of 4

Target 3.5 esignature user ID: sej02002

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may04i.b/ly04i01.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 12:18

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 19:29

Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD300

Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
134) 1,2,3-Trimethylbenzene	(4)	13.248	105	8522094	291.186
135) Benzyl Chloride	(4)	13.313	91	7372827	332.941
136) 1,3-Diethylbenzene	(4)	13.367	119	5620297	306.903
141) Diethylbenzene (total)	(4)		100	15927292	898.580
137) 1,4-Diethylbenzene	(4)	13.441	119	5732746	299.071
139) n-Butylbenzene	(4)	13.461	92	4551903	311.717
138) 1,2-Dichlorobenzene	(4)	13.496	146	4532401	277.010
140) 1,2-Diethylbenzene	(4)	13.515	119	4574249	292.606
142) 1,2-Dibromo-3-chloropropane	(4)	14.039	75	799123	332.209
144) 1,3,5-Trichlorobenzene	(4)	14.162	180	3668043	297.595
146) 1,2,4-Trichlorobenzene	(4)	14.586	180	3403261	295.460
147) Hexachlorobutadiene	(4)	14.666	225	1492448	280.870
148) Naphthalene	(4)	14.769	128	11189563	300.110
149) 1,2,3-Trichlorobenzene	(4)	14.914	180	3150450	275.252
150) 2-Methylnaphthalene	(4)	15.560	142	5808143	299.728

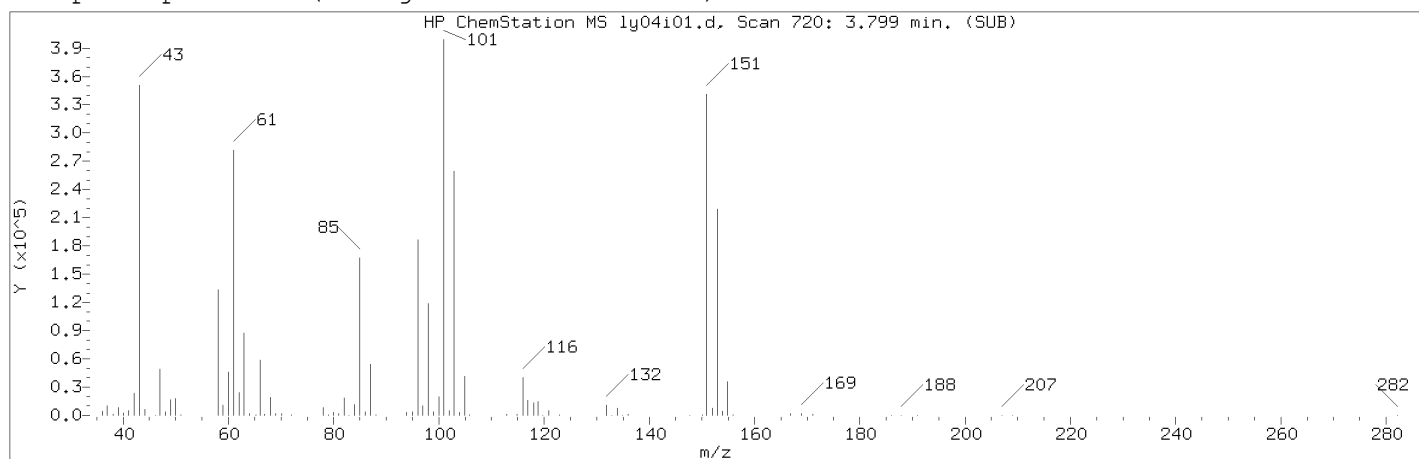
page 4 of 4

Digitally signed by Sara E. Johnson
on 05/04/2020 at 19:29.

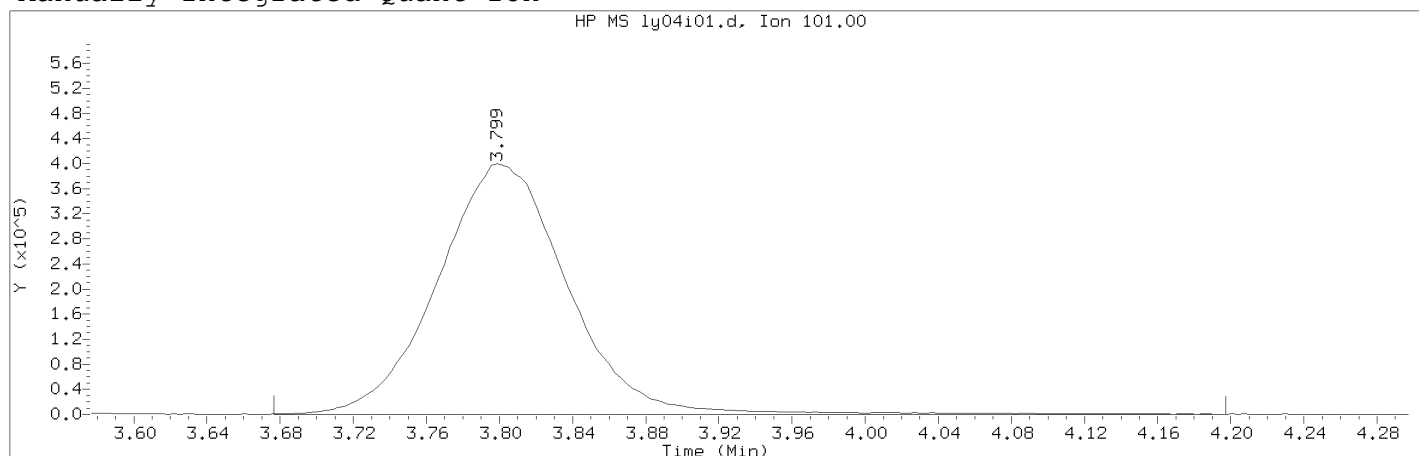
Target 3.5 esignature user ID: sej02002

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Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i01.d Instrument ID: HP09915.i
 Injection date and time: 04-MAY-2020 12:18 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 04-MAY-2020 19:29
 Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD300

Lab Sample ID: VSTD300

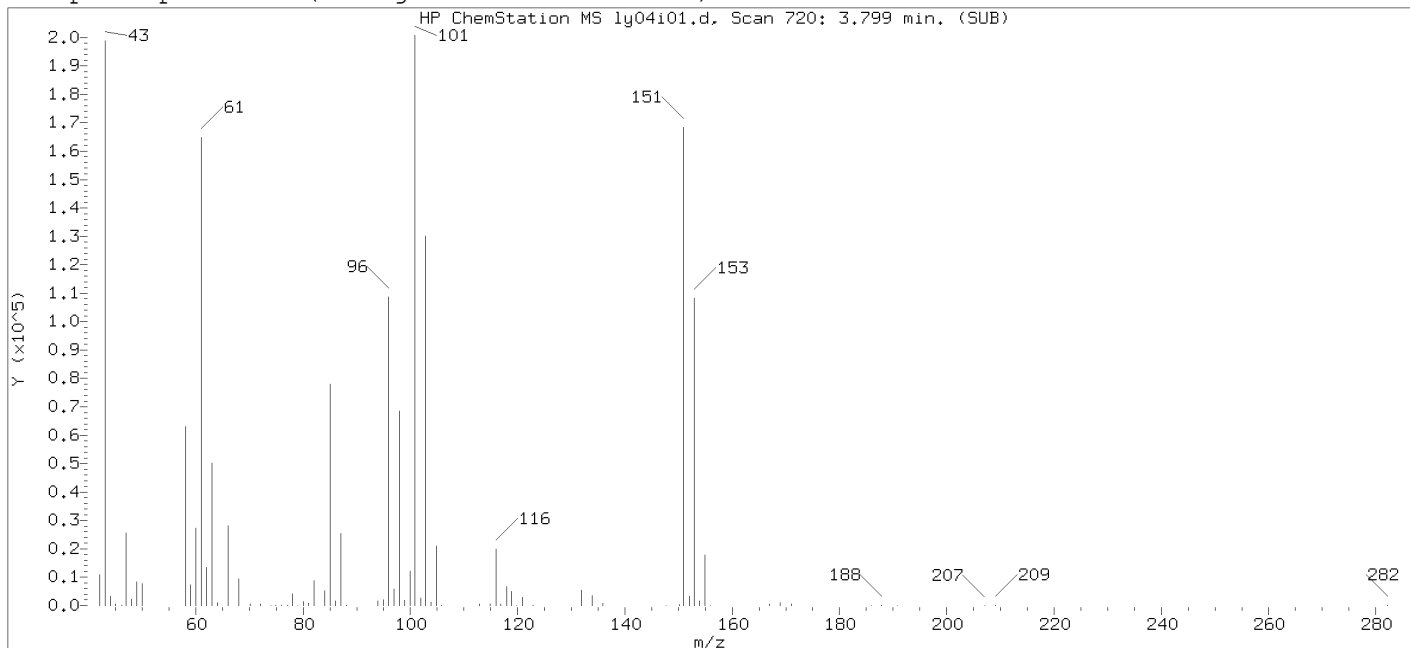
Compound Number : 19
 Compound Name : Freon 113
 Scan Number : 720
 Retention Time (minutes): 3.799
 Quant Ion : 101.00
 Area (flag) : 1965220M
 On-Column Amount (ng) : 329.3664
 Integration start scan : 681 Integration stop scan: 843
 Y at integration start : 276 Y at integration end: 276

Reason for manual integration: improper integration

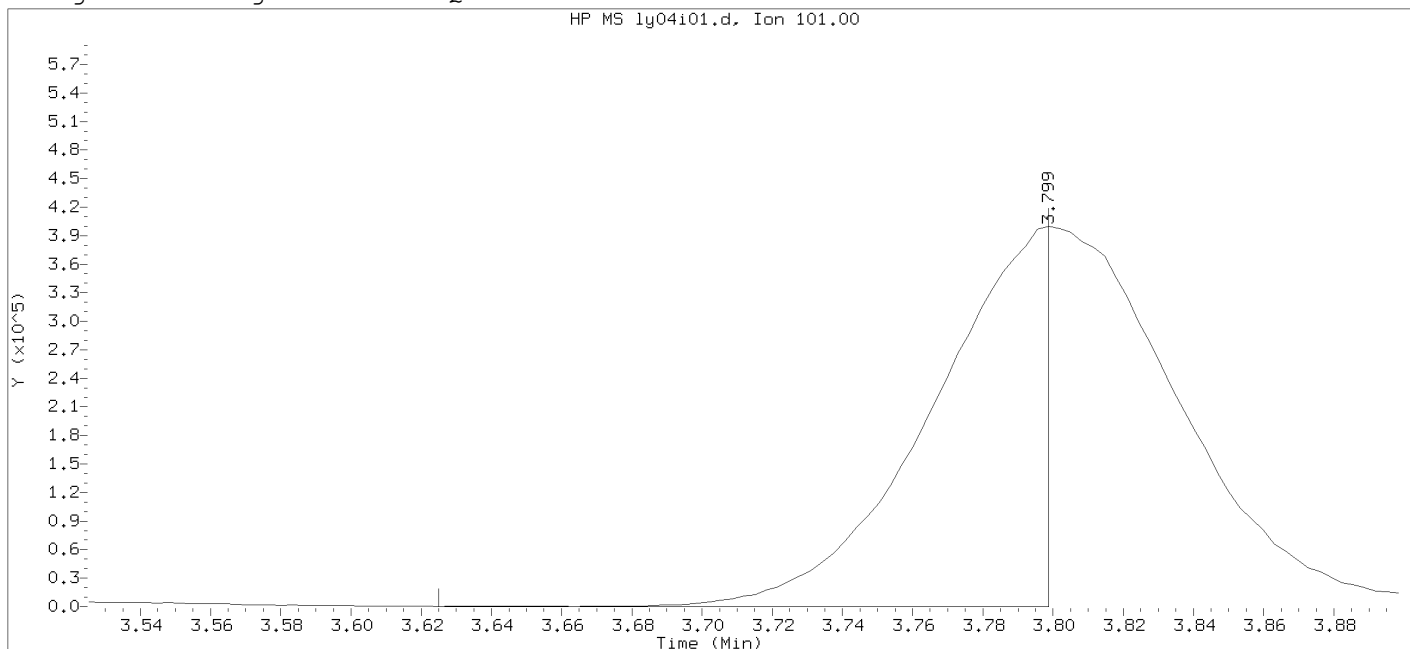
Analyst responsible for change: Digitally signed by Sara E. Johnson
 on 05/04/2020 at 19:29.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/06/2020 at 08:34.
 PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i01.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 12:18

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 13:31

Date, time and analyst ID of latest file update: 04-May-2020 13:31 lcp00895

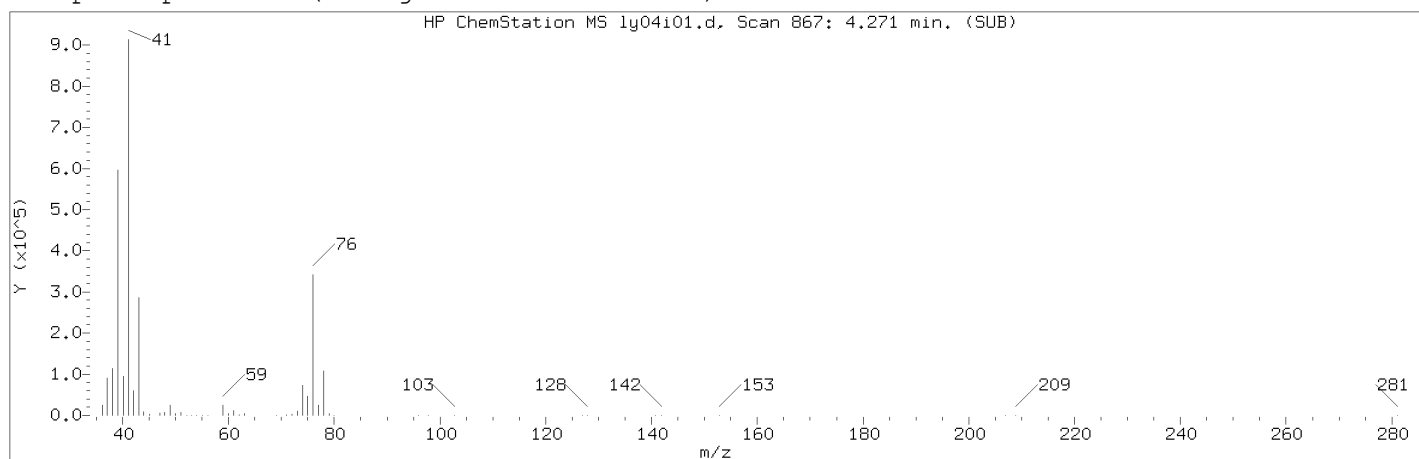
Sample Name: VSTD300

Lab Sample ID: VSTD300

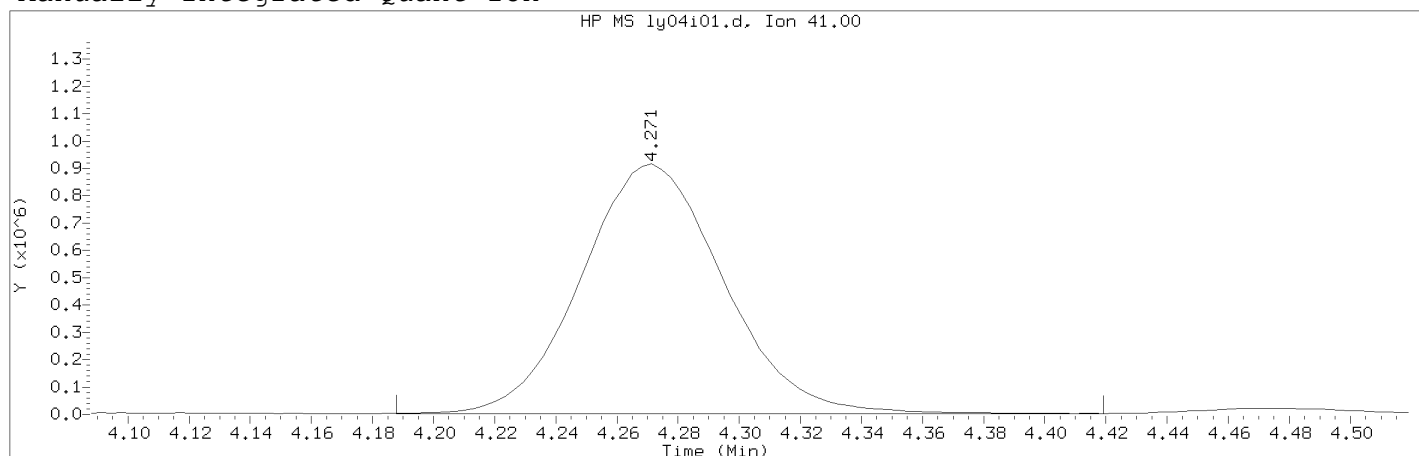
Compound Number	: 19
Compound Name	: Freon 113
Scan Number	: 720
Retention Time (minutes)	: 3.799
Quant Ion	: 101.00
Area	: 893647
On-column Amount (ng)	: 300.0000
Integration start scan	: 665
Integration stop scan	: 719
Y at integration start	: 308
Y at integration end	: 308

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 Target 3.5 esignature user KR446 Page 113 of 579

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i01.d Instrument ID: HP09915.i
 Injection date and time: 04-MAY-2020 12:18 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 04-MAY-2020 19:29
 Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD300 Lab Sample ID: VSTD300

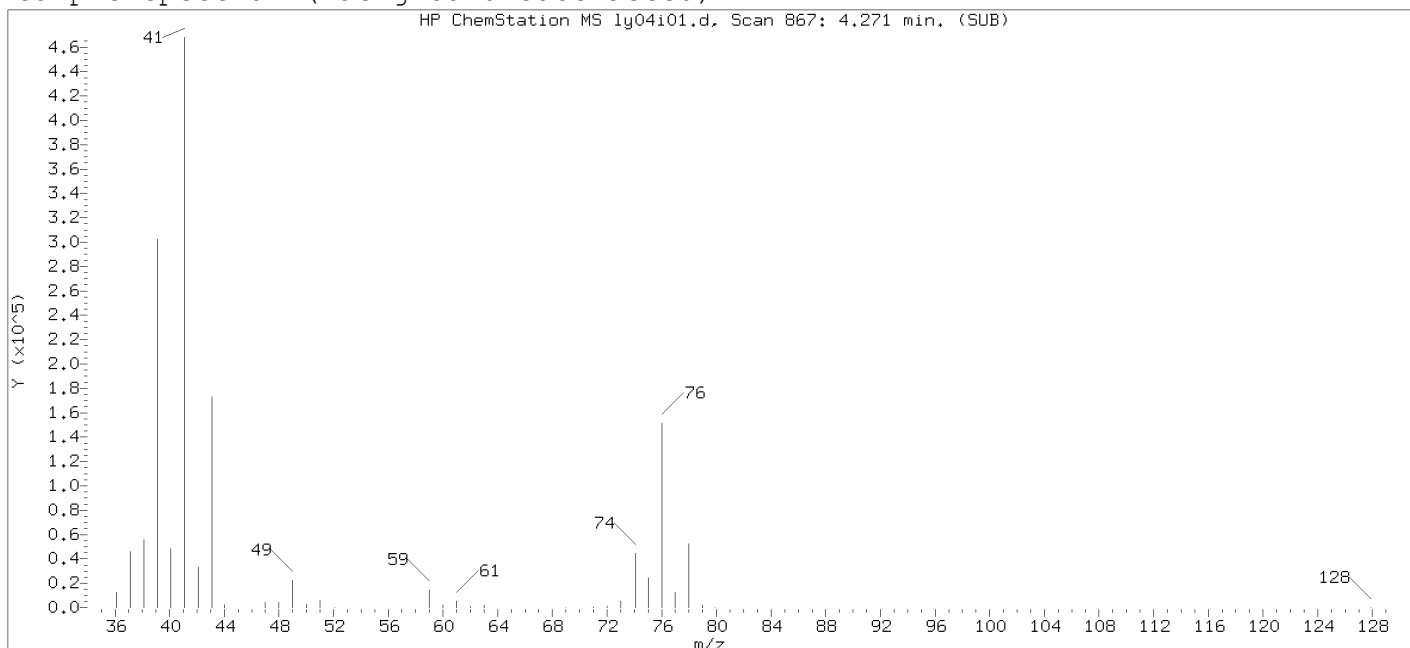
Compound Number : 25
 Compound Name : Allyl Chloride
 Scan Number : 867
 Retention Time (minutes): 4.271
 Quant Ion : 41.00
 Area (flag) : 2951991M
 On-Column Amount (ng) : 316.7471
 Integration start scan : 840 Integration stop scan: 912
 Y at integration start : 2551 Y at integration end: 2551

Reason for manual integration: improper integration

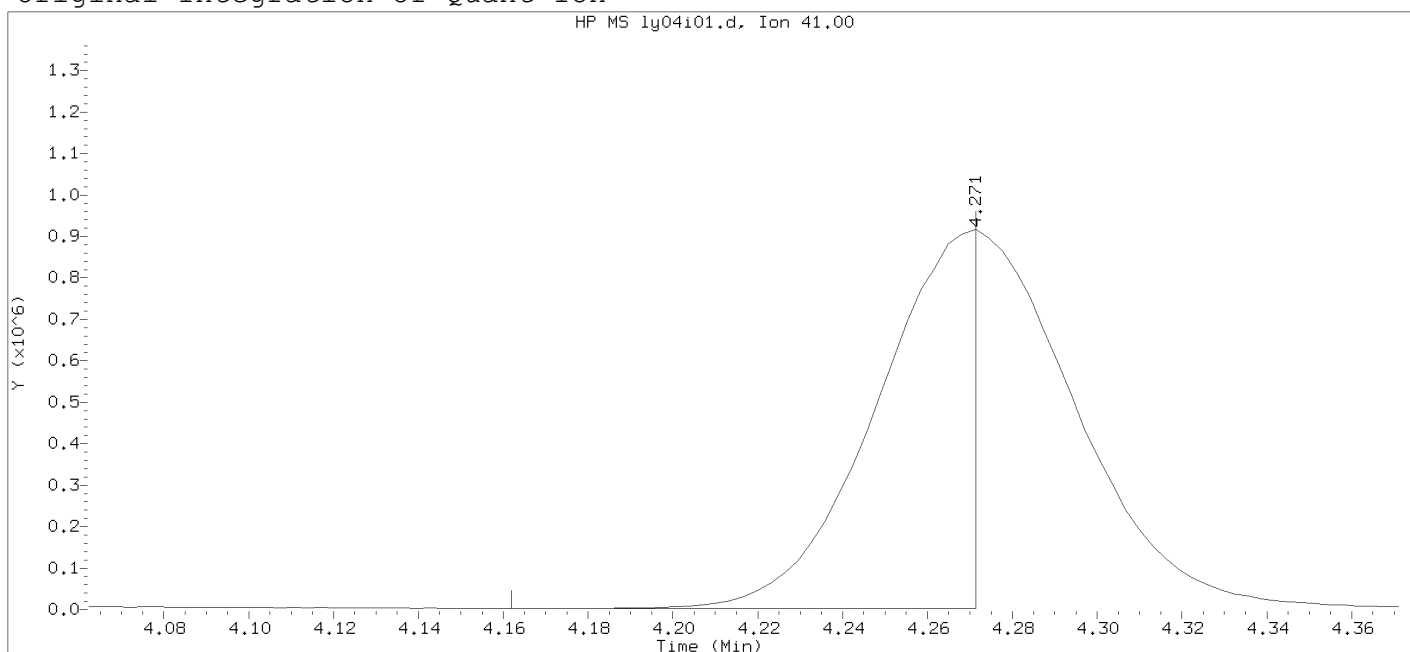
Analyst responsible for change: Digitally signed by Sara E. Johnson
 on 05/04/2020 at 19:29.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/06/2020 at 08:34.
 PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20may04i.b/ly04i01.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 12:18

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 13:31

Date, time and analyst ID of latest file update: 04-May-2020 13:31 lcp00895

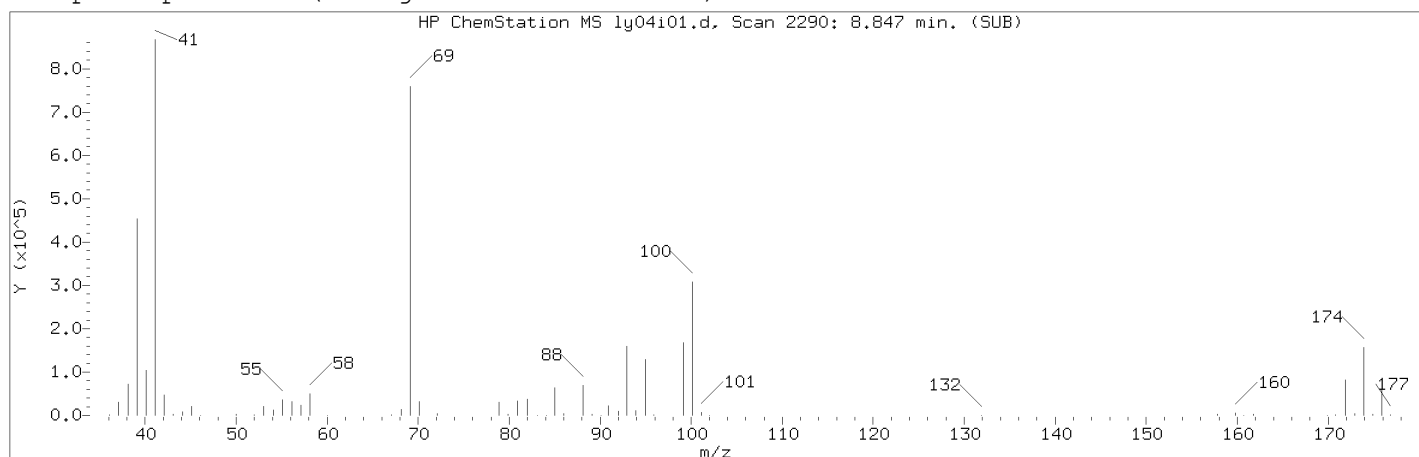
Sample Name: VSTD300

Lab Sample ID: VSTD300

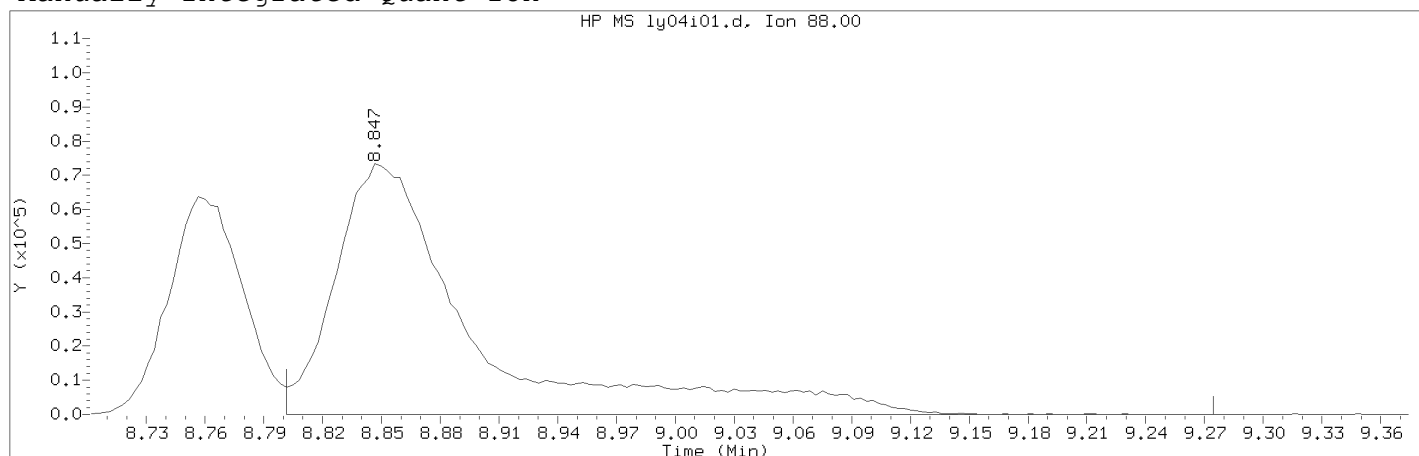
Compound Number	: 25
Compound Name	: Allyl Chloride
Scan Number	: 867
Retention Time (minutes)	: 4.271
Quant Ion	: 41.00
Area	: 1439953
On-column Amount (ng)	: 300.0000
Integration start scan	: 832
Integration stop scan	: 866
Y at integration start	: 2601
Y at integration end	: 2601

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 Target 3.5 esignature user KR446 Page 115 of 579

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i01.d Instrument ID: HP09915.i
 Injection date and time: 04-MAY-2020 12:18 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 04-MAY-2020 19:29
 Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD300

Lab Sample ID: VSTD300

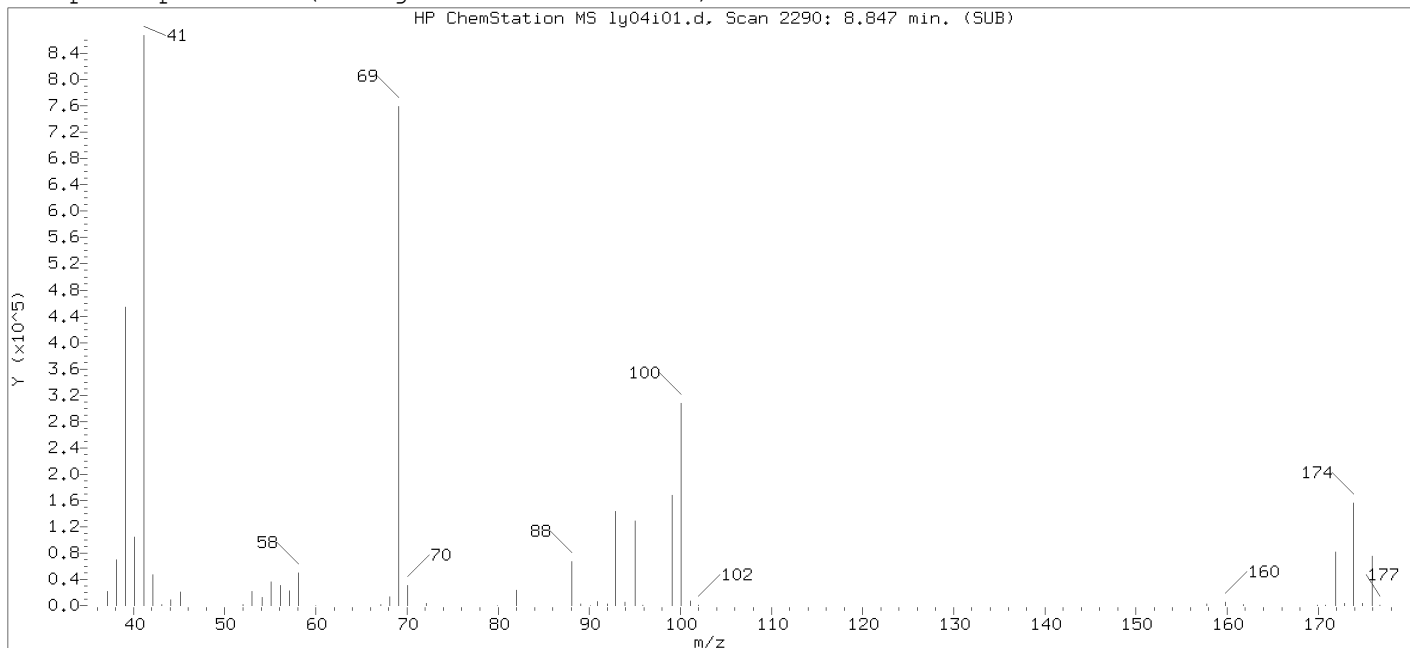
Compound Number : 75
 Compound Name : 1,4-Dioxane
 Scan Number : 2290
 Retention Time (minutes): 8.847
 Quant Ion : 88.00
 Area (flag) : 360140M
 On-Column Amount (ng) : 3874.1804
 Integration start scan : 2275 Integration stop scan: 2422
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

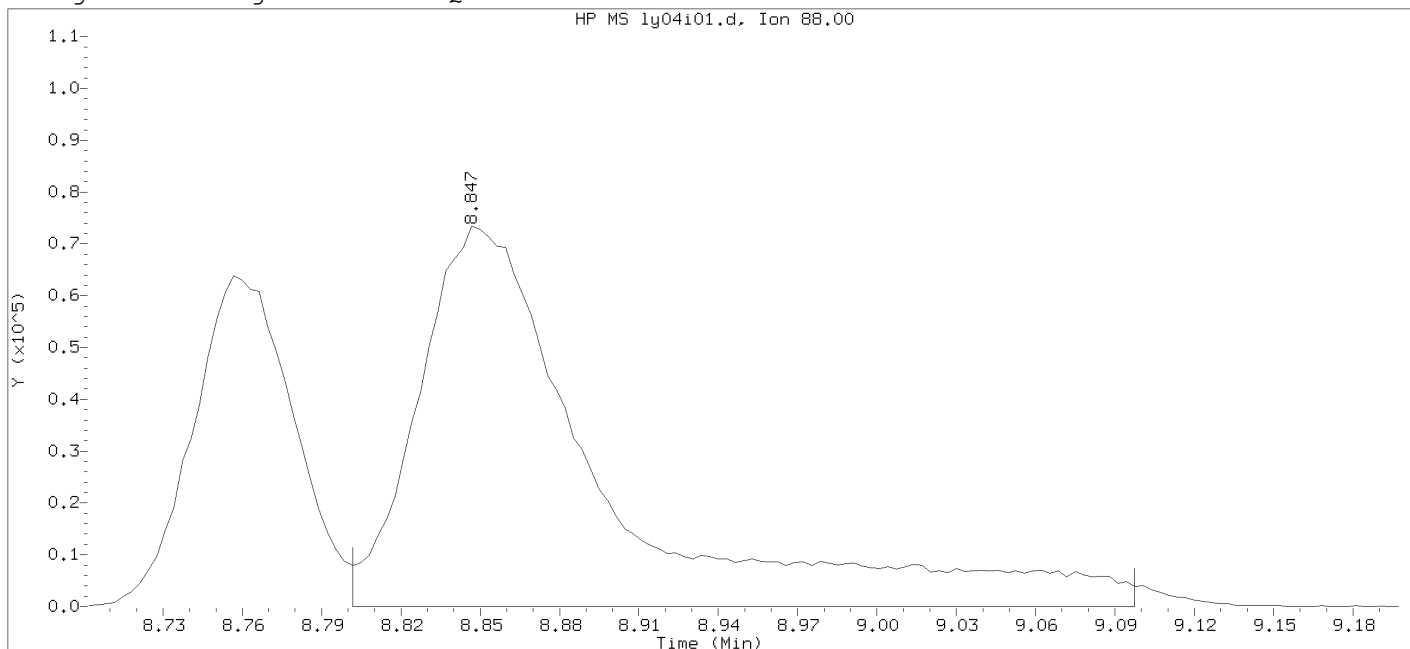
Analyst responsible for change: Digitally signed by Sara E. Johnson
 on 05/04/2020 at 19:29.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/06/2020 at 08:34.
 PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20may04i.b/ly04i01.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 12:18

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 13:31

Date, time and analyst ID of latest file update: 04-May-2020 13:31 lcp00895

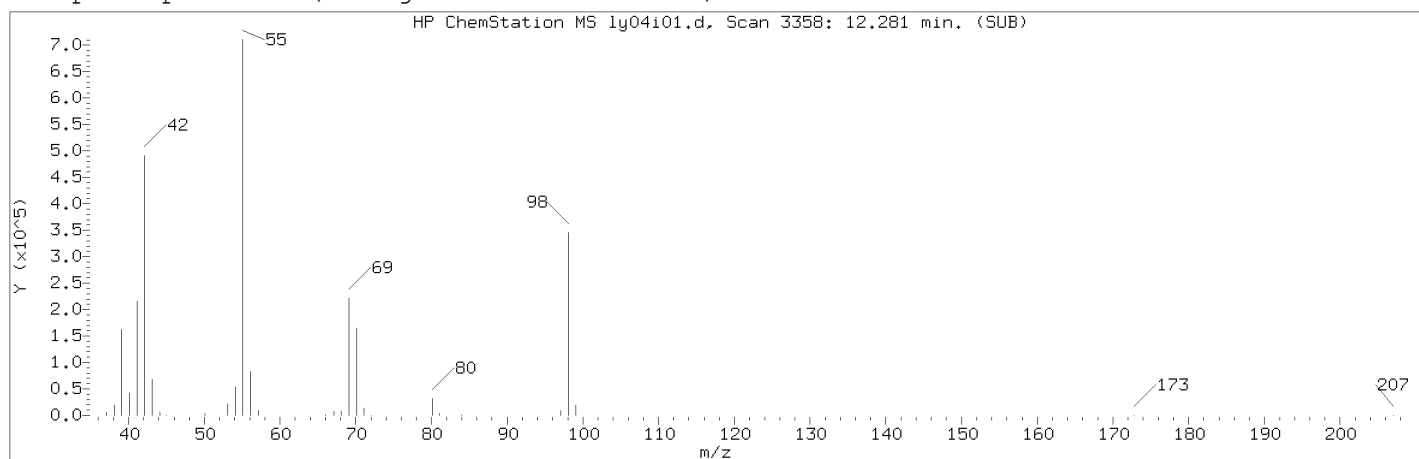
Sample Name: VSTD300

Lab Sample ID: VSTD300

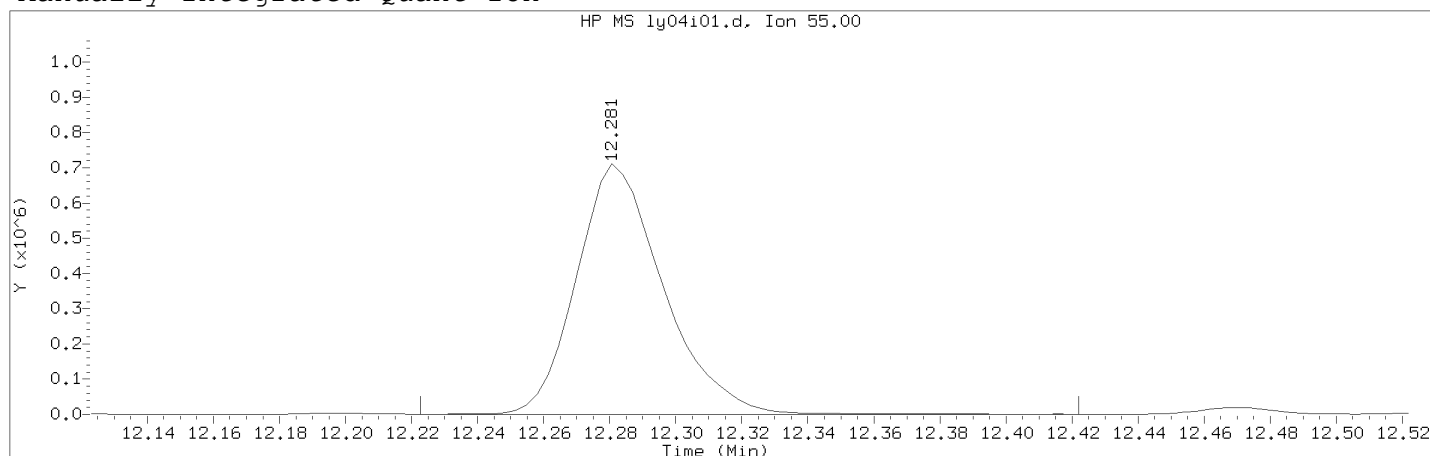
Compound Number : 75
 Compound Name : 1,4-Dioxane
 Scan Number : 2290
 Retention Time (minutes): 8.847
 Quant Ion : 88.00
 Area : 354631
 On-column Amount (ng) : 3750.0000
 Integration start scan : 2275 Integration stop scan: 2367
 Y at integration start : 0 Y at integration end: 0

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 Target 3.5 esignature user KR446 Page 117 of 579

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i01.d Instrument ID: HP09915.i
 Injection date and time: 04-MAY-2020 12:18 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 04-MAY-2020 19:29
 Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD300

Lab Sample ID: VSTD300

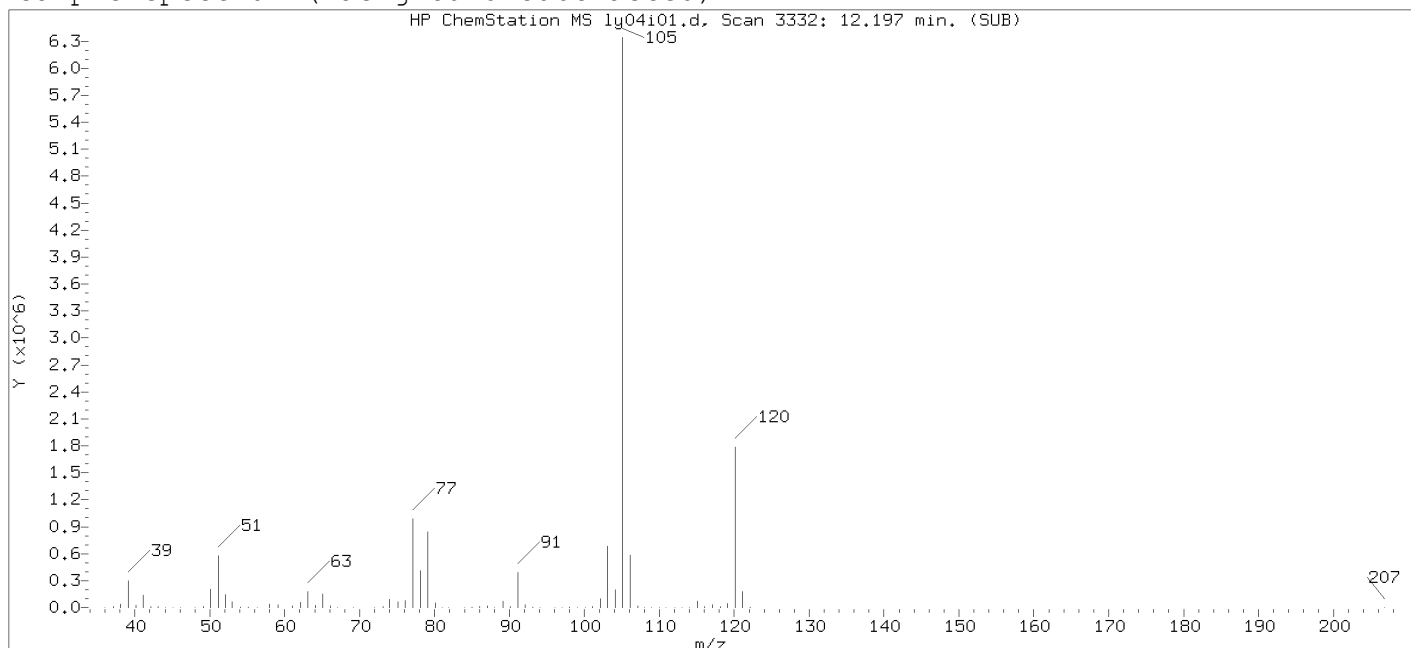
Compound Number : 112
 Compound Name : Cyclohexanone
 Scan Number : 3358
 Retention Time (minutes): 12.281
 Quant Ion : 55.00
 Area (flag) : 1298373A
 On-Column Amount (ng) : 3752.2869
 Integration start scan : 3339 Integration stop scan: 3401
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

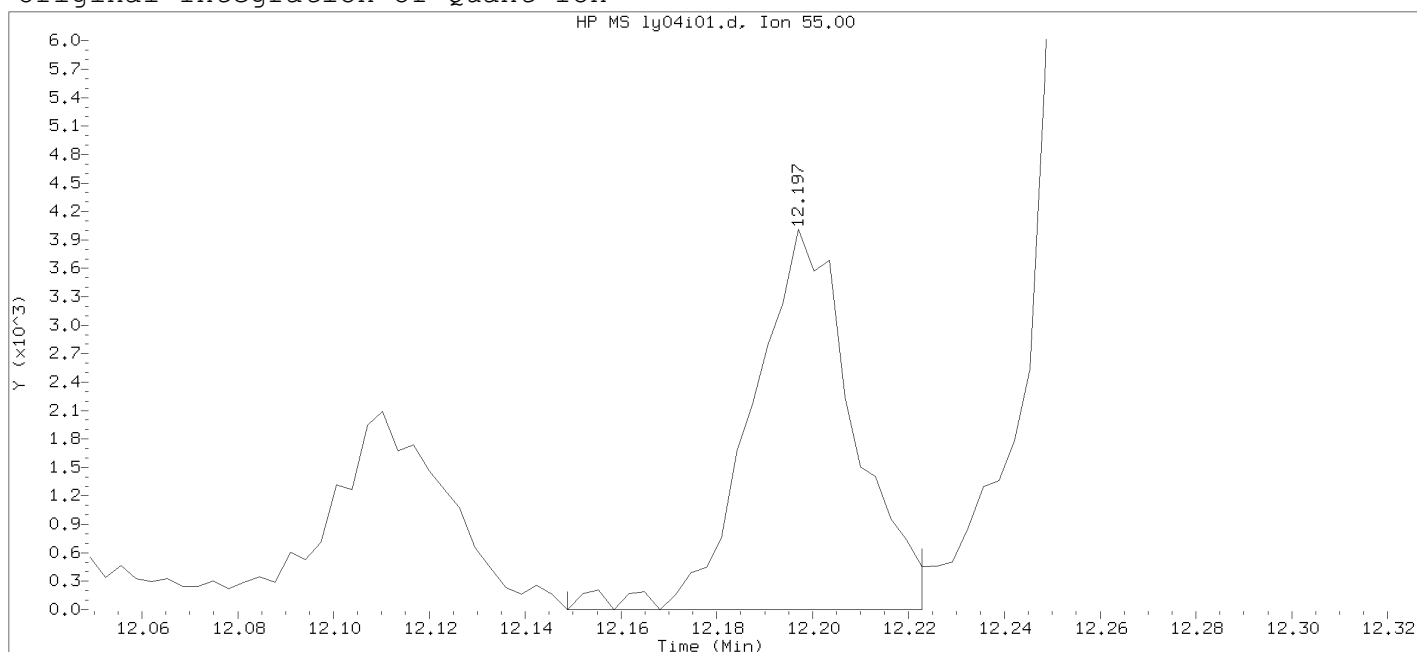
Analyst responsible for change: Digitally signed by Sara E. Johnson
 on 05/04/2020 at 19:29.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/06/2020 at 08:34.
 PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20may04i.b/ly04i01.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 12:18

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 13:31

Date, time and analyst ID of latest file update: 04-May-2020 13:31 lcp00895

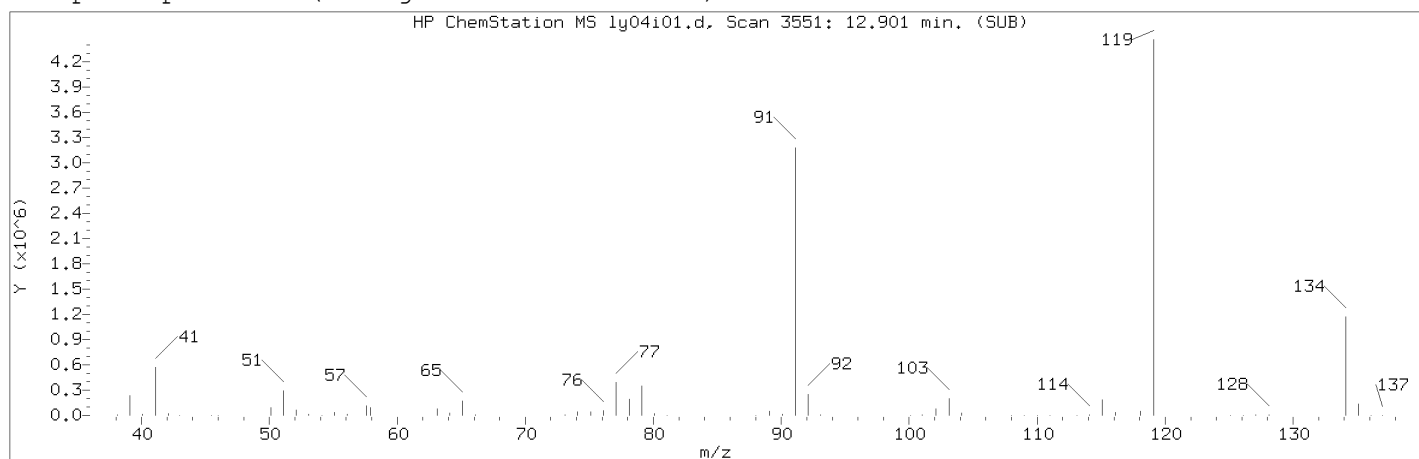
Sample Name: VSTD300

Lab Sample ID: VSTD300

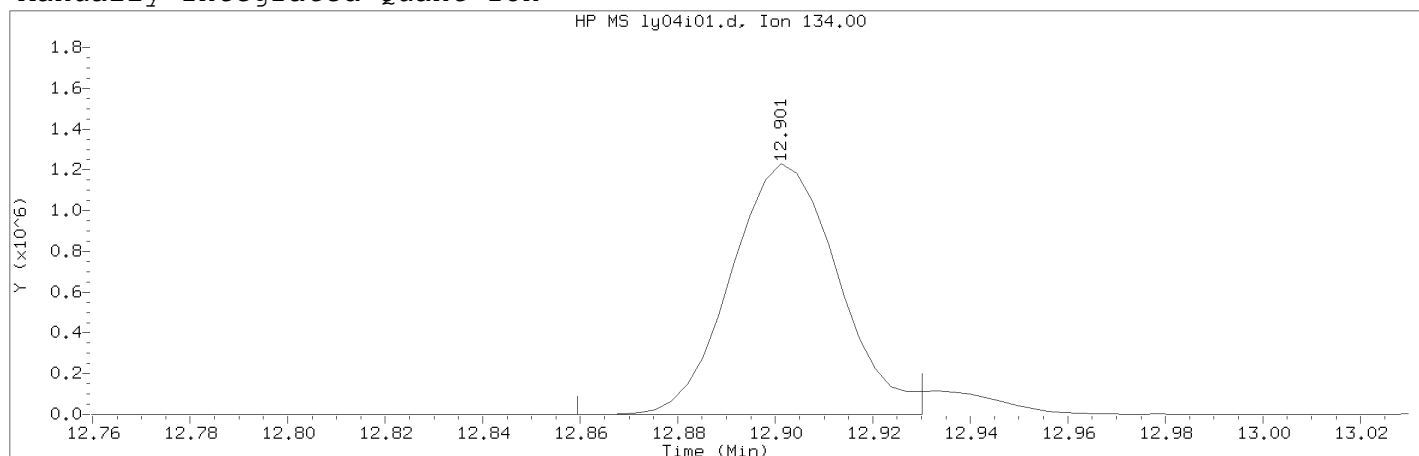
Compound Number	: 112
Compound Name	: Cyclohexanone
Scan Number	: 3332
Retention Time (minutes)	: 12.197
Quant Ion	: 55.00
Area	: 5922
On-column Amount (ng)	: 3750.0000
Integration start scan	: 3316
Integration stop scan	: 3339
Y at integration start	: 0
Y at integration end	: 0

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 Target 3.5 esignature user KR446 Page 119 of 579

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i01.d Instrument ID: HP09915.i
 Injection date and time: 04-MAY-2020 12:18 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 04-MAY-2020 19:29
 Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD300

Lab Sample ID: VSTD300

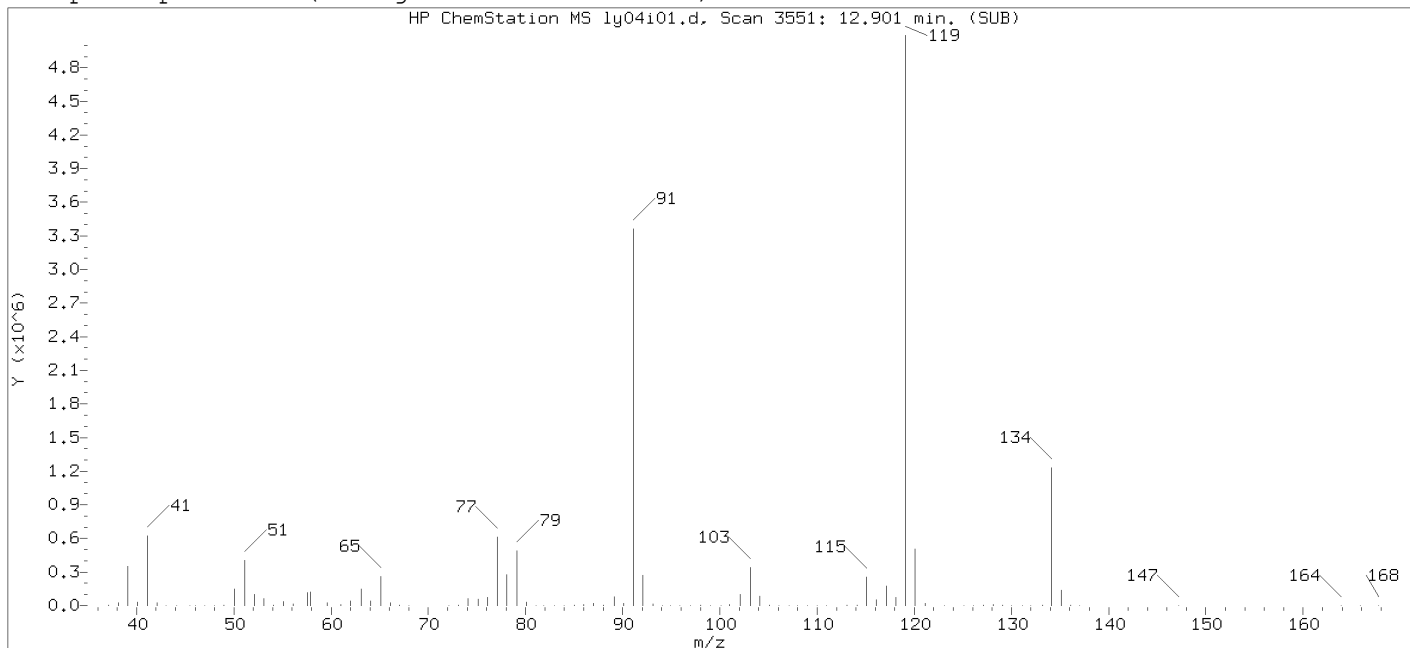
Compound Number : 124
 Compound Name : tert-Butylbenzene
 Scan Number : 3551
 Retention Time (minutes): 12.901
 Quant Ion : 134.00
 Area (flag) : 1876803M
 On-Column Amount (ng) : 335.1392
 Integration start scan : 3537 Integration stop scan: 3559
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

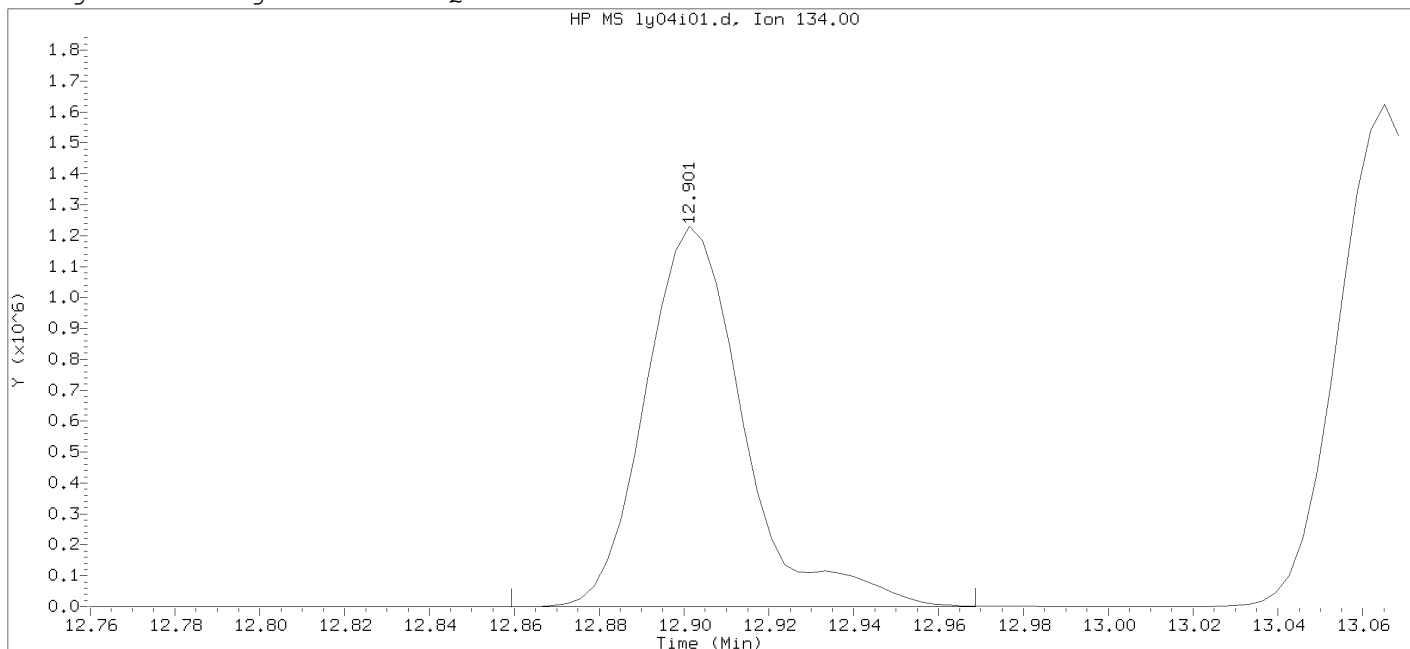
Analyst responsible for change: Digitally signed by Sara E. Johnson
 on 05/04/2020 at 19:29.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/06/2020 at 08:34.
 PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20may04i.b/ly04i01.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 12:18

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 13:31

Date, time and analyst ID of latest file update: 04-May-2020 13:31 lcp00895

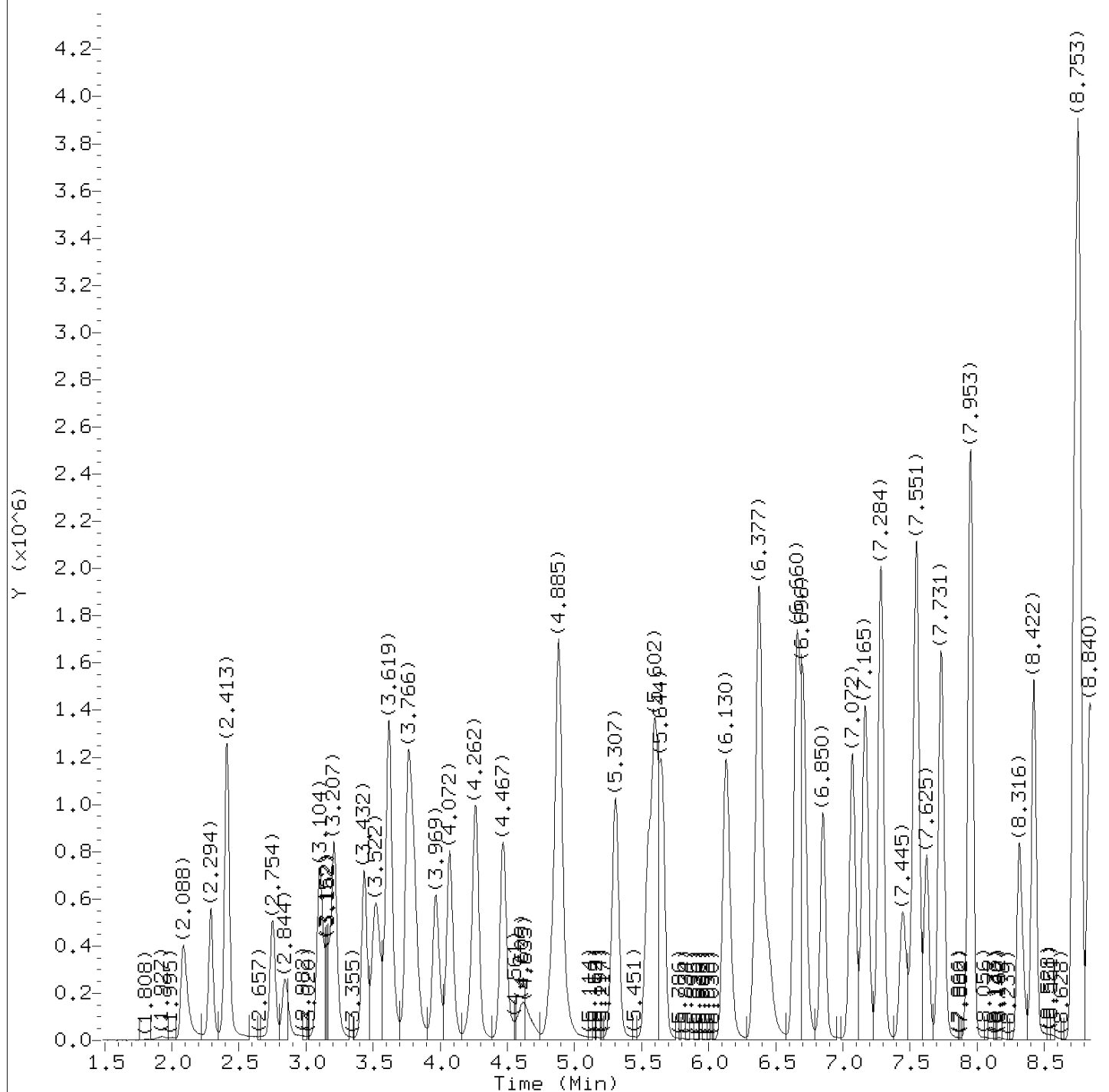
Sample Name: VSTD300

Lab Sample ID: VSTD300

Compound Number	:	124	
Compound Name	:	tert-Butylbenzene	
Scan Number	:	3551	
Retention Time (minutes)	:	12.901	
Quant Ion	:	134.00	
Area	:	1987823	
On-column Amount (ng)	:	300.0000	
Integration start scan	:	3537	Integration stop scan: 3571
Y at integration start	:	0	Y at integration end: 0

Digitally signed by Sara E. Johnson on 05/04/2020 at 19:29.
 Target 3.5 esignature user KR446 Page 121 of 579

/chem/HP09915.i/20may04i.b/ly04i02.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20may04i.b/ly04i02.d
 Injection date and time: 04-MAY-2020 12:40

Instrument ID: HP09915.i
 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m
 Calibration date and time: 04-MAY-2020 19:29

Sublist used: 8260W

Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD100

Lab Sample ID: VSTD100

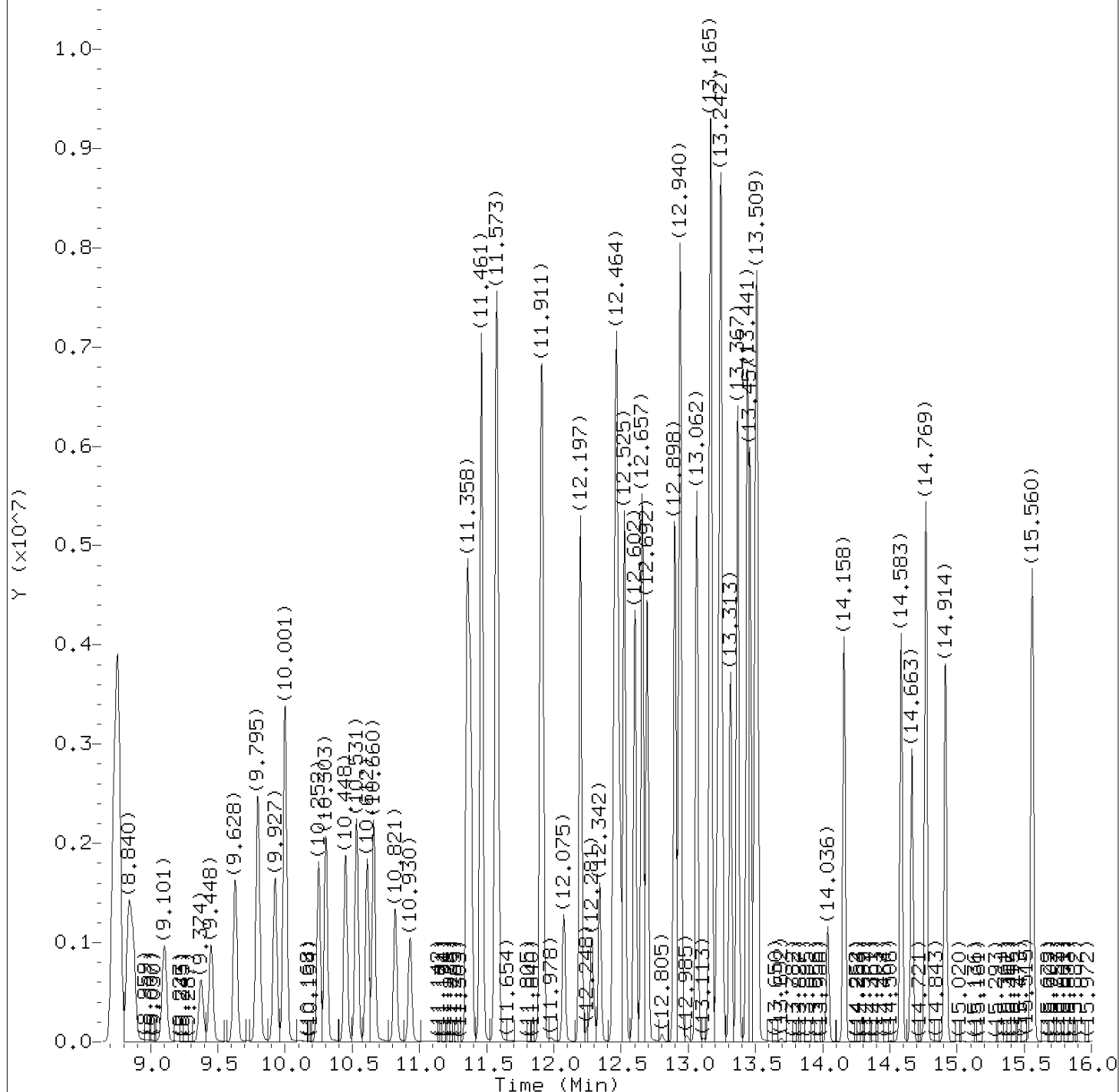
Digitally signed by Sara E. Johnson
 on 05/04/2020 at 19:30.

Target 3.5 esignature user ID: sej02002

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/chem/HP09915.i/20may04i.b/ly04i02.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20may04i.b/ly04i02.d
 Injection date and time: 04-MAY-2020 12:40

Instrument ID: HP09915.i
 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m
 Calibration date and time: 04-MAY-2020 19:29

Sublist used: 8260W

Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD100

Lab Sample ID: VSTD100

Digitally signed by Sara E. Johnson
 on 05/04/2020 at 19:30.

Target 3.5 esignature user ID: sej02002

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may04i.b/ly04i02.d
 Injection date and time: 04-MAY-2020 12:40

Instrument ID: HP09915.i
 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 19:29

Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD100

Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
3) Dichlorodifluoromethane	(2)	2.088	85	853077	95.314
4) Chloromethane	(2)	2.291	50	786838	94.160
5) 1,3-Butadiene	(2)	2.410	39	520508	97.096
6) Vinyl Chloride	(2)	2.413	62	744105	92.275
8) Bromomethane	(2)	2.754	94	519305	89.319
9) Chloroethane	(2)	2.844	64	387582	86.085
10) Dichlorofluoromethane	(2)	3.101	67	879288	90.539
12) Trichlorofluoromethane	(2)	3.162	101	829326	94.165
11) n-Pentane	(2)	3.210	43	821828	99.384
14) Ethyl ether	(2)	3.432	59	654590	105.186
15) Freon 123a	(2)	3.522	67	719785	100.879
16) Acrolein	(1)	3.619	56	2202055	982.350
17) 1,1-Dichloroethene	(2)	3.760	96	549714	97.873
17) 1,1-Dichloroethene	(2)	3.760	63	273099	102.093
19) Freon 113	(2)	3.795	101	592843	101.735
18) Acetone	(1)	3.802	58	188610	184.460
22) Methyl Iodide	(2)	3.969	142	1096160	101.269
21) 2-Propanol	(1)	3.985	45	318831	489.238
23) Carbon Disulfide	(2)	4.072	76	1939244	102.543
27) Methyl Acetate	(2)	4.239	43	716612	100.037
25) Allyl Chloride	(2)	4.268	41	969396	106.503
28) Methylene Chloride	(2)	4.471	84	666610	99.772
29) *t-Butyl alcohol-d10	(1)	4.490	65	272479	250.000
30) t-Butyl alcohol	(1)	4.622	59	557035	506.379
31) Acrylonitrile	(2)	4.827	53	384725	96.951
33) Methyl Tertiary Butyl Ether	(2)	4.876	73	1974492	102.504
32) trans-1,2-Dichloroethene	(2)	4.885	96	643936	99.659
34) n-Hexane	(2)	5.307	57	980157	108.319
36) 1,1-Dichloroethane	(2)	5.548	63	1150743	101.542
38) di-Isopropyl ether	(2)	5.599	45	2135393	107.138
39) 2-Chloro-1,3-butadiene	(2)	5.654	53	983912	108.868
40) Ethyl t-butyl ether	(2)	6.130	59	1972223	106.499
43) 1,2-Dichloroethene (Total)	(2)		96	1379003	201.103
44) 2-Butanone	(2)	6.348	43	955566	198.384
42) cis-1,2-Dichloroethene	(2)	6.377	96	735067	101.444
45) 2,2-Dichloropropane	(2)	6.384	77	906496	103.496
47) Propionitrile	(1)	6.448	54	775173	521.611
48) Methacrylonitrile	(2)	6.657	67	1032016	259.410

* = Compound is an internal standard.

page 1 of 4

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 on 05/04/2020 at 19:30.

Target 3.5 esignature user ID: sej02002

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may04i.b/ly04i02.d
 Injection date and time: 04-MAY-2020 12:40

Instrument ID: HP09915.i
 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 19:29

Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD100

Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
49) Bromochloromethane	(2)	6.702	128	387109	103.541
50) Tetrahydrofuran	(1)	6.715	71	265025	203.822
51) Chloroform	(2)	6.850	83	1119265	101.093
52)\$Dibromofluoromethane	(2)	7.069	113	329675	50.139
52)\$Dibromofluoromethane	(2)	7.069	111	336828	50.113
53) 1,1,1-Trichloroethane	(2)	7.075	97	966703	101.774
54) Cyclohexane	(2)	7.165	56	1163895	109.463
54) Cyclohexane	(2)	7.168	84	1000103	107.756
54) Cyclohexane	(2)	7.165	69	357764	108.275
56) Carbon Tetrachloride	(2)	7.278	117	830197	104.318
55) 1,1-Dichloropropene	(2)	7.287	75	900576	103.427
58) Isobutyl Alcohol	(1)	7.445	41	477848	1280.506
57)\$1,2-Dichloroethane-d4	(2)	7.522	102	82703	49.570
57)\$1,2-Dichloroethane-d4	(2)	7.522	65	369652	49.914
57)\$1,2-Dichloroethane-d4	(2)	7.519	104	52535	49.449
60) Benzene	(2)	7.551	78	2723134	101.028
61) 1,2-Dichloroethane	(2)	7.625	62	882324	97.653
61) 1,2-Dichloroethane	(2)	7.625	98	89171	101.277
65) t-Amyl methyl ether	(2)	7.731	73	2011782	106.341
66)*Fluorobenzene	(2)	7.950	96	1305159	50.000
67) n-Heptane	(2)	7.956	43	975825	103.704
69) n-Butanol	(1)	8.316	56	860676	2828.614
71) Trichloroethene	(2)	8.425	95	688560	100.949
72) Methylcyclohexane	(2)	8.728	83	1282390	115.625
72) Methylcyclohexane	(2)	8.728	98	579444	115.508
73) 1,2-Dichloropropane	(2)	8.760	63	707167	101.826
76) Methyl Methacrylate	(2)	8.837	69	660132	110.547
75) 1,4-Dioxane	(1)	8.843	88	121991M	1333.722
74) Dibromomethane	(2)	8.869	93	465649	102.523
78) Bromodichloromethane	(2)	9.101	83	872696	107.177
79) 2-Nitropropane	(2)	9.374	41	514618	210.790
80) 2-Chloroethyl Vinyl Ether	(2)	9.448	63	544528	117.753
81) cis-1,3-Dichloropropene	(2)	9.628	75	1173507	110.278
82) 4-Methyl-2-pentanone	(2)	9.795	43	2014827M	206.557
83)\$Toluene-d8	(3)	9.927	98	1347192	50.298
83)\$Toluene-d8	(3)	9.927	100	873877	50.274
88) Toluene	(3)	10.001	92	1720446	100.774
90) 1,3-Dichloropropene (total)	(3)		100	2256338	220.822

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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Target 3.5 esignature user ID: sej02002

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may04i.b/ly04i02.d
 Injection date and time: 04-MAY-2020 12:40

Instrument ID: HP09915.i
 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 19:29

Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD100

Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
89) trans-1,3-Dichloropropene	(3)	10.248	75	1082831	110.544
91) Ethyl Methacrylate	(3)	10.303	69	1150351	116.713
92) 1,1,2-Trichloroethane	(3)	10.448	97	674393	101.801
93) Tetrachloroethene	(3)	10.531	166	745147	102.417
94) 1,3-Dichloropropane	(3)	10.612	76	1153873	104.156
96) 2-Hexanone	(3)	10.660	43	1466416	204.845
97) Dibromochloromethane	(3)	10.821	129	768603	111.537
99) 1,2-Dibromoethane	(3)	10.930	107	757251	106.362
100) *Chlorobenzene-d5	(3)	11.351	117	1042614	50.000
101) 1-Chlorohexane	(3)	11.358	91	894543	102.388
102) Chlorobenzene	(3)	11.380	112	1974796	100.728
103) 1,1,1,2-Tetrachloroethane	(3)	11.457	131	698262	105.060
104) Ethylbenzene	(3)	11.461	91	3302145	104.495
106) m+p-Xylene	(3)	11.573	106	2617893	210.839
108) Xylene (Total)	(3)		106	3901521	317.742
107) o-Xylene	(3)	11.901	106	1283628	106.904
109) Styrene	(3)	11.917	104	2175134	111.387
110) Bromoform	(3)	12.075	173	575326	114.684
111) Isopropylbenzene	(3)	12.197	105	3285092	107.815
112) Cyclohexanone	(1)	12.281	55	465460A	1367.124
114) \$4-Bromofluorobenzene	(3)	12.342	95	512925	49.770
114) \$4-Bromofluorobenzene	(3)	12.342	174	437104	49.470
116) 1,1,2,2-Tetrachloroethane	(4)	12.445	83	1088037	102.939
115) Bromobenzene	(4)	12.461	156	869682	102.507
118) trans-1,4-Dichloro-2-butene	(4)	12.470	53	825411	268.454
117) 1,2,3-Trichloropropane	(4)	12.490	110	336139	104.128
119) n-Propylbenzene	(4)	12.525	91	3817261	104.103
120) 2-Chlorotoluene	(4)	12.602	126	813495	103.844
122) 1,3,5-Trimethylbenzene	(4)	12.657	105	2845054	107.378
121) 4-Chlorotoluene	(4)	12.692	126	843646	103.759
124) tert-Butylbenzene	(4)	12.898	134	591495M	108.603
125) Pentachloroethane	(4)	12.933	167	549570	113.616
126) 1,2,4-Trimethylbenzene	(4)	12.940	105	2971690	108.477
127) sec-Butylbenzene	(4)	13.062	105	3479126	107.847
129) 1,3-Dichlorobenzene	(4)	13.162	146	1615369	102.175
130) p-Isopropyltoluene	(4)	13.168	119	3007783	108.812
131) *1,4-Dichlorobenzene-d4	(4)	13.216	152	579781	50.000
133) 1,4-Dichlorobenzene	(4)	13.236	146	1664879	100.338

M = Compound was manually integrated.

A = User selected an alternate hit.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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 on 05/04/2020 at 19:30.

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Target 3.5 esignature user ID: sej02002

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may04i.b/ly04i02.d
 Injection date and time: 04-MAY-2020 12:40

Instrument ID: HP09915.i
 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 19:29

Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD100

Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
134) 1,2,3-Trimethylbenzene	(4)	13.245	105	3076651	108.090
135) Benzyl Chloride	(4)	13.313	91	2438204	113.211
136) 1,3-Diethylbenzene	(4)	13.367	119	1960676	110.086
141) Diethylbenzene (total)	(4)		100	5656125	328.324
137) 1,4-Diethylbenzene	(4)	13.438	119	2046082	109.754
139) n-Butylbenzene	(4)	13.457	92	1477265	104.018
138) 1,2-Dichlorobenzene	(4)	13.496	146	1601420	100.637
140) 1,2-Diethylbenzene	(4)	13.512	119	1649367	108.484
142) 1,2-Dibromo-3-chloropropane	(4)	14.036	75	256247	109.532
144) 1,3,5-Trichlorobenzene	(4)	14.162	180	1224679	102.164
146) 1,2,4-Trichlorobenzene	(4)	14.583	180	1178758	105.224
147) Hexachlorobutadiene	(4)	14.663	225	502383	97.213
148) Naphthalene	(4)	14.769	128	4071339	112.277
149) 1,2,3-Trichlorobenzene	(4)	14.914	180	1139574	102.373
150) 2-Methylnaphthalene	(4)	15.560	142	2393759	102.167

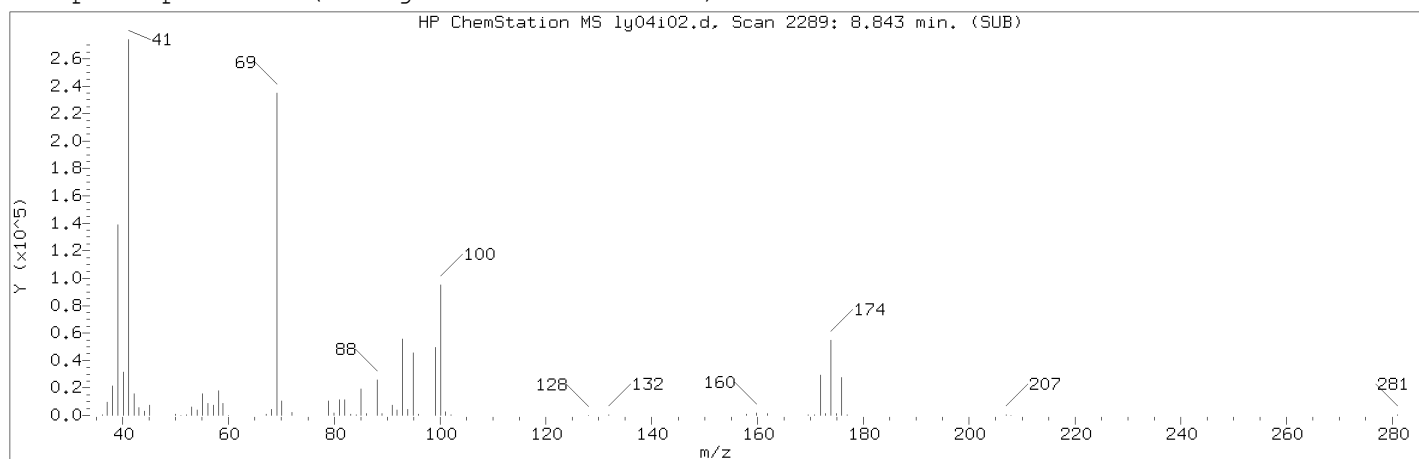
page 4 of 4

Digitally signed by Sara E. Johnson
 on 05/04/2020 at 19:30.

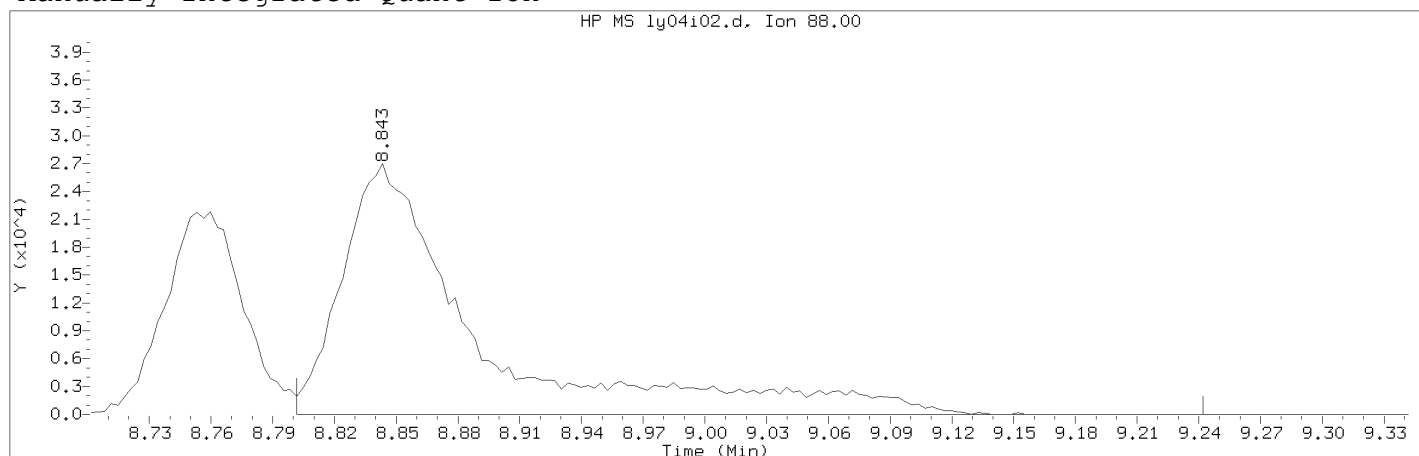
Target 3.5 esignature user ID: sej02002

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Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i02.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 12:40

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 19:29

Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD100

Lab Sample ID: VSTD100

Compound Number : 75
 Compound Name : 1,4-Dioxane
 Scan Number : 2289
 Retention Time (minutes): 8.843
 Quant Ion : 88.00
 Area (flag) : 121991M
 On-Column Amount (ng) : 1333.7223
 Integration start scan : 2275 Integration stop scan: 2412
 Y at integration start : 0 Y at integration end: 0

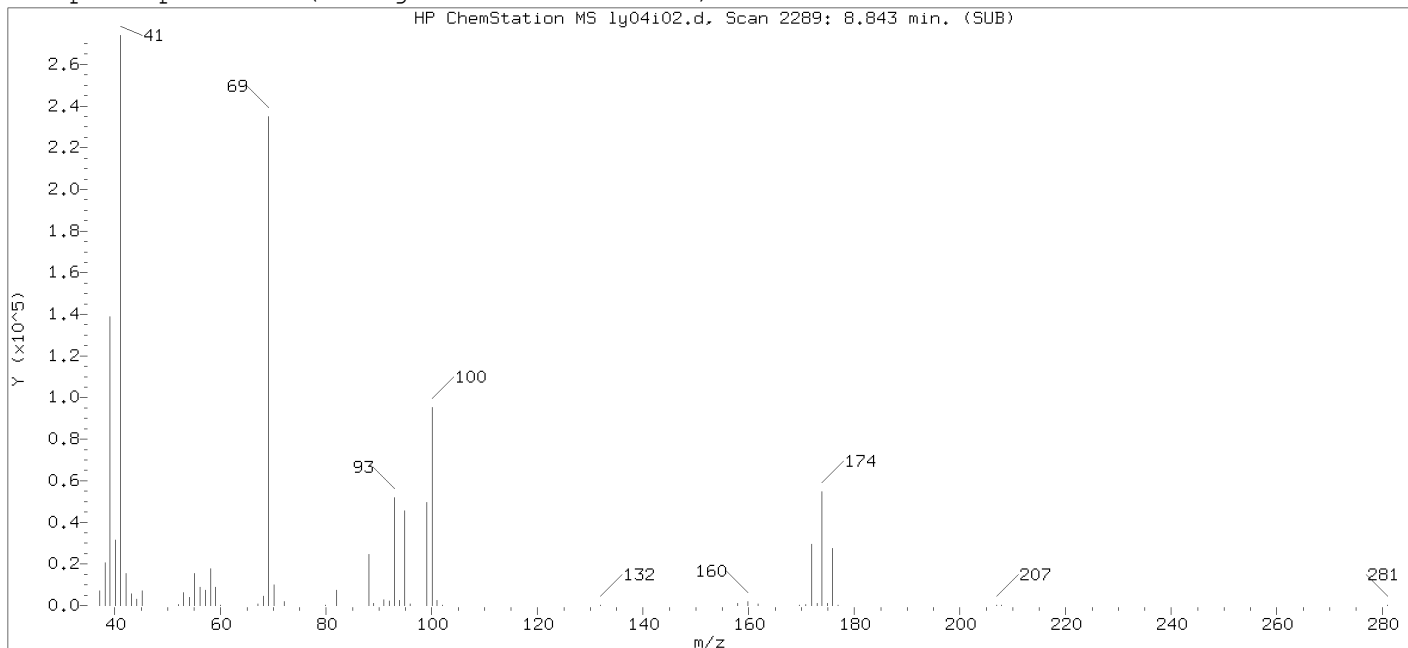
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Sara E. Johnson
 on 05/04/2020 at 19:30.
 Target 3.5 esignature user ID: sej02002

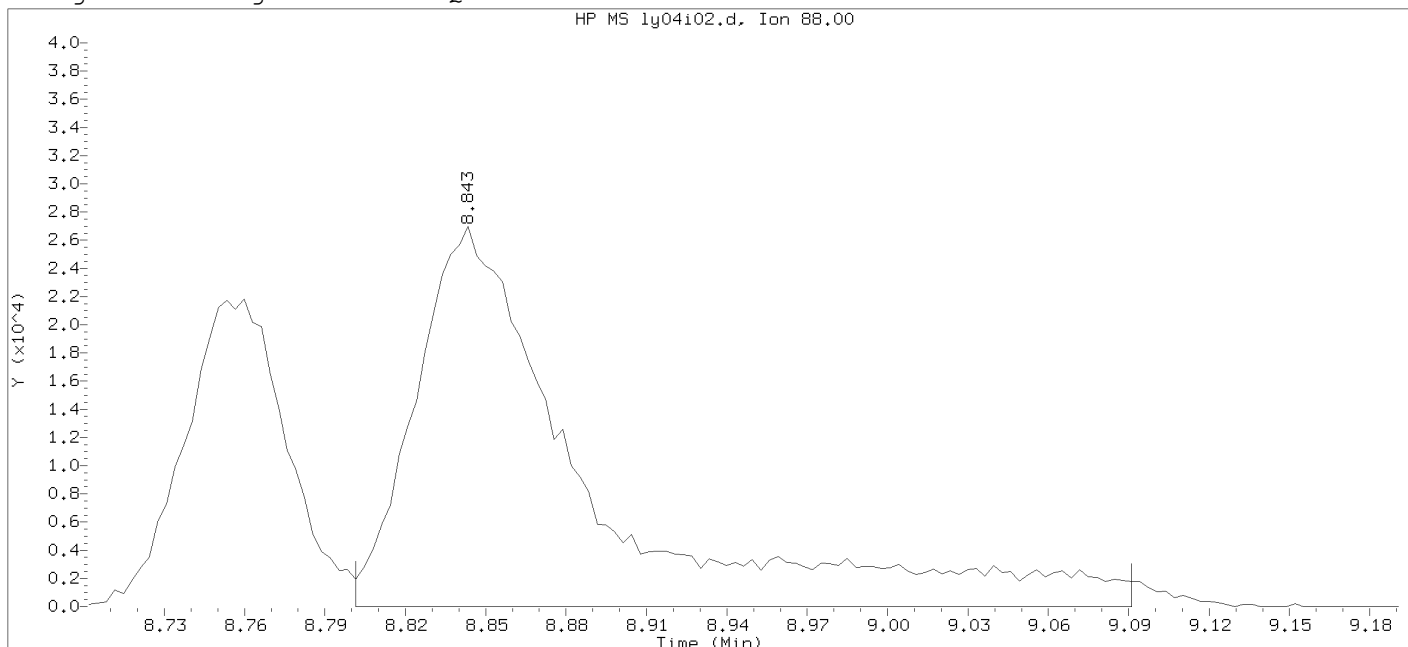
Secondary review performed and digitally signed by Chelsea B. Riehl on 05/06/2020 at 08:34.

PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20may04i.b/ly04i02.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 12:40

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 13:31

Date, time and analyst ID of latest file update: 04-May-2020 13:31 lcp00895

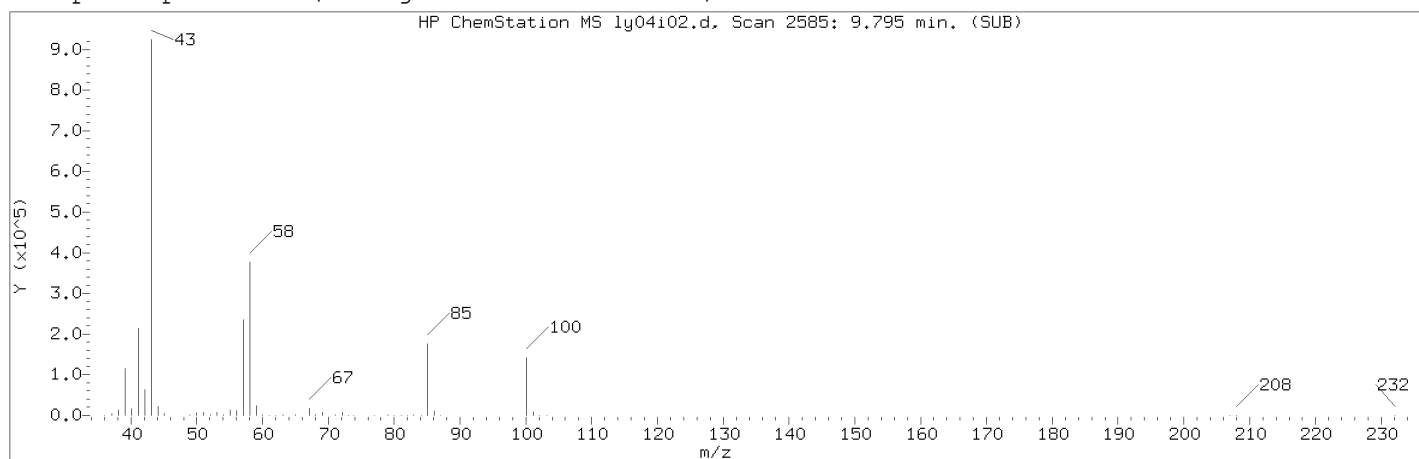
Sample Name: VSTD100

Lab Sample ID: VSTD100

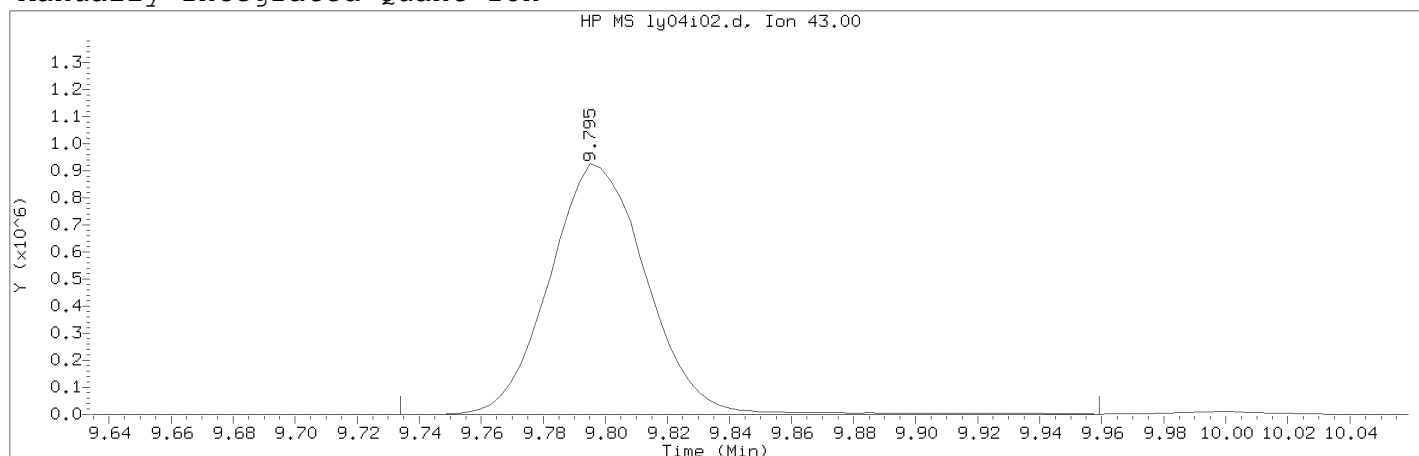
Compound Number	: 75
Compound Name	: 1,4-Dioxane
Scan Number	: 2289
Retention Time (minutes)	: 8.843
Quant Ion	: 88.00
Area	: 119871
On-column Amount (ng)	: 1268.8357
Integration start scan	: 2275
Integration stop scan	: 2365
Y at integration start	: 0
Y at integration end	: 0

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 Target 3.5 esignature user KR446 Page 129 of 579

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i02.d Instrument ID: HP09915.i
 Injection date and time: 04-MAY-2020 12:40 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 04-MAY-2020 19:29
 Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD100 Lab Sample ID: VSTD100

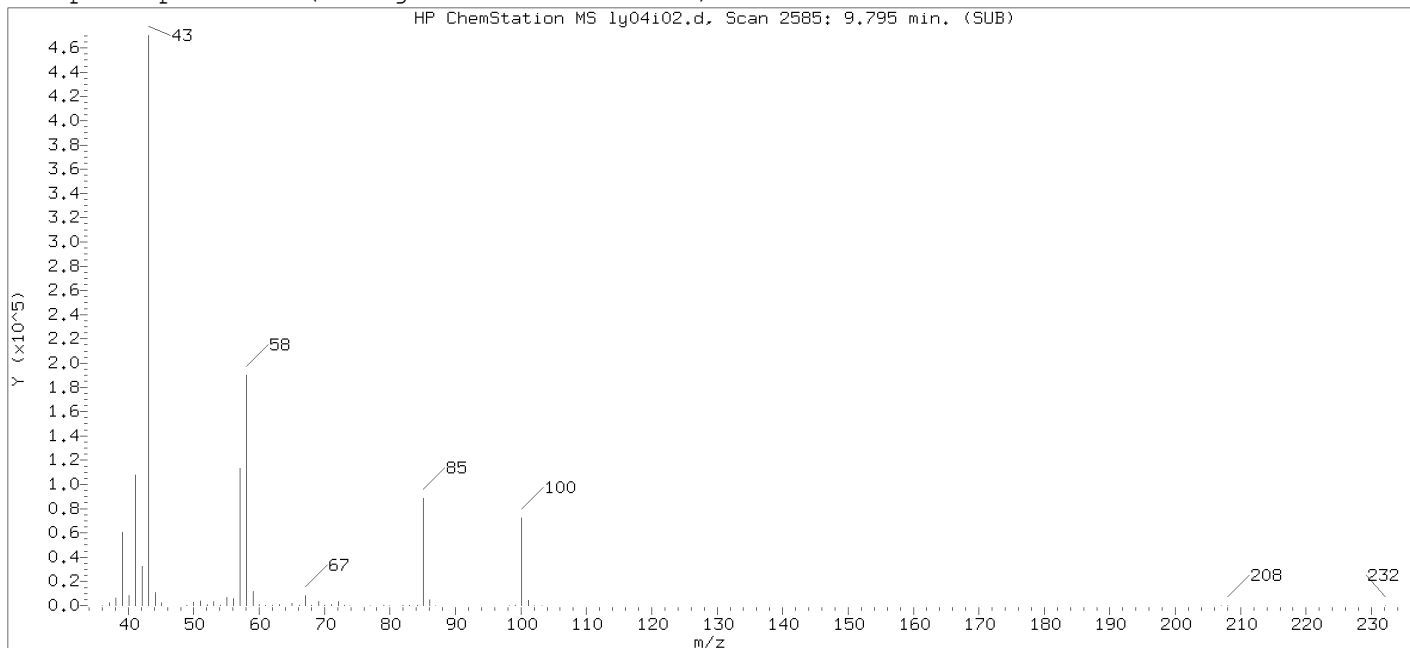
Compound Number : 82
 Compound Name : 4-Methyl-2-pentanone
 Scan Number : 2585
 Retention Time (minutes): 9.795
 Quant Ion : 43.00
 Area (flag) : 2014827M
 On-Column Amount (ng) : 206.5570
 Integration start scan : 2565 Integration stop scan: 2635
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

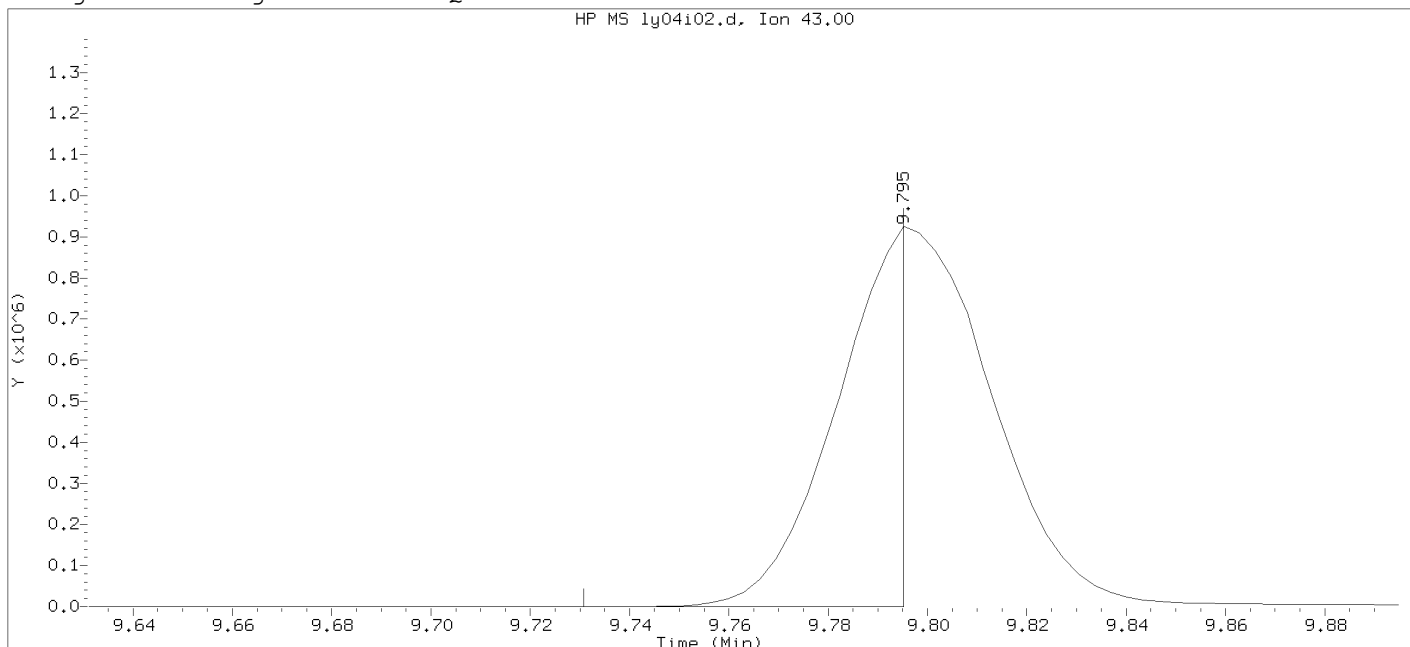
Analyst responsible for change: Digitally signed by Sara E. Johnson
 on 05/04/2020 at 19:30.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/06/2020 at 08:34.
 PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i02.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 12:40

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 13:31

Date, time and analyst ID of latest file update: 04-May-2020 13:31 lcp00895

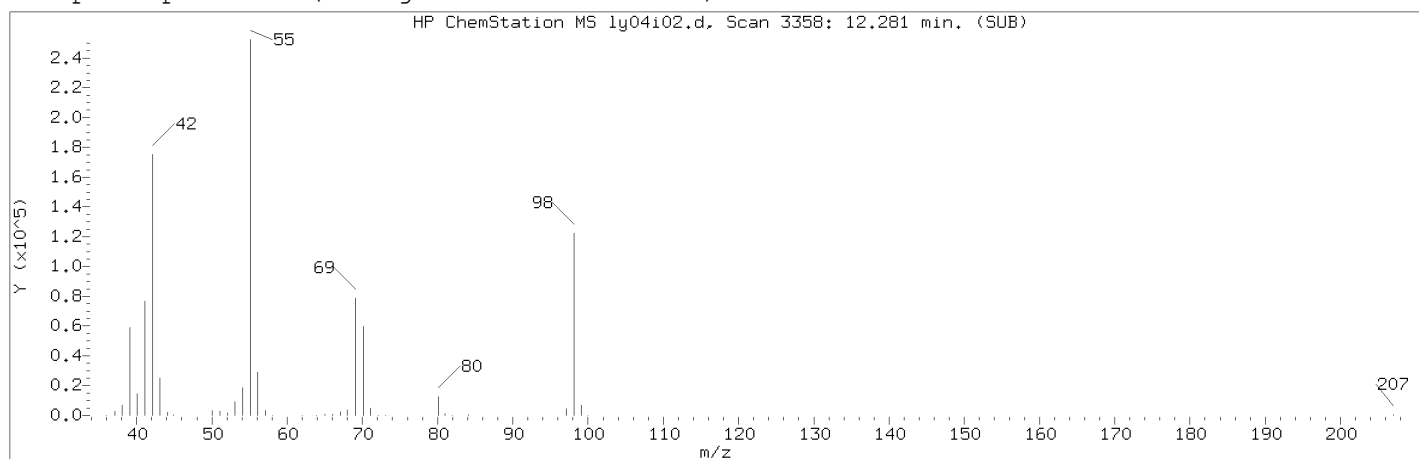
Sample Name: VSTD100

Lab Sample ID: VSTD100

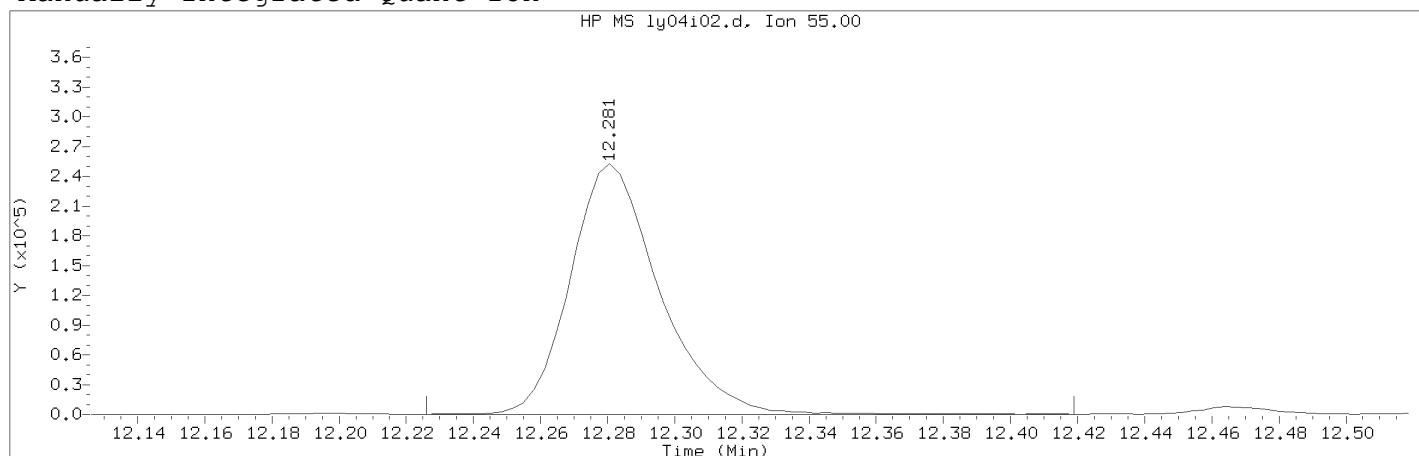
Compound Number	: 82
Compound Name	: 4-Methyl-2-pentanone
Scan Number	: 2585
Retention Time (minutes)	: 9.795
Quant Ion	: 43.00
Area	: 841283
On-column Amount (ng)	: 116.9659
Integration start scan	: 2564
Integration stop scan	: 2584
Y at integration start	: 188
Y at integration end	: 188

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 Target 3.5 esignature user KR446 Page 131 of 579

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i02.d Instrument ID: HP09915.i
 Injection date and time: 04-MAY-2020 12:40 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 04-MAY-2020 19:29
 Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD100

Lab Sample ID: VSTD100

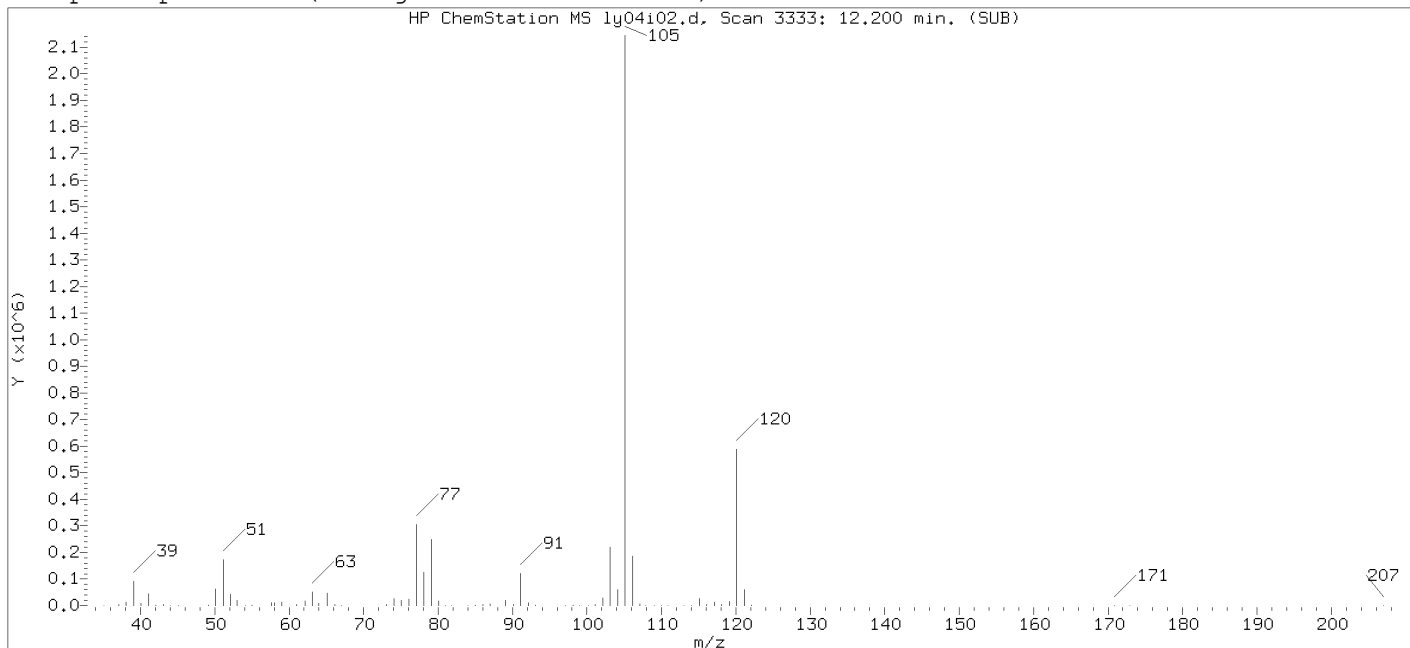
Compound Number : 112
 Compound Name : Cyclohexanone
 Scan Number : 3358
 Retention Time (minutes): 12.281
 Quant Ion : 55.00
 Area (flag) : 465460A
 On-Column Amount (ng) : 1367.1245
 Integration start scan : 3340 Integration stop scan: 3400
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

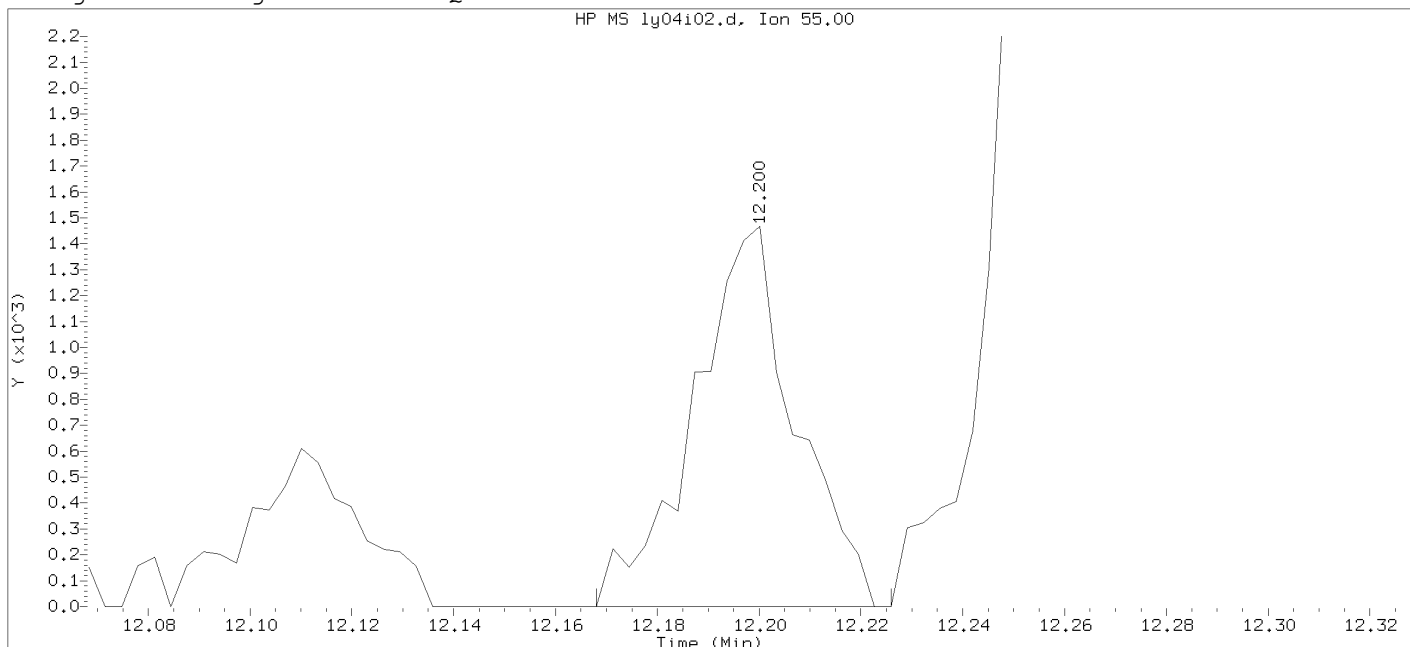
Analyst responsible for change: Digitally signed by Sara E. Johnson
 on 05/04/2020 at 19:30.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/06/2020 at 08:34.
 PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20may04i.b/ly04i02.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 12:40

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 13:31

Date, time and analyst ID of latest file update: 04-May-2020 13:31 lcp00895

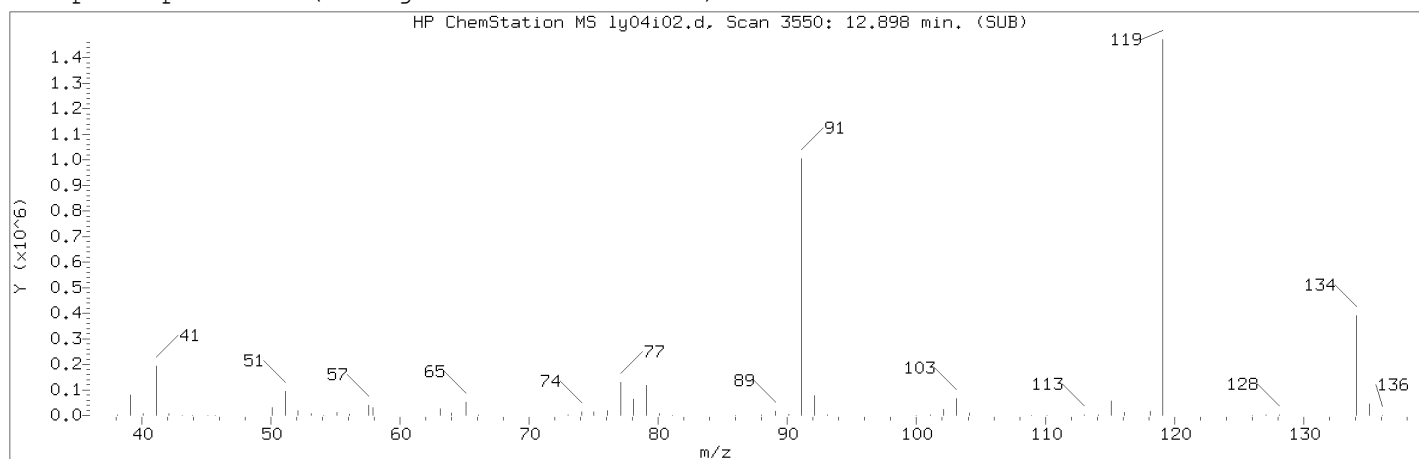
Sample Name: VSTD100

Lab Sample ID: VSTD100

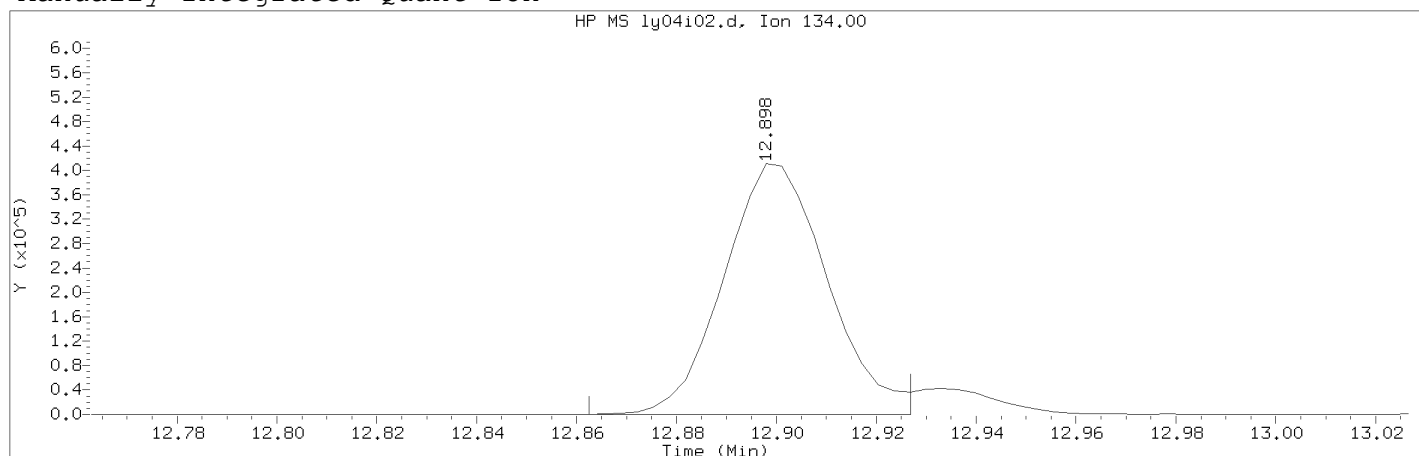
Compound Number	: 112
Compound Name	: Cyclohexanone
Scan Number	: 3333
Retention Time (minutes)	: 12.200
Quant Ion	: 55.00
Area	: 2031
On-column Amount (ng)	: 1278.2054
Integration start scan	: 3322
Integration stop scan	: 3340
Y at integration start	: 0
Y at integration end	: 0

Digitally signed by Sara E. Johnson on 05/04/2020 at 19:30.
 Target 3.5 esignature user KR446 Page 133 of 579

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i02.d Instrument ID: HP09915.i
 Injection date and time: 04-MAY-2020 12:40 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 04-MAY-2020 19:29
 Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD100

Lab Sample ID: VSTD100

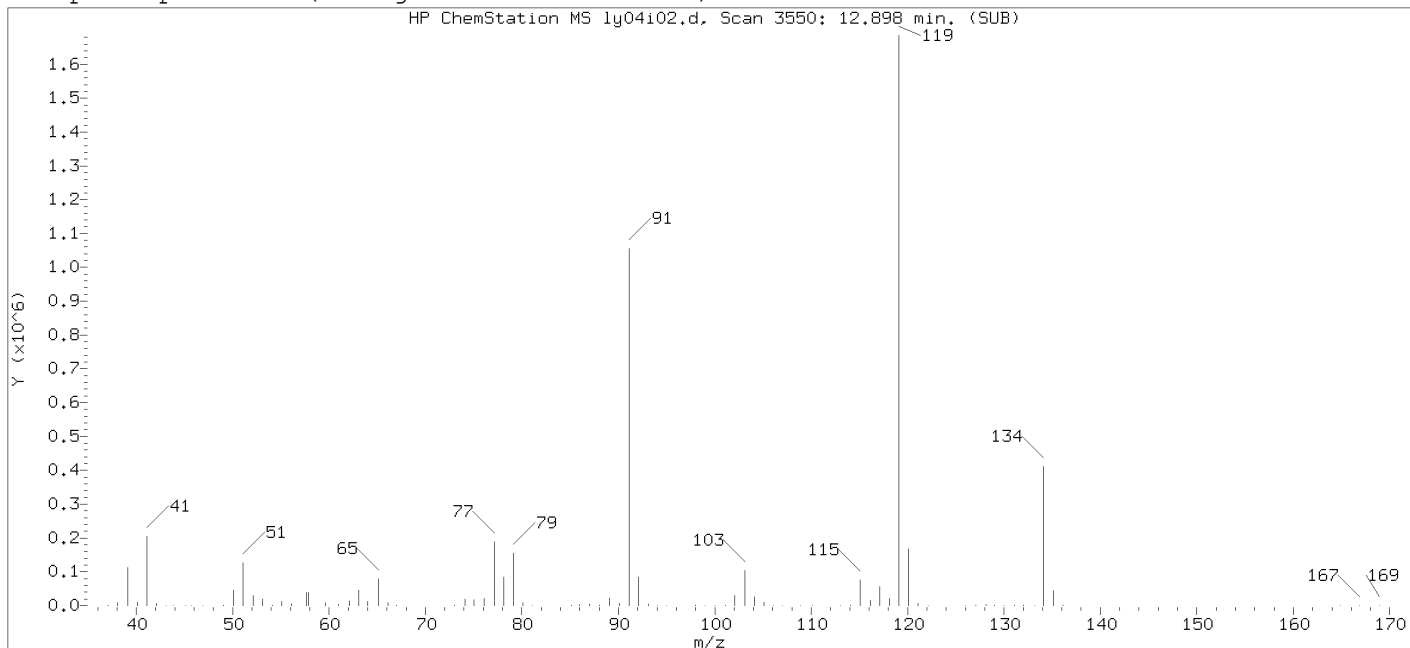
Compound Number : 124
 Compound Name : tert-Butylbenzene
 Scan Number : 3550
 Retention Time (minutes): 12.898
 Quant Ion : 134.00
 Area (flag) : 591495M
 On-Column Amount (ng) : 108.6030
 Integration start scan : 3538 Integration stop scan: 3558
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

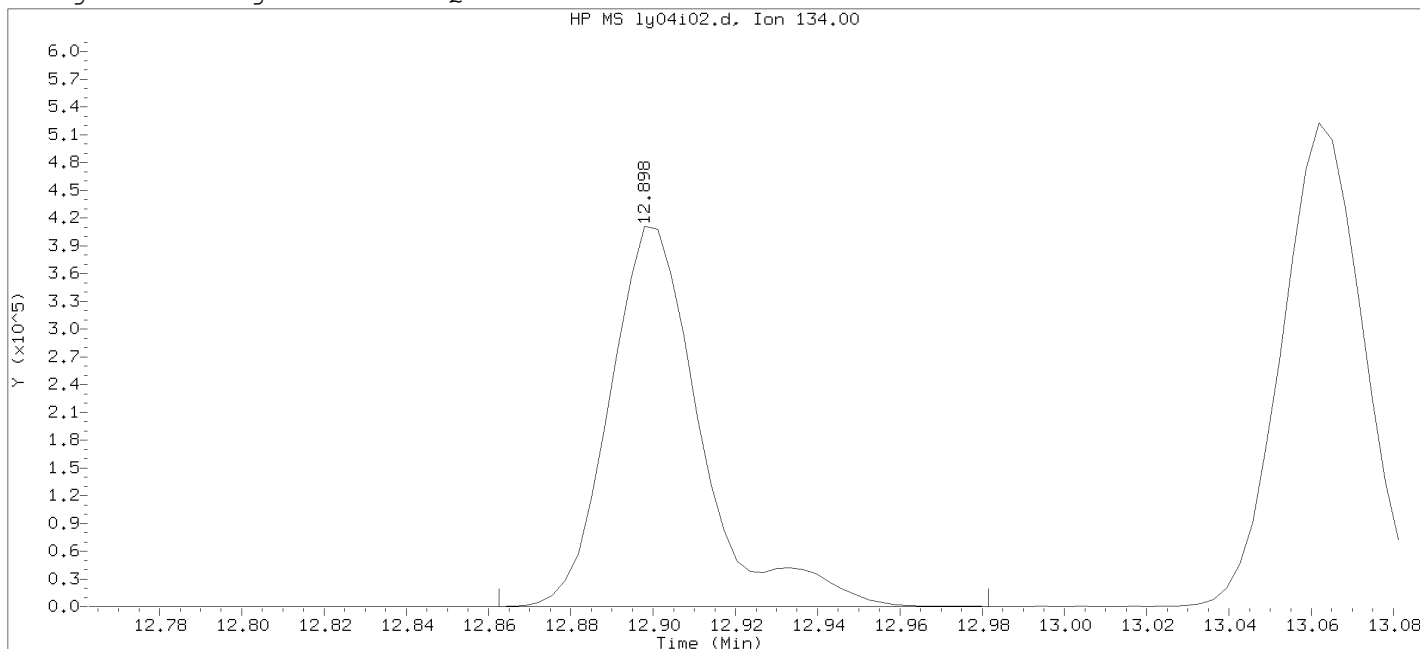
Analyst responsible for change: Digitally signed by Sara E. Johnson
 on 05/04/2020 at 19:30.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/06/2020 at 08:34.
 PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i02.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 12:40

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 13:31

Date, time and analyst ID of latest file update: 04-May-2020 13:31 lcp00895

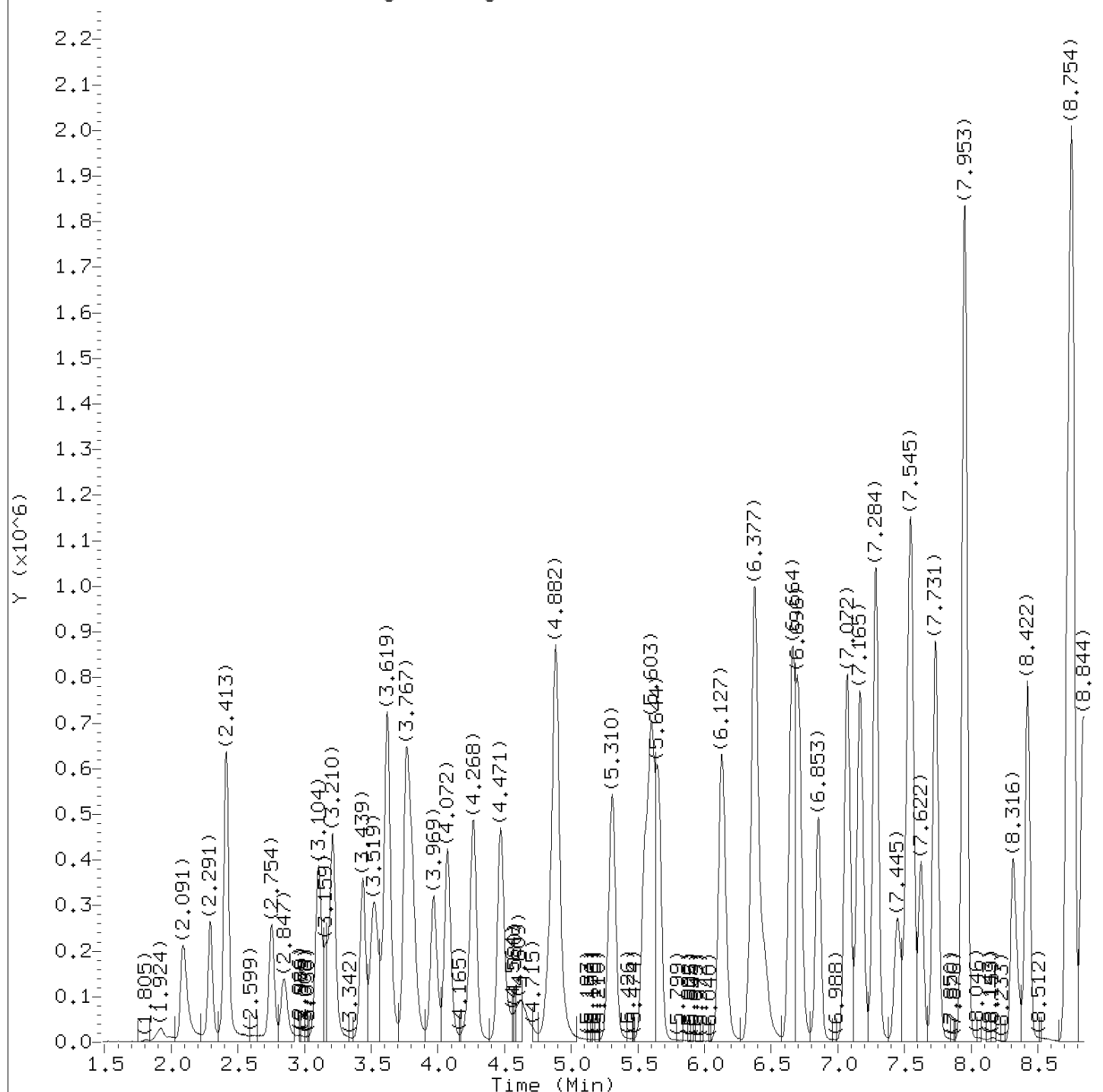
Sample Name: VSTD100

Lab Sample ID: VSTD100

Compound Number	: 124	
Compound Name	: tert-Butylbenzene	
Scan Number	: 3550	
Retention Time (minutes)	: 12.898	
Quant Ion	: 134.00	
Area	: 636568	
On-column Amount (ng)	: 99.3867	
Integration start scan	: 3538	Integration stop scan: 3575
Y at integration start	: 0	Y at integration end: 0

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 Target 3.5 esignature user KR446 Page 135 of 579

/chem/HP09915.i/20may04i.b/ly04i03.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20may04i.b/ly04i03.d
 Injection date and time: 04-MAY-2020 13:02

Instrument ID: HP09915.i
 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m
 Calibration date and time: 04-MAY-2020 19:29

Sublist used: 8260W

Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD050

Lab Sample ID: VSTD050

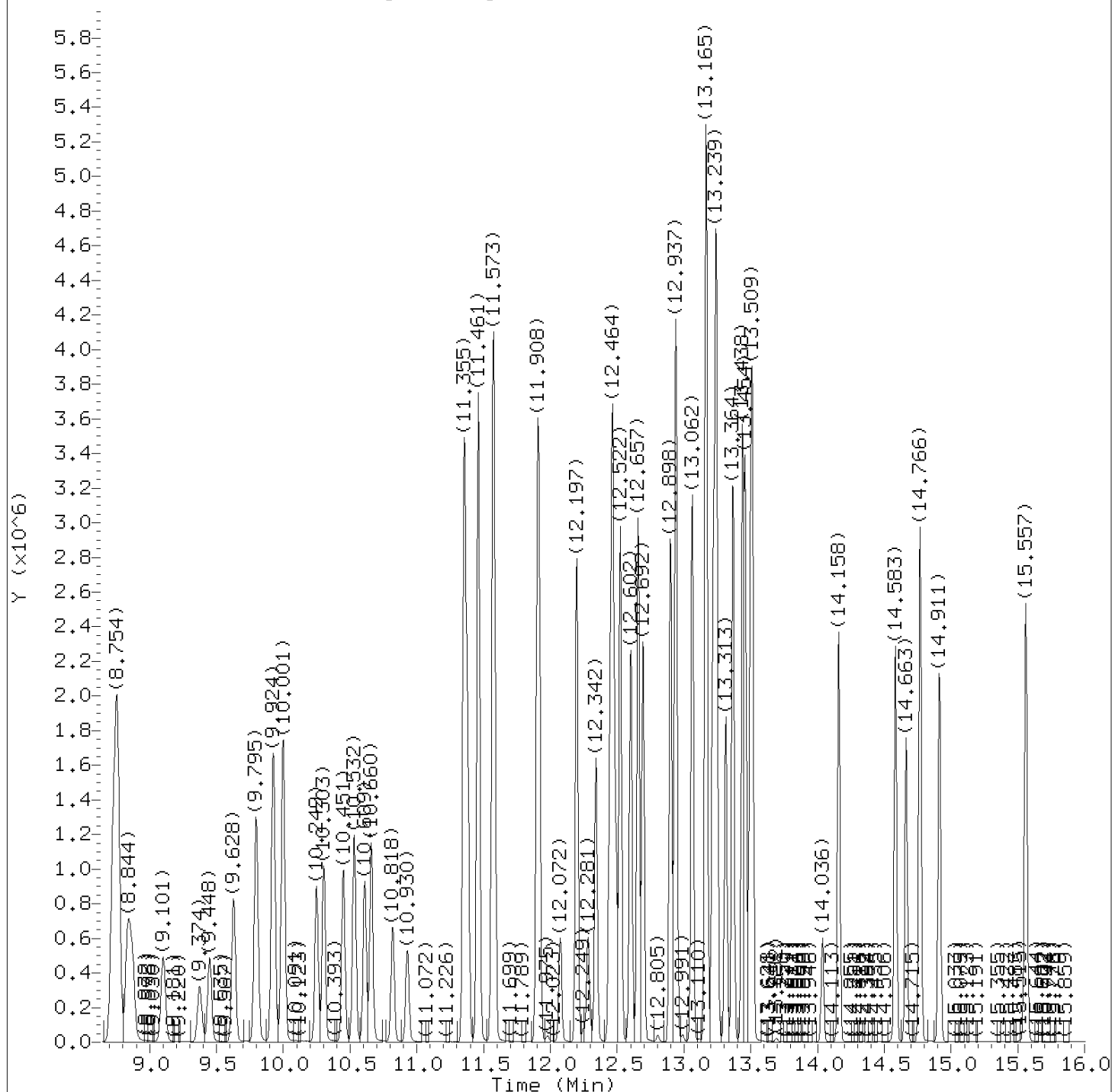
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 on 05/04/2020 at 19:30.

Target 3.5 esignature user ID: sej02002

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page 1 of 2

/chem/HP09915.i/20may04i.b/ly04i03.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20may04i.b/ly04i03.d
 Injection date and time: 04-MAY-2020 13:02

Instrument ID: HP09915.i
 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m
 Calibration date and time: 04-MAY-2020 19:29

Sublist used: 8260W

Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD050

Lab Sample ID: VSTD050

Digitally signed by Sara E. Johnson
 on 05/04/2020 at 19:30.

Target 3.5 esignature user ID: sej02002

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page 2 of 2

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may04i.b/ly04i03.d
 Injection date and time: 04-MAY-2020 13:02

Instrument ID: HP09915.i
 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 19:29

Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD050

Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
3) Dichlorodifluoromethane	(2)	2.088	85	449709	49.088
4) Chloromethane	(2)	2.291	50	375424	43.891
5) 1,3-Butadiene	(2)	2.413	39	269470	49.108
6) Vinyl Chloride	(2)	2.416	62	380784	46.132
8) Bromomethane	(2)	2.754	94	257980	43.349
9) Chloroethane	(2)	2.847	64	206201	44.743
10) Dichlorofluoromethane	(2)	3.104	67	463748	46.651
12) Trichlorofluoromethane	(2)	3.159	101	441482	48.972
11) n-Pentane	(2)	3.214	43	444974	52.570
14) Ethyl ether	(2)	3.439	59	329703	51.759
15) Freon 123a	(2)	3.525	67	378614	51.840
16) Acrolein	(1)	3.622	56	1164434	467.232
17) 1,1-Dichloroethene	(2)	3.760	96	289094	50.285
17) 1,1-Dichloroethene	(2)	3.760	63	142043	51.876
19) Freon 113	(2)	3.796	101	315184	52.840
18) Acetone	(1)	3.799	58	99761	87.756
22) Methyl Iodide	(2)	3.966	142	569177	51.371
21) 2-Propanol	(1)	3.988	45	173097	238.907
23) Carbon Disulfide	(2)	4.072	76	1006416	51.990
27) Methyl Acetate	(2)	4.239	43	355334	48.460
25) Allyl Chloride	(2)	4.271	41	475545	51.041
28) Methylene Chloride	(2)	4.471	84	347199	50.768
29) *t-Butyl alcohol-d10	(1)	4.487	65	302938	250.000
30) t-Butyl alcohol	(1)	4.625	59	297512	243.263
31) Acrylonitrile	(2)	4.831	53	203235	50.035
33) Methyl Tertiary Butyl Ether	(2)	4.873	73	1020841	51.774
32) trans-1,2-Dichloroethene	(2)	4.889	96	334114	50.517
34) n-Hexane	(2)	5.307	57	535246	57.788
36) 1,1-Dichloroethane	(2)	5.548	63	597370	51.497
38) di-Isopropyl ether	(2)	5.603	45	1095502	53.697
39) 2-Chloro-1,3-butadiene	(2)	5.654	53	508071	54.921
40) Ethyl t-butyl ether	(2)	6.127	59	1024536	54.049
43) 1,2-Dichloroethene (Total)	(2)		96	715832	101.982
44) 2-Butanone	(2)	6.358	43	495815	100.563
42) cis-1,2-Dichloroethene	(2)	6.374	96	381718	51.465
45) 2,2-Dichloropropane	(2)	6.387	77	472103	52.658
47) Propionitrile	(1)	6.448	54	403723	244.349
48) Methacrylonitrile	(2)	6.657	67	526393	129.265

* = Compound is an internal standard.

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Target 3.5 esignature user ID: sej02002

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may04i.b/ly04i03.d
 Injection date and time: 04-MAY-2020 13:02

Instrument ID: HP09915.i
 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 19:29

Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD050

Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
49) Bromochloromethane	(2)	6.705	128	193620	50.594
50) Tetrahydrofuran	(1)	6.718	71	137401	95.046
51) Chloroform	(2)	6.853	83	581531	51.313
52)\$Dibromofluoromethane	(2)	7.065	113	337742	50.182
52)\$Dibromofluoromethane	(2)	7.065	111	345243	50.181
53) 1,1,1-Trichloroethane	(2)	7.078	97	506155	52.059
54) Cyclohexane	(2)	7.168	56	624004	57.334
54) Cyclohexane	(2)	7.165	84	533866	56.195
54) Cyclohexane	(2)	7.165	69	188877	55.844
56) Carbon Tetrachloride	(2)	7.281	117	437519	53.709
55) 1,1-Dichloropropene	(2)	7.287	75	472822	53.050
58) Isobutyl Alcohol	(1)	7.451	41	250108	602.836
57)\$1,2-Dichloroethane-d4	(2)	7.522	102	85148	49.859
57)\$1,2-Dichloroethane-d4	(2)	7.522	65	382006	50.393
57)\$1,2-Dichloroethane-d4	(2)	7.519	104	54993	50.569
60) Benzene	(2)	7.551	78	1417699	51.384
61) 1,2-Dichloroethane	(2)	7.625	62	457945	49.515
61) 1,2-Dichloroethane	(2)	7.625	98	46267	51.337
65) t-Amyl methyl ether	(2)	7.731	73	1045355	53.982
66)*Fluorobenzene	(2)	7.950	96	1335958	50.000
67) n-Heptane	(2)	7.956	43	565094	58.670
69) n-Butanol	(1)	8.316	56	428273	1266.001
71) Trichloroethene	(2)	8.422	95	358732	51.381
72) Methylcyclohexane	(2)	8.725	83	626729	55.206
72) Methylcyclohexane	(2)	8.728	98	281181	54.759
73) 1,2-Dichloropropane	(2)	8.760	63	368890	51.892
76) Methyl Methacrylate	(2)	8.837	69	328320	53.714
75) 1,4-Dioxane	(1)	8.847	88	65798M	647.038
74) Dibromomethane	(2)	8.869	93	239968	51.616
78) Bromodichloromethane	(2)	9.098	83	440131	52.807
79) 2-Nitropropane	(2)	9.374	41	261718	104.730
80) 2-Chloroethyl Vinyl Ether	(2)	9.448	63	266380	56.276
81) cis-1,3-Dichloropropene	(2)	9.628	75	590475	54.209
82) 4-Methyl-2-pentanone	(2)	9.795	43	1044729	104.635
83)\$Toluene-d8	(3)	9.924	98	1380023	49.808
83)\$Toluene-d8	(3)	9.924	100	895486	49.802
88) Toluene	(3)	10.001	92	903135	51.140
90) 1,3-Dichloropropene (total)	(3)		100	1132692	107.721

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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Target 3.5 esignature user ID: sej02002

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may04i.b/ly04i03.d
 Injection date and time: 04-MAY-2020 13:02

Instrument ID: HP09915.i
 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 19:29

Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD050

Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
89) trans-1,3-Dichloropropene	(3)	10.249	75	542217	53.511
91) Ethyl Methacrylate	(3)	10.303	69	572533	56.155
92) 1,1,2-Trichloroethane	(3)	10.451	97	346501	50.564
93) Tetrachloroethene	(3)	10.532	166	397309	52.791
94) 1,3-Dichloropropane	(3)	10.609	76	586078	51.142
96) 2-Hexanone	(3)	10.660	43	760412	102.687
97) Dibromochloromethane	(3)	10.818	129	383013	53.731
99) 1,2-Dibromoethane	(3)	10.930	107	383959	52.135
100) *Chlorobenzene-d5	(3)	11.355	117	1078517	50.000
101) 1-Chlorohexane	(3)	11.358	91	491546	54.389
102) Chlorobenzene	(3)	11.377	112	1030814	50.828
103) 1,1,1,2-Tetrachloroethane	(3)	11.458	131	362258	52.691
104) Ethylbenzene	(3)	11.461	91	1746331	53.422
106) m+p-Xylene	(3)	11.573	106	1388438	108.099
108) Xylene (Total)	(3)		106	2065199	162.585
107) o-Xylene	(3)	11.901	106	676761	54.486
109) Styrene	(3)	11.917	104	1128029	55.843
110) Bromoform	(3)	12.075	173	280294	54.013
111) Isopropylbenzene	(3)	12.197	105	1789947	56.789
112) Cyclohexanone	(1)	12.281	55	250083A	660.677
114) \$4-Bromofluorobenzene	(3)	12.342	95	526272	49.365
114) \$4-Bromofluorobenzene	(3)	12.342	174	450419	49.280
116) 1,1,2,2-Tetrachloroethane	(4)	12.441	83	560714M	50.510
115) Bromobenzene	(4)	12.461	156	457863	51.384
118) trans-1,4-Dichloro-2-butene	(4)	12.467	53	418508	129.599
117) 1,2,3-Trichloropropane	(4)	12.490	110	172280	50.814
119) n-Propylbenzene	(4)	12.522	91	2099925	54.527
120) 2-Chlorotoluene	(4)	12.602	126	437402	53.162
122) 1,3,5-Trimethylbenzene	(4)	12.657	105	1557090	55.955
121) 4-Chlorotoluene	(4)	12.692	126	448224	52.488
124) tert-Butylbenzene	(4)	12.898	134	327078M	57.179
125) Pentachloroethane	(4)	12.933	167	270606	53.266
126) 1,2,4-Trimethylbenzene	(4)	12.940	105	1620529	56.323
127) sec-Butylbenzene	(4)	13.062	105	2000977	59.058
129) 1,3-Dichlorobenzene	(4)	13.162	146	872418	52.540
130) p-Isopropyltoluene	(4)	13.168	119	1736247	59.805
131) *1,4-Dichlorobenzene-d4	(4)	13.216	152	608929	50.000
133) 1,4-Dichlorobenzene	(4)	13.236	146	899651	51.624

M = Compound was manually integrated.

A = User selected an alternate hit.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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 on 05/04/2020 at 19:30.

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Target 3.5 esignature user ID: sej02002

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may04i.b/ly04i03.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 13:02

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 19:29

Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD050

Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
134) 1,2,3-Trimethylbenzene	(4)	13.245	105	1557265	52.092
135) Benzyl Chloride	(4)	13.313	91	1236236	54.653
136) 1,3-Diethylbenzene	(4)	13.367	119	991545	53.007
141) Diethylbenzene (total)	(4)		100	2872948	158.754
137) 1,4-Diethylbenzene	(4)	13.438	119	1045337	53.389
139) n-Butylbenzene	(4)	13.458	92	856054	57.392
138) 1,2-Dichlorobenzene	(4)	13.496	146	862079	51.582
140) 1,2-Diethylbenzene	(4)	13.512	119	836066	52.358
142) 1,2-Dibromo-3-chloropropane	(4)	14.036	75	128904	52.462
144) 1,3,5-Trichlorobenzene	(4)	14.158	180	690748	54.865
146) 1,2,4-Trichlorobenzene	(4)	14.583	180	653918	55.579
147) Hexachlorobutadiene	(4)	14.663	225	301933	55.629
148) Naphthalene	(4)	14.766	128	2178912	57.212
149) 1,2,3-Trichlorobenzene	(4)	14.911	180	643443	55.036
150) 2-Methylnaphthalene	(4)	15.560	142	1255729	47.626

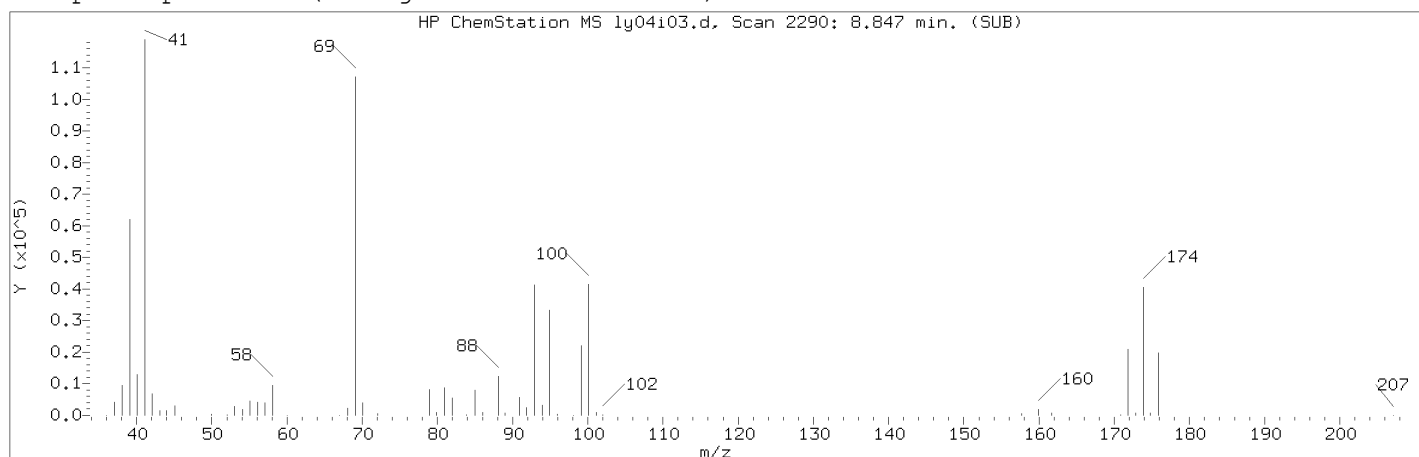
page 4 of 4

Digitally signed by Sara E. Johnson
on 05/04/2020 at 19:30.

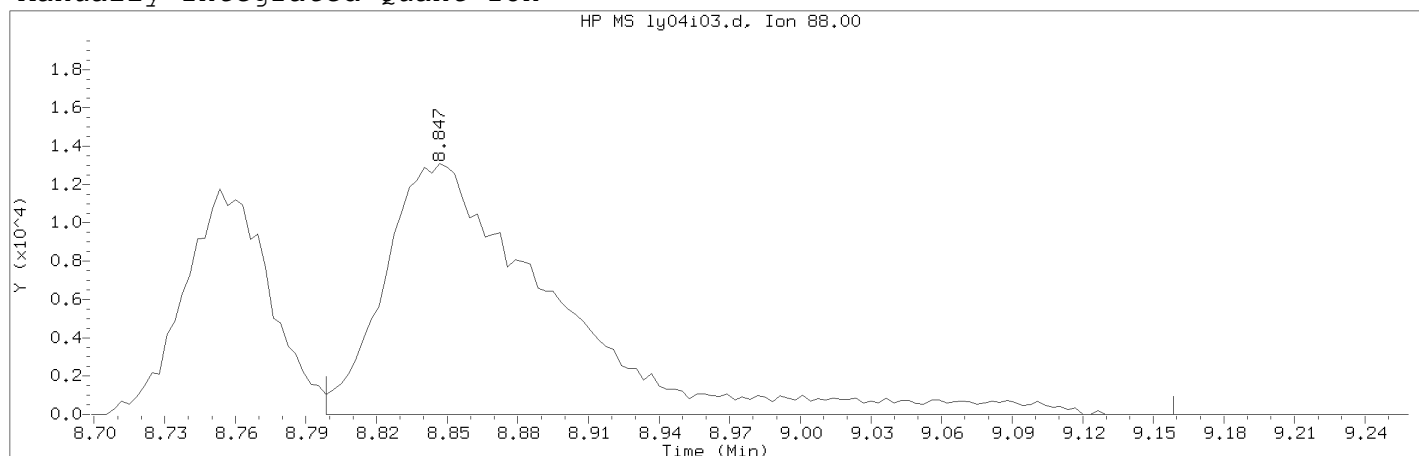
Target 3.5 esignature user ID: sej02002

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Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i03.d Instrument ID: HP09915.i
 Injection date and time: 04-MAY-2020 13:02 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 04-MAY-2020 19:29
 Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD050

Lab Sample ID: VSTD050

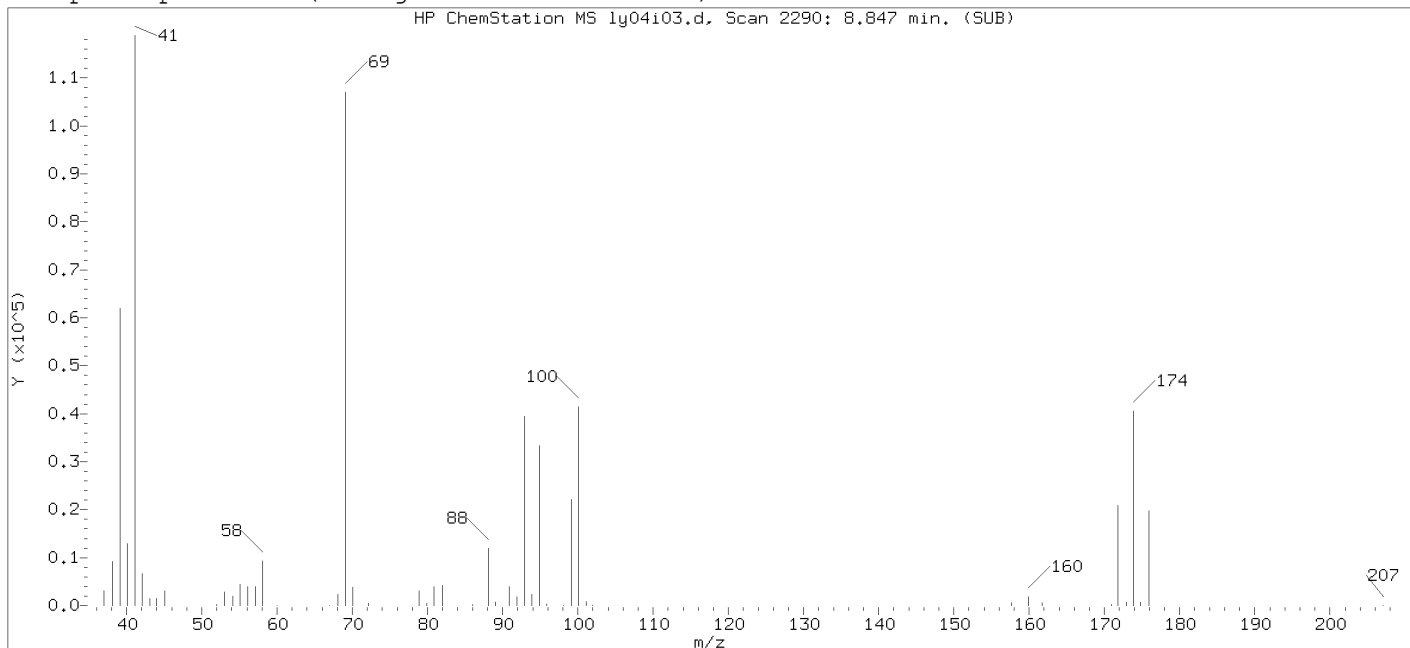
Compound Number : 75
 Compound Name : 1,4-Dioxane
 Scan Number : 2290
 Retention Time (minutes): 8.847
 Quant Ion : 88.00
 Area (flag) : 65798M
 On-Column Amount (ng) : 647.0377
 Integration start scan : 2274 Integration stop scan: 2386
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

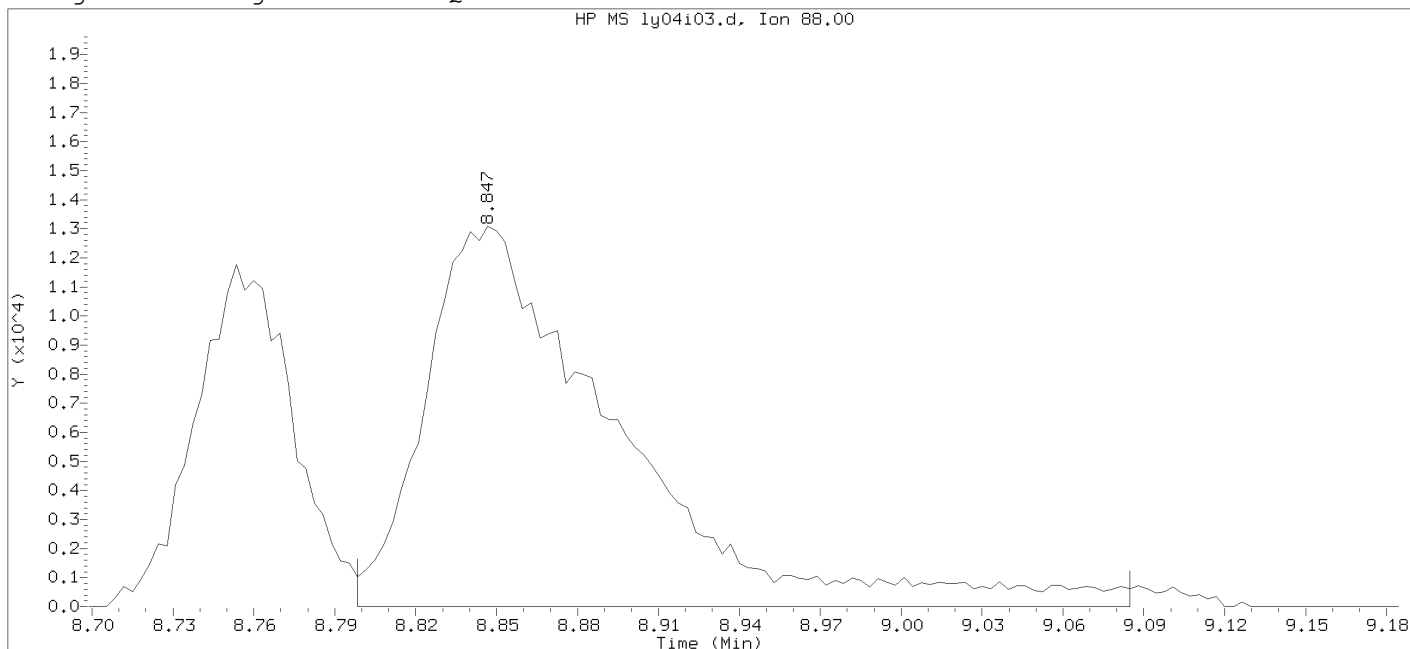
Analyst responsible for change: Digitally signed by Sara E. Johnson
 on 05/04/2020 at 19:30.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/06/2020 at 08:34.
 PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i03.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 13:02

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 13:31

Date, time and analyst ID of latest file update: 04-May-2020 13:31 lcp00895

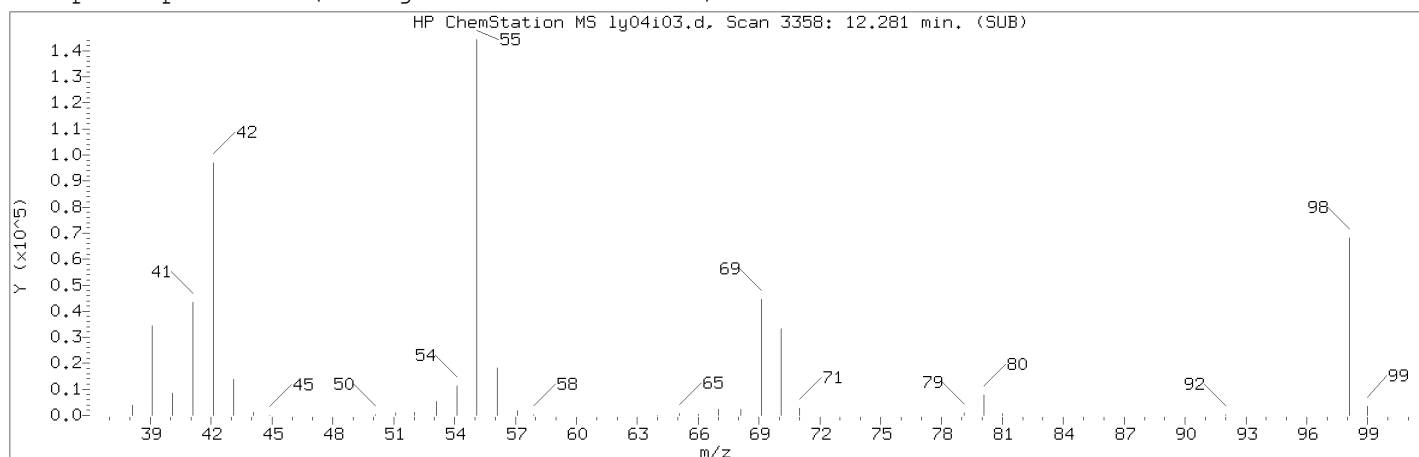
Sample Name: VSTD050

Lab Sample ID: VSTD050

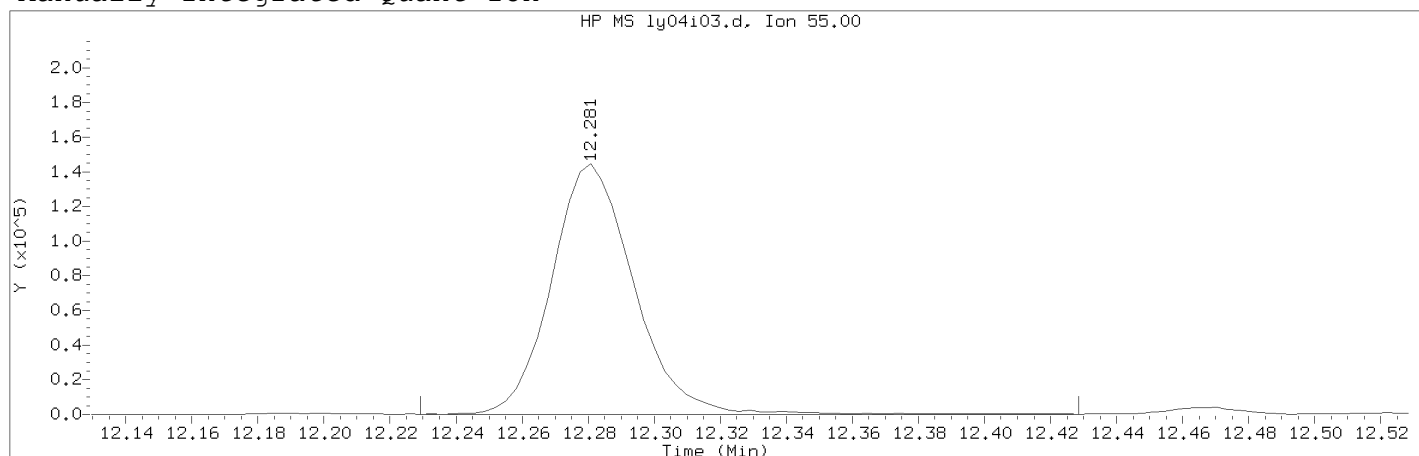
Compound Number	: 75
Compound Name	: 1,4-Dioxane
Scan Number	: 2290
Retention Time (minutes)	: 8.847
Quant Ion	: 88.00
Area	: 64664
On-column Amount (ng)	: 618.7368
Integration start scan	: 2274
Integration stop scan	: 2363
Y at integration start	: 0
Y at integration end	: 0

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 Target 3.5 esignature user KR446 Page 143 of 579

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i03.d Instrument ID: HP09915.i
 Injection date and time: 04-MAY-2020 13:02 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 04-MAY-2020 19:29
 Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD050

Lab Sample ID: VSTD050

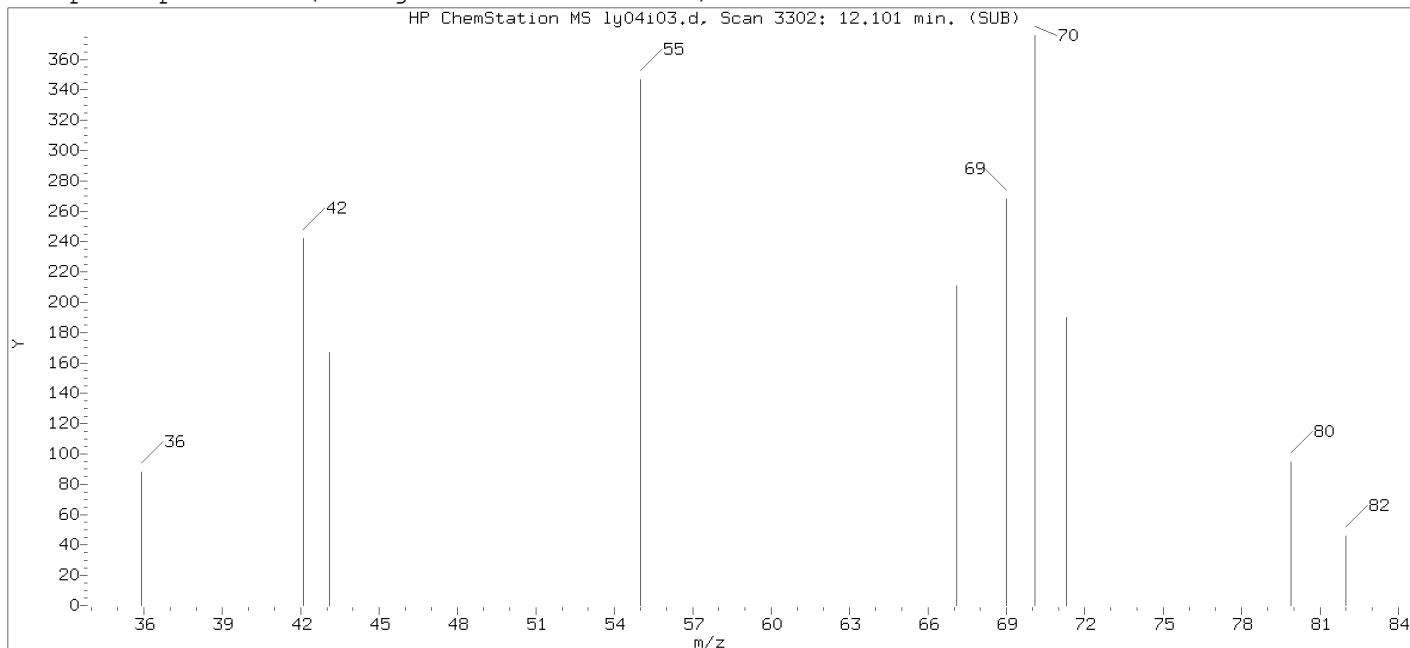
Compound Number : 112
 Compound Name : Cyclohexanone
 Scan Number : 3358
 Retention Time (minutes): 12.281
 Quant Ion : 55.00
 Area (flag) : 250083A
 On-Column Amount (ng) : 660.6769
 Integration start scan : 3341 Integration stop scan: 3403
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

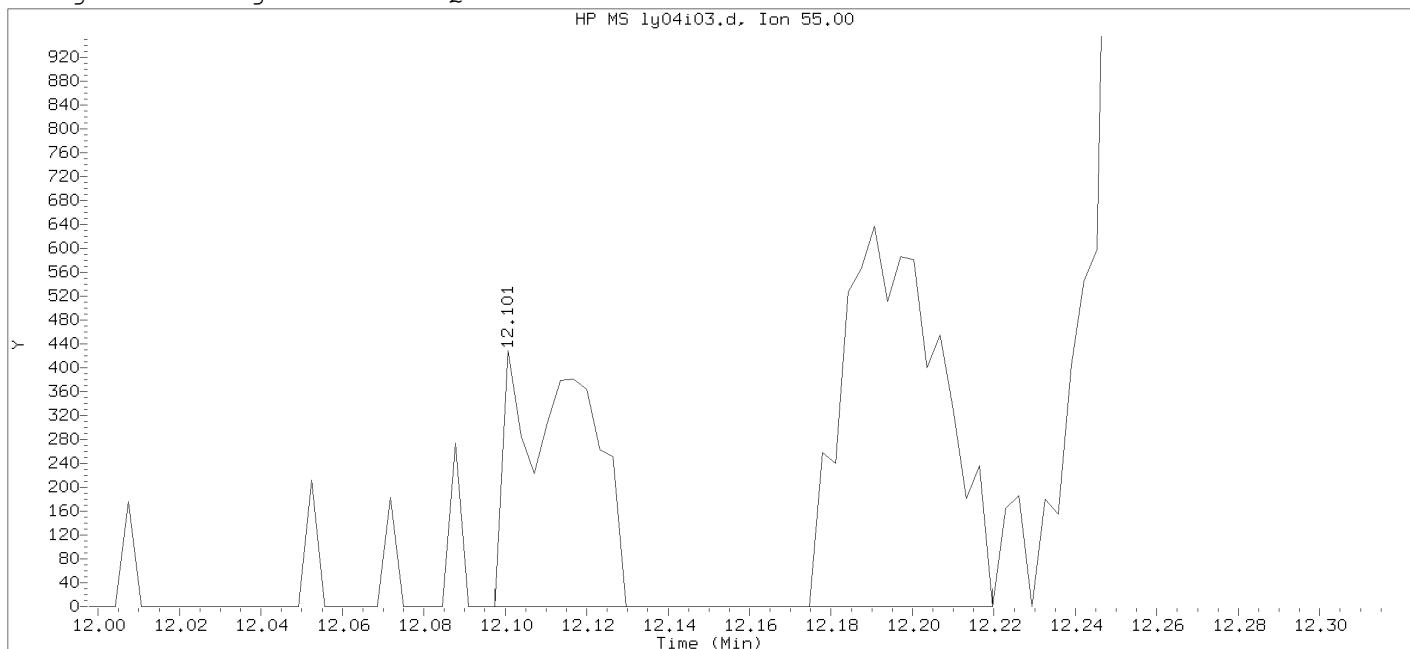
Analyst responsible for change: Digitally signed by Sara E. Johnson
 on 05/04/2020 at 19:30.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/06/2020 at 08:34.
 PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i03.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 13:02

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 13:31

Date, time and analyst ID of latest file update: 04-May-2020 13:31 lcp00895

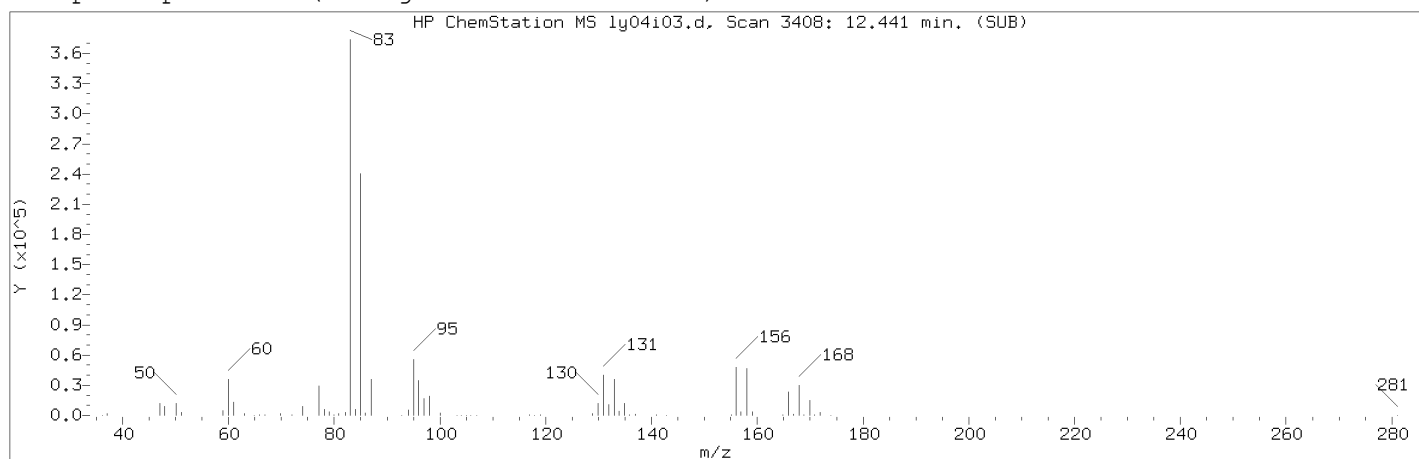
Sample Name: VSTD050

Lab Sample ID: VSTD050

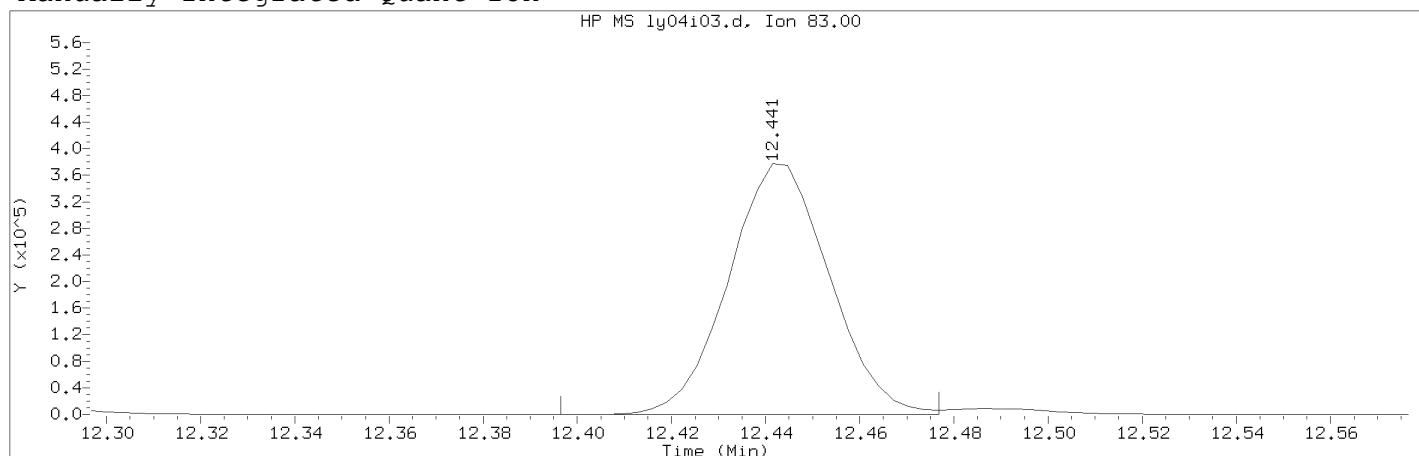
Compound Number	: 112
Compound Name	: Cyclohexanone
Scan Number	: 3302
Retention Time (minutes)	: 12.101
Quant Ion	: 55.00
Area	: 1618
On-column Amount (ng)	: 793.0477
Integration start scan	: 3300
Integration stop scan	: 3338
Y at integration start	: 0
Y at integration end	: 0

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 Target 3.5 esignature user KR446 Page 145 of 579

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i03.d Instrument ID: HP09915.i
 Injection date and time: 04-MAY-2020 13:02 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 04-MAY-2020 19:29
 Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD050

Lab Sample ID: VSTD050

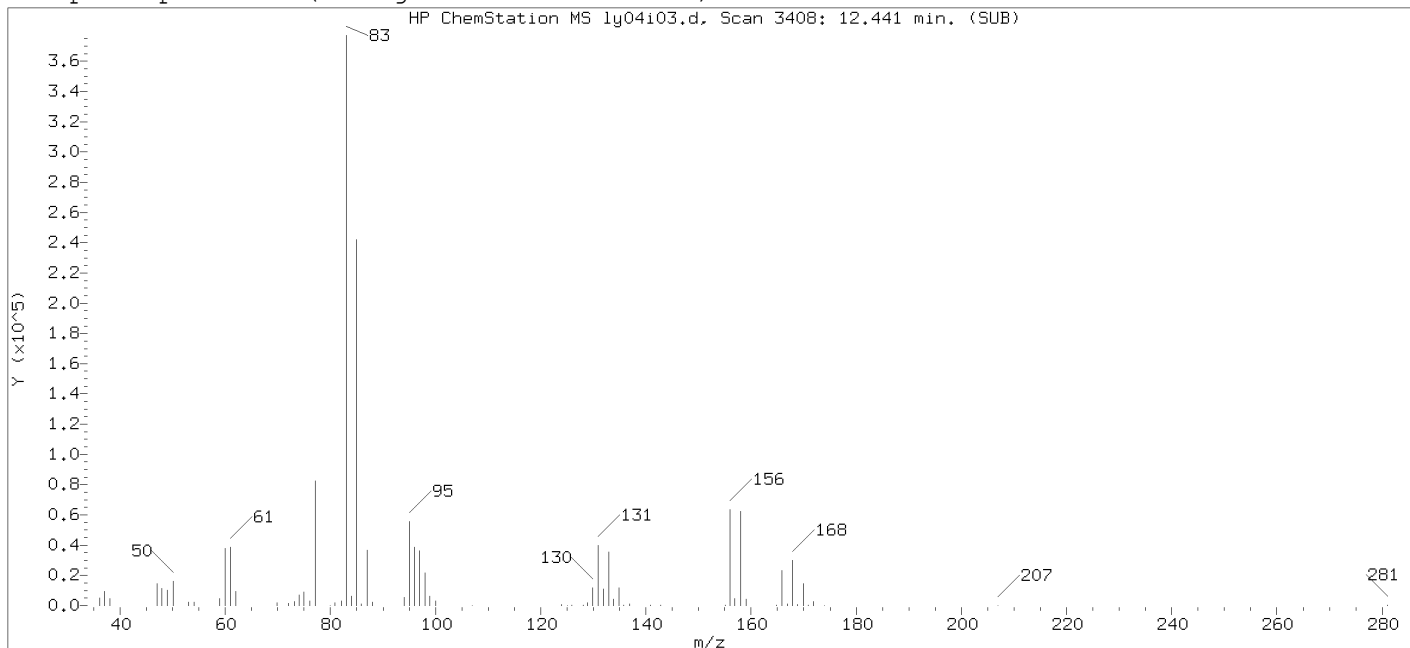
Compound Number : 116
 Compound Name : 1,1,2,2-Tetrachloroethane
 Scan Number : 3408
 Retention Time (minutes): 12.441
 Quant Ion : 83.00
 Area (flag) : 560714M
 On-Column Amount (ng) : 50.5096
 Integration start scan : 3393 Integration stop scan: 3418
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

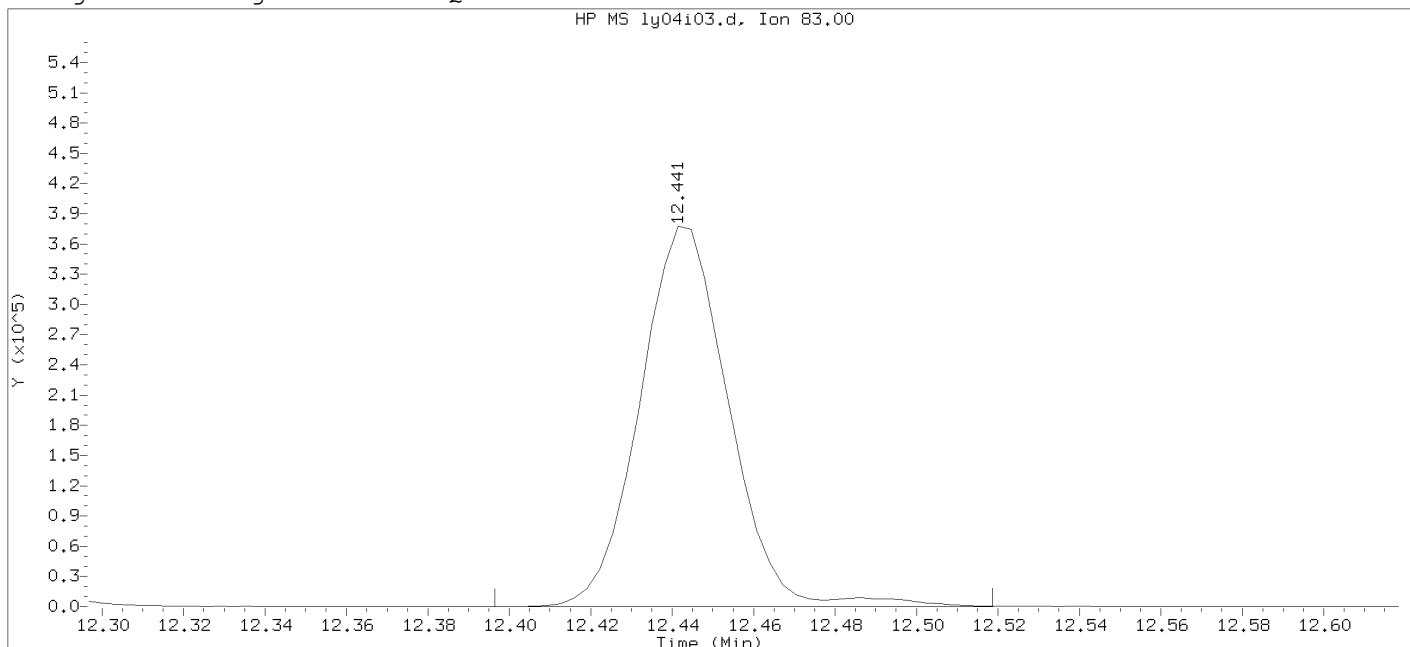
Analyst responsible for change: Digitally signed by Sara E. Johnson
 on 05/04/2020 at 19:30.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/06/2020 at 08:34.
 PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20may04i.b/ly04i03.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 13:02

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 13:31

Date, time and analyst ID of latest file update: 04-May-2020 13:31 lcp00895

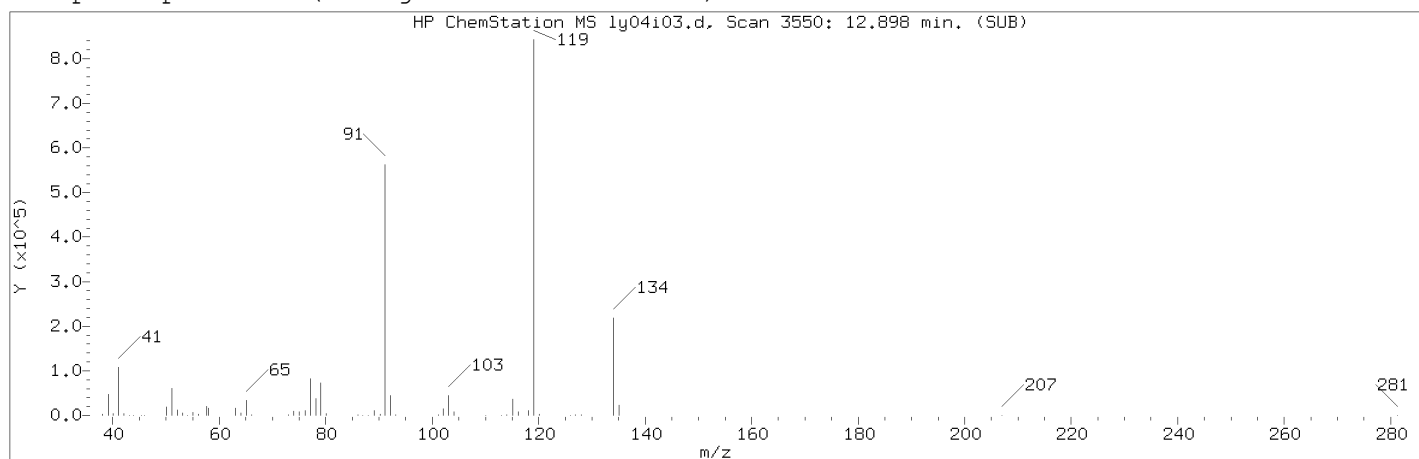
Sample Name: VSTD050

Lab Sample ID: VSTD050

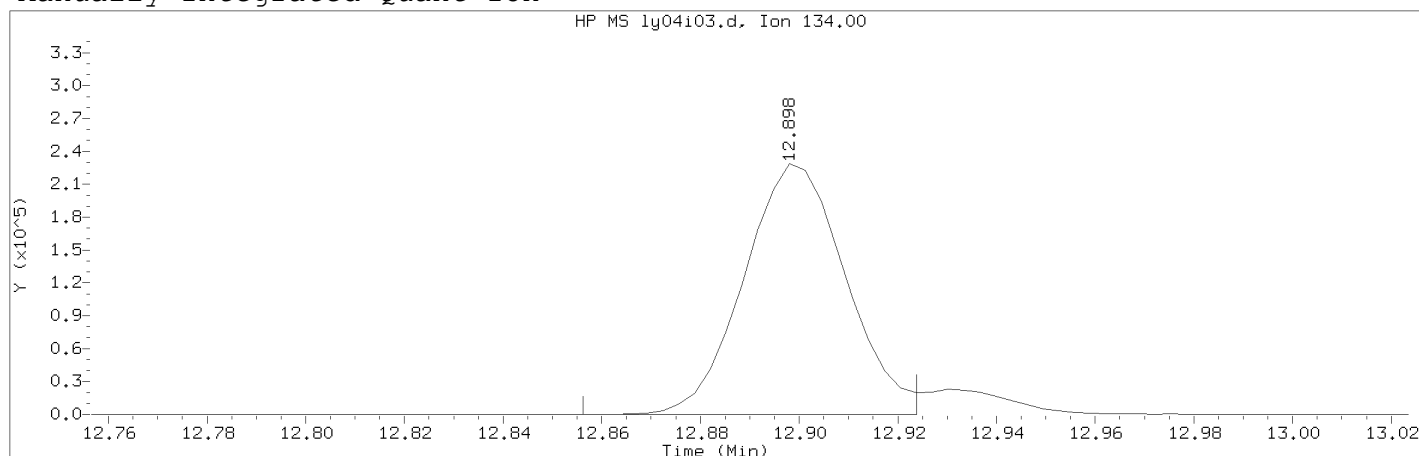
Compound Number	: 116	
Compound Name	: 1,1,2,2-Tetrachloroethane	
Scan Number	: 3408	
Retention Time (minutes)	: 12.441	
Quant Ion	: 83.00	
Area	: 572715	
On-column Amount (ng)	: 51.1549	
Integration start scan	: 3393	Integration stop scan: 3431
Y at integration start	: 0	Y at integration end: 0

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 Target 3.5 esignature user KR446 Page 147 of 579

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i03.d Instrument ID: HP09915.i
 Injection date and time: 04-MAY-2020 13:02 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 04-MAY-2020 19:29
 Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD050

Lab Sample ID: VSTD050

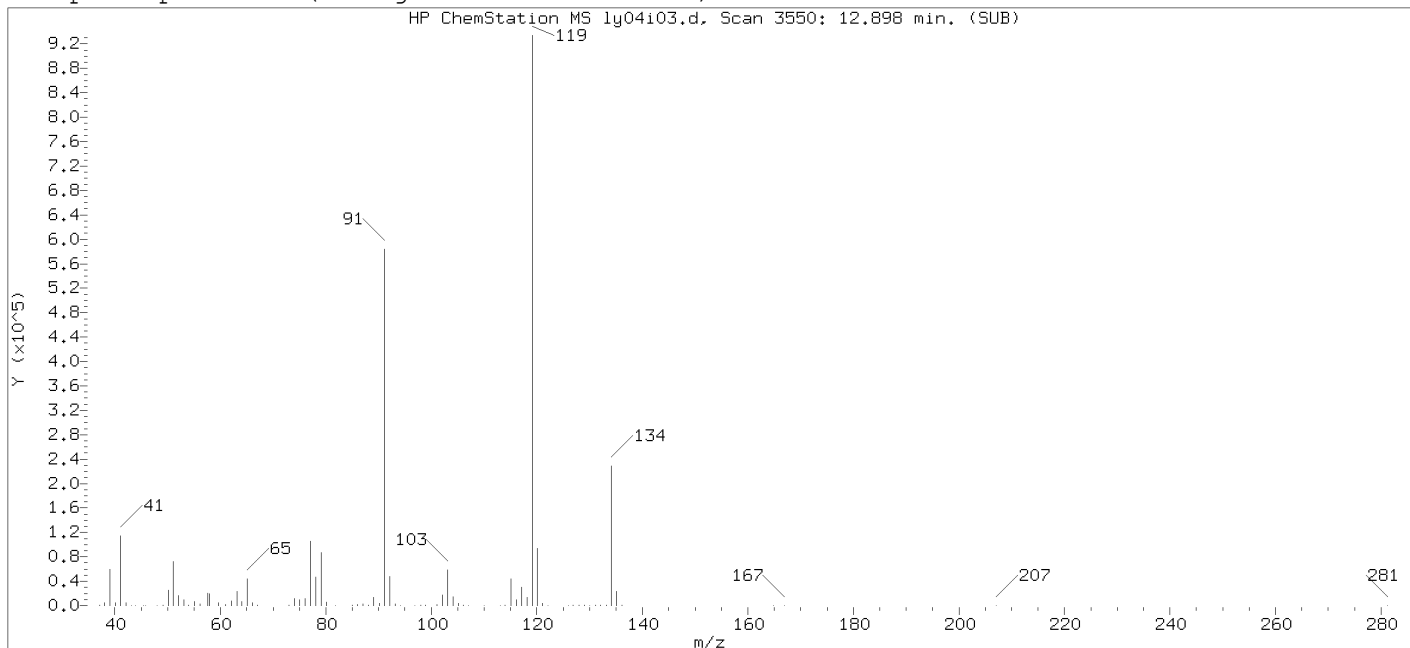
Compound Number : 124
 Compound Name : tert-Butylbenzene
 Scan Number : 3550
 Retention Time (minutes): 12.898
 Quant Ion : 134.00
 Area (flag) : 327078M
 On-Column Amount (ng) : 57.1794
 Integration start scan : 3536 Integration stop scan: 3557
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

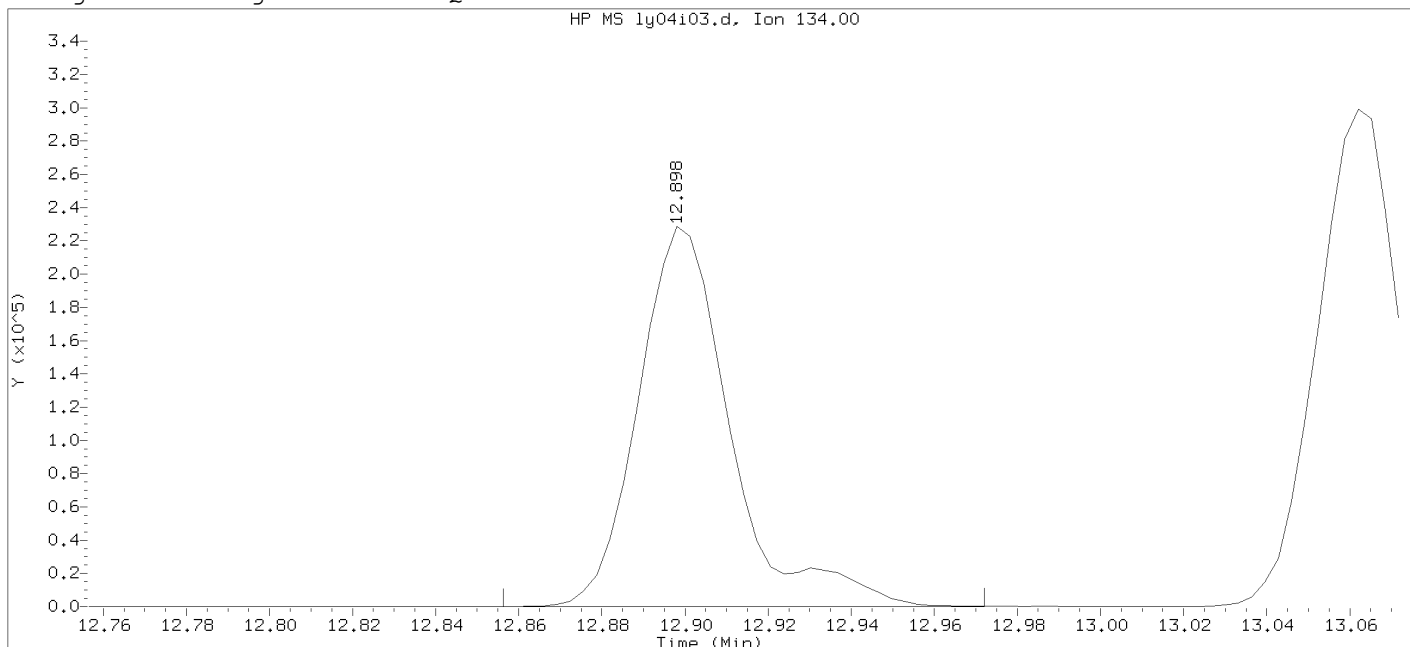
Analyst responsible for change: Digitally signed by Sara E. Johnson
 on 05/04/2020 at 19:30.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/06/2020 at 08:34.
 PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20may04i.b/ly04i03.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 13:02

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 13:31

Date, time and analyst ID of latest file update: 04-May-2020 13:31 lcp00895

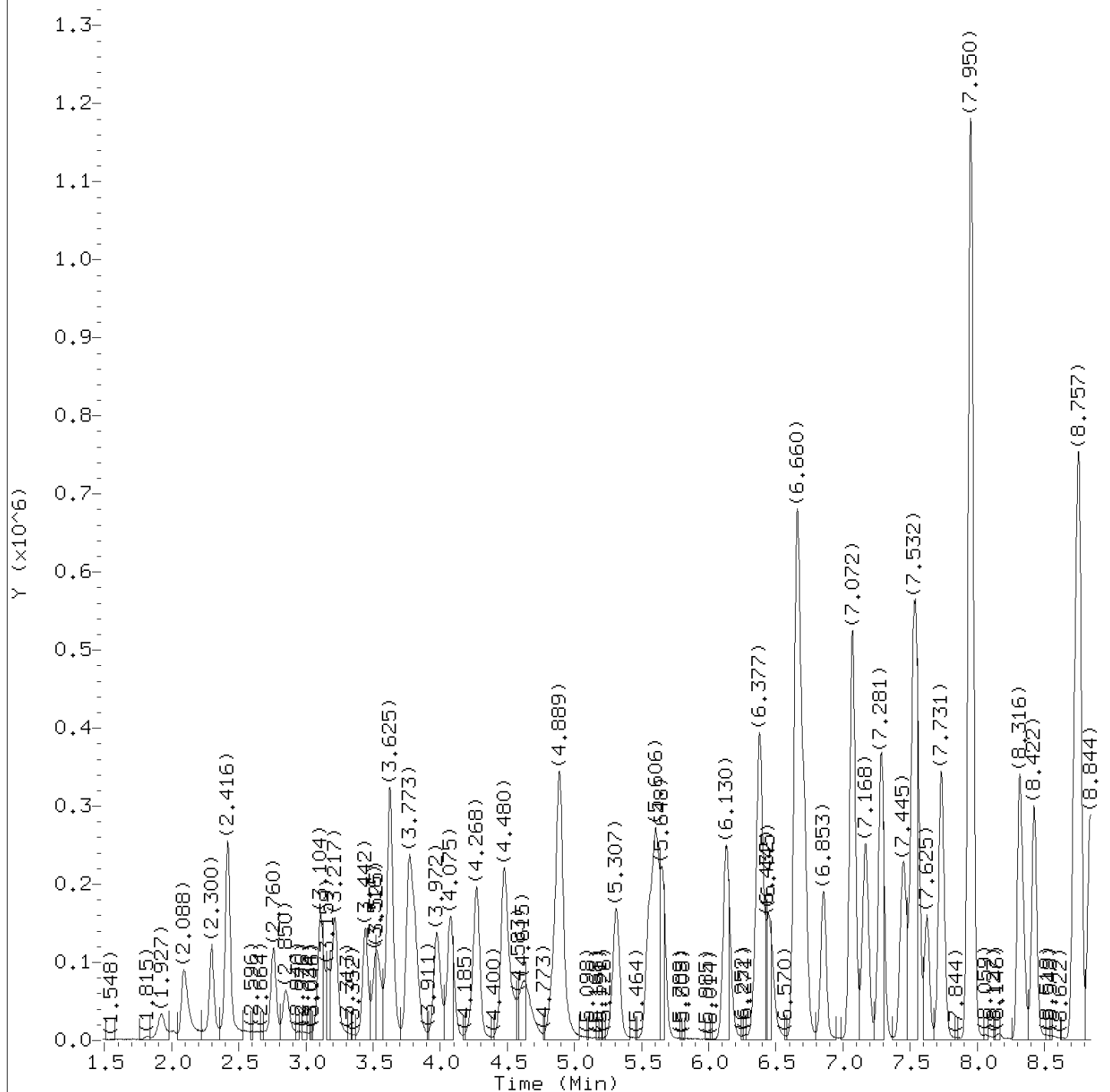
Sample Name: VSTD050

Lab Sample ID: VSTD050

Compound Number	: 124	
Compound Name	: tert-Butylbenzene	
Scan Number	: 3550	
Retention Time (minutes)	: 12.898	
Quant Ion	: 134.00	
Area	: 353406	
On-column Amount (ng)	: 51.6624	
Integration start scan	: 3536	Integration stop scan: 3572
Y at integration start	: 0	Y at integration end: 0

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 Target 3.5 esignature user KR446 Page 149 of 579

/chem/HP09915.i/20may04i.b/ly04i04.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20may04i.b/ly04i04.d
 Injection date and time: 04-MAY-2020 13:24

Instrument ID: HP09915.i
 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m
 Calibration date and time: 04-MAY-2020 19:29

Sublist used: 8260W

Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD020

Lab Sample ID: VSTD020

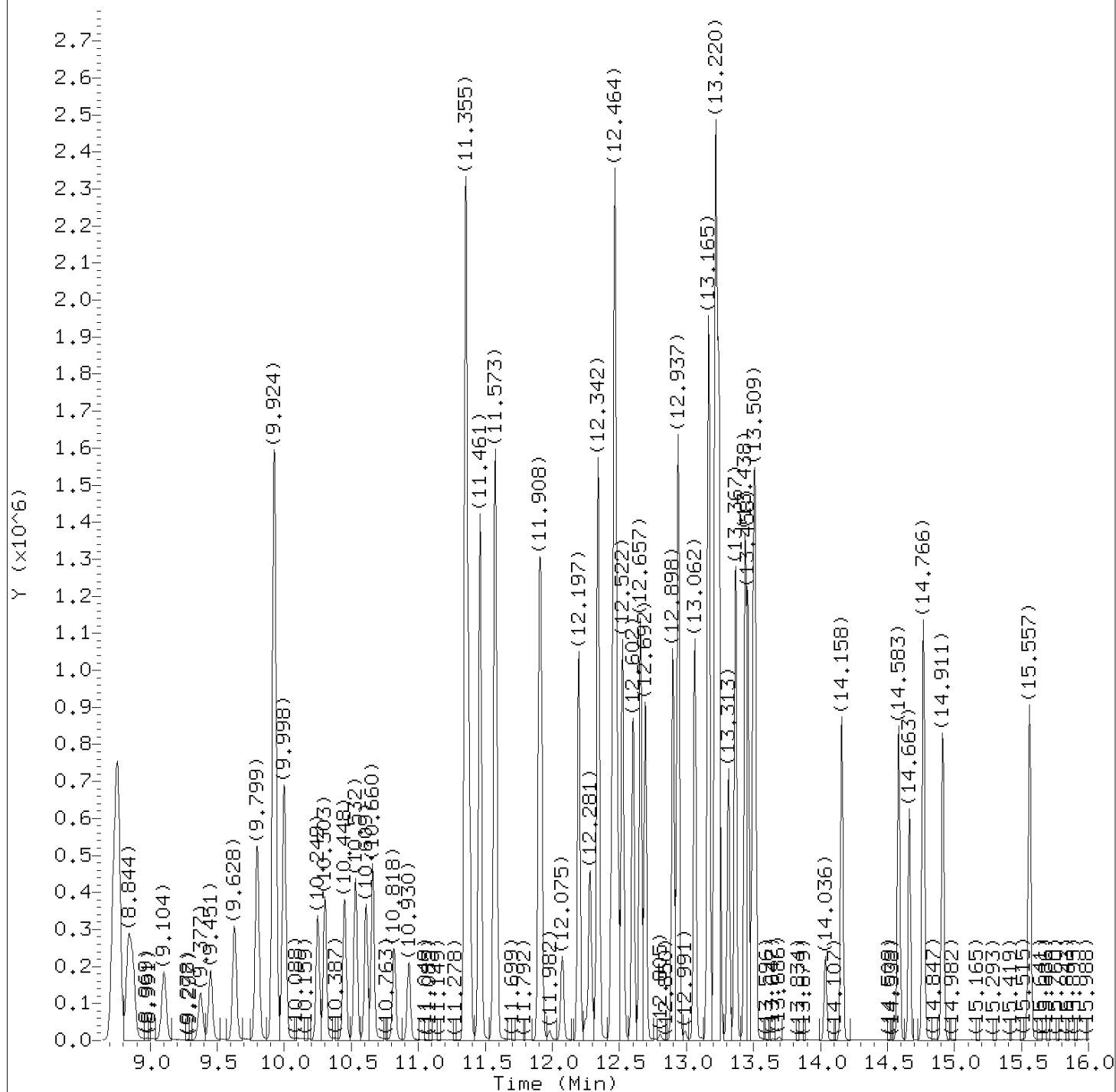
Digitally signed by Sara E. Johnson
 on 05/04/2020 at 19:30.

Target 3.5 esignature user ID: sej02002

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page 1 of 2

/chem/HP09915.i/20may04i.b/ly04i04.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20may04i.b/ly04i04.d
 Injection date and time: 04-MAY-2020 13:24

Instrument ID: HP09915.i
 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m
 Calibration date and time: 04-MAY-2020 19:29

Sublist used: 8260W

Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD020

Lab Sample ID: VSTD020

Digitally signed by Sara E. Johnson
 on 05/04/2020 at 19:30.

Target 3.5 esignature user ID: sej02002

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may04i.b/ly04i04.d
 Injection date and time: 04-MAY-2020 13:24

Instrument ID: HP09915.i
 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 19:29

Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD020

Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
3) Dichlorodifluoromethane	(2)	2.098	85	182493	20.678
4) Chloromethane	(2)	2.297	50	160528	19.482
5) 1,3-Butadiene	(2)	2.413	39	98295	18.595
6) Vinyl Chloride	(2)	2.416	62	157383	19.793
8) Bromomethane	(2)	2.760	94	111396	19.431
9) Chloroethane	(2)	2.847	64	85384	19.233
10) Dichlorofluoromethane	(2)	3.104	67	183563	19.169
12) Trichlorofluoromethane	(2)	3.169	101	173142	19.937
11) n-Pentane	(2)	3.217	43	144840	17.763
14) Ethyl ether	(2)	3.445	59	128448	20.932
15) Freon 123a	(2)	3.525	67	138710	19.715
16) Acrolein	(1)	3.625	56	491814	208.981
17) 1,1-Dichloroethene	(2)	3.763	96	106805	19.285
17) 1,1-Dichloroethene	(2)	3.763	63	52324	19.837
19) Freon 113	(2)	3.792	101	104838	18.245
18) Acetone	(1)	3.808	58	42345	39.446
22) Methyl Iodide	(2)	3.972	142	216364	20.271
21) 2-Propanol	(1)	3.992	45	139861	204.421
23) Carbon Disulfide	(2)	4.075	76	373129	20.009
27) Methyl Acetate	(2)	4.246	43	141236	19.995
25) Allyl Chloride	(2)	4.275	41	185201	20.635
28) Methylene Chloride	(2)	4.477	84	132592	20.126
29) *t-Butyl alcohol-d10	(1)	4.500	65	286065	250.000
30) t-Butyl alcohol	(1)	4.625	59	239168	207.092
31) Acrylonitrile	(2)	4.841	53	81905	20.932
33) Methyl Tertiary Butyl Ether	(2)	4.879	73	397874	20.947
32) trans-1,2-Dichloroethene	(2)	4.889	96	127981	20.087
34) n-Hexane	(2)	5.310	57	161671	18.119
36) 1,1-Dichloroethane	(2)	5.554	63	227789	20.384
38) di-Isopropyl ether	(2)	5.603	45	414045	21.067
39) 2-Chloro-1,3-butadiene	(2)	5.657	53	182122	20.436
40) Ethyl t-butyl ether	(2)	6.130	59	388621	21.282
43) 1,2-Dichloroethene (Total)	(2)		96	274584	40.605
44) 2-Butanone	(2)	6.358	43	198595	41.813
42) cis-1,2-Dichloroethene	(2)	6.374	96	146603	20.518
45) 2,2-Dichloropropane	(2)	6.394	77	174795	20.239
47) Propionitrile	(1)	6.451	54	319787	204.964
48) Methacrylonitrile	(2)	6.660	67	415491	105.915

* = Compound is an internal standard.

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 on 05/04/2020 at 19:30.

Target 3.5 esignature user ID: sej02002

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may04i.b/ly04i04.d
 Injection date and time: 04-MAY-2020 13:24

Instrument ID: HP09915.i
 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 19:29

Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD020

Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
49) Bromochloromethane	(2)	6.705	128	75830	20.569
50) Tetrahydrofuran	(1)	6.709	71	55239	40.465
51) Chloroform	(2)	6.853	83	221887	20.324
52)\$Dibromofluoromethane	(2)	7.069	113	324872	50.107
52)\$Dibromofluoromethane	(2)	7.069	111	330761	49.906
53) 1,1,1-Trichloroethane	(2)	7.072	97	185712	19.828
54) Cyclohexane	(2)	7.168	56	195002	18.599
54) Cyclohexane	(2)	7.165	84	167123	18.261
54) Cyclohexane	(2)	7.168	69	59506	18.264
56) Carbon Tetrachloride	(2)	7.284	117	152394	19.420
55) 1,1-Dichloropropene	(2)	7.287	75	170572	19.866
58) Isobutyl Alcohol	(1)	7.451	41	199593	509.455
57)\$1,2-Dichloroethane-d4	(2)	7.519	102	82752	50.300
57)\$1,2-Dichloroethane-d4	(2)	7.519	65	365637	50.070
57)\$1,2-Dichloroethane-d4	(2)	7.522	104	51858	49.502
60) Benzene	(2)	7.551	78	543226	20.439
61) 1,2-Dichloroethane	(2)	7.625	62	178307	20.013
61) 1,2-Dichloroethane	(2)	7.625	98	18135	20.888
65) t-Amyl methyl ether	(2)	7.734	73	396286	21.243
67) n-Heptane	(2)	7.950	43	159155	17.153
66)*Fluorobenzene	(2)	7.950	96	1286965	50.000
69) n-Butanol	(1)	8.319	56	337255	1055.749
71) Trichloroethene	(2)	8.422	95	135676	20.172
72) Methylcyclohexane	(2)	8.728	83	219111	20.035
72) Methylcyclohexane	(2)	8.731	98	97903	19.792
73) 1,2-Dichloropropane	(2)	8.763	63	142062	20.745
76) Methyl Methacrylate	(2)	8.834	69	121569	20.646
75) 1,4-Dioxane	(1)	8.847	88	49216	512.522
74) Dibromomethane	(2)	8.869	93	92385	20.628
78) Bromodichloromethane	(2)	9.104	83	163155	20.321
79) 2-Nitropropane	(2)	9.377	41	100789	41.867
80) 2-Chloroethyl Vinyl Ether	(2)	9.448	63	100249	21.985
81) cis-1,3-Dichloropropene	(2)	9.628	75	220292	20.994
82) 4-Methyl-2-pentanone	(2)	9.799	43	414870	43.133
83)\$Toluene-d8	(3)	9.924	98	1318781	49.746
83)\$Toluene-d8	(3)	9.924	100	855298	49.713
88) Toluene	(3)	10.001	92	349405	20.678
90) 1,3-Dichloropropene (total)	(3)		100	421273	41.724

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 2 of 4

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 on 05/04/2020 at 19:30.

Target 3.5 esignature user ID: sej02002

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may04i.b/ly04i04.d
 Injection date and time: 04-MAY-2020 13:24

Instrument ID: HP09915.i
 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 19:29

Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD020

Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
89) trans-1,3-Dichloropropene	(3)	10.249	75	200981	20.730
91) Ethyl Methacrylate	(3)	10.303	69	210606	21.589
92) 1,1,2-Trichloroethane	(3)	10.448	97	135197	20.619
93) Tetrachloroethene	(3)	10.532	166	143073	19.868
94) 1,3-Dichloropropane	(3)	10.609	76	227131	20.714
96) 2-Hexanone	(3)	10.660	43	300504	42.411
97) Dibromochloromethane	(3)	10.818	129	142549	20.900
99) 1,2-Dibromoethane	(3)	10.930	107	146696	20.818
100) *Chlorobenzene-d5	(3)	11.352	117	1031952	50.000
101) 1-Chlorohexane	(3)	11.358	91	166099	19.208
102) Chlorobenzene	(3)	11.377	112	402991	20.768
103) 1,1,1,2-Tetrachloroethane	(3)	11.458	131	139268	21.171
104) Ethylbenzene	(3)	11.461	91	658352	21.048
106) m+p-Xylene	(3)	11.573	106	527120	42.892
108) Xylene (Total)	(3)		106	785933	64.669
107) o-Xylene	(3)	11.901	106	258813	21.777
109) Styrene	(3)	11.917	104	426156	22.049
110) Bromoform	(3)	12.072	173	102983	20.740
111) Isopropylbenzene	(3)	12.197	105	646899	21.450
112) Cyclohexanone	(1)	12.281	55	193908A	542.487
114) \$4-Bromofluorobenzene	(3)	12.342	95	506416	49.646
114) \$4-Bromofluorobenzene	(3)	12.342	174	435782	49.830
116) 1,1,2,2-Tetrachloroethane	(4)	12.441	83	222212M	21.001
115) Bromobenzene	(4)	12.461	156	177922	20.949
118) trans-1,4-Dichloro-2-butene	(4)	12.467	53	330551	107.395
117) 1,2,3-Trichloropropane	(4)	12.490	110	67089	20.761
119) n-Propylbenzene	(4)	12.522	91	772909	21.056
120) 2-Chlorotoluene	(4)	12.602	126	164580	20.987
122) 1,3,5-Trimethylbenzene	(4)	12.657	105	579385	21.844
121) 4-Chlorotoluene	(4)	12.692	126	172819	21.233
124) tert-Butylbenzene	(4)	12.898	134	115481M	21.181
125) Pentachloroethane	(4)	12.933	167	103044	21.281
126) 1,2,4-Trimethylbenzene	(4)	12.940	105	613752	22.381
127) sec-Butylbenzene	(4)	13.062	105	688409	21.317
129) 1,3-Dichlorobenzene	(4)	13.162	146	344035	21.738
130) p-Isopropyltoluene	(4)	13.168	119	610035	22.046
131) *1,4-Dichlorobenzene-d4	(4)	13.216	152	580388	50.000
133) 1,4-Dichlorobenzene	(4)	13.236	146	354497	21.342

M = Compound was manually integrated.

A = User selected an alternate hit.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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 on 05/04/2020 at 19:30.

page 3 of 4

Target 3.5 esignature user ID: sej02002

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may04i.b/ly04i04.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 13:24

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 19:29

Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD020

Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
134) 1,2,3-Trimethylbenzene	(4)	13.245	105	609451	21.389
135) Benzyl Chloride	(4)	13.313	91	466875	21.655
136) 1,3-Diethylbenzene	(4)	13.367	119	387190	21.717
141) Diethylbenzene (total)	(4)		100	1123913	65.203
137) 1,4-Diethylbenzene	(4)	13.438	119	405953	21.753
139) n-Butylbenzene	(4)	13.458	92	301552	21.211
138) 1,2-Dichlorobenzene	(4)	13.496	146	341680	21.449
140) 1,2-Diethylbenzene	(4)	13.512	119	330770	21.733
142) 1,2-Dibromo-3-chloropropane	(4)	14.036	75	48343	20.642
144) 1,3,5-Trichlorobenzene	(4)	14.158	180	258381	21.532
146) 1,2,4-Trichlorobenzene	(4)	14.583	180	247167	22.041
147) Hexachlorobutadiene	(4)	14.663	225	104234	20.149
148) Naphthalene	(4)	14.769	128	836600	23.047
149) 1,2,3-Trichlorobenzene	(4)	14.911	180	250166	22.450
150) 2-Methylnaphthalene	(4)	15.560	142	445635	18.446

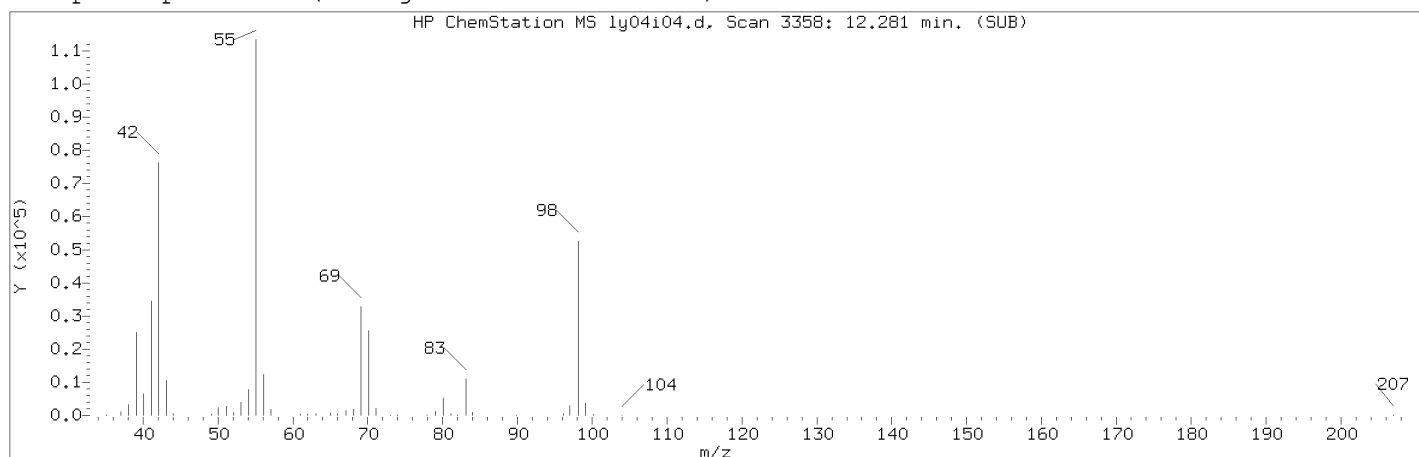
page 4 of 4

Digitally signed by Sara E. Johnson
on 05/04/2020 at 19:30.

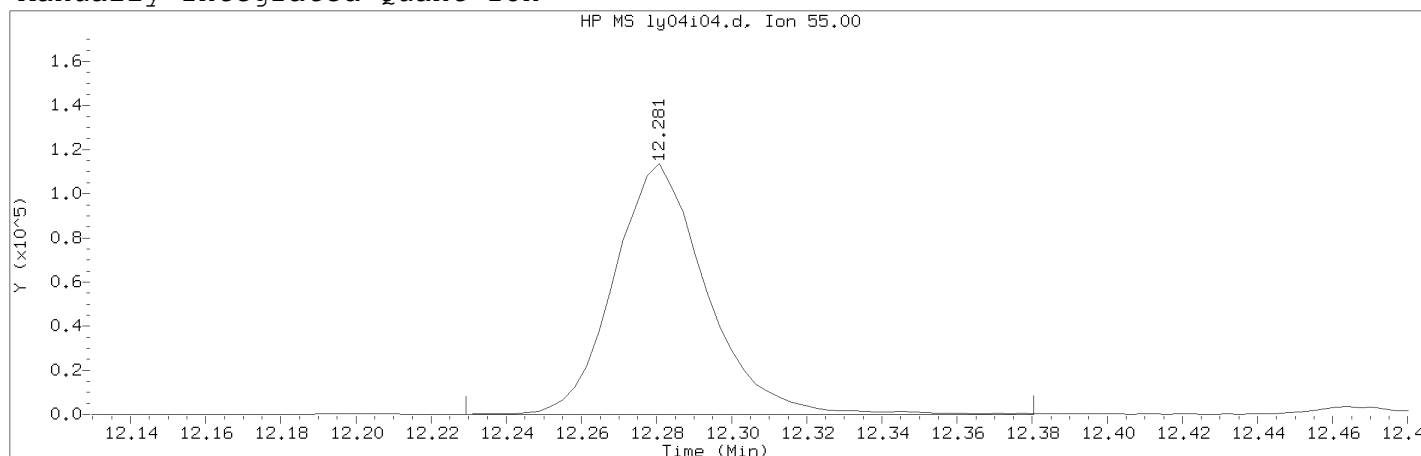
Target 3.5 esignature user ID: sej02002

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Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i04.d Instrument ID: HP09915.i
 Injection date and time: 04-MAY-2020 13:24 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 04-MAY-2020 19:29
 Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD020

Lab Sample ID: VSTD020

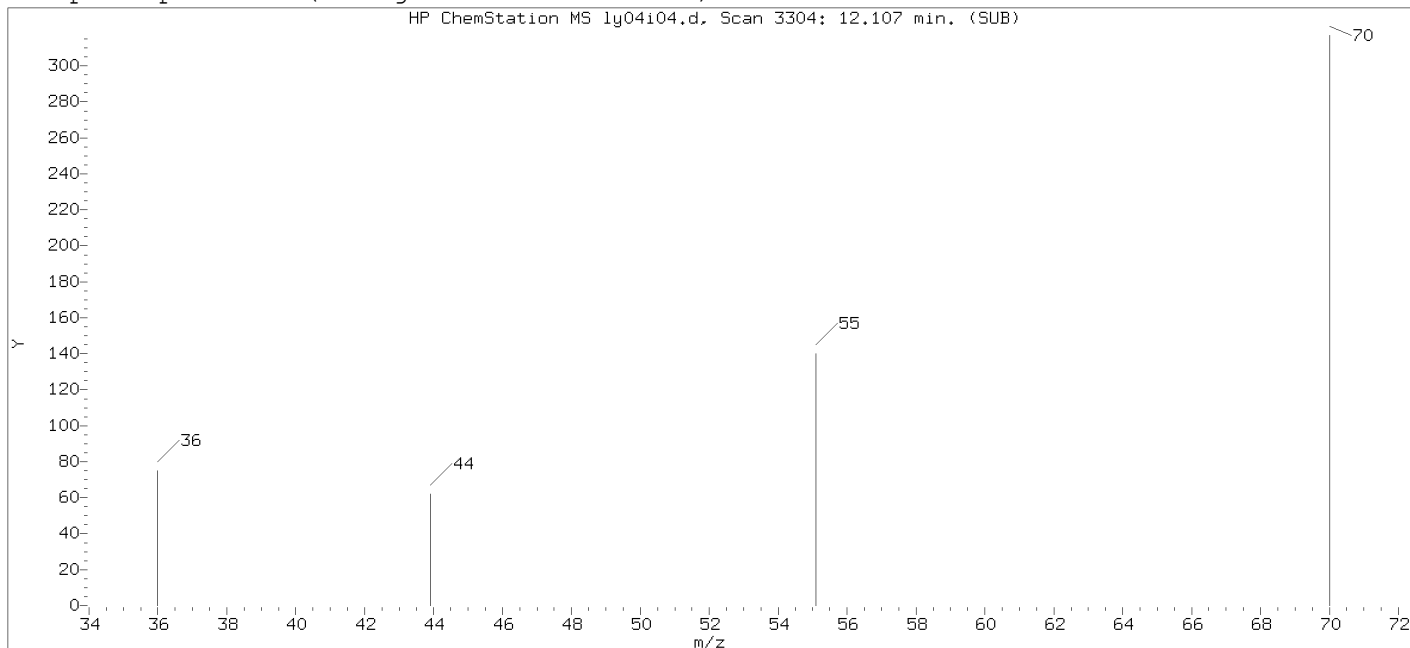
Compound Number : 112
 Compound Name : Cyclohexanone
 Scan Number : 3358
 Retention Time (minutes): 12.281
 Quant Ion : 55.00
 Area (flag) : 193908A
 On-Column Amount (ng) : 542.4875
 Integration start scan : 3341 Integration stop scan: 3388
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

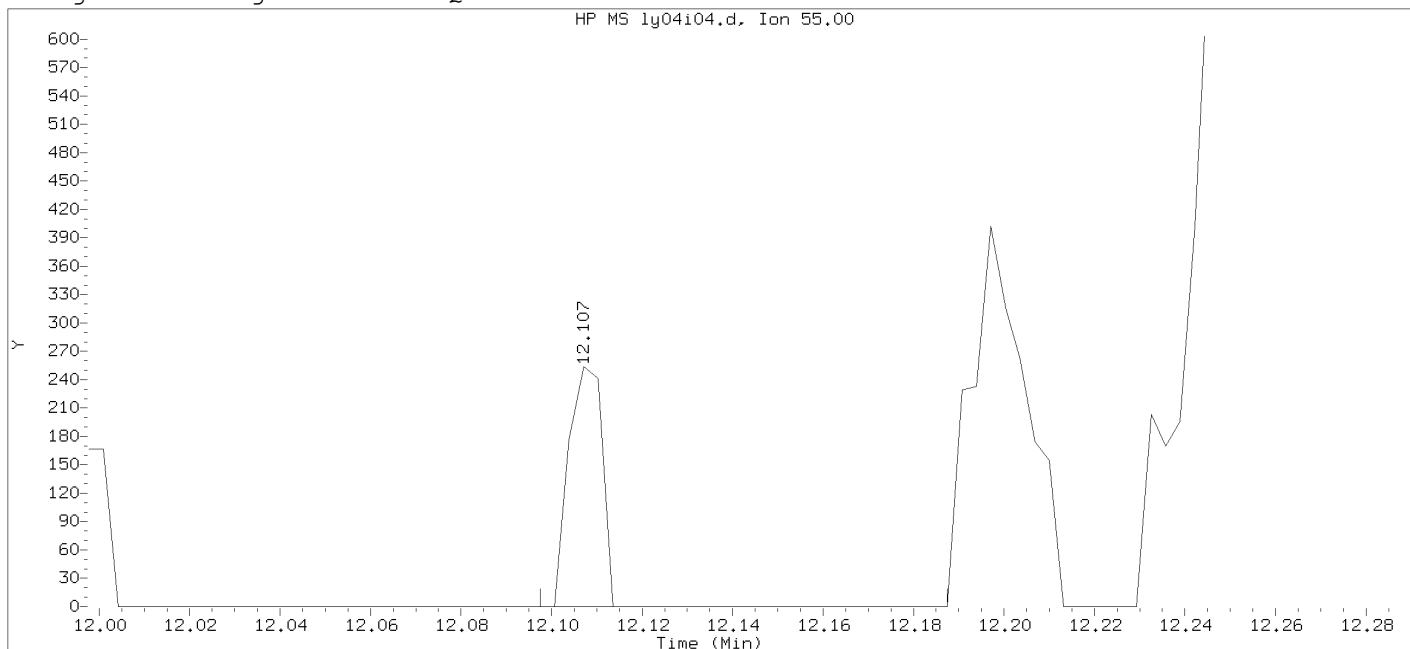
Analyst responsible for change: Digitally signed by Sara E. Johnson
 on 05/04/2020 at 19:30.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/06/2020 at 08:34.
 PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i04.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 13:24

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 13:41

Date, time and analyst ID of latest file update: 04-May-2020 13:41 Automation

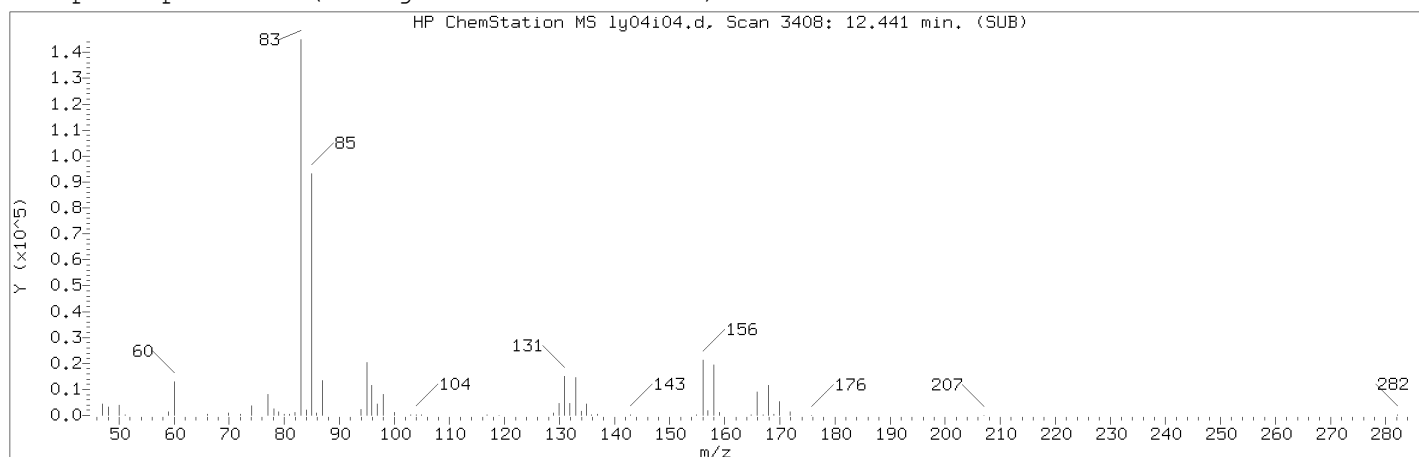
Sample Name: VSTD020

Lab Sample ID: VSTD020

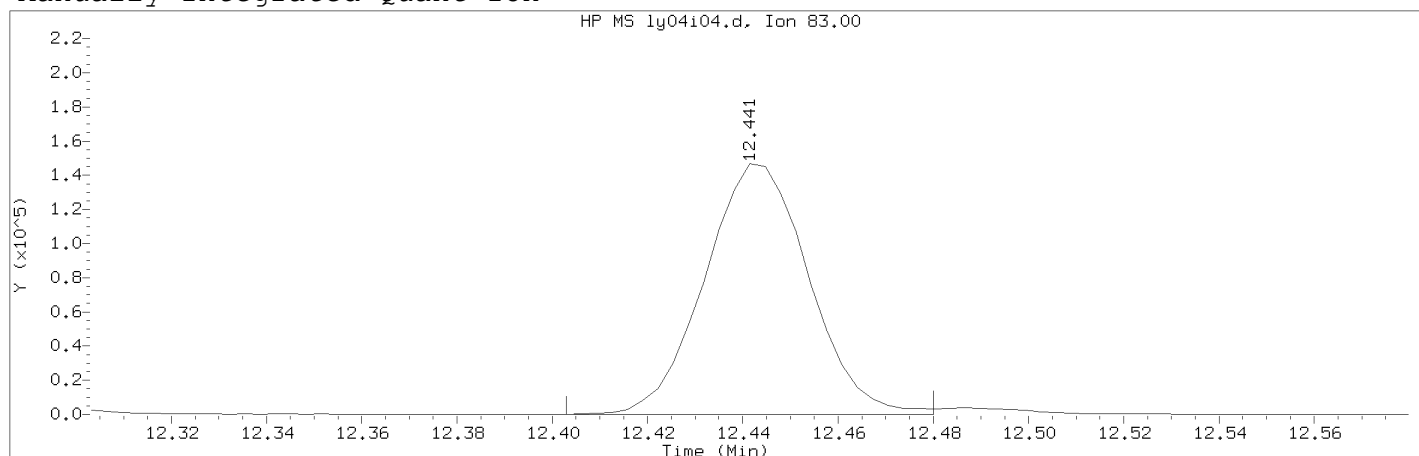
Compound Number	: 112
Compound Name	: Cyclohexanone
Scan Number	: 3304
Retention Time (minutes)	: 12.107
Quant Ion	: 55.00
Area	: 129
On-column Amount (ng)	: 85.7174
Integration start scan	: 3300
Integration stop scan	: 3328
Y at integration start	: 0
Y at integration end	: 0

Digitally signed by Sara E. Johnson on 05/04/2020 at 19:30.
 Target 3.5 esignature user KR446 Page 157 of 579

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i04.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 13:24

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 19:29

Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD020

Lab Sample ID: VSTD020

Compound Number : 116
 Compound Name : 1,1,2,2-Tetrachloroethane
 Scan Number : 3408
 Retention Time (minutes): 12.441
 Quant Ion : 83.00
 Area (flag) : 222212M
 On-Column Amount (ng) : 21.0014
 Integration start scan : 3395 Integration stop scan: 3419
 Y at integration start : 0 Y at integration end: 0

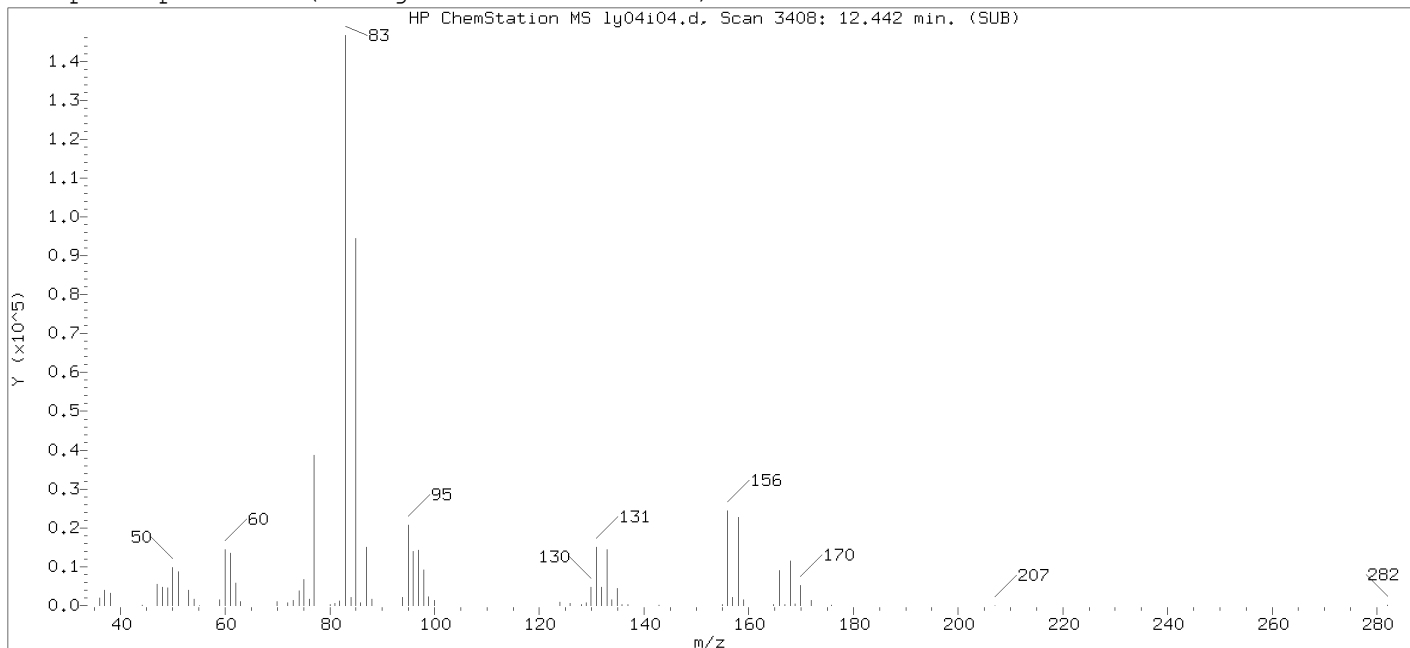
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Sara E. Johnson
 on 05/04/2020 at 19:30.
 Target 3.5 esignature user ID: sej02002

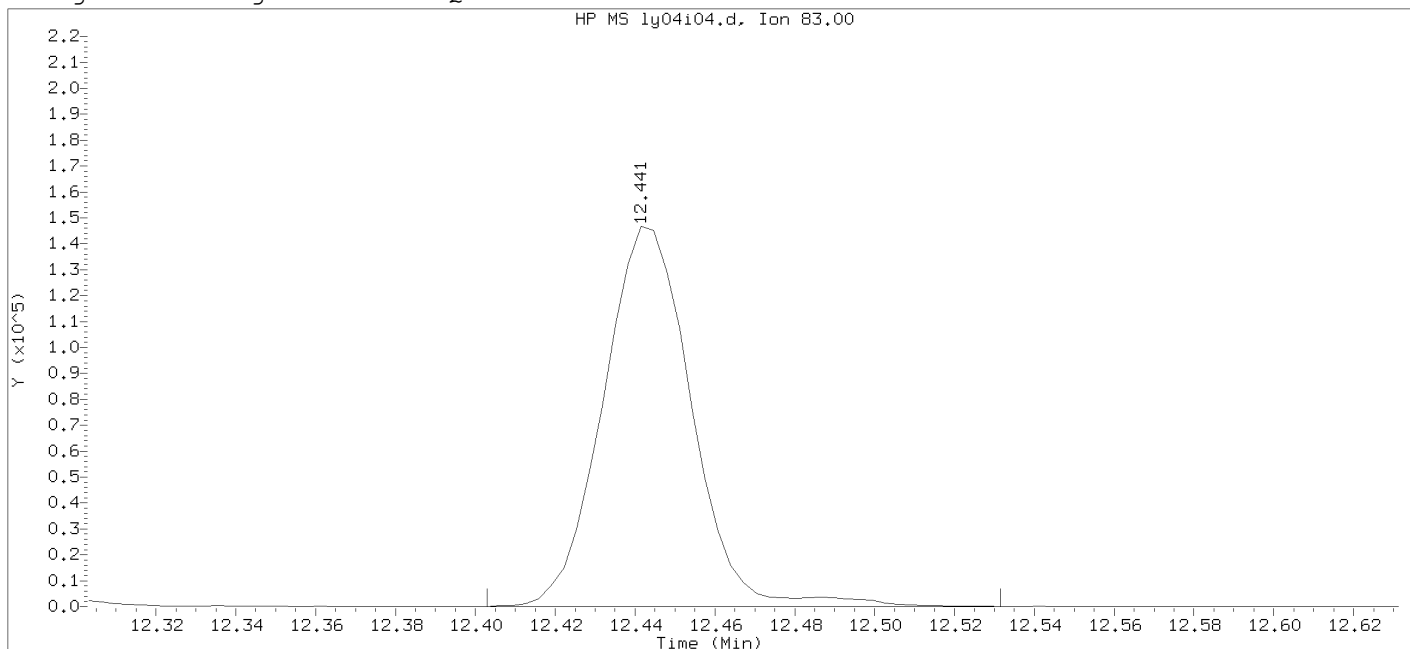
Secondary review performed and digitally signed by Chelsea B. Riehl on 05/06/2020 at 08:34.

PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20may04i.b/ly04i04.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 13:24

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 13:41

Date, time and analyst ID of latest file update: 04-May-2020 13:41 Automation

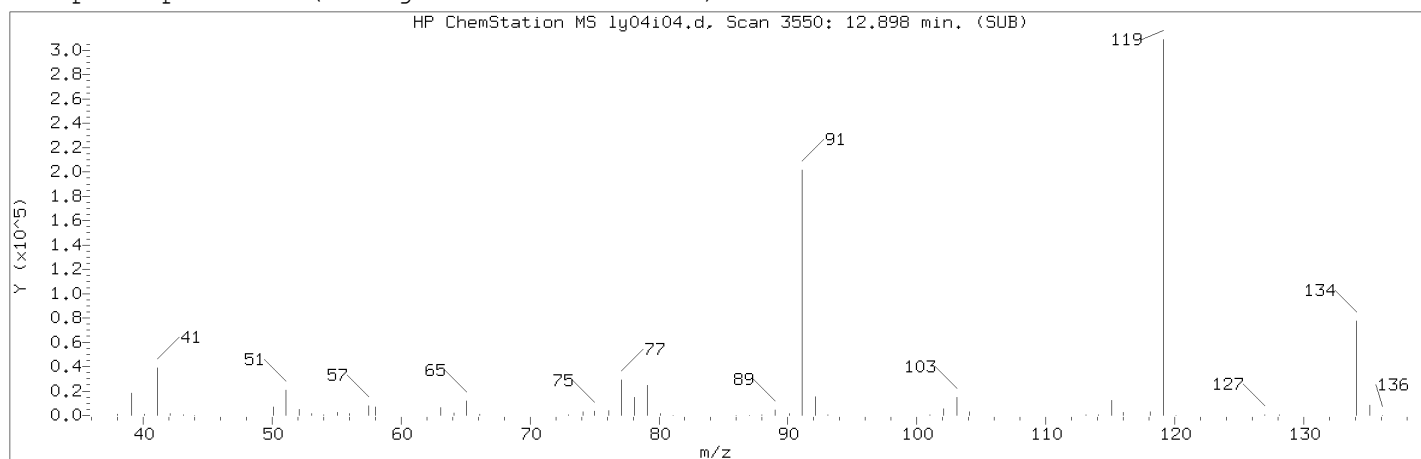
Sample Name: VSTD020

Lab Sample ID: VSTD020

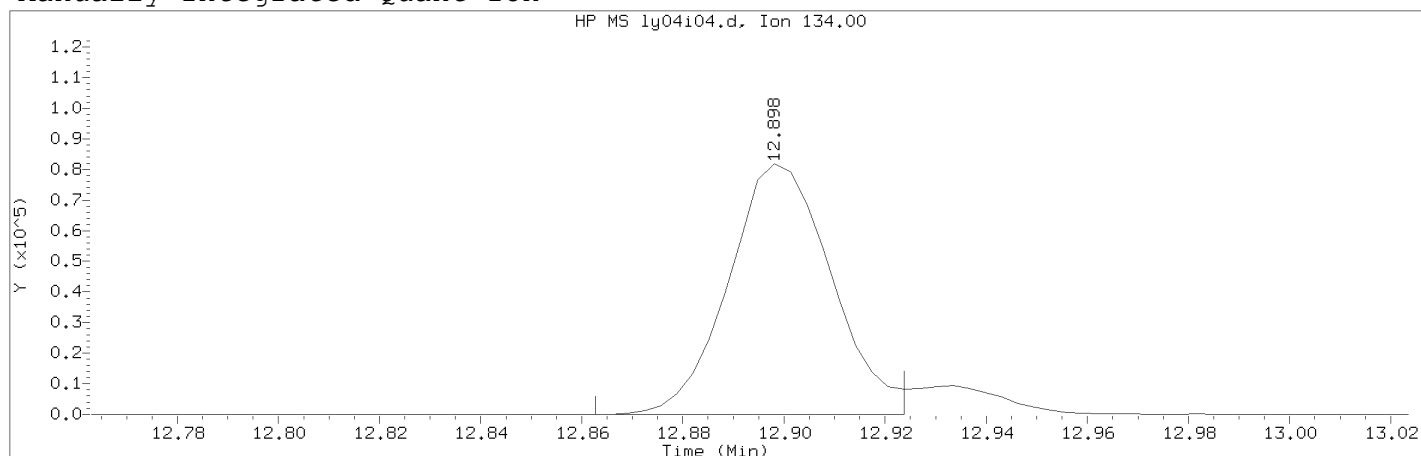
Compound Number	: 116
Compound Name	: 1,1,2,2-Tetrachloroethane
Scan Number	: 3408
Retention Time (minutes)	: 12.441
Quant Ion	: 83.00
Area	: 226818
On-column Amount (ng)	: 20.9272
Integration start scan	: 3395
Integration stop scan	: 3435
Y at integration start	: 0
Y at integration end	: 0

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 Target 3.5 esignature user KR446 Page 159 of 579

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i04.d Instrument ID: HP09915.i
 Injection date and time: 04-MAY-2020 13:24 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 04-MAY-2020 19:29
 Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD020

Lab Sample ID: VSTD020

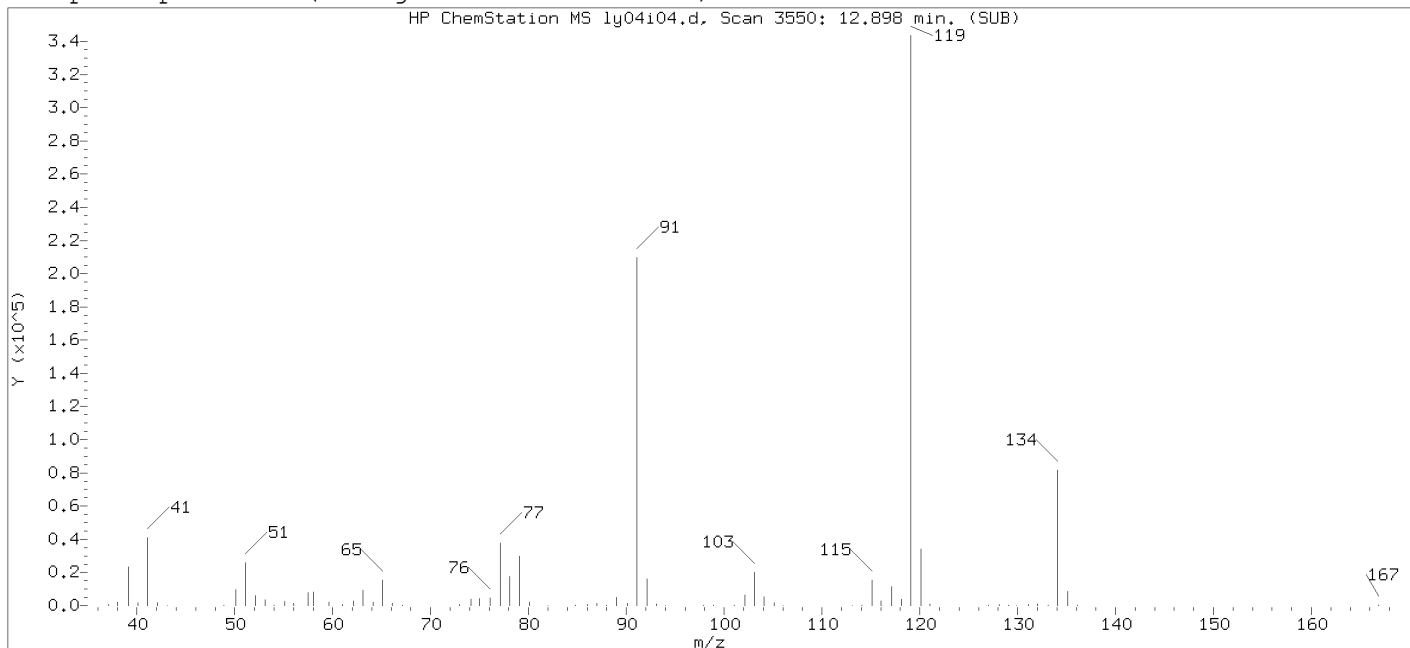
Compound Number : 124
 Compound Name : tert-Butylbenzene
 Scan Number : 3550
 Retention Time (minutes): 12.898
 Quant Ion : 134.00
 Area (flag) : 115481M
 On-Column Amount (ng) : 21.1810
 Integration start scan : 3538 Integration stop scan: 3557
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

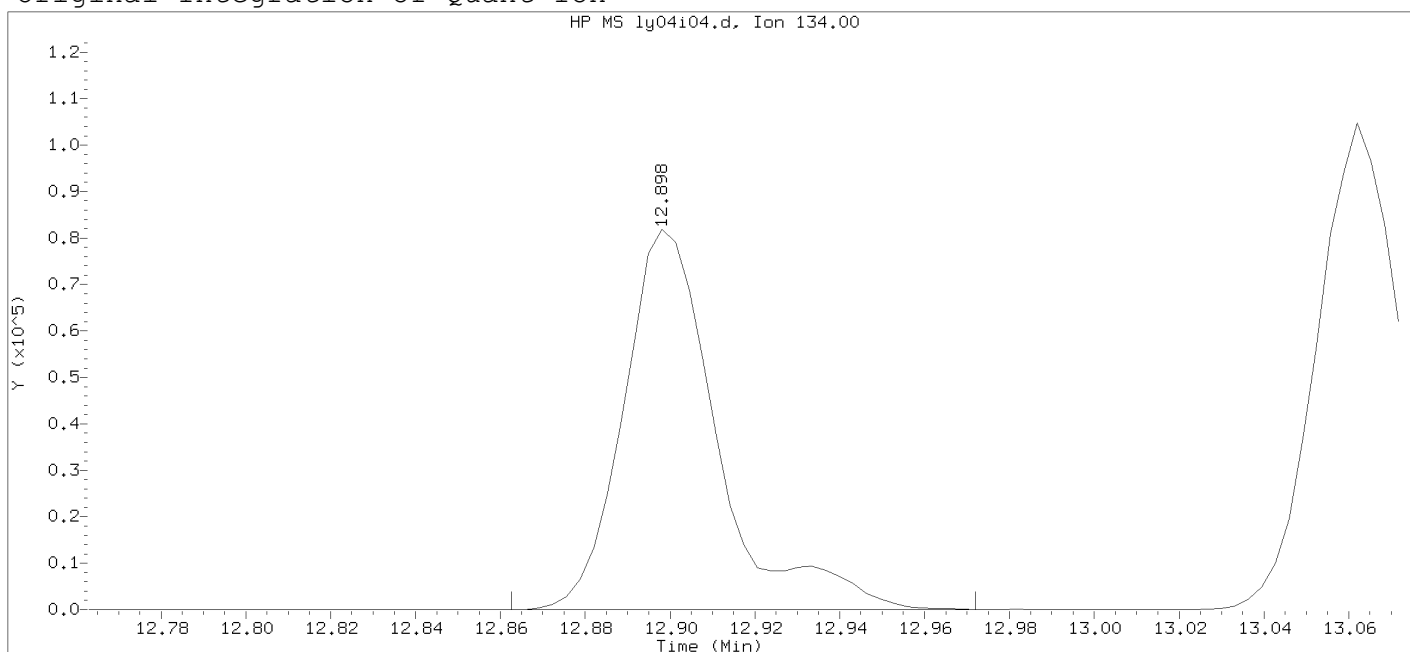
Analyst responsible for change: Digitally signed by Sara E. Johnson
 on 05/04/2020 at 19:30.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/06/2020 at 08:34.
 PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20may04i.b/ly04i04.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 13:24

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 13:41

Date, time and analyst ID of latest file update: 04-May-2020 13:41 Automation

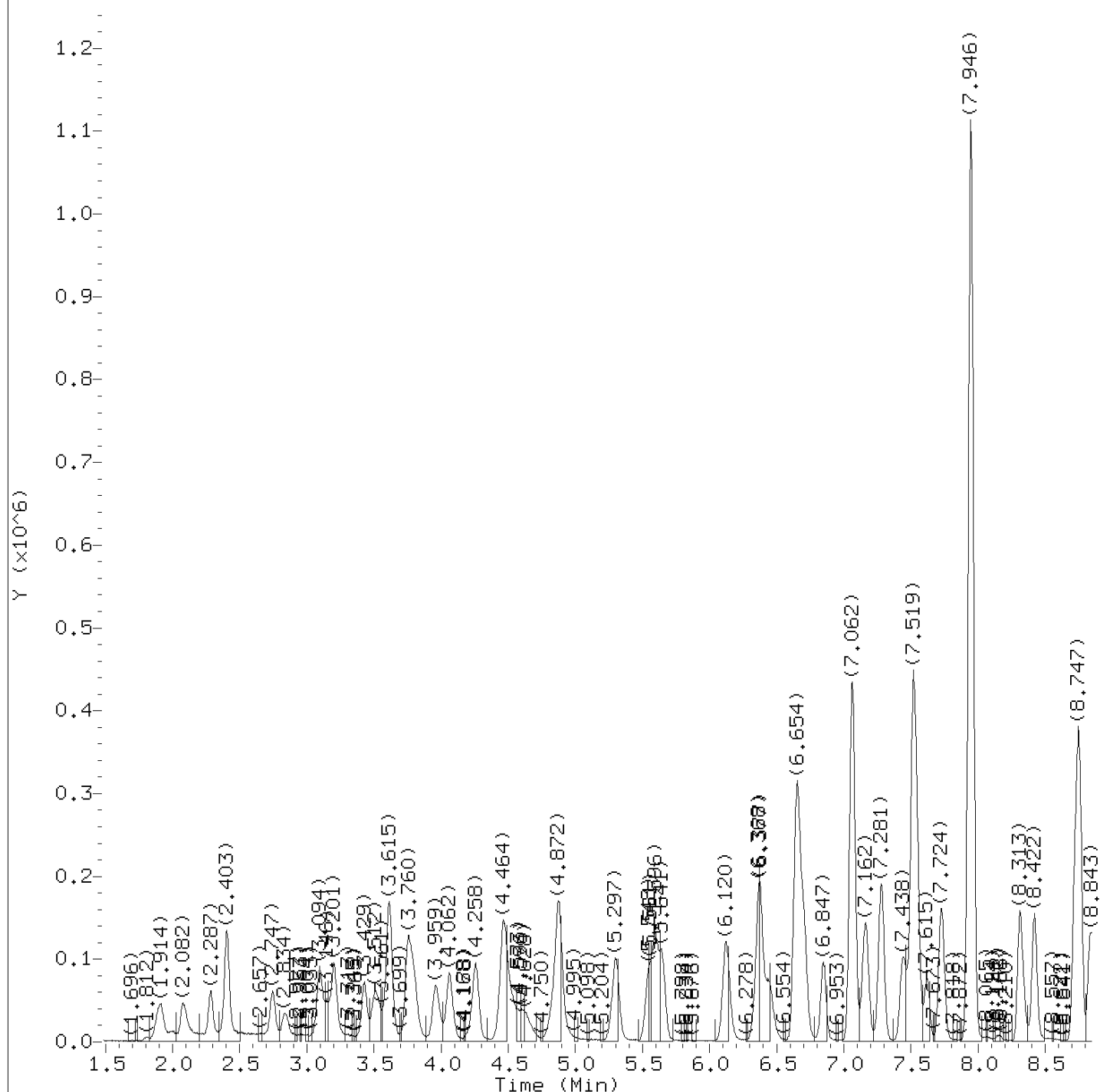
Sample Name: VSTD020

Lab Sample ID: VSTD020

Compound Number	: 124	
Compound Name	: tert-Butylbenzene	
Scan Number	: 3550	
Retention Time (minutes)	: 12.898	
Quant Ion	: 134.00	
Area	: 126488	
On-column Amount (ng)	: 19.5466	
Integration start scan	: 3538	Integration stop scan: 3572
Y at integration start	: 0	Y at integration end: 0

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 Target 3.5 esignature user KR446 Page 161 of 579

/chem/HP09915.i/20may04i.b/ly04i05.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20may04i.b/ly04i05.d
 Injection date and time: 04-MAY-2020 13:46

Instrument ID: HP09915.i
 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m
 Calibration date and time: 04-MAY-2020 19:29

Sublist used: 8260W

Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD010

Lab Sample ID: VSTD010

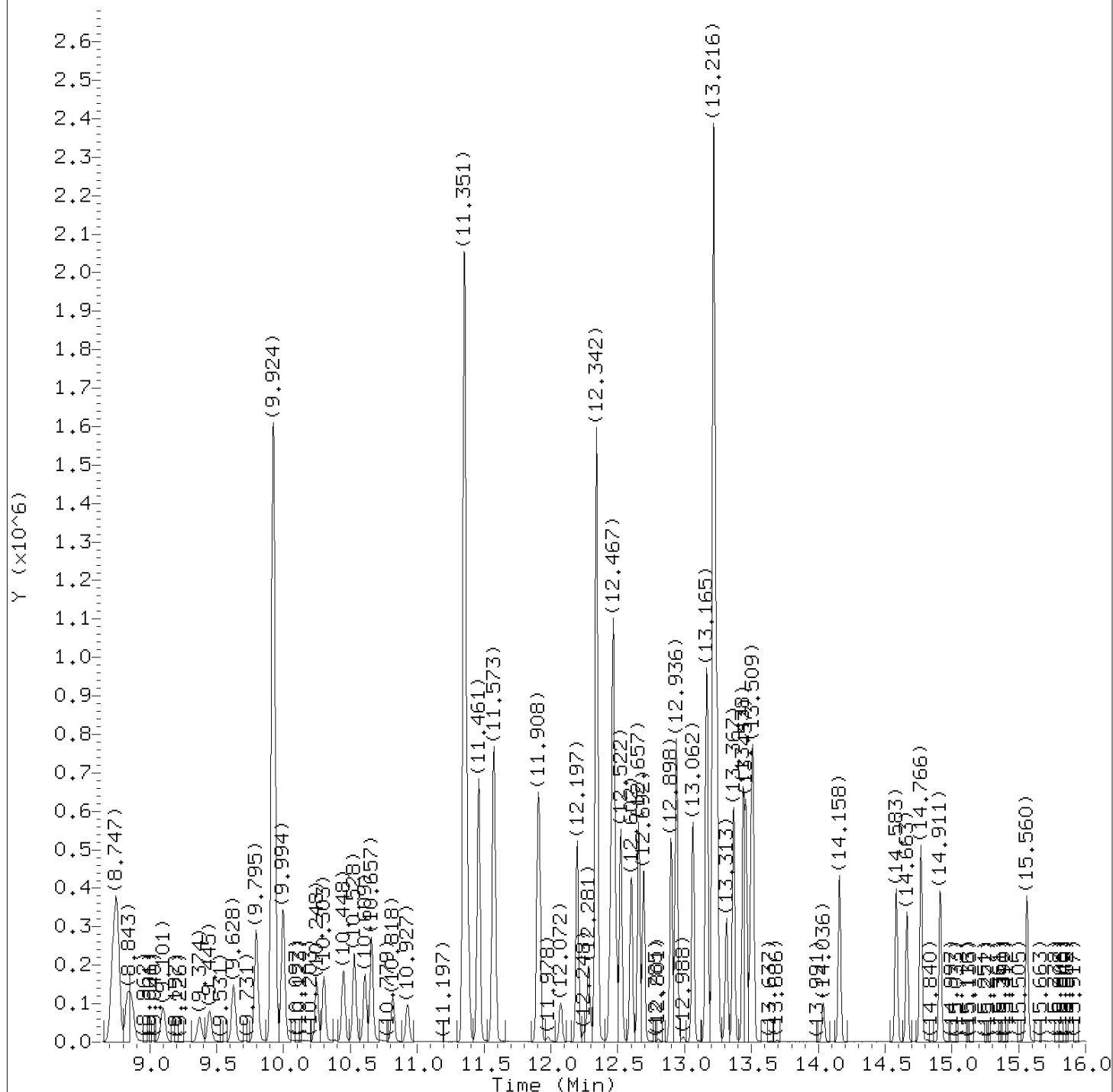
Digitally signed by Sara E. Johnson
 on 05/04/2020 at 19:30.

Target 3.5 esignature user ID: sej02002

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page 1 of 2

/chem/HP09915.i/20may04i.b/ly04i05.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20may04i.b/ly04i05.d
 Injection date and time: 04-MAY-2020 13:46

Instrument ID: HP09915.i
 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m
 Calibration date and time: 04-MAY-2020 19:29

Sublist used: 8260W

Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD010

Lab Sample ID: VSTD010

Digitally signed by Sara E. Johnson
 on 05/04/2020 at 19:30.

Target 3.5 esignature user ID: sej02002

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may04i.b/ly04i05.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 13:46

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 19:29

Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
3) Dichlorodifluoromethane	(2)	2.082	85	90118	10.053
4) Chloromethane	(2)	2.284	50	78549	9.385
5) 1,3-Butadiene	(2)	2.403	39	53204	9.909
6) Vinyl Chloride	(2)	2.406	62	75776	9.382
8) Bromomethane	(2)	2.747	94	54416	9.345
9) Chloroethane	(2)	2.844	64	42783	9.488
10) Dichlorofluoromethane	(2)	3.094	67	97511	10.025
12) Trichlorofluoromethane	(2)	3.149	101	86007	9.750
11) n-Pentane	(2)	3.201	43	86657	10.463
14) Ethyl ether	(2)	3.426	59	62820	10.079
15) Freon 123a	(2)	3.512	67	72194	10.102
16) Acrolein	(1)	3.615	56	265523	114.386
17) 1,1-Dichloroethene	(2)	3.750	96	56607	10.063
17) 1,1-Dichloroethene	(2)	3.757	63	27453	10.247
19) Freon 113	(2)	3.779	101	60789	10.415
18) Acetone	(1)	3.795	58	21573	20.374
22) Methyl Iodide	(2)	3.956	142	107855	9.949
21) 2-Propanol	(1)	3.979	45	66051	97.875
23) Carbon Disulfide	(2)	4.062	76	190505	10.058
27) Methyl Acetate	(2)	4.236	43	69346	9.665
25) Allyl Chloride	(2)	4.258	41	88910	9.753
28) Methylene Chloride	(2)	4.461	84	67332	10.062
29) *t-Butyl alcohol-d10	(1)	4.480	65	282164	250.000
30) t-Butyl alcohol	(1)	4.615	59	112728	98.959
31) Acrylonitrile	(2)	4.821	53	41519	10.447
33) Methyl Tertiary Butyl Ether	(2)	4.866	73	189790	9.837
32) trans-1,2-Dichloroethene	(2)	4.882	96	65119	10.062
34) n-Hexane	(2)	5.297	57	94542	10.432
36) 1,1-Dichloroethane	(2)	5.541	63	114433	10.082
38) di-Isopropyl ether	(2)	5.599	45	198191	9.928
39) 2-Chloro-1,3-butadiene	(2)	5.651	53	89746	9.915
40) Ethyl t-butyl ether	(2)	6.126	59	184298	9.937
43) 1,2-Dichloroethene (Total)	(2)		96	138243	20.138
44) 2-Butanone	(2)	6.345	43	99442	20.613
42) cis-1,2-Dichloroethene	(2)	6.371	96	73124	10.076
45) 2,2-Dichloropropane	(2)	6.377	77	85647	9.763
47) Propionitrile	(1)	6.448	54	149718	97.287
48) Methacrylonitrile	(2)	6.654	67	195000	48.939

* = Compound is an internal standard.

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on 05/04/2020 at 19:30.

Target 3.5 esignature user ID: sej02002

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may04i.b/ly04i05.d
 Injection date and time: 04-MAY-2020 13:46

Instrument ID: HP09915.i
 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 19:29

Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
49) Bromochloromethane	(2)	6.696	128	37514	10.018
50) Tetrahydrofuran	(1)	6.708	71	27785	20.635
51) Chloroform	(2)	6.850	83	109436	9.869
52)\$Dibromofluoromethane	(2)	7.062	113	322240	48.932
52)\$Dibromofluoromethane	(2)	7.059	111	332011	49.320
53) 1,1,1-Trichloroethane	(2)	7.069	97	93153	9.792
54) Cyclohexane	(2)	7.162	56	109782	10.309
54) Cyclohexane	(2)	7.162	84	94445	10.160
54) Cyclohexane	(2)	7.155	69	33849	10.228
56) Carbon Tetrachloride	(2)	7.278	117	79395	9.961
55) 1,1-Dichloropropene	(2)	7.284	75	87744	10.061
58) Isobutyl Alcohol	(1)	7.448	41	93954	243.130
57)\$1,2-Dichloroethane-d4	(2)	7.512	102	82568	49.412
57)\$1,2-Dichloroethane-d4	(2)	7.519	65	364177	49.098
57)\$1,2-Dichloroethane-d4	(2)	7.515	104	52909	49.724
60) Benzene	(2)	7.544	78	272006	10.076
61) 1,2-Dichloroethane	(2)	7.622	62	87436	9.662
61) 1,2-Dichloroethane	(2)	7.618	98	8802	9.981
65) t-Amyl methyl ether	(2)	7.724	73	186147	9.824
67) n-Heptane	(2)	7.946	43	103553	10.988
66)*Fluorobenzene	(2)	7.946	96	1307193	50.000
69) n-Butanol	(1)	8.313	56	146517	465.001
71) Trichloroethene	(2)	8.419	95	67138	9.828
72) Methylcyclohexane	(2)	8.724	83	113527	10.220
72) Methylcyclohexane	(2)	8.724	98	51823	10.314
73) 1,2-Dichloropropane	(2)	8.750	63	68836	9.896
76) Methyl Methacrylate	(2)	8.831	69	55947	9.354
75) 1,4-Dioxane	(1)	8.850	88	23550M	248.634
74) Dibromomethane	(2)	8.863	93	44545	9.792
78) Bromodichloromethane	(2)	9.101	83	77969	9.561
79) 2-Nitropropane	(2)	9.371	41	49747	20.345
80) 2-Chloroethyl Vinyl Ether	(2)	9.445	63	42539	9.185
81) cis-1,3-Dichloropropene	(2)	9.628	75	103288	9.691
82) 4-Methyl-2-pentanone	(2)	9.795	43	222795	22.805
83)\$Toluene-d8	(3)	9.924	98	1329104	49.926
83)\$Toluene-d8	(3)	9.924	100	862386	49.917
88) Toluene	(3)	9.994	92	170397	10.042
90) 1,3-Dichloropropene (total)	(3)		100	195460	19.158

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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 on 05/04/2020 at 19:30.

Target 3.5 esignature user ID: sej02002

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may04i.b/ly04i05.d
 Injection date and time: 04-MAY-2020 13:46

Instrument ID: HP09915.i
 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 19:29

Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
89) trans-1,3-Dichloropropene	(3)	10.248	75	92172	9.467
91) Ethyl Methacrylate	(3)	10.300	69	91658	9.356
92) 1,1,2-Trichloroethane	(3)	10.451	97	63938	9.711
93) Tetrachloroethene	(3)	10.528	166	73770	10.201
94) 1,3-Dichloropropane	(3)	10.612	76	106883	9.707
96) 2-Hexanone	(3)	10.657	43	174630	24.544
97) Dibromochloromethane	(3)	10.818	129	64751	9.454
99) 1,2-Dibromoethane	(3)	10.930	107	69131	9.770
100) *Chlorobenzene-d5	(3)	11.351	117	1036265	50.000
101) 1-Chlorohexane	(3)	11.355	91	87039	10.023
102) Chlorobenzene	(3)	11.377	112	196773	10.098
103) 1,1,1,2-Tetrachloroethane	(3)	11.457	131	65125	9.859
104) Ethylbenzene	(3)	11.461	91	321971	10.251
106) m+p-Xylene	(3)	11.573	106	256765	20.806
108) Xylene (Total)	(3)		106	381311	31.242
107) o-Xylene	(3)	11.901	106	124546	10.436
109) Styrene	(3)	11.914	104	198052	10.204
110) Bromoform	(3)	12.072	173	45366	9.099
111) Isopropylbenzene	(3)	12.197	105	319386	10.546
112) Cyclohexanone	(1)	12.281	55	84690	240.209
114) \$4-Bromofluorobenzene	(3)	12.342	95	511563	49.942
114) \$4-Bromofluorobenzene	(3)	12.342	174	439236	50.016
116) 1,1,2,2-Tetrachloroethane	(4)	12.445	83	104030	9.693
115) Bromobenzene	(4)	12.457	156	86654	10.058
118) trans-1,4-Dichloro-2-butene	(4)	12.467	53	155211	49.713
117) 1,2,3-Trichloropropane	(4)	12.490	110	32547	9.929
119) n-Propylbenzene	(4)	12.522	91	389641	10.465
120) 2-Chlorotoluene	(4)	12.602	126	81568	10.254
122) 1,3,5-Trimethylbenzene	(4)	12.657	105	282787	10.511
121) 4-Chlorotoluene	(4)	12.695	126	85740	10.385
124) tert-Butylbenzene	(4)	12.901	134	56977	10.302
125) Pentachloroethane	(4)	12.933	167	47983	9.769
126) 1,2,4-Trimethylbenzene	(4)	12.940	105	295531	10.624
127) sec-Butylbenzene	(4)	13.062	105	356950	10.897
129) 1,3-Dichlorobenzene	(4)	13.162	146	168498	10.496
130) p-Isopropyltoluene	(4)	13.168	119	305773	10.894
131) *1,4-Dichlorobenzene-d4	(4)	13.216	152	588728	50.000
133) 1,4-Dichlorobenzene	(4)	13.236	146	175369	10.408

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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 on 05/04/2020 at 19:30.

Target 3.5 esignature user ID: sej02002

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may04i.b/ly04i05.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 13:46

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 19:29

Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
134) 1,2,3-Trimethylbenzene	(4)	13.245	105	295346	10.219
135) Benzyl Chloride	(4)	13.313	91	205157	9.381
136) 1,3-Diethylbenzene	(4)	13.367	119	184043	10.176
141) Diethylbenzene (total)	(4)		100	539339	30.855
137) 1,4-Diethylbenzene	(4)	13.438	119	195436	10.324
139) n-Butylbenzene	(4)	13.457	92	158495	10.990
138) 1,2-Dichlorobenzene	(4)	13.499	146	166903	10.329
140) 1,2-Diethylbenzene	(4)	13.512	119	159860	10.355
142) 1,2-Dibromo-3-chloropropane	(4)	14.039	75	22103	9.304
144) 1,3,5-Trichlorobenzene	(4)	14.158	180	125310	10.295
146) 1,2,4-Trichlorobenzene	(4)	14.583	180	115079	10.117
147) Hexachlorobutadiene	(4)	14.663	225	56989	10.860
148) Naphthalene	(4)	14.769	128	371810	10.098
149) 1,2,3-Trichlorobenzene	(4)	14.911	180	117053	10.356
150) 2-Methylnaphthalene	(4)	15.560	142	179694	8.949

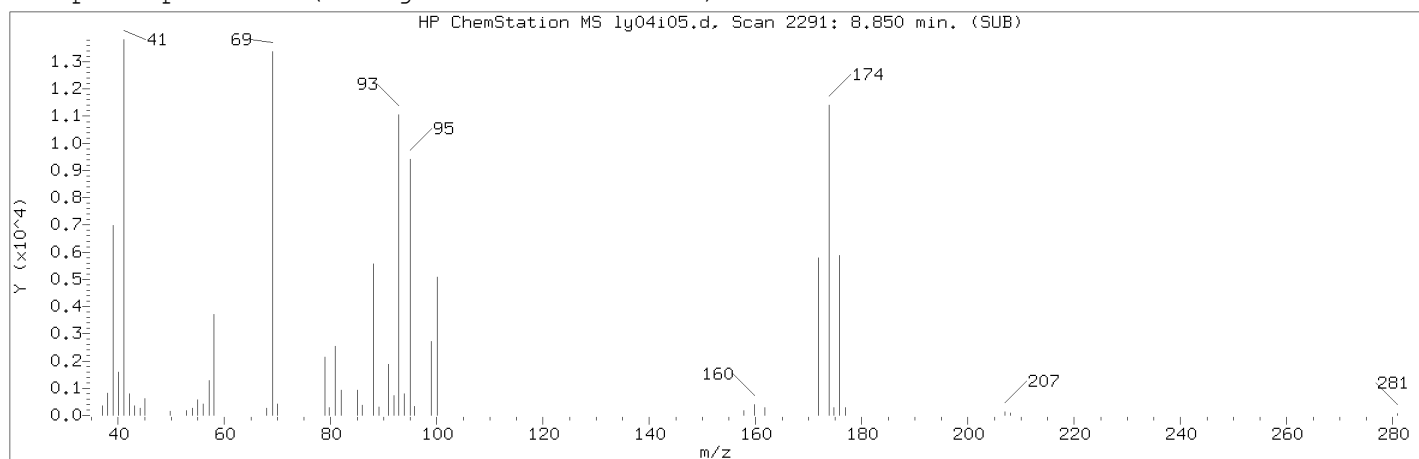
page 4 of 4

Digitally signed by Sara E. Johnson
on 05/04/2020 at 19:30.

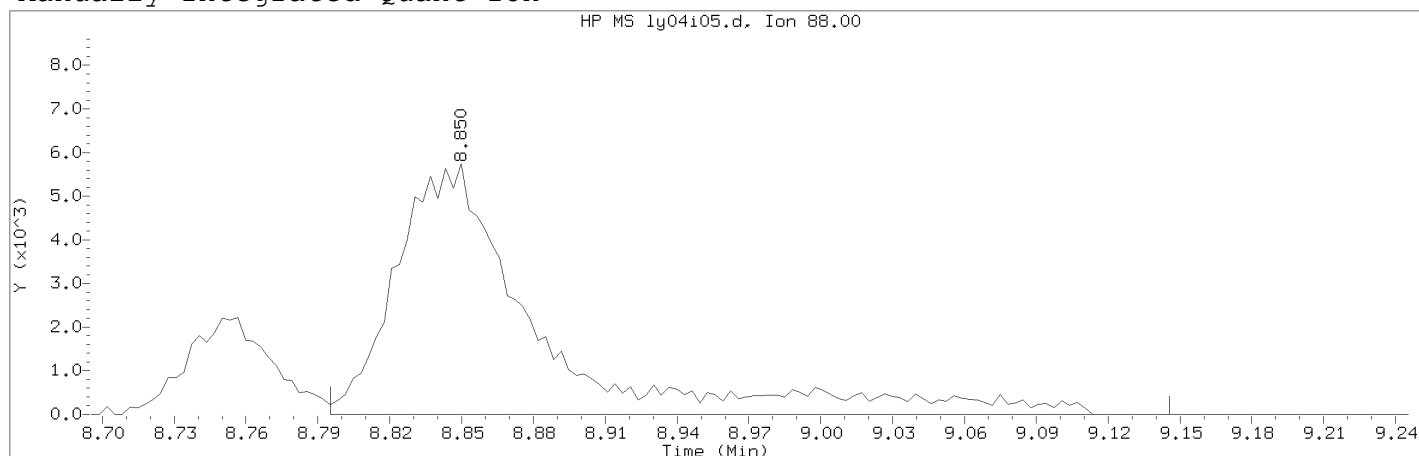
Target 3.5 esignature user ID: sej02002

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Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i05.d Instrument ID: HP09915.i
 Injection date and time: 04-MAY-2020 13:46 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 04-MAY-2020 19:29
 Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD010

Lab Sample ID: VSTD010

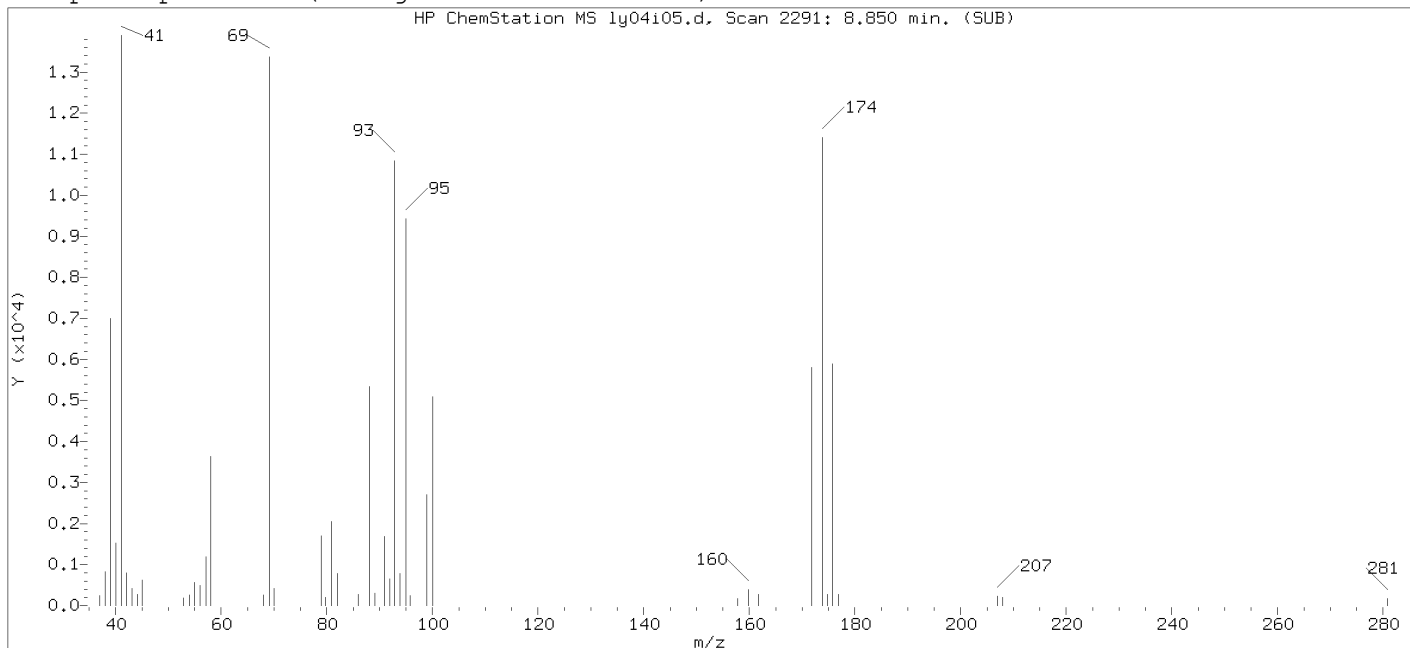
Compound Number : 75
 Compound Name : 1,4-Dioxane
 Scan Number : 2291
 Retention Time (minutes): 8.850
 Quant Ion : 88.00
 Area (flag) : 23550M
 On-Column Amount (ng) : 248.6337
 Integration start scan : 2273 Integration stop scan: 2382
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

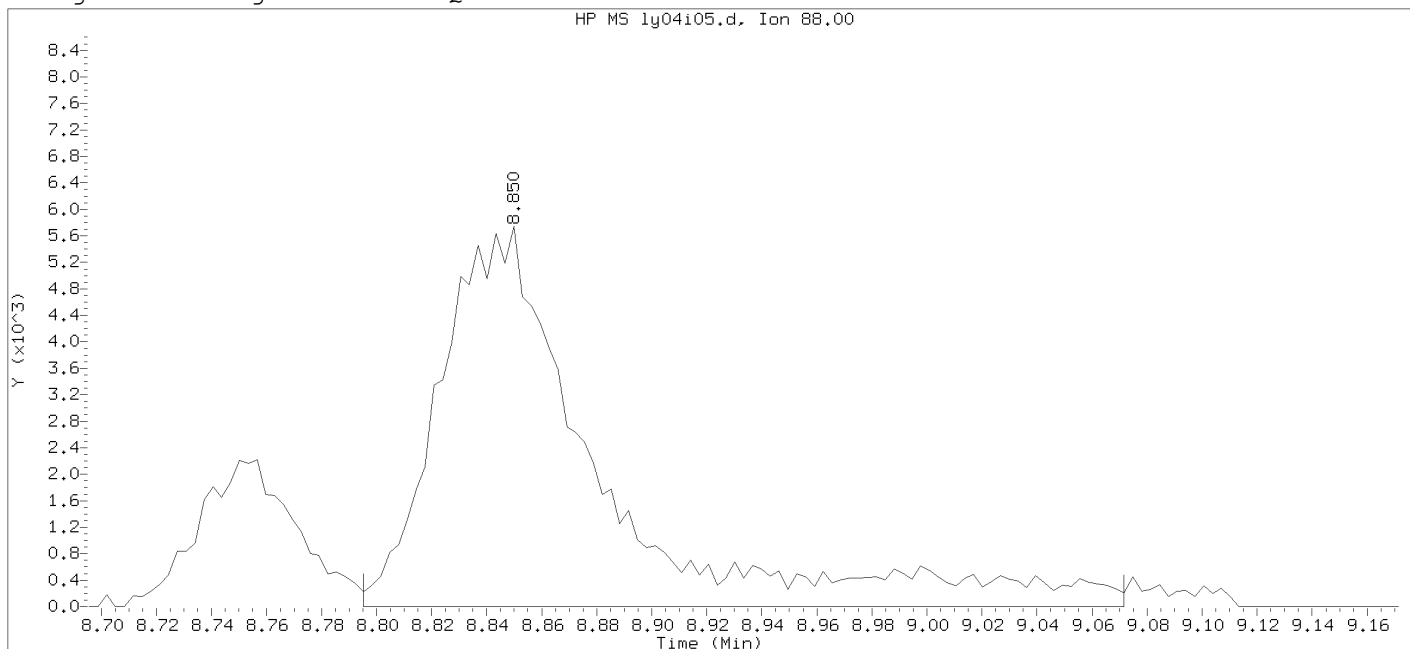
Analyst responsible for change: Digitally signed by Sara E. Johnson
 on 05/04/2020 at 19:30.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/06/2020 at 08:34.
 PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20may04i.b/ly04i05.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 13:46

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 14:04

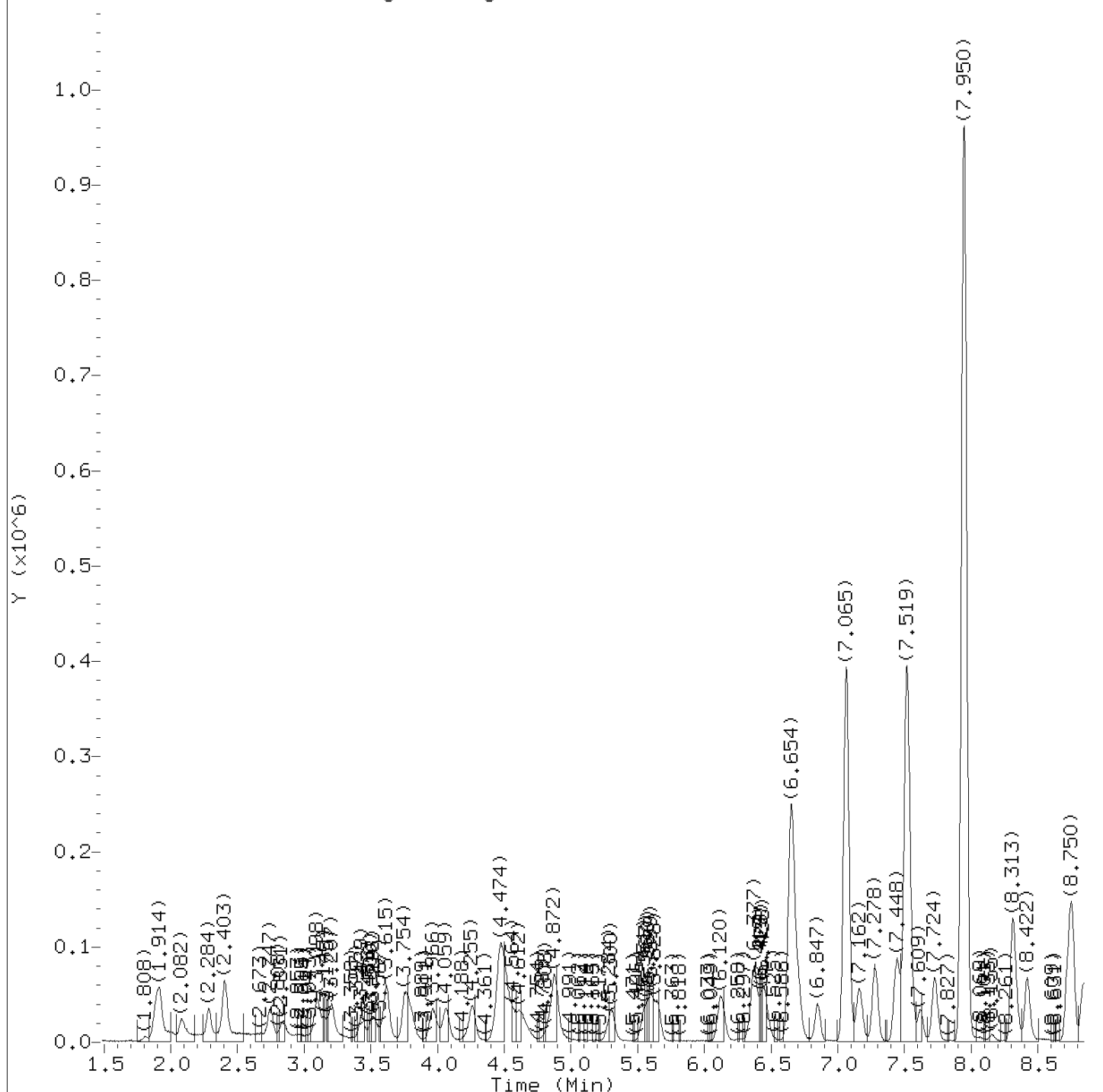
Date, time and analyst ID of latest file update: 04-May-2020 14:04 Automation

Sample Name: VSTD010

Lab Sample ID: VSTD010

Compound Number	: 75
Compound Name	: 1,4-Dioxane
Scan Number	: 2291
Retention Time (minutes)	: 8.850
Quant Ion	: 88.00
Area	: 22923
On-column Amount (ng)	: 235.9161
Integration start scan	: 2273
Integration stop scan	: 2359
Y at integration start	: 0
Y at integration end	: 0

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 Target 3.5 esignature user KR446 Page 169 of 579



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20may04i.b/ly04i06.d
Injection date and time: 04-MAY-2020 14:08

Instrument ID: HP09915.i
Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m
Calibration date and time: 04-MAY-2020 19:29

Sublist used: 8260W

Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD004

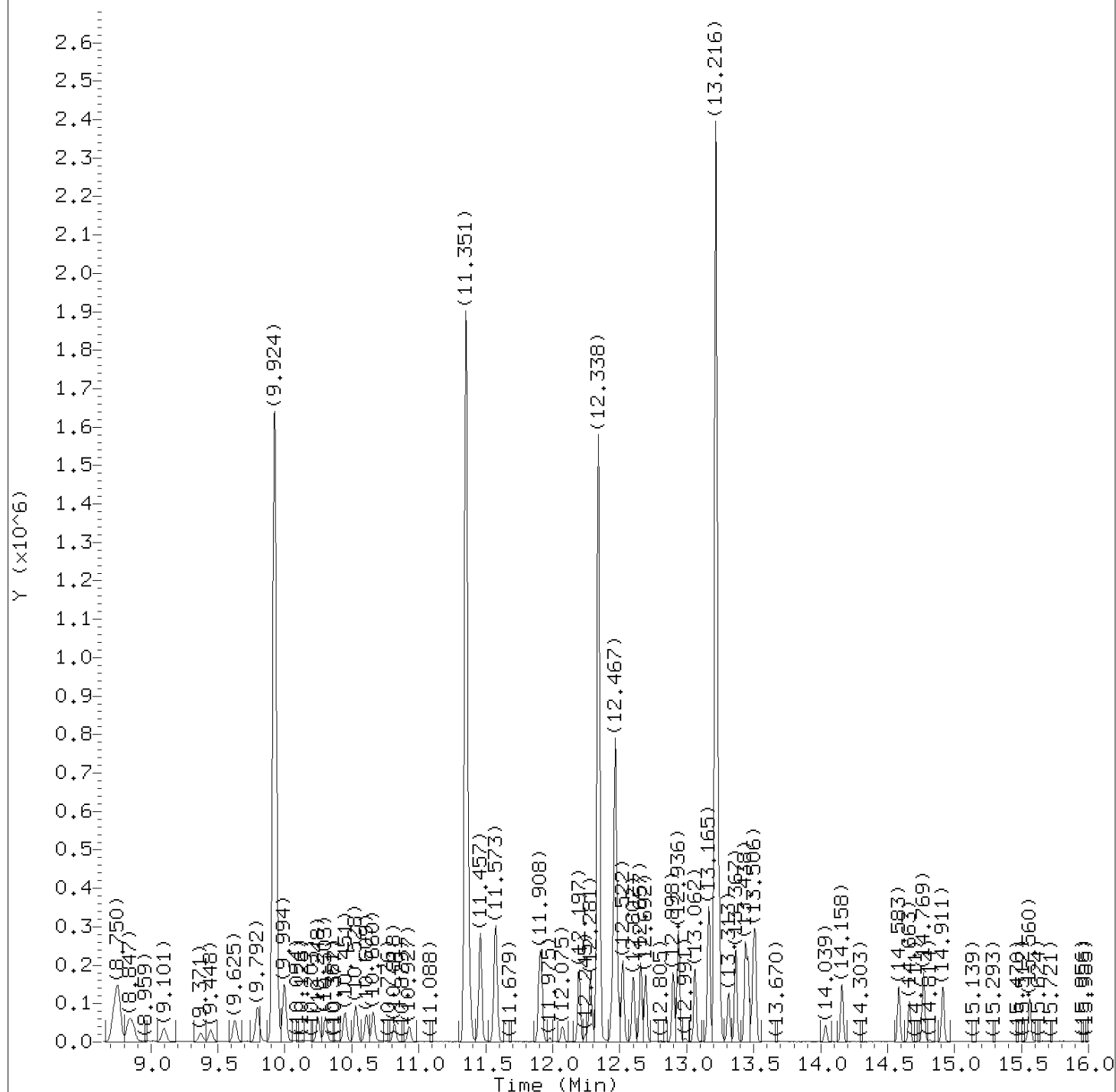
Lab Sample ID: VSTD004

Digitally signed by Sara E. Johnson
on 05/04/2020 at 19:30.
Target 3.5 esignature user ID: sei02002

Case ID: se102002
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/chem/HP09915.i/20may04i.b/ly04i06.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20may04i.b/ly04i06.d
 Injection date and time: 04-MAY-2020 14:08

Instrument ID: HP09915.i
 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m
 Calibration date and time: 04-MAY-2020 19:29

Sublist used: 8260W

Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD004

Lab Sample ID: VSTD004

Digitally signed by Sara E. Johnson
 on 05/04/2020 at 19:30.

Target 3.5 esignature user ID: sej02002

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may04i.b/ly04i06.d
 Injection date and time: 04-MAY-2020 14:08

Instrument ID: HP09915.i
 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 19:29

Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD004

Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
3) Dichlorodifluoromethane	(2)	2.091	85	38980	4.374
4) Chloromethane	(2)	2.281	50	40837	4.908
5) 1,3-Butadiene	(2)	2.403	39	22445M	4.205
6) Vinyl Chloride	(2)	2.410	62	38694	4.819
8) Bromomethane	(2)	2.747	94	28864	4.986
9) Chloroethane	(2)	2.850	64	22132M	4.937
10) Dichlorofluoromethane	(2)	3.098	67	46604	4.819
12) Trichlorofluoromethane	(2)	3.149	101	39863	4.546
11) n-Pentane	(2)	3.207	43	33845	4.111
14) Ethyl ether	(2)	3.435	59	23890	3.855
15) Freon 123a	(2)	3.522	67	29140	4.102
16) Acrolein	(1)	3.615	56	89549	38.087
17) 1,1-Dichloroethene	(2)	3.754	96	23333	4.172
17) 1,1-Dichloroethene	(2)	3.754	63	11176	4.196
19) Freon 113	(2)	3.789	101	24000	4.136
18) Acetone	(1)	3.808	58	8567M	7.988
22) Methyl Iodide	(2)	3.959	142	43429	4.029
21) 2-Propanol	(1)	3.982	45	54311	79.457
23) Carbon Disulfide	(2)	4.065	76	74748	3.970
27) Methyl Acetate	(2)	4.239	43	29297	4.107
25) Allyl Chloride	(2)	4.262	41	34618	3.820
28) Methylene Chloride	(2)	4.458	84	27141	4.080
29) *t-Butyl alcohol-d10	(1)	4.490	65	285792	250.000
30) t-Butyl alcohol	(1)	4.622	59	92858	80.481
31) Acrylonitrile	(2)	4.821	53	15387	3.894
33) Methyl Tertiary Butyl Ether	(2)	4.872	73	74603	3.890
32) trans-1,2-Dichloroethene	(2)	4.879	96	26257	4.081
34) n-Hexane	(2)	5.307	57	30933	3.433
36) 1,1-Dichloroethane	(2)	5.545	63	45665	4.047
38) di-Isopropyl ether	(2)	5.599	45	74509	3.754
39) 2-Chloro-1,3-butadiene	(2)	5.651	53	33993	3.777
40) Ethyl t-butyl ether	(2)	6.130	59	70167	3.805
43) 1,2-Dichloroethene (Total)	(2)		96	54548	8.002
44) 2-Butanone	(2)	6.348	43	36969	7.708
42) cis-1,2-Dichloroethene	(2)	6.371	96	28291	3.921
45) 2,2-Dichloropropane	(2)	6.380	77	35169M	4.033
47) Propionitrile	(1)	6.445	54	123766	79.402
48) Methacrylonitrile	(2)	6.647	67	157154	39.673

M = Compound was manually integrated.

* = Compound is an internal standard.

page 1 of 4

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 on 05/04/2020 at 19:30.

Target 3.5 esignature user ID: sej02002

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may04i.b/ly04i06.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 14:08

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 19:29

Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD004

Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
49) Bromochloromethane	(2)	6.702	128	15148	4.069
50) Tetrahydrofuran	(1)	6.702	71	11134	8.164
51) Chloroform	(2)	6.847	83	44235	4.013
52)\$Dibromofluoromethane	(2)	7.065	113	325931	49.783
52)\$Dibromofluoromethane	(2)	7.065	111	332442	49.674
53) 1,1,1-Trichloroethane	(2)	7.069	97	38791	4.101
54) Cyclohexane	(2)	7.159	56	40137	3.791
54) Cyclohexane	(2)	7.162	84	35210	3.810
54) Cyclohexane	(2)	7.159	69	12808	3.893
56) Carbon Tetrachloride	(2)	7.278	117	32820	4.142
55) 1,1-Dichloropropene	(2)	7.287	75	35669	4.114
58) Isobutyl Alcohol	(1)	7.448	41	78273	199.980
57)\$1,2-Dichloroethane-d4	(2)	7.515	102	84287	50.737
57)\$1,2-Dichloroethane-d4	(2)	7.519	65	366597	49.715
57)\$1,2-Dichloroethane-d4	(2)	7.515	104	52842	49.952
60) Benzene	(2)	7.544	78	109723	4.088
61) 1,2-Dichloroethane	(2)	7.622	62	36503	4.057
61) 1,2-Dichloroethane	(2)	7.618	98	3686	4.204
65) t-Amyl methyl ether	(2)	7.731	73	71962	3.820
67) n-Heptane	(2)	7.946	43	30974	3.306
66)*Fluorobenzene	(2)	7.950	96	1299562	50.000
69) n-Butanol	(1)	8.313	56	121908	381.987
71) Trichloroethene	(2)	8.422	95	28461	4.191
72) Methylcyclohexane	(2)	8.718	83	39242	3.553
72) Methylcyclohexane	(2)	8.718	98	17809	3.565
73) 1,2-Dichloropropane	(2)	8.750	63	27695	4.005
76) Methyl Methacrylate	(2)	8.837	69	22069	3.712
75) 1,4-Dioxane	(1)	8.840	88	19114M	199.238
74) Dibromomethane	(2)	8.869	93	18097	4.002
78) Bromodichloromethane	(2)	9.101	83	30571	3.771
79) 2-Nitropropane	(2)	9.374	41	17814	7.328
80) 2-Chloroethyl Vinyl Ether	(2)	9.448	63	15049	3.268
81) cis-1,3-Dichloropropene	(2)	9.628	75	38959	3.677
82) 4-Methyl-2-pentanone	(2)	9.798	43	70454	7.254
83)\$Toluene-d8	(3)	9.924	98	1327920	49.628
83)\$Toluene-d8	(3)	9.924	100	858083	49.415
88) Toluene	(3)	9.994	92	71873	4.214
90) 1,3-Dichloropropene (total)	(3)		100	74497	7.309

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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on 05/04/2020 at 19:30.

Target 3.5 esignature user ID: sej02002

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may04i.b/ly04i06.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 14:08

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 19:29

Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD004

Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
89) trans-1,3-Dichloropropene	(3)	10.248	75	35538	3.632
91) Ethyl Methacrylate	(3)	10.303	69	33141	3.366
92) 1,1,2-Trichloroethane	(3)	10.451	97	26564	4.014
93) Tetrachloroethene	(3)	10.531	166	30607	4.211
94) 1,3-Dichloropropane	(3)	10.609	76	43581	3.938
96) 2-Hexanone	(3)	10.660	43	50212	7.021
97) Dibromochloromethane	(3)	10.821	129	25387	3.688
99) 1,2-Dibromoethane	(3)	10.927	107	27031	3.801
100) *Chlorobenzene-d5	(3)	11.351	117	1041559	50.000
101) 1-Chlorohexane	(3)	11.355	91	31930	3.658
102) Chlorobenzene	(3)	11.377	112	82399	4.207
103) 1,1,1,2-Tetrachloroethane	(3)	11.457	131	27074	4.078
104) Ethylbenzene	(3)	11.461	91	127933	4.052
106) m+p-Xylene	(3)	11.570	106	100704	8.119
108) Xylene (Total)	(3)		106	148049	12.066
107) o-Xylene	(3)	11.901	106	47345	3.947
109) Styrene	(3)	11.917	104	73846	3.785
110) Bromoform	(3)	12.075	173	17579	3.508
111) Isopropylbenzene	(3)	12.197	105	113477	3.728
112) Cyclohexanone	(1)	12.281	55	69843	195.583
114) \$4-Bromofluorobenzene	(3)	12.342	95	516427	50.161
114) \$4-Bromofluorobenzene	(3)	12.342	174	443503	50.246
116) 1,1,2,2-Tetrachloroethane	(4)	12.441	83	45427	4.166
115) Bromobenzene	(4)	12.457	156	37061	4.235
118) trans-1,4-Dichloro-2-butene	(4)	12.467	53	124994	39.408
117) 1,2,3-Trichloropropane	(4)	12.486	110	13788	4.140
119) n-Propylbenzene	(4)	12.522	91	144976	3.833
120) 2-Chlorotoluene	(4)	12.602	126	32155	3.979
122) 1,3,5-Trimethylbenzene	(4)	12.657	105	99992	3.658
121) 4-Chlorotoluene	(4)	12.692	126	33101	3.946
124) tert-Butylbenzene	(4)	12.901	134	19337M	3.442
125) Pentachloroethane	(4)	12.930	167	18271	3.662
126) 1,2,4-Trimethylbenzene	(4)	12.940	105	105087	3.719
127) sec-Butylbenzene	(4)	13.062	105	115390	3.467
129) 1,3-Dichlorobenzene	(4)	13.162	146	66842	4.098
130) p-Isopropyltoluene	(4)	13.165	119	100033	3.508
131) *1,4-Dichlorobenzene-d4	(4)	13.216	152	598089	50.000
133) 1,4-Dichlorobenzene	(4)	13.232	146	71398	4.171

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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on 05/04/2020 at 19:30.

Target 3.5 esignature user ID: sej02002

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may04i.b/ly04i06.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 14:08

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 19:29

Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD004

Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
134) 1,2,3-Trimethylbenzene	(4)	13.245	105	113876	3.878
135) Benzyl Chloride	(4)	13.313	91	82729	3.724
136) 1,3-Diethylbenzene	(4)	13.367	119	70395	3.831
141) Diethylbenzene (total)	(4)		100	208679	11.749
137) 1,4-Diethylbenzene	(4)	13.438	119	76469	3.976
139) n-Butylbenzene	(4)	13.457	92	51886	3.542
138) 1,2-Dichlorobenzene	(4)	13.496	146	68727	4.187
140) 1,2-Diethylbenzene	(4)	13.512	119	61815	3.941
142) 1,2-Dibromo-3-chloropropane	(4)	14.033	75	9341	3.871
144) 1,3,5-Trichlorobenzene	(4)	14.162	180	44631	3.609
146) 1,2,4-Trichlorobenzene	(4)	14.583	180	41152	3.561
147) Hexachlorobutadiene	(4)	14.663	225	18000	3.376
148) Naphthalene	(4)	14.766	128	133216	3.561
149) 1,2,3-Trichlorobenzene	(4)	14.911	180	43500	3.788
150) 2-Methylnaphthalene	(4)	15.560	142	55411	4.749

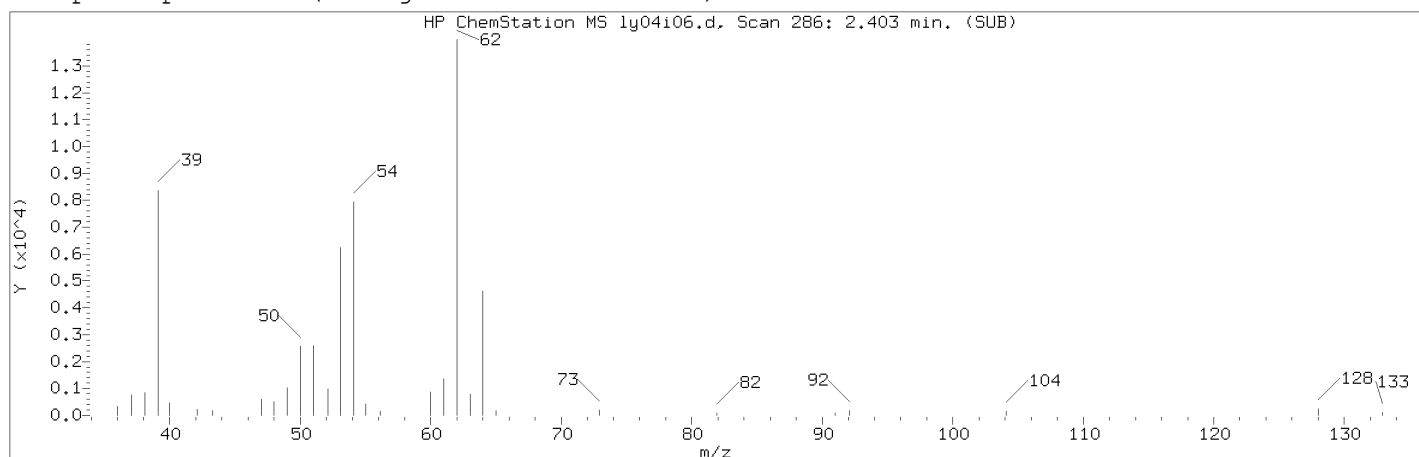
page 4 of 4

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on 05/04/2020 at 19:30.

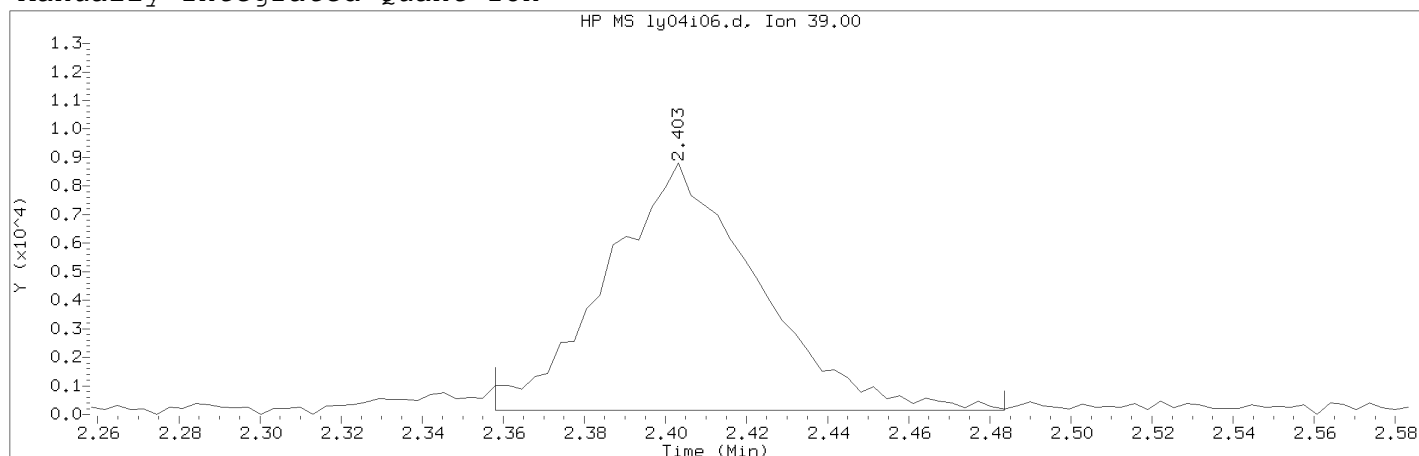
Target 3.5 esignature user ID: sej02002

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Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i06.d Instrument ID: HP09915.i
 Injection date and time: 04-MAY-2020 14:08 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 04-MAY-2020 19:29
 Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD004

Lab Sample ID: VSTD004

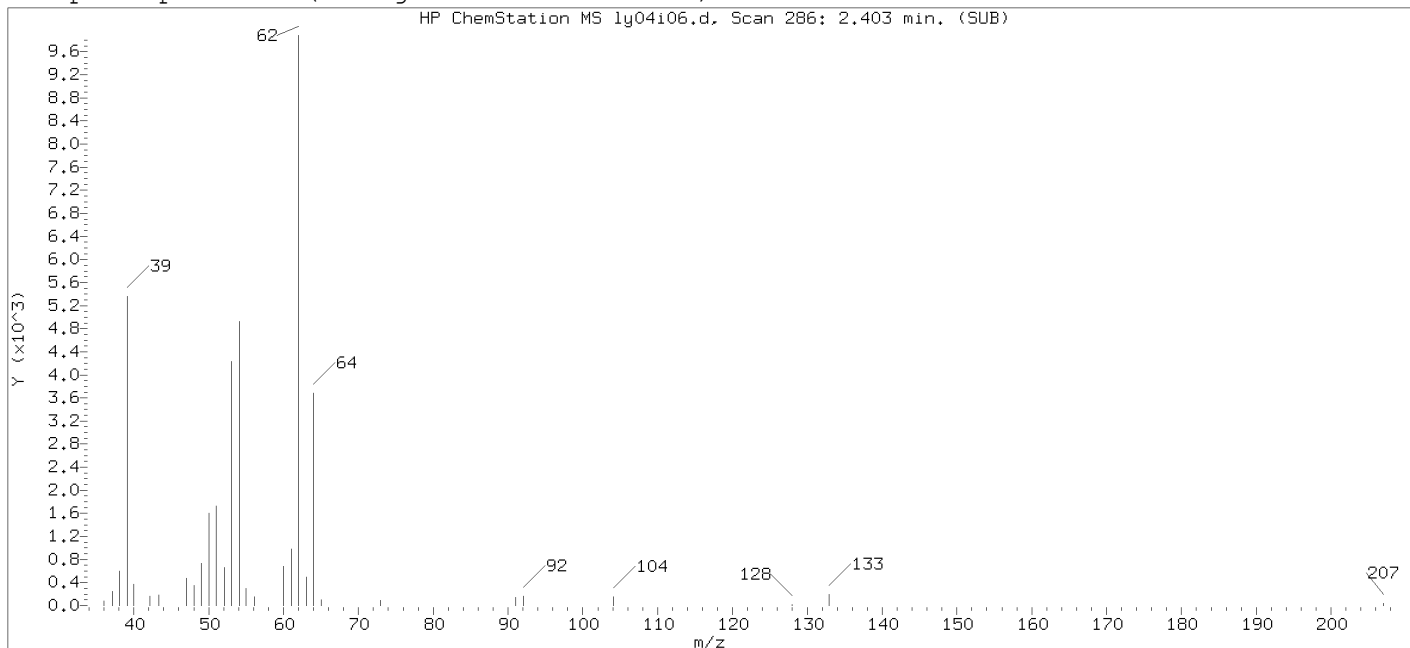
Compound Number : 5
 Compound Name : 1,3-Butadiene
 Scan Number : 286
 Retention Time (minutes): 2.403
 Quant Ion : 39.00
 Area (flag) : 22445M
 On-Column Amount (ng) : 4.2049
 Integration start scan : 271 Integration stop scan: 310
 Y at integration start : 140 Y at integration end: 140

Reason for manual integration: improper integration

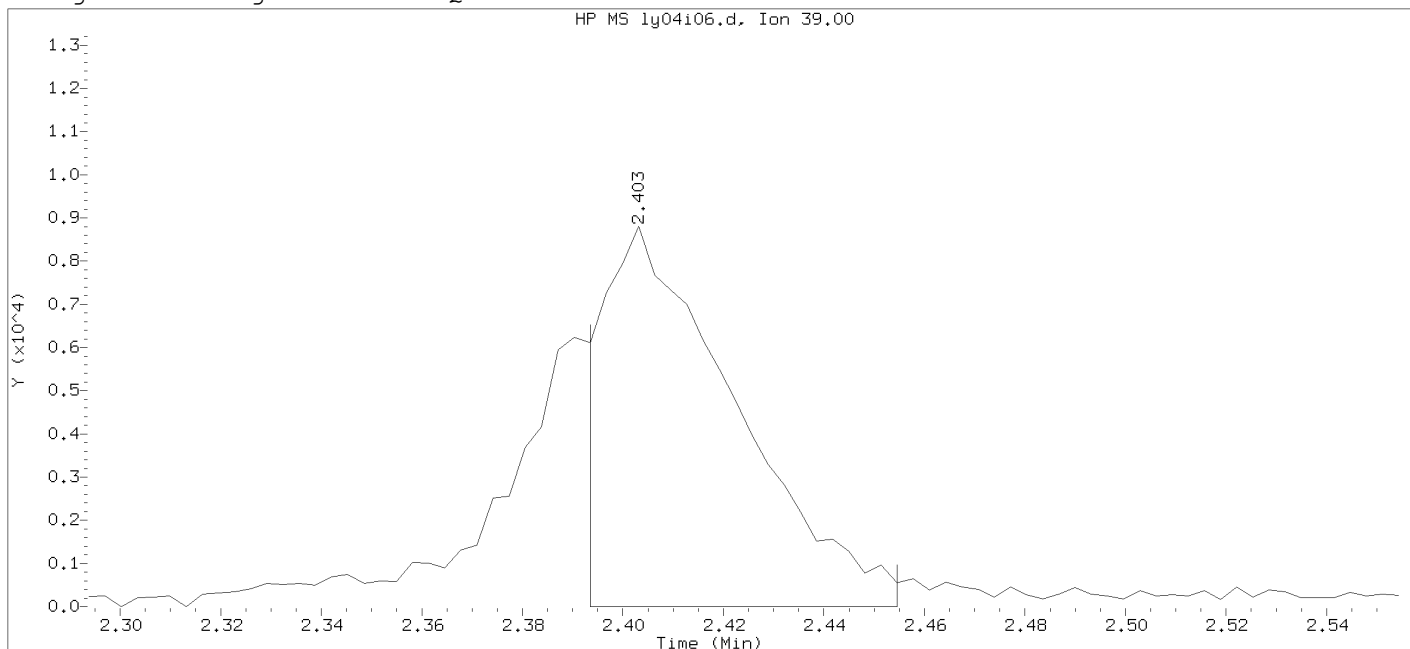
Analyst responsible for change: Digitally signed by Sara E. Johnson
 on 05/04/2020 at 19:30.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/06/2020 at 08:34.
 PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i06.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 14:08

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 14:25

Date, time and analyst ID of latest file update: 04-May-2020 14:25 Automation

Sample Name: VSTD004

Lab Sample ID: VSTD004

Compound Number : 5

Compound Name : 1,3-Butadiene

Scan Number : 286

Retention Time (minutes): 2.403

Quant Ion : 39.00

Area : 16243

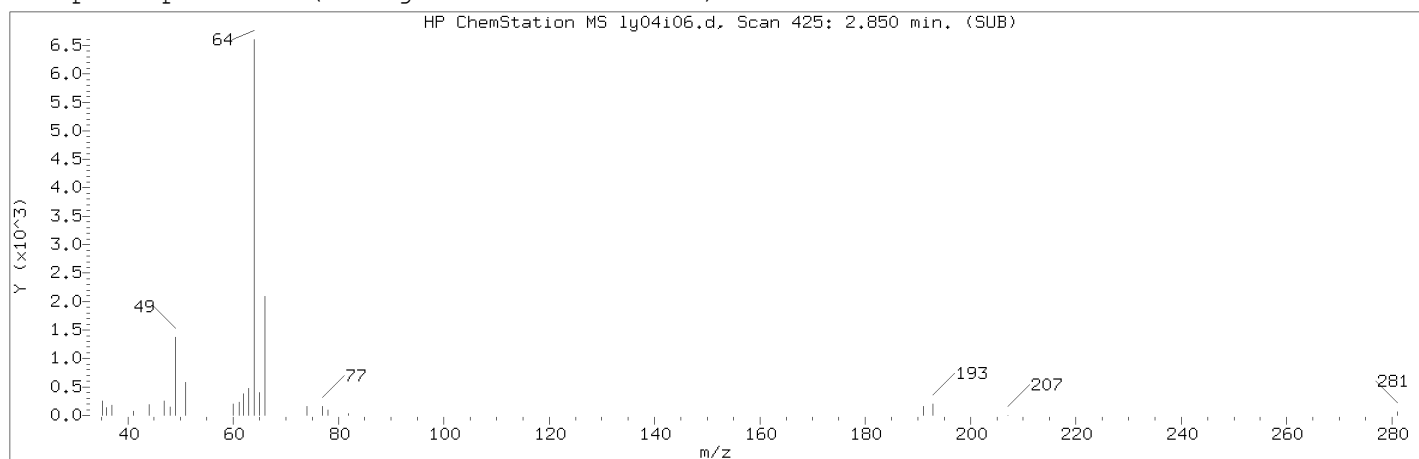
On-column Amount (ng) : 3.2238

Integration start scan : 282 Integration stop scan: 301

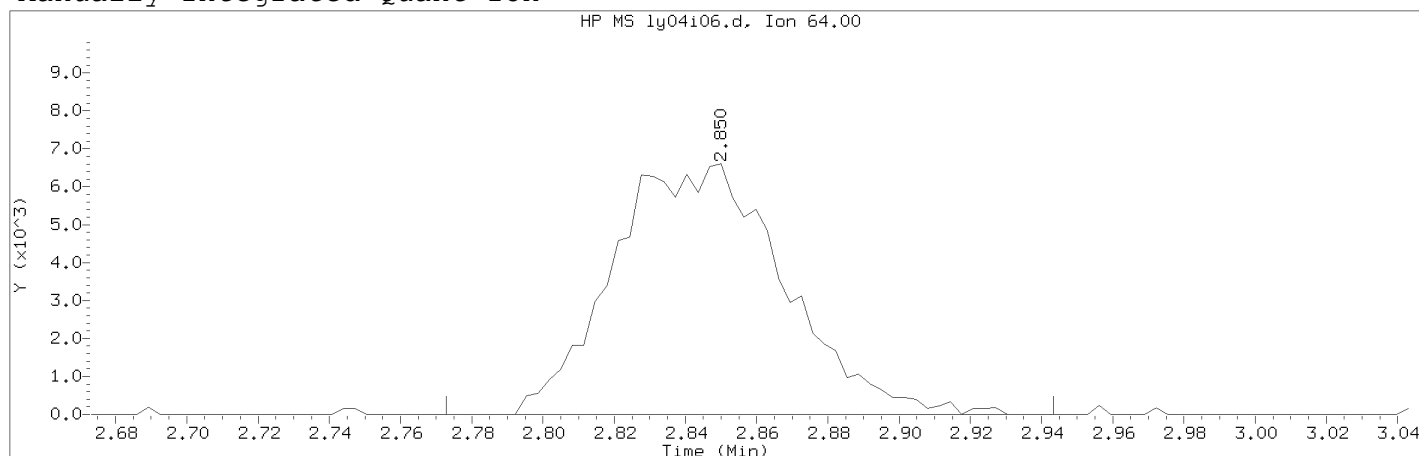
Y at integration start : 0 Y at integration end: 0

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 Target 3.5 esignature user KR446 Page 177 of 579

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i06.d Instrument ID: HP09915.i
 Injection date and time: 04-MAY-2020 14:08 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 04-MAY-2020 19:29
 Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD004

Lab Sample ID: VSTD004

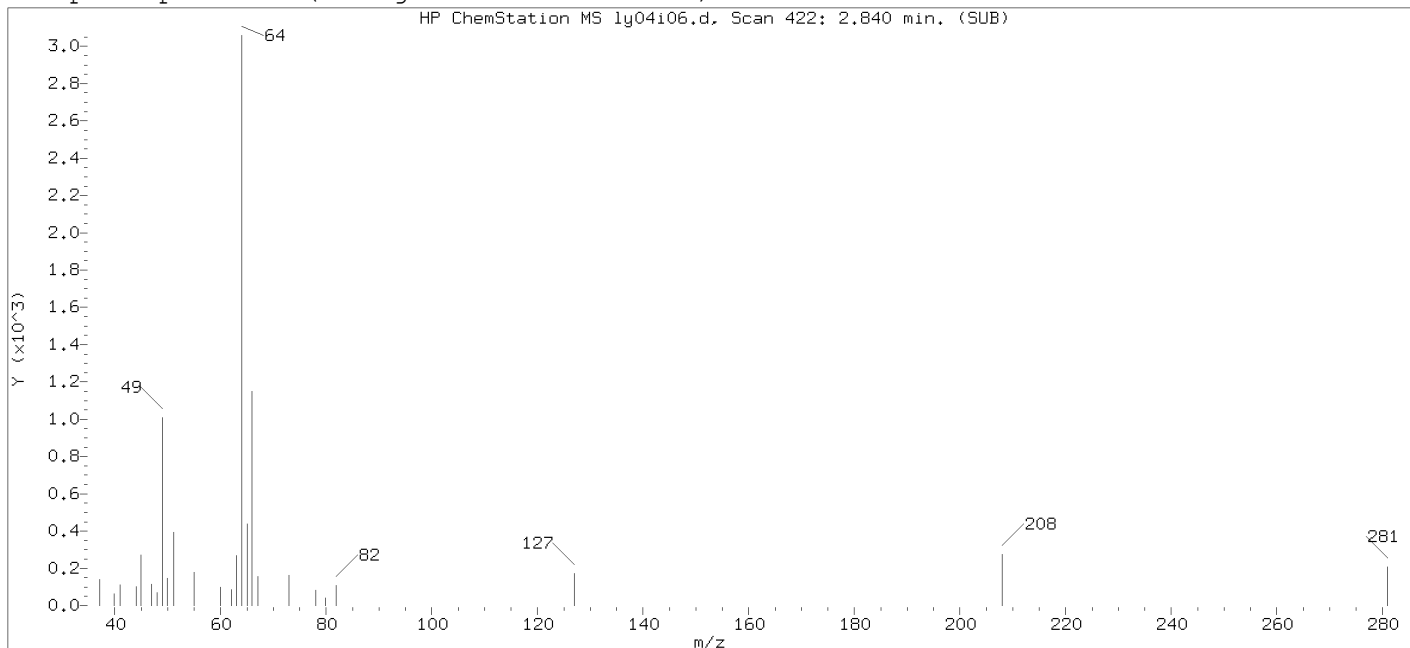
Compound Number : 9
 Compound Name : Chloroethane
 Scan Number : 425
 Retention Time (minutes): 2.850
 Quant Ion : 64.00
 Area (flag) : 22132M
 On-Column Amount (ng) : 4.9369
 Integration start scan : 400 Integration stop scan: 453
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

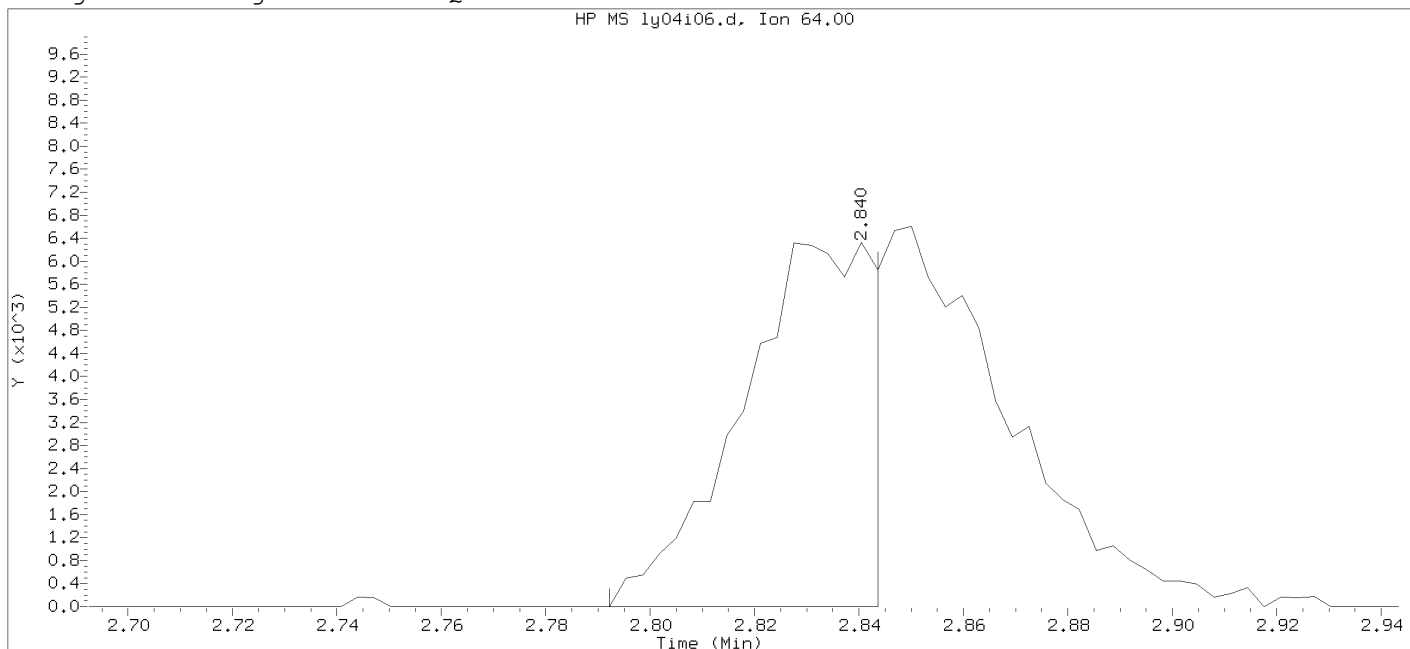
Analyst responsible for change: Digitally signed by Sara E. Johnson
 on 05/04/2020 at 19:30.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/06/2020 at 08:34.
 PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20may04i.b/ly04i06.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 14:08

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 14:25

Date, time and analyst ID of latest file update: 04-May-2020 14:25 Automation

Sample Name: VSTD004

Lab Sample ID: VSTD004

Compound Number : 9

Compound Name : Chloroethane

Scan Number : 422

Retention Time (minutes): 2.840

Quant Ion : 64.00

Area : 10831

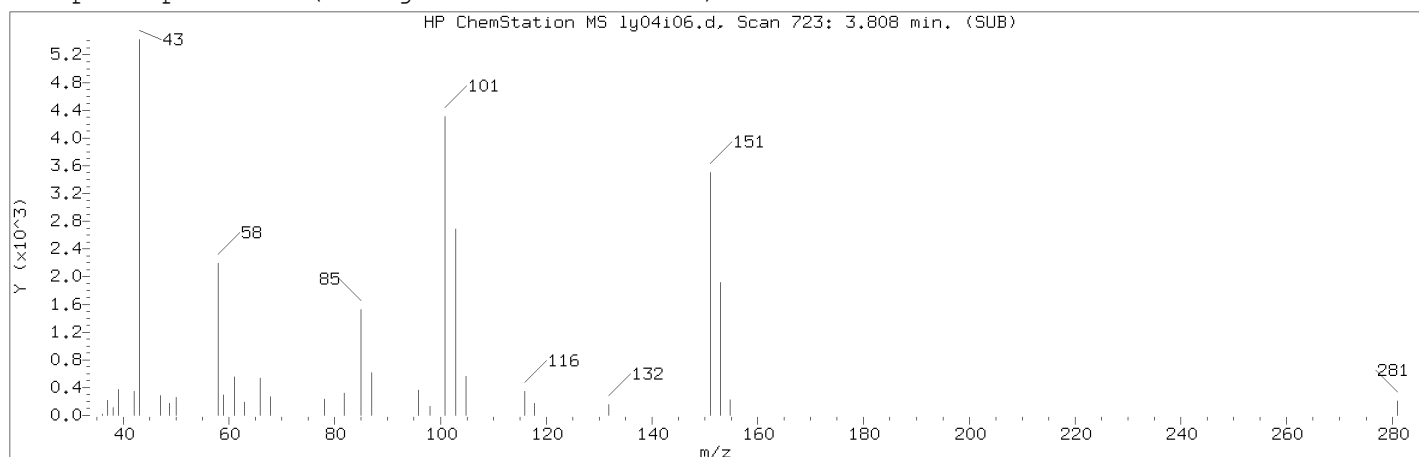
On-column Amount (ng) : 2.8757

Integration start scan : 406 Integration stop scan: 422

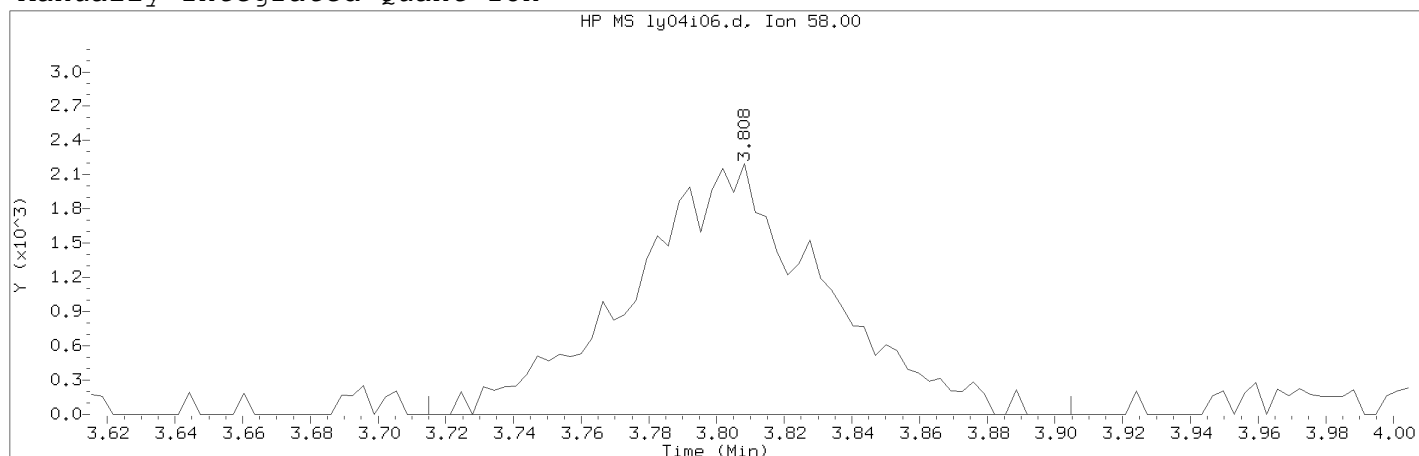
Y at integration start : 0 Y at integration end: 0

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 Target 3.5 esignature user KR446 Page 179 of 579

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i06.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 14:08

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 19:29

Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD004

Lab Sample ID: VSTD004

Compound Number	: 18	
Compound Name	: Acetone	
Scan Number	: 723	
Retention Time (minutes)	: 3.808	
Quant Ion	: 58.00	
Area (flag)	: 8567M	
On-Column Amount (ng)	: 7.9882	
Integration start scan	: 693	Integration stop scan: 752
Y at integration start	: 0	Y at integration end: 0

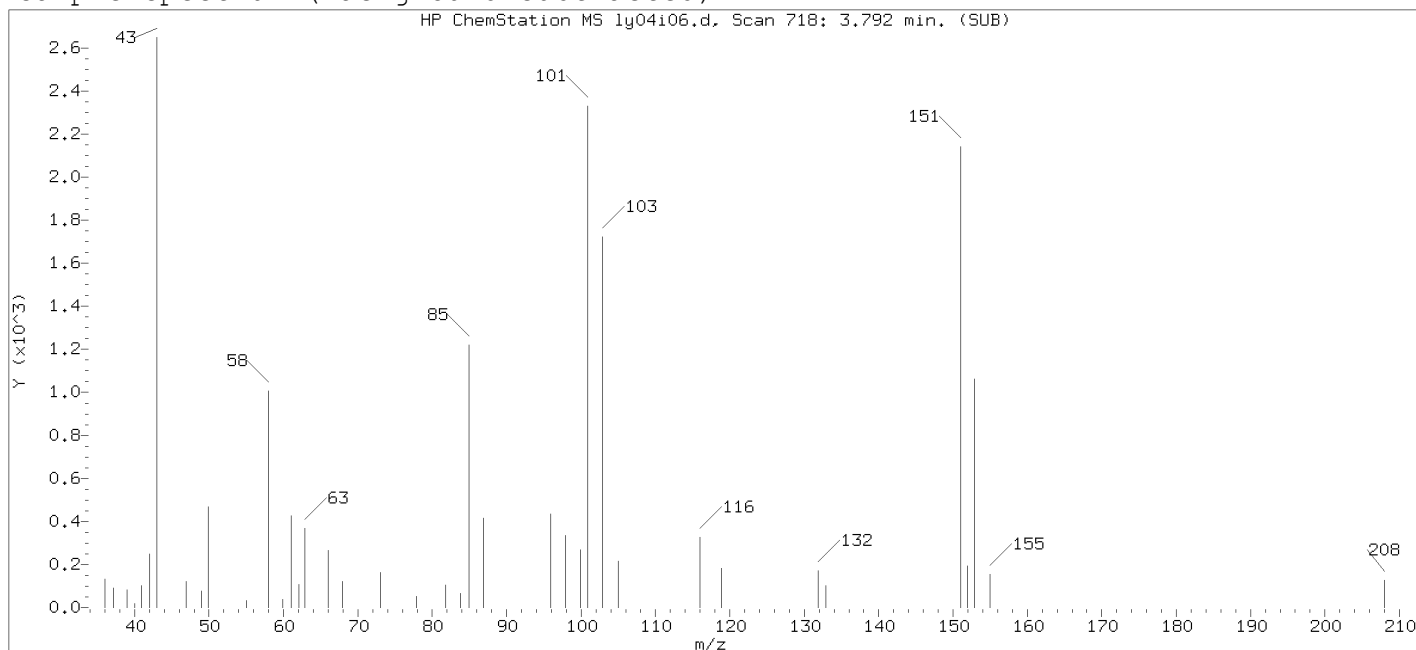
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/04/2020 at 19:30.
Target 3.5 esignature user ID: sej02002

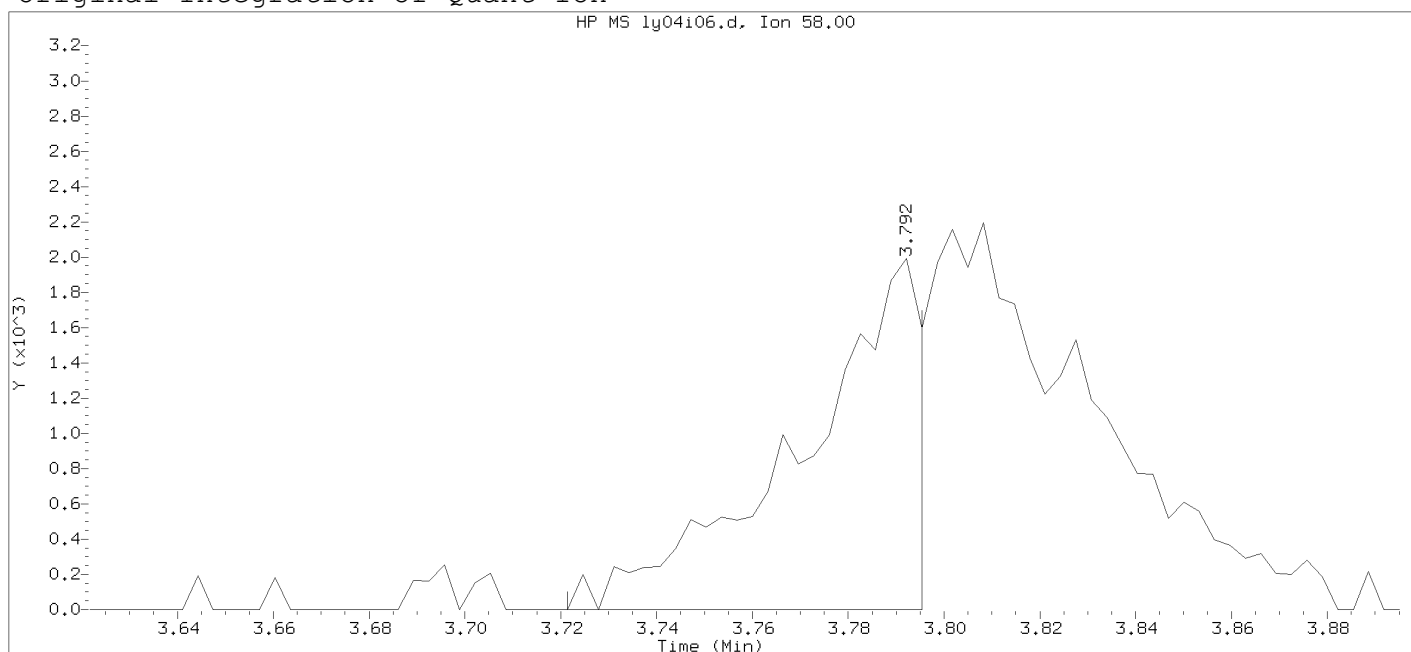
Secondary review performed and digitally signed by Chelsea B. Riehl on 05/06/2020 at 08:34.

PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i06.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 14:08

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 14:25

Date, time and analyst ID of latest file update: 04-May-2020 14:25 Automation

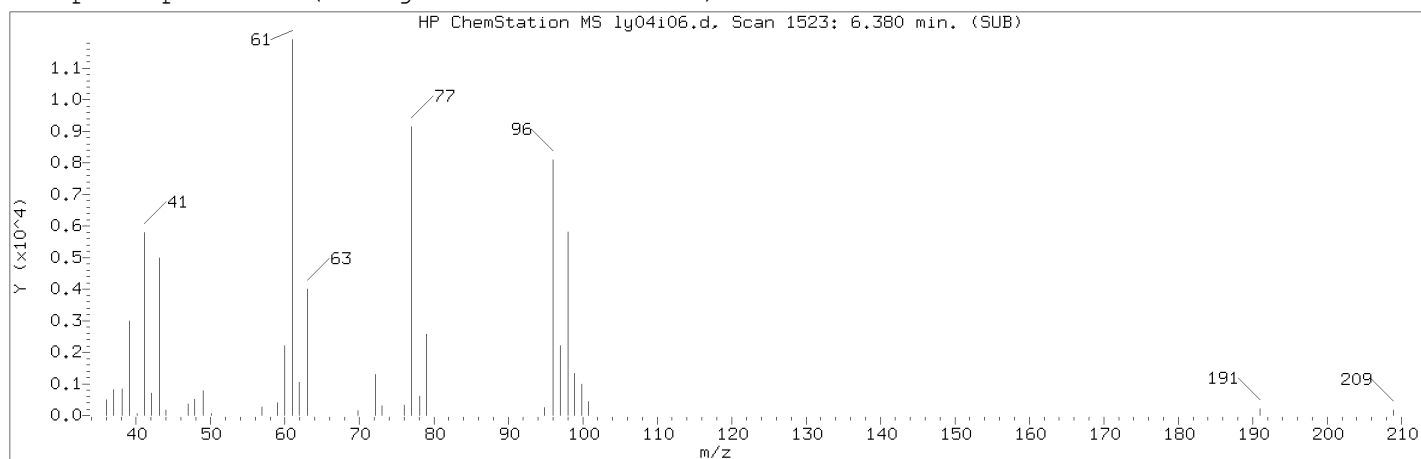
Sample Name: VSTD004

Lab Sample ID: VSTD004

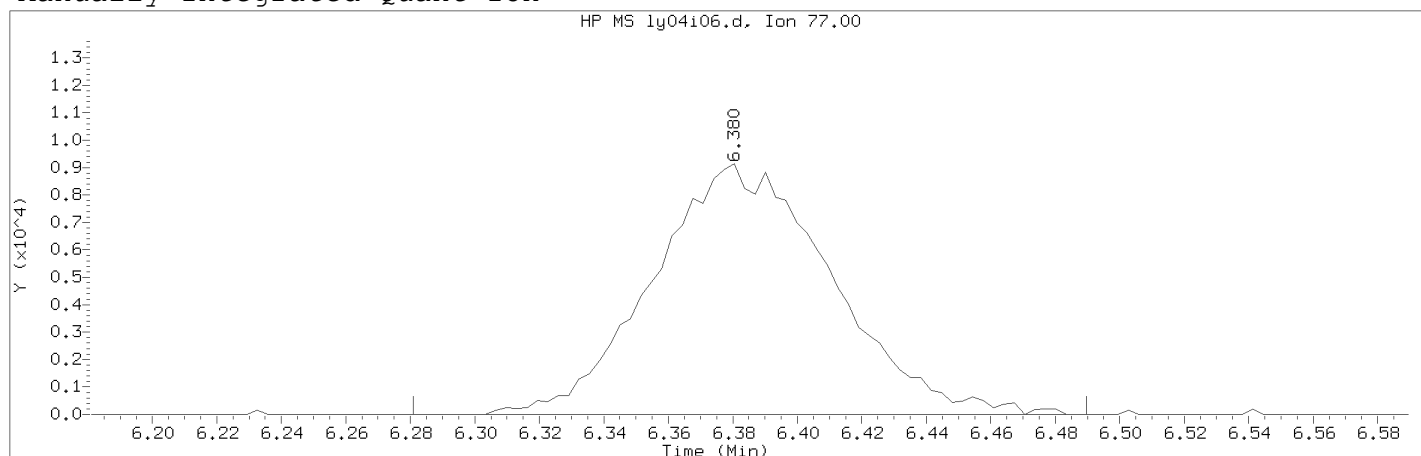
Compound Number	: 18	
Compound Name	: Acetone	
Scan Number	: 718	
Retention Time (minutes)	: 3.792	
Quant Ion	: 58.00	
Area	: 3364	
On-column Amount (ng)	: 3.7739	
Integration start scan	: 695	Integration stop scan: 718
Y at integration start	: 0	Y at integration end: 0

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 Target 3.5 esignature user KR446 Page 181 of 579

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i06.d Instrument ID: HP09915.i
 Injection date and time: 04-MAY-2020 14:08 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 04-MAY-2020 19:29
 Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD004 Lab Sample ID: VSTD004

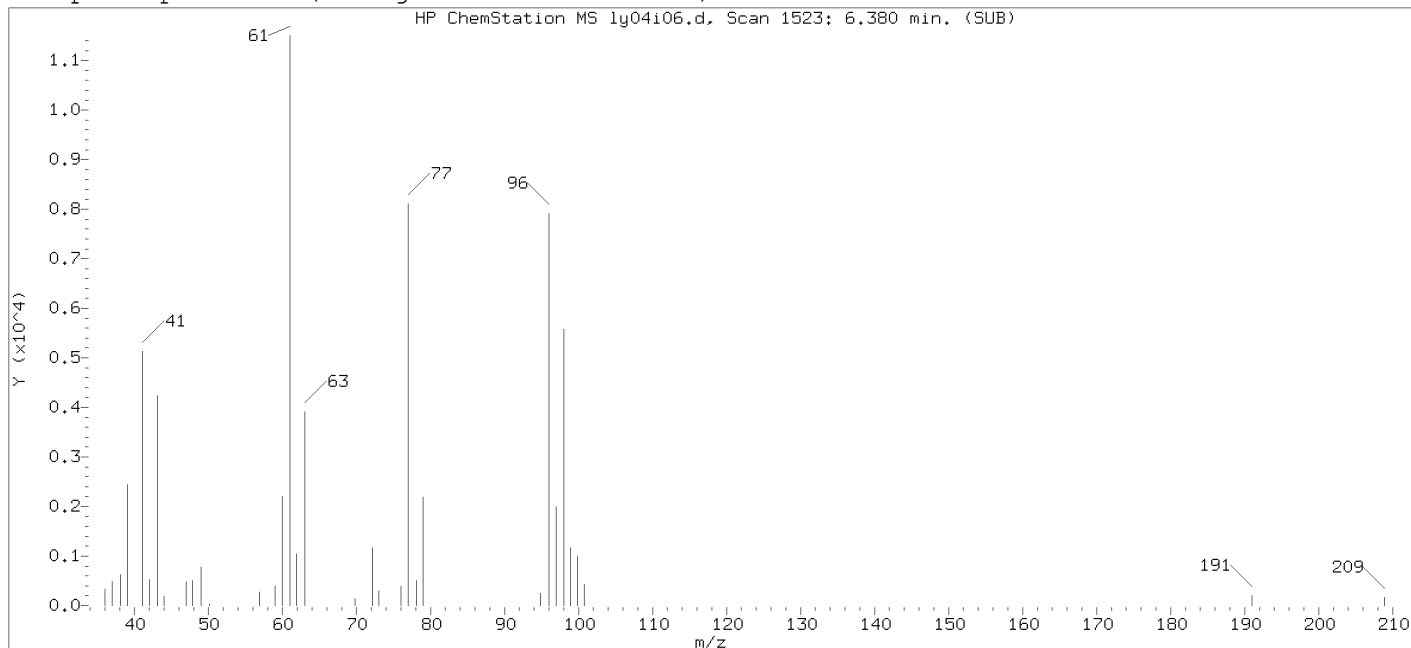
Compound Number : 45
 Compound Name : 2,2-Dichloropropane
 Scan Number : 1523
 Retention Time (minutes): 6.380
 Quant Ion : 77.00
 Area (flag) : 35169M
 On-Column Amount (ng) : 4.0326
 Integration start scan : 1491 Integration stop scan: 1556
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

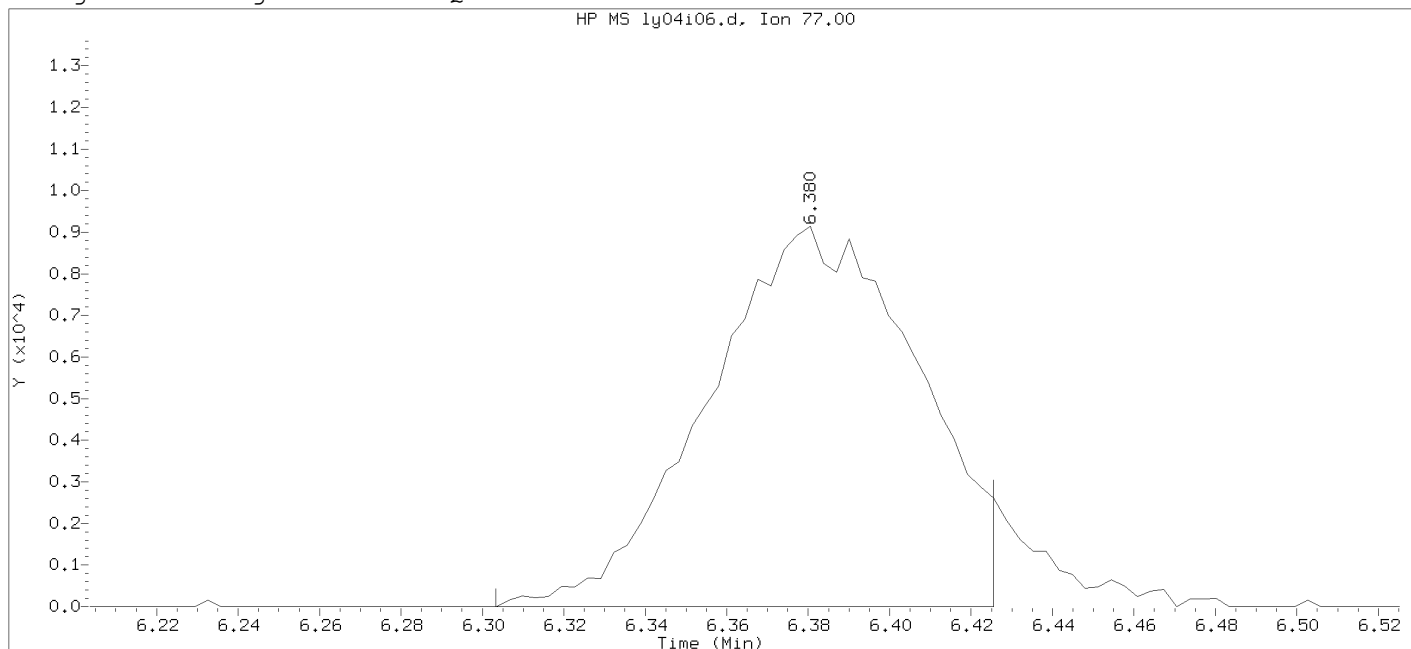
Analyst responsible for change: Digitally signed by Sara E. Johnson
 on 05/04/2020 at 19:30.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/06/2020 at 08:34.
 PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20may04i.b/ly04i06.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 14:08

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 14:25

Date, time and analyst ID of latest file update: 04-May-2020 14:25 Automation

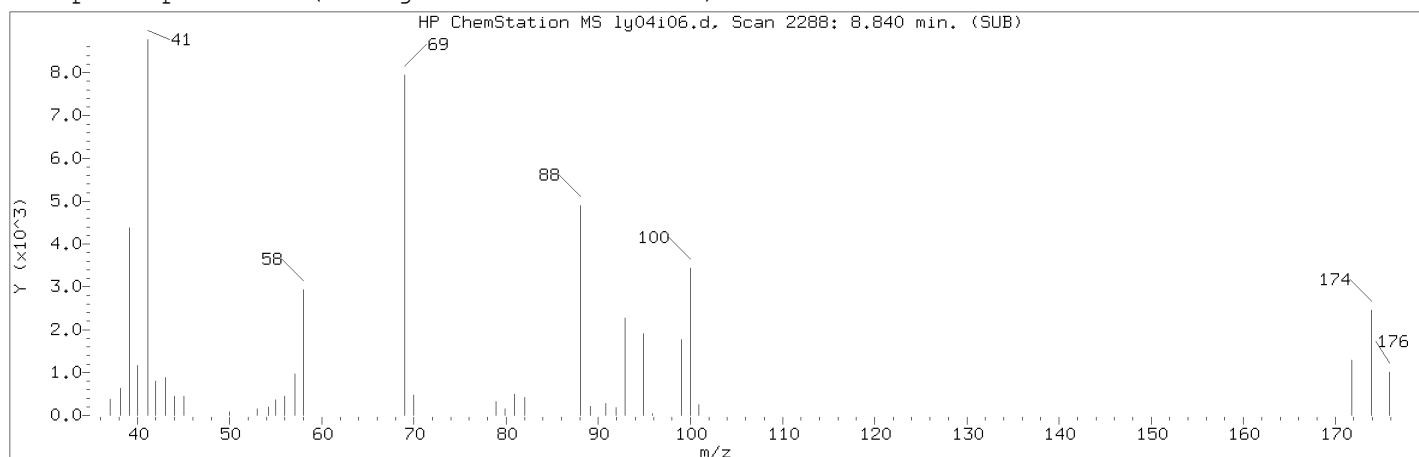
Sample Name: VSTD004

Lab Sample ID: VSTD004

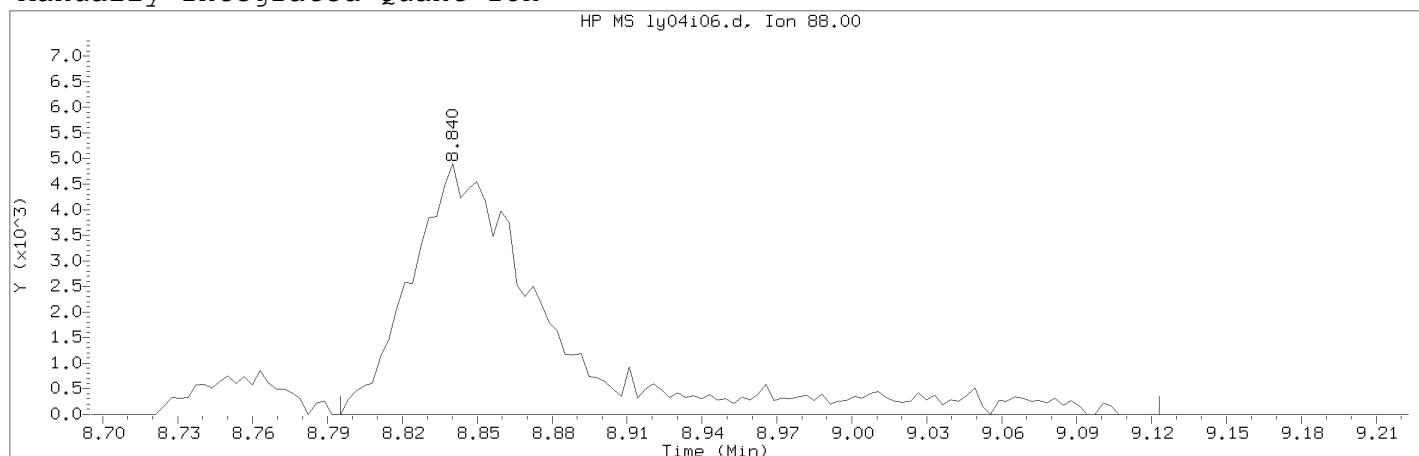
Compound Number	: 45	
Compound Name	: 2,2-Dichloropropane	
Scan Number	: 1523	
Retention Time (minutes)	: 6.380	
Quant Ion	: 77.00	
Area	: 32659	
On-column Amount (ng)	: 3.7028	
Integration start scan	: 1498	Integration stop scan: 1536
Y at integration start	: 0	Y at integration end: 0

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 Target 3.5 esignature user KR446 Page 183 of 579

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i06.d Instrument ID: HP09915.i
 Injection date and time: 04-MAY-2020 14:08 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 04-MAY-2020 19:29
 Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD004

Lab Sample ID: VSTD004

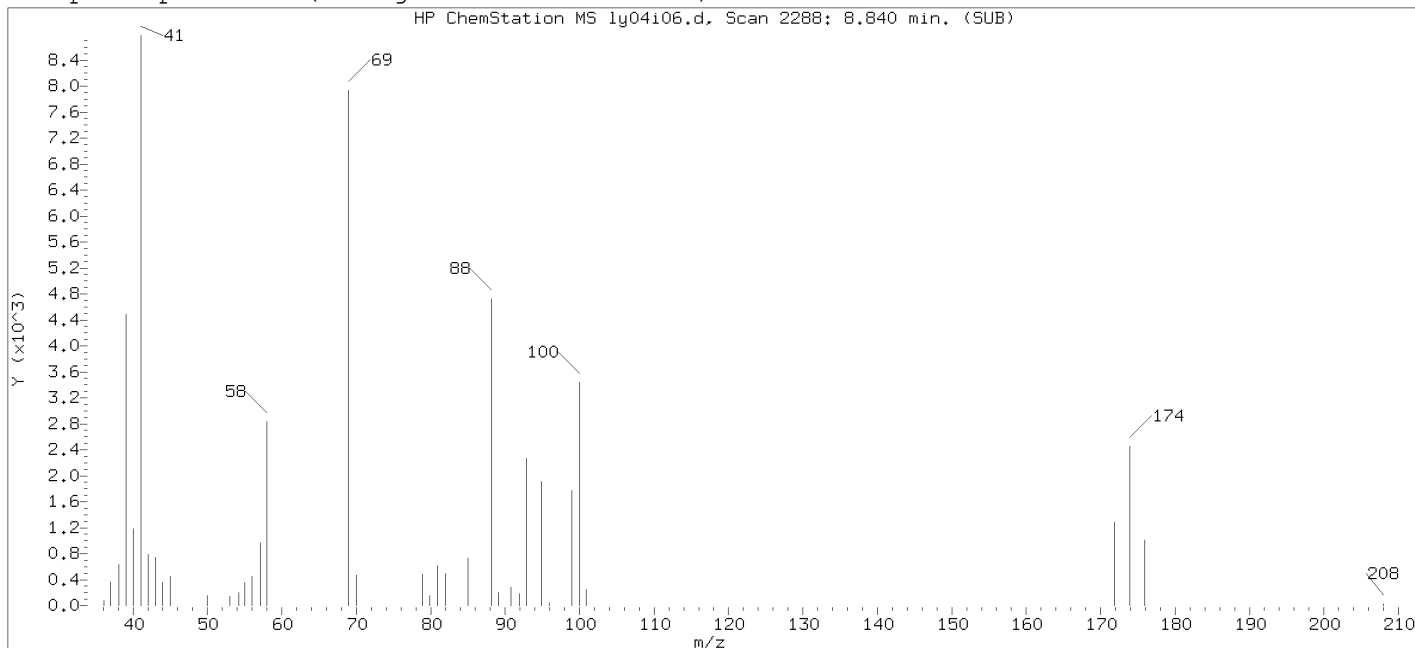
Compound Number : 75
 Compound Name : 1,4-Dioxane
 Scan Number : 2288
 Retention Time (minutes): 8.840
 Quant Ion : 88.00
 Area (flag) : 19114M
 On-Column Amount (ng) : 199.2380
 Integration start scan : 2273 Integration stop scan: 2375
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

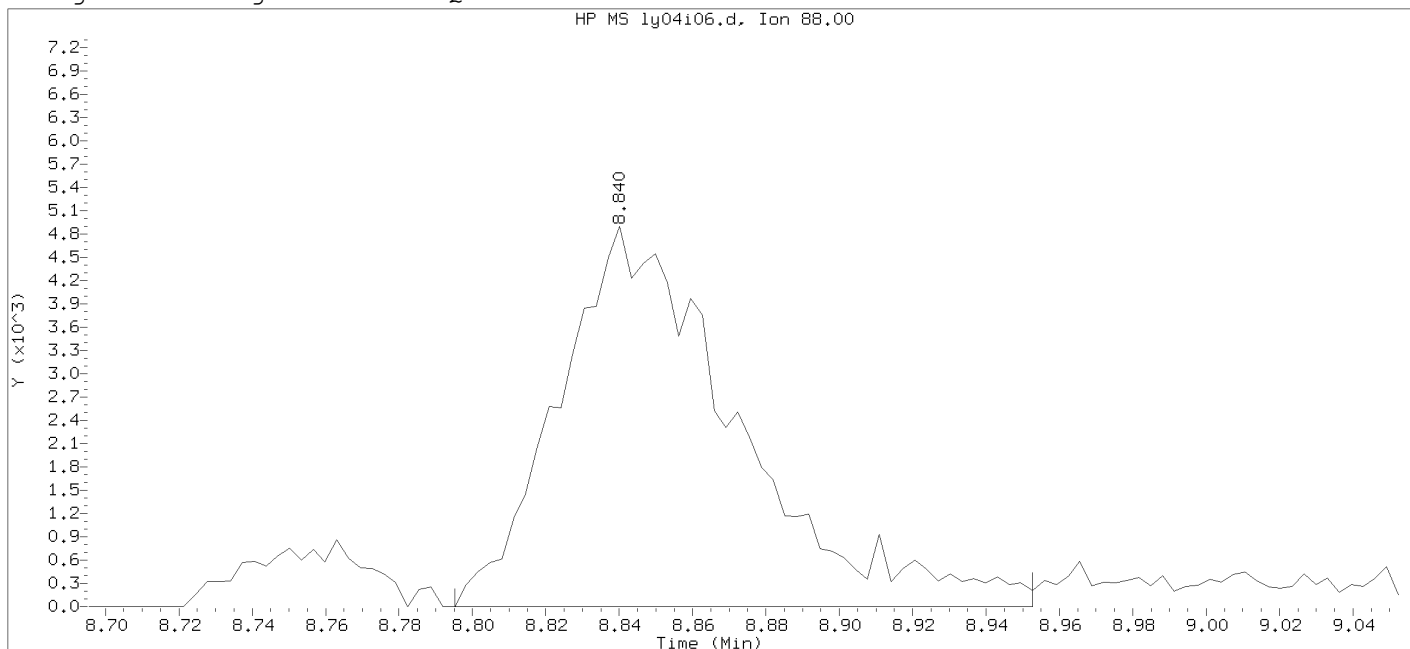
Analyst responsible for change: Digitally signed by Sara E. Johnson
 on 05/04/2020 at 19:30.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/06/2020 at 08:34.
 PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i06.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 14:08

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 14:25

Date, time and analyst ID of latest file update: 04-May-2020 14:25 Automation

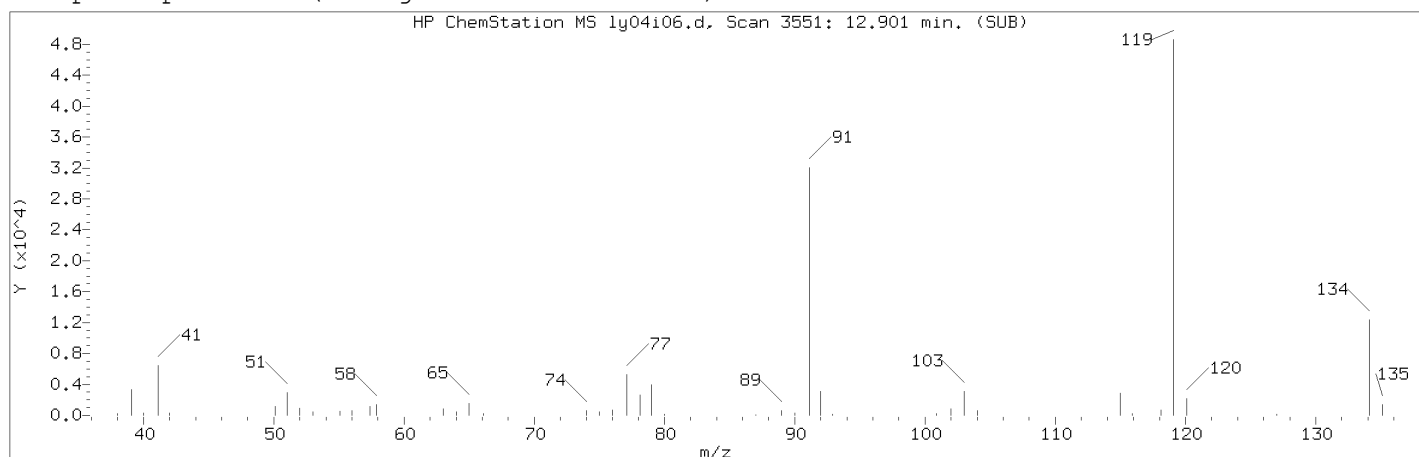
Sample Name: VSTD004

Lab Sample ID: VSTD004

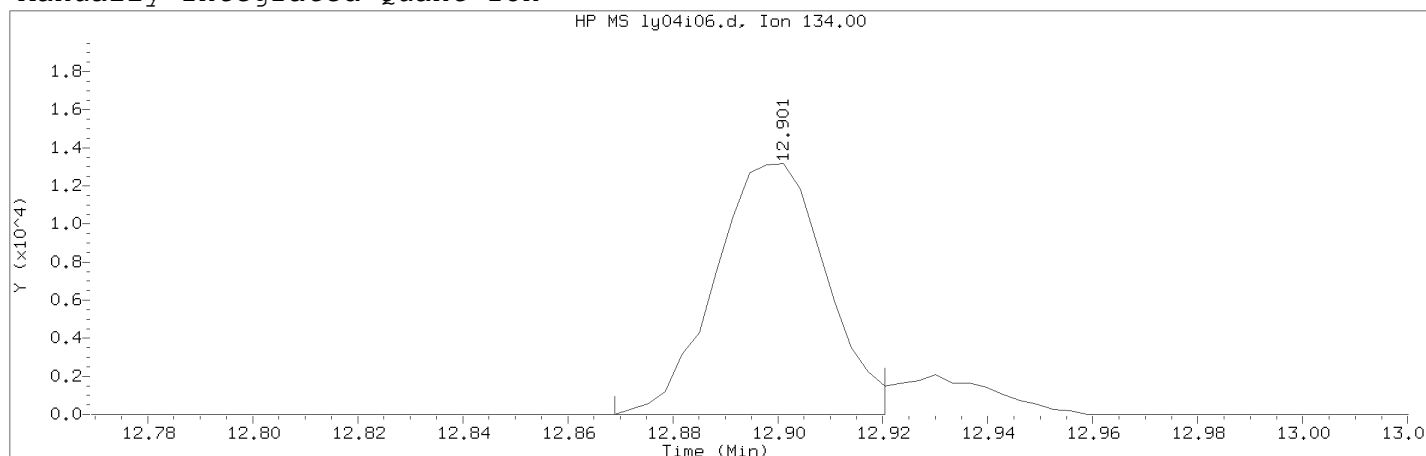
Compound Number	: 75
Compound Name	: 1,4-Dioxane
Scan Number	: 2288
Retention Time (minutes)	: 8.840
Quant Ion	: 88.00
Area	: 16526
On-column Amount (ng)	: 173.4864
Integration start scan	: 2273
Integration stop scan	: 2322
Y at integration start	: 0
Y at integration end	: 0

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 Target 3.5 esignature user KR446 Page 185 of 579

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i06.d Instrument ID: HP09915.i
 Injection date and time: 04-MAY-2020 14:08 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 04-MAY-2020 19:29
 Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD004

Lab Sample ID: VSTD004

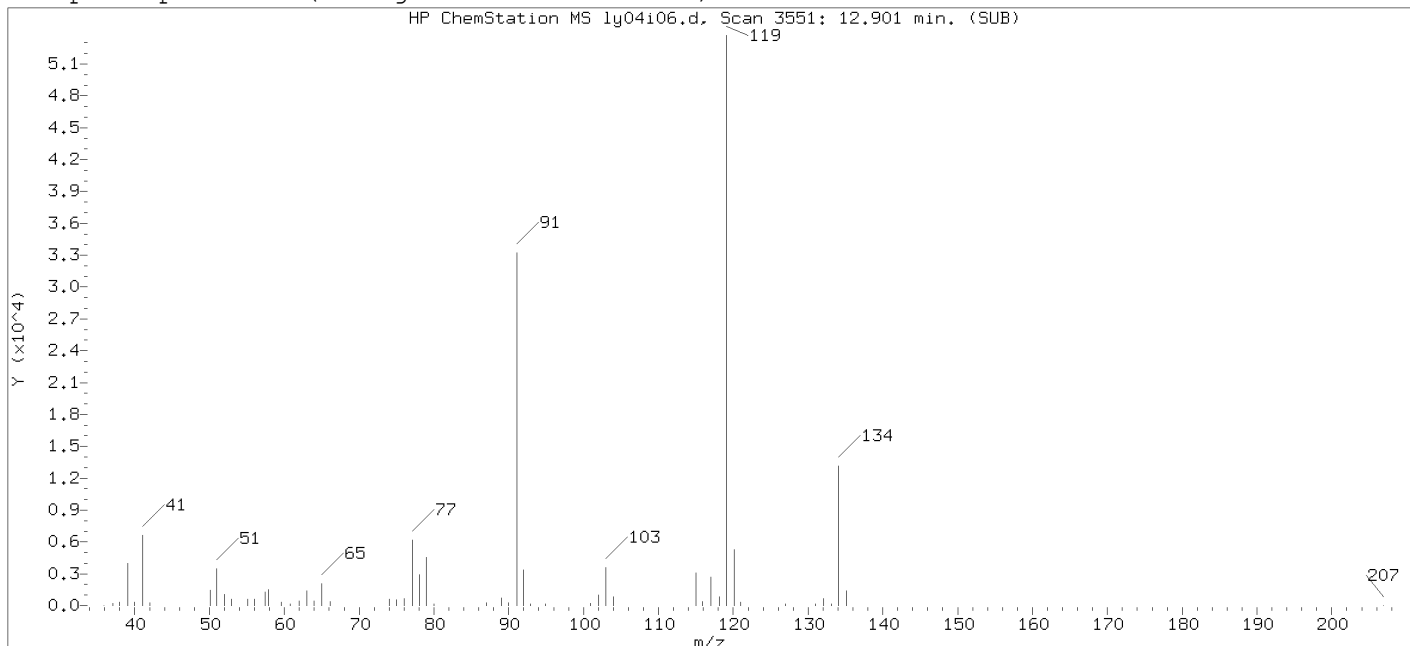
Compound Number : 124
 Compound Name : tert-Butylbenzene
 Scan Number : 3551
 Retention Time (minutes): 12.901
 Quant Ion : 134.00
 Area (flag) : 19337M
 On-Column Amount (ng) : 3.4417
 Integration start scan : 3540 Integration stop scan: 3556
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

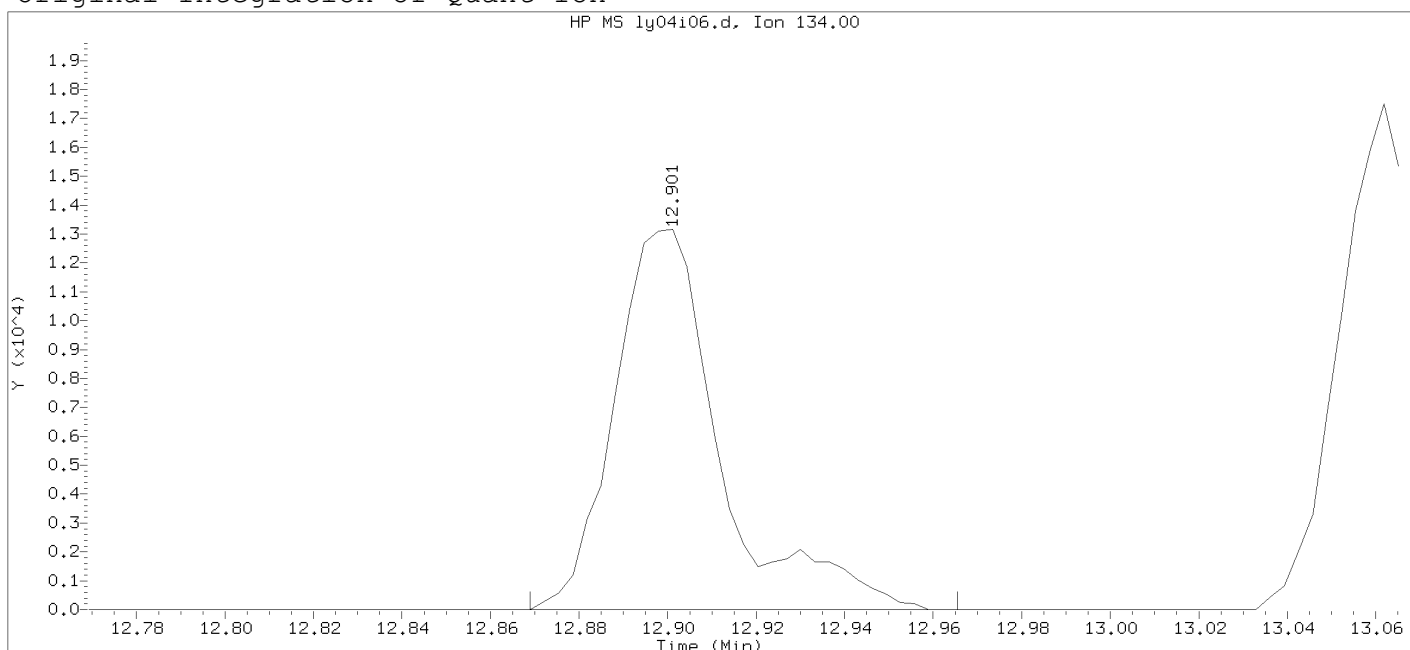
Analyst responsible for change: Digitally signed by Sara E. Johnson
 on 05/04/2020 at 19:30.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/06/2020 at 08:34.
 PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i06.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 14:08

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 14:25

Date, time and analyst ID of latest file update: 04-May-2020 14:25 Automation

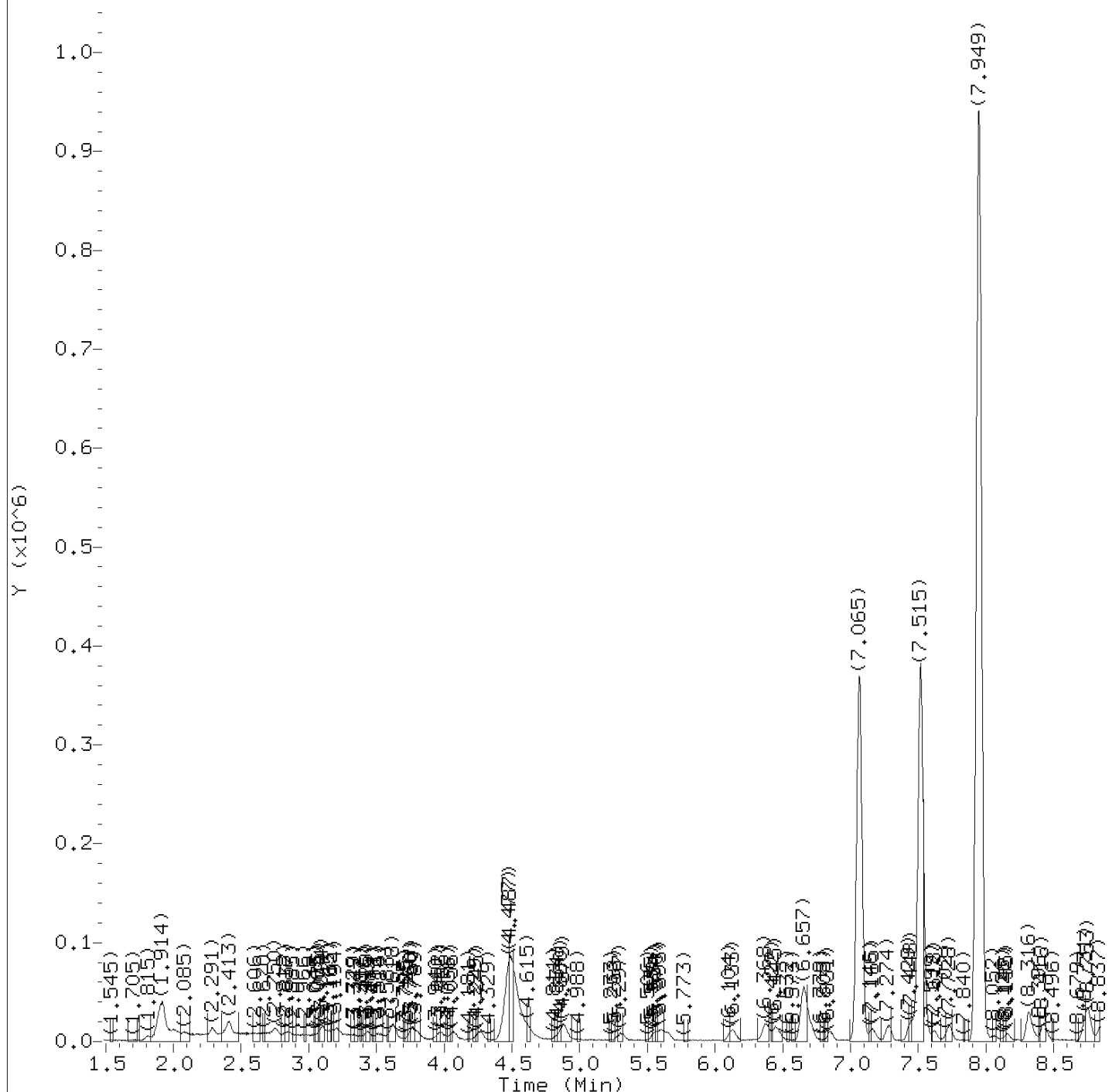
Sample Name: VSTD004

Lab Sample ID: VSTD004

Compound Number	: 124	
Compound Name	: tert-Butylbenzene	
Scan Number	: 3551	
Retention Time (minutes)	: 12.901	
Quant Ion	: 134.00	
Area	: 21846	
On-column Amount (ng)	: 3.6346	
Integration start scan	: 3540	Integration stop scan: 3570
Y at integration start	: 0	Y at integration end: 0

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 Target 3.5 esignature user KR446 Page 187 of 579

/chem/HP09915.i/20may04i.b/ly04i07.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20may04i.b/ly04i07.d
 Injection date and time: 04-MAY-2020 14:30

Instrument ID: HP09915.i
 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m
 Calibration date and time: 04-MAY-2020 19:29

Sublist used: 8260W

Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

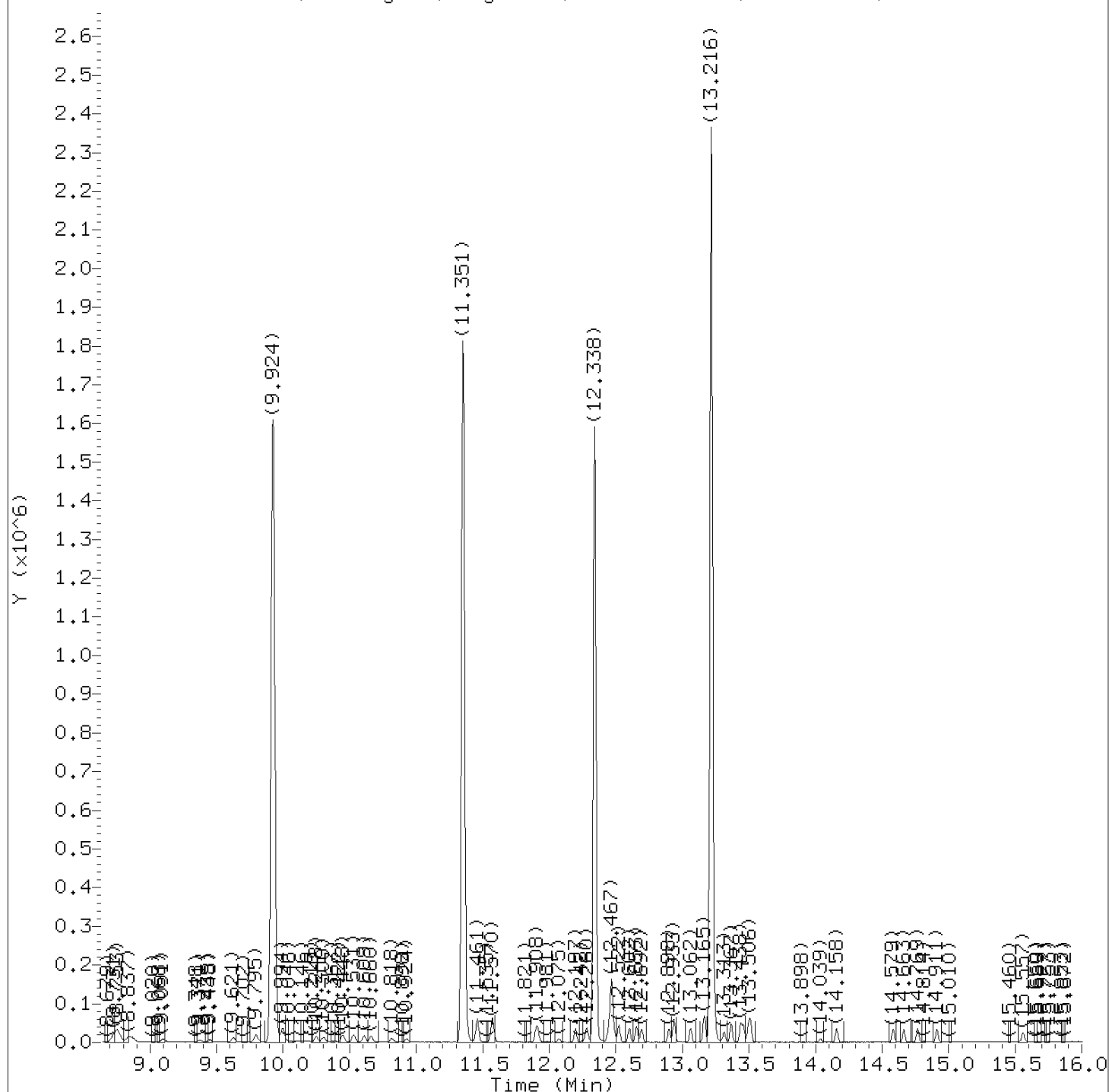
Digitally signed by Sara E. Johnson
 on 05/04/2020 at 19:30.

Target 3.5 esignature user ID: sej02002

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/chem/HP09915.i/20may04i.b/ly04i07.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20may04i.b/ly04i07.d
 Injection date and time: 04-MAY-2020 14:30

Instrument ID: HP09915.i
 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m
 Calibration date and time: 04-MAY-2020 19:29

Sublist used: 8260W

Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

Digitally signed by Sara E. Johnson
 on 05/04/2020 at 19:30.

Target 3.5 esignature user ID: sej02002

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may04i.b/ly04i07.d
 Injection date and time: 04-MAY-2020 14:30

Instrument ID: HP09915.i
 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 19:29

Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
3) Dichlorodifluoromethane	(2)	2.085	85	8023	0.896
4) Chloromethane	(2)	2.291	50	9098	1.088
5) 1,3-Butadiene	(2)	2.406	39	5686M	1.060
6) Vinyl Chloride	(2)	2.416	62	8737	1.083
8) Bromomethane	(2)	2.747	94	6838	1.176
9) Chloroethane	(2)	2.840	64	5438M	1.207
10) Dichlorofluoromethane	(2)	3.094	67	10216	1.051
12) Trichlorofluoromethane	(2)	3.168	101	8417	0.955
11) n-Pentane	(2)	3.210	43	7608M	0.920
14) Ethyl ether	(2)	3.432	59	5446	0.875
15) Freon 123a	(2)	3.516	67	6261	0.877
16) Acrolein	(1)	3.615	56	23166	9.566
17) 1,1-Dichloroethene	(2)	3.757	96	5549	0.987
17) 1,1-Dichloroethene	(2)	3.770	63	2205	0.824
19) Freon 113	(2)	3.799	101	4898	0.840
18) Acetone	(1)	3.821	58	2764M	2.502
22) Methyl Iodide	(2)	3.969	142	9677	0.894
21) 2-Propanol	(1)	3.985	45	14938M	21.218
23) Carbon Disulfide	(2)	4.062	76	16435M	0.869
27) Methyl Acetate	(2)	4.252	43	7412M	1.034
25) Allyl Chloride	(2)	4.271	41	8163	0.896
28) Methylene Chloride	(2)	4.471	84	6287	0.940
29) *t-Butyl alcohol-d10	(1)	4.487	65	294363	250.000
30) t-Butyl alcohol	(1)	4.615	59	23172	19.499
31) Acrylonitrile	(2)	4.834	53	3837	0.966
33) Methyl Tertiary Butyl Ether	(2)	4.876	73	18019	0.935
32) trans-1,2-Dichloroethene	(2)	4.888	96	6111M	0.945
34) n-Hexane	(2)	5.310	57	6497M	0.718
36) 1,1-Dichloroethane	(2)	5.548	63	10230	0.902
38) di-Isopropyl ether	(2)	5.596	45	16324	0.819
39) 2-Chloro-1,3-butadiene	(2)	5.663	53	6540	0.723
40) Ethyl t-butyl ether	(2)	6.130	59	15230	0.822
43) 1,2-Dichloroethene (Total)	(2)		96	12826	1.871
44) 2-Butanone	(2)	6.358	43	9091	1.886
42) cis-1,2-Dichloroethene	(2)	6.377	96	6715	0.926
45) 2,2-Dichloropropane	(2)	6.390	77	7531M	0.859
47) Propionitrile	(1)	6.448	54	29925	18.639
48) Methacrylonitrile	(2)	6.657	67	34606	8.694

M = Compound was manually integrated.

* = Compound is an internal standard.

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 on 05/04/2020 at 19:30.

Target 3.5 esignature user ID: sej02002

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may04i.b/ly04i07.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 14:30

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 19:29

Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
49) Bromochloromethane	(2)	6.692	128	3311	0.885
50) Tetrahydrofuran	(1)	6.718	71	2576	1.834
51) Chloroform	(2)	6.856	83	10313	0.931
52)\$Dibromofluoromethane	(2)	7.065	113	327107	49.723
52)\$Dibromofluoromethane	(2)	7.065	111	334312	49.713
53) 1,1,1-Trichloroethane	(2)	7.075	97	8371	0.881
54) Cyclohexane	(2)	7.165	56	7115	0.669
54) Cyclohexane	(2)	7.165	84	6850	0.738
54) Cyclohexane	(2)	7.165	69	2378	0.719
56) Carbon Tetrachloride	(2)	7.281	117	6219	0.781
55) 1,1-Dichloropropene	(2)	7.287	75	6955M	0.798
58) Isobutyl Alcohol	(1)	7.448	41	19195	47.613
57)\$1,2-Dichloroethane-d4	(2)	7.515	102	83472	50.005
57)\$1,2-Dichloroethane-d4	(2)	7.519	65	369677	49.891
57)\$1,2-Dichloroethane-d4	(2)	7.522	104	53704	50.523
60) Benzene	(2)	7.548	78	24385	0.904
61) 1,2-Dichloroethane	(2)	7.618	62	9508M	1.052
61) 1,2-Dichloroethane	(2)	7.615	98	734	0.833
65) t-Amyl methyl ether	(2)	7.734	73	16322	0.862
67) n-Heptane	(2)	7.946	43	7624	0.810
66)*Fluorobenzene	(2)	7.949	96	1305845	50.000
69) n-Butanol	(1)	8.313	56	25742	78.312
71) Trichloroethene	(2)	8.425	95	6044	0.886
72) Methylcyclohexane	(2)	8.731	83	7534	0.679
72) Methylcyclohexane	(2)	8.731	98	3392	0.676
73) 1,2-Dichloropropane	(2)	8.757	63	6479	0.932
76) Methyl Methacrylate	(2)	8.840	69	4771M	0.799
75) 1,4-Dioxane	(1)	8.850	88	4194	42.444
74) Dibromomethane	(2)	8.869	93	4079M	0.898
78) Bromodichloromethane	(2)	9.107	83	6897	0.847
79) 2-Nitropropane	(2)	9.374	41	3881	1.589
80) 2-Chloroethyl Vinyl Ether	(2)	9.451	63	3089	0.668
81) cis-1,3-Dichloropropene	(2)	9.631	75	8067	0.758
82) 4-Methyl-2-pentanone	(2)	9.795	43	14679	1.504
83)\$Toluene-d8	(3)	9.924	98	1320930	49.236
83)\$Toluene-d8	(3)	9.924	100	856712	49.205
88) Toluene	(3)	9.991	92	14924	0.873
90) 1,3-Dichloropropene (total)	(3)		100	15946	1.561

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 2 of 4

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on 05/04/2020 at 19:30.

Target 3.5 esignature user ID: sej02002

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may04i.b/ly04i07.d
 Injection date and time: 04-MAY-2020 14:30

Instrument ID: HP09915.i
 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 19:29

Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
89) trans-1,3-Dichloropropene	(3)	10.248	75	7879	0.803
91) Ethyl Methacrylate	(3)	10.306	69	6707	0.679
92) 1,1,2-Trichloroethane	(3)	10.448	97	6228	0.939
93) Tetrachloroethene	(3)	10.531	166	5688	0.781
94) 1,3-Dichloropropane	(3)	10.609	76	10007	0.902
96) 2-Hexanone	(3)	10.657	43	10381	1.448
97) Dibromochloromethane	(3)	10.818	129	5097	0.738
99) 1,2-Dibromoethane	(3)	10.924	107	5964	0.836
100) *Chlorobenzene-d5	(3)	11.351	117	1044326	50.000
101) 1-Chlorohexane	(3)	11.354	91	8043	0.919
102) Chlorobenzene	(3)	11.377	112	17474	0.890
103) 1,1,1,2-Tetrachloroethane	(3)	11.461	131	5490	0.825
104) Ethylbenzene	(3)	11.461	91	25022	0.791
106) m+p-Xylene	(3)	11.573	106	18632	1.498
108) Xylene (Total)	(3)		106	27231	2.213
107) o-Xylene	(3)	11.898	106	8599	0.715
109) Styrene	(3)	11.917	104	12566	0.642
110) Bromoform	(3)	12.075	173	3758	0.748
111) Isopropylbenzene	(3)	12.197	105	19546	0.640
112) Cyclohexanone	(1)	12.280	55	15170M	41.244
114) \$4-Bromofluorobenzene	(3)	12.338	95	512453	49.643
114) \$4-Bromofluorobenzene	(3)	12.342	174	441400	49.875
116) 1,1,2,2-Tetrachloroethane	(4)	12.441	83	10218	0.935
115) Bromobenzene	(4)	12.457	156	7896	0.900
118) trans-1,4-Dichloro-2-butene	(4)	12.467	53	26358	8.293
117) 1,2,3-Trichloropropane	(4)	12.493	110	2928	0.877
119) n-Propylbenzene	(4)	12.525	91	29592	0.781
120) 2-Chlorotoluene	(4)	12.599	126	6422	0.793
122) 1,3,5-Trimethylbenzene	(4)	12.653	105	18521	0.676
121) 4-Chlorotoluene	(4)	12.692	126	6754	0.804
124) tert-Butylbenzene	(4)	12.901	134	3961M	0.704
125) Pentachloroethane	(4)	12.933	167	4085	0.817
126) 1,2,4-Trimethylbenzene	(4)	12.943	105	18226	0.644
127) sec-Butylbenzene	(4)	13.062	105	20974	0.629
130) p-Isopropyltoluene	(4)	13.165	119	17502	0.612
129) 1,3-Dichlorobenzene	(4)	13.165	146	14103	0.863
131) *1,4-Dichlorobenzene-d4	(4)	13.216	152	599351	50.000
133) 1,4-Dichlorobenzene	(4)	13.235	146	15472	0.902

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 3 of 4

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 on 05/04/2020 at 19:30.

Target 3.5 esignature user ID: sej02002

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may04i.b/ly04i07.d
 Injection date and time: 04-MAY-2020 14:30

Instrument ID: HP09915.i
 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 19:29

Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
134) 1,2,3-Trimethylbenzene	(4)	13.245	105	24886	0.846
135) Benzyl Chloride	(4)	13.313	91	15879	0.713
136) 1,3-Diethylbenzene	(4)	13.364	119	13894	0.755
141) Diethylbenzene (total)	(4)		100	40181	2.263
137) 1,4-Diethylbenzene	(4)	13.435	119	13946	0.724
139) n-Butylbenzene	(4)	13.457	92	10687	0.728
138) 1,2-Dichlorobenzene	(4)	13.493	146	14584	0.887
140) 1,2-Diethylbenzene	(4)	13.512	119	12341	0.785
142) 1,2-Dibromo-3-chloropropane	(4)	14.036	75	1978	0.818
144) 1,3,5-Trichlorobenzene	(4)	14.158	180	10914	0.881
146) 1,2,4-Trichlorobenzene	(4)	14.579	180	9813	0.847
147) Hexachlorobutadiene	(4)	14.660	225	5564	1.042
148) Naphthalene	(4)	14.766	128	25497	0.680
149) 1,2,3-Trichlorobenzene	(4)	14.911	180	9815	0.853
150) 2-Methylnaphthalene	(4)	15.557	142	11936M	3.336

M = Compound was manually integrated.

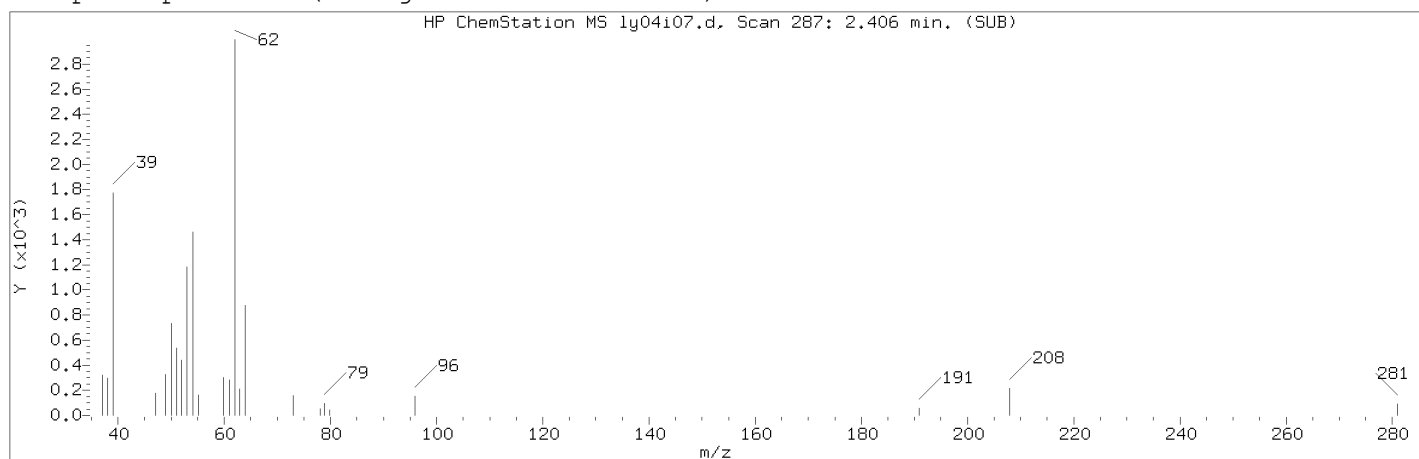
page 4 of 4

Digitally signed by Sara E. Johnson
 on 05/04/2020 at 19:30.

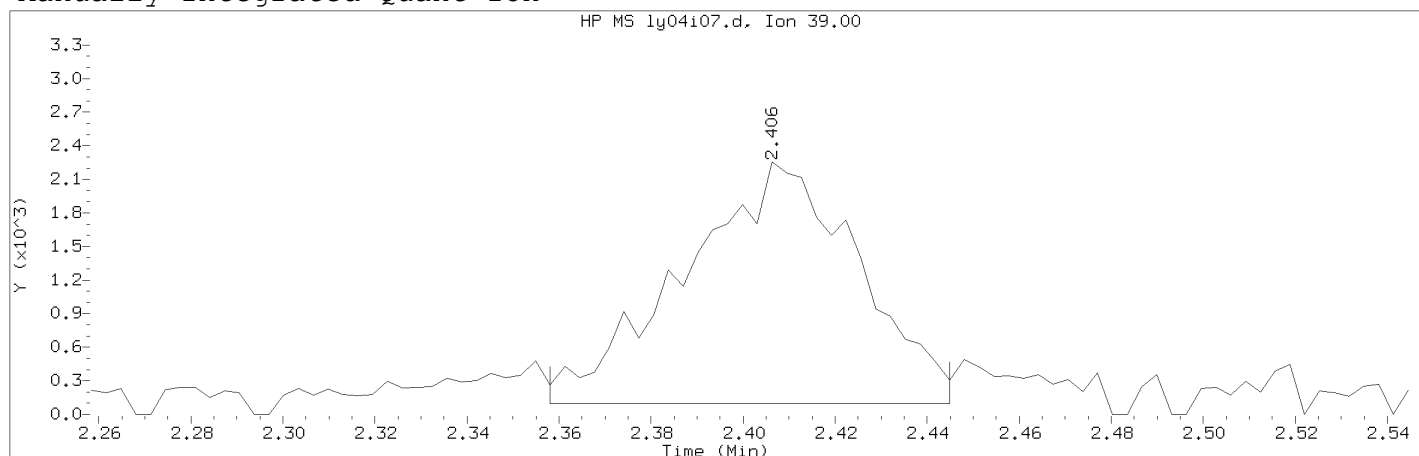
Target 3.5 esignature user ID: sej02002

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Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i07.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 14:30

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 19:29

Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

Compound Number	: 5	
Compound Name	: 1,3-Butadiene	
Scan Number	: 287	
Retention Time (minutes)	: 2.406	
Quant Ion	: 39.00	
Area (flag)	: 5686M	
On-Column Amount (ng)	: 1.0601	
Integration start scan	: 271	Integration stop scan: 298
Y at integration start	: 98	Y at integration end: 98

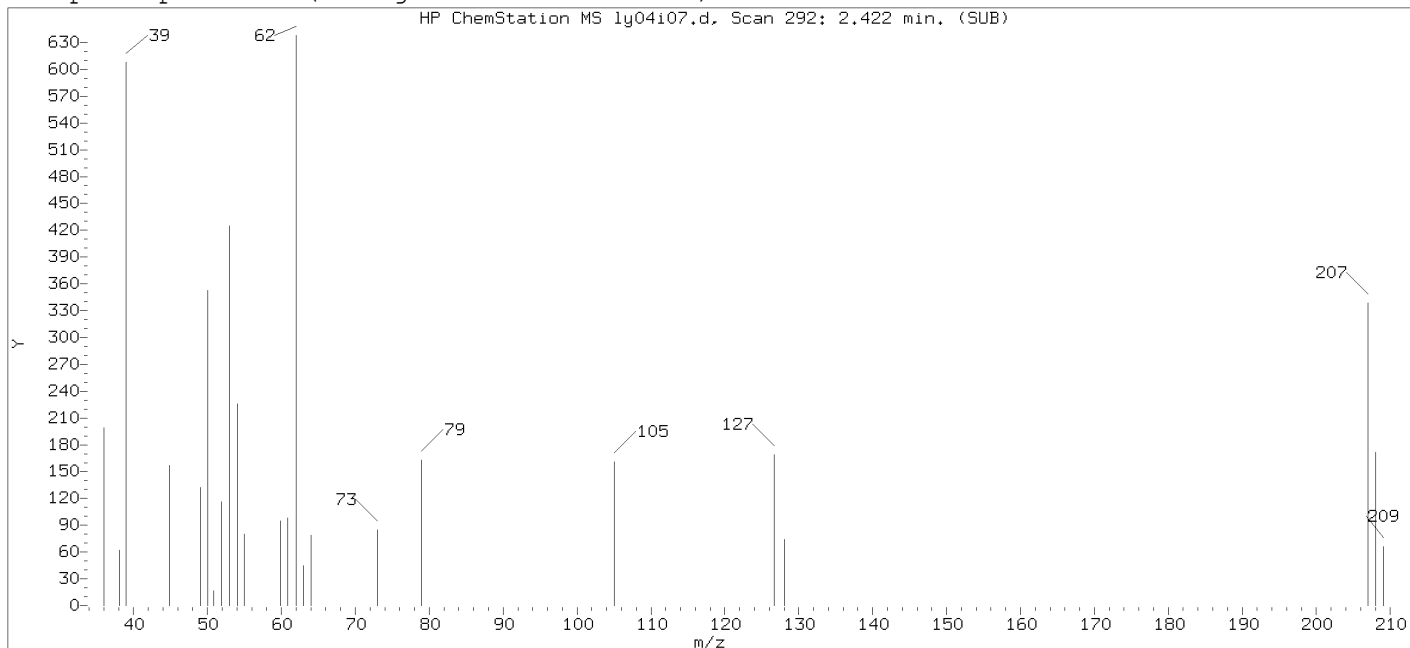
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Sara E. Johnson
on 05/04/2020 at 19:30.
Target 3.5 esignature user ID: sej02002

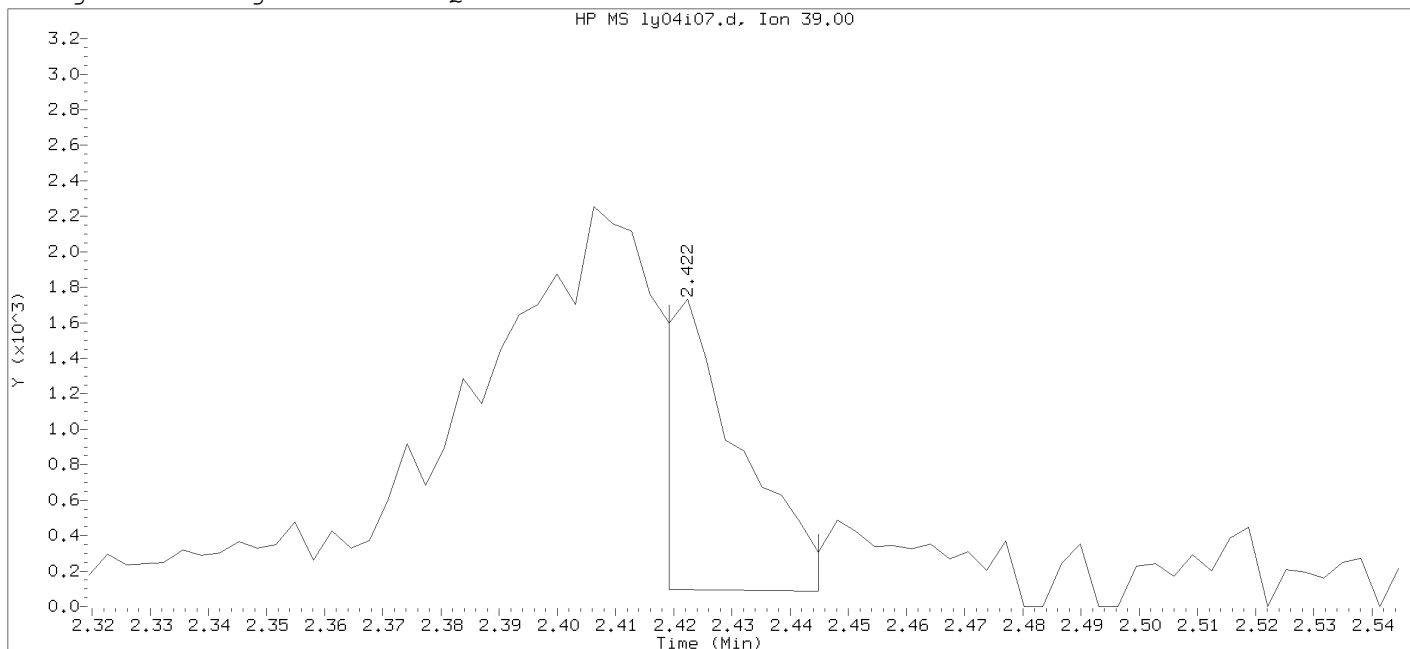
Secondary review performed and digitally signed by Chelsea B. Riehl on 05/06/2020 at 08:34.

PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20may04i.b/ly04i07.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 14:30

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 14:47

Date, time and analyst ID of latest file update: 04-May-2020 14:47 Automation

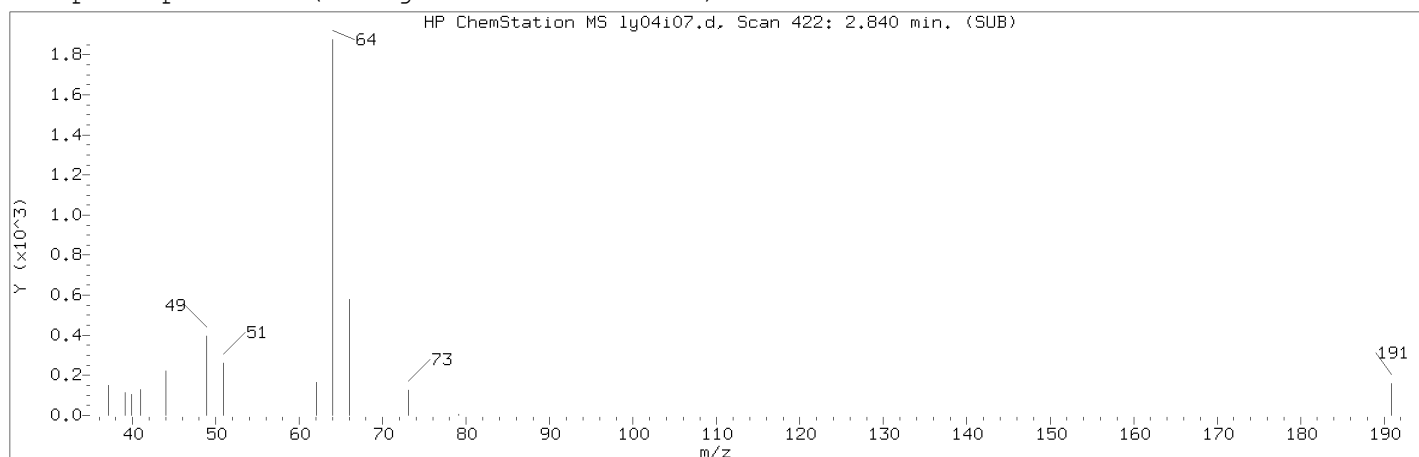
Sample Name: VSTD001

Lab Sample ID: VSTD001

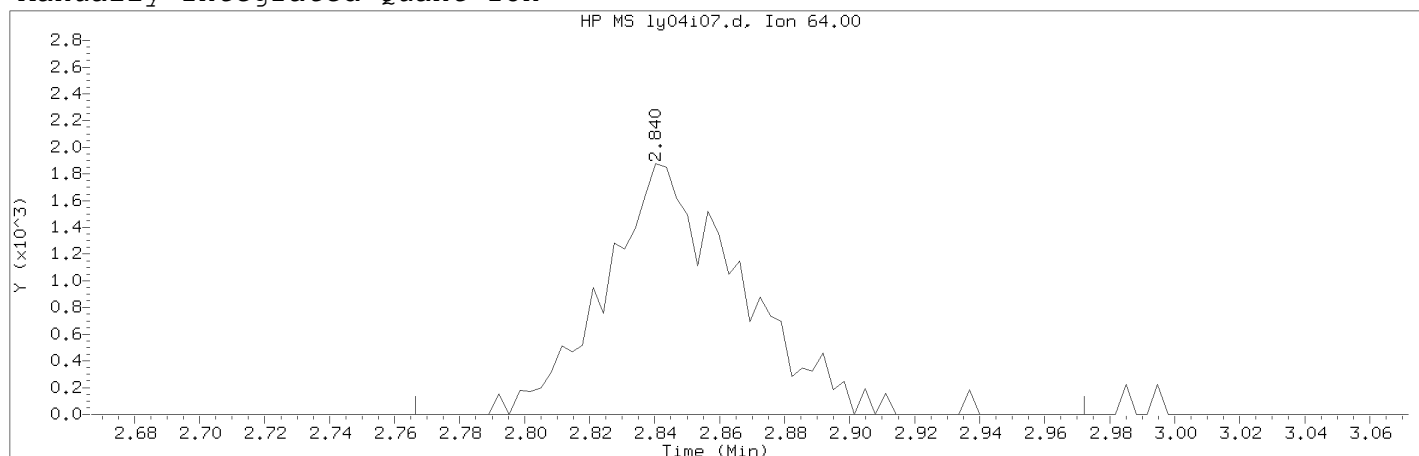
Compound Number	: 5	
Compound Name	: 1,3-Butadiene	
Scan Number	: 292	
Retention Time (minutes)	: 2.422	
Quant Ion	: 39.00	
Area	: 1340	
On-column Amount (ng)	: 0.3017	
Integration start scan	: 290	Integration stop scan: 298
Y at integration start	: 97	Y at integration end: 86

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 Target 3.5 esignature user KR446 Page 195 of 579

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i07.d Instrument ID: HP09915.i
 Injection date and time: 04-MAY-2020 14:30 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 04-MAY-2020 19:29
 Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

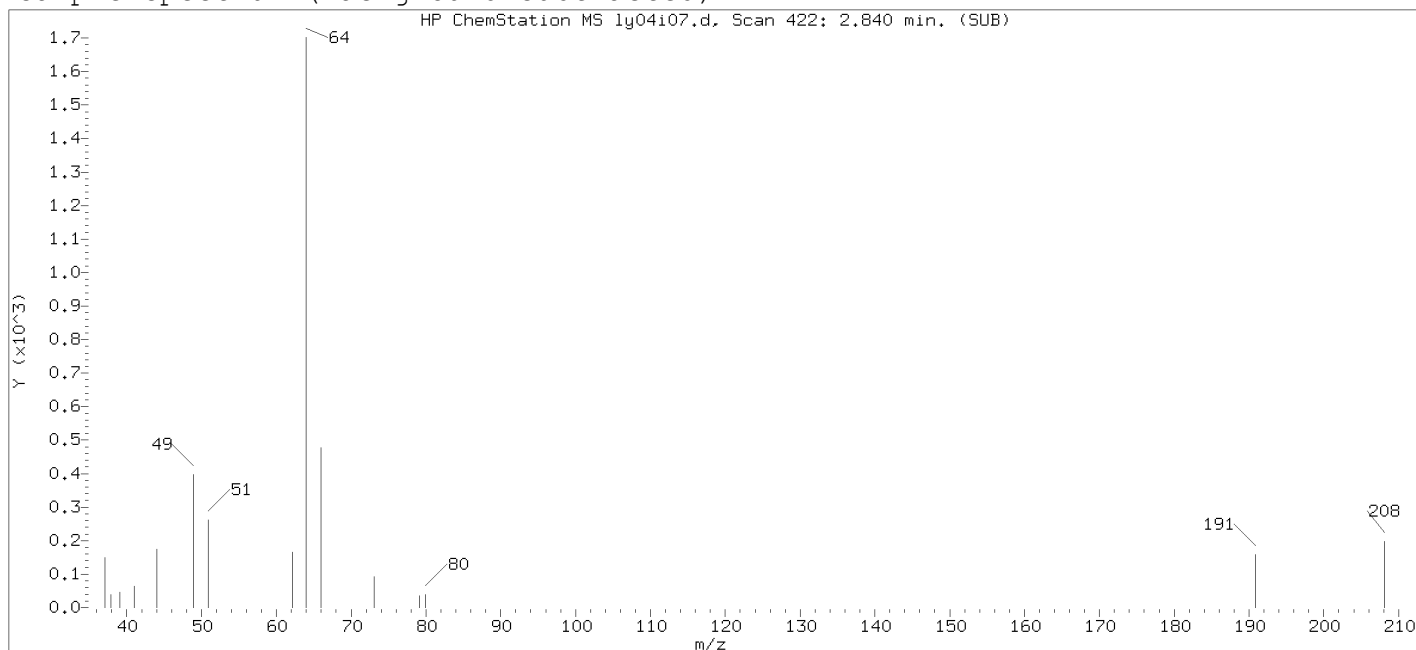
Compound Number : 9
 Compound Name : Chloroethane
 Scan Number : 422
 Retention Time (minutes): 2.840
 Quant Ion : 64.00
 Area (flag) : 5438M
 On-Column Amount (ng) : 1.2072
 Integration start scan : 398 Integration stop scan: 462
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

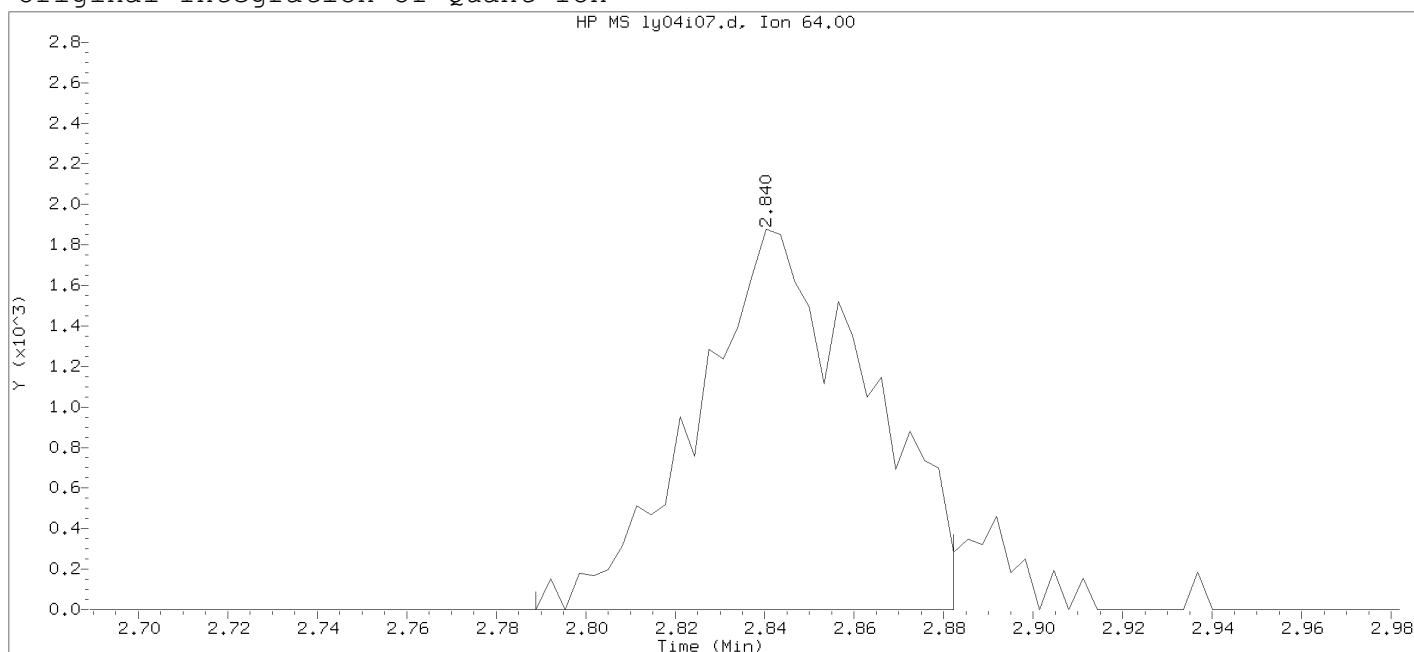
Analyst responsible for change: Digitally signed by Sara E. Johnson
 on 05/04/2020 at 19:30.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/06/2020 at 08:34.
 PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20may04i.b/ly04i07.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 14:30

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 14:47

Date, time and analyst ID of latest file update: 04-May-2020 14:47 Automation

Sample Name: VSTD001

Lab Sample ID: VSTD001

Compound Number : 9

Compound Name : Chloroethane

Scan Number : 422

Retention Time (minutes): 2.840

Quant Ion : 64.00

Area : 5005

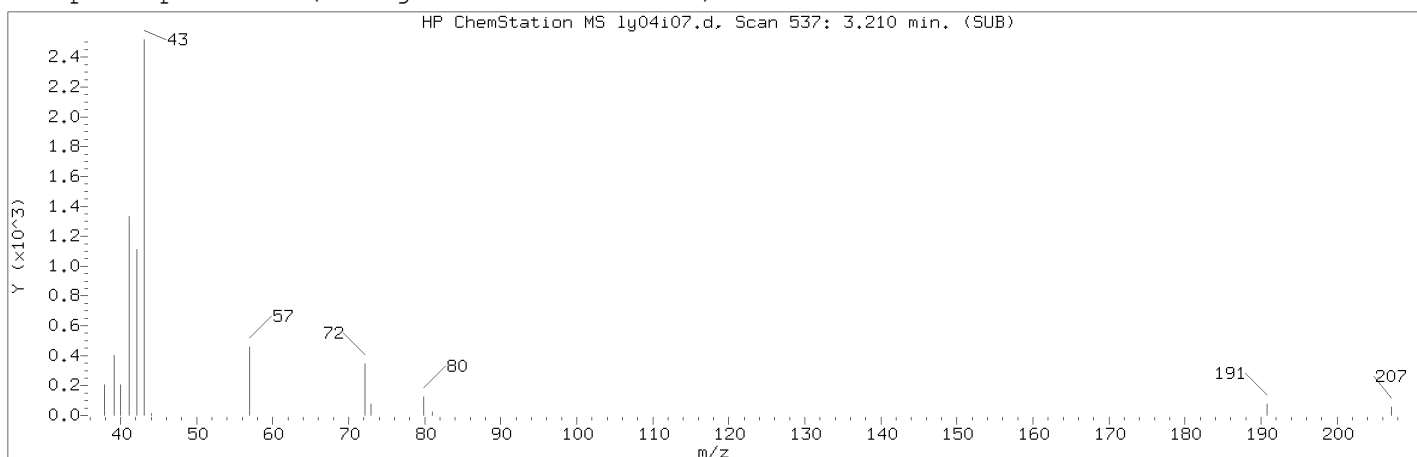
On-column Amount (ng) : 1.2551

Integration start scan : 405 Integration stop scan: 434

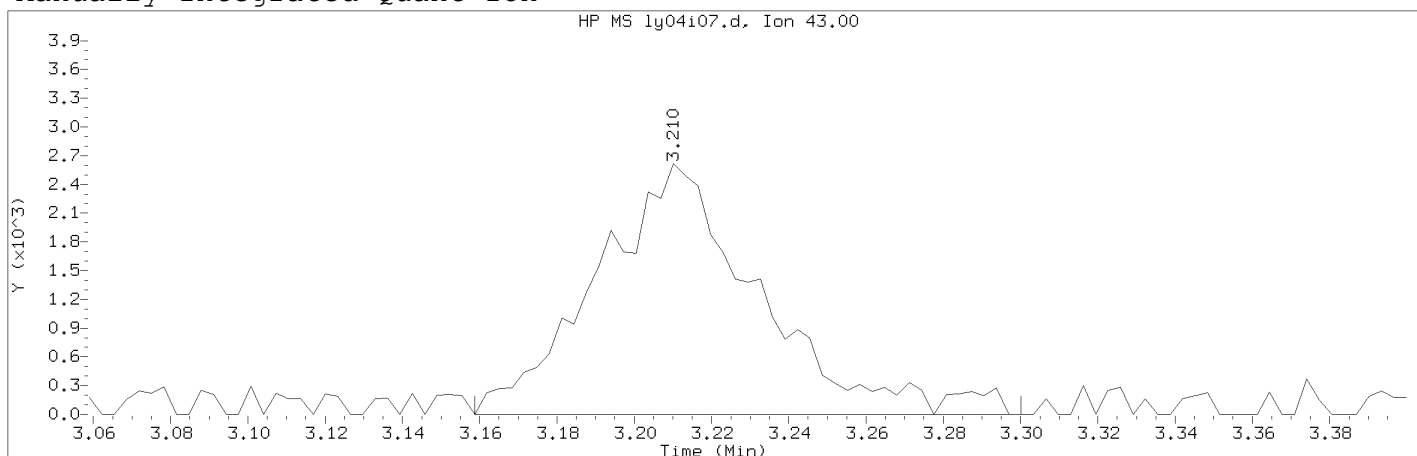
Y at integration start : 0 Y at integration end: 0

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 Target 3.5 esignature user KR446 Page 197 of 579

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i07.d Instrument ID: HP09915.i
 Injection date and time: 04-MAY-2020 14:30 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 04-MAY-2020 19:29
 Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

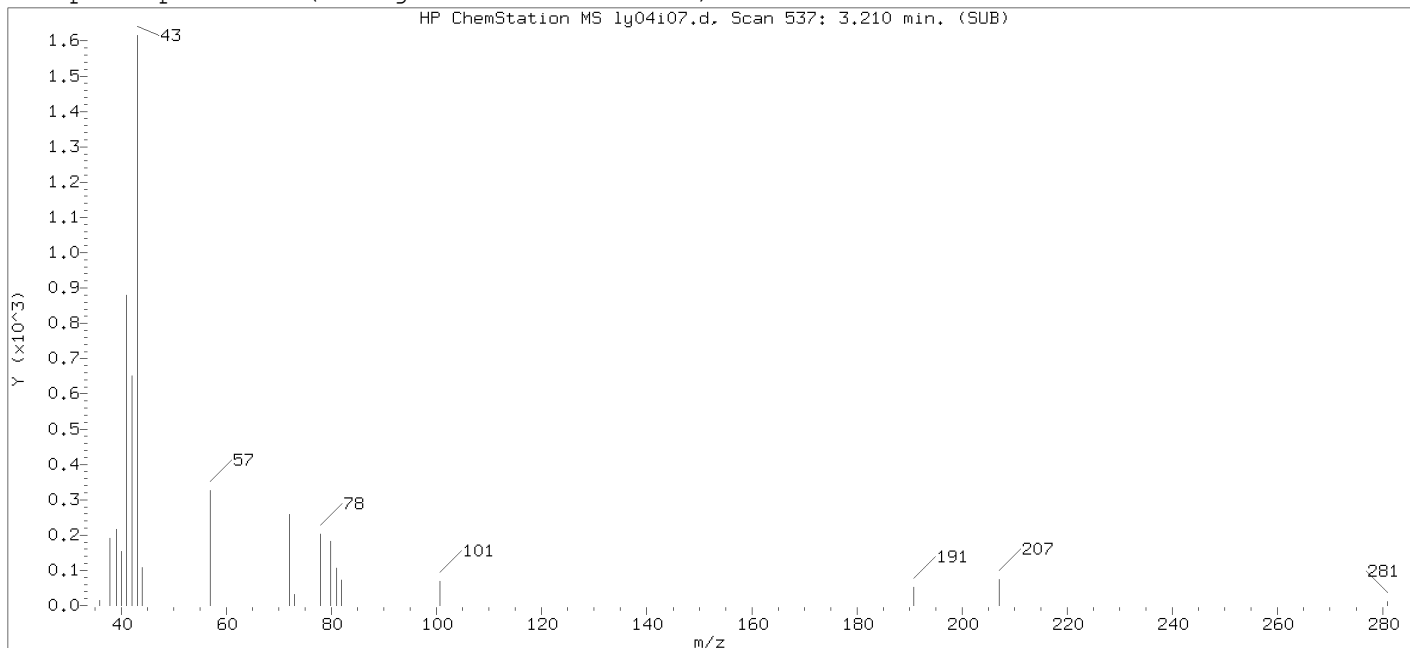
Compound Number : 11
 Compound Name : n-Pentane
 Scan Number : 537
 Retention Time (minutes): 3.210
 Quant Ion : 43.00
 Area (flag) : 7608M
 On-Column Amount (ng) : 0.9196
 Integration start scan : 520 Integration stop scan: 564
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

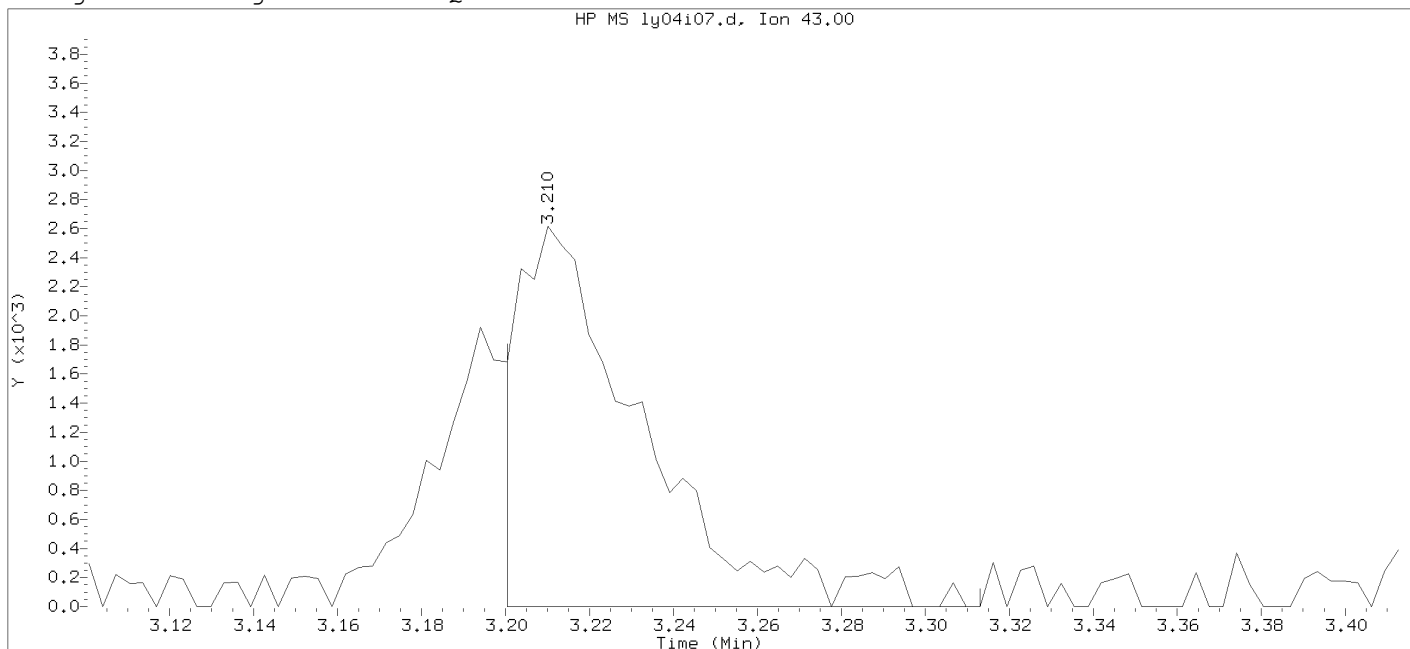
Analyst responsible for change: Digitally signed by Sara E. Johnson
 on 05/04/2020 at 19:30.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/06/2020 at 08:34.
 PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20may04i.b/ly04i07.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 14:30

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 14:47

Date, time and analyst ID of latest file update: 04-May-2020 14:47 Automation

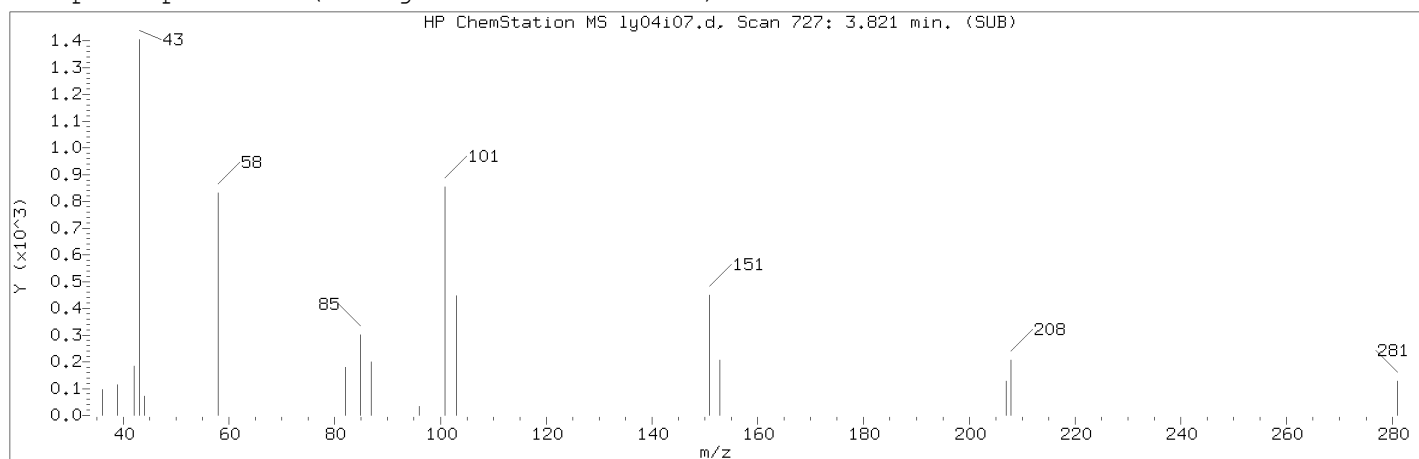
Sample Name: VSTD001

Lab Sample ID: VSTD001

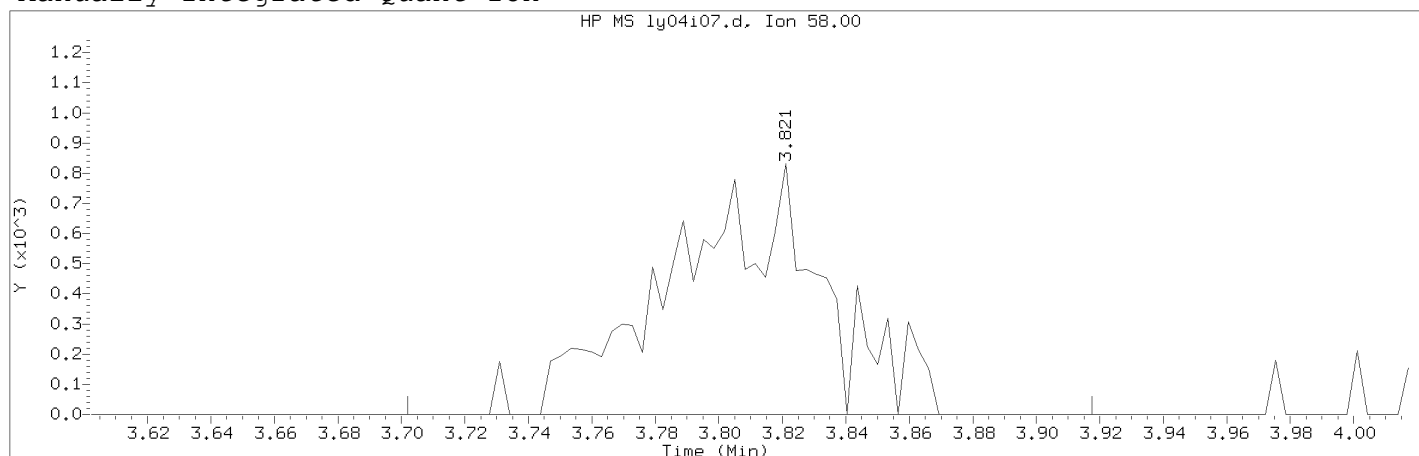
Compound Number	: 11	
Compound Name	: n-Pentane	
Scan Number	: 537	
Retention Time (minutes)	: 3.210	
Quant Ion	: 43.00	
Area	: 5408	
On-column Amount (ng)	: 0.6709	
Integration start scan	: 533	Integration stop scan: 568
Y at integration start	: 0	Y at integration end: 0

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 Target 3.5 esignature user KR446 Page 199 of 579

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i07.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 14:30

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 19:29

Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

Compound Number : 18
 Compound Name : Acetone
 Scan Number : 727
 Retention Time (minutes): 3.821
 Quant Ion : 58.00
 Area (flag) : 2764M
 On-Column Amount (ng) : 2.5022
 Integration start scan : 689
 Y at integration start : 0

Integration stop scan: 756
 Y at integration end: 0

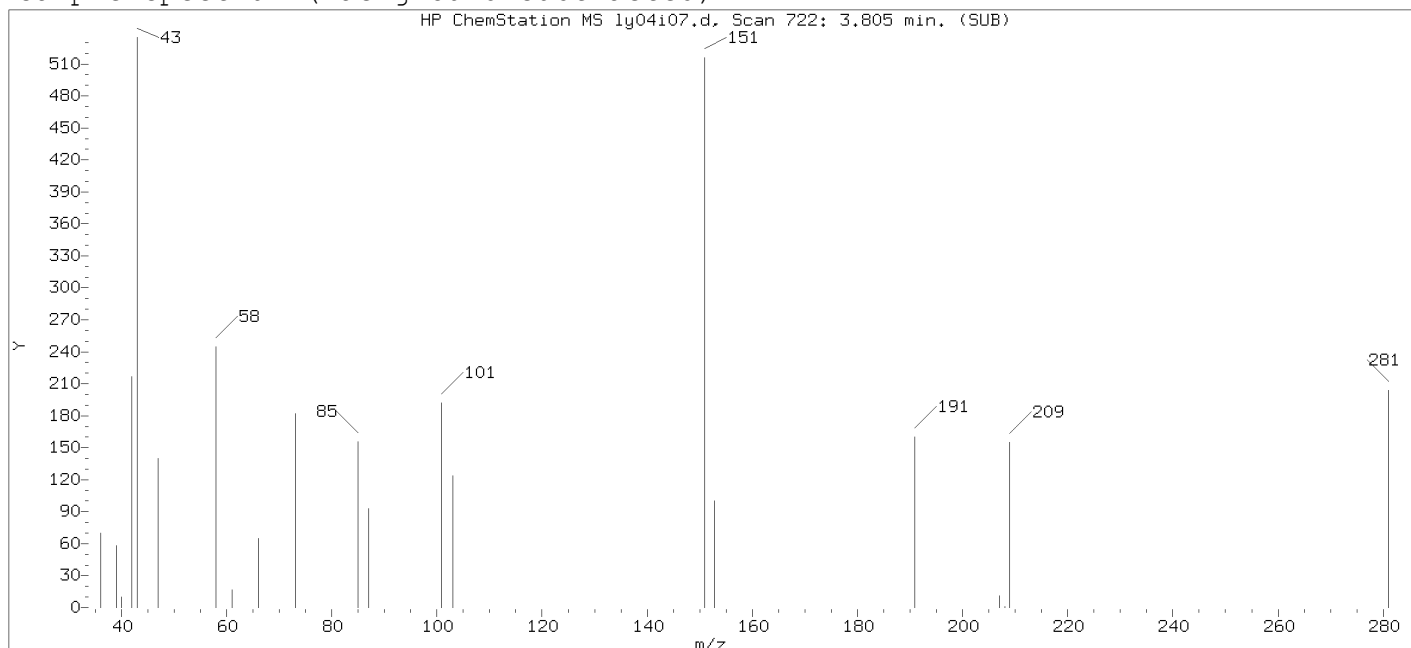
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Sara E. Johnson
 on 05/04/2020 at 19:30.
 Target 3.5 esignature user ID: sej02002

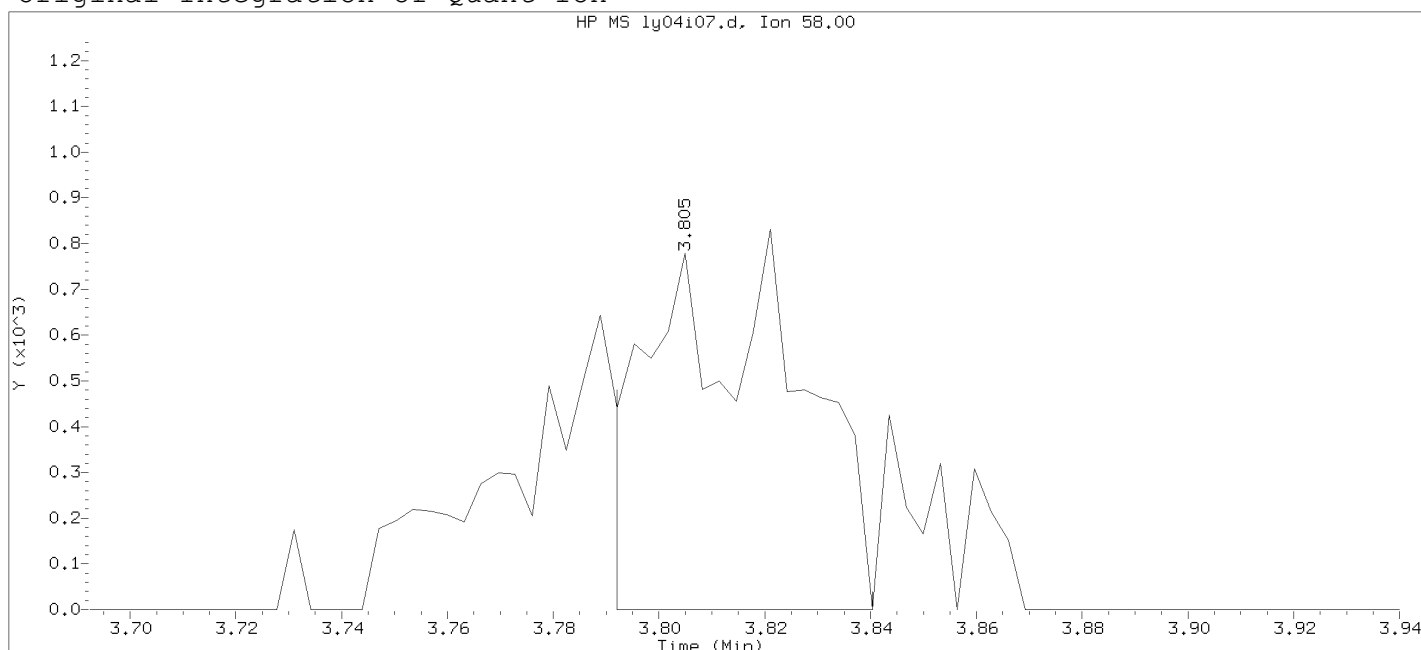
Secondary review performed and digitally signed by Chelsea B. Riehl on 05/06/2020 at 08:34.

PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20may04i.b/ly04i07.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 14:30

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 14:47

Date, time and analyst ID of latest file update: 04-May-2020 14:47 Automation

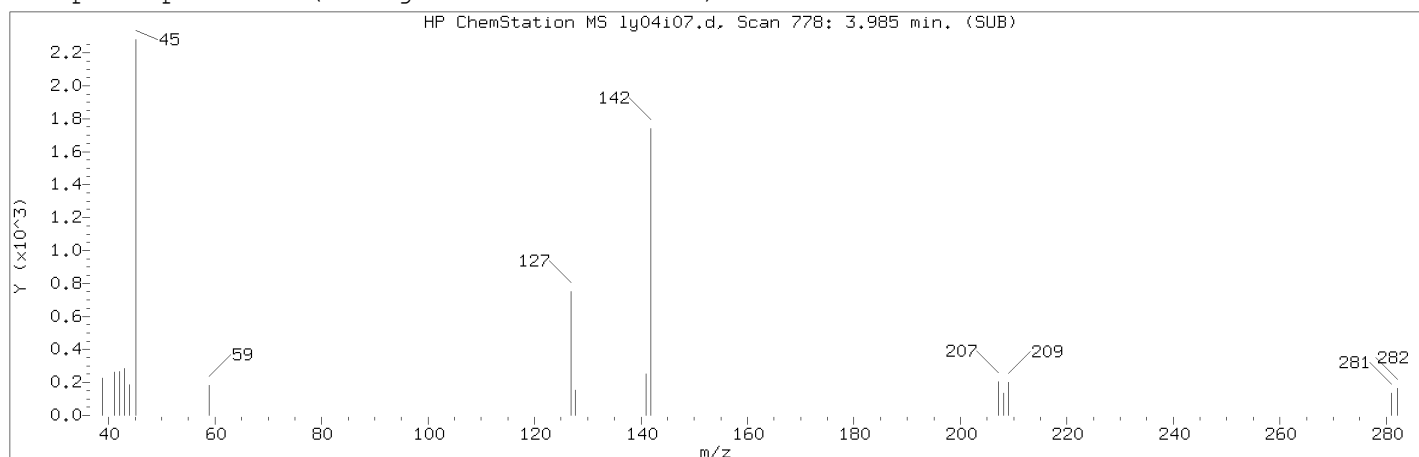
Sample Name: VSTD001

Lab Sample ID: VSTD001

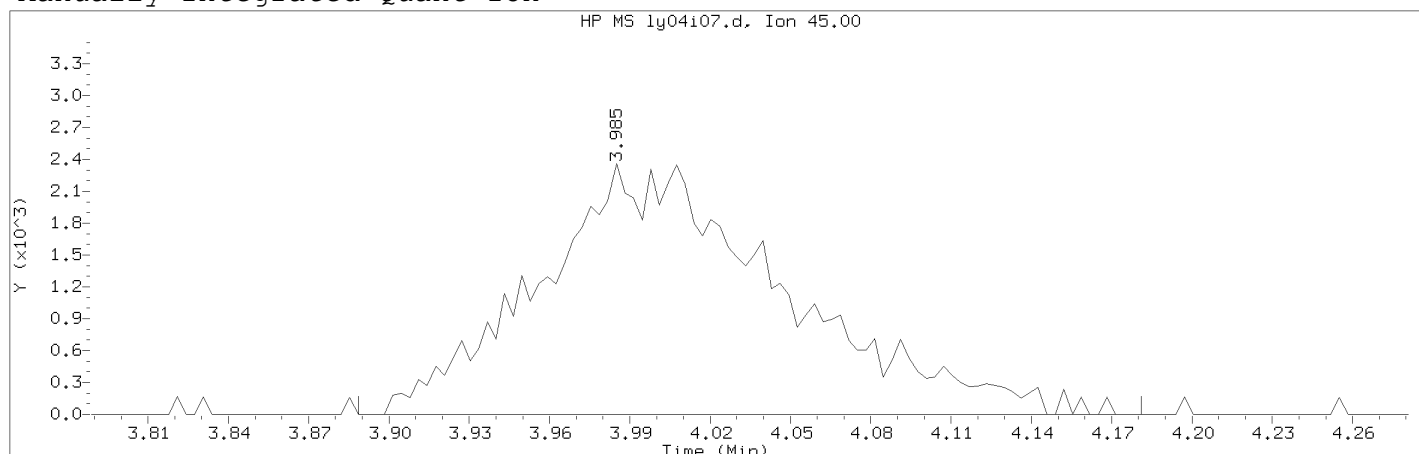
Compound Number	: 18	
Compound Name	: Acetone	
Scan Number	: 722	
Retention Time (minutes)	: 3.805	
Quant Ion	: 58.00	
Area	: 1517	
On-column Amount (ng)	: 1.7017	
Integration start scan	: 717	Integration stop scan: 732
Y at integration start	: 0	Y at integration end: 0

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 Target 3.5 esignature user KR446 Page 201 of 579

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i07.d Instrument ID: HP09915.i
 Injection date and time: 04-MAY-2020 14:30 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 04-MAY-2020 19:29
 Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

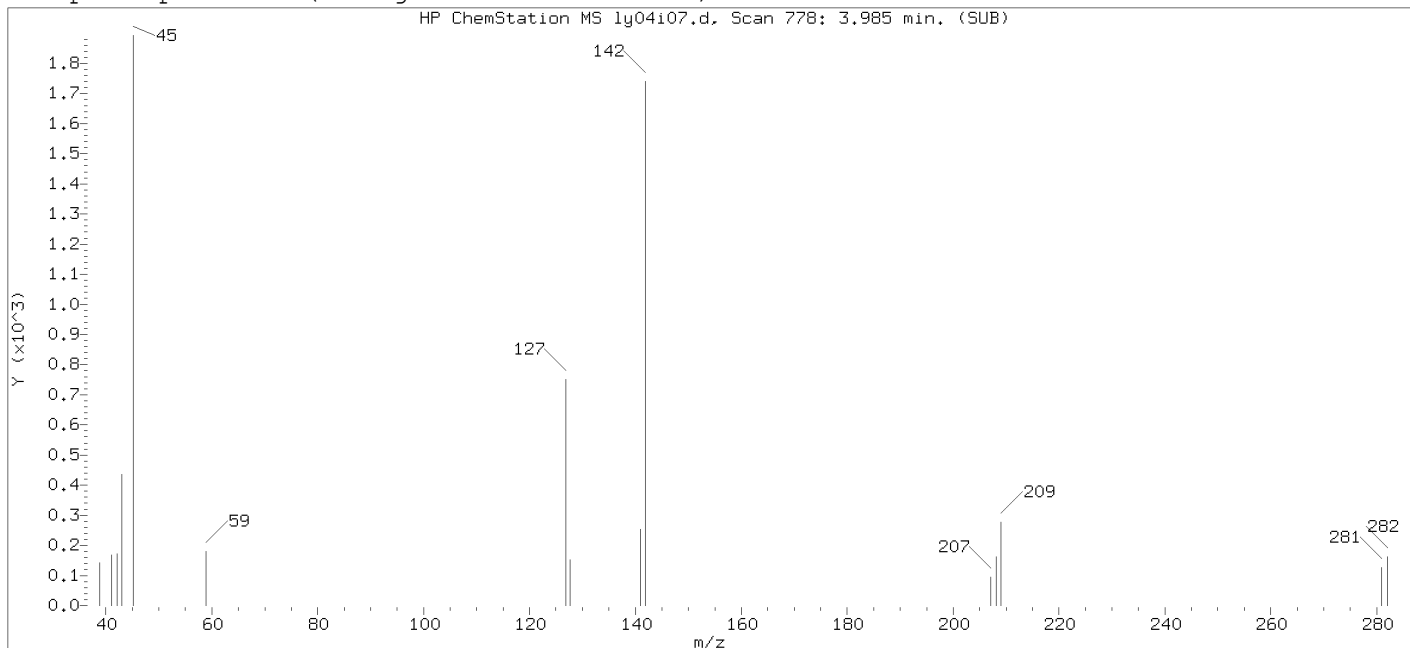
Compound Number : 21
 Compound Name : 2-Propanol
 Scan Number : 778
 Retention Time (minutes): 3.985
 Quant Ion : 45.00
 Area (flag) : 14938M
 On-Column Amount (ng) : 21.2179
 Integration start scan : 747 Integration stop scan: 838
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

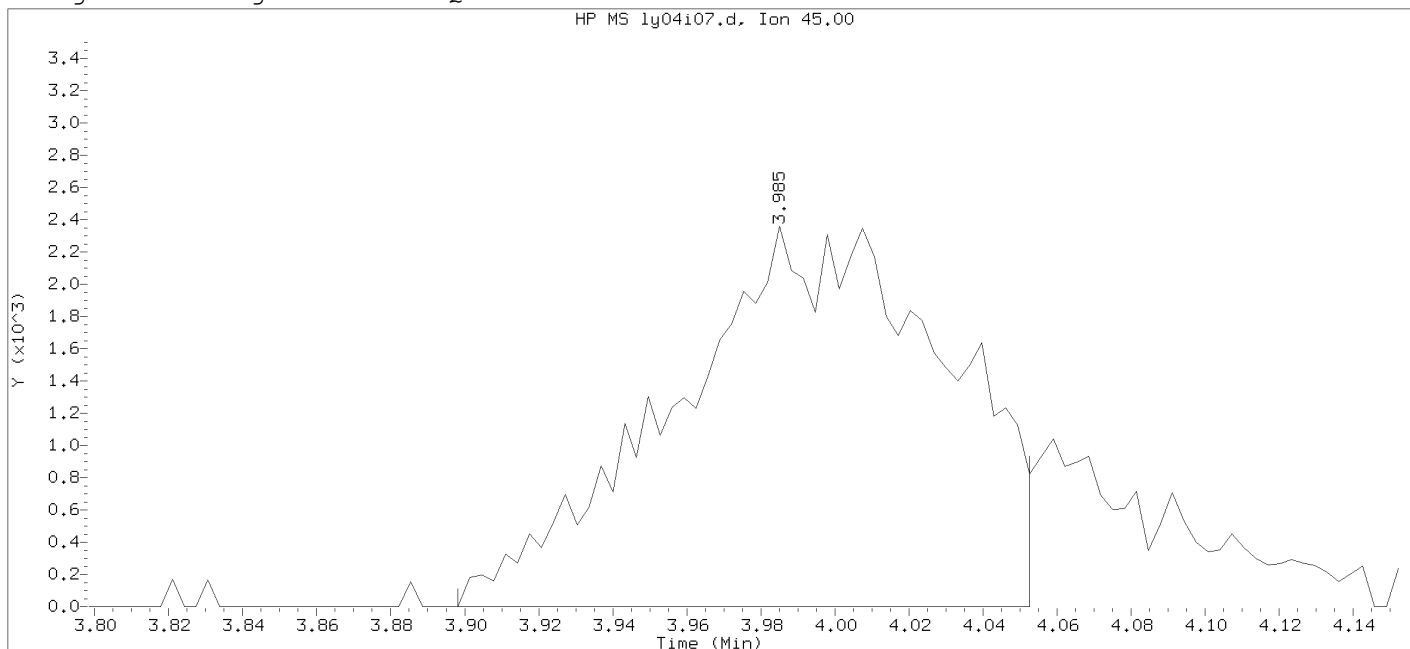
Analyst responsible for change: Digitally signed by Sara E. Johnson
 on 05/04/2020 at 19:30.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/06/2020 at 08:34.
 PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20may04i.b/ly04i07.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 14:30

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 14:47

Date, time and analyst ID of latest file update: 04-May-2020 14:47 Automation

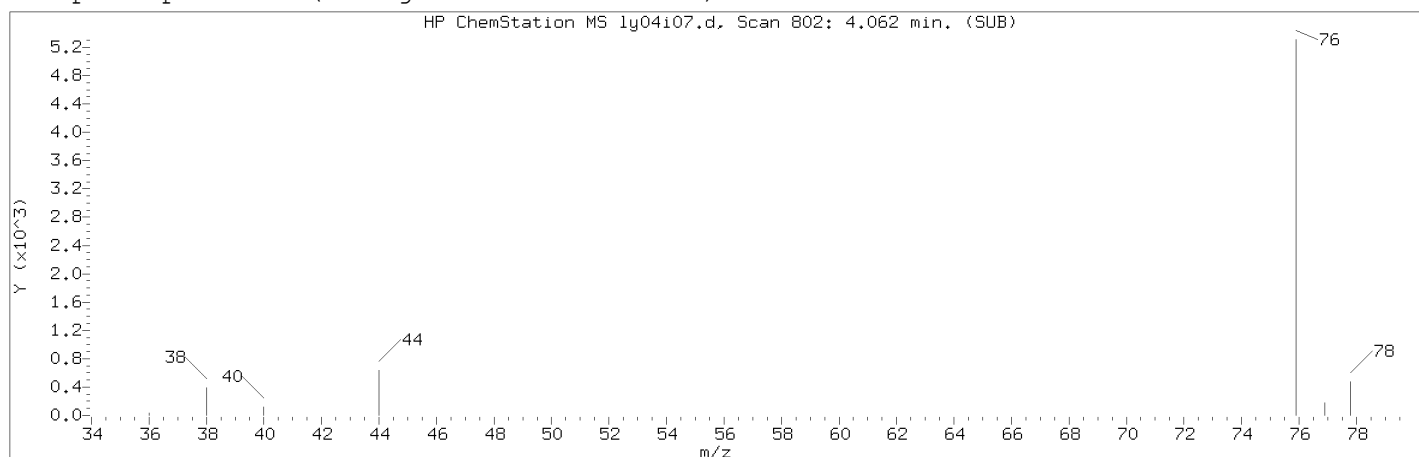
Sample Name: VSTD001

Lab Sample ID: VSTD001

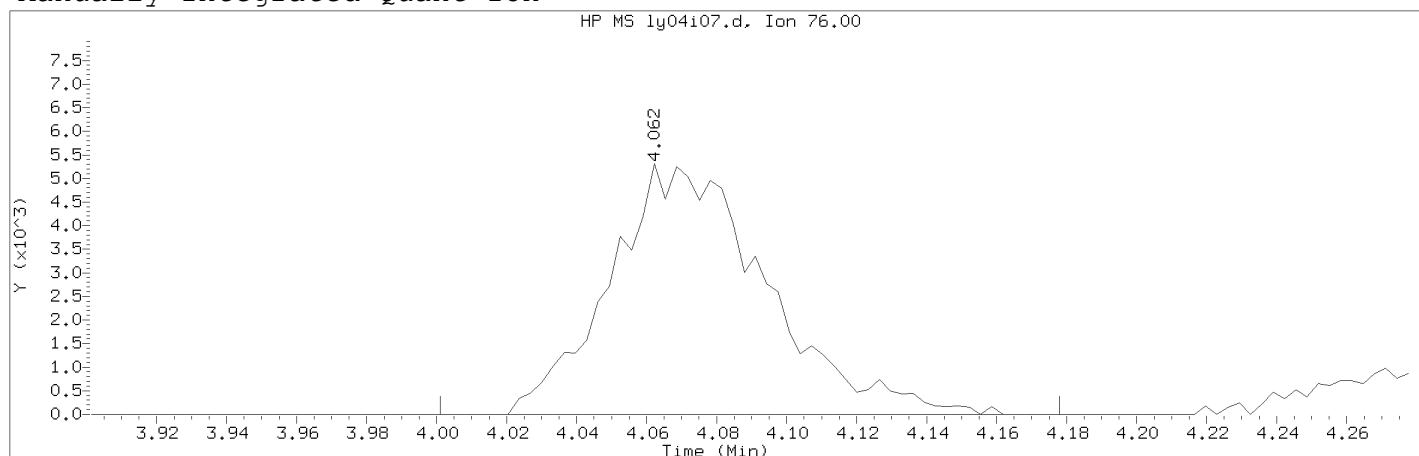
Compound Number	: 21
Compound Name	: 2-Propanol
Scan Number	: 778
Retention Time (minutes)	: 3.985
Quant Ion	: 45.00
Area	: 12094
On-column Amount (ng)	: 17.8452
Integration start scan	: 750
Integration stop scan	: 798
Y at integration start	: 0
Y at integration end	: 0

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 Target 3.5 esignature user KR446 Page 203 of 579

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i07.d Instrument ID: HP09915.i
 Injection date and time: 04-MAY-2020 14:30 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 04-MAY-2020 19:29
 Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD001 Lab Sample ID: VSTD001

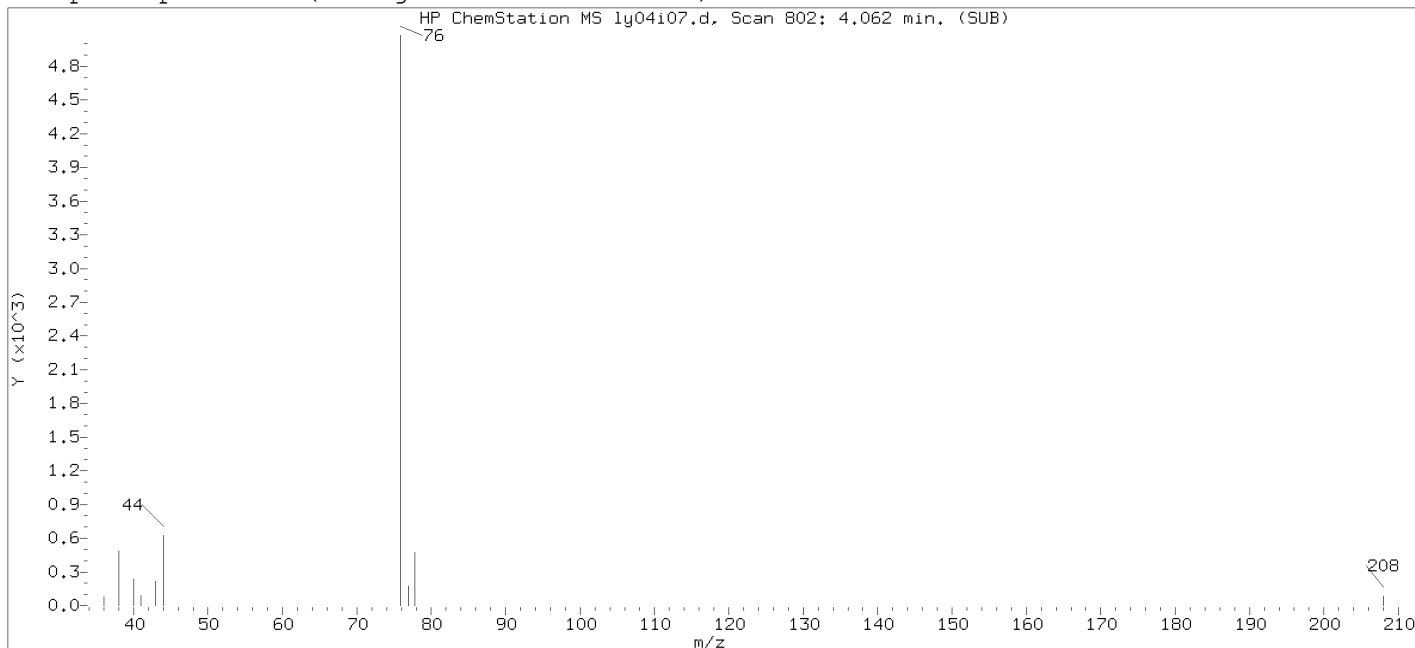
Compound Number : 23
 Compound Name : Carbon Disulfide
 Scan Number : 802
 Retention Time (minutes): 4.062
 Quant Ion : 76.00
 Area (flag) : 16435M
 On-Column Amount (ng) : 0.8686
 Integration start scan : 782 Integration stop scan: 837
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

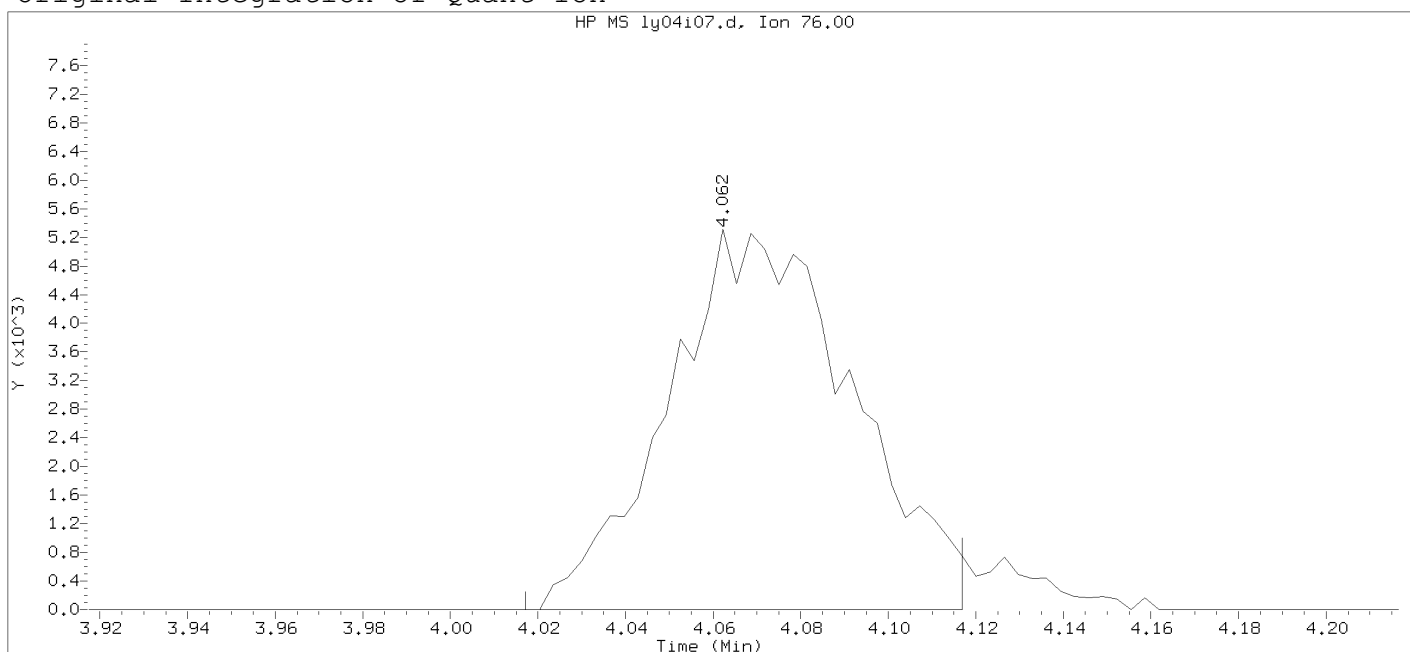
Analyst responsible for change: Digitally signed by Sara E. Johnson
 on 05/04/2020 at 19:30.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/06/2020 at 08:34.
 PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20may04i.b/ly04i07.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 14:30

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 14:47

Date, time and analyst ID of latest file update: 04-May-2020 14:47 Automation

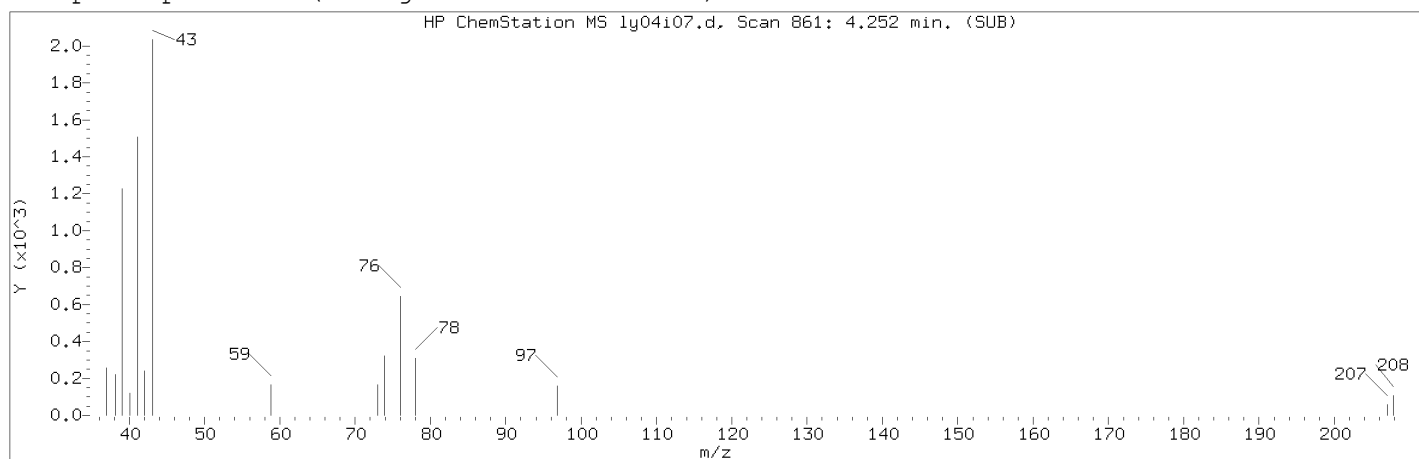
Sample Name: VSTD001

Lab Sample ID: VSTD001

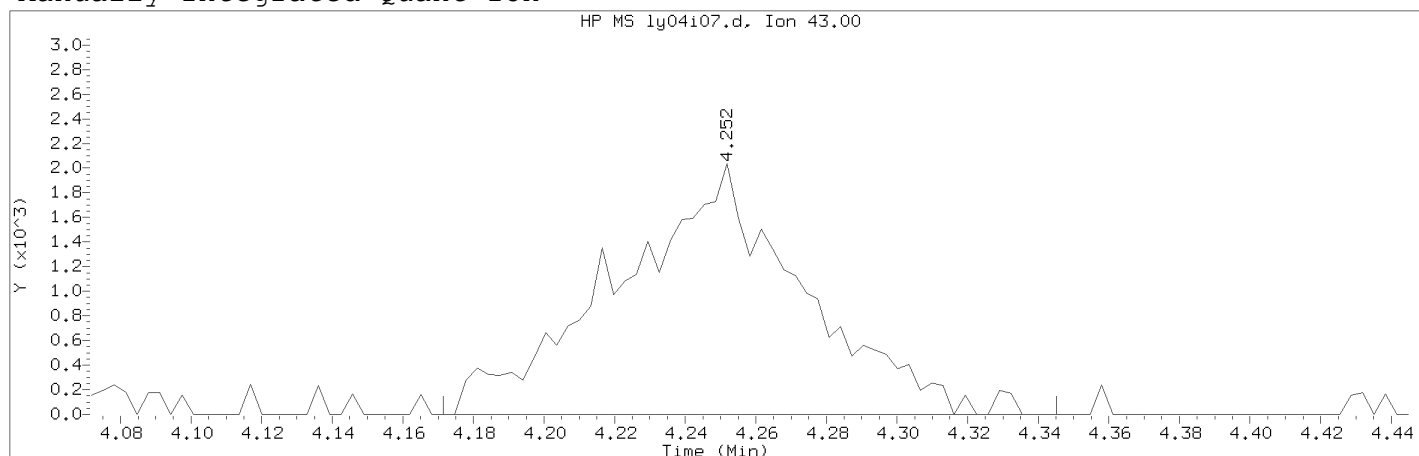
Compound Number	: 23	
Compound Name	: Carbon Disulfide	
Scan Number	: 802	
Retention Time (minutes)	: 4.062	
Quant Ion	: 76.00	
Area	: 15554	
On-column Amount (ng)	: 0.8286	
Integration start scan	: 787	Integration stop scan: 818
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Sara E. Johnson on 05/04/2020 at 19:30.
 Target 3.5 esignature user KR446 Page 205 of 579

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i07.d Instrument ID: HP09915.i
 Injection date and time: 04-MAY-2020 14:30 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 04-MAY-2020 19:29
 Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD001 Lab Sample ID: VSTD001

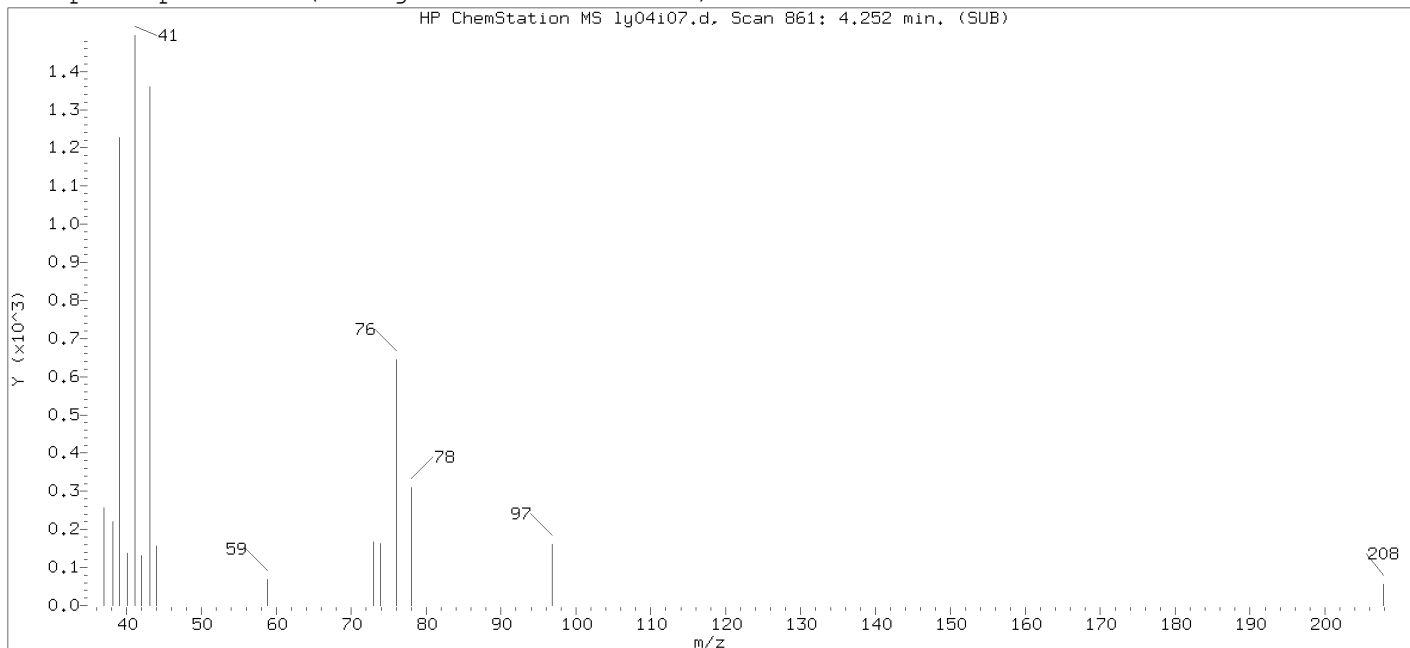
Compound Number : 27
 Compound Name : Methyl Acetate
 Scan Number : 861
 Retention Time (minutes): 4.252
 Quant Ion : 43.00
 Area (flag) : 7412M
 On-Column Amount (ng) : 1.0342
 Integration start scan : 835 Integration stop scan: 889
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

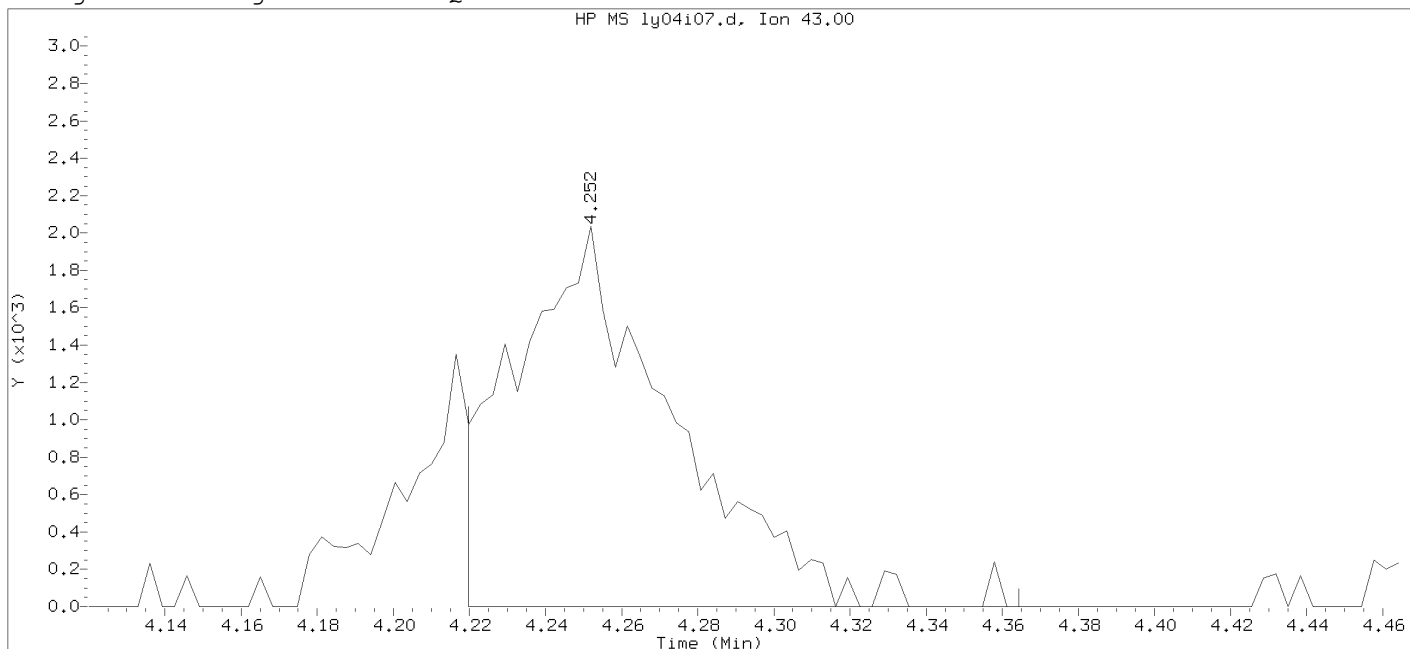
Analyst responsible for change: Digitally signed by Sara E. Johnson
 on 05/04/2020 at 19:30.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/06/2020 at 08:34.
 PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20may04i.b/ly04i07.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 14:30

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 14:47

Date, time and analyst ID of latest file update: 04-May-2020 14:47 Automation

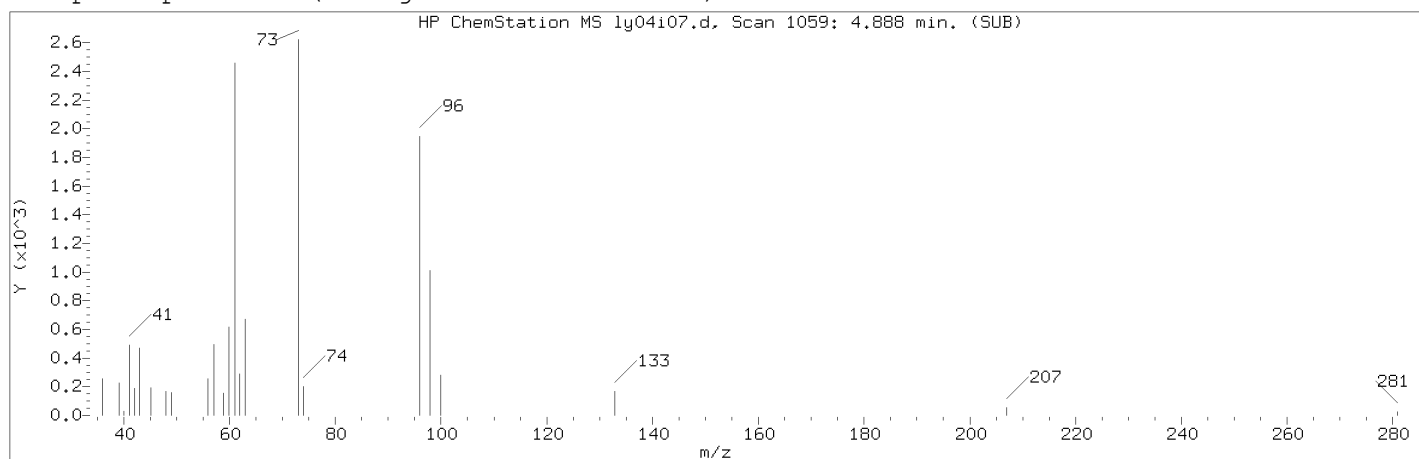
Sample Name: VSTD001

Lab Sample ID: VSTD001

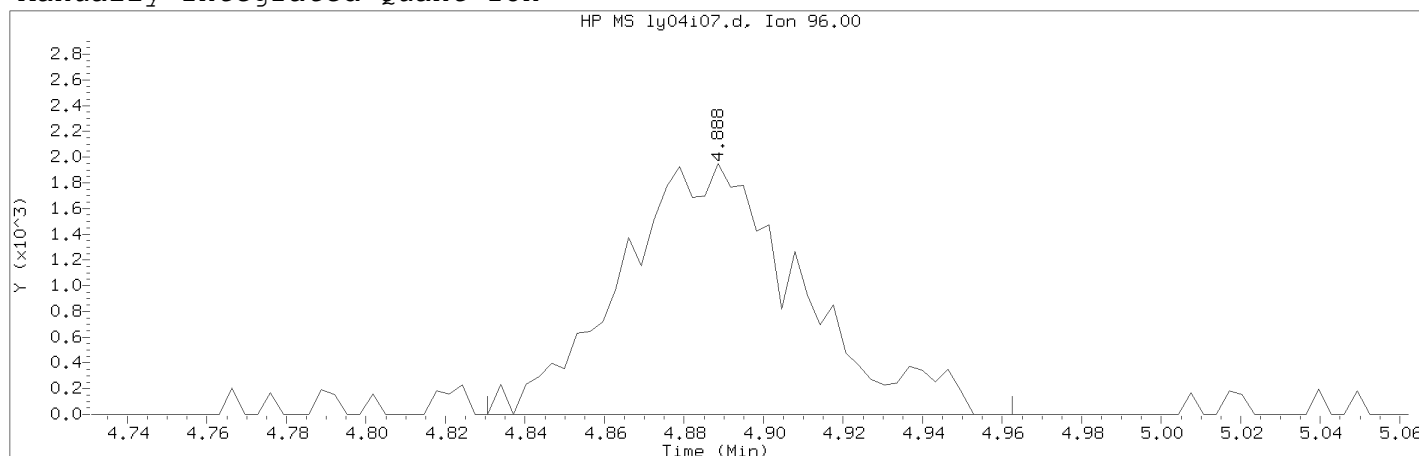
Compound Number	: 27
Compound Name	: Methyl Acetate
Scan Number	: 861
Retention Time (minutes)	: 4.252
Quant Ion	: 43.00
Area	: 5953
On-column Amount (ng)	: 0.8598
Integration start scan	: 850
Integration stop scan	: 895
Y at integration start	: 0
Y at integration end	: 0

Digitally signed by Sara E. Johnson on 05/04/2020 at 19:30.
 Target 3.5 esignature user KR446 Page 207 of 579

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i07.d Instrument ID: HP09915.i
 Injection date and time: 04-MAY-2020 14:30 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 04-MAY-2020 19:29
 Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD001 Lab Sample ID: VSTD001

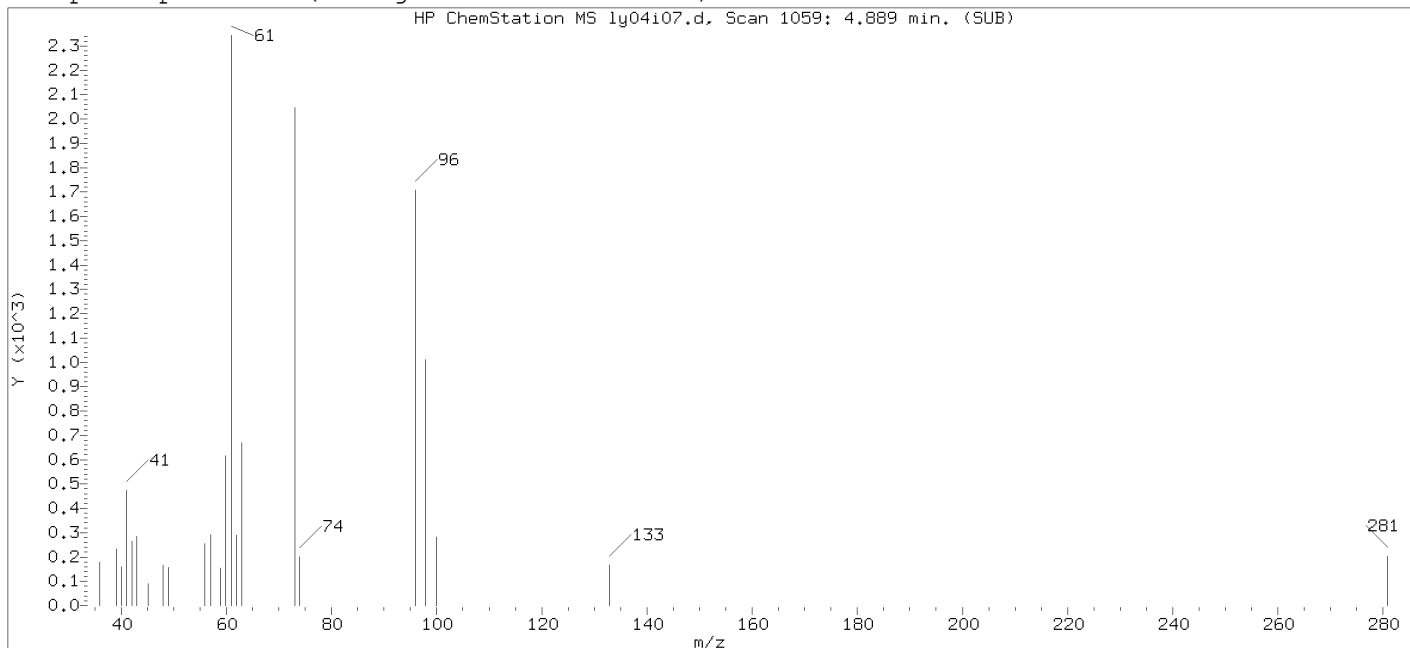
Compound Number : 32
 Compound Name : trans-1,2-Dichloroethene
 Scan Number : 1059
 Retention Time (minutes): 4.888
 Quant Ion : 96.00
 Area (flag) : 6111M
 On-Column Amount (ng) : 0.9453
 Integration start scan : 1040 Integration stop scan: 1081
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

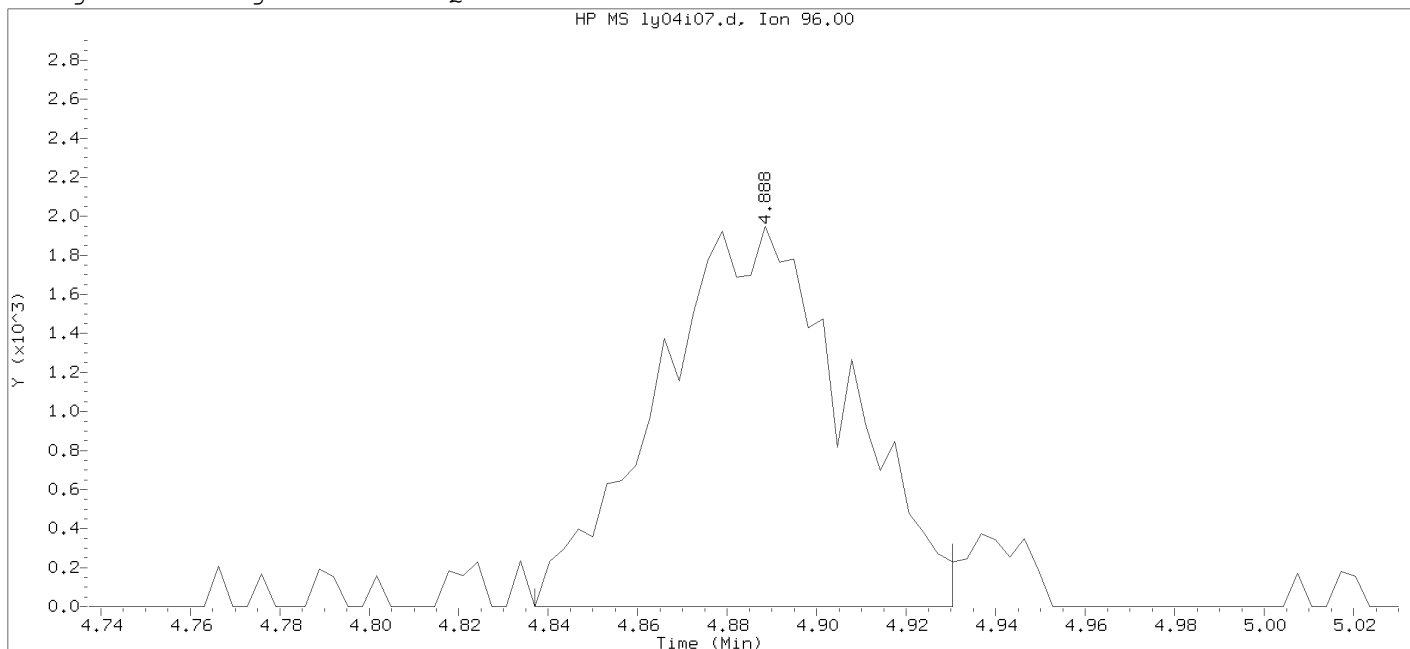
Analyst responsible for change: Digitally signed by Sara E. Johnson
 on 05/04/2020 at 19:30.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/06/2020 at 08:34.
 PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20may04i.b/ly04i07.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 14:30

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 14:47

Date, time and analyst ID of latest file update: 04-May-2020 14:47 Automation

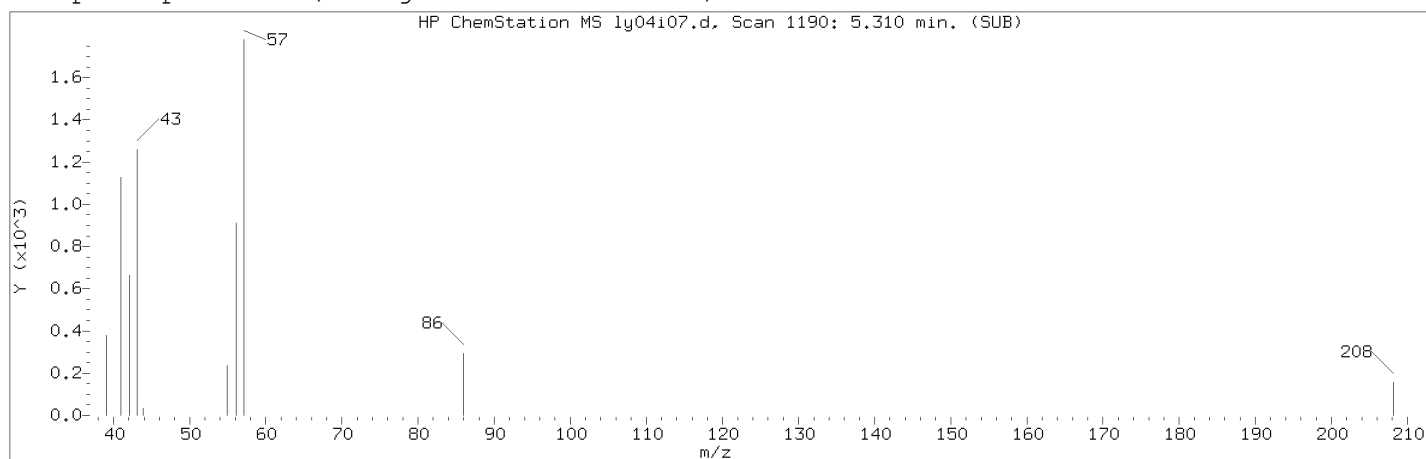
Sample Name: VSTD001

Lab Sample ID: VSTD001

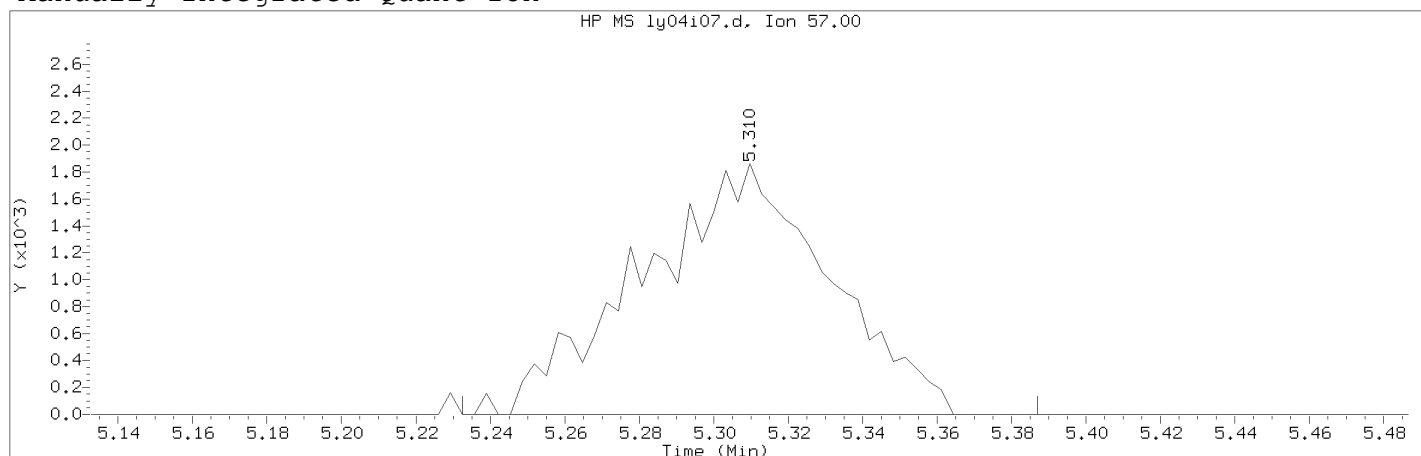
Compound Number	: 32
Compound Name	: trans-1,2-Dichloroethene
Scan Number	: 1059
Retention Time (minutes)	: 4.888
Quant Ion	: 96.00
Area	: 5705
On-column Amount (ng)	: 0.8926
Integration start scan	: 1042
Integration stop scan	: 1071
Y at integration start	: 0
Y at integration end	: 0

Digitally signed by Sara E. Johnson on 05/04/2020 at 19:30.
 Target 3.5 esignature user KR446 Page 209 of 579

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i07.d Instrument ID: HP09915.i
 Injection date and time: 04-MAY-2020 14:30 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 04-MAY-2020 19:29
 Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

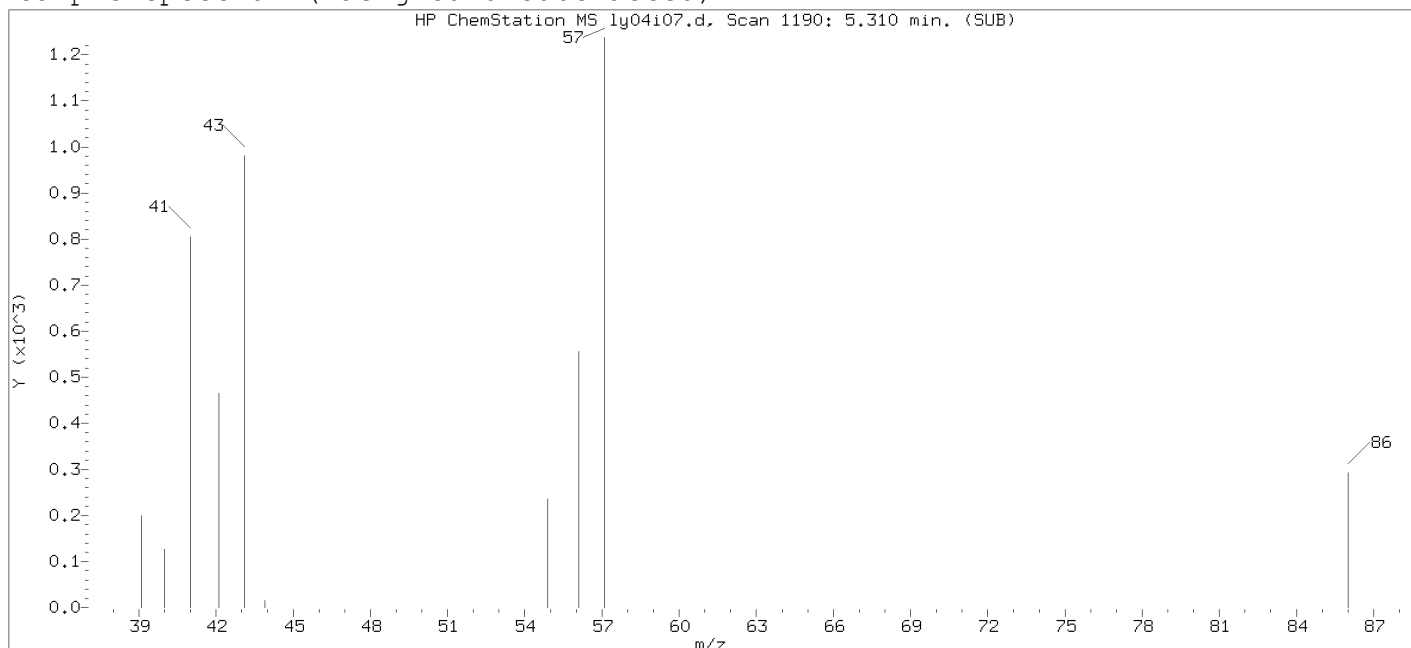
Compound Number : 34
 Compound Name : n-Hexane
 Scan Number : 1190
 Retention Time (minutes): 5.310
 Quant Ion : 57.00
 Area (flag) : 6497M
 On-Column Amount (ng) : 0.7176
 Integration start scan : 1165 Integration stop scan: 1213
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

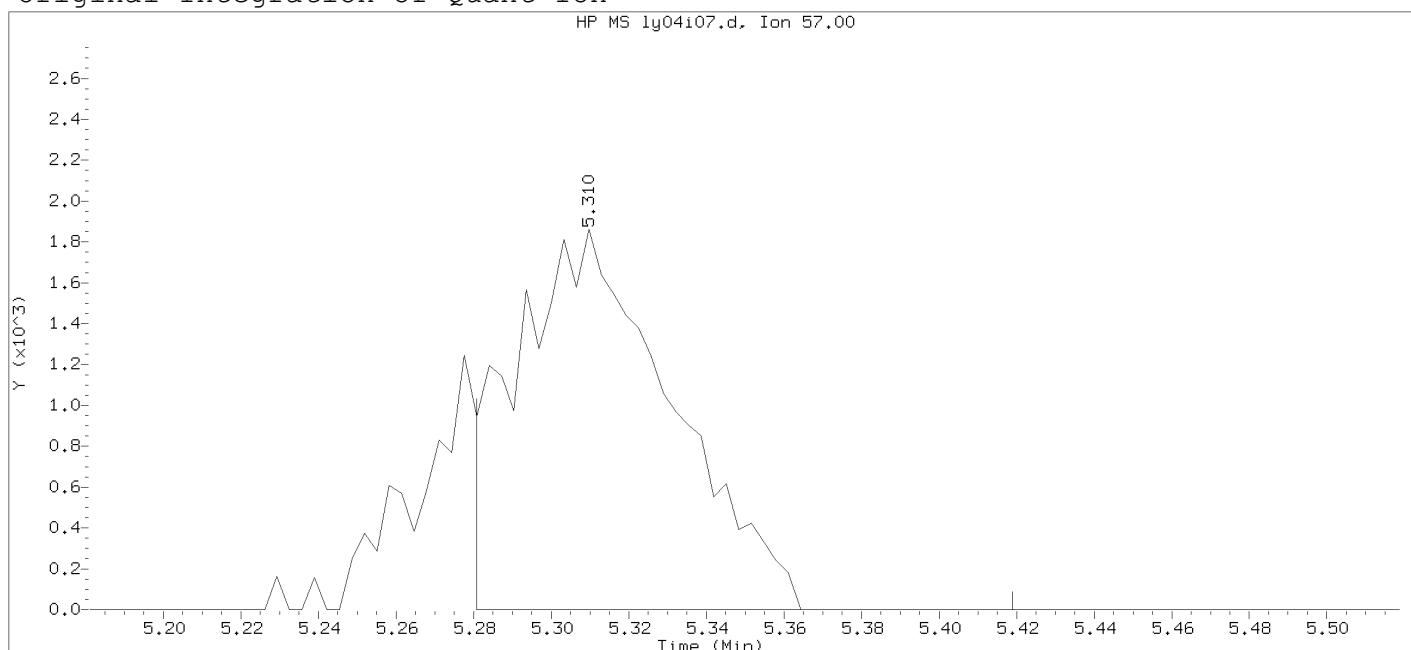
Analyst responsible for change: Digitally signed by Sara E. Johnson
 on 05/04/2020 at 19:30.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/06/2020 at 08:34.
 PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i07.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 14:30

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 14:47

Date, time and analyst ID of latest file update: 04-May-2020 14:47 Automation

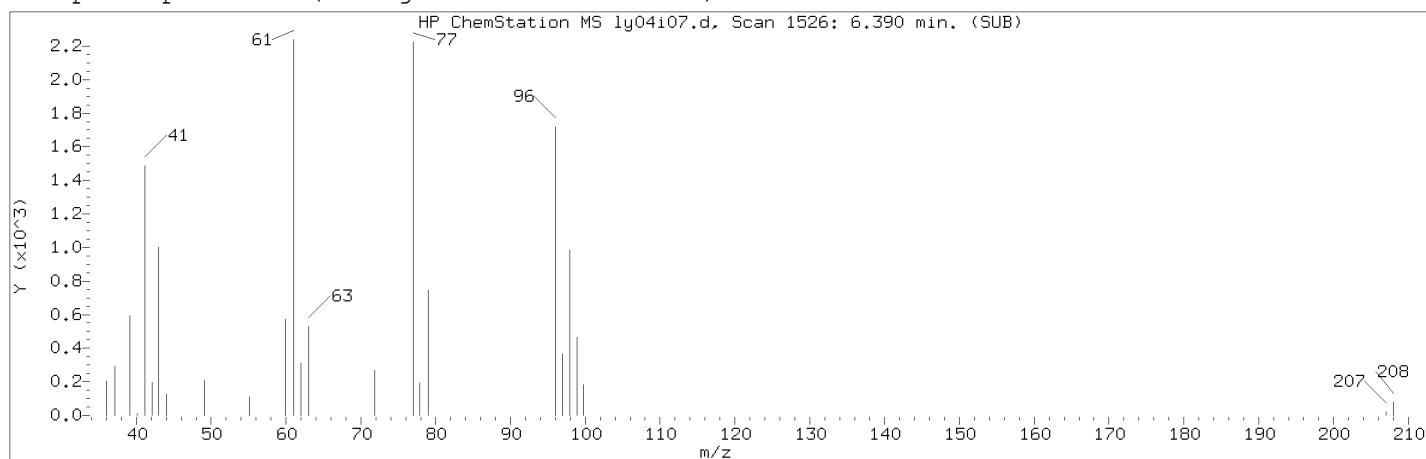
Sample Name: VSTD001

Lab Sample ID: VSTD001

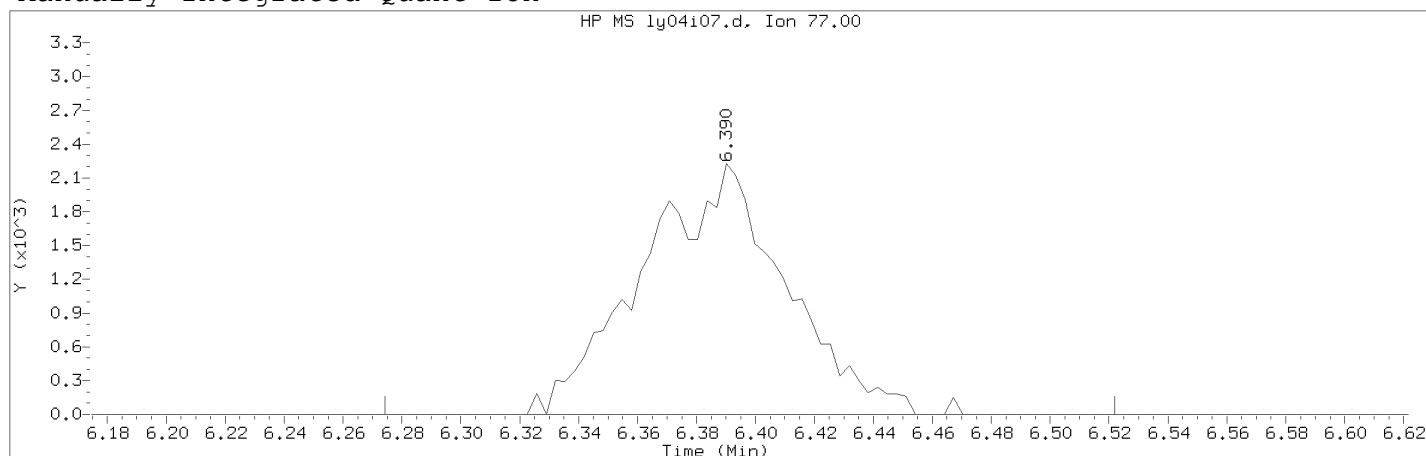
Compound Number	: 34	
Compound Name	: n-Hexane	
Scan Number	: 1190	
Retention Time (minutes)	: 5.310	
Quant Ion	: 57.00	
Area	: 5237	
On-column Amount (ng)	: 0.5829	
Integration start scan	: 1180	Integration stop scan: 1223
Y at integration start	: 0	Y at integration end: 0

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 Target 3.5 esignature user KR446 Page 211 of 579

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i07.d Instrument ID: HP09915.i
 Injection date and time: 04-MAY-2020 14:30 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 04-MAY-2020 19:29
 Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

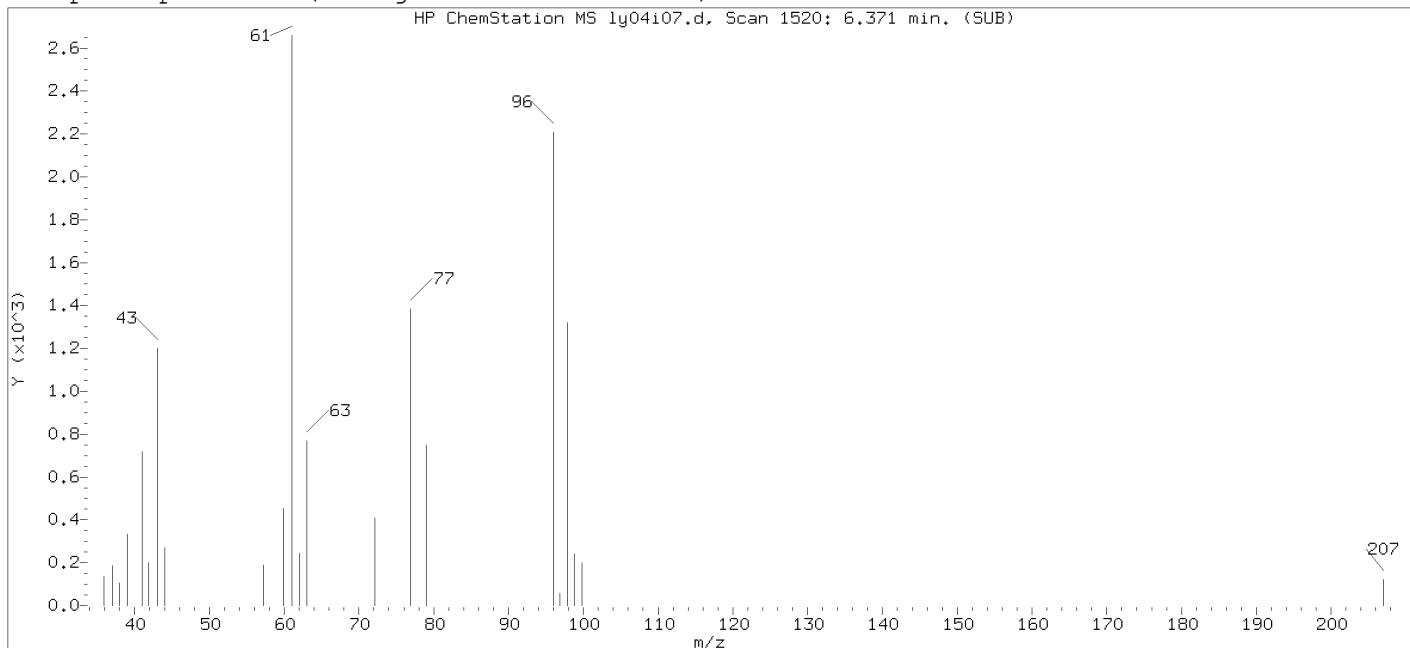
Compound Number : 45
 Compound Name : 2,2-Dichloropropane
 Scan Number : 1526
 Retention Time (minutes): 6.390
 Quant Ion : 77.00
 Area (flag) : 7531M
 On-Column Amount (ng) : 0.8594
 Integration start scan : 1489 Integration stop scan: 1566
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

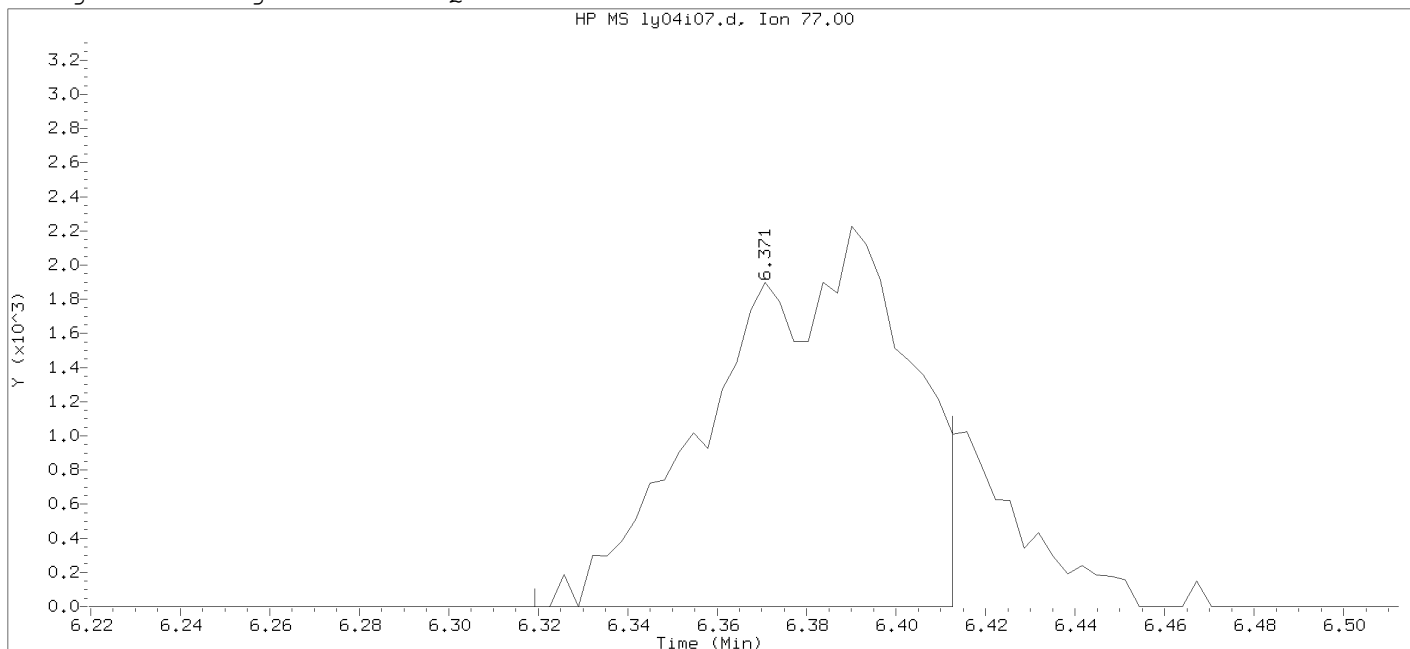
Analyst responsible for change: Digitally signed by Sara E. Johnson
 on 05/04/2020 at 19:30.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/06/2020 at 08:34.
 PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20may04i.b/ly04i07.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 14:30

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 14:47

Date, time and analyst ID of latest file update: 04-May-2020 14:47 Automation

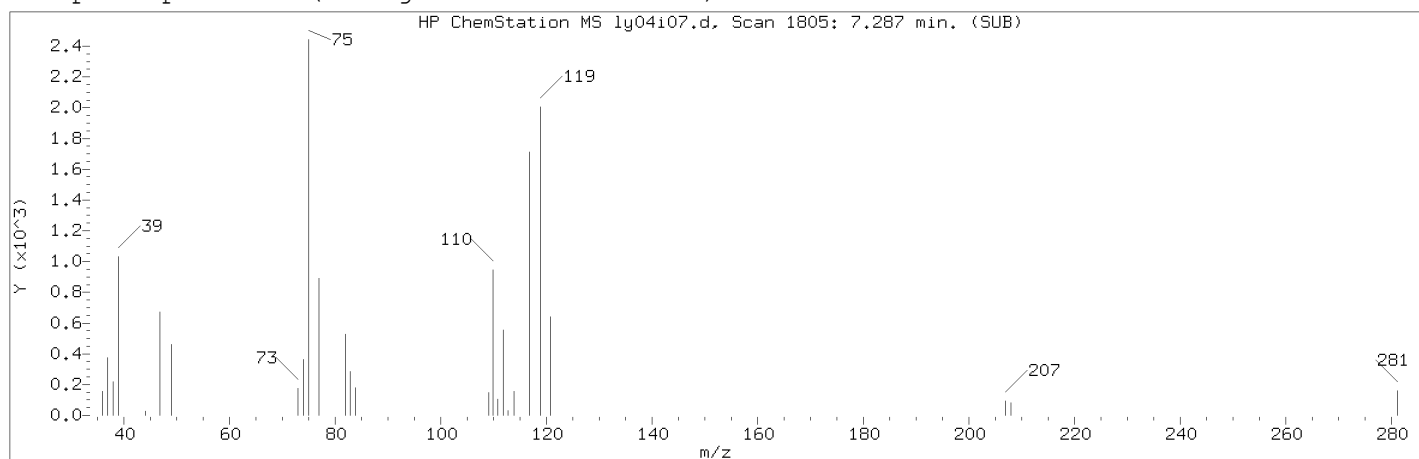
Sample Name: VSTD001

Lab Sample ID: VSTD001

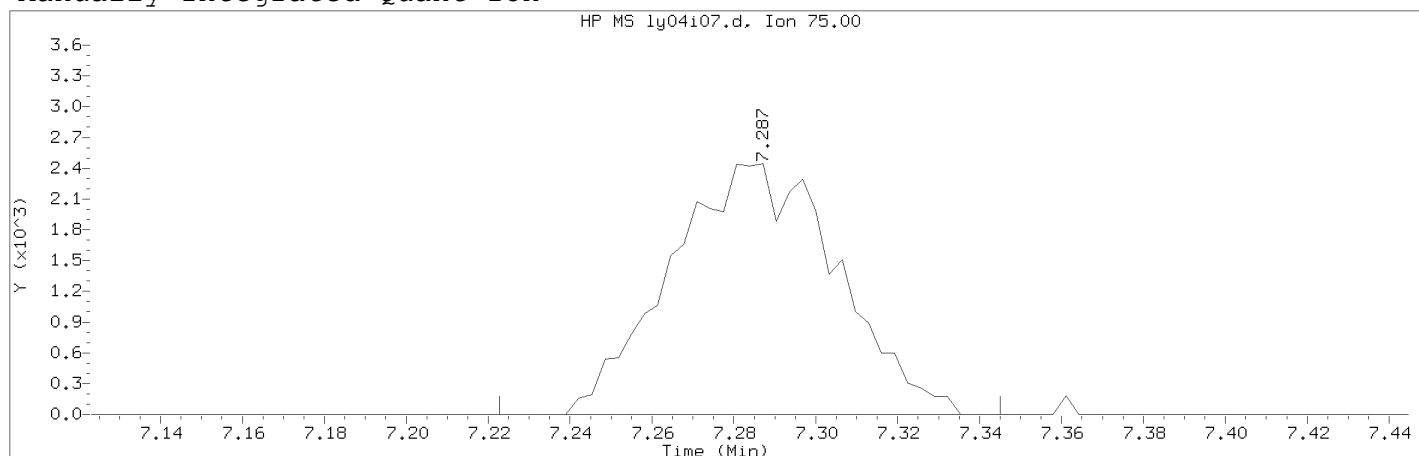
Compound Number	: 45	
Compound Name	: 2,2-Dichloropropane	
Scan Number	: 1520	
Retention Time (minutes)	: 6.371	
Quant Ion	: 77.00	
Area	: 6414	
On-column Amount (ng)	: 0.7586	
Integration start scan	: 1503	Integration stop scan: 1532
Y at integration start	: 0	Y at integration end: 0

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 Target 3.5 esignature user KR446 Page 213 of 579

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i07.d Instrument ID: HP09915.i
 Injection date and time: 04-MAY-2020 14:30 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 04-MAY-2020 19:29
 Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

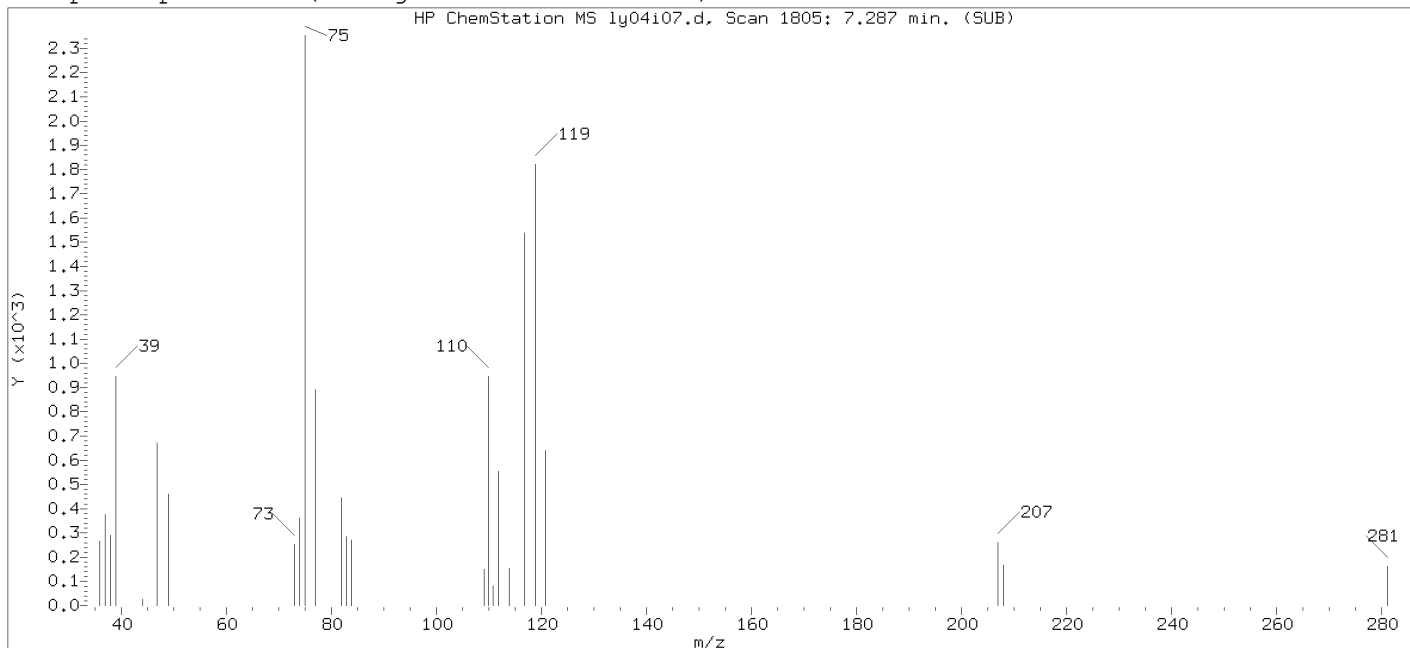
Compound Number : 55
 Compound Name : 1,1-Dichloropropene
 Scan Number : 1805
 Retention Time (minutes): 7.287
 Quant Ion : 75.00
 Area (flag) : 6955M
 On-Column Amount (ng) : 0.7983
 Integration start scan : 1784 Integration stop scan: 1822
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

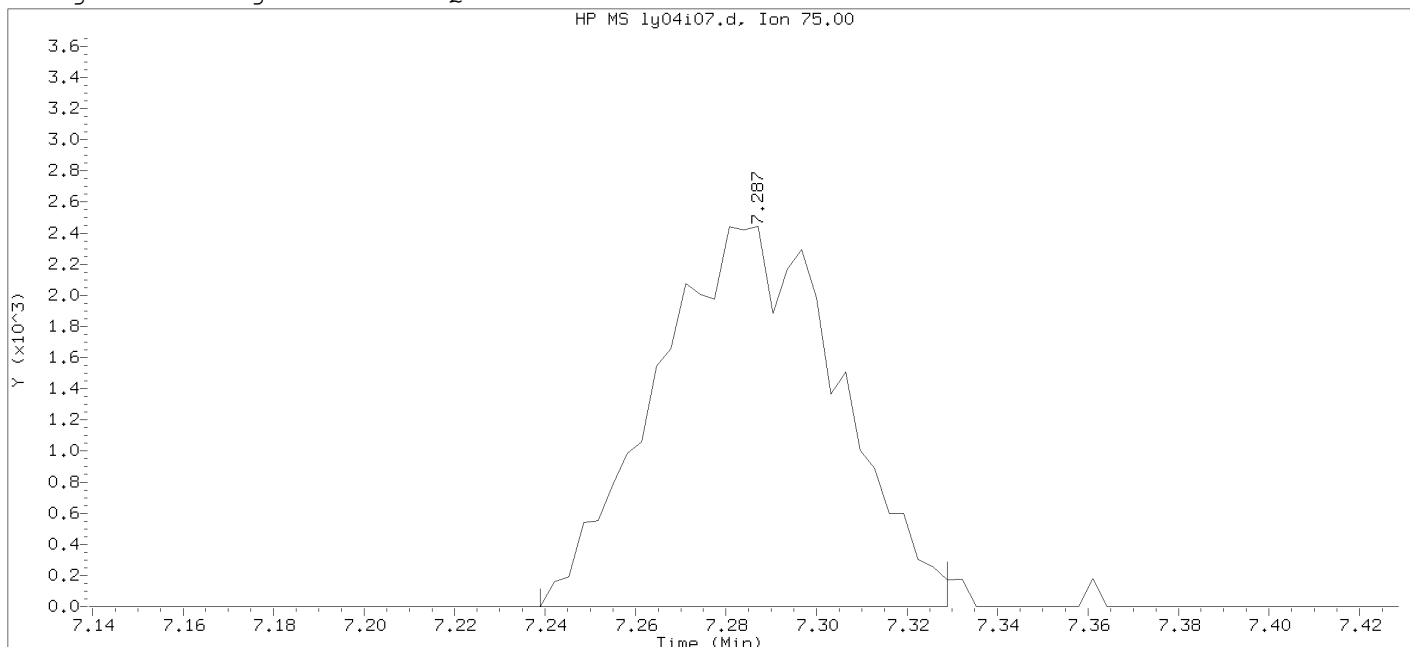
Analyst responsible for change: Digitally signed by Sara E. Johnson
 on 05/04/2020 at 19:30.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/06/2020 at 08:34.
 PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i07.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 14:30

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 14:47

Date, time and analyst ID of latest file update: 04-May-2020 14:47 Automation

Sample Name: VSTD001

Lab Sample ID: VSTD001

Compound Number : 55

Compound Name : 1,1-Dichloropropene

Scan Number : 1805

Retention Time (minutes): 7.287

Quant Ion : 75.00

Area : 6904

On-column Amount (ng) : 0.7924

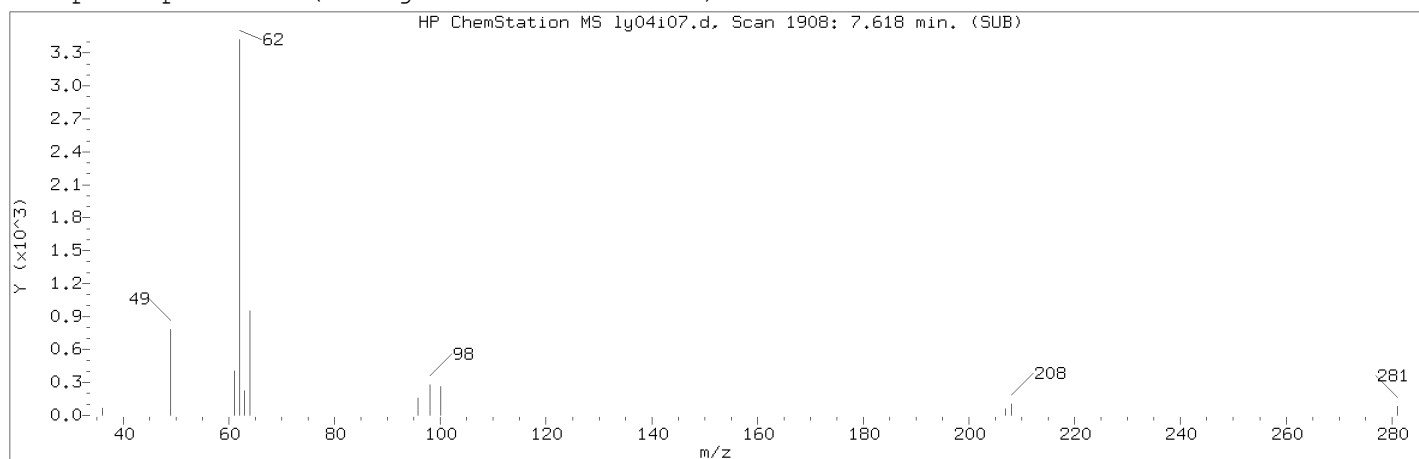
Integration start scan : 1789 Integration stop scan: 1817

Y at integration start : 0 Y at integration end: 0

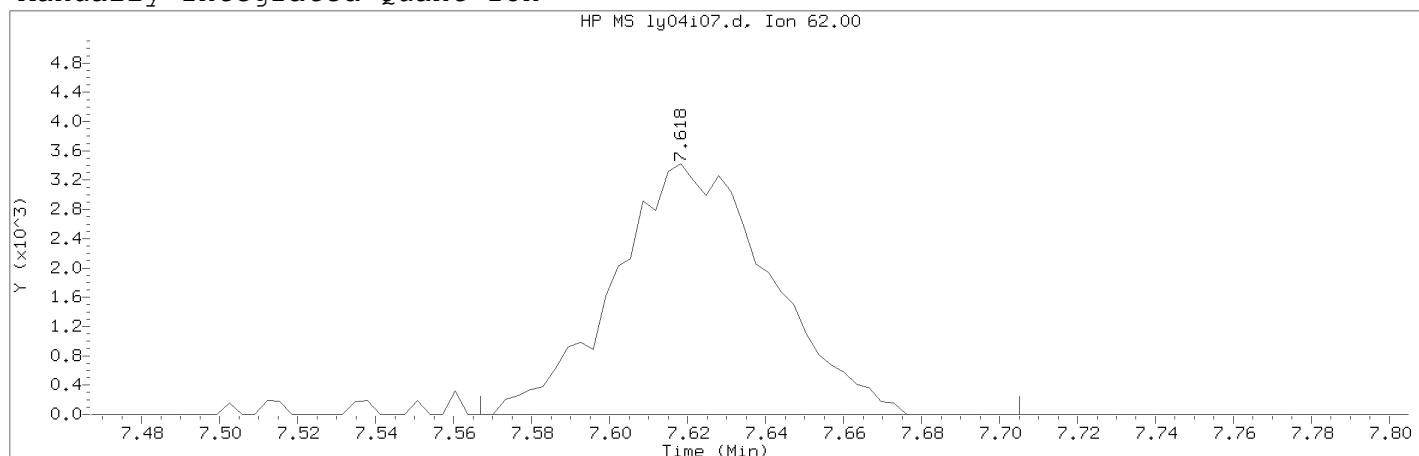
Digitally signed by Sara E. Johnson on 05/04/2020 at 19:30.

Target 3.5 esignature user KR446 Page 215 of 579

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i07.d Instrument ID: HP09915.i
 Injection date and time: 04-MAY-2020 14:30 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 04-MAY-2020 19:29
 Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

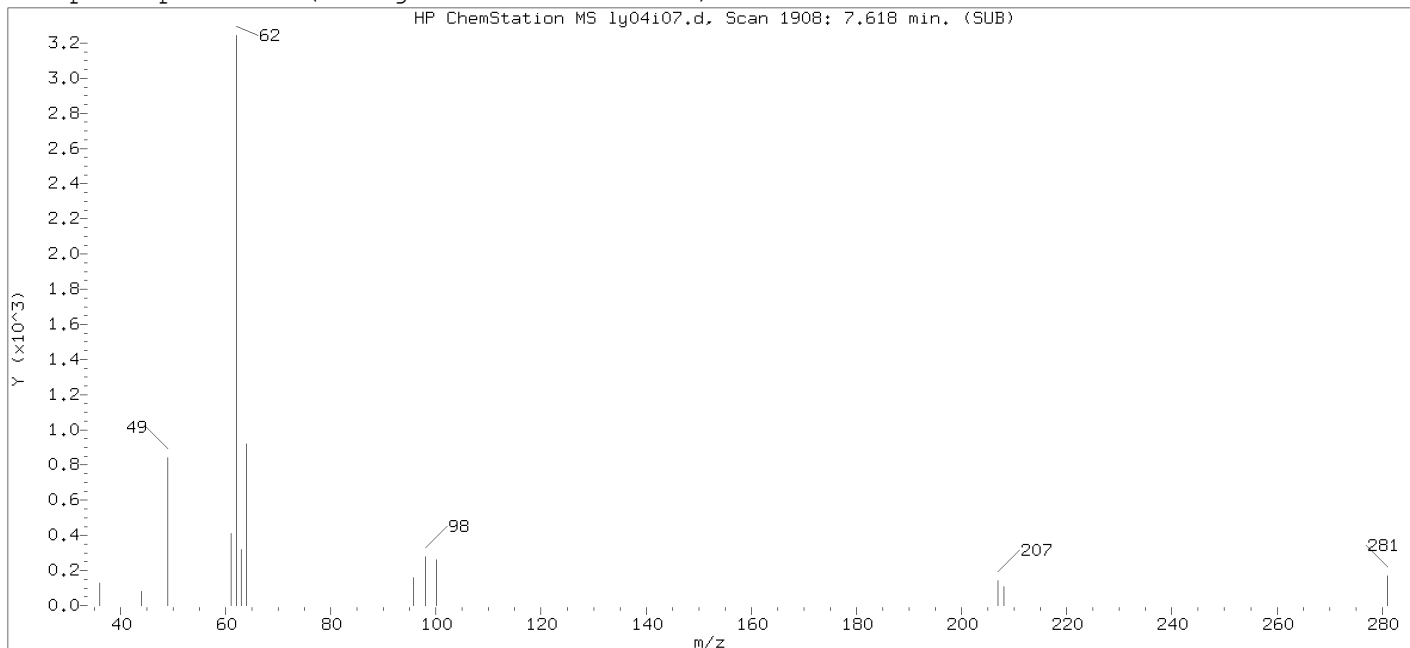
Compound Number : 61
 Compound Name : 1,2-Dichloroethane
 Scan Number : 1908
 Retention Time (minutes): 7.618
 Quant Ion : 62.00
 Area (flag) : 9508M
 On-Column Amount (ng) : 1.0518
 Integration start scan : 1891 Integration stop scan: 1934
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

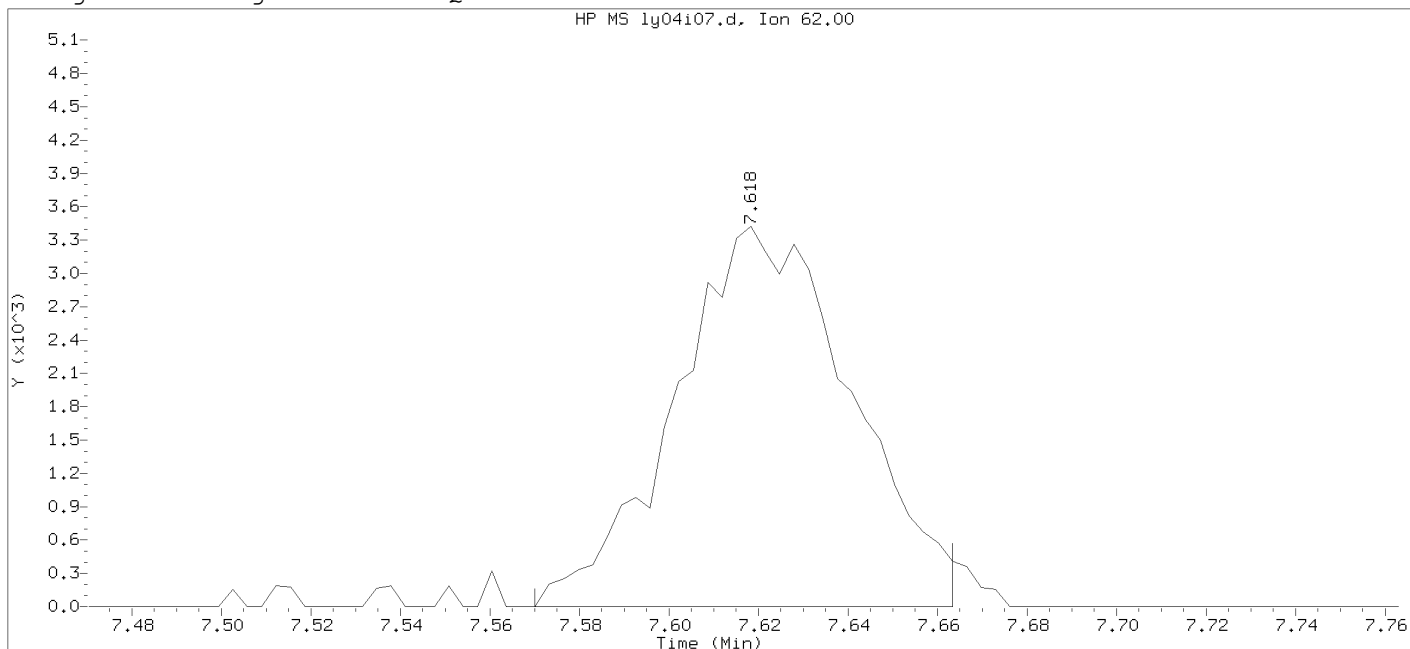
Analyst responsible for change: Digitally signed by Sara E. Johnson
 on 05/04/2020 at 19:30.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/06/2020 at 08:34.
 PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20may04i.b/ly04i07.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 14:30

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 14:47

Date, time and analyst ID of latest file update: 04-May-2020 14:47 Automation

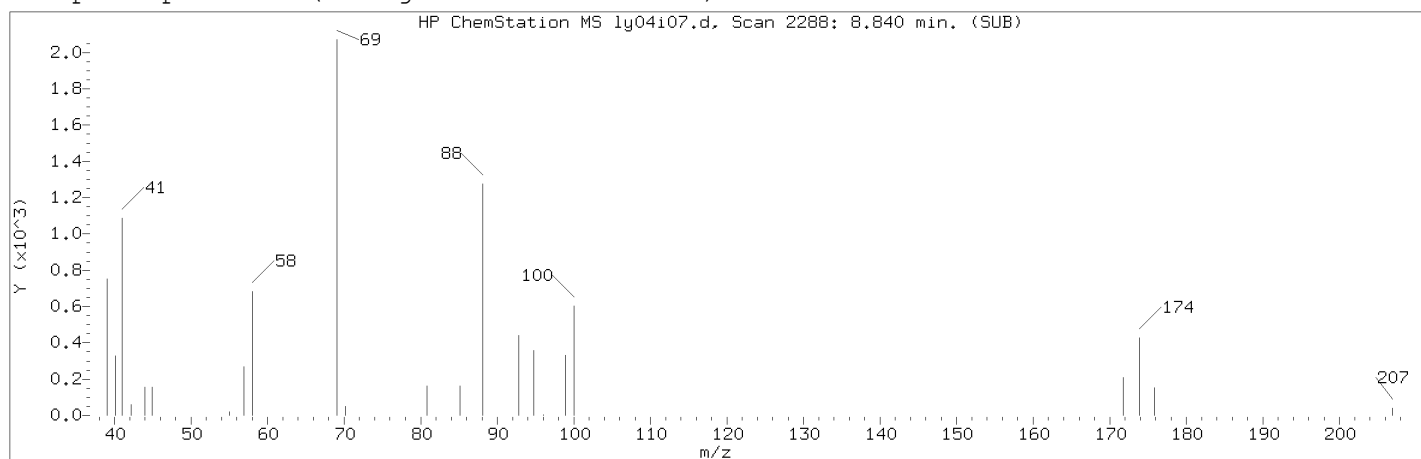
Sample Name: VSTD001

Lab Sample ID: VSTD001

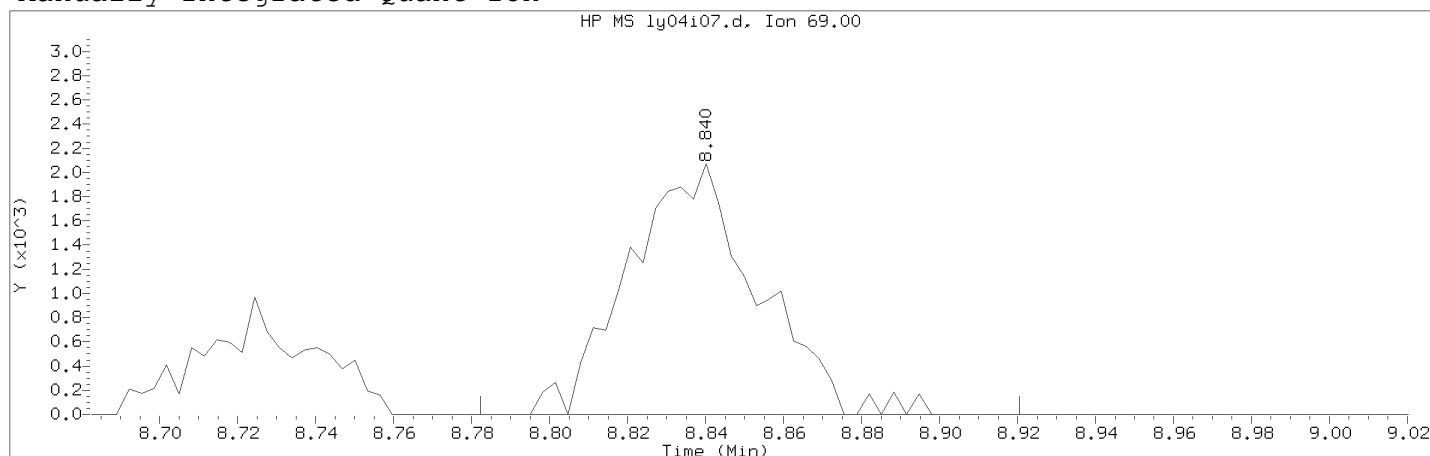
Compound Number	: 61	
Compound Name	: 1,2-Dichloroethane	
Scan Number	: 1908	
Retention Time (minutes)	: 7.618	
Quant Ion	: 62.00	
Area	: 9335	
On-column Amount (ng)	: 1.0361	
Integration start scan	: 1892	Integration stop scan: 1921
Y at integration start	: 0	Y at integration end: 0

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 Target 3.5 esignature user KR446 Page 217 of 579

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i07.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 14:30

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 19:29

Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

Compound Number	: 76	
Compound Name	: Methyl Methacrylate	
Scan Number	: 2288	
Retention Time (minutes)	: 8.840	
Quant Ion	: 69.00	
Area (flag)	: 4771M	
On-Column Amount (ng)	: 0.7985	
Integration start scan	: 2269	Integration stop scan: 2312
Y at integration start	: 0	Y at integration end: 0

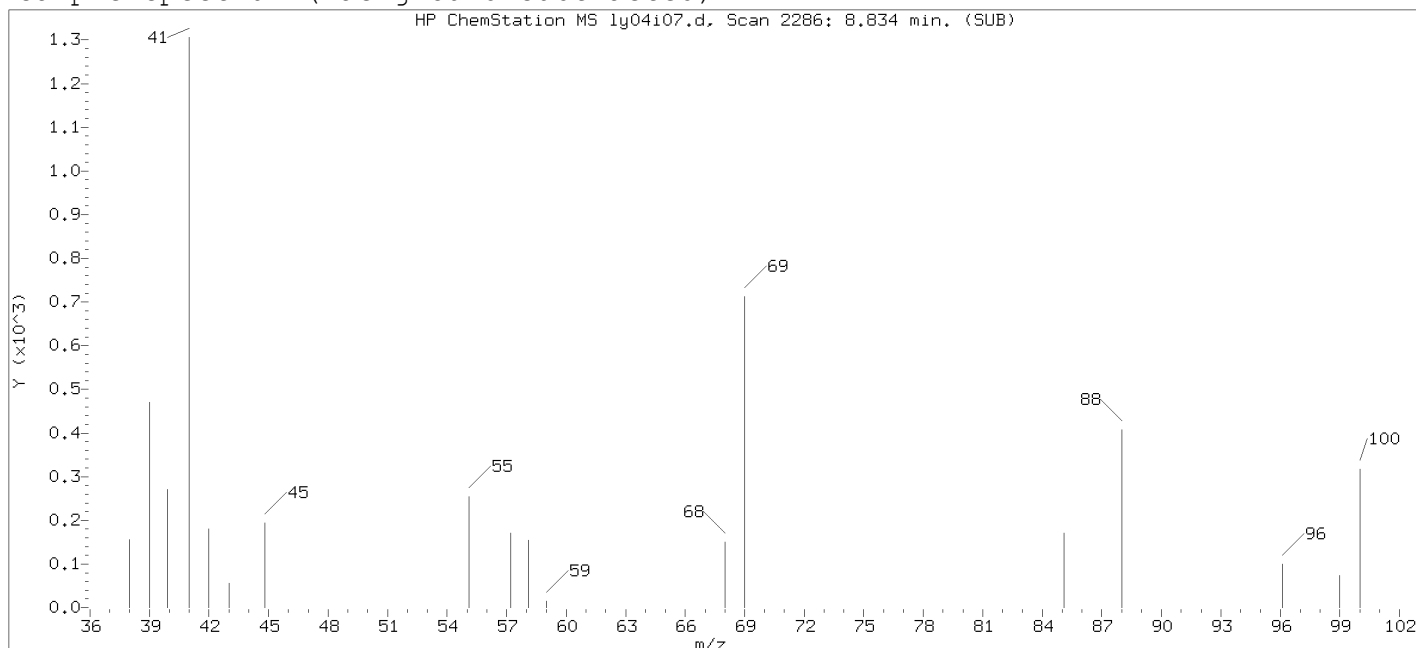
Reason for manual integration: improper integration

Analyst responsible for change:	Digitally signed by Sara E. Johnson
	on 05/04/2020 at 19:30.
	Target 3.5 esignature user ID: sej02002

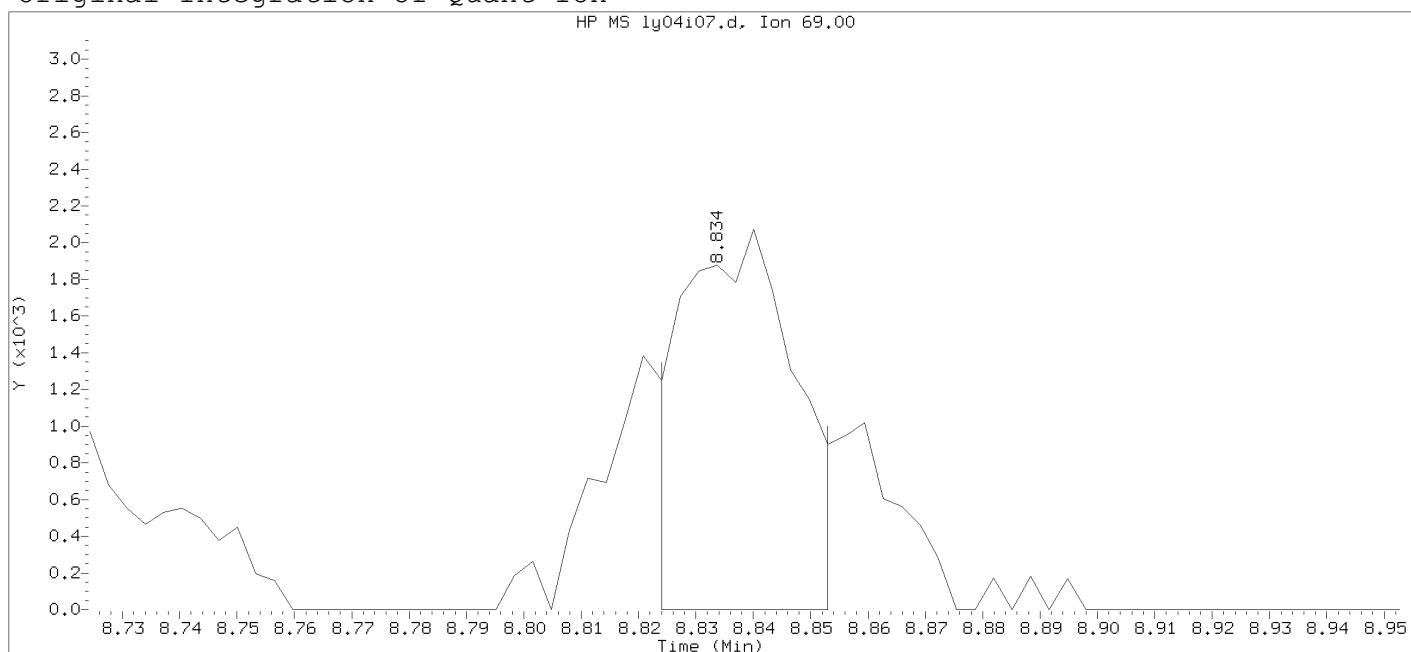
Secondary review performed and digitally signed by Chelsea B. Riehl on 05/06/2020 at 08:34.

PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i07.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 14:30

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 14:47

Date, time and analyst ID of latest file update: 04-May-2020 14:47 Automation

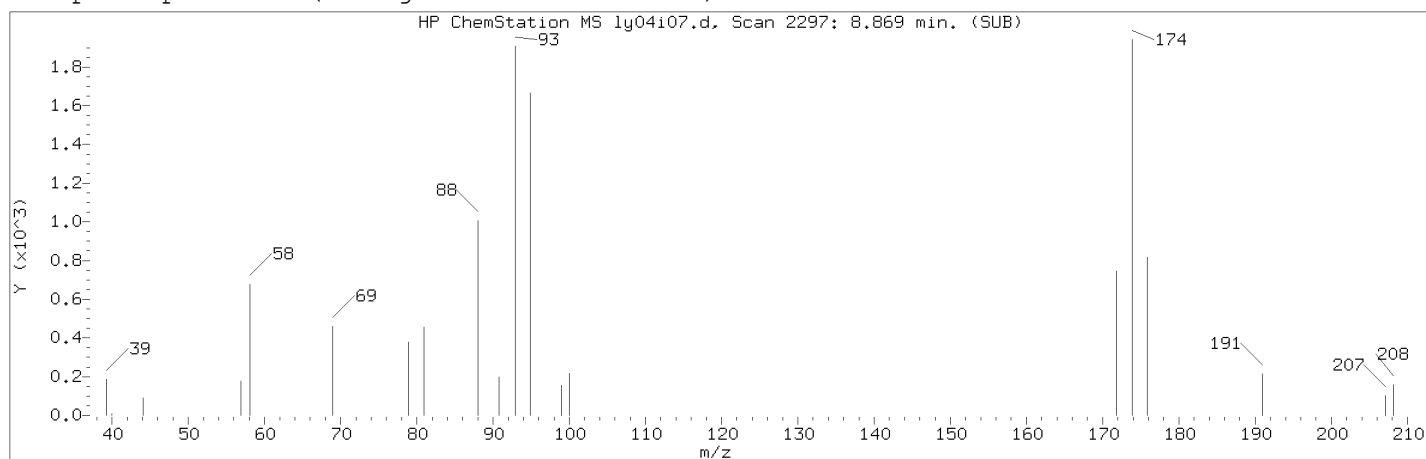
Sample Name: VSTD001

Lab Sample ID: VSTD001

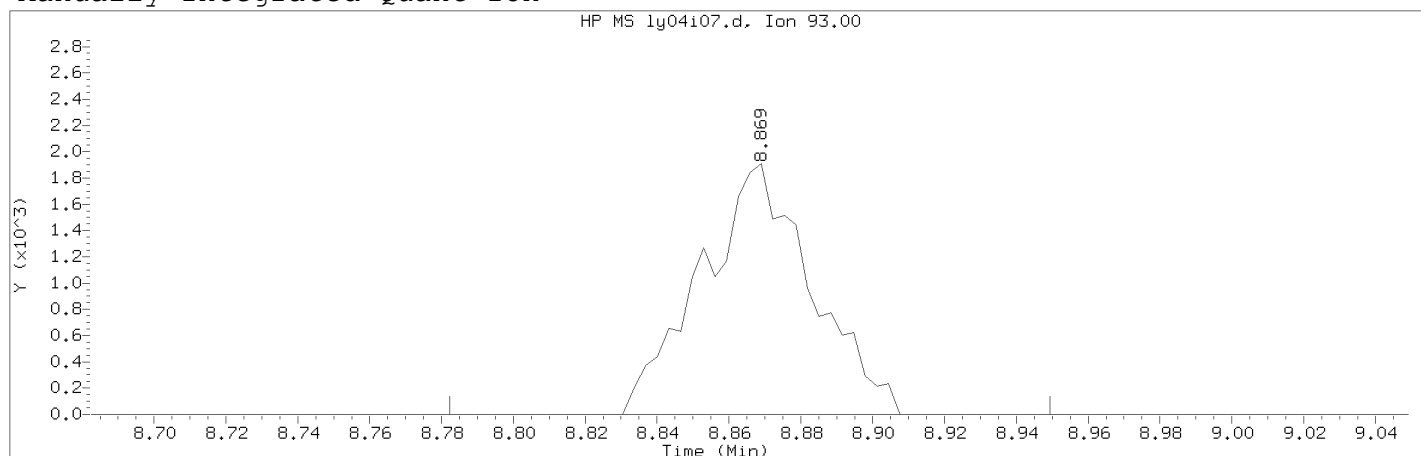
Compound Number	: 76
Compound Name	: Methyl Methacrylate
Scan Number	: 2286
Retention Time (minutes)	: 8.834
Quant Ion	: 69.00
Area	: 2808
On-column Amount (ng)	: 0.5001
Integration start scan	: 2282
Integration stop scan	: 2291
Y at integration start	: 0
Y at integration end	: 0

Digitally signed by Sara E. Johnson on 05/04/2020 at 19:30.
 Target 3.5 esignature user KR446 Page 219 of 579

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i07.d Instrument ID: HP09915.i
 Injection date and time: 04-MAY-2020 14:30 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 04-MAY-2020 19:29
 Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD001 Lab Sample ID: VSTD001

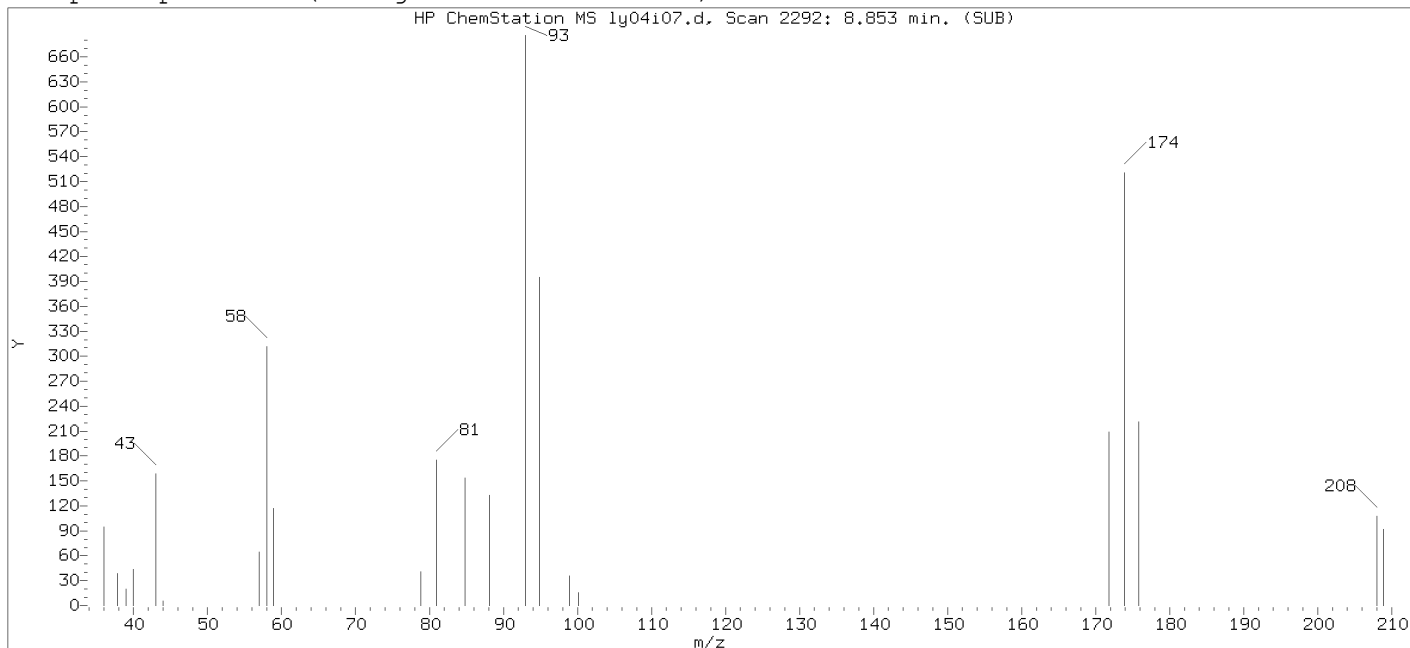
Compound Number : 74
 Compound Name : Dibromomethane
 Scan Number : 2297
 Retention Time (minutes): 8.869
 Quant Ion : 93.00
 Area (flag) : 4079M
 On-Column Amount (ng) : 0.8976
 Integration start scan : 2269 Integration stop scan: 2321
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

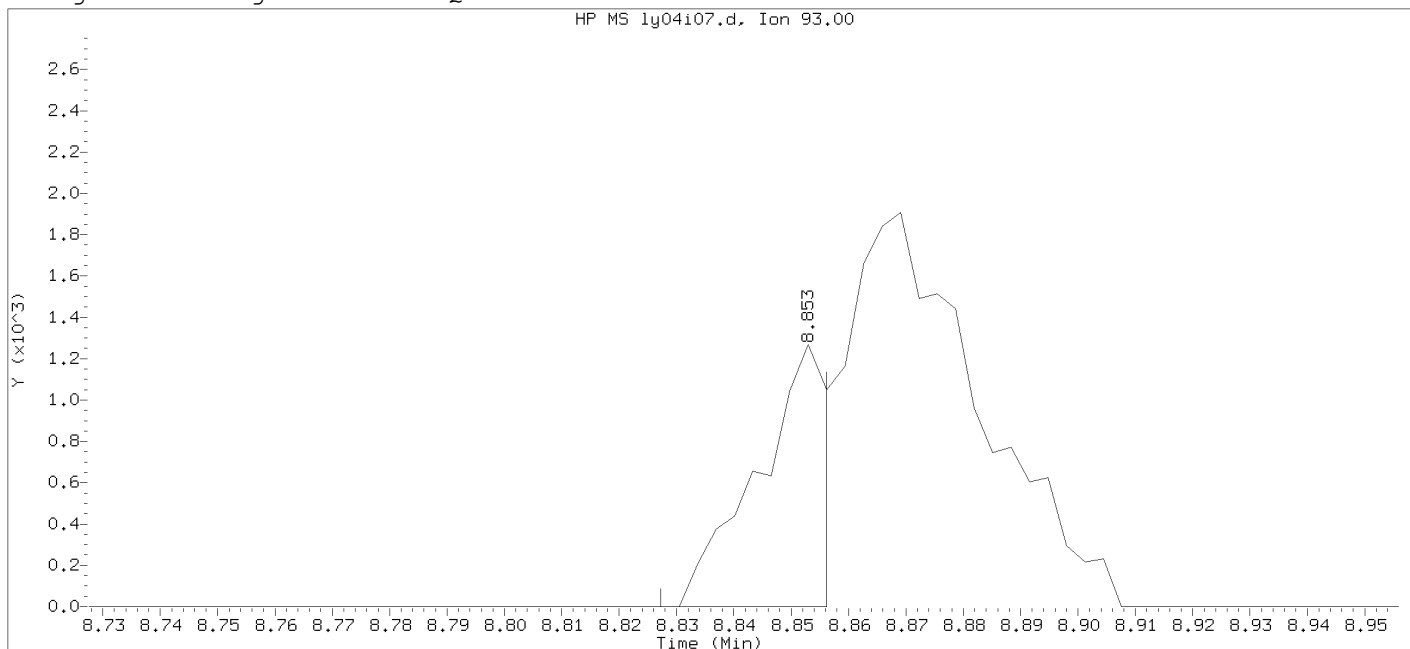
Analyst responsible for change: Digitally signed by Sara E. Johnson
 on 05/04/2020 at 19:30.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/06/2020 at 08:34.
 PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i07.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 14:30

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 14:47

Date, time and analyst ID of latest file update: 04-May-2020 14:47 Automation

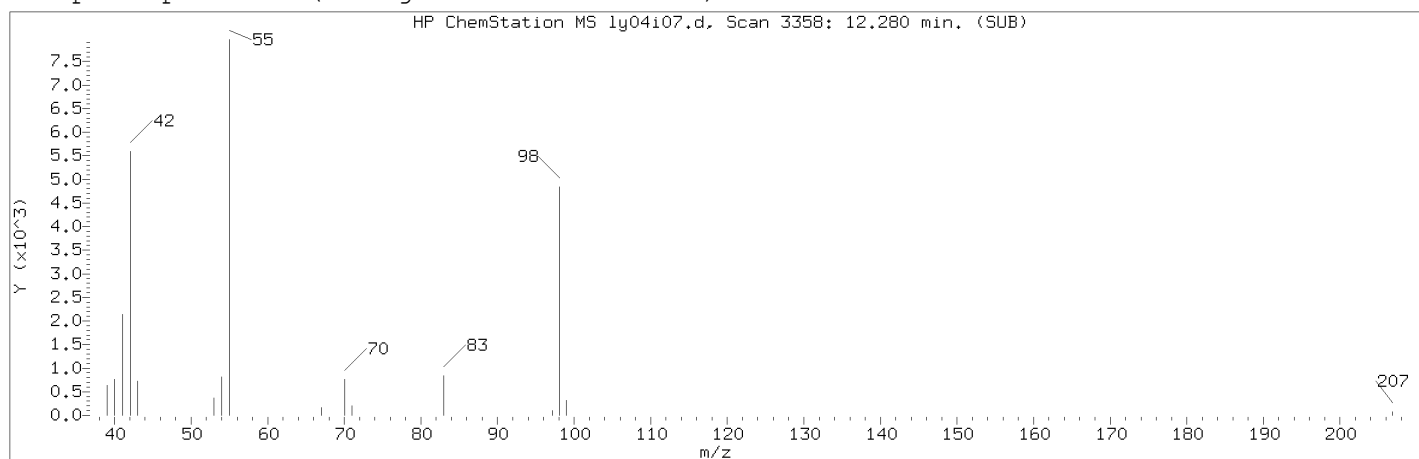
Sample Name: VSTD001

Lab Sample ID: VSTD001

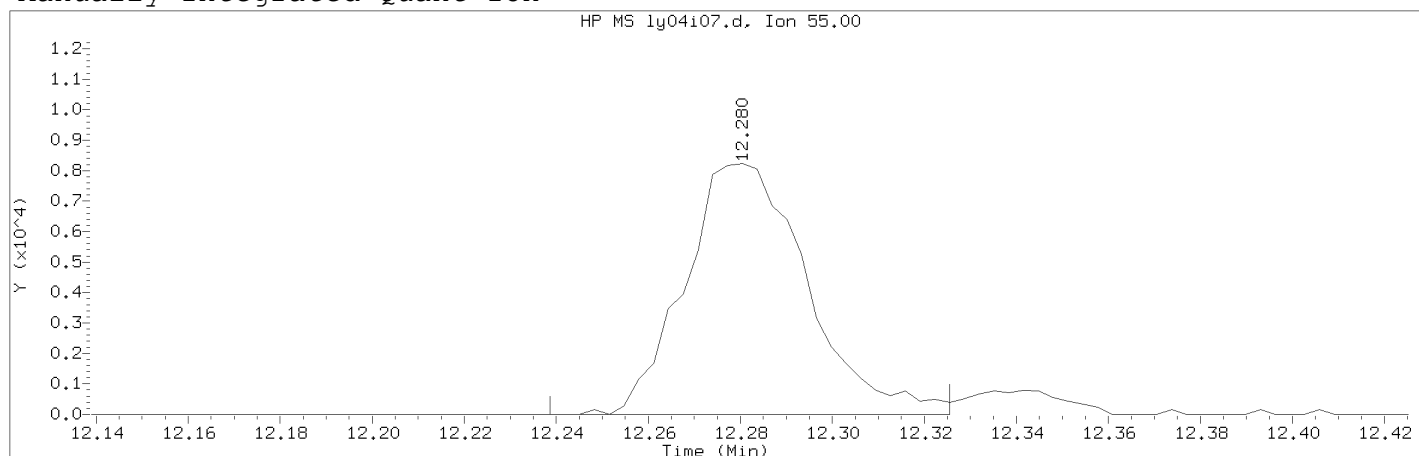
Compound Number	: 74	
Compound Name	: Dibromomethane	
Scan Number	: 2292	
Retention Time (minutes)	: 8.853	
Quant Ion	: 93.00	
Area	: 993	
On-column Amount (ng)	: 0.2481	
Integration start scan	: 2283	Integration stop scan: 2292
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Sara E. Johnson on 05/04/2020 at 19:30.
 Target 3.5 esignature user KR446 Page 221 of 579

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i07.d Instrument ID: HP09915.i
 Injection date and time: 04-MAY-2020 14:30 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 04-MAY-2020 19:29
 Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD001

Lab Sample ID: VSTD001

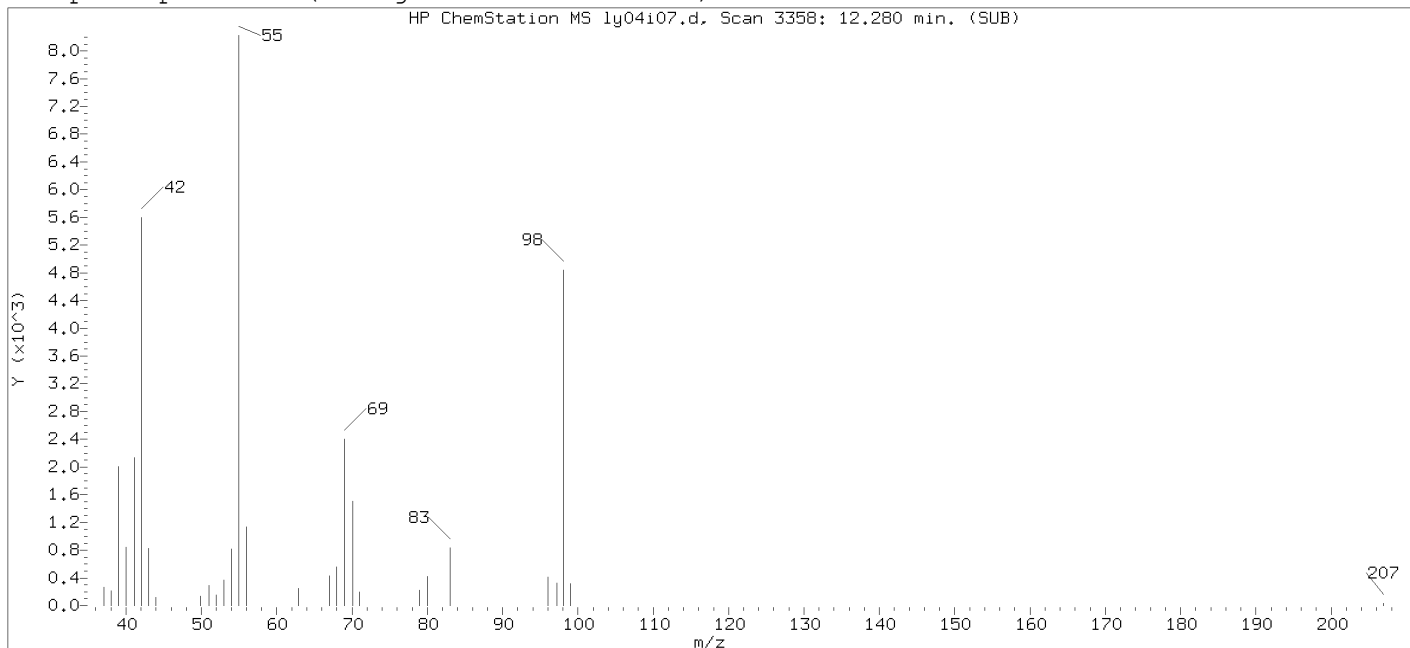
Compound Number : 112
 Compound Name : Cyclohexanone
 Scan Number : 3358
 Retention Time (minutes): 12.280
 Quant Ion : 55.00
 Area (flag) : 15170M
 On-Column Amount (ng) : 41.2440
 Integration start scan : 3344 Integration stop scan: 3371
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

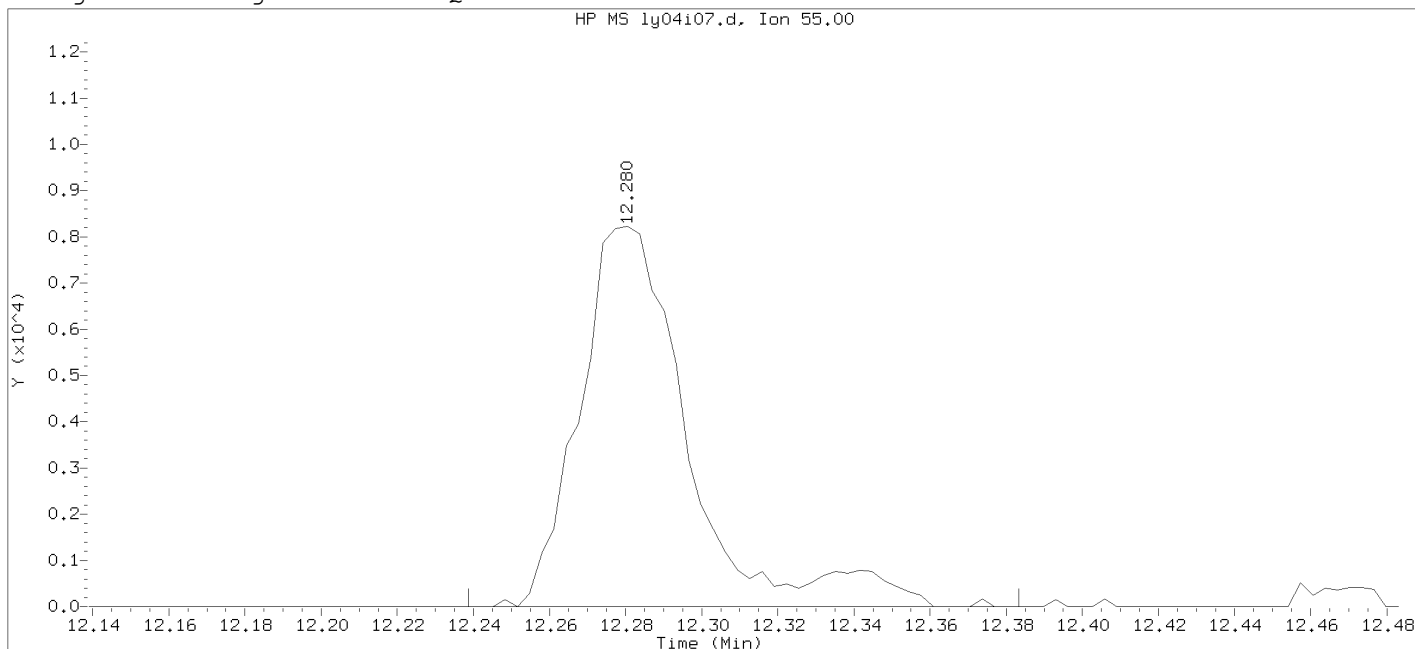
Analyst responsible for change: Digitally signed by Sara E. Johnson
 on 05/04/2020 at 19:30.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/06/2020 at 08:34.
 PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20may04i.b/ly04i07.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 14:30

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 14:47

Date, time and analyst ID of latest file update: 04-May-2020 14:47 Automation

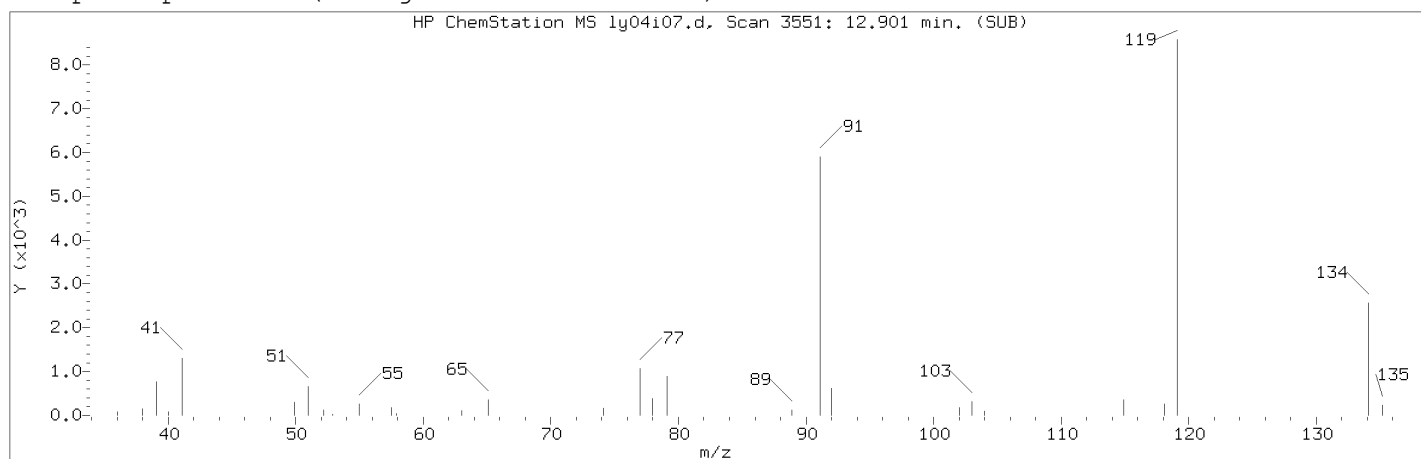
Sample Name: VSTD001

Lab Sample ID: VSTD001

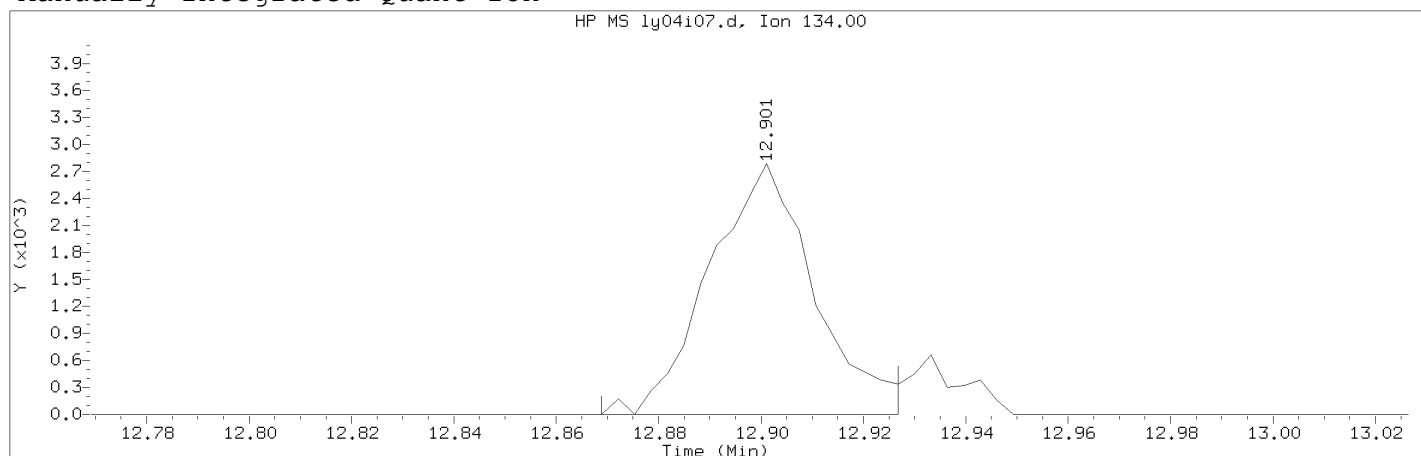
Compound Number	: 112	
Compound Name	: Cyclohexanone	
Scan Number	: 3358	
Retention Time (minutes)	: 12.280	
Quant Ion	: 55.00	
Area	: 16320	
On-column Amount (ng)	: 44.5393	
Integration start scan	: 3344	Integration stop scan: 3389
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Sara E. Johnson on 05/04/2020 at 19:30.
 Target 3.5 esignature user KR446 Page 223 of 579

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i07.d Instrument ID: HP09915.i
 Injection date and time: 04-MAY-2020 14:30 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 04-MAY-2020 19:29
 Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD001 Lab Sample ID: VSTD001

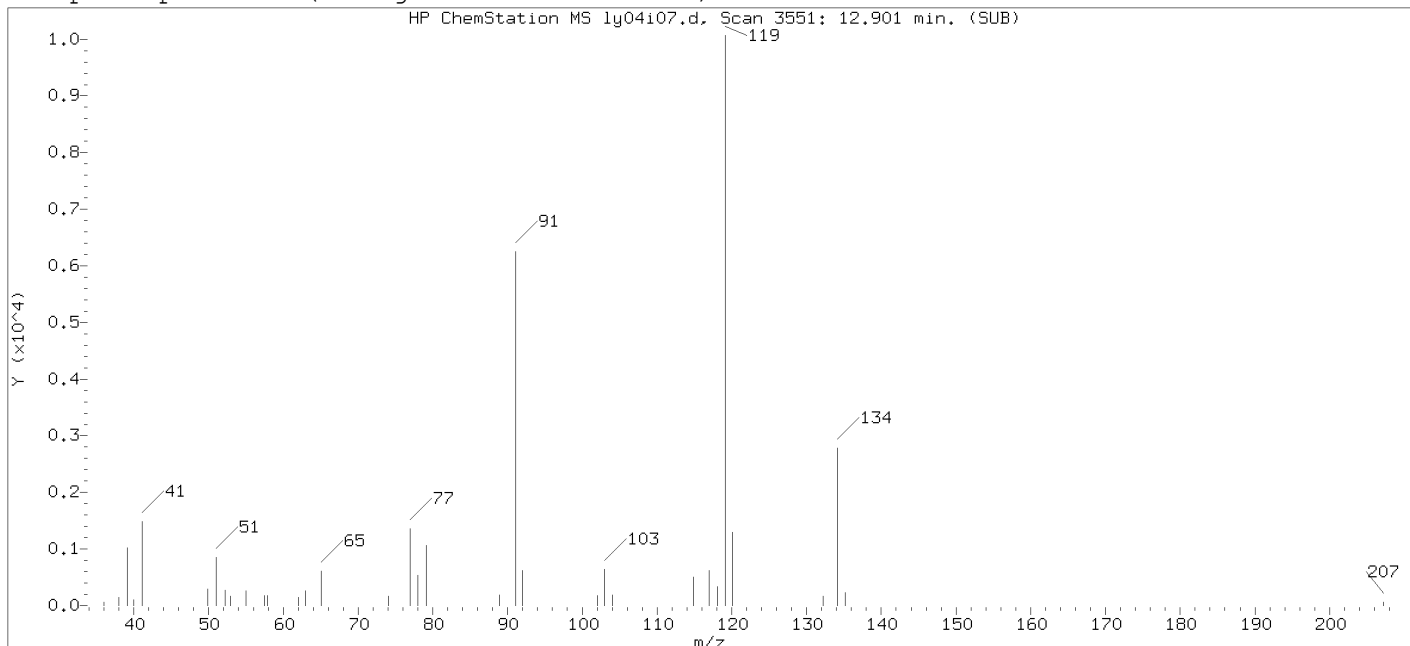
Compound Number : 124
 Compound Name : tert-Butylbenzene
 Scan Number : 3551
 Retention Time (minutes): 12.901
 Quant Ion : 134.00
 Area (flag) : 3961M
 On-Column Amount (ng) : 0.7035
 Integration start scan : 3540 Integration stop scan: 3558
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

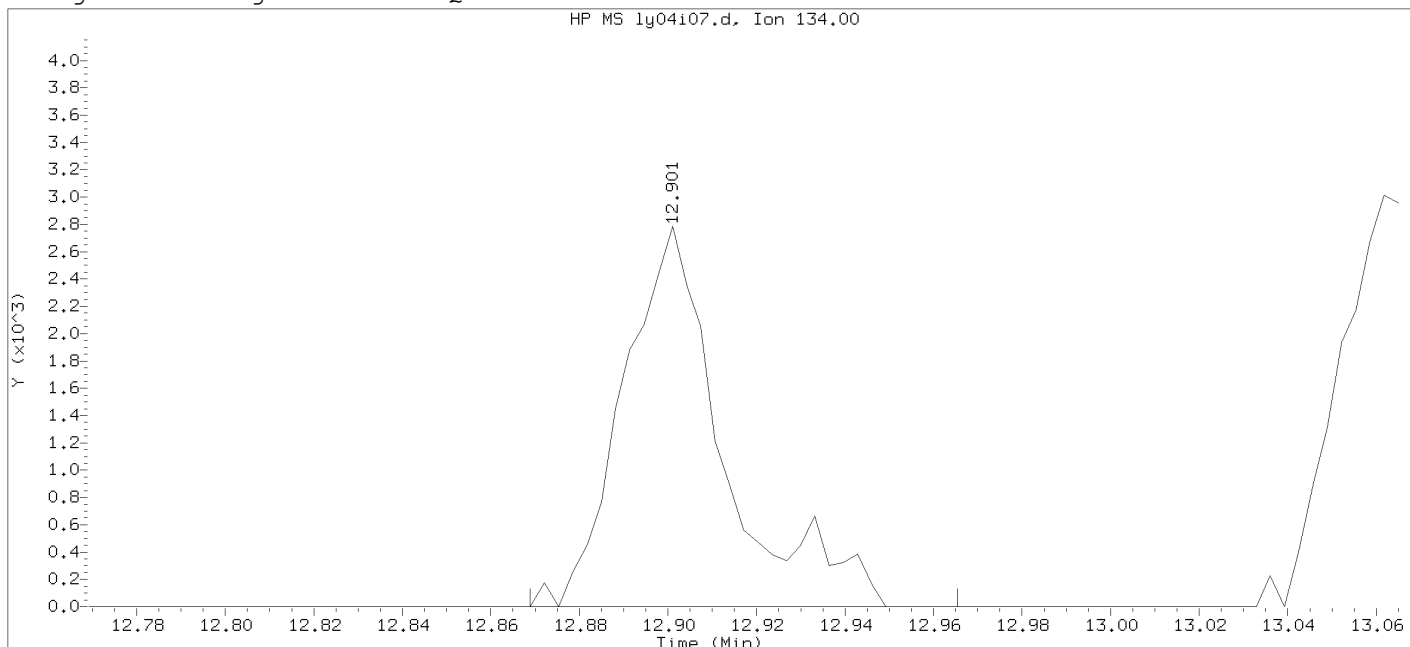
Analyst responsible for change: Digitally signed by Sara E. Johnson
 on 05/04/2020 at 19:30.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/06/2020 at 08:34.
 PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20may04i.b/ly04i07.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 14:30

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 14:47

Date, time and analyst ID of latest file update: 04-May-2020 14:47 Automation

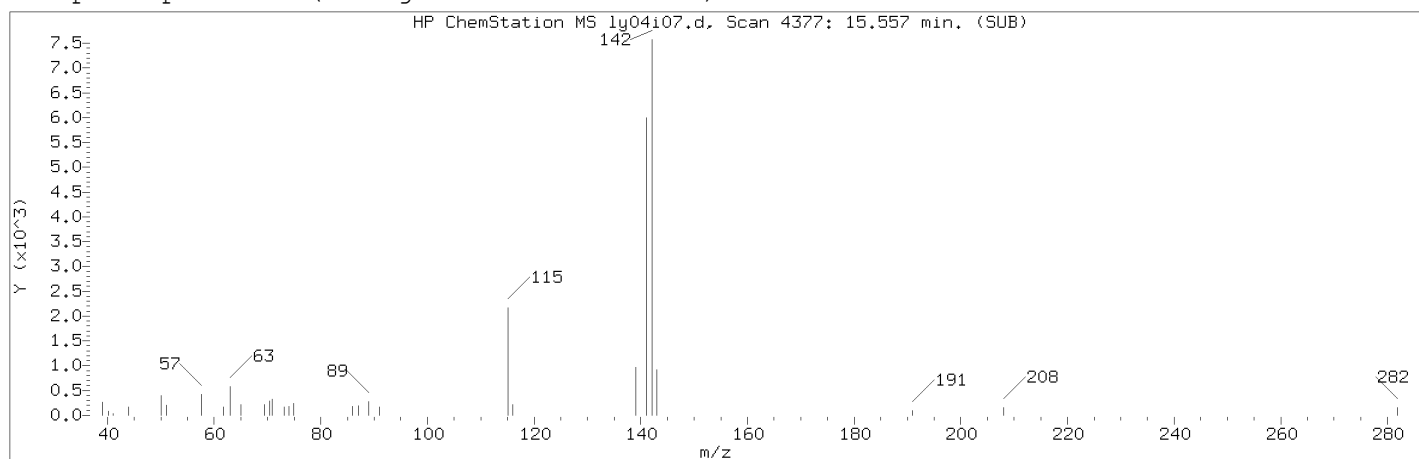
Sample Name: VSTD001

Lab Sample ID: VSTD001

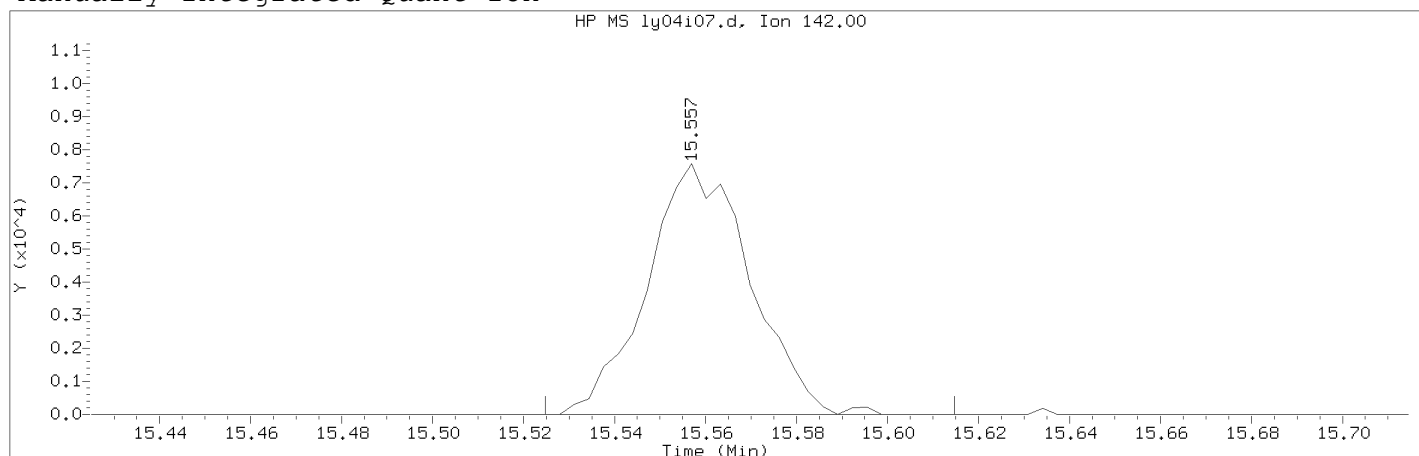
Compound Number	: 124
Compound Name	: tert-Butylbenzene
Scan Number	: 3551
Retention Time (minutes)	: 12.901
Quant Ion	: 134.00
Area	: 4401
On-column Amount (ng)	: 0.7650
Integration start scan	: 3540
Integration stop scan	: 3570
Y at integration start	: 0
Y at integration end	: 0

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 Target 3.5 esignature user KR446 Page 225 of 579

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04i07.d Instrument ID: HP09915.i
 Injection date and time: 04-MAY-2020 14:30 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 04-MAY-2020 19:29
 Date, time and analyst ID of latest file update: 04-May-2020 19:29 sej02002

Sample Name: VSTD001 Lab Sample ID: VSTD001

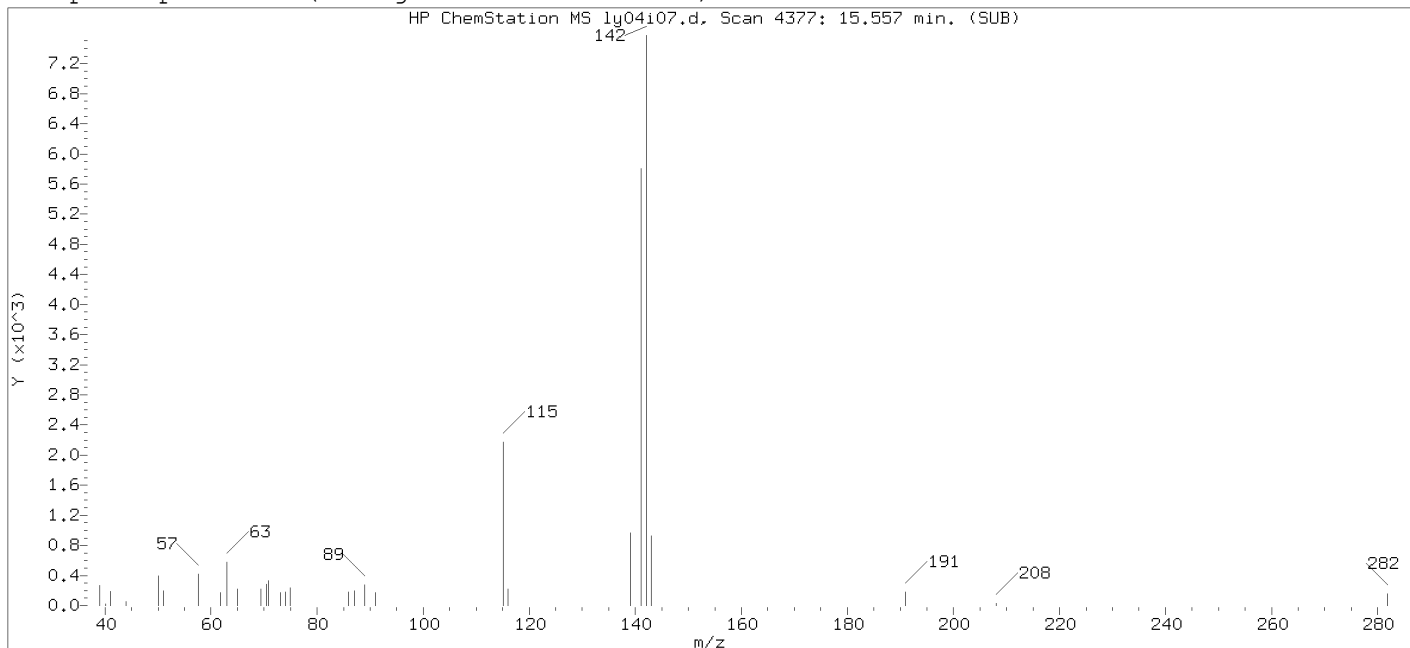
Compound Number : 150
 Compound Name : 2-Methylnaphthalene
 Scan Number : 4377
 Retention Time (minutes): 15.557
 Quant Ion : 142.00
 Area (flag) : 11936M
 On-Column Amount (ng) : 3.3357
 Integration start scan : 4366 Integration stop scan: 4394
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

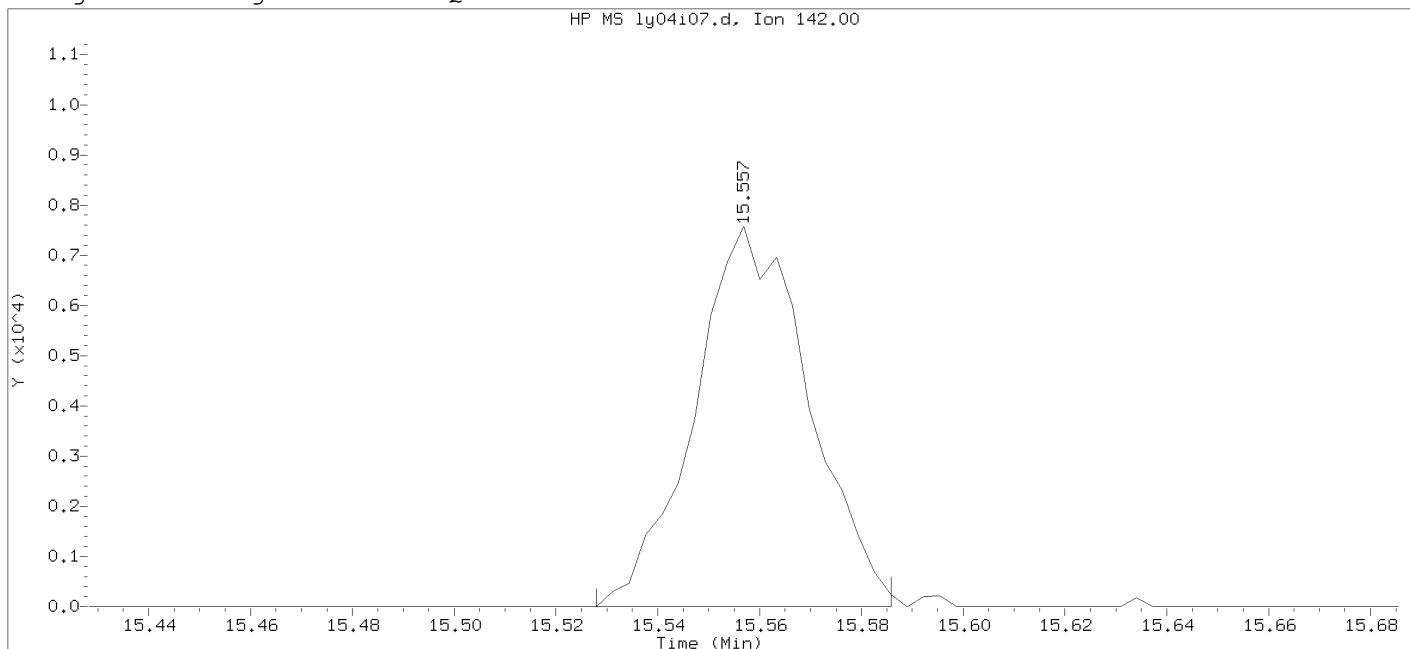
Analyst responsible for change: Digitally signed by Sara E. Johnson
 on 05/04/2020 at 19:30.
 Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/06/2020 at 08:34.
 PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20may04i.b/ly04i07.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 14:30

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 14:47

Date, time and analyst ID of latest file update: 04-May-2020 14:47 Automation

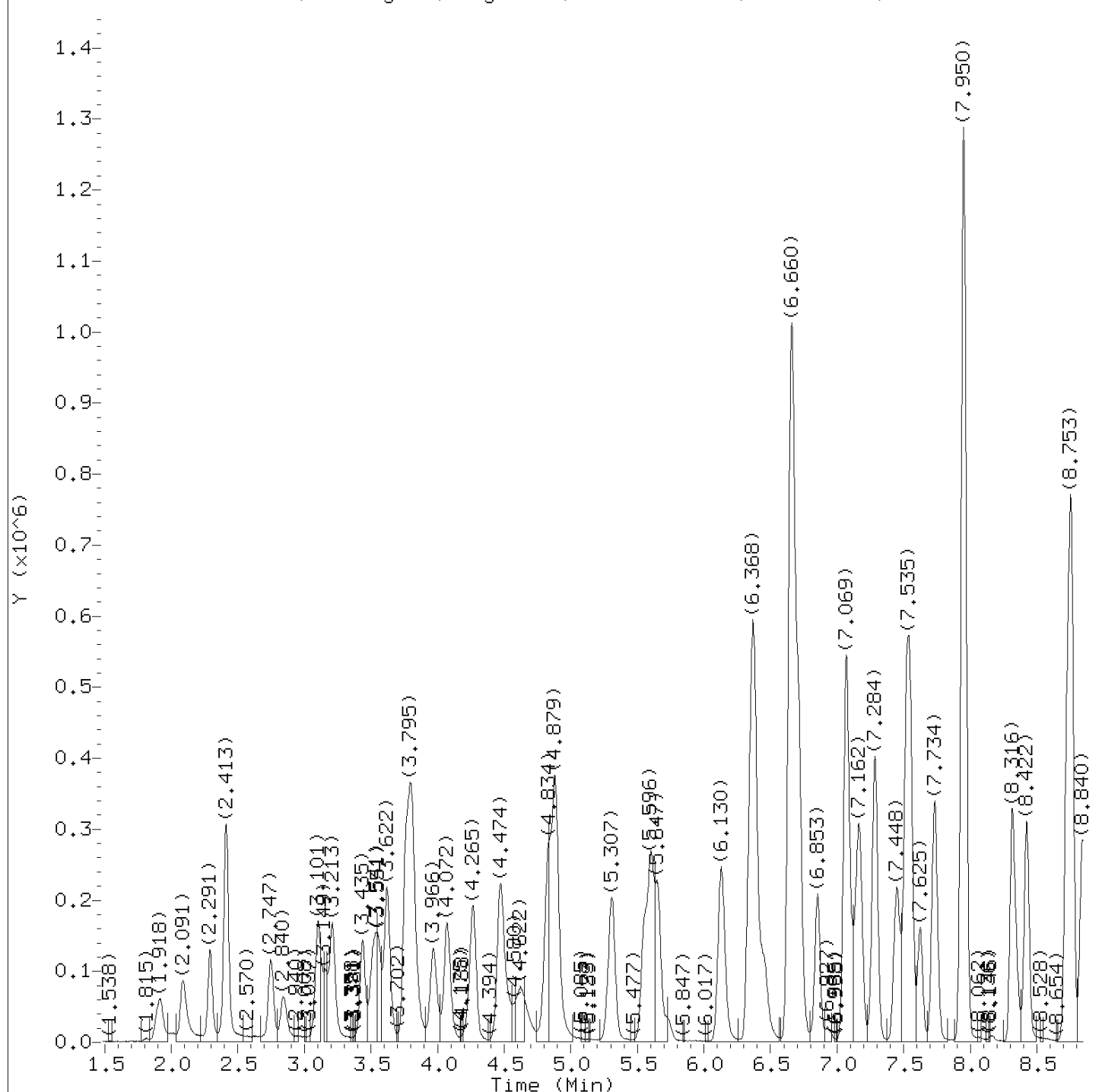
Sample Name: VSTD001

Lab Sample ID: VSTD001

Compound Number	: 150	
Compound Name	: 2-Methylnaphthalene	
Scan Number	: 4377	
Retention Time (minutes)	: 15.557	
Quant Ion	: 142.00	
Area	: 11832	
On-column Amount (ng)	: 0.6286	
Integration start scan	: 4367	Integration stop scan: 4385
Y at integration start	: 0	Y at integration end: 0

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 Target 3.5 esignature user KR446 Page 227 of 579

/chem/HP09915.i/20may04i.b/ly04v01.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20may04i.b/ly04v01.d
 Injection date and time: 04-MAY-2020 14:52

Instrument ID: HP09915.i
 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m
 Calibration date and time: 04-MAY-2020 19:29

Sublist used: 8260W

Date, time and analyst ID of latest file update: 04-May-2020 20:11 sej02002

Sample Name: ICVLLG

Lab Sample ID: ICVLLG

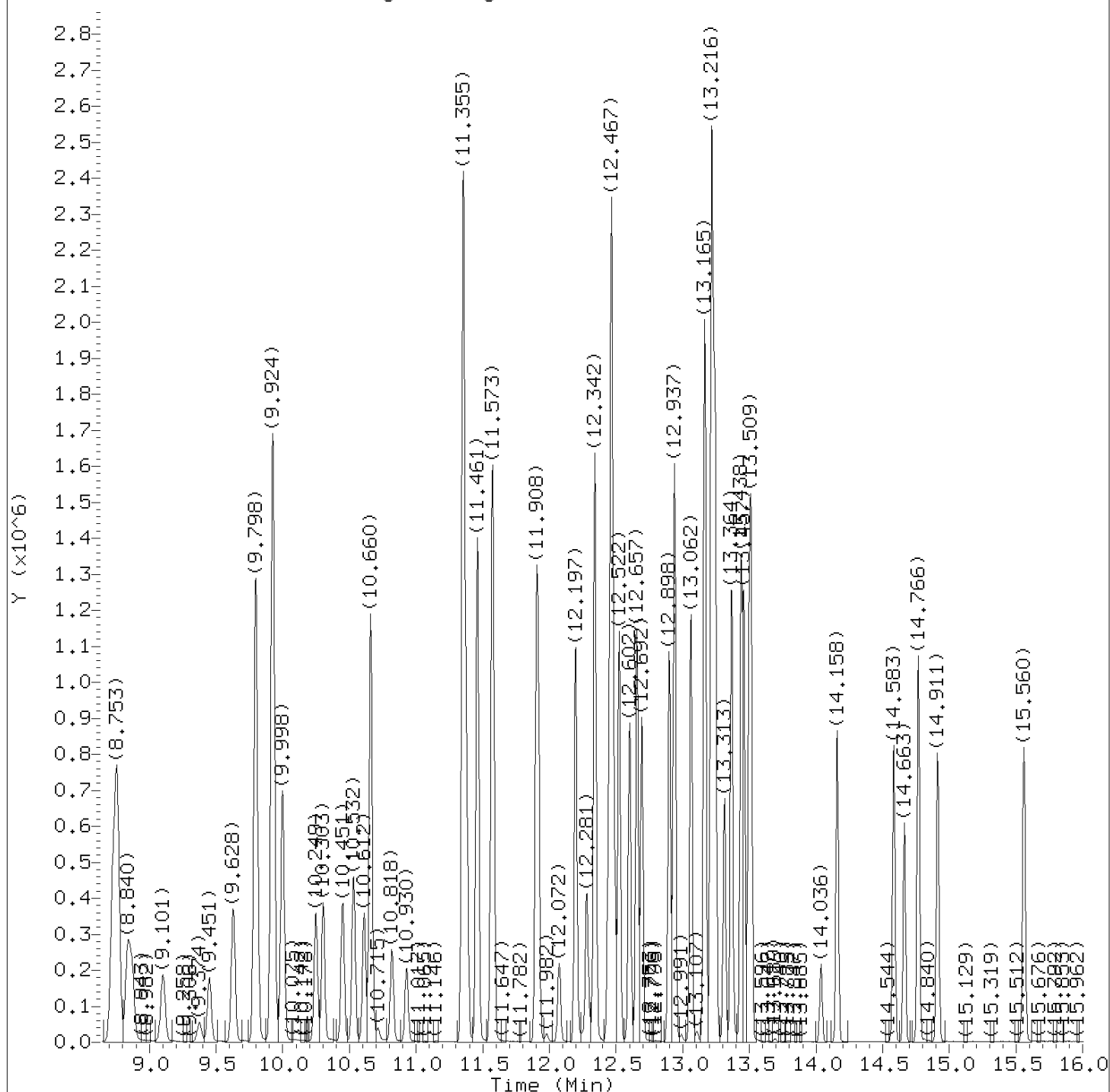
Digitally signed by Don V. Viray
 on 05/06/2020 at 08:00.

Target 3.5 esignature user ID: dvv10203

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/chem/HP09915.i/20may04i.b/ly04v01.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20may04i.b/ly04v01.d
 Injection date and time: 04-MAY-2020 14:52

Instrument ID: HP09915.i
 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m
 Calibration date and time: 04-MAY-2020 19:29

Sublist used: 8260W

Date, time and analyst ID of latest file update: 04-May-2020 20:11 sej02002

Sample Name: ICVLLG

Lab Sample ID: ICVLLG

Digitally signed by Don V. Viray
 on 05/06/2020 at 08:00.

Target 3.5 esignature user ID: dvv10203

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may04i.b/ly04v01.d
 Injection date and time: 04-MAY-2020 14:52

Instrument ID: HP09915.i
 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 19:29

Date, time and analyst ID of latest file update: 04-May-2020 20:11 sej02002

Sample Name: ICVLLG

Lab Sample ID: ICVLLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
3) Dichlorodifluoromethane	(2)	2.091	85	170822	18.748
4) Chloromethane	(2)	2.294	50	178347	20.965
5) 1,3-Butadiene	(2)	2.410	39	127548M	23.372
6) Vinyl Chloride	(2)	2.413	62	173135	21.090
8) Bromomethane	(2)	2.747	94	113651	19.202
9) Chloroethane	(2)	2.837	64	89576	19.543
10) Dichlorofluoromethane	(2)	3.101	67	184252	18.636
12) Trichlorofluoromethane	(2)	3.156	101	202771	22.616
11) n-Pentane	(2)	3.213	43	155213	18.438
14) Ethyl ether	(2)	3.435	59	129003	20.363
15) Freon 123a	(2)	3.525	67	151026	20.792
16) Acrolein	(1)	3.622	56	329175	139.630
17) 1,1-Dichloroethene	(2)	3.760	96	118964	20.806
19) Freon 113	(2)	3.792	101	114815	19.354
18) Acetone	(1)	3.802	58	207762	193.204
22) Methyl Iodide	(2)	3.966	142	219377	19.908
21) 2-Propanol	(1)	3.985	45	103119	150.457
23) Carbon Disulfide	(2)	4.072	76	402072	20.884
27) Methyl Acetate	(2)	4.242	43	139909	19.185
25) Allyl Chloride	(2)	4.268	41	179935	19.419
28) Methylene Chloride	(2)	4.467	84	139636	20.530
29) *t-Butyl alcohol-d10	(1)	4.493	65	286563	250.000
30) t-Butyl alcohol	(1)	4.622	59	234564	202.753
31) Acrylonitrile	(2)	4.824	53	381896	94.534
33) Methyl Tertiary Butyl Ether	(2)	4.879	73	376365	19.193
32) trans-1,2-Dichloroethene	(2)	4.889	96	134049	20.379
34) n-Hexane	(2)	5.310	57	192921	20.943
36) 1,1-Dichloroethane	(2)	5.548	63	232641	20.165
38) di-Isopropyl ether	(2)	5.602	45	404847	19.953
39) 2-Chloro-1,3-butadiene	(2)	5.654	53	188423	20.480
40) Ethyl t-butyl ether	(2)	6.130	59	373926	19.834
43) 1,2-Dichloroethene (Total)	(2)		96	293072	41.937
44) 2-Butanone	(2)	6.352	43	810086	165.204
42) cis-1,2-Dichloroethene	(2)	6.377	96	159023	21.558
45) 2,2-Dichloropropane	(2)	6.387	77	181449	20.350
47) Propionitrile	(1)	6.448	54	235686	150.798
48) Methacrylonitrile	(2)	6.657	67	620974	153.326
49) Bromochloromethane	(2)	6.705	128	74060	19.458

M = Compound was manually integrated.

* = Compound is an internal standard.

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 on 05/06/2020 at 08:00.

Target 3.5 esignature user ID: dvv10203

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may04i.b/ly04v01.d
 Injection date and time: 04-MAY-2020 14:52

Instrument ID: HP09915.i
 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 19:29

Date, time and analyst ID of latest file update: 04-May-2020 20:11 sej02002

Sample Name: ICVLLG

Lab Sample ID: ICVLLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
50) Tetrahydrofuran	(1)	6.712	71	133663	97.744
51) Chloroform	(2)	6.853	83	227394	20.175
52)\$Dibromofluoromethane	(2)	7.069	113	330544	49.382
53) 1,1,1-Trichloroethane	(2)	7.072	97	191699	19.825
54) Cyclohexane	(2)	7.168	56	232443	21.474
56) Carbon Tetrachloride	(2)	7.281	117	165383	20.413
55) 1,1-Dichloropropene	(2)	7.284	75	180448	20.357
58) Isobutyl Alcohol	(1)	7.454	41	194524	495.653
57)\$1,2-Dichloroethane-d4	(2)	7.519	102	84686	49.860
60) Benzene	(2)	7.551	78	549814	20.037
61) 1,2-Dichloroethane	(2)	7.625	62	181543	19.737
65) t-Amyl methyl ether	(2)	7.734	73	388580	20.176
66)*Fluorobenzene	(2)	7.950	96	1328679	50.000
67) n-Heptane	(2)	7.956	43	195566	20.416
69) n-Butanol	(1)	8.313	56	319239	997.615
71) Trichloroethene	(2)	8.422	95	138805	19.990
72) Methylcyclohexane	(2)	8.721	83	230091	20.379
73) 1,2-Dichloropropane	(2)	8.757	63	143846	20.346
76) Methyl Methacrylate	(2)	8.834	69	119148	19.600
75) 1,4-Dioxane	(1)	8.840	88	49173M	511.194
74) Dibromomethane	(2)	8.866	93	92229	19.947
78) Bromodichloromethane	(2)	9.104	83	164272	19.817
79) 2-Nitropropane	(2)	9.374	41	43949	17.683
80) 2-Chloroethyl Vinyl Ether	(2)	9.451	63	96311	20.458
81) cis-1,3-Dichloropropene	(2)	9.628	75	217653	20.091
82) 4-Methyl-2-pentanone	(2)	9.795	43	988209	99.516
83)\$Toluene-d8	(3)	9.924	98	1360447	49.949
88) Toluene	(3)	9.998	92	346986	19.987
90) 1,3-Dichloropropene (total)	(3)		100	414410	39.844
89) trans-1,3-Dichloropropene	(3)	10.249	75	196757	19.753
91) Ethyl Methacrylate	(3)	10.303	69	207140	20.667
92) 1,1,2-Trichloroethane	(3)	10.451	97	138453	20.553
93) Tetrachloroethene	(3)	10.528	166	153665	20.770
94) 1,3-Dichloropropane	(3)	10.609	76	223187	19.812
96) 2-Hexanone	(3)	10.660	43	781980	107.421
97) Dibromochloromethane	(3)	10.818	129	142177	20.290
99) 1,2-Dibromoethane	(3)	10.930	107	143222	19.783
100)*Chlorobenzene-d5	(3)	11.351	117	1060223	50.000

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 2 of 4

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 on 05/06/2020 at 08:00.

Target 3.5 esignature user ID: dvv10203

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may04i.b/ly04v01.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 14:52

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 19:29

Date, time and analyst ID of latest file update: 04-May-2020 20:11 sej02002

Sample Name: ICVLLG

Lab Sample ID: ICVLLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
101) 1-Chlorohexane	(3)	11.358	91	177481	19.977
102) Chlorobenzene	(3)	11.380	112	403802	20.255
103) 1,1,1,2-Tetrachloroethane	(3)	11.458	131	133891	19.811
104) Ethylbenzene	(3)	11.461	91	665092	20.697
106) m+p-Xylene	(3)	11.573	106	539656	42.741
108) Xylene (Total)	(3)		106	798814	63.966
107) o-Xylene	(3)	11.901	106	259158	21.225
109) Styrene	(3)	11.917	104	425651	21.435
110) Bromoform	(3)	12.072	173	98703	19.348
111) Isopropylbenzene	(3)	12.197	105	672074	21.691
112) Cyclohexanone	(1)	12.277	55	174130	486.309
114) \$4-Bromofluorobenzene	(3)	12.342	95	522085	49.817
116) 1,1,2,2-Tetrachloroethane	(4)	12.441	83	216158M	19.631
115) Bromobenzene	(4)	12.461	156	176337	19.952
118) trans-1,4-Dichloro-2-butene	(4)	12.467	53	326570	101.958
117) 1,2,3-Trichloropropane	(4)	12.490	110	66018	19.632
119) n-Propylbenzene	(4)	12.522	91	805085	21.076
120) 2-Chlorotoluene	(4)	12.602	126	165995	20.341
122) 1,3,5-Trimethylbenzene	(4)	12.657	105	584710	21.184
121) 4-Chlorotoluene	(4)	12.692	126	171352	20.230
124) tert-Butylbenzene	(4)	12.898	134	120476M	21.234
125) Pentachloroethane	(4)	12.933	167	103397	20.520
126) 1,2,4-Trimethylbenzene	(4)	12.940	105	603784	21.157
127) sec-Butylbenzene	(4)	13.062	105	729406	21.705
129) 1,3-Dichlorobenzene	(4)	13.162	146	341577	20.740
130) p-Isopropyltoluene	(4)	13.165	119	640341	22.238
131) *1,4-Dichlorobenzene-d4	(4)	13.216	152	603976	50.000
133) 1,4-Dichlorobenzene	(4)	13.236	146	352089	20.370
134) 1,2,3-Trimethylbenzene	(4)	13.245	105	631126	21.285
135) Benzyl Chloride	(4)	13.313	91	436330	19.448
136) 1,3-Diethylbenzene	(4)	13.367	119	388528	20.941
141) Diethylbenzene (total)	(4)		100	1127079	62.827
137) 1,4-Diethylbenzene	(4)	13.438	119	407378	20.977
139) n-Butylbenzene	(4)	13.457	92	311525	21.057
138) 1,2-Dichlorobenzene	(4)	13.496	146	335221	20.222
140) 1,2-Diethylbenzene	(4)	13.512	119	331173	20.910
142) 1,2-Dibromo-3-chloropropane	(4)	14.036	75	45288	18.583
144) 1,3,5-Trichlorobenzene	(4)	14.158	180	252472	20.218

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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on 05/06/2020 at 08:00.

Target 3.5 esignature user ID: dvv10203

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may04i.b/ly04v01.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 14:52

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 19:29

Date, time and analyst ID of latest file update: 04-May-2020 20:11 sej02002

Sample Name: ICVLLG

Lab Sample ID: ICVLLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
146) 1,2,4-Trichlorobenzene	(4)	14.583	180	239361	20.511
147) Hexachlorobutadiene	(4)	14.663	225	102388	19.019
148) Naphthalene	(4)	14.766	128	784765	20.775
149) 1,2,3-Trichlorobenzene	(4)	14.911	180	239315	20.637
150) 2-Methylnaphthalene	(4)	15.560	142	394789	16.057

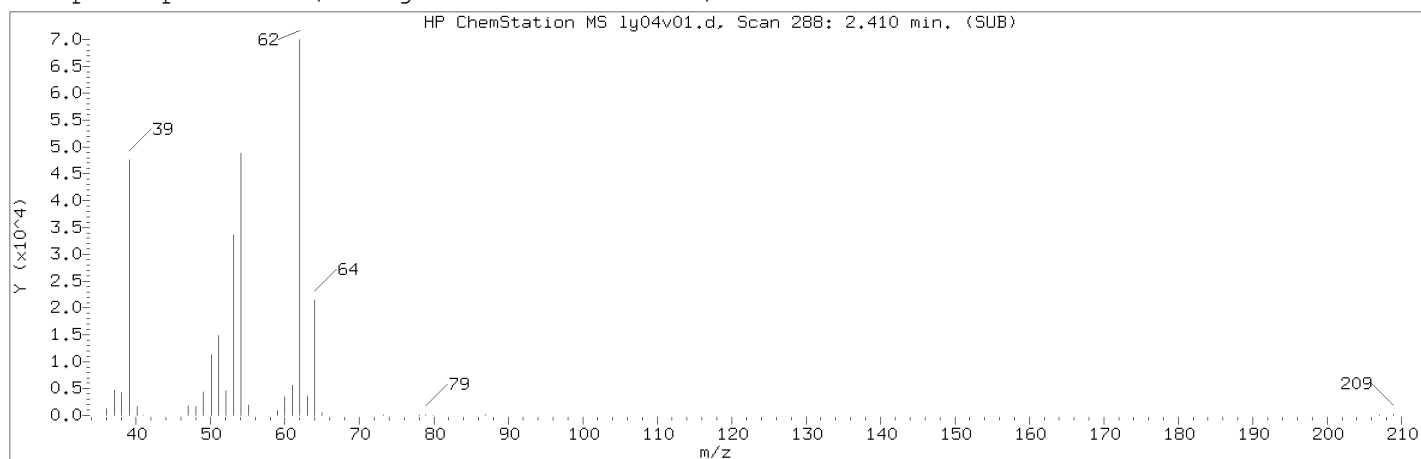
page 4 of 4

Digitally signed by Don V. Viray
on 05/06/2020 at 08:00.

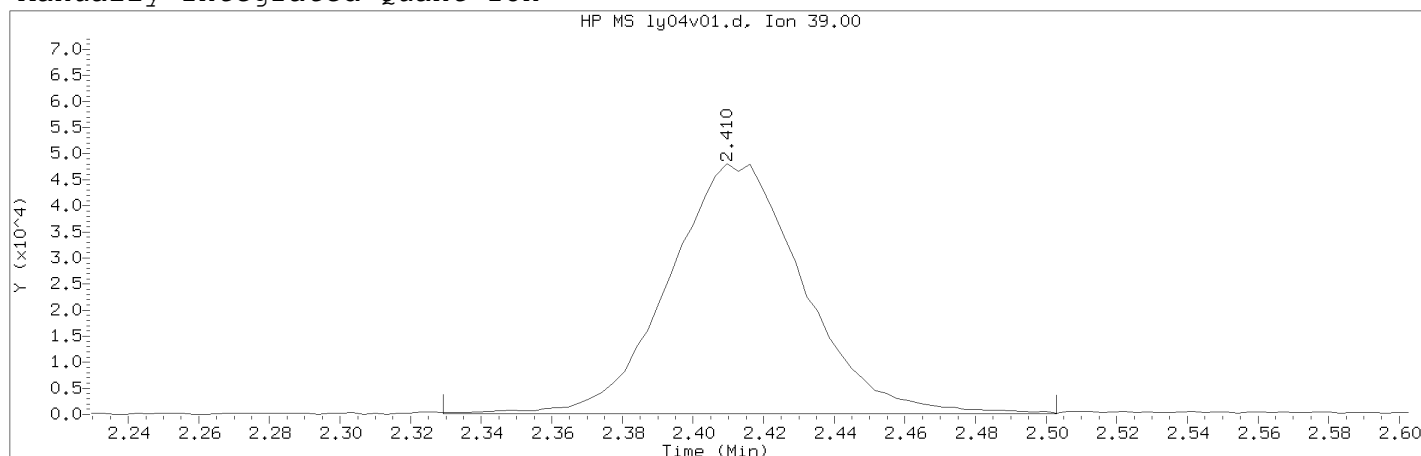
Target 3.5 esignature user ID: dvv10203

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Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04v01.d Instrument ID: HP09915.i
 Injection date and time: 04-MAY-2020 14:52 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 04-MAY-2020 19:29
 Date, time and analyst ID of latest file update: 04-May-2020 20:11 sej02002

Sample Name: ICVLLG

Lab Sample ID: ICVLLG

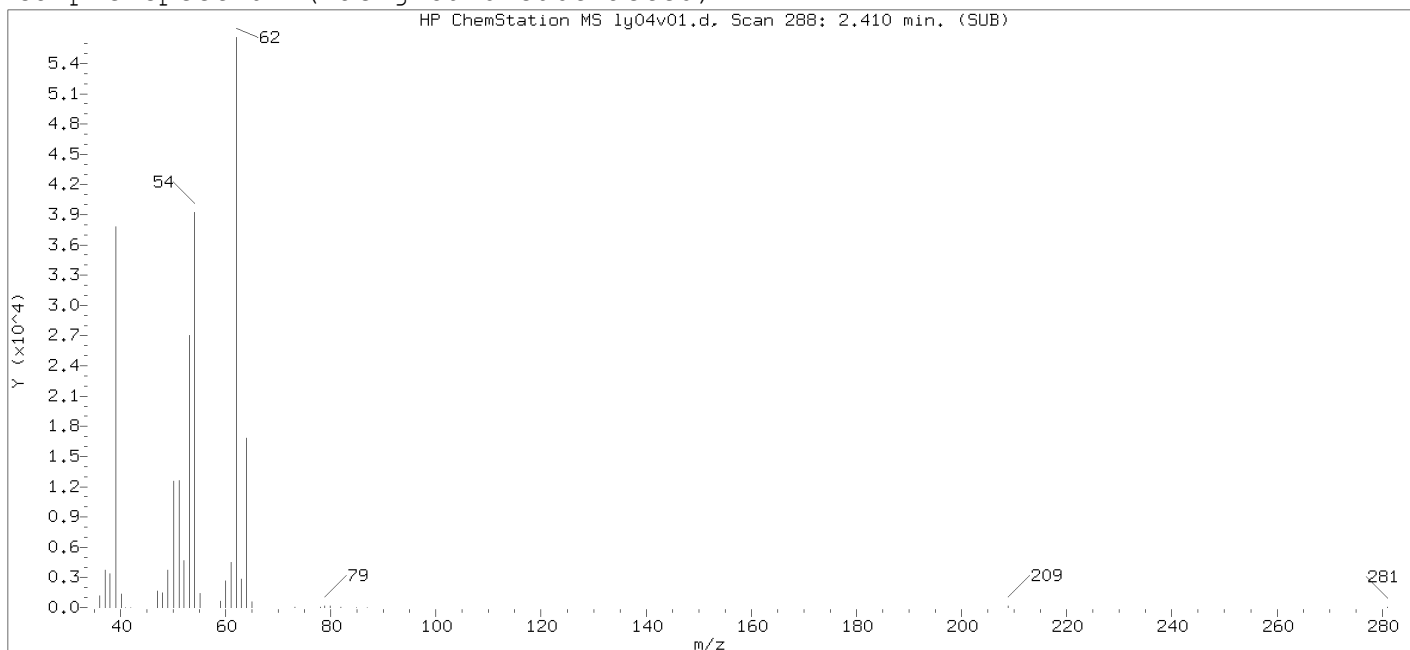
Compound Number : 5
 Compound Name : 1,3-Butadiene
 Scan Number : 288
 Retention Time (minutes): 2.410
 Quant Ion : 39.00
 Area (flag) : 127548M
 On-Column Amount (ng) : 23.3717
 Integration start scan : 262 Integration stop scan: 316
 Y at integration start : 100 Y at integration end: 100

Reason for manual integration: improper integration

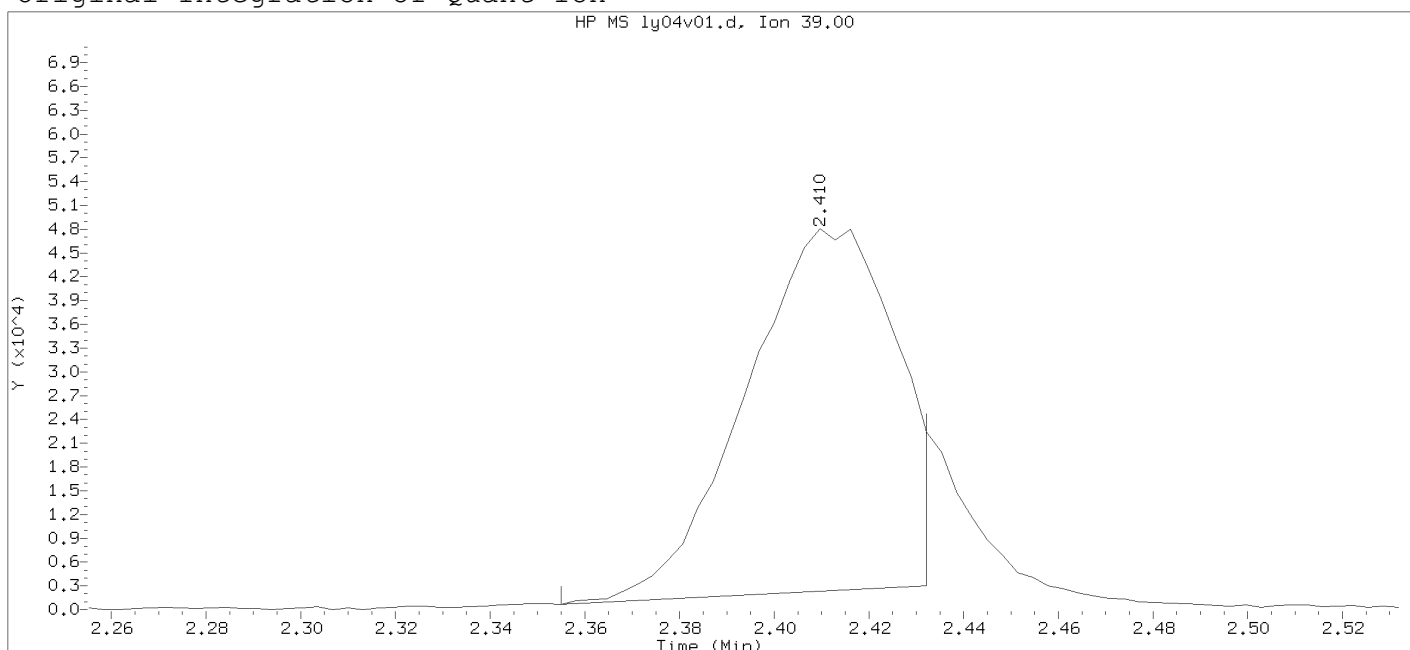
Analyst responsible for change: Digitally signed by Don V. Viray
 on 05/06/2020 at 08:00.
 Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/06/2020 at 08:34.
 PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20may04i.b/ly04v01.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 14:52

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 14:47

Date, time and analyst ID of latest file update: 04-May-2020 15:09 Automation

Sample Name: ICVLLG

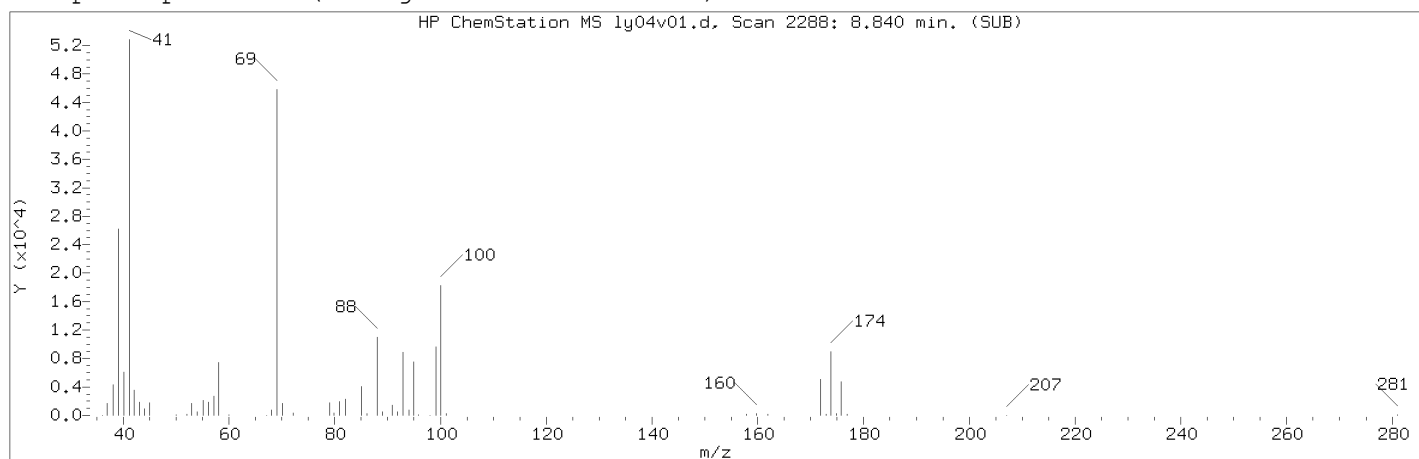
Lab Sample ID: ICVLLG

Compound Number	: 5	
Compound Name	: 1,3-Butadiene	
Scan Number	: 288	
Retention Time (minutes)	: 2.410	
Quant Ion	: 39.00	
Area	: 99799	
On-column Amount (ng)	: 22.0790	
Integration start scan	: 270	Integration stop scan: 294
Y at integration start	: 715	Y at integration end: 3016

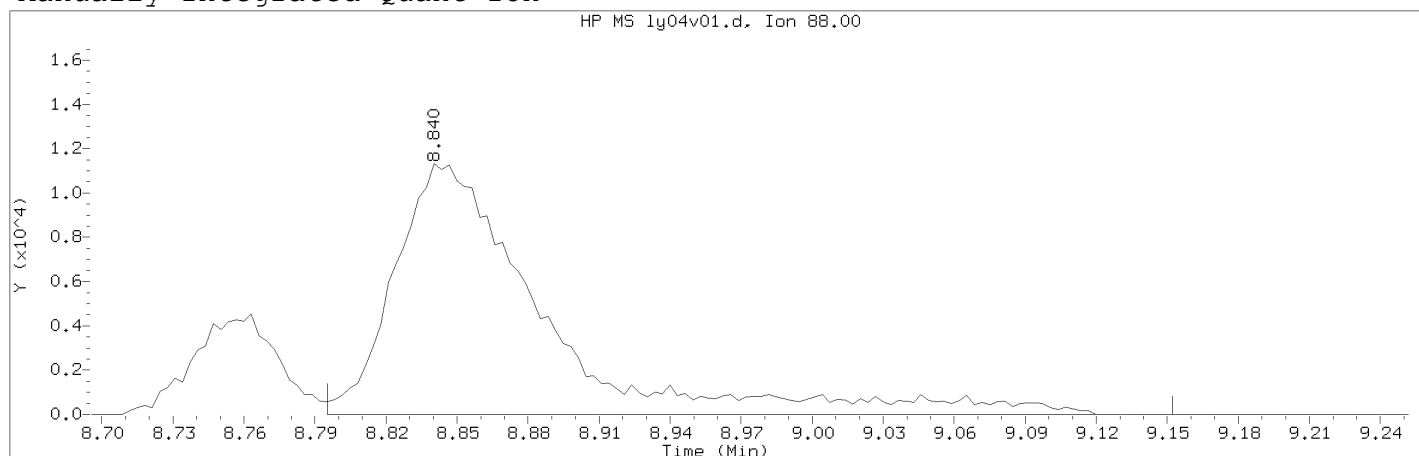
Digitally signed by Don V. Viray on 05/06/2020 at 08:00.

Target 3.5 esignature user KR446d Page 235 of 579

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04v01.d Instrument ID: HP09915.i
 Injection date and time: 04-MAY-2020 14:52 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 04-MAY-2020 19:29
 Date, time and analyst ID of latest file update: 04-May-2020 20:11 sej02002

Sample Name: ICVLLG

Lab Sample ID: ICVLLG

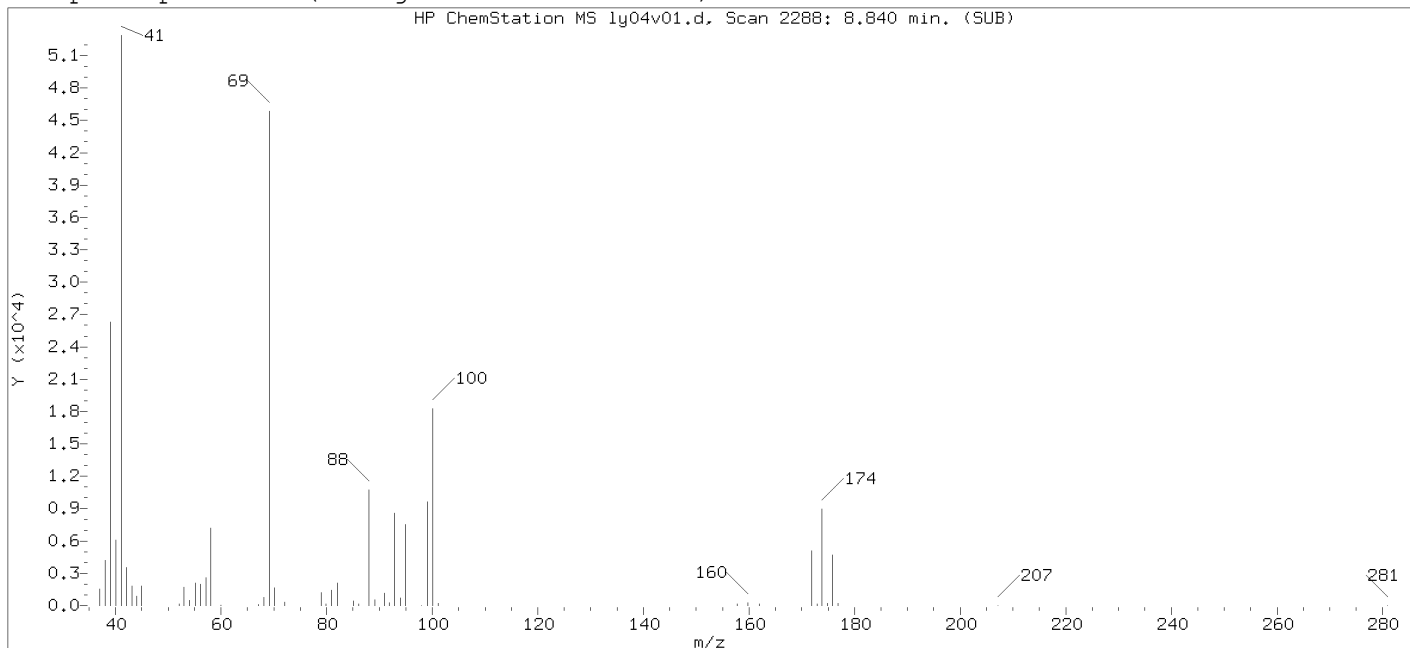
Compound Number : 75
 Compound Name : 1,4-Dioxane
 Scan Number : 2288
 Retention Time (minutes): 8.840
 Quant Ion : 88.00
 Area (flag) : 49173M
 On-Column Amount (ng) : 511.1942
 Integration start scan : 2273 Integration stop scan: 2384
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

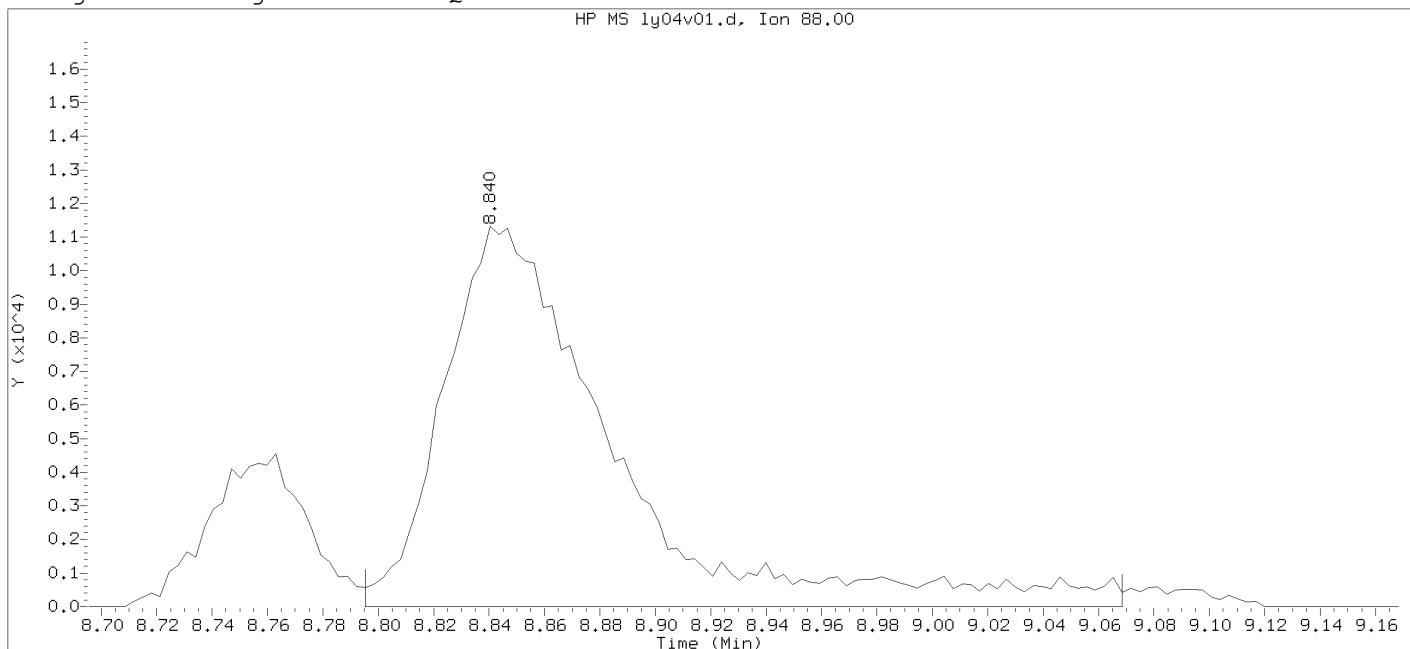
Analyst responsible for change: Digitally signed by Don V. Viray
 on 05/06/2020 at 08:00.
 Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/06/2020 at 08:34.
 PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20may04i.b/ly04v01.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 14:52

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 14:47

Date, time and analyst ID of latest file update: 04-May-2020 15:09 Automation

Sample Name: ICVLLG

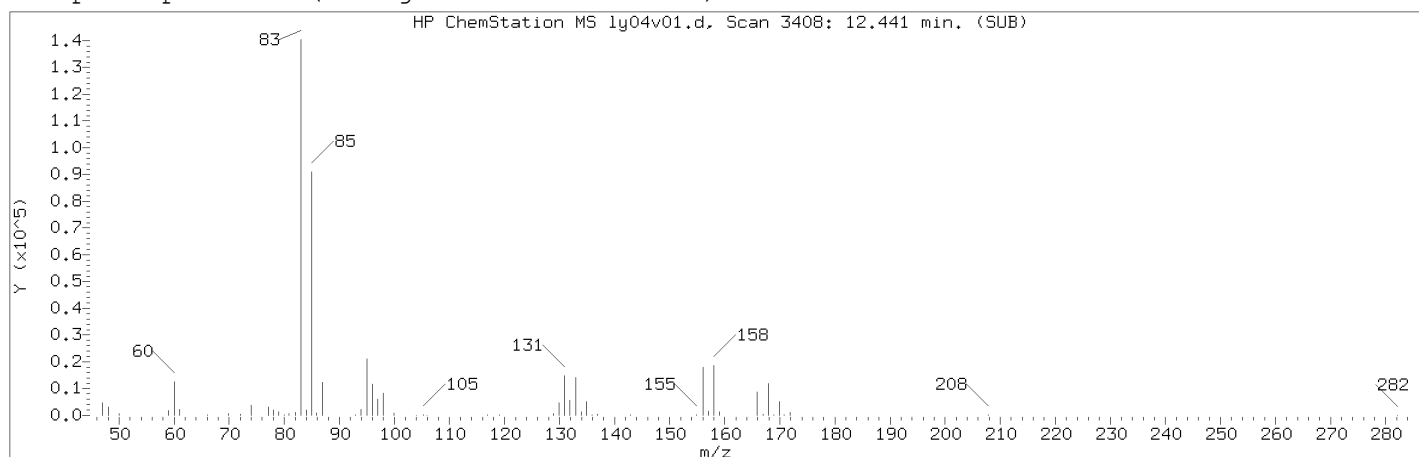
Lab Sample ID: ICVLLG

Compound Number : 75
 Compound Name : 1,4-Dioxane
 Scan Number : 2288
 Retention Time (minutes): 8.840
 Quant Ion : 88.00
 Area : 47936
 On-column Amount (ng) : 514.2935
 Integration start scan : 2273 Integration stop scan: 2358
 Y at integration start : 0 Y at integration end: 0

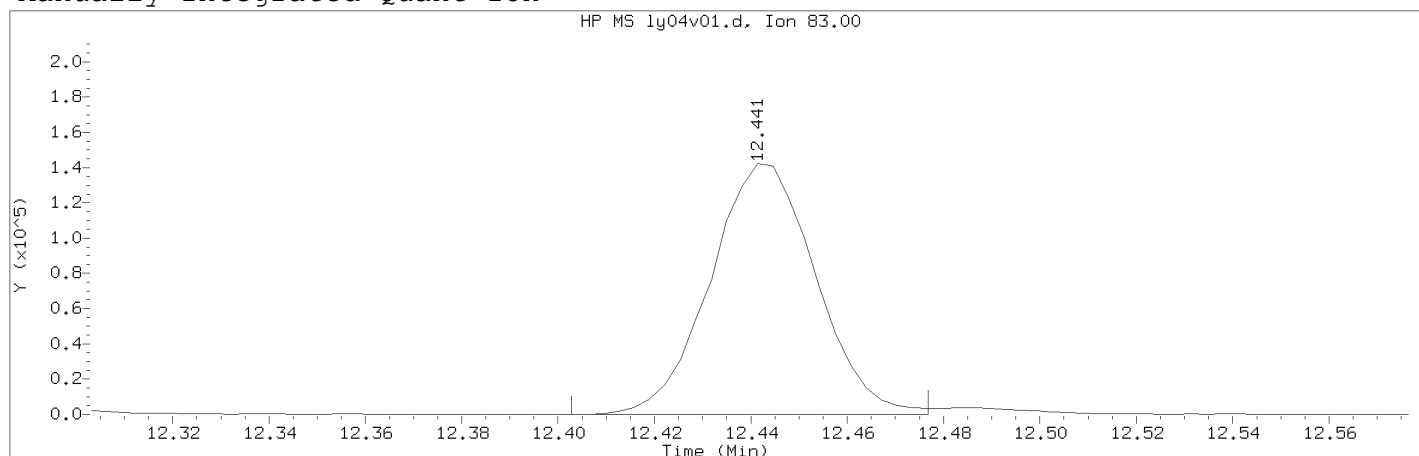
Digitally signed by Don V. Viray on 05/06/2020 at 08:00.

Target 3.5 esignature user KR446d Page 237 of 579

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04v01.d Instrument ID: HP09915.i
 Injection date and time: 04-MAY-2020 14:52 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 04-MAY-2020 19:29
 Date, time and analyst ID of latest file update: 04-May-2020 20:11 sej02002

Sample Name: ICVLLG

Lab Sample ID: ICVLLG

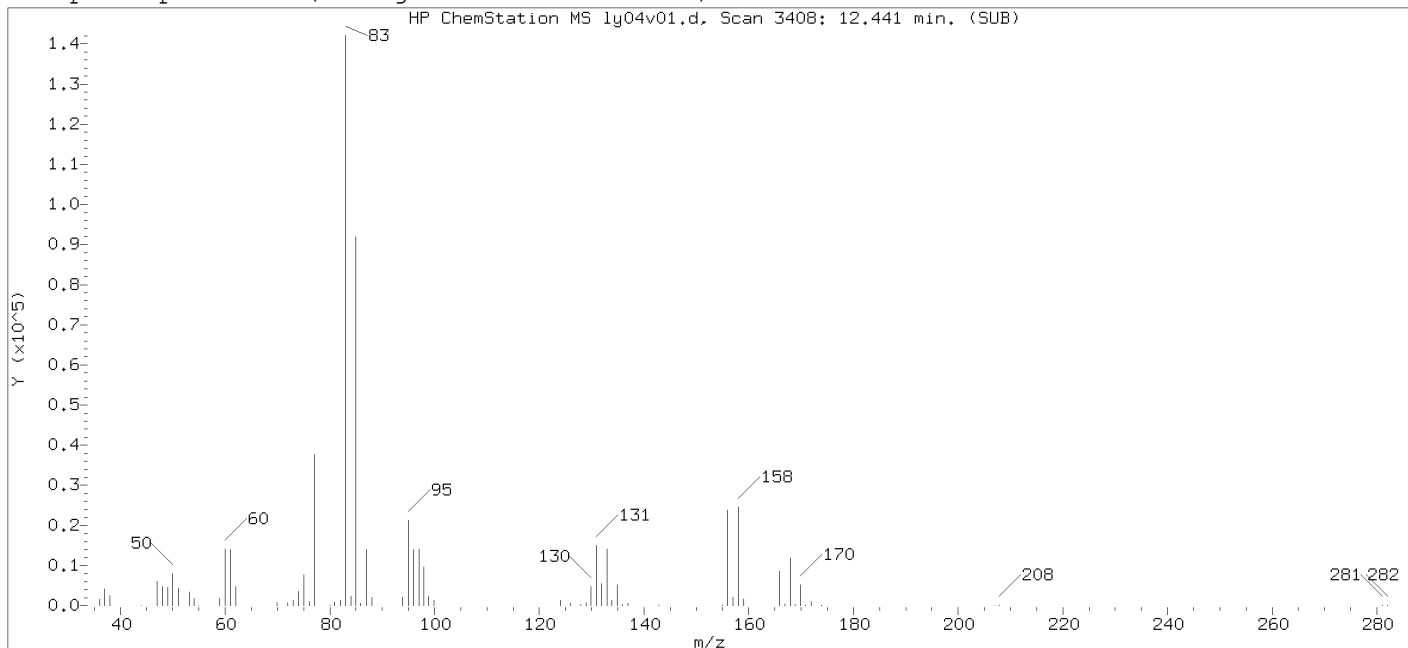
Compound Number : 116
 Compound Name : 1,1,2,2-Tetrachloroethane
 Scan Number : 3408
 Retention Time (minutes): 12.441
 Quant Ion : 83.00
 Area (flag) : 216158M
 On-Column Amount (ng) : 19.6314
 Integration start scan : 3395 Integration stop scan: 3418
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

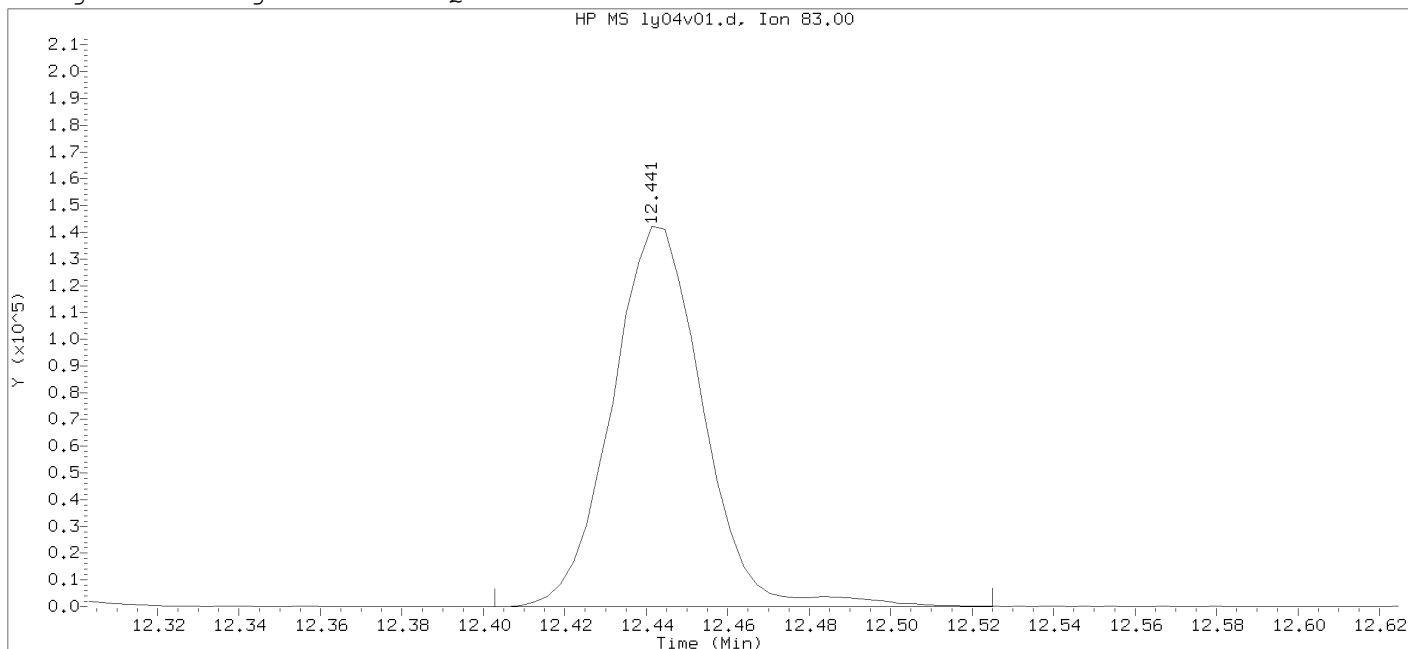
Analyst responsible for change: Digitally signed by Don V. Viray
 on 05/06/2020 at 08:00.
 Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/06/2020 at 08:34.
 PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20may04i.b/ly04v01.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 14:52

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 14:47

Date, time and analyst ID of latest file update: 04-May-2020 15:09 Automation

Sample Name: ICVLLG

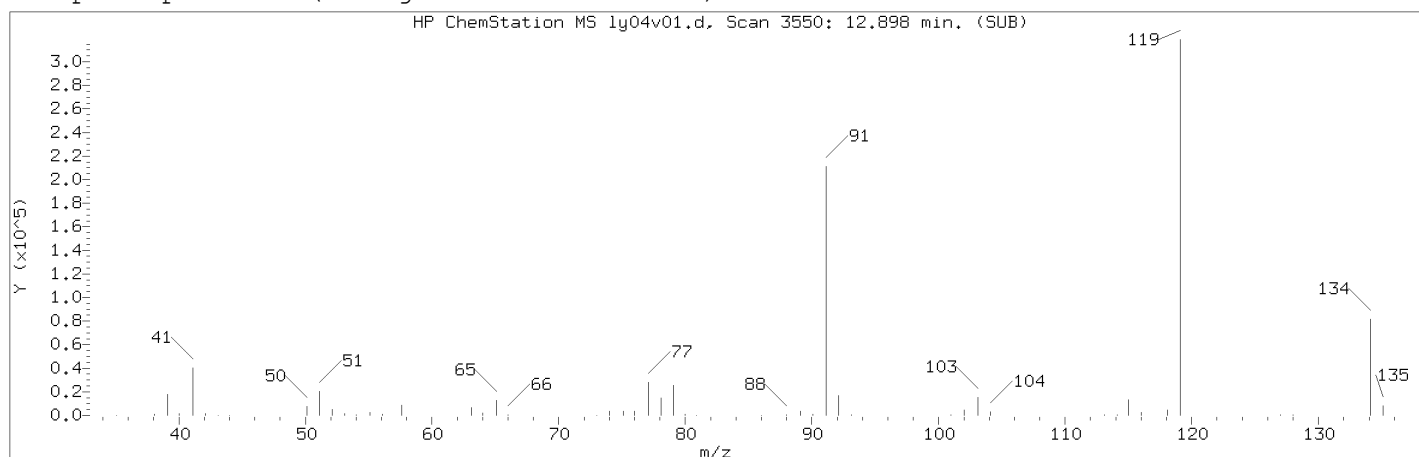
Lab Sample ID: ICVLLG

Compound Number	: 116	
Compound Name	: 1,1,2,2-Tetrachloroethane	
Scan Number	: 3408	
Retention Time (minutes)	: 12.441	
Quant Ion	: 83.00	
Area	: 221202	
On-column Amount (ng)	: 20.1851	
Integration start scan	: 3395	Integration stop scan: 3433
Y at integration start	: 0	Y at integration end: 0

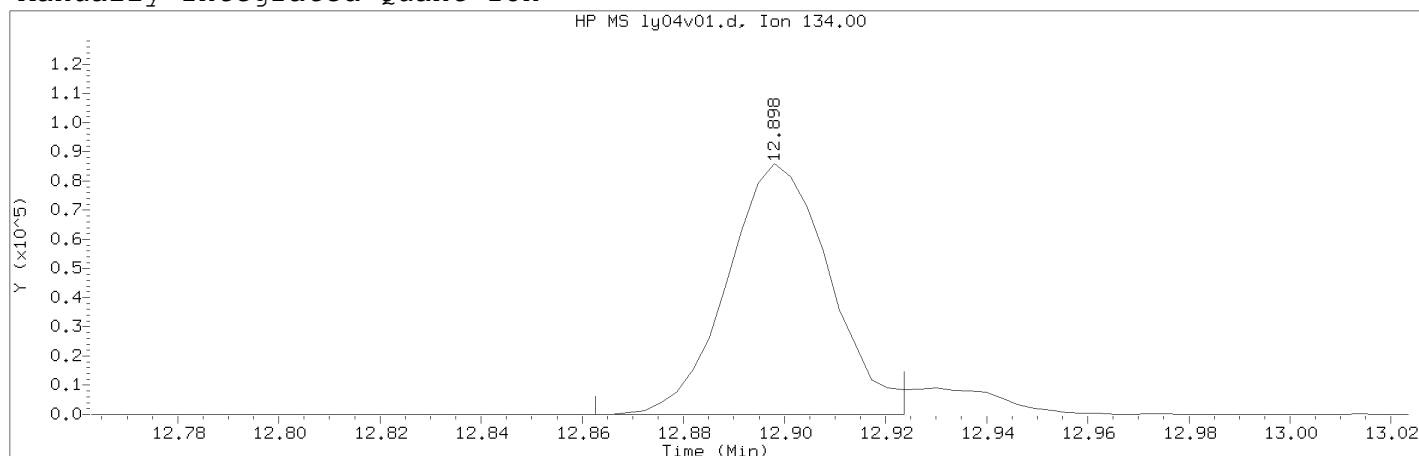
Digitally signed by Don V. Viray on 05/06/2020 at 08:00.

Target 3.5 esignature user KR446 on 05/06/2020 at 08:00

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20may04i.b/1y04v01.d Instrument ID: HP09915.i
 Injection date and time: 04-MAY-2020 14:52 Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 04-MAY-2020 19:29
 Date, time and analyst ID of latest file update: 04-May-2020 20:11 sej02002

Sample Name: ICVLLG

Lab Sample ID: ICVLLG

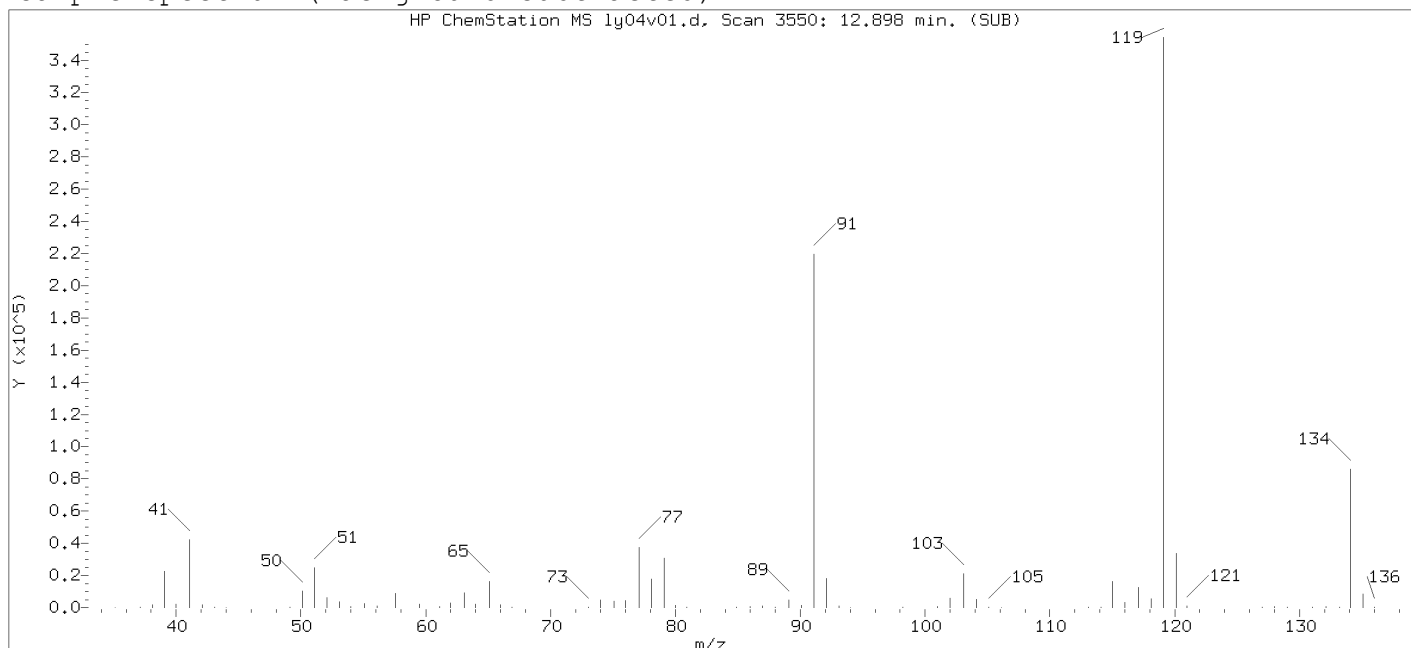
Compound Number : 124
 Compound Name : tert-Butylbenzene
 Scan Number : 3550
 Retention Time (minutes): 12.898
 Quant Ion : 134.00
 Area (flag) : 120476M
 On-Column Amount (ng) : 21.2342
 Integration start scan : 3538 Integration stop scan: 3557
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

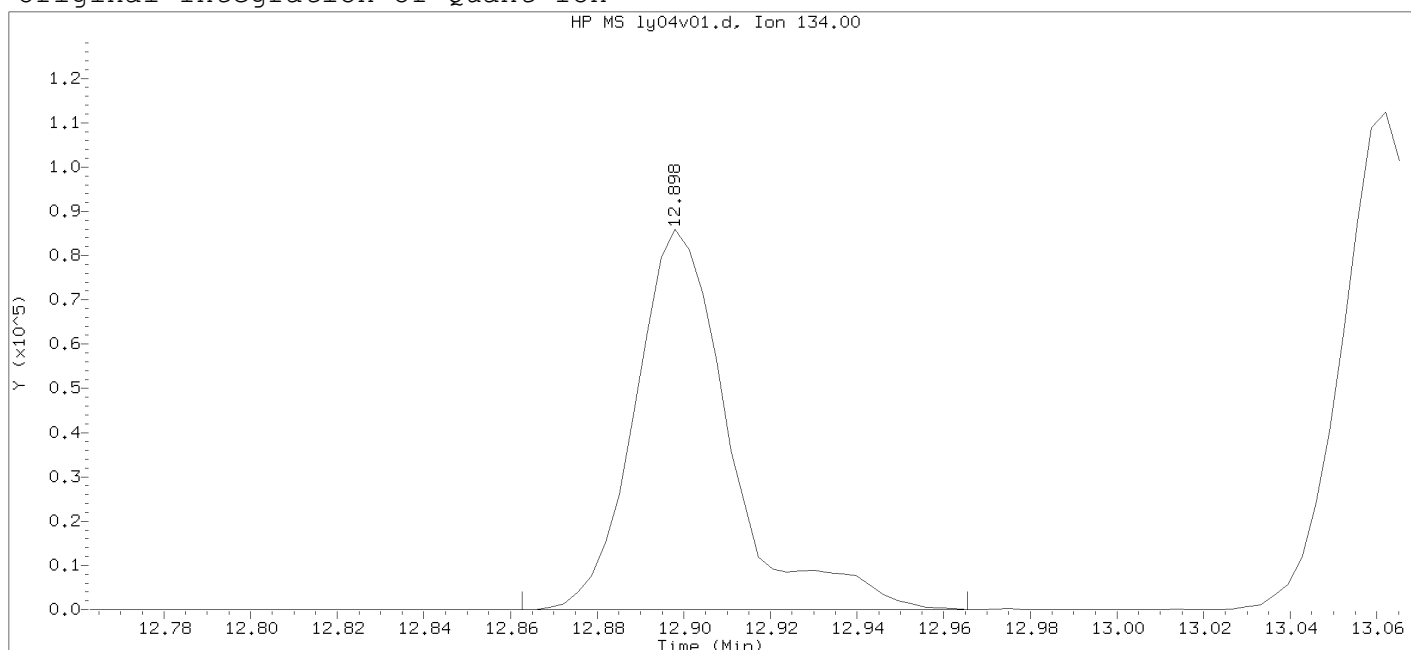
Analyst responsible for change: Digitally signed by Don V. Viray
 on 05/06/2020 at 08:00.
 Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Chelsea B. Riehl on 05/06/2020 at 08:34.
 PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20may04i.b/ly04v01.d

Instrument ID: HP09915.i

Injection date and time: 04-MAY-2020 14:52

Analyst ID: lcp00895

Method used: /chem/HP09915.i/20may04i.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 04-MAY-2020 14:47

Date, time and analyst ID of latest file update: 04-May-2020 15:09 Automation

Sample Name: ICVLLG

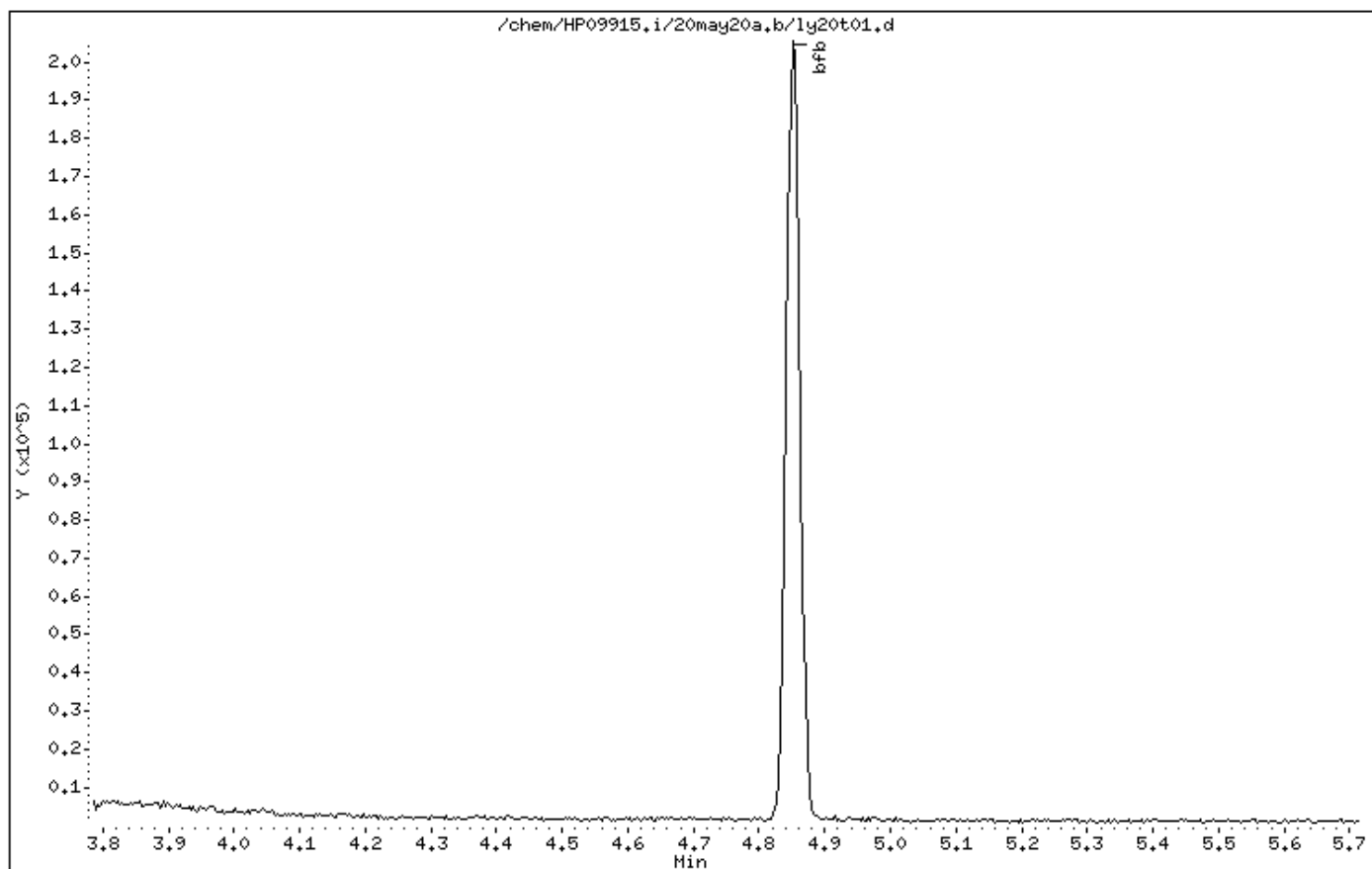
Lab Sample ID: ICVLLG

Compound Number	:	124	
Compound Name	:	tert-Butylbenzene	
Scan Number	:	3550	
Retention Time (minutes)	:	12.898	
Quant Ion	:	134.00	
Area	:	131138	
On-column Amount (ng)	:	22.6204	
Integration start scan	:	3538	Integration stop scan: 3570
Y at integration start	:	0	Y at integration end: 0

Digitally signed by Don V. Viray on 05/06/2020 at 08:00.

Target 3.5 esignature user KR446 Page 241 of 579

Column diameter: 0.25



Data File: /chem/HP09915.i/20may20a,b/1y20t01.d

Date : 20-MAY-2020 07:40

Client ID: jan28-20

Instrument: HP09915.i

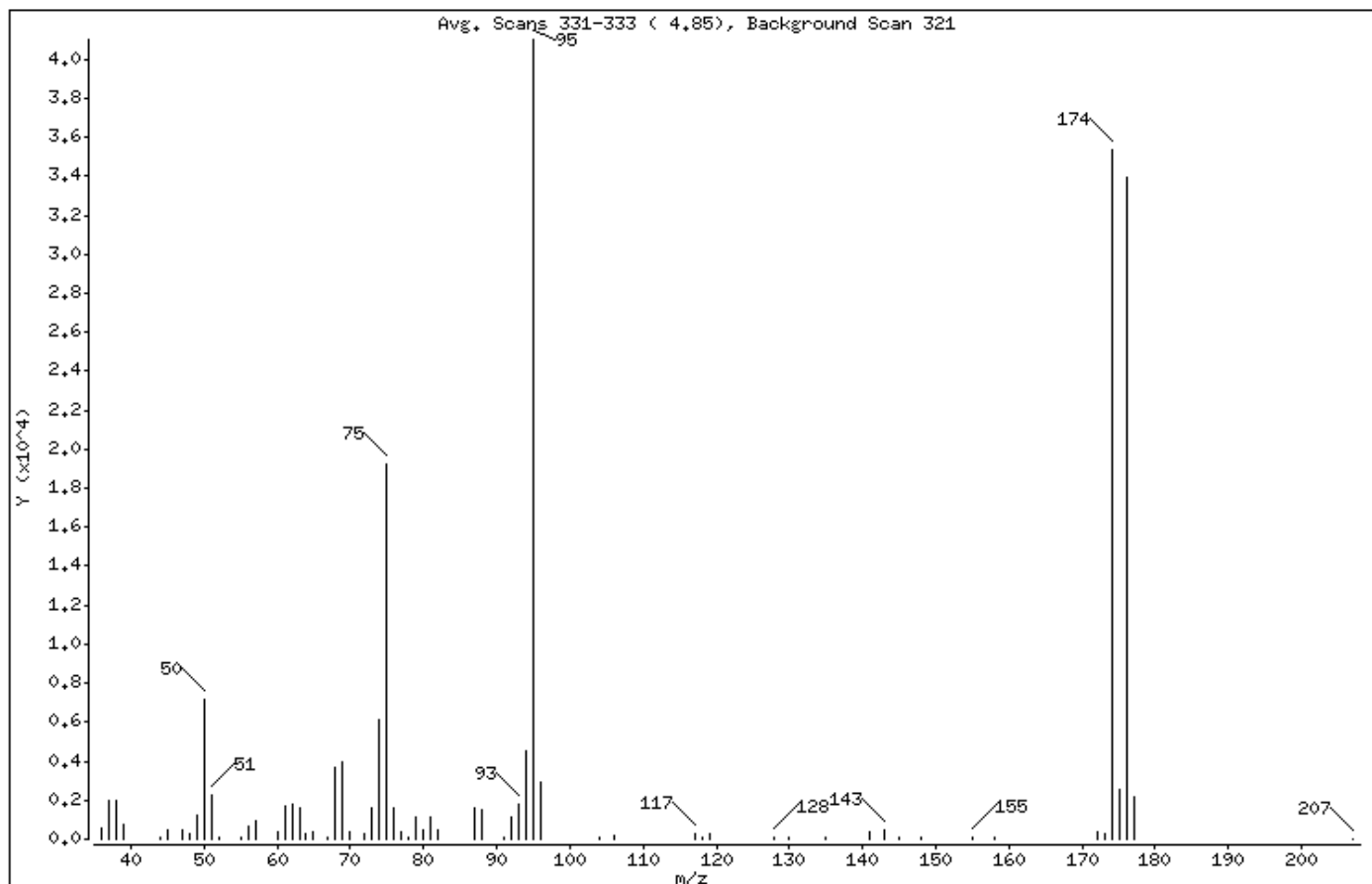
Sample Info: jan28-20;50NGBFB;1;3;++++;

Operator: CLM27445

Column phase: Rxi-624S11 MS

Column diameter: 0.25

1 bfb



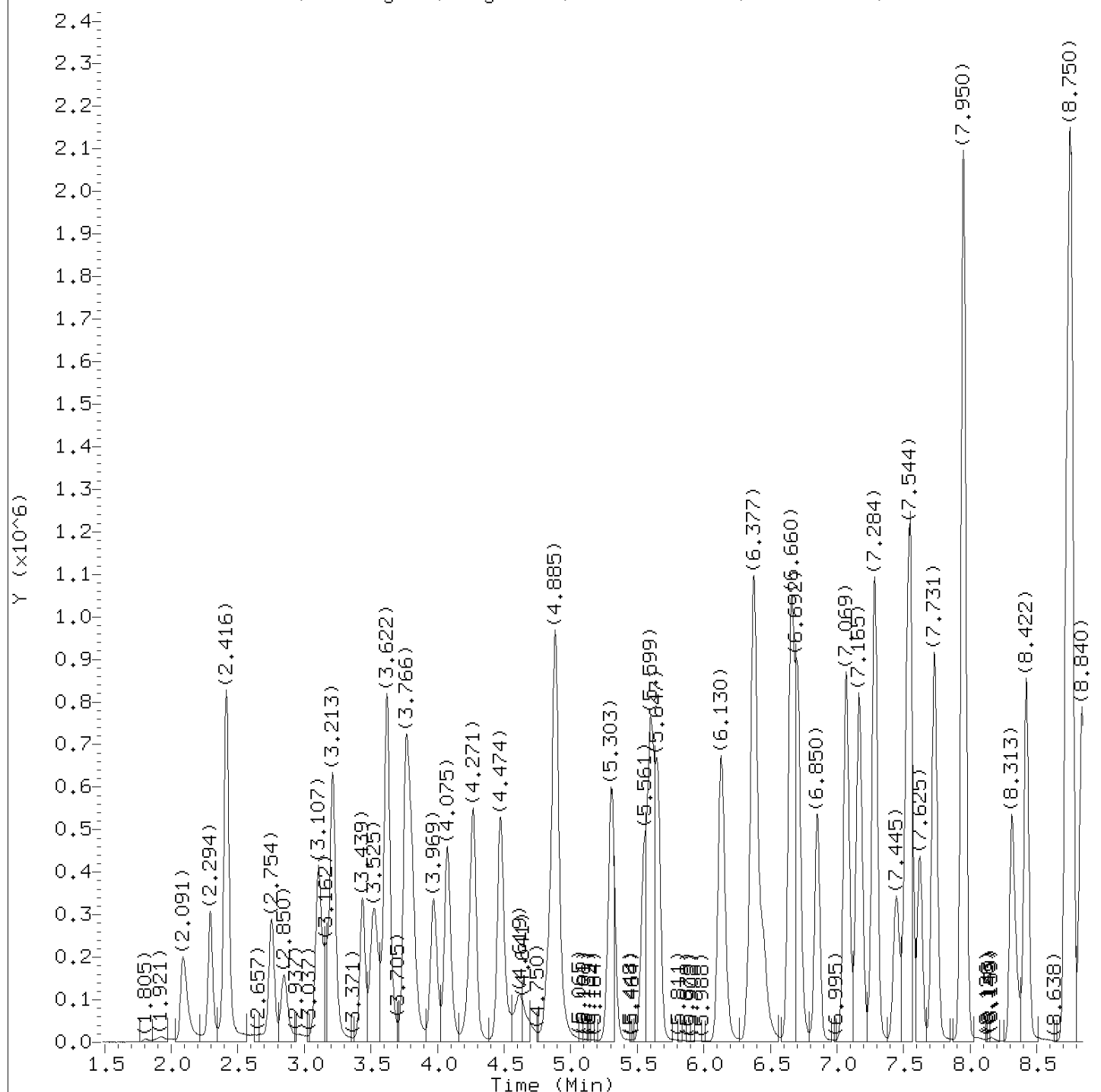
m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	17.53
75	30.00 - 60.00% of mass 95	46.94
96	5.00 - 9.00% of mass 95	7.09
173	Less than 2.00% of mass 174	0.67 (0.78)
174	50.00 - 100.00% of mass 95	86.31
175	5.00 - 9.00% of mass 174	6.16 (7.14)
176	95.00 - 101.00% of mass 174	82.81 (95.95)
177	5.00 - 9.00% of mass 176	5.33 (6.43)

Column diameter: 0.25

Number of points: 65

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36,00	590	62,00	1748	81,00	1159	135,00	60
37,00	1958	63,00	1563	82,00	452	141,00	378
38,00	1959	64,00	304	87,00	1598	143,00	469
39,00	715	65,00	330	88,00	1533	145,00	116
44,00	132	67,00	52	91,00	61	148,00	57
45,00	448	68,00	3676	92,00	1094	155,00	73
47,00	429	69,00	3986	93,00	1803	158,00	52
48,00	263	70,00	410	94,00	4514	172,00	349
49,00	1235	72,00	254	95,00	41008	173,00	276
50,00	7189	73,00	1649	96,00	2907	174,00	35392
51,00	2217	74,00	6152	104,00	122	175,00	2527
52,00	62	75,00	19248	106,00	219	176,00	33960
55,00	74	76,00	1639	117,00	283	177,00	2184
56,00	631	77,00	337	118,00	138	207,00	10
57,00	970	78,00	96	119,00	243		
60,00	391	79,00	1086	128,00	124		
61,00	1742	80,00	475	130,00	114		

/chem/HP09915.i/20may20a.b/ly20c01.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20may20a.b/ly20c01.d
 Injection date and time: 20-MAY-2020 08:26

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m
 Calibration date and time: 20-MAY-2020 08:48

Sublist used: 8260W

Date, time and analyst ID of latest file update: 20-May-2020 08:48 clm27445

Sample Name: VSTD050

Lab Sample ID: VSTD050

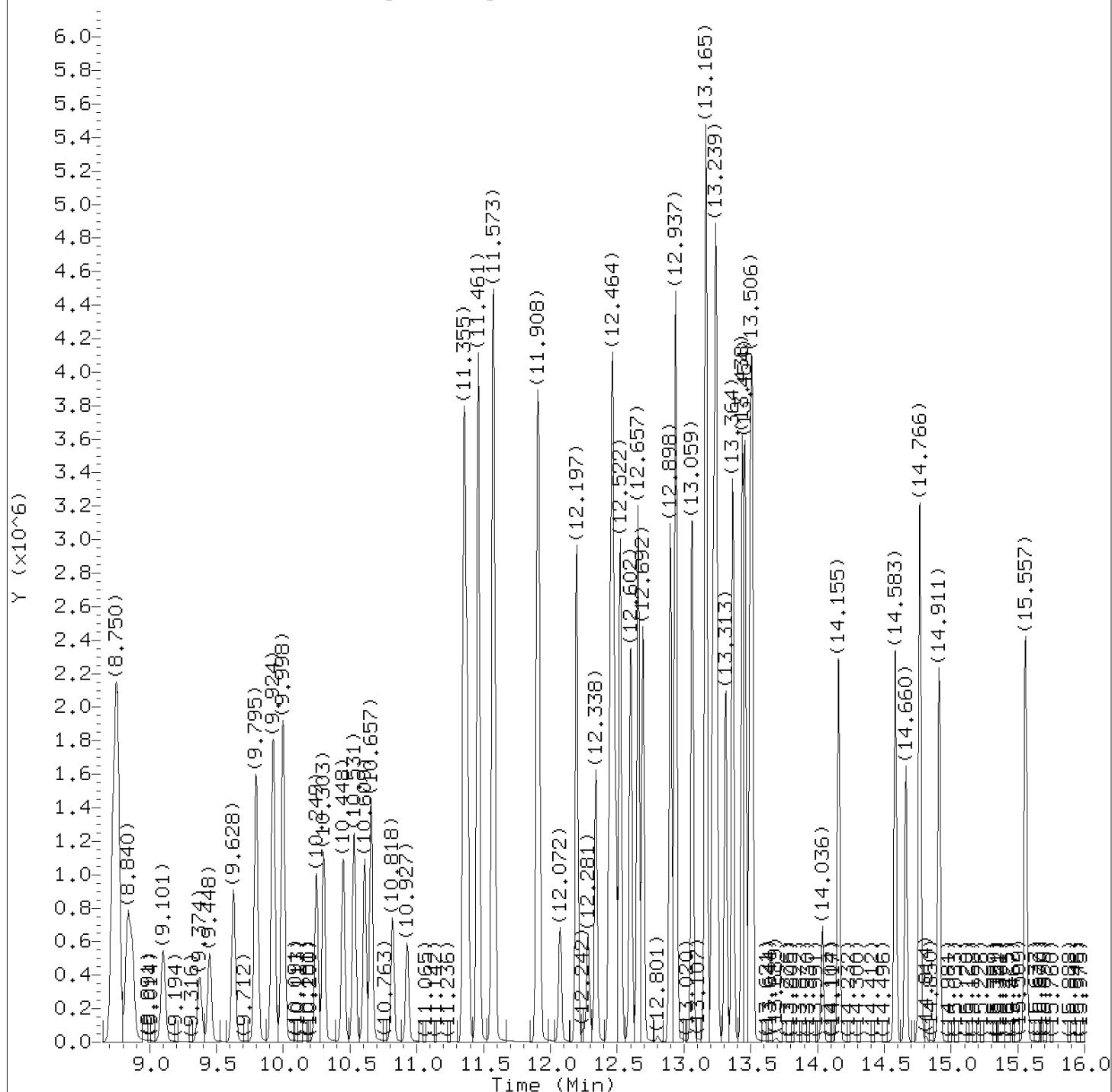
Digitally signed by Corie L. Mellinger
 on 05/20/2020 at 08:53.

Target 3.5 esignature user ID: clm27445

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/chem/HP09915.i/20may20a.b/ly20c01.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20may20a.b/ly20c01.d
 Injection date and time: 20-MAY-2020 08:26

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m
 Calibration date and time: 20-MAY-2020 08:48

Sublist used: 8260W

Date, time and analyst ID of latest file update: 20-May-2020 08:48 clm27445

Sample Name: VSTD050

Lab Sample ID: VSTD050

Digitally signed by Corie L. Mellinger
 on 05/20/2020 at 08:53.

Target 3.5 esignature user ID: clm27445

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may20a.b/ly20c01.d
 Injection date and time: 20-MAY-2020 08:26

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 20-MAY-2020 08:48

Date, time and analyst ID of latest file update: 20-May-2020 08:48 clm27445

Sample Name: VSTD050

Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
3) Dichlorodifluoromethane	(2)	2.091	85	442153	44.405
4) Chloromethane	(2)	2.294	50	446871	48.068
5) 1,3-Butadiene	(2)	2.413	39	407430	68.315
6) Vinyl Chloride	(2)	2.416	62	419350	46.743
8) Bromomethane	(2)	2.754	94	291506	45.067
9) Chloroethane	(2)	2.850	64	231375	46.192
10) Dichlorofluoromethane	(2)	3.104	67	509338	47.141
12) Trichlorofluoromethane	(2)	3.159	101	447674	45.689
11) n-Pentane	(2)	3.213	43	627478	68.206
14) Ethyl ether	(2)	3.439	59	283248	40.911
15) Freon 123a	(2)	3.522	67	402202M	50.668
16) Acrolein	(1)	3.622	56	1260622	516.158
17) 1,1-Dichloroethene	(2)	3.763	96	304191	48.681
17) 1,1-Dichloroethene	(2)	3.766	63	156764	52.676
19) Freon 113	(2)	3.799	101	337055	51.990
18) Acetone	(1)	3.805	58	109308	98.118
22) Methyl Iodide	(2)	3.969	142	575148	47.761
21) 2-Propanol	(1)	3.985	45	196847	277.235
23) Carbon Disulfide	(2)	4.075	76	1099378	52.253
27) Methyl Acetate	(2)	4.246	43	401230	50.345
25) Allyl Chloride	(2)	4.271	41	522281	51.577
28) Methylene Chloride	(2)	4.474	84	366712	49.335
29) *t-Butyl alcohol-d10	(1)	4.496	65	296875M	250.000
30) t-Butyl alcohol	(1)	4.625	59	310802	259.320
31) Acrylonitrile	(2)	4.821	53	213174	48.286
33) Methyl Tertiary Butyl Ether	(2)	4.879	73	999325	46.632
32) trans-1,2-Dichloroethene	(2)	4.889	96	351904	48.954
34) n-Hexane	(2)	5.303	57	527722	52.421
36) 1,1-Dichloroethane	(2)	5.545	63	615338	48.805
38) di-Isopropyl ether	(2)	5.599	45	1146181	51.690
39) 2-Chloro-1,3-butadiene	(2)	5.654	53	530223	52.734
40) Ethyl t-butyl ether	(2)	6.130	59	992207	48.159
43) 1,2-Dichloroethene (Total)	(2)		96	749977	98.334
44) 2-Butanone	(2)	6.352	43	553056	103.206
42) cis-1,2-Dichloroethene	(2)	6.374	96	398073	49.380
45) 2,2-Dichloropropane	(2)	6.384	77	502669	51.586
47) Propionitrile	(1)	6.445	54	466279	287.974
48) Methacrylonitrile	(2)	6.657	67	587507	132.740

M = Compound was manually integrated.

* = Compound is an internal standard.

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Digitally signed by Corie L. Mellinger
 on 05/20/2020 at 08:53.

Target 3.5 esignature user ID: clm27445

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may20a.b/ly20c01.d
 Injection date and time: 20-MAY-2020 08:26

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 20-MAY-2020 08:48

Date, time and analyst ID of latest file update: 20-May-2020 08:48 clm27445

Sample Name: VSTD050

Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
49) Bromochloromethane	(2)	6.702	128	207573	49.904
50) Tetrahydrofuran	(1)	6.712	71	144055	101.684
51) Chloroform	(2)	6.853	83	606972	49.277
52)\$Dibromofluoromethane	(2)	7.065	113	347704	47.533
52)\$Dibromofluoromethane	(2)	7.069	111	356540	47.681
53) 1,1,1-Trichloroethane	(2)	7.072	97	521492	49.349
54) Cyclohexane	(2)	7.165	56	624387	52.783
54) Cyclohexane	(2)	7.168	84	517816	50.149
54) Cyclohexane	(2)	7.162	69	185780	50.538
56) Carbon Tetrachloride	(2)	7.274	117	450716	50.906
55) 1,1-Dichloropropene	(2)	7.284	75	475694	49.106
58) Isobutyl Alcohol	(1)	7.445	41	318657	783.745
57)\$1,2-Dichloroethane-d4	(2)	7.519	102	88342	47.594
57)\$1,2-Dichloroethane-d4	(2)	7.522	65	407142	49.416
57)\$1,2-Dichloroethane-d4	(2)	7.522	104	54792	46.357
60) Benzene	(2)	7.551	78	1467783	48.947
61) 1,2-Dichloroethane	(2)	7.625	62	494867	49.230
61) 1,2-Dichloroethane	(2)	7.625	98	47260	48.247
65) t-Amyl methyl ether	(2)	7.731	73	1002570	47.635
67) n-Heptane	(2)	7.950	43	599022	57.221
66)*Fluorobenzene	(2)	7.950	96	1452026	50.000
69) n-Butanol	(1)	8.313	56	525481	1585.077
71) Trichloroethene	(2)	8.422	95	376459	49.610
72) Methylcyclohexane	(2)	8.724	83	634364	51.411
72) Methylcyclohexane	(2)	8.724	98	287401	51.496
73) 1,2-Dichloropropane	(2)	8.760	63	395880	51.238
76) Methyl Methacrylate	(2)	8.834	69	338857M	51.006
75) 1,4-Dioxane	(1)	8.843	88	83979M	842.690
74) Dibromomethane	(2)	8.872	93	255279	50.520
78) Bromodichloromethane	(2)	9.104	83	467977	51.660
79) 2-Nitropropane	(2)	9.371	41	308883	113.723
80) 2-Chloroethyl Vinyl Ether	(2)	9.448	63	273439	53.150
81) cis-1,3-Dichloropropene	(2)	9.628	75	607044	51.276
82) 4-Methyl-2-pentanone	(2)	9.795	43	1251226	115.299
83)\$Toluene-d8	(3)	9.927	98	1440069	50.200
83)\$Toluene-d8	(3)	9.924	100	929689	49.938
88) Toluene	(3)	9.998	92	942460	51.544
90) 1,3-Dichloropropene (total)	(3)		100	1187377	106.592

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 2 of 4

Digitally signed by Corie L. Mellinger
 on 05/20/2020 at 08:53.

Target 3.5 esignature user ID: clm27445

KR446 Page 248 of 579

Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may20a.b/ly20c01.d
 Injection date and time: 20-MAY-2020 08:26

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 20-MAY-2020 08:48

Date, time and analyst ID of latest file update: 20-May-2020 08:48 clm27445

Sample Name: VSTD050

Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
89) trans-1,3-Dichloropropene	(3)	10.249	75	580333	55.317
91) Ethyl Methacrylate	(3)	10.303	69	597208	56.574
92) 1,1,2-Trichloroethane	(3)	10.448	97	368755	51.973
93) Tetrachloroethene	(3)	10.531	166	393386	50.484
94) 1,3-Dichloropropane	(3)	10.609	76	634278	53.458
96) 2-Hexanone	(3)	10.657	43	943803	123.099
97) Dibromochloromethane	(3)	10.818	129	405101	54.889
99) 1,2-Dibromoethane	(3)	10.927	107	397334	52.108
100) *Chlorobenzene-d5	(3)	11.351	117	1116656	50.000
101) 1-Chlorohexane	(3)	11.358	91	493792	52.771
102) Chlorobenzene	(3)	11.377	112	1109269	52.829
103) 1,1,1,2-Tetrachloroethane	(3)	11.457	131	394378	55.403
104) Ethylbenzene	(3)	11.461	91	1847318	54.581
106) m+p-Xylene	(3)	11.573	106	1478789	111.201
108) Xylene (Total)	(3)		106	2190872	166.573
107) o-Xylene	(3)	11.901	106	712083	55.372
109) Styrene	(3)	11.914	104	1192405	57.014
110) Bromoform	(3)	12.072	173	303111	56.415
111) Isopropylbenzene	(3)	12.197	105	1774465	54.375
112) Cyclohexanone	(1)	12.281	55	258357	696.475
114) \$4-Bromofluorobenzene	(3)	12.338	95	521165	47.216
114) \$4-Bromofluorobenzene	(3)	12.338	174	436080	46.082
116) 1,1,2,2-Tetrachloroethane	(4)	12.441	83	639776	59.175
115) Bromobenzene	(4)	12.457	156	480393	55.356
118) trans-1,4-Dichloro-2-butene	(4)	12.467	53	479252	152.384
117) 1,2,3-Trichloropropane	(4)	12.490	110	195413	59.181
119) n-Propylbenzene	(4)	12.522	91	2143463	57.148
120) 2-Chlorotoluene	(4)	12.599	126	441957	55.155
122) 1,3,5-Trimethylbenzene	(4)	12.657	105	1559212	57.532
121) 4-Chlorotoluene	(4)	12.692	126	465883	56.017
124) tert-Butylbenzene	(4)	12.898	134	316850	56.875
125) Pentachloroethane	(4)	12.933	167	276191	55.822
126) 1,2,4-Trimethylbenzene	(4)	12.940	105	1647143	58.782
127) sec-Butylbenzene	(4)	13.059	105	1944353	58.924
129) 1,3-Dichlorobenzene	(4)	13.162	146	909326	56.230
130) p-Isopropyltoluene	(4)	13.165	119	1710273	60.489
131) *1,4-Dichlorobenzene-d4	(4)	13.216	152	593044	50.000
133) 1,4-Dichlorobenzene	(4)	13.232	146	931598	54.890

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

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 on 05/20/2020 at 08:53.

Target 3.5 esignature user ID: clm27445

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may20a.b/ly20c01.d

Instrument ID: HP09915.i

Injection date and time: 20-MAY-2020 08:26

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 20-MAY-2020 08:48

Date, time and analyst ID of latest file update: 20-May-2020 08:48 clm27445

Sample Name: VSTD050

Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
134) 1,2,3-Trimethylbenzene	(4)	13.242	105	1578741	54.225
135) Benzyl Chloride	(4)	13.313	91	1339686	60.813
136) 1,3-Diethylbenzene	(4)	13.364	119	1000808	54.936
141) Diethylbenzene (total)	(4)		100	2909295	165.230
137) 1,4-Diethylbenzene	(4)	13.435	119	1047574	54.936
139) n-Butylbenzene	(4)	13.457	92	863753	59.459
138) 1,2-Dichlorobenzene	(4)	13.496	146	932745	57.305
140) 1,2-Diethylbenzene	(4)	13.512	119	860913	55.358
142) 1,2-Dibromo-3-chloropropane	(4)	14.036	75	145050	60.615
144) 1,3,5-Trichlorobenzene	(4)	14.158	180	671531	54.767
146) 1,2,4-Trichlorobenzene	(4)	14.583	180	655539	57.209
147) Hexachlorobutadiene	(4)	14.663	225	264682	50.072
148) Naphthalene	(4)	14.766	128	2319299	62.530
149) 1,2,3-Trichlorobenzene	(4)	14.911	180	665109	58.413
150) 2-Methylnaphthalene	(4)	15.557	142	1141607	44.351

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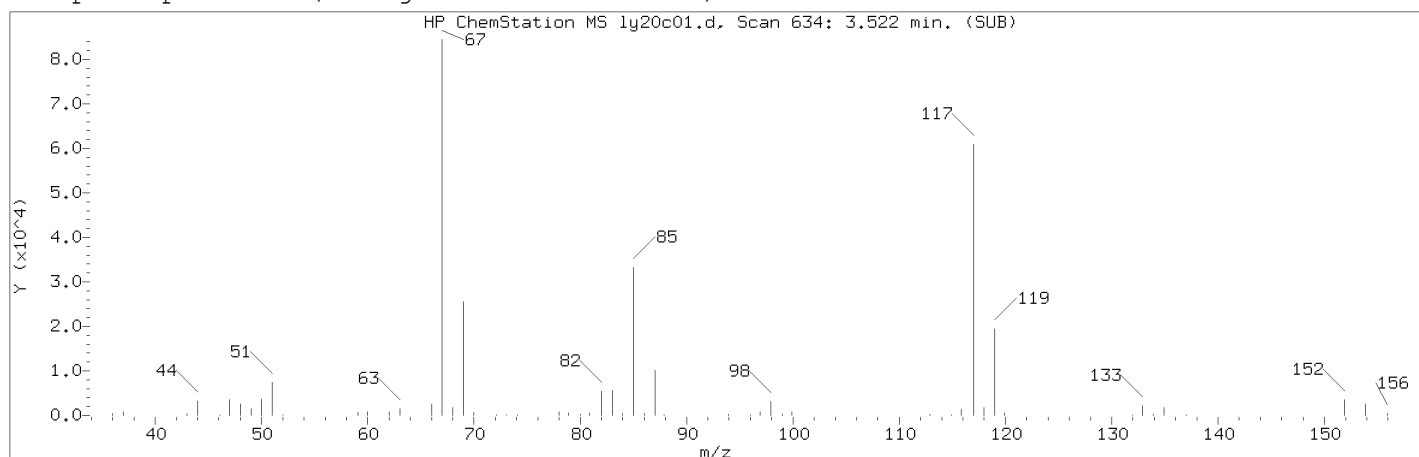
Digitally signed by Corie L. Mellinger

on 05/20/2020 at 08:53.

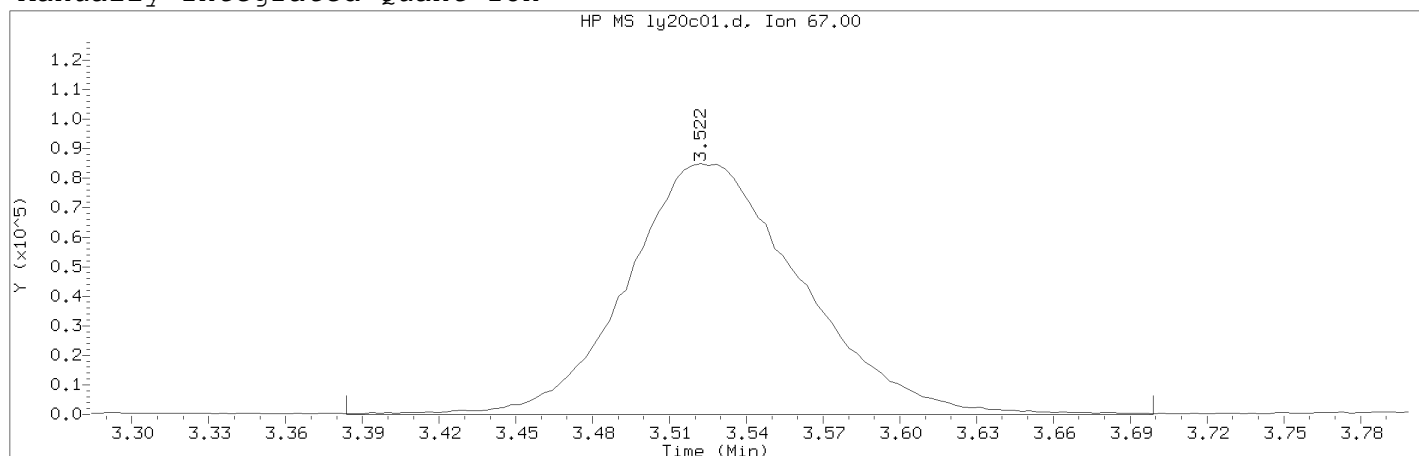
Target 3.5 esignature user ID: clm27445

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Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20may20a.b/1y20c01.d Instrument ID: HP09915.i
 Injection date and time: 20-MAY-2020 08:26 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 20-MAY-2020 08:48
 Date, time and analyst ID of latest file update: 20-May-2020 08:48 clm27445

Sample Name: VSTD050

Lab Sample ID: VSTD050

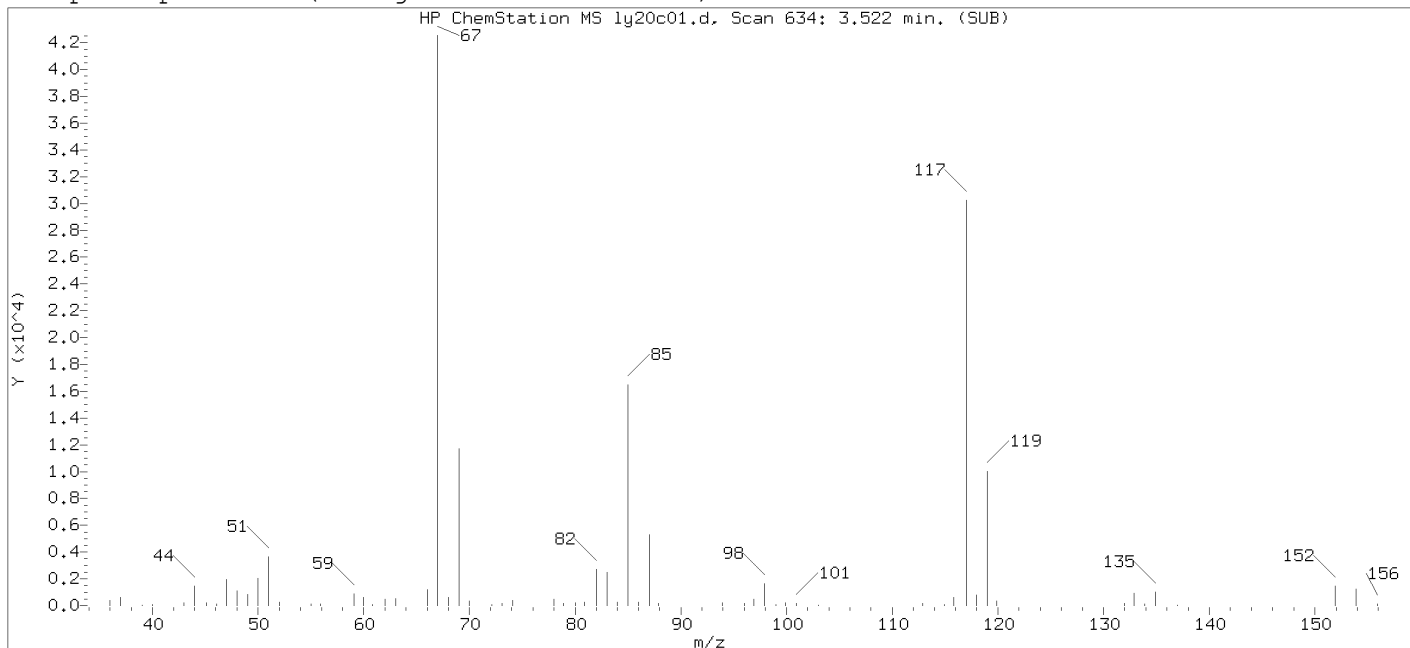
Compound Number : 15
 Compound Name : Freon 123a
 Scan Number : 634
 Retention Time (minutes): 3.522
 Quant Ion : 67.00
 Area (flag) : 402202M
 On-Column Amount (ng) : 50.6679
 Integration start scan : 590 Integration stop scan: 688
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

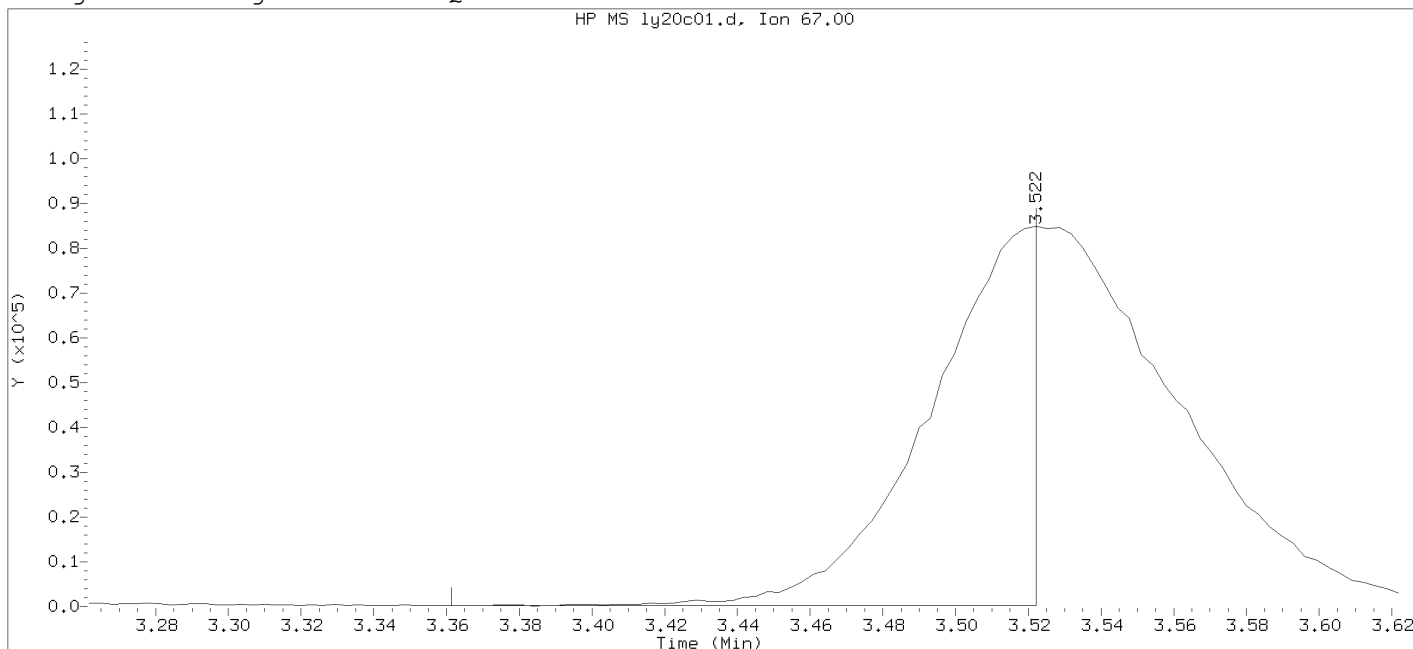
Analyst responsible for change: Digitally signed by Corie L. Mellinger
 on 05/20/2020 at 08:53.
 Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Rachel Krueger on 05/21/2020 at 18:30.
 PARALLAX ID: rek30744

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20may20a.b/ly20c01.d

Instrument ID: HP09915.i

Injection date and time: 20-MAY-2020 08:26

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 20-MAY-2020 08:43

Date, time and analyst ID of latest file update: 20-May-2020 08:43 Automation

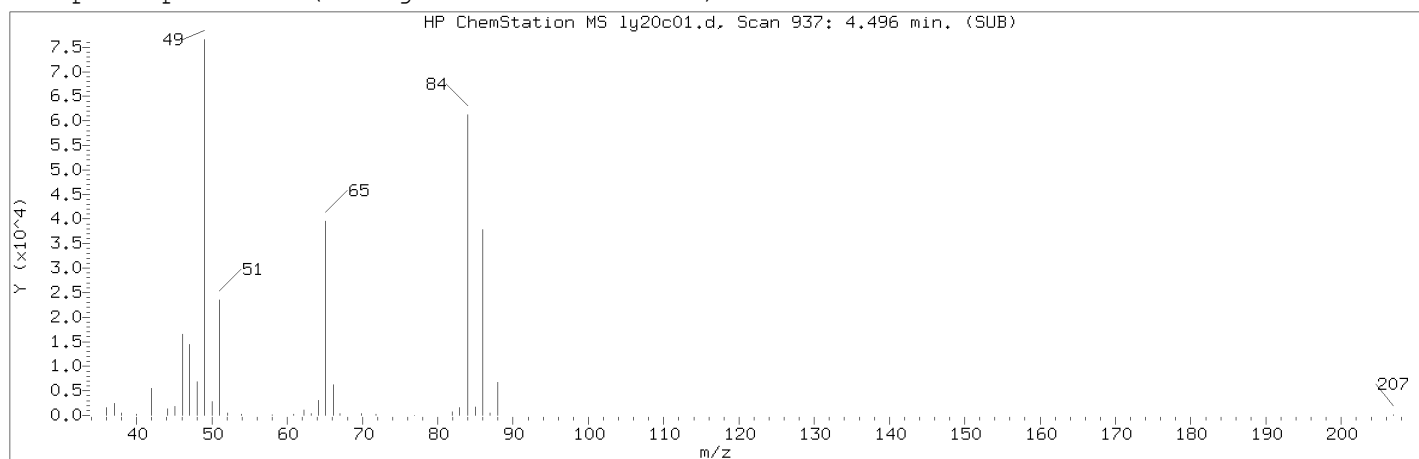
Sample Name: VSTD050

Lab Sample ID: VSTD050

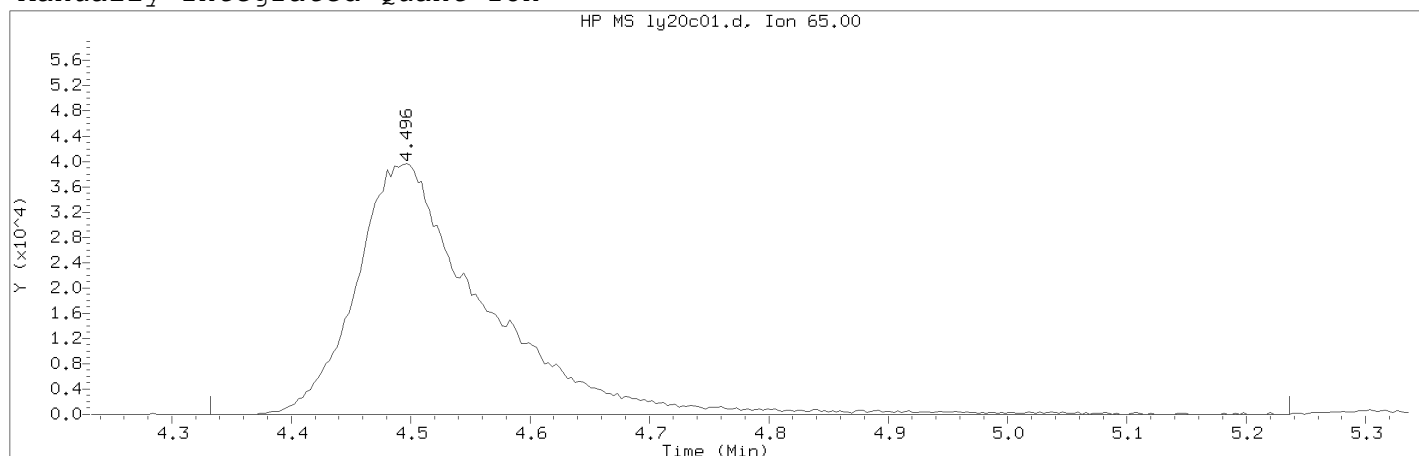
Compound Number	: 15	
Compound Name	: Freon 123a	
Scan Number	: 634	
Retention Time (minutes)	: 3.522	
Quant Ion	: 67.00	
Area	: 167428	
On-column Amount (ng)	: 21.0920	
Integration start scan	: 583	Integration stop scan: 633
Y at integration start	: 226	Y at integration end: 204

Digitally signed by Corie L. Mellinger on 05/20/2020 at 08:53.
 Target 3.5 esignature user KR446 Page 252 of 579

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20may20a.b/1y20c01.d Instrument ID: HP09915.i
 Injection date and time: 20-MAY-2020 08:26 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 20-MAY-2020 08:48
 Date, time and analyst ID of latest file update: 20-May-2020 08:48 clm27445

Sample Name: VSTD050 Lab Sample ID: VSTD050

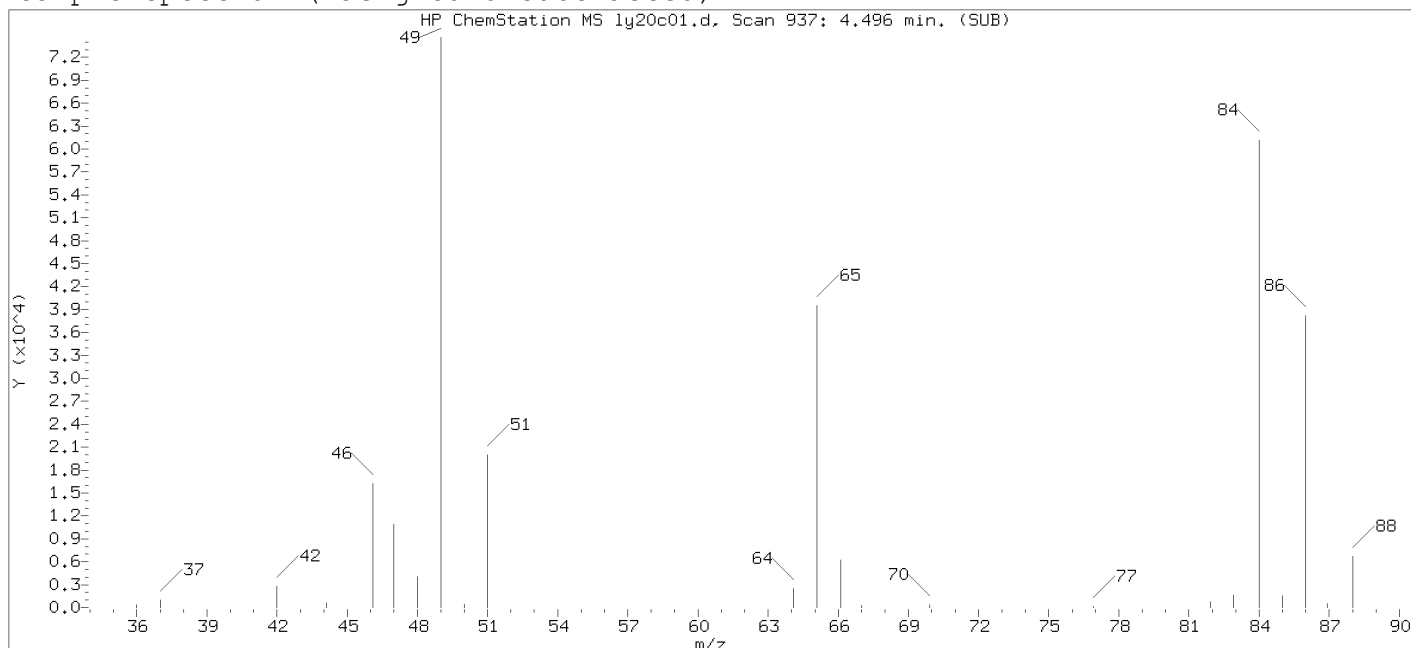
Compound Number : 29
 Compound Name : t-Butyl alcohol-d10
 Scan Number : 937
 Retention Time (minutes): 4.496
 Quant Ion : 65.00
 Area (flag) : 296875M
 On-Column Amount (ng) : 250.0000
 Integration start scan : 885 Integration stop scan: 1166
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

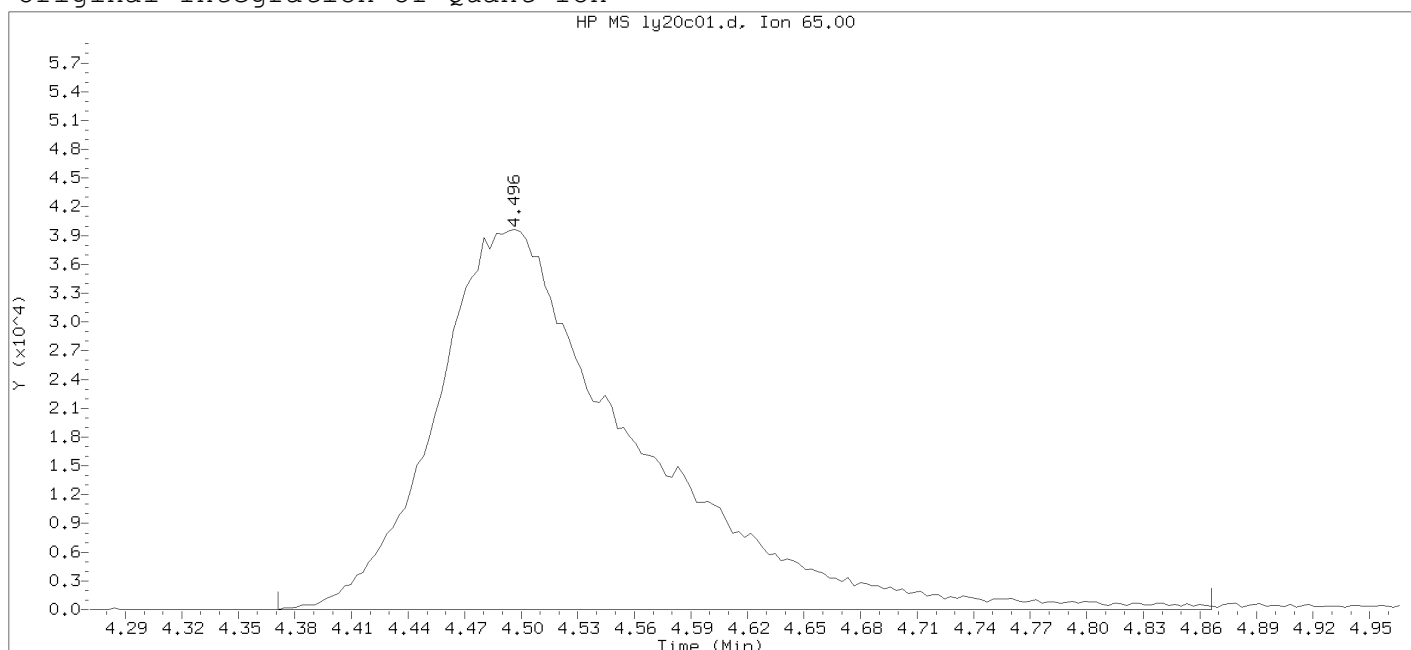
Analyst responsible for change: Digitally signed by Corie L. Mellinger
 on 05/20/2020 at 08:53.
 Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Rachel Krueger on 05/21/2020 at 18:30.
 PARALLAX ID: rek30744

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20may20a.b/ly20c01.d

Instrument ID: HP09915.i

Injection date and time: 20-MAY-2020 08:26

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 20-MAY-2020 08:43

Date, time and analyst ID of latest file update: 20-May-2020 08:43 Automation

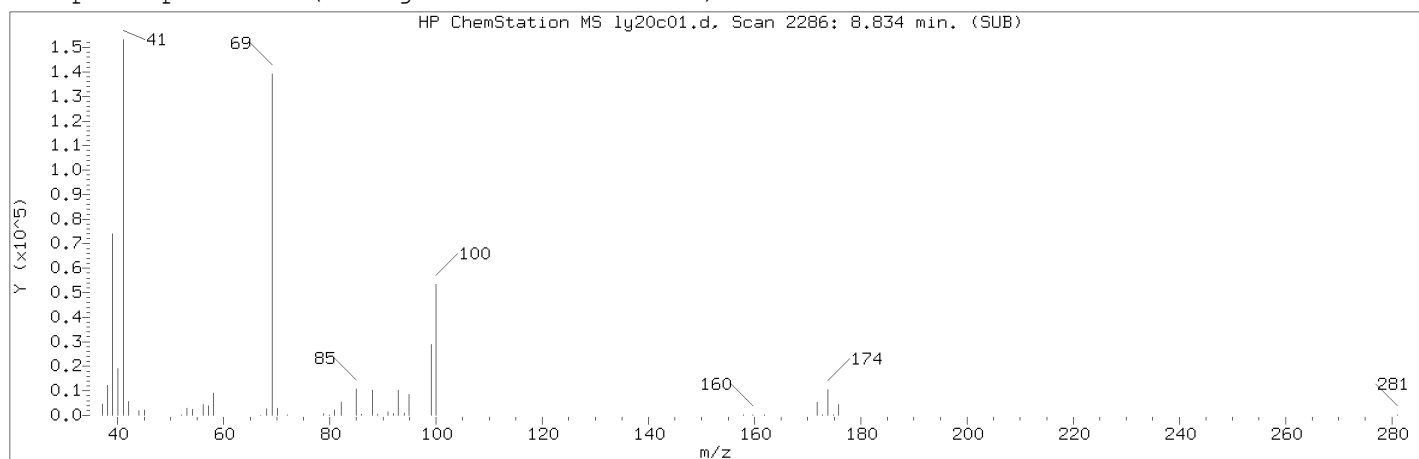
Sample Name: VSTD050

Lab Sample ID: VSTD050

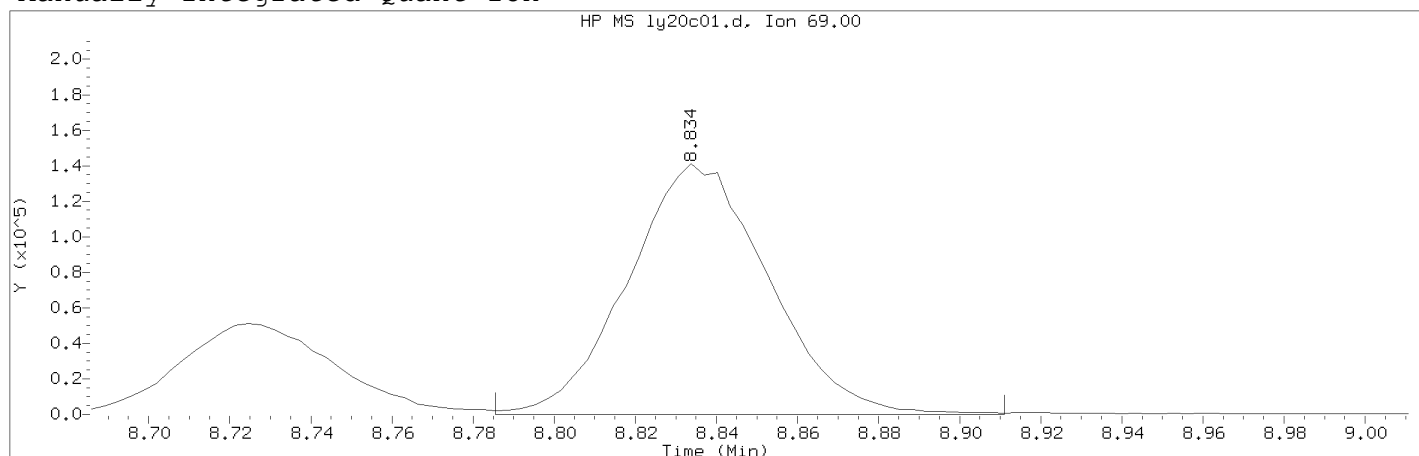
Compound Number	: 29
Compound Name	: t-Butyl alcohol-d10
Scan Number	: 937
Retention Time (minutes)	: 4.496
Quant Ion	: 65.00
Area	: 292183
On-column Amount (ng)	: 250.0000
Integration start scan	: 897
Integration stop scan	: 1051
Y at integration start	: 0
Y at integration end	: 0

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 Target 3.5 esignature user KR446 Page 254 of 579

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20may20a.b/1y20c01.d Instrument ID: HP09915.i
 Injection date and time: 20-MAY-2020 08:26 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 20-MAY-2020 08:48
 Date, time and analyst ID of latest file update: 20-May-2020 08:48 clm27445

Sample Name: VSTD050

Lab Sample ID: VSTD050

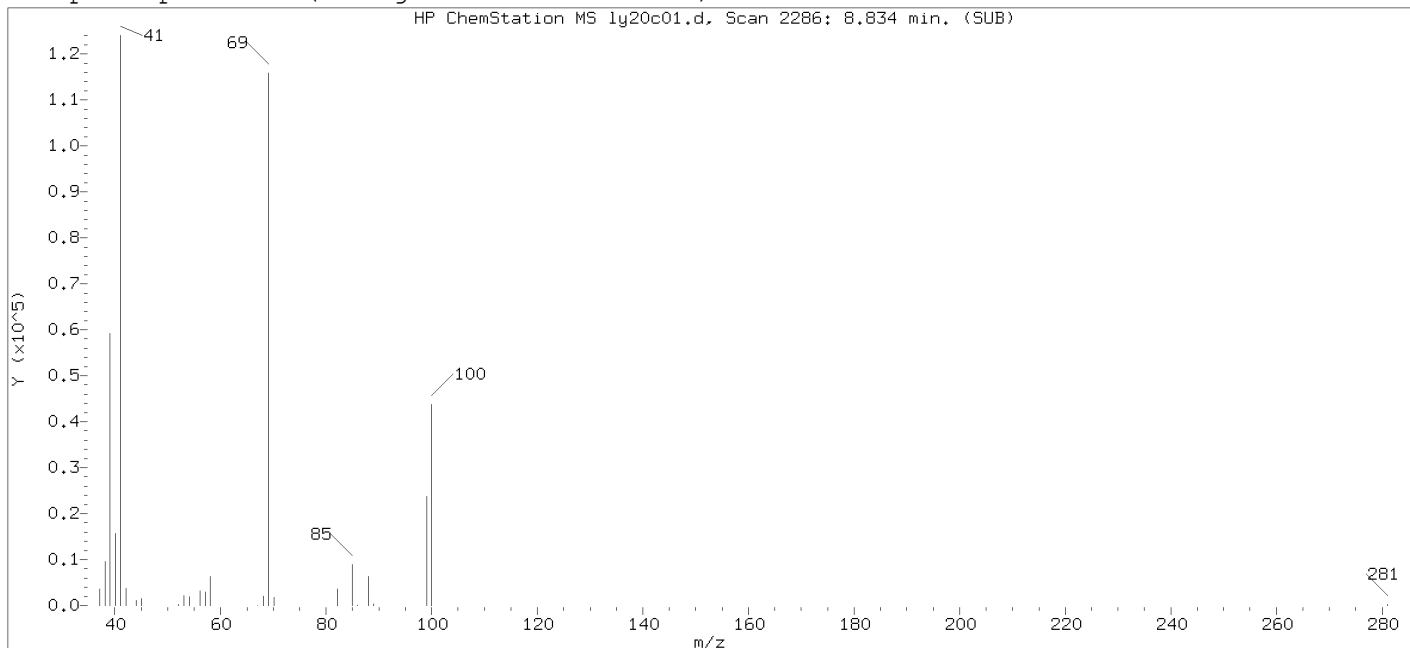
Compound Number : 76
 Compound Name : Methyl Methacrylate
 Scan Number : 2286
 Retention Time (minutes): 8.834
 Quant Ion : 69.00
 Area (flag) : 338857M
 On-Column Amount (ng) : 51.0061
 Integration start scan : 2270 Integration stop scan: 2309
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

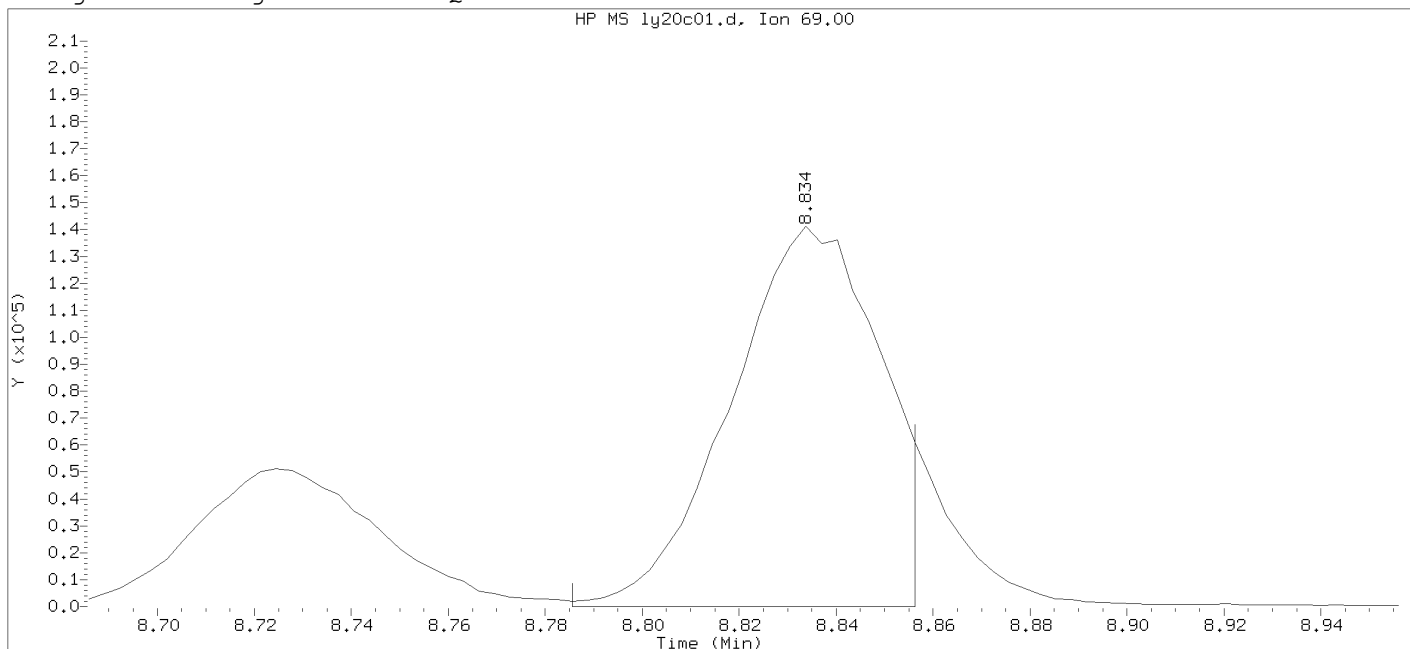
Analyst responsible for change: Digitally signed by Corie L. Mellinger
 on 05/20/2020 at 08:53.
 Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Rachel Krueger on 05/21/2020 at 18:30.
 PARALLAX ID: rek30744

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20may20a.b/1y20c01.d

Instrument ID: HP09915.i

Injection date and time: 20-MAY-2020 08:26

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 20-MAY-2020 08:43

Date, time and analyst ID of latest file update: 20-May-2020 08:43 Automation

Sample Name: VSTD050

Lab Sample ID: VSTD050

Compound Number : 76

Compound Name : Methyl Methacrylate

Scan Number : 2286

Retention Time (minutes): 8.834

Quant Ion : 69.00

Area : 299423

On-column Amount (ng) : 45.0704

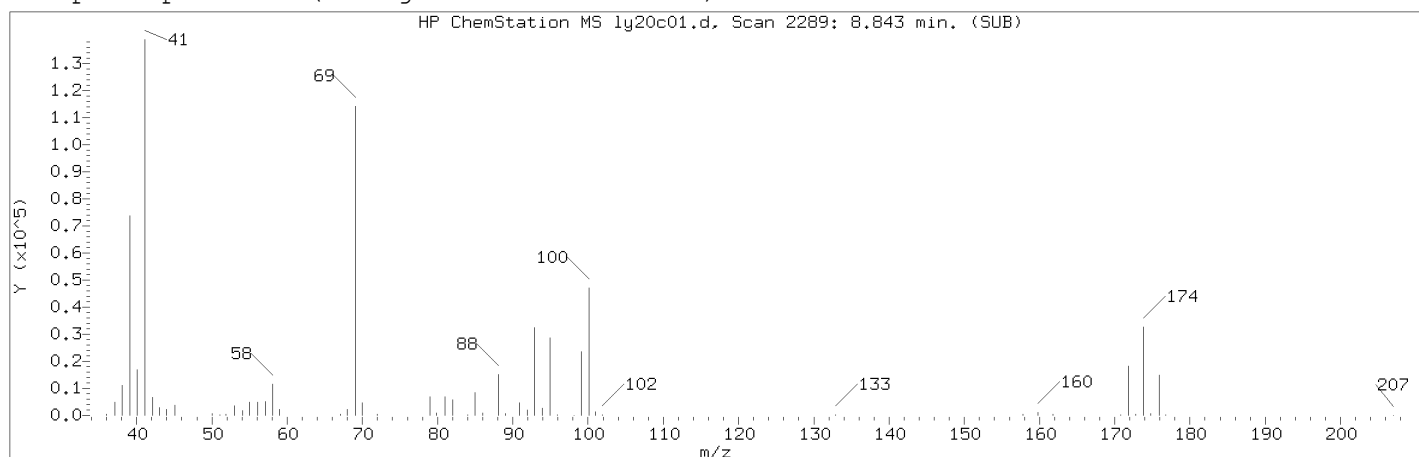
Integration start scan : 2270 Integration stop scan: 2292

Y at integration start : 0 Y at integration end: 0

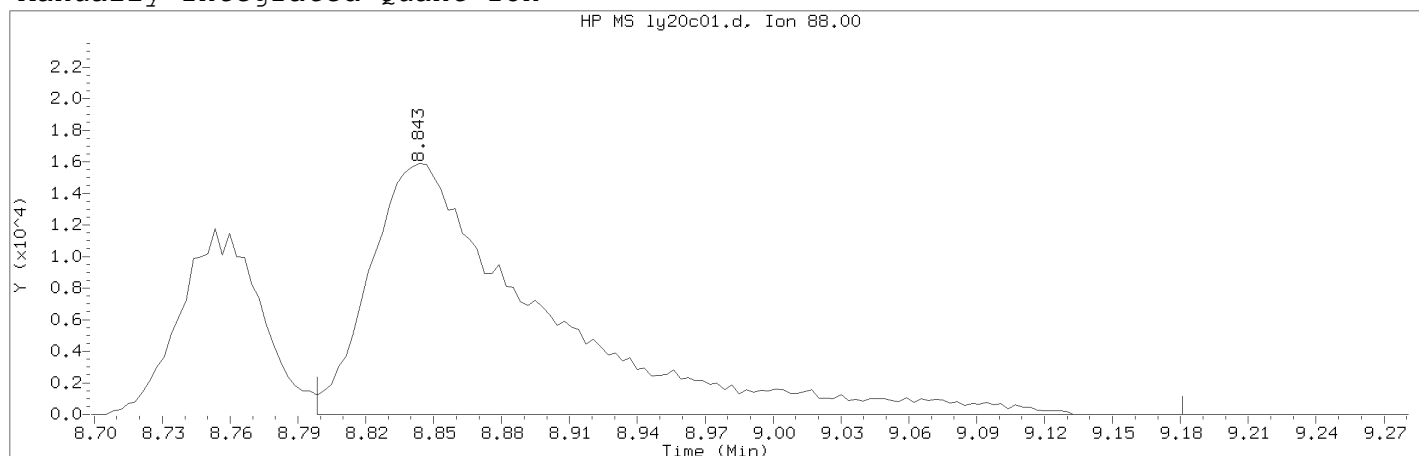
Digitally signed by Corie L. Mellinger on 05/20/2020 at 08:53.

Target 3.5 esignature user KR446 Page 256 of 579

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20may20a.b/1y20c01.d Instrument ID: HP09915.i
 Injection date and time: 20-MAY-2020 08:26 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m Sublist used: 8260W
 Calibration date and time: 20-MAY-2020 08:48
 Date, time and analyst ID of latest file update: 20-May-2020 08:48 clm27445

Sample Name: VSTD050

Lab Sample ID: VSTD050

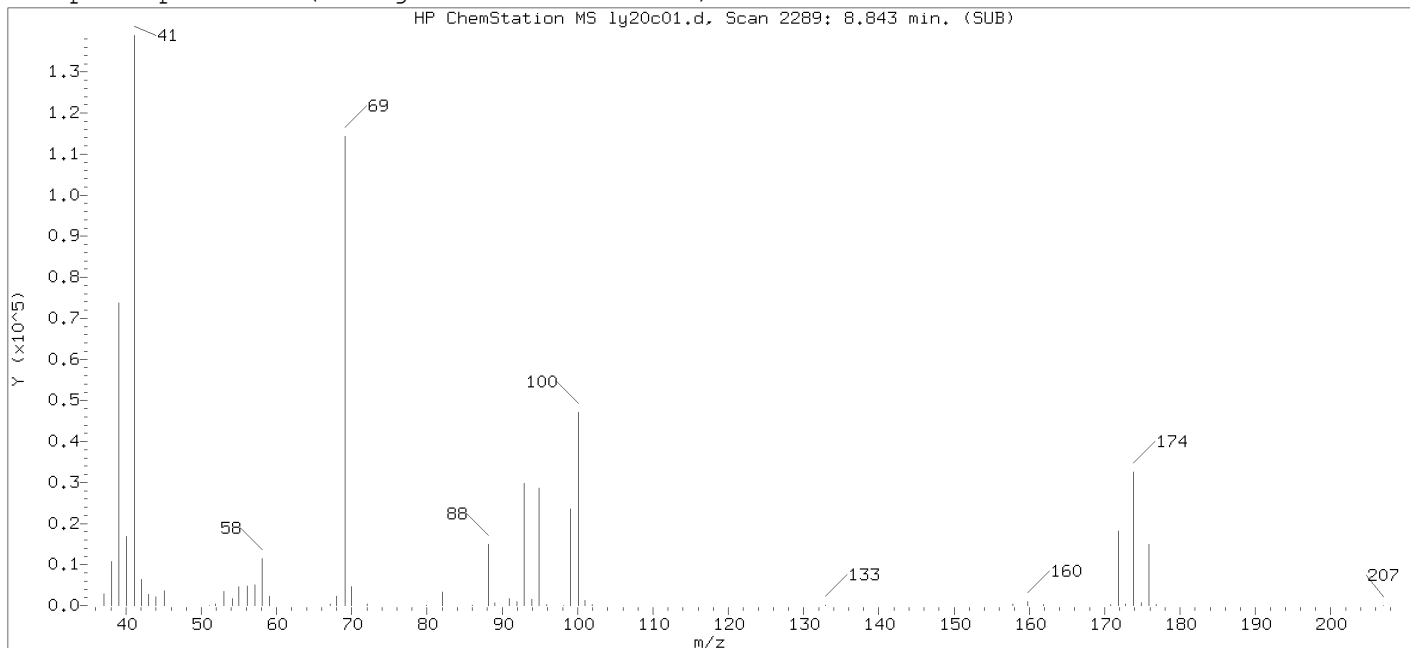
Compound Number : 75
 Compound Name : 1,4-Dioxane
 Scan Number : 2289
 Retention Time (minutes): 8.843
 Quant Ion : 88.00
 Area (flag) : 83979M
 On-Column Amount (ng) : 842.6898
 Integration start scan : 2274 Integration stop scan: 2393
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

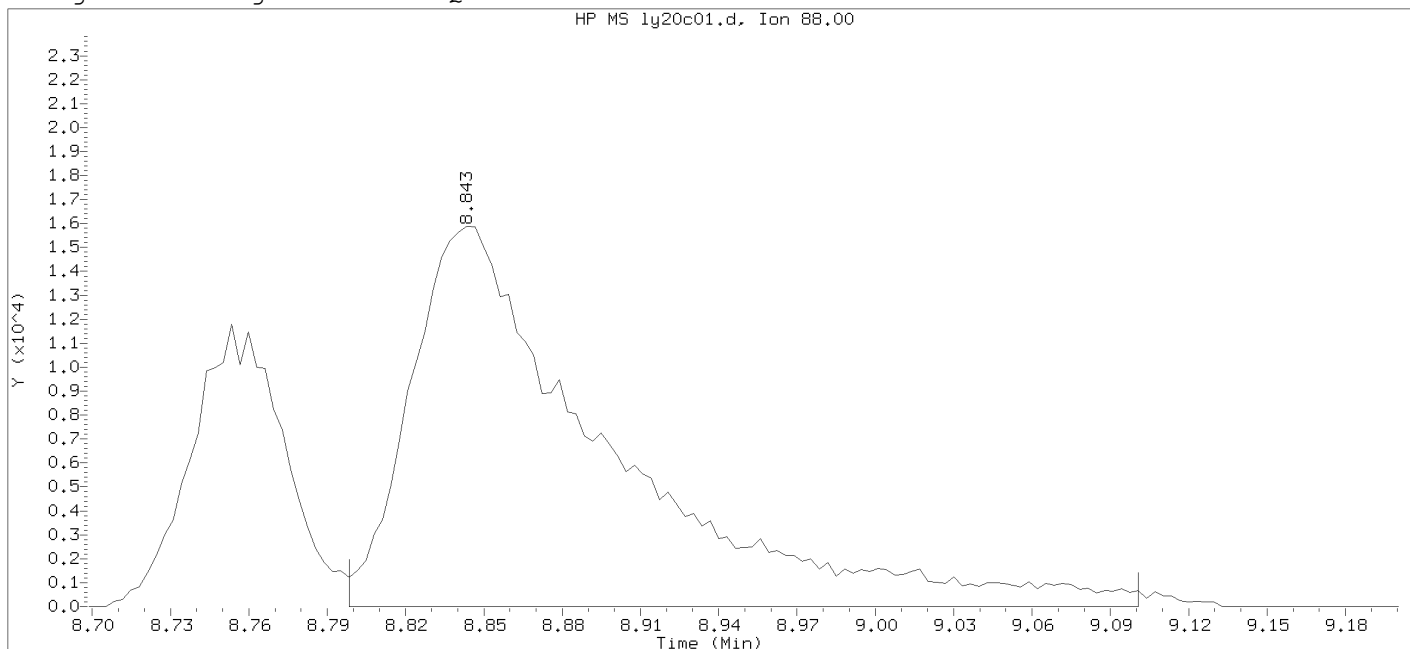
Analyst responsible for change: Digitally signed by Corie L. Mellinger
 on 05/20/2020 at 08:53.
 Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Rachel Krueger on 05/21/2020 at 18:30.
 PARALLAX ID: rek30744

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20may20a.b/ly20c01.d

Instrument ID: HP09915.i

Injection date and time: 20-MAY-2020 08:26

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m

Sublist used: 8260W

Calibration date and time: 20-MAY-2020 08:43

Date, time and analyst ID of latest file update: 20-May-2020 08:43 Automation

Sample Name: VSTD050

Lab Sample ID: VSTD050

Compound Number	: 75
Compound Name	: 1,4-Dioxane
Scan Number	: 2289
Retention Time (minutes)	: 8.843
Quant Ion	: 88.00
Area	: 83224
On-column Amount (ng)	: 848.5240
Integration start scan	: 2274
Integration stop scan	: 2368
Y at integration start	: 0
Y at integration end	: 0

Digitally signed by Corie L. Mellinger on 05/20/2020 at 08:53.
 Target 3.5 esignature user KR446 Page 258 of 579

SECC050

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

SECC050

Data file: /chem/HP09915.i/20may20a.b/ly20ec5.d

Injection date and time: 20-MAY-2020 18:33

Data file Sample Info. Line: SECC050;SECC050;1;3;LCS;;DODWW;;ly20b01;

Instrument ID: HP09915.i Batch: L201411AA

Date, time and analyst ID of latest file update: 20-May-2020 18:50 Automation

Blank Data file reference: /chem/HP09915.i/20may20a.b/ly20b01.d

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m

Sublist used: L201411

Calibration date and time (Last Method Edit): 20-MAY-2020 09:17

Mid Level Daily Calibration Standard Reference: /chem/HP09915.i/20may20a.b/ly20c01.d

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo)

VOA Prep Factor: 1.00

Volume Purged (Vt): 5 ml

Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.493 (0.003)	936	65	259684 (-13)	250.00	
66) Fluorobenzene	7.950 (0.000)	2011	96	1447269 (0)	50.00	
100) Chlorobenzene-d5	11.351 (0.000)	3069	117	1081152 (-3)	50.00	
131) 1,4-Dichlorobenzene-d4	13.216 (0.000)	3649	152	617627 (4)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.065 (0.000)	113	354307	48.595	97%		80 - 119
57) 1,2-Dichloroethane-d4	(2)	7.525 (-0.001)	102	89483	48.368	97%		81 - 118
83) Toluene-d8	(3)	9.924 (0.000)	98	1429091	51.453	103%		89 - 112
114) 4-Bromofluorobenzene	(3)	12.338 (0.000)	95	534321	49.998	100%		85 - 114

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)	2.094 (-0.000)	85	475432	47.904	47.90			0.2	1
4) Chloromethane	(2)	2.297 (-0.000)	50	479583	51.756	51.76			0.2	1
6) Vinyl Chloride	(2)	2.419 (-0.000)	62	453048	50.665	50.67			0.2	1
8) Bromomethane	(2)	2.760 (-0.000)	94	308550	47.859	47.86			0.3	1
9) Chloroethane	(2)	2.853 (-0.000)	64	245947	49.263	49.26			0.2	1
12) Trichlorofluoromethane	(2)	3.165 (-0.000)	101	478709	49.018	49.02			0.2	1
17) 1,1-Dichloroethene	(2)	3.763 (0.000)	96	321612	51.638	51.64			0.2	1
18) Acetone	(1)	3.802 (0.000)	58	120847	124.011	124.01			0.7	20
19) Freon 113	(2)	3.795 (0.000)	101	361096	55.882	55.88			0.2	10
23) Carbon Disulfide	(2)	4.075 (0.000)	76	1165289	55.568	55.57			0.2	5
27) Methyl Acetate	(2)	4.249 (-0.000)	43	438540	55.208	55.21			0.3	5
28) Methylene Chloride	(2)	4.474 (0.000)	84	387517	52.305	52.31			0.3	1
32) trans-1,2-Dichloroethene	(2)	4.889 (0.000)	96	369485	51.569	51.57			0.2	1
33) Methyl Tertiary Butyl Ether	(2)	4.882 (-0.000)	73	1019839	47.745	47.75			0.2	1
36) 1,1-Dichloroethane	(2)	5.551 (-0.000)	63	665298	52.942	52.94			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.380 (-0.000)	96	409901	51.014	51.01			0.2	1
44) 2-Butanone	(2)	6.358 (-0.000)	43	589801	110.425	110.42			0.3	10
51) Chloroform	(2)	6.850 (0.000)	83	641663	52.265	52.26			0.2	1
53) 1,1,1-Trichloroethane	(2)	7.075 (-0.000)	97	559535	53.123	53.12			0.3	1
54) Cyclohexane	(2)	7.168 (-0.000)	56	678279	57.528	57.53			1	5
56) Carbon Tetrachloride	(2)	7.278 (-0.000)	117	490480	55.580	55.58			0.2	1
60) Benzene	(2)	7.548 (0.000)	78	1581507	52.912	52.91			0.2	1
61) 1,2-Dichloroethane	(2)	7.622 (0.000)	62	535442	53.442	53.44			0.3	1
71) Trichloroethene	(2)	8.422 (-0.000)	95	386591	51.112	51.11			0.2	1
72) Methylcyclohexane	(2)	8.724 (0.000)	83	694981	56.509	56.51			0.5	5
73) 1,2-Dichloropropane	(2)	8.760 (-0.000)	63	427799	55.551	55.55			0.2	1
78) Bromodichloromethane	(2)	9.101 (0.000)	83	488832	54.140	54.14			0.2	1
81) cis-1,3-Dichloropropene	(2)	9.628 (0.000)	75	619985	52.541	52.54			0.2	1
82) 4-Methyl-2-pentanone	(2)	9.795 (0.000)	43	1266062	117.050	117.05			0.5	10
88) Toluene	(3)	9.998 (0.000)	92	980792	55.401	55.40			0.2	1
89) trans-1,3-Dichloropropene	(3)	10.248 (0.000)	75	589203	58.007	58.01			0.2	1

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SECC050

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

SECC050

Data file: /chem/HP09915.i/20may20a.b/ly20ec5.d

Injection date and time: **20-MAY-2020 18:33**Data file Sample Info. Line: SECC050;SECC050;1;3;LCS;;DODWW;;ly20b01; Instrument ID: **HP09915.i** Batch: **L201411AA**

Date, time and analyst ID of latest file update: 20-May-2020 18:50 Automation

Blank Data file reference: /chem/HP09915.i/20may20a.b/ly20b01.d

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m Sublist used: **L201411**

Calibration date and time (Last Method Edit): 20-MAY-2020 09:17

Mid Level Daily Calibration Standard Reference: /chem/HP09915.i/20may20a.b/ly20c01.d

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit LOQ	
									(in sample)	
92) 1,1,2-Trichloroethane	(3)	10.448 (0.000)	97	385047	56.052	56.05			0.2	1
93) Tetrachloroethene	(3)	10.531 (0.000)	166	498223	66.038	66.04			0.2	1
96) 2-Hexanone	(3)	10.660 (-0.000)	43	922083	124.215	124.22			0.3	10
97) Dibromochloromethane	(3)	10.818 (0.000)	129	411486	57.585	57.59			0.2	1
99) 1,2-Dibromoethane	(3)	10.927 (0.000)	107	401811	54.426	54.43			0.2	1
102) Chlorobenzene	(3)	11.377 (-0.000)	112	1110449	54.621	54.62			0.2	1
104) Ethylbenzene	(3)	11.461 (-0.000)	91	1873069	57.160	57.16			0.4	1
106) m+p-Xylene	(3)	11.573 (-0.000)	106	1490632	115.773	115.77			1	5
107) o-Xylene	(3)	11.901 (-0.000)	106	732944	58.865	58.87			0.4	1
108) Xylene (Total)	(3)		106	2223576	174.638	174.64			1	6
109) Styrene	(3)	11.914 (0.000)	104	1235808	61.029	61.03			0.2	5
110) Bromoform	(3)	12.072 (0.000)	173	300866	57.836	57.84			1	4
111) Isopropylbenzene	(3)	12.197 (-0.000)	105	1886737	59.714	59.71			0.2	5
116) 1,1,2,2-Tetrachloroethane	(4)	12.441 (-0.000)	83	647210	57.480	57.48			0.2	1
129) 1,3-Dichlorobenzene	(4)	13.162 (-0.000)	146	964446	57.265	57.26			0.2	5
133) 1,4-Dichlorobenzene	(4)	13.232 (-0.000)	146	995856	56.340	56.34			0.2	5
134) 1,2,3-Trimethylbenzene	(4)	13.242 (-0.000)	105	1837687	60.606	60.61			0.3	5
138) 1,2-Dichlorobenzene	(4)	13.496 (-0.000)	146	957030	56.456	56.46			0.2	5
142) 1,2-Dibromo-3-chloropropane	(4)	14.036 (-0.000)	75	142289	57.094	57.09			0.3	5
146) 1,2,4-Trichlorobenzene	(4)	14.583 (-0.000)	180	617027	51.705	51.70			0.3	5
148) Naphthalene	(4)	14.766 (-0.000)	128	2197925	56.899	56.90			1	5

Total number of targets = 52

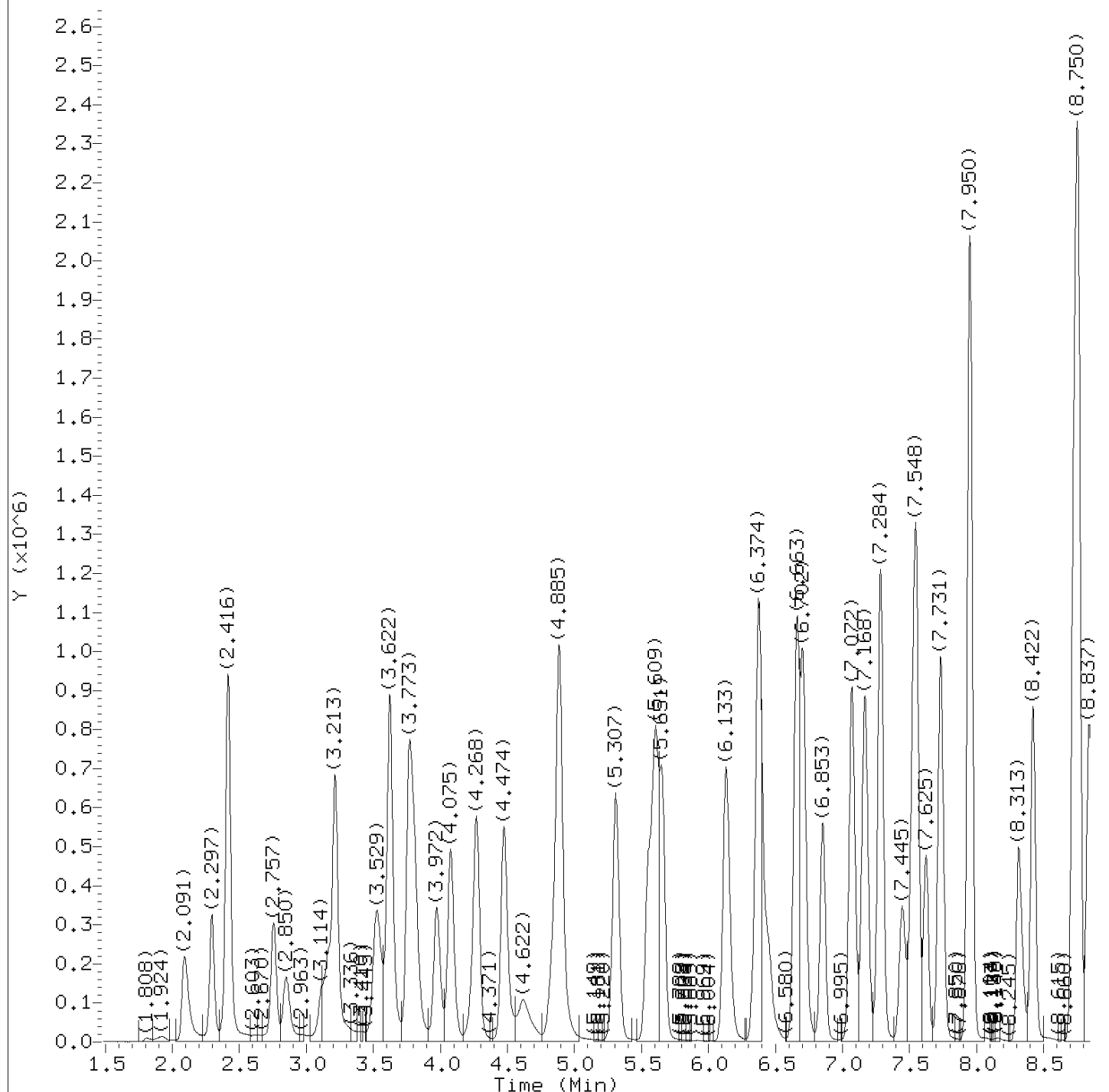
Digitally signed by Laura J. Green on 05/21/2020 at 01:11. Target 3.5 esignature user ID: ljg30941

Secondary review performed and digitally signed by Rachel Krueger on 05/21/2020 at 18:46. PARALLAX ID: rek30744

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page 2 of 2

/chem/HP09915.i/20may20a.b/ly20ec5.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20may20a.b/ly20ec5.d
 Injection date and time: 20-MAY-2020 18:33

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m
 Calibration date and time: 20-MAY-2020 09:17

Sublist used: L201411

Date, time and analyst ID of latest file update: 20-May-2020 18:50 Automation

Sample Name: SECC050

Lab Sample ID: SECC050

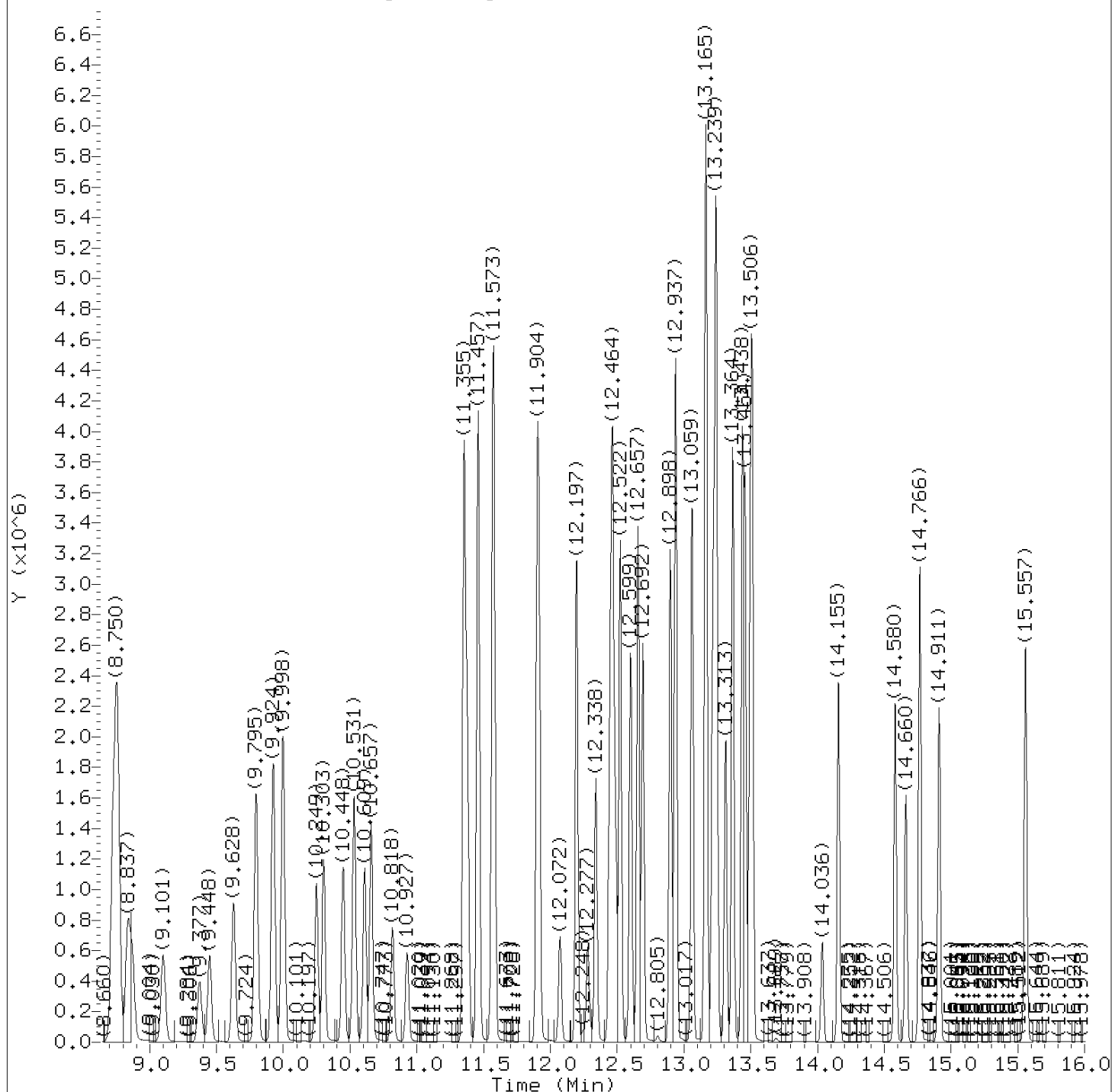
Digitally signed by Laura J. Green
 on 05/21/2020 at 01:11.

Target 3.5 esignature user ID: ljo30941

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/chem/HP09915.i/20may20a.b/ly20ec5.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20may20a.b/ly20ec5.d
 Injection date and time: 20-MAY-2020 18:33

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m
 Calibration date and time: 20-MAY-2020 09:17

Sublist used: L201411

Date, time and analyst ID of latest file update: 20-May-2020 18:50 Automation

Sample Name: SECC050

Lab Sample ID: SECC050

Digitally signed by Laura J. Green
 on 05/21/2020 at 01:11.

Target 3.5 esignature user ID: ljo30941

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may20a.b/ly20ec5.d

Instrument ID: HP09915.i

Injection date and time: 20-MAY-2020 18:33

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m

Sublist used: L201411

Calibration date and time: 20-MAY-2020 09:17

Date, time and analyst ID of latest file update: 20-May-2020 18:50 Automation

Sample Name: SECC050

Lab Sample ID: SECC050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
3) Dichlorodifluoromethane	(2)	2.095	85	475432	47.904
4) Chloromethane	(2)	2.297	50	479583	51.756
6) Vinyl Chloride	(2)	2.419	62	453048	50.665
8) Bromomethane	(2)	2.760	94	308550	47.859
9) Chloroethane	(2)	2.853	64	245947	49.263
12) Trichlorofluoromethane	(2)	3.165	101	478709	49.018
17) 1,1-Dichloroethene	(2)	3.763	96	321612	51.638
19) Freon 113	(2)	3.795	101	361096	55.882
18) Acetone	(1)	3.802	58	120847	124.011
23) Carbon Disulfide	(2)	4.075	76	1165289	55.568
27) Methyl Acetate	(2)	4.249	43	438540	55.208
28) Methylene Chloride	(2)	4.474	84	387517	52.305
29)*t-Butyl alcohol-d10	(1)	4.493	65	259684	250.000
33) Methyl Tertiary Butyl Ether	(2)	4.882	73	1019839	47.745
32) trans-1,2-Dichloroethene	(2)	4.889	96	369485	51.569
36) 1,1-Dichloroethane	(2)	5.551	63	665298	52.942
44) 2-Butanone	(2)	6.358	43	589801	110.425
42) cis-1,2-Dichloroethene	(2)	6.380	96	409901	51.014
51) Chloroform	(2)	6.850	83	641663	52.265
52)\$Dibromofluoromethane	(2)	7.065	113	354307	48.595
53) 1,1,1-Trichloroethane	(2)	7.075	97	559535	53.123
54) Cyclohexane	(2)	7.168	56	678279	57.528
56) Carbon Tetrachloride	(2)	7.278	117	490480	55.580
57)\$1,2-Dichloroethane-d4	(2)	7.525	102	89483	48.368
60) Benzene	(2)	7.548	78	1581507	52.912
61) 1,2-Dichloroethane	(2)	7.622	62	535442	53.442
66)*Fluorobenzene	(2)	7.950	96	1447269	50.000
71) Trichloroethene	(2)	8.422	95	386591	51.112
72) Methylcyclohexane	(2)	8.724	83	694981	56.509
73) 1,2-Dichloropropane	(2)	8.760	63	427799	55.551
78) Bromodichloromethane	(2)	9.101	83	488832	54.140
81) cis-1,3-Dichloropropene	(2)	9.628	75	619985	52.541
82) 4-Methyl-2-pentanone	(2)	9.795	43	1266062	117.050
83)\$Toluene-d8	(3)	9.924	98	1429091	51.453
88) Toluene	(3)	9.998	92	980792	55.401
89) trans-1,3-Dichloropropene	(3)	10.249	75	589203	58.007
92) 1,1,2-Trichloroethane	(3)	10.448	97	385047	56.052
93) Tetrachloroethene	(3)	10.531	166	498223	66.038

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 1 of 2

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on 05/21/2020 at 01:11.

Target 3.5 esignature user ID: ljg30941

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may20a.b/ly20ec5.d

Instrument ID: HP09915.i

Injection date and time: 20-MAY-2020 18:33

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m

Sublist used: L201411

Calibration date and time: 20-MAY-2020 09:17

Date, time and analyst ID of latest file update: 20-May-2020 18:50 Automation

Sample Name: SECC050

Lab Sample ID: SECC050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
96) 2-Hexanone	(3)	10.660	43	922083	124.215
97) Dibromochloromethane	(3)	10.818	129	411486	57.585
99) 1,2-Dibromoethane	(3)	10.927	107	401811	54.426
100) *Chlorobenzene-d5	(3)	11.351	117	1081152	50.000
102) Chlorobenzene	(3)	11.377	112	1110449	54.621
104) Ethylbenzene	(3)	11.461	91	1873069	57.160
106) m+p-Xylene	(3)	11.573	106	1490632	115.773
108) Xylene (Total)	(3)		106	2223576	174.638
107) o-Xylene	(3)	11.901	106	732944	58.865
109) Styrene	(3)	11.914	104	1235808	61.029
110) Bromoform	(3)	12.072	173	300866	57.836
111) Isopropylbenzene	(3)	12.197	105	1886737	59.714
114) \$4-Bromofluorobenzene	(3)	12.338	95	534321	49.998
116) 1,1,2,2-Tetrachloroethane	(4)	12.441	83	647210	57.480
129) 1,3-Dichlorobenzene	(4)	13.162	146	964446	57.265
131) *1,4-Dichlorobenzene-d4	(4)	13.216	152	617627	50.000
133) 1,4-Dichlorobenzene	(4)	13.232	146	995856	56.340
134) 1,2,3-Trimethylbenzene	(4)	13.242	105	1837687	60.606
138) 1,2-Dichlorobenzene	(4)	13.496	146	957030	56.456
142) 1,2-Dibromo-3-chloropropane	(4)	14.036	75	142289	57.094
146) 1,2,4-Trichlorobenzene	(4)	14.583	180	617027	51.705
148) Naphthalene	(4)	14.766	128	2197925	56.899

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 2 of 2

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on 05/21/2020 at 01:11.

Target 3.5 esignature user ID: ljg30941

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Raw QC Data

Volatiles by GC/MS

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VBLKL84

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKL84

Data file: /chem/HP09915.i/20may20a.b/ly20b01.d

Injection date and time: 20-MAY-2020 09:53

Data file Sample Info. Line: VBLKL84;VBLKL84;1;3;;;DODWW;;;

Instrument ID: HP09915.i Batch: L201411AA

Date, time and analyst ID of latest file update: 20-May-2020 10:11 Automation

Blank Data file reference: /chem/HP09915.i/20may20a.b/ly20b01.d

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m Sublist used: L201411

Calibration date and time (Last Method Edit): 20-MAY-2020 09:17

Mid Level Daily Calibration Standard Reference: /chem/HP09915.i/20may20a.b/ly20c01.d

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.500 (-0.003)	938	65	268298 (-10)	250.00	
66) Fluorobenzene	7.950 (0.000)	2011	96	1325260 (-9)	50.00	
100) Chlorobenzene-d5	11.351 (0.000)	3069	117	1001110 (-10)	50.00	
131) 1,4-Dichlorobenzene-d4	13.216 (0.000)	3649	152	525453 (-11)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.069 (0.000)	113	347351	52.026	104%		80 - 119
57) 1,2-Dichloroethane-d4	(2)	7.522 (0.000)	102	87223	51.486	103%		81 - 118
83) Toluene-d8	(3)	9.924 (0.000)	98	1302743	50.654	101%		89 - 112
114) 4-Bromofluorobenzene	(3)	12.339 (0.000)	95	449996	45.474	91%		85 - 114

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)			Not Detected					0.2	1
4) Chloromethane	(2)			Not Detected					0.2	1
6) Vinyl Chloride	(2)			Not Detected					0.2	1
8) Bromomethane	(2)			Not Detected					0.3	1
9) Chloroethane	(2)			Not Detected					0.2	1
12) Trichlorofluoromethane	(2)			Not Detected					0.2	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
18) Acetone	(1)			Not Detected					0.7	20
19) Freon 113	(2)			Not Detected					0.2	10
23) Carbon Disulfide	(2)			Not Detected					0.2	5
27) Methyl Acetate	(2)			Not Detected					0.3	5
28) Methylene Chloride	(2)			Not Detected					0.3	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
33) Methyl Tertiary Butyl Ether	(2)			Not Detected					0.2	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.2	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.2	1
44) 2-Butanone	(2)			Not Detected					0.3	10
51) Chloroform	(2)			Not Detected					0.2	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.3	1
54) Cyclohexane	(2)			Not Detected					1	5
56) Carbon Tetrachloride	(2)			Not Detected					0.2	1
60) Benzene	(2)			Not Detected					0.2	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.3	1
71) Trichloroethene	(2)			Not Detected					0.2	1
72) Methylcyclohexane	(2)			Not Detected					0.5	5
73) 1,2-Dichloropropane	(2)			Not Detected					0.2	1
78) Bromodichloromethane	(2)			Not Detected					0.2	1
81) cis-1,3-Dichloropropene	(2)			Not Detected					0.2	1
82) 4-Methyl-2-pentanone	(2)			Not Detected					0.5	10
88) Toluene	(3)			Not Detected					0.2	1
89) trans-1,3-Dichloropropene	(3)			Not Detected					0.2	1

Digitally signed by Corie L. Mellinger on 05/20/2020 at 10:25. Target 3.5 esignature user ID: clm27445

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VBLKL84

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKL84

Data file: /chem/HP09915.i/20may20a.b/ly20b01.d

Injection date and time: 20-MAY-2020 09:53

Data file Sample Info. Line: VBLKL84;VBLKL84;1;3;;;DODWW;;;

Instrument ID: HP09915.i Batch: L201411AA

Date, time and analyst ID of latest file update: 20-May-2020 10:11 Automation

Blank Data file reference: /chem/HP09915.i/20may20a.b/ly20b01.d

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m Sublist used: L201411

Calibration date and time (Last Method Edit): 20-MAY-2020 09:17

Mid Level Daily Calibration Standard Reference: /chem/HP09915.i/20may20a.b/ly20c01.d

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/--RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting	
										Limit (in sample)	LOQ (in sample)
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
92) 1,1,2-Trichloroethane	(3)				Not Detected					0.2	1
93) Tetrachloroethene	(3)				Not Detected					0.2	1
96) 2-Hexanone	(3)				Not Detected					0.3	10
97) Dibromochloromethane	(3)				Not Detected					0.2	1
99) 1,2-Dibromoethane	(3)				Not Detected					0.2	1
102) Chlorobenzene	(3)				Not Detected					0.2	1
104) Ethylbenzene	(3)				Not Detected					0.4	1
106) m+p-Xylene	(3)				Not Detected					1	5
107) o-Xylene	(3)				Not Detected					0.4	1
108) Xylene (Total)	(3)				Not Detected					1	6
109) Styrene	(3)				Not Detected					0.2	5
110) Bromoform	(3)				Not Detected					1	4
111) Isopropylbenzene	(3)				Not Detected					0.2	5
116) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.2	1
129) 1,3-Dichlorobenzene	(4)				Not Detected					0.2	5
133) 1,4-Dichlorobenzene	(4)				Not Detected					0.2	5
134) 1,2,3-Trimethylbenzene	(4)				Not Detected					0.3	5
138) 1,2-Dichlorobenzene	(4)				Not Detected					0.2	5
142) 1,2-Dibromo-3-chloropropane	(4)				Not Detected					0.3	5
146) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.3	5
148) Naphthalene	(4)				Not Detected					1	5

Total number of targets = 52

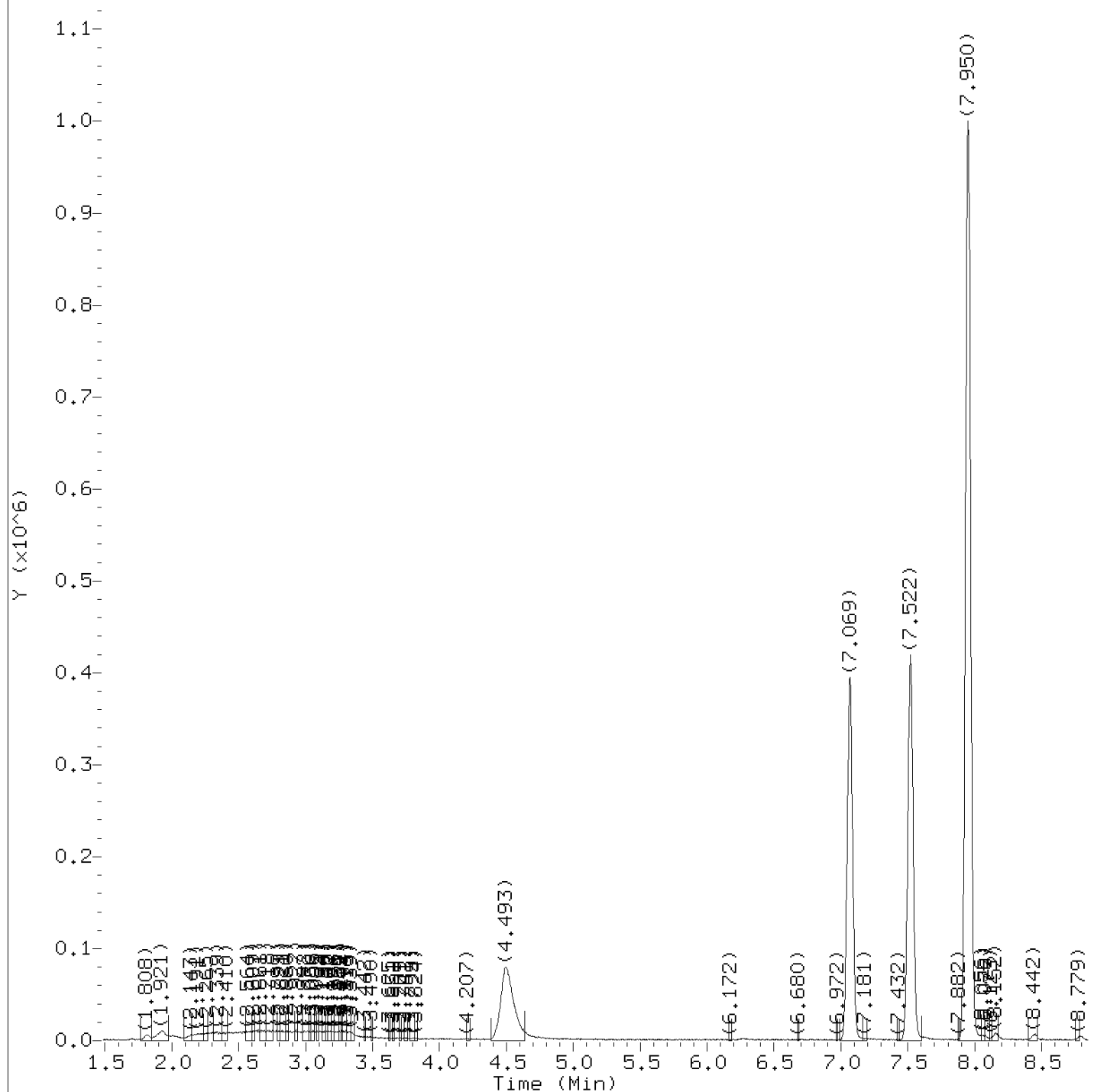
Digitally signed by Corie L. Mellinger on 05/20/2020 at 10:25. Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Rachel Krueger on 05/21/2020 at 18:30. PARALLAX ID: rek30744

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/chem/HP09915.i/20may20a.b/ly20b01.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20may20a.b/ly20b01.d
 Injection date and time: 20-MAY-2020 09:53

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m
 Calibration date and time: 20-MAY-2020 09:17

Sublist used: L201411

Date, time and analyst ID of latest file update: 20-May-2020 10:11 Automation

Sample Name: VBLKL84

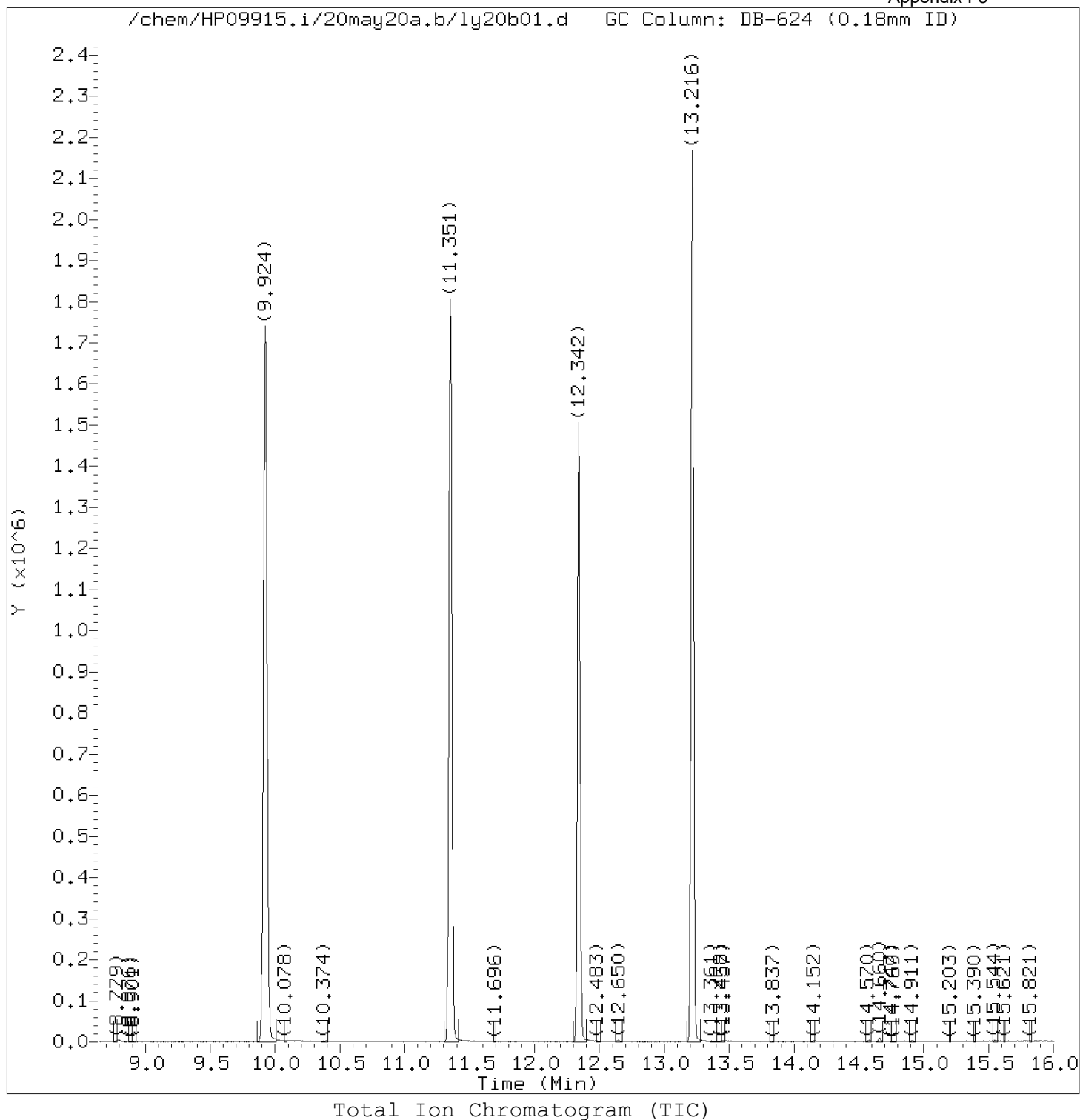
Lab Sample ID: VBLKL84

Digitally signed by Corie L. Mellinger
 on 05/20/2020 at 10:25.

Target 3.5 esignature user ID: clm27445

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Target Revision 3.5

Data File: /chem/HP09915.i/20may20a.b/ly20b01.d
 Injection date and time: 20-MAY-2020 09:53

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m
 Calibration date and time: 20-MAY-2020 09:17

Sublist used: L201411

Date, time and analyst ID of latest file update: 20-May-2020 10:11 Automation

Sample Name: VBLKL84

Lab Sample ID: VBLKL84

Digitally signed by Corie L. Mellinger
 on 05/20/2020 at 10:25.

Target 3.5 esignature user ID: clm27445

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may20a.b/ly20b01.d

Instrument ID: HP09915.i

Injection date and time: 20-MAY-2020 09:53

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m

Sublist used: L201411

Calibration date and time: 20-MAY-2020 09:17

Date, time and analyst ID of latest file update: 20-May-2020 10:11 Automation

Sample Name: VBLKL84

Lab Sample ID: VBLKL84

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
29) *t-Butyl alcohol-d10	(1)	4.500	65	268298	250.000
52) \$Dibromofluoromethane	(2)	7.069	113	347351	52.026
57) \$1,2-Dichloroethane-d4	(2)	7.522	102	87223	51.486
66) *Fluorobenzene	(2)	7.950	96	1325260	50.000
83) \$Toluene-d8	(3)	9.924	98	1302743	50.654
100) *Chlorobenzene-d5	(3)	11.351	117	1001110	50.000
114) \$4-Bromofluorobenzene	(3)	12.339	95	449996	45.474
131) *1,4-Dichlorobenzene-d4	(4)	13.216	152	525453	50.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 1 of 1

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on 05/20/2020 at 10:25.

Target 3.5 esignature user ID: clm27445

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12351MS

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1313221MS

Data file: /chem/HP09915.i/20may20a.b/ly20s11.d

Injection date and time: 20-MAY-2020 14:09

Data file Sample Info. Line: 12351MS;1313221MS;1;3;MS;KR446;DODWW;;ly20b01; Instrument ID: HP09915.i Batch: L201411AA

Date, time and analyst ID of latest file update: 22-May-2020 00:30 sej02002

Blank Data file reference: /chem/HP09915.i/20may20a.b/ly20b01.d

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m

Sublist used: 17639

Calibration date and time (Last Method Edit): 21-MAY-2020 06:41

Mid Level Daily Calibration Standard Reference: /chem/HP09915.i/20may20a.b/ly20c01.d

Bottle Code: 038A Matrix: WATER Level: Low

On-Column Amount units: ng

In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo)

VOA Prep Factor: 1.00

Volume Purged (Vt): 5 ml

Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.506(-0.010)	940	65	261594 (-12)	250.00	
66) Fluorobenzene	7.950(0.000)	2011	96	1368858 (-6)	50.00	
100) Chlorobenzene-d5	11.351(0.000)	3069	117	1009358 (-10)	50.00	
131) 1,4-Dichlorobenzene-d4	13.216(0.000)	3649	152	580298 (-2)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.069(0.000)	113	344995	50.028	100%		80 - 119
57) 1,2-Dichloroethane-d4	(2)	7.519(0.000)	102	86964	49.698	99%		81 - 118
83) Toluene-d8	(3)	9.924(0.000)	98	1348268	51.996	104%		89 - 112
114) 4-Bromofluorobenzene	(3)	12.338(0.000)	95	505473	50.663	101%		85 - 114

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Reporting Limit LOQ (in sample)
60) Benzene	(2)	7.548(0.000)	78	612669	21.672	21.67		0.2 1
88) Toluene	(3)	9.994(0.000)	92	369311	22.345	22.34		0.2 1
104) Ethylbenzene	(3)	11.461(-0.000)	91	686379	22.436	22.44		0.4 1
106) m+p-Xylene	(3)	11.570(0.000)	106	565302	47.028	47.03		1 5
107) o-Xylene	(3)	11.901(-0.000)	106	259274	22.304	22.30		0.4 1
108) Xylene (Total)	(3)		106	824576	69.332	69.33		1 6

Total number of targets = 6

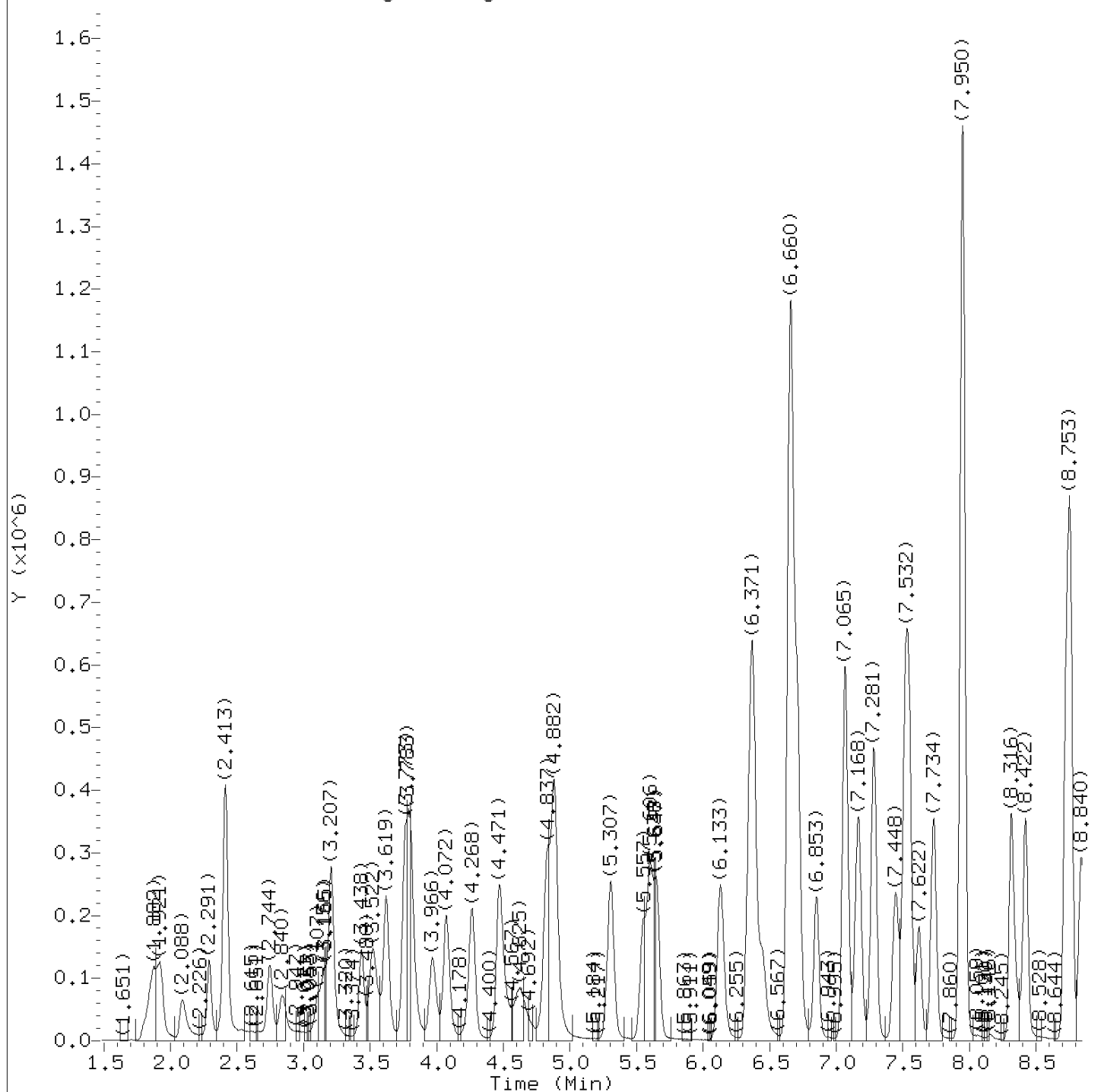
Digitally signed by Sara E. Johnson on 05/22/2020 at 00:30. Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Rachel Krueger on 05/22/2020 at 16:39. PARALLAX ID: rek30744

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/chem/HP09915.i/20may20a.b/ly20s11.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20may20a.b/ly20s11.d
 Injection date and time: 20-MAY-2020 14:09

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m
 Calibration date and time: 21-MAY-2020 06:41

Sublist used: 17639

Date, time and analyst ID of latest file update: 22-May-2020 00:30 sej02002

Sample Name: 12351MS

Lab Sample ID: 1313221MS

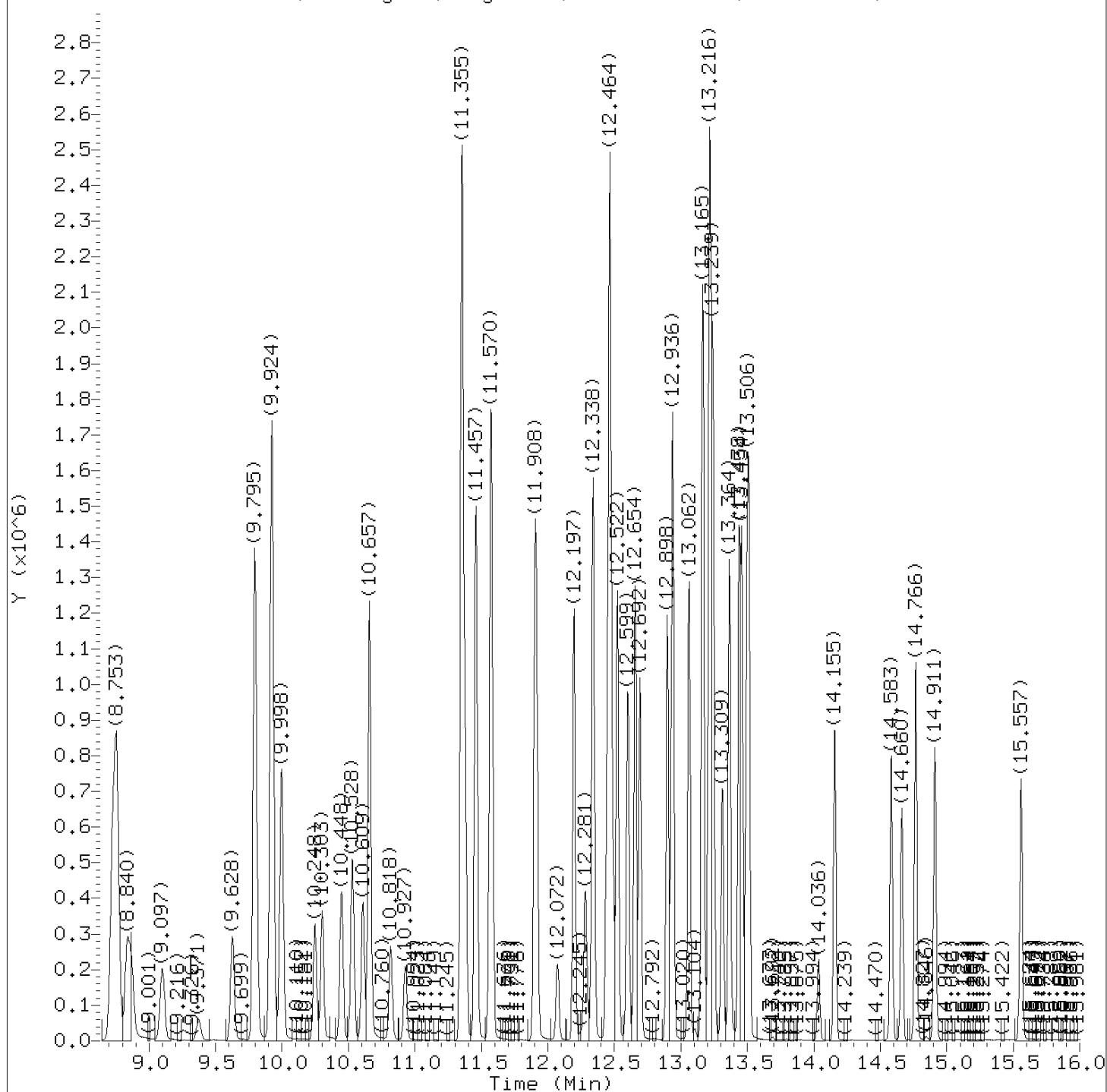
Digitally signed by Sara E. Johnson
 on 05/22/2020 at 00:30.

Target 3.5 esignature user ID: sej02002

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page 1 of 2

/chem/HP09915.i/20may20a.b/ly20s11.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20may20a.b/ly20s11.d
 Injection date and time: 20-MAY-2020 14:09

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m
 Calibration date and time: 21-MAY-2020 06:41

Sublist used: 17639

Date, time and analyst ID of latest file update: 22-May-2020 00:30 sej02002

Sample Name: 12351MS

Lab Sample ID: 1313221MS

Digitally signed by Sara E. Johnson
 on 05/22/2020 at 00:30.

Target 3.5 esignature user ID: sej02002

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may20a.b/ly20s11.d

Instrument ID: HP09915.i

Injection date and time: 20-MAY-2020 14:09

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m

Sublist used: 17639

Calibration date and time: 21-MAY-2020 06:41

Date, time and analyst ID of latest file update: 22-May-2020 00:30 sej02002

Sample Name: 12351MS

Lab Sample ID: 1313221MS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
29) *t-Butyl alcohol-d10	(1)	4.506	65	261594	250.000
52) \$Dibromofluoromethane	(2)	7.069	113	344995	50.028
57) \$1,2-Dichloroethane-d4	(2)	7.519	102	86964	49.698
60) Benzene	(2)	7.548	78	612669	21.672
66) *Fluorobenzene	(2)	7.950	96	1368858	50.000
83) \$Toluene-d8	(3)	9.924	98	1348268	51.996
88) Toluene	(3)	9.994	92	369311	22.345
100) *Chlorobenzene-d5	(3)	11.351	117	1009358	50.000
104) Ethylbenzene	(3)	11.461	91	686379	22.436
106) m+p-Xylene	(3)	11.570	106	565302	47.028
108) Xylene (Total)	(3)		106	824576	69.332
107) o-Xylene	(3)	11.901	106	259274	22.304
114) \$4-Bromofluorobenzene	(3)	12.338	95	505473	50.663
131) *1,4-Dichlorobenzene-d4	(4)	13.216	152	580298	50.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 1 of 1

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on 05/22/2020 at 00:30.

Target 3.5 esignature user ID: sej02002

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12351MSD

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

1313222MSD

Data file: /chem/HP09915.i/20may20a.b/ly20s12.d

Injection date and time: 20-MAY-2020 14:31

Data file Sample Info. Line: 12351MSD;1313222MSD;1;3;MSD;KR446;DODWW;;ly20b01; Instrument ID: HP09915.i Batch: L201411/

Date, time and analyst ID of latest file update: 22-May-2020 00:30 sej02002

Blank Data file reference: /chem/HP09915.i/20may20a.b/ly20b01.d

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m Sublist used: 17639

Calibration date and time (Last Method Edit): 21-MAY-2020 06:41

Mid Level Daily Calibration Standard Reference: /chem/HP09915.i/20may20a.b/ly20c01.d

Bottle Code: 038A Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.500 (-0.003)	938	65	297359 (0)	250.00	
66) Fluorobenzene	7.950 (0.000)	2011	96	1512087 (4)	50.00	
100) Chlorobenzene-d5	11.351 (0.000)	3069	117	1106126 (-1)	50.00	
131) 1,4-Dichlorobenzene-d4	13.216 (0.000)	3649	152	648441 (9)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.065 (0.000)	113	372397	48.886	98%		80 - 119
57) 1,2-Dichloroethane-d4	(2)	7.522 (0.000)	102	95881	49.604	99%		81 - 118
83) Toluene-d8	(3)	9.924 (0.000)	98	1449262	51.002	102%		89 - 112
114) 4-Bromofluorobenzene	(3)	12.342 (0.000)	95	566876	51.847	104%		85 - 114

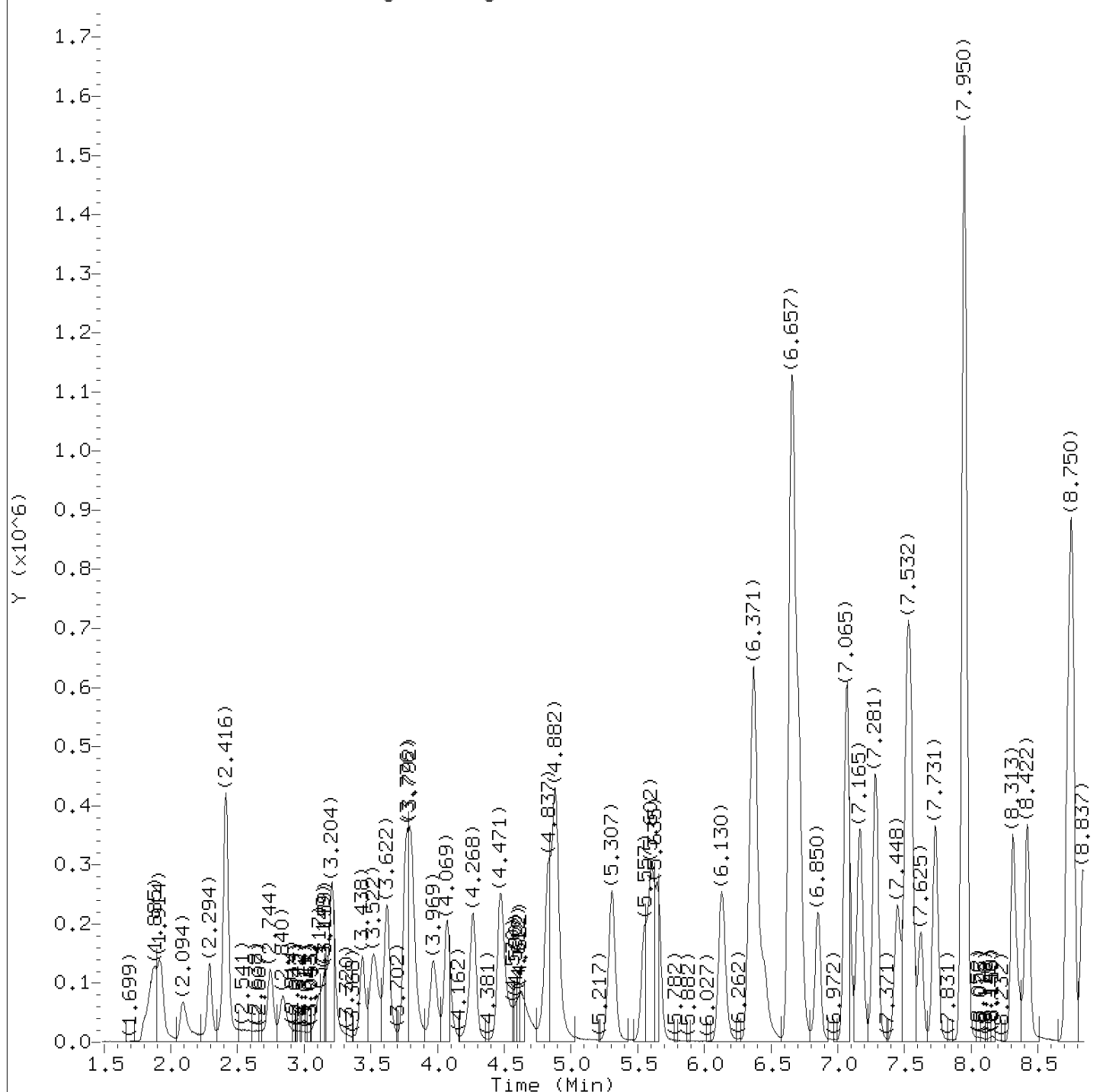
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Reporting Limit LOQ (in sample)
60) Benzene	(2)	7.551 (0.000)	78	631484	20.222	20.22		0.2 1
88) Toluene	(3)	9.998 (0.000)	92	386409	21.334	21.33		0.2 1
104) Ethylbenzene	(3)	11.461 (-0.000)	91	706537	21.074	21.07		0.4 1
106) m+p-Xylene	(3)	11.573 (-0.000)	106	562851	42.728	42.73		1 5
107) o-Xylene	(3)	11.901 (-0.000)	106	261019	20.490	20.49		0.4 1
108) Xylene (Total)	(3)		106	823870	63.218	63.22		1 6

Total number of targets = 6

Digitally signed by Sara E. Johnson on 05/22/2020 at 00:30. Target 3.5 esignature user ID: sej02002

Secondary review performed and digitally signed by Rachel Krueger on 05/22/2020 at 16:39. PARALLAX ID: rek30744

/chem/HP09915.i/20may20a.b/ly20s12.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20may20a.b/ly20s12.d
 Injection date and time: 20-MAY-2020 14:31

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m
 Calibration date and time: 21-MAY-2020 06:41

Sublist used: 17639

Date, time and analyst ID of latest file update: 22-May-2020 00:30 sej02002

Sample Name: 12351MSD

Lab Sample ID: 1313222MSD

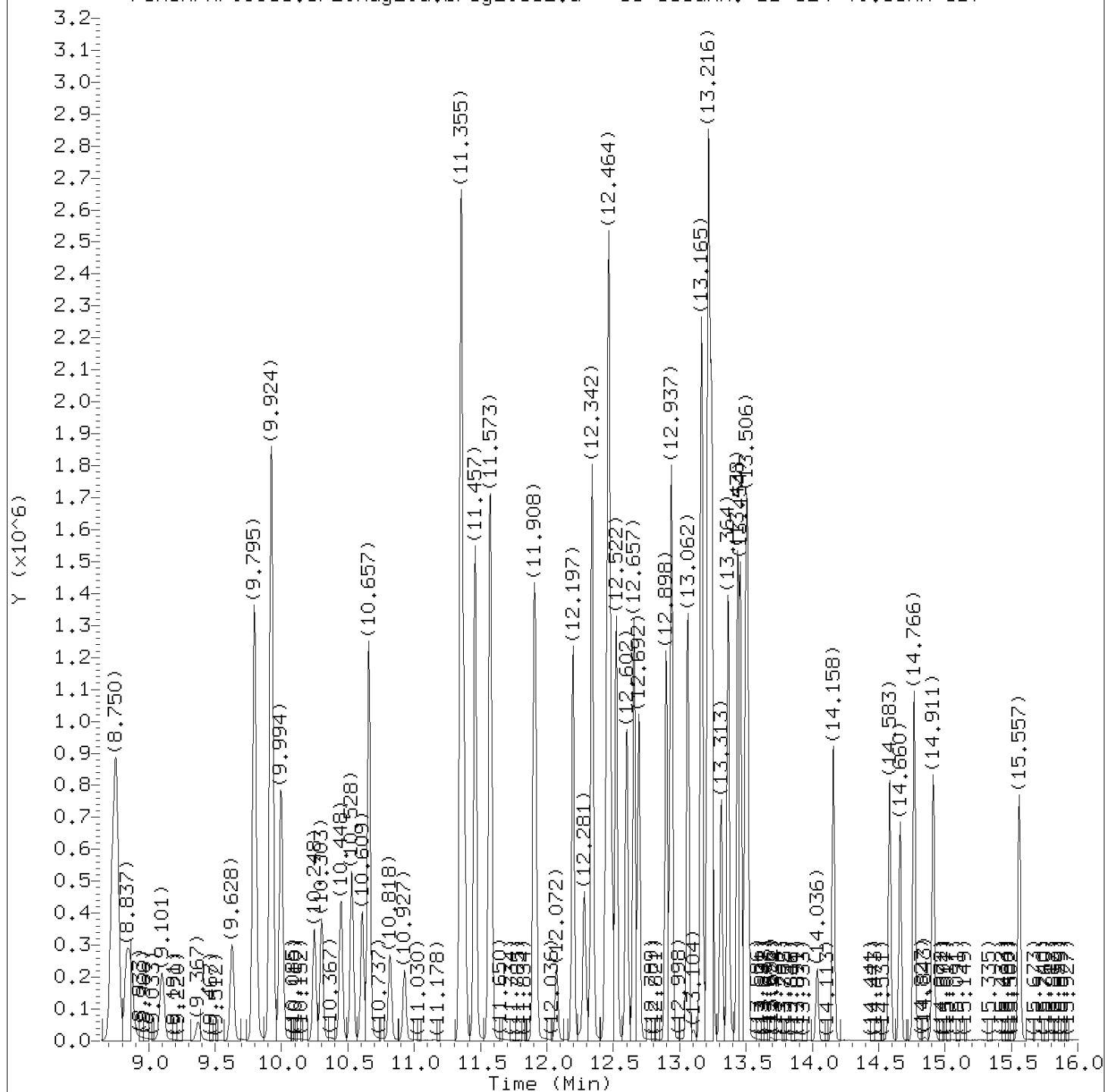
Digitally signed by Sara E. Johnson
 on 05/22/2020 at 00:30.

Target 3.5 esignature user ID: sej02002

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/chem/HP09915.i/20may20a.b/ly20s12.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20may20a.b/ly20s12.d
 Injection date and time: 20-MAY-2020 14:31

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m
 Calibration date and time: 21-MAY-2020 06:41

Sublist used: 17639

Date, time and analyst ID of latest file update: 22-May-2020 00:30 sej02002

Sample Name: 12351MSD

Lab Sample ID: 1313222MSD

Digitally signed by Sara E. Johnson
 on 05/22/2020 at 00:30.

Target 3.5 esignature user ID: sej02002

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may20a.b/ly20s12.d

Instrument ID: HP09915.i

Injection date and time: 20-MAY-2020 14:31

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m

Sublist used: 17639

Calibration date and time: 21-MAY-2020 06:41

Date, time and analyst ID of latest file update: 22-May-2020 00:30 sej02002

Sample Name: 12351MSD

Lab Sample ID: 1313222MSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
29) *t-Butyl alcohol-d10	(1)	4.500	65	297359	250.000
52) \$Dibromofluoromethane	(2)	7.065	113	372397	48.886
57) \$1,2-Dichloroethane-d4	(2)	7.522	102	95881	49.604
60) Benzene	(2)	7.551	78	631484	20.222
66) *Fluorobenzene	(2)	7.950	96	1512087	50.000
83) \$Toluene-d8	(3)	9.924	98	1449262	51.002
88) Toluene	(3)	9.998	92	386409	21.334
100) *Chlorobenzene-d5	(3)	11.351	117	1106126	50.000
104) Ethylbenzene	(3)	11.461	91	706537	21.074
106) m+p-Xylene	(3)	11.573	106	562851	42.728
108) Xylene (Total)	(3)		106	823870	63.218
107) o-Xylene	(3)	11.901	106	261019	20.490
114) \$4-Bromofluorobenzene	(3)	12.342	95	566876	51.847
131) *1,4-Dichlorobenzene-d4	(4)	13.216	152	648441	50.000

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 1 of 1

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on 05/22/2020 at 00:30.

Target 3.5 esignature user ID: sej02002

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Lancaster Laboratories

Analysis Summary for GC/MS Volatiles

Data file: /chem/HP09915.i/20may20a.b/ly20s01.d Injection date and time: **20-MAY-2020 09:09**
 Data file Sample Info. Line: LCLS84;LCLS84;1;3;LCS;;DODWW;;ly20b01; Instrument ID: **HP09915.i** Batch: **L201411AA**
 Date, time and analyst ID of latest file update: 20-May-2020 10:25 c1m27445

Blank Data file reference: /chem/HP09915.i/20may20a.b/ly20b01.d

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m Sublist used: **L201411**
 Calibration date and time (Last Method Edit): 20-MAY-2020 09:17
 Mid Level Daily Calibration Standard Reference: /chem/HP09915.i/20may20a.b/ly20c01.d

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	4.493 (0.003)	936	65	285544M (-4)	250.00	
66) Fluorobenzene	7.943 (0.006)	2009	96	1409407 (-3)	50.00	
100) Chlorobenzene-d5	11.352 (0.000)	3069	117	1032801 (-8)	50.00	
131) 1,4-Dichlorobenzene-d4	13.216 (0.000)	3649	152	573846 (-3)	50.00	

M = Internal Standard was manually integrated

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	7.062 (0.000)	113	350217	49.324	99%		80 - 119
57) 1,2-Dichloroethane-d4	(2)	7.516 (0.000)	102	88446	49.091	98%		81 - 118
83) Toluene-d8	(3)	9.921 (0.001)	98	1358345	51.196	102%		89 - 112
114) 4-Bromofluorobenzene	(3)	12.342 (0.000)	95	497028	48.686	97%		85 - 114

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)	2.078 (0.001)	85	128475	13.293	13.29			0.2	1
4) Chloromethane	(2)	2.284 (0.000)	50	169993	18.838	18.84			0.2	1
6) Vinyl Chloride	(2)	2.406 (0.000)	62	169746	19.493	19.49			0.2	1
8) Bromomethane	(2)	2.741 (0.001)	94	115260	18.358	18.36			0.3	1
9) Chloroethane	(2)	2.837 (0.001)	64	100818	20.736	20.74			0.2	1
12) Trichlorofluoromethane	(2)	3.152 (0.000)	101	210963	22.182	22.18			0.2	1
17) 1,1-Dichloroethene	(2)	3.754 (0.000)	96	122575	20.209	20.21			0.2	1
18) Acetone	(1)	3.799 (0.000)	58	158948	148.338	148.34			0.7	20
19) Freon 113	(2)	3.789 (0.000)	101	124417	19.771	19.77			0.2	10
23) Carbon Disulfide	(2)	4.066 (0.000)	76	440793	21.584	21.58			0.2	5
27) Methyl Acetate	(2)	4.233 (0.001)	43	153021	19.781	19.78			0.3	5
28) Methylene Chloride	(2)	4.464 (0.000)	84	148081	20.524	20.52			0.3	1
32) trans-1,2-Dichloroethene	(2)	4.882 (0.000)	96	143302	20.538	20.54			0.2	1
33) Methyl Tertiary Butyl Ether	(2)	4.876 (-0.000)	73	367037	17.645	17.64			0.2	1
36) 1,1-Dichloroethane	(2)	5.545 (-0.000)	93	256126	20.929	20.93			0.2	1
42) cis-1,2-Dichloroethene	(2)	6.374 (-0.000)	96	166874	21.326	21.33			0.2	1
44) 2-Butanone	(2)	6.345 (0.000)	43	805711	154.901	154.90			0.3	10
51) Chloroform	(2)	6.850 (-0.000)	83	247649	20.713	20.71			0.2	1
53) 1,1,1-Trichloroethane	(2)	7.069 (-0.000)	97	211357	20.606	20.61			0.3	1
54) Cyclohexane	(2)	7.165 (-0.000)	56	237117	20.651	20.65			1	5
56) Carbon Tetrachloride	(2)	7.274 (-0.000)	117	185504	21.585	21.59			0.2	1
60) Benzene	(2)	7.545 (0.000)	78	601321	20.659	20.66			0.2	1
61) 1,2-Dichloroethane	(2)	7.615 (0.000)	62	199713	20.469	20.47			0.3	1
71) Trichloroethene	(2)	8.422 (-0.000)	95	147789	20.064	20.06			0.2	1
72) Methylcyclohexane	(2)	8.725 (-0.000)	83	225063	18.792	18.79			0.5	5
73) 1,2-Dichloropropane	(2)	8.757 (-0.000)	63	155277	20.705	20.70			0.2	1
78) Bromodichloromethane	(2)	9.098 (-0.000)	83	172461	19.614	19.61			0.2	1
81) cis-1,3-Dichloropropene	(2)	9.625 (-0.000)	75	213950	18.618	18.62			0.2	1
82) 4-Methyl-2-pentanone	(2)	9.795 (-0.000)	43	1055752	100.228	100.23			0.5	10
88) Toluene	(3)	9.995 (0.000)	92	356147	21.059	21.06			0.2	1

Digitally signed by Corie L. Mellinger on 05/20/2020 at 10:27. Target 3.5 esignature user ID: c1m27445

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LCSL84

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

LCSL84

Data file: /chem/HP09915.i/20may20a.b/ly20s01.d

Injection date and time: **20-MAY-2020 09:09**

Data file Sample Info. Line: LCSL84;LCSL84;1;3;LCS;;DODWW;;ly20b01;

Instrument ID: **HP09915.i** Batch: **L201411AA**

Date, time and analyst ID of latest file update: 20-May-2020 10:25 c1m27445

Blank Data file reference: /chem/HP09915.i/20may20a.b/ly20b01.d

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m Sublist used: **L201411**

Calibration date and time (Last Method Edit): 20-MAY-2020 09:17

Mid Level Daily Calibration Standard Reference: /chem/HP09915.i/20may20a.b/ly20c01.d

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit LOQ (in sample)	
89) trans-1,3-Dichloropropene	(3)	10.245 (0.000)	75	197273	20.331	20.33			0.2	1
92) 1,1,2-Trichloroethane	(3)	10.448 (-0.000)	97	142140	21.660	21.66			0.2	1
93) Tetrachloroethene	(3)	10.532 (-0.000)	166	158896	22.047	22.05			0.2	1
96) 2-Hexanone	(3)	10.657 (0.000)	43	800628	112.903	112.90			0.3	10
97) Dibromochloromethane	(3)	10.818 (0.000)	129	143405	21.008	21.01			0.2	1
99) 1,2-Dibromoethane	(3)	10.927 (-0.000)	107	143513	20.349	20.35			0.2	1
102) Chlorobenzene	(3)	11.377 (0.000)	112	414348	21.335	21.34			0.2	1
104) Ethylbenzene	(3)	11.461 (0.000)	91	675029	21.564	21.56			0.4	1
106) m+p-Xylene	(3)	11.573 (0.000)	106	555040	45.126	45.13			1	5
107) o-Xylene	(3)	11.901 (0.000)	106	253910	21.347	21.35			0.4	1
108) Xylene (Total)	(3)		106	808950	66.473	66.47			1	6
109) Styrene	(3)	11.914 (0.000)	104	420736	21.750	21.75			0.2	5
110) Bromoform	(3)	12.072 (0.000)	173	99041	19.930	19.93			1	4
111) Isopropylbenzene	(3)	12.197 (0.000)	105	658909	21.830	21.83			0.2	5
116) 1,1,2,2-Tetrachloroethane	(4)	12.442 (-0.000)	83	229169	21.906	21.91			0.2	1
129) 1,3-Dichlorobenzene	(4)	13.162 (-0.000)	146	348224	22.254	22.25			0.2	5
133) 1,4-Dichlorobenzene	(4)	13.232 (-0.000)	146	361616	22.019	22.02			0.2	5
134) 1,2,3-Trimethylbenzene	(4)	13.242 (-0.000)	105	614829	21.824	21.82			0.3	5
138) 1,2-Dichlorobenzene	(4)	13.493 (0.000)	146	340078	21.592	21.59			0.2	5
142) 1,2-Dibromo-3-chloropropane	(4)	14.036 (-0.000)	75	47836	20.659	20.66			0.3	5
146) 1,2,4-Trichlorobenzene	(4)	14.583 (-0.000)	180	221016	19.933	19.93			0.3	5
148) Naphthalene	(4)	14.766 (-0.000)	128	727084	20.258	20.26			1	5

Total number of targets = 52

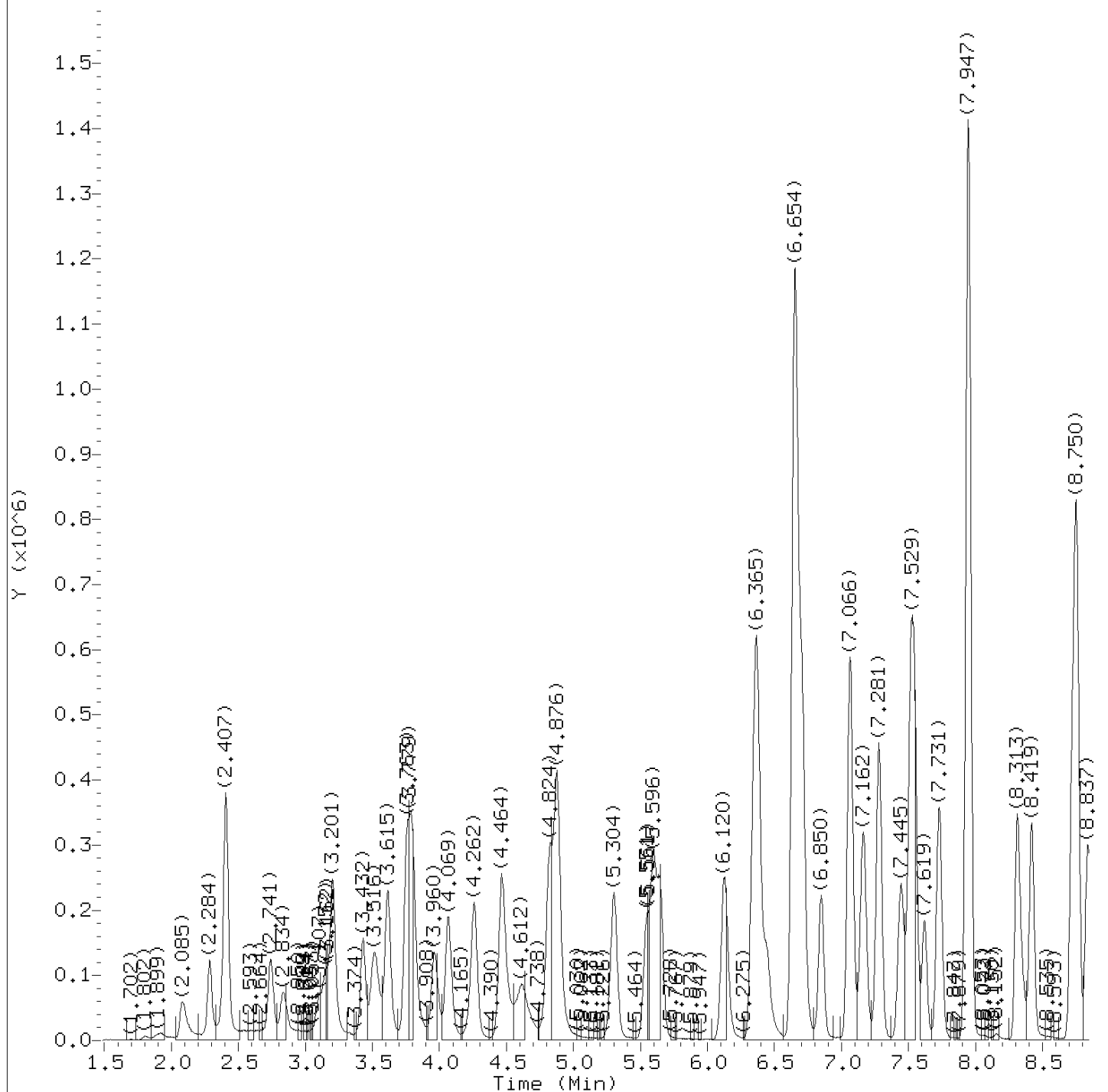
Digitally signed by Corie L. Mellinger on 05/20/2020 at 10:27. Target 3.5 esignature user ID: c1m27445

Secondary review performed and digitally signed by Rachel Krueger on 05/21/2020 at 18:30. PARALLAX ID: rek30744

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/chem/HP09915.i/20may20a.b/ly20s01.d GC Column: DB-624 (0.18mm ID)



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09915.i/20may20a.b/ly20s01.d
 Injection date and time: 20-MAY-2020 09:09

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m
 Calibration date and time: 20-MAY-2020 09:17

Sublist used: L201411

Date, time and analyst ID of latest file update: 20-May-2020 10:25 clm27445

Sample Name: LCSL84

Lab Sample ID: LCSL84

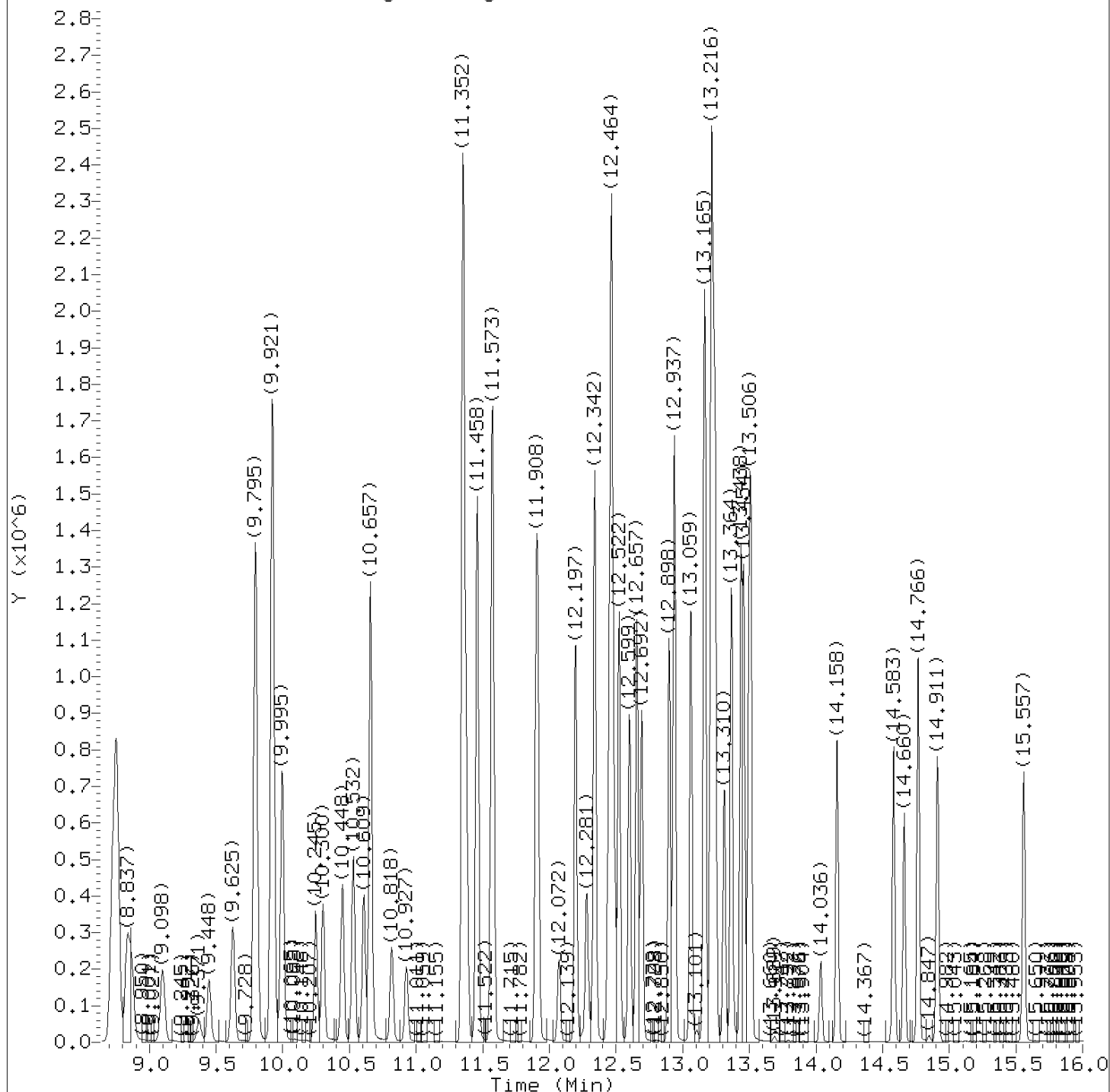
Digitally signed by Corie L. Mellinger
 on 05/20/2020 at 10:27.

Target 3.5 esignature user ID: clm27445

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page 1 of 2

/chem/HP09915.i/20may20a.b/ly20s01.d GC Column: DB-624 (0.18mm ID)



Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may20a.b/ly20s01.d
 Injection date and time: 20-MAY-2020 09:09

Instrument ID: HP09915.i
 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m Sublist used: L201411
 Calibration date and time: 20-MAY-2020 09:17
 Date, time and analyst ID of latest file update: 20-May-2020 10:25 clm27445

Sample Name: LCSL84

Lab Sample ID: LCSL84

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
3) Dichlorodifluoromethane	(2)	2.079	85	128475	13.293
4) Chloromethane	(2)	2.284	50	169993	18.838
6) Vinyl Chloride	(2)	2.407	62	169746	19.493
8) Bromomethane	(2)	2.741	94	115260	18.358
9) Chloroethane	(2)	2.837	64	100818	20.736
12) Trichlorofluoromethane	(2)	3.152	101	210963	22.182
17) 1,1-Dichloroethene	(2)	3.754	96	122575	20.209
19) Freon 113	(2)	3.789	101	124417	19.771
18) Acetone	(1)	3.799	58	158948	148.338
23) Carbon Disulfide	(2)	4.066	76	440793	21.584
27) Methyl Acetate	(2)	4.233	43	153021	19.781
28) Methylene Chloride	(2)	4.464	84	148081	20.524
29)*t-Butyl alcohol-d10	(1)	4.493	65	285544M	250.000
33) Methyl Tertiary Butyl Ether	(2)	4.876	73	367037	17.645
32) trans-1,2-Dichloroethene	(2)	4.882	96	143302	20.538
36) 1,1-Dichloroethane	(2)	5.545	63	256126	20.929
44) 2-Butanone	(2)	6.345	43	805711	154.901
42) cis-1,2-Dichloroethene	(2)	6.374	96	166874	21.326
51) Chloroform	(2)	6.850	83	247649	20.713
52)\$Dibromofluoromethane	(2)	7.062	113	350217	49.324
53) 1,1,1-Trichloroethane	(2)	7.069	97	211357	20.606
54) Cyclohexane	(2)	7.165	56	237117	20.651
56) Carbon Tetrachloride	(2)	7.274	117	185504	21.585
57)\$1,2-Dichloroethane-d4	(2)	7.516	102	88446	49.091
60) Benzene	(2)	7.545	78	601321	20.659
61) 1,2-Dichloroethane	(2)	7.615	62	199713	20.469
66)*Fluorobenzene	(2)	7.943	96	1409407	50.000
71) Trichloroethene	(2)	8.422	95	147789	20.064
72) Methylcyclohexane	(2)	8.725	83	225063	18.792
73) 1,2-Dichloropropane	(2)	8.757	63	155277	20.705
78) Bromodichloromethane	(2)	9.098	83	172461	19.614
81) cis-1,3-Dichloropropene	(2)	9.625	75	213950	18.618
82) 4-Methyl-2-pentanone	(2)	9.795	43	1055752	100.228
83)\$Toluene-d8	(3)	9.921	98	1358345	51.196
88) Toluene	(3)	9.995	92	356147	21.059
89) trans-1,3-Dichloropropene	(3)	10.245	75	197273	20.331
92) 1,1,2-Trichloroethane	(3)	10.448	97	142140	21.660
93) Tetrachloroethene	(3)	10.532	166	158896	22.047

M = Compound was manually integrated.

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

page 1 of 2

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 on 05/20/2020 at 10:27.

Target 3.5 esignature user ID: clm27445

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Quant Report

Target Revision 3.5

Data File: /chem/HP09915.i/20may20a.b/ly20s01.d

Instrument ID: HP09915.i

Injection date and time: 20-MAY-2020 09:09

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m

Sublist used: L201411

Calibration date and time: 20-MAY-2020 09:17

Date, time and analyst ID of latest file update: 20-May-2020 10:25 clm27445

Sample Name: LCSL84

Lab Sample ID: LCSL84

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
=====	=====	=====	=====	=====	=====
96) 2-Hexanone	(3)	10.657	43	800628	112.903
97) Dibromochloromethane	(3)	10.818	129	143405	21.008
99) 1,2-Dibromoethane	(3)	10.927	107	143513	20.349
100)*Chlorobenzene-d5	(3)	11.352	117	1032801	50.000
102) Chlorobenzene	(3)	11.377	112	414348	21.335
104) Ethylbenzene	(3)	11.461	91	675029	21.564
106) m+p-Xylene	(3)	11.573	106	555040	45.126
108) Xylene (Total)	(3)		106	808950	66.473
107) o-Xylene	(3)	11.901	106	253910	21.347
109) Styrene	(3)	11.914	104	420736	21.750
110) Bromoform	(3)	12.072	173	99041	19.930
111) Isopropylbenzene	(3)	12.197	105	658909	21.830
114)\$4-Bromofluorobenzene	(3)	12.342	95	497028	48.686
116) 1,1,2,2-Tetrachloroethane	(4)	12.441	83	229169	21.906
129) 1,3-Dichlorobenzene	(4)	13.162	146	348224	22.254
131)*1,4-Dichlorobenzene-d4	(4)	13.216	152	573846	50.000
133) 1,4-Dichlorobenzene	(4)	13.232	146	361616	22.019
134) 1,2,3-Trimethylbenzene	(4)	13.242	105	614829	21.824
138) 1,2-Dichlorobenzene	(4)	13.493	146	340078	21.592
142) 1,2-Dibromo-3-chloropropane	(4)	14.036	75	47836	20.659
146) 1,2,4-Trichlorobenzene	(4)	14.583	180	221016	19.933
148) Naphthalene	(4)	14.766	128	727084	20.258

* = Compound is an internal standard.

\$ = Compound is a surrogate standard.

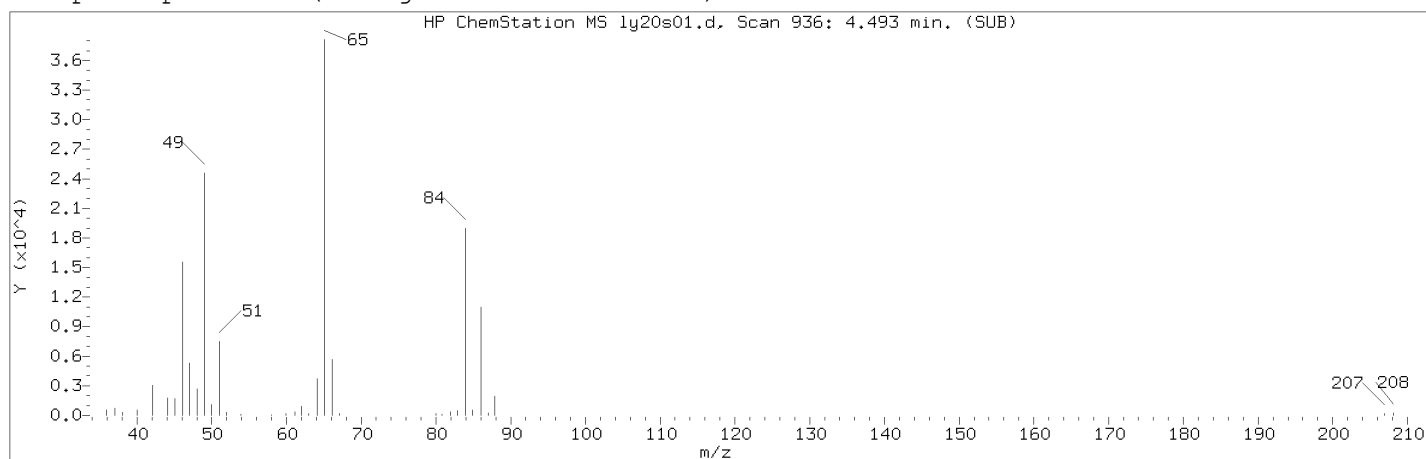
page 2 of 2

Digitally signed by Corie L. Mellinger
on 05/20/2020 at 10:27.

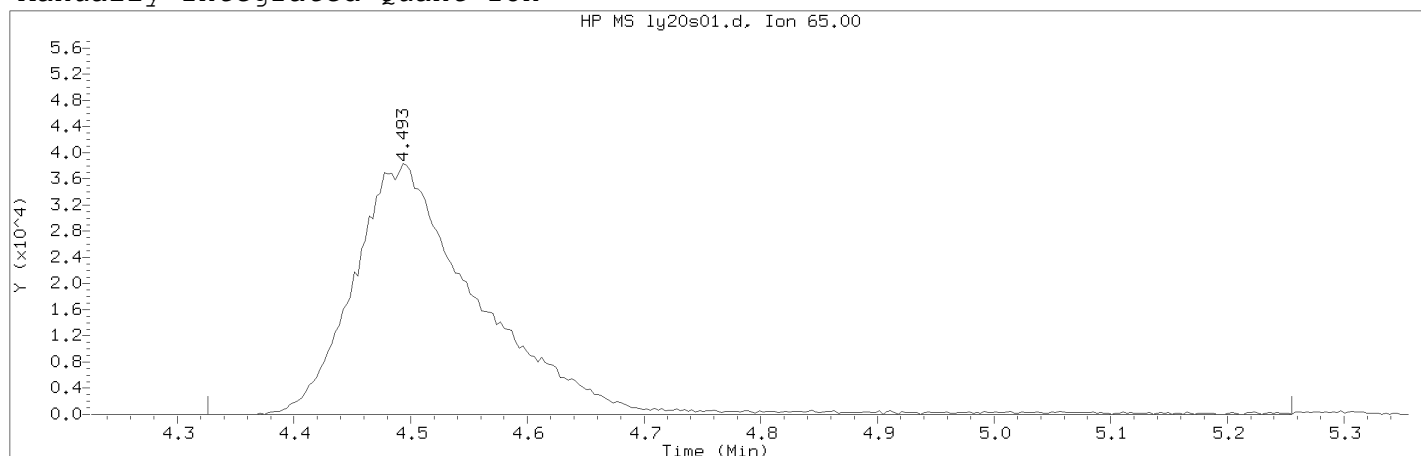
Target 3.5 esignature user ID: clm27445

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Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09915.i/20may20a.b/1y20s01.d Instrument ID: HP09915.i
 Injection date and time: 20-MAY-2020 09:09 Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m Sublist used: L201411
 Calibration date and time: 20-MAY-2020 09:17
 Date, time and analyst ID of latest file update: 20-May-2020 10:25 clm27445

Sample Name: LCSL84

Lab Sample ID: LCSL84

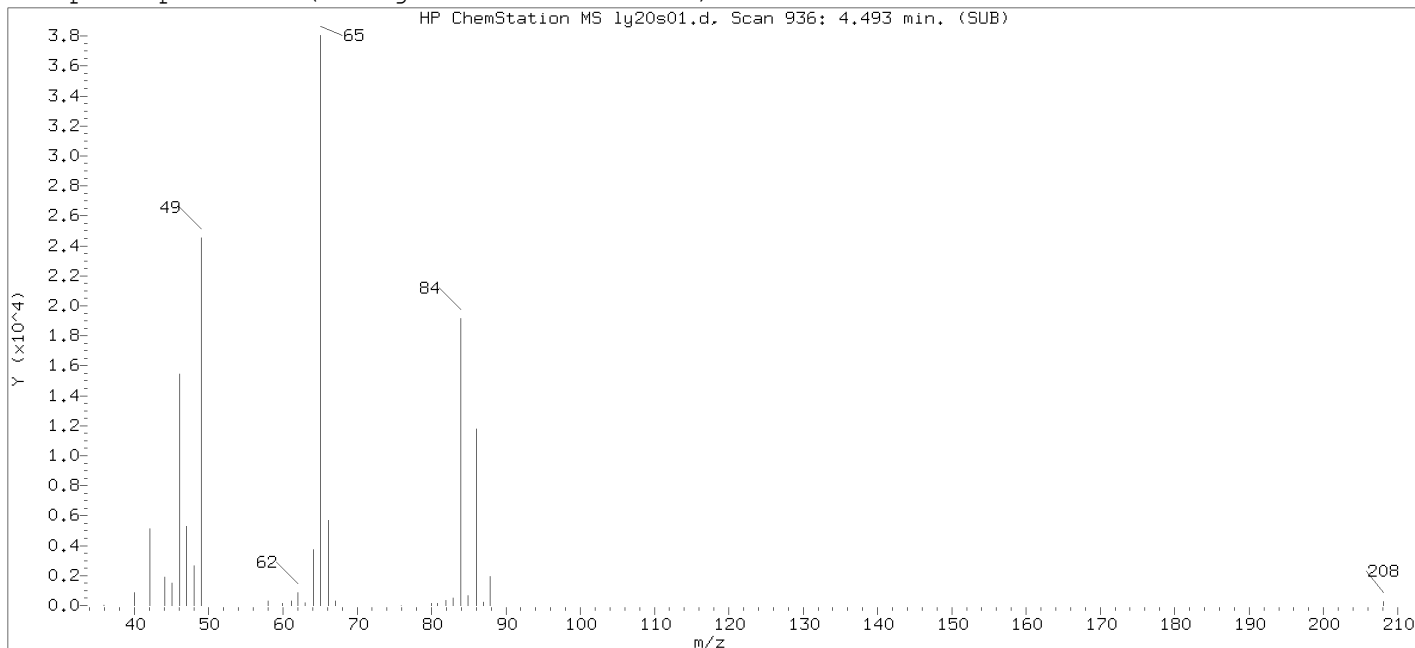
Compound Number : 29
 Compound Name : t-Butyl alcohol-d10
 Scan Number : 936
 Retention Time (minutes): 4.493
 Quant Ion : 65.00
 Area (flag) : 285544M
 On-Column Amount (ng) : 250.0000
 Integration start scan : 883 Integration stop scan: 1172
 Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

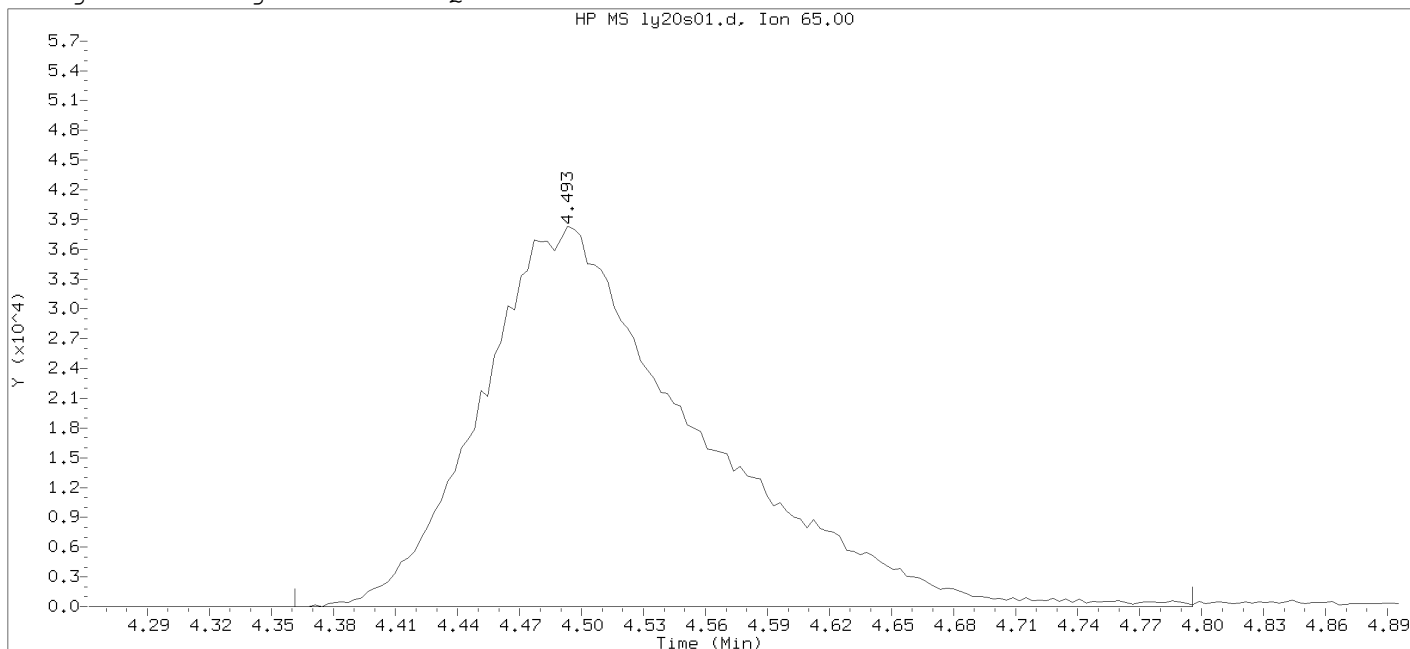
Analyst responsible for change: Digitally signed by Corie L. Mellinger
 on 05/20/2020 at 10:27.
 Target 3.5 esignature user ID: clm27445

Secondary review performed and digitally signed by Rachel Krueger on 05/21/2020 at 18:30.
 PARALLAX ID: rek30744

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09915.i/20may20a.b/ly20s01.d

Instrument ID: HP09915.i

Injection date and time: 20-MAY-2020 09:09

Analyst ID: CLM27445

Method used: /chem/HP09915.i/20may20a.b/m8260c5.m

Sublist used: L201411

Calibration date and time: 20-MAY-2020 09:17

Date, time and analyst ID of latest file update: 20-May-2020 09:27 Automation

Sample Name: LCSL84

Lab Sample ID: LCSL84

Compound Number	: 29
Compound Name	: t-Butyl alcohol-d10
Scan Number	: 936
Retention Time (minutes)	: 4.493
Quant Ion	: 65.00
Area	: 278250
On-column Amount (ng)	: 250.0000
Integration start scan	: 894
Integration stop scan	: 1029
Y at integration start	: 0
Y at integration end	: 0

Digitally signed by Corie L. Mellinger on 05/20/2020 at 10:27.
 Target 3.5 esignature user KR446 Page 286 of 579

EDB/DBCP Data

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Case Narrative/Conformance Summary

EDB/DBCP

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Case Narrative/Conformance Summary

CLIENT: EA Engineering, Science & Tech
SDG: KR446

Pesticide Residue Analysis

Fraction: EDB/DBCP

Sample #	Client ID	Matrix		DF	Comments
		Liquid	Solid		
1313220	GWTS-EFF1-051120	X		1	Unspiked
1313221	GWTS-EFF1-051120	X		1	Matrix Spike
1313222	GWTS-EFF1-051120	X		1	Matrix Spike Duplicate
1313224	GWTS-GAC1-051120	X		1	
1313225	GWTS-INF1-051120	X		1	
1313226	GWTS-FB01-051120	X		1	Field Blank
1313227	GWTS-TB01-051120	X		1	Trip Blank
1313228	GWTS-EFF2-051120	X		1	
1313229	GWTS-EFF2DUP-051120	X		1	Field Duplicate Sample
1313230	GWTS-GAC2-051120	X		1	
1313231	GWTS-INF2-051120	X		1	

All analyses have been performed in accordance with DOD QSM Version 5.1.1 unless otherwise noted below.
See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

(Sample number(s): 1313220-1313222, 1313224-1313231: Analysis: 10398)
For dual column analyses in which the calibration (initial and/or continuing) response is outside the acceptance criteria on one column and within criteria on the second column affected analytes are reported from the compliant column. The sample raw data identifies the column used to report each analyte.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

All QC is within specification.

Case Narrative/Conformance Summary

CLIENT: EA Engineering, Science & Tech

SDG: KR446

Pesticide Residue Analysis

Fraction: EDB/DBCP

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
+MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

Quality Control and Calibration Summary Forms

EDB/DBCP

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Quality Control Reference List Pesticide Residue Analysis

CLIENT: EA Engineering, Science & Tech
SDG: KR446

Fraction: EDB/DBCP

Analysis	Batch Number	Sample Number	Analysis Date
EDB 8011 Water	201350023A	PBLK23135	05/15/2020 21:43
		LCS23135	05/15/2020 22:00
		LCSD23135	05/15/2020 22:17
		1313220 UNSPK	05/16/2020 00:48
		1313221 MS	05/16/2020 01:05
		1313222 MSD	05/16/2020 01:22
		1313224	05/16/2020 01:39
		1313225	05/16/2020 01:56
		1313226	05/16/2020 02:13
		1313227	05/16/2020 02:29
		1313228	05/16/2020 03:20
		1313229	05/16/2020 03:37
		1313230	05/16/2020 03:53
		1313231	05/16/2020 04:10

Quality Control Summary
Method Blank
Pesticide Residue Analysis
SDG: KR446
Matrix: LIQUID**Fraction: EDB/DBCP**

201350023A / PBLK23135						
Analyte	Analysis Date	Blank Results	Units	DL	LOD	LOQ
Ethylene dibromide	05/15/20	N.D.	ug/l	0.010	0.020	0.030

Quality Control Summary
Surrogates
Pesticide Residue Analysis
SDG: KR446
Matrix: LIQUID

Fraction: EDB/DBCP

Sample	1,1,2,2-Tetrachloroethane-D1		1,1,2,2-Tetrachloroethane-D2	
	Spike Added	0.070428 ug/l	Spike Added	0.070428 ug/l
	% Recovery	Limits	% Recovery	Limits
PBLK23135	65	46 - 136	63	46 - 136
LCS23135	67	46 - 136	65	46 - 136
LCSD23135	63	46 - 136	63	46 - 136
1313220 UNSPK	69	46 - 136	62	46 - 136
1313221 MS	70	46 - 136	63	46 - 136
1313222 MSD	69	46 - 136	63	46 - 136
1313224	68	46 - 136	64	46 - 136
1313225	66	46 - 136	62	46 - 136
1313226	58	46 - 136	57	46 - 136
1313227	54	46 - 136	54	46 - 136
1313228	65	46 - 136	59	46 - 136
1313229	68	46 - 136	57	46 - 136
1313230	62	46 - 136	64	46 - 136
1313231	63	46 - 136	64	46 - 136

Quality Control Summary
Matrix Spike/Matrix Spike Duplicate

SDG: KR446
Matrix: LIQUID

Pesticide Residue Analysis

Fraction: EDB/DBCP

UNSPK: 1313220 MS: 1313221 MSD: 1313222 Analyte	Batch: 201350023A (Sample number(s): 1313220-1313222, 1313224-1313231)								
	Spike Added ug/l MS/MSD	Unspiked Conc ug/l	MS Conc ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	%Rec Limits	%RPD	%RPD Limits
Ethylene dibromide	0.122 / 0.125	N.D.	0.112	0.113	92	91	60-140	2	20

Comments:

(2) The unspiked sample result is greater than four times the spike added.

* = Out of Specification

Results are being reported on an as received basis.

6/2/2020 2:14:36 PM

Page 1 of 1

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: KR446
Matrix: LIQUID

Pesticide Residue Analysis
Fraction: EDB/DBCP

LCS: LCS23135 LCSD: LCSD23135	Batch: 201350023A (Sample number(s): 1313220-1313222, 1313224-1313231)							
Analyte	Spike Added ug/l	LCS Conc ug/l	LCSD Conc ug/l	LCS %Rec	LCSD %Rec	%Rec Limits	%RPD	%RPD Limits
Ethylene dibromide	0.128	0.110	0.104	86	81	60-140	6	20

**LOQ/MDL Summary
Pesticide Residue Analysis**

SDG: KR446

Fraction: EDB/DBCP

10398: EDB 8011 Water Analyte Name	Default DL	Default LOD	Default LOQ	Units
Ethylene dibromide	.01	.02	0.030	ug/l

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 19853ACalibration File: 16EDBS2013301GC Column (1): DB CLP1ID: 0.32 (mm)ICAL 16EDBS2013301ICAL Date(s) Analyzed: 5/12/2020 5/13/2020

COMPOUND	RT OF STANDARDS						MIDPOINT	RT WINDOW	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	RT	FROM	TO
ETHYLENE DIBROMIDE	3.82	3.83	3.82	3.82	3.83	3.82	3.82	3.79	3.85
1,1,2,2-TETRACHLOROETHANE	5.31	5.32	5.31	5.31	5.32	5.31	5.31	5.28	5.34
1,2,3-Trichloropropane	5.46	5.46	5.46	5.46	5.46	5.46	5.46	5.43	5.49
1,2-DIBROMO-3-CHLOROPROPA	8.22	8.22	8.22	8.22	8.22	8.22	8.22	8.19	8.25

level 4

5/16/20

5/13/20

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code: Case No.:

SAS No.:

SDG No.:

Instrument: 19853ACalibration File: 16EDBS2013301GC Column (1): DB CLP1ID: 0.32 (mm)ICAL 16EDBS2013301ICAL Date(s) Analyzed: 5/12/2020 5/13/2020

COMPOUND	CALIBRATION FACTORS						MEAN	%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6		
ETHYLENE DIBROMIDE	1.51E+04	1.49E+04	1.68E+04	1.52E+04	1.64E+04	1.31E+04	1.53E+04	8
1,1,2,2-TETRACHLOROETHANE	2.17E+04	2.17E+04	2.39E+04	2.15E+04	2.27E+04	1.96E+04	2.18E+04	7
1,2,3-Trichloropropane	3.61E+03	3.47E+03	3.56E+03	2.84E+03	3.18E+03	2.77E+03	3.24E+03	11
1,2-DIBROMO-3-CHLOROPROPA	4.00E+04	4.14E+04	4.19E+04	3.58E+04	3.81E+04	3.37E+04	3.85E+04	8

Chrom Perfect Calibration File

File Name: V:\CP16\16EDBS2013301.CAL
Version: 13

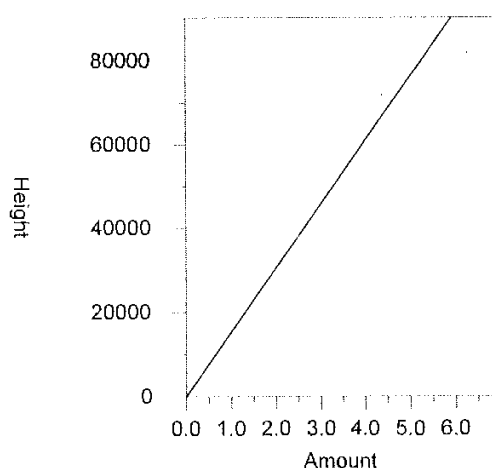
Creator:
Description:
Reason for change:

External standard calibration
Standard injection volume: 1
No sample weight correction
Area reject threshold: 100
Reference peak area reject threshold: 1000
Amount units:
No default component

Method of calculating data point averages: Current update equal to cal data
No calibration update report

All levels are normal data points.

1 EDB



Expected retention time: 3.822 minutes
Search window: 0.03 minutes
No retention time reference component
No response proxy component
Group number: 0
High alarm limit: 0
Low alarm limit: 0
Component constant: 0

Single peak quantification by height

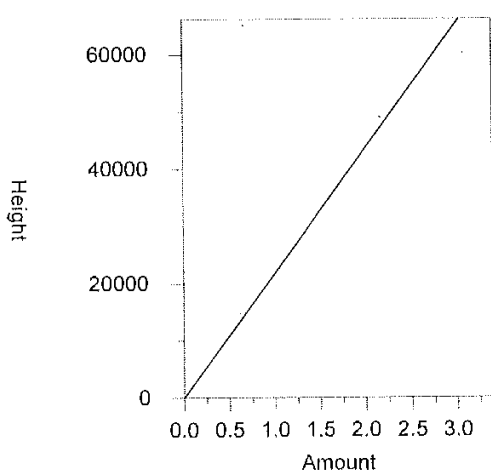
$$Y = 15257.8 X + 0$$

Average CF fit with equal weighting, forced to origin
Coefficient of determination: 0.9598542
Average error: 5.834%
Average CF: 15257.8
RSD: 8.493%

Level	Amount	Response	Cal Factor	Error, %	Source
1	0.35	5301.134	15146.1	-0.732	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001.004.BND
2	0.63	9385.587	14897.76	-2.360	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001.005.BND
3	1.25	20940.86	16752.69	9.797	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001.006.BND
4	2.5	38029.29	15211.72	-0.302	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001.007.BND
5	4.38	71978.77	16433.51	7.706	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001.008.BND
6	6.26	82037.67	13105.06	-14.109	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001.009.BND

2 1,1,2,2-PCA

Chrom Perfect Calibration File



Expected retention time: 5.313 minutes
 Search window: 0.03 minutes
 No retention time reference component
 No response proxy component
 Group number: 0

High alarm limit: 0
 Low alarm limit: 0
 Component constant: 0

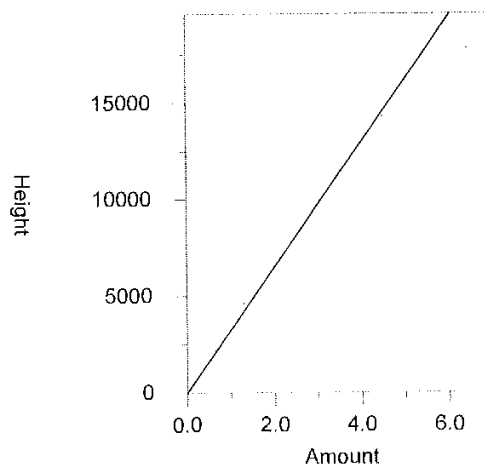
Single peak quantification by height

$$Y = 21831.99 X + 0$$

Average CF fit with equal weighting, forced to origin
 Coefficient of determination: 0.9797019
 Average error: 4.459%
 Average CF: 21831.99
 RSD: 6.565%

Level	Amount	Response	Cal Factor	Error, %	Source
1	0.17	3680.85	21652.06	-0.824	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001.004.B
2	0.31	6715.659	21663.42	-0.772	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001.005.B
3	0.62	14797.63	23867.14	9.322	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001.006.B
4	1.23	26494.51	21540.25	-1.336	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001.007.B
5	2.16	49069.15	22717.2	4.055	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001.008.B
6	3.08	60219.77	19551.87	-10.444	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001.009.B

3 1,2,3-TCP



Expected retention time: 5.46 minutes
 Search window: 0.03 minutes
 No retention time reference component
 No response proxy component
 Group number: 0

High alarm limit: 0
 Low alarm limit: 0
 Component constant: 0

Single peak quantification by height

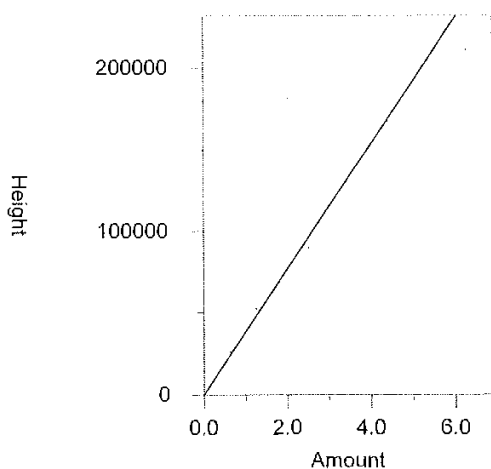
$$Y = 3237.981 X + 0$$

Average CF fit with equal weighting, forced to origin
 Coefficient of determination: 0.9537769
 Average error: 9.576%
 Average CF: 3237.981
 RSD: 11.413%

Level	Amount	Response	Cal Factor	Error, %	Source
1	0.36	1301.261	3614.614	11.632	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001.004.B
2	0.64	2217.705	3465.164	7.016	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001.005.B
3	1.29	4598.013	3564.351	10.079	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001.006.B
4	2.57	7297.31	2839.42	-12.309	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001.007.B
5	4.5	14289.96	3175.547	-1.928	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001.008.B
6	6.43	17803.32	2768.79	-14.490	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001.009.B

4 DBCP

Chrom Perfect Calibration File



Expected retention time: 8.22 minutes
 Search window: 0.03 minutes
 No retention time reference component
 No response proxy component
 Group number: 0

High alarm limit: 0
 Low alarm limit: 0
 Component constant: 0

Single peak quantification by height

$$Y = 38493.24 X + 0$$

Average CF fit with equal weighting, forced to origin
 Coefficient of determination: 0.9692255
 Average error: 6.769%
 Average CF: 38493.24
 RSD: 8.433%

Level	Amount	Response	Cal Factor	Error, %	Source
1	0.35	14001.42	40004.06	3.925	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001.004.BN
2	0.63	26052.76	41353.59	7.431	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001.005.BN
3	1.25	52422.99	41938.39	8.950	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001.006.BN
4	2.51	89968.63	35844.08	-6.882	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001.007.BN
5	4.39	167450.5	38143.62	-0.908	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001.008.BN
6	6.27	211146.7	33675.71	-12.515	WUSLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001.009.BN

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code: Case No.:

SAS No.:

SDG No.:

Instrument: 19853BCalibration File: 16EDBS2013301BGC Column (2): DB CLP2ID: 0.32 (mm)ICAL 16EDBS2013301BICAL Date(s) Analyzed: 5/12/2020 5/13/2020

COMPOUND	RT OF STANDARDS						MIDPOINT	RT WINDOW	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	RT	FROM	TO
ETHYLENE DIBROMIDE	4.65	4.65	4.65	4.65	4.65	4.65	4.65	4.62	4.68
1,1,2,2-TETRACHLOROETHANE	6.33	6.33	6.33	6.33	6.33	6.32	6.33	6.30	6.36
1,2,3-Trichloropropane	6.44	6.44	6.44	6.44	6.44	6.44	6.44	6.41	6.47
1,2-DIBROMO-3-CHLOROPROPA	9.08	9.08	9.08	9.08	9.08	9.08	9.08	9.05	9.11

level 4
SP16346
5/13/20

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code: Case No.:

SAS No.:

SDG No.:

Instrument: 19853BCalibration File: 16EDBS2013301BGC Column (2) : DB CLP2ID: 0.32 (mm)ICAL 16EDBS2013301BICAL Date(s) Analyzed: 5/12/2020 5/13/2020

COMPOUND	CALIBRATION FACTORS						MEAN	%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6		
ETHYLENE DIBROMIDE	2.33E+04	2.23E+04	2.65E+04	2.43E+04	2.51E+04	2.16E+04	2.38E+04	8
1,1,2,2-TETRACHLOROETHANE	3.23E+04	3.03E+04	3.31E+04	3.03E+04	3.26E+04	2.85E+04	3.12E+04	6
1,2,3-Trichloropropane	5.57E+03	4.45E+03	4.82E+03	4.35E+03	4.51E+03	4.04E+03	4.62E+03	11
1,2-DIBROMO-3-CHLOROPROPA	6.77E+04	7.11E+04	7.26E+04	6.47E+04	6.58E+04	6.10E+04	6.71E+04	6

Chrom Perfect Calibration File

File Name: V:\CP16\16EDBS2013301B.CAL
Version: 13

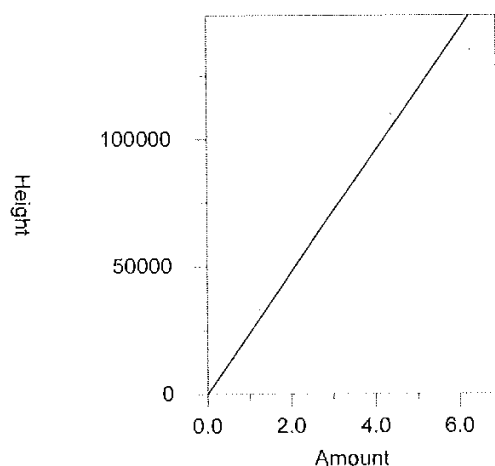
Creator:
Description:
Reason for change:

External standard calibration
Standard injection volume: 1
No sample weight correction
Area reject threshold: 100
Reference peak area reject threshold: 1000
Amount units:
No default component

Method of calculating data point averages: Current update equal to cal data
No calibration update report

All levels are normal data points.

1 EDB



Expected retention time: 4.647 minutes
Search window: 0.03 minutes
No retention time reference component
No response proxy component
Group number: 0
High alarm limit: 0
Low alarm limit: 0
Component constant: 0

Single peak quantification by height

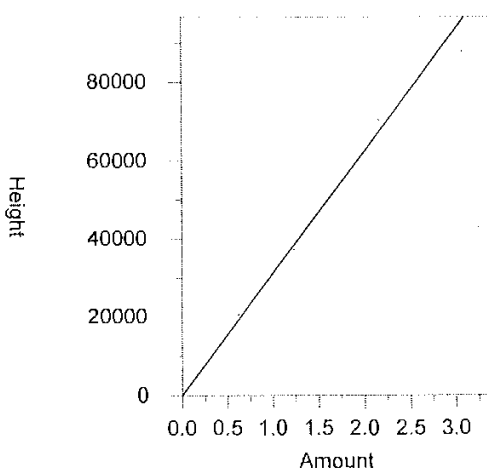
$$Y = 23844.54 X + 0$$

Average CF fit with equal weighting, forced to origin
Coefficient of determination: 0.9826723
Average error: 6.051%
Average CF: 23844.54
RSD: 7.576%

Level	Amount	Response	Cal Factor	Error, %	Source
1	0.35	8146.931	23276.95	-2.380	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001B.004.BND
2	0.63	14053.19	22306.65	-6.450	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001B.005.BND
3	1.25	33087.05	26469.64	11.009	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001B.006.BND
4	2.5	60706.86	24282.74	1.838	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001B.007.BND
5	4.38	109982.2	25110.09	5.307	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001B.008.BND
6	6.26	135348.6	21621.18	-9.324	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001B.009.BND

2 1,1,2,2-PCA

Chrom Perfect Calibration File



Expected retention time: 6.325 minutes
 Search window: 0.03 minutes
 No retention time reference component
 No response proxy component
 Group number: 0
 High alarm limit: 0
 Low alarm limit: 0
 Component constant: 0

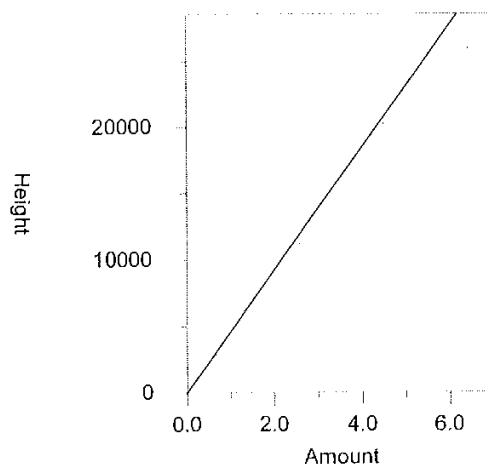
Single peak quantification by height

$$Y = 31188.98 X + 0$$

Average CF fit with equal weighting, forced to origin
 Coefficient of determination: 0.9861689
 Average error: 4.714%
 Average CF: 31188.98
 RSD: 5.633%

Level	Amount	Response	Cal Factor	Error, %	Source
1	0.17	5495.489	32326.4	3.647	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001B.004.E
2	0.31	9399.269	30320.22	-2.785	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001B.005.E
3	0.62	20518.36	33094.13	6.108	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001B.006.E
4	1.23	37288.68	30316	-2.799	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001B.007.E
5	2.16	70322.91	32556.9	4.386	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001B.008.E
6	3.08	87842.32	28520.23	-8.557	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001B.009.E

3 1,2,3-TCP



Expected retention time: 6.439 minutes
 Search window: 0.03 minutes
 No retention time reference component
 No response proxy component
 Group number: 0
 High alarm limit: 0
 Low alarm limit: 0
 Component constant: 0

Single peak quantification by height

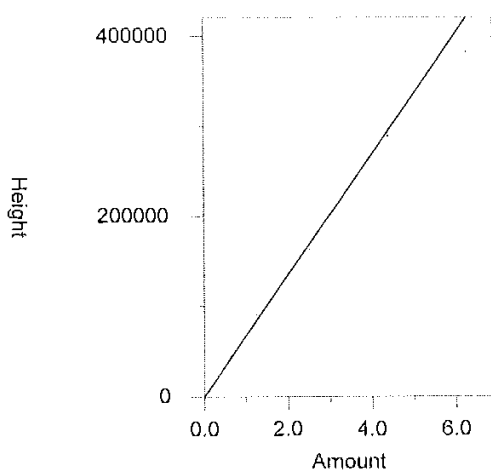
$$Y = 4623.179 X + 0$$

Average CF fit with equal weighting, forced to origin
 Coefficient of determination: 0.9688606
 Average error: 8.230%
 Average CF: 4623.179
 RSD: 11.415%

Level	Amount	Response	Cal Factor	Error, %	Source
1	0.36	2005.655	5571.264	20.507	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001B.004.E
2	0.64	2847.733	4449.583	-3.755	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001B.005.E
3	1.29	6213.317	4816.525	4.182	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001B.006.E
4	2.57	11180.63	4350.44	-5.899	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001B.007.E
5	4.5	20296.03	4510.229	-2.443	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001B.008.E
6	6.43	25983.85	4041.034	-12.592	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001B.009.E

4 DBCP

Chrom Perfect Calibration File



Expected retention time: 9.077 minutes
 Search window: 0.03 minutes
 No retention time reference component
 No response proxy component
 Group number: 0
 High alarm limit: 0
 Low alarm limit: 0
 Component constant: 0

Single peak quantification by height

$$Y = 67136.66 X + 0$$

Average CF fit with equal weighting, forced to origin
 Coefficient of determination: 0.984417
 Average error: 4.938%
 Average CF: 67136.66
 RSD: 6.353%

Level	Amount	Response	Cal Factor	Error, %	Source
1	0.35	23691.13	67688.95	0.823	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001B.004.E
2	0.63	44789.06	71093.74	5.894	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001B.005.E
3	1.25	90715.3	72572.23	8.096	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001B.006.E
4	2.51	162274.7	64651.28	-3.702	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001B.007.E
5	4.39	288856.6	65798.77	-1.993	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001B.008.E
6	6.27	382563.8	61014.96	-9.118	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001B.009.E

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 19853A

Date Analyzed: 05/13/20

GC Column (1) : DB CLP1 ID: .32 (mm)

Time Analyzed: 0:56

Lab File ID: 16EDBS20133001.012.RAW

Initial Calibration: 16EDBS2013301

Lab Standard ID: ICEBXAA

Init. Calib Date(s): 05/12/20 05/13/20

Calibration: 16EDBS2013301

COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
ETHYLENE DIBROMIDE	3.82	3.79	3.85	1.41	1.25	12
1,1,2,2-TETRACHLOROETHANE	5.31	5.28	5.34	0.70	0.62	14
1,2,3-Trichloropropane	5.46	5.43	5.49	1.55	1.25	24
1,2-DIBROMO-3-CHLOROPROPANE	8.22	8.19	8.25	1.26	1.25	1

Compounds 4

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 19853B

Date Analyzed: 05/13/20

GC Column (2) : DB CLP2 ID: .32 (mm)

Time Analyzed: 0:56

Lab File ID: 16EDBS20133001B.012.RAW

Initial Calibration: 16EDBS2013301B

Lab Standard ID: ICEBXAA

Init. Calib Date(s): 05/12/20 05/13/20

Calibration: 16EDBS2013301B

COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
ETHYLENE DIBROMIDE	4.65	4.62	4.68	1.40	1.25	12
1,1,2,2-TETRACHLOROETHANE	6.33	6.30	6.36	0.67	0.62	8
1,2,3-Trichloropropane	6.44	6.41	6.47	1.34	1.25	7
1,2-DIBROMO-3-CHLOROPROPANE	9.08	9.05	9.11	1.30	1.25	4

Compounds 4

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 19853A

Date Analyzed: 05/15/20

GC Column (1): DB CLP1 ID: .32 (mm)

Time Analyzed: 21:10

Lab File ID: 16EDBS20133003.003.RAW

Initial Calibration: 16EDBS2013301

Lab Standard ID: EDB_4GJ

Init. Calib Date(s): 05/12/20 05/13/20

Calibration: 16EDBS2013301

COMPOUND	RT	RT WINDOW FROM TO	CALC AMOUNT	NOM AMOUNT	%D
ETHYLENE DIBROMIDE	3.81	3.79 3.85	2.05	2.50	-18
1,1,2,2-TETRACHLOROETHANE	5.31	5.28 5.34	1.08	1.23	-12
1,2,3-Trichloropropane	5.45	5.43 5.49	2.18	2.57	-15
1,2-DIBROMO-3-CHLOROPROPANE	8.22	8.19 8.25	2.00	2.51	-20

Compounds 4

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 19853B

Date Analyzed: 05/15/20

GC Column (2) : DB CLP2 ID: .32 (mm)

Time Analyzed: 21:10

Lab File ID: 16EDBS20133003B.003.RAW

Initial Calibration: 16EDBS2013301B

Lab Standard ID: EDB_4GJ

Init. Calib Date(s): 05/12/20 05/13/20

Calibration: 16EDBS2013301B

COMPOUND	RT	RT WINDOW FROM TO	CALC AMOUNT	NOM AMOUNT	%D
ETHYLENE DIBROMIDE	4.64	4.62 4.68	2.15	2.50	-14
1,1,2,2-TETRACHLOROETHANE	6.32	6.30 6.36	1.12	1.23	-9
1,2,3-Trichloropropane	6.43	6.41 6.47	2.38	2.57	-8
1,2-DIBROMO-3-CHLOROPROPANE	9.07	9.05 9.11	1.87	2.51	-26

Compounds 4

Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: EIBKX2024A PIBLKUR ID: UR Batchnumber: 2013599999
 Sample Amount: 35 Total Volume: 2 ml Analyst: 13378 SDG: State:
 Analyses: 10398

Analysis Report (A)

Injected on : May 15, 2020 21:27:03
 Instrument : CP16--19853A
 Result file : 16EDBS20133003.004.RAW
 Calibration file : 16EDBS2013301.CAL
 Method file : 16EDBS.MET

%SSR(1,1,2,2-PCA) : 94% (46-136) Conc.: 0.063714

Peak name	Min	R.T.	Max	Height	Amount
1,1,2,2-PCA	5.28	5.30	5.34	24343	0.063714

Analysis Report (B)

Injected on : May 15, 2020 21:27:03
 Instrument : CP16--19853B
 Result file : 16EDBS20133003B.004.RAW
 Calibration file : 16EDBS2013301B.CAL
 Method file : 16EDBSB.MET

%SSR(1,1,2,2-PCA) : 100% (46-136) Conc.: 0.067461

Peak name	Min	R.T.	Max	Height	Amount
1,1,2,2-PCA	6.30	6.32	6.36	36821	0.067461
1,2,3-TCP	6.41	6.43	6.47	6039	0.074641
DBCP	9.05	9.05	9.11	612	0.000521

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☒ EDB			<0.03	<0.01			
☐ 1,1,2,2-PCA	A	0.063714				5.71	
☒ 1,2,3-TCP			<0.27	<0.1			
☒ DBCP			<0.03	<0.01			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 5/18/2020 07:07:11

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7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 19853A

Date Analyzed: 05/15/20

GC Column (1) : DB CLP1 ID: .32 (mm)

Time Analyzed: 23:24

Lab File ID: 16EDBS20133003.011.RAW

Initial Calibration: 16EDBS2013301

Lab Standard ID: EDB_4GK

Init. Calib Date(s): 05/12/20 05/13/20

Calibration: 16EDBS2013301

COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT	NOM AMOUNT	%D
ETHYLENE DIBROMIDE	3.83	3.79	3.85	2.59	2.50	3
1,1,2,2-TETRACHLOROETHANE	5.31	5.28	5.34	1.31	1.23	6
1,2,3-Trichloropropane	5.46	5.43	5.49	2.57	2.57	0
1,2-DIBROMO-3-CHLOROPROPANE	8.22	8.19	8.25	2.27	2.51	-9

Compounds 4

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 19853B

Date Analyzed: 05/15/20

GC Column (2) : DB CLP2 ID: .32 (mm)

Time Analyzed: 23:24

Lab File ID: 16EDBS20133003B.011.RAW

Initial Calibration: 16EDBS2013301B

Lab Standard ID: EDB_4GK

Init. Calib Date(s): 05/12/20 05/13/20

Calibration: 16EDBS2013301B

COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT	NOM AMOUNT	%D
ETHYLENE DIBROMIDE	4.65	4.62	4.68	2.58	2.50	3
1,1,2,2-TETRACHLOROETHANE	6.33	6.30	6.36	1.31	1.23	7
1,2,3-Trichloropropane	6.44	6.41	6.47	2.66	2.57	4
1,2-DIBROMO-3-CHLOROPROPANE	9.08	9.05	9.11	2.20	2.51	-12

Compounds 4

Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: EIBKX2024A **PIBLKUS ID:** US **Batchnumber:** 2013599999
Sample Amount: 35 **Total Volume:** 2 ml **Analyst:** 13378 **SDG:** **State:**
Analyses: 10398

Analysis Report (A)

Injected on : May 15, 2020 23:41:36
 Instrument : CP16--19853A
 Result file : 16EDBS20133003.012.RAW
 Calibration file : 16EDBS2013301.CAL
 Method file : 16EDBS.MET

%SSR(1,1,2,2-PCA) : 115% (46-136) Conc.: 0.077737

Peak name	Min	R.T.	Max	Height	Amount
EDB	3.79	3.82	3.85	557	0.002087
1,1,2,2-PCA	5.28	5.31	5.34	29700	0.077737
DBCP	8.19	8.25	8.25	709	0.001053

Analysis Report (B)

Injected on : May 15, 2020 23:41:36
 Instrument : CP16--19853B
 Result file : 16EDBS20133003B.012.RAW
 Calibration file : 16EDBS2013301B.CAL
 Method file : 16EDBSB.MET

%SSR(1,1,2,2-PCA) : 109% (46-136) Conc.: 0.07361

Peak name	Min	R.T.	Max	Height	Amount
1,1,2,2-PCA	6.30	6.32	6.36	40177	0.073610
1,2,3-TCP	6.41	6.44	6.47	8609	0.106412
DBCP	9.05	9.06	9.11	852	0.000725

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☒ EDB			<0.03	<0.01			
☐ 1,1,2,2-PCA	A	0.077737				5.45	
☒ 1,2,3-TCP			<0.27	<0.1			
☒ DBCP			<0.03	<0.01			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 5/18/2020 07:07:55

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7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 19853A

Date Analyzed: 05/16/20

GC Column (1) : DB CLP1 ID: .32 (mm)

Time Analyzed: 2:46

Lab File ID: 16EDBS20133003.023.RAW

Initial Calibration: 16EDBS2013301

Lab Standard ID: EDB_4GL

Init. Calib Date(s): 05/12/20 05/13/20

Calibration: 16EDBS2013301

COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT	NOM AMOUNT	%D
ETHYLENE DIBROMIDE	3.82	3.79	3.85	2.35	2.50	-6
1,1,2,2-TETRACHLOROETHANE	5.31	5.28	5.34	1.20	1.23	-3
1,2,3-Trichloropropane	5.46	5.43	5.49	2.42	2.57	-6
1,2-DIBROMO-3-CHLOROPROPANE	8.22	8.19	8.25	2.23	2.51	-11

Compounds 4

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 19853B

Date Analyzed: 05/16/20

GC Column (2) : DB CLP2 ID: .32 (mm)

Time Analyzed: 2:46

Lab File ID: 16EDBS20133003B.023.RAW

Initial Calibration: 16EDBS2013301B

Lab Standard ID: EDB_4GL

Init. Calib Date(s): 05/12/20 05/13/20

Calibration: 16EDBS2013301B

COMPOUND	RT	RT WINDOW FROM TO	CALC AMOUNT	NOM AMOUNT	%D
ETHYLENE DIBROMIDE	4.64	4.62 4.68	2.46	2.50	-2
1,1,2,2-TETRACHLOROETHANE	6.32	6.30 6.36	1.21	1.23	-2
1,2,3-Trichloropropane	6.44	6.41 6.47	2.44	2.57	-5
1,2-DIBROMO-3-CHLOROPROPANE	9.08	9.05 9.11	2.12	2.51	-15

Compounds 4

Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: EIBKX2024A **PIBLKUT ID: UT** **Batchnumber: 2013599999**
Sample Amount: 35 **Total Volume:** 2 ml **Analyst:** 13378 **SDG:** **State:**
Analyses: 10398

Analysis Report (A)

Injected on : May 16, 2020 03:03:19
 Instrument : CP16--19853A
 Result file : 16EDBS20133003.024.RAW
 Calibration file : 16EDBS2013301.CAL
 Method file : 16EDBS.MET

%SSR(1,1,2,2-PCA) : 110% (46-136) Conc.: 0.074277

Peak name	Min	R.T.	Max	Height	Amount
EDB	3.79	3.81	3.85	494	0.001852
1,1,2,2-PCA	5.28	5.31	5.34	28378	0.074277
DBCP	8.19	8.23	8.25	570	0.000845

Analysis Report (B)

Injected on : May 16, 2020 03:03:19
 Instrument : CP16--19853B
 Result file : 16EDBS20133003B.024.RAW
 Calibration file : 16EDBS2013301B.CAL
 Method file : 16EDBSB.MET

%SSR(1,1,2,2-PCA) : 110% (46-136) Conc.: 0.074219

Peak name	Min	R.T.	Max	Height	Amount
1,1,2,2-PCA	6.30	6.32	6.36	40509	0.074219
1,2,3-TCP	6.41	6.44	6.47	8741	0.108043

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☒ EDB			<0.03	<0.01			
☐ 1,1,2,2-PCA	A	0.074277				0.08	
☒ 1,2,3-TCP			<0.27	<0.1			
☒ DBCP			<0.03	<0.01			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 5/18/2020 07:09:02

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7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 19853A

Date Analyzed: 05/16/20

GC Column (1) : DB CLP1 ID: .32 (mm)

Time Analyzed: 6:08

Lab File ID: 16EDBS20133003.035.RAW

Initial Calibration: 16EDBS2013301

Lab Standard ID: EDB_4GM

Init. Calib Date(s): 05/12/20 05/13/20

Calibration: 16EDBS2013301

COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT	NOM AMOUNT	%D
ETHYLENE DIBROMIDE	3.81	3.79	3.85	2.36	2.50	-6
1,1,2,2-TETRACHLOROETHANE	5.31	5.28	5.34	1.18	1.23	-4
1,2,3-Trichloropropane	5.46	5.43	5.49	2.30	2.57	-10
1,2-DIBROMO-3-CHLOROPROPANE	8.22	8.19	8.25	2.62	2.51	5

Compounds 4

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 19853B

Date Analyzed: 05/16/20

GC Column (2) : DB CLP2 ID: .32 (mm)

Time Analyzed: 6:08

Lab File ID: 16EDBS20133003B.035.RAW

Initial Calibration: 16EDBS2013301B

Lab Standard ID: EDB_4GM

Init. Calib Date(s): 05/12/20 05/13/20

Calibration: 16EDBS2013301B

COMPOUND	RT	RT WINDOW FROM TO		CALC AMOUNT	NOM AMOUNT	%D
ETHYLENE DIBROMIDE	4.64	4.62	4.68	2.56	2.50	2
1,1,2,2-TETRACHLOROETHANE	6.32	6.30	6.36	1.25	1.23	2
1,2,3-Trichloropropane	6.43	6.41	6.47	2.46	2.57	-4
1,2-DIBROMO-3-CHLOROPROPANE	9.08	9.05	9.11	2.67	2.51	7

Compounds 4

Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: EIBKX2024A **PIBLKUU ID:** UU **Batchnumber:** 2013599999
Sample Amount: 35 **Total Volume:** 2 ml **Analyst:** 13378 **SDG:** **State:**
Analyses: 10398

Analysis Report (A)

Injected on : May 16, 2020 06:24:58
 Instrument : CP16--19853A
 Result file : 16EDBS20133003.036.RAW
 Calibration file : 16EDBS2013301.CAL
 Method file : 16EDBS.MET

%SSR(1,1,2,2-PCA) : 104% (46-136) Conc.: 0.070132

Peak name	Min	R.T.	Max	Height	Amount
1,1,2,2-PCA	5.28	5.31	5.34	26795	0.070132

Analysis Report (B)

Injected on : May 16, 2020 06:24:58
 Instrument : CP16--19853B
 Result file : 16EDBS20133003B.036.RAW
 Calibration file : 16EDBS2013301B.CAL
 Method file : 16EDBSB.MET

%SSR(1,1,2,2-PCA) : 104% (46-136) Conc.: 0.070342

Peak name	Min	R.T.	Max	Height	Amount
1,1,2,2-PCA	6.30	6.32	6.36	38393	0.070342
1,2,3-TCP	6.41	6.44	6.47	8536	0.105506
DBCP	9.05	9.06	9.11	1433	0.001219

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☒ EDB			<0.03	<0.01			
☐ 1,1,2,2-PCA	A	0.070132				0.30	
☒ 1,2,3-TCP			<0.27	<0.1			
☒ DBCP			<0.03	<0.01			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 5/18/2020 07:10:08

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Eurofins Lancaster Laboratories
Pesticide Residue Analysis
Runlog for 16EDBS20133001
Instrument CP16--19853A

Data Directory Path is - \\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\

Operator	File	LLI#	Client ID	Analysis Date	Batch	Dilution Factor
13378	16EDBS20133001.001	CONDITIONER		5/12/20 21:52	2013299999	1.00
13378	16EDBS20133001.002	CONDITIONER		5/12/20 22:09	2013299999	1.00
13378	16EDBS20133001.003	EIBKX2024A	PIBLKAA	5/12/20 22:26	2013299999	2.00
13378	16EDBS20133001.004	EDB_12024R	EDB_1AA	5/12/20 22:42	2013299999	1.00
13378	16EDBS20133001.005	EDB_22024R	EDB_2AA	5/12/20 22:59	2013299999	1.00
13378	16EDBS20133001.006	EDB_32024AA	EDB_3AA	5/12/20 23:16	2013299999	1.00
13378	16EDBS20133001.007	EDB_42024AY	EDB_4AA	5/12/20 23:32	2013299999	1.00
13378	16EDBS20133001.008	EDB_52024R	EDB_5AA	5/12/20 23:49	2013299999	1.00
13378	16EDBS20133001.009	EDB_62024R	EDB_6AA	5/13/20 0:06	2013299999	1.00
13378	16EDBS20133001.010	MDEDX2024T	MDEDXAA	5/13/20 0:23	2013299999	1.00
13378	16EDBS20133001.011	DBCMX1924B	DBCMXAA	5/13/20 0:39	2013299999	1.00
13378	16EDBS20133001.012	ICEBX2024Y	ICEBXAA	5/13/20 0:56	2013299999	1.00

Eurofins Lancaster Laboratories
Pesticide Residue Analysis
Runlog for 16EDBS20133003
Instrument CP16--19853A

Data Directory Path is - \\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\

Operator	File	LLI#	Client ID	Analysis Date	Batch	Dilution Factor
13378	16EDBS20133003.001	CONDITIONER		5/15/20 20:36	2013599999	1.00
13378	16EDBS20133003.002	CONDITIONER		5/15/20 20:53	2013599999	1.00
13378	16EDBS20133003.003	EDB_42024AY	EDB_4GJ	5/15/20 21:10	2013599999	1.00
13378	16EDBS20133003.004	EIBKX2024A	PIBLKUR	5/15/20 21:27	2013599999	2.00
13378	16EDBS20133003.005	BLANKA 5/14/20	PBLK23135	5/15/20 21:43	201350023A	2.00
13378	16EDBS20133003.006	LCSA 5/14/20	LCS23135	5/15/20 22:00	201350023A	2.00
13378	16EDBS20133003.007	LCSDA 5/14/20	LCSD23135	5/15/20 22:17	201350023A	2.00
13378	16EDBS20133003.008	BLANKA 5/14/20	PBLK24135	5/15/20 22:34	201350024A	2.00
13378	16EDBS20133003.009	LCSA 5/14/20	LCS24135	5/15/20 22:51	201350024A	2.00
13378	16EDBS20133003.010	LCSDA 5/14/20	LCSD24135	5/15/20 23:07	201350024A	2.00
13378	16EDBS20133003.011	EDB_42024AY	EDB_4GK	5/15/20 23:24	2013599999	1.00
13378	16EDBS20133003.012	EIBKX2024A	PIBLKUS	5/15/20 23:41	2013599999	2.00
13378	16EDBS20133003.013	1312500	GW018	5/15/20 23:58	201350023A	2.00
13378	16EDBS20133003.014	1312502	GW096	5/16/20 0:15	201350023A	2.00
13378	16EDBS20133003.015	1312506	KAT90	5/16/20 0:32	201350023A	2.00
13378	16EDBS20133003.016	1313220	12351	5/16/20 0:48	201350023A	2.00
13378	16EDBS20133003.017	1313221MS	12351	5/16/20 1:05	201350023A	2.00
13378	16EDBS20133003.018	1313222MSD	12351	5/16/20 1:22	201350023A	2.00
13378	16EDBS20133003.019	1313224	12352	5/16/20 1:39	201350023A	2.00
13378	16EDBS20133003.020	1313225	12353	5/16/20 1:56	201350023A	2.00
13378	16EDBS20133003.021	1313226	12354	5/16/20 2:13	201350023A	2.00
13378	16EDBS20133003.022	1313227	12355	5/16/20 2:29	201350023A	2.00
13378	16EDBS20133003.023	EDB_42024AY	EDB_4GL	5/16/20 2:46	2013599999	1.00
13378	16EDBS20133003.024	EIBKX2024A	PIBLKUT	5/16/20 3:03	2013599999	2.00
13378	16EDBS20133003.025	1313228	12356	5/16/20 3:20	201350023A	2.00
13378	16EDBS20133003.026	1313229	12357	5/16/20 3:37	201350023A	2.00
13378	16EDBS20133003.027	1313230	12358	5/16/20 3:53	201350023A	2.00
13378	16EDBS20133003.028	1313231	12359	5/16/20 4:10	201350023A	2.00
13378	16EDBS20133003.029	1313011	PST-A	5/16/20 4:27	201350024A	2.00
13378	16EDBS20133003.030	1313012	PST-C	5/16/20 4:44	201350024A	2.00
13378	16EDBS20133003.031	1313013	PST-D	5/16/20 5:01	201350024A	2.00
13378	16EDBS20133003.032	1313014	PST-E	5/16/20 5:17	201350024A	2.00
13378	16EDBS20133003.033	1313015	PSTFD	5/16/20 5:34	201350024A	2.00
13378	16EDBS20133003.034	1313016	PSTTB	5/16/20 5:51	201350024A	2.00
13378	16EDBS20133003.035	EDB_42024AZ	EDB_4GM	5/16/20 6:08	2013599999	1.00
13378	16EDBS20133003.036	EIBKX2024A	PIBLKUU	5/16/20 6:24	2013599999	2.00
13378	16EDBS20133003.037	1313049	51131	5/16/20 6:41	201350024A	2.00
13378	16EDBS20133003.038	1313050MS	51131	5/16/20 6:58	201350024A	2.00
13378	16EDBS20133003.039	1313051MSD	51131	5/16/20 7:15	201350024A	2.00
13378	16EDBS20133003.040	1313052	51132	5/16/20 7:32	201350024A	2.00
13378	16EDBS20133003.041	1313053	51133	5/16/20 7:49	201350024A	2.00
13378	16EDBS20133003.042	1313054	51134	5/16/20 8:05	201350024A	2.00
13378	16EDBS20133003.043	1313055	51135	5/16/20 8:22	201350024A	2.00
13378	16EDBS20133003.044	1313056	51136	5/16/20 8:39	201350024A	2.00
13378	16EDBS20133003.045	EDB_42024AZ	EDB_4GN	5/16/20 8:56	2013599999	1.00
13378	16EDBS20133003.046	EIBKX2024A	PIBLKUV	5/16/20 9:12	2013599999	2.00

Sample Data

EDB/DBCP

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Lancaster Laboratories
Environmental

Data Summary

Sample Name: 1313220 **12351** **Sample ID:** AA **Batchnumber:** 201350023A
Sample Amount: 36.18 mL **Total Volume:** 2 ml **Analyst:** 13378 **SDG:** KR446 **State:** NM
Analyses: 10398

Analysis Report (A)

Injected on May 16, 2020 00:48:48
Instrument 19853A
Result file 16EDBS20133003.016.RAW
Calibration file 16EDBS2013301
Method file 16EDBS

%SSR(PCA) 69% (46 - 136) Conc: 0.047039

Single Component Data

Compound	Min	RT	Max	Height
Ethylene dibromide	3.79	3.82	3.85	404
1,1,2,2-TETRACHLORO	5.28	5.31	5.34	18577
1,2-Dibromo-3-chloropropanol	8.19	8.24	8.25	1067

Analysis Report (B)

Injected on May 16, 2020 00:48:48
Instrument 19853B
Result file 16EDBS20133003B.016.RAW
Calibration file 16EDBS2013301B
Method file 16EDBSB

%SSR(PCA) 62% (46 - 136) Conc: 0.042344

Amount	Compound	Min	RT	Max	Height	Amount
0.001465	1,1,2,2-TETRACHLORO	6.30	6.32	6.36	23891	0.042344
0.047039	1,2,3-Trichloropropane	6.41	6.44	6.47	579	0.006922
0.001533	1,2-Dibromo-3-chloropropanol	9.05	9.10	9.11	2298	0.001892

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
☒ Ethylene dibromide			<0.0097	<0.0193	<0.029	D1		
☐ 1,1,2,2-TETRACHLORO	A	0.047039	0.0034	0.0068	0.0068		10.51	
☒ 1,1,2,2-TETRACHLORO	A	0.047039	0.0034	0.0068	0.0068			
☒ 1,1,2,2-TETRACHLORO	B	0.042344	0.0034	0.0068	0.0068			
☐ 1,2,3-Trichloropropane			<0.0967	<0.1935	<0.2612			
☐ 1,2-Dibromo-3-chloropropanol			<0.0097	<0.0193	<0.029			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Charles T. Beasley
 Charles T. Beasley
 Manager

MAY 18 2020

Reviewed and digitally signed by Rachel Umberger on 5/18/2020 07:49:08

5/18/2020

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Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: 1313220 12351 ID: AA **Batchnumber:** 201350023A
Sample Amount: 36.18 mL **Total Volume:** 2 mL **Analyst:** 13378 **SDG:** KR446 **State:** NM
Analyses: 10398

Analysis Report (A)

Injected on : May 16, 2020 00:48:48
 Instrument : CP16--19853A
 Result file : 16EDBS20133003.016.RAW
 Calibration file : 16EDBS2013301.CAL
 Method file : 16EDBS.MET

%SSR(1,1,2,2-PCA) : 69% (46-136) Conc.: 0.047039

Peak name	Min	R.T.	Max	Height	Amount
EDB	3.79	3.82	3.85	404	0.001465
1,1,2,2-PCA	5.28	5.31	5.34	18577	0.047039
DBCP	8.19	8.24	8.25	1067	0.001533

Analysis Report (B)

Injected on : May 16, 2020 00:48:48
 Instrument : CP16--19853B
 Result file : 16EDBS20133003B.016.RAW
 Calibration file : 16EDBS2013301B.CAL
 Method file : 16EDBSB.MET

%SSR(1,1,2,2-PCA) : 62% (46-136) Conc.: 0.042344

Peak name	Min	R.T.	Max	Height	Amount
1,1,2,2-PCA	6.30	6.32	6.36	23891	0.042344
1,2,3-TCP	6.41	6.44	6.47	579	0.006922
DBCP	9.05	9.10	9.11	2298	0.001892

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☒ EDB			<0.029	<0.0097			
☐ 1,1,2,2-PCA	A	0.047039				10.51	
☐ 1,2,3-TCP			<0.2612	<0.0967			
☐ DBCP			<0.029	<0.0097			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

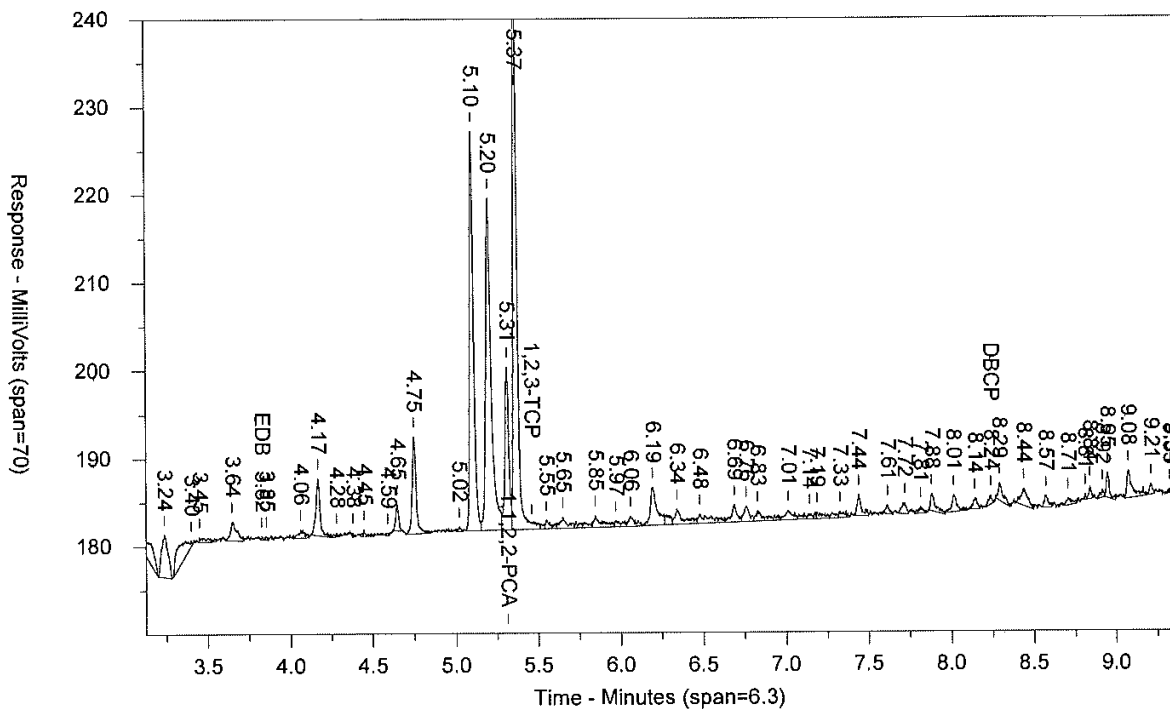
Printed on: 5/18/2020 07:08:16

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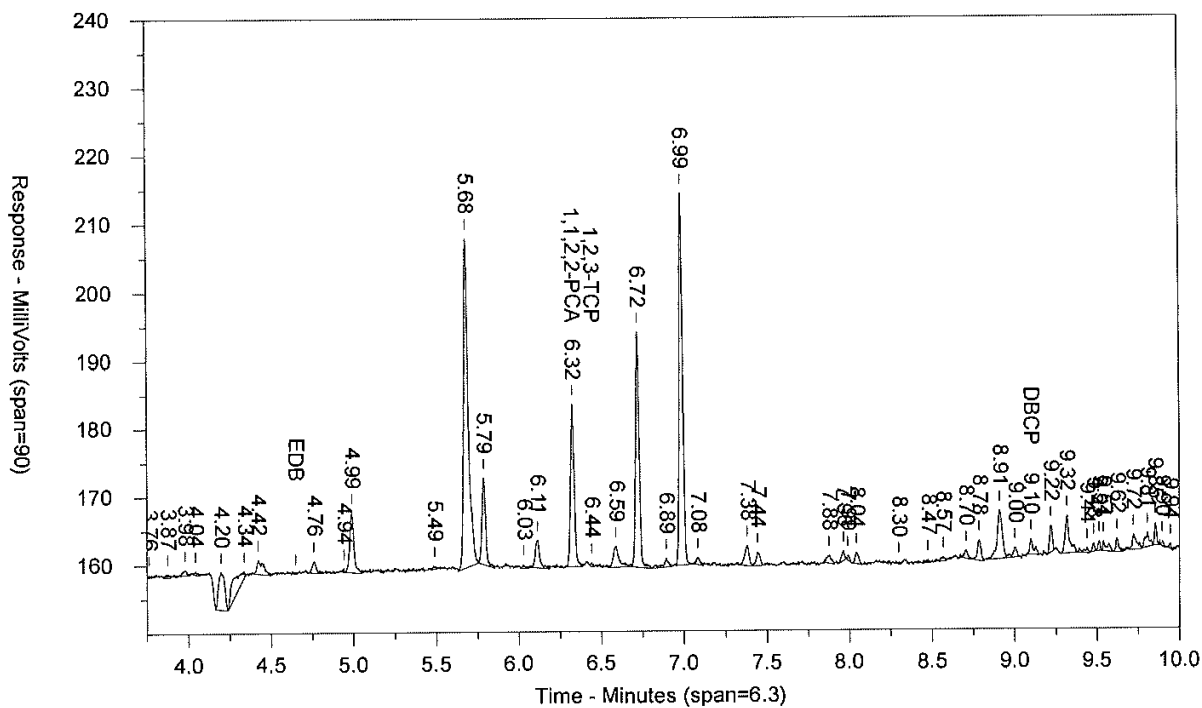
Chrom Perfect Chromatogram Report

1313220 AA12351 T 201350023A 10398 SW-846 8011

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133003.016.RAW



\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133003B.016.RAW



Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: 1313220 AA12351 T 201350023A 10398
 Injected On: 5/16/2020 12:48:48 AM
 Instrument ID: CP16-19853
 Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min
 Column A ID: DB CLP1 30m x 0.32mm x 0.25um
 Column B ID: DB CLP2 30m x 0.32mm x 0.5um
 Injection Volume: 1 ul

SW-846 8011
 Sample Weight: 36.18
 Dilution Factor: 2

Threshold: 1
 Calibration Type: external
 Quantitation: Height

Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.824	404	.001	EDB		0		EDB
5.312	18577	.047	1,1,2,2-PCA	6.325	23891	.042	1,1,2,2-PCA
	0		1,2,3-TCP	6.441	579	.007	1,2,3-TCP
8.239	1067	.002	DBCP	9.097	2298	.002	DBCP

Files:

Area File: 16edbs20133003.016.RAW
 Area File: 16edbs20133003B.016.RAW
 Method A: 16EDBS.MET
 Method B: 16EDBSB.MET
 Calibration File A: 16EDBS2013301.CAL
 Calibration File B: 16EDBS2013301B.CAL
 Format A: EDB16.FMTA
 Format B: EDB16.FMTB
 Area File Created On: 5/16/2020 12:58:51 AM
 File Reported On: 5/18/2020 at 6:56:30 AM



Lancaster Laboratories
Environmental

Data Summary

Sample Name: 1313224 **12352** **Sample ID:** AA **Batchnumber:** 201350023A
Sample Amount: 36.27 mL **Total Volume:** 2 ml **Analyst:** 13378 **SDG:** KR446 **State:** NM
Analyses: 10398

Analysis Report (A)

Injected on May 16, 2020 01:39:22
Instrument 19853A
Result file 16EDBS20133003.019.RAW
Calibration file 16EDBS2013301
Method file 16EDBS

%SSR(PCA) 68% (46 - 136) Conc: 0.046279

Single Component Data

Compound	Min	RT	Max	Height
Ethylene dibromide	3.79	3.82	3.85	2419
1,1,2,2-TETRACHLORO	5.28	5.31	5.34	18323
1,2-Dibromo-3-chloroprope	8.19	8.24	8.25	1320

Analysis Report (B)

Injected on May 16, 2020 01:39:22
Instrument 19853B
Result file 16EDBS20133003B.019.RAW
Calibration file 16EDBS2013301B
Method file 16EDBSB

%SSR(PCA) 64% (46 - 136) Conc: 0.043477

Amount	Compound	Min	RT	Max	Height	Amount
0.008741	Ethylene dibromide	4.62	4.65	4.68	4325	0.010002
0.046279	1,1,2,2-TETRACHLORO	6.30	6.32	6.36	24591	0.043477
0.001892	1,2-Dibromo-3-chloroprope	9.05	9.10	9.11	2065	0.001696

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
☒ Ethylene dibromide			<0.0096	<0.0193	<0.0289	D1		
☐ 1,1,2,2-TETRACHLORO	A	0.046279	0.0034	0.0068	0.0068		6.24	
☒ 1,1,2,2-TETRACHLORO	A	0.046279	0.0034	0.0068	0.0068			
☒ 1,1,2,2-TETRACHLORO	B	0.043477	0.0034	0.0068	0.0068			
☐ 1,2,3-Trichloropropane			<0.0965	<0.193	<0.2605			
☐ 1,2-Dibromo-3-chloroprope			<0.0096	<0.0193	<0.0289			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Charles T. Banefey
 Charles T. Banefey
 Manager

MAY 18 2020

Reviewed and digitally signed by Rachel Umberger on 5/18/2020 07:49:13

5/18/2020

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Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: 1313224 12352 ID: AA Batchnumber: 201350023A
 Sample Amount: 36.27 mL Total Volume: 2 ml Analyst: 13378 SDG: KR446 State: NM
 Analyses: 10398

Analysis Report (A)

Injected on : May 16, 2020 01:39:22
 Instrument : CP16--19853A
 Result file : 16EDBS20133003.019.RAW
 Calibration file : 16EDBS2013301.CAL
 Method file : 16EDBS.MET

%SSR(1,1,2,2-PCA) : 68% (46-136) Conc.: 0.046279

Peak name	Min	R.T.	Max	Height	Amount
EDB	3.79	3.82	3.85	2419	0.008741
1,1,2,2-PCA	5.28	5.31	5.34	18323	0.046279
DBCP	8.19	8.24	8.25	1320	0.001892

Analysis Report (B)

Injected on : May 16, 2020 01:39:22
 Instrument : CP16--19853B
 Result file : 16EDBS20133003B.019.RAW
 Calibration file : 16EDBS2013301B.CAL
 Method file : 16EDBSB.MET

%SSR(1,1,2,2-PCA) : 64% (46-136) Conc.: 0.043477

Peak name	Min	R.T.	Max	Height	Amount
EDB	4.62	4.65	4.68	4325	0.010002
1,1,2,2-PCA	6.30	6.32	6.36	24591	0.043477
DBCP	9.05	9.10	9.11	2065	0.001696

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☒ EDB			<0.0289	<0.0096			
☐ 1,1,2,2-PCA	A	0.046279				6.24	
☐ 1,2,3-TCP			<0.2605	<0.0965			
☐ DBCP			<0.0289	<0.0096			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

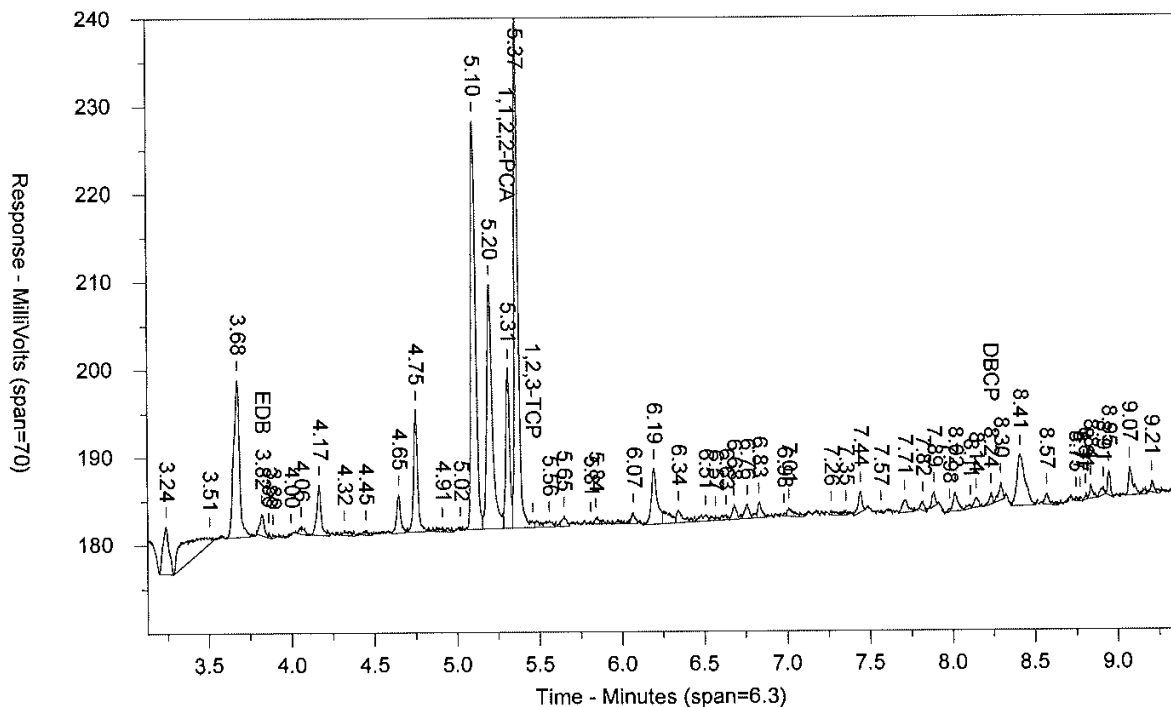
Printed on: 5/18/2020 07:08:33

KR446 Page 330 of 579

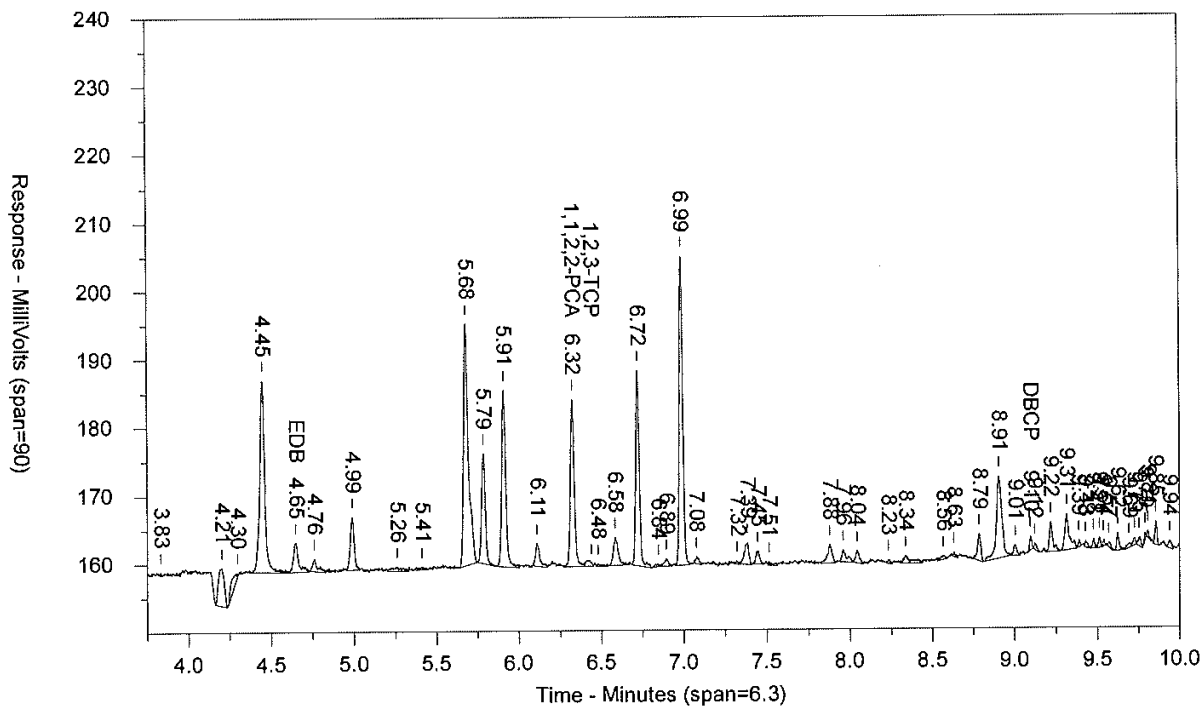
Chrom Perfect Chromatogram Report

1313224 AA12352 T 201350023A 10398 SW-846 8011

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: 1313224 AA12352 T 201350023A 10398
Injected On: 5/16/2020 1:39:22 AM
Instrument ID: CP16-19853
Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min
Column A ID: DB CLP1 30m x 0.32mm x 0.25um
Column B ID: DB CLP2 30m x 0.32mm x 0.5um
Injection Volume: 1 ul

SW-846 8011
Sample Weight: 36.27
Dilution Factor: 2

Threshold: 1
Calibration Type: external
Quantitation: Height

Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.82	2419	.009	EDB	4.65	4325	.01	EDB
5.313	18323	.046	1,1,2,2-PCA	6.325	24591	.043	1,1,2,2-PCA
8.235	1320	.002	DBCP	9.097	2065	.002	DBCP

Files:

Area File: 16edbs20133003.019.RAW
Area File: 16edbs20133003B.019.RAW
Method A: 16EDBS.MET
Method B: 16EDBSB.MET
Calibration File A: 16EDBS2013301.CAL
Calibration File B: 16EDBS2013301B.CAL
Format A: EDB16.FMTA
Format B: EDB16.FMTB
Area File Created On: 5/16/2020 1:49:24 AM
File Reported On: 5/18/2020 at 6:57:18 AM



Lancaster Laboratories
Environmental

Data Summary

Sample Name: 1313225 **12353** **Sample ID:** AA **Batchnumber:** 201350023A
Sample Amount: 36.71 mL **Total Volume:** 2 ml **Analyst:** 13378 **SDG:** KR446 **State:** NM
Analyses: 10398

Analysis Report (A)

Injected on May 16, 2020 01:56:03
Instrument 19853A
Result file 16EDBS20133003.020.RAW
Calibration file 16EDBS2013301
Method file 16EDBS

%SSR(PCA) 66% (46 - 136) Conc: 0.044497

Single Component Data

Compound	Min	RT	Max	Height
Ethylene dibromide	3.79	3.82	3.85	2252
1,1,2,2-TETRACHLORO	5.28	5.31	5.34	17831
1,2-Dibromo-3-chloropropan	8.19	8.24	8.25	1338

Analysis Report (B)

Injected on May 16, 2020 01:56:03
Instrument 19853B
Result file 16EDBS20133003B.020.RAW
Calibration file 16EDBS2013301B
Method file 16EDBSB

%SSR(PCA) 62% (46 - 136) Conc: 0.04195

Amount	Compound	Min	RT	Max	Height	Amount
0.008041	Ethylene dibromide	4.62	4.65	4.68	3734	0.008531
0.044497	1,1,2,2-TETRACHLORO	6.30	6.32	6.36	24015	0.04195
0.001894	1,2,3-Trichloropropane	6.41	6.41	6.47	1010	0.011901
	1,2-Dibromo-3-chloropropan	9.05	9.10	9.11	3459	0.002807

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
☒ Ethylene dibromide			<0.0095	<0.0191	<0.0286	D1		
☐ 1,1,2,2-TETRACHLORO	A	0.044497	0.0033	0.0067	0.0067		5.89	
☒ 1,1,2,2-TETRACHLORO	A	0.044497	0.0033	0.0067	0.0067			
☒ 1,1,2,2-TETRACHLORO	B	0.04195	0.0033	0.0067	0.0067			
☐ 1,2,3-Trichloropropane			<0.0953	<0.1907	<0.2574			
☐ 1,2-Dibromo-3-chloropropan			<0.0095	<0.0191	<0.0286			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Charles T. Beasley
Manager

MAY 18 2020

Reviewed and digitally signed by Rachel Umberger on 5/18/2020 07:49:16

5/18/2020

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Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: 1313225 12353 ID: AA **Batchnumber:** 201350023A
Sample Amount: 36.71 mL **Total Volume:** 2 mL **Analyst:** 13378 **SDG:** KR446 **State:** NM
Analyses: 10398

Analysis Report (A)

Injected on : May 16, 2020 01:56:03
 Instrument : CP16--19853A
 Result file : 16EDBS20133003.020.RAW
 Calibration file : 16EDBS2013301.CAL
 Method file : 16EDBS.MET

%SSR(1,1,2,2-PCA) : 66% (46-136) Conc.: 0.044497

Peak name	Min	R.T.	Max	Height	Amount
EDB	3.79	3.82	3.85	2252	0.008041
1,1,2,2-PCA	5.28	5.31	5.34	17831	0.044497
DBCP	8.19	8.24	8.25	1338	0.001894

Analysis Report (B)

Injected on : May 16, 2020 01:56:03
 Instrument : CP16--19853B
 Result file : 16EDBS20133003B.020.RAW
 Calibration file : 16EDBS2013301B.CAL
 Method file : 16EDBSB.MET

%SSR(1,1,2,2-PCA) : 62% (46-136) Conc.: 0.04195

Peak name	Min	R.T.	Max	Height	Amount
EDB	4.62	4.65	4.68	3734	0.008531
1,1,2,2-PCA	6.30	6.32	6.36	24015	0.041950
1,2,3-TCP	6.41	6.41	6.47	1010	0.011901
DBCP	9.05	9.10	9.11	3459	0.002807

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☒ EDB			<0.0286	<0.0095			
☐ 1,1,2,2-PCA	A	0.044497				5.89	
☐ 1,2,3-TCP			<0.2574	<0.0953			
☐ DBCP			<0.0286	<0.0095			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

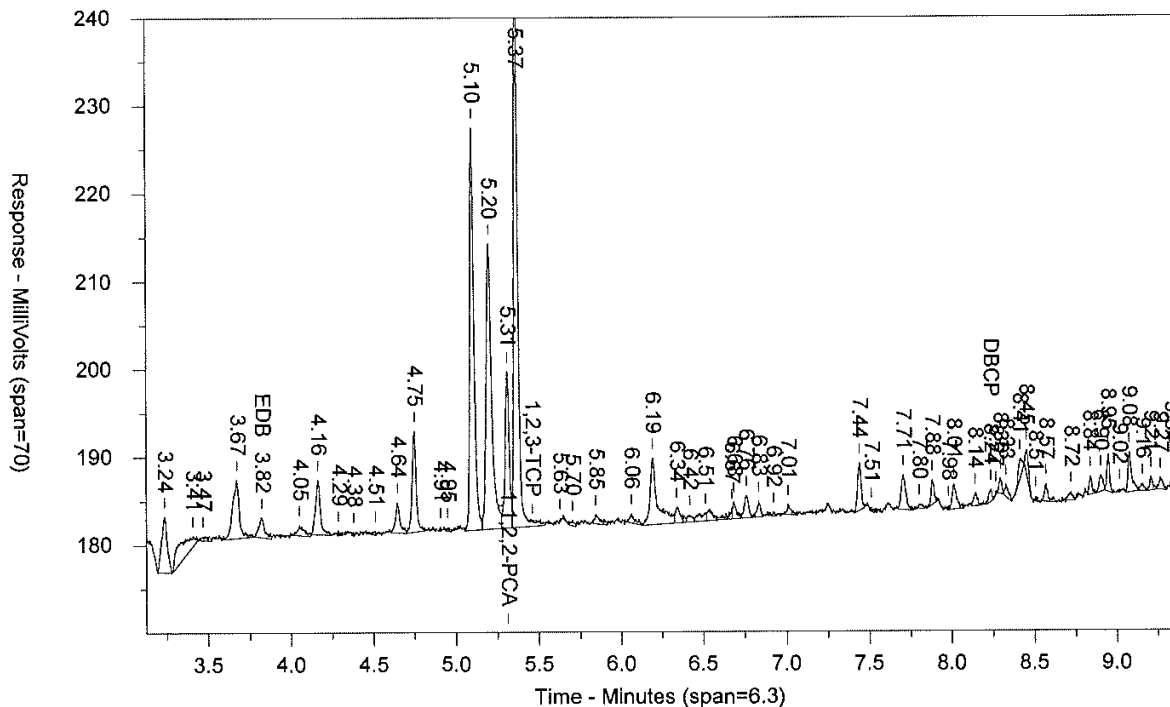
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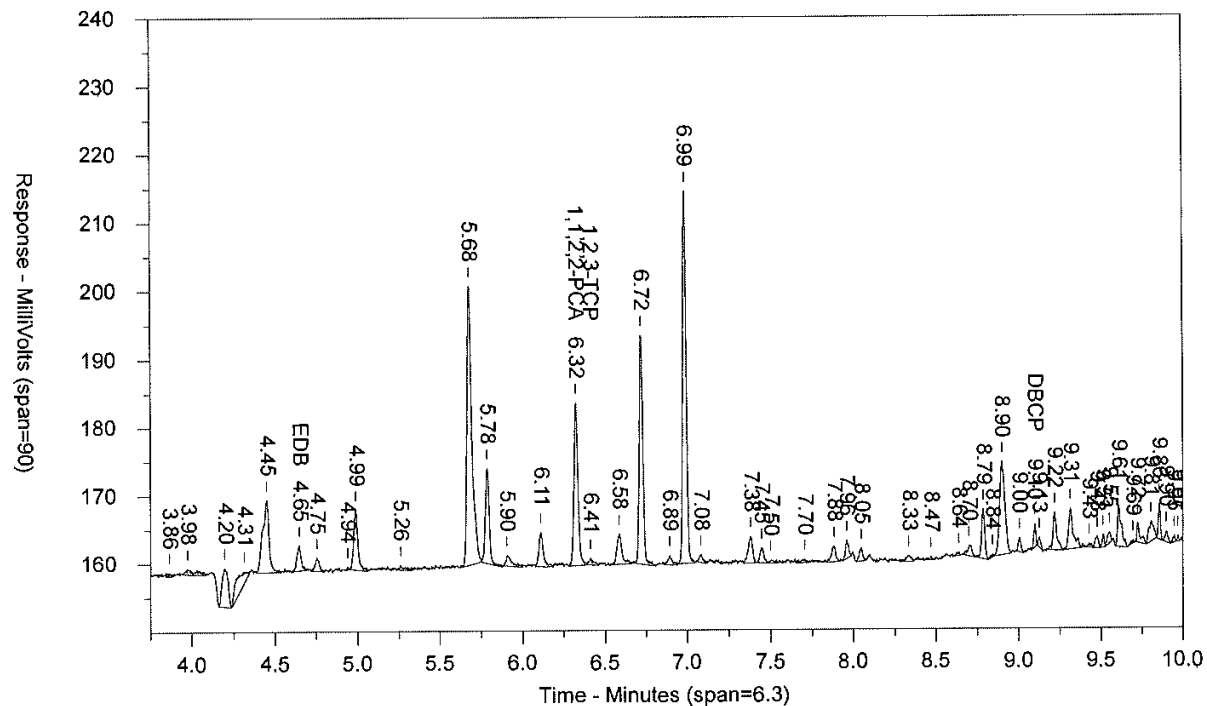
Chrom Perfect Chromatogram Report

1313225 AA12353 T 201350023A 10398 SW-846 8011

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: 1313225 AA12353 T 201350023A 10398

SW-846 8011

Injected On: 5/16/2020 1:56:03 AM

Sample Weight: 36.71

Instrument ID: CP16-19853

Dilution Factor: 2

Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min

Column A ID: DB CLP1 30m x 0.32mm x 0.25um

Column B ID: DB CLP2 30m x 0.32mm x 0.5um

Injection Volume: 1 ul

Threshold: 1

Calibration Type: external

Quantitation: Height

Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.822	2252	.008	EDB	4.648	3734	.009	EDB
5.31	17831	.044	1,1,2,2-PCA	6.324	24015	.042	1,1,2,2-PCA
	0		1,2,3-TCP	6.41	1010	.012	1,2,3-TCP
8.238	1338	.002	DBCP	9.098	3459	.003	DBCP

Files:

Area File: 16edbs20133003.020.RAW

Area File: 16edbs20133003B.020.RAW

Method A: 16EDBS.MET

Method B: 16EDBSB.MET

Calibration File A: 16EDBS2013301.CAL

Calibration File B: 16EDBS2013301B.CAL

Format A: EDB16.FMTA

Format B: EDB16.FMTB

Area File Created On: 5/16/2020 2:06:06 AM

File Reported On: 5/18/2020 at 6:57:34 AM



Lancaster Laboratories
Environmental

Data Summary

Sample Name: 1313226 **12354** **Sample ID:** AA **Batchnumber:** 201350023A
Sample Amount: 36.15 mL **Total Volume:** 2 ml **Analyst:** 13378 **SDG:** KR446 **State:** NM
Analyses: 10398

Analysis Report (A)

Injected on May 16, 2020 02:13:06
Instrument 19853A
Result file 16EDBS20133003.021.RAW
Calibration file 16EDBS2013301
Method file 16EDBS

%SSR(PCA) 58% (46 - 136) Conc: 0.039584

Single Component Data

Compound	Min	RT	Max	Height
1,1,2,2-TETRACHLORO	5.28	5.31	5.34	15620
1,2-Dibromo-3-chloropropan	8.19	8.22	8.25	661

Analysis Report (B)

Injected on May 16, 2020 02:13:06
Instrument 19853B
Result file 16EDBS20133003B.021.RAW
Calibration file 16EDBS2013301B
Method file 16EDBSB

%SSR(PCA) 57% (46 - 136) Conc: 0.039105

Amount	Compound	Min	RT	Max	Height	Amount
0.039584	1,1,2,2-TETRACHLORO	6.30	6.32	6.36	22045	0.039105
0.000949	1,2,3-Trichloropropane	6.41	6.44	6.47	600	0.007176

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
☒ Ethylene dibromide			<0.0097	<0.0194	<0.029	D1		
☐ 1,1,2,2-TETRACHLORO	A	0.039584	0.0034	0.0068	0.0068		1.22	
☒ 1,1,2,2-TETRACHLORO	A	0.039584	0.0034	0.0068	0.0068			
☒ 1,1,2,2-TETRACHLORO	B	0.039105	0.0034	0.0068	0.0068			
☐ 1,2,3-Trichloropropane			<0.0968	<0.1936	<0.2614			
☐ 1,2-Dibromo-3-chloropropane			<0.0097	<0.0194	<0.029			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Charles T. Beasley
 Charles T. Beasley
 Manager

MAY 18 2020

Reviewed and digitally signed by Rachel Umberger on 5/18/2020 07:49:18

5/18/2020

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Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: 1313226 12354 ID: AA Batchnumber: 201350023A
 Sample Amount: 36.15 mL Total Volume: 2 ml Analyst: 13378 SDG: KR446 State: NM
 Analyses: 10398

Analysis Report (A)

Injected on : May 16, 2020 02:13:06
 Instrument : CP16--19853A
 Result file : 16EDBS20133003.021.RAW
 Calibration file : 16EDBS2013301.CAL
 Method file : 16EDBS.MET

%SSR(1,1,2,2-PCA) : 58% (46-136) Conc.: 0.039584

Peak name	Min	R.T.	Max	Height	Amount
1,1,2,2-PCA	5.28	5.31	5.34	15620	0.039584
DBCP	8.19	8.22	8.25	661	0.000949

Analysis Report (B)

Injected on : May 16, 2020 02:13:06
 Instrument : CP16--19853B
 Result file : 16EDBS20133003B.021.RAW
 Calibration file : 16EDBS2013301B.CAL
 Method file : 16EDBSB.MET

%SSR(1,1,2,2-PCA) : 57% (46-136) Conc.: 0.039105

Peak name	Min	R.T.	Max	Height	Amount
1,1,2,2-PCA	6.30	6.32	6.36	22045	0.039105
1,2,3-TCP	6.41	6.44	6.47	600	0.007176

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☒ EDB			<0.029	<0.0097			
☐ 1,1,2,2-PCA	A	0.039584				1.22	
☐ 1,2,3-TCP			<0.2614	<0.0968			
☐ DBCP			<0.029	<0.0097			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

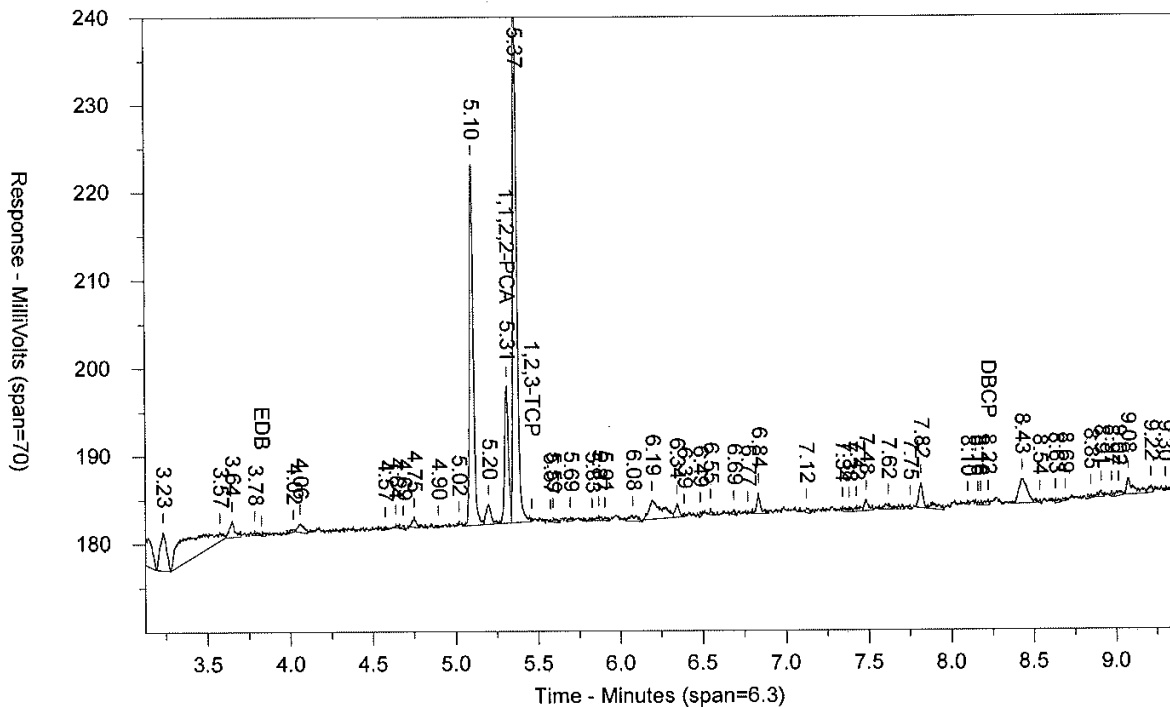
Printed on: 5/18/2020 07:08:45

KR446 Page 338 of 579

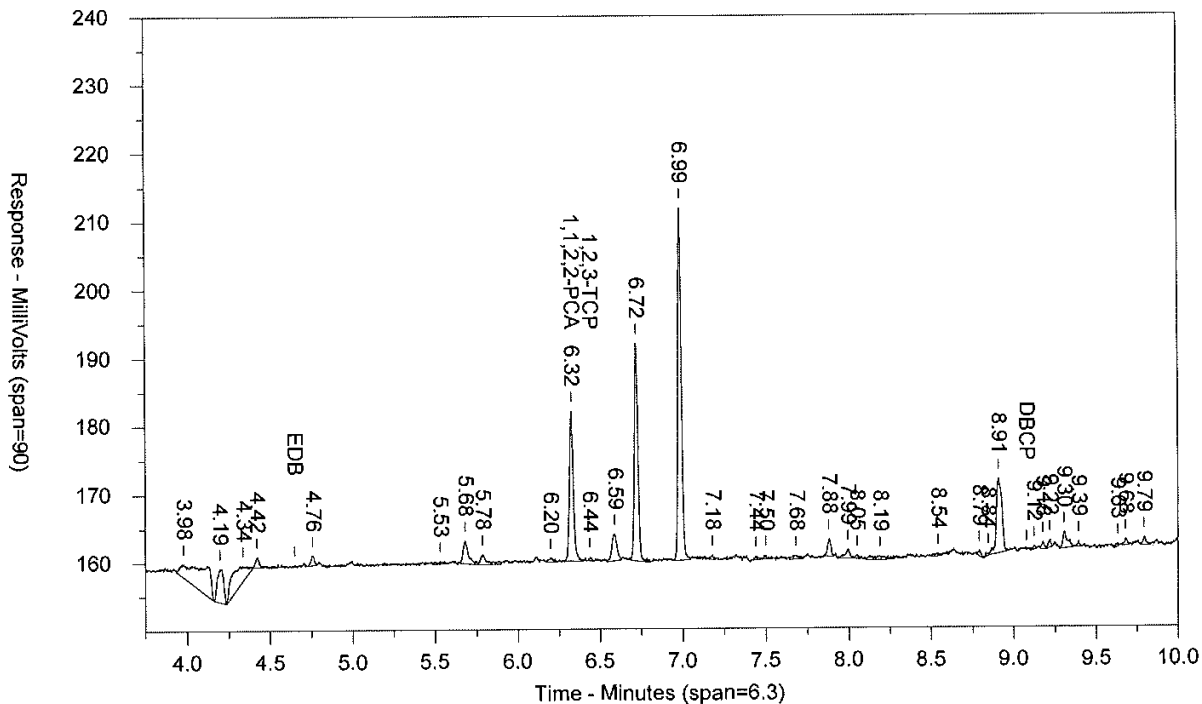
Chrom Perfect Chromatogram Report

1313226 AA12354 T 201350023A 10398 SW-846 8011

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: 1313226 AA12354 T 201350023A 10398

SW-846 8011

Injected On: 5/16/2020 2:13:06 AM

Sample Weight: 36.15

Instrument ID: CP16-19853

Dilution Factor: 2

Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min

Column A ID: DB CLP1 30m x 0.32mm x 0.25um

Column B ID: DB CLP2 30m x 0.32mm x 0.5um

Injection Volume: 1 ul

Threshold: 1

Calibration Type: external

Quantitation: Height

Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
5.311	15620	.04	1,1,2,2-PCA	6.324	22045	.039	1,1,2,2-PCA
	0		1,2,3-TCP	6.437	600	.007	1,2,3-TCP
8.222	661	.001	DBCP		0		DBCP

Files:

Area File: 16edbs20133003.021.RAW

Area File: 16edbs20133003B.021.RAW

Method A: 16EDBS.MET

Method B: 16EDBSB.MET

Calibration File A: 16EDBS2013301.CAL

Calibration File B: 16EDBS2013301B.CAL

Format A: EDB16.FMTA

Format B: EDB16.FMTB

Area File Created On: 5/16/2020 2:23:08 AM

File Reported On: 5/18/2020 at 6:57:50 AM



Lancaster Laboratories
Environmental

Data Summary

Sample Name: 1313227 **12355** **Sample ID:** AA **Batchnumber:** 201350023A
Sample Amount: 36.4 mL **Total Volume:** 2 ml **Analyst:** 13378 **SDG:** KR446 **State:** NM
Analyses: 10398

Analysis Report (A)

Injected on May 16, 2020 02:29:49
Instrument 19853A
Result file 16EDBS20133003.022.RAW
Calibration file 16EDBS2013301
Method file 16EDBS

%SSR(PCA) 54% (46 - 136) Conc: 0.036546

Single Component Data

Compound	Min	RT	Max	Height
1,1,2,2-TETRACHLORO	5.28	5.31	5.34	14521
1,2-Dibromo-3-chloropropan	8.19	8.20	8.25	528

Analysis Report (B)

Injected on May 16, 2020 02:29:49
Instrument 19853B
Result file 16EDBS20133003B.022.RAW
Calibration file 16EDBS2013301B
Method file 16EDBSB

%SSR(PCA) 54% (46 - 136) Conc: 0.036569

Amount	Compound	Min	RT	Max	Height	Amount
0.036546	1,1,2,2-TETRACHLORO	6.30	6.32	6.36	20758	0.036569
0.000754	1,2-Dibromo-3-chloropropan	9.05	9.07	9.11	453	0.000371

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
☒ Ethylene dibromide			<0.0096	<0.0192	<0.0288	D1		
☐ 1,1,2,2-TETRACHLORO	A	0.036546	0.0034	0.0067	0.0067		0.06	
☒ 1,1,2,2-TETRACHLORO	A	0.036546	0.0034	0.0067	0.0067			
☒ 1,1,2,2-TETRACHLORO	B	0.036569	0.0034	0.0067	0.0067			
☐ 1,2,3-Trichloropropane			<0.0962	<0.1923	<0.2596			
☐ 1,2-Dibromo-3-chloropropan			<0.0096	<0.0192	<0.0288			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Charles T. Beasley
Manager

MAY 18 2020

Reviewed and digitally signed by Rachel Umberger on 5/18/2020 07:49:21

5/18/2020

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Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: 1313227 12355 ID: AA **Batchnumber:** 201350023A
Sample Amount: 36.4 mL **Total Volume:** 2 ml **Analyst:** 13378 **SDG:** KR446 **State:** NM
Analyses: 10398

Analysis Report (A)

Injected on : May 16, 2020 02:29:49
 Instrument : CP16--19853A
 Result file : 16EDBS20133003.022.RAW
 Calibration file : 16EDBS2013301.CAL
 Method file : 16EDBS.MET

%SSR(1,1,2,2-PCA) : 54% (46-136) Conc.: 0.036546

Peak name	Min	R.T.	Max	Height	Amount
1,1,2,2-PCA	5.28	5.31	5.34	14521	0.036546
DBCP	8.19	8.20	8.25	528	0.000754

Analysis Report (B)

Injected on : May 16, 2020 02:29:49
 Instrument : CP16--19853B
 Result file : 16EDBS20133003B.022.RAW
 Calibration file : 16EDBS2013301B.CAL
 Method file : 16EDBSB.MET

%SSR(1,1,2,2-PCA) : 54% (46-136) Conc.: 0.036569

Peak name	Min	R.T.	Max	Height	Amount
1,1,2,2-PCA	6.30	6.32	6.36	20758	0.036569
DBCP	9.05	9.07	9.11	453	0.000371

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☒ EDB			<0.0288	<0.0096			
☐ 1,1,2,2-PCA	A	0.036546				0.06	
☐ 1,2,3-TCP			<0.2596	<0.0962			
☐ DBCP			<0.0288	<0.0096			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

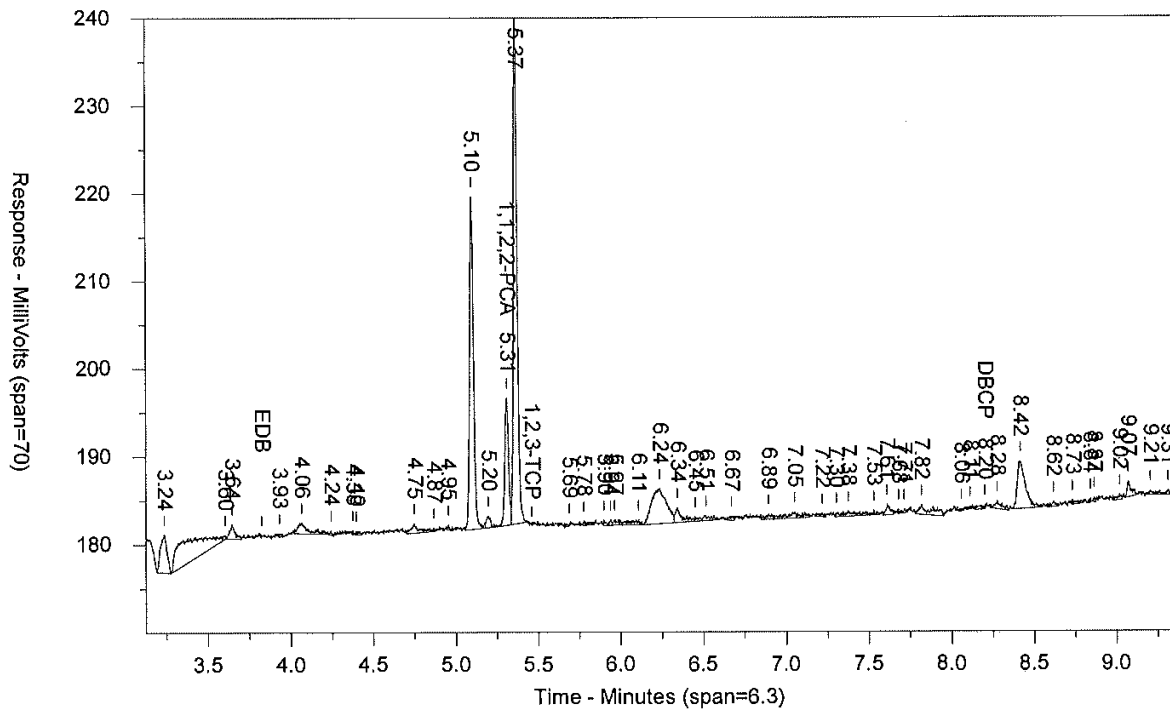
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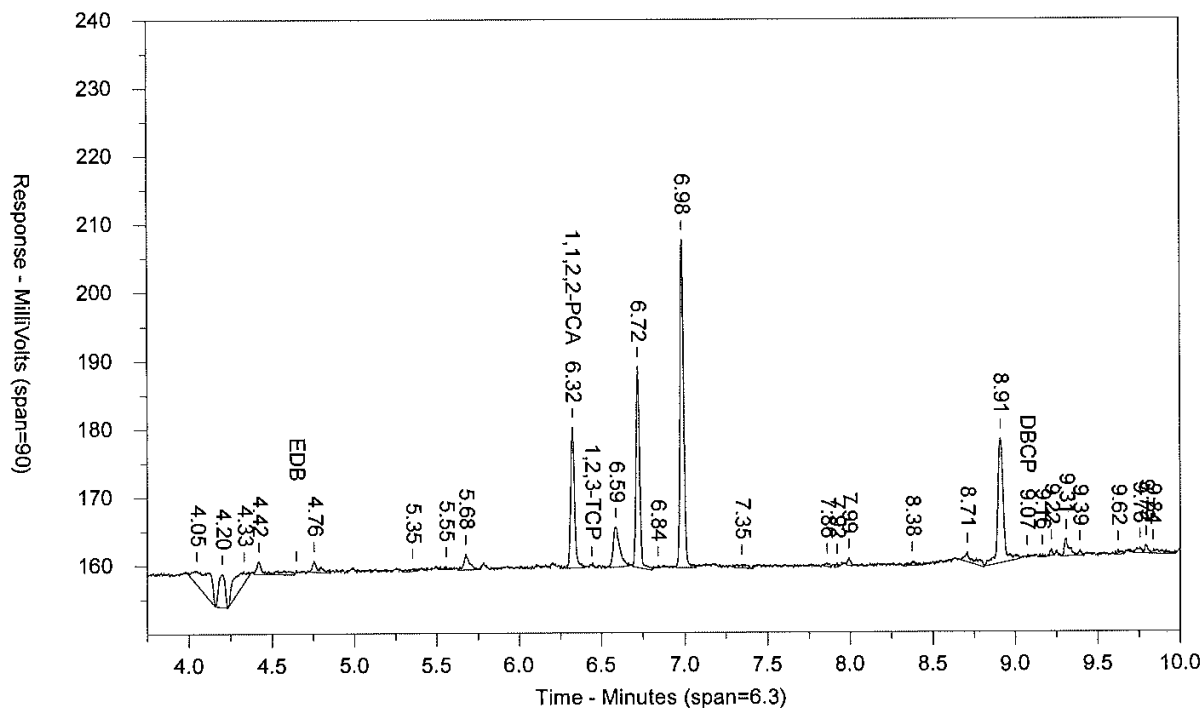
Chrom Perfect Chromatogram Report

1313227 AA12355 T 201350023A 10398 SW-846 8011

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: 1313227 AA12355 T 201350023A 10398

SW-846 8011

Injected On: 5/16/2020 2:29:49 AM

Sample Weight: 36.4

Instrument ID: CP16-19853

Dilution Factor: 2

Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min

Column A ID: DB CLP1 30m x 0.32mm x 0.25um

Column B ID: DB CLP2 30m x 0.32mm x 0.5um

Injection Volume: 1 ul

Threshold: 1

Calibration Type: external

Quantitation: Height

Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
5.311	14521	.037	1,1,2,2-PCA	6.324	20758	.037	1,1,2,2-PCA
8.201	528	.001	DBCP	9.07	453		DBCP

Files:

Area File: 16edbs20133003.022.RAW

Area File: 16edbs20133003B.022.RAW

Method A: 16EDBS.MET

Method B: 16EDBSB.MET

Calibration File A: 16EDBS2013301.CAL

Calibration File B: 16EDBS2013301B.CAL

Format A: EDB16.FMTA

Format B: EDB16.FMTB

Area File Created On: 5/16/2020 2:39:54 AM

File Reported On: 5/18/2020 at 6:58:02 AM



Lancaster Laboratories
Environmental

Data Summary

Sample Name: 1313228 **12356** **Sample ID:** AA **Batchnumber:** 201350023A
Sample Amount: 36.34 mL **Total Volume:** 2 ml **Analyst:** 13378 **SDG:** KR446 **State:** NM
Analyses: 10398

Analysis Report (A)

Injected on May 16, 2020 03:20:17
Instrument 19853A
Result file 16EDBS20133003.025.RAW
Calibration file 16EDBS2013301
Method file 16EDBS

%SSR(PCA) 65% (46 - 136) Conc: 0.044425

Single Component Data

Compound	Min	RT	Max	Height
Ethylene dibromide	3.79	3.79	3.85	480
1,1,2,2-TETRACHLORO	5.28	5.31	5.34	17623
1,2-Dibromo-3-chloropropan	8.19	8.24	8.25	1414

Analysis Report (B)

Injected on May 16, 2020 03:20:17
Instrument 19853B
Result file 16EDBS20133003B.025.RAW
Calibration file 16EDBS2013301B
Method file 16EDBSB

%SSR(PCA) 59% (46 - 136) Conc: 0.039692

Amount	Compound	Min	RT	Max	Height	Amount
0.001731	1,1,2,2-TETRACHLORO	6.30	6.32	6.36	22493	0.039692
0.044425	1,2-Dibromo-3-chloropropan	9.05	9.10	9.11	3573	0.002929
0.002022						

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
☒ Ethylene dibromide			<0.0096	<0.0193	<0.0289	D1		
☐ 1,1,2,2-TETRACHLORO	A	0.044425	0.0034	0.0067	0.0067		11.25	
☒ 1,1,2,2-TETRACHLORO	A	0.044425	0.0034	0.0067	0.0067			
☒ 1,1,2,2-TETRACHLORO	B	0.039692	0.0034	0.0067	0.0067			
☐ 1,2,3-Trichloropropane			<0.0963	<0.1926	<0.26			
☐ 1,2-Dibromo-3-chloropropan			<0.0096	<0.0193	<0.0289			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Charles T. Beasley
 Charles T. Beasley
 Manager

MAY 18 2020

Reviewed and digitally signed by Rachel Umberger on 5/18/2020 07:49:24

5/18/2020

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Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: 1313228 12356 ID: AA **Batchnumber:** 201350023A
Sample Amount: 36.34 mL **Total Volume:** 2 mL **Analyst:** 13378 **SDG:** KR446 **State:** NM
Analyses: 10398

Analysis Report (A)

Injected on : May 16, 2020 03:20:17
 Instrument : CP16--19853A
 Result file : 16EDBS20133003.025.RAW
 Calibration file : 16EDBS2013301B.CAL
 Method file : 16EDBS.MET

%SSR(1,1,2,2-PCA) : 65% (46-136) Conc.: 0.044425

Peak name	Min	R.T.	Max	Height	Amount
EDB	3.79	3.79	3.85	480	0.001731
1,1,2,2-PCA	5.28	5.31	5.34	17623	0.044425
DBCP	8.19	8.24	8.25	1414	0.002022

Analysis Report (B)

Injected on : May 16, 2020 03:20:17
 Instrument : CP16--19853B
 Result file : 16EDBS20133003B.025.RAW
 Calibration file : 16EDBS2013301B.CAL
 Method file : 16EDBSB.MET

%SSR(1,1,2,2-PCA) : 59% (46-136) Conc.: 0.039692

Peak name	Min	R.T.	Max	Height	Amount
1,1,2,2-PCA	6.30	6.32	6.36	22493	0.039692
DBCP	9.05	9.10	9.11	3573	0.002929

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☒ EDB			<0.0289	<0.0096			
☐ 1,1,2,2-PCA	A	0.044425				11.25	
☐ 1,2,3-TCP			<0.26	<0.0963			
☐ DBCP			<0.0289	<0.0096			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

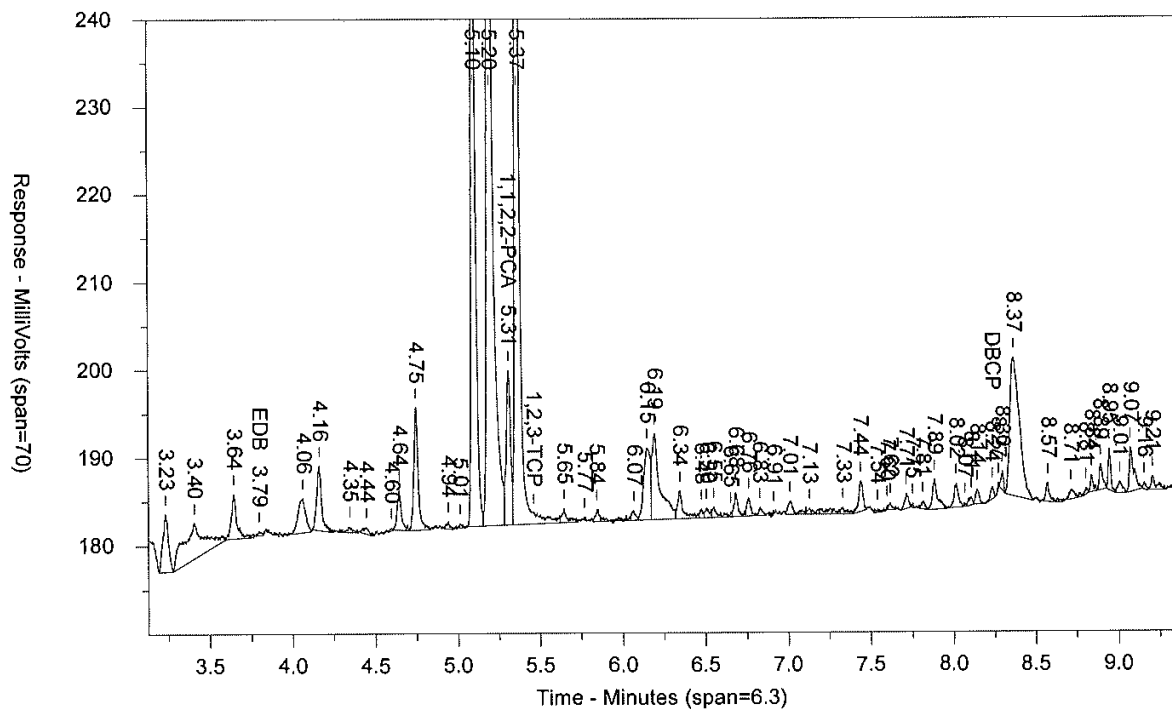
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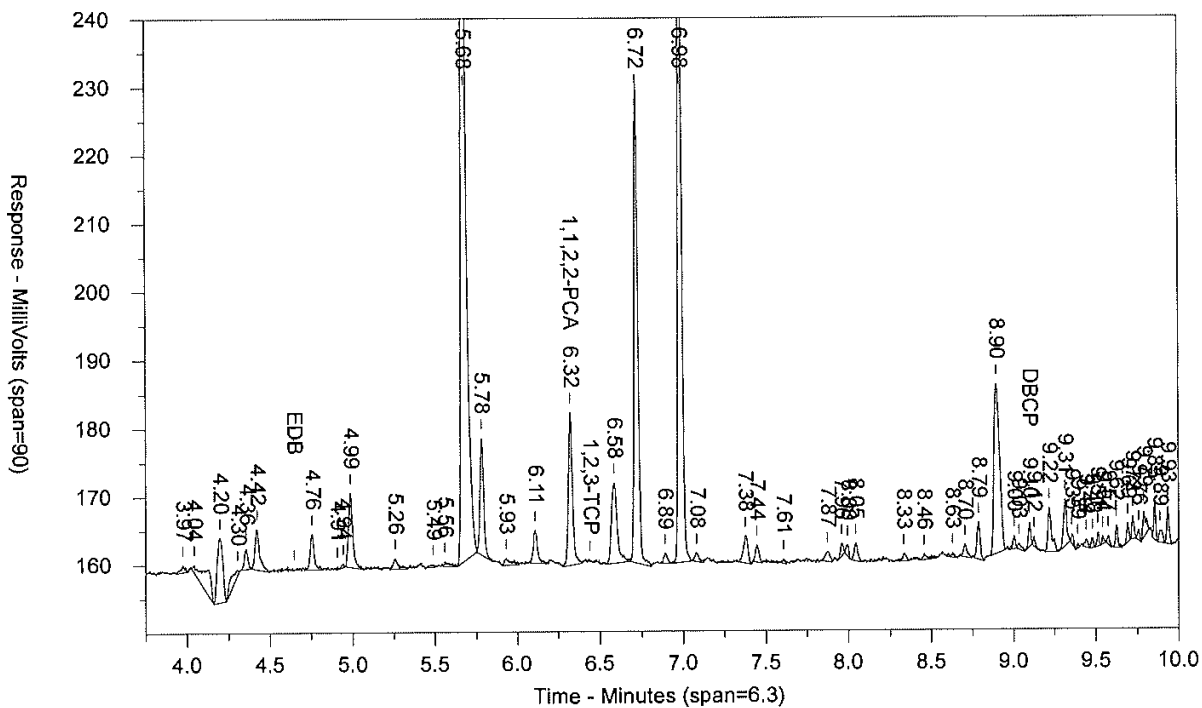
Chrom Perfect Chromatogram Report

1313228 AA12356 T 201350023A 10398 SW-846 8011

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: 1313228 AA12356 T 201350023A 10398

SW-846 8011

Injected On: 5/16/2020 3:20:17 AM

Sample Weight: 36.34

Instrument ID: CP16-19853

Dilution Factor: 2

Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min

Column A ID: DB CLP1 30m x 0.32mm x 0.25um

Column B ID: DB CLP2 30m x 0.32mm x 0.5um

Injection Volume: 1 ul

Threshold: 1

Calibration Type: external

Quantitation: Height

Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.794	480	.002	EDB		0		EDB
5.309	17623	.044	1,1,2,2-PCA	6.323	22493	.04	1,1,2,2-PCA
8.235	1414	.002	DBCP	9.098	3573	.003	DBCP

Files:

Area File: 16edbs20133003.025.RAW

Area File: 16edbs20133003B.025.RAW

Method A: 16EDBS.MET

Method B: 16EDBSB.MET

Calibration File A: 16EDBS2013301.CAL

Calibration File B: 16EDBS2013301B.CAL

Format A: EDB16.FMTA

Format B: EDB16.FMTB

Area File Created On: 5/16/2020 3:30:21 AM

File Reported On: 5/18/2020 at 7:20:02 AM



Lancaster Laboratories
Environmental

Data Summary

Sample Name: 1313229 **12357** **Sample ID:** AA **Batchnumber:** 201350023A
Sample Amount: 36.77 mL **Total Volume:** 2 ml **Analyst:** 13378 **SDG:** KR446 **State:** NM
Analyses: 10398

Analysis Report (A)

Injected on May 16, 2020 03:37:01
Instrument 19853A
Result file 16EDBS20133003.026.RAW
Calibration file 16EDBS2013301
Method file 16EDBS

%SSR(PCA) 68% (46 - 136) Conc: 0.045821

Analysis Report (B)

Injected on May 16, 2020 03:37:01
Instrument 19853B
Result file 16EDBS20133003B.026.RAW
Calibration file 16EDBS2013301B
Method file 16EDBSB

%SSR(PCA) 57% (46 - 136) Conc: 0.038315

Single Component Data

Compound	Min	RT	Max	Height
1,1,2,2-TETRACHLORO	5.28	5.31	5.34	18392
1,2-Dibromo-3-chloropropl	8.19	8.24	8.25	1298

Amount	Compound	Min	RT	Max	Height	Amount
0.045821	1,1,2,2-TETRACHLORO	6.30	6.32	6.36	21970	0.038315
0.001834	1,2,3-Trichloropropane	6.41	6.41	6.47	624	0.007339
	1,2-Dibromo-3-chloropropl	9.05	9.10	9.11	3383	0.002741

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
☒ Ethylene dibromide			<0.0095	<0.019	<0.0286	D1		
☐ 1,1,2,2-TETRACHLORO	A	0.045821	0.0033	0.0067	0.0067		17.84	
☒ 1,1,2,2-TETRACHLORO	A	0.045821	0.0033	0.0067	0.0067			
☒ 1,1,2,2-TETRACHLORO	B	0.038315	0.0033	0.0067	0.0067			
☐ 1,2,3-Trichloropropane			<0.0952	<0.1904	<0.257			
☐ 1,2-Dibromo-3-chloroprope			<0.0095	<0.019	<0.0286			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Charles T. Booley
 Charles T. Booley
 Manager

MAY 18 2020

Reviewed and digitally signed by Rachel Umberger on 5/18/2020 07:49:26

5/18/2020

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Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: 1313229 12357 ID: AA Batchnumber: 201350023A
 Sample Amount: 36.77 mL Total Volume: 2 ml Analyst: 13378 SDG: KR446 State: NM
 Analyses: 10398

Analysis Report (A)

Injected on : May 16, 2020 03:37:01
 Instrument : CP16--19853A
 Result file : 16EDBS20133003.026.RAW
 Calibration file : 16EDBS2013301.CAL
 Method file : 16EDBS.MET

%SSR(1,1,2,2-PCA) : 68% (46-136) Conc.: 0.045821

Peak name	Min	R.T.	Max	Height	Amount
1,1,2,2-PCA	5.28	5.31	5.34	18392	0.045821
DBCP	8.19	8.24	8.25	1298	0.001834

Analysis Report (B)

Injected on : May 16, 2020 03:37:01
 Instrument : CP16--19853B
 Result file : 16EDBS20133003B.026.RAW
 Calibration file : 16EDBS2013301B.CAL
 Method file : 16EDBSB.MET

%SSR(1,1,2,2-PCA) : 57% (46-136) Conc.: 0.038315

Peak name	Min	R.T.	Max	Height	Amount
1,1,2,2-PCA	6.30	6.32	6.36	21970	0.038315
1,2,3-TCP	6.41	6.41	6.47	624	0.007339
DBCP	9.05	9.10	9.11	3383	0.002741

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☒ EDB			<0.0286	<0.0095			
☐ 1,1,2,2-PCA	A	0.045821				17.84	
☐ 1,2,3-TCP			<0.257	<0.0952			
☐ DBCP			<0.0286	<0.0095			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

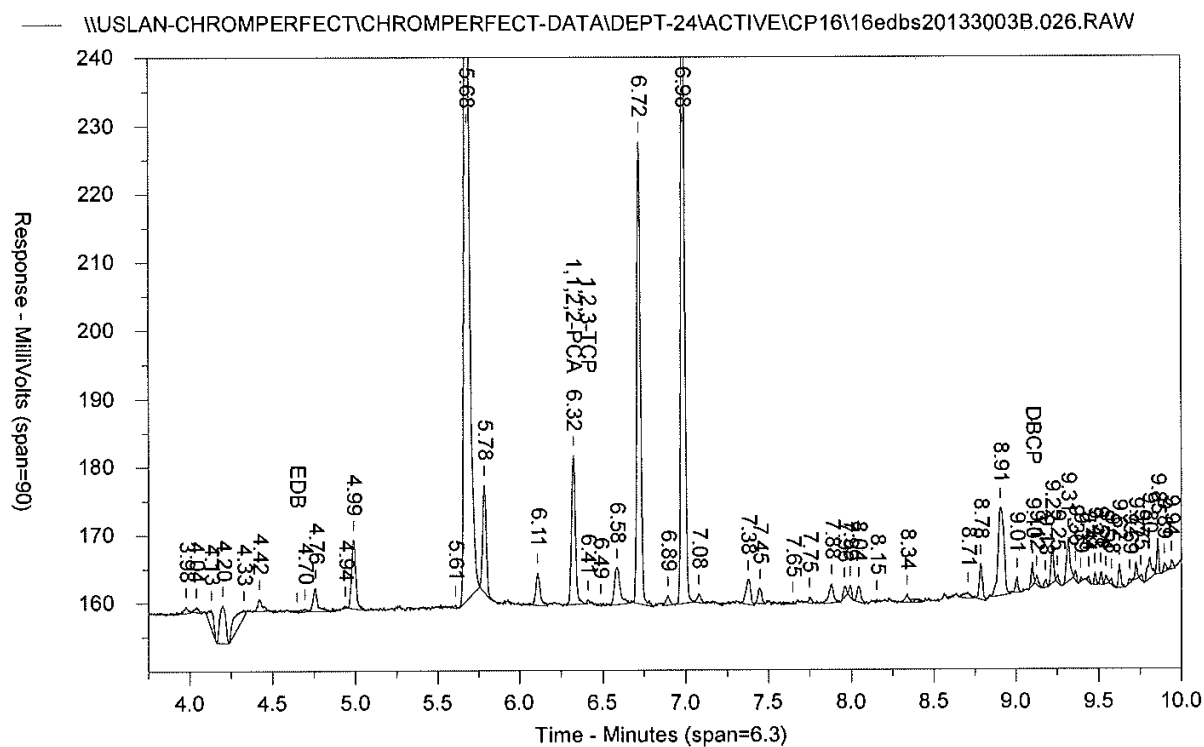
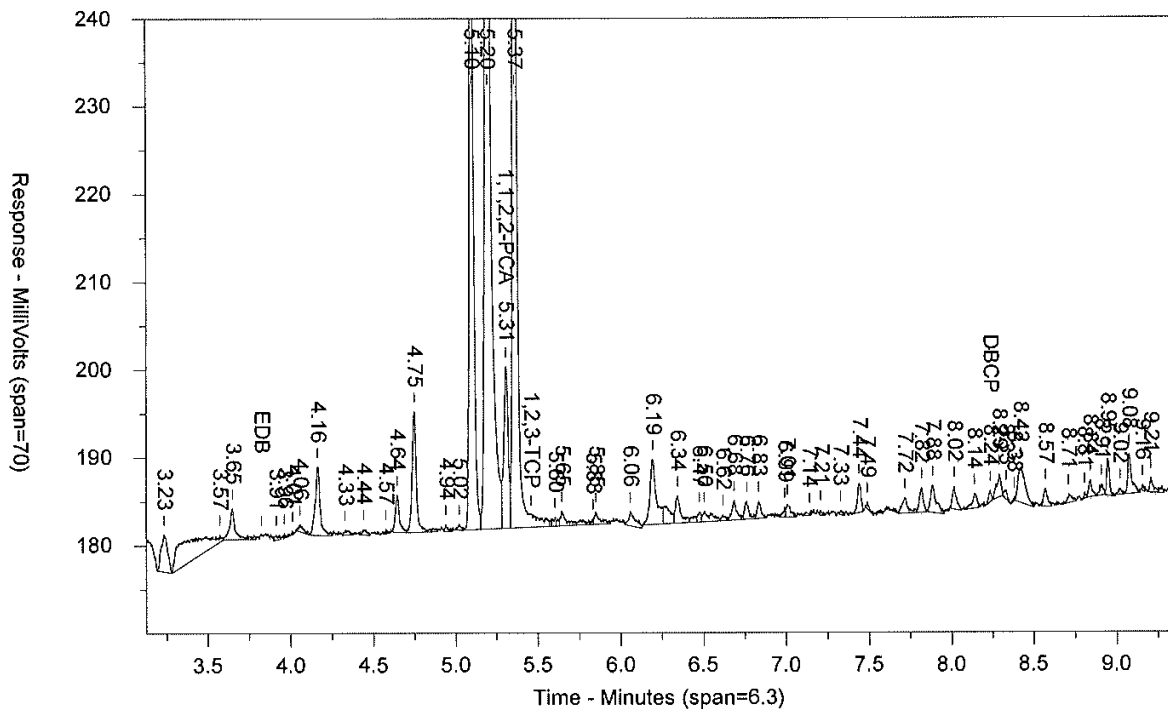
* Recovery outside QC Limits

Printed on: 5/18/2020 07:09:12

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Chrom Perfect Chromatogram Report

1313229 AA12357 T 201350023A 10398 SW-846 8011
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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: 1313229 AA12357 T 201350023A 10398 SW-846 8011
Injected On: 5/16/2020 3:37:01 AM Sample Weight: 36.77
Instrument ID: CP16-19853 Dilution Factor: 2
Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min
Column A ID: DB CLP1 30m x 0.32mm x 0.25um
Column B ID: DB CLP2 30m x 0.32mm x 0.5um
Injection Volume: 1 ul

Threshold: 1
Calibration Type: external
Quantitation: Height

Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
5.309	18392	.046	1,1,2,2-PCA	6.323	21970	.038	1,1,2,2-PCA
	0		1,2,3-TCP	6.41	624	.007	1,2,3-TCP
8.236	1298	.002	DBCP	9.099	3383	.003	DBCP

Files:

Area File: 16edbs20133003.026.RAW
Area File: 16edbs20133003B.026.RAW
Method A: 16EDBS.MET
Method B: 16EDBSB.MET
Calibration File A: 16EDBS2013301.CAL
Calibration File B: 16EDBS2013301B.CAL
Format A: EDB16.FMTA
Format B: EDB16.FMTB
Area File Created On: 5/16/2020 3:47:03 AM
File Reported On: 5/18/2020 at 6:59:04 AM



Lancaster Laboratories
Environmental

Data Summary

Sample Name: 1313230 **12358** **Sample ID:** AA **Batchnumber:** 201350023A
Sample Amount: 36.92 mL **Total Volume:** 2 ml **Analyst:** 13378 **SDG:** KR446 **State:** NM
Analyses: 10398

Analysis Report (A)

Injected on May 16, 2020 03:53:49
Instrument 19853A
Result file 16EDBS20133003.027.RAW
Calibration file 16EDBS2013301
Method file 16EDBS

%SSR(PCA) 62% (46 - 136) Conc: 0.041334

Single Component Data

Compound	Min	RT	Max	Height
Ethylene dibromide	3.79	3.82	3.85	1626
1,1,2,2-TETRACHLORO	5.28	5.31	5.34	16658
1,2-Dibromo-3-chloropropl	8.19	8.23	8.25	980

Analysis Report (B)

Injected on May 16, 2020 03:53:49
Instrument 19853B
Result file 16EDBS20133003B.027.RAW
Calibration file 16EDBS2013301B
Method file 16EDBSB

%SSR(PCA) 64% (46 - 136) Conc: 0.042551

Amount	Compound	Min	RT	Max	Height	Amount
0.005774	Ethylene dibromide	4.62	4.64	4.68	3604	0.008187
0.041334	1,1,2,2-TETRACHLORO	6.30	6.32	6.36	24499	0.042551
0.001378	1,2-Dibromo-3-chloropropl	9.05	9.10	9.11	2366	0.001909

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
☒ Ethylene dibromide			<0.0095	<0.019	<0.0284	D1		
☐ 1,1,2,2-TETRACHLORO	A	0.041334	0.0033	0.0066	0.0066		2.90	
☒ 1,1,2,2-TETRACHLORO	A	0.041334	0.0033	0.0066	0.0066			
☒ 1,1,2,2-TETRACHLORO	B	0.042551	0.0033	0.0066	0.0066			
☐ 1,2,3-Trichloropropane			<0.0948	<0.1896	<0.256			
☐ 1,2-Dibromo-3-chloropropane			<0.0095	<0.019	<0.0284			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Charles T. Boostey
 Charles T. Boostey
 Manager

MAY 18 2020

Reviewed and digitally signed by Rachel Umberger on 5/18/2020 07:49:29

5/18/2020

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Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: 1313230 12358 ID: AA **Batchnumber:** 201350023A
Sample Amount: 36.92 mL **Total Volume:** 2 mL **Analyst:** 13378 **SDG:** KR446 **State:** NM
Analyses: 10398

Analysis Report (A)

Injected on : May 16, 2020 03:53:49
 Instrument : CP16--19853A
 Result file : 16EDBS20133003.027.RAW
 Calibration file : 16EDBS2013301.CAL
 Method file : 16EDBS.MET

%SSR(1,1,2,2-PCA) : 62% (46-136) Conc.: 0.041334

Peak name	Min	R.T.	Max	Height	Amount
EDB	3.79	3.82	3.85	1626	0.005774
1,1,2,2-PCA	5.28	5.31	5.34	16658	0.041334
DBCP	8.19	8.23	8.25	980	0.001378

Analysis Report (B)

Injected on : May 16, 2020 03:53:49
 Instrument : CP16--19853B
 Result file : 16EDBS20133003B.027.RAW
 Calibration file : 16EDBS2013301B.CAL
 Method file : 16EDBSB.MET

%SSR(1,1,2,2-PCA) : 64% (46-136) Conc.: 0.042551

Peak name	Min	R.T.	Max	Height	Amount
EDB	4.62	4.64	4.68	3604	0.008187
1,1,2,2-PCA	6.30	6.32	6.36	24499	0.042551
DBCP	9.05	9.10	9.11	2366	0.001909

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☒ EDB			<0.0284	<0.0095			
☐ 1,1,2,2-PCA	A	0.041334				2.90	
☐ 1,2,3-TCP			<0.256	<0.0948			
☐ DBCP			<0.0284	<0.0095			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

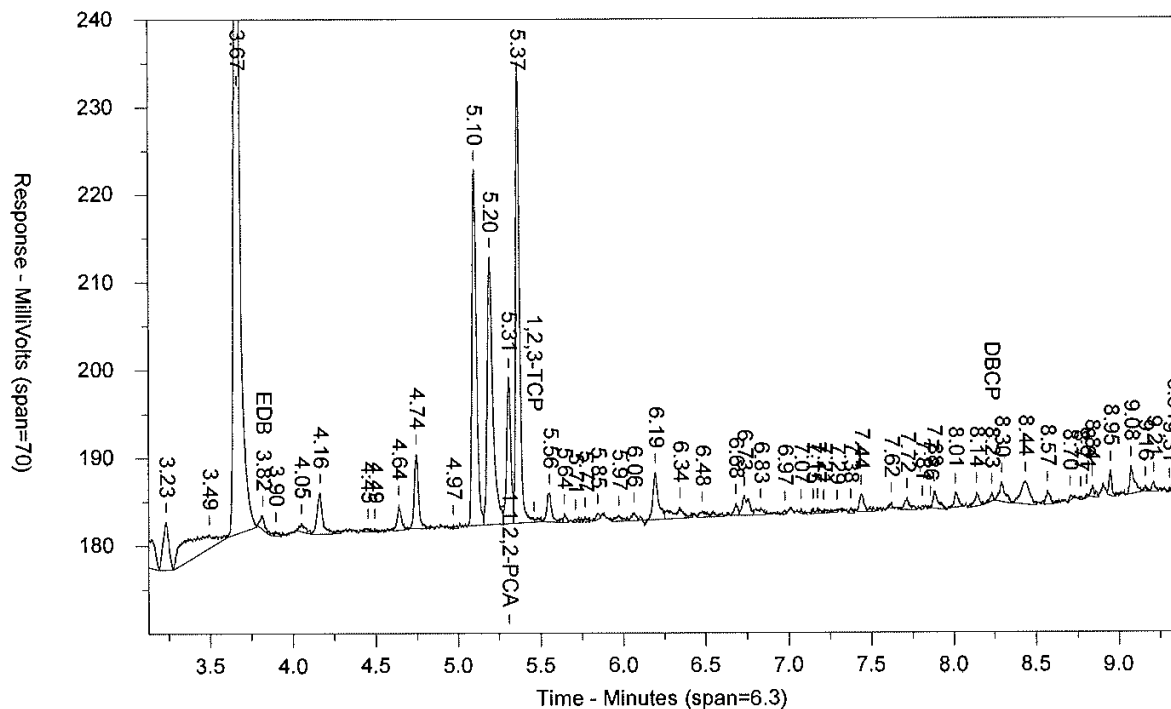
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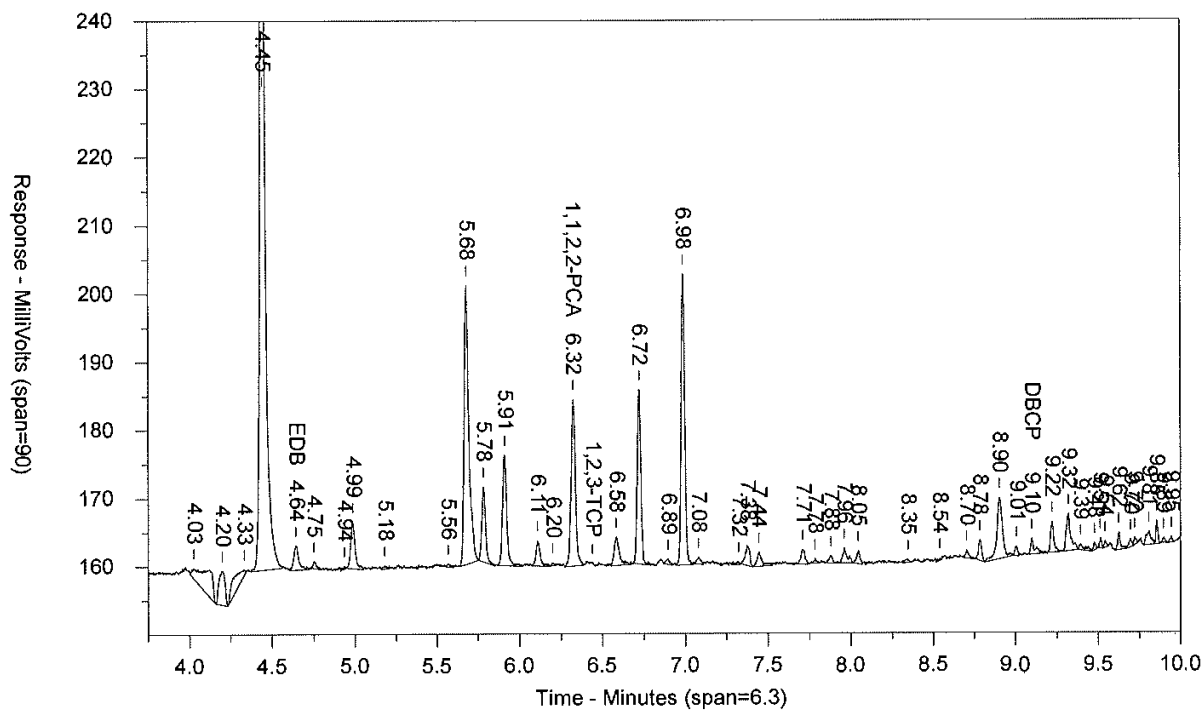
Chrom Perfect Chromatogram Report

1313230 AA12358 T 201350023A 10398 SW-846 8011

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: 1313230 AA12358 T 201350023A 10398 SW-846 8011
Injected On: 5/16/2020 3:53:49 AM Sample Weight: 36.92
Instrument ID: CP16-19853 Dilution Factor: 2
Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min
Column A ID: DB CLP1 30m x 0.32mm x 0.25um
Column B ID: DB CLP2 30m x 0.32mm x 0.5um
Injection Volume: 1 ul

Threshold: 1
Calibration Type: external
Quantitation: Height

Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.818	1626	.006	EDB	4.641	3604	.008	EDB
5.308	16658	.041	1,1,2,2-PCA	6.321	24499	.043	1,1,2,2-PCA
8.235	980	.001	DBCP	9.098	2366	.002	DBCP

Files:

Area File: 16edbs20133003.027.RAW
Area File: 16edbs20133003B.027.RAW
Method A: 16EDBS.MET
Method B: 16EDBSB.MET
Calibration File A: 16EDBS2013301.CAL
Calibration File B: 16EDBS2013301B.CAL
Format A: EDB16.FMTA
Format B: EDB16.FMTB
Area File Created On: 5/16/2020 4:03:51 AM
File Reported On: 5/18/2020 at 6:59:20 AM



Lancaster Laboratories
Environmental

Data Summary

Sample Name: 1313231 **12359** **Sample ID:** AA **Batchnumber:** 201350023A
Sample Amount: 36.42 mL **Total Volume:** 2 ml **Analyst:** 13378 **SDG:** KR446 **State:** NM
Analyses: 10398

Analysis Report (A)

Injected on May 16, 2020 04:10:50
Instrument 19853A
Result file 16EDBS20133003.028.RAW
Calibration file 16EDBS2013301
Method file 16EDBS

%SSR(PCA) 63% (46 - 136) Conc: 0.042862

Single Component Data

Compound	Min	RT	Max	Height
Ethylene dibromide	3.79	3.82	3.85	3860
1,1,2,2-TETRACHLORO	5.28	5.31	5.34	17040
1,2,3-Trichloropropane	5.43	5.44	5.49	7354

Analysis Report (B)

Injected on May 16, 2020 04:10:50
Instrument 19853B
Result file 16EDBS20133003B.028.RAW
Calibration file 16EDBS2013301B
Method file 16EDBSB

%SSR(PCA) 64% (46 - 136) Conc: 0.043631

Amount	Compound	Min	RT	Max	Height	Amount
0.013891	Ethylene dibromide	4.62	4.64	4.68	8257	0.019016
0.042862	1,1,2,2-TETRACHLORO	6.30	6.32	6.36	24780	0.043631
0.124725	1,2,3-Trichloropropane	6.41	6.42	6.47	10071	0.119621
	1,2-Dibromo-3-chloropropanol	9.05	9.07	9.11	15935	0.013034

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
☒ Ethylene dibromide	A	0.013891	0.0096	<0.0192	<0.0288	JD1	31.15	
☐ 1,1,2,2-TETRACHLORO	A	0.042862	0.0034	0.0067	0.0067		1.78	
☒ 1,1,2,2-TETRACHLORO	A	0.042862	0.0034	0.0067	0.0067			
☒ 1,1,2,2-TETRACHLORO	B	0.043631	0.0034	0.0067	0.0067			
☐ 1,2,3-Trichloropropane	A	0.124725	0.0961	<0.1922	<0.2595	J	4.18	
☐ 1,2-Dibromo-3-chloropropane			<0.0096	<0.0192	<0.0288			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Charles T. Beasley
 Charles T. Beasley
 Manager

MAY 18 2020

Reviewed and digitally signed by Rachel Umberger on 5/18/2020 07:49:31

5/18/2020

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Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: 1313231 12359 ID: AA **Batchnumber:** 201350023A
Sample Amount: 36.42 mL **Total Volume:** 2 mL **Analyst:** 13378 **SDG:** KR446 **State:** NM
Analyses: 10398

Analysis Report (A)

Injected on : May 16, 2020 04:10:50
 Instrument : CP16--19853A
 Result file : 16EDBS20133003.028.RAW
 Calibration file : 16EDBS2013301.CAL
 Method file : 16EDBS.MET

%SSR(1,1,2,2-PCA) : 63% (46-136) Conc.: 0.042862

Peak name	Min	R.T.	Max	Height	Amount
EDB	3.79	3.82	3.85	3860	0.013891
1,1,2,2-PCA	5.28	5.31	5.34	17040	0.042862
1,2,3-TCP	5.43	5.44	5.49	7354	0.124725

Analysis Report (B)

Injected on : May 16, 2020 04:10:50
 Instrument : CP16--19853B
 Result file : 16EDBS20133003B.028.RAW
 Calibration file : 16EDBS2013301B.CAL
 Method file : 16EDBSB.MET

%SSR(1,1,2,2-PCA) : 64% (46-136) Conc.: 0.043631

Peak name	Min	R.T.	Max	Height	Amount
EDB	4.62	4.64	4.68	8257	0.019016
1,1,2,2-PCA	6.30	6.32	6.36	24780	0.043631
1,2,3-TCP	6.41	6.42	6.47	10071	0.119621
DBCP	9.05	9.07	9.11	15935	0.013034

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☒ EDB	A	0.013891	<0.0288	0.0096	J	31.15	
☐ 1,1,2,2-PCA	A	0.042862				1.78	
☐ 1,2,3-TCP	A	0.124725	<0.2595	0.0961	J	4.18	
☐ DBCP			<0.0288	<0.0096			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

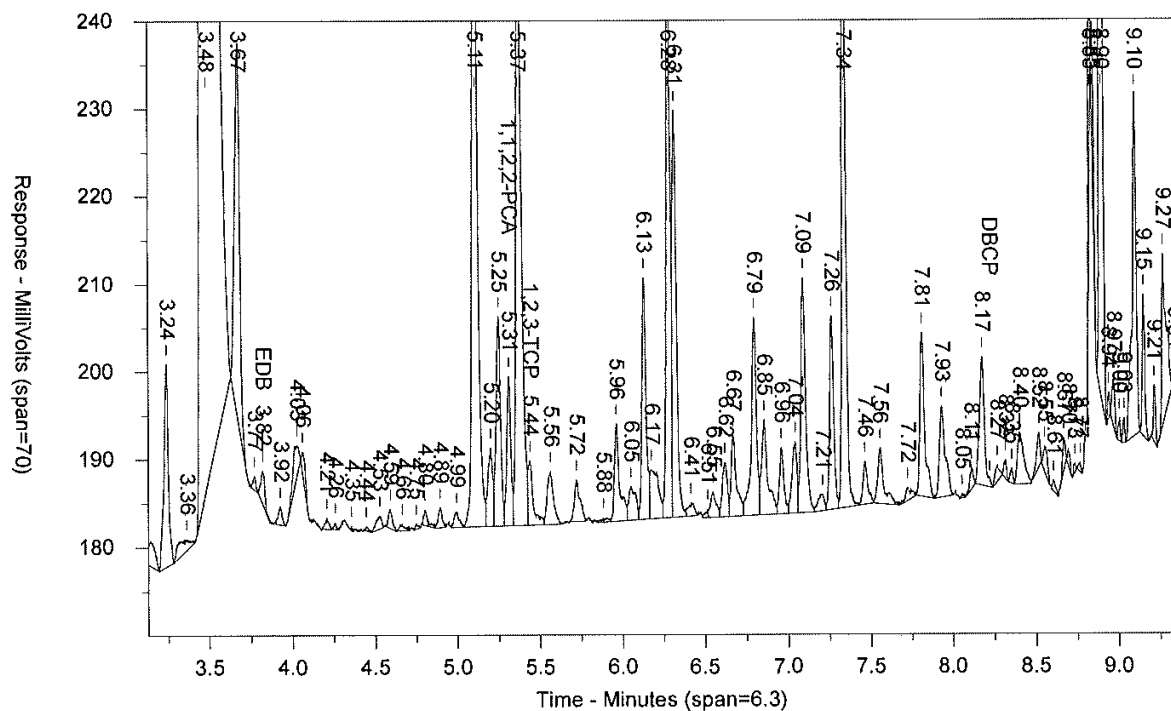
Printed on: 5/18/2020 07:09:23

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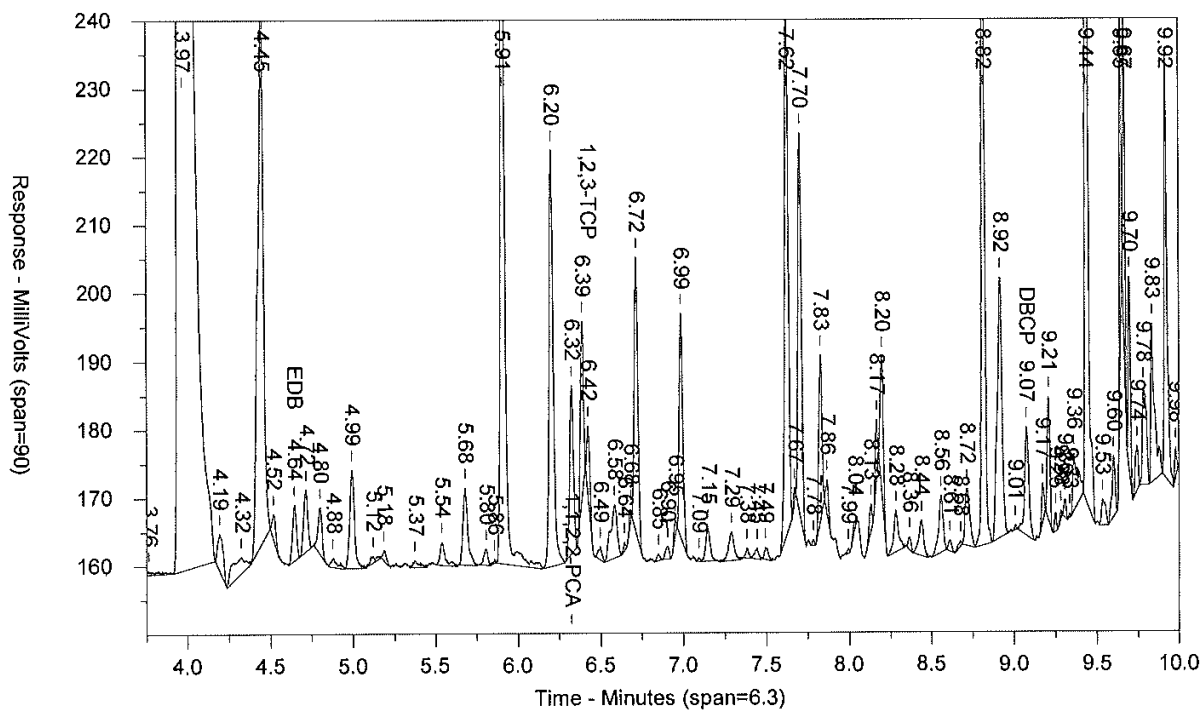
Chrom Perfect Chromatogram Report

1313231 AA12359 T 201350023A 10398 SW-846 8011

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\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16eds20133003B.028.RAW



Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: 1313231 AA12359 T 201350023A 10398

SW-846 8011

Injected On: 5/16/2020 4:10:50 AM

Sample Weight: 36.42

Instrument ID: CP16-19853

Dilution Factor: 2

Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min

Column A ID: DB CLP1 30m x 0.32mm x 0.25um

Column B ID: DB CLP2 30m x 0.32mm x 0.5um

Injection Volume: 1 ul

Threshold: 1

Calibration Type: external

Quantitation: Height

Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.819	3860	.014	EDB	4.644	8257	.019	EDB
5.311	17040	.043	1,1,2,2-PCA	6.325	24780	.044	1,1,2,2-PCA
5.438	7354	.125	1,2,3-TCP	6.423	10071	.12	1,2,3-TCP
	0		DBCP	9.072	15935	.013	DBCP

Files:

Area File: 16edbs20133003.028.RAW

Area File: 16edbs20133003B.028.RAW

Method A: 16EDBS.MET

Method B: 16EDBSB.MET

Calibration File A: 16EDBS2013301.CAL

Calibration File B: 16EDBS2013301B.CAL

Format A: EDB16.FMTA

Format B: EDB16.FMTB

Area File Created On: 5/16/2020 4:20:51 AM

File Reported On: 5/18/2020 at 6:59:36 AM

Standards Data

EDB/DBCP

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Eurofins Lancaster Laboratories
CHROM PERFECT SEQUENCE FILE

Sequence File: \\Uslan-chromperfect\chromperfect-data\Dept-24\Active\CP16\16edbs20133001.seq

Chromatography Directory: \\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16

Method Directory: \\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16

Number of Entries: 12

<u>Sampname</u>	<u>VP</u>	<u>Code</u>	<u>ID</u>	<u>Method</u>	<u>Samp Amt</u>	<u>DF</u>	<u>Int Std</u>	<u>C</u>	<u>Batch Number</u>	<u>Analysis</u>	
1 CONDITIONER	1	MISC	AA		16EDBS.MET	1	1	1	0	2013299999	10398
2 CONDITIONER	2	MISC	AA		16EDBS.MET	1	1	1	0	2013299999	10398
3 EIBKX2024A	3	PIBLK	AA		16EDBS.MET	35	2	1	0	2013299999	10398
4 EDB_12024R	4	ICAL	AA		16EDBS.MET	1	1	1	1	2013299999	10398
5 EDB_22024R	5	ICAL	AA		16EDBS.MET	1	1	1	2	2013299999	10398
6 EDB_32024AA	6	ICAL	AA		16EDBS.MET	1	1	1	3	2013299999	10398
7 EDB_42024AY	7	ICAL	AA		16EDBS.MET	1	1	1	4	2013299999	10398
8 EDB_52024R	8	ICAL	AA		16EDBS.MET	1	1	1	5	2013299999	10398
9 EDB_62024R	9	ICAL	AA		16EDBS.MET	1	1	1	6	2013299999	10398
10 MDEDX2024T	10	ICAL	AA		16EDBS.MET	1	1	1	0	2013299999	10398
11 DBCMX1924B	11	MISC	AA		16EDBS.MET	1	1	1	0	2013299999	10398
12 ICEBX2024Y	12	CCAL	AA		16EDBS.MET	1	1	1	0	2013299999	10398

Set-up by: B/K346Date: 5/17/20

S16edbs20133001

5/12/2020

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Eurofins Lancaster Laboratories CHROM PERFECT SEQUENCE FILE

Sequence File: \\Uslan-chromperfect\chromperfect-data\Dept-24\Active\CP16\16edbs20133003.seq

Chromatography Directory: \\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16

Method Directory: \\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16

Number of Entries: 46

Samplename	VP	Code	ID	Method	Samp Amt	DF	Int Std	C	Batch Number	Analysis
1 CONDITIONER	1	MISC	AA		16EDBS.MET	1	1	1	0	2013599999
2 CONDITIONER	2	MISC	AA		16EDBS.MET	1	1	1	0	2013599999
3 EDB_42024AY	3	CCAL	GJ		16EDBS.MET	1	1	1	0	2013599999
4 EIBKX2024A	4	PIBLK	UR		16EDBS.MET	35	2	1	0	2013599999
5 BLANKA 5/14/20	5	BLK	AA		16EDBS.MET	35	2	1	0	201350023A
6 LCSA 5/14/20	6	LCS	AA		16EDBS.MET	35	2	1	0	201350023A
7 LCSDA 5/14/20	7	LCSD	AA		16EDBS.MET	35	2	1	0	201350023A
8 BLANKA 5/14/20	8	BLK	AA		16EDBS.MET	35	2	1	0	201350024A
9 LCSA 5/14/20	9	LCS	AA		16EDBS.MET	35	2	1	0	201350024A
10 LCSDA 5/14/20	10	LCSD	AA		16EDBS.MET	35	2	1	0	201350024A
11 EDB_42024AY	11	CCAL	GK		16EDBS.MET	1	1	1	0	2013599999
12 EIBKX2024A	12	PIBLK	US		16EDBS.MET	35	2	1	0	2013599999
13 1312500	13	T	AA		16EDBS.MET	36.51	2	1	0	201350023A
14 1312502	14	T	AA		16EDBS.MET	36.71	2	1	0	201350023A
15 1312506	15	T	AA		16EDBS.MET	36.77	2	1	0	201350023A
16 1313220	16	T	AA		16EDBS.MET	36.18	2	1	0	201350023A
17 1313221MS	17	MS	AA		16EDBS.MET	36.76	2	1	0	201350023A
18 1313222MSD	18	MSD	AA		16EDBS.MET	35.84	2	1	0	201350023A
19 1313224	19	T	AA		16EDBS.MET	36.27	2	1	0	201350023A
20 1313225	20	T	AA		16EDBS.MET	36.71	2	1	0	201350023A
21 1313226	21	T	AA		16EDBS.MET	36.15	2	1	0	201350023A
22 1313227	22	T	AA		16EDBS.MET	36.4	2	1	0	201350023A
23 EDB_42024AY	23	CCAL	GL		16EDBS.MET	1	1	1	0	2013599999
24 EIBKX2024A	24	PIBLK	UT		16EDBS.MET	35	2	1	0	2013599999
25 1313228	25	T	AA		16EDBS.MET	36.34	2	1	0	201350023A
26 1313229	26	T	AA		16EDBS.MET	36.77	2	1	0	201350023A
27 1313230	27	T	AA		16EDBS.MET	36.92	2	1	0	201350023A
28 1313231	28	T	AA		16EDBS.MET	36.42	2	1	0	201350023A
29 1313011	29	T	AA		16EDBS.MET	36.58	2	1	0	201350024A
30 1313012	30	T	AA		16EDBS.MET	36.36	2	1	0	201350024A
31 1313013	31	T	AA		16EDBS.MET	36.41	2	1	0	201350024A
32 1313014	32	T	AA		16EDBS.MET	36.09	2	1	0	201350024A
33 1313015	33	T	AA		16EDBS.MET	36.34	2	1	0	201350024A
34 1313016	34	T	AA		16EDBS.MET	36.41	2	1	0	201350024A
35 EDB_42024AZ	35	CCAL	GM		16EDBS.MET	1	1	1	0	2013599999
36 EIBKX2024A	36	PIBLK	UU		16EDBS.MET	35	2	1	0	2013599999
37 1313049	37	T	AA		16EDBS.MET	36.39	2	1	0	201350024A
38 1313050MS	38	MS	AA		16EDBS.MET	36.37	2	1	0	201350024A
39 1313051MSD	39	MSD	AA		16EDBS.MET	36.37	2	1	0	201350024A
40 1313052	40	T	AA		16EDBS.MET	36.32	2	1	0	201350024A
41 1313053	41	T	AA		16EDBS.MET	36.36	2	1	0	201350024A
42 1313054	42	T	AA		16EDBS.MET	36.52	2	1	0	201350024A
43 1313055	43	T	AA		16EDBS.MET	36.34	2	1	0	201350024A
44 1313056	44	T	AA		16EDBS.MET	36.94	2	1	0	201350024A
45 EDB_42024AZ	45	CCAL	GN		16EDBS.MET	1	1	1	0	2013599999
46 EIBKX2024A	46	PIBLK	UV		16EDBS.MET	35	2	1	0	2013599999

Set-up by: JH6MUDate: 5/13/20

S16edbs20133003

5/15/2020

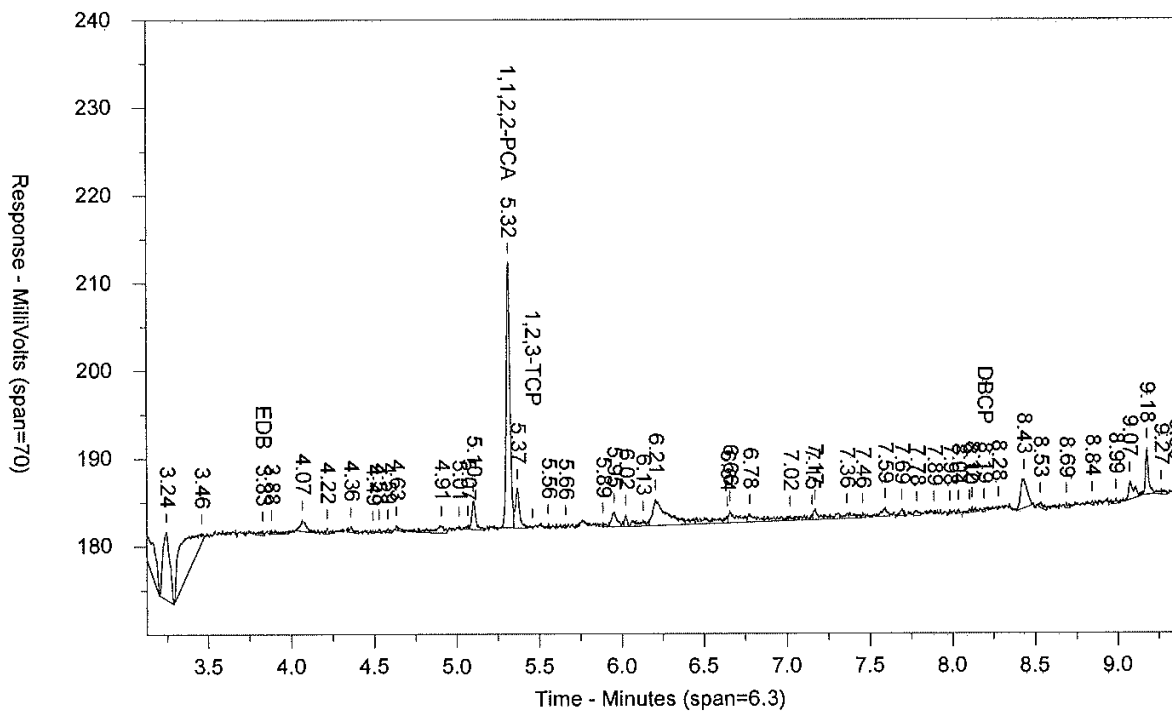
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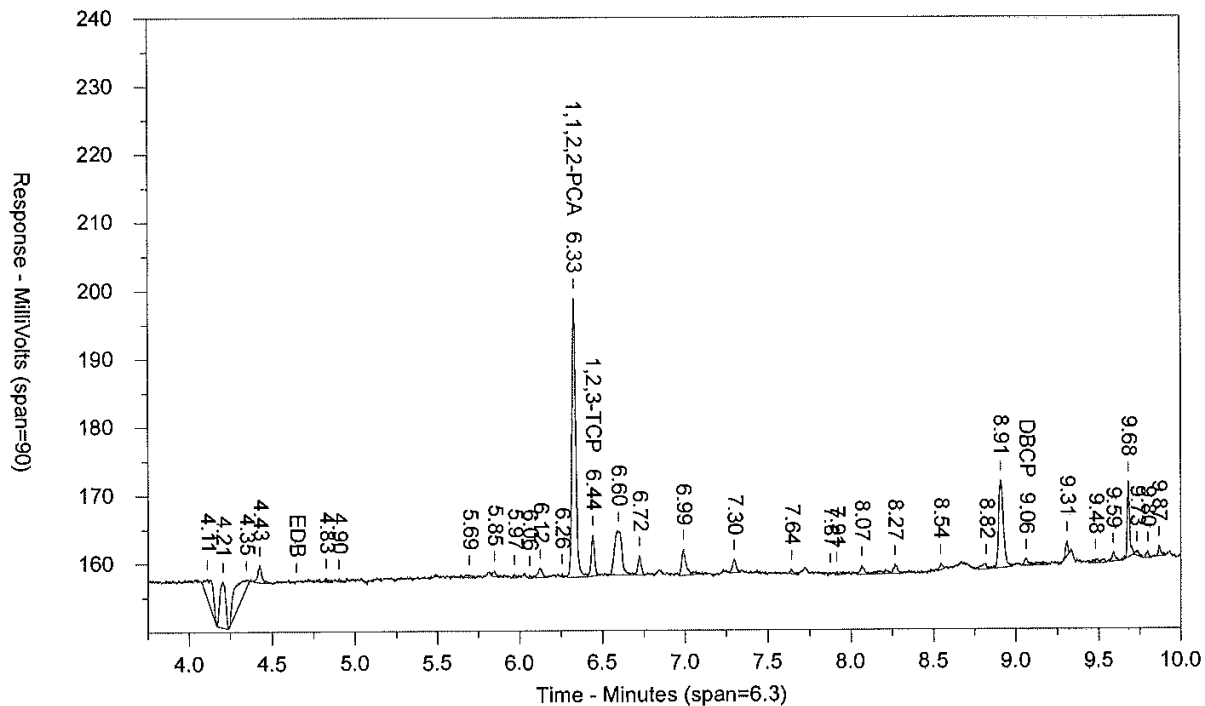
Chrom Perfect Chromatogram Report

EIBKX2024A AAPIBLKAA PIBLK2013299999 10398 SW-846 8011

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— \\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001B.003.RAW



Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: EIBKX2024A AAPIBLKAA PIBLK2013299999 10398 Sample Weight: 35 SW-846 8011
 Injected On: 5/12/2020 10:26:08 PM Dilution Factor: 2
 Instrument ID: CP16-19853
 Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min
 Column A ID: DB CLP1 30m x 0.32mm x 0.25um
 Column B ID: DB CLP2 30m x 0.32mm x 0.5um
 Injection Volume: 1 ul

Threshold: 1
 Calibration Type: external
 Quantitation: Height

Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.828	521	.002	EDB		0		EDB
5.316	30284	.079	1,1,2,2-PCA	6.327	41050	.075	1,1,2,2-PCA
	0		1,2,3-TCP	6.441	6105	.075	1,2,3-TCP
8.195	511	.001	DBCP	9.061	1093	.001	DBCP

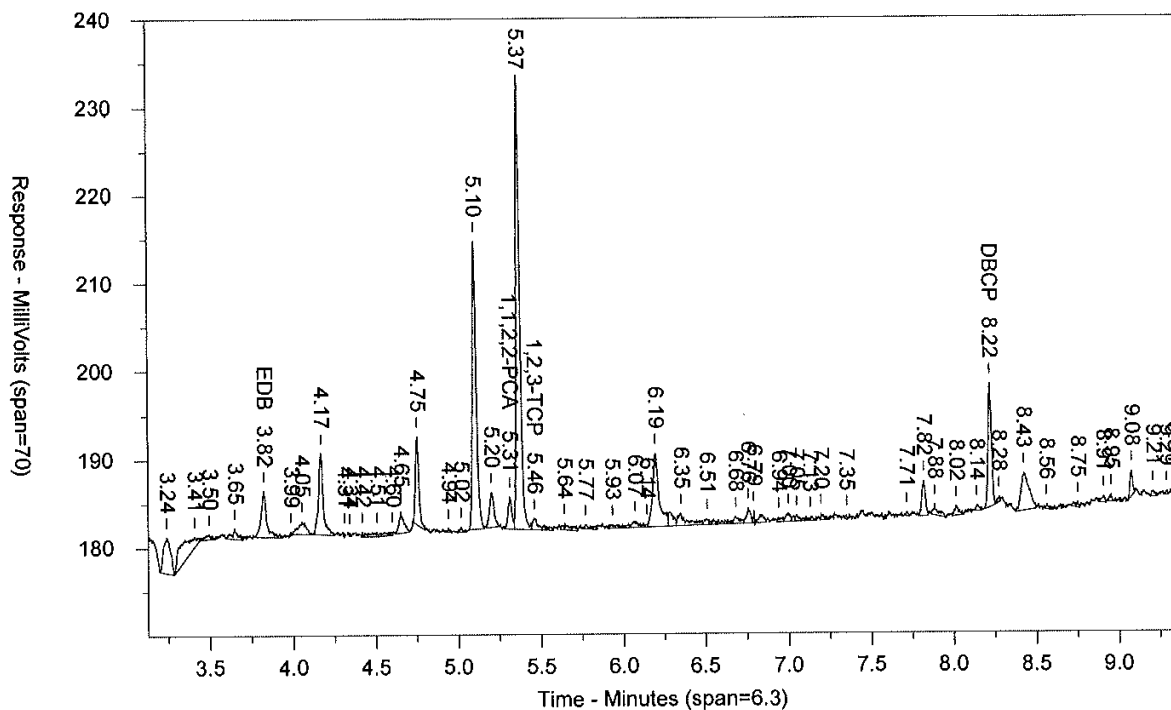
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 Area File: 16edbs20133001B.003.RAW
 Method A: 16EDBS.MET
 Method B: 16EDBSB.MET
 Calibration File A: 16EDBS2013301.CAL
 Calibration File B: 16EDBS2013301B.CAL
 Format A: EDB16.FMTA
 Format B: EDB16.FMTB
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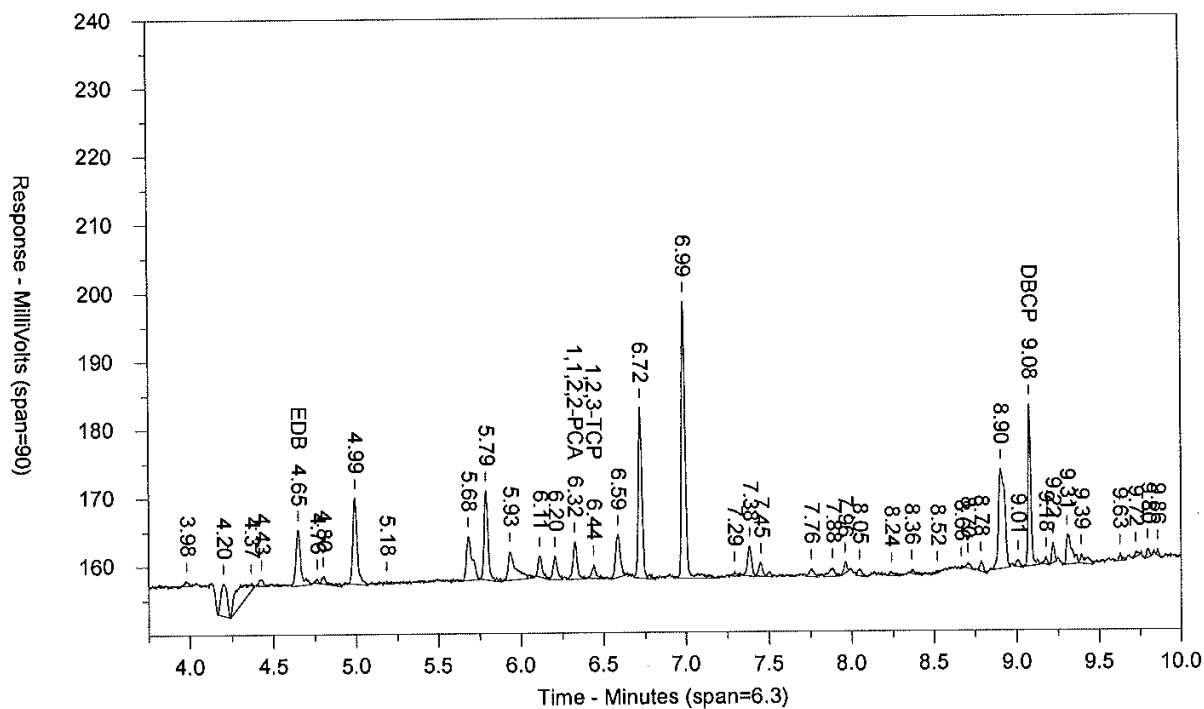
Chrom Perfect Chromatogram Report

EDB_12024R AAEDB_1AA ICAL 2013299999 10398 SW-846 8011

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: EDB_12024R AAEDB_1AA ICAL 2013299999 10398 Sample Weight: 1 SW-846 8011
 Injected On: 5/12/2020 10:42:49 PM Dilution Factor: 1
 Instrument ID: CP16-19853
 Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min
 Column A ID: DB CLP1 30m x 0.32mm x 0.25um
 Column B ID: DB CLP2 30m x 0.32mm x 0.5um
 Injection Volume: 1 ul

Threshold: 1
 Calibration Type: external
 Quantitation: Height

Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.824	5301	.351	EDB	4.65	8147	.344	EDB
5.313	3681	.172	1,1,2,2-PCA	6.325	5495	.176	1,1,2,2-PCA
5.459	1301	.443	1,2,3-TCP	6.438	2006	.433	1,2,3-TCP
8.222	14001	.375	DBCP	9.077	23691	.367	DBCP

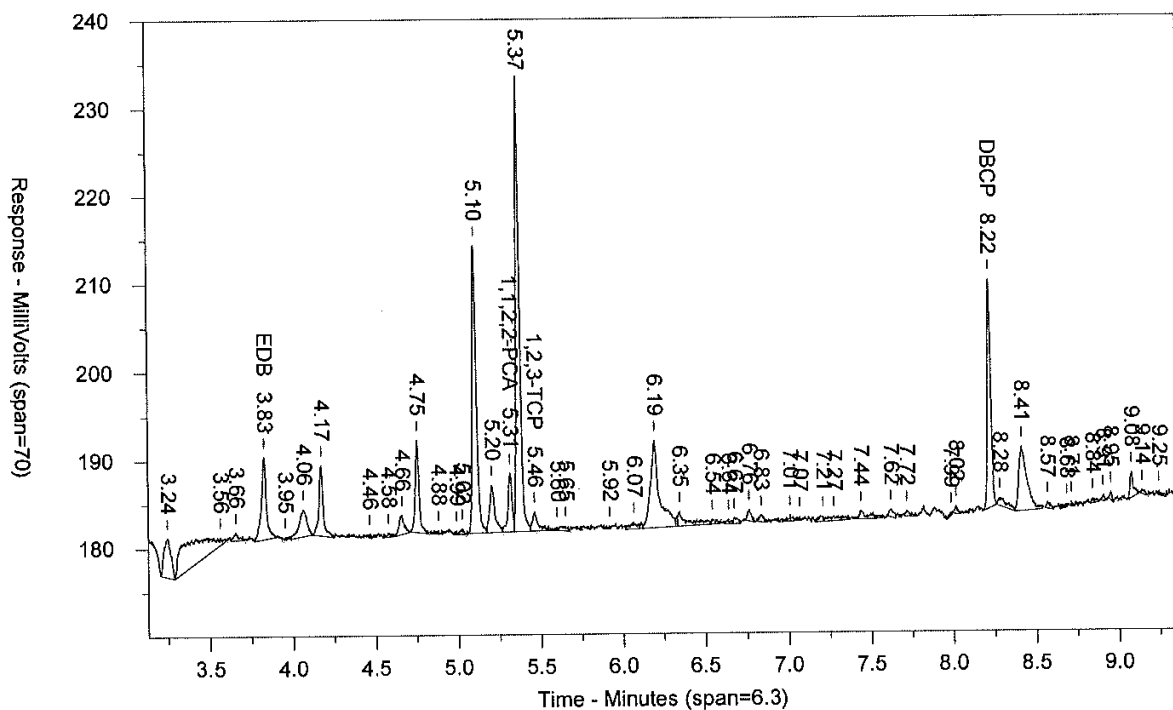
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 Method A: 16EDBS.MET
 Method B: 16EDBSB.MET
 Calibration File A: 16EDBS2013301.CAL
 Calibration File B: 16EDBS2013301B.CAL
 Format A: EDB16.FMTA
 Format B: EDB16.FMTB
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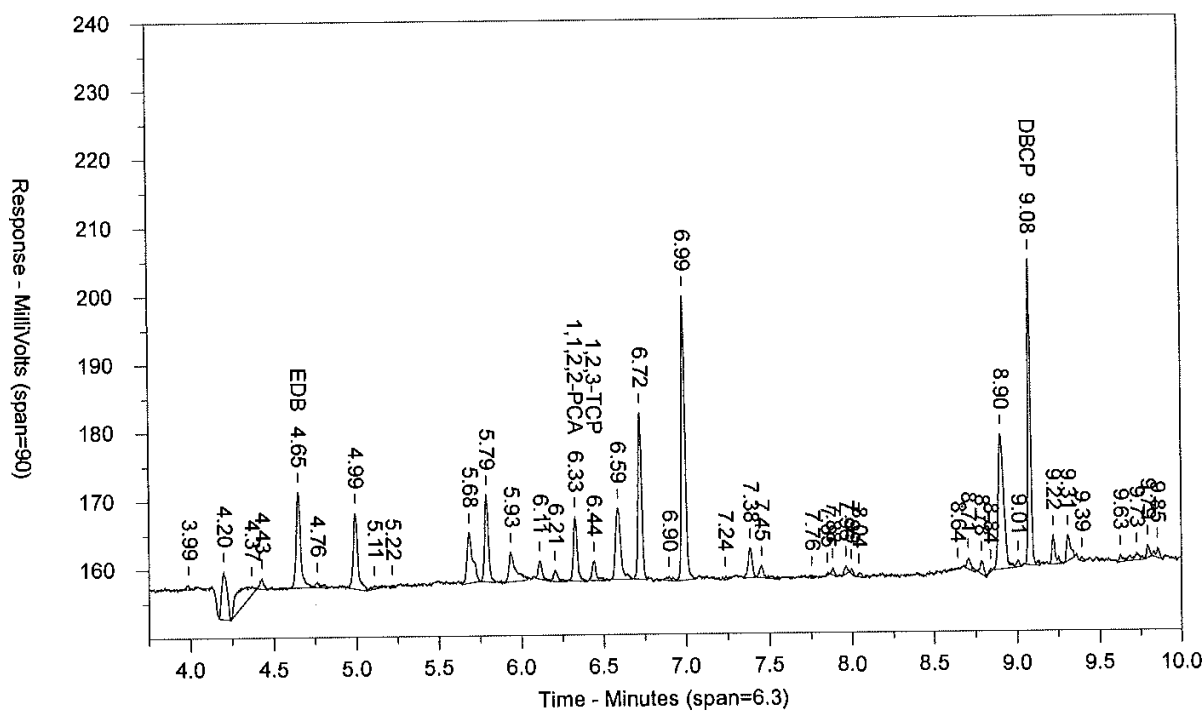
Chrom Perfect Chromatogram Report

EDB_22024R AAEDB_2AA ICAL 2013299999 10398 SW-846 8011

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: EDB_22024R AAEDB_2AA ICAL 2013299999 10398 SW-846 8011
 Injected On: 5/12/2020 10:59:36 PM Sample Weight: 1
 Instrument ID: CP16-19853 Dilution Factor: 1
 Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min
 Column A ID: DB CLP1 30m x 0.32mm x 0.25um
 Column B ID: DB CLP2 30m x 0.32mm x 0.5um
 Injection Volume: 1 ul

Threshold: 1
 Calibration Type: external
 Quantitation: Height

Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.827	9386	.616	EDB	4.65	14053	.593	EDB
5.315	6716	.314	1,1,2,2-PCA	6.326	9399	.301	1,1,2,2-PCA
5.462	2218	.716	1,2,3-TCP	6.441	2848	.615	1,2,3-TCP
8.221	26053	.699	DBCP	9.077	44789	.693	DBCP

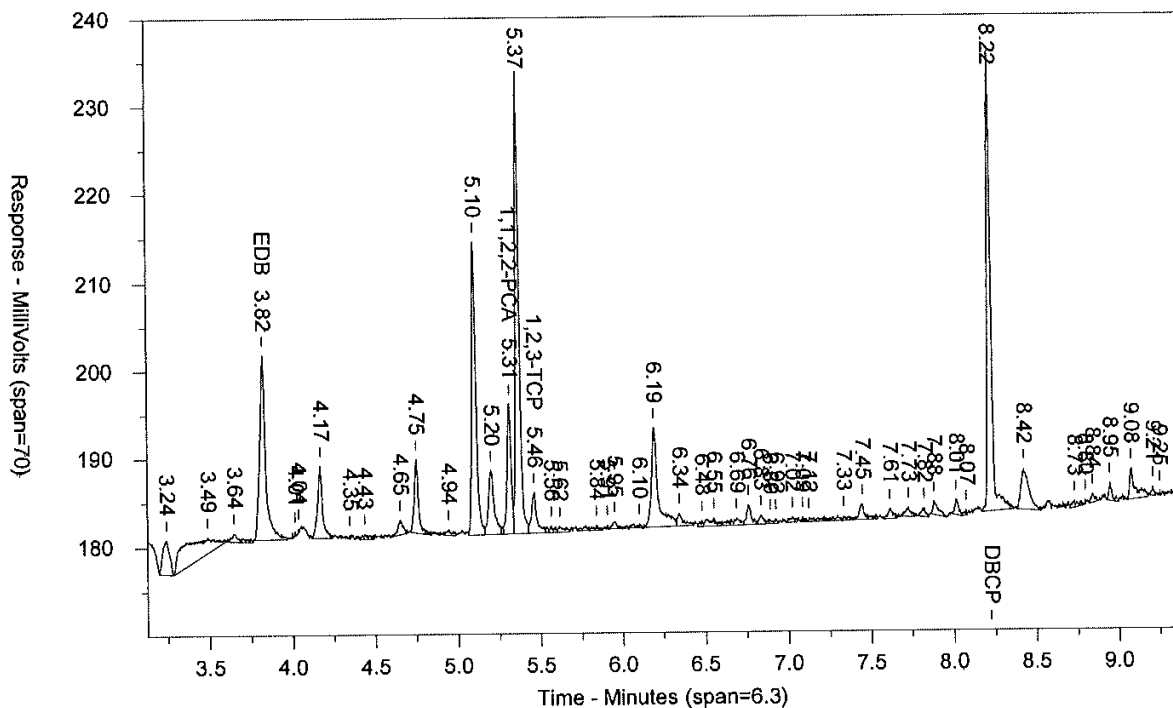
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 Method A: 16EDBS.MET
 Method B: 16EDBSB.MET
 Calibration File A: 16EDBS2013301.CAL
 Calibration File B: 16EDBS2013301B.CAL
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 Format B: EDB16.FMTB
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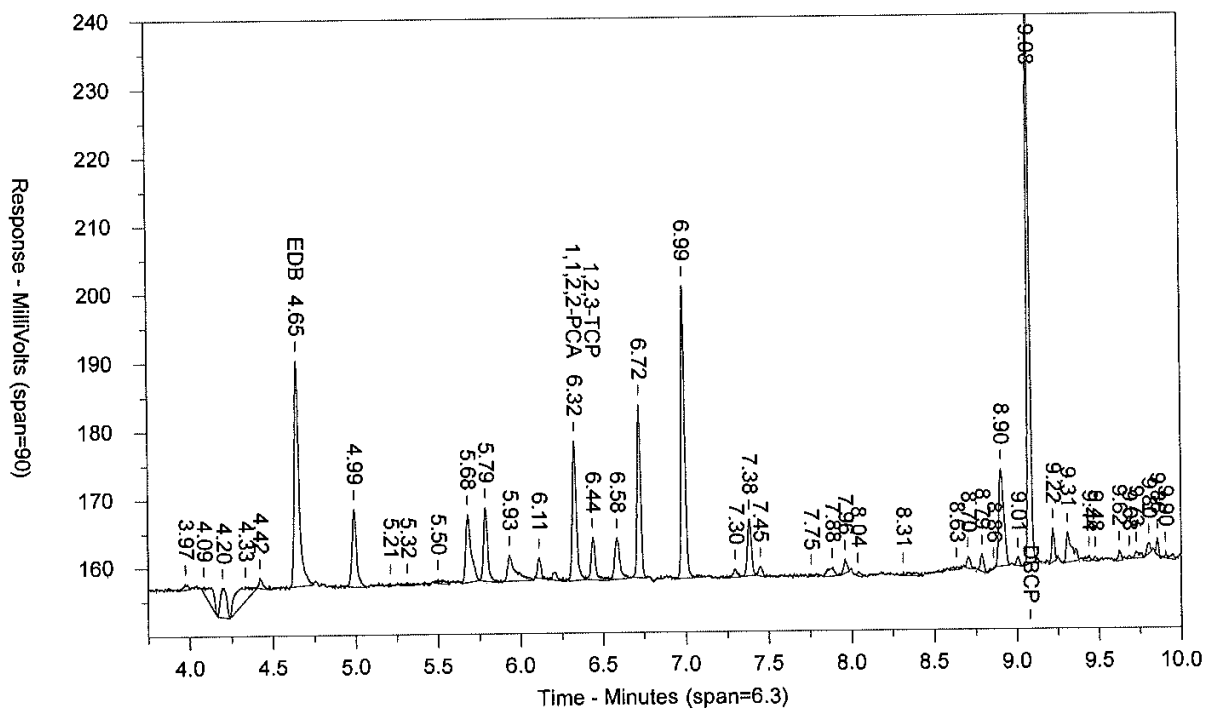
Chrom Perfect Chromatogram Report

EDB_32024AA AAEDB_3AA ICAL 2013299999 10398 SW-846 8011

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: EDB_32024AA AAEDB_3AA ICAL 2013299999 10398 SW-846 8011
 Injected On: 5/12/2020 11:16:17 PM Sample Weight: 1
 Instrument ID: CP16-19853 Dilution Factor: 1
 Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min
 Column A ID: DB CLP1 30m x 0.32mm x 0.25um
 Column B ID: DB CLP2 30m x 0.32mm x 0.5um
 Injection Volume: 1 ul

Threshold: 1
 Calibration Type: external
 Quantitation: Height

Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.823	20941	1.37	EDB	4.648	33087	1.397	EDB
5.313	14798	.69	1,1,2,2-PCA	6.325	20518	.658	1,1,2,2-PCA
5.463	4598	1.469	1,2,3-TCP	6.437	6213	1.342	1,2,3-TCP
8.22	52423	1.406	DBCP	9.078	90715	1.404	DBCP

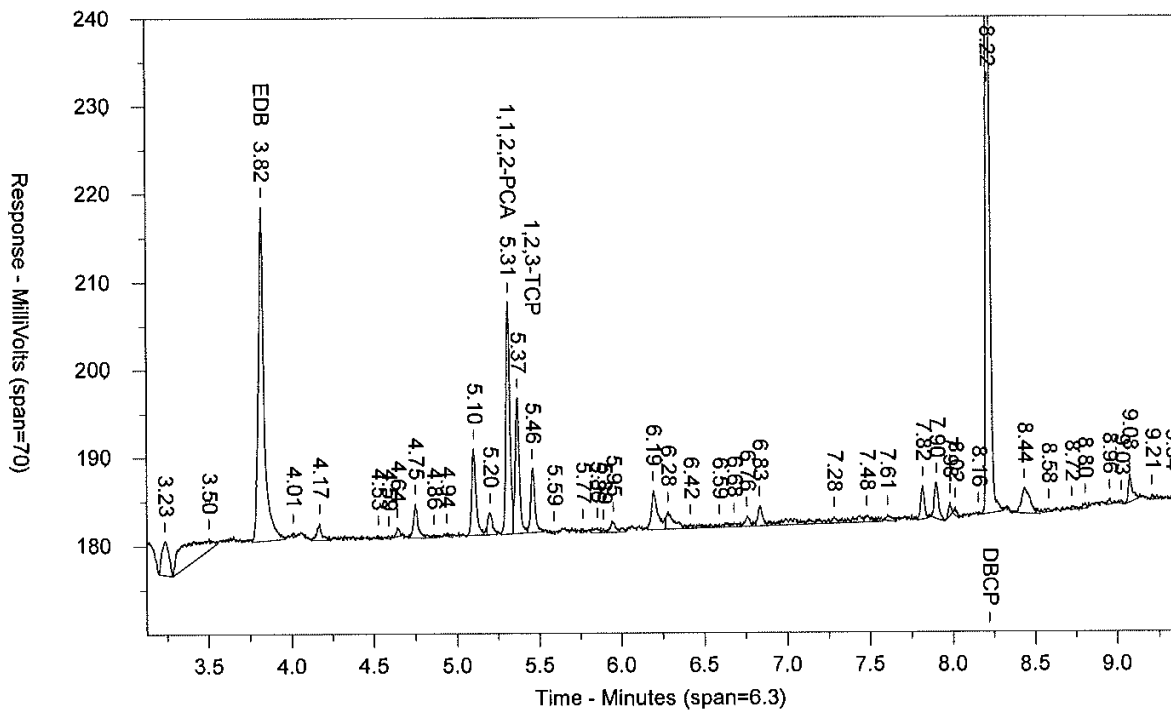
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 Method A: 16EDBS.MET
 Method B: 16EDBSB.MET
 Calibration File A: 16EDBS2013301.CAL
 Calibration File B: 16EDBS2013301B.CAL
 Format A: EDB16.FMTA
 Format B: EDB16.FMTB
 Area File Created On: 5/12/2020 11:26:21 PM
 File Reported On: 5/13/2020 at 5:03:23 PM

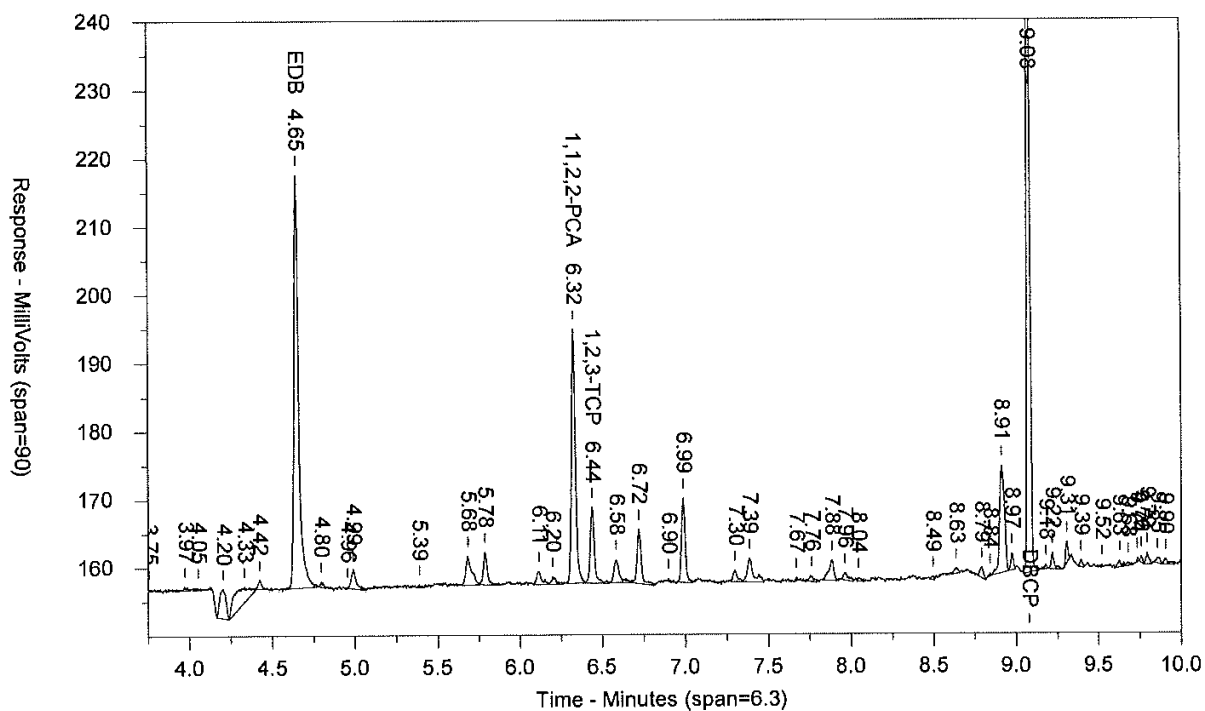
Chrom Perfect Chromatogram Report

EDB_42024AY AAEDB_4AA ICAL 2013299999 10398 SW-846 8011

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: EDB_42024AY AAEDB_4AA ICAL 2013299999 10398 SW-846 8011
 Injected On: 5/12/2020 11:32:59 PM Sample Weight: 1
 Instrument ID: CP16-19853 Dilution Factor: 1
 Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min
 Column A ID: DB CLP1 30m x 0.32mm x 0.25um
 Column B ID: DB CLP2 30m x 0.32mm x 0.5um
 Injection Volume: 1 ul

Threshold: 1
 Calibration Type: external
 Quantitation: Height

Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.822	38029	2.487	EDB	4.647	60707	2.563	EDB
5.313	26495	1.22	1,1,2,2-PCA	6.325	37289	1.196	1,1,2,2-PCA
5.46	7297	2.233	1,2,3-TCP	6.439	11181	2.414	1,2,3-TCP
8.22	89969	2.405	DBCP	9.077	162275	2.511	DBCP

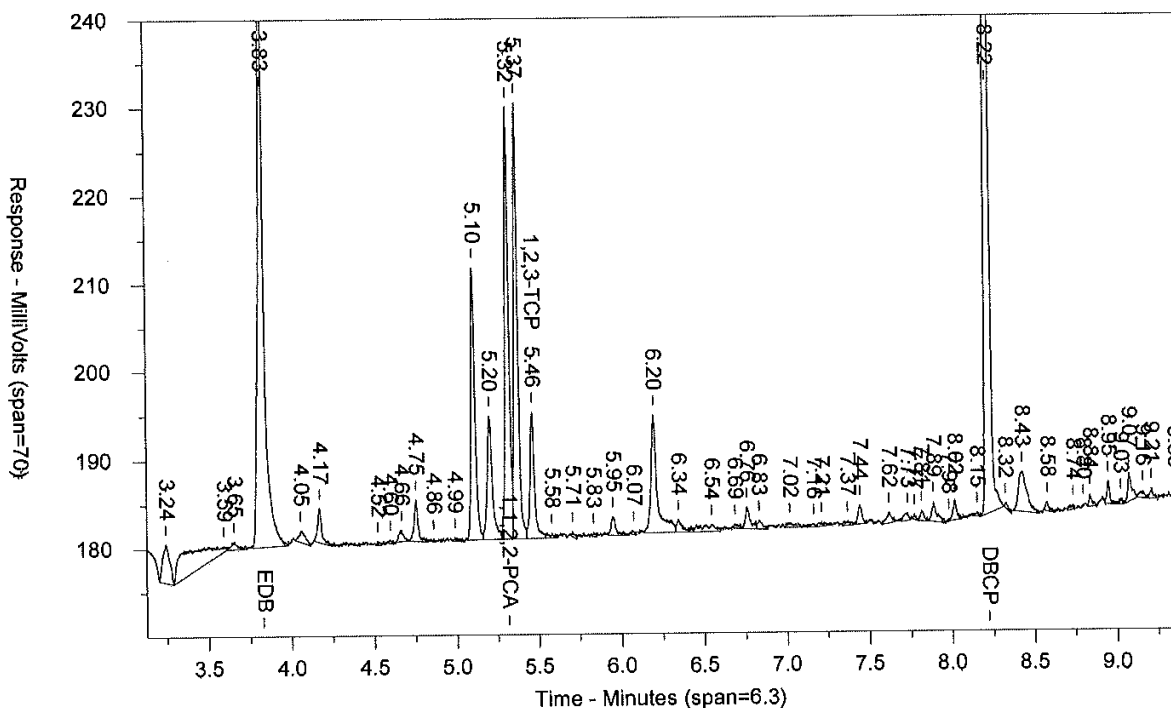
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Area File: 16edbs20133001.007.RAW
 Area File: 16edbs20133001B.007.RAW
 Method A: 16EDBS.MET
 Method B: 16EDBSB.MET
 Calibration File A: 16EDBS2013301.CAL
 Calibration File B: 16EDBS2013301B.CAL
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 Format B: EDB16.FMTB
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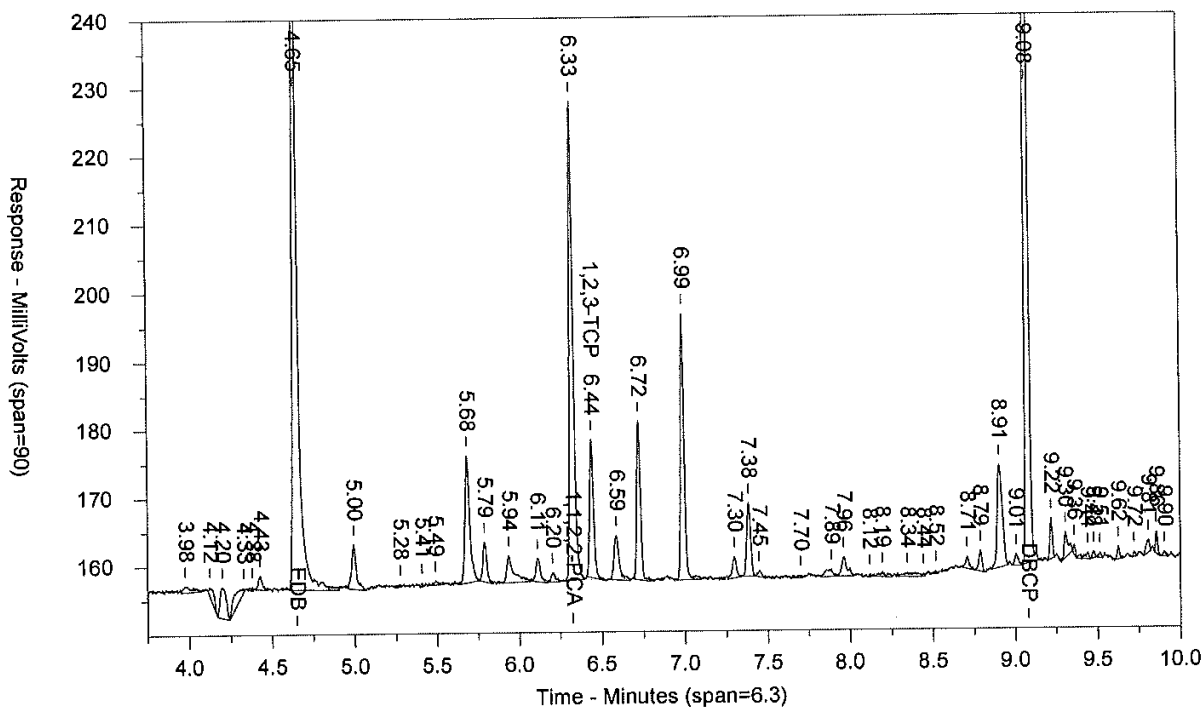
Chrom Perfect Chromatogram Report

EDB_52024R AAEDB_5AA ICAL 2013299999 10398 SW-846 8011

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\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001B.008.RAW



Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: EDB_52024R AAEDB_5AA IÇAL 2013299999 10398 SW-846 8011
 Injected On: 5/12/2020 11:49:46 PM Sample Weight: 1
 Instrument ID: CP16-19853 Dilution Factor: 1
 Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min
 Column A ID: DB CLP1 30m x 0.32mm x 0.25um
 Column B ID: DB CLP2 30m x 0.32mm x 0.5um
 Injection Volume: 1 ul

Threshold: 1
 Calibration Type: external
 Quantitation: Height

Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.827	71979	4.708	EDB	4.651	109982	4.644	EDB
5.315	49069	2.27	1,1,2,2-PCA	6.326	70323	2.255	1,1,2,2-PCA
5.463	14290	4.445	1,2,3-TCP	6.44	20296	4.382	1,2,3-TCP
8.221	167451	4.478	DBCP	9.078	288857	4.47	DBCP

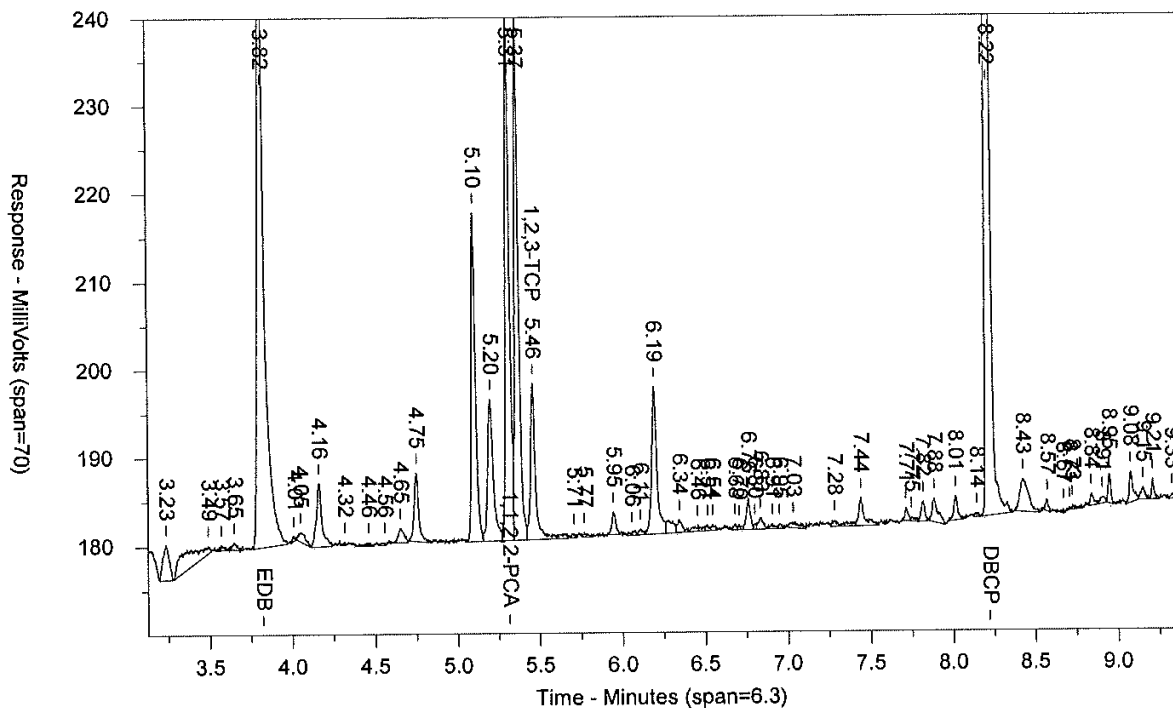
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Area File: 16edbs20133001.008.RAW
 Area File: 16edbs20133001B.008.RAW
 Method A: 16EDBS.MET
 Method B: 16EDBSB.MET
 Calibration File A: 16EDBS2013301.CAL
 Calibration File B: 16EDBS2013301B.CAL
 Format A: EDB16.FMTA
 Format B: EDB16.FMTB
 Area File Created On: 5/12/2020 11:59:50 PM
 File Reported On: 5/13/2020 at 5:03:39 PM

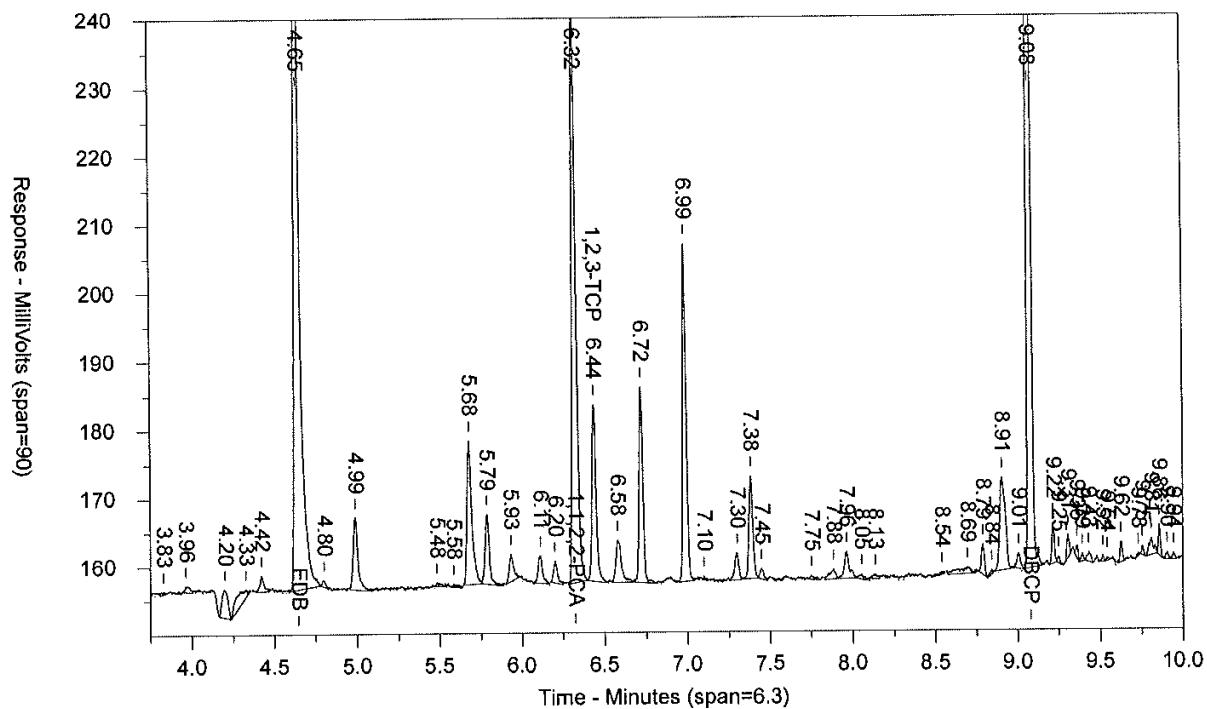
Chrom Perfect Chromatogram Report

EDB_62024R AAEDB_6AA ICAL 2013299999 10398 SW-846 8011

\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001.009.RAW



\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001B.009.RAW



Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: EDB_62024R AAEDB_6AA ICAL 2013299999 10398 SW-846 8011
 Injected On: 5/13/2020 12:06:31 AM Sample Weight: 1
 Instrument ID: CP16-19853 Dilution Factor: 1
 Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min
 Column A ID: DB CLP1 30m x 0.32mm x 0.25um
 Column B ID: DB CLP2 30m x 0.32mm x 0.5um
 Injection Volume: 1 ul

Threshold: 1
 Calibration Type: external
 Quantitation: Height

Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.82	82038	5.366	EDB	4.646	135349	5.715	EDB
5.312	60220	2.779	1,1,2,2-PCA	6.324	87842	2.817	1,1,2,2-PCA
5.461	17803	5.492	1,2,3-TCP	6.438	25984	5.61	1,2,3-TCP
8.22	211147	5.647	DBCP	9.077	382564	5.92	DBCP

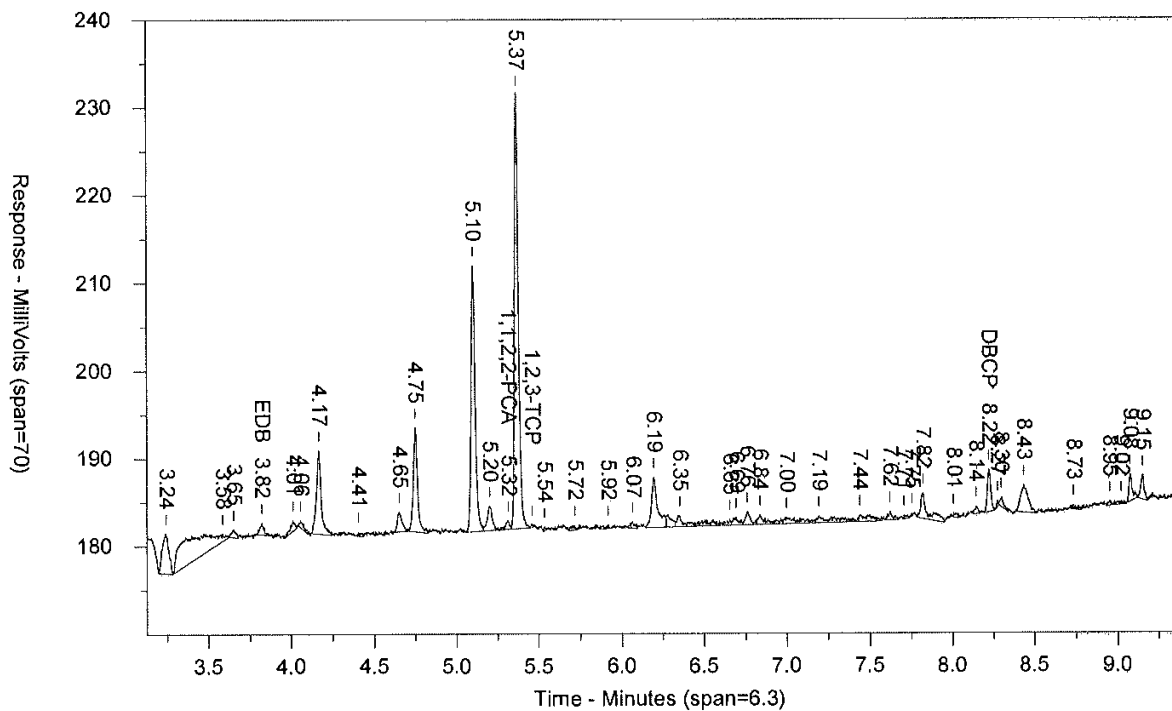
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Area File: 16edbs20133001.009.RAW
 Area File: 16edbs20133001B.009.RAW
 Method A: 16EDBS.MET
 Method B: 16EDBSB.MET
 Calibration File A: 16EDBS2013301.CAL
 Calibration File B: 16EDBS2013301B.CAL
 Format A: EDB16.FMTA
 Format B: EDB16.FMTB
 Area File Created On: 5/13/2020 12:16:35 AM
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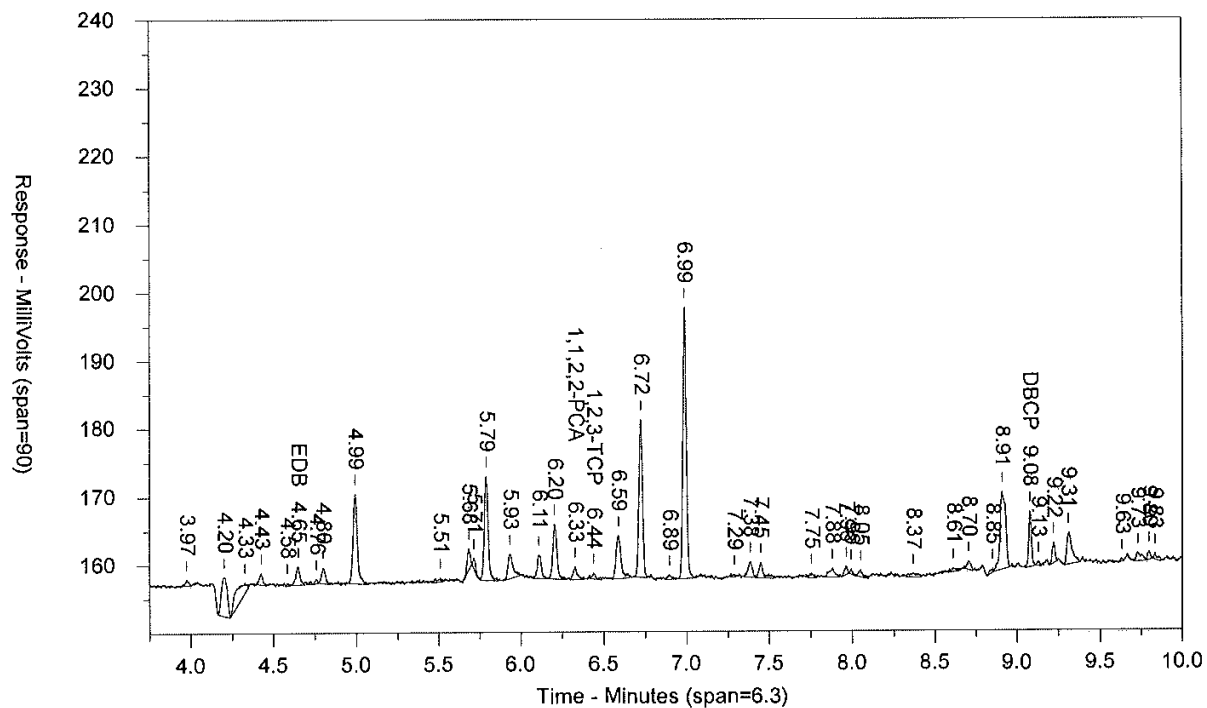
Chrom Perfect Chromatogram Report

MDEDX2024T AAMDEDXAA ICAL 2013299999 10398 SW-846 8011

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: MDEDX2024T AAMDEDXAA ICAL 2013299999 10398 SW-846 8011
 Injected On: 5/13/2020 12:23:13 AM Sample Weight: 1
 Instrument ID: CP16-19853 Dilution Factor: 1
 Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min
 Column A ID: DB CLP1 30m x 0.32mm x 0.25um
 Column B ID: DB CLP2 30m x 0.32mm x 0.5um
 Injection Volume: 1 ul

Threshold: 1
 Calibration Type: external
 Quantitation: Height

Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.821	1361	.089	EDB	4.65	2731	.115	EDB
5.316	999	.046	1,1,2,2-PCA	6.325	1960	.063	1,1,2,2-PCA
	0		1,2,3-TCP	6.437	895	.194	1,2,3-TCP
8.219	4904	.127	DBCP	9.076	8287	.123	DBCP

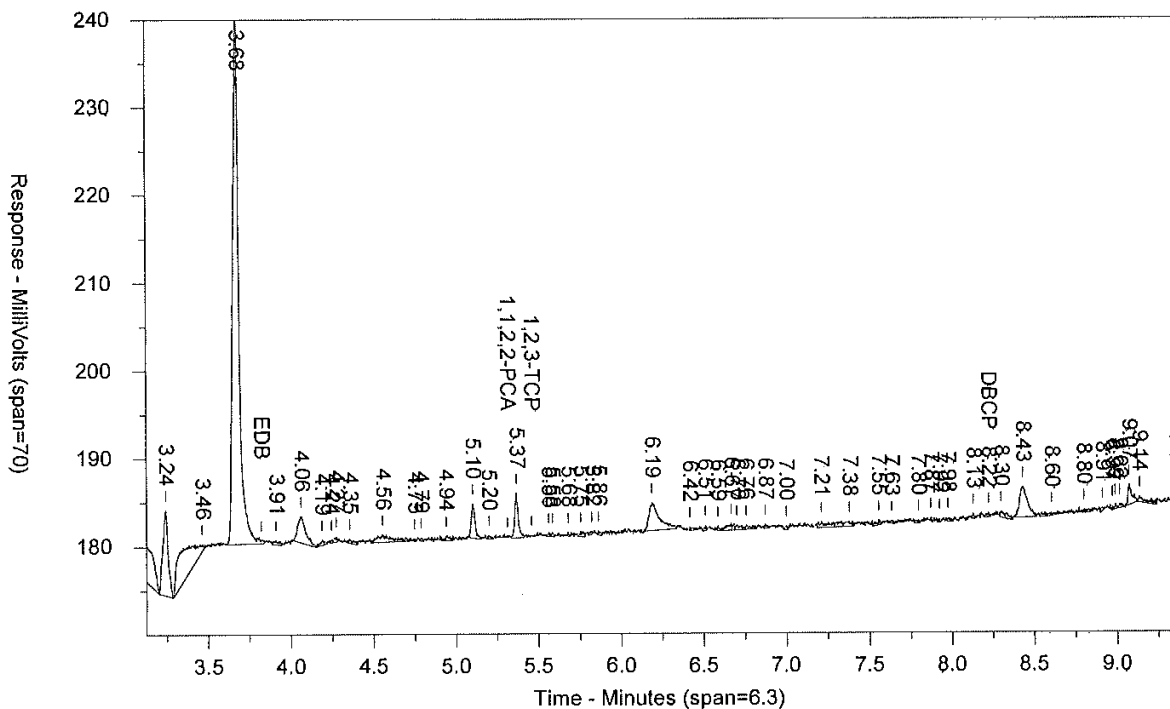
Files:

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 Area File: 16edbs20133001B.010.RAW
 Method A: 16EDBS.MET
 Method B: 16EDBSB.MET
 Calibration File A: 16EDBS2013301.CAL
 Calibration File B: 16EDBS2013301B.CAL
 Format A: EDB16.FMTA
 Format B: EDB16.FMTB
 Area File Created On: 5/13/2020 12:33:17 AM
 File Reported On: 5/13/2020 at 5:25:25 PM

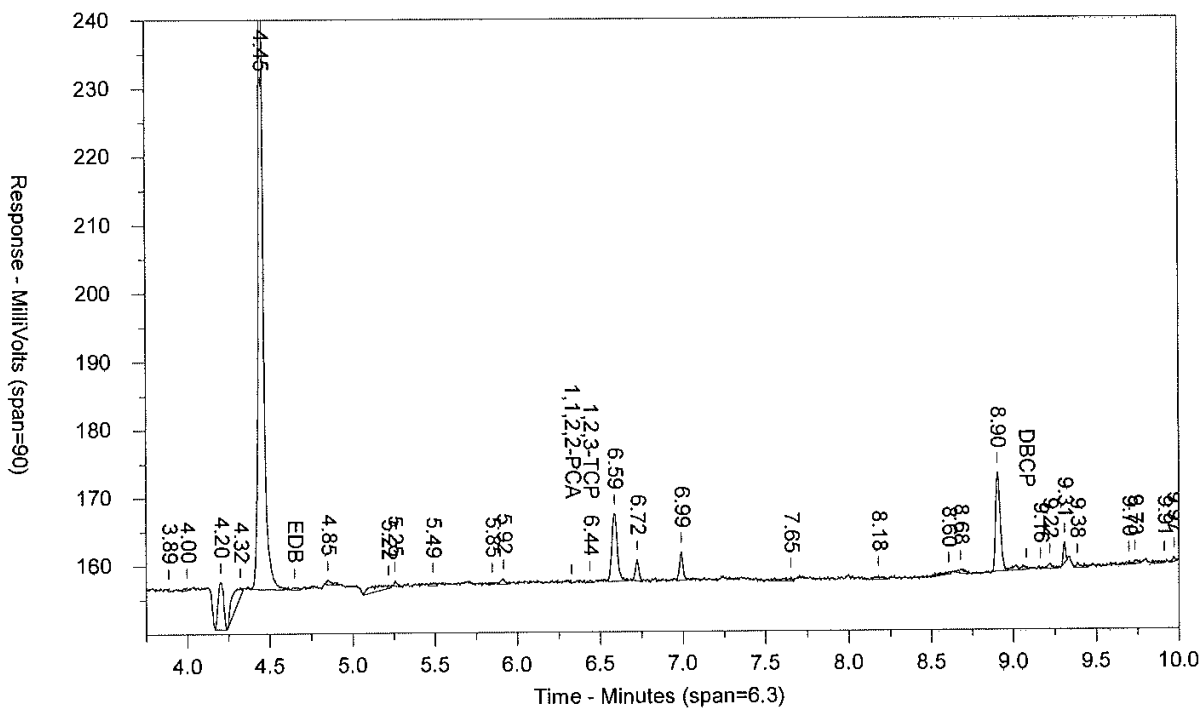
Chrom Perfect Chromatogram Report

DBCMX1924B AADBCMXAA MISC 2013299999 10398 SW-846 8011

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: DBCM1924B AADBCMXXA MISC 2013299999 10398 SW-846 8011
 Injected On: 5/13/2020 12:39:56 AM Sample Weight: 1
 Instrument ID: CP16-19853 Dilution Factor: 1
 Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min
 Column A ID: DB CLP1 30m x 0.32mm x 0.25um
 Column B ID: DB CLP2 30m x 0.32mm x 0.5um
 Injection Volume: 1 ul

Threshold: 1
 Calibration Type: external
 Quantitation: Height

Analyst: 13378

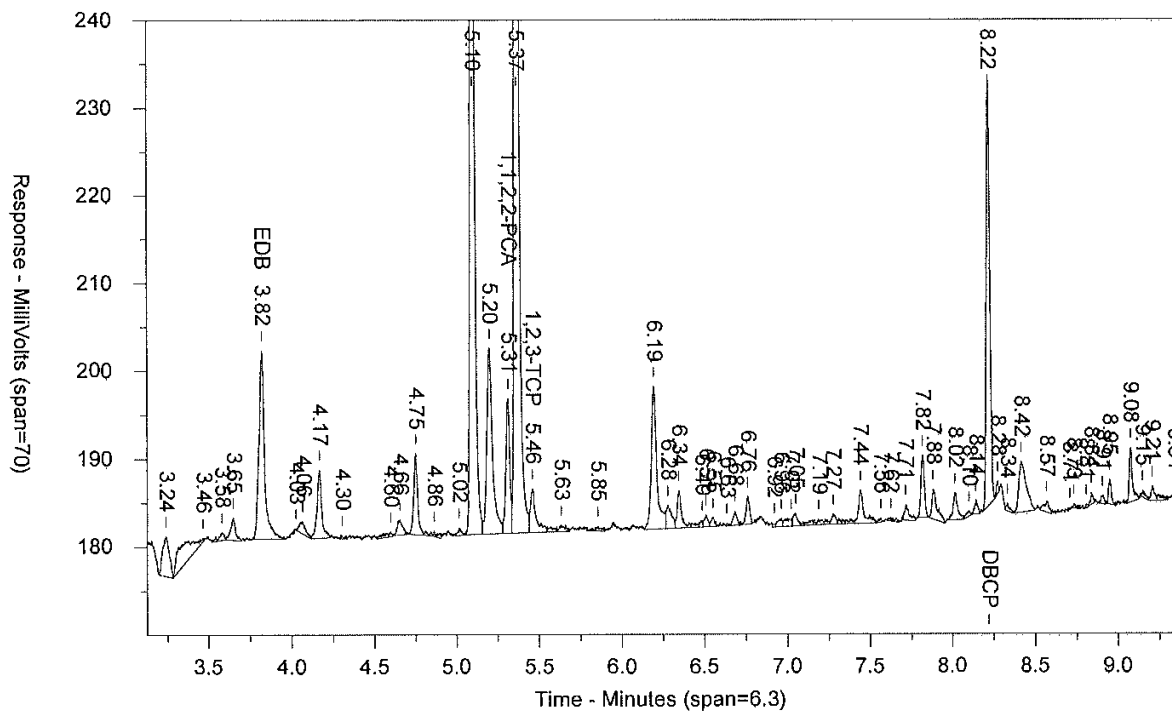
RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
	0		1,2,3-TCP	6.437	383	.083	1,2,3-TCP
8.222	534	.014	DBCP		0		DBCP

Files:

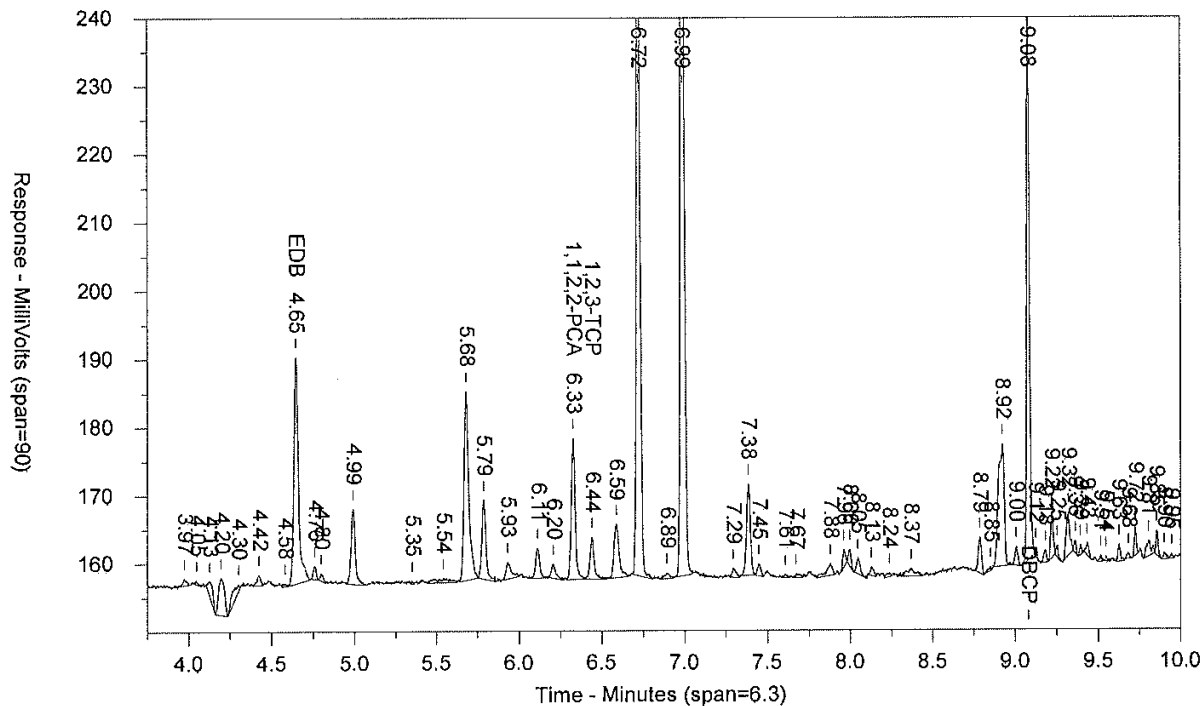
Area File: 16edbs20133001.011.RAW
 Area File: 16edbs20133001B.011.RAW
 Method A: 16EDBS.MET
 Method B: 16EDBSB.MET
 Calibration File A: 16EDBS2013301.CAL
 Calibration File B: 16EDBS2013301B.CAL
 Format A: EDB16.FMTA
 Format B: EDB16.FMTB
 Area File Created On: 5/13/2020 12:50:00 AM
 File Reported On: 5/13/2020 at 5:25:41 PM

Chrom Perfect Chromatogram Report

ICEBX2024Y AAICEBXAA CCAL 2013299999 10398 SW-846 8011
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— \\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133001B.012.RAW



Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: ICEBX2024Y AAICEBXAA CCAL 2013299999 10398 SW-846 8011
 Injected On: 5/13/2020 12:56:40 AM Sample Weight: 1
 Instrument ID: CP16-19853 Dilution Factor: 1
 Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min
 Column A ID: DB CLP1 30m x 0.32mm x 0.25um
 Column B ID: DB CLP2 30m x 0.32mm x 0.5um
 Injection Volume: 1 ul

Threshold: 1
 Calibration Type: external
 Quantitation: Height

Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.822	21455	1.406	EDB	4.648	33263	1.395	EDB
5.314	15369	.704	1,1,2,2-PCA	6.326	20772	.666	1,1,2,2-PCA
5.458	5027	1.553	1,2,3-TCP	6.439	6209	1.343	1,2,3-TCP
8.22	48603	1.263	DBCP	9.077	87131	1.298	DBCP

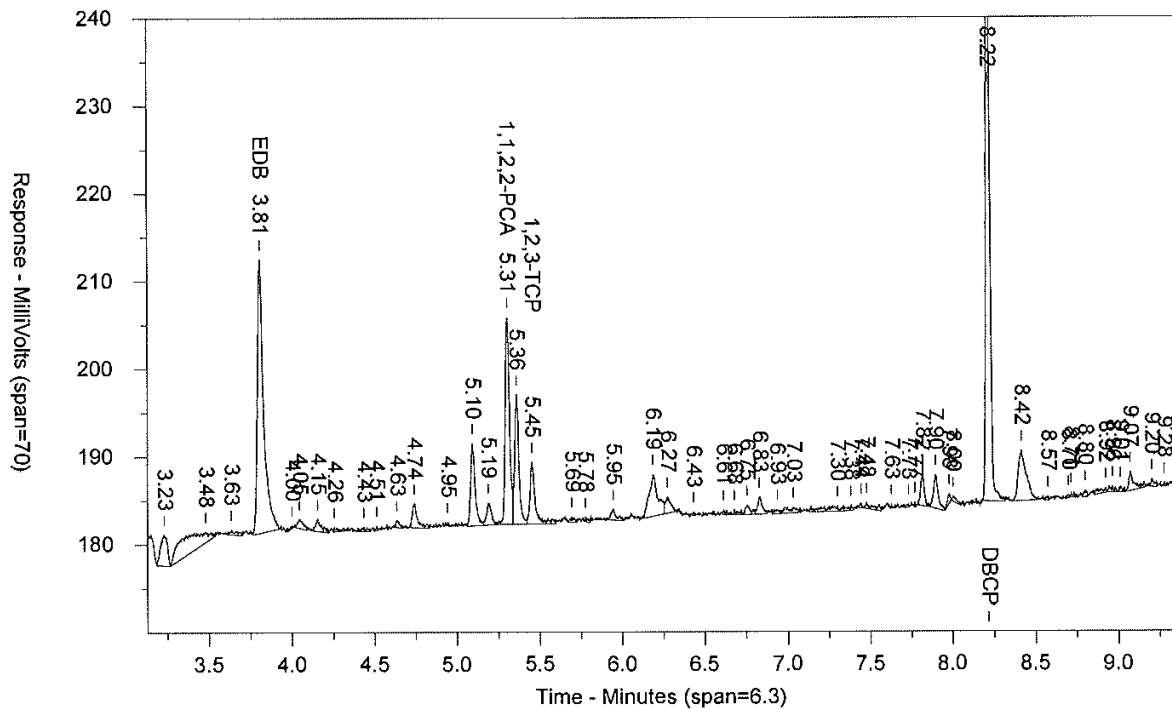
Files:

Area File: 16edbs20133001.012.RAW
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 Method A: 16EDBS.MET
 Method B: 16EDBSB.MET
 Calibration File A: 16EDBS2013301.CAL
 Calibration File B: 16EDBS2013301B.CAL
 Format A: EDB16.FMTA
 Format B: EDB16.FMTB
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 File Reported On: 5/13/2020 at 5:25:57 PM

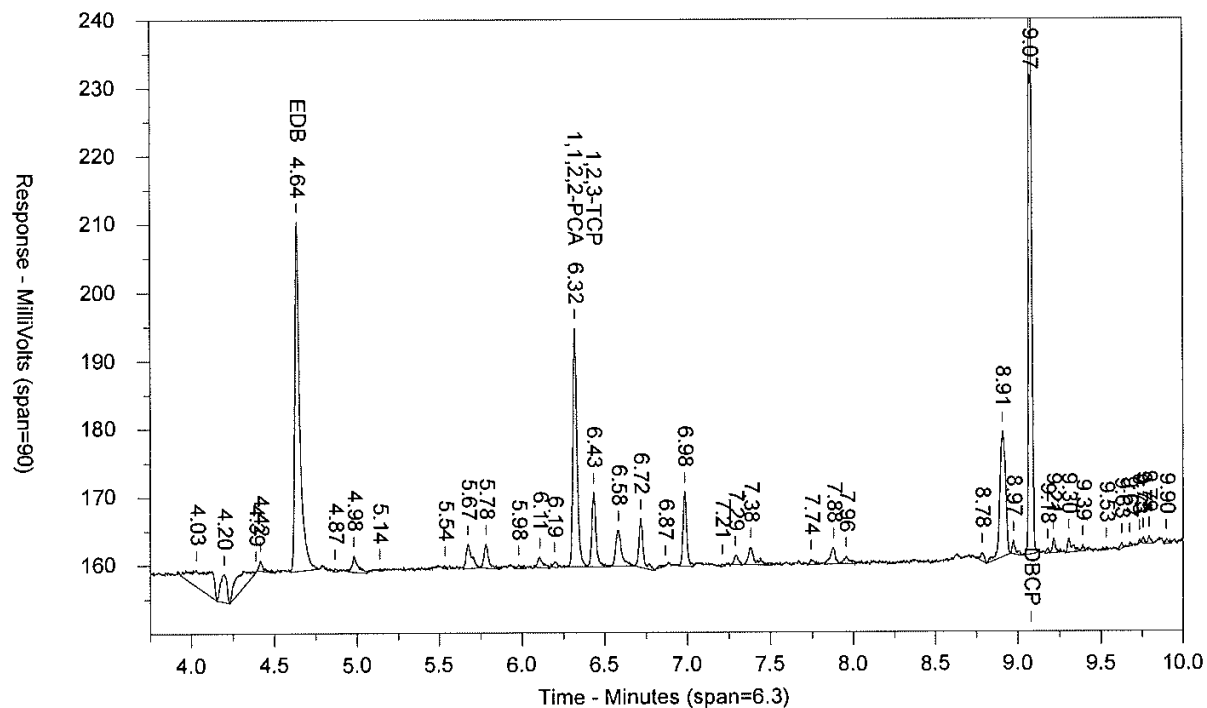
Chrom Perfect Chromatogram Report

EDB_42024AY GJEDB_4GJ CCAL 2013599999 10398 SW-846 8011

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: EDB_42024AY GJEDB_4GJ CCAL 2013599999 10398 SW-846 8011
 Injected On: 5/15/2020 9:10:12 PM Sample Weight: 1
 Instrument ID: CP16-19853 Dilution Factor: 1
 Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min
 Column A ID: DB CLP1 30m x 0.32mm x 0.25um
 Column B ID: DB CLP2 30m x 0.32mm x 0.5um
 Injection Volume: 1 ul

Threshold: 1
 Calibration Type: external
 Quantitation: Height

Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.806	31214	2.046	EDB	4.639	51228	2.148	EDB
5.305	23552	1.079	1,1,2,2-PCA	6.319	35069	1.124	1,1,2,2-PCA
5.454	7073	2.184	1,2,3-TCP	6.433	10986	2.376	1,2,3-TCP
8.217	76885	1.997	DBCP	9.075	125319	1.867	DBCP

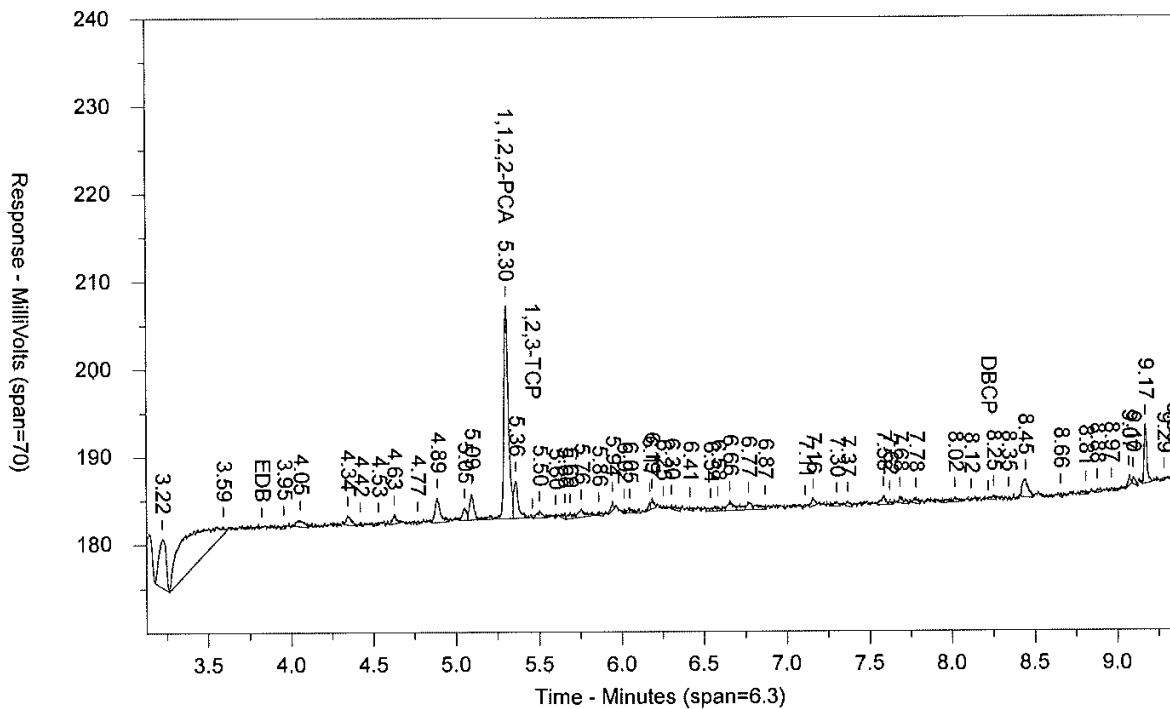
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Area File: 16edbs20133003.003.RAW
 Area File: 16edbs20133003B.003.RAW
 Method A: 16EDBS.MET
 Method B: 16EDBSB.MET
 Calibration File A: 16EDBS2013301.CAL
 Calibration File B: 16EDBS2013301B.CAL
 Format A: EDB16.FMTA
 Format B: EDB16.FMTB
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 File Reported On: 5/18/2020 at 6:53:02 AM

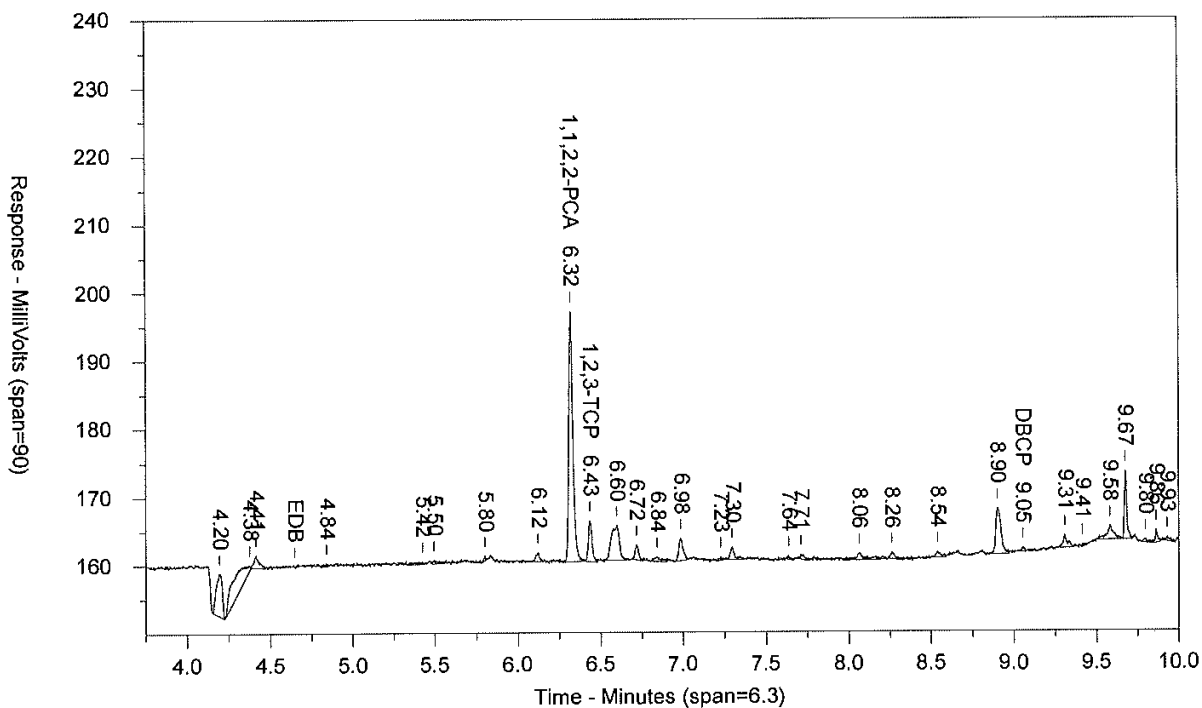
Chrom Perfect Chromatogram Report

EIBKX2024A URPIBLKUR PIBLK2013599999 10398 SW-846 8011

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: EIBKX2024A URPIBLKUR PIBLK2013599999 10398 SW-846 8011
 Injected On: 5/15/2020 9:27:03 PM Sample Weight: 35
 Instrument ID: CP16-19853 Dilution Factor: 2
 Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min
 Column A ID: DB CLP1 30m x 0.32mm x 0.25um
 Column B ID: DB CLP2 30m x 0.32mm x 0.5um
 Injection Volume: 1 ul

Threshold: 1
 Calibration Type: external
 Quantitation: Height

Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
5.305	24343	.064	1,1,2,2-PCA	6.319	36821	.067	1,1,2,2-PCA
	0		1,2,3-TCP	6.434	6039	.075	1,2,3-TCP
	0		DBCP	9.053	612	.001	DBCP

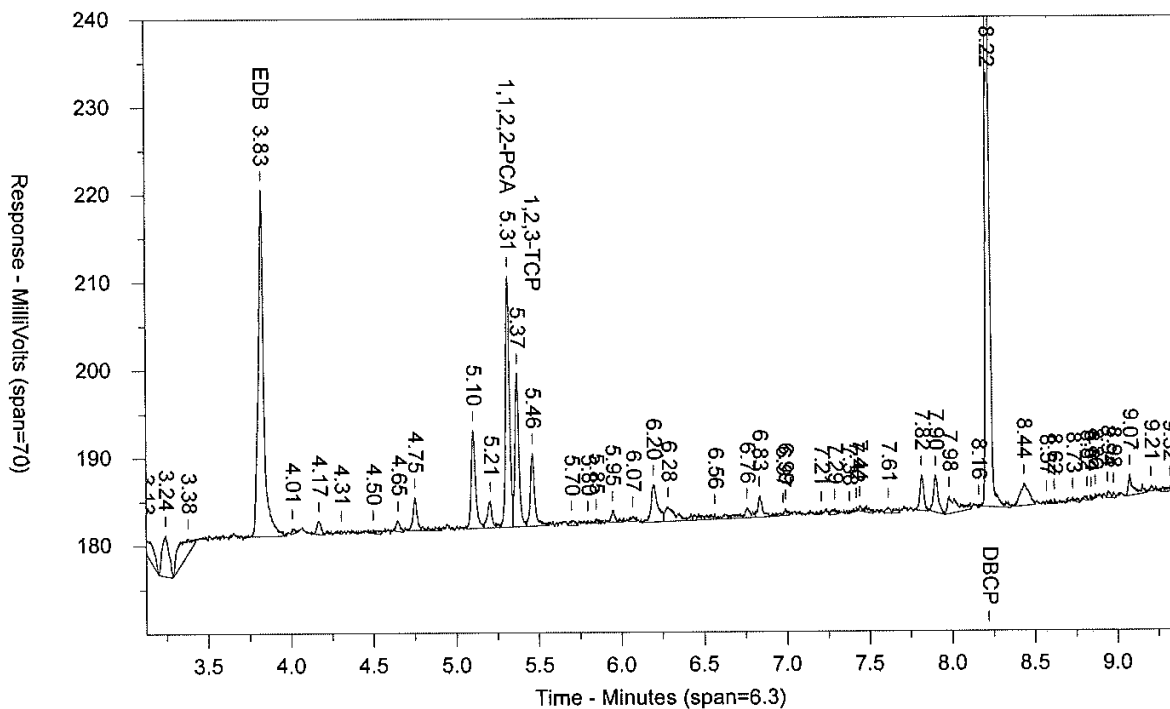
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 Area File: 16edbs20133003B.004.RAW
 Method A: 16EDBS.MET
 Method B: 16EDBSB.MET
 Calibration File A: 16EDBS2013301.CAL
 Calibration File B: 16EDBS2013301B.CAL
 Format A: EDB16.FMTA
 Format B: EDB16.FMTB
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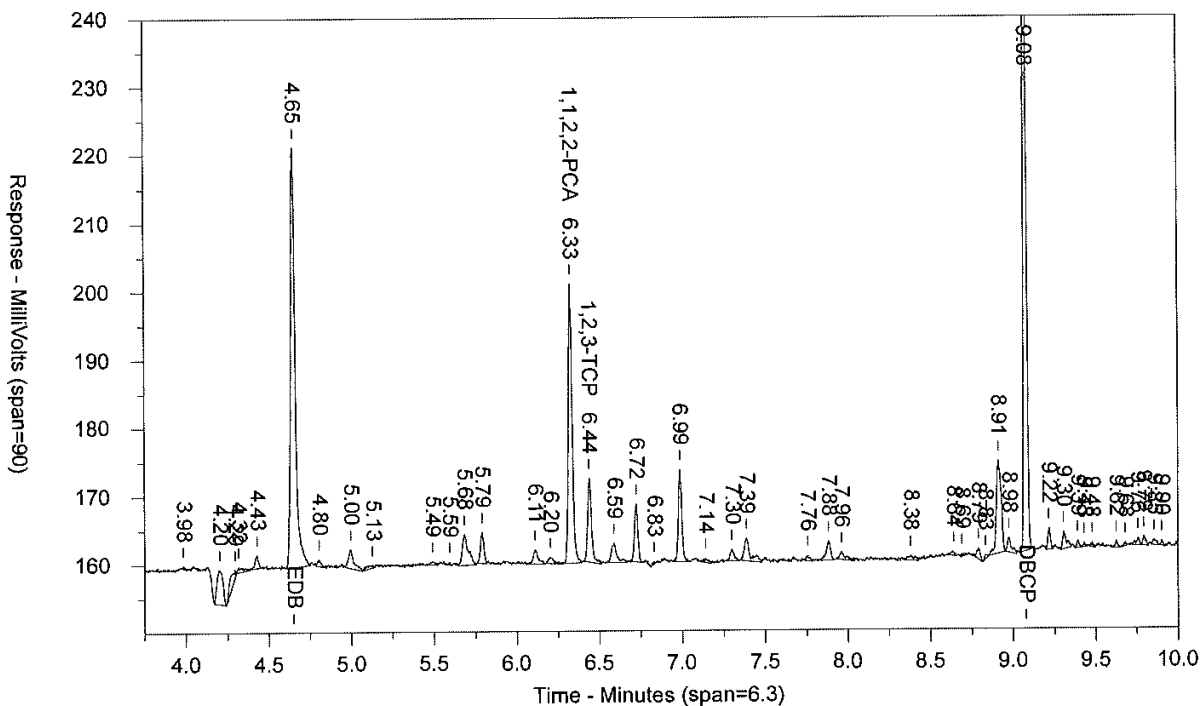
Chrom Perfect Chromatogram Report

EDB_42024AY GKEDB_4GK CCAL 2013599999 10398 SW-846 8011

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: EDB_42024AY GKEDB_4GK CCAL 2013599999 10398 SW-846 8011
 Injected On: 5/15/2020 11:24:49 PM Sample Weight: 1
 Instrument ID: CP16-19853 Dilution Factor: 1
 Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min
 Column A ID: DB CLP1 30m x 0.32mm x 0.25um
 Column B ID: DB CLP2 30m x 0.32mm x 0.5um
 Injection Volume: 1 ul

Threshold: 1
 Calibration Type: external
 Quantitation: Height

Analyst: 13378

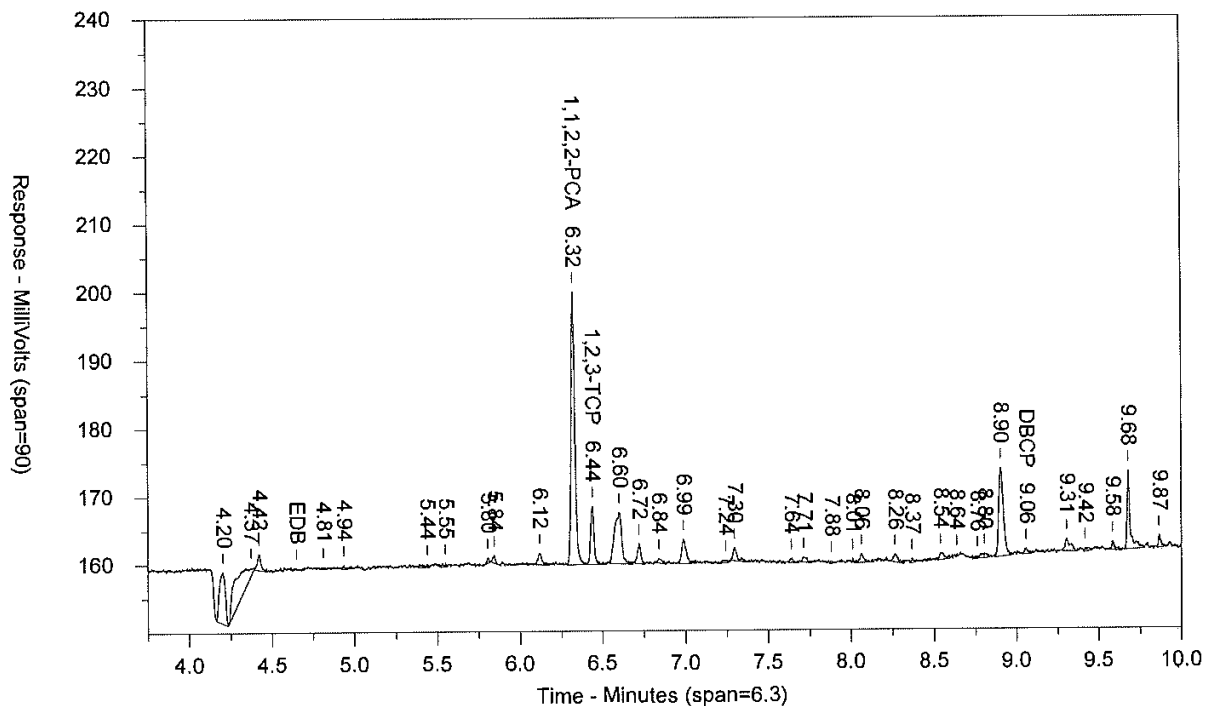
RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.826	39484	2.588	EDB	4.65	61552	2.581	EDB
5.314	28656	1.313	1,1,2,2-PCA	6.326	41012	1.315	1,1,2,2-PCA
5.462	8336	2.575	1,2,3-TCP	6.438	12317	2.664	1,2,3-TCP
8.22	87523	2.274	DBCP	9.077	147983	2.204	DBCP

Files:

Area File: 16edbs20133003.011.RAW
 Area File: 16edbs20133003B.011.RAW
 Method A: 16EDBS.MET
 Method B: 16EDBSB.MET
 Calibration File A: 16EDBS2013301.CAL
 Calibration File B: 16EDBS2013301B.CAL
 Format A: EDB16.FMTA
 Format B: EDB16.FMTB
 Area File Created On: 5/15/2020 11:34:52 PM
 File Reported On: 5/18/2020 at 6:55:10 AM

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: EIBKX2024A USPIBLKUS PIBLK201359999 10398 SW-846 8011
Injected On: 5/15/2020 11:41:36 PM Sample Weight: 35
Instrument ID: CP16-19853 Dilution Factor: 2
Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min
Column A ID: DB CLP1 30m x 0.32mm x 0.25um
Column B ID: DB CLP2 30m x 0.32mm x 0.5um
Injection Volume: 1 ul

Threshold: 1
Calibration Type: external
Quantitation: Height

Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.817	557	.002	EDB		0		EDB
5.311	29700	.078	1,1,2,2-PCA	6.322	40177	.074	1,1,2,2-PCA
	0		1,2,3-TCP	6.437	8609	.106	1,2,3-TCP
8.248	709	.001	DBCP	9.058	852	.001	DBCP

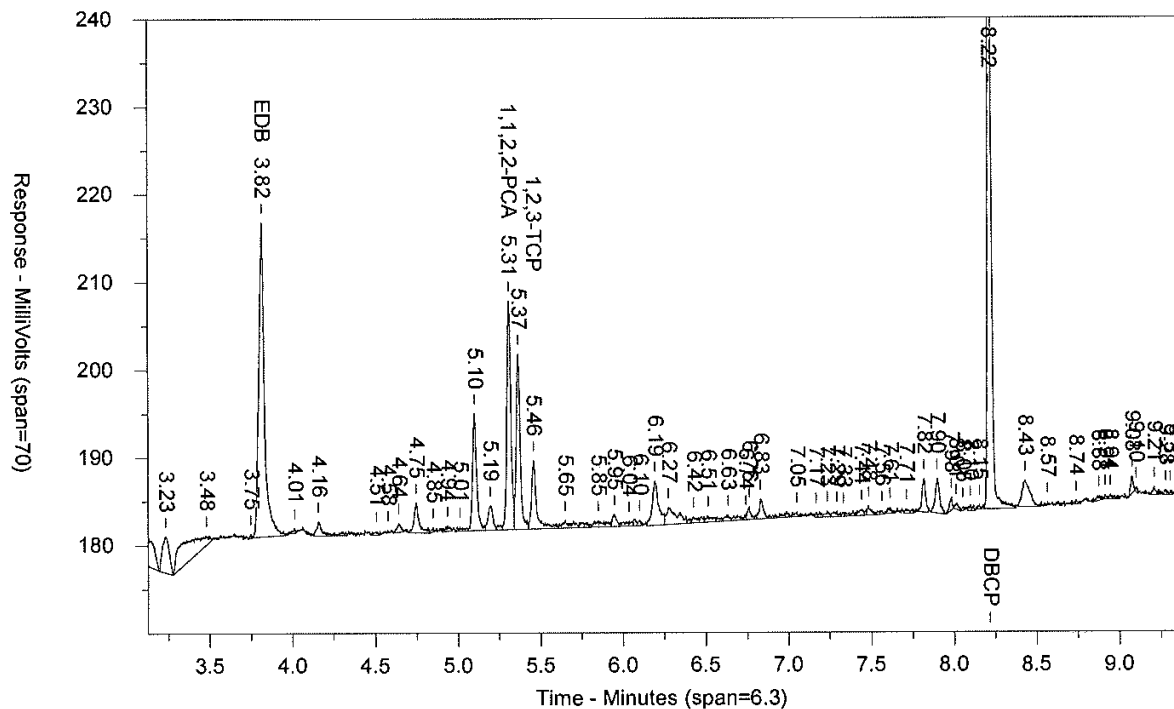
Files:

Area File: 16edbs20133003.012.RAW
Area File: 16edbs20133003B.012.RAW
Method A: 16EDBS.MET
Method B: 16EDBSB.MET
Calibration File A: 16EDBS2013301.CAL
Calibration File B: 16EDBS2013301B.CAL
Format A: EDB16.FMTA
Format B: EDB16.FMTB
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File Reported On: 5/18/2020 at 6:55:26 AM

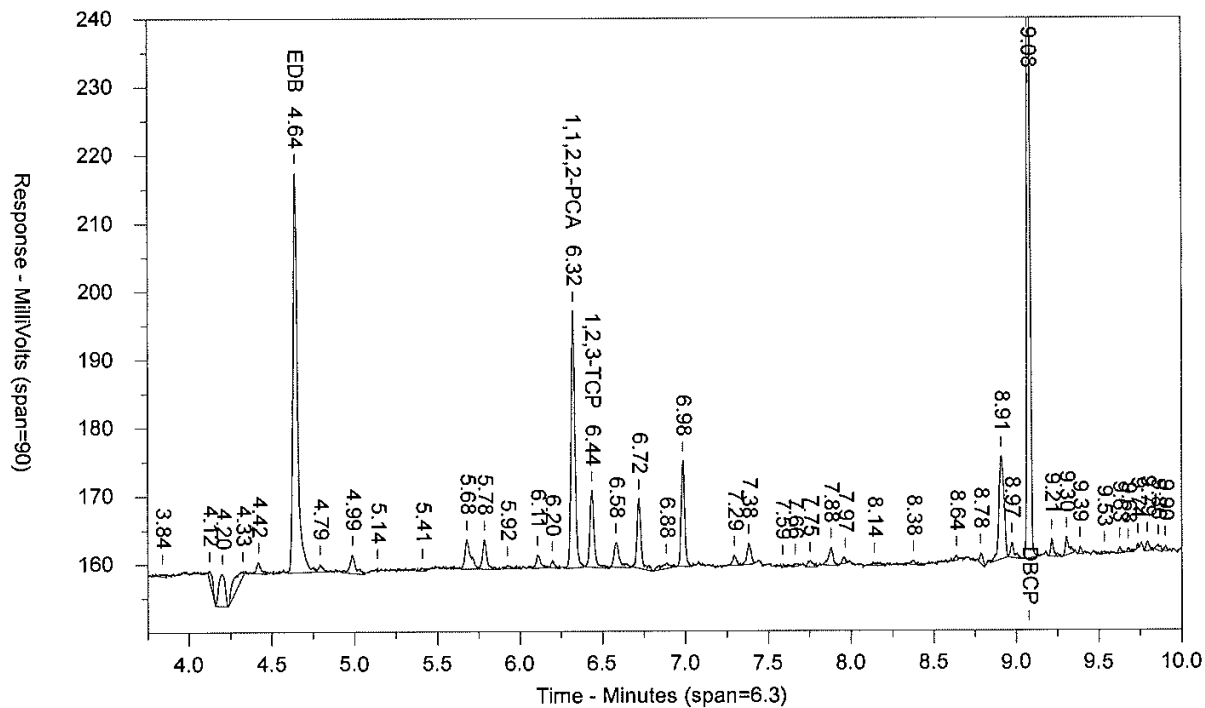
Chrom Perfect Chromatogram Report

EDB_42024AY GLEDB_4GL CCAL 2013599999 10398 SW-846 8011

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: EDB_42024AY GLEDB_4GL CCAL 2013599999 10398 SW-846 8011
Injected On: 5/16/2020 2:46:31 AM Sample Weight: 1
Instrument ID: CP16-19853 Dilution Factor: 1
Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min
Column A ID: DB CLP1 30m x 0.32mm x 0.25µm
Column B ID: DB CLP2 30m x 0.32mm x 0.5µm
Injection Volume: 1 µl

Threshold: 1
Calibration Type: external
Quantitation: Height

Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.818	35827	2.348	EDB	4.644	58719	2.463	EDB
5.309	26102	1.196	1,1,2,2-PCA	6.322	37802	1.212	1,1,2,2-PCA
5.457	7832	2.419	1,2,3-TCP	6.436	11294	2.443	1,2,3-TCP
8.218	85908	2.232	DBCP	9.075	142373	2.121	DBCP

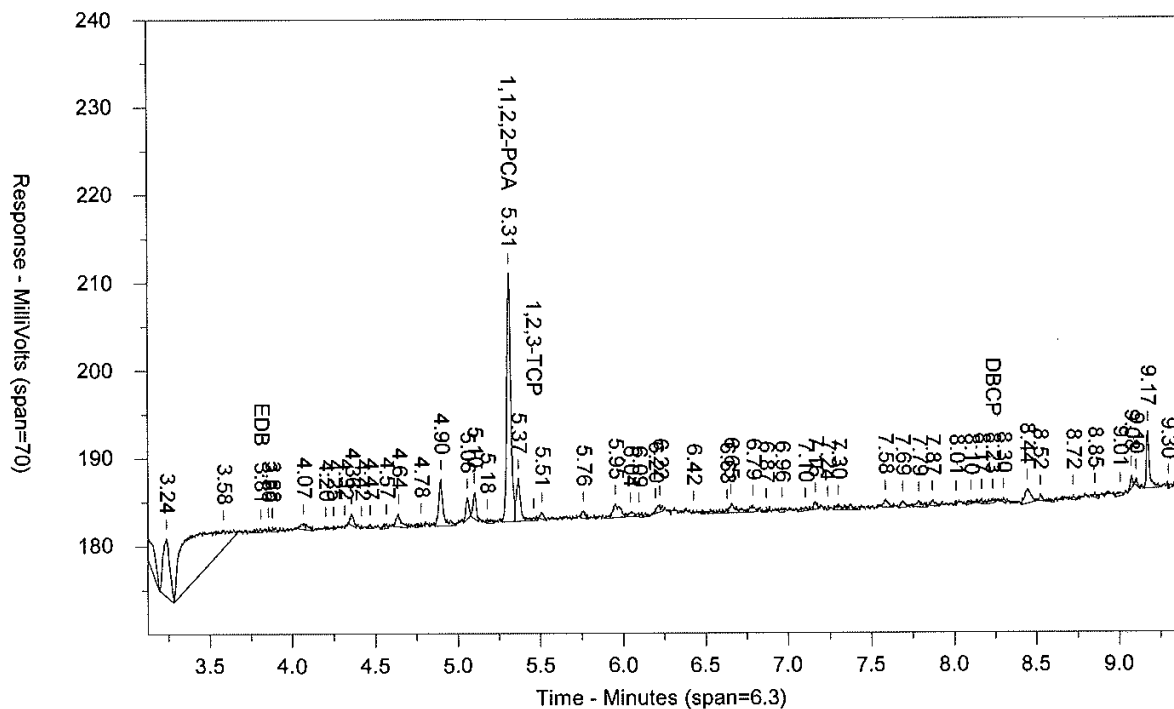
Files:

Area File: 16edbs20133003.023.RAW
Area File: 16edbs20133003B.023.RAW
Method A: 16EDBS.MET
Method B: 16EDBSB.MET
Calibration File A: 16EDBS2013301.CAL
Calibration File B: 16EDBS2013301B.CAL
Format A: EDB16.FMTA
Format B: EDB16.FMTB
Area File Created On: 5/16/2020 2:56:33 AM
File Reported On: 5/18/2020 at 6:58:16 AM

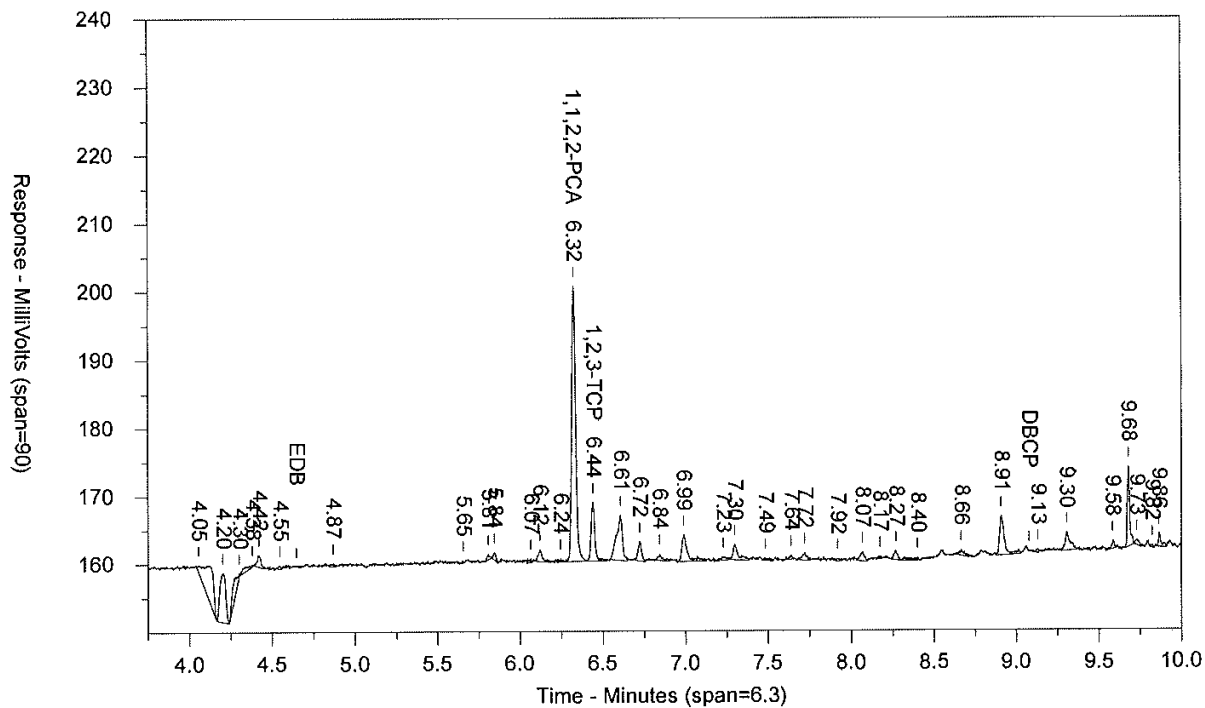
Chrom Perfect Chromatogram Report

EIBKX2024A UTPIBLKUT PIBLK201359999 10398 SW-846 8011

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: EIBKX2024A UTPIBLKUT PIBLK2013599999 10398 SW-846 8011
 Injected On: 5/16/2020 3:03:19 AM Sample Weight: 35
 Instrument ID: CP16-19853 Dilution Factor: 2
 Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min
 Column A ID: DB CLP1 30m x 0.32mm x 0.25um
 Column B ID: DB CLP2 30m x 0.32mm x 0.5um
 Injection Volume: 1 ul

Threshold: 1
 Calibration Type: external
 Quantitation: Height

Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.811	494	.002	EDB		0		EDB
5.313	28378	.074	1,1,2,2-PCA	6.324	40509	.074	1,1,2,2-PCA
	0		1,2,3-TCP	6.439	8741	.108	1,2,3-TCP
8.235	570	.001	DBCP		0		DBCP

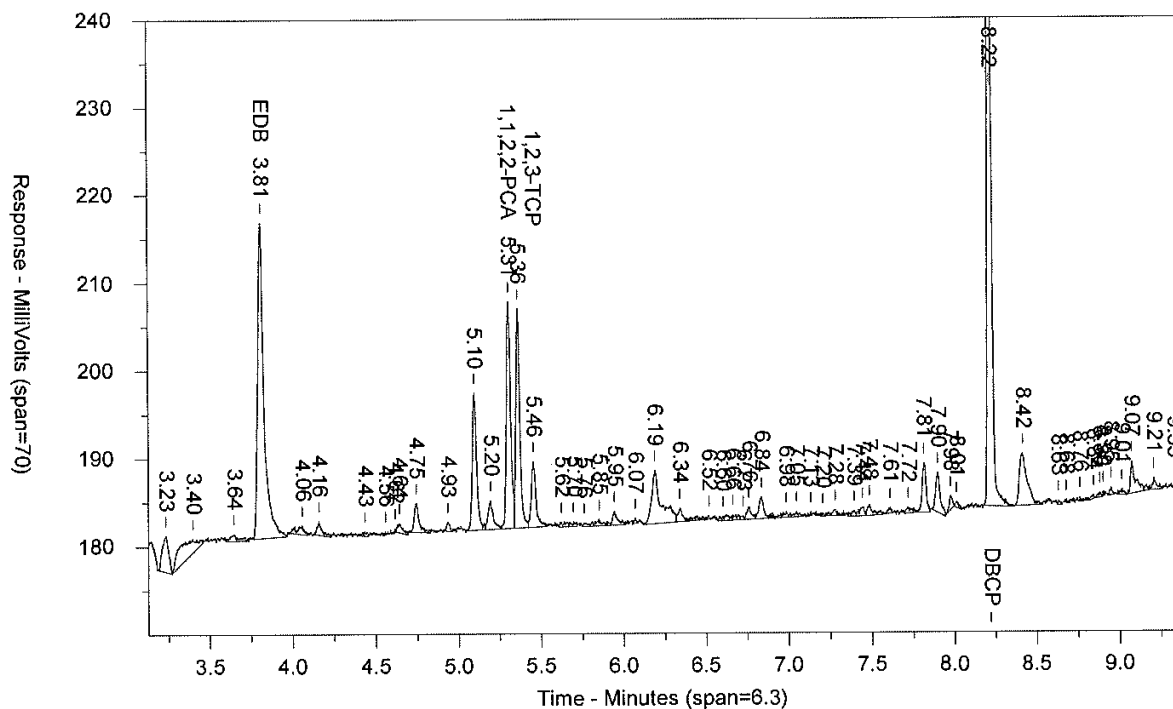
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 Area File: 16edbs20133003B.024.RAW
 Method A: 16EDBS.MET
 Method B: 16EDBSB.MET
 Calibration File A: 16EDBS2013301.CAL
 Calibration File B: 16EDBS2013301B.CAL
 Format A: EDB16.FMTA
 Format B: EDB16.FMTB
 Area File Created On: 5/16/2020 3:13:23 AM
 File Reported On: 5/18/2020 at 6:58:32 AM

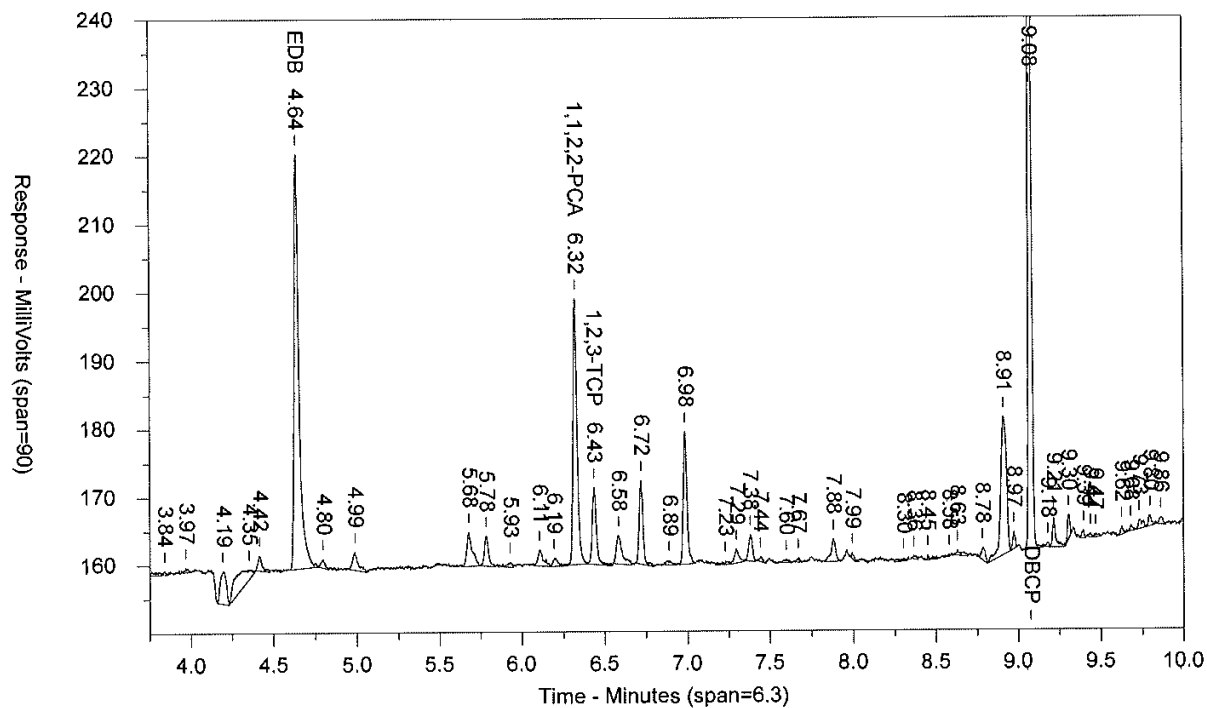
Chrom Perfect Chromatogram Report

EDB_42024AZ GMEDB_4GM CCAL 2013599999 10398 SW-846 8011

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: EDB_42024AZ GMEDB_4GM CCAL 2013599999 10398 SW-846 8011
 Injected On: 5/16/2020 6:08:19 AM Sample Weight: 1
 Instrument ID: CP16-19853 Dilution Factor: 1
 Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min
 Column A ID: DB CLP1 30m x 0.32mm x 0.25um
 Column B ID: DB CLP2 30m x 0.32mm x 0.5um
 Injection Volume: 1 ul

Threshold: 1
 Calibration Type: external
 Quantitation: Height

Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.813	35949	2.356	EDB	4.64	60968	2.557	EDB
5.308	25849	1.184	1,1,2,2-PCA	6.321	39102	1.254	1,1,2,2-PCA
5.456	7463	2.305	1,2,3-TCP	6.434	11374	2.46	1,2,3-TCP
8.219	100973	2.623	DBCP	9.076	179483	2.673	DBCP

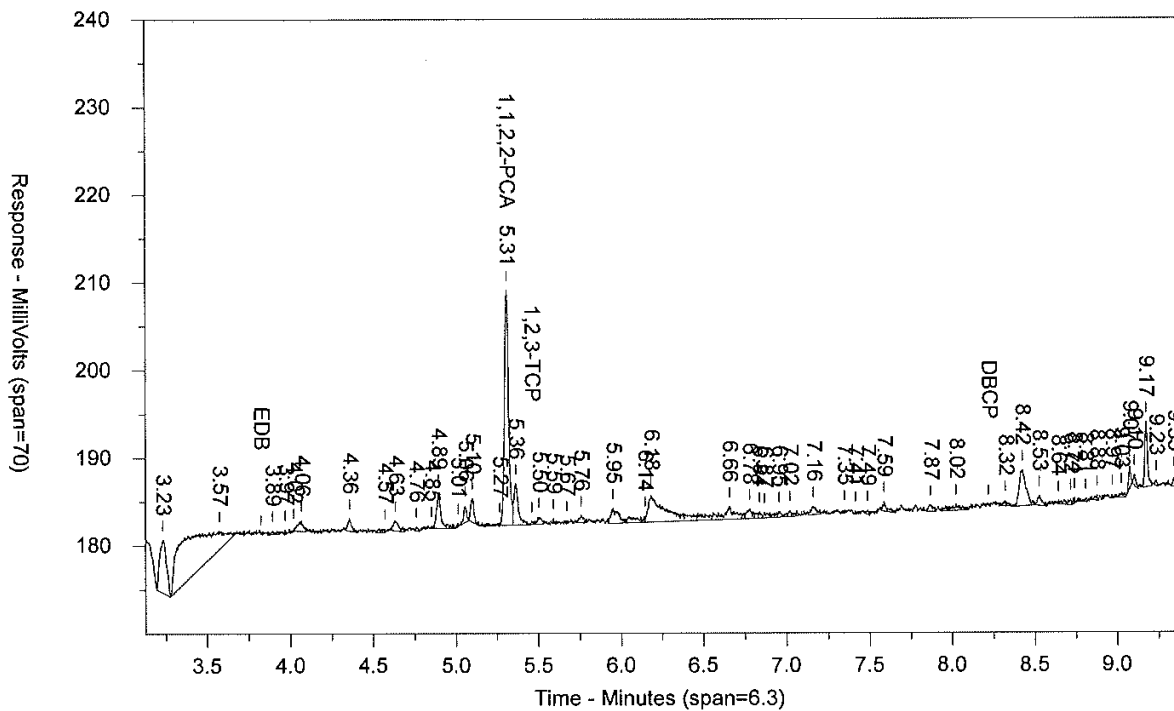
Files:

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 Method A: 16EDBS.MET
 Method B: 16EDBSB.MET
 Calibration File A: 16EDBS2013301.CAL
 Calibration File B: 16EDBS2013301B.CAL
 Format A: EDB16.FMTA
 Format B: EDB16.FMTB
 Area File Created On: 5/16/2020 6:18:22 AM
 File Reported On: 5/18/2020 at 7:01:32 AM

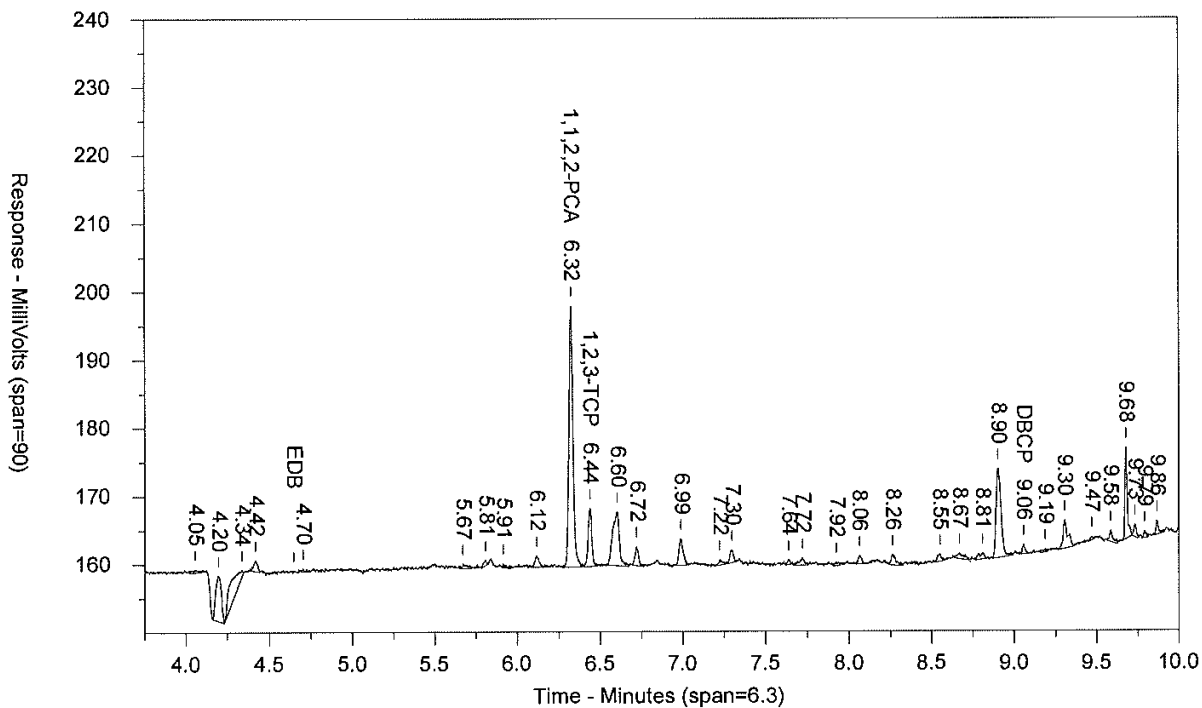
Chrom Perfect Chromatogram Report

EIBKX2024A UUIBLKUU PIBLK2013599999 10398 SW-846 8011

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: EIBKX2024A UUIBLKUU PIBLK201359999 10398 SW-846 8011
Injected On: 5/16/2020 6:24:58 AM Sample Weight: 35
Instrument ID: CP16-19853 Dilution Factor: 2
Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min
Column A ID: DB CLP1 30m x 0.32mm x 0.25um
Column B ID: DB CLP2 30m x 0.32mm x 0.5um
Injection Volume: 1 ul

Threshold: 1
Calibration Type: external
Quantitation: Height

Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
5.31	26795	.07	1,1,2,2-PCA	6.323	38393	.07	1,1,2,2-PCA
	0		1,2,3-TCP	6.437	8536	.106	1,2,3-TCP
	0		DBCP	9.056	1433	.001	DBCP

Files:

Area File: 16edbs20133003.036.RAW
Area File: 16edbs20133003B.036.RAW
Method A: 16EDBS.MET
Method B: 16EDBSB.MET
Calibration File A: 16EDBS2013301.CAL
Calibration File B: 16EDBS2013301B.CAL
Format A: EDB16.FMTA
Format B: EDB16.FMTB
Area File Created On: 5/16/2020 6:35:02 AM
File Reported On: 5/18/2020 at 7:01:49 AM

Raw QC Data

EDB/DBCP

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Lancaster Laboratories
Environmental

Data Summary

Sample Name: BLANKA 5/14/20 PBLK23135 BLK Sample ID: AA Batchnumber: 201350023A
Sample Amount: 35 mL Total Volume: 2 ml Analyst: 13378 SDG: State:
Analyses: 10398

Analysis Report (A)

Injected on May 15, 2020 21:43:57
Instrument 19853A
Result file 16EDBS20133003.005.RAW
Calibration file 16EDBS2013301
Method file 16EDBS

%SSR(PCA) 65% (46 - 136) Conc: 0.045739

Single Component Data

Compound	Min	RT	Max	Height
1,1,2,2-TETRACHLORO	5.28	5.31	5.34	17475
1,2-Dibromo-3-chloroproj	8.19	8.25	8.25	476

Amount
0.045739
0.000706

Analysis Report (B)

Injected on May 15, 2020 21:43:57
Instrument 19853B
Result file 16EDBS20133003B.005.RAW
Calibration file 16EDBS2013301B
Method file 16EDBSB

%SSR(PCA) 63% (46 - 136) Conc: 0.044166

Compound	Min	RT	Max	Height	Amount
1,1,2,2-TETRACHLORO	6.30	6.32	6.36	24106	0.044166

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
☐ Ethylene dibromide			<0.01	<0.02	<0.03			
☐ 1,1,2,2-TETRACHLORO	A	0.045739	0.0035	0.007	0.007		3.50	
☐ 1,1,2,2-TETRACHLORO	A	0.045739	0.0035	0.007	0.007			
☐ 1,1,2,2-TETRACHLORO	B	0.044166	0.0035	0.007	0.007			
☐ 1,2,3-Trichloropropane			<0.1	<0.2	<0.27			
☐ 1,2-Dibromo-3-chloropropane			<0.01	<0.02	<0.03			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Charles T. Beasley
Charles T. Beasley
Manager

MAY 18 2020

Reviewed and digitally signed by Rachel Umberger on 5/18/2020 07:48:46

5/18/2020

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Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: BLANKA 5/14/20 PBLK23135 ID: AA **Batchnumber:** 201350023A
Sample Amount: 35 mL **Total Volume:** 2 mL **Analyst:** 13378 **SDG:** **State:**
Analyses: 10398

Analysis Report (A)

Injected on : May 15, 2020 21:43:57
 Instrument : CP16--19853A
 Result file : 16EDBS20133003.005.RAW
 Calibration file : 16EDBS2013301.CAL
 Method file : 16EDBS.MET

%SSR(1,1,2,2-PCA) : 65% (46-136) Conc.: 0.045739

Peak name	Min	R.T.	Max	Height	Amount
1,1,2,2-PCA	5.28	5.31	5.34	17475	0.045739
DBCP	8.19	8.25	8.25	476	0.000706

Analysis Report (B)

Injected on : May 15, 2020 21:43:57
 Instrument : CP16--19853B
 Result file : 16EDBS20133003B.005.RAW
 Calibration file : 16EDBS2013301B.CAL
 Method file : 16EDBSB.MET

%SSR(1,1,2,2-PCA) : 63% (46-136) Conc.: 0.044166

Peak name	Min	R.T.	Max	Height	Amount
1,1,2,2-PCA	6.30	6.32	6.36	24106	0.044166

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☒ EDB			<0.03	<0.01			
☐ 1,1,2,2-PCA	A	0.045739				3.50	
☒ 1,2,3-TCP			<0.27	<0.1			
☒ DBCP			<0.03	<0.01			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

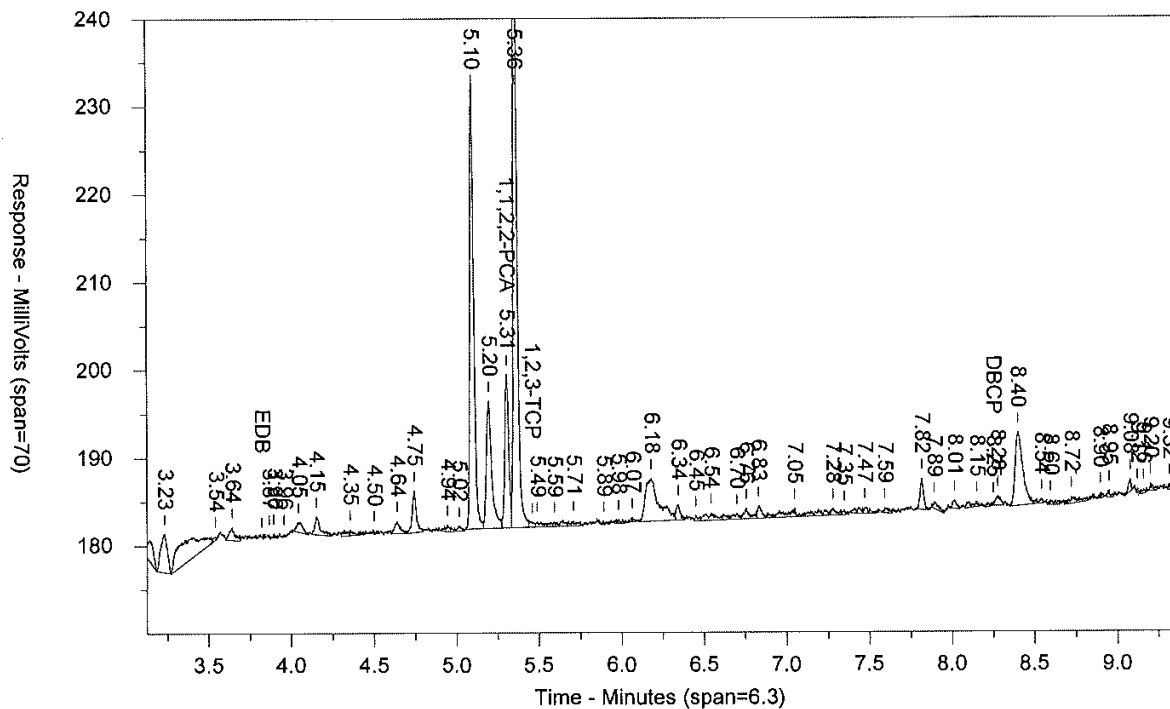
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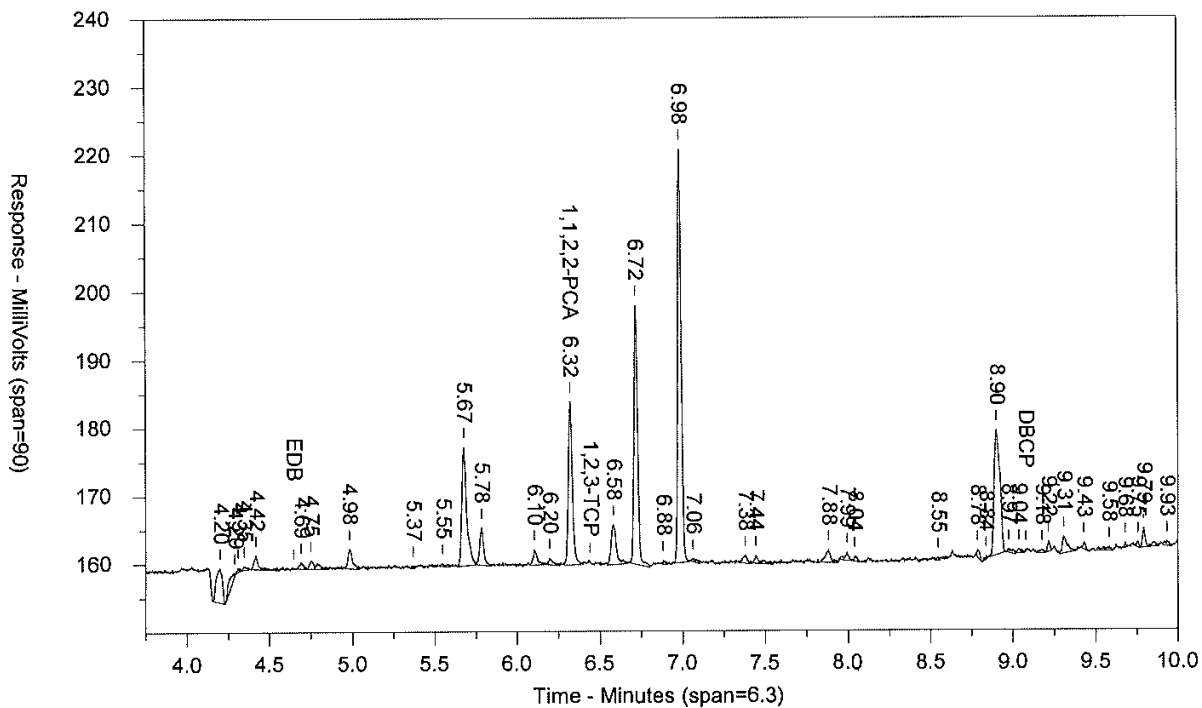
Chrom Perfect Chromatogram Report

BLANKA 5/14/20 AAPBLK23135 BLK 201350023A 10398 SW-846 8011

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: BLANKA 5/14/20 AAPBLK23135 BLK 201350023A 10398 SW-846 8011
Injected On: 5/15/2020 9:43:57 PM Sample Weight: 35
Instrument ID: CP16-19853 Dilution Factor: 2
Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min
Column A ID: DB CLP1 30m x 0.32mm x 0.25um
Column B ID: DB CLP2 30m x 0.32mm x 0.5um
Injection Volume: 1 ul

Threshold: 1
Calibration Type: external
Quantitation: Height

Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
5.308	17475	.046	1,1,2,2-PCA	6.32	24106	.044	1,1,2,2-PCA
8.249	476	.001	DBCP		0		DBCP

Files:

Area File: 16edbs20133003.005.RAW
Area File: 16edbs20133003B.005.RAW
Method A: 16EDBS.MET
Method B: 16EDBSB.MET
Calibration File A: 16EDBS2013301.CAL
Calibration File B: 16EDBS2013301B.CAL
Format A: EDB16.FMTA
Format B: EDB16.FMTB
Area File Created On: 5/15/2020 9:54:00 PM
File Reported On: 5/18/2020 at 6:53:34 AM



Lancaster Laboratories
Environmental

Data Summary

Sample Name: 1313221 MS 12351 MS Sample ID: AA Batchnumber: 201350023A
Sample Amount: 36.76 mL Total Volume: 2 ml Analyst: 13378 SDG: KR446 State: NM
Analyses: 10398

Analysis Report (A)

Injected on May 16, 2020 01:05:37
Instrument 19853A
Result file 16EDBS20133003.017.RAW
Calibration file 16EDBS2013301
Method file 16EDBS

%SSR(PCA) 70% (46 - 136) Conc: 0.046744

Single Component Data

Compound	Min	RT	Max	Height
Ethylene dibromide	3.79	3.82	3.85	31289
1,1,2,2-TETRACHLORO	5.28	5.31	5.34	18757
1,2,3-Trichloropropane	5.43	5.46	5.49	6928
1,2-Dibromo-3-chloropropane	8.19	8.22	8.25	74474

Analysis Report (B)

Injected on May 16, 2020 01:05:37
Instrument 19853B
Result file 16EDBS20133003B.017.RAW
Calibration file 16EDBS2013301B
Method file 16EDBSB

%SSR(PCA) 63% (46 - 136) Conc: 0.042268

Amount	Compound	Min	RT	Max	Height	Amount
0.111572	Ethylene dibromide	4.62	4.65	4.68	48165	0.1099
0.046744	1,1,2,2-TETRACHLORO	6.30	6.33	6.36	24230	0.042268
0.116407	1,2,3-Trichloropropane	6.41	6.44	6.47	9648	0.113539
0.105262	1,2-Dibromo-3-chloropropane	9.05	9.08	9.11	129415	0.104877

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
☐ Ethylene dibromide	A	0.111572	0.0095	0.019	0.0286		1.51	
☐ 1,1,2,2-TETRACHLORO	A	0.046744	0.0033	0.0067	0.0067		10.06	
☐ 1,1,2,2-TETRACHLORO	A	0.046744	0.0033	0.0067	0.0067			
☐ 1,1,2,2-TETRACHLORO	B	0.042268	0.0033	0.0067	0.0067			
☐ 1,2,3-Trichloropropane	A	0.116407	0.0952	<0.1904	<0.2571	J	2.49	
☐ 1,2-Dibromo-3-chloropropane	A	0.105262	0.0095	0.019	0.0286		0.37	

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Charles T. Beasley
Charles T. Beasley
Manager

MAY 18 2020

Reviewed and digitally signed by Rachel Umberger on 5/18/2020 07:49:02

5/18/2020

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Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: 1313221 MS 12351 ID: AA **Batchnumber:** 201350023A
Sample Amount: 36.76 mL **Total Volume:** 2 mL **Analyst:** 13378 **SDG:** KR446 **State:** NM
Analyses: 10398

Analysis Report (A)

Injected on : May 16, 2020 01:05:37
 Instrument : CP16--19853A
 Result file : 16EDBS20133003.017.RAW
 Calibration file : 16EDBS2013301.CAL
 Method file : 16EDBS.MET

%SSR(1,1,2,2-PCA) : 70% (46-136) Conc.: 0.046744

Peak name	Min	R.T.	Max	Height	Amount
EDB	3.79	3.82	3.85	31289	0.111572
1,1,2,2-PCA	5.28	5.31	5.34	18757	0.046744
1,2,3-TCP	5.43	5.46	5.49	6928	0.116407
DBCP	8.19	8.22	8.25	74474	0.105262

Analysis Report (B)

Injected on : May 16, 2020 01:05:37
 Instrument : CP16--19853B
 Result file : 16EDBS20133003B.017.RAW
 Calibration file : 16EDBS2013301B.CAL
 Method file : 16EDBSB.MET

%SSR(1,1,2,2-PCA) : 63% (46-136) Conc.: 0.042268

Peak name	Min	R.T.	Max	Height	Amount
EDB	4.62	4.65	4.68	48165	0.109900
1,1,2,2-PCA	6.30	6.33	6.36	24230	0.042268
1,2,3-TCP	6.41	6.44	6.47	9648	0.113539
DBCP	9.05	9.08	9.11	129415	0.104877

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☒ EDB	A	0.111572	0.0286	0.0095		1.51	
☐ 1,1,2,2-PCA	A	0.046744				10.06	
☐ 1,2,3-TCP	A	0.116407	<0.2571	0.0952	J	2.49	
☐ DBCP	A	0.105262	0.0286	0.0095		0.37	

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

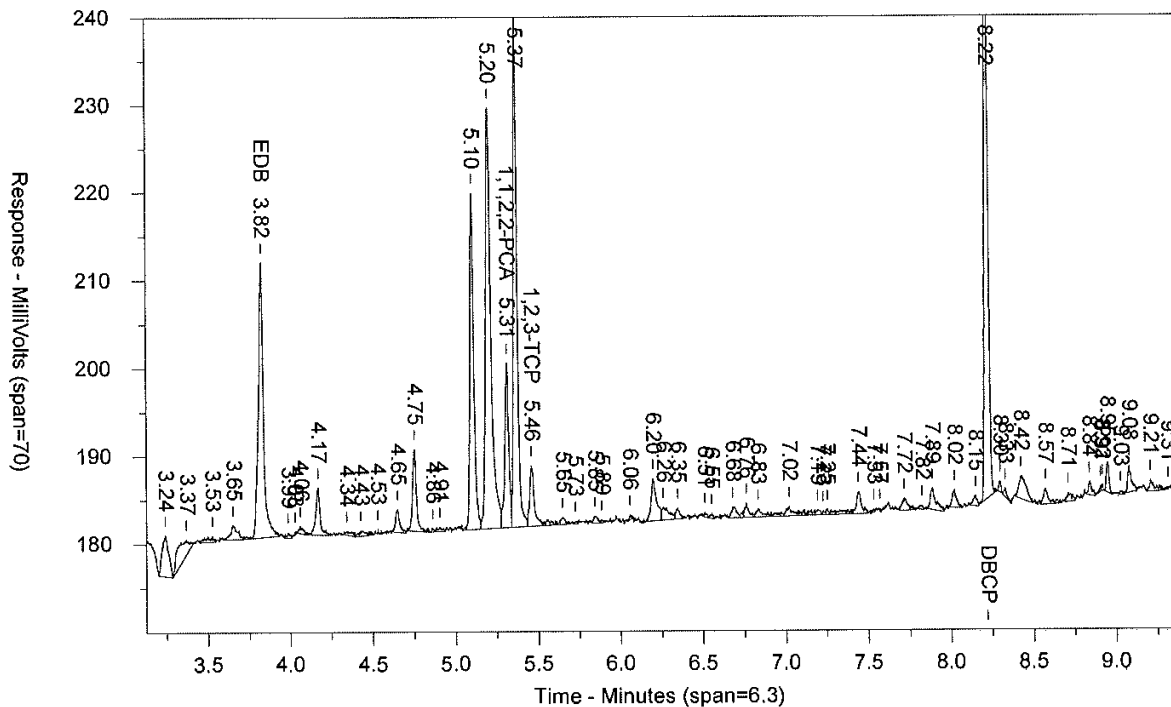
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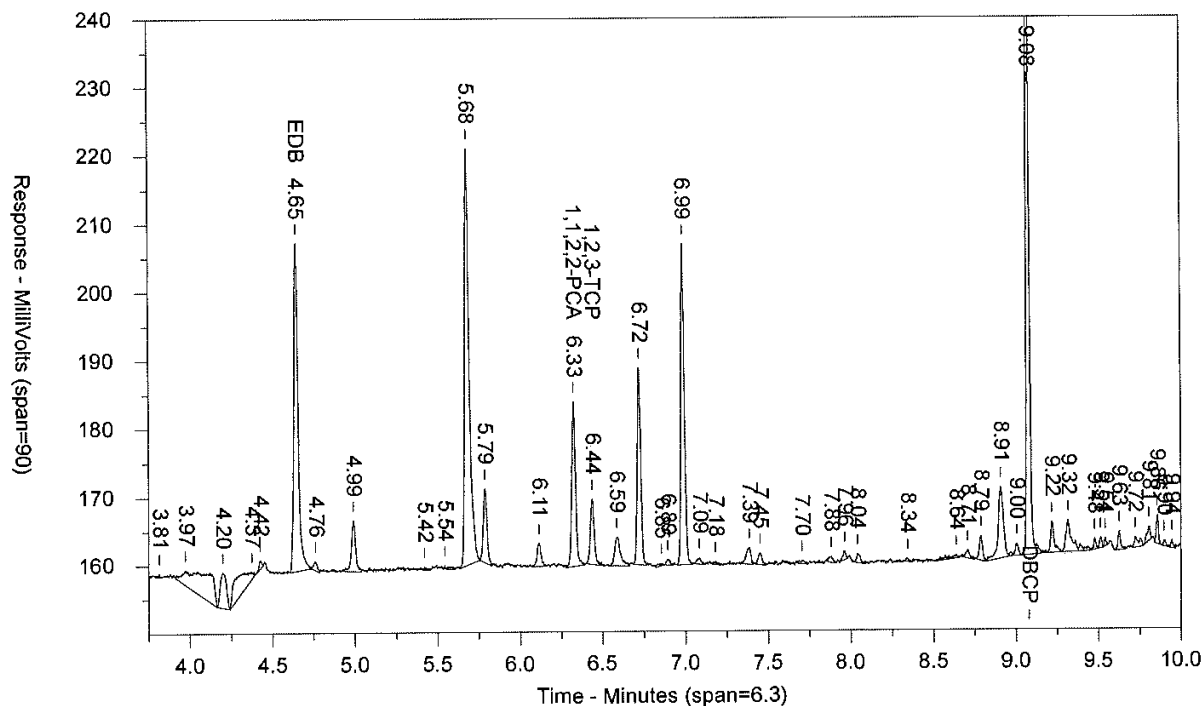
Chrom Perfect Chromatogram Report

1313221MS AA12351 MS 201350023A 10398 SW-846 8011

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: 1313221MS AA12351 MS 201350023A 10398 SW-846 8011
 Injected On: 5/16/2020 1:05:37 AM Sample Weight: 36.76
 Instrument ID: CP16-19853 Dilution Factor: 2
 Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min
 Column A ID: DB CLP1 30m x 0.32mm x 0.25um
 Column B ID: DB CLP2 30m x 0.32mm x 0.5um
 Injection Volume: 1 ul

Threshold: 1
 Calibration Type: external
 Quantitation: Height

Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.825	31289	.112	EDB	4.649	48165	.11	EDB
5.313	18757	.047	1,1,2,2-PCA	6.326	24230	.042	1,1,2,2-PCA
5.46	6928	.116	1,2,3-TCP	6.44	9648	.114	1,2,3-TCP
8.22	74474	.105	DBCP	9.077	129415	.105	DBCP

Files:

Area File: 16edbs20133003.017.RAW
 Area File: 16edbs20133003B.017.RAW
 Method A: 16EDBS.MET
 Method B: 16EDBSB.MET
 Calibration File A: 16EDBS2013301.CAL
 Calibration File B: 16EDBS2013301B.CAL
 Format A: EDB16.FMTA
 Format B: EDB16.FMTB
 Area File Created On: 5/16/2020 1:15:40 AM
 File Reported On: 5/18/2020 at 6:56:46 AM



Lancaster Laboratories
Environmental

Data Summary

Sample Name: 1313222 MSD 12351 MSD Sample ID: AA Batchnumber: 201350023A
Sample Amount: 35.84 mL Total Volume: 2 ml Analyst: 13378 SDG: KR446 State: NM
Analyses: 10398

Analysis Report (A)

Injected on May 16, 2020 01:22:37
Instrument 19853A
Result file 16EDBS20133003.018.RAW
Calibration file 16EDBS2013301
Method file 16EDBS

%SSR(PCA) 69% (46 - 136) Conc: 0.047145

Single Component Data

Compound	Min	RT	Max	Height
Ethylene dibromide	3.79	3.82	3.85	31023
1,1,2,2-TETRACHLORO	5.28	5.31	5.34	18445
1,2,3-Trichloropropane	5.43	5.46	5.49	7035
1,2-Dibromo-3-chloropropanol	8.19	8.22	8.25	78227

Analysis Report (B)

Injected on May 16, 2020 01:22:37
Instrument 19853B
Result file 16EDBS20133003B.018.RAW
Calibration file 16EDBS2013301B
Method file 16EDBSB

%SSR(PCA) 63% (46 - 136) Conc: 0.0436

Amount	Compound	Min	RT	Max	Height	Amount
0.113463	Ethylene dibromide	4.62	4.65	4.68	47905	0.112112
0.047145	1,1,2,2-TETRACHLORO	6.30	6.32	6.36	24368	0.0436
0.121244	1,2,3-Trichloropropane	6.41	6.44	6.47	9625	0.116176
0.113405	1,2-Dibromo-3-chloropropanol	9.05	9.08	9.11	127631	0.106086

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
☐ Ethylene dibromide	A	0.113463	0.0098	0.0195	0.0293		1.20	
☐ 1,1,2,2-TETRACHLORO	A	0.047145	0.0034	0.0068	0.0068		7.81	
☐ 1,1,2,2-TETRACHLORO	A	0.047145	0.0034	0.0068	0.0068			
☐ 1,1,2,2-TETRACHLORO	B	0.0436	0.0034	0.0068	0.0068			
☐ 1,2,3-Trichloropropane	A	0.121244	0.0977	<0.1953	<0.2637	J	4.27	
☐ 1,2-Dibromo-3-chloropropanol	A	0.113405	0.0098	0.0195	0.0293		6.67	

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Charles T. Beasley
Charles T. Beasley
Manager

MAY 18 2020

Reviewed and digitally signed by Rachel Umberger on 5/18/2020 07:49:10

5/18/2020

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Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: 1313222 MSD 12351 ID: AA **Batchnumber:** 201350023A
Sample Amount: 35.84 mL **Total Volume:** 2 ml **Analyst:** 13378 **SDG:** KR446 **State:** NM
Analyses: 10398

Analysis Report (A)

Injected on : May 16, 2020 01:22:37
 Instrument : CP16--19853A
 Result file : 16EDBS20133003.018.RAW
 Calibration file : 16EDBS2013301.CAL
 Method file : 16EDBS.MET

%SSR(1,1,2,2-PCA) : 69% (46-136) Conc.: 0.047145

Peak name	Min	R.T.	Max	Height	Amount
EDB	3.79	3.82	3.85	31023	0.113463
1,1,2,2-PCA	5.28	5.31	5.34	18445	0.047145
1,2,3-TCP	5.43	5.46	5.49	7035	0.121244
DBCP	8.19	8.22	8.25	78227	0.113405

Analysis Report (B)

Injected on : May 16, 2020 01:22:37
 Instrument : CP16--19853B
 Result file : 16EDBS20133003B.018.RAW
 Calibration file : 16EDBS2013301B.CAL
 Method file : 16EDBSB.MET

%SSR(1,1,2,2-PCA) : 63% (46-136) Conc.: 0.0436

Peak name	Min	R.T.	Max	Height	Amount
EDB	4.62	4.65	4.68	47905	0.112112
1,1,2,2-PCA	6.30	6.32	6.36	24368	0.043600
1,2,3-TCP	6.41	6.44	6.47	9625	0.116176
DBCP	9.05	9.08	9.11	127631	0.106086

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☒ EDB	A	0.113463	0.0293	0.0098		1.20	
☐ 1,1,2,2-PCA	A	0.047145				7.81	
☐ 1,2,3-TCP	A	0.121244	<0.2637	0.0977	J	4.27	
☐ DBCP	A	0.113405	0.0293	0.0098		6.67	

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

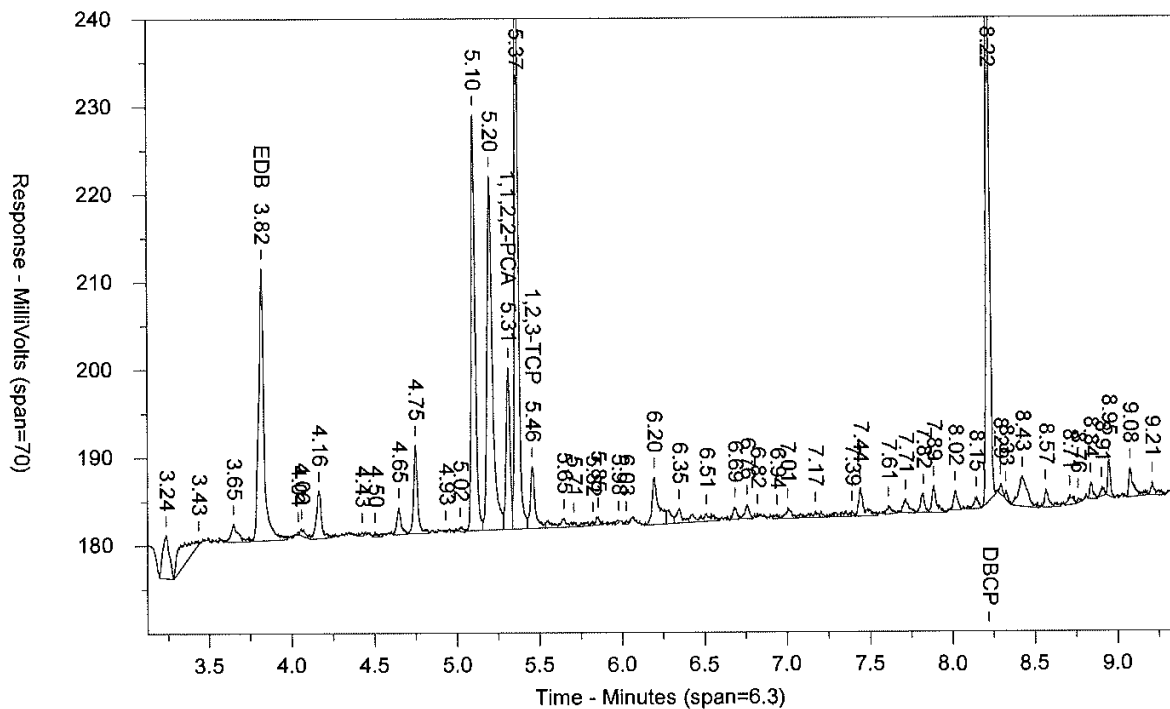
Printed on: 5/18/2020 07:08:28

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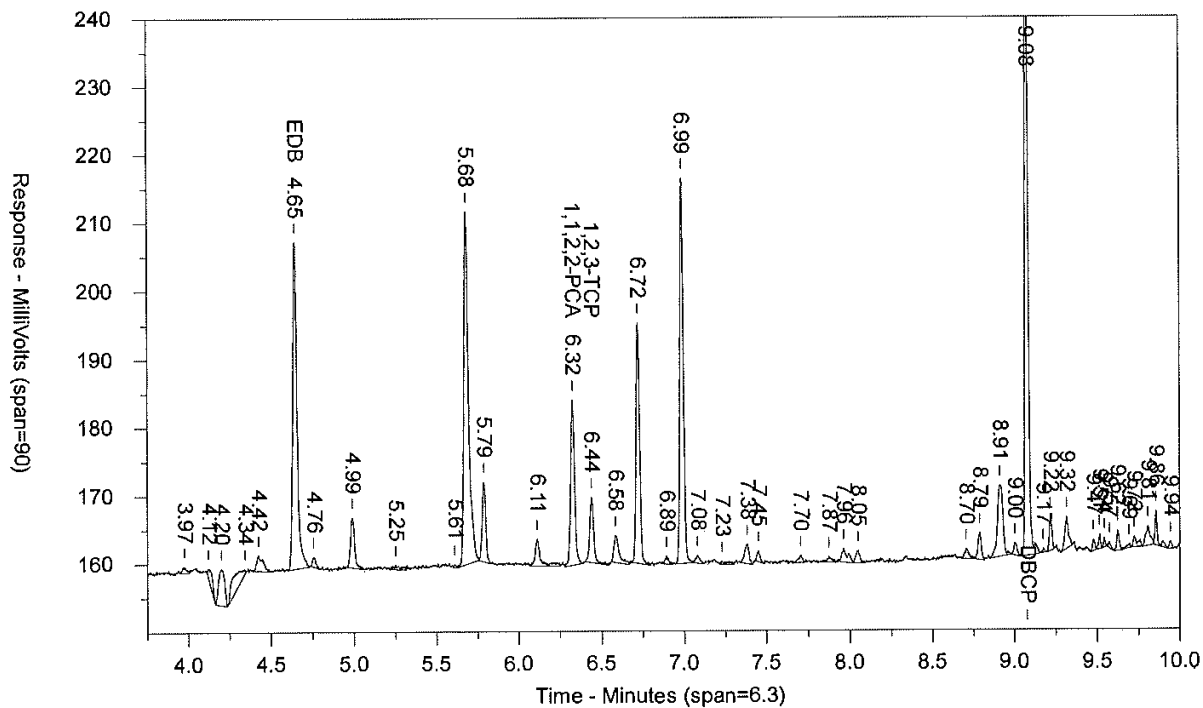
Chrom Perfect Chromatogram Report

1313222MSD AA12351 MSD 201350023A 10398 SW-846 8011

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133003.018.RAW



\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133003B.018.RAW



Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: 1313222MSD AA12351 MSD 201350023A 10398 SW-846 8011
Injected On: 5/16/2020 1:22:37 AM Sample Weight: 35.84
Instrument ID: CP16-19853 Dilution Factor: 2
Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min
Column A ID: DB CLP1 30m x 0.32mm x 0.25um
Column B ID: DB CLP2 30m x 0.32mm x 0.5um
Injection Volume: 1 ul

Threshold: 1
Calibration Type: external
Quantitation: Height

Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.822	31023	.113	EDB	4.647	47905	.112	EDB
5.312	18445	.047	1,1,2,2-PCA	6.324	24368	.044	1,1,2,2-PCA
5.459	7035	.121	1,2,3-TCP	6.437	9625	.116	1,2,3-TCP
8.22	78227	.113	DBCP	9.076	127631	.106	DBCP

Files:

Area File: 16edbs20133003.018.RAW
Area File: 16edbs20133003B.018.RAW
Method A: 16EDBS.MET
Method B: 16EDBSB.MET
Calibration File A: 16EDBS2013301.CAL
Calibration File B: 16EDBS2013301B.CAL
Format A: EDB16.FMTA
Format B: EDB16.FMTB
Area File Created On: 5/16/2020 1:32:39 AM
File Reported On: 5/18/2020 at 6:57:02 AM



Lancaster Laboratories
Environmental

Data Summary

Sample Name: LCSA **5/14/20** **LCS23135 LCS** **Sample ID: AA** **Batchnumber: 201350023A**
Sample Amount: 35 mL **Total Volume:** 2 ml **Analyst:** 13378 **SDG:** **State:**
Analyses: 10398

Analysis Report (A)

Injected on May 15, 2020 22:00:38
Instrument 19853A
Result file 16EDBS20133003.006.RAW
Calibration file 16EDBS2013301
Method file 16EDBS

%SSR(PCA) 67% (46 - 136) Conc: 0.04748

Single Component Data

Compound	Min	RT	Max	Height
Ethylene dibromide	3.79	3.81	3.85	29381
1,1,2,2-TETRACHLORO	5.28	5.31	5.34	18140
1,2,3-Trichloropropane	5.43	5.46	5.49	6929
1,2-Dibromo-3-chloropropane	8.19	8.22	8.25	74371

Analysis Report (B)

Injected on May 15, 2020 22:00:38
Instrument 19853B
Result file 16EDBS20133003B.006.RAW
Calibration file 16EDBS2013301B
Method file 16EDBSB

%SSR(PCA) 65% (46 - 136) Conc: 0.045929

Amount	Compound	Min	RT	Max	Height	Amount
0.110035	Ethylene dibromide	4.62	4.64	4.68	48139	0.115365
0.04748	1,1,2,2-TETRACHLORO	6.30	6.32	6.36	25068	0.045929
0.122288	1,2,3-Trichloropropane	6.41	6.44	6.47	9651	0.119289
0.110403	1,2-Dibromo-3-chloropropane	9.05	9.08	9.11	117885	0.100337

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
☐ Ethylene dibromide	A	0.110035	0.01	0.02	0.03		4.73	
☐ 1,1,2,2-TETRACHLORO	A	0.04748	0.0035	0.007	0.007		3.32	
☐ 1,1,2,2-TETRACHLORO	A	0.04748	0.0035	0.007	0.007			
☐ 1,1,2,2-TETRACHLORO	B	0.045929	0.0035	0.007	0.007			
☐ 1,2,3-Trichloropropane	A	0.122288	0.1	<0.2	<0.27	J	2.48	
☐ 1,2-Dibromo-3-chloropropane	A	0.110403	0.01	0.02	0.03		9.55	

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Charles T. Beasley
 Charles T. Beasley
 Manager

MAY 18 2020

Reviewed and digitally signed by Rachel Umberger on 5/18/2020 07:48:49

5/18/2020

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Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: LCSA 5/14/20 LCS23135 ID: AA **Batchnumber:** 201350023A
Sample Amount: 35 mL **Total Volume:** 2 mL **Analyst:** 13378 **SDG:** **State:**
Analyses: 10398

Analysis Report (A)

Injected on : May 15, 2020 22:00:38
 Instrument : CP16--19853A
 Result file : 16EDBS20133003.006.RAW
 Calibration file : 16EDBS2013301.CAL
 Method file : 16EDBS.MET

%SSR(1,1,2,2-PCA) : 67% (46-136) Conc.: 0.04748

Peak name	Min	R.T.	Max	Height	Amount
EDB	3.79	3.81	3.85	29381	0.110035
1,1,2,2-PCA	5.28	5.31	5.34	18140	0.047480
1,2,3-TCP	5.43	5.46	5.49	6929	0.122288
DBCP	8.19	8.22	8.25	74371	0.110403

Analysis Report (B)

Injected on : May 15, 2020 22:00:38
 Instrument : CP16--19853B
 Result file : 16EDBS20133003B.006.RAW
 Calibration file : 16EDBS2013301B.CAL
 Method file : 16EDBSB.MET

%SSR(1,1,2,2-PCA) : 65% (46-136) Conc.: 0.045929

Peak name	Min	R.T.	Max	Height	Amount
EDB	4.62	4.64	4.68	48139	0.115365
1,1,2,2-PCA	6.30	6.32	6.36	25068	0.045929
1,2,3-TCP	6.41	6.44	6.47	9651	0.119289
DBCP	9.05	9.08	9.11	117885	0.100337

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☒ EDB	A	0.110035	0.03	0.01		4.73	
☐ 1,1,2,2-PCA	A	0.047480				3.32	
☒ 1,2,3-TCP	A	0.122288	<0.27	0.1	J	2.48	
☒ DBCP	A	0.110403	0.03	0.01		9.55	

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

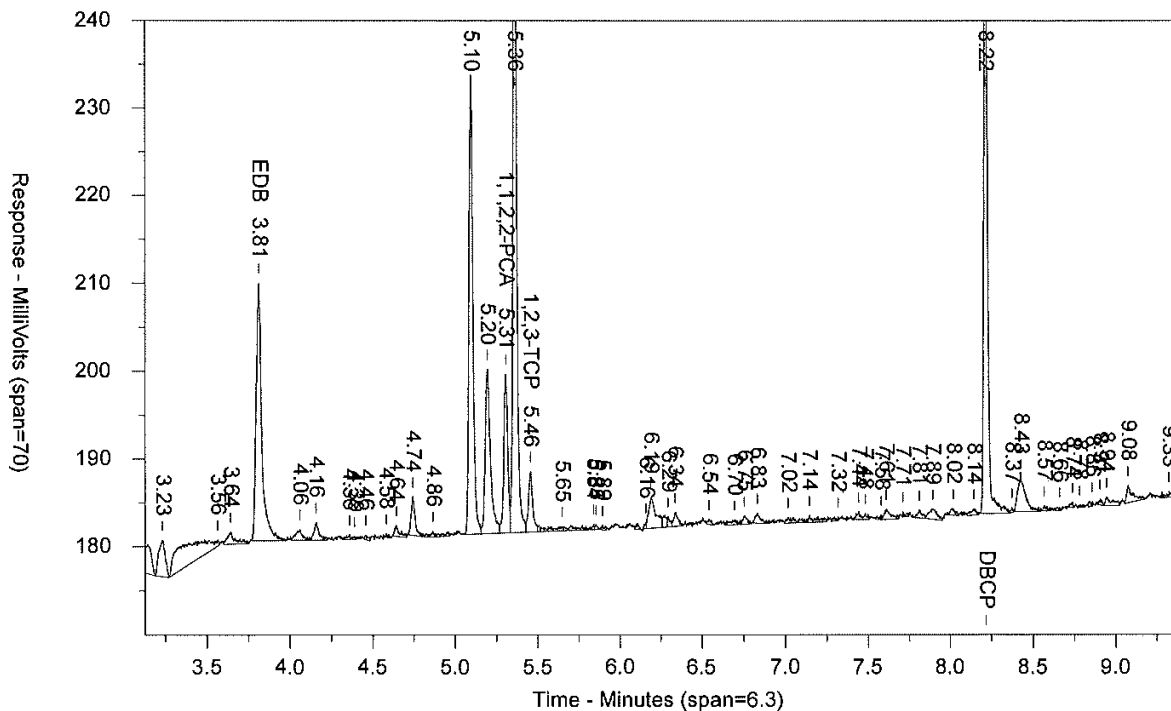
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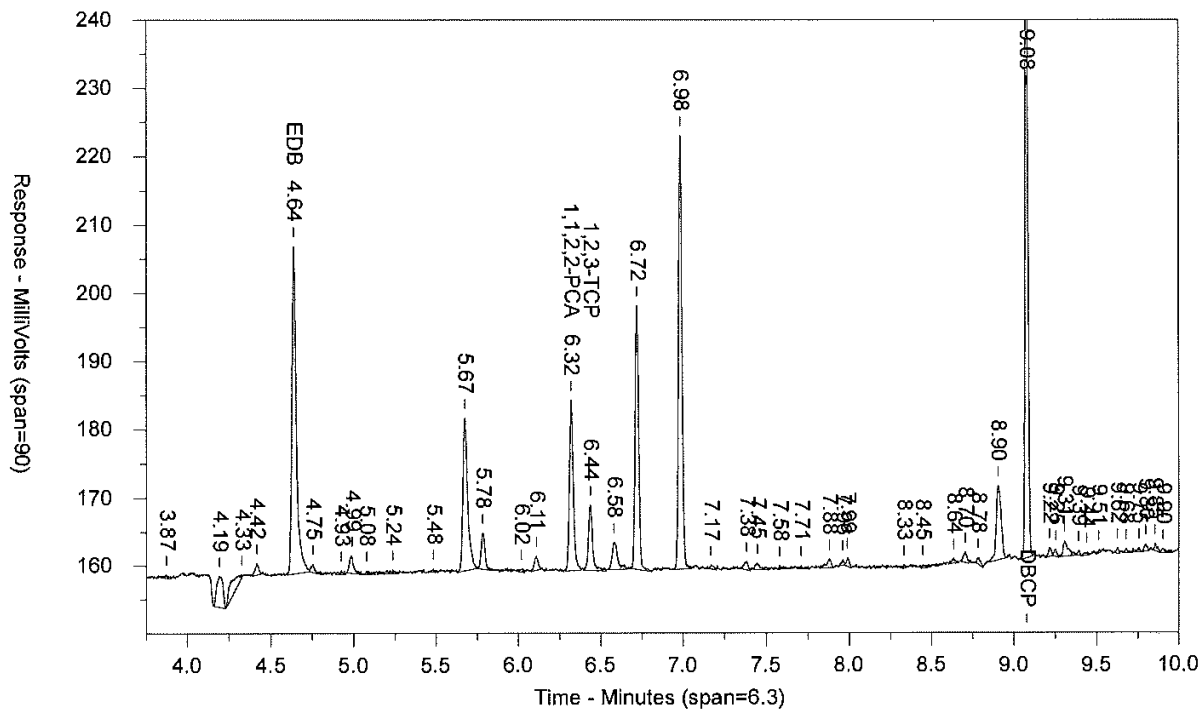
Chrom Perfect Chromatogram Report

LCSA 5/14/20 AALCS23135 LCS 201350023A 10398 SW-846 8011

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\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133003B.006.RAW



Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: LCSA 5/14/20 AALCS23135 LCS 201350023A 10398 SW-846 8011
 Injected On: 5/15/2020 10:00:38 PM Sample Weight: 35
 Instrument ID: CP16-19853 Dilution Factor: 2
 Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min
 Column A ID: DB CLP1 30m x 0.32mm x 0.25um
 Column B ID: DB CLP2 30m x 0.32mm x 0.5um
 Injection Volume: 1 ul

Threshold: 1
 Calibration Type: external
 Quantitation: Height

Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.813	29381	.11	EDB	4.64	48139	.115	EDB
5.308	18140	.047	1,1,2,2-PCA	6.321	25068	.046	1,1,2,2-PCA
5.457	6929	.122	1,2,3-TCP	6.436	9651	.119	1,2,3-TCP
8.218	74371	.11	DBCP	9.075	117885	.1	DBCP

Files:

Area File: 16edbs20133003.006.RAW
 Area File: 16edbs20133003B.006.RAW
 Method A: 16EDBS.MET
 Method B: 16EDBSB.MET
 Calibration File A: 16EDBS2013301.CAL
 Calibration File B: 16EDBS2013301B.CAL
 Format A: EDB16.FMTA
 Format B: EDB16.FMTB
 Area File Created On: 5/15/2020 10:10:42 PM
 File Reported On: 5/18/2020 at 6:53:50 AM



Lancaster Laboratories
Environmental

Data Summary

Sample Name: LCSDA **5/14/20** **LCSD23135 LCSD Sample ID: AA Batchnumber: 201350023A**
Sample Amount: 35 mL **Total Volume:** 2 ml **Analyst:** 13378 **SDG:** **State:**
Analyses: 10398

Analysis Report (A)

Injected on May 15, 2020 22:17:24
Instrument 19853A
Result file 16EDBS20133003.007.RAW
Calibration file 16EDBS2013301
Method file 16EDBS

%SSR(PCA) 63% (46 - 136) Conc: 0.044548

Single Component Data

Compound	Min	RT	Max	Height
Ethylene dibromide	3.79	3.81	3.85	27693
1,1,2,2-TETRACHLORO	5.28	5.31	5.34	17020
1,2,3-Trichloropropane	5.43	5.46	5.49	6512
1,2-Dibromo-3-chloropropane	8.19	8.22	8.25	73093

Analysis Report (B)

Injected on May 15, 2020 22:17:24
Instrument 19853B
Result file 16EDBS20133003B.007.RAW
Calibration file 16EDBS2013301B
Method file 16EDBSB

%SSR(PCA) 63% (46 - 136) Conc: 0.04405

Amount	Compound	Min	RT	Max	Height	Amount
0.103715	Ethylene dibromide	4.62	4.64	4.68	45937	0.110087
0.044548	1,1,2,2-TETRACHLORO	6.30	6.32	6.36	24043	0.04405
0.114929	1,2,3-Trichloropropane	6.41	6.44	6.47	9236	0.114152
0.108506	1,2-Dibromo-3-chloropropane	9.05	9.08	9.11	122352	0.104139

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
☐ Ethylene dibromide	A	0.103715	0.01	0.02	0.03		5.96	
☐ 1,1,2,2-TETRACHLORO	A	0.044548	0.0035	0.007	0.007		1.12	
☐ 1,1,2,2-TETRACHLORO	A	0.044548	0.0035	0.007	0.007			
☐ 1,1,2,2-TETRACHLORO	B	0.04405	0.0035	0.007	0.007			
☐ 1,2,3-Trichloropropane	A	0.114929	0.1	<0.2	<0.27	J	0.68	
☐ 1,2-Dibromo-3-chloropropane	A	0.108506	0.01	0.02	0.03		4.11	

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Charles T. Bensley
 Charles T. Bensley
 Manager

MAY 18 2020

Reviewed and digitally signed by Rachel Umberger on 5/18/2020 07:48:52

5/18/2020

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Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: LCSDA 5/14/20 LCSD23135 ID: AA Batchnumber: 201350023A
Sample Amount: 35 mL Total Volume: 2 ml Analyst: 13378 SDG: State:
Analyses: 10398

Analysis Report (A)

Injected on : May 15, 2020 22:17:24
 Instrument : CP16--19853A
 Result file : 16EDBS20133003.007.RAW
 Calibration file : 16EDBS2013301.CAL
 Method file : 16EDBS.MET

%SSR(1,1,2,2-PCA) : 63% (46-136) Conc.: 0.044548

Peak name	Min	R.T.	Max	Height	Amount
EDB	3.79	3.81	3.85	27693	0.103715
1,1,2,2-PCA	5.28	5.31	5.34	17020	0.044548
1,2,3-TCP	5.43	5.46	5.49	6512	0.114929
DBCP	8.19	8.22	8.25	73093	0.108506

Analysis Report (B)

Injected on : May 15, 2020 22:17:24
 Instrument : CP16--19853B
 Result file : 16EDBS20133003B.007.RAW
 Calibration file : 16EDBS2013301B.CAL
 Method file : 16EDBSB.MET

%SSR(1,1,2,2-PCA) : 63% (46-136) Conc.: 0.04405

Peak name	Min	R.T.	Max	Height	Amount
EDB	4.62	4.64	4.68	45937	0.110087
1,1,2,2-PCA	6.30	6.32	6.36	24043	0.044050
1,2,3-TCP	6.41	6.44	6.47	9236	0.114152
DBCP	9.05	9.08	9.11	122352	0.104139

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☒ EDB	A	0.103715	0.03	0.01		5.96	
☐ 1,1,2,2-PCA	A	0.044548				1.12	
☒ 1,2,3-TCP	A	0.114929	<0.27	0.1	J	0.68	
☒ DBCP	A	0.108506	0.03	0.01		4.11	

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

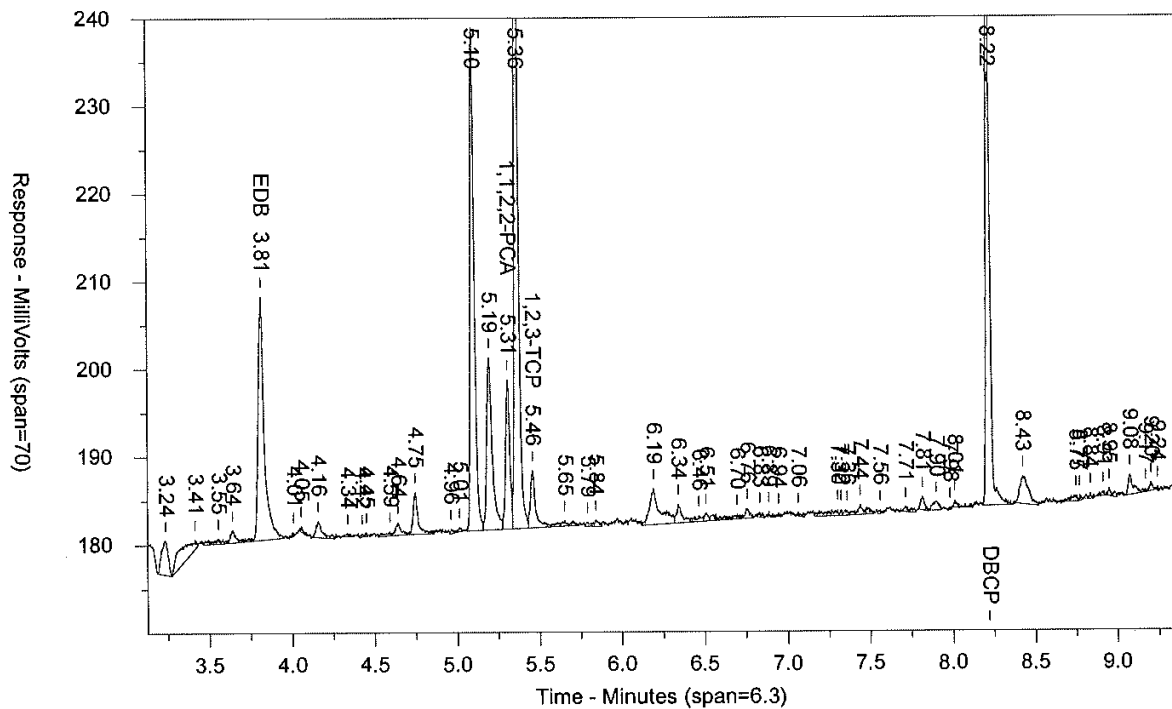
Printed on: 5/18/2020 07:07:27

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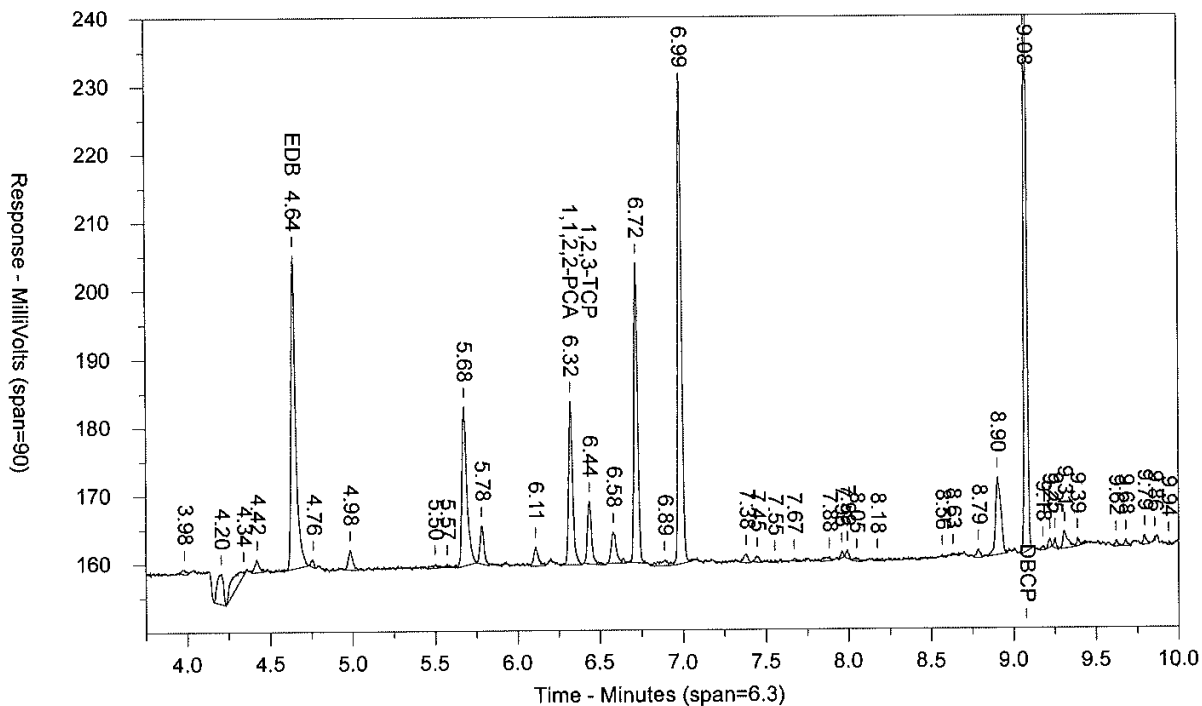
Chrom Perfect Chromatogram Report

LCSDA 5/14/20 AALCSD23135 LCSD 201350023A 10398 SW-846 8011

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\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP16\16edbs20133003B.007.RAW



Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: LCSDA 5/14/20 AALCSD23135 LCSD 201350023A 10398 SW-846 8011
 Injected On: 5/15/2020 10:17:24 PM Sample Weight: 35
 Instrument ID: CP16-19853 Dilution Factor: 2
 Oven Parameters: 45c for 1 min, to 280 @ 12c/min, hold for 2 min
 Column A ID: DB CLP1 30m x 0.32mm x 0.25um
 Column B ID: DB CLP2 30m x 0.32mm x 0.5um
 Injection Volume: 1 ul

Threshold: 1
 Calibration Type: external
 Quantitation: Height

Analyst: 13378

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
3.813	27693	.104	EDB	4.641	45937	.11	EDB
5.307	17020	.045	1,1,2,2-PCA	6.321	24043	.044	1,1,2,2-PCA
5.457	6512	.115	1,2,3-TCP	6.435	9236	.114	1,2,3-TCP
8.218	73093	.109	DBCP	9.076	122352	.104	DBCP

Files:

Area File: 16edbs20133003.007.RAW
 Area File: 16edbs20133003B.007.RAW
 Method A: 16EDBS.MET
 Method B: 16EDBSB.MET
 Calibration File A: 16EDBS2013301.CAL
 Calibration File B: 16EDBS2013301B.CAL
 Format A: EDB16.FMTA
 Format B: EDB16.FMTB
 Area File Created On: 5/15/2020 10:27:27 PM
 File Reported On: 5/18/2020 at 6:54:06 AM

Extraction/Distillation/Digestion Logs

EDB/DBCP

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Organic Extraction Batchlog Assigned to: 1383 Mathias Okpo

Reviewed by: WU 13378 Start Date: 05/14/2020 Start Time: 22:00Tech 1: WU 13376 Tech 2: _____**201350023A**

8011 Master Master		Solvent Used	Lot No.
QC		Hexane	200226
		NaCl	20093B
		Sodium Sulfate	20083A
		Vial Lot#	0417701E
		Vial Preservative Lot#	59072

8011 Master Master									
Dept 24	Prep Analysis: 07786	EDB Extraction (8011)							
QC	Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	Cl-	BC
1313221MS	12351	36.76	SS2012724A	.1	MS2012124A	.07	2	N	2
1313222MSD	12351	35.84	SS2012724A	.1	MS2012124A	.07	2	N	2
BLANKA	PBLK23135	35	SS2012724A	.1			2	N	2
LCSA	LCS23135	35	SS2012724A	.1	MS2012124A	.07	2	N	2
LCSDA	LCS23135	35	SS2012724A	.1	MS2012124A	.07	2	N	2

Spike Solutions: WU 13376 Witness: WU 13378

MS2012124A EDB SPIKE

SS2012724A EDB SURROGATE STANDARD

Sample #	Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	FV (mL)	Cl-	pH	BC	Comments	Analyses	List	Due Date	Prio
11312500	GW018	36.51	SS2012724A	0.10	2.00	N	2	057a	clear	10398	17641	05/20/2020	N
121312502	GW096	36.71	SS2012724A	0.10	2.00	N	2	057a	clear	10398	17641	05/20/2020	N
131312506	KAT90	36.77	SS2012724A	0.10	2.00	N	2	057a	clear	10398	17641	05/20/2020	N
141313220BKG	12351	36.18	SS2012724A	0.10	2.00	N	2	057a	clear	10398	17641	05/21/2020	N
151313224	12352	36.27	SS2012724A	0.10	2.00	N	2	057a	clear	10398	17641	05/21/2020	N
161313225	12353	36.71	SS2012724A	0.10	2.00	N	2	057a	clear	10398	17641	05/21/2020	N
171313226	12354	36.15	SS2012724A	0.10	2.00	N	2	057a	clear	10398	17641	05/21/2020	N
181313227	12355	36.40	SS2012724A	0.10	2.00	N	2	057a	clear	10398	17641	05/21/2020	N
191313228	12356	36.34	SS2012724A	0.10	2.00	N	2	057a	clear	10398	17641	05/21/2020	N
201313229	12357	36.77	SS2012724A	0.10	2.00	N	2	057a	clear	10398	17641	05/21/2020	N
111313230	12358	36.92	SS2012724A	0.10	2.00	N	2	057a	clear	10398	17641	05/21/2020	N
121313231	12359	36.42	SS2012724A	0.10	2.00	N	2	057a	clear	10398	17641	05/21/2020	N

WU 13376
WU 13378
05/15/20

Tumbler ID 1

Rack ID:	Work Station
Internal Standard	Balance #
	9330

S-bath ID	C	S-bath ID	C	N-Evap	C	M-vap	C	201350023A
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Documented temps are NIST corrected.

NF = Dilution Factor FV = Final Volume

Metals in Liquid Data

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Case Narrative/Conformance Summary

Metals in Liquid

KR446 Page 424 of 579

Case Narrative/Conformance Summary

CLIENT: EA Engineering, Science & Tech
SDG: KR446

ICP Metals

Fraction: Metals in Liquid

Sample #	Client ID	Matrix		DF	Comments
		Liquid	Solid		
1313220	GWTS-EFF1-051120	X		1	Background/Unspiked
1313221	GWTS-EFF1-051120	X		1	Matrix Spike
1313222	GWTS-EFF1-051120	X		1	Matrix Spike Duplicate
1313223	GWTS-EFF1-051120	X		1	Duplicate
1313224	GWTS-GAC1-051120	X		1	
1313225	GWTS-INF1-051120	X		1	
1313228	GWTS-EFF2-051120	X		1	
1313229	GWTS-EFF2DUP-051120	X		1	Field Duplicate Sample
1313230	GWTS-GAC2-051120	X		1	
1313231	GWTS-INF2-051120	X		1	

All analyses have been performed in accordance with DOD QSM Version 5.1.1 unless otherwise noted below.
See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

MS/MSD

All QC is within specification.

SAMPLE ANALYSIS:

Case Narrative/Conformance Summary

CLIENT: EA Engineering, Science & Tech

SDG: KR446

ICP Metals

Fraction: Metals in Liquid

The instrument detection limits (IDLs) are used for determining the U flags on the initial and continuing calibration blanks. The highest IDL is selected when multiple instruments are used for an analysis. The method detection limits (MDLs) are used for determining all other U flags.

No problems were encountered with the analysis of the samples.

Abbreviation Key

BKG – Background	AF - Cold Vapor Atomic Fluorescence
DUP – Duplicate	U - Below MDL
MS - Matrix Spike	B - Below LOQ
MSD - Matrix Spike Dup	N - Matrix Spike out of specifications
B – Blank	* - Duplicate out of specifications
Q - Laboratory Control Sample	E - Matrix Effects exist as proven by Serial Dilution or Spiked Dilution
Y - Laboratory Control Sample Duplicate	A - Post Digestion Spike
P - ICP Atomic Emission Spectrometer	L - Serial Dilution
MS - ICP Mass Spectrometry	R - Internal Standard Relative Intensity OOS
CV - Cold Vapor	NR - Not Required

Sample Data

Metals in Liquid

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QUALITY ASSURANCE SUMMARY

FORM 1

INORGANIC ANALYSIS DATA SHEET

SDG No.: KR446

Matrix: WATER Level (low/med): LOW

Lab Sample ID: 1313220BKG

% Solids: 0.0

Concentration Units: UG/L

Date Received: 05/12/2020

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	41.2	U		P
7439-96-5	Manganese	3.1	U		P

Comments:

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:

U = Below MDL,
B = Below LOQ



QUALITY ASSURANCE SUMMARY

FORM 1

INORGANIC ANALYSIS DATA SHEET

SDG No.: KR446

Matrix: WATER Level (low/med): LOW

Lab Sample ID: 1313221MS
Concentration Units: UG/L

% Solids: 0.0
Date Received: 05/12/2020

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	411			P
7439-96-5	Manganese	20.3			P

Comments:

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:

U = Below MDL,
B = Below LOQ



QUALITY ASSURANCE SUMMARY

FORM 1

INORGANIC ANALYSIS DATA SHEET

SDG No.: KR446

Matrix: WATER Level (low/med): LOW

Lab Sample ID: 1313222MSD

% Solids: 0.0

Concentration Units: UG/L

Date Received: 05/12/2020

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	406			P
7439-96-5	Manganese	20.6			P

Comments:

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:

U = Below MDL,
B = Below LOQ



QUALITY ASSURANCE SUMMARY

FORM 1

INORGANIC ANALYSIS DATA SHEET

SDG No.: KR446

Matrix: WATER Level (low/med): LOW

Lab Sample ID: 1313223DUP

% Solids: 0.0

Concentration Units: UG/L

Date Received: 05/12/2020

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	41.2	U		P
7439-96-5	Manganese	3.1	U		P

Comments:

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:

U = Below MDL,
B = Below LOQ



QUALITY ASSURANCE SUMMARY

FORM 1

INORGANIC ANALYSIS DATA SHEET

SDG No.: KR446

Matrix: WATER Level (low/med): LOW

Lab Sample ID: 1313224

% Solids: 0.0

Concentration Units: UG/L

Date Received: 05/12/2020

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	41.2	U		P
7439-96-5	Manganese	3.1	U		P

Comments:

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:

U = Below MDL,
B = Below LOQ



QUALITY ASSURANCE SUMMARY

FORM 1

INORGANIC ANALYSIS DATA SHEET

SDG No.: KR446

Matrix: WATER Level (low/med): LOW

Lab Sample ID: 1313225

% Solids: 0.0

Concentration Units: UG/L

Date Received: 05/12/2020

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	41.2	U		P
7439-96-5	Manganese	3.1	U		P

Comments:

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:

U = Below MDL,
B = Below LOQ



QUALITY ASSURANCE SUMMARY

FORM 1

INORGANIC ANALYSIS DATA SHEET

SDG No.: KR446

Matrix: WATER Level (low/med): LOW

Lab Sample ID: 1313228

% Solids: 0.0

Concentration Units: UG/L

Date Received: 05/12/2020

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	41.2	U		P
7439-96-5	Manganese	3.1	U		P

Comments:

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:

U = Below MDL,
B = Below LOQ



QUALITY ASSURANCE SUMMARY

FORM 1

INORGANIC ANALYSIS DATA SHEET

SDG No.: KR446

Matrix: WATER Level (low/med): LOW

Lab Sample ID: 1313229

% Solids: 0.0

Concentration Units: UG/L

Date Received: 05/12/2020

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	41.2	U		P
7439-96-5	Manganese	3.1	U		P

Comments:

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:

U = Below MDL,
B = Below LOQ



QUALITY ASSURANCE SUMMARY

FORM 1

INORGANIC ANALYSIS DATA SHEET

SDG No.: KR446

Matrix: WATER Level (low/med): LOW

Lab Sample ID: 1313230

% Solids: 0.0

Concentration Units: UG/L

Date Received: 05/12/2020

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	41.2	U		P
7439-96-5	Manganese	3.1	U		P

Comments:

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:

U = Below MDL,
B = Below LOQ



QUALITY ASSURANCE SUMMARY

FORM 1

INORGANIC ANALYSIS DATA SHEET

SDG No.: KR446

Matrix: WATER Level (low/med): LOW

Lab Sample ID: 1313231

% Solids: 0.0

Concentration Units: UG/L

Date Received: 05/12/2020

CAS No.	Analyte	Concentration	C	Q	M
7439-89-6	Iron	41.2	U		P
7439-96-5	Manganese	7.1	B		P

Comments:

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:

U = Below MDL,
B = Below LOQ

Quality Control and Calibration Summary Forms

Metals in Liquid

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QUALITY CONTROL REFERENCE LIST

SDG No.: KR446

Matrix: WATER

<u>Analyte</u>	<u>Batch Number</u>	<u>Lab Sample ID</u>
Iron	201351486601	1313220BKG
Manganese		1313221MS
		1313222MSD
		1313223DUP
		1313224
		1313225
		1313228
		1313229
		1313230
		1313231
		P13586AB
		P13586AQ

LEGEND:

BKG = Background	B = Blank
DUP = Duplicate	Q = Laboratory Control Sample
MS = Matrix Spike	Y = Laboratory Control Sample Duplicate
MSD = Matrix Spike Duplicate	

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QUALITY ASSURANCE SUMMARY

FORM 2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

SDG No.: KR446

Method: P

Run Name: 2013801T74

Calibration Date(s): 05/17/2020

Concentration Units: UG/L

Analyte	Mass	Initial Calibration			Continuing Calibration					
		True	Found	%R(1)	True	Found	%R(2)	True	Found	%R(2)
Iron		30000.0	30869.83	102.9	25000.0	27982.41	111.9*	25000.0	29348.08	117.4*
Manganese		600.0	588.52	98.1	500.0	504.18	100.8	500.0	502.18	100.4

(1) Control Limits: 90 - 110

(2) Control Limits: 90 - 110

* Outside Limits. If Continuing Calibration is outside limits, high, only ND samples are accepted.

METHODS:

P = ICP Atomic Emission Spectrometer

MS = ICP Mass Spectrometry

CV = Cold Vapor

AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY

FORM 2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

SDG No.: KR446

Method: P

Run Name: 2013801T74

Calibration Date(s): 05/17/2020

Concentration Units: UG/L

Analyte	Mass	Initial Calibration			Continuing Calibration					
		True	Found	%R(1)	True	Found	%R(2)	True	Found	%R(2)
Iron					25000.0	29500.29	118.0*	25000.0	27474.47	109.9
Manganese					500.0	505.78	101.2	500.0	498.27	99.7

(1) Control Limits: 90 - 110

(2) Control Limits: 90 - 110

* Outside Limits. If Continuing Calibration is outside limits, high, only ND samples are accepted.

METHODS:

P = ICP Atomic Emission Spectrometer

MS = ICP Mass Spectrometry

CV = Cold Vapor

AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY

FORM 2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

SDG No.: KR446

Method: P

Run Name: 2014003T73

Calibration Date(s): 05/19/2020

Concentration Units: UG/L

Analyte	Mass	Initial Calibration			Continuing Calibration					
		True	Found	%R(1)	True	Found	%R(2)	True	Found	%R(2)
Iron		30000.0	30358.37	101.2	25000.0	25912.50	103.7	25000.0	25951.85	103.8
Manganese		600.0	594.69	99.1	500.0	501.11	100.2	500.0	507.93	101.6

(1) Control Limits: 90 - 110

(2) Control Limits: 90 - 110

* Outside Limits. If Continuing Calibration is outside limits, high, only ND samples are accepted.

METHODS:

P = ICP Atomic Emission Spectrometer

MS = ICP Mass Spectrometry

CV = Cold Vapor

AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY

FORM 2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

SDG No.: KR446

Method: P

Run Name: 2014003T73

Calibration Date(s): 05/19/2020

Concentration Units: UG/L

Analyte	Mass	Initial Calibration			Continuing Calibration					
		True	Found	%R(1)	True	Found	%R(2)	True	Found	%R(2)
Iron					25000.0	25495.40	102.0			
Manganese					500.0	508.94	101.8			

(1) Control Limits: 90 - 110

(2) Control Limits: 90 - 110

* Outside Limits. If Continuing Calibration is outside limits, high, only ND samples are accepted.

METHODS:

P = ICP Atomic Emission Spectrometer

MS = ICP Mass Spectrometry

CV = Cold Vapor

AF = Cold Vapor Atomic Fluorescence

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Lancaster Laboratories
Environmental

QUALITY ASSURANCE SUMMARY
FORM 2B
LOW LEVEL CHECK STANDARD
SDG No.: KR446

Method: P
Run Name: 2013801T74
Calibration Date(s): 05/17/2020
Concentration Units: UG/L

Analyte	Mass	Initial			Final	
		True	Found	%R	Found	%R
Iron		200.0	229.72	114.9		
Manganese		10.0	10.28	102.8		

Control limits: 80% - 120%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.

For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2B
LOW LEVEL CHECK STANDARD
SDG No.: KR446

Method: P
Run Name: 2014003T73
Calibration Date(s): 05/19/2020
Concentration Units: UG/L

Analyte	Mass	Initial			Final	
		True	Found	%R	Found	%R
Iron		200.0	193.18	96.6		
Manganese		10.0	10.50	105.0		

Control limits: 80% - 120%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.

For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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Environmental

Appendix I-5

QUALITY ASSURANCE SUMMARY

FORM 3

BLANKS

SDG No.: KR446

Method: P

Run Name: 2013801T74

Calibration Date(s): 05/17/2020

Preparation Blank Matrix: WATER

Analyte	Mass	Initial Calibration Blank (ug/L)	Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)		
			C	1	C	2	C	3	C	Mass	Batch Number
Iron		33.4	U	33.4	U	33.4	U	33.4	U		
Manganese		0.83	U	0.83	U	0.83	U	7.4	B	3.100	201351486601

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:

U= Below IDL/MDL
B= Below LOQ

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Lancaster Laboratories
Environmental

QUALITY ASSURANCE SUMMARY

FORM 3

BLANKS

SDG No.: KR446

Method: P

Run Name: 2013801T74

Calibration Date(s): 05/17/2020

Analyte	Mass	Initial Calibration Blank (ug/L)	Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)		
			C	1	C	2	C	3	C	Mass	Batch Number
Iron				33.4	U						
Manganese				2.8	B						

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:

U= Below IDL/MDL
B= Below LOQ



QUALITY ASSURANCE SUMMARY

FORM 3

BLANKS

SDG No.: KR446

Method: P

Run Name: 2014003T73

Calibration Date(s): 05/19/2020

Preparation Blank Matrix: WATER

Analyte	Mass	Initial Calibration Blank (ug/L)	Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)		
			C	1	C	2	C	3	C	Mass	Batch Number
Iron		33.4	U	33.4	U	33.4	U	33.4	U	41.200	201351486601
Manganese		0.83	U	0.83	U	0.83	U	0.83	U		

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:

U= Below IDL/MDL
B= Below LOQ



QUALITY ASSURANCE SUMMARY

FORM 4A

ICP-AES INTERFERENCE CHECK SAMPLE

SDG No.: KR446

Instrument ID: 23745

Run Name: 2013801T74

Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum	500000	500000	541818	108.4	539379.4	107.9				
Calcium	500000	500000	547145	109.4	542366.1	108.5				
Iron	200000	200000	233650	116.8	233470.5	116.7				
Magnesium	500000	500000	566701	113.3	538570.2	107.7				
Manganese	0	500	-2		478.8	95.8				

Control Limits: All Metals 80%-120%



QUALITY ASSURANCE SUMMARY

FORM 4A

ICP-AES INTERFERENCE CHECK SAMPLE

SDG No.: KR446

Instrument ID: 18255

Run Name: 2014003T73

Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum	500000	500000	507995	101.6	504723.0	100.9				
Calcium	500000	500000	522885	104.6	517704.1	103.5				
Iron	200000	200000	204402	102.2	203283.7	101.6				
Magnesium	500000	500000	527663	105.5	525012.3	105.0				
Manganese	0	500	0		481.9	96.4				

Control Limits: All Metals 80%-120%



Lancaster Laboratories
Environmental

QUALITY ASSURANCE SUMMARY

FORM 5A (MS/MSD)

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

SDG No.: KR446

Matrix: WATER Level (low/med): LOW

Background Lab Sample ID: 1313220BKG Matrix Spike Lab Sample ID: 1313221MS Matrix Spike Duplicate Lab Sample ID: 1313222MSD
Batch Number(s): 201351486601

Analyte	Mass	BKG Sample		MS Sample		MSD Sample		MS Spike Added	MSD Spike Added	Units	MS		MSD		RPD	Control Limit		
		Result	C	Result	C	Result	C				%R	Q	%R	Q		%R	RPD	M
Iron		41.2000	U	411.0437		405.5418		417.6000	417.6000	UG/L	98		97		1	87 - 115	20	P
Manganese		3.0900	U	20.3058		20.5564		20.8800	20.8800	UG/L	97		98		1	90 - 114	20	P

Note: Results shown are reported on an as-received basis.

If Matrix Spike/ Matrix Spike Duplicate were out of specification, see Post Digestion Spike form.

METHODS:

P = ICP Atomic Emission Spectrometer

CV = Cold Vapor

MS = ICP Mass Spectrometry

AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:

U= Below MDL, B= Below LOQ

FLAGS:

N = Matrix Spike OOS, * = Duplicate OOS

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QUALITY ASSURANCE SUMMARY

FORM 6

DUPLICATES

SDG No.: KR446

Matrix: WATER Level (low/med): LOW

Background Lab Sample ID: 1313220BKG

1313223DUP

Batch Number(s): 2013514866
01

Concentration Units: UG/L

Analyte	Mass	Control Limit	Samples (S)	C	Duplicate (D)	C	RPD	Max RPD	Q	M
Iron			41.2000	U	41.2000	U		20		P
Manganese			3.0900	U	3.0900	U		20		P

NOTE: An asterisk (*) in column "Q" indicates poor duplicate precision (RPD > Max OR $| (S) - (D) | > LOQ$ for values < 5x LOQ).

The data are considered to be valid because the laboratory control sample is within the control limits. See the Laboratory Control Sample.

Note: Results shown are reported on an as-received basis.

METHODS: P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	CONCENTRATION QUALIFIERS: U= Below MDL B= Below LOQ FLAGS: * = Duplicate Out of Spec
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Lancaster Laboratories
Environmental

Appendix I-5

QUALITY ASSURANCE SUMMARY
FORM 7
LABORATORY CONTROL SAMPLE
SDG No.: KR446
Matrix: WATER

Analyte	Mass	Batch Number	Units	True	Found	C	Control Limits (%)	%R	M	In Spec
Iron		201351486601	UG/L	400.000	406.720		87 - 115	102	P	Yes
Manganese		201351486601	UG/L	20.000	20.290		90 - 114	101	P	Yes

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:

U= Below MDL
B= Below LOQ

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QUALITY ASSURANCE SUMMARY

FORM 9

SERIAL DILUTIONS

SDG No.: KR446

Matrix: WATER

Level (low/med): LOW

Background Lab Sample ID: 1313220BKG

Serial Dilution Lab Sample ID: 1313220L

Batch Number(s): 201351486601

Concentration Units: UG/L

Analyte	Mass	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Diff.	Q	M
Iron		41.2000	U	206.0000	U			P
Manganese		3.0900	U	15.4500	U			P

NOTE: An E in column Q indicates the presence of a chemical or physical interference in the matrix when the % difference is greater than 10%. This applies only when (I) is greater than or equal to 50x MDL for ICP, 100x MDL for ICP-MS (6020), 50x MDL for ICP-MS (200.8), or 25x MDL for GFAA.

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry

CONCENTRATION QUALIFIERS:

U= Below MDL
B= Below LOQ

FLAGS:

E = Matrix Effects exist as proven by
Serial Dilution or Spiked Dilution

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QUALITY ASSURANCE SUMMARY
FORM 10
INSTRUMENT DETECTION LIMITS
SDG No.: KR446

Method: P
Instrument ID: 18255
Date: 07/2018

Analyte	Wavelength (nm)	Background	IDL (UG/L)
Iron	261.19		33.4
Manganese	257.61		0.83

Comments:

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10
INSTRUMENT DETECTION LIMITS
SDG No.: KR446

Method: P
Instrument ID: 23745
Date: 07/2018

Analyte	Wavelength (nm)	Background	IDL (UG/L)
Iron	261.19		33.4
Manganese	257.61		0.83

Comments:

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10 MDL
METHOD DETECTION LIMITS (ANNUALLY)
SDG No.: KR446
Matrix: WATER

Method: P
Date: 09/2019

Analyte	Wavelength (nm)	Background	LOQ (UG/L)	MDL (UG/L)
Iron	261.19		200	40.0
Manganese	257.61		10.0	3.0

The LOQ/MDL must be adjusted for % Solids and Sample Weight for samples reporting in mg/kg and ug/L.

Comments:

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence



QUALITY ASSURANCE SUMMARY

FORM 11

ICP INTERELEMENT CORRECTION FACTORS (BIANNUALLY)

SDG No.: KR446

Instrument ID: 18255

Date: 02/2020

Analyte	Wavelength (nm)	Interelement Correction Factor for:				
		AL	CA	FE	MG	TH
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	-0.0005640

Comments:

QUALITY ASSURANCE SUMMARY

FORM 11

ICP INTERELEMENT CORRECTION FACTORS (BIANNUALLY)

SDG No.: KR446

Instrument ID: 23745

Date: 01/2020

Analyte	Wavelength (nm)	Interelement Correction Factor for:				
		AL	CA	FE	MG	TH
Manganese	257.61	0.0000000	0.0000000	0.0000130	0.0000000	0.0003030

Comments:



QUALITY ASSURANCE SUMMARY

FORM 11

ICP INTERELEMENT CORRECTION FACTORS (BIANNUALLY)

SDG No.: KR446

Instrument ID: 23745

Date: 01/2020

Analyte	Wavelength (nm)	Interelement Correction Factor for:			
		W	--	--	--
Manganese	257.61	-0.0004830			

Comments:

QUALITY ASSURANCE SUMMARY
FORM 12
LINEAR RANGES
SDG No.: KR446

Method: P
Instrument ID: 18255
Date: 01/2020

Analyte	Wavelength (nm)	Integration Time (Sec.)	Concentration (ug/L)
Iron	261.19	10.00	300000.0
Manganese	257.61	10.00	20000.0

Comments:

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

Method: P
Instrument ID: 23745
Date: 01/2020

Analyte	Wavelength (nm)	Integration Time (Sec.)	Concentration (ug/L)
Iron	261.19	10.00	300000.0
Manganese	257.61	10.00	20000.0

Comments:

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

QUALITY ASSURANCE SUMMARY
FORM 13
PREPARATION LOG
SDG No.: KR446

Method: P
Batch Number: 201351486601

Lab Sample ID	Date	Initial Volume(ml)	Final Volume(ml)
1313224	05/14/2020	50.00	51.5
1313225	05/14/2020	50.00	51.5
1313228	05/14/2020	50.00	51.5
1313229	05/14/2020	50.00	51.5
1313230	05/14/2020	50.00	51.5
1313231	05/14/2020	50.00	51.5
1313220BKG	05/14/2020	50.00	51.5
1313223DUP	05/14/2020	50.00	51.5
1313222MSD	05/14/2020	50.00	52.20000000000000 3
1313221MS	05/14/2020	50.00	52.20000000000000 3
P13586AB	05/14/2020	50.00	51.5
P13586AQ	05/14/2020	50.00	50

METHODS: P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	LEGEND: BKG = Background DUP = Duplicate MS = Matrix Spike MSD = Matrix Spike Duplicate B = Blank Q = Laboratory Control Sample Y = Laboratory Control Sample Duplicate
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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KR446

Method: P
Instrument ID: 23745
Run Name: 2013801T74

Run Start Date: 05/17/2020
Run End Date: 05/17/2020

Lab Sample ID	D/F	Time	Analytes																									
			F	M																								
S0	1.00	13:34	X	X																								
S	1.00	13:37	X																									
S	1.00	13:40		X																								
S	1.00	13:43																										
ICV	1.00	13:47	X	X																								
ICB	1.00	13:50	X	X																								
LLC	1.00	13:53	X	X																								
ICSA	1.00	13:56	X	X																								
ICSAB	1.00	14:00	X	X																								
CCV	1.00	14:03	X	X																								
CCB	1.00	14:06	X	X																								
LRS2	1.00	14:09	X	X																								
LRS4	1.00	14:13	X	X																								
LRS3	1.00	14:16	X	X																								
LRS5	1.00	14:20	X	X																								
CCV	1.00	14:23	X	X																								
CCB	1.00	14:27	X	X																								
P13586AB	1.00	14:30		X																								
P13586AQ	1.00	14:33		X																								
1313220BKG	1.00	14:36	X	X																								
ZZZZZZ	1.00	14:39																										
1313223DUP	1.00	14:42	X	X																								
ZZZZZZ	1.00	14:46																										
ZZZZZZ	1.00	14:49																										
1313220L	5.00	14:52	X	X																								
ZZZZZZ	1.00	14:55																										
1313224	1.00	14:59	X	X																								
CCV	1.00	15:02	X	X																								
CCB	1.00	15:06	X	X																								
1313225	1.00	15:09	X	X																								
1313229	1.00	15:12	X	X																								
1313230	1.00	15:15	X	X																								
1313228	1.00	15:18	X	X																								
1313231	1.00	15:21	X																									
ZZZZZZ	1.00	15:24																										
ZZZZZZ	1.00	15:28																										
ZZZZZZ	1.00	15:32																										
ZZZZZZ	1.00	15:36																										

METHODS: P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	LEGEND: BKG = Background DUP = Duplicate MS = Matrix Spike MSD = Matrix Spike Duplicate A = Post Digest Spike L = Serial Dilution B = Blank Q = Laboratory Control Sample Y = Laboratory Control Sample Duplicate
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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KR446

Method: P
Instrument ID: 23745
Run Name: 2013801T74

Run Start Date: 05/17/2020
Run End Date: 05/17/2020

Lab Sample ID	D/F	Time	Analytes																											
			F	M																										
ZZZZZZ	1.00	15:39																												
CCV	1.00	15:43	X	X																										
CCB	1.00	15:46	X	X																										

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:

BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KR446

Method: P
Instrument ID: 18255
Run Name: 2014003T73

Run Start Date: 05/19/2020
Run End Date: 05/19/2020

Lab Sample ID	D/F	Time	Analytes																									
			F	M																								
S0	1.00	05:51	X	X																								
S	1.00	05:54	X																									
S	1.00	05:57		X																								
S	1.00	06:00																										
ICV	1.00	06:03	X	X																								
ICB	1.00	06:07	X	X																								
LLC	1.00	06:10	X	X																								
ICSA	1.00	06:13	X	X																								
ICSAB	1.00	06:16	X	X																								
CCS	1.00	06:19	X	X																								
CCV	1.00	06:22	X	X																								
CCB	1.00	06:25	X	X																								
LRS2	1.00	06:29	X	X																								
LRS4	1.00	06:32	X	X																								
LRS3	1.00	06:35	X	X																								
LRS5	1.00	06:39	X	X																								
CCS	1.00	06:42	X	X																								
CCV	1.00	06:45	X	X																								
CCB	1.00	06:48	X	X																								
P13586AB	1.00	06:51	X																									
P13586AQ	1.00	06:55	X																									
1313220A	1.00	06:58																										
1313221MS	1.00	07:01	X	X																								
1313222MSD	1.00	07:04	X	X																								
ZZZZZZ	1.00	07:07																										
ZZZZZZ	5.00	07:11																										
1313231	1.00	07:14		X																								
ZZZZZZ	1.00	07:17																										
ZZZZZZ	5.00	07:21																										
CCV	1.00	07:24	X	X																								
CCB	1.00	07:27	X	X																								

METHODS: P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	LEGEND: BKG = Background DUP = Duplicate MS = Matrix Spike MSD = Matrix Spike Duplicate A = Post Digest Spike L = Serial Dilution B = Blank Q = Laboratory Control Sample Y = Laboratory Control Sample Duplicate
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Raw Data

Metals in Liquid

KR446 Page 467 of 579

ICP Data

Metals in Liquid

KR446 Page 468 of 579

ICP-AES Run Data Report



Reviewed By
Elaine F Stoltzfus

Reviewed Date
05/17/2020 5:00PM

Data File Name 2013801T74.TXT
Run Name: 2013801T74

Method Reference Name(s):

Verified By:
Elizabeth Saarinen

Verified Date
05/19/2020 7:35PM

Analyst Employee:

463

Instrument Parameters:

Individual Integration Time: 10.00 sec

Total Integration Time: 30.00 sec

Rinse Time: 15.00 sec

<u>Element</u>	<u>Analyte Name</u>	<u>Wavelength Value</u>
AG	Silver	328.06
AL	Aluminum	308.21
AS	Arsenic	189.04
AU	Gold	242.80
B	Boron	249.67
BA	Barium	455.40
BE	Beryllium	313.04
CA	Calcium	317.93
CD	Cadmium	226.50
CO	Cobalt	228.62
CR	Chromium	267.72
CU	Copper	327.40
FE	Iron	261.19
K	Potassium	766.49
LI	Lithium	670.78
MG	Magnesium	285.21
MN	Manganese	257.61
MO	Molybdenum	202.03
NA	Sodium	589.59
NI	Nickel	231.60
P	Phosphorus	177.49
PB	Lead	220.35
S	Sulfur	182.00
SB	Antimony	206.83
SE	Selenium	196.09
SI	Silicon	251.60
SN	Tin	189.99
SR	Strontium	421.55
TE	Tellurium	214.28
TH	Thorium	401.91
TI	Titanium	334.94
TL	Thallium	190.86
V	Vanadium	292.40
W	Tungsten	207.91
Y1	Yttrium	224.31
Y2	Yttrium	371.03
ZN	Zinc	213.86
ZR	Zirconium	339.19

The TRACE ICP utilizes Yttrium as an internal standard to compensate for fluctuations in nebulization and plasma conditions. All Yttrium readings are expressed in counts.

LANCASTER LABORATORIES

Run Name: 2013801T74

Instrument ID: 23745

Tube: 1

Date/Time: 05/17/2020 13:34

Sample Number: S0

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS		
				#1	#2	#3
AG	0.000	0.26784	3882.838	-0.00045	0.00304	-0.00237
AL	0.000	2.72391	103.557	0.00921	0.04066	0.00580
ALA	0.000	43.89375	7.708	0.01045	0.01219	0.01139
AS	0.000	0.23998	315.049	-0.00716	0.01040	0.00537
B	0.000	4.72412	94.303	0.00000	0.00005	0.00002
BA	0.000	115.64622	3.241	0.00061	0.00058	0.00061
BE	0.000	-792.94661	1.757	-0.20299	-0.20272	-0.20908
CA	0.000	48.72957	5.182	0.00621	0.00674	0.00685
CD	0.000	-0.45662	187.598	0.00632	-0.01219	-0.01051
CO	0.000	3.19301	3.273	0.03830	0.03680	0.03928
CR	0.000	-5.55339	49.537	-0.00003	-0.00004	-0.00002
CU	0.000	-5.87536	171.510	0.00136	-0.00372	-0.00221
FE	0.000	-2.51006	63.401	-0.00058	-0.00025	-0.00018
K	0.000	21.84381	47.926	0.10029	0.11479	0.23007
LI	0.000	-7.85429	203.660	-0.00345	0.00021	0.00015
MG	0.000	-1.61333	150.676	-0.00055	-0.00018	0.00009
MN	0.000	7.56232	47.815	0.00299	0.00119	0.00168
MO	0.000	-0.24164	152.736	-0.00730	0.00151	-0.00285
NA	0.000	128.70561	10.020	0.01542	0.01846	0.01844
NI	0.000	4.25624	29.560	0.03854	0.04636	0.06757
P	0.000	1.43986	33.298	0.00025	0.00047	0.00031
PB	0.000	1.16100	21.115	0.01491	0.01055	0.01612
S	0.000	0.94657	19.466	0.00021	0.00019	0.00027
SB	0.000	1.43986	12.354	0.00030	0.00038	0.00035
SE	0.000	0.19847	101.759	-0.00039	0.00343	0.00407
SI	0.000	0.72527	156.343	0.00027	0.00000	0.00002
SN	0.000	-0.38996	98.516	-0.00835	-0.00609	0.00048
SR	0.000	-20.29259	53.517	-0.00012	-0.00015	-0.00004
TH	0.000	0.93086	200.481	0.00021	0.00032	-0.00016
TI	0.000	9.24231	25.824	0.00307	0.00187	0.00222
TL	0.000	-0.65660	107.960	-0.00072	-0.01721	-0.00561
V	0.000	-20.20129	13.486	-0.00477	-0.00603	-0.00486
W	0.000	0.72882	43.260	0.00021	0.00009	0.00023
Y1	0.000	4187.30794	0.072	4190.18098	4184.17658	4187.56624
Y2A	0.000	193468.79774	0.177	193847.34954	193183.81913	193375.22455
Y2R	0.000	7391.94703	2.317	7589.63865	7289.96812	7296.23431
ZN	0.000	11.41553	12.552	0.15535	0.12223	0.13133
ZR	0.000	6.29441	53.507	0.00033	0.00110	0.00115

LANCASTER LABORATORIES

Run Name: 2013801T74

Instrument ID: 23745

Tube: 2

Date/Time: 05/17/2020 13:37

Sample Number: **S1**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS		
				#1	#2	#3
AL	50.000	2088.25320	0.405	14.19235	14.18703	14.28932
ALA	50.000	69205.32344	0.457	18.93131	18.86837	18.76087
CA	50.000	22046.32873	0.129	3.00166	3.00014	3.00746
FE	50.000	6161.86036	0.139	0.83844	0.83896	0.84066
K	50.000	23971.19909	0.150	163.15992	163.08869	163.54505
MG	50.000	32745.72604	0.747	4.43021	4.45541	4.49625
NA	50.000	33300.30976	1.088	4.49527	4.52233	4.59103
S	50.000	2577.53558	0.567	0.64590	0.65071	0.64352
SI	50.000	3815.91541	0.375	0.51755	0.52096	0.52089
Y1	50.000	3985.62644	0.191	3994.36056	3980.47195	3982.04680
Y2A	50.000	183537.18614	0.583	182325.97305	183930.00600	184355.57938
Y2R	50.000	7341.23682	0.513	7383.00020	7330.90202	7309.80823

LANCASTER LABORATORIES

Run Name: 2013801T74

Instrument ID: 23745

Tube: 3

Date/Time: 05/17/2020 13:40

Sample Number: **S2**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS		
				#1	#2	#3
AG	1.000	8223.71957	0.255	2.21239	2.21242	2.22221
AS	1.000	106.75742	0.580	1.30706	1.30000	1.31516
B	1.000	7783.11967	0.489	0.04198	0.04172	0.04212
BA	1.000	627053.28232	0.552	3.38029	3.35952	3.39674
BE	1.000	375704.29394	0.332	101.61133	101.00519	101.05607
CD	1.000	10514.65294	0.152	128.99339	128.66015	128.64942
CO	1.000	1738.71120	0.545	21.30181	21.17307	21.40464
CU	1.000	7680.60404	0.242	2.06874	2.06467	2.07462
LI	1.000	7843.59869	0.670	1.07383	1.08707	1.07541
MN	1.000	63641.40361	0.168	17.17931	17.13563	17.12494
NI	1.000	1285.23875	0.549	15.81773	15.64686	15.75465
P	1.000	197.63185	0.931	0.04881	0.04849	0.04792
PB	1.000	783.87769	0.353	9.63806	9.58768	9.57356
SE	1.000	115.79449	0.147	1.42013	1.41813	1.41597
SR	1.000	642159.68536	0.986	3.44528	3.49940	3.43638
TH	1.000	48.18412	3.379	0.00674	0.00677	0.00637
TL	1.000	190.13949	0.932	2.33155	2.30551	2.34861
W	1.000	536.47756	0.462	0.13184	0.13071	0.13166
Y1	1.000	4082.80594	0.165	4076.58171	4089.97205	4081.86407
Y2A	1.000	185579.90911	0.291	185727.67679	184982.04654	186030.00399
Y2R	1.000	7271.14751	0.843	7300.96961	7200.66000	7311.81291
ZN	1.000	7677.49759	0.243	94.27723	93.83721	93.95321

LANCASTER LABORATORIES

Run Name: 2013801T74

Instrument ID: 23745

Tube: 4

Date/Time: 05/17/2020 13:43

Sample Number: **S3**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS		
				#1	#2	#3
CR	1.000	6362.29892	0.617	0.03280	0.03248	0.03285
MO	1.000	1552.90104	0.195	18.35553	18.28509	18.30985
SB	1.000	285.93474	0.313	0.06727	0.06768	0.06741
SN	1.000	209.99900	0.019	2.47711	2.47645	2.47740
TI	1.000	52812.33466	0.395	13.53309	13.63481	13.55491
V	1.000	5937.52645	0.410	1.52818	1.53104	1.51906
Y1	1.000	4239.00443	0.145	4239.40106	4244.96050	4232.65173
Y2A	1.000	194530.72854	0.635	195514.28785	194934.30893	193143.58885
Y2R	1.000	7532.11607	0.391	7524.18809	7564.69355	7507.46656
ZR	1.000	952.84846	0.269	0.12687	0.12620	0.12644

LANCASTER LABORATORIES

Run Name: 2013801T74

Instrument ID: 23745

Tube: 5

Date/Time: 05/17/2020 13:47

Sample Number: **ICV**

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	0.58905	4,799.86	0.401	0.59122	0.58939	0.58653
___ AL	30.77197	1,302.70	0.305	30.66626	30.84512	30.80454
___ AL A)	30.09464	42,284.15	0.407	30.20501	30.11628	29.96264
___ AS	0.59301	62.53	1.051	0.60013	0.59033	0.58856
___ B	0.59026	4,639.94	0.434	0.59157	0.59189	0.58731
___ BA	0.59606	372,127.44	1.282	0.59268	0.59070	0.60482
___ BE	0.57428	214,415.56	0.031	0.57437	0.57440	0.57408
___ CA	30.25287	13,506.85	0.450	30.30952	30.09763	30.35145
___ CD	0.59465	6,225.19	0.263	0.59437	0.59633	0.59324
___ CO	0.59308	1,026.75	0.524	0.59585	0.59368	0.58972
___ CR	0.58577	3,536.68	1.014	0.59249	0.58120	0.58363
___ CU	0.60644	4,581.44	0.362	0.60726	0.60812	0.60396
___ FE	30.86983	3,872.03	0.474	30.73317	30.85229	31.02403
___ K	29.75340	14,375.36	0.315	29.67223	29.73178	29.85618
___ LI	0.59592	4,760.13	0.392	0.59367	0.59833	0.59576
___ MG	30.65490	20,492.84	0.485	30.53321	30.82066	30.61082
___ MN	0.58852	37,482.29	0.071	0.58866	0.58806	0.58885
___ MO	0.60119	891.29	0.446	0.59905	0.60030	0.60420
___ NA	29.28235	19,695.69	0.789	29.07923	29.53352	29.23430
___ NI	0.59490	758.27	0.538	0.59566	0.59766	0.59139
___ P	0.60373	118.92	0.837	0.60609	0.60717	0.59793
___ PB	0.58678	462.69	0.371	0.58626	0.58490	0.58917
___ S	29.47792	1,541.94	0.315	29.55670	29.50163	29.37543
___ SB	0.62009	169.80	0.849	0.61434	0.62468	0.62124
___ SE	0.58440	66.92	0.384	0.58503	0.58626	0.58191
___ SI	31.77216	2,443.57	0.183	31.70733	31.78953	31.81963
___ SN	0.57423	115.06	0.311	0.57230	0.57582	0.57458
___ SR	0.59627	381,568.41	0.500	0.59569	0.59950	0.59362
___ TH	0.82837	40.09	2.538	0.84988	0.82736	0.80787
___ TI	0.60776	30,478.50	0.197	0.60744	0.60908	0.60676
___ TL	0.60292	109.97	0.751	0.60799	0.60147	0.59929
___ V	0.60085	3,380.29	0.294	0.59882	0.60182	0.60192
___ W	0.61428	327.02	0.479	0.61767	0.61282	0.61236
___ Y1	4050.44263	4,050.44	0.135	4052.06587	4044.33293	4054.92909
___ Y2A	184698.49411	184,698.49	0.267	184711.09172	185184.56543	184199.82517
___ Y2R	7393.62634	7,393.63	0.414	7399.50010	7420.88153	7360.49740
___ ZN	0.58420	4,498.16	0.018	0.58424	0.58428	0.58408
___ ZR	0.60014	610.21	1.108	0.59248	0.60451	0.60342

LANCASTER LABORATORIES

Run Name: 2013801T74

Instrument ID: 23745

Tube: 6

Date/Time: 05/17/2020 13:50

Sample Number: ICB

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS		
				#1	#2	#3
___ AG	0.00061	0.09	149.621	0.00137	0.00088	-0.00041
___ AL	0.01631	3.59	136.834	-0.00848	0.03478	0.02262
___ AL A)	0.00024	49.00	1665.462	-0.00238	0.00488	-0.00177
___ AS	0.00060	0.30	681.433	-0.00397	0.00195	0.00380
___ B	0.00080	11.41	35.356	0.00057	0.00111	0.00071
___ BA	0.00005	143.85	76.756	0.00002	0.00008	0.00003
___ BE	0.00007	-764.69	82.989	0.00000	0.00010	0.00009
___ CA	-0.00362	47.38	127.117	-0.00044	-0.00890	-0.00153
___ CD	0.00067	-0.89	14.603	0.00062	0.00079	0.00061
___ CO	-0.00083	1.71	64.367	-0.00033	-0.00077	-0.00139
___ CR	0.00078	0.28	73.089	0.00098	0.00014	0.00122
___ CU	-0.00012	1.10	1040.166	-0.00023	0.00114	-0.00126
___ FE	0.01505	0.63	41.251	0.01127	0.01167	0.02222
___ K	0.01738	30.46	208.024	0.03175	-0.02375	0.04412
___ LI	0.00007	-7.06	446.371	-0.00028	0.00012	0.00039
___ MG	-0.00019	-1.50	1472.873	0.00112	-0.00347	0.00177
___ MN	-0.00002	6.01	194.031	-0.00005	-0.00006	0.00003
___ MO	0.00028	-0.19	118.785	0.00015	0.00065	0.00003
___ NA	-0.01602	118.79	77.338	-0.00735	-0.03022	-0.01051
___ NI	-0.00028	3.87	137.284	-0.00029	-0.00066	0.00011
___ P	0.00076	1.59	302.626	0.00082	0.00305	-0.00158
___ PB	-0.00146	-0.01	67.753	-0.00259	-0.00105	-0.00074
___ S	0.00426	1.17	106.257	-0.00011	0.00397	0.00894
___ SB	-0.00011	1.41	275.873	-0.00044	-0.00008	0.00018
___ SE	0.00239	0.48	209.788	0.00258	-0.00271	0.00729
___ SI	0.00657	1.22	191.466	-0.00465	0.00419	0.02016
___ SN	0.00355	0.35	23.405	0.00328	0.00289	0.00448
___ SR	0.00020	26.38	20.692	0.00015	0.00024	0.00020
___ TH	0.03118	-1.30	80.574	0.03800	0.00335	0.05219
___ TI	0.00000	9.17	3870.484	-0.00007	-0.00008	0.00015
___ TL	0.00158	-0.24	284.455	-0.00333	0.00547	0.00259
___ V	0.00198	-14.95	45.503	0.00129	0.00164	0.00300
___ W	-0.00024	0.59	554.476	-0.00064	0.00125	-0.00133
___ Y1	4169.39473	4,169.39	0.129	4174.18258	4163.55864	4170.44296
___ Y2A	192238.53638	192,238.54	0.392	192742.22333	191371.95609	192601.42971
___ Y2R	7428.16396	7,428.16	0.577	7473.98884	7421.47135	7389.03168
___ ZN	-0.00075	5.53	17.536	-0.00085	-0.00060	-0.00080
___ ZR	-0.00110	7.10	443.473	-0.00589	0.00383	-0.00123

LANCASTER LABORATORIES

Run Name: 2013801T74

Instrument ID: 23745

Tube: 7

Date/Time: 05/17/2020 13:53

Sample Number: LLC

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	0.00048	-79.18	162.541	0.00130	0.00035	-0.00023
___ AL	0.17996	12.79	32.476	0.15457	0.13851	0.24681
___ AL A)	0.19429	404.26	4.579	0.18474	0.19578	0.20235
___ AS	0.02935	3.45	15.350	0.03066	0.02434	0.03306
___ B	0.02909	238.12	2.476	0.02970	0.02928	0.02829
___ BA	0.00528	3,537.78	0.874	0.00525	0.00533	0.00526
___ BE	0.00486	1,061.49	0.944	0.00491	0.00482	0.00487
___ CA	0.19912	140.15	4.656	0.20912	0.19742	0.19081
___ CD	0.00580	54.85	2.252	0.00593	0.00567	0.00579
___ CO	0.00359	9.68	19.285	0.00393	0.00279	0.00405
___ CR	0.01471	87.54	1.718	0.01442	0.01490	0.01480
___ CU	0.01265	211.18	8.469	0.01165	0.01253	0.01378
___ FE	0.22972	28.48	4.459	0.23665	0.21795	0.23456
___ K	0.28971	164.34	1.389	0.29041	0.29333	0.28538
___ LI	0.05135	409.25	5.402	0.04985	0.05455	0.04965
___ MG	0.10737	73.15	3.119	0.10570	0.11122	0.10518
___ MN	0.01028	683.78	0.606	0.01035	0.01023	0.01026
___ MO	0.01021	15.11	2.743	0.00994	0.01020	0.01050
___ NA	0.93930	769.15	1.457	0.92983	0.93307	0.95499
___ NI	0.01089	18.62	7.128	0.01178	0.01051	0.01036
___ P	0.10172	21.94	2.634	0.09954	0.10091	0.10471
___ PB	0.01404	12.54	1.309	0.01425	0.01389	0.01400
___ S	0.46718	26.24	3.197	0.48372	0.45470	0.46311
___ SB	0.05059	15.58	2.309	0.05157	0.05090	0.04930
___ SE	0.04843	5.94	8.977	0.05160	0.04348	0.05022
___ SI	0.55400	44.06	4.145	0.57653	0.55484	0.53063
___ SN	0.05114	10.29	3.456	0.05210	0.05223	0.04910
___ SR	0.00537	3,454.77	0.232	0.00535	0.00538	0.00536
___ TH	0.48850	22.81	9.598	0.54126	0.47262	0.45162
___ TI	0.00999	528.16	1.345	0.00994	0.01014	0.00988
___ TL	0.03373	6.01	8.748	0.03286	0.03131	0.03702
___ V	0.01118	39.07	6.150	0.01057	0.01105	0.01193
___ W	0.02994	17.20	1.474	0.03016	0.03023	0.02943
___ Y1	4207.43259	4,207.43	0.369	4199.54505	4225.31247	4197.44026
___ Y2A	191421.73124	191,421.73	0.696	192362.04147	192006.97767	189896.17459
___ Y2R	7516.49327	7,516.49	1.021	7442.33380	7595.56685	7511.57916
___ ZN	0.01960	166.27	1.107	0.01970	0.01976	0.01936
___ ZR	0.04818	79.74	6.330	0.04512	0.04822	0.05122

LANCASTER LABORATORIES

Run Name: 2013801T74

Instrument ID: 23745

Tube: 8

Date/Time: 05/17/2020 13:56

Sample Number: **ICSA**

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	-0.00087	-41.56	14.759	-0.00077	-0.00083	-0.00101
___ AL	541.81777	21,348.94	0.512	538.99951	541.90598	544.54781
___ AL A)	536.90658	610,408.93	1.065	530.32691	539.74967	540.64318
___ AS	-0.00967	-2.90	66.950	-0.01247	-0.01426	-0.00227
___ B	-0.01204	926.29	3.226	-0.01174	-0.01190	-0.01248
___ BA	0.00169	1,038.81	2.123	0.00167	0.00173	0.00166
___ BE	-0.00087	-977.64	1.274	-0.00086	-0.00086	-0.00088
___ CA	547.14457	210,521.32	0.898	547.13121	542.24012	552.06237
___ CD	0.00067	168.83	24.147	0.00065	0.00084	0.00052
___ CO	0.00060	3.72	5.666	0.00056	0.00059	0.00063
___ CR	-0.00614	-37.12	9.381	-0.00666	-0.00552	-0.00624
___ CU	0.00213	85.74	96.550	0.00387	0.00266	-0.00014
___ FE	233.65011	25,015.65	0.219	233.28771	233.42825	234.23438
___ K	-0.25682	45.31	5.701	-0.27160	-0.24233	-0.25652
___ LI	-0.01872	24.94	2.804	-0.01848	-0.01836	-0.01933
___ MG	566.70093	230,159.86	2.991	568.76954	548.80903	582.52424
___ MN	-0.00220	1,254.64	4.039	-0.00224	-0.00210	-0.00227
___ MO	-0.00176	-2.91	44.156	-0.00235	-0.00088	-0.00205
___ NA	0.09733	186.49	18.295	0.11460	0.07903	0.09835
___ NI	-0.00442	-1.37	6.964	-0.00455	-0.00407	-0.00465
___ P	0.00456	2.07	91.534	0.00494	0.00021	0.00853
___ PB	0.01522	75.05	22.947	0.01819	0.01609	0.01137
___ S	-0.08305	-3.12	26.456	-0.07963	-0.06299	-0.10653
___ SB	0.00376	2.16	92.695	0.00308	0.00066	0.00753
___ SE	-0.00189	-2.28	66.497	-0.00121	-0.00335	-0.00113
___ SI	0.01237	1.60	107.573	0.02119	-0.00294	0.01887
___ SN	0.00511	0.59	18.046	0.00607	0.00424	0.00501
___ SR	-0.00487	5,506.91	3.050	-0.00489	-0.00471	-0.00500
___ TH	0.15421	4.89	36.349	0.09694	0.15672	0.20896
___ TI	-0.00430	-184.57	6.041	-0.00439	-0.00400	-0.00450
___ TL	0.00482	-2.95	120.372	0.00010	0.00306	0.01129
___ V	0.01388	71.21	3.957	0.01359	0.01452	0.01354
___ W	-0.00020	0.53	594.724	0.00030	0.00068	-0.00158
___ Y1	3679.16542	3,679.17	1.070	3646.73533	3667.80822	3722.95270
___ Y2A	165076.99428	165,076.99	0.157	165340.48880	165069.48324	164821.01080
___ Y2R	7108.52190	7,108.52	0.575	7132.05436	7132.21845	7061.29290
___ ZN	-0.00100	300.87	64.464	-0.00048	-0.00080	-0.00172
___ ZR	-0.00196	12.65	167.406	0.00182	-0.00390	-0.00379

LANCASTER LABORATORIES

Run Name: 2013801T74

Instrument ID: 23745

Tube: 9

Date/Time: 05/17/2020 14:00

Sample Number: ICSAB

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	0.21645	1,602.56	0.326	0.21574	0.21644	0.21715
___ AL	539.37942	21,764.14	0.384	540.15350	540.95488	537.02988
___ AL A)	528.74835	611,512.10	0.685	524.80141	531.91732	529.52632
___ AS	0.10171	7.72	9.009	0.09657	0.11229	0.09627
___ B	-0.01720	895.25	2.903	-0.01765	-0.01666	-0.01729
___ BA	0.51045	289,200.42	1.124	0.50434	0.51573	0.51129
___ BE	0.49756	168,576.23	0.303	0.49668	0.49930	0.49670
___ CA	542.36609	213,887.65	0.842	545.41141	544.57371	537.11317
___ CD	0.92075	8,901.14	1.803	0.92833	0.93220	0.90172
___ CO	0.45310	712.25	0.958	0.45630	0.45484	0.44816
___ CR	0.46544	2,549.95	0.502	0.46369	0.46809	0.46453
___ CU	0.54579	3,746.55	0.218	0.54452	0.54687	0.54598
___ FE	233.47047	25,595.91	0.403	234.40418	233.48645	232.52077
___ K	-0.33085	3.99	2.145	-0.33734	-0.33193	-0.32327
___ LI	-0.01341	65.83	16.774	-0.01556	-0.01358	-0.01107
___ MG	538.57023	230,864.84	1.476	543.02341	543.29751	529.38977
___ MN	0.47879	28,923.93	0.366	0.47701	0.48051	0.47886
___ MO	-0.00153	-2.61	52.972	-0.00195	-0.00060	-0.00205
___ NA	0.08009	179.61	14.641	0.08783	0.06660	0.08585
___ NI	0.90043	1,044.54	1.848	0.90701	0.91278	0.88151
___ P	0.00348	2.30	23.724	0.00413	0.00375	0.00255
___ PB	0.50698	421.83	2.398	0.51435	0.51365	0.49295
___ S	-0.09841	-3.94	5.557	-0.09827	-0.10395	-0.09301
___ SB	0.64342	159.99	2.381	0.65840	0.64407	0.62778
___ SE	0.52436	52.00	1.115	0.52790	0.52757	0.51761
___ SI	0.02408	2.52	71.172	0.04388	0.01401	0.01436
___ SN	0.00718	0.96	57.232	0.00848	0.01047	0.00258
___ SR	-0.00100	7,761.88	12.393	-0.00110	-0.00105	-0.00086
___ TH	0.17236	5.94	16.826	0.20135	0.17236	0.14336
___ TI	-0.00343	-148.26	1.600	-0.00338	-0.00344	-0.00349
___ TL	0.08716	11.25	4.395	0.08888	0.08983	0.08277
___ V	0.51723	2,700.27	0.634	0.51906	0.51345	0.51919
___ W	0.00121	6.84	105.471	0.00207	0.00182	-0.00026
___ Y1	3682.99898	3,683.00	1.332	3658.07208	3651.39333	3739.53152
___ Y2A	167654.10020	167,654.10	0.489	168452.07500	166814.22500	167696.00060
___ Y2R	7278.26272	7,278.26	0.708	7232.60870	7267.99681	7334.18265
___ ZN	0.97943	7,074.44	1.719	0.98812	0.99014	0.96002
___ ZR	-0.00613	10.15	75.131	-0.00914	-0.00842	-0.00083

LANCASTER LABORATORIES

Run Name: 2013801T74

Instrument ID: 23745

Tube: 10

Date/Time: 05/17/2020 14:03

Sample Number: **CCV**

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	0.49454	4,046.12	0.837	0.49308	0.49132	0.49921
___ AL	26.62079	1,146.09	0.422	26.65349	26.71306	26.49581
___ AL A)	26.01834	36,453.87	0.248	26.09033	25.96605	25.99865
___ AS	0.50638	53.61	1.510	0.49918	0.51440	0.50556
___ B	0.49287	3,869.69	0.407	0.49519	0.49161	0.49183
___ BA	0.51399	319,979.30	1.246	0.52097	0.50840	0.51260
___ BE	0.50315	187,240.81	0.321	0.50465	0.50144	0.50337
___ CA	26.59230	12,091.85	0.353	26.69402	26.50918	26.57369
___ CD	0.50938	5,351.70	0.219	0.51034	0.50964	0.50816
___ CO	0.49906	867.60	0.069	0.49898	0.49943	0.49875
___ CR	0.49119	2,956.35	0.963	0.49260	0.48592	0.49506
___ CU	0.52559	3,914.21	0.881	0.53018	0.52567	0.52092
___ FE	27.98241	3,575.98	0.525	28.11155	28.01320	27.82246
___ K	25.13049	12,354.84	0.462	25.25840	25.10141	25.03167
___ LI	0.49425	4,015.19	0.891	0.49512	0.49815	0.48947
___ MG	26.60109	18,139.30	0.221	26.61964	26.64836	26.53527
___ MN	0.50418	32,029.17	0.348	0.50409	0.50247	0.50597
___ MO	0.50488	751.09	0.259	0.50549	0.50576	0.50338
___ NA	24.23566	16,604.44	0.704	24.13461	24.43262	24.13975
___ NI	0.50579	647.52	0.405	0.50743	0.50646	0.50349
___ P	0.51275	101.58	0.509	0.51576	0.51106	0.51145
___ PB	0.50438	399.50	0.488	0.50176	0.50473	0.50664
___ S	24.08885	1,264.68	0.462	24.00301	24.21468	24.04885
___ SB	0.51004	140.45	0.465	0.50824	0.50915	0.51272
___ SE	0.50242	57.73	0.882	0.50753	0.49970	0.50002
___ SI	28.67891	2,243.69	0.076	28.66444	28.70403	28.66824
___ SN	0.49247	98.98	1.390	0.50033	0.48924	0.48783
___ SR	0.51569	329,044.29	1.041	0.52184	0.51327	0.51196
___ TH	0.53062	25.06	18.476	0.51201	0.44322	0.63663
___ TI	0.52205	26,106.13	0.433	0.52466	0.52073	0.52077
___ TL	0.51994	95.09	1.219	0.52127	0.52551	0.51304
___ V	0.50828	2,847.92	0.558	0.50534	0.50851	0.51099
___ W	0.51053	272.98	0.288	0.51093	0.51176	0.50890
___ Y1	4064.92416	4,064.92	0.124	4059.46108	4065.88888	4069.42252
___ Y2A	184169.37993	184,169.38	0.509	183661.17764	185251.76793	183595.19422
___ Y2R	7521.04598	7,521.05	0.188	7534.54854	7506.30613	7522.28326
___ ZN	0.50243	3,885.78	0.174	0.50341	0.50216	0.50173
___ ZR	0.51478	523.12	0.702	0.51243	0.51894	0.51296

LANCASTER LABORATORIES

Run Name: 2013801T74

Instrument ID: 23745

Tube: 11

Date/Time: 05/17/2020 14:06

Sample Number: CCB

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	0.00103	-0.80	7.398	0.00098	0.00112	0.00100
___ AL	0.04605	5.09	11.235	0.05200	0.04350	0.04265
___ AL A)	-0.00053	51.12	315.925	0.00068	-0.00246	0.00017
___ AS	-0.00121	0.11	611.471	0.00709	-0.00702	-0.00369
___ B	0.00044	8.24	115.735	0.00096	0.00041	-0.00005
___ BA	0.00004	138.88	31.926	0.00005	0.00003	0.00004
___ BE	-0.00002	-788.35	96.489	-0.00004	-0.00002	0.00000
___ CA	0.01608	57.60	95.734	0.00885	0.00563	0.03377
___ CD	0.00055	-2.27	5.729	0.00053	0.00058	0.00053
___ CO	-0.00068	1.98	60.227	-0.00027	-0.00068	-0.00110
___ CR	0.00016	-3.53	346.452	0.00081	-0.00019	-0.00013
___ CU	-0.00143	-2.39	110.512	-0.00217	-0.00249	0.00038
___ FE	0.01883	1.15	62.713	0.01735	0.00783	0.03132
___ K	-0.04163	1.93	11.089	-0.03957	-0.04692	-0.03841
___ LI	-0.00014	-8.98	1479.482	-0.00053	0.00211	-0.00200
___ MG	0.02257	14.46	52.988	0.02017	0.01200	0.03555
___ MN	-0.00005	4.24	176.697	0.00005	-0.00011	-0.00009
___ MO	0.00029	-0.17	65.967	0.00050	0.00017	0.00018
___ NA	0.00829	138.38	198.535	-0.00553	0.02649	0.00391
___ NI	-0.00113	2.77	15.294	-0.00103	-0.00132	-0.00102
___ P	0.00018	1.47	1859.963	-0.00324	0.00026	0.00353
___ PB	-0.00188	-0.34	161.149	0.00021	-0.00534	-0.00049
___ S	-0.00711	0.56	58.719	-0.00464	-0.00476	-0.01193
___ SB	-0.00618	-0.27	38.577	-0.00384	-0.00860	-0.00610
___ SE	-0.00347	-0.21	56.177	-0.00416	-0.00498	-0.00127
___ SI	0.00385	1.04	335.846	-0.01107	0.01138	0.01123
___ SN	0.00464	0.57	18.530	0.00529	0.00496	0.00366
___ SR	0.00017	12.43	4.804	0.00017	0.00018	0.00017
___ TH	0.05726	0.07	50.533	0.03823	0.09056	0.04300
___ TI	-0.00014	2.03	75.415	-0.00018	-0.00021	-0.00002
___ TL	-0.00077	-0.69	516.776	-0.00412	0.00361	-0.00179
___ V	0.00114	-19.66	13.608	0.00104	0.00132	0.00105
___ W	0.00030	0.89	384.523	0.00161	-0.00061	-0.00010
___ Y1	4182.16345	4,182.16	0.265	4194.34557	4179.40206	4172.74273
___ Y2A	189274.34944	189,274.35	0.107	189507.86242	189151.63402	189163.55187
___ Y2R	7607.57924	7,607.58	0.265	7584.40807	7617.65822	7620.67145
___ ZN	-0.00065	6.28	14.503	-0.00074	-0.00055	-0.00067
___ ZR	-0.00069	9.16	776.868	0.00443	-0.00629	-0.00022

LANCASTER LABORATORIES

Run Name: 2013801T74

Instrument ID: 23745

Tube: 12

Date/Time: 05/17/2020 14:09

Sample Number: LRS2

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	2.59042	21,823.80	2.402	2.63938	2.61148	2.52041
___ AL	2.20259	165.25	2.370	2.21915	2.24451	2.14411
___ AL A)	2.46796	5,663.11	1.958	2.50276	2.41280	2.48831
___ AS	20.52692	2,080.25	1.392	20.68970	20.69396	20.19709
___ B	4.74552	33,619.86	0.243	4.75862	4.73705	4.74088
___ BA	4.81479	3,010,583.55	0.992	4.86950	4.78132	4.79356
___ BE	4.66457	1,749,523.16	0.523	4.69219	4.64593	4.65558
___ CA	-0.07327	70.62	10.176	-0.06633	-0.08115	-0.07232
___ CD	20.01988	201,572.08	1.530	20.24005	20.14940	19.67017
___ CO	20.75838	34,550.68	1.555	20.96160	20.92728	20.38626
___ CR	19.45519	117,714.44	0.918	19.66105	19.36147	19.34306
___ CU	21.56516	157,158.45	0.416	21.46326	21.59966	21.63256
___ FE	0.00433	-0.75	414.848	-0.01037	0.02435	-0.00098
___ K	-0.01260	16.40	302.796	0.02881	-0.02031	-0.04630
___ LI	19.15697	157,916.40	0.647	19.27448	19.02740	19.16903
___ MG	-0.02984	12.63	17.218	-0.03113	-0.02418	-0.03421
___ MN	18.50079	1,172,768.03	1.009	18.71425	18.41942	18.36869
___ MO	20.24282	28,961.49	1.558	20.45142	20.39701	19.88001
___ NA	0.07488	184.84	21.613	0.08917	0.07817	0.05731
___ NI	20.81241	25,513.92	1.581	21.04018	20.96194	20.43512
___ P	20.40843	3,833.83	1.648	20.63706	20.56612	20.02212
___ PB	20.89204	15,619.52	1.613	21.11298	21.05903	20.50412
___ S	0.13144	-82.07	23.328	0.15150	0.14667	0.09615
___ SB	21.44315	5,614.70	1.404	21.66829	21.55992	21.10123
___ SE	20.19445	2,234.40	1.170	20.31302	20.34785	19.92249
___ SI	0.82682	107.90	13.015	0.74305	0.78922	0.94819
___ SN	19.80141	3,838.77	1.468	19.99970	19.93669	19.46784
___ SR	4.76196	3,046,648.43	0.868	4.80484	4.72239	4.75865
___ TH	3.09936	163.12	1.374	3.08704	3.06429	3.14675
___ TI	19.60913	984,021.75	0.425	19.70315	19.57959	19.54464
___ TL	20.98799	3,732.37	1.194	21.11525	21.14930	20.69941
___ V	20.11805	113,996.93	0.703	20.26174	20.11335	19.97908
___ W	20.68006	10,534.30	1.520	20.90578	20.81332	20.32108
___ Y1	3906.73517	3,906.74	1.091	3878.74713	3885.65860	3955.79978
___ Y2A	184876.15566	184,876.16	0.748	183297.97526	185878.19170	185452.30000
___ Y2R	7634.72660	7,634.73	1.069	7616.26770	7723.97602	7563.93606
___ ZN	9.66235	71,395.79	1.501	9.76237	9.72862	9.49608
___ ZR	19.98496	19,356.70	0.049	19.97421	19.98730	19.99339

LANCASTER LABORATORIES

Run Name: 2013801T74

Instrument ID: 23745

Tube: 13

Date/Time: 05/17/2020 14:13

Sample Number: LRS4

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	0.02911	150.38	37.909	0.02363	0.02190	0.04182
___ AL	550.95034	21,652.41	0.418	551.36409	548.47104	553.01590
___ AL A>	531.29019	578,224.63	0.168	532.20906	531.23151	530.43001
___ AS	-0.02247	-3.64	7.551	-0.02093	-0.02218	-0.02429
___ B	-0.04984	826.36	1.487	-0.05068	-0.04954	-0.04929
___ BA	0.00225	1,294.95	11.274	0.00230	0.00248	0.00198
___ BE	-0.00026	-749.75	78.033	-0.00021	-0.00009	-0.00049
___ CA	541.76297	208,247.56	0.377	543.40174	539.47157	542.41558
___ CD	-0.00214	247.71	10.299	-0.00200	-0.00203	-0.00239
___ CO	0.00341	7.72	46.514	0.00494	0.00350	0.00178
___ CR	-0.00963	-53.53	7.613	-0.00901	-0.01044	-0.00944
___ CU	0.00381	111.75	87.089	0.00487	0.00647	0.00009
___ FE	399.42059	38,252.05	0.438	400.62333	400.22601	397.41245
___ K	478.71018	221,571.06	0.883	482.92267	478.73704	474.47083
___ LI	-0.00399	135.98	36.309	-0.00440	-0.00238	-0.00519
___ MG	499.05086	217,182.61	0.150	499.52086	498.18977	499.44195
___ MN	-0.02104	1,111.36	4.029	-0.02106	-0.02019	-0.02188
___ MO	0.00004	-0.46	2056.066	0.00101	-0.00073	-0.00016
___ NA	446.38461	286,273.89	2.007	456.06855	444.68843	438.39686
___ NI	0.00298	-5.19	59.168	0.00102	0.00445	0.00346
___ P	0.00120	1.39	396.627	-0.00158	0.00673	-0.00153
___ PB	0.00043	81.00	1014.708	0.00412	0.00147	-0.00432
___ S	190.93362	8,568.24	1.171	191.98068	192.45309	188.36709
___ SB	0.01560	4.73	53.259	0.02515	0.01161	0.01004
___ SE	0.00412	-3.08	158.174	-0.00228	0.00389	0.01076
___ SI	229.66114	16,932.66	0.168	229.85883	229.21582	229.90878
___ SN	0.01453	2.18	36.051	0.01296	0.02038	0.01026
___ SR	0.00030	8,010.75	65.035	0.00037	0.00045	0.00008
___ TH	0.26326	10.33	24.569	0.25309	0.20427	0.33242
___ TI	0.01669	722.76	4.212	0.01706	0.01713	0.01588
___ TL	0.00386	-5.27	139.107	0.00706	0.00685	-0.00234
___ V	0.02249	125.71	10.717	0.02269	0.02479	0.01998
___ W	0.00201	1.27	49.935	0.00167	0.00314	0.00122
___ Y1	3470.62710	3,470.63	0.758	3454.51955	3456.36355	3500.99820
___ Y2A	157847.82716	157,847.83	0.185	157509.99701	158025.56421	158007.92025
___ Y2R	7093.05314	7,093.05	0.377	7105.28942	7062.38000	7111.49000
___ ZN	-0.04377	206.49	0.308	-0.04380	-0.04362	-0.04388
___ ZR	-0.00455	16.17	99.468	0.00056	-0.00617	-0.00805

LANCASTER LABORATORIES

Run Name: 2013801T74

Instrument ID: 23745

Tube: 14

Date/Time: 05/17/2020 14:16

Sample Number: LRS3

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	2.30745	18,398.86	0.654	2.32466	2.30119	2.29648
___ AL	1.19425	120.75	0.207	1.19676	1.19418	1.19182
___ AL A)	0.77250	3,279.34	2.864	0.78452	0.74697	0.78601
___ AS	10.27075	1,055.62	1.898	10.35065	10.41307	10.04854
___ B	2.39605	17,152.36	0.444	2.39798	2.40558	2.38459
___ BA	2.53171	1,598,069.26	1.106	2.53105	2.56004	2.50403
___ BE	2.44843	926,076.43	0.436	2.45856	2.44944	2.43727
___ CA	-0.02478	66.95	104.266	0.00499	-0.04132	-0.03800
___ CD	10.30800	105,233.41	1.705	10.42282	10.39553	10.10564
___ CO	10.45458	17,646.56	1.551	10.53693	10.55907	10.26773
___ CR	9.81705	59,961.46	0.393	9.85515	9.81800	9.77801
___ CU	10.62477	79,758.36	0.292	10.60478	10.66053	10.60900
___ FE	0.04987	5.24	47.357	0.07562	0.04477	0.02922
___ K	0.33227	188.61	15.957	0.38952	0.28485	0.32245
___ LI	9.60890	79,457.74	0.108	9.61788	9.61136	9.59747
___ MG	0.04106	46.04	79.133	0.07851	0.02427	0.02040
___ MN	9.74488	623,606.47	0.628	9.68336	9.74551	9.80577
___ MO	10.22038	14,826.61	1.624	10.30696	10.32522	10.02896
___ NA	0.15037	237.47	34.654	0.20731	0.13876	0.10505
___ NI	10.52487	13,084.90	1.617	10.61361	10.63235	10.32863
___ P	10.30636	1,963.61	1.852	10.41176	10.42129	10.08602
___ PB	10.56745	8,011.58	1.593	10.68350	10.64444	10.37442
___ S	0.06459	-41.38	42.502	0.07437	0.08581	0.03358
___ SB	10.75115	2,855.39	1.286	10.85132	10.80873	10.59339
___ SE	10.20989	1,145.43	1.455	10.28718	10.30385	10.03864
___ SI	0.55614	66.15	3.427	0.53461	0.57085	0.56296
___ SN	10.06115	1,977.56	1.682	10.15822	10.15950	9.86573
___ SR	2.51806	1,626,297.25	0.195	2.51806	2.51314	2.52297
___ TH	8.40702	449.04	0.511	8.44126	8.42093	8.35887
___ TI	10.09258	511,270.34	0.310	10.05666	10.10709	10.11399
___ TL	10.80360	1,947.95	1.055	10.84075	10.89433	10.67573
___ V	10.09462	57,725.63	0.506	10.14311	10.09954	10.04122
___ W	10.36452	5,354.67	1.612	10.47387	10.44754	10.17215
___ Y1	3961.43586	3,961.44	1.206	3937.10645	3930.71771	4016.48341
___ Y2A	186626.23403	186,626.23	0.251	187141.69332	186225.33912	186511.66966
___ Y2R	7658.87144	7,658.87	0.706	7601.72896	7665.63310	7709.25224
___ ZN	4.98517	37,344.09	1.605	5.03339	5.02933	4.89280
___ ZR	10.17751	10,287.65	0.207	10.19339	10.15363	10.18553

LANCASTER LABORATORIES

Run Name: 2013801T74

Instrument ID: 23745

Tube: 15

Date/Time: 05/17/2020 14:20

Sample Number: LRS5

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	0.00331	2.54	29.075	0.00332	0.00235	0.00428
___ AL	271.63097	11,066.56	0.367	270.50729	271.97437	272.41126
___ AL A)	264.57447	319,888.52	0.536	263.36390	266.13489	264.22461
___ AS	-0.01987	-2.46	9.659	-0.01769	-0.02131	-0.02061
___ B	-0.00676	469.00	18.022	-0.00557	-0.00800	-0.00672
___ BA	0.00117	760.84	3.279	0.00122	0.00117	0.00114
___ BE	-0.00017	-746.45	35.815	-0.00015	-0.00012	-0.00023
___ CA	265.86717	110,681.74	0.253	265.30025	266.61031	265.69097
___ CD	0.00064	130.56	50.091	0.00101	0.00042	0.00050
___ CO	0.00061	3.82	38.832	0.00053	0.00088	0.00043
___ CR	-0.00396	-25.61	17.285	-0.00377	-0.00339	-0.00472
___ CU	0.00410	60.72	21.520	0.00511	0.00358	0.00359
___ FE	180.64661	20,375.85	0.391	180.59197	181.37778	179.97007
___ K	241.52766	114,262.53	0.396	241.96040	242.19038	240.43219
___ LI	0.00157	91.97	67.178	0.00105	0.00088	0.00278
___ MG	263.70091	145,190.18	0.419	262.78598	263.38958	264.92718
___ MN	-0.00819	610.10	2.847	-0.00803	-0.00809	-0.00846
___ MO	-0.00035	-1.02	102.303	0.00006	-0.00050	-0.00061
___ NA	229.78176	150,653.94	1.173	226.67020	231.35430	231.32077
___ NI	0.00131	-1.49	65.517	0.00184	0.00032	0.00177
___ P	0.00205	1.64	249.010	-0.00207	0.00046	0.00776
___ PB	0.00075	42.82	413.668	-0.00023	0.00424	-0.00175
___ S	97.86685	4,671.56	1.248	97.72496	99.15270	96.72288
___ SB	0.00488	2.44	55.953	0.00802	0.00352	0.00309
___ SE	0.00612	-0.95	35.510	0.00445	0.00858	0.00533
___ SI	122.12961	9,202.45	0.286	121.72830	122.36720	122.29332
___ SN	0.00708	0.95	33.024	0.00438	0.00833	0.00852
___ SR	0.00051	4,314.79	14.921	0.00056	0.00055	0.00042
___ TH	0.08695	1.56	45.400	0.04434	0.09424	0.12228
___ TI	0.01031	474.56	3.273	0.01034	0.01063	0.00996
___ TL	0.01205	-1.03	51.726	0.01632	0.00490	0.01493
___ V	0.01200	56.87	4.526	0.01146	0.01255	0.01198
___ W	0.00267	1.83	16.641	0.00230	0.00255	0.00316
___ Y1	3691.25889	3,691.26	0.391	3700.49495	3674.64564	3698.63609
___ Y2A	166735.48291	166,735.48	0.226	167120.32593	166717.49651	166368.62627
___ Y2R	7248.84851	7,248.85	0.734	7296.39577	7258.71605	7191.43371
___ ZN	-0.01616	129.91	1.394	-0.01594	-0.01614	-0.01639
___ ZR	-0.00229	8.90	71.542	-0.00302	-0.00041	-0.00342

LANCASTER LABORATORIES

Run Name: 2013801T74

Instrument ID: 23745

Tube: 16

Date/Time: 05/17/2020 14:23

Sample Number: **CCV**

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	0.49415	4,063.71	0.482	0.49468	0.49155	0.49622
___ AL	27.22388	1,196.53	0.372	27.31041	27.11247	27.24877
___ AL A)	25.81255	36,363.76	0.364	25.74606	25.92018	25.77140
___ AS	0.49734	52.65	0.209	0.49723	0.49635	0.49843
___ B	0.49202	3,884.98	0.689	0.49583	0.49088	0.48934
___ BA	0.50932	318,793.82	0.678	0.51241	0.50560	0.50995
___ BE	0.49714	185,987.46	0.571	0.49448	0.50013	0.49680
___ CA	26.84940	12,464.49	0.074	26.86338	26.85800	26.82681
___ CD	0.50914	5,351.13	0.252	0.51050	0.50897	0.50795
___ CO	0.49764	865.29	0.245	0.49837	0.49831	0.49623
___ CR	0.48979	2,963.88	0.619	0.49104	0.49201	0.48634
___ CU	0.52709	3,948.20	0.504	0.52838	0.52886	0.52404
___ FE	29.34808	3,826.59	0.110	29.31176	29.37300	29.35947
___ K	24.96339	12,531.40	0.382	25.05336	24.97326	24.86354
___ LI	0.48922	4,058.07	0.792	0.49369	0.48702	0.48695
___ MG	27.53357	19,157.82	0.485	27.61301	27.37937	27.60834
___ MN	0.50218	32,084.15	0.329	0.50397	0.50184	0.50072
___ MO	0.50223	747.26	0.453	0.50404	0.50296	0.49968
___ NA	24.09067	16,853.11	0.581	24.15704	23.92983	24.18515
___ NI	0.50088	641.22	0.307	0.50189	0.50164	0.49911
___ P	0.51339	101.72	1.090	0.50934	0.51977	0.51106
___ PB	0.50271	398.50	0.519	0.50319	0.49990	0.50505
___ S	23.89416	1,254.65	0.565	24.02757	23.89712	23.75779
___ SB	0.50775	139.84	1.065	0.50208	0.51285	0.50831
___ SE	0.50781	58.34	1.752	0.50971	0.51560	0.49811
___ SI	30.86939	2,465.73	0.233	30.90282	30.78676	30.91857
___ SN	0.49272	99.04	1.187	0.48913	0.49947	0.48956
___ SR	0.51477	330,231.50	0.602	0.51149	0.51765	0.51517
___ TH	0.53733	25.94	8.173	0.56168	0.48663	0.56368
___ TI	0.52136	26,211.81	0.217	0.52036	0.52258	0.52112
___ TL	0.51431	94.02	0.203	0.51483	0.51498	0.51310
___ V	0.50811	2,862.72	0.914	0.51348	0.50537	0.50550
___ W	0.51032	272.90	0.288	0.50905	0.51193	0.50998
___ Y1	4065.59056	4,065.59	0.253	4064.38561	4055.97663	4076.40944
___ Y2A	185160.50432	185,160.50	0.210	185574.42139	184804.53321	185102.55835
___ Y2R	7679.29994	7,679.30	0.385	7680.67319	7708.12375	7649.10287
___ ZN	0.50033	3,872.20	0.173	0.50115	0.50042	0.49942
___ ZR	0.52147	540.96	0.398	0.52387	0.52026	0.52028

LANCASTER LABORATORIES

Run Name: 2013801T74

Instrument ID: 23745

Tube: 17

Date/Time: 05/17/2020 14:27

Sample Number: CCB

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	0.00351	16.18	22.899	0.00291	0.00442	0.00318
___ AL	0.06381	6.05	20.392	0.07481	0.04944	0.06716
___ AL A)	-0.00229	52.09	150.200	0.00161	-0.00492	-0.00356
___ AS	0.00036	0.28	817.887	-0.00029	0.00360	-0.00222
___ B	0.00135	15.85	12.747	0.00149	0.00116	0.00139
___ BA	0.00003	131.51	54.841	0.00004	0.00001	0.00004
___ BE	-0.00001	-783.61	425.976	-0.00004	0.00000	0.00002
___ CA	0.00332	52.44	206.539	0.01110	-0.00178	0.00063
___ CD	0.00060	-1.63	14.783	0.00050	0.00067	0.00065
___ CO	-0.00117	1.10	52.645	-0.00170	-0.00050	-0.00132
___ CR	0.00089	0.94	77.298	0.00012	0.00109	0.00145
___ CU	-0.00293	-8.10	21.509	-0.00323	-0.00335	-0.00220
___ FE	0.00713	-0.40	63.628	0.01237	0.00452	0.00450
___ K	0.23663	141.93	4.806	0.24966	0.23154	0.22869
___ LI	0.00297	16.76	102.085	0.00439	-0.00051	0.00504
___ MG	0.00775	4.10	10.486	0.00825	0.00819	0.00681
___ MN	-0.00002	6.08	137.469	0.00001	-0.00002	-0.00005
___ MO	0.00043	0.05	43.422	0.00034	0.00065	0.00031
___ NA	0.03609	159.69	85.998	0.01938	0.01699	0.07189
___ NI	-0.00079	3.21	76.906	-0.00038	-0.00051	-0.00149
___ P	0.00088	1.61	391.463	0.00235	0.00335	-0.00306
___ PB	-0.00112	0.27	48.490	-0.00050	-0.00149	-0.00137
___ S	0.00948	1.46	115.970	0.01913	-0.00249	0.01179
___ SB	-0.00066	1.26	196.319	-0.00109	0.00080	-0.00169
___ SE	-0.00074	0.11	330.025	0.00067	-0.00356	0.00067
___ SI	0.01223	1.72	81.455	0.01336	0.02159	0.00175
___ SN	0.00295	0.22	90.611	0.00274	0.00038	0.00571
___ SR	0.00018	14.07	9.784	0.00016	0.00020	0.00017
___ TH	0.07996	1.30	15.988	0.08657	0.08810	0.06523
___ TI	-0.00005	6.71	194.454	0.00005	-0.00006	-0.00012
___ TL	0.00117	-0.32	165.165	-0.00028	0.00043	0.00336
___ V	0.00117	-19.48	42.051	0.00157	0.00131	0.00062
___ W	-0.00140	-0.03	111.304	-0.00216	0.00039	-0.00243
___ Y1	4173.47765	4,173.48	0.509	4185.26147	4186.22638	4148.94511
___ Y2A	188886.74381	188,886.74	0.232	189379.93224	188741.32256	188538.97661
___ Y2R	7714.57988	7,714.58	0.399	7682.93072	7744.47101	7716.33792
___ ZN	-0.00071	5.84	12.331	-0.00074	-0.00061	-0.00077
___ ZR	-0.00680	4.70	73.910	-0.00869	-0.01060	-0.00110

LANCASTER LABORATORIES

Run Name: 2013801T74

Instrument ID: 23745

Tube: 18

Date/Time: 05/17/2020 14:30

Sample Number: **PBW**

Class: ****

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 1.00

Protocol Symbol: UA

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	0.00203	8.71	14.271	0.00219	0.00220	0.00169
___ AL	0.00808	3.57	421.490	0.00309	0.04433	-0.02319
___ AL A)	-0.00647	43.16	38.347	-0.00397	-0.00893	-0.00651
___ AS	0.00008	0.26	9011.080	-0.00250	0.00794	-0.00521
___ B	0.00069	10.58	101.671	0.00026	0.00149	0.00031
___ BA	0.00001	121.64	205.114	0.00000	-0.00001	0.00003
___ BE	-0.00007	-833.90	15.413	-0.00008	-0.00006	-0.00006
___ CA	-0.00456	50.38	196.267	-0.01485	0.00122	-0.00003
___ CD	0.00054	-2.34	5.569	0.00057	0.00051	0.00055
___ CO	-0.00100	1.45	19.843	-0.00105	-0.00078	-0.00116
___ CR	0.00025	-3.11	28.565	0.00033	0.00021	0.00020
___ CU	-0.00098	-0.31	80.533	-0.00186	-0.00074	-0.00034
___ FE	0.00690	-0.45	221.818	0.00096	0.02429	-0.00455
___ K	0.27834	168.14	8.482	0.30512	0.26054	0.26937
___ LI	0.00167	6.31	119.016	-0.00023	0.00151	0.00374
___ MG	0.00476	2.04	11.623	0.00438	0.00450	0.00540
___ MN	-0.00004	5.24	108.759	-0.00007	-0.00005	0.00001
___ MO	-0.00008	-0.75	220.645	0.00012	-0.00017	-0.00019
___ NA	-0.01722	126.44	88.262	-0.01832	-0.00150	-0.03184
___ NI	-0.00112	2.85	68.018	-0.00037	-0.00109	-0.00189
___ P	-0.00041	1.39	521.637	-0.00159	-0.00173	0.00207
___ PB	-0.00187	-0.34	115.152	-0.00376	0.00047	-0.00232
___ S	0.00329	1.15	41.896	0.00226	0.00486	0.00276
___ SB	-0.00056	1.32	448.745	-0.00190	-0.00212	0.00234
___ SE	0.00481	0.78	99.599	0.00594	0.00893	-0.00044
___ SI	0.00979	1.58	58.768	0.00446	0.01590	0.00902
___ SN	0.00257	0.15	69.965	0.00385	0.00051	0.00334
___ SR	0.00015	-6.46	10.739	0.00013	0.00015	0.00016
___ TH	0.05172	-0.25	33.654	0.06593	0.05693	0.03231
___ TI	-0.00006	6.37	98.559	0.00000	-0.00011	-0.00006
___ TL	0.00147	-0.26	146.293	0.00049	-0.00001	0.00395
___ V	0.00085	-22.02	110.884	0.00186	-0.00002	0.00073
___ W	0.00006	0.77	1844.755	0.00117	-0.00018	-0.00082
___ Y1	4281.20855	4,281.21	0.329	4289.19608	4289.48105	4264.94851
___ Y2A	195622.60883	195,622.61	0.113	195819.59944	195384.50030	195663.72676
___ Y2R	7964.52149	7,964.52	1.226	7883.83144	7936.66069	8073.07233
___ ZN	-0.00103	3.40	11.951	-0.00111	-0.00089	-0.00109
___ ZR	-0.00782	2.13	29.673	-0.00583	-0.01036	-0.00726

LANCASTER LABORATORIES

Run Name: 2013801T74

Instrument ID: 23745

Tube: 19

Date/Time: 05/17/2020 14:33

Sample Number: **LCSW**

Class: ****

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 50.00

DF: 1.00

Protocol Symbol: UA

ELEMENT	INTEGRATIONS			#1	#2	#3
	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD			
___ AG	0.02099	176.35	5.022	0.02171	0.01978	0.02147
___ AL	0.47099	24.99	10.935	0.51583	0.41474	0.48240
___ AL A)	0.39585	647.79	0.888	0.39214	0.39914	0.39628
___ AS	0.05830	6.84	9.042	0.06439	0.05544	0.05508
___ B	0.05578	461.06	1.155	0.05642	0.05513	0.05579
___ BA	0.01038	6,990.64	0.374	0.01042	0.01035	0.01036
___ BE	0.00939	2,918.30	0.478	0.00941	0.00941	0.00934
___ CA	0.42655	260.39	0.470	0.42608	0.42874	0.42481
___ CD	0.01080	111.40	1.114	0.01091	0.01083	0.01067
___ CO	0.00915	20.54	3.109	0.00931	0.00932	0.00882
___ CR	0.02948	184.02	3.444	0.02833	0.02985	0.03025
___ CU	0.03953	317.97	3.638	0.03788	0.04021	0.04050
___ FE	0.47477	64.42	2.621	0.46056	0.48005	0.48370
___ K	5.58342	2,949.11	0.593	5.54756	5.61281	5.58989
___ LI	0.09858	847.03	2.719	0.09879	0.10115	0.09580
___ MG	0.21647	159.11	1.534	0.21868	0.21265	0.21809
___ MN	0.02029	1,371.48	0.675	0.02026	0.02044	0.02017
___ MO	0.01999	30.72	2.433	0.02001	0.02047	0.01950
___ NA	1.80874	1,453.41	1.052	1.83050	1.80040	1.79530
___ NI	2.07955	2,802.56	0.387	2.08555	2.08270	2.07039
___ P	0.20337	43.21	1.348	0.20637	0.20101	0.20271
___ PB	0.03219	27.75	4.539	0.03365	0.03072	0.03219
___ S	0.94556	52.86	0.797	0.93940	0.94332	0.95396
___ SB	0.09942	29.76	3.645	0.10048	0.09538	0.10239
___ SE	0.09787	12.02	7.495	0.10479	0.09863	0.09018
___ SI	1.21817	102.63	1.596	1.20688	1.24062	1.20703
___ SN	0.10261	21.42	2.147	0.10277	0.10473	0.10033
___ SR	0.01048	6,995.19	0.103	0.01049	0.01048	0.01047
___ TH	0.07252	0.93	54.171	0.11789	0.04982	0.04987
___ TI	0.02016	1,079.82	0.897	0.02029	0.02025	0.01996
___ TL	0.06204	11.72	4.614	0.06473	0.05903	0.06237
___ V	0.02082	97.74	4.079	0.01999	0.02169	0.02077
___ W	0.06143	37.78	1.076	0.06162	0.06197	0.06069
___ Y1	4285.26481	4,285.26	0.046	4283.05669	4285.83142	4286.90631
___ Y2A	195589.02941	195,589.03	0.122	195318.01140	195768.41317	195680.66367
___ Y2R	8034.13974	8,034.14	0.519	8040.48284	7989.65311	8072.28326
___ ZN	0.43424	3,571.46	0.146	0.43477	0.43441	0.43354
___ ZR	0.09349	105.68	3.002	0.09365	0.09622	0.09061

LANCASTER LABORATORIES

Run Name: 2013801T74

Instrument ID: 23745

Tube: 20

Date/Time: 05/17/2020 14:36

Sample Number: 1313220

Class: U***

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 1.00

Protocol Symbol: DU

ELEMENT	AVERAGE		%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	-0.00005	-3.52	1981.684	0.00108	-0.00099	-0.00025
___ AL	-0.04438	1.18	71.737	-0.02195	-0.08082	-0.03037
___ AL A)	-0.00227	46.68	79.576	-0.00269	-0.00384	-0.00029
___ AS	-0.00060	0.29	448.820	0.00200	-0.00336	-0.00043
___ B	0.04738	343.36	1.801	0.04741	0.04821	0.04650
___ BA	0.09164	58,449.43	0.410	0.09151	0.09134	0.09206
___ BE	-0.00013	-822.47	26.483	-0.00013	-0.00016	-0.00009
___ CA	56.50865	27,186.64	0.449	56.71462	56.58599	56.22533
___ CD	0.00054	-2.34	20.433	0.00056	0.00063	0.00042
___ CO	-0.00132	0.84	22.939	-0.00143	-0.00097	-0.00155
___ CR	0.00220	9.02	18.132	0.00176	0.00254	0.00228
___ CU	0.00021	5.26	450.285	-0.00065	0.00006	0.00121
___ FE	0.00782	-0.32	111.207	0.01370	-0.00217	0.01191
___ K	2.81653	1,499.54	0.718	2.81610	2.79654	2.83696
___ LI	0.01256	121.02	15.489	0.01057	0.01446	0.01266
___ MG	7.93685	5,845.31	0.153	7.95083	7.92938	7.93035
___ MN	0.00002	8.69	110.225	0.00002	0.00000	0.00004
___ MO	0.00260	3.32	2.643	0.00266	0.00253	0.00262
___ NA	24.46435	17,877.02	0.377	24.35794	24.51762	24.51749
___ NI	0.00021	3.35	425.922	0.00012	-0.00065	0.00117
___ P	0.00660	2.71	35.679	0.00492	0.00558	0.00929
___ PB	0.00120	2.97	79.257	0.00211	0.00021	0.00129
___ S	19.96891	1,061.60	0.150	19.97642	19.99438	19.93592
___ SB	-0.00317	0.56	115.719	-0.00357	0.00068	-0.00663
___ SE	0.00470	0.74	28.167	0.00452	0.00611	0.00348
___ SI	17.83419	1,487.87	0.531	17.87929	17.89784	17.72544
___ SN	0.00258	0.14	112.168	0.00261	-0.00033	0.00546
___ SR	0.34530	226,087.47	1.003	0.34664	0.34788	0.34136
___ TH	0.01910	-2.08	123.489	0.04632	0.00632	0.00466
___ TI	0.00199	110.95	3.027	0.00194	0.00206	0.00197
___ TL	0.00069	-0.41	231.292	0.00243	0.00034	-0.00070
___ V	0.00700	14.58	9.040	0.00765	0.00639	0.00696
___ W	-0.00002	0.74	3134.382	-0.00100	0.00138	-0.00044
___ Y1	4108.07919	4,108.08	0.025	4107.04930	4109.07909	4108.10919
___ Y2A	188447.87930	188,447.88	0.092	188251.37007	188582.77700	188509.49083
___ Y2R	8022.35454	8,022.35	0.285	8046.62675	8001.18691	8019.24995
___ ZN	0.00586	56.14	0.795	0.00584	0.00583	0.00591
___ ZR	-0.00142	6.62	108.963	-0.00306	-0.00121	0.00001

LANCASTER LABORATORIES

Run Name: 2013801T74

Instrument ID: 23745

Tube: 21

Date/Time: 05/17/2020 14:39

Sample Number: 1313220

Class: UP**

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 1.00

Protocol Symbol: DU

ELEMENT	INTEGRATIONS			#1	#2	#3
	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD			
___ AG	0.01628	164.68	9.791	0.01538	0.01534	0.01812
___ AL	1.08104	52.24	8.175	0.99604	1.17244	1.07463
___ AL A)	1.04177	1,534.40	1.714	1.05607	1.04748	1.02176
___ AS	0.51058	54.64	0.434	0.51303	0.50871	0.51001
___ B	0.23876	1,863.39	0.145	0.23852	0.23861	0.23916
___ BA	0.14203	89,345.04	0.453	0.14164	0.14277	0.14168
___ BE	0.01971	6,660.31	0.358	0.01978	0.01964	0.01969
___ CA	56.61612	26,797.44	0.308	56.46671	56.80780	56.57384
___ CD	0.05159	535.95	0.442	0.05140	0.05152	0.05184
___ CO	0.09911	175.80	0.787	0.09921	0.09828	0.09983
___ CR	0.19673	1,190.57	0.698	0.19752	0.19752	0.19514
___ CU	0.52940	3,921.43	0.478	0.52917	0.53204	0.52700
___ FE	0.60477	80.99	2.297	0.62081	0.59705	0.59645
___ K	4.71802	2,454.29	1.098	4.68219	4.77741	4.69447
___ LI	0.98859	8,437.50	0.575	0.98619	0.99508	0.98450
___ MG	8.91910	6,458.45	0.173	8.92213	8.90233	8.93282
___ MN	0.06121	3,906.30	0.619	0.06161	0.06113	0.06087
___ MO	0.20521	306.63	0.174	0.20551	0.20481	0.20530
___ NA	26.05485	18,722.37	0.404	26.10378	25.93391	26.12687
___ NI	0.15249	198.51	0.612	0.15143	0.15317	0.15287
___ P	1.05460	208.02	0.120	1.05383	1.05606	1.05392
___ PB	0.50289	395.78	0.868	0.49857	0.50281	0.50730
___ S	20.54655	1,086.05	0.295	20.58117	20.47647	20.58202
___ SB	0.42482	116.67	2.043	0.43432	0.42282	0.41731
___ SE	0.81575	93.53	0.673	0.81245	0.82208	0.81271
___ SI	18.90351	1,552.46	0.389	18.86143	18.98847	18.86064
___ SN	0.59998	121.27	0.296	0.59879	0.59912	0.60202
___ SR	0.35834	231,049.26	0.549	0.36035	0.35826	0.35642
___ TH	0.04744	-0.50	131.099	0.02382	0.00052	0.11798
___ TI	0.10688	5,393.07	0.279	0.10707	0.10703	0.10653
___ TL	0.99874	188.99	0.605	0.99858	0.99277	1.00486
___ V	0.10597	568.06	0.350	0.10631	0.10602	0.10558
___ W	0.00054	1.81	302.330	0.00187	0.00104	-0.00128
___ Y1	4085.12815	4,085.13	0.269	4096.94531	4083.22168	4075.21748
___ Y2A	185596.37169	185,596.37	0.397	185977.13901	184747.33034	186064.64571
___ Y2R	7892.65229	7,892.65	0.887	7936.53501	7929.55135	7811.87050
___ ZN	0.12728	992.51	0.253	0.12704	0.12715	0.12765
___ ZR	1.03436	1,035.38	0.820	1.03220	1.04371	1.02717

LANCASTER LABORATORIES

Run Name: 2013801T74

Instrument ID: 23745

Tube: 22

Date/Time: 05/17/2020 14:42

Sample Number: 1313223

Class: D***

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 1.00

Protocol Symbol: DU

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS		
				#1	#2	#3
___ AG	0.00066	-0.82	166.369	0.00187	0.00039	-0.00028
___ AL	-0.01668	2.53	344.508	-0.05044	0.04969	-0.04931
___ AL A)	0.02482	87.30	9.583	0.02234	0.02502	0.02709
___ AS	-0.00286	0.05	293.817	0.00565	-0.01116	-0.00308
___ B	0.04696	334.89	0.220	0.04703	0.04699	0.04684
___ BA	0.09217	58,005.25	0.300	0.09249	0.09198	0.09204
___ BE	-0.00017	-830.08	28.190	-0.00019	-0.00021	-0.00012
___ CA	56.62707	26,995.84	0.578	56.49049	56.39028	57.00045
___ CD	0.00061	-1.51	20.252	0.00051	0.00075	0.00058
___ CO	-0.00106	1.29	31.424	-0.00094	-0.00081	-0.00144
___ CR	0.00247	10.54	13.688	0.00208	0.00263	0.00269
___ CU	0.00077	14.08	106.468	-0.00005	0.00077	0.00158
___ FE	0.00748	-0.37	102.508	0.00322	0.00289	0.01633
___ K	2.76467	1,459.02	2.254	2.70024	2.76912	2.82463
___ LI	0.01305	124.26	12.978	0.01446	0.01352	0.01117
___ MG	7.97907	5,823.01	0.484	8.01162	7.93643	7.98914
___ MN	0.00005	10.68	67.767	0.00001	0.00006	0.00008
___ MO	0.00231	2.89	19.355	0.00233	0.00275	0.00186
___ NA	24.55157	17,777.98	0.332	24.60495	24.45775	24.59201
___ NI	-0.00005	3.01	1848.365	-0.00093	0.00004	0.00075
___ P	0.00857	3.10	33.903	0.00810	0.01168	0.00592
___ PB	-0.00044	1.68	29.782	-0.00046	-0.00057	-0.00030
___ S	19.90075	1,058.58	0.531	20.01965	19.86461	19.81798
___ SB	-0.00129	1.07	60.141	-0.00219	-0.00075	-0.00094
___ SE	0.00688	0.99	56.359	0.00250	0.00989	0.00825
___ SI	18.04949	1,492.17	0.676	18.06333	17.92121	18.16394
___ SN	0.00271	0.17	95.703	0.00565	0.00173	0.00075
___ SR	0.34665	223,940.64	0.250	0.34623	0.34765	0.34608
___ TH	0.03852	-0.98	102.653	0.08102	0.00281	0.03173
___ TI	0.00208	113.94	0.576	0.00208	0.00207	0.00209
___ TL	0.00346	0.12	113.351	0.00483	-0.00096	0.00651
___ V	0.00677	13.10	2.244	0.00695	0.00669	0.00668
___ W	-0.00012	0.69	356.532	-0.00061	0.00013	0.00012
___ Y1	4110.41396	4,110.41	0.067	4113.55364	4108.34417	4109.34407
___ Y2A	185930.01973	185,930.02	0.156	185700.85193	185832.46805	186256.73922
___ Y2R	7949.84026	7,949.84	0.727	7950.33865	8007.39078	7891.79134
___ ZN	0.00592	56.65	1.279	0.00601	0.00589	0.00587
___ ZR	-0.00258	6.56	44.610	-0.00354	-0.00130	-0.00291

LANCASTER LABORATORIES

Run Name: 2013801T74

Instrument ID: 23745

Tube: 23

Date/Time: 05/17/2020 14:46

Sample Number: 1313221

Class: R***

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 52.20

DF: 1.00

Protocol Symbol: DU

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS		
				#1	#2	#3
___ AG	0.01899	155.83	8.699	0.01709	0.01994	0.01995
___ AL	0.38395	20.69	5.745	0.37927	0.40797	0.36461
___ AL A)	0.39308	610.21	1.719	0.39544	0.39833	0.38545
___ AS	0.05698	6.49	12.001	0.05347	0.06486	0.05261
___ B	0.10258	766.76	0.672	0.10204	0.10335	0.10234
___ BA	0.10051	63,152.80	0.776	0.10090	0.10101	0.09961
___ BE	0.00945	2,793.77	0.455	0.00945	0.00948	0.00940
___ CA	56.31461	26,749.14	0.215	56.39962	56.36846	56.17575
___ CD	0.01020	99.83	0.753	0.01018	0.01013	0.01028
___ CO	0.00819	17.89	8.634	0.00764	0.00794	0.00899
___ CR	0.02987	176.99	2.319	0.03049	0.02998	0.02912
___ CU	0.04103	310.06	5.075	0.04164	0.04274	0.03871
___ FE	0.45593	60.93	1.749	0.44767	0.46358	0.45653
___ K	7.99776	4,156.46	0.455	8.00159	8.03206	7.95962
___ LI	0.10695	926.64	1.411	0.10863	0.10650	0.10571
___ MG	8.06031	5,860.09	0.508	8.03483	8.03854	8.10757
___ MN	0.01937	1,243.16	0.563	0.01943	0.01924	0.01944
___ MO	0.02192	32.17	1.052	0.02191	0.02215	0.02169
___ NA	25.60621	18,466.55	0.612	25.45997	25.58724	25.77141
___ NI	1.95292	2,508.26	0.397	1.94482	1.96028	1.95365
___ P	0.21280	43.04	1.194	0.21493	0.21348	0.20999
___ PB	0.03019	25.76	9.381	0.03122	0.03236	0.02698
___ S	20.58436	1,087.77	0.713	20.45635	20.74470	20.55204
___ SB	0.09761	27.88	2.426	0.09907	0.09487	0.09887
___ SE	0.10581	12.37	1.325	0.10727	0.10566	0.10448
___ SI	19.16676	1,578.73	0.285	19.12505	19.14659	19.22864
___ SN	0.09395	18.67	1.563	0.09324	0.09563	0.09296
___ SR	0.34776	224,272.73	0.963	0.34471	0.34721	0.35134
___ TH	0.04203	-0.78	88.356	0.02369	0.01763	0.08477
___ TI	0.02251	1,142.82	1.273	0.02250	0.02280	0.02222
___ TL	0.05538	9.89	4.003	0.05727	0.05294	0.05593
___ V	0.02539	119.02	4.534	0.02416	0.02558	0.02643
___ W	0.05842	34.37	2.649	0.05787	0.05721	0.06016
___ Y1	4085.36146	4,085.36	0.430	4092.46575	4065.33847	4098.28017
___ Y2A	185623.03499	185,623.03	0.258	186137.32500	185191.33367	185540.44630
___ Y2R	7920.09855	7,920.10	0.295	7908.88046	7946.98027	7904.43492
___ ZN	0.42537	3,332.19	0.055	0.42511	0.42557	0.42542
___ ZR	0.09485	103.71	2.315	0.09526	0.09681	0.09247

LANCASTER LABORATORIES

Run Name: 2013801T74

Instrument ID: 23745

Tube: 24

Date/Time: 05/17/2020 14:49

Sample Number: 1313222

Class: M***

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 52.20

DF: 1.00

Protocol Symbol: DU

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS		
				#1	#2	#3
___ AG	0.01978	162.15	2.345	0.02025	0.01976	0.01932
___ AL	0.39560	21.12	5.300	0.37363	0.39778	0.41540
___ AL A)	0.39789	617.25	1.117	0.40156	0.39295	0.39915
___ AS	0.05355	6.14	7.402	0.04907	0.05500	0.05659
___ B	0.10267	767.38	0.523	0.10223	0.10251	0.10327
___ BA	0.10090	63,390.34	0.235	0.10082	0.10071	0.10116
___ BE	0.00951	2,819.18	0.126	0.00951	0.00953	0.00950
___ CA	56.15737	26,542.53	0.271	56.26244	56.22690	55.98276
___ CD	0.01030	101.03	0.579	0.01031	0.01035	0.01023
___ CO	0.00881	19.01	5.887	0.00850	0.00852	0.00941
___ CR	0.03056	181.17	2.171	0.02983	0.03114	0.03070
___ CU	0.04217	318.91	2.078	0.04138	0.04202	0.04311
___ FE	0.45268	60.19	0.677	0.45619	0.45127	0.45056
___ K	8.01311	4,143.70	0.570	7.99028	7.98337	8.06568
___ LI	0.10753	926.88	3.248	0.10353	0.10997	0.10910
___ MG	8.07560	5,842.02	0.512	8.04861	8.05503	8.12317
___ MN	0.01958	1,256.51	0.668	0.01944	0.01962	0.01969
___ MO	0.02191	32.21	0.721	0.02177	0.02188	0.02208
___ NA	25.85549	18,552.73	0.959	25.75415	25.67424	26.13809
___ NI	1.98262	2,551.06	0.274	1.97851	1.98877	1.98057
___ P	0.21341	43.24	0.741	0.21419	0.21446	0.21159
___ PB	0.02971	25.44	5.852	0.03044	0.02773	0.03097
___ S	20.57530	1,089.30	0.269	20.63189	20.57258	20.52144
___ SB	0.09857	28.19	3.259	0.09951	0.09499	0.10120
___ SE	0.11078	12.96	1.974	0.11297	0.10859	0.11078
___ SI	19.03467	1,560.08	0.375	19.11695	18.98841	18.99864
___ SN	0.10066	20.07	4.983	0.09957	0.09628	0.10613
___ SR	0.35065	226,100.77	0.220	0.35033	0.35153	0.35009
___ TH	0.04383	-0.68	83.099	0.05963	0.06968	0.00218
___ TI	0.02245	1,139.76	0.376	0.02236	0.02246	0.02253
___ TL	0.06041	10.87	5.299	0.05772	0.05956	0.06395
___ V	0.02674	126.79	6.105	0.02499	0.02822	0.02701
___ W	0.06035	35.50	0.486	0.06017	0.06019	0.06069
___ Y1	4092.88071	4,092.88	0.237	4101.54485	4082.40676	4094.69053
___ Y2A	185598.61805	185,598.62	0.012	185597.35265	185622.20280	185576.29870
___ Y2R	7880.69195	7,880.69	0.694	7916.19676	7817.72518	7908.15391
___ ZN	0.43269	3,395.44	0.088	0.43304	0.43228	0.43275
___ ZR	0.09667	105.09	5.621	0.09190	0.09551	0.10258

LANCASTER LABORATORIES

Run Name: 2013801T74

Instrument ID: 23745

Tube: 25

Date/Time: 05/17/2020 14:52

Sample Number: 1313220

Class: UL**

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 5.00

Protocol Symbol: DU

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS		
				#1	#2	#3
___ AG	0.00068	-0.08	211.169	-0.00098	0.00149	0.00154
___ AL	0.03847	4.80	131.675	0.06741	0.06801	-0.02002
___ AL A)	0.00614	57.74	40.041	0.00840	0.00352	0.00651
___ AS	0.00015	0.28	3913.777	0.00580	-0.00598	0.00063
___ B	0.00949	72.46	2.018	0.00929	0.00967	0.00951
___ BA	0.01809	11,589.64	0.476	0.01802	0.01806	0.01818
___ BE	-0.00010	-811.02	18.772	-0.00011	-0.00011	-0.00008
___ CA	11.09716	5,287.34	0.787	11.16606	11.12654	10.99886
___ CD	0.00050	-2.76	21.683	0.00038	0.00054	0.00058
___ CO	-0.00151	0.51	13.166	-0.00171	-0.00131	-0.00151
___ CR	0.00035	-2.36	219.791	0.00091	-0.00052	0.00066
___ CU	0.00010	4.58	606.150	0.00074	-0.00044	-0.00001
___ FE	0.00732	-0.38	98.411	0.01272	0.01011	-0.00086
___ K	0.54899	303.40	2.765	0.54520	0.53606	0.56570
___ LI	0.00290	20.31	60.884	0.00488	0.00149	0.00233
___ MG	1.56342	1,125.17	0.725	1.55286	1.57541	1.56199
___ MN	0.00019	19.46	10.745	0.00019	0.00016	0.00020
___ MO	0.00049	0.13	23.723	0.00041	0.00062	0.00043
___ NA	4.74664	3,488.29	0.507	4.71921	4.76409	4.75663
___ NI	-0.00003	3.97	2525.601	0.00074	-0.00016	-0.00066
___ P	0.00432	2.29	110.038	0.00114	0.00977	0.00204
___ PB	0.00012	1.42	1021.445	0.00042	-0.00121	0.00115
___ S	3.81450	205.85	0.283	3.81781	3.80243	3.82326
___ SB	0.00073	1.63	831.234	0.00673	-0.00541	0.00088
___ SE	0.00269	0.51	54.703	0.00351	0.00099	0.00356
___ SI	3.47309	282.83	0.536	3.45826	3.49396	3.46704
___ SN	0.00393	0.42	90.803	0.00555	-0.00016	0.00640
___ SR	0.06791	44,245.91	0.347	0.06787	0.06770	0.06817
___ TH	0.03560	-1.12	82.518	0.00193	0.05603	0.04884
___ TI	0.00113	66.45	3.897	0.00108	0.00116	0.00114
___ TL	-0.00038	-0.62	495.943	-0.00079	0.00168	-0.00205
___ V	0.00190	-15.09	34.087	0.00263	0.00139	0.00168
___ W	0.00045	0.98	136.650	0.00050	-0.00019	0.00103
___ Y1	4154.67453	4,154.67	0.255	4166.28337	4152.22978	4145.51045
___ Y2A	187858.68292	187,858.68	0.079	187908.20702	187691.27768	187976.56406
___ Y2R	7813.82804	7,813.83	0.897	7764.93701	7782.45702	7894.09009
___ ZN	0.00285	33.40	0.755	0.00283	0.00283	0.00287
___ ZR	-0.00114	7.70	343.841	0.00217	-0.00545	-0.00013

LANCASTER LABORATORIES

Run Name: 2013801T74

Instrument ID: 23745

Tube: 26

Date/Time: 05/17/2020 14:55

Sample Number: 1313077

Class: ****

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 1.00

Protocol Symbol: DU

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	-0.00128	-6.31	62.767	-0.00109	-0.00059	-0.00215
___ AL	0.80513	35.29	14.320	0.88542	0.67302	0.85696
___ AL A)	0.99263	904.52	1.115	1.00409	0.98199	0.99181
___ AS k	-0.01493	-0.26	105.987	0.00264	-0.01938	-0.02804
___ B	3.93794	17,985.21	0.200	3.93075	3.93675	3.94633
___ BA	0.04502	16,240.33	0.155	0.04502	0.04508	0.04494
___ BE	-0.00119	-692.85	1.408	-0.00120	-0.00119	-0.00117
___ CA	1015.44112	316,807.79	1.490	1022.44000	998.07790	1025.80546
___ CD	0.04362	250.07	7.446	0.04561	0.04537	0.03987
___ CO	0.07677	75.47	6.786	0.08015	0.07939	0.07077
___ CR	0.00399	11.33	47.008	0.00476	0.00185	0.00535
___ CU	0.01554	113.58	11.346	0.01376	0.01729	0.01558
___ FE	1.25557	137.78	1.814	1.23221	1.25676	1.27772
___ K k	359.71434	150,463.66	1.083	356.58542	358.47840	364.07919
___ LI	0.36545	2,818.79	1.588	0.36333	0.36100	0.37201
___ MG k	0.00000	298,487.01	0.000	0.00000	0.00000	0.00000
___ MN	16.63737	606,860.43	0.109	16.61743	16.65313	16.64155
___ MO	0.00028	-0.11	209.134	0.00094	-0.00015	0.00005
___ NA	2384.59360	1,382,453.97	2.314	2347.03420	2447.95814	2358.78845
___ NI	0.12383	89.45	7.333	0.12982	0.12828	0.11338
___ P	0.05857	7.13	3.970	0.06015	0.05967	0.05590
___ PB	0.00229	2.25	58.016	0.00076	0.00297	0.00314
___ S	1296.21486	37,857.75	7.035	1354.39491	1343.12404	1191.12563
___ SB	-0.00242	0.42	418.927	-0.01100	0.00874	-0.00499
___ SE	0.01076	0.74	124.048	0.01871	0.01823	-0.00465
___ SI	18.46968	1,231.88	0.298	18.46053	18.41975	18.52877
___ SN	-0.00491	-0.75	92.177	-0.00991	-0.00375	-0.00108
___ SR k	0.00000	1,223,601.90	0.000	3.31932	3.28446	3.28599
___ TH	0.00247	-2.41	393.701	0.00738	0.00876	-0.00873
___ TI	0.01037	304.53	4.600	0.01027	0.01089	0.00995
___ TL	-0.06900	-5.55	6.256	-0.06727	-0.07391	-0.06581
___ V	0.00226	-7.23	67.778	0.00194	0.00092	0.00393
___ W	0.00158	0.94	196.901	-0.00093	0.00507	0.00061
___ Y1	2266.27158	2,266.27	6.995	2166.52525	2183.21347	2449.07602
___ Y2A	106374.69568	106,374.70	0.066	106301.38251	106380.80874	106441.89580
___ Y2R	6413.80030	6,413.80	0.691	6417.79948	6456.00957	6367.59185
___ ZN	0.02638	121.01	9.152	0.02806	0.02746	0.02361
___ ZR	-0.00228	3.80	141.282	-0.00320	0.00130	-0.00494

LANCASTER LABORATORIES

Run Name: 2013801T74

Instrument ID: 23745

Tube: 27

Date/Time: 05/17/2020 14:59

Sample Number: 1313224

Class: ****

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 1.00

Protocol Symbol: DU

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS		
				#1	#2	#3
___ AG	-0.00060	-7.61	159.089	-0.00002	-0.00008	-0.00169
___ AL	-0.01358	2.56	330.866	0.01088	-0.06543	0.01382
___ AL A)	-0.00443	42.99	55.280	-0.00725	-0.00311	-0.00292
___ AS	-0.00444	-0.11	120.533	-0.00545	-0.00923	0.00134
___ B	0.05118	370.88	1.296	0.05059	0.05190	0.05106
___ BA	0.09687	61,261.19	0.801	0.09615	0.09677	0.09769
___ BE	-0.00019	-837.59	14.982	-0.00017	-0.00017	-0.00022
___ CA	56.78674	27,127.18	0.022	56.77651	56.78300	56.80071
___ CD	0.00059	-1.73	16.731	0.00056	0.00070	0.00051
___ CO	-0.00112	1.17	40.350	-0.00064	-0.00153	-0.00120
___ CR	0.00237	10.00	24.190	0.00259	0.00279	0.00172
___ CU	0.00138	13.28	105.047	0.00102	0.00015	0.00297
___ FE	0.00806	-0.28	105.422	0.01480	-0.00148	0.01084
___ K	2.94181	1,554.19	1.431	2.98518	2.93915	2.90110
___ LI	0.01373	130.31	13.243	0.01165	0.01450	0.01503
___ MG	8.06653	5,898.68	0.103	8.07517	8.05851	8.06591
___ MN	0.00079	57.90	39.851	0.00114	0.00067	0.00055
___ MO	0.00180	2.11	9.721	0.00200	0.00175	0.00166
___ NA	23.76320	17,247.30	0.562	23.90886	23.73426	23.64649
___ NI	-0.00051	2.40	137.342	-0.00050	0.00019	-0.00122
___ P	0.00986	3.34	21.133	0.00953	0.00796	0.01209
___ PB	0.00109	2.87	167.232	0.00192	0.00235	-0.00100
___ S	20.22771	1,070.42	0.825	20.20996	20.07051	20.40266
___ SB	-0.00510	0.04	48.925	-0.00797	-0.00384	-0.00348
___ SE	0.00240	0.47	162.517	0.00189	-0.00122	0.00652
___ SI	17.92720	1,485.14	0.375	17.84977	17.96996	17.96187
___ SN	0.00212	0.05	99.620	0.00281	0.00380	-0.00025
___ SR	0.35021	227,364.09	0.785	0.35072	0.34725	0.35268
___ TH	0.01614	-2.23	191.956	0.04804	0.01419	-0.01382
___ TI	0.00203	112.12	6.017	0.00191	0.00215	0.00204
___ TL	0.00241	-0.08	22.589	0.00258	0.00180	0.00285
___ V	0.00626	10.23	17.238	0.00505	0.00712	0.00660
___ W	-0.00036	0.60	310.388	-0.00139	0.00082	-0.00050
___ Y1	4089.29940	4,089.30	0.456	4110.01400	4084.06659	4073.81762
___ Y2A	186862.04229	186,862.04	0.511	187230.95547	187576.82344	185778.34795
___ Y2R	7966.14297	7,966.14	0.383	7989.41235	7977.44863	7931.56792
___ ZN	0.01198	102.55	0.547	0.01195	0.01205	0.01193
___ ZR	-0.00322	4.59	108.811	-0.00670	-0.00326	0.00030

LANCASTER LABORATORIES

Run Name: 2013801T74

Instrument ID: 23745

Tube: 28

Date/Time: 05/17/2020 15:02

Sample Number: **CCV**

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	0.49025	3,954.45	0.439	0.48780	0.49185	0.49109
___ AL	27.00604	1,199.01	0.738	27.04586	26.78992	27.18233
___ AL A)	25.94492	35,860.24	0.473	26.01658	25.80329	26.01488
___ AS	0.50449	53.26	0.388	0.50306	0.50370	0.50672
___ B	0.49839	3,862.35	0.203	0.49745	0.49825	0.49946
___ BA	0.52257	320,917.00	0.220	0.52381	0.52238	0.52154
___ BE	0.50313	184,691.63	0.456	0.50070	0.50343	0.50527
___ CA	26.85696	12,593.38	0.206	26.81238	26.91887	26.83962
___ CD	0.50915	5,336.53	0.384	0.51062	0.50990	0.50693
___ CO	0.49152	852.38	0.369	0.49099	0.49003	0.49354
___ CR	0.48814	2,898.17	0.395	0.48774	0.49023	0.48644
___ CU	0.53887	3,959.25	0.123	0.53945	0.53815	0.53900
___ FE	29.50029	3,884.83	0.213	29.57223	29.45653	29.47211
___ K	24.66816	12,507.94	0.104	24.65675	24.65023	24.69749
___ LI	0.48693	4,079.73	0.713	0.48590	0.48409	0.49080
___ MG	27.08824	19,043.44	0.549	26.97780	27.02942	27.25748
___ MN	0.50578	31,704.65	0.180	0.50606	0.50477	0.50653
___ MO	0.50328	746.76	0.508	0.50607	0.50105	0.50272
___ NA	22.05124	15,593.14	0.466	21.95884	22.03281	22.16207
___ NI	0.50260	641.62	0.427	0.50340	0.50423	0.50017
___ P	0.52093	102.92	1.916	0.51033	0.53014	0.52233
___ PB	0.50214	396.98	0.296	0.50315	0.50284	0.50043
___ S	23.77344	1,244.87	0.374	23.83794	23.67194	23.81045
___ SB	0.51142	140.43	0.988	0.51726	0.50862	0.50838
___ SE	0.50910	58.31	2.166	0.51068	0.51925	0.49737
___ SI	31.24719	2,521.02	0.329	31.33717	31.13525	31.26915
___ SN	0.49741	99.71	0.749	0.50087	0.49789	0.49347
___ SR	0.52401	329,815.95	0.273	0.52247	0.52425	0.52529
___ TH	0.54045	26.38	4.128	0.52434	0.53110	0.56591
___ TI	0.52775	26,032.72	0.274	0.52880	0.52610	0.52833
___ TL	0.50591	92.14	0.923	0.51126	0.50382	0.50265
___ V	0.50849	2,810.81	0.505	0.51110	0.50841	0.50596
___ W	0.50464	269.15	0.456	0.50474	0.50689	0.50229
___ Y1	4054.32593	4,054.33	0.100	4051.04895	4053.07976	4058.84907
___ Y2A	181669.75233	181,669.75	0.423	181873.92757	182315.63562	180819.69380
___ Y2R	7756.56772	7,756.57	0.251	7776.63803	7755.25319	7737.81194
___ ZN	0.49906	3,852.22	0.327	0.50084	0.49764	0.49868
___ ZR	0.52002	545.19	1.056	0.52636	0.51661	0.51711

LANCASTER LABORATORIES

Run Name: 2013801T74

Instrument ID: 23745

Tube: 29

Date/Time: 05/17/2020 15:06

Sample Number: CCB

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS		
				#1	#2	#3
___ AG	0.00157	7.12	9.179	0.00145	0.00173	0.00154
___ AL	0.02759	4.34	132.610	0.06956	0.00246	0.01075
___ AL A)	0.01072	64.24	145.851	0.00309	0.00037	0.02871
___ AS	0.00661	0.95	62.483	0.00184	0.00883	0.00915
___ B	0.00279	27.19	103.731	0.00091	0.00134	0.00613
___ BA	0.00035	334.33	143.473	0.00006	0.00006	0.00093
___ BE	0.00015	-720.51	245.699	-0.00003	-0.00009	0.00059
___ CA	0.00514	54.31	164.025	0.01210	-0.00424	0.00757
___ CD	0.00051	-2.64	11.617	0.00057	0.00051	0.00045
___ CO	-0.00069	1.96	33.181	-0.00044	-0.00088	-0.00075
___ CR	0.00021	-3.23	48.943	0.00009	0.00028	0.00027
___ CU	-0.00068	-1.61	95.114	-0.00140	-0.00045	-0.00017
___ FE	0.01013	0.00	78.918	0.01933	0.00495	0.00610
___ K	0.03801	42.74	83.512	0.06875	0.03992	0.00535
___ LI	0.00276	15.30	24.347	0.00299	0.00329	0.00200
___ MG	0.01182	7.14	7.176	0.01165	0.01274	0.01107
___ MN	0.00736	479.03	172.204	0.00004	0.00004	0.02198
___ MO	0.00015	-0.38	196.384	0.00015	-0.00015	0.00045
___ NA	0.30044	350.48	5.360	0.31714	0.29917	0.28501
___ NI	-0.00048	3.61	20.324	-0.00051	-0.00055	-0.00037
___ P	0.00318	2.07	21.314	0.00396	0.00282	0.00276
___ PB	0.00045	1.52	329.037	-0.00070	0.00213	-0.00007
___ S	0.06867	4.64	11.811	0.07522	0.07119	0.05960
___ SB	-0.00550	-0.08	44.895	-0.00267	-0.00663	-0.00721
___ SE	0.00296	0.54	21.936	0.00300	0.00359	0.00229
___ SI	0.00724	1.34	231.096	0.02652	-0.00138	-0.00342
___ SN	0.00129	-0.12	137.131	0.00323	-0.00026	0.00091
___ SR	0.00474	2,966.97	165.571	0.00022	0.00019	0.01380
___ TH	0.03743	-1.03	37.868	0.04606	0.04516	0.02107
___ TI	0.00018	18.31	240.381	-0.00010	-0.00004	0.00069
___ TL	-0.00090	-0.72	209.558	-0.00250	-0.00139	0.00118
___ V	0.00236	-12.50	32.744	0.00215	0.00171	0.00321
___ W	0.00019	0.83	409.121	0.00008	-0.00054	0.00104
___ Y1	4165.28680	4,165.29	0.301	4179.76202	4158.10919	4157.98920
___ Y2A	189160.61288	189,160.61	1.009	190352.21146	190169.59824	186960.02892
___ Y2R	7860.98132	7,860.98	0.758	7821.56804	7831.79916	7929.57676
___ ZN	-0.00029	9.12	36.297	-0.00037	-0.00017	-0.00032
___ ZR	-0.00387	5.15	71.995	-0.00084	-0.00631	-0.00445

LANCASTER LABORATORIES

Run Name: 2013801T74

Instrument ID: 23745

Tube: 30

Date/Time: 05/17/2020 15:09

Sample Number: 1313225

Class: ****

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 1.00

Protocol Symbol: DU

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	0.00021	-2.26	307.250	0.00048	0.00067	-0.00052
___ AL	0.05265	5.60	51.358	0.08351	0.04130	0.03313
___ AL A)	0.00229	54.11	117.313	0.00534	0.00026	0.00127
___ AS	-0.00701	-0.38	43.953	-0.00959	-0.00784	-0.00360
___ B	0.05201	373.85	1.400	0.05117	0.05250	0.05236
___ BA	0.12049	75,604.32	0.395	0.11998	0.12092	0.12057
___ BE	-0.00019	-833.35	3.110	-0.00019	-0.00020	-0.00018
___ CA	57.39508	27,299.56	0.296	57.33216	57.26566	57.58743
___ CD	0.00042	-3.57	37.488	0.00027	0.00058	0.00041
___ CO	-0.00142	0.66	46.308	-0.00210	-0.00078	-0.00138
___ CR	0.00214	8.52	24.314	0.00254	0.00231	0.00155
___ CU	0.00011	5.97	1315.083	0.00156	-0.00140	0.00018
___ FE	0.01132	0.17	153.984	0.00828	0.03008	-0.00439
___ K	2.73476	1,440.61	1.219	2.69644	2.75079	2.75706
___ LI	0.01500	140.89	2.232	0.01486	0.01538	0.01475
___ MG	8.07948	5,883.32	0.410	8.10782	8.08755	8.04308
___ MN	0.00016	17.34	22.617	0.00014	0.00020	0.00014
___ MO	0.00275	3.54	10.487	0.00270	0.00249	0.00306
___ NA	24.42003	17,645.31	1.087	24.60673	24.53713	24.11625
___ NI	-0.00012	2.90	973.047	0.00115	-0.00109	-0.00042
___ P	0.00934	3.25	47.185	0.00685	0.01443	0.00675
___ PB	-0.00153	0.84	174.693	-0.00416	0.00117	-0.00158
___ S	19.96078	1,060.22	0.586	19.82571	20.02370	20.03292
___ SB	-0.00300	0.61	72.735	-0.00336	-0.00498	-0.00066
___ SE	0.00473	0.74	154.368	-0.00329	0.01099	0.00649
___ SI	18.22281	1,503.33	0.592	18.19789	18.12956	18.34099
___ SN	0.00464	0.56	25.942	0.00438	0.00596	0.00359
___ SR	0.35827	230,852.53	0.245	0.35726	0.35883	0.35873
___ TH	0.02497	-1.73	92.474	0.01008	0.05157	0.01326
___ TI	0.00216	117.56	15.073	0.00180	0.00225	0.00243
___ TL	0.00315	0.06	48.648	0.00138	0.00411	0.00396
___ V	0.00644	11.16	11.813	0.00732	0.00609	0.00593
___ W	0.00029	0.94	228.128	0.00083	-0.00044	0.00048
___ Y1	4104.43956	4,104.44	0.149	4107.87421	4097.37026	4108.07419
___ Y2A	185466.53989	185,466.54	0.734	186949.80531	185176.02500	184273.78936
___ Y2R	7932.84756	7,932.85	0.668	7872.22112	7955.80491	7970.51666
___ ZN	0.01123	97.18	0.499	0.01123	0.01117	0.01128
___ ZR	-0.00178	6.53	127.556	0.00062	-0.00390	-0.00205

LANCASTER LABORATORIES

Run Name: 2013801T74

Instrument ID: 23745

Tube: 31

Date/Time: 05/17/2020 15:12

Sample Number: 1313229

Class: ****

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 1.00

Protocol Symbol: DU

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS		
				#1	#2	#3
___ AG	0.00139	-0.39	31.148	0.00152	0.00174	0.00091
___ AL	-0.06062	0.70	21.335	-0.05841	-0.07451	-0.04893
___ AL A)	-0.00972	44.33	78.666	-0.01620	-0.01169	-0.00128
___ AS	-0.00070	0.26	759.676	0.00529	-0.00270	-0.00468
___ B	0.05180	377.81	0.601	0.05205	0.05145	0.05189
___ BA	0.10146	64,430.50	0.541	0.10187	0.10084	0.10168
___ BE	-0.00013	-824.18	11.722	-0.00012	-0.00012	-0.00015
___ CA	40.99090	19,530.52	0.353	40.83876	41.00749	41.12646
___ CD	0.00062	-1.43	5.885	0.00059	0.00066	0.00061
___ CO	-0.00098	1.44	28.335	-0.00090	-0.00075	-0.00129
___ CR	0.00114	2.53	42.091	0.00063	0.00158	0.00122
___ CU	-0.00147	4.18	79.581	-0.00263	-0.00147	-0.00030
___ FE	0.01508	0.68	48.887	0.02355	0.01011	0.01158
___ K	2.20276	1,162.11	1.860	2.23116	2.15579	2.22135
___ LI	0.01105	100.96	14.649	0.00941	0.01111	0.01265
___ MG	5.90127	4,293.60	0.673	5.93027	5.85600	5.91752
___ MN	0.00018	18.74	20.824	0.00014	0.00022	0.00017
___ MO	0.00362	4.89	12.894	0.00364	0.00408	0.00315
___ NA	22.23126	16,040.96	0.852	22.39778	22.02533	22.27065
___ NI	-0.00015	2.91	709.008	0.00076	-0.00133	0.00012
___ P	0.00615	2.64	24.733	0.00491	0.00568	0.00785
___ PB	-0.00176	0.63	43.540	-0.00098	-0.00179	-0.00252
___ S	10.73898	575.09	0.320	10.71986	10.71842	10.77864
___ SB	-0.00199	0.88	70.890	-0.00161	-0.00355	-0.00081
___ SE	0.00325	0.57	103.110	0.00420	0.00601	-0.00048
___ SI	17.74756	1,460.86	0.429	17.75791	17.66685	17.81793
___ SN	0.00355	0.34	59.883	0.00319	0.00163	0.00584
___ SR	0.25852	168,507.64	0.271	0.25912	0.25775	0.25870
___ TH	0.07146	0.86	52.930	0.11140	0.06679	0.03619
___ TI	0.00193	107.01	7.463	0.00208	0.00190	0.00180
___ TL	0.00165	-0.23	63.726	0.00259	0.00051	0.00185
___ V	0.00653	11.69	6.331	0.00606	0.00683	0.00669
___ W	0.00000	0.77	3295.114	-0.00033	0.00053	-0.00018
___ Y1	4135.05983	4,135.06	0.433	4148.69013	4141.70583	4114.78352
___ Y2A	187653.95060	187,653.95	0.664	186807.00440	189085.37802	187069.46938
___ Y2R	7915.20673	7,915.21	0.468	7943.71514	7928.58568	7873.31937
___ ZN	0.00675	63.35	2.014	0.00688	0.00675	0.00661
___ ZR	-0.00649	4.62	65.306	-0.00955	-0.00825	-0.00165

LANCASTER LABORATORIES

Run Name: 2013801T74

Instrument ID: 23745

Tube: 32

Date/Time: 05/17/2020 15:15

Sample Number: 1313230

Class: ****

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 1.00

Protocol Symbol: DU

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	0.00138	3.48	39.071	0.00107	0.00107	0.00200
___ AL	0.01109	3.76	117.879	0.02478	-0.00126	0.00976
___ AL A)	-0.00569	47.01	50.116	-0.00297	-0.00865	-0.00545
___ AS	-0.00415	-0.12	171.374	0.00207	-0.00261	-0.01191
___ B	0.05036	368.55	2.149	0.04911	0.05100	0.05098
___ BA	0.10359	66,250.62	2.834	0.10020	0.10540	0.10517
___ BE	-0.00016	-840.96	14.934	-0.00015	-0.00019	-0.00014
___ CA	41.10051	19,260.80	0.771	41.46510	40.89327	40.94316
___ CD	0.00054	-2.36	8.932	0.00048	0.00057	0.00055
___ CO	-0.00156	0.41	60.489	-0.00181	-0.00052	-0.00236
___ CR	0.00333	16.02	21.081	0.00320	0.00408	0.00270
___ CU	0.00069	14.84	135.932	-0.00039	0.00131	0.00114
___ FE	0.01458	0.60	131.000	0.02767	-0.00733	0.02339
___ K	2.17951	1,131.20	1.622	2.21902	2.15086	2.16865
___ LI	0.01255	112.06	12.396	0.01105	0.01245	0.01416
___ MG	5.88380	4,210.85	0.922	5.89688	5.82423	5.93028
___ MN	-0.00003	5.92	134.348	0.00001	-0.00005	-0.00003
___ MO	0.00371	5.03	3.403	0.00370	0.00359	0.00384
___ NA	22.20996	15,763.20	0.763	22.27017	22.01852	22.34120
___ NI	-0.00007	3.02	650.773	-0.00043	-0.00019	0.00042
___ P	0.00928	3.27	18.782	0.01075	0.00974	0.00736
___ PB	0.00021	2.21	623.709	0.00075	-0.00130	0.00119
___ S	10.72585	575.60	0.725	10.65675	10.71068	10.81012
___ SB	-0.00202	0.89	154.823	-0.00558	0.00029	-0.00077
___ SE	0.00175	0.40	283.707	0.00546	0.00365	-0.00387
___ SI	17.79571	1,440.82	0.260	17.84231	17.74983	17.79500
___ SN	0.00022	-0.34	884.701	0.00154	-0.00202	0.00115
___ SR	0.25526	167,578.31	2.771	0.24712	0.25983	0.25885
___ TH	0.04901	-0.38	17.024	0.03951	0.05512	0.05241
___ TI	0.00184	103.22	4.815	0.00187	0.00190	0.00173
___ TL	0.00393	0.21	50.254	0.00326	0.00238	0.00615
___ V	0.00623	10.04	7.163	0.00672	0.00613	0.00584
___ W	0.00122	1.47	41.302	0.00067	0.00133	0.00165
___ Y1	4143.81395	4,143.81	0.209	4146.73033	4134.05159	4150.65993
___ Y2A	189066.09208	189,066.09	2.283	193941.01516	185729.77758	187527.48351
___ Y2R	7785.48134	7,785.48	0.791	7724.30279	7784.73968	7847.40156
___ ZN	0.01411	120.43	0.822	0.01420	0.01398	0.01416
___ ZR	-0.00376	5.88	76.444	-0.00090	-0.00373	-0.00664

LANCASTER LABORATORIES

Run Name: 2013801T74

Instrument ID: 23745

Tube: 33

Date/Time: 05/17/2020 15:18

Sample Number: 1313228

Class: ****

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 1.00

Protocol Symbol: DU

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS		
				#1	#2	#3
___ AG	0.00220	5.62	44.234	0.00136	0.00196	0.00326
___ AL	-0.00902	3.09	614.540	0.04143	-0.06837	-0.00013
___ AL A)	-0.01079	43.73	69.691	-0.00885	-0.00443	-0.01910
___ AS	0.00242	0.59	190.188	-0.00196	0.00200	0.00721
___ B	0.05034	368.73	0.132	0.05026	0.05039	0.05035
___ BA	0.10059	64,182.57	0.158	0.10077	0.10045	0.10056
___ BE	-0.00017	-843.12	12.032	-0.00019	-0.00015	-0.00016
___ CA	40.45714	19,638.93	0.350	40.39201	40.35980	40.61961
___ CD	0.00053	-2.38	21.895	0.00067	0.00045	0.00049
___ CO	-0.00063	2.08	90.270	-0.00117	-0.00004	-0.00068
___ CR	0.00102	1.80	7.034	0.00108	0.00094	0.00105
___ CU	-0.00119	7.55	186.219	0.00000	0.00018	-0.00374
___ FE	0.03406	3.33	44.413	0.02268	0.02827	0.05123
___ K	2.12352	1,142.20	1.481	2.10147	2.15955	2.10955
___ LI	0.00898	84.60	3.515	0.00906	0.00924	0.00863
___ MG	5.77058	4,277.34	0.859	5.81230	5.78371	5.71574
___ MN	0.00022	21.94	33.102	0.00015	0.00021	0.00030
___ MO	0.00320	4.29	4.917	0.00312	0.00338	0.00310
___ NA	21.71810	15,966.54	0.527	21.84176	21.69640	21.61613
___ NI	0.00037	3.65	100.749	0.00060	-0.00006	0.00058
___ P	0.00983	3.41	23.595	0.00985	0.01214	0.00750
___ PB	-0.00115	1.12	168.595	-0.00092	0.00067	-0.00319
___ S	10.52008	569.95	0.407	10.47068	10.54473	10.54483
___ SB	-0.00457	0.18	65.482	-0.00255	-0.00315	-0.00801
___ SE	0.00352	0.61	45.885	0.00167	0.00423	0.00466
___ SI	17.40378	1,459.35	0.035	17.40781	17.40685	17.39667
___ SN	0.00131	-0.12	199.202	0.00356	0.00192	-0.00155
___ SR	0.25519	167,114.02	0.160	0.25556	0.25475	0.25524
___ TH	0.07672	1.17	58.962	0.04190	0.06041	0.12786
___ TI	0.00198	110.37	4.657	0.00194	0.00209	0.00191
___ TL	0.00441	0.30	203.259	-0.00196	0.01465	0.00053
___ V	0.00642	11.17	7.124	0.00644	0.00687	0.00595
___ W	-0.00011	0.71	926.870	0.00039	0.00053	-0.00124
___ Y1	4183.26667	4,183.27	0.257	4193.96560	4183.38166	4172.45275
___ Y2A	188535.25427	188,535.25	0.559	189186.00419	189100.66328	187319.09535
___ Y2R	8063.03254	8,063.03	0.722	8032.03187	8130.22187	8026.84389
___ ZN	0.00670	63.73	3.729	0.00683	0.00685	0.00641
___ ZR	-0.00517	6.38	69.743	-0.00615	-0.00118	-0.00819

LANCASTER LABORATORIES

Run Name: 2013801T74

Instrument ID: 23745

Tube: 34

Date/Time: 05/17/2020 15:21

Sample Number: **1313231**

Class: ****

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 1.00

Protocol Symbol: DU

ELEMENT				INTEGRATIONS		
	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	#1	#2	#3
___ AG	0.00016	-1.61	989.817	0.00199	-0.00112	-0.00037
___ AL	-0.03056	1.79	48.865	-0.02036	-0.04769	-0.02361
___ AL A)	-0.00272	46.59	160.155	-0.00521	-0.00525	0.00231
___ AS	-0.00207	0.11	295.207	0.00466	-0.00722	-0.00364
___ B	0.04989	363.86	0.236	0.04982	0.04982	0.05003
___ BA	0.11687	74,403.07	0.402	0.11639	0.11689	0.11733
___ BE	-0.00017	-836.62	35.785	-0.00010	-0.00019	-0.00021
___ CA	41.00285	19,420.68	0.361	41.15387	40.99701	40.85766
___ CD	0.00050	-2.75	21.990	0.00061	0.00050	0.00039
___ CO	-0.00163	0.31	73.426	-0.00037	-0.00275	-0.00175
___ CR	0.00267	11.94	18.719	0.00297	0.00294	0.00209
___ CU	-0.00010	1.40	1036.953	-0.00130	0.00023	0.00076
___ FE	0.00559	-0.61	33.596	0.00351	0.00607	0.00717
___ K	2.12279	1,114.17	1.686	2.10574	2.09872	2.16393
___ LI	0.01153	104.47	22.220	0.01390	0.01188	0.00881
___ MG	5.83478	4,220.27	0.397	5.81110	5.83585	5.85739
___ MN	0.00663	434.98	0.224	0.00664	0.00661	0.00663
___ MO	0.00370	5.06	4.286	0.00366	0.00356	0.00387
___ NA	21.97506	15,763.72	0.280	21.90824	21.98765	22.02928
___ NI	-0.00002	3.13	4182.202	0.00035	-0.00116	0.00074
___ P	0.00995	3.44	14.234	0.00856	0.01139	0.00991
___ PB	-0.00118	1.10	81.307	-0.00009	-0.00152	-0.00191
___ S	10.46129	567.76	0.914	10.56957	10.42567	10.38863
___ SB	-0.00271	0.70	54.933	-0.00104	-0.00319	-0.00389
___ SE	0.00138	0.36	326.978	-0.00185	-0.00055	0.00656
___ SI	17.55760	1,436.68	0.552	17.49737	17.50604	17.66940
___ SN	0.00207	0.04	84.581	0.00101	0.00409	0.00111
___ SR	0.25843	168,904.95	0.487	0.25697	0.25923	0.25907
___ TH	0.01839	-2.08	288.022	0.07766	0.00189	-0.02437
___ TI	0.00198	110.38	1.313	0.00198	0.00201	0.00196
___ TL	0.00496	0.41	86.709	0.00816	0.00007	0.00663
___ V	0.00611	9.29	22.782	0.00720	0.00658	0.00454
___ W	0.00006	0.80	1218.993	-0.00050	0.00091	-0.00022
___ Y1	4190.48429	4,190.48	0.143	4195.59544	4183.91661	4191.94081
___ Y2A	188167.43271	188,167.43	0.834	189430.11398	188662.55493	186409.62922
___ Y2R	7868.32043	7,868.32	0.174	7872.55976	7879.38299	7853.01853
___ ZN	0.00565	55.60	0.564	0.00566	0.00561	0.00567
___ ZR	-0.00324	4.65	129.928	-0.00668	-0.00448	0.00145

LANCASTER LABORATORIES

Run Name: 2013801T74

Instrument ID: 23745

Tube: 35

Date/Time: 05/17/2020 15:24

Sample Number: **1313727**

Class: ****

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 1.00

Protocol Symbol: DU

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	-0.00257	-8.03	40.152	-0.00167	-0.00233	-0.00369
___ AL	-0.20239	0.68	13.256	-0.18404	-0.23318	-0.18994
___ AL A)	-0.13163	42.90	12.589	-0.13770	-0.14430	-0.11288
___ AS k	-0.02853	-0.35	80.133	-0.04043	-0.04299	-0.00217
___ B	6.62396	29,636.35	0.225	6.62288	6.63939	6.60961
___ BA	0.05447	19,228.27	0.236	0.05452	0.05458	0.05433
___ BE	-0.00085	-604.46	4.205	-0.00089	-0.00083	-0.00083
___ CA	703.09755	236,180.16	1.099	711.55175	696.39460	701.34629
___ CD	0.00032	-2.29	34.848	0.00024	0.00045	0.00028
___ CO	0.03102	31.04	10.663	0.03427	0.03114	0.02765
___ CR	-0.00092	-5.64	127.463	-0.00111	0.00034	-0.00198
___ CU	0.00988	68.64	1.266	0.00987	0.01000	0.00975
___ FE	0.44290	47.97	2.205	0.45398	0.43916	0.43555
___ K k	448.98292	188,065.30	0.536	448.66420	446.75007	451.53449
___ LI	0.43266	3,198.28	0.074	0.43231	0.43272	0.43294
___ MG k	0.00000	299,131.04	0.000	0.00000	0.00000	0.00000
___ MN	17.47413	624,041.14	0.189	17.44312	17.47034	17.50892
___ MO	-0.00151	-1.55	58.388	-0.00104	-0.00252	-0.00096
___ NA	2413.58018	1,401,063.37	2.795	2486.56946	2400.66749	2353.50361
___ NI	0.04203	31.15	9.131	0.04533	0.04295	0.03782
___ P	0.05572	6.72	17.307	0.05062	0.06684	0.04970
___ PB	0.00233	2.00	98.701	0.00263	0.00447	-0.00010
___ S	1235.14636	35,599.05	8.292	1305.86516	1281.87673	1117.69720
___ SB	-0.00139	0.53	559.826	-0.00525	0.00759	-0.00652
___ SE	0.02387	1.60	5.389	0.02272	0.02364	0.02526
___ SI	15.42743	1,030.53	0.349	15.36558	15.46433	15.45238
___ SN	-0.00293	-0.51	157.051	-0.00740	-0.00318	0.00179
___ SR k	0.00000	2,063,576.52	0.000	3.44149	10.38028	3.30665
___ TH	-0.04106	-4.37	79.124	-0.04264	-0.00781	-0.07273
___ TI	-0.01600	-447.21	2.212	-0.01639	-0.01590	-0.01570
___ TL	-0.08137	-6.61	2.298	-0.07972	-0.08340	-0.08098
___ V	-0.00489	-30.30	15.018	-0.00428	-0.00470	-0.00571
___ W	-0.00062	0.21	191.552	0.00075	-0.00140	-0.00122
___ Y1	2238.87043	2,238.87	7.919	2126.02918	2147.34792	2443.23421
___ Y2A	104148.53549	104,148.54	0.254	103977.73734	104014.58833	104453.28081
___ Y2R	6422.74383	6,422.74	0.509	6401.49492	6460.37547	6406.36109
___ ZN	0.00374	22.94	12.134	0.00387	0.00412	0.00324
___ ZR	0.00096	4.29	390.806	-0.00061	-0.00175	0.00524

LANCASTER LABORATORIES

Run Name: 2013801T74

Instrument ID: 23745

Tube: 36

Date/Time: 05/17/2020 15:28

Sample Number: 1313723

Class: ****

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 1.00

Protocol Symbol: DU

ELEMENT	AVERAGE		%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	0.00478	17.33	19.041	0.00418	0.00434	0.00583
___ AL	3.25561	128.72	3.226	3.14110	3.27832	3.34742
___ AL A)	3.84393	3,343.19	1.050	3.88167	3.84874	3.80137
___ AS k	-0.04222	-0.39	36.234	-0.04038	-0.02793	-0.05836
___ B	6.08364	28,547.90	0.237	6.09433	6.08931	6.06727
___ BA	0.05543	20,517.49	0.274	0.05557	0.05546	0.05527
___ BE	-0.00071	-606.86	5.989	-0.00066	-0.00071	-0.00074
___ CA	669.00160	229,304.56	0.352	667.07819	671.62632	668.30029
___ CD	0.00676	39.23	10.717	0.00717	0.00718	0.00592
___ CO	0.05914	61.56	10.891	0.06188	0.06375	0.05178
___ CR	0.01494	50.78	6.577	0.01524	0.01384	0.01573
___ CU	0.05997	293.65	1.049	0.06060	0.05934	0.05997
___ FE	5.53679	618.51	1.403	5.48662	5.62626	5.49749
___ K k	421.30110	178,695.62	0.803	417.40422	423.48926	423.00981
___ LI	0.33969	2,575.71	1.051	0.33569	0.34083	0.34256
___ MG k	0.00000	286,274.65	0.000	0.00000	0.00000	0.00000
___ MN	14.13209	529,275.76	0.419	14.19417	14.12590	14.07621
___ MO	-0.00138	-1.54	35.153	-0.00117	-0.00193	-0.00103
___ NA	2288.72674	1,345,426.20	0.346	2295.03297	2279.85375	2291.29350
___ NI	0.09410	71.58	10.726	0.10112	0.09864	0.08253
___ P	0.19757	23.22	11.355	0.20968	0.21136	0.17169
___ PB	0.00606	4.46	26.511	0.00558	0.00785	0.00475
___ S	1075.37486	32,938.53	9.553	1136.78993	1132.56318	956.77147
___ SB	-0.00149	0.64	165.544	-0.00065	-0.00425	0.00045
___ SE	0.01490	1.06	38.159	0.01215	0.02144	0.01111
___ SI	21.31593	1,441.51	1.107	21.09065	21.56116	21.29600
___ SN	0.00634	0.53	53.964	0.00313	0.00993	0.00595
___ SR	9.30624	3,524,394.43	0.388	9.28772	9.28314	9.34785
___ TH	0.06173	0.27	38.258	0.05929	0.03943	0.08648
___ TI	0.09354	2,778.17	1.909	0.09549	0.09313	0.09199
___ TL	-0.05148	-4.50	5.376	-0.05435	-0.04884	-0.05124
___ V	0.01309	29.94	5.969	0.01399	0.01258	0.01271
___ W	0.00055	0.75	355.442	0.00268	-0.00118	0.00016
___ Y1	2382.02842	2,382.03	8.645	2253.17746	2273.39427	2619.51354
___ Y2A	109218.20132	109,218.20	0.151	109140.68735	109407.47207	109106.44453
___ Y2R	6503.82777	6,503.83	0.981	6547.69783	6430.66160	6533.12388
___ ZN	0.04662	219.37	11.279	0.05048	0.04874	0.04063
___ ZR	-0.00529	4.29	91.467	-0.00350	-0.00160	-0.01077

LANCASTER LABORATORIES

Run Name: 2013801T74

Instrument ID: 23745

Tube: 37

Date/Time: 05/17/2020 15:32

Sample Number: 1313729

Class: ****

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 1.00

Protocol Symbol: DU

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	-0.00350	-25.21	35.674	-0.00226	-0.00475	-0.00348
___ AL	-6.78130	7.99	0.404	-6.75035	-6.79110	-6.80246
___ AL A)	-6.72563	217.59	0.064	-6.72071	-6.72740	-6.72878
___ AS	-0.02292	-0.27	5.535	-0.02435	-0.02248	-0.02193
___ B	286.70853	1,680,629.17	0.304	285.70282	287.19838	287.22439
___ BA	0.04974	22,998.13	0.634	0.04944	0.05007	0.04973
___ BE	0.00000	-560.88	4619.688	-0.00004	0.00008	-0.00004
___ CA	138.45132	58,686.57	0.400	138.90823	138.61098	137.83474
___ CD	0.00067	-0.48	25.925	0.00077	0.00047	0.00077
___ CO	0.01269	18.38	1.339	0.01288	0.01256	0.01263
___ CR	0.00310	10.54	24.033	0.00226	0.00368	0.00336
___ CU	0.00439	33.46	73.128	0.00069	0.00644	0.00604
___ FE	0.28090	33.61	4.889	0.29584	0.26883	0.27803
___ K	200.38655	94,084.67	0.150	200.09159	200.37702	200.69104
___ LI	0.07786	642.25	0.907	0.07741	0.07750	0.07868
___ MG	359.83652	181,115.52	1.355	355.14399	359.48814	364.87744
___ MN	3.52768	164,964.21	0.204	3.52389	3.53598	3.52319
___ MO	0.00126	0.94	55.596	0.00101	0.00206	0.00072
___ NA	1669.90935	1,085,431.04	1.056	1690.27420	1659.83802	1659.61583
___ NI	0.02871	29.07	0.867	0.02845	0.02873	0.02895
___ P	0.10177	15.55	7.747	0.11061	0.09548	0.09921
___ PB	0.00487	3.81	28.839	0.00383	0.00431	0.00647
___ S	566.75597	21,847.98	1.327	572.41133	569.63642	558.22016
___ SB	-0.00237	0.57	283.101	0.00361	-0.00960	-0.00111
___ SE	0.00392	0.46	192.333	0.00766	0.00885	-0.00476
___ SI	18.56958	1,388.71	0.347	18.50680	18.63552	18.56643
___ SN	0.00361	0.26	105.619	0.00547	-0.00078	0.00614
___ SR	2.48991	1,176,839.81	0.710	2.49028	2.50741	2.47204
___ TH	0.03042	-1.29	183.789	0.09165	-0.01792	0.01753
___ TI	0.00624	237.65	5.464	0.00663	0.00601	0.00609
___ TL	-0.00471	-0.49	65.830	-0.00829	-0.00298	-0.00286
___ V	0.00274	-7.38	46.457	0.00314	0.00377	0.00132
___ W	0.00257	1.55	5.048	0.00242	0.00263	0.00265
___ Y1	2981.64045	2,981.64	1.118	2967.96024	2957.32182	3019.63929
___ Y2A	136371.63972	136,371.64	0.505	137157.97362	136085.36099	135871.58456
___ Y2R	7191.29018	7,191.29	0.090	7196.12155	7193.77490	7183.97410
___ ZN	0.00849	56.52	4.434	0.00822	0.00892	0.00834
___ ZR	-0.00217	5.87	63.150	-0.00373	-0.00162	-0.00116

LANCASTER LABORATORIES

Run Name: 2013801T74

Instrument ID: 23745

Tube: 38

Date/Time: 05/17/2020 15:36

Sample Number: **1313732**

Class: ****

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 1.00

Protocol Symbol: DU

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS		
				#1	#2	#3
___ AG	-0.00163	-4.52	52.718	-0.00105	-0.00122	-0.00261
___ AL	1.03717	46.07	2.279	1.05904	1.01208	1.04038
___ AL A)	1.32136	1,222.02	0.792	1.33266	1.31944	1.31199
___ AS k	-0.02056	0.03	70.718	-0.02617	-0.03146	-0.00405
___ B	6.08462	28,089.68	0.409	6.10370	6.05646	6.09369
___ BA	0.10382	37,749.96	0.815	0.10423	0.10285	0.10439
___ BE	-0.00077	-607.24	11.650	-0.00083	-0.00067	-0.00083
___ CA	683.94415	232,989.19	1.123	689.90675	675.27367	686.65202
___ CD	0.00039	-0.98	17.834	0.00046	0.00032	0.00038
___ CO	0.02893	29.66	8.636	0.03010	0.03063	0.02606
___ CR	0.00267	6.80	14.258	0.00233	0.00308	0.00259
___ CU	0.02095	114.61	10.697	0.02324	0.01876	0.02085
___ FE	2.61477	291.16	0.692	2.61923	2.59488	2.63021
___ K k	456.16314	192,938.79	0.783	454.80073	453.47438	460.21432
___ LI	0.40191	3,008.60	0.776	0.39831	0.40357	0.40384
___ MG k	0.00000	273,864.14	0.000	0.00000	0.00000	0.00000
___ MN	17.23399	634,963.19	0.695	17.33394	17.10126	17.26677
___ MO	0.00004	-0.28	1733.081	0.00031	-0.00079	0.00061
___ NA	2217.76990	1,300,016.89	2.202	2271.31271	2175.69264	2206.30433
___ NI	0.03859	29.23	8.276	0.03903	0.04155	0.03520
___ P	0.12876	14.73	12.437	0.14015	0.13567	0.11045
___ PB	0.00474	3.31	55.172	0.00733	0.00211	0.00478
___ S	1205.43851	35,339.51	7.169	1253.41587	1257.22985	1105.66981
___ SB	-0.00170	0.59	550.826	-0.00433	-0.00946	0.00869
___ SE	0.01009	0.74	29.202	0.00766	0.00924	0.01337
___ SI	15.90981	1,073.12	0.096	15.91410	15.89281	15.92252
___ SN	0.00168	-0.02	107.266	0.00317	-0.00033	0.00220
___ SR k	0.00000	2,026,099.96	0.000	3.28987	9.76934	3.20873
___ TH	-0.03389	-4.09	139.076	-0.07647	0.01675	-0.04194
___ TI	0.02510	737.29	1.526	0.02555	0.02490	0.02487
___ TL	-0.07199	-5.86	9.250	-0.07208	-0.07861	-0.06529
___ V	0.00375	-2.21	34.644	0.00342	0.00264	0.00518
___ W	-0.00181	-0.04	87.953	-0.00179	-0.00023	-0.00341
___ Y1	2274.56928	2,274.57	6.631	2183.80795	2191.21844	2448.68145
___ Y2A	107448.38647	107,448.39	0.310	107198.82500	107826.51077	107319.82363
___ Y2R	6485.57319	6,485.57	0.558	6493.90853	6516.88636	6445.92467
___ ZN	0.03233	145.90	8.319	0.03403	0.03372	0.02922
___ ZR	0.00074	4.51	626.732	0.00573	-0.00339	-0.00012

LANCASTER LABORATORIES

Run Name: 2013801T74

Instrument ID: 23745

Tube: 39

Date/Time: 05/17/2020 15:39

Sample Number: 1313725

Class: ****

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 1.00

Protocol Symbol: DU

ELEMENT	AVERAGE		%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	-0.00236	-13.82	20.339	-0.00255	-0.00272	-0.00182
___ AL	0.11812	12.66	24.886	0.11522	0.09028	0.14886
___ AL A)	0.16221	284.92	7.783	0.14786	0.16719	0.17159
___ AS k	-0.02461	-0.72	58.417	-0.04121	-0.01624	-0.01637
___ B	6.84559	30,571.88	5.829	7.30619	6.60599	6.62459
___ BA	0.06138	21,592.76	1.036	0.06098	0.06106	0.06212
___ BE	-0.00089	-613.78	4.773	-0.00093	-0.00085	-0.00088
___ CA	751.29666	245,397.96	0.782	757.99213	747.00973	748.88812
___ CD	0.00064	3.23	37.750	0.00067	0.00038	0.00086
___ CO	0.00665	7.77	26.031	0.00748	0.00781	0.00466
___ CR	-0.00088	-5.48	209.751	-0.00119	0.00110	-0.00255
___ CU	0.00913	76.37	9.022	0.00974	0.00819	0.00946
___ FE	8.92046	966.25	0.398	8.88701	8.91664	8.95774
___ K k	460.37881	189,552.57	0.608	463.61013	458.72998	458.79631
___ LI	0.40878	2,994.83	0.705	0.40806	0.41195	0.40632
___ MG k	0.00000	270,038.33	0.000	0.00000	0.00000	0.00000
___ MN	18.86450	671,659.66	0.428	18.77559	18.93354	18.88435
___ MO	-0.00042	-0.64	263.733	-0.00163	0.00053	-0.00016
___ NA	2289.04118	1,306,021.78	1.943	2278.86251	2250.54615	2337.71487
___ NI	0.00933	8.17	32.586	0.01123	0.01093	0.00582
___ P	0.09427	10.61	8.503	0.09376	0.10254	0.08653
___ PB	0.00196	2.11	159.238	0.00431	-0.00158	0.00316
___ S	1229.49394	34,714.37	7.415	1287.92266	1276.11726	1124.44191
___ SB	0.00417	1.32	116.789	0.00762	0.00628	-0.00140
___ SE	0.01102	0.71	82.669	0.02154	0.00575	0.00577
___ SI	11.48079	753.99	0.385	11.43212	11.51854	11.49171
___ SN	0.00632	0.47	101.841	0.01373	0.00216	0.00306
___ SR k	0.00000	1,275,672.06	0.000	3.47078	3.53260	3.58734
___ TH	0.02717	-1.28	62.863	0.00871	0.03038	0.04241
___ TI	-0.00948	-262.17	4.347	-0.00918	-0.00995	-0.00931
___ TL	-0.08903	-7.18	11.927	-0.07848	-0.09972	-0.08890
___ V	-0.00179	-19.67	101.135	-0.00108	-0.00044	-0.00384
___ W	0.00105	0.69	263.276	0.00006	0.00417	-0.00108
___ Y1	2191.40162	2,191.40	7.127	2088.31934	2114.79373	2371.09180
___ Y2A	103831.28497	103,831.28	0.699	104642.08633	103608.21343	103243.55516
___ Y2R	6313.23226	6,313.23	0.769	6311.60375	6362.56477	6265.52826
___ ZN	0.00933	50.87	14.037	0.00997	0.01019	0.00782
___ ZR	-0.00092	5.99	194.947	0.00108	-0.00237	-0.00146

LANCASTER LABORATORIES

Run Name: 2013801T74

Instrument ID: 23745

Tube: 40

Date/Time: 05/17/2020 15:43

Sample Number: **CCV**

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	0.47928	3,921.83	0.647	0.48268	0.47854	0.47662
___ AL	26.32448	1,144.66	0.740	26.42400	26.44956	26.09988
___ AL A)	25.58664	35,941.01	0.175	25.53884	25.62763	25.59344
___ AS	0.49913	53.52	1.408	0.50718	0.49422	0.49598
___ B	0.55806	4,394.55	0.675	0.56235	0.55649	0.55532
___ BA	0.51550	321,632.17	0.705	0.51454	0.51951	0.51244
___ BE	0.49887	186,047.56	1.044	0.50430	0.49841	0.49392
___ CA	26.27771	12,066.27	0.550	26.31773	26.39790	26.11750
___ CD	0.50056	5,324.47	0.451	0.50203	0.50169	0.49796
___ CO	0.48156	847.83	0.316	0.48076	0.48060	0.48332
___ CR	0.47593	2,870.77	0.456	0.47826	0.47559	0.47396
___ CU	0.53123	3,973.05	0.446	0.53162	0.53339	0.52869
___ FE	27.47447	3,546.17	0.836	27.49038	27.69580	27.23722
___ K	25.46431	12,639.66	0.481	25.42777	25.60099	25.36416
___ LI	0.50022	4,103.16	1.070	0.49497	0.50566	0.50004
___ MG	24.29999	16,757.86	0.590	24.32237	24.14667	24.43095
___ MN	0.49827	31,723.33	0.148	0.49885	0.49853	0.49744
___ MO	0.49243	741.70	0.295	0.49388	0.49244	0.49098
___ NA	20.88459	14,466.23	0.352	20.95378	20.80756	20.89242
___ NI	0.49403	640.41	0.411	0.49633	0.49328	0.49249
___ P	0.50587	101.50	0.369	0.50373	0.50671	0.50717
___ PB	0.49442	396.58	0.738	0.49433	0.49811	0.49081
___ S	23.69247	1,259.42	0.779	23.68215	23.51329	23.88196
___ SB	0.50012	139.43	0.922	0.49712	0.50543	0.49781
___ SE	0.50620	58.88	1.283	0.50369	0.51357	0.50134
___ SI	28.86517	2,280.21	0.319	28.79839	28.97016	28.82695
___ SN	0.49121	99.96	0.777	0.49304	0.49377	0.48683
___ SR	0.52145	333,453.04	0.299	0.51981	0.52164	0.52290
___ TH	0.56503	27.14	7.743	0.60711	0.51978	0.56820
___ TI	0.52160	26,141.59	0.184	0.52075	0.52265	0.52141
___ TL	0.49181	90.89	0.544	0.48873	0.49307	0.49362
___ V	0.50190	2,818.62	0.630	0.50555	0.50016	0.49999
___ W	0.50070	271.07	0.290	0.50172	0.50133	0.49904
___ Y1	4115.63851	4,115.64	0.066	4115.20024	4113.15868	4118.55660
___ Y2A	184576.36781	184,576.37	0.326	184343.61277	184125.59856	185259.89209
___ Y2R	7594.24043	7,594.24	0.188	7587.33054	7584.77350	7610.61726
___ ZN	0.49114	3,846.37	0.077	0.49154	0.49108	0.49079
___ ZR	0.51239	527.91	0.227	0.51125	0.51233	0.51358

LANCASTER LABORATORIES

Run Name: 2013801T74

Instrument ID: 23745

Tube: 41

Date/Time: 05/17/2020 15:46

Sample Number: CCB

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	0.00057	-3.01	134.427	-0.00025	0.00069	0.00128
___ AL	0.03194	4.49	265.321	-0.01336	0.12972	-0.02053
___ AL A)	0.00306	57.02	93.805	0.00635	0.00183	0.00101
___ AS	0.00125	0.38	337.696	-0.00314	0.00528	0.00162
___ B	0.05477	454.03	2.634	0.05327	0.05490	0.05615
___ BA	0.00008	163.05	23.874	0.00006	0.00008	0.00009
___ BE	-0.00006	-808.74	14.336	-0.00005	-0.00005	-0.00007
___ CA	0.01934	59.12	18.843	0.01702	0.02354	0.01747
___ CD	0.00063	-1.33	17.720	0.00050	0.00071	0.00068
___ CO	-0.00107	1.30	80.316	-0.00029	-0.00092	-0.00199
___ CR	0.00047	-1.65	129.825	0.00044	-0.00012	0.00109
___ CU	-0.00114	-2.93	72.463	-0.00059	-0.00074	-0.00209
___ FE	0.02339	1.74	36.451	0.01506	0.03210	0.02300
___ K	0.20276	123.24	9.073	0.18163	0.21144	0.21522
___ LI	0.00033	-5.13	502.332	0.00007	-0.00117	0.00209
___ MG	0.06023	40.91	8.234	0.06381	0.06230	0.05457
___ MN	0.00277	188.73	24.676	0.00205	0.00284	0.00341
___ MO	0.00031	-0.14	41.776	0.00025	0.00046	0.00022
___ NA	1.75006	1,336.39	1.934	1.73851	1.78818	1.72349
___ NI	-0.00055	3.56	90.032	-0.00007	-0.00105	-0.00052
___ P	0.00119	1.69	85.809	0.00007	0.00144	0.00207
___ PB	-0.00065	0.65	306.784	-0.00283	0.00106	-0.00017
___ S	0.83124	46.23	16.157	0.96298	0.83623	0.69452
___ SB	-0.00202	0.89	76.471	-0.00053	-0.00190	-0.00361
___ SE	0.00140	0.36	248.141	0.00306	0.00374	-0.00260
___ SI	0.01294	1.76	69.105	0.00370	0.02155	0.01356
___ SN	0.00154	-0.07	214.715	-0.00129	0.00517	0.00073
___ SR	0.00176	1,057.85	21.290	0.00137	0.00178	0.00212
___ TH	0.04636	-0.51	51.181	0.03168	0.03367	0.07374
___ TI	0.00004	11.41	128.146	0.00010	-0.00001	0.00004
___ TL	0.00038	-0.47	336.124	0.00034	-0.00088	0.00167
___ V	0.00181	-15.86	14.300	0.00210	0.00161	0.00171
___ W	0.00015	0.81	775.675	0.00141	-0.00021	-0.00077
___ Y1	4214.02526	4,214.03	0.227	4203.68963	4215.78842	4222.59774
___ Y2A	190846.37182	190,846.37	0.505	191953.69171	190384.64421	190200.77953
___ Y2R	7610.37657	7,610.38	0.252	7590.41725	7612.12393	7628.58854
___ ZN	-0.00033	8.92	18.430	-0.00029	-0.00030	-0.00040
___ ZR	-0.00364	5.72	25.304	-0.00267	-0.00376	-0.00450

LANCASTER LABORATORIES

Run Name: 2013801T74

Instrument ID: 23745

Tube: 42

Date/Time: 05/17/2020 15:49

Sample Number: 1313997

Class: ****

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 1.00

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	0.00018	-4.29	60.834	0.00023	0.00026	0.00005
___ AL	0.00628	3.59	215.894	0.01997	-0.00716	0.00604
___ AL A)	0.00278	58.01	265.235	-0.00114	-0.00180	0.01127
___ AS	-0.00592	-0.03	115.999	0.00123	-0.01246	-0.00652
___ B	0.21188	1,608.93	0.652	0.21283	0.21251	0.21029
___ BA	0.08739	52,261.05	0.769	0.08662	0.08773	0.08782
___ BE	-0.00020	-799.44	34.901	-0.00023	-0.00025	-0.00012
___ CA	88.28747	40,396.73	0.147	88.33648	88.38599	88.13994
___ CD	0.00086	1.64	7.803	0.00079	0.00089	0.00091
___ CO	0.00002	3.07	2110.270	-0.00053	0.00015	0.00045
___ CR	0.00056	-1.00	67.734	0.00050	0.00097	0.00021
___ CU	0.02066	156.58	8.841	0.02156	0.01856	0.02187
___ FE	0.70095	91.59	2.212	0.71837	0.69585	0.68864
___ K	4.43088	2,246.55	1.480	4.44886	4.48560	4.35818
___ LI	-0.00003	22.36	3778.736	-0.00208	0.00255	-0.00057
___ MG	14.34417	10,080.69	1.121	14.16978	14.48650	14.37625
___ MN	3.79981	230,192.60	0.167	3.79353	3.80622	3.79968
___ MO	0.00058	0.26	69.374	0.00037	0.00105	0.00033
___ NA	219.20621	152,317.65	1.719	215.43696	222.97135	219.21030
___ NI	0.00110	5.19	86.214	0.00011	0.00118	0.00200
___ P	0.01304	3.84	7.951	0.01264	0.01422	0.01227
___ PB	-0.00033	1.05	291.843	-0.00144	0.00023	0.00022
___ S	195.42764	9,984.08	0.748	196.49809	196.02264	193.76219
___ SB	0.00077	1.56	244.547	-0.00138	0.00204	0.00164
___ SE	0.00598	0.84	79.146	0.01026	0.00680	0.00089
___ SI	3.21131	257.16	1.792	3.21077	3.26912	3.15403
___ SN	0.00074	-0.22	405.795	-0.00174	0.00407	-0.00011
___ SR	0.43251	265,789.25	1.105	0.42788	0.43223	0.43742
___ TH	0.03674	-1.05	60.779	0.01848	0.06163	0.03011
___ TI	0.00197	102.87	8.578	0.00178	0.00201	0.00212
___ TL	-0.01830	-3.09	31.256	-0.02096	-0.02220	-0.01173
___ V	0.00153	-16.17	34.836	0.00095	0.00199	0.00164
___ W	0.00023	0.91	469.117	-0.00073	0.00141	0.00002
___ Y1	3950.90398	3,950.90	0.008	3950.85406	3950.61889	3951.23901
___ Y2A	176664.91842	176,664.92	0.431	177500.47453	176481.79321	176012.48754
___ Y2R	7682.73013	7,682.73	1.033	7767.66587	7610.47068	7670.05385
___ ZN	0.01713	138.25	1.190	0.01711	0.01735	0.01694
___ ZR	-0.00093	7.83	160.599	0.00076	-0.00210	-0.00146

LANCASTER LABORATORIES

Run Name: 2013801T74

Instrument ID: 23745

Tube: 43

Date/Time: 05/17/2020 15:53

Sample Number: 1313989

Class: ****

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 1.00

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS		
				#1	#2	#3
___ AG	-0.00001	-4.30	3068.430	-0.00164	0.00097	0.00062
___ AL	-0.02274	2.14	250.561	-0.01926	-0.08139	0.03242
___ AL A)	0.02613	87.46	9.837	0.02910	0.02458	0.02472
___ AS	0.00234	0.60	170.701	0.00321	-0.00202	0.00583
___ B	0.12929	1,000.53	0.699	0.12828	0.12959	0.13001
___ BA	0.02437	15,148.59	0.708	0.02417	0.02451	0.02442
___ BE	-0.00009	-784.38	9.077	-0.00009	-0.00010	-0.00008
___ CA	24.95283	11,588.22	0.509	24.82366	24.95715	25.07768
___ CD	0.00053	-2.21	14.083	0.00059	0.00045	0.00056
___ CO	-0.00072	1.87	138.369	-0.00185	-0.00033	0.00003
___ CR	0.00113	2.38	70.532	0.00025	0.00134	0.00181
___ CU	0.00777	59.19	14.244	0.00875	0.00798	0.00657
___ FE	0.20234	25.46	4.731	0.19361	0.20082	0.21258
___ K	2.18404	1,117.09	1.256	2.17766	2.21411	2.16035
___ LI	0.00113	10.07	99.933	0.00199	-0.00015	0.00153
___ MG	2.62272	1,856.23	0.927	2.63255	2.59503	2.64058
___ MN	1.03120	64,611.66	0.082	1.03172	1.03166	1.03022
___ MO	0.00390	5.20	12.440	0.00367	0.00357	0.00446
___ NA	137.55588	95,580.76	0.520	137.41875	136.91849	138.33041
___ NI	0.00111	5.03	54.143	0.00127	0.00161	0.00044
___ P	0.49413	97.36	0.915	0.49898	0.49003	0.49338
___ PB	-0.00001	1.54	3001.973	0.00015	0.00241	-0.00259
___ S	39.15427	2,055.37	0.432	39.11932	39.00538	39.33810
___ SB	-0.00002	1.39	1492.119	-0.00091	-0.00399	0.00484
___ SE	0.00315	0.55	165.407	0.00008	0.00020	0.00916
___ SI	8.34106	666.39	0.198	8.32912	8.33411	8.35994
___ SN	0.00373	0.37	95.049	0.00778	0.00118	0.00223
___ SR	0.17284	109,611.94	0.279	0.17230	0.17296	0.17324
___ TH	0.02654	-1.59	126.421	-0.01195	0.04959	0.04198
___ TI	0.00390	202.09	4.188	0.00375	0.00408	0.00387
___ TL	-0.00117	-0.55	214.419	-0.00256	0.00173	-0.00269
___ V	0.01742	73.38	7.266	0.01801	0.01597	0.01829
___ W	-0.00067	0.38	58.697	-0.00073	-0.00102	-0.00025
___ Y1	4058.22084	4,058.22	0.451	4063.35866	4073.41766	4037.88621
___ Y2A	182705.93611	182,705.94	0.309	183216.98066	182100.61827	182800.20941
___ Y2R	7677.97589	7,677.98	1.040	7722.17573	7725.91926	7585.83267
___ ZN	0.00327	36.23	4.739	0.00345	0.00316	0.00320
___ ZR	-0.00003	8.12	3539.132	0.00343	-0.00056	-0.00297

LANCASTER LABORATORIES

Run Name: 2013801T74

Instrument ID: 23745

Tube: 44

Date/Time: 05/17/2020 15:56

Sample Number: 1313995

Class: ****

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 1.00

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	0.00043	-5.65	108.579	-0.00010	0.00062	0.00078
___ AL	-0.02381	2.25	160.588	-0.04134	0.02005	-0.05013
___ AL A)	-0.00939	43.63	62.843	-0.01339	-0.00261	-0.01216
___ AS	-0.00347	-0.02	128.952	-0.00777	0.00116	-0.00381
___ B	0.14783	1,188.17	0.599	0.14832	0.14681	0.14836
___ BA	0.02900	18,495.84	0.353	0.02911	0.02894	0.02894
___ BE	-0.00020	-848.50	11.554	-0.00020	-0.00017	-0.00022
___ CA	44.16283	20,352.07	0.519	44.42332	43.99315	44.07203
___ CD	0.00080	0.93	15.705	0.00083	0.00067	0.00091
___ CO	-0.00021	2.83	156.183	-0.00042	0.00017	-0.00038
___ CR	0.00175	6.23	76.350	0.00021	0.00241	0.00262
___ CU	0.00253	30.50	68.338	0.00165	0.00453	0.00142
___ FE	0.53498	69.39	1.871	0.54106	0.52343	0.54045
___ K	2.69464	1,370.54	1.935	2.67761	2.75316	2.65314
___ LI	-0.00049	3.32	111.028	-0.00112	-0.00011	-0.00025
___ MG	5.21735	3,677.60	1.445	5.16936	5.17845	5.30423
___ MN	0.94459	60,797.54	0.122	0.94396	0.94389	0.94591
___ MO	0.00340	4.61	15.547	0.00348	0.00283	0.00388
___ NA	16.27415	11,402.13	0.798	16.14417	16.27441	16.40387
___ NI	0.00045	4.56	127.561	0.00074	-0.00021	0.00081
___ P	0.00756	2.96	64.544	0.00506	0.01317	0.00443
___ PB	-0.00113	0.53	84.939	-0.00224	-0.00058	-0.00057
___ S	4.96227	270.08	0.840	4.96197	5.00410	4.92074
___ SB	-0.00135	1.08	74.968	-0.00103	-0.00249	-0.00054
___ SE	0.00344	0.60	60.199	0.00113	0.00512	0.00406
___ SI	4.70357	375.30	1.376	4.63811	4.70506	4.76753
___ SN	0.00119	-0.14	55.782	0.00044	0.00144	0.00168
___ SR	0.16541	108,108.11	0.277	0.16506	0.16593	0.16525
___ TH	0.05492	-0.07	82.261	0.05696	0.00876	0.09905
___ TI	0.00188	104.76	6.398	0.00176	0.00189	0.00200
___ TL	-0.00273	-0.88	90.689	-0.00283	-0.00515	-0.00021
___ V	0.00144	-17.99	68.448	0.00076	0.00099	0.00257
___ W	-0.00113	0.16	103.169	-0.00214	-0.00140	0.00015
___ Y1	4194.63720	4,194.64	0.274	4195.02550	4182.96670	4205.91941
___ Y2A	187675.91950	187,675.92	0.426	187294.65000	188595.31873	187137.78977
___ Y2R	7661.79141	7,661.79	0.572	7692.73743	7680.96381	7611.67300
___ ZN	0.00737	69.90	2.310	0.00730	0.00756	0.00724
___ ZR	-0.00537	4.60	87.706	-0.00681	-0.00011	-0.00919

LANCASTER LABORATORIES

Run Name: 2013801T74

Instrument ID: 23745

Tube: 45

Date/Time: 05/17/2020 15:59

Sample Number: 1314001

Class: ****

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 1.00

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	0.00228	2.61	24.284	0.00289	0.00180	0.00216
___ AL	0.01527	4.01	471.865	-0.06005	0.08348	0.02236
___ AL A)	-0.00521	52.40	70.187	-0.00936	-0.00244	-0.00384
___ AS	0.00288	0.56	94.035	0.00275	0.00024	0.00565
___ B	0.01897	161.29	4.386	0.01947	0.01944	0.01801
___ BA	0.00016	216.90	8.385	0.00017	0.00015	0.00016
___ BE	-0.00016	-862.40	12.373	-0.00018	-0.00016	-0.00014
___ CA	0.08538	90.76	8.889	0.08855	0.09087	0.07672
___ CD	0.00055	-2.33	22.299	0.00063	0.00041	0.00060
___ CO	-0.00144	0.64	44.873	-0.00116	-0.00099	-0.00218
___ CR	0.00090	1.05	48.911	0.00080	0.00138	0.00052
___ CU	-0.00185	4.65	66.012	-0.00177	-0.00067	-0.00312
___ FE	-0.00336	-1.80	110.957	-0.00660	-0.00420	0.00072
___ K	0.12694	86.79	19.762	0.15278	0.12533	0.10269
___ LI	-0.00037	-10.97	395.339	-0.00003	-0.00197	0.00089
___ MG	0.00761	3.99	45.971	0.00386	0.01079	0.00817
___ MN	0.00010	14.22	106.685	0.00022	0.00007	0.00001
___ MO	0.00007	-0.52	202.013	0.00004	0.00021	-0.00005
___ NA	0.74863	656.43	2.913	0.73474	0.73737	0.77377
___ NI	-0.00024	4.01	388.907	-0.00073	-0.00079	0.00082
___ P	0.00213	1.90	60.115	0.00161	0.00119	0.00358
___ PB	-0.00051	0.78	153.766	-0.00140	-0.00027	0.00012
___ S	0.08050	5.41	11.080	0.07030	0.08687	0.08432
___ SB	-0.00169	1.00	191.827	-0.00085	-0.00527	0.00105
___ SE	-0.00739	-0.68	35.766	-0.00966	-0.00802	-0.00449
___ SI	0.29563	24.45	3.821	0.29454	0.28492	0.30744
___ SN	0.00469	0.60	54.117	0.00498	0.00202	0.00707
___ SR	0.00034	121.04	6.190	0.00032	0.00036	0.00032
___ TH	0.09802	2.28	14.725	0.11447	0.08751	0.09206
___ TI	-0.00012	2.98	64.369	-0.00015	-0.00003	-0.00017
___ TL	0.00101	-0.35	147.517	0.00229	0.00138	-0.00063
___ V	0.00187	-15.62	20.235	0.00166	0.00231	0.00165
___ W	-0.00027	0.58	141.306	0.00005	-0.00070	-0.00018
___ Y1	4272.21444	4,272.21	0.187	4281.37186	4266.61834	4268.65313
___ Y2A	192834.64911	192,834.65	0.272	192507.16354	193439.16445	192557.61933
___ Y2R	7714.33105	7,714.33	0.631	7769.72504	7678.34897	7694.91915
___ ZN	-0.00111	2.77	5.316	-0.00113	-0.00116	-0.00104
___ ZR	-0.00886	3.74	43.071	-0.01327	-0.00677	-0.00654

LANCASTER LABORATORIES

Run Name: 2013801T74

Instrument ID: 23745

Tube: 46

Date/Time: 05/17/2020 16:02

Sample Number: 1313991

Class: ****

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 1.00

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	0.00085	-0.21	129.868	0.00083	-0.00024	0.00197
___ AL	-0.02726	2.01	166.227	0.02400	-0.04381	-0.06197
___ AL A)	0.00106	52.81	235.840	-0.00066	0.00393	-0.00009
___ AS	-0.00410	0.25	221.576	-0.00085	0.00291	-0.01436
___ B	0.10656	815.02	0.520	0.10716	0.10607	0.10645
___ BA	0.06538	39,119.92	0.216	0.06525	0.06535	0.06553
___ BE	-0.00029	-832.28	4.004	-0.00028	-0.00030	-0.00029
___ CA	126.79423	56,852.72	0.535	127.15269	126.01257	127.21744
___ CD	0.00058	0.13	22.778	0.00054	0.00046	0.00072
___ CO	0.00332	8.48	6.628	0.00340	0.00349	0.00307
___ CR	0.00073	0.00	79.504	0.00116	0.00007	0.00098
___ CU	0.00269	34.06	52.750	0.00154	0.00427	0.00224
___ FE	2.52986	329.61	0.629	2.53735	2.51159	2.54065
___ K	6.98705	3,494.75	0.616	6.99214	6.94167	7.02734
___ LI	-0.00294	11.65	27.356	-0.00258	-0.00238	-0.00386
___ MG	53.75034	36,303.28	1.024	53.37910	53.48892	54.38298
___ MN	4.98634	302,049.35	0.284	4.98000	4.97647	5.00254
___ MO	0.00092	0.75	33.672	0.00062	0.00124	0.00091
___ NA	186.01402	127,707.83	0.786	184.50087	186.12279	187.41841
___ NI	0.00289	7.26	2.454	0.00297	0.00282	0.00289
___ P	0.00983	3.18	20.028	0.00757	0.01118	0.01075
___ PB	-0.00080	0.85	309.127	0.00142	-0.00348	-0.00035
___ S	169.68599	8,554.70	0.660	170.92525	169.38480	168.74793
___ SB	-0.00572	-0.13	18.852	-0.00694	-0.00489	-0.00533
___ SE	0.00590	0.80	105.865	0.01072	0.00815	-0.00116
___ SI	4.24360	335.46	0.406	4.23291	4.23445	4.26346
___ SN	0.00204	0.03	177.388	0.00348	0.00472	-0.00208
___ SR	0.57199	351,670.92	0.476	0.57498	0.56967	0.57130
___ TH	0.04330	-0.68	62.637	0.06254	0.01228	0.05509
___ TI	0.00152	81.37	7.464	0.00159	0.00139	0.00158
___ TL	-0.02241	-3.57	21.495	-0.02092	-0.01852	-0.02780
___ V	0.00147	-16.30	16.333	0.00135	0.00132	0.00175
___ W	0.00005	0.87	1065.572	0.00038	0.00037	-0.00059
___ Y1	3898.82253	3,898.82	0.402	3887.49376	3892.24895	3916.72490
___ Y2A	176646.63980	176,646.64	0.273	177202.24410	176389.81445	176347.86086
___ Y2R	7589.12005	7,589.12	1.077	7636.62547	7636.03514	7494.69954
___ ZN	0.02809	218.56	0.925	0.02826	0.02823	0.02779
___ ZR	-0.00479	4.42	86.636	-0.00951	-0.00175	-0.00310

LANCASTER LABORATORIES

Run Name: 2013801T74

Instrument ID: 23745

Tube: 47

Date/Time: 05/17/2020 16:06

Sample Number: **1313406**

Class: ****

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 1.00

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	0.00060	-2.93	238.609	0.00192	0.00082	-0.00093
___ AL	-0.02376	2.10	128.219	-0.02643	0.00795	-0.05279
___ AL A)	0.00799	54.04	113.178	0.01218	-0.00239	0.01418
___ AS	-0.01928	-0.46	49.655	-0.01098	-0.02976	-0.01712
___ B	0.10667	672.94	0.875	0.10646	0.10586	0.10769
___ BA	0.02394	12,439.93	0.241	0.02400	0.02390	0.02390
___ BE	-0.00033	-732.39	9.457	-0.00037	-0.00031	-0.00032
___ CA	211.97658	90,470.96	0.623	210.94038	213.46258	211.52678
___ CD	0.00091	1.87	22.932	0.00100	0.00106	0.00067
___ CO	0.00498	9.80	9.101	0.00550	0.00481	0.00464
___ CR	0.04304	211.44	0.667	0.04330	0.04308	0.04273
___ CU	0.00510	52.27	11.094	0.00574	0.00491	0.00465
___ FE	0.69031	86.26	1.060	0.68254	0.69707	0.69132
___ K	7.56176	3,666.68	1.273	7.45230	7.63341	7.59956
___ LI	-0.00018	61.45	1107.404	-0.00157	0.00206	-0.00103
___ MG	79.03810	50,815.45	0.446	78.78351	79.44072	78.89007
___ MN	18.65712	976,901.50	0.094	18.65179	18.67664	18.64292
___ MO	0.00018	-0.28	393.646	-0.00012	0.00097	-0.00032
___ NA	1351.53033	897,976.89	1.261	1365.09788	1357.09601	1332.39709
___ NI	0.01373	17.28	9.648	0.01454	0.01220	0.01445
___ P	0.03648	7.11	8.363	0.03384	0.03580	0.03982
___ PB	0.00355	3.97	110.806	-0.00076	0.00695	0.00446
___ S	1189.18931	52,289.20	1.036	1186.56343	1202.61155	1178.39296
___ SB	-0.00238	0.80	65.261	-0.00124	-0.00175	-0.00415
___ SE	0.01587	1.66	66.472	0.00393	0.02394	0.01973
___ SI	16.50224	1,261.46	0.283	16.49247	16.55301	16.46124
___ SN	0.00285	0.17	120.975	-0.00068	0.00301	0.00621
___ SR	0.63613	339,100.19	0.658	0.63177	0.63650	0.64012
___ TH	0.05229	-0.20	42.158	0.02827	0.07159	0.05701
___ TI	0.00068	35.44	29.629	0.00079	0.00080	0.00045
___ TL	-0.08977	-11.23	4.979	-0.08728	-0.09493	-0.08709
___ V	0.00378	-3.22	25.668	0.00447	0.00421	0.00267
___ W	-0.00121	0.53	138.322	-0.00166	0.00064	-0.00260
___ Y1	3400.90949	3,400.91	0.973	3395.23048	3371.01218	3436.48581
___ Y2A	152701.21375	152,701.21	0.231	153033.96142	152737.90484	152331.77500
___ Y2R	7350.29933	7,350.30	0.968	7432.11431	7302.50299	7316.28069
___ ZN	0.08859	572.76	0.914	0.08919	0.08891	0.08767
___ ZR	-0.00060	8.67	222.777	0.00093	-0.00147	-0.00125

LANCASTER LABORATORIES

Run Name: 2013801T74

Instrument ID: 23745

Tube: 48

Date/Time: 05/17/2020 16:09

Sample Number: 1313402

Class: ****

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 1.00

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	0.00061	-1.03	278.246	-0.00046	0.00257	-0.00028
___ AL	-0.01039	2.84	348.823	-0.03683	0.03092	-0.02526
___ AL A)	-0.00698	47.11	118.787	-0.00354	-0.01644	-0.00097
___ AS	0.02557	3.14	10.873	0.02241	0.02666	0.02763
___ B	0.24862	1,974.71	0.459	0.24970	0.24874	0.24743
___ BA	0.05987	37,273.15	0.394	0.06013	0.05967	0.05980
___ BE	-0.00018	-823.76	19.273	-0.00021	-0.00014	-0.00020
___ CA	49.82968	22,799.58	0.072	49.78910	49.85659	49.84334
___ CD	0.00055	2.89	14.654	0.00058	0.00062	0.00046
___ CO	-0.00095	1.47	75.532	-0.00163	-0.00020	-0.00101
___ CR	0.00078	0.27	177.630	0.00048	0.00229	-0.00043
___ CU	-0.00005	6.48	5123.484	0.00067	-0.00305	0.00222
___ FE	6.26930	820.22	0.968	6.29414	6.20015	6.31361
___ K	8.63853	4,318.36	0.309	8.65950	8.64754	8.60854
___ LI	0.00024	11.27	544.559	0.00149	0.00027	-0.00106
___ MG	16.60698	11,552.40	0.941	16.76793	16.59734	16.45569
___ MN	2.70317	170,367.77	0.238	2.71034	2.70125	2.69792
___ MO	0.00008	-0.48	706.614	0.00062	-0.00052	0.00014
___ NA	50.59363	34,964.20	0.527	50.78993	50.70100	50.28996
___ NI	0.00015	3.74	260.811	-0.00012	0.00059	-0.00003
___ P	0.71776	141.20	0.366	0.72056	0.71536	0.71735
___ PB	0.00129	3.06	72.942	0.00175	0.00021	0.00190
___ S	1.14704	61.28	3.780	1.19474	1.13631	1.11005
___ SB	-0.00238	0.76	59.758	-0.00079	-0.00284	-0.00352
___ SE	0.00521	0.72	83.035	0.01017	0.00226	0.00320
___ SI	9.57178	758.62	0.117	9.57923	9.55891	9.57721
___ SN	0.00190	0.00	80.109	0.00356	0.00059	0.00153
___ SR	0.27779	177,412.43	0.317	0.27851	0.27681	0.27806
___ TH	0.03512	-1.13	224.409	0.00033	0.12535	-0.02031
___ TI	0.00216	116.33	4.400	0.00206	0.00216	0.00225
___ TL	-0.00995	-1.93	30.735	-0.00729	-0.00925	-0.01329
___ V	0.00208	-12.98	26.034	0.00184	0.00171	0.00270
___ W	0.00030	0.86	180.737	0.00045	-0.00030	0.00077
___ Y1	4070.10466	4,070.10	0.249	4063.21868	4081.75182	4065.34347
___ Y2A	183752.32638	183,752.33	0.219	183300.92777	183884.54427	184071.50710
___ Y2R	7617.69452	7,617.69	0.363	7644.03030	7588.83011	7620.22315
___ ZN	-0.00106	11.87	3.159	-0.00103	-0.00109	-0.00107
___ ZR	-0.00372	5.00	90.513	-0.00462	-0.00653	0.00001

LANCASTER LABORATORIES

Run Name: 2013801T74

Instrument ID: 23745

Tube: 49

Date/Time: 05/17/2020 16:12

Sample Number: CCV

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	0.47902	3,858.27	0.659	0.47541	0.48129	0.48035
___ AL	26.48142	1,120.60	0.966	26.22277	26.48729	26.73421
___ AL A)	25.79890	35,578.94	0.309	25.88711	25.77741	25.73218
___ AS	0.50104	53.31	1.949	0.49342	0.49764	0.51205
___ B	0.50726	3,919.03	0.778	0.50506	0.51181	0.50489
___ BA	0.51932	318,226.16	0.164	0.51896	0.52030	0.51871
___ BE	0.50795	186,066.94	0.324	0.50961	0.50632	0.50793
___ CA	26.43533	11,815.95	0.710	26.22208	26.57612	26.50781
___ CD	0.50484	5,328.40	0.037	0.50504	0.50480	0.50467
___ CO	0.48645	849.79	0.193	0.48551	0.48738	0.48644
___ CR	0.48489	2,872.53	0.586	0.48294	0.48815	0.48357
___ CU	0.53685	3,929.89	0.280	0.53571	0.53855	0.53630
___ FE	27.35053	3,436.76	0.713	27.12640	27.48097	27.44421
___ K	25.92435	12,526.34	0.808	25.68254	26.03725	26.05327
___ LI	0.50913	4,065.41	0.642	0.50556	0.51198	0.50985
___ MG	25.46916	17,084.74	0.035	25.47000	25.45977	25.47770
___ MN	0.50393	31,506.72	0.065	0.50402	0.50420	0.50356
___ MO	0.49688	742.64	0.222	0.49696	0.49794	0.49574
___ NA	22.88515	15,419.27	0.412	22.85314	22.81097	22.99134
___ NI	0.49597	637.95	0.149	0.49652	0.49625	0.49513
___ P	0.51520	102.55	0.398	0.51459	0.51749	0.51353
___ PB	0.49970	397.66	0.718	0.50233	0.49561	0.50115
___ S	23.43930	1,236.32	0.531	23.54549	23.30238	23.47002
___ SB	0.50517	139.76	0.287	0.50675	0.50390	0.50487
___ SE	0.50194	57.94	1.058	0.50084	0.49726	0.50772
___ SI	28.72133	2,208.65	0.762	28.47836	28.90324	28.78239
___ SN	0.49360	99.67	0.527	0.49305	0.49643	0.49131
___ SR	0.52303	328,477.16	0.822	0.52424	0.52659	0.51825
___ TH	0.51377	23.75	6.574	0.47488	0.53577	0.53066
___ TI	0.52633	25,906.36	0.262	0.52659	0.52756	0.52483
___ TL	0.49276	90.35	1.058	0.49740	0.48712	0.49376
___ V	0.49968	2,755.28	0.612	0.49654	0.49985	0.50265
___ W	0.50487	271.21	0.669	0.50873	0.50248	0.50338
___ Y1	4083.93065	4,083.93	0.074	4083.97602	4080.86765	4086.94827
___ Y2A	181275.07311	181,275.07	0.277	181445.14442	180709.41623	181670.65868
___ Y2R	7392.89582	7,392.90	0.541	7438.95754	7367.49551	7372.23440
___ ZN	0.49397	3,838.26	0.239	0.49507	0.49412	0.49272
___ ZR	0.51844	516.64	0.942	0.51321	0.51921	0.52289

LANCASTER LABORATORIES

Run Name: 2013801T74

Instrument ID: 23745

Tube: 50

Date/Time: 05/17/2020 16:15

Sample Number: CCB

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	0.00157	5.25	65.718	0.00071	0.00271	0.00128
___ AL	-0.01033	2.64	235.062	-0.01431	-0.03238	0.01570
___ AL A)	-0.00065	50.37	508.052	0.00162	0.00088	-0.00446
___ AS	-0.00033	0.21	457.237	-0.00167	0.00126	-0.00056
___ B	0.01296	110.94	6.229	0.01328	0.01355	0.01204
___ BA	0.00012	192.59	30.545	0.00015	0.00014	0.00008
___ BE	-0.00003	-797.44	126.267	-0.00001	-0.00001	-0.00008
___ CA	0.07860	87.27	55.284	0.03863	0.12485	0.07232
___ CD	0.00055	-2.18	5.651	0.00059	0.00055	0.00052
___ CO	-0.00081	1.76	33.888	-0.00103	-0.00089	-0.00050
___ CR	0.00001	-4.53	3499.405	-0.00074	-0.00014	0.00090
___ CU	-0.00061	1.64	126.138	-0.00015	-0.00018	-0.00149
___ FE	0.01812	1.06	47.843	0.01579	0.02772	0.01086
___ K	0.09415	70.10	95.163	-0.00065	0.17744	0.10567
___ LI	-0.00059	-12.81	271.674	0.00048	-0.00244	0.00018
___ MG	0.04073	27.52	58.155	0.01790	0.06518	0.03910
___ MN	0.00344	232.47	32.929	0.00460	0.00340	0.00233
___ MO	0.00003	-0.58	953.384	-0.00024	0.00007	0.00024
___ NA	1.08614	888.64	28.328	0.75994	1.37117	1.12731
___ NI	-0.00091	3.07	53.640	-0.00043	-0.00089	-0.00141
___ P	0.00364	2.18	47.342	0.00459	0.00165	0.00469
___ PB	-0.00303	-1.28	18.467	-0.00244	-0.00310	-0.00356
___ S	0.16540	9.95	16.822	0.19744	0.15144	0.14732
___ SB	-0.00452	0.19	17.028	-0.00540	-0.00399	-0.00417
___ SE	0.00017	0.22	1978.224	0.00411	-0.00216	-0.00143
___ SI	0.02155	2.46	64.196	0.03071	0.02830	0.00564
___ SN	0.00192	0.01	165.046	0.00288	0.00451	-0.00162
___ SR	0.00042	173.53	21.490	0.00050	0.00043	0.00032
___ TH	0.04822	-0.42	70.164	0.01417	0.08183	0.04865
___ TI	-0.00012	2.99	218.718	0.00017	-0.00033	-0.00020
___ TL	0.00139	-0.27	182.150	0.00004	0.00431	-0.00018
___ V	0.00209	-14.14	10.868	0.00198	0.00235	0.00194
___ W	-0.00061	0.40	236.403	-0.00095	-0.00186	0.00097
___ Y1	4206.42936	4,206.43	0.042	4204.77952	4208.31917	4206.18938
___ Y2A	190485.24333	190,485.24	0.170	190261.55839	190855.94953	190338.22207
___ Y2R	7682.17495	7,682.17	0.461	7641.36554	7700.69735	7704.46197
___ ZN	-0.00031	9.02	35.051	-0.00027	-0.00043	-0.00023
___ ZR	-0.00372	5.80	128.932	-0.00145	-0.00924	-0.00048

ICP-AES Run Data ReportReviewed By

Lisa J Cooke

Reviewed Date

05/19/2020 9:13AM

Data File Name 2014003T73.TXT

Run Name: 2014003T73

Method Reference Name(s):

Verified By:

Elizabeth Saarinen

Verified Date

05/19/2020 7:35PM

Analyst Employee:

943

Instrument Parameters:

Individual Integration Time: 10.00 sec

Total Integration Time: 30.00 sec

Rinse Time: 15.00 sec

<u>Element</u>	<u>Analyte Name</u>	<u>Wavelength Value</u>
AG	Silver	328.06
AL	Aluminum	308.21
AS	Arsenic	189.04
AU	Gold	242.80
B	Boron	249.67
BA	Barium	455.40
BE	Beryllium	313.04
CA	Calcium	317.93
CD	Cadmium	226.50
CO	Cobalt	228.62
CR	Chromium	267.72
CU	Copper	327.40
FE	Iron	261.19
K	Potassium	766.49
LI	Lithium	670.78
MG	Magnesium	285.21
MN	Manganese	257.61
MO	Molybdenum	202.03
NA	Sodium	589.59
NI	Nickel	231.60
P	Phosphorus	177.49
PB	Lead	220.35
SB	Antimony	206.83
SE	Selenium	196.09
SI	Silicon	251.60
SN	Tin	189.99
SR	Strontium	421.55
TE	Tellurium	214.28
TH	Thorium	401.91
TI	Titanium	334.94
TL	Thallium	190.86
V	Vanadium	292.40
W	Tungsten	207.91
Y1	Yttrium	224.31
Y2	Yttrium	371.03
ZN	Zinc	213.86
ZR	Zirconium	339.19

The TRACE ICP utilizes Yttrium as an internal standard to compensate for fluctuations in nebulization and plasma conditions. All Yttrium readings are expressed in counts.

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 1

Date/Time: 05/19/2020 05:51

Sample Number: **S0**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS		
				#1	#2	#3
AG	0.000	5.45622	166.664	0.00298	0.00405	-0.00161
AL	0.000	3.51667	43.184	0.02865	0.05682	0.07420
ALUI	0.000	7.49060	42.726	0.00153	0.00362	0.00227
AS	0.000	-0.32330	259.227	0.00855	-0.00885	-0.01289
B	0.000	18.31284	17.285	0.00011	0.00014	0.00011
BA	0.000	219.44479	7.405	0.00155	0.00146	0.00134
BE	0.000	-168.04391	4.503	-0.05366	-0.05831	-0.05440
CA	0.000	12.03333	8.495	0.00363	0.00333	0.00395
CD	0.000	-0.81659	156.957	0.00815	-0.01565	-0.02579
CO	0.000	3.29634	24.901	0.04793	0.03240	0.05402
CR	0.000	4.84562	34.680	0.00002	0.00003	0.00004
CU	0.000	-0.48874	3146.593	-0.00563	0.00386	0.00130
FE	0.000	3.90000	4.547	0.00115	0.00115	0.00124
K	0.000	-12.41667	90.122	-0.28124	-0.28942	0.00757
LI	0.000	15.20000	25.004	0.00415	0.00374	0.00591
MG	0.000	3.68333	42.336	0.00164	0.00095	0.00074
MN	0.000	4.46151	50.474	0.00208	0.00170	0.00064
MO	0.000	1.51152	31.001	0.02789	0.01695	0.01678
NA	0.000	-7.08333	11.503	-0.00210	-0.00241	-0.00192
NI	0.000	1.56651	57.985	0.00747	0.02518	0.03122
P	0.000	0.94657	35.907	0.00033	0.00028	0.00015
PB	0.000	0.99435	110.127	0.01675	-0.00272	0.02647
S	0.000	0.00333	1103.176	-0.00021	0.00004	0.00017
SB	0.000	-0.16665	392.682	-0.00017	0.00016	-0.00012
SE	0.000	0.26997	215.712	0.01222	0.00218	-0.00339
SI	0.000	1.55000	28.969	0.00060	0.00048	0.00033
SN	0.000	1.52651	57.355	0.00706	0.02654	0.02864
SR	0.000	-26.73771	14.803	-0.00018	-0.00020	-0.00015
TH	0.000	-0.85000	135.877	-0.00023	0.00008	-0.00062
TI	0.000	-1.42375	830.644	0.00209	-0.00504	0.00151
TL	0.000	0.07666	1180.997	0.01236	-0.01184	0.00258
V	0.000	-0.90424	1034.140	0.00082	0.00203	-0.00374
W	0.000	-0.13332	489.042	0.00017	-0.00016	-0.00011
Y1	0.000	3679.45705	0.155	3682.18178	3672.90271	3683.28667
Y2A	0.000	151521.48090	0.267	151686.91285	151059.81840	151817.71146
Y2R	0.000	3305.81667	0.261	3315.67500	3299.67500	3302.10000
ZN	0.000	6.57934	7.041	0.08214	0.09283	0.09325
ZR	0.000	1.25000	131.911	0.00087	0.00038	-0.00012

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 2

Date/Time: 05/19/2020 05:54

Sample Number: **S1**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS		
				#1	#2	#3
AL	50.000	1378.35350	0.969	20.87108	21.05295	21.27844
ALUI	50.000	69207.00053	0.156	23.92760	23.99741	23.98545
CA	50.000	13934.23396	0.348	4.24249	4.26602	4.26987
FE	50.000	3392.73475	0.950	1.02639	1.03923	1.04576
K	50.000	9456.88731	0.390	143.89180	144.90100	144.82907
MG	50.000	24195.81058	0.353	7.36619	7.40902	7.41354
NA	50.000	27090.72157	0.279	8.25510	8.28929	8.29908
S	50.000	2848.22184	0.291	0.80294	0.80201	0.80645
SI	50.000	2553.15784	0.414	0.77700	0.78340	0.78097
Y1	50.000	3543.47065	0.393	3546.24538	3555.80942	3528.35716
Y2A	50.000	144361.05160	0.268	144709.89438	144427.66042	143945.60000
Y2R	50.000	3271.40644	0.609	3292.77434	3268.12463	3253.32035

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 3

Date/Time: 05/19/2020 05:57

Sample Number: **S2**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS		
				#1	#2	#3
AG	1.000	10045.59341	0.594	3.42164	3.44489	3.46240
AS	1.000	99.48672	0.158	1.38881	1.39184	1.38758
B	1.000	3987.71336	0.394	0.02722	0.02736	0.02742
BA	1.000	415685.04415	0.223	2.84268	2.85531	2.85012
BE	1.000	312739.84687	0.437	106.78464	107.07429	107.70066
CD	1.000	5156.89764	0.243	71.94187	71.89770	72.22014
CO	1.000	2287.50792	0.198	32.00318	31.95882	31.87841
CU	1.000	8817.74258	0.281	3.01752	3.01692	3.03194
LI	1.000	2967.77698	0.885	0.91660	0.90068	0.90671
MN	1.000	31223.94899	0.309	10.66727	10.70393	10.73323
NI	1.000	1187.95120	0.240	16.63636	16.57172	16.56385
P	1.000	103.63297	0.719	0.02871	0.02908	0.02905
PB	1.000	448.85511	0.506	6.30368	6.24193	6.26019
SE	1.000	56.70100	1.058	0.80153	0.78653	0.78756
SR	1.000	434888.23389	0.207	2.98801	2.97642	2.97851
TH	1.000	37.54429	2.700	0.01168	0.01113	0.01166
TL	1.000	83.60497	0.651	1.16130	1.16548	1.17604
W	1.000	290.31763	0.378	0.08106	0.08080	0.08141
Y1	1.000	3580.18532	0.069	3579.69203	3577.99720	3582.86671
Y2A	1.000	145887.11231	0.322	146371.71249	145854.82666	145434.79777
Y2R	1.000	3268.44115	0.334	3279.49410	3268.13549	3257.69384
ZN	1.000	2941.90914	0.325	40.95906	41.22537	41.07361

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 4

Date/Time: 05/19/2020 06:00

Sample Number: **S3**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS		
				#1	#2	#3
CR	1.000	6402.46832	0.284	0.04192	0.04196	0.04215
MO	1.000	638.65147	0.319	8.63447	8.68093	8.68378
SB	1.000	148.38516	0.328	0.04041	0.04026	0.04015
SN	1.000	250.75826	0.404	3.39769	3.41830	3.39226
TI	1.000	35531.53302	0.362	11.62462	11.64196	11.70476
V	1.000	9152.95930	0.210	3.00268	2.99665	3.00926
Y1	1.000	3684.64320	0.011	3684.34157	3684.50655	3685.08149
Y2A	1.000	152404.57319	0.498	153144.36128	152442.33653	151627.02177
Y2R	1.000	3328.75000	0.604	3351.90000	3318.52500	3315.82500
ZR	1.000	506.10000	0.588	0.15130	0.15303	0.15179

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 5

Date/Time: 05/19/2020 06:03

Sample Number: **ICV**

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	0.59630	6,043.78	0.491	0.59963	0.59512	0.59414
___ AL	30.80458	855.52	0.080	30.77881	30.80729	30.82763
___ ALUM	30.90210	43,329.76	0.406	31.01573	30.92289	30.76769
___ AS	0.60327	59.60	0.723	0.59826	0.60531	0.60624
___ B	0.59530	2,479.18	0.302	0.59424	0.59737	0.59427
___ BA	0.60097	250,441.33	0.334	0.60205	0.60220	0.59865
___ BE	0.58358	182,741.40	0.290	0.58471	0.58441	0.58163
___ CA	30.51171	8,553.33	0.137	30.47169	30.50856	30.55490
___ CD	0.59717	3,091.23	0.281	0.59579	0.59668	0.59903
___ CO	0.59615	1,366.29	0.083	0.59611	0.59567	0.59666
___ CR	0.59009	3,623.86	0.178	0.59120	0.58996	0.58910
___ CU	0.59772	5,283.47	0.428	0.59852	0.59978	0.59485
___ FE	30.35837	2,077.14	0.188	30.40729	30.29562	30.37221
___ K	30.39810	5,775.00	0.315	30.30791	30.38764	30.49876
___ LI	0.60594	1,812.45	0.773	0.60553	0.60147	0.61081
___ MG	30.50125	14,878.00	0.099	30.50317	30.47005	30.53051
___ MN	0.59469	18,692.75	0.058	0.59470	0.59434	0.59504
___ MO	0.61175	379.63	0.517	0.61117	0.61516	0.60891
___ NA	30.15634	16,385.12	0.178	30.16221	30.10005	30.20675
___ NI	0.59757	707.20	0.227	0.59646	0.59717	0.59908
___ P	0.61400	63.92	1.781	0.60754	0.62663	0.60782
___ PB	0.58919	266.37	0.414	0.58892	0.58689	0.59175
___ S	30.35302	1,743.81	0.016	30.35099	30.34937	30.35869
___ SB	0.63247	90.24	1.114	0.63027	0.64035	0.62678
___ SE	0.57481	32.73	1.494	0.58393	0.57364	0.56687
___ SI	10.49492	539.92	0.482	10.53770	10.43915	10.50789
___ SN	0.58449	142.90	0.533	0.58327	0.58217	0.58803
___ SR	0.60450	263,636.83	0.226	0.60491	0.60298	0.60562
___ TH	0.72340	28.03	2.036	0.70705	0.73564	0.72750
___ TI	0.61630	20,986.45	0.187	0.61728	0.61658	0.61502
___ TL	0.60339	50.51	2.279	0.61742	0.58993	0.60282
___ V	0.60700	5,338.33	0.102	0.60745	0.60725	0.60630
___ W	0.68859	199.29	0.799	0.69002	0.69324	0.68251
___ Y1	3576.88898	3,576.89	0.080	3578.66713	3573.60264	3578.39716
___ Y2A	146107.73599	146,107.74	0.161	145900.64487	146363.69986	146058.86323
___ Y2R	3283.41636	3,283.42	0.191	3290.53379	3278.67133	3281.04396
___ ZN	0.58569	1,743.83	0.179	0.58689	0.58497	0.58520
___ ZR	0.60304	322.41	0.469	0.60602	0.60039	0.60271

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 6

Date/Time: 05/19/2020 06:07

Sample Number: ICB

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	0.00003	5.76	2502.750	-0.00049	0.00087	-0.00030
___ AL	-0.07345	1.55	70.493	-0.06133	-0.13022	-0.02881
___ ALUM	-0.00060	9.75	1705.819	0.00279	0.00744	-0.01202
___ AS	0.00466	0.11	75.789	0.00130	0.00834	0.00433
___ B	0.00073	21.21	136.263	0.00102	-0.00038	0.00156
___ BA	0.00001	221.48	528.154	-0.00002	0.00005	-0.00001
___ BE	0.00006	-151.10	75.592	0.00005	0.00011	0.00002
___ CA	-0.00428	10.67	98.282	-0.00913	-0.00155	-0.00217
___ CD	0.00018	0.38	28.795	0.00014	0.00023	0.00015
___ CO	0.00002	3.34	1707.987	0.00022	0.00018	-0.00035
___ CR	0.00018	5.93	227.390	-0.00003	0.00064	-0.00008
___ CU	0.00023	6.79	922.943	0.00110	0.00175	-0.00217
___ FE	-0.00903	3.25	165.052	-0.02074	-0.01408	0.00774
___ K	-0.07366	-2.75	74.558	-0.01165	-0.11618	-0.09316
___ LI	0.00128	18.87	46.157	0.00140	0.00064	0.00180
___ MG	-0.00215	2.60	278.163	-0.00246	-0.00796	0.00398
___ MN	0.00025	3.83	46.345	0.00014	0.00023	0.00037
___ MO	-0.00082	0.99	49.516	-0.00116	-0.00092	-0.00037
___ NA	0.07830	6.85	7.039	0.08195	0.08098	0.07196
___ NI	0.00013	1.73	79.536	0.00023	0.00002	0.00015
___ P	0.00003	0.95	1948.829	-0.00129	0.00457	-0.00317
___ PB	0.00202	1.92	84.041	0.00042	0.00380	0.00184
___ S	0.00215	-0.05	144.176	0.00528	0.00210	-0.00092
___ SB	0.00108	-0.01	216.484	-0.00146	0.00316	0.00155
___ SE	-0.00614	-0.08	189.573	-0.01950	-0.00084	0.00191
___ SI	0.01408	2.26	180.159	0.04315	-0.00359	0.00268
___ SN	-0.00354	0.65	37.899	-0.00413	-0.00200	-0.00448
___ SR	0.00007	-4.42	91.626	0.00006	0.00013	0.00001
___ TH	0.02535	-1.08	254.359	-0.00264	-0.02041	0.09910
___ TI	0.00014	6.19	123.529	0.00016	0.00030	-0.00004
___ TL	0.00431	0.33	86.735	0.00836	0.00357	0.00100
___ V	0.00038	2.99	62.246	0.00061	0.00039	0.00014
___ W	-0.00020	-0.20	1236.114	0.00037	-0.00289	0.00193
___ Y1	3675.36746	3,675.37	0.103	3674.75252	3679.43706	3671.91281
___ Y2A	150491.85196	150,491.85	0.114	150383.92679	150690.33693	150401.29216
___ Y2R	3280.15000	3,280.15	0.128	3284.72500	3276.47500	3279.25000
___ ZN	-0.00133	2.59	15.467	-0.00128	-0.00116	-0.00156
___ ZR	0.00147	2.70	566.514	0.00248	0.00926	-0.00733

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 7

Date/Time: 05/19/2020 06:10

Sample Number: LLC

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	0.01115	123.87	4.467	0.01059	0.01154	0.01133
___ AL	0.14134	9.22	79.420	0.11280	0.04611	0.26511
___ ALUM	0.20287	375.63	2.348	0.20401	0.20696	0.19764
___ AS	0.03102	2.83	6.557	0.03144	0.02882	0.03282
___ B	0.02843	136.66	1.705	0.02899	0.02821	0.02810
___ BA	0.00519	2,484.61	1.283	0.00514	0.00527	0.00517
___ BE	0.00500	1,458.72	1.369	0.00496	0.00508	0.00495
___ CA	0.20751	69.38	0.898	0.20961	0.20606	0.20687
___ CD	0.00538	28.15	2.427	0.00523	0.00540	0.00549
___ CO	0.00548	16.25	8.487	0.00495	0.00579	0.00571
___ CR	0.01529	102.51	4.455	0.01568	0.01450	0.01568
___ CU	0.02046	302.89	2.909	0.02015	0.02115	0.02008
___ FE	0.19318	17.33	9.337	0.21062	0.17460	0.19430
___ K	0.21612	52.75	39.325	0.30956	0.19535	0.14343
___ LI	0.05547	181.65	5.324	0.05227	0.05605	0.05809
___ MG	0.10736	56.98	1.687	0.10840	0.10842	0.10527
___ MN	0.01050	328.59	1.740	0.01060	0.01061	0.01029
___ MO	0.00951	7.58	4.954	0.00947	0.01001	0.00907
___ NA	1.10422	571.80	1.017	1.11645	1.09437	1.10186
___ NI	0.01059	14.50	0.615	0.01066	0.01053	0.01059
___ P	0.10304	11.78	3.247	0.10503	0.10491	0.09918
___ PB	0.01705	8.89	5.358	0.01685	0.01804	0.01625
___ S	0.49565	29.17	1.941	0.49334	0.50621	0.48739
___ SB	0.05472	7.87	3.514	0.05653	0.05270	0.05491
___ SE	0.04574	2.93	8.238	0.04869	0.04703	0.04150
___ SI	0.53249	29.16	5.375	0.55552	0.54150	0.50044
___ SN	0.04460	12.67	2.145	0.04464	0.04363	0.04554
___ SR	0.00523	2,339.73	1.173	0.00523	0.00529	0.00517
___ TH	0.57322	20.97	2.969	0.55546	0.57480	0.58939
___ TI	0.01017	362.31	0.839	0.01014	0.01027	0.01011
___ TL	0.03646	3.10	12.528	0.03211	0.03606	0.04122
___ V	0.01006	97.40	4.691	0.00989	0.01059	0.00969
___ W	0.03109	9.13	11.072	0.03498	0.02984	0.02844
___ Y1	3692.35910	3,692.36	0.369	3705.99440	3692.37076	3678.71213
___ Y2A	152169.33915	152,169.34	0.107	152017.08400	152149.40666	152341.52678
___ Y2R	3320.06667	3,320.07	0.306	3311.50000	3331.30000	3317.40000
___ ZN	0.01956	65.79	1.540	0.01921	0.01969	0.01977
___ ZR	0.04600	41.13	3.804	0.04707	0.04398	0.04694

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 8

Date/Time: 05/19/2020 06:13

Sample Number: **ICSA**

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	-0.00067	0.44	131.276	-0.00043	-0.00164	0.00007
___ AL	507.99514	13,886.73	0.482	505.60776	507.88098	510.49666
___ ALUM	486.57897	635,955.90	0.116	486.10354	486.43118	487.20218
___ AS	0.00791	-0.94	63.325	0.00475	0.01369	0.00530
___ B	-0.03227	516.82	7.210	-0.03014	-0.03191	-0.03475
___ BA	0.00159	794.35	2.167	0.00163	0.00156	0.00158
___ BE	-0.00020	-206.27	19.555	-0.00020	-0.00016	-0.00024
___ CA	522.88496	133,661.44	0.593	520.05909	522.38998	526.20580
___ CD	0.00362	97.72	5.468	0.00348	0.00354	0.00385
___ CO	0.00085	4.66	42.563	0.00124	0.00052	0.00080
___ CR	-0.00354	-15.47	5.720	-0.00378	-0.00341	-0.00345
___ CU	-0.01669	-121.32	6.398	-0.01639	-0.01788	-0.01581
___ FE	204.40187	12,930.19	0.734	202.87301	204.45923	205.87336
___ K	0.00269	11.20	2139.271	-0.03312	-0.02781	0.06900
___ LI	0.00248	21.54	81.191	0.00355	0.00373	0.00016
___ MG	527.66327	220,459.42	0.632	524.59082	527.18505	531.21394
___ MN	0.00043	618.16	31.333	0.00048	0.00052	0.00027
___ MO	0.00146	2.15	102.225	-0.00023	0.00201	0.00260
___ NA	0.21099	75.85	4.980	0.19893	0.21813	0.21592
___ NI	0.00648	-6.38	14.434	0.00542	0.00682	0.00719
___ P	0.01175	1.93	77.837	0.02205	0.00457	0.00864
___ PB	0.00921	38.51	21.876	0.01087	0.00697	0.00979
___ S	-0.06291	-3.44	21.069	-0.07706	-0.05079	-0.06088
___ SB	-0.01117	-1.60	15.021	-0.01018	-0.01310	-0.01022
___ SE	-0.01573	-0.56	122.660	-0.00487	-0.03801	-0.00432
___ SI	0.06103	4.47	45.534	0.08135	0.02936	0.07239
___ SN	0.00536	2.52	112.115	0.01129	-0.00072	0.00551
___ SR	-0.00461	3,787.02	1.103	-0.00456	-0.00461	-0.00466
___ TH	-0.05228	4.54	25.860	-0.06015	-0.03667	-0.06001
___ TI	-0.00184	-99.79	23.002	-0.00232	-0.00152	-0.00168
___ TL	-0.00031	1.00	2517.940	-0.00799	-0.00070	0.00776
___ V	-0.00172	17.65	38.885	-0.00104	-0.00176	-0.00238
___ W	-0.00022	-0.19	1135.472	-0.00286	-0.00004	0.00222
___ Y1	3239.90934	3,239.91	0.418	3249.57504	3245.73043	3224.42256
___ Y2A	132488.96516	132,488.97	0.283	132412.68456	132896.19912	132158.01180
___ Y2R	3148.40645	3,148.41	0.478	3162.30523	3150.51428	3132.39984
___ ZN	-0.00265	117.77	36.250	-0.00157	-0.00341	-0.00297
___ ZR	0.00922	4.14	28.864	0.00620	0.01123	0.01022

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 9

Date/Time: 05/19/2020 06:16

Sample Number: ICSAB

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	0.20698	1,877.95	0.222	0.20668	0.20751	0.20675
___ AL	504.72302	13,842.93	0.684	508.36421	504.31083	501.49401
___ ALUM	483.21525	627,223.47	0.364	481.62051	482.92519	485.10004
___ AS	0.09604	6.92	8.775	0.09656	0.08736	0.10420
___ B	-0.03144	511.57	7.307	-0.03392	-0.03101	-0.02939
___ BA	0.50506	189,494.83	0.362	0.50331	0.50493	0.50695
___ BE	0.49130	138,552.96	0.304	0.48975	0.49141	0.49273
___ CA	517.70413	132,871.31	0.404	519.74071	517.80759	515.56408
___ CD	0.92215	4,384.55	0.212	0.92081	0.92439	0.92123
___ CO	0.45994	953.69	0.408	0.46105	0.46100	0.45777
___ CR	0.47416	2,623.84	0.151	0.47431	0.47339	0.47480
___ CU	0.50430	3,933.94	0.216	0.50318	0.50536	0.50437
___ FE	203.28366	12,907.51	0.648	204.46137	203.52935	201.86026
___ K	-0.04435	2.67	132.524	0.02072	-0.06019	-0.09358
___ LI	0.00358	24.75	43.171	0.00529	0.00318	0.00227
___ MG	525.01226	220,260.89	0.351	526.98041	524.72866	523.32772
___ MN	0.48187	14,180.32	0.605	0.47904	0.48172	0.48486
___ MO	-0.00049	1.06	218.962	-0.00155	-0.00054	0.00061
___ NA	0.16769	53.43	4.122	0.17326	0.15995	0.16986
___ NI	0.91589	970.59	0.177	0.91447	0.91554	0.91765
___ P	0.00651	1.54	70.919	0.00224	0.00587	0.01140
___ PB	0.50827	240.52	1.383	0.50540	0.51628	0.50313
___ S	-0.06572	-3.44	19.370	-0.05548	-0.06171	-0.07998
___ SB	0.61944	80.78	2.468	0.62038	0.63423	0.60370
___ SE	0.51673	26.40	2.166	0.52960	0.51126	0.50932
___ SI	0.04551	3.72	39.508	0.02686	0.04694	0.06274
___ SN	0.00515	2.47	114.688	0.00171	0.00177	0.01196
___ SR	-0.00917	1,918.85	0.773	-0.00925	-0.00915	-0.00911
___ TH	0.00819	6.82	554.337	0.03120	-0.04411	0.03748
___ TI	-0.00154	-85.50	5.856	-0.00163	-0.00146	-0.00152
___ TL	0.07847	7.11	11.040	0.07812	0.06999	0.08730
___ V	0.50266	4,071.92	0.265	0.50135	0.50260	0.50402
___ W	-0.00849	1.04	72.721	-0.00174	-0.01386	-0.00986
___ Y1	3240.12432	3,240.12	0.154	3242.00580	3234.45155	3243.91561
___ Y2A	131609.97827	131,609.98	0.396	132098.95000	131669.98002	131061.00478
___ Y2R	3159.40074	3,159.40	0.382	3146.43142	3170.27500	3161.49580
___ ZN	0.97287	2,706.74	0.307	0.97283	0.97587	0.96990
___ ZR	0.00377	3.23	186.181	-0.00315	0.01088	0.00357

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 10

Date/Time: 05/19/2020 06:19

Sample Number: CCS

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	0.00005	5.86	1023.428	0.00047	0.00025	-0.00056
___ AL	-0.01255	3.32	251.871	-0.04673	-0.00652	0.01561
___ ALUM	0.15306	233.87	176.697	-0.01540	0.00956	0.46501
___ AS	0.00488	0.14	68.989	0.00754	0.00600	0.00110
___ B	-0.00004	18.06	740.237	-0.00027	-0.00011	0.00026
___ BA	0.00009	255.74	167.208	-0.00001	0.00002	0.00026
___ BE	0.00014	-126.48	155.437	-0.00001	0.00004	0.00038
___ CA	0.00229	12.43	764.249	0.00143	0.02016	-0.01473
___ CD	0.00036	1.34	20.893	0.00039	0.00027	0.00041
___ CO	0.00000	3.29	5356.537	-0.00044	0.00086	-0.00042
___ CR	-0.00013	4.00	146.327	0.00004	-0.00010	-0.00033
___ CU	-0.00034	8.11	673.449	-0.00210	-0.00117	0.00225
___ FE	-0.01247	3.02	70.143	-0.01218	-0.00387	-0.02136
___ K	-0.10951	-9.57	29.887	-0.13262	-0.12385	-0.07206
___ LI	0.00015	15.53	1532.341	-0.00256	0.00131	0.00170
___ MG	0.00335	5.30	55.534	0.00411	0.00123	0.00471
___ MN	0.00029	4.62	69.734	0.00013	0.00023	0.00051
___ MO	-0.00099	0.88	135.701	-0.00073	0.00020	-0.00246
___ NA	0.07066	2.72	32.484	0.08353	0.08429	0.04416
___ NI	-0.00007	1.47	2283.559	-0.00189	0.00048	0.00120
___ P	0.00697	1.67	39.577	0.00732	0.00405	0.00953
___ PB	-0.00028	0.88	933.417	0.00207	0.00013	-0.00303
___ S	-0.00058	-0.21	1758.225	0.00770	0.00248	-0.01191
___ SB	0.00005	-0.16	3809.325	0.00023	0.00503	-0.00511
___ SE	-0.00203	0.15	821.303	-0.02063	0.01153	0.00301
___ SI	0.03751	3.46	79.214	0.03413	0.06878	0.00963
___ SN	-0.00360	0.63	27.183	-0.00277	-0.00336	-0.00468
___ SR	0.00005	-9.73	47.412	0.00004	0.00004	0.00008
___ TH	0.05623	0.15	120.788	0.10887	0.08027	-0.02044
___ TI	0.00011	5.06	93.968	0.00021	0.00002	0.00007
___ TL	0.00716	0.58	39.142	0.00483	0.00638	0.01027
___ V	0.00025	2.13	276.169	0.00014	-0.00037	0.00097
___ W	-0.00124	-0.50	89.153	-0.00197	-0.00177	0.00003
___ Y1	3672.31610	3,672.32	0.492	3691.12589	3670.72293	3655.09949
___ Y2A	150594.78896	150,594.79	0.356	151003.09814	150793.54129	149987.72745
___ Y2R	3282.87500	3,282.88	0.392	3297.70000	3276.32500	3274.60000
___ ZN	-0.00110	3.26	40.365	-0.00075	-0.00096	-0.00160
___ ZR	0.00098	3.35	355.005	-0.00300	0.00242	0.00353

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 11

Date/Time: 05/19/2020 06:22

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS		
				#1	#2	#3
___ AG	0.49679	5,083.29	1.040	0.49868	0.49095	0.50076
___ AL	25.96863	715.38	0.136	25.94892	26.00941	25.94755
___ ALUM	25.91645	36,660.93	0.993	26.05432	25.61948	26.07555
___ AS	0.50963	50.53	1.338	0.50667	0.50479	0.51742
___ B	0.48884	2,060.67	1.667	0.48770	0.48132	0.49749
___ BA	0.50770	213,589.83	0.657	0.50729	0.50458	0.51122
___ BE	0.48750	154,060.85	0.460	0.48837	0.48495	0.48917
___ CA	25.80667	7,180.29	0.094	25.81317	25.77984	25.82699
___ CD	0.49975	2,600.12	0.133	0.49904	0.49986	0.50035
___ CO	0.49983	1,151.31	0.339	0.49798	0.50130	0.50020
___ CR	0.49285	3,055.83	1.098	0.49553	0.48662	0.49639
___ CU	0.50476	4,490.53	0.430	0.50644	0.50231	0.50554
___ FE	25.91250	1,760.48	0.132	25.89670	25.95166	25.88916
___ K	25.58118	4,821.77	0.218	25.58817	25.52230	25.63308
___ LI	0.51311	1,524.46	1.229	0.50603	0.51812	0.51519
___ MG	25.91340	12,549.14	0.462	25.77518	25.97680	25.98823
___ MN	0.50111	15,900.74	1.099	0.50106	0.49563	0.50664
___ MO	0.50494	315.21	0.121	0.50483	0.50561	0.50440
___ NA	25.87380	13,937.70	0.280	25.82683	25.95725	25.83732
___ NI	0.50175	596.17	0.223	0.50123	0.50098	0.50303
___ P	0.50664	53.17	0.810	0.50930	0.50191	0.50871
___ PB	0.49886	227.15	0.936	0.49632	0.50425	0.49602
___ S	24.87178	1,436.21	0.146	24.84656	24.85535	24.91342
___ SB	0.50381	72.30	0.349	0.50192	0.50410	0.50541
___ SE	0.50311	28.77	1.527	0.50264	0.49567	0.51101
___ SI	25.24635	1,284.68	0.220	25.19694	25.23545	25.30666
___ SN	0.48871	120.33	0.942	0.48872	0.49331	0.48410
___ SR	0.50234	221,135.82	0.923	0.50290	0.49744	0.50667
___ TH	0.54522	20.57	11.739	0.49657	0.52137	0.61773
___ TI	0.51473	17,692.48	1.083	0.51456	0.50925	0.52039
___ TL	0.51589	43.47	0.831	0.51678	0.51123	0.51967
___ V	0.50907	4,519.62	0.628	0.51050	0.50541	0.51130
___ W	0.50215	146.31	0.285	0.50213	0.50072	0.50359
___ Y1	3594.88718	3,594.89	0.533	3616.01840	3589.99100	3578.65213
___ Y2A	147482.86092	147,482.86	0.582	146892.39087	148467.99481	147088.19708
___ Y2R	3256.45849	3,256.46	0.296	3263.55662	3245.48313	3260.33572
___ ZN	0.50155	1,501.51	0.034	0.50142	0.50174	0.50148
___ ZR	0.49885	263.21	0.866	0.50384	0.49650	0.49622

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 12

Date/Time: 05/19/2020 06:25

Sample Number: CCB

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS		
				#1	#2	#3
___ AG	-0.00010	3.77	838.632	-0.00103	0.00062	0.00011
___ AL	-0.03371	2.75	262.354	-0.02010	0.04713	-0.12816
___ ALUM	-0.00615	4.91	70.521	-0.00835	-0.00115	-0.00895
___ AS	0.00486	0.13	91.396	0.00747	-0.00027	0.00737
___ B	-0.00030	17.04	157.760	0.00024	-0.00056	-0.00058
___ BA	-0.00005	197.01	42.773	-0.00002	-0.00005	-0.00006
___ BE	0.00001	-168.04	172.891	0.00000	0.00003	0.00000
___ CA	0.00391	13.05	154.656	0.00781	-0.00305	0.00696
___ CD	0.00021	0.55	193.198	0.00027	0.00057	-0.00022
___ CO	0.00010	3.51	351.053	0.00049	-0.00013	-0.00007
___ CR	-0.00007	4.34	456.313	-0.00047	0.00013	0.00011
___ CU	-0.00072	3.45	252.874	-0.00060	0.00104	-0.00262
___ FE	-0.00096	3.85	523.281	0.00476	-0.00454	-0.00309
___ K	-0.08504	-4.97	71.002	-0.01714	-0.10528	-0.13269
___ LI	0.00141	19.50	253.358	-0.00266	0.00408	0.00282
___ MG	-0.00298	2.22	220.761	-0.01057	0.00092	0.00072
___ MN	0.00024	3.16	55.557	0.00038	0.00022	0.00011
___ MO	-0.00077	1.02	105.841	-0.00015	-0.00047	-0.00169
___ NA	0.06961	2.15	25.112	0.07896	0.08042	0.04944
___ NI	-0.00019	1.33	71.350	-0.00007	-0.00017	-0.00034
___ P	-0.00192	0.74	334.684	-0.00454	-0.00662	0.00540
___ PB	-0.00069	0.67	396.328	0.00242	-0.00268	-0.00181
___ S	-0.00531	-0.49	149.473	-0.01363	0.00219	-0.00449
___ SB	0.00124	0.02	499.999	0.00180	-0.00524	0.00717
___ SE	0.00497	0.55	114.232	0.00753	0.00892	-0.00154
___ SI	0.01569	2.37	99.553	0.00712	0.03372	0.00623
___ SN	-0.00327	0.71	75.346	-0.00541	-0.00057	-0.00383
___ SR	0.00004	-15.76	70.505	0.00007	0.00002	0.00003
___ TH	0.05010	-0.10	120.801	0.05630	-0.01328	0.10727
___ TI	-0.00004	-0.02	155.223	-0.00009	-0.00006	0.00003
___ TL	0.00381	0.29	169.069	0.01037	0.00357	-0.00251
___ V	-0.00029	-2.85	72.736	-0.00048	-0.00007	-0.00030
___ W	-0.00167	-0.63	55.423	-0.00183	-0.00067	-0.00250
___ Y1	3669.39973	3,669.40	0.091	3668.44816	3666.64834	3673.10269
___ Y2A	150481.33926	150,481.34	0.208	150338.44693	150265.71543	150839.85543
___ Y2R	3319.46667	3,319.47	0.066	3322.00000	3318.32500	3318.07500
___ ZN	-0.00155	1.93	12.145	-0.00148	-0.00140	-0.00176
___ ZR	-0.00549	-0.05	188.849	-0.00625	0.00524	-0.01546

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 13

Date/Time: 05/19/2020 06:29

Sample Number: LRS2

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	2.89374	30,427.48	0.562	2.89041	2.91142	2.87939
___ AL	-0.02710	51.31	433.462	-0.11135	0.10707	-0.07701
___ ALUM	0.10277	1,118.60	13.583	0.11823	0.09898	0.09109
___ AS	20.52492	1,965.22	0.202	20.48237	20.56511	20.52727
___ B	4.81486	18,293.17	0.509	4.83306	4.82453	4.78701
___ BA	4.85884	2,023,177.06	0.237	4.86256	4.86803	4.84593
___ BE	4.71312	1,474,500.55	0.416	4.73362	4.71119	4.69454
___ CA	0.05090	6.13	19.144	0.05894	0.04006	0.05370
___ CD	20.07460	99,328.27	0.119	20.07896	20.09597	20.04886
___ CO	20.93518	45,966.41	0.081	20.91554	20.94439	20.94560
___ CR	19.65381	120,293.13	0.547	19.76067	19.65514	19.54563
___ CU	20.36941	176,111.86	0.262	20.42049	20.37384	20.31389
___ FE	-0.08470	-1.93	15.568	-0.07525	-0.07909	-0.09977
___ K	-0.10269	-8.21	9.595	-0.11221	-0.09254	-0.10333
___ LI	19.97233	58,829.01	0.434	19.93300	20.07174	19.91226
___ MG	-0.00250	2.41	68.535	-0.00440	-0.00109	-0.00199
___ MN	19.01909	593,770.24	0.433	19.06972	19.06354	18.92402
___ MO	20.54380	12,196.07	0.114	20.54486	20.51984	20.56670
___ NA	0.14216	41.30	7.892	0.12924	0.14952	0.14772
___ NI	20.98406	23,893.64	0.156	20.97858	21.01913	20.95447
___ P	20.48438	2,020.69	0.240	20.42980	20.52518	20.49815
___ PB	20.76025	8,920.72	0.175	20.72296	20.79576	20.76204
___ S	0.09293	-37.54	13.000	0.10280	0.09651	0.07946
___ SB	21.53787	2,957.70	0.268	21.47270	21.58220	21.55871
___ SE	20.03956	1,085.53	0.475	19.95139	20.14041	20.02687
___ SI	0.58785	57.58	14.194	0.49201	0.62721	0.64433
___ SN	20.08743	4,667.86	0.094	20.07032	20.08438	20.10758
___ SR	4.79987	2,086,293.30	0.260	4.81010	4.78597	4.80354
___ TH	7.15331	280.62	1.145	7.06561	7.22790	7.16642
___ TI	19.69230	669,357.76	0.413	19.71434	19.76033	19.60223
___ TL	20.52307	1,648.58	0.081	20.52803	20.53665	20.50452
___ V	20.39138	178,618.87	0.163	20.42555	20.38943	20.35915
___ W	20.68920	5,724.59	0.224	20.71442	20.71748	20.63570
___ Y1	3434.47118	3,434.47	0.108	3431.91585	3438.71580	3432.78189
___ Y2A	145801.21118	145,801.21	0.418	145228.63355	145732.65204	146442.34796
___ Y2R	3259.67307	3,259.67	0.667	3284.51027	3250.47320	3244.03574
___ ZN	9.79183	27,780.36	0.135	9.77708	9.79564	9.80277
___ ZR	19.85601	10,022.27	0.632	19.76359	19.99898	19.80545

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 14

Date/Time: 05/19/2020 06:32

Sample Number: **LRS4**

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	0.03199	287.02	23.154	0.04017	0.03004	0.02575
___ AL	487.23496	13,036.81	0.084	487.10226	486.90978	487.69284
___ ALUM	463.84931	582,447.29	0.329	465.01335	462.11966	464.41490
___ AS	-0.00249	-2.41	294.487	0.00367	-0.01061	-0.00054
___ B	-0.06200	625.13	2.686	-0.06045	-0.06376	-0.06179
___ BA	0.00234	1,036.48	30.226	0.00316	0.00190	0.00196
___ BE	0.00040	-35.78	161.443	0.00114	0.00004	0.00001
___ CA	490.10117	123,205.66	0.226	490.76335	490.71520	488.82496
___ CD	0.00531	144.14	12.234	0.00483	0.00605	0.00504
___ CO	0.00237	2.58	35.527	0.00140	0.00282	0.00288
___ CR	-0.00481	-21.67	49.601	-0.00206	-0.00603	-0.00633
___ CU	-0.02553	-160.31	7.474	-0.02334	-0.02681	-0.02645
___ FE	297.50817	18,094.82	0.185	298.07556	297.47192	296.97704
___ K	504.38888	89,893.70	0.143	504.01938	505.22253	503.92474
___ LI	0.01397	53.13	32.936	0.01668	0.00866	0.01658
___ MG	492.51486	203,389.21	0.202	492.80812	493.32777	491.40869
___ MN	-0.01060	558.97	24.339	-0.00762	-0.01210	-0.01208
___ MO	0.00057	1.60	439.704	-0.00091	0.00348	-0.00085
___ NA	485.01824	248,180.24	0.120	484.72212	485.69026	484.64234
___ NI	0.01827	-9.13	8.414	0.01650	0.01931	0.01898
___ P	0.00700	1.43	31.344	0.00517	0.00943	0.00640
___ PB	0.02670	42.64	10.043	0.02429	0.02959	0.02622
___ S	200.90968	10,162.50	0.257	200.42013	201.44871	200.86020
___ SB	-0.01174	-1.63	71.355	-0.02038	-0.00366	-0.01118
___ SE	-0.02036	-0.77	110.280	0.00093	-0.01819	-0.04382
___ SI	199.14174	9,587.75	0.225	199.45785	199.33962	198.62773
___ SN	0.00731	2.86	86.365	0.00039	0.01274	0.00879
___ SR	0.00101	5,439.46	66.366	0.00179	0.00060	0.00065
___ TH	0.03363	11.48	101.786	0.01586	0.01194	0.07309
___ TI	0.01987	529.53	13.165	0.02287	0.01809	0.01865
___ TL	0.01212	2.33	55.176	0.01953	0.00654	0.01028
___ V	0.00043	49.22	597.717	0.00334	-0.00051	-0.00154
___ W	0.00664	1.44	12.696	0.00761	0.00613	0.00617
___ Y1	3146.32321	3,146.32	0.357	3146.76597	3134.86527	3157.33840
___ Y2A	127469.42712	127,469.43	0.213	127216.63009	127436.02853	127755.62275
___ Y2R	3085.85663	3,085.86	0.791	3059.65114	3089.98802	3107.93072
___ ZN	-0.03498	84.23	1.903	-0.03496	-0.03433	-0.03566
___ ZR	0.00859	6.09	41.228	0.01264	0.00609	0.00704

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 15

Date/Time: 05/19/2020 06:35

Sample Number: **LRS3**

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	2.37850	24,996.61	0.632	2.39584	2.37003	2.36961
___ AL	-0.05046	46.86	179.909	-0.11269	-0.09240	0.05371
___ ALUM	0.05344	1,375.77	19.162	0.05182	0.04410	0.06439
___ AS	10.30751	1,005.13	0.095	10.29755	10.30780	10.31717
___ B	2.46045	9,541.19	0.689	2.47762	2.46003	2.44371
___ BA	2.53191	1,073,488.36	0.530	2.52116	2.54695	2.52761
___ BE	2.46026	783,641.97	0.374	2.46892	2.46126	2.45059
___ CA	0.02691	-8.69	61.274	0.04553	0.01416	0.02105
___ CD	10.34969	52,164.89	0.082	10.34023	10.35208	10.35675
___ CO	10.66539	23,855.81	0.243	10.63582	10.68393	10.67642
___ CR	10.02324	62,470.23	0.285	10.05345	10.01957	9.99669
___ CU	10.32925	92,234.24	0.332	10.36222	10.33171	10.29383
___ FE	-0.02966	1.87	85.171	-0.03566	-0.00194	-0.05138
___ K	0.28117	65.54	8.086	0.26813	0.30743	0.26796
___ LI	10.14192	30,575.08	0.584	10.20992	10.11425	10.10159
___ MG	0.01238	9.88	27.496	0.01485	0.00850	0.01378
___ MN	9.99766	317,704.69	0.287	10.00079	10.02469	9.96751
___ MO	10.37615	6,275.59	0.246	10.34859	10.39889	10.38097
___ NA	0.36913	167.84	2.034	0.37653	0.36932	0.36152
___ NI	10.69638	12,407.39	0.191	10.67286	10.70739	10.70891
___ P	10.34685	1,039.44	0.194	10.32409	10.36204	10.35441
___ PB	10.57430	4,628.98	0.057	10.56807	10.58021	10.57462
___ S	0.06198	-18.06	42.410	0.09231	0.04792	0.04572
___ SB	10.73279	1,501.80	0.366	10.68838	10.76297	10.74702
___ SE	10.21409	563.61	0.366	10.17127	10.23089	10.24012
___ SI	0.56958	44.64	5.035	0.54203	0.56743	0.59927
___ SN	10.07803	2,386.32	0.173	10.05792	10.08832	10.08785
___ SR	2.53087	1,120,103.42	0.291	2.53750	2.53217	2.52295
___ TH	10.00058	402.29	1.183	10.09225	10.04242	9.86709
___ TI	10.02027	346,813.00	0.208	10.04291	10.00187	10.01601
___ TL	10.56832	864.73	0.345	10.53003	10.60252	10.57241
___ V	10.29965	91,934.02	0.040	10.30113	10.30280	10.29501
___ W	10.29117	2,901.40	0.115	10.28007	10.28989	10.30354
___ Y1	3498.55012	3,498.55	0.294	3503.83923	3486.67832	3505.13281
___ Y2A	148460.11464	148,460.11	0.222	148556.08175	148092.48252	148731.77966
___ Y2R	3335.40757	3,335.41	0.027	3336.44254	3334.85803	3334.92214
___ ZN	5.09271	14,716.95	0.285	5.07609	5.10269	5.09937
___ ZR	9.98244	5,344.07	0.289	10.01507	9.96044	9.97181

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 16

Date/Time: 05/19/2020 06:39

Sample Number: LRS5

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	0.00140	18.71	84.368	0.00157	0.00249	0.00014
___ AL	248.25802	6,715.60	0.223	248.89703	247.94046	247.93656
___ ALUM	243.38166	316,246.85	0.272	243.28767	242.77113	244.08618
___ AS	-0.00389	-1.68	199.875	-0.01203	-0.00312	0.00347
___ B	-0.02119	372.89	4.803	-0.02211	-0.02010	-0.02136
___ BA	0.00103	587.58	1.198	0.00102	0.00104	0.00104
___ BE	0.00004	-141.30	63.403	0.00002	0.00002	0.00006
___ CA	245.94554	65,132.86	0.053	246.04887	245.99031	245.79746
___ CD	0.00261	75.35	30.423	0.00201	0.00351	0.00231
___ CO	0.00160	3.68	41.222	0.00123	0.00236	0.00121
___ CR	-0.00405	-18.45	13.696	-0.00349	-0.00460	-0.00405
___ CU	-0.01282	-91.12	15.501	-0.01086	-0.01484	-0.01277
___ FE	148.99972	9,602.98	0.339	149.33212	149.24876	148.41827
___ K	251.77720	46,122.97	0.264	252.13805	252.18278	251.01077
___ LI	0.01045	44.52	42.512	0.00656	0.01529	0.00950
___ MG	248.12706	111,431.86	0.135	248.41367	248.20795	247.75957
___ MN	-0.00567	282.45	1.682	-0.00560	-0.00578	-0.00563
___ MO	-0.00161	0.44	67.181	-0.00154	-0.00057	-0.00273
___ NA	244.06022	128,332.05	0.152	244.17530	244.35957	243.64579
___ NI	0.00921	-4.10	23.339	0.00682	0.00982	0.01099
___ P	0.00374	1.21	38.450	0.00524	0.00236	0.00363
___ PB	0.00828	21.63	33.082	0.00827	0.00555	0.01103
___ S	102.09210	5,436.15	0.219	102.22070	102.22156	101.83406
___ SB	-0.00519	-0.85	255.571	-0.00244	0.00648	-0.01961
___ SE	-0.01855	-0.72	57.056	-0.01845	-0.00801	-0.02917
___ SI	101.12050	5,004.36	0.390	101.00145	101.56076	100.79928
___ SN	0.00309	2.07	110.332	0.00661	-0.00020	0.00286
___ SR	0.00043	2,820.87	13.152	0.00041	0.00039	0.00050
___ TH	-0.01795	3.56	233.541	-0.04978	0.02954	-0.03360
___ TI	0.00929	258.34	1.604	0.00945	0.00917	0.00924
___ TL	0.01464	1.91	30.978	0.01018	0.01924	0.01449
___ V	-0.00111	14.60	64.299	-0.00057	-0.00192	-0.00085
___ W	0.00171	0.27	120.548	0.00233	0.00340	-0.00059
___ Y1	3312.13712	3,312.14	0.179	3307.35426	3310.27897	3318.77812
___ Y2A	133809.55450	133,809.55	0.211	133831.03328	133517.41232	134080.21791
___ Y2R	3171.49496	3,171.49	0.284	3162.97405	3170.59764	3180.91317
___ ZN	-0.01760	47.15	3.065	-0.01808	-0.01702	-0.01770
___ ZR	0.00342	2.35	126.665	-0.00158	0.00578	0.00608

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 17

Date/Time: 05/19/2020 06:42

Sample Number: CCS

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS		
				#1	#2	#3
___ AG	0.00101	15.45	69.611	0.00038	0.00088	0.00176
___ AL	-0.06683	1.85	50.043	-0.02932	-0.09353	-0.07765
___ ALUM	-0.00781	4.36	64.638	-0.01169	-0.00210	-0.00962
___ AS	0.00673	0.32	58.431	0.01062	0.00680	0.00276
___ B	0.00269	29.28	11.378	0.00290	0.00234	0.00282
___ BA	-0.00001	211.55	483.519	0.00001	-0.00009	0.00003
___ BE	-0.00002	-175.76	133.635	-0.00002	-0.00003	0.00001
___ CA	0.01213	15.17	32.201	0.01642	0.00879	0.01117
___ CD	0.00010	-0.01	216.576	0.00013	-0.00013	0.00031
___ CO	-0.00016	2.90	345.267	0.00045	-0.00060	-0.00033
___ CR	-0.00010	4.21	248.501	0.00005	0.00003	-0.00037
___ CU	-0.00087	5.25	127.127	-0.00207	-0.00061	0.00008
___ FE	-0.01438	2.88	49.050	-0.00743	-0.01417	-0.02154
___ K	0.28868	65.90	12.507	0.32978	0.26208	0.27419
___ LI	0.00175	20.27	216.456	0.00589	-0.00155	0.00091
___ MG	0.00531	6.25	155.140	0.01444	-0.00154	0.00302
___ MN	0.00028	4.16	39.808	0.00027	0.00040	0.00017
___ MO	-0.00097	0.88	21.329	-0.00113	-0.00074	-0.00104
___ NA	0.22835	88.50	13.453	0.26058	0.19940	0.22509
___ NI	0.00007	1.63	766.774	0.00018	-0.00049	0.00051
___ P	-0.00134	0.79	387.196	-0.00724	0.00256	0.00066
___ PB	0.00095	1.42	403.272	0.00437	-0.00318	0.00165
___ S	0.00193	-0.07	248.885	0.00728	-0.00198	0.00048
___ SB	-0.00270	-0.56	64.588	-0.00273	-0.00443	-0.00094
___ SE	-0.00515	-0.03	139.262	-0.01291	0.00126	-0.00381
___ SI	0.07935	5.60	13.251	0.07288	0.09148	0.07368
___ SN	-0.00395	0.54	70.301	-0.00234	-0.00715	-0.00236
___ SR	0.00003	-18.24	56.888	0.00001	0.00005	0.00004
___ TH	0.06481	0.48	56.145	0.10681	0.04255	0.04509
___ TI	0.00013	5.80	37.661	0.00007	0.00016	0.00014
___ TL	0.00588	0.46	99.740	-0.00077	0.01031	0.00808
___ V	0.00003	0.20	1695.384	0.00031	-0.00048	0.00024
___ W	0.00022	-0.07	639.433	-0.00070	0.00187	-0.00050
___ Y1	3647.75689	3,647.76	0.260	3658.29917	3645.09549	3639.87601
___ Y2A	150599.57108	150,599.57	0.204	150247.32660	150736.31369	150815.07294
___ Y2R	3281.88333	3,281.88	0.320	3270.67500	3283.50000	3291.47500
___ ZN	-0.00149	2.09	12.567	-0.00161	-0.00158	-0.00127
___ ZR	-0.00219	2.02	165.927	-0.00384	0.00197	-0.00470

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 18

Date/Time: 05/19/2020 06:45

Sample Number: **CCV**

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	0.50327	5,087.01	0.271	0.50306	0.50472	0.50202
___ AL	26.04539	725.79	0.721	26.09889	26.20067	25.83662
___ ALUM	26.01983	36,354.33	0.368	25.97532	26.12972	25.95446
___ AS	0.51018	50.45	0.331	0.50930	0.51213	0.50912
___ B	0.49985	2,079.44	1.088	0.50294	0.50305	0.49357
___ BA	0.51214	212,816.65	0.241	0.51224	0.51333	0.51087
___ BE	0.49277	153,816.45	0.174	0.49322	0.49331	0.49178
___ CA	25.90905	7,292.41	0.736	25.99421	26.04235	25.69059
___ CD	0.50347	2,612.14	0.107	0.50408	0.50315	0.50316
___ CO	0.50160	1,152.23	0.294	0.50169	0.50009	0.50303
___ CR	0.49897	3,055.79	0.483	0.49787	0.50173	0.49730
___ CU	0.51177	4,492.98	0.382	0.51352	0.51212	0.50966
___ FE	25.95185	1,783.62	0.943	25.98291	26.17947	25.69318
___ K	25.90602	4,939.56	0.585	26.00375	25.98289	25.73142
___ LI	0.51213	1,539.28	0.768	0.51306	0.51552	0.50781
___ MG	25.91788	12,697.08	0.791	26.04365	26.02872	25.68128
___ MN	0.50793	15,918.71	0.331	0.50756	0.50976	0.50646
___ MO	0.50649	315.29	0.374	0.50862	0.50500	0.50584
___ NA	26.00550	14,171.48	0.794	26.18197	26.05623	25.77831
___ NI	0.50727	601.07	0.319	0.50914	0.50627	0.50641
___ P	0.50593	52.95	1.239	0.50844	0.51056	0.49880
___ PB	0.50525	229.40	0.527	0.50445	0.50822	0.50308
___ S	25.05660	1,442.89	0.208	25.09596	24.99759	25.07625
___ SB	0.51244	73.34	0.917	0.51773	0.51085	0.50874
___ SE	0.49073	28.00	1.982	0.50196	0.48488	0.48535
___ SI	25.58229	1,316.89	0.580	25.56031	25.74051	25.44605
___ SN	0.49569	121.69	1.256	0.48872	0.50071	0.49764
___ SR	0.51127	222,302.41	0.361	0.51054	0.50989	0.51336
___ TH	0.53289	20.32	9.755	0.49859	0.59270	0.50737
___ TI	0.52250	17,739.04	0.526	0.52224	0.52536	0.51989
___ TL	0.51402	43.19	1.117	0.51997	0.50852	0.51356
___ V	0.51381	4,506.00	0.211	0.51285	0.51499	0.51358
___ W	0.50790	147.56	0.959	0.51285	0.50773	0.50311
___ Y1	3584.94151	3,584.94	0.098	3581.37686	3585.06649	3588.38116
___ Y2A	145669.64974	145,669.65	0.092	145686.93829	145527.88596	145794.12498
___ Y2R	3294.35166	3,294.35	0.617	3272.84758	3296.97182	3313.23559
___ ZN	0.50278	1,501.07	0.080	0.50299	0.50231	0.50302
___ ZR	0.51307	273.02	0.664	0.51041	0.51691	0.51188

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 19

Date/Time: 05/19/2020 06:48

Sample Number: CCB

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	0.00072	12.91	119.051	0.00141	-0.00024	0.00098
___ AL	0.00097	3.48	7411.632	0.07555	-0.06853	-0.00410
___ ALUM	0.01058	23.05	187.363	-0.00421	0.03311	0.00284
___ AS	0.00147	-0.21	292.206	0.00632	-0.00181	-0.00011
___ B	0.00317	30.97	27.867	0.00241	0.00414	0.00296
___ BA	0.00008	247.54	202.781	-0.00002	0.00026	-0.00001
___ BE	0.00010	-136.54	139.705	0.00002	0.00026	0.00002
___ CA	0.00099	12.02	1253.557	-0.00092	-0.01033	0.01421
___ CD	0.00045	1.81	74.891	0.00069	0.00058	0.00007
___ CO	0.00003	3.32	1063.152	0.00006	0.00037	-0.00033
___ CR	0.00017	5.82	192.419	0.00055	0.00005	-0.00008
___ CU	0.00084	8.30	105.914	-0.00005	0.00084	0.00173
___ FE	0.01215	4.63	153.199	0.02147	-0.00928	0.02427
___ K	0.04644	19.70	113.132	0.09698	0.05023	-0.00789
___ LI	0.00529	30.33	62.556	0.00418	0.00901	0.00267
___ MG	-0.00216	2.55	324.760	0.00584	-0.00724	-0.00507
___ MN	0.00058	14.74	80.760	0.00037	0.00112	0.00025
___ MO	-0.00069	1.06	81.767	-0.00004	-0.00103	-0.00099
___ NA	0.12763	33.20	14.535	0.14354	0.13210	0.10725
___ NI	0.00034	1.95	284.303	0.00134	-0.00057	0.00025
___ P	-0.00326	0.59	4.021	-0.00340	-0.00325	-0.00313
___ PB	0.00348	2.56	65.289	0.00264	0.00175	0.00605
___ S	0.00904	0.35	102.027	0.01685	-0.00114	0.01141
___ SB	-0.00045	-0.23	703.797	0.00298	-0.00332	-0.00102
___ SE	-0.01227	-0.43	92.077	-0.00908	-0.00291	-0.02483
___ SI	0.02751	2.90	96.448	0.05550	0.02428	0.00274
___ SN	-0.00452	0.40	29.987	-0.00402	-0.00606	-0.00349
___ SR	0.00014	26.86	137.786	0.00000	0.00035	0.00005
___ TH	0.00702	-1.78	439.303	0.01033	0.03608	-0.02534
___ TI	0.00029	11.40	178.790	0.00012	0.00088	-0.00012
___ TL	0.00418	0.32	288.959	-0.00492	0.01786	-0.00042
___ V	0.00065	5.19	36.741	0.00054	0.00048	0.00092
___ W	-0.00181	-0.66	15.173	-0.00213	-0.00168	-0.00163
___ Y1	3623.68763	3,623.69	0.188	3631.44686	3618.72313	3620.89291
___ Y2A	148159.41895	148,159.42	0.450	148576.52908	147390.91452	148510.81324
___ Y2R	3233.10000	3,233.10	0.385	3222.95000	3246.97500	3229.37500
___ ZN	-0.00134	2.55	3.064	-0.00132	-0.00131	-0.00138
___ ZR	0.00323	3.00	86.987	0.00499	-0.00001	0.00470

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 20

Date/Time: 05/19/2020 06:51

Sample Number: **PBW**

Class: ****

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 1.00

Protocol Symbol: UA

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	-0.00039	1.06	87.144	-0.00056	0.00000	-0.00062
___ AL	-0.00900	3.43	322.335	-0.01621	-0.03371	0.02293
___ ALUM	-0.00749	4.08	36.806	-0.00959	-0.00437	-0.00852
___ AS	0.00081	-0.28	218.862	0.00210	-0.00120	0.00152
___ B	0.00145	24.46	50.418	0.00101	0.00106	0.00230
___ BA	-0.00001	213.92	229.666	-0.00005	-0.00001	0.00002
___ BE	-0.00001	-174.31	117.307	-0.00001	0.00000	-0.00001
___ CA	-0.00975	9.07	100.901	-0.00729	-0.02059	-0.00138
___ CD	0.00025	0.76	65.789	0.00043	0.00017	0.00013
___ CO	-0.00005	3.20	1085.382	-0.00065	0.00012	0.00038
___ CR	-0.00038	2.43	210.555	-0.00052	0.00048	-0.00111
___ CU	-0.00039	8.27	135.852	-0.00031	0.00009	-0.00097
___ FE	-0.02005	2.50	42.846	-0.01105	-0.02816	-0.02093
___ K	-0.00507	10.22	1516.456	0.07284	-0.00718	-0.08086
___ LI	0.00169	20.15	155.195	0.00216	0.00404	-0.00114
___ MG	-0.00027	3.53	1581.069	-0.00192	0.00460	-0.00350
___ MN	0.00037	7.28	28.020	0.00045	0.00025	0.00041
___ MO	-0.00141	0.62	50.116	-0.00059	-0.00184	-0.00180
___ NA	0.05619	-5.18	17.213	0.05104	0.06735	0.05019
___ NI	-0.00067	0.76	74.442	-0.00021	-0.00059	-0.00119
___ P	-0.00067	0.88	844.616	-0.00151	-0.00591	0.00539
___ PB	0.00227	2.06	190.022	0.00581	-0.00252	0.00350
___ S	0.01370	0.64	51.550	0.02136	0.01229	0.00744
___ SB	0.00073	-0.06	1117.140	-0.00862	0.00579	0.00500
___ SE	-0.00993	-0.30	54.367	-0.01070	-0.01489	-0.00418
___ SI	0.04621	3.92	38.365	0.02688	0.06171	0.05004
___ SN	-0.00492	0.31	16.831	-0.00518	-0.00558	-0.00399
___ SR	0.00003	-21.27	69.033	0.00001	0.00002	0.00005
___ TH	0.05880	0.25	37.691	0.03871	0.05511	0.08257
___ TI	-0.00016	-4.25	64.111	-0.00027	-0.00007	-0.00014
___ TL	0.00318	0.24	208.021	-0.00248	0.00157	0.01046
___ V	0.00006	0.50	106.157	-0.00001	0.00011	0.00007
___ W	-0.00095	-0.42	217.581	-0.00325	-0.00035	0.00075
___ Y1	3709.52571	3,709.53	0.226	3712.06379	3700.17498	3716.33837
___ Y2A	152163.31799	152,163.32	0.232	152567.17500	151911.03132	152011.74765
___ Y2R	3291.00000	3,291.00	0.602	3268.12500	3302.17500	3302.70000
___ ZN	-0.00125	2.85	10.087	-0.00110	-0.00134	-0.00129
___ ZR	-0.00130	2.28	396.753	0.00445	-0.00558	-0.00278

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 21

Date/Time: 05/19/2020 06:55

Sample Number: **LCSW**

Class: ****

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 50.00

DF: 1.00

Protocol Symbol: UA

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	0.01999	220.88	0.459	0.01989	0.02006	0.02003
___ AL	0.40846	14.73	18.381	0.40628	0.48460	0.33450
___ ALUM	0.41704	608.14	1.706	0.42501	0.41134	0.41476
___ AS	0.06238	6.08	11.562	0.05432	0.06821	0.06462
___ B	0.05812	258.37	0.489	0.05839	0.05814	0.05783
___ BA	0.01023	4,643.42	0.453	0.01027	0.01018	0.01025
___ BE	0.00960	2,935.37	0.152	0.00961	0.00961	0.00958
___ CA	0.40653	126.27	1.429	0.41060	0.40910	0.39987
___ CD	0.01016	53.94	1.504	0.01019	0.01030	0.00999
___ CO	0.01065	29.14	1.328	0.01069	0.01049	0.01076
___ CR	0.02987	194.04	0.591	0.02984	0.03006	0.02971
___ CU	0.04140	366.69	2.145	0.04203	0.04038	0.04178
___ FE	0.40672	31.85	7.037	0.37473	0.42991	0.41551
___ K	5.60022	1,074.27	0.965	5.54152	5.64787	5.61125
___ LI	0.10234	319.00	1.240	0.10177	0.10379	0.10145
___ MG	0.20122	102.53	1.168	0.20191	0.20315	0.19860
___ MN	0.02097	675.51	0.912	0.02108	0.02075	0.02108
___ MO	0.01890	13.63	5.565	0.01769	0.01952	0.01950
___ NA	2.08548	1,101.05	0.881	2.06470	2.09960	2.09214
___ NI	2.10584	2,591.51	0.295	2.10194	2.11301	2.10256
___ P	0.20093	22.29	5.277	0.19205	0.21267	0.19806
___ PB	0.03023	15.08	3.270	0.02936	0.03131	0.03003
___ S	0.99345	58.91	2.527	0.96448	1.00684	1.00903
___ SB	0.10643	15.53	1.892	0.10588	0.10866	0.10475
___ SE	0.09374	5.73	1.872	0.09391	0.09191	0.09541
___ SI	1.02967	54.38	2.995	0.99808	1.05970	1.03123
___ SN	0.09682	25.82	1.632	0.09511	0.09714	0.09822
___ SR	0.01023	4,573.34	0.423	0.01028	0.01019	0.01023
___ TH	-0.00512	-2.28	785.881	-0.02198	0.04080	-0.03419
___ TI	0.02041	719.38	1.267	0.02012	0.02062	0.02050
___ TL	0.06312	5.42	9.473	0.05700	0.06895	0.06341
___ V	0.02029	183.23	3.051	0.02017	0.02096	0.01974
___ W	0.05596	18.22	1.487	0.05685	0.05520	0.05583
___ Y1	3708.18918	3,708.19	0.290	3718.78812	3697.27527	3708.50415
___ Y2A	150883.64319	150,883.64	0.079	150843.32534	151018.12138	150789.48286
___ Y2R	3287.07500	3,287.08	0.258	3281.60000	3282.80000	3296.82500
___ ZN	0.44191	1,377.54	0.662	0.43854	0.44332	0.44385
___ ZR	0.09807	49.98	2.559	0.09724	0.10090	0.09609

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 22

Date/Time: 05/19/2020 06:58

Sample Number: 1313220

Class: UP**

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 1.00

Protocol Symbol: DU

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS		
				#1	#2	#3
___ AG	0.01826	271.55	2.092	0.01810	0.01798	0.01870
___ AL	1.04295	33.09	5.153	1.10341	1.02482	1.00062
___ ALUM	1.05054	1,512.72	1.430	1.03854	1.04570	1.06738
___ AS	0.51781	51.81	0.781	0.52097	0.51326	0.51921
___ B	0.24478	1,022.28	0.881	0.24720	0.24406	0.24308
___ BA	0.14005	59,973.56	0.219	0.14040	0.13994	0.13982
___ BE	0.01974	6,148.05	0.201	0.01978	0.01972	0.01971
___ CA	53.74954	15,392.09	0.661	53.39460	54.10554	53.74848
___ CD	0.05085	264.82	0.048	0.05085	0.05088	0.05083
___ CO	0.10243	239.74	0.642	0.10206	0.10204	0.10319
___ CR	0.20187	1,268.39	0.465	0.20268	0.20084	0.20209
___ CU	0.51150	4,509.06	0.414	0.50910	0.51227	0.51312
___ FE	0.52371	40.81	4.753	0.49640	0.54512	0.52959
___ K	4.73881	931.79	0.899	4.69220	4.77576	4.74849
___ LI	1.03284	3,153.36	1.213	1.01934	1.04409	1.03510
___ MG	8.34852	4,193.49	0.429	8.31254	8.38417	8.34884
___ MN	0.06175	1,969.59	0.077	0.06180	0.06171	0.06174
___ MO	0.20938	132.49	1.051	0.20687	0.21029	0.21097
___ NA	28.25779	15,723.38	0.679	28.05836	28.44130	28.27371
___ NI	0.15365	185.12	0.580	0.15468	0.15317	0.15310
___ P	1.04712	109.48	0.861	1.05408	1.05035	1.03693
___ PB	0.50303	228.24	1.554	0.51182	0.49685	0.50043
___ S	21.63564	1,258.43	0.113	21.60798	21.65419	21.64475
___ SB	0.42752	61.59	0.700	0.42567	0.42591	0.43097
___ SE	0.79367	45.14	0.970	0.79110	0.80232	0.78758
___ SI	15.25669	802.13	0.444	15.21207	15.33459	15.22342
___ SN	0.60561	149.78	0.430	0.60637	0.60272	0.60775
___ SR	0.35007	156,241.81	0.389	0.35159	0.34896	0.34966
___ TH	0.03904	-0.53	171.962	0.10584	0.03967	-0.02841
___ TI	0.10440	3,631.45	0.230	0.10467	0.10428	0.10424
___ TL	1.04074	87.72	0.952	1.02961	1.04401	1.04860
___ V	0.10916	961.69	0.354	0.10894	0.10961	0.10894
___ W	-0.00012	0.34	1225.751	0.00150	-0.00054	-0.00131
___ Y1	3618.34983	3,618.35	0.243	3625.42746	3621.09289	3608.52915
___ Y2A	149116.77195	149,116.77	0.227	149391.49202	149220.47087	148738.35295
___ Y2R	3363.03733	3,363.04	0.455	3365.44411	3346.67266	3376.99521
___ ZN	0.13000	393.84	0.160	0.12983	0.12994	0.13023
___ ZR	1.00404	514.53	1.428	0.98798	1.01554	1.00861

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 23

Date/Time: 05/19/2020 07:01

Sample Number: 1313221

Class: R***

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 52.20

DF: 1.00

Protocol Symbol: DU

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS		
				#1	#2	#3
___ AG	0.01854	201.51	1.974	0.01891	0.01818	0.01853
___ AL	0.33854	13.16	17.462	0.40542	0.29326	0.31695
___ ALUM	0.39803	579.13	2.085	0.40617	0.38958	0.39832
___ AS	0.06133	5.81	2.535	0.05954	0.06236	0.06209
___ B	0.10395	438.44	0.518	0.10422	0.10430	0.10333
___ BA	0.09892	42,052.98	0.157	0.09907	0.09876	0.09893
___ BE	0.00942	2,829.76	0.365	0.00938	0.00945	0.00941
___ CA	53.89711	15,251.09	0.659	53.58648	53.82083	54.28401
___ CD	0.00990	51.18	1.867	0.00992	0.01008	0.00971
___ CO	0.01001	26.44	0.600	0.00995	0.01000	0.01007
___ CR	0.02961	189.24	1.937	0.03025	0.02914	0.02945
___ CU	0.03968	358.60	1.699	0.04033	0.03899	0.03973
___ FE	0.39372	31.30	5.022	0.40354	0.40665	0.37095
___ K	8.21255	1,587.48	0.562	8.24574	8.23208	8.15983
___ LI	0.11333	355.44	3.661	0.11179	0.11016	0.11803
___ MG	7.63055	3,788.36	0.382	7.63258	7.60045	7.65862
___ MN	0.01945	614.92	1.012	0.01950	0.01923	0.01961
___ MO	0.02160	14.96	3.411	0.02245	0.02119	0.02116
___ NA	28.52959	15,686.81	0.561	28.42673	28.44802	28.71402
___ NI	1.96797	2,357.71	0.161	1.96451	1.96864	1.97075
___ P	0.20922	22.56	3.078	0.20919	0.20280	0.21568
___ PB	0.02760	13.02	10.366	0.03045	0.02760	0.02473
___ S	21.92106	1,272.28	0.383	21.88456	22.01713	21.86150
___ SB	0.10429	14.81	2.741	0.10315	0.10755	0.10218
___ SE	0.08600	5.14	17.891	0.07543	0.07891	0.10365
___ SI	15.37890	798.84	0.689	15.30900	15.32684	15.50085
___ SN	0.09290	24.19	2.614	0.09338	0.09027	0.09505
___ SR	0.34217	152,016.16	0.295	0.34326	0.34128	0.34196
___ TH	0.05872	0.27	53.568	0.02622	0.08901	0.06094
___ TI	0.02003	694.36	1.584	0.01967	0.02029	0.02012
___ TL	0.07346	6.22	7.422	0.07921	0.06836	0.07281
___ V	0.02570	229.52	1.910	0.02619	0.02570	0.02520
___ W	0.05524	17.49	1.075	0.05470	0.05587	0.05515
___ Y1	3610.95557	3,610.96	0.420	3627.80222	3606.63934	3598.42516
___ Y2A	148419.73349	148,419.73	0.260	148541.30110	148730.61377	147987.28560
___ Y2R	3323.25599	3,323.26	0.971	3335.76278	3347.38575	3286.61944
___ ZN	0.43037	1,305.22	0.125	0.42988	0.43028	0.43095
___ ZR	0.09010	48.39	4.217	0.08707	0.09436	0.08886

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 24

Date/Time: 05/19/2020 07:04

Sample Number: 1313222

Class: M***

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 52.20

DF: 1.00

Protocol Symbol: DU

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	0.01907	206.73	0.175	0.01907	0.01904	0.01911
___ AL	0.36219	13.56	8.978	0.35187	0.39862	0.33609
___ ALUM	0.40142	573.40	1.493	0.40213	0.40703	0.39511
___ AS	0.06235	5.89	5.749	0.06515	0.06360	0.05831
___ B	0.10519	441.16	0.434	0.10562	0.10471	0.10523
___ BA	0.09882	41,801.42	0.212	0.09903	0.09884	0.09861
___ BE	0.00949	2,837.69	0.488	0.00949	0.00953	0.00943
___ CA	53.87384	15,175.55	0.418	54.05854	53.62311	53.93988
___ CD	0.00982	50.50	1.391	0.00983	0.00967	0.00994
___ CO	0.00995	26.19	3.997	0.00973	0.01040	0.00970
___ CR	0.03044	193.42	2.361	0.03122	0.02981	0.03029
___ CU	0.04016	348.46	2.780	0.03917	0.04137	0.03994
___ FE	0.38845	30.78	5.555	0.40553	0.36420	0.39562
___ K	8.23605	1,584.66	0.293	8.26340	8.21774	8.22702
___ LI	0.11482	358.36	1.281	0.11319	0.11524	0.11604
___ MG	7.62896	3,770.31	0.648	7.66262	7.57222	7.65204
___ MN	0.01969	620.63	0.948	0.01989	0.01951	0.01968
___ MO	0.02222	15.27	1.427	0.02251	0.02188	0.02226
___ NA	28.49135	15,594.62	0.477	28.57113	28.33449	28.56844
___ NI	1.98354	2,365.68	0.325	1.98261	1.99040	1.97761
___ P	0.20871	22.41	4.731	0.21898	0.20784	0.19929
___ PB	0.02466	11.64	13.846	0.02074	0.02628	0.02697
___ S	21.65511	1,251.18	0.177	21.67339	21.61106	21.68087
___ SB	0.10289	14.54	0.153	0.10290	0.10272	0.10304
___ SE	0.09003	5.35	6.001	0.09626	0.08656	0.08728
___ SI	15.41483	797.05	1.568	15.64526	15.16320	15.43604
___ SN	0.09498	24.59	4.821	0.09569	0.09917	0.09009
___ SR	0.34363	151,891.53	0.420	0.34519	0.34235	0.34335
___ TH	-0.00290	-2.21	1272.918	0.03966	-0.02461	-0.02374
___ TI	0.02071	714.33	1.239	0.02053	0.02100	0.02060
___ TL	0.06213	5.24	11.036	0.05423	0.06650	0.06566
___ V	0.02588	229.24	2.269	0.02559	0.02655	0.02549
___ W	0.05735	18.03	1.360	0.05728	0.05816	0.05660
___ Y1	3594.69386	3,594.69	0.091	3594.89051	3597.87021	3591.32087
___ Y2A	147669.43853	147,669.44	0.298	147968.22667	147876.44711	147163.64180
___ Y2R	3308.09325	3,308.09	0.427	3294.16600	3322.39074	3307.72301
___ ZN	0.43396	1,310.10	0.275	0.43308	0.43348	0.43531
___ ZR	0.09763	50.15	9.327	0.08765	0.09973	0.10550

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 25

Date/Time: 05/19/2020 07:07

Sample Number: 1313077

Class: ****

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 1.00

Protocol Symbol: DU

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	0.00351	25.16	40.169	0.00507	0.00314	0.00232
___ AL	1.00432	25.29	2.672	0.97710	1.00510	1.03076
___ ALUM	1.09317	962.64	1.510	1.11188	1.08067	1.08695
___ AS	0.01000	0.41	40.430	0.01407	0.00598	0.00995
___ B	4.06295	10,266.82	0.447	4.08356	4.04936	4.05592
___ BA	0.04344	11,459.02	0.645	0.04372	0.04316	0.04345
___ BE	-0.00017	-137.00	10.546	-0.00016	-0.00019	-0.00016
___ CA	956.12814	197,438.56	0.163	957.48505	956.48009	954.41927
___ CD	0.04691	157.13	0.959	0.04736	0.04692	0.04646
___ CO	0.08325	125.29	1.400	0.08250	0.08459	0.08265
___ CR	0.00700	29.81	2.827	0.00695	0.00683	0.00721
___ CU	0.01744	96.73	13.426	0.02014	0.01599	0.01619
___ FE	1.39989	81.07	0.997	1.41180	1.38454	1.40333
___ K	406.29622	62,453.68	0.170	406.66301	406.72600	405.49965
___ LI	0.35235	859.42	1.416	0.35538	0.34660	0.35508
___ MG	1842.19049	445,529.34	1.182	1866.63823	1835.02770	1824.90554
___ MN	18.56606	364,033.23	0.716	18.68832	18.42447	18.58540
___ MO	0.00063	1.21	4.333	0.00066	0.00062	0.00061
___ NA	6387.67042	2,819,263.62	4.723	6702.59229	6359.15495	6101.26401
___ NI	0.12825	99.19	1.858	0.13081	0.12610	0.12784
___ P	0.03999	3.26	5.746	0.04263	0.03841	0.03894
___ PB	0.01827	-2.96	17.892	0.01484	0.01862	0.02134
___ S	1606.96113	60,038.56	0.645	1615.95647	1609.29539	1595.63153
___ SB	-0.01717	-1.69	78.757	-0.00374	-0.03078	-0.01699
___ SE	0.00501	0.35	180.501	0.00054	0.01542	-0.00092
___ SI	16.00218	665.62	0.723	16.07283	16.06507	15.86864
___ SN	0.00248	1.36	138.873	0.00020	0.00080	0.00645
___ SR	9.79303	2,679,866.00	0.539	9.81297	9.73317	9.83296
___ TH	0.02376	-0.88	274.014	-0.03397	0.09433	0.01092
___ TI	0.02445	522.46	0.747	0.02424	0.02456	0.02456
___ TL	-0.05875	-1.67	26.325	-0.06985	-0.06533	-0.04109
___ V	0.00616	34.22	1.642	0.00622	0.00604	0.00621
___ W	0.00247	0.45	201.183	0.00339	-0.00290	0.00692
___ Y1	2323.84105	2,323.84	0.621	2308.99690	2324.72258	2337.80366
___ Y2A	91550.18306	91,550.18	0.602	91663.33500	92035.81419	90951.40000
___ Y2R	2661.43341	2,661.43	0.081	2659.86344	2660.56120	2663.87560
___ ZN	0.02775	58.66	2.352	0.02842	0.02711	0.02773
___ ZR	-0.00436	-0.20	146.224	0.00207	-0.01067	-0.00448

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 26

Date/Time: 05/19/2020 07:11

Sample Number: 1313077

Class: ****

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 5.00

Protocol Symbol: DU

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	0.00135	14.57	38.873	0.00078	0.00145	0.00182
___ AL	0.16124	7.41	17.344	0.17885	0.12900	0.17588
___ ALUM	0.16119	191.14	3.004	0.15815	0.16677	0.15863
___ AS	0.00257	-0.08	203.021	0.00817	0.00173	-0.00218
___ B	0.77247	2,492.48	0.304	0.77516	0.77084	0.77141
___ BA	0.00883	3,094.03	0.398	0.00887	0.00881	0.00881
___ BE	-0.00014	-166.51	8.921	-0.00015	-0.00013	-0.00014
___ CA	187.16155	47,120.64	0.258	187.62110	187.20374	186.65982
___ CD	0.01019	42.90	1.961	0.01003	0.01042	0.01012
___ CO	0.01855	37.45	1.996	0.01875	0.01879	0.01813
___ CR	0.00141	10.60	15.481	0.00166	0.00124	0.00133
___ CU	0.00364	34.71	15.997	0.00326	0.00336	0.00432
___ FE	0.25619	19.61	7.241	0.23530	0.26255	0.27073
___ K	74.62515	12,927.25	0.064	74.61651	74.67667	74.58227
___ LI	0.06556	191.32	0.333	0.06568	0.06569	0.06531
___ MG	402.85906	165,038.82	0.250	404.01596	402.19636	402.36486
___ MN	3.96198	98,744.29	0.273	3.97441	3.95474	3.95680
___ MO	-0.00053	0.94	220.522	-0.00167	-0.00061	0.00068
___ NA	2441.38084	1,213,479.33	1.677	2434.05057	2404.59673	2485.49522
___ NI	0.02690	27.37	4.943	0.02687	0.02824	0.02558
___ P	0.00651	1.30	36.089	0.00507	0.00922	0.00525
___ PB	-0.00094	-1.76	341.543	-0.00364	0.00259	-0.00175
___ S	339.80980	16,087.22	0.453	341.52662	339.34585	338.55692
___ SB	-0.00484	-0.70	108.371	-0.00711	0.00116	-0.00857
___ SE	-0.02522	-0.94	47.725	-0.02132	-0.01561	-0.03872
___ SI	2.98434	140.95	2.006	3.03430	3.00070	2.91800
___ SN	-0.00202	0.82	115.412	-0.00419	0.00044	-0.00230
___ SR	2.12899	740,348.06	0.405	2.13041	2.13681	2.11974
___ TH	0.06324	0.40	18.875	0.04956	0.06860	0.07156
___ TI	0.00603	164.60	3.617	0.00605	0.00624	0.00580
___ TL	-0.01057	-0.34	73.423	-0.01952	-0.00646	-0.00573
___ V	0.00039	2.75	74.539	0.00042	0.00066	0.00008
___ W	0.00295	0.61	91.608	0.00204	0.00600	0.00082
___ Y1	2944.49950	2,944.50	0.524	2961.37725	2940.96674	2931.15450
___ Y2A	116371.38238	116,371.38	0.121	116227.60896	116376.47441	116510.06377
___ Y2R	2997.36162	2,997.36	0.766	2979.07950	3023.11217	2989.89319
___ ZN	0.00670	21.84	4.374	0.00701	0.00642	0.00667
___ ZR	-0.00406	0.96	134.388	-0.00823	0.00212	-0.00608

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 27

Date/Time: 05/19/2020 07:14

Sample Number: 1313231

Class: ****

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 1.00

Protocol Symbol: DU

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	0.00027	7.83	227.897	0.00094	-0.00027	0.00014
___ AL	0.00984	3.99	853.035	0.01603	0.09050	-0.07702
___ ALUM	-0.00547	3.54	93.639	-0.00643	-0.01005	0.00006
___ AS	-0.00012	-0.37	2644.652	-0.00118	-0.00274	0.00355
___ B	0.05278	233.41	1.421	0.05363	0.05245	0.05224
___ BA	0.11732	50,387.56	0.169	0.11754	0.11716	0.11726
___ BE	-0.00003	-179.17	80.888	0.00000	-0.00004	-0.00004
___ CA	39.83117	11,461.63	0.332	39.68209	39.87696	39.93447
___ CD	0.00000	-0.55	3196.507	0.00004	-0.00017	0.00012
___ CO	0.00008	3.04	793.740	0.00041	0.00051	-0.00067
___ CR	0.00102	11.21	23.793	0.00093	0.00129	0.00083
___ CU	0.00027	8.51	723.968	0.00017	-0.00165	0.00230
___ FE	-0.00287	3.78	236.996	-0.00618	-0.00737	0.00495
___ K	2.67224	532.24	4.438	2.58623	2.80753	2.62295
___ LI	0.01466	60.18	20.442	0.01125	0.01583	0.01690
___ MG	6.08660	3,071.16	10.197	5.85205	6.79034	5.61743
___ MN	0.00687	216.61	2.267	0.00694	0.00697	0.00669
___ MO	0.00148	2.43	87.246	0.00265	0.00010	0.00168
___ NA	30.73030	17,170.00	14.381	29.42904	35.65423	27.10762
___ NI	0.00028	1.17	393.238	-0.00003	0.00149	-0.00063
___ P	0.00633	1.60	115.003	-0.00129	0.00708	0.01322
___ PB	0.00194	1.60	155.574	-0.00102	0.00182	0.00503
___ S	11.39163	668.05	0.506	11.35679	11.36000	11.45810
___ SB	0.00179	0.10	387.570	0.00961	-0.00357	-0.00068
___ SE	-0.01328	-0.49	36.613	-0.00804	-0.01765	-0.01416
___ SI	14.19103	748.44	0.675	14.11588	14.15839	14.29884
___ SN	-0.00352	0.65	49.326	-0.00155	-0.00415	-0.00484
___ SR	0.25856	116,192.57	0.086	0.25870	0.25830	0.25867
___ TH	0.03233	-0.82	166.714	0.02940	0.08763	-0.02004
___ TI	0.00055	20.77	10.989	0.00056	0.00049	0.00061
___ TL	0.00088	0.11	1550.447	-0.01332	0.01398	0.00199
___ V	0.00554	50.01	3.637	0.00572	0.00532	0.00557
___ W	-0.00019	-0.17	671.644	0.00123	-0.00064	-0.00115
___ Y1	3648.66847	3,648.67	0.133	3645.92541	3654.28957	3645.79042
___ Y2A	150152.84307	150,152.84	0.328	150632.45116	150178.14685	149647.93121
___ Y2R	3373.80039	3,373.80	0.815	3376.04895	3400.10460	3345.24760
___ ZN	0.00552	22.93	3.627	0.00551	0.00572	0.00532
___ ZR	-0.00309	0.66	39.552	-0.00331	-0.00177	-0.00418

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 28

Date/Time: 05/19/2020 07:17

Sample Number: 1313727

Class: ****

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 1.00

Protocol Symbol: DU

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	0.00337	24.22	29.232	0.00253	0.00312	0.00445
___ AL	-0.00732	2.74	92.972	-0.01379	-0.00792	-0.00023
___ ALUM	0.00212	7.41	269.922	-0.00440	0.00441	0.00636
___ AS	0.03171	1.79	23.123	0.02335	0.03705	0.03473
___ B	6.91508	17,369.70	0.645	6.95498	6.86688	6.92339
___ BA	0.05278	13,816.69	0.590	0.05300	0.05242	0.05290
___ BE	-0.00014	-131.11	12.351	-0.00016	-0.00013	-0.00013
___ CA	697.58221	150,310.50	0.440	699.47305	694.03780	699.23577
___ CD	-0.00022	-0.95	221.112	0.00033	-0.00040	-0.00060
___ CO	0.03245	49.02	2.443	0.03154	0.03299	0.03281
___ CR	0.00267	13.09	56.434	0.00441	0.00190	0.00170
___ CU	0.01001	55.37	11.309	0.00977	0.00902	0.01124
___ FE	0.37232	24.24	1.406	0.36672	0.37709	0.37316
___ K	499.31475	77,926.11	0.448	498.84466	497.34797	501.75162
___ LI	0.38007	940.26	0.662	0.38249	0.37747	0.38025
___ MG	1752.12480	443,795.87	1.481	1742.78887	1732.14369	1781.44184
___ MN	19.67746	383,733.58	0.757	19.75030	19.50618	19.77589
___ MO	0.00031	1.06	618.009	0.00251	-0.00110	-0.00047
___ NA	5649.15955	2,531,635.28	2.418	5805.56719	5588.56492	5553.34653
___ NI	0.04060	31.26	1.606	0.04102	0.04093	0.03985
___ P	0.03054	2.58	50.868	0.04827	0.02405	0.01930
___ PB	0.00945	-3.08	29.882	0.01156	0.00624	0.01055
___ S	1539.72098	56,499.40	0.309	1538.45953	1544.97893	1535.72449
___ SB	-0.00873	-0.89	26.084	-0.00682	-0.00812	-0.01125
___ SE	-0.02068	-0.57	137.523	-0.02208	0.00843	-0.04839
___ SI	12.85990	543.37	0.358	12.90207	12.81077	12.86686
___ SN	0.00084	1.08	603.091	-0.00374	0.00623	0.00002
___ SR	10.27908	2,795,432.07	0.493	10.32845	10.22718	10.28161
___ TH	0.01304	-1.28	147.218	0.01255	0.03248	-0.00591
___ TI	-0.01026	-216.89	3.191	-0.00991	-0.01029	-0.01057
___ TL	-0.04998	-1.11	42.748	-0.03134	-0.07329	-0.04531
___ V	-0.00190	-11.00	51.415	-0.00187	-0.00094	-0.00289
___ W	0.00145	0.19	335.080	0.00435	0.00418	-0.00417
___ Y1	2282.28260	2,282.28	0.031	2283.10379	2281.85858	2281.88543
___ Y2A	91057.22295	91,057.22	0.917	90398.82735	91996.28244	90776.55906
___ Y2R	2702.25427	2,702.25	0.463	2702.23232	2714.78768	2689.74282
___ ZN	0.00459	13.21	24.188	0.00571	0.00349	0.00457
___ ZR	-0.00339	-0.07	151.662	-0.00395	-0.00824	0.00201

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 29

Date/Time: 05/19/2020 07:21

Sample Number: **1313727**

Class: ****

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 5.00

Protocol Symbol: DU

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS		
				#1	#2	#3
___ AG	0.00045	7.46	159.805	0.00122	0.00032	-0.00019
___ AL	0.05331	4.72	89.431	0.00423	0.09945	0.05627
___ ALUM	0.03482	51.07	6.056	0.03300	0.03433	0.03713
___ AS	-0.00144	-0.41	791.492	-0.01132	-0.00397	0.01099
___ B	1.28262	4,112.60	0.289	1.27835	1.28454	1.28497
___ BA	0.01067	3,688.00	0.373	0.01063	0.01071	0.01066
___ BE	-0.00013	-164.11	20.641	-0.00014	-0.00015	-0.00010
___ CA	137.94732	34,994.71	0.254	137.68082	138.34340	137.81774
___ CD	0.00017	0.31	139.728	0.00001	0.00005	0.00044
___ CO	0.00706	15.91	11.684	0.00775	0.00615	0.00730
___ CR	0.00058	6.52	96.762	0.00122	0.00018	0.00034
___ CU	0.00099	17.54	198.299	-0.00105	0.00288	0.00115
___ FE	0.09266	9.37	12.623	0.07998	0.10303	0.09496
___ K	91.02920	15,808.74	0.235	91.17931	91.12389	90.78439
___ LI	0.06174	181.49	4.791	0.06421	0.06256	0.05847
___ MG	401.27748	164,886.87	0.414	399.89648	403.12275	400.81322
___ MN	4.15994	103,265.02	0.090	4.16407	4.15907	4.15669
___ MO	-0.00010	1.16	1536.911	-0.00190	0.00088	0.00072
___ NA	2488.86854	1,240,348.42	1.020	2460.33958	2508.93884	2497.32719
___ NI	0.00747	8.47	22.158	0.00914	0.00583	0.00744
___ P	0.00424	1.11	66.100	0.00644	0.00109	0.00518
___ PB	-0.00075	-1.12	405.723	-0.00376	-0.00079	0.00231
___ S	312.55223	14,852.73	0.192	313.06057	311.88956	312.70656
___ SB	0.00545	0.51	196.166	0.01770	-0.00197	0.00062
___ SE	-0.00970	-0.23	98.448	0.00006	-0.01901	-0.01014
___ SI	2.46990	117.21	0.879	2.46703	2.44975	2.49290
___ SN	-0.00241	0.75	107.009	0.00039	-0.00294	-0.00468
___ SR	2.17341	752,289.59	0.100	2.17535	2.17106	2.17383
___ TH	0.06959	0.63	46.043	0.10659	0.05108	0.05110
___ TI	-0.00002	0.51	639.633	0.00003	0.00007	-0.00016
___ TL	-0.01891	-0.90	49.538	-0.00975	-0.02847	-0.01852
___ V	-0.00105	-7.48	77.113	-0.00133	-0.00168	-0.00014
___ W	0.00176	0.32	191.636	-0.00136	0.00533	0.00130
___ Y1	2955.65301	2,955.65	0.356	2963.94245	2959.19224	2943.82432
___ Y2A	115908.09051	115,908.09	0.107	115768.22397	116006.30734	115949.74021
___ Y2R	3005.34871	3,005.35	1.141	3043.69635	2977.69016	2994.65961
___ ZN	0.00226	10.87	2.957	0.00221	0.00222	0.00233
___ ZR	-0.00137	2.36	243.481	0.00150	-0.00059	-0.00501

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 30

Date/Time: 05/19/2020 07:24

Sample Number: **CCV**

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	0.50013	5,049.26	0.380	0.50042	0.49810	0.50187
___ AL	25.86229	713.79	0.631	25.80904	26.04547	25.73237
___ ALUM	25.74209	35,935.69	0.156	25.75629	25.69664	25.77334
___ AS	0.50436	49.88	2.033	0.50817	0.51217	0.49274
___ B	0.50063	2,079.46	0.563	0.50387	0.49874	0.49926
___ BA	0.51135	212,272.25	0.027	0.51138	0.51120	0.51146
___ BE	0.49157	153,288.35	0.158	0.49177	0.49071	0.49222
___ CA	26.09944	7,273.94	1.179	26.41487	26.08319	25.80026
___ CD	0.49966	2,592.48	0.199	0.50041	0.50004	0.49853
___ CO	0.50276	1,154.99	0.290	0.50314	0.50400	0.50115
___ CR	0.49464	3,026.36	0.226	0.49592	0.49413	0.49388
___ CU	0.50672	4,452.77	0.411	0.50912	0.50539	0.50565
___ FE	25.49540	1,735.33	1.176	25.19627	25.79604	25.49390
___ K	26.44157	4,992.20	0.551	26.57330	26.46632	26.28509
___ LI	0.51435	1,530.79	0.924	0.51009	0.51347	0.51948
___ MG	26.51747	12,862.59	4.303	27.82618	25.99603	25.73020
___ MN	0.50894	15,931.75	1.687	0.51864	0.50230	0.50588
___ MO	0.51095	318.09	0.306	0.51006	0.51275	0.51002
___ NA	37.35922	20,179.68	25.730	48.44282	32.33189	31.30295
___ NI	0.50277	595.83	0.137	0.50353	0.50217	0.50261
___ P	0.51124	53.50	1.171	0.50434	0.51508	0.51429
___ PB	0.50211	227.99	0.366	0.50415	0.50059	0.50160
___ S	25.29234	1,456.62	0.384	25.22900	25.24391	25.40412
___ SB	0.51195	73.28	0.932	0.50920	0.51746	0.50918
___ SE	0.50545	28.83	3.520	0.51881	0.48525	0.51229
___ SI	25.04207	1,276.48	1.333	24.76689	25.41359	24.94574
___ SN	0.49097	120.55	0.428	0.49065	0.49321	0.48904
___ SR	0.51136	222,124.03	0.190	0.51236	0.51041	0.51130
___ TH	0.57099	21.61	9.085	0.53965	0.54246	0.63087
___ TI	0.52040	17,650.41	0.562	0.52353	0.51775	0.51992
___ TL	0.51634	43.39	2.203	0.51793	0.50426	0.52684
___ V	0.51174	4,482.79	0.218	0.51172	0.51064	0.51287
___ W	0.49972	145.24	0.621	0.49950	0.50292	0.49672
___ Y1	3585.25647	3,585.26	0.117	3580.57194	3586.52635	3588.67113
___ Y2A	145525.98029	145,525.98	0.446	144977.50649	146241.51188	145358.92251
___ Y2R	3262.11825	3,262.12	0.354	3267.28963	3248.87725	3270.18789
___ ZN	0.50480	1,506.73	0.239	0.50489	0.50596	0.50355
___ ZR	0.49801	263.99	0.595	0.49748	0.50120	0.49535

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 31

Date/Time: 05/19/2020 07:27

Sample Number: CCB

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS		
				#1	#2	#3
___ AG	0.00016	6.75	138.179	-0.00010	0.00028	0.00031
___ AL	-0.00180	3.53	3270.566	-0.06790	0.01699	0.04550
___ ALUM	0.00258	14.95	562.120	-0.01339	0.00616	0.01498
___ AS	0.00404	0.05	99.476	0.00857	0.00089	0.00267
___ B	0.00416	35.43	22.054	0.00325	0.00415	0.00509
___ BA	0.00013	271.43	160.113	-0.00002	0.00005	0.00036
___ BE	0.00016	-118.06	131.522	0.00001	0.00007	0.00041
___ CA	0.00004	11.88	3604.007	-0.00200	-0.00537	0.00749
___ CD	0.00042	1.68	5.515	0.00044	0.00040	0.00043
___ CO	0.00026	3.86	90.483	0.00006	0.00051	0.00020
___ CR	-0.00030	2.93	214.543	-0.00101	0.00020	-0.00007
___ CU	0.00051	10.41	305.815	-0.00120	0.00087	0.00187
___ FE	-0.00281	3.68	84.331	-0.00373	-0.00012	-0.00457
___ K	0.30155	68.48	21.496	0.36899	0.29596	0.23971
___ LI	0.00234	22.02	124.213	-0.00030	0.00545	0.00186
___ MG	0.00302	5.13	102.275	-0.00038	0.00564	0.00379
___ MN	0.00065	16.89	55.699	0.00025	0.00097	0.00074
___ MO	-0.00191	0.29	32.094	-0.00149	-0.00261	-0.00163
___ NA	3.56839	1,908.78	2.038	3.62043	3.59943	3.48530
___ NI	-0.00012	1.40	427.627	-0.00057	-0.00023	0.00044
___ P	-0.00087	0.84	542.130	0.00431	-0.00204	-0.00486
___ PB	0.00100	1.44	210.608	0.00213	-0.00143	0.00230
___ S	0.07554	4.24	27.556	0.05753	0.07074	0.09833
___ SB	0.00140	0.04	296.546	0.00197	0.00525	-0.00301
___ SE	0.00069	0.31	996.130	0.00810	-0.00555	-0.00047
___ SI	0.00570	1.83	412.485	-0.02036	0.01217	0.02529
___ SN	-0.00333	0.69	11.076	-0.00341	-0.00365	-0.00293
___ SR	0.00037	133.04	85.038	0.00002	0.00063	0.00046
___ TH	0.03068	-0.87	105.997	0.06752	0.01853	0.00598
___ TI	0.00003	2.34	1375.528	-0.00027	-0.00009	0.00044
___ TL	0.00265	0.19	209.225	0.00465	-0.00361	0.00690
___ V	0.00043	3.71	27.439	0.00054	0.00045	0.00031
___ W	-0.00064	-0.32	336.449	0.00159	-0.00270	-0.00081
___ Y1	3640.31597	3,640.32	0.196	3646.76532	3632.65173	3641.53085
___ Y2A	150258.72873	150,258.73	0.177	150097.32196	150113.40232	150565.46191
___ Y2R	3285.79167	3,285.79	0.719	3312.95000	3270.10000	3274.32500
___ ZN	-0.00147	2.16	19.895	-0.00137	-0.00180	-0.00124
___ ZR	-0.00317	0.53	213.254	-0.01098	0.00047	0.00099

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 32

Date/Time: 05/19/2020 07:31

Sample Number: 1313723

Class: ****

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 1.00

Protocol Symbol: DU

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS		
				#1	#2	#3
___ AG	0.00760	51.93	3.757	0.00732	0.00759	0.00789
___ AL	4.41844	103.01	7.937	4.06400	4.42609	4.76523
___ ALUM	5.52904	4,922.80	4.398	5.30311	5.49761	5.78641
___ AS	0.01453	0.69	59.349	0.01000	0.00911	0.02447
___ B	6.34452	16,304.46	0.426	6.32647	6.33150	6.37560
___ BA	0.06158	16,458.70	2.743	0.05998	0.06142	0.06334
___ BE	0.00003	-98.78	152.554	0.00008	0.00003	-0.00001
___ CA	661.67903	143,340.73	1.063	654.37716	668.40488	662.25505
___ CD	0.00813	29.30	5.022	0.00766	0.00842	0.00829
___ CO	0.06640	102.06	1.295	0.06593	0.06740	0.06588
___ CR	0.02340	94.41	5.360	0.02203	0.02366	0.02450
___ CU	0.05621	304.67	1.754	0.05515	0.05710	0.05638
___ FE	6.43141	366.94	1.729	6.30841	6.46101	6.52480
___ K	459.23666	71,787.02	1.209	453.16791	464.05770	460.48436
___ LI	0.30930	768.80	2.440	0.31045	0.31621	0.30125
___ MG	1598.25726	426,642.13	2.013	1561.64164	1611.14397	1621.98616
___ MN	15.90003	317,002.08	0.213	15.93322	15.90123	15.86565
___ MO	0.00092	1.34	120.191	-0.00033	0.00132	0.00177
___ NA	5619.44788	2,522,890.20	1.427	5693.97536	5629.74377	5534.62450
___ NI	0.10719	83.58	2.468	0.10610	0.11020	0.10526
___ P	0.19238	13.57	2.406	0.19634	0.19349	0.18729
___ PB	0.02417	1.80	11.372	0.02734	0.02244	0.02272
___ S	1346.84543	50,956.69	0.333	1349.54052	1349.32022	1341.67557
___ SB	-0.01418	-1.40	46.936	-0.00745	-0.01433	-0.02076
___ SE	-0.02606	-0.79	53.888	-0.01965	-0.01637	-0.04217
___ SI	21.25149	898.43	2.426	20.65691	21.52472	21.57286
___ SN	0.00276	1.42	300.751	-0.00664	0.00587	0.00904
___ SR	9.22953	2,566,239.12	0.066	9.22802	9.22437	9.23619
___ TH	-0.01096	-1.84	356.090	0.01137	-0.05602	0.01177
___ TI	0.20117	4,364.11	5.389	0.19416	0.19569	0.21365
___ TL	-0.03894	-0.81	15.650	-0.03312	-0.03843	-0.04528
___ V	0.01972	112.87	4.632	0.02047	0.01870	0.01998
___ W	0.00121	0.28	276.366	0.00158	-0.00230	0.00433
___ Y1	2353.18011	2,353.18	0.190	2351.00309	2350.21472	2358.32250
___ Y2A	93085.07908	93,085.08	0.250	93353.67618	92964.16101	92937.40004
___ Y2R	2706.90723	2,706.91	1.632	2756.72847	2672.49801	2691.49521
___ ZN	0.05314	110.04	0.772	0.05338	0.05266	0.05337
___ ZR	-0.00090	0.38	428.178	-0.00517	0.00223	0.00026

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 33

Date/Time: 05/19/2020 07:34

Sample Number: 1313723

Class: ****

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 5.00

Protocol Symbol: DU

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	0.00031	6.61	56.399	0.00035	0.00012	0.00046
___ AL	0.46434	14.71	15.614	0.45212	0.54218	0.39873
___ ALUM	0.54309	607.53	0.592	0.54152	0.54096	0.54678
___ AS	0.00976	0.50	78.095	0.00140	0.01156	0.01633
___ B	1.20208	3,858.49	0.330	1.20040	1.19924	1.20660
___ BA	0.01071	3,705.42	0.391	0.01076	0.01068	0.01070
___ BE	-0.00013	-163.52	5.916	-0.00012	-0.00013	-0.00013
___ CA	130.92373	32,799.42	0.982	131.84955	129.45642	131.46524
___ CD	0.00224	9.60	31.143	0.00304	0.00184	0.00184
___ CO	0.01524	31.67	7.926	0.01647	0.01405	0.01518
___ CR	0.00305	18.53	14.761	0.00282	0.00275	0.00356
___ CU	0.00970	66.01	9.916	0.00862	0.01001	0.01047
___ FE	0.91426	60.22	1.962	0.93012	0.89480	0.91787
___ K	84.10885	14,415.41	0.861	84.72830	83.31316	84.28510
___ LI	0.05311	155.90	3.428	0.05495	0.05131	0.05306
___ MG	366.06662	149,659.23	0.928	368.36894	362.16479	367.66612
___ MN	3.35365	83,279.37	0.221	3.34868	3.35008	3.36218
___ MO	-0.00086	0.79	177.614	0.00032	-0.00031	-0.00260
___ NA	2281.77146	1,122,133.95	1.949	2315.69864	2231.42874	2298.18701
___ NI	0.02052	21.35	3.746	0.02135	0.01984	0.02035
___ P	0.03640	3.87	15.456	0.03131	0.04244	0.03544
___ PB	0.00761	2.08	52.436	0.00343	0.00803	0.01138
___ S	270.31235	12,948.61	0.465	269.03844	271.55142	270.34718
___ SB	0.00190	0.10	89.085	0.00378	0.00049	0.00143
___ SE	-0.02318	-0.86	11.955	-0.02636	-0.02126	-0.02192
___ SI	3.28272	153.28	0.891	3.31163	3.28340	3.25314
___ SN	0.00090	1.43	434.476	0.00456	0.00136	-0.00322
___ SR	1.98418	687,051.67	1.468	1.95311	2.01089	1.98852
___ TH	0.00140	-1.81	2350.857	0.03896	-0.02201	-0.01276
___ TI	0.01948	527.33	2.093	0.01945	0.01990	0.01909
___ TL	-0.00359	0.07	245.248	-0.01365	0.00013	0.00275
___ V	0.00157	10.80	50.485	0.00242	0.00145	0.00085
___ W	0.00103	0.15	185.115	-0.00116	0.00196	0.00229
___ Y1	2979.60773	2,979.61	2.489	3065.25102	2936.87419	2936.69798
___ Y2A	115945.93221	115,945.93	0.088	116057.53138	115858.87016	115921.39509
___ Y2R	2966.07114	2,966.07	1.577	2934.89739	3019.86424	2943.45179
___ ZN	0.00784	25.16	5.526	0.00831	0.00747	0.00773
___ ZR	-0.00070	0.81	709.677	-0.00049	-0.00579	0.00418

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 34

Date/Time: 05/19/2020 07:38

Sample Number: 1313729

Class: ****

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 1.00

Protocol Symbol: DU

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	-0.00073	-1.57	145.184	0.00049	-0.00144	-0.00124
___ AL	0.19084	7.86	32.048	0.12179	0.23819	0.21253
___ ALUM	0.18678	201.53	1.053	0.18625	0.18895	0.18513
___ AS	0.02563	1.73	20.790	0.02682	0.03026	0.01981
___ B	322.73639	972,042.94	0.398	321.40062	322.84733	323.96122
___ BA	0.04941	15,530.91	0.200	0.04930	0.04950	0.04943
___ BE	-0.00010	-147.42	21.406	-0.00011	-0.00011	-0.00008
___ CA	140.91434	34,901.02	0.577	141.78150	140.79155	140.16998
___ CD	0.00062	2.22	36.026	0.00088	0.00047	0.00052
___ CO	0.01443	28.02	3.106	0.01494	0.01410	0.01425
___ CR	0.00208	13.06	28.494	0.00276	0.00166	0.00183
___ CU	0.00512	34.49	15.921	0.00516	0.00428	0.00591
___ FE	0.30219	22.01	12.361	0.28154	0.34531	0.27971
___ K	218.08497	36,973.84	0.299	218.75312	218.05149	217.45031
___ LI	0.08378	235.63	1.801	0.08487	0.08441	0.08206
___ MG	475.59753	187,552.06	0.795	478.98163	476.29491	471.51605
___ MN	3.76880	88,175.48	0.163	3.76195	3.77383	3.77062
___ MO	0.00259	2.41	46.804	0.00291	0.00125	0.00361
___ NA	3994.84752	1,944,314.23	2.057	4078.17255	3992.45734	3913.91268
___ NI	0.02761	26.25	3.734	0.02732	0.02676	0.02876
___ P	0.09696	8.51	1.157	0.09717	0.09575	0.09796
___ PB	0.00574	1.43	83.871	0.00966	0.00720	0.00037
___ S	637.67299	28,779.26	0.207	637.82239	636.28279	638.91379
___ SB	-0.00706	-0.92	63.107	-0.00789	-0.00225	-0.01105
___ SE	-0.01726	-0.55	90.415	-0.03458	-0.00428	-0.01293
___ SI	15.96069	732.12	1.267	16.10441	16.04824	15.72940
___ SN	-0.00175	0.83	26.634	-0.00151	-0.00146	-0.00229
___ SR	2.45730	801,505.47	0.470	2.45552	2.46964	2.44674
___ TH	0.01285	-1.40	257.718	-0.00266	-0.00966	0.05089
___ TI	0.00540	138.53	6.043	0.00552	0.00503	0.00566
___ TL	0.03178	2.47	30.309	0.02076	0.03862	0.03595
___ V	0.00350	22.59	17.098	0.00405	0.00286	0.00358
___ W	0.00434	0.90	32.526	0.00558	0.00464	0.00280
___ Y1	2807.15190	2,807.15	0.025	2807.22278	2807.81484	2806.41807
___ Y2A	109242.58212	109,242.58	0.966	110461.57869	108627.81936	108638.34830
___ Y2R	2935.07836	2,935.08	0.760	2922.48952	2921.89679	2960.84877
___ ZN	0.00868	25.38	3.538	0.00876	0.00894	0.00834
___ ZR	-0.00042	1.25	1102.728	0.00307	0.00133	-0.00566

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 35

Date/Time: 05/19/2020 07:41

Sample Number: 1313732

Class: ****

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 1.00

Protocol Symbol: DU

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	0.00344	24.74	1.823	0.00347	0.00348	0.00336
___ AL	1.34591	32.80	11.733	1.52760	1.24171	1.26843
___ ALUM	1.48080	1,286.88	1.518	1.48510	1.50082	1.45648
___ AS	0.00234	-0.09	651.540	0.00018	-0.01170	0.01853
___ B	6.43464	16,069.80	0.016	6.43348	6.43550	6.43494
___ BA	0.10110	26,187.99	0.143	0.10100	0.10127	0.10103
___ BE	-0.00003	-107.72	205.994	-0.00004	0.00003	-0.00007
___ CA	692.08654	146,480.94	1.177	682.68816	697.15346	696.41799
___ CD	0.00088	3.50	46.136	0.00042	0.00103	0.00118
___ CO	0.02925	44.81	2.598	0.02911	0.02856	0.03007
___ CR	0.00716	30.12	13.927	0.00818	0.00618	0.00713
___ CU	0.01898	103.78	4.085	0.01894	0.01977	0.01822
___ FE	2.92829	165.58	1.562	2.98110	2.90169	2.90209
___ K	503.30225	77,111.05	1.348	495.46546	507.17150	507.26978
___ LI	0.34649	842.58	0.430	0.34478	0.34751	0.34717
___ MG	1676.65033	427,627.38	0.752	1662.65264	1687.11557	1680.18279
___ MN	19.92688	386,221.36	0.570	19.79995	20.01884	19.96184
___ MO	0.00035	1.08	501.549	0.00040	-0.00143	0.00208
___ NA	5323.80212	2,342,199.72	0.711	5354.84891	5334.90418	5281.65326
___ NI	0.03815	29.44	4.105	0.03815	0.03972	0.03659
___ P	0.09911	7.11	10.615	0.10475	0.10561	0.08697
___ PB	0.02111	0.35	32.349	0.01326	0.02572	0.02434
___ S	1509.71394	55,785.12	0.163	1511.43893	1510.81055	1506.89234
___ SB	-0.01388	-1.37	138.575	0.00737	-0.03010	-0.01891
___ SE	0.00239	0.26	239.849	0.00838	-0.00305	0.00185
___ SI	14.16775	587.55	0.786	14.03958	14.22363	14.24002
___ SN	0.00239	1.33	121.477	-0.00033	0.00545	0.00206
___ SR	9.83583	2,658,695.71	0.108	9.82932	9.84812	9.83004
___ TH	0.02456	-0.80	101.774	0.02146	0.00125	0.05095
___ TI	0.03922	827.64	0.748	0.03909	0.03902	0.03956
___ TL	-0.05646	-1.44	4.794	-0.05353	-0.05887	-0.05698
___ V	0.00665	36.81	29.927	0.00566	0.00894	0.00535
___ W	0.00655	1.21	80.754	0.00362	0.00337	0.01266
___ Y1	2298.22308	2,298.22	0.395	2289.62575	2297.31581	2307.72768
___ Y2A	90497.42766	90,497.43	0.672	91194.28072	90223.87725	90074.12500
___ Y2R	2652.84400	2,652.84	0.309	2662.15541	2646.75538	2649.62121
___ ZN	0.03434	70.05	0.632	0.03451	0.03410	0.03442
___ ZR	0.00279	2.69	147.469	-0.00188	0.00588	0.00436

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 36

Date/Time: 05/19/2020 07:45

Sample Number: **1313732**

Class: ****

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 5.00

Protocol Symbol: DU

ELEMENT	INTEGRATIONS			#1	#2	#3
	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD			
___ AG	0.00083	10.68	70.189	0.00043	0.00151	0.00057
___ AL	0.23337	8.89	2.413	0.23853	0.23422	0.22736
___ ALUM	0.21494	245.09	4.504	0.21292	0.22547	0.20642
___ AS	0.00975	0.50	72.859	0.00432	0.00714	0.01779
___ B	1.28046	4,068.92	0.350	1.27973	1.28525	1.27639
___ BA	0.01989	6,671.09	0.281	0.01992	0.01992	0.01982
___ BE	-0.00007	-148.06	106.490	-0.00011	0.00002	-0.00012
___ CA	135.13487	33,219.78	0.353	134.59375	135.31638	135.49448
___ CD	0.00040	1.43	120.368	0.00056	-0.00014	0.00077
___ CO	0.00616	14.09	17.539	0.00552	0.00555	0.00741
___ CR	0.00137	10.26	16.276	0.00158	0.00114	0.00138
___ CU	0.00358	29.62	35.046	0.00404	0.00455	0.00216
___ FE	0.48045	32.71	6.057	0.51402	0.46239	0.46494
___ K	90.82524	15,280.25	0.251	90.57174	91.01402	90.88994
___ LI	0.06170	175.64	4.712	0.06017	0.06505	0.05987
___ MG	373.86681	149,775.16	0.397	372.15298	374.76416	374.68330
___ MN	4.13932	101,807.89	0.324	4.12404	4.14913	4.14478
___ MO	0.00065	1.53	151.052	0.00021	-0.00004	0.00178
___ NA	2331.44397	1,125,664.79	0.459	2329.39404	2343.02694	2321.91093
___ NI	0.00712	8.01	9.588	0.00725	0.00773	0.00638
___ P	0.01844	2.29	24.256	0.01622	0.02359	0.01550
___ PB	0.00256	0.14	108.534	0.00279	0.00522	-0.00033
___ S	303.12043	14,252.99	0.474	304.53997	303.15608	301.66524
___ SB	-0.00563	-0.79	98.083	-0.00009	-0.01114	-0.00565
___ SE	-0.00500	-0.01	332.066	-0.01739	-0.01147	0.01386
___ SI	2.56196	117.73	0.752	2.56548	2.54117	2.57923
___ SN	-0.00479	0.27	77.537	-0.00457	-0.00119	-0.00861
___ SR	2.06129	706,935.51	1.054	2.04009	2.06030	2.08349
___ TH	0.03650	-0.55	40.967	0.02530	0.03072	0.05348
___ TI	0.00795	213.74	0.352	0.00798	0.00792	0.00795
___ TL	-0.00203	0.26	273.857	-0.00739	0.00372	-0.00244
___ V	-0.00043	-3.36	63.360	-0.00027	-0.00074	-0.00027
___ W	0.00068	0.07	62.042	0.00062	0.00112	0.00029
___ Y1	2924.56565	2,924.57	0.123	2920.41621	2926.37571	2926.90502
___ Y2A	114840.43000	114,840.43	0.266	115007.27962	115026.70024	114487.31015
___ Y2R	2911.44442	2,911.44	0.535	2927.58036	2896.46641	2910.28648
___ ZN	0.00529	18.18	11.635	0.00473	0.00518	0.00595
___ ZR	0.00053	2.26	367.428	-0.00171	0.00188	0.00142

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 37

Date/Time: 05/19/2020 07:48

Sample Number: 1313725

Class: ****

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 1.00

Protocol Symbol: DU

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	0.00360	25.03	9.339	0.00390	0.00324	0.00365
___ AL	0.28313	8.97	17.281	0.25266	0.25717	0.33957
___ ALUM	0.31746	275.15	1.641	0.32347	0.31448	0.31442
___ AS	0.00415	0.00	77.339	0.00270	0.00192	0.00784
___ B	6.90211	16,910.58	0.230	6.88634	6.91809	6.90190
___ BA	0.05956	15,177.25	0.329	0.05935	0.05975	0.05957
___ BE	-0.00001	-103.19	333.869	0.00000	-0.00006	0.00002
___ CA	750.69577	154,439.21	0.936	747.74209	758.72084	745.62439
___ CD	0.00060	4.27	36.250	0.00081	0.00038	0.00062
___ CO	0.00409	7.63	20.849	0.00487	0.00421	0.00318
___ CR	0.00266	12.74	51.861	0.00227	0.00152	0.00419
___ CU	0.01028	56.74	17.993	0.01210	0.01034	0.00840
___ FE	8.49544	463.45	1.209	8.42982	8.61385	8.44264
___ K	504.30754	75,564.84	0.843	502.63373	509.14082	501.14807
___ LI	0.34958	831.29	1.298	0.35259	0.35179	0.34436
___ MG	1804.59277	430,993.59	2.085	1785.54217	1847.93960	1780.29653
___ MN	21.41738	406,993.10	0.787	21.25816	21.59396	21.40003
___ MO	0.00188	1.64	77.059	0.00331	0.00193	0.00041
___ NA	5365.95110	2,308,856.24	2.000	5464.03617	5382.50525	5251.31188
___ NI	0.00577	4.49	35.998	0.00402	0.00523	0.00806
___ P	0.04315	3.34	23.090	0.03221	0.04553	0.05170
___ PB	0.01005	-3.60	39.640	0.00574	0.01361	0.01081
___ S	1546.90170	55,581.28	0.729	1557.13378	1548.76706	1534.80426
___ SB	-0.02934	-2.71	15.081	-0.02509	-0.02901	-0.03392
___ SE	0.00116	0.21	1390.396	-0.01735	0.01162	0.00920
___ SI	10.14363	411.75	0.870	10.06979	10.24136	10.11973
___ SN	0.00774	2.10	34.834	0.00486	0.00816	0.01021
___ SR	10.54988	2,795,888.59	0.863	10.44476	10.60559	10.59930
___ TH	0.02094	-0.70	108.378	0.04650	0.00312	0.01321
___ TI	-0.00226	-47.19	23.996	-0.00170	-0.00279	-0.00231
___ TL	-0.04769	-0.86	34.348	-0.05177	-0.06165	-0.02966
___ V	-0.00054	-2.59	156.769	-0.00107	0.00044	-0.00099
___ W	0.00435	0.72	91.132	0.00426	0.00043	0.00835
___ Y1	2234.80233	2,234.80	0.383	2227.39794	2232.84730	2244.16175
___ Y2A	88725.78177	88,725.78	0.530	89108.38323	88200.22455	88868.73752
___ Y2R	2594.49476	2,594.49	0.781	2612.76415	2572.71274	2598.00739
___ ZN	0.00965	25.05	7.651	0.00992	0.01022	0.00882
___ ZR	-0.00306	0.26	214.349	0.00413	-0.00459	-0.00870

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 38

Date/Time: 05/19/2020 07:52

Sample Number: 1313725

Class: ****

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 5.00

Protocol Symbol: DU

ELEMENT	INTEGRATIONS			#1	#2	#3
	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD			
___ AG	0.00139	14.56	65.550	0.00222	0.00154	0.00042
___ AL	0.00645	3.46	1273.346	-0.08690	0.06741	0.03884
___ ALUM	0.09233	112.85	76.833	0.17402	0.04633	0.05663
___ AS	0.00228	-0.11	322.715	0.00629	-0.00622	0.00678
___ B	1.61646	5,097.11	24.607	2.07567	1.37925	1.39447
___ BA	0.01243	4,194.36	3.993	0.01301	0.01216	0.01214
___ BE	0.00030	-55.73	173.756	0.00089	0.00001	-0.00002
___ CA	147.06909	36,410.16	0.342	146.52682	147.51866	147.16179
___ CD	0.00044	2.11	49.721	0.00021	0.00064	0.00048
___ CO	0.00151	5.31	5.288	0.00142	0.00154	0.00156
___ CR	0.00073	7.17	131.458	0.00176	0.00059	-0.00015
___ CU	0.00260	27.64	28.668	0.00303	0.00174	0.00304
___ FE	1.71637	108.86	1.354	1.74125	1.69524	1.71261
___ K	90.89641	15,419.73	0.374	90.93083	91.21769	90.54071
___ LI	0.05608	162.26	5.747	0.05954	0.05316	0.05555
___ MG	403.43726	161,851.41	0.353	402.15305	404.96901	403.18973
___ MN	4.51846	110,118.37	0.815	4.47887	4.55171	4.52481
___ MO	-0.00017	1.10	166.016	0.00015	-0.00029	-0.00036
___ NA	2427.01480	1,181,532.44	0.556	2429.52088	2412.44559	2439.07793
___ NI	0.00060	1.61	273.025	-0.00123	0.00196	0.00108
___ P	0.01353	1.85	55.139	0.02031	0.00554	0.01473
___ PB	0.00460	0.66	42.264	0.00640	0.00486	0.00254
___ S	311.46742	14,426.60	0.272	310.89051	311.07288	312.43888
___ SB	-0.00207	-0.37	659.983	0.00826	0.00308	-0.01755
___ SE	-0.01264	-0.36	41.624	-0.00694	-0.01367	-0.01732
___ SI	1.94200	90.32	1.312	1.93411	1.97049	1.92140
___ SN	-0.00062	1.08	657.234	0.00135	-0.00531	0.00210
___ SR	2.23803	760,509.20	1.218	2.20655	2.25367	2.25386
___ TH	0.06636	0.56	55.988	0.10898	0.04933	0.04078
___ TI	0.00258	69.44	60.270	0.00437	0.00154	0.00183
___ TL	-0.00749	-0.08	48.844	-0.01171	-0.00511	-0.00567
___ V	-0.00046	-2.96	349.018	0.00137	-0.00117	-0.00157
___ W	0.00356	0.72	75.854	0.00352	0.00629	0.00088
___ Y1	2880.82260	2,880.82	0.365	2882.45579	2869.59912	2890.41288
___ Y2A	113793.40586	113,793.41	1.005	115048.51119	113521.97363	112809.73275
___ Y2R	2935.63807	2,935.64	1.002	2959.45407	2944.71010	2902.75005
___ ZN	0.00121	8.90	35.182	0.00081	0.00166	0.00116
___ ZR	-0.00529	0.47	29.115	-0.00536	-0.00680	-0.00372

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 39

Date/Time: 05/19/2020 07:55

Sample Number: 1313997

Class: ****

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 1.00

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	0.00067	11.22	67.286	0.00120	0.00044	0.00038
___ AL	-0.08315	1.25	97.607	0.00846	-0.11184	-0.14605
___ ALUM	-0.00094	8.93	211.406	-0.00140	-0.00266	0.00124
___ AS	0.00862	0.48	55.095	0.00318	0.01196	0.01072
___ B	0.25853	997.43	0.965	0.25674	0.26138	0.25745
___ BA	0.08676	34,151.03	0.132	0.08664	0.08687	0.08677
___ BE	-0.00007	-175.32	59.268	-0.00007	-0.00010	-0.00003
___ CA	86.64663	23,347.34	0.665	87.16833	86.02882	86.74273
___ CD	0.00092	4.36	21.385	0.00077	0.00115	0.00085
___ CO	0.00086	4.87	63.980	0.00048	0.00149	0.00060
___ CR	0.00082	9.15	70.720	0.00143	0.00078	0.00027
___ CU	0.02095	175.24	6.371	0.02050	0.01991	0.02246
___ FE	0.63982	46.24	5.420	0.67749	0.60922	0.63276
___ K	4.98205	924.44	0.697	4.99900	4.94210	5.00504
___ LI	0.00294	23.04	5.468	0.00284	0.00286	0.00313
___ MG	15.03934	7,120.52	0.619	15.11378	15.06924	14.93499
___ MN	3.94208	116,010.64	0.172	3.93912	3.94986	3.93727
___ MO	0.00018	1.52	305.063	0.00079	0.00008	-0.00032
___ NA	255.10474	134,314.18	0.457	256.37414	254.08142	254.85866
___ NI	0.00093	2.34	77.440	0.00040	0.00175	0.00065
___ P	0.00716	1.58	53.750	0.00626	0.00384	0.01137
___ PB	0.00079	0.07	100.080	0.00084	0.00154	-0.00002
___ S	216.59985	11,932.80	0.138	216.59463	216.30424	216.90068
___ SB	0.00822	0.97	35.752	0.00857	0.01097	0.00512
___ SE	-0.00725	-0.14	46.931	-0.00356	-0.01027	-0.00791
___ SI	2.75842	138.13	1.297	2.74585	2.73064	2.79877
___ SN	-0.00414	0.46	68.889	-0.00144	-0.00713	-0.00385
___ SR	0.42732	175,985.01	0.262	0.42633	0.42854	0.42709
___ TH	0.02930	-0.87	52.407	0.02309	0.04678	0.01802
___ TI	0.00045	15.59	49.703	0.00020	0.00064	0.00051
___ TL	0.00061	0.49	189.804	0.00078	-0.00062	0.00167
___ V	0.00028	1.91	440.753	0.00117	-0.00112	0.00078
___ W	0.00036	0.04	987.699	-0.00151	-0.00185	0.00443
___ Y1	3426.45620	3,426.46	0.093	3427.92370	3428.66267	3422.78222
___ Y2A	137408.29409	137,408.29	0.250	137592.86568	137011.46125	137620.55533
___ Y2R	3175.65816	3,175.66	0.978	3155.01900	3211.39449	3160.56099
___ ZN	0.01724	54.70	1.577	0.01694	0.01730	0.01747
___ ZR	-0.00022	1.90	2606.084	0.00516	-0.00602	0.00022

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 40

Date/Time: 05/19/2020 07:58

Sample Number: **Z313989**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS		
				#1	#2	#3
___ AG	0.00024	7.14	314.117	-0.00008	-0.00029	0.00108
___ AL	0.07434	5.68	44.183	0.03762	0.08446	0.10092
___ ALUM	0.02071	41.54	19.728	0.01904	0.01773	0.02537
___ AS	0.01234	0.86	26.272	0.01605	0.01008	0.01088
___ B	0.16912	686.76	0.999	0.17106	0.16803	0.16825
___ BA	0.02417	10,104.12	0.217	0.02412	0.02423	0.02417
___ BE	-0.00005	-177.94	41.698	-0.00003	-0.00007	-0.00005
___ CA	25.05186	6,990.44	3.485	24.64875	24.45324	26.05359
___ CD	0.00022	0.67	76.133	0.00004	0.00025	0.00036
___ CO	0.00005	3.09	193.044	0.00014	-0.00006	0.00008
___ CR	-0.00030	2.79	150.122	0.00012	-0.00078	-0.00024
___ CU	0.00706	69.46	20.132	0.00603	0.00868	0.00646
___ FE	0.18072	16.20	14.384	0.17195	0.16024	0.20996
___ K	2.75750	531.60	22.610	2.41744	2.37798	3.47707
___ LI	0.00489	29.47	65.143	0.00341	0.00271	0.00854
___ MG	4.53691	2,223.77	72.080	2.67489	2.62295	8.31290
___ MN	1.05175	32,378.01	0.224	1.04920	1.05221	1.05383
___ MO	0.00421	4.02	9.415	0.00467	0.00393	0.00404
___ NA k	0.00000	84,687.87	0.000	158.21925	156.78722	154.54182
___ NI	0.00097	2.28	57.366	0.00100	0.00040	0.00151
___ P	0.48826	50.18	0.927	0.48412	0.48757	0.49309
___ PB	0.00332	2.21	53.936	0.00385	0.00132	0.00478
___ S	42.67043	2,419.40	0.770	42.37263	42.61583	43.02283
___ SB	0.00135	0.03	625.446	0.00088	-0.00683	0.00999
___ SE	-0.01025	-0.31	130.061	-0.01195	0.00385	-0.02265
___ SI	6.95498	355.66	1.667	7.02888	7.01470	6.82137
___ SN	-0.00408	0.49	105.204	-0.00869	-0.00021	-0.00333
___ SR	0.16999	73,111.48	0.663	0.17109	0.16884	0.17002
___ TH	0.05205	-0.02	80.620	0.09800	0.01578	0.04236
___ TI	0.00253	85.91	7.640	0.00233	0.00271	0.00254
___ TL	0.00352	0.41	74.482	0.00554	0.00446	0.00056
___ V	0.01707	148.96	2.574	0.01673	0.01692	0.01757
___ W	0.00002	-0.11	1496.506	0.00077	0.00003	-0.00074
___ Y1	3526.57734	3,526.58	0.179	3532.46175	3519.90301	3527.36726
___ Y2A	143755.28539	143,755.29	0.485	144553.38282	143260.84031	143451.63304
___ Y2R	3264.23859	3,264.24	0.873	3242.57820	3253.61200	3296.52556
___ ZN	0.00295	14.93	4.774	0.00292	0.00283	0.00310
___ ZR	-0.00091	2.28	392.752	-0.00067	-0.00461	0.00255

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 41

Date/Time: 05/19/2020 08:02

Sample Number: 1313995

Class: ****

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 1.00

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	0.00019	6.90	242.322	0.00071	-0.00011	-0.00004
___ AL	-0.10741	0.77	84.402	-0.20904	-0.03487	-0.07832
___ ALUM	-0.00615	8.17	69.770	-0.01003	-0.00154	-0.00688
___ AS	0.00471	0.11	92.092	0.00780	0.00659	-0.00025
___ B	0.18603	777.56	0.583	0.18553	0.18528	0.18727
___ BA	0.02879	12,347.06	0.184	0.02881	0.02882	0.02872
___ BE	-0.00004	-180.14	35.868	-0.00005	-0.00004	-0.00002
___ CA	43.25538	11,933.20	0.114	43.28197	43.28549	43.19869
___ CD	0.00032	1.35	45.290	0.00015	0.00039	0.00041
___ CO	0.00063	4.51	21.472	0.00063	0.00049	0.00076
___ CR	-0.00043	2.08	51.291	-0.00035	-0.00067	-0.00025
___ CU	0.00266	38.36	19.997	0.00205	0.00299	0.00295
___ FE	0.46497	35.29	5.494	0.49439	0.45209	0.44843
___ K	2.82352	538.67	1.521	2.78345	2.86887	2.81825
___ LI	-0.00058	13.19	722.279	0.00319	-0.00504	0.00013
___ MG	5.35136	2,589.36	0.416	5.34639	5.37569	5.33201
___ MN	0.96238	30,499.82	0.219	0.96002	0.96406	0.96306
___ MO	0.00279	3.19	18.858	0.00311	0.00218	0.00308
___ NA	21.07968	11,276.92	1.328	21.06337	21.36747	20.80821
___ NI	-0.00006	1.21	1051.312	-0.00082	0.00039	0.00024
___ P	0.00557	1.48	73.591	0.01020	0.00407	0.00243
___ PB	0.00177	1.18	70.959	0.00180	0.00050	0.00300
___ S	5.39506	309.85	0.466	5.36654	5.41405	5.40459
___ SB	0.00441	0.46	51.319	0.00570	0.00180	0.00573
___ SE	-0.00572	-0.06	151.037	-0.01096	-0.01044	0.00425
___ SI	4.01773	204.33	0.470	3.99750	4.03488	4.02080
___ SN	-0.00579	0.08	31.714	-0.00427	-0.00527	-0.00784
___ SR	0.16261	72,228.50	0.128	0.16257	0.16283	0.16242
___ TH	0.07624	0.95	37.829	0.10682	0.04954	0.07235
___ TI	0.00062	22.50	23.031	0.00074	0.00065	0.00046
___ TL	0.00246	0.30	78.671	0.00435	0.00253	0.00049
___ V	-0.00024	-2.56	214.817	-0.00078	0.00024	-0.00017
___ W	0.00060	0.07	257.855	-0.00104	0.00081	0.00203
___ Y1	3571.04956	3,571.05	0.009	3571.13789	3571.31287	3570.69793
___ Y2A	147990.53217	147,990.53	0.344	148546.90614	147878.34598	147546.34439
___ Y2R	3235.91600	3,235.92	0.286	3227.91185	3233.79768	3246.03847
___ ZN	0.00739	28.18	2.210	0.00735	0.00725	0.00757
___ ZR	-0.00111	2.84	455.732	-0.00613	0.00401	-0.00121

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 42

Date/Time: 05/19/2020 08:05

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS		
				#1	#2	#3
___ AG	0.49718	4,936.47	0.435	0.49859	0.49826	0.49469
___ AL	25.34188	685.65	0.488	25.41948	25.19940	25.40677
___ ALUM	25.57030	35,102.28	0.483	25.62962	25.65308	25.42820
___ AS	0.51221	49.46	0.815	0.51681	0.51113	0.50867
___ B	0.55361	2,251.32	0.276	0.55486	0.55404	0.55191
___ BA	0.51070	208,490.75	0.505	0.51300	0.51119	0.50792
___ BE	0.49320	151,248.66	0.605	0.49580	0.49385	0.48995
___ CA	25.53183	6,975.62	0.412	25.58473	25.60004	25.41072
___ CD	0.50346	2,549.30	0.134	0.50269	0.50395	0.50374
___ CO	0.50371	1,129.53	0.420	0.50507	0.50479	0.50127
___ CR	0.49545	2,981.03	0.607	0.49644	0.49783	0.49207
___ CU	0.50585	4,368.13	0.190	0.50640	0.50640	0.50474
___ FE	24.72061	1,649.71	0.845	24.96008	24.57583	24.62593
___ K	26.02963	4,817.38	0.387	26.00281	26.14110	25.94498
___ LI	0.50918	1,485.57	0.230	0.50997	0.50973	0.50783
___ MG	25.30324	12,033.86	0.216	25.33406	25.33556	25.24008
___ MN	0.50616	15,580.85	0.368	0.50506	0.50510	0.50831
___ MO	0.51198	311.11	0.200	0.51171	0.51111	0.51311
___ NA	29.62289	15,673.73	0.661	29.70374	29.76543	29.39949
___ NI	0.50646	585.99	0.175	0.50545	0.50711	0.50683
___ P	0.50650	51.75	0.994	0.50829	0.50082	0.51041
___ PB	0.50773	224.98	0.666	0.50933	0.50384	0.51000
___ S	25.12343	1,412.28	0.266	25.16570	25.15815	25.04646
___ SB	0.50912	71.12	1.111	0.50595	0.50576	0.51565
___ SE	0.48924	27.26	2.858	0.48781	0.47603	0.50389
___ SI	23.84142	1,191.38	0.436	23.88037	23.92019	23.72370
___ SN	0.49349	118.26	0.798	0.48949	0.49736	0.49362
___ SR	0.51113	218,337.62	0.497	0.51109	0.50860	0.51368
___ TH	0.55376	20.48	9.944	0.60426	0.56198	0.49505
___ TI	0.51912	17,315.36	0.414	0.52027	0.52044	0.51664
___ TL	0.51308	42.08	1.382	0.51959	0.51414	0.50553
___ V	0.51421	4,429.56	0.391	0.51587	0.51477	0.51197
___ W	0.50954	144.52	0.553	0.50731	0.51271	0.50860
___ Y1	3499.55504	3,499.56	0.221	3507.27427	3491.83082	3499.56004
___ Y2A	143113.81641	143,113.82	0.109	142941.87325	143151.22500	143248.35099
___ Y2R	3197.60685	3,197.61	0.407	3194.09209	3186.71548	3212.01299
___ ZN	0.50664	1,475.54	0.442	0.50637	0.50900	0.50455
___ ZR	0.49715	257.87	1.634	0.49260	0.49232	0.50653

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 43

Date/Time: 05/19/2020 08:08

Sample Number: CCB

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	-0.00009	4.17	467.564	-0.00041	-0.00026	0.00040
___ AL	-0.03388	2.60	297.527	-0.14377	0.05429	-0.01216
___ ALUM	-0.00563	3.41	116.056	0.00173	-0.00789	-0.01074
___ AS	0.00382	0.03	10.634	0.00425	0.00375	0.00345
___ B	0.05698	247.29	0.952	0.05735	0.05636	0.05723
___ BA	0.00001	215.28	715.476	-0.00002	0.00008	-0.00004
___ BE	0.00008	-141.62	108.184	0.00001	0.00017	0.00005
___ CA	0.03412	20.88	188.696	-0.00379	0.10845	-0.00230
___ CD	0.00017	0.35	153.635	0.00018	0.00042	-0.00010
___ CO	-0.00018	2.79	354.305	0.00001	0.00034	-0.00089
___ CR	0.00035	6.83	183.948	-0.00020	0.00018	0.00107
___ CU	0.00025	8.36	875.282	0.00247	0.00016	-0.00189
___ FE	0.01050	4.47	307.775	-0.00562	0.04771	-0.01059
___ K	0.14549	37.65	24.184	0.10534	0.17097	0.16016
___ LI	0.00662	33.68	9.499	0.00600	0.00726	0.00660
___ MG	0.02918	17.55	154.751	0.00358	0.08132	0.00264
___ MN	0.00023	3.06	100.333	0.00001	0.00046	0.00021
___ MO	-0.00067	1.05	75.436	-0.00111	-0.00012	-0.00079
___ NA	3.36401	1,741.53	3.697	3.38609	3.47586	3.23007
___ NI	-0.00052	0.90	98.926	-0.00074	0.00007	-0.00089
___ P	-0.00089	0.83	603.322	-0.00350	0.00528	-0.00445
___ PB	0.00063	1.24	194.247	0.00204	-0.00012	-0.00004
___ S	0.02300	1.14	47.257	0.01352	0.02061	0.03486
___ SB	0.00133	0.03	404.437	0.00268	-0.00458	0.00587
___ SE	0.00595	0.60	74.136	0.00086	0.00865	0.00835
___ SI	0.03950	3.46	36.550	0.03095	0.05617	0.03139
___ SN	-0.00231	0.93	109.947	-0.00465	-0.00267	0.00039
___ SR	0.00008	0.54	126.024	0.00002	0.00019	0.00003
___ TH	0.03323	-0.73	306.310	-0.07163	0.03970	0.13163
___ TI	0.00001	1.56	1765.934	0.00012	-0.00010	0.00000
___ TL	-0.00223	-0.22	102.792	0.00041	-0.00343	-0.00367
___ V	0.00013	0.77	328.960	0.00009	0.00058	-0.00028
___ W	0.00173	0.36	150.393	0.00010	0.00473	0.00036
___ Y1	3578.39549	3,578.40	0.198	3570.34797	3583.75662	3581.08189
___ Y2A	146193.59680	146,193.60	0.386	146829.64293	145752.54440	145998.60307
___ Y2R	3183.54167	3,183.54	0.943	3153.87500	3213.90000	3182.85000
___ ZN	-0.00132	2.56	29.341	-0.00150	-0.00087	-0.00158
___ ZR	-0.00070	1.80	731.875	0.00323	0.00116	-0.00649

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 44

Date/Time: 05/19/2020 08:11

Sample Number: **1314001**

Class: ****

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 1.00

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	-0.00042	1.07	41.656	-0.00061	-0.00038	-0.00026
___ AL	0.01284	3.77	877.315	-0.09512	0.00405	0.12957
___ ALUM	-0.00240	5.55	165.801	-0.00659	0.00132	-0.00192
___ AS	0.00217	-0.14	173.443	0.00356	-0.00209	0.00504
___ B	0.05085	227.32	2.357	0.04980	0.05215	0.05058
___ BA	0.00012	265.86	16.909	0.00009	0.00013	0.00013
___ BE	-0.00001	-173.55	11.336	-0.00001	-0.00001	-0.00001
___ CA	0.09995	38.80	9.466	0.08952	0.10799	0.10235
___ CD	0.00019	0.44	83.446	0.00036	0.00006	0.00014
___ CO	-0.00007	3.09	731.715	-0.00062	0.00022	0.00021
___ CR	-0.00004	4.52	974.674	-0.00014	0.00040	-0.00038
___ CU	0.00089	10.03	125.889	0.00066	-0.00010	0.00211
___ FE	-0.01558	2.72	223.133	0.00661	-0.05564	0.00229
___ K	0.07220	24.15	82.368	0.13681	0.01976	0.06002
___ LI	0.00171	19.55	100.578	0.00111	0.00037	0.00364
___ MG	0.00691	6.83	67.785	0.01092	0.00176	0.00803
___ MN	0.00021	2.94	65.812	0.00025	0.00033	0.00006
___ MO	-0.00120	0.74	100.389	-0.00259	-0.00060	-0.00042
___ NA	1.86795	952.22	1.878	1.89984	1.83037	1.87365
___ NI	0.00017	1.74	265.514	0.00068	-0.00003	-0.00015
___ P	0.00505	1.46	80.114	0.00729	0.00749	0.00038
___ PB	0.00078	1.34	446.774	-0.00077	-0.00166	0.00477
___ S	0.01475	0.69	92.437	0.02271	0.02253	-0.00099
___ SB	0.00180	0.10	391.888	0.00016	0.00955	-0.00430
___ SE	-0.00516	-0.03	139.796	0.00216	-0.01226	-0.00538
___ SI	0.30069	16.43	7.793	0.29843	0.27847	0.32517
___ SN	-0.00431	0.45	31.283	-0.00517	-0.00275	-0.00499
___ SR	0.00017	41.76	4.663	0.00018	0.00016	0.00017
___ TH	0.01289	-1.53	41.261	0.01763	0.01392	0.00714
___ TI	0.00007	3.94	90.395	0.00005	0.00015	0.00002
___ TL	-0.00179	-0.18	402.306	0.00617	-0.00363	-0.00792
___ V	-0.00070	-6.96	86.852	-0.00131	-0.00071	-0.00009
___ W	-0.00223	-0.79	24.109	-0.00258	-0.00161	-0.00249
___ Y1	3633.56831	3,633.57	0.464	3652.19478	3629.20208	3619.30807
___ Y2A	149290.88173	149,290.88	0.521	149974.43691	149454.72677	148443.48152
___ Y2R	3185.95000	3,185.95	0.290	3186.50000	3194.90000	3176.45000
___ ZN	-0.00167	1.56	12.283	-0.00144	-0.00183	-0.00174
___ ZR	0.00025	1.68	2835.527	0.00828	-0.00329	-0.00425

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 45

Date/Time: 05/19/2020 08:14

Sample Number: **1313991**

Class: ****

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 1.00

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS		
				#1	#2	#3
___ AG	0.00014	5.55	668.602	0.00037	0.00095	-0.00090
___ AL	-0.00947	3.33	68.294	-0.00453	-0.00709	-0.01680
___ ALUM	-0.00679	8.35	52.197	-0.00707	-0.01019	-0.00312
___ AS	0.00609	0.22	85.978	0.00148	0.01179	0.00500
___ B	0.14509	572.86	1.006	0.14668	0.14476	0.14382
___ BA	0.06534	25,771.16	0.127	0.06525	0.06537	0.06540
___ BE	-0.00009	-183.24	23.576	-0.00010	-0.00011	-0.00007
___ CA	125.32412	32,965.22	0.233	125.19108	125.65944	125.12186
___ CD	0.00065	3.77	32.652	0.00081	0.00041	0.00074
___ CO	0.00502	13.73	4.257	0.00478	0.00519	0.00509
___ CR	0.00086	9.35	124.436	0.00059	-0.00005	0.00205
___ CU	0.00137	28.00	170.351	0.00337	-0.00119	0.00191
___ FE	2.31731	154.50	1.898	2.32136	2.35911	2.27144
___ K	7.18760	1,302.39	1.086	7.11492	7.27009	7.17778
___ LI	0.00446	26.85	31.989	0.00463	0.00295	0.00579
___ MG	55.60693	25,568.65	0.278	55.53199	55.78473	55.50405
___ MN	5.18659	152,661.58	0.099	5.19049	5.18081	5.18849
___ MO	0.00042	1.63	272.351	0.00172	-0.00035	-0.00012
___ NA	212.59389	109,692.30	0.406	212.45013	213.51947	211.81207
___ NI	0.00335	4.83	15.081	0.00282	0.00340	0.00382
___ P	-0.00047	0.81	1393.586	-0.00793	0.00245	0.00408
___ PB	0.00182	-0.09	86.538	0.00002	0.00296	0.00246
___ S	188.21376	10,205.96	0.322	187.75961	187.98025	188.90143
___ SB	-0.00551	-0.89	52.574	-0.00424	-0.00883	-0.00347
___ SE	-0.00135	0.18	537.063	-0.00545	0.00703	-0.00564
___ SI	3.69969	181.08	0.945	3.66460	3.73451	3.69995
___ SN	-0.00115	1.14	224.884	-0.00242	-0.00285	0.00182
___ SR	0.56430	232,565.99	0.662	0.56854	0.56289	0.56147
___ TH	0.09072	1.53	75.685	0.03025	0.16537	0.07654
___ TI	0.00019	6.88	108.144	0.00031	0.00031	-0.00005
___ TL	-0.01342	-0.48	3.620	-0.01341	-0.01390	-0.01293
___ V	-0.00051	-3.84	65.666	-0.00012	-0.00071	-0.00069
___ W	-0.00034	-0.11	197.538	-0.00009	0.00017	-0.00110
___ Y1	3372.45591	3,372.46	0.319	3380.69079	3376.39721	3360.27972
___ Y2A	137427.72514	137,427.73	0.388	137462.44507	137942.38437	136878.34598
___ Y2R	3112.21352	3,112.21	0.199	3117.59721	3105.42740	3113.61594
___ ZN	0.02870	86.33	0.444	0.02876	0.02877	0.02855
___ ZR	-0.00654	0.57	49.857	-0.00804	-0.00878	-0.00280

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 46

Date/Time: 05/19/2020 08:17

Sample Number: **1313406**

Class: ****

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 1.00

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	0.00379	35.34	5.881	0.00356	0.00381	0.00400
___ AL	0.06649	5.14	76.798	0.12279	0.05352	0.02317
___ ALUM	0.00055	13.02	403.140	0.00065	-0.00171	0.00269
___ AS	0.00453	0.07	105.879	0.00974	0.00359	0.00028
___ B	0.14065	476.43	0.659	0.14127	0.14109	0.13958
___ BA	0.02403	8,343.29	0.200	0.02408	0.02399	0.02401
___ BE	-0.00016	-175.84	2.517	-0.00016	-0.00016	-0.00016
___ CA	209.64119	53,696.44	0.254	209.84198	210.04502	209.03656
___ CD	0.00070	2.87	32.722	0.00068	0.00048	0.00093
___ CO	0.00545	12.92	13.925	0.00466	0.00553	0.00617
___ CR	0.04982	253.48	2.966	0.04994	0.04829	0.05123
___ CU	0.00574	50.83	18.034	0.00677	0.00470	0.00573
___ FE	0.63792	44.40	4.203	0.61700	0.62861	0.66815
___ K	7.84160	1,394.44	1.482	7.75240	7.79943	7.97298
___ LI	0.01131	45.26	22.267	0.01007	0.01421	0.00965
___ MG	84.69175	38,001.04	0.035	84.72556	84.67491	84.67477
___ MN	20.21451	516,851.08	0.192	20.17247	20.24876	20.22230
___ MO	0.00032	1.41	214.432	0.00032	0.00099	-0.00036
___ NA	2174.12715	1,101,918.66	0.529	2172.83043	2186.21828	2163.33275
___ NI	0.01210	12.83	7.962	0.01316	0.01127	0.01188
___ P	-0.00230	0.58	285.109	-0.00986	0.00093	0.00202
___ PB	0.00865	1.73	61.198	0.00387	0.01434	0.00774
___ S	1468.67030	71,709.14	0.339	1467.30060	1464.52275	1474.18755
___ SB	-0.00461	-0.59	57.359	-0.00157	-0.00589	-0.00637
___ SE	0.00393	0.41	274.291	-0.00806	0.00705	0.01279
___ SI	14.28322	682.41	0.421	14.28073	14.34449	14.22443
___ SN	-0.00249	0.75	102.508	0.00004	-0.00245	-0.00507
___ SR	0.62814	225,564.47	0.153	0.62771	0.62746	0.62924
___ TH	0.06536	0.50	5.492	0.06131	0.06814	0.06664
___ TI	-0.00030	-6.83	39.360	-0.00017	-0.00039	-0.00032
___ TL	-0.05921	-2.07	22.786	-0.04573	-0.07271	-0.05918
___ V	0.00228	16.53	15.656	0.00205	0.00210	0.00269
___ W	0.00178	0.61	150.915	-0.00005	0.00053	0.00486
___ Y1	3036.81449	3,036.81	0.266	3038.41847	3043.97464	3028.05036
___ Y2A	119381.62415	119,381.62	0.303	119678.99940	119487.36795	118978.50509
___ Y2R	3056.27538	3,056.28	0.503	3066.27048	3038.55746	3063.99820
___ ZN	0.09032	229.41	0.430	0.09066	0.08990	0.09040
___ ZR	0.00152	3.61	96.415	0.00019	0.00309	0.00128

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 47

Date/Time: 05/19/2020 08:21

Sample Number: **1313406**

Class: ****

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 5.00

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	0.00032	7.61	109.802	0.00038	-0.00006	0.00063
___ AL	-0.04212	2.23	45.622	-0.06006	-0.02184	-0.04446
___ ALUM	-0.00077	7.26	915.016	0.00680	-0.00192	-0.00719
___ AS	0.00483	0.12	184.295	-0.00519	0.00785	0.01181
___ B	0.06727	265.63	0.589	0.06683	0.06760	0.06737
___ BA	0.00478	2,025.00	0.860	0.00480	0.00473	0.00480
___ BE	-0.00007	-173.03	16.290	-0.00006	-0.00008	-0.00007
___ CA	41.16386	10,776.46	0.060	41.16665	41.18716	41.13777
___ CD	0.00041	1.53	66.668	0.00070	0.00016	0.00036
___ CO	0.00130	5.71	35.507	0.00106	0.00183	0.00101
___ CR	0.00937	57.20	7.331	0.00917	0.00880	0.01013
___ CU	0.00133	12.70	97.827	0.00205	0.00211	-0.00017
___ FE	0.13788	12.48	14.326	0.11638	0.15523	0.14204
___ K	1.55104	285.47	4.240	1.47735	1.60378	1.57198
___ LI	0.00695	33.41	26.084	0.00702	0.00511	0.00873
___ MG	16.63880	7,612.43	0.399	16.60338	16.71541	16.59761
___ MN	4.11015	118,424.98	0.702	4.08733	4.10055	4.14256
___ MO	0.00112	2.03	45.618	0.00157	0.00124	0.00056
___ NA	470.19153	239,347.82	0.102	470.10400	470.70680	469.76380
___ NI	0.00288	4.49	18.376	0.00347	0.00272	0.00245
___ P	0.00163	1.02	214.870	-0.00229	0.00443	0.00273
___ PB	0.00043	0.57	518.077	-0.00211	0.00193	0.00146
___ S	312.21203	16,848.39	0.130	312.55055	312.32295	311.76258
___ SB	0.00092	-0.01	634.225	0.00555	-0.00561	0.00281
___ SE	-0.00615	-0.08	111.491	-0.00565	-0.01325	0.00044
___ SI	2.76750	133.97	0.195	2.77308	2.76712	2.76232
___ SN	-0.00342	0.62	175.733	-0.00737	0.00350	-0.00640
___ SR	0.12496	50,538.07	0.580	0.12447	0.12462	0.12579
___ TH	0.01395	-1.43	428.299	-0.04425	0.01094	0.07516
___ TI	0.00056	19.00	11.059	0.00061	0.00059	0.00049
___ TL	-0.00763	-0.15	88.732	-0.01378	-0.00037	-0.00874
___ V	0.00072	5.13	64.764	0.00081	0.00022	0.00114
___ W	-0.00007	-0.08	1543.262	0.00090	-0.00129	0.00018
___ Y1	3356.44144	3,356.44	0.058	3356.85609	3354.30639	3358.16184
___ Y2A	134536.71932	134,536.72	0.582	135340.50949	134493.20136	133776.44711
___ Y2R	3069.89485	3,069.89	0.339	3058.41633	3072.50349	3078.76473
___ ZN	0.01628	50.63	2.045	0.01614	0.01665	0.01603
___ ZR	-0.00180	0.70	327.525	0.00330	-0.00045	-0.00823

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 48

Date/Time: 05/19/2020 08:24

Sample Number: 1313406

Class: ****

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 10.00

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS		
				#1	#2	#3
___ AG	-0.00018	3.31	514.173	0.00089	-0.00083	-0.00060
___ AL	-0.03751	2.28	215.529	-0.03512	0.04211	-0.11951
___ ALUM	0.00326	8.31	54.406	0.00160	0.00513	0.00306
___ AS	0.00228	-0.12	295.994	-0.00187	-0.00136	0.01006
___ B	0.05666	232.04	2.475	0.05812	0.05533	0.05652
___ BA	0.00273	1,270.77	2.334	0.00279	0.00273	0.00266
___ BE	-0.00005	-169.87	5.858	-0.00005	-0.00004	-0.00005
___ CA	20.95110	5,608.84	0.196	20.90654	20.98733	20.95944
___ CD	0.00025	0.79	110.617	0.00004	0.00056	0.00015
___ CO	0.00075	4.67	48.811	0.00090	0.00033	0.00101
___ CR	0.00466	31.40	8.433	0.00480	0.00422	0.00497
___ CU	0.00163	8.29	73.147	0.00028	0.00208	0.00252
___ FE	0.12045	11.58	73.029	0.06483	0.07466	0.22186
___ K	0.74514	145.36	8.319	0.68335	0.74475	0.80732
___ LI	0.00378	25.09	74.043	0.00326	0.00128	0.00681
___ MG	8.53597	3,990.23	1.576	8.42642	8.49532	8.68616
___ MN	2.09695	61,903.04	0.441	2.10523	2.09867	2.08696
___ MO	-0.00126	0.66	58.738	-0.00197	-0.00132	-0.00049
___ NA	242.58227	125,883.45	0.133	242.29745	242.93374	242.51561
___ NI	0.00068	2.16	145.879	0.00181	0.00031	-0.00007
___ P	0.00608	1.48	40.265	0.00865	0.00379	0.00578
___ PB	0.00137	1.24	260.114	-0.00072	0.00546	-0.00065
___ S	159.65918	8,797.35	0.075	159.63700	159.78794	159.55261
___ SB	-0.00469	-0.78	188.522	-0.00107	-0.01477	0.00177
___ SE	0.00464	0.50	335.015	-0.00359	0.02255	-0.00505
___ SI	1.43933	71.74	4.630	1.45309	1.36687	1.49801
___ SN	-0.00193	0.97	223.952	-0.00179	0.00232	-0.00631
___ SR	0.06415	26,564.11	0.331	0.06433	0.06420	0.06392
___ TH	-0.02383	-2.89	261.216	0.04725	-0.05006	-0.06869
___ TI	0.00045	15.70	21.232	0.00055	0.00043	0.00037
___ TL	0.00244	0.41	144.896	0.00626	0.00178	-0.00072
___ V	0.00026	1.33	53.775	0.00011	0.00027	0.00039
___ W	0.00022	-0.04	767.128	0.00127	0.00106	-0.00168
___ Y1	3427.14627	3,427.15	0.140	3430.97473	3421.74651	3428.71756
___ Y2A	137840.28139	137,840.28	0.220	137506.54346	137916.09178	138098.20894
___ Y2R	3129.93762	3,129.94	0.135	3134.67500	3126.54506	3128.59281
___ ZN	0.00800	28.55	5.344	0.00775	0.00775	0.00849
___ ZR	-0.00013	0.47	2177.064	-0.00228	-0.00106	0.00296

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 49

Date/Time: 05/19/2020 08:27

Sample Number: 1313402

Class: ****

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 1.00

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	0.00051	9.61	106.194	0.00112	0.00028	0.00012
___ AL	-0.08678	1.28	90.909	-0.10682	-0.15370	0.00020
___ ALUM	-0.00485	8.38	53.634	-0.00306	-0.00365	-0.00783
___ AS	0.03580	3.13	16.293	0.04101	0.03690	0.02950
___ B	0.27928	1,147.42	0.453	0.27852	0.27859	0.28074
___ BA	0.05894	24,473.40	0.801	0.05943	0.05848	0.05892
___ BE	-0.00007	-184.64	34.381	-0.00009	-0.00005	-0.00006
___ CA	48.62260	13,309.30	0.424	48.81284	48.40393	48.65103
___ CD	0.00071	5.87	95.625	0.00031	0.00032	0.00149
___ CO	0.00032	3.65	235.938	0.00015	-0.00033	0.00113
___ CR	-0.00014	3.79	344.110	0.00001	0.00024	-0.00067
___ CU	-0.00034	10.29	242.585	-0.00110	-0.00043	0.00052
___ FE	5.62666	381.61	0.492	5.62019	5.65700	5.60278
___ K	8.47498	1,583.30	0.865	8.50670	8.39117	8.52705
___ LI	0.00552	30.79	33.399	0.00727	0.00359	0.00570
___ MG	17.07842	8,176.18	0.345	17.09636	17.01264	17.12625
___ MN	2.76110	85,494.98	0.672	2.77995	2.74283	2.76052
___ MO	-0.00073	1.00	187.497	0.00057	-0.00217	-0.00060
___ NA	57.81963	30,771.18	0.209	57.95306	57.71739	57.78844
___ NI	0.00046	1.20	372.235	-0.00043	-0.00061	0.00242
___ P	0.68922	70.56	1.085	0.69315	0.69392	0.68060
___ PB	0.00677	3.14	15.015	0.00791	0.00597	0.00642
___ S	2.08843	119.76	119.054	0.68310	0.62296	4.95924
___ SB	-0.00208	-0.45	130.121	-0.00468	-0.00226	0.00071
___ SE	-0.00116	0.19	399.010	0.00170	0.00132	-0.00649
___ SI	8.14994	409.95	0.801	8.21010	8.15918	8.08054
___ SN	-0.00497	0.28	40.276	-0.00727	-0.00395	-0.00368
___ SR	0.27079	117,232.57	0.635	0.27247	0.26903	0.27086
___ TH	0.06565	0.75	39.136	0.06823	0.08995	0.03876
___ TI	0.00062	21.03	10.735	0.00067	0.00065	0.00055
___ TL	-0.00255	0.11	316.593	-0.01158	0.00008	0.00387
___ V	0.00073	7.40	62.301	0.00125	0.00057	0.00038
___ W	-0.00168	-0.61	69.782	-0.00262	-0.00206	-0.00037
___ Y1	3531.45852	3,531.46	0.598	3517.21328	3521.43786	3555.72443
___ Y2A	144554.05864	144,554.06	0.533	144090.55511	145443.00738	144128.61344
___ Y2R	3212.70984	3,212.71	0.186	3206.07300	3214.36776	3217.68877
___ ZN	-0.00109	6.77	23.839	-0.00106	-0.00136	-0.00084
___ ZR	-0.00571	0.28	65.833	-0.00439	-0.00995	-0.00279

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 50

Date/Time: 05/19/2020 08:30

Sample Number: 1313989

Class: ****

Batch: 201351486601

Initial Vol: 50.00

Final Vol: 51.50

DF: 1.00

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	-0.00027	2.30	217.828	-0.00043	0.00038	-0.00074
___ AL	0.00538	3.76	2120.733	0.06885	0.07351	-0.12623
___ ALUM	0.02390	46.40	44.535	0.03027	0.01161	0.02981
___ AS	0.01731	1.35	19.964	0.02104	0.01421	0.01669
___ B	0.14150	575.37	0.785	0.14152	0.14260	0.14038
___ BA	0.02422	10,086.38	0.304	0.02414	0.02422	0.02429
___ BE	-0.00003	-172.09	61.183	-0.00004	-0.00005	-0.00001
___ CA	24.40577	6,740.94	0.601	24.40037	24.55497	24.26197
___ CD	0.00022	0.69	73.808	0.00040	0.00009	0.00017
___ CO	0.00016	3.34	102.679	0.00003	0.00035	0.00010
___ CR	-0.00006	4.25	868.990	0.00011	-0.00060	0.00033
___ CU	0.00688	68.80	20.353	0.00827	0.00547	0.00690
___ FE	0.19432	16.95	6.055	0.20614	0.19421	0.18261
___ K	2.06559	396.55	3.341	2.13795	2.00051	2.05831
___ LI	0.00071	16.97	384.584	0.00380	-0.00145	-0.00021
___ MG	2.63917	1,277.77	0.671	2.64234	2.65509	2.62008
___ MN	1.05255	32,287.34	0.452	1.04737	1.05356	1.05673
___ MO	0.00347	3.57	33.195	0.00443	0.00219	0.00378
___ NA	158.03235	84,652.52	0.669	158.28410	158.94073	156.87222
___ NI	0.00011	1.28	474.269	-0.00008	-0.00030	0.00072
___ P	0.48609	50.05	1.116	0.48035	0.49114	0.48677
___ PB	0.00284	2.00	103.345	0.00623	0.00125	0.00104
___ S	42.55081	2,416.82	0.270	42.66359	42.43398	42.55485
___ SB	0.00283	0.24	181.110	0.00627	0.00526	-0.00305
___ SE	-0.01029	-0.31	74.607	-0.01446	-0.01498	-0.00143
___ SI	6.88197	348.44	0.200	6.89779	6.87312	6.87501
___ SN	-0.00334	0.67	96.146	0.00014	-0.00396	-0.00618
___ SR	0.16876	72,320.24	0.596	0.16787	0.16857	0.16985
___ TH	0.05772	0.20	118.799	-0.01617	0.11929	0.07004
___ TI	0.00255	86.49	4.185	0.00264	0.00259	0.00243
___ TL	0.00023	0.14	3886.356	0.00859	0.00091	-0.00882
___ V	0.01746	152.03	3.805	0.01784	0.01785	0.01670
___ W	-0.00166	-0.59	95.039	-0.00226	-0.00284	0.00013
___ Y1	3532.70673	3,532.71	0.174	3532.34177	3539.02110	3526.75732
___ Y2A	143243.35297	143,243.35	0.242	143601.80928	142910.66074	143217.58889
___ Y2R	3231.47132	3,231.47	1.062	3243.81114	3192.68135	3257.92148
___ ZN	0.00311	15.42	7.269	0.00296	0.00337	0.00301
___ ZR	0.00083	3.26	463.503	0.00514	-0.00045	-0.00221

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 51

Date/Time: 05/19/2020 08:33

Sample Number: **CCV**

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	0.49853	4,941.81	0.236	0.49762	0.49986	0.49812
___ AL	25.57206	683.52	0.797	25.34643	25.74240	25.62735
___ ALUM	25.66358	35,163.49	0.060	25.68128	25.65552	25.65394
___ AS	0.49923	48.54	1.355	0.49645	0.50694	0.49430
___ B	0.53687	2,181.57	0.195	0.53726	0.53767	0.53569
___ BA	0.51230	208,769.35	0.303	0.51344	0.51053	0.51292
___ BE	0.49584	151,787.93	0.317	0.49714	0.49409	0.49628
___ CA	25.81419	6,968.72	0.305	25.73622	25.81293	25.89343
___ CD	0.50058	2,553.06	0.206	0.50173	0.49973	0.50028
___ CO	0.50454	1,139.57	0.229	0.50571	0.50452	0.50340
___ CR	0.49553	2,976.19	0.049	0.49527	0.49555	0.49575
___ CU	0.50645	4,358.75	0.257	0.50782	0.50523	0.50630
___ FE	24.61061	1,622.88	0.780	24.40975	24.63009	24.79201
___ K	26.00969	4,756.47	0.901	25.74755	26.08307	26.19843
___ LI	0.51432	1,482.58	0.774	0.50985	0.51565	0.51746
___ MG	25.39085	11,931.69	0.486	25.25621	25.41764	25.49869
___ MN	0.50738	15,590.80	0.124	0.50774	0.50666	0.50776
___ MO	0.51480	315.08	0.114	0.51443	0.51547	0.51448
___ NA	27.47965	14,364.44	0.364	27.58432	27.38531	27.46932
___ NI	0.50318	586.41	0.277	0.50168	0.50343	0.50444
___ P	0.50714	52.19	0.506	0.51004	0.50516	0.50622
___ PB	0.50414	225.06	1.212	0.49811	0.50400	0.51032
___ S	25.34061	1,434.83	0.116	25.30803	25.36546	25.34835
___ SB	0.50340	70.84	1.185	0.49910	0.51021	0.50087
___ SE	0.48881	27.42	1.041	0.48898	0.49381	0.48363
___ SI	23.91876	1,181.02	0.704	23.73714	23.94953	24.06961
___ SN	0.49427	119.31	0.576	0.49665	0.49111	0.49504
___ SR	0.50800	216,619.71	0.575	0.50475	0.51040	0.50885
___ TH	0.51996	18.94	1.920	0.51158	0.51730	0.53101
___ TI	0.51996	17,312.55	0.212	0.52082	0.51872	0.52034
___ TL	0.51114	42.23	0.993	0.51378	0.50529	0.51436
___ V	0.51505	4,428.21	0.340	0.51538	0.51315	0.51661
___ W	0.49785	142.28	0.148	0.49870	0.49746	0.49739
___ Y1	3524.88085	3,524.88	0.285	3514.97850	3524.60254	3535.06149
___ Y2A	142858.40647	142,858.41	0.209	142810.04584	143177.92590	142587.24765
___ Y2R	3159.58358	3,159.58	0.846	3156.11919	3187.87410	3134.75744
___ ZN	0.50824	1,490.69	0.210	0.50701	0.50894	0.50877
___ ZR	0.50624	258.21	0.739	0.50192	0.50835	0.50844

LANCASTER LABORATORIES

Run Name: 2014003T73

Instrument ID: 18255

Tube: 52

Date/Time: 05/19/2020 08:36

Sample Number: CCB

ELEMENT	AVERAGE			INTEGRATIONS		
	CONC (ppm)	INTENSITY	%RSD	#1	#2	#3
___ AG	0.00058	11.05	182.614	0.00121	-0.00064	0.00116
___ AL	0.02131	4.03	165.449	0.00394	-0.00189	0.06187
___ ALUM	0.00031	10.51	629.219	0.00160	-0.00191	0.00124
___ AS	0.00509	0.15	34.582	0.00325	0.00525	0.00676
___ B	0.03954	178.34	1.494	0.04005	0.03967	0.03889
___ BA	0.00011	257.75	48.309	0.00013	0.00005	0.00014
___ BE	0.00014	-122.84	31.256	0.00019	0.00010	0.00013
___ CA	0.01781	16.42	66.483	0.03144	0.00997	0.01204
___ CD	0.00048	1.93	25.980	0.00056	0.00033	0.00054
___ CO	-0.00021	2.74	313.707	0.00003	-0.00095	0.00029
___ CR	0.00034	6.78	175.492	0.00077	0.00057	-0.00033
___ CU	0.00041	7.69	187.085	0.00019	-0.00022	0.00125
___ FE	-0.00297	3.57	486.942	0.01328	-0.00774	-0.01446
___ K	-0.01460	8.20	559.328	0.05191	0.01005	-0.10576
___ LI	0.00248	21.83	125.469	0.00561	0.00245	-0.00062
___ MG	0.00503	5.95	180.753	0.01551	-0.00012	-0.00032
___ MN	0.00082	21.78	20.228	0.00097	0.00064	0.00083
___ MO	-0.00083	0.96	110.752	0.00012	-0.00089	-0.00172
___ NA	1.52885	774.42	3.897	1.59315	1.51788	1.47553
___ NI	0.00061	2.25	195.581	0.00177	-0.00060	0.00065
___ P	0.00292	1.22	164.797	0.00821	0.00176	-0.00120
___ PB	0.00121	1.52	225.554	0.00298	-0.00194	0.00260
___ S	0.04051	2.16	12.191	0.04497	0.04136	0.03520
___ SB	0.00079	-0.05	663.657	0.00559	-0.00484	0.00163
___ SE	-0.00339	0.07	385.615	0.00098	-0.01807	0.00693
___ SI	0.03006	2.99	12.121	0.03426	0.02819	0.02773
___ SN	-0.00433	0.44	35.029	-0.00286	-0.00424	-0.00589
___ SR	0.00019	49.87	23.549	0.00023	0.00014	0.00019
___ TH	0.02287	-1.15	156.044	0.05127	0.03451	-0.01718
___ TI	0.00013	5.66	53.014	0.00018	0.00014	0.00005
___ TL	0.00228	0.16	216.532	0.00065	0.00783	-0.00163
___ V	0.00013	0.68	392.653	-0.00025	-0.00007	0.00071
___ W	0.00002	-0.13	508.532	-0.00003	0.00016	-0.00006
___ Y1	3591.60917	3,591.61	0.376	3606.14939	3589.19108	3579.48705
___ Y2A	147281.72473	147,281.72	0.235	146998.80072	147667.74145	147178.63201
___ Y2R	3191.52500	3,191.53	0.044	3190.12500	3192.92500	3191.52500
___ ZN	-0.00107	3.31	34.983	-0.00132	-0.00064	-0.00124
___ ZR	0.00005	1.87	1965.303	0.00581	-0.00480	-0.00087

Extraction/Distillation/Digestion Logs

Metals in Liquid

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LLENS Worksheet for ICP-ICPMS filtered no-digest

Batch# 20 135 14866 01

Start Time: 5/14/20 10:40 End Time: 5/14/20 10:50 Hot Block: n/a

Pipette ID: 0111 /200 S/500

Spike/Reagent	Lot#	Volume Added(mL)
1:1 HCL	P20-104B	0.50
1:1 HNO3	P20-114D	1.00
ICP LLC	1928338ILC	0.20
K,Ni,Zn Spike	P2-MEB686960B	0.50

Method Ref:

SampleID	Date Due	ST	P	H	Method	PH<2	BC	Vessel	Location	Comments
								Lot#	ID	
1) PBW	.							2001329		
2) LCSW	.							2001329		
3) 1313220U	05/21/20 10:29	WW	N7		SW-846 6010C	Y	800A	1909231	WMET30/A5	
4) 1313223D	05/21/20 10:29	WW	N7		SW-846 6010C	Y	800A	1909231	WMET30/F4	
5) 1313221R	05/21/20 10:29	WW	N7		SW-846 6010C	Y	800A	1909231	WMET30/B5	
6) 1313222M	05/21/20 10:29	WW	N7		SW-846 6010C	Y	800A	1909231	WMET30/E4	
7) 1313077	05/21/20 10:32	GW	N7		SW-846 6010C	Y	800A	1909231	WMET30/A1	
8) 1313224	05/21/20 10:29	WW	N7		SW-846 6010C	Y	800A	1909231	WMET30/C4	
9) 1313225	05/21/20 10:29	WW	N7		SW-846 6010C	Y	800A	1909231	WMET30/D4	
10) 1313229FD	05/21/20 10:29	WW	N7		SW-846 6010C	Y	800A	1909231	WMET30/F5	
11) 1313230	05/21/20 10:29	WW	N7		SW-846 6010C	Y	800A	1909231	WMET30/C5	
12) 1313228	05/21/20 10:29	WW	N7		SW-846 6010C	Y	800A	1909231	WMET30/D5	
13) 1313231	05/21/20 10:29	WW	N7		SW-846 6010C	Y	800A	1909231	WMET30/E5	
14) 1313727	05/22/20 10:40	GW	N7		SW-846 6010C	Y	800A	1909231	WMET01/F1	
15) 1313723	05/22/20 10:40	GW	N7		SW-846 6010C	Y	800A	1909231	WMET01/E1	
16) 1313729	05/22/20 10:40	GW	N7		SW-846 6010C	Y	800A	1909231	WMET01/A2	
17) 1313732	05/22/20 10:40	GW	N7		SW-846 6010C	Y	800A	1909231	WMET01/B2	
18) 1313725	05/22/20 10:40	GW	N7		SW-846 6010C	Y	800D	1909231	WMET01/D1	
19) 1313997	05/22/20 15:27	GW	N7		SW-846 6010D Rev.4, July 2014	Y	800A	1909231	WMET01/B4	
20) 1313989	05/22/20 15:27	GW	N7		SW-846 6010D Rev.4, July 2014	Y	800A	1909231	WMET01/E3	
21) 1313995	05/22/20 15:27	GW	N7		SW-846 6010D Rev.4, July 2014	Y	800A	1909231	WMET01/D3	
22) 1314001FB	05/22/20 15:27	GW	N7		SW-846 6010D Rev.4, July 2014	Y	800A	1909231	WMET01/A4	
23) 1313991	05/22/20 15:27	GW	N7		SW-846 6010D Rev.4, July 2014	Y	800A	1909231	WMET01/F3	

Prep Employee:862

D/I

5/14/2020

v 1.2.0

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LLENS Worksheet for ICP-ICPMS filtered no-digest

Batch# 20 135 14866 01

SampleID		Date Due	ST	P	H	Method	PH<2	BC	Vessel Lot#	Location ID	Comments
24)	1313406	05/21/20 18:27	GW	N7		SW-846 6010D Rev.4, July 2014	Y	800A	1909231	WMET30/B4	
25)	1313402	05/21/20 18:27	GW	N7		SW-846 6010D Rev.4, July 2014	Y	800A	1909231	WMET30/A4	

5/14/2020

v 1.2.0

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Batch# 20 135 1486 601

LLENS Batch Chronology and Change Log - ICP-ICPMS filtered no-digest

	<u>Operation</u>	<u>Instrument</u>	<u>Operation Date</u>	<u>ANALYST</u>
1)	Batch Creation		5/14/20 10:27	862
2)	Sample Vol	CLEAR	5/14/20 10:54	862
3)	Trial		5/14/20 10:54	862
4)	Upload Prep	US19PCC06695	5/14/20 10:54	862

<u>Sample ID</u>	<u>Analysis</u>	<u>D</u> <u>Operation</u>	<u>Measurement</u>	<u>Original Entry</u>				<u>Data Changed</u>	
				<u>Date/Time</u>	<u>Data</u>	<u>Units</u>	<u>Analyst</u>	<u>Date/Time</u>	<u>Analyst Reason</u>

5/14/2020

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September 2020

Analysis: 4866 ICP-ICPMS filtered no-digest

Batch# 20 135 1486 601

<u>Sample ID</u>	<u>Due Date</u>	<u>P</u>	<u>EPA#</u>	<u>SDG#</u>	<u>Initial Volume</u>	<u>Final Volume</u>	<u>Trial</u>
PBW					50.0000	51.5000	1
LCSW					50.0000	50.0000	1
1313220U	05/21/20	N7	12351	KR446-01BKG	50.0000	51.5000	1
1313223D	05/21/20	N7	12351	KR446-01DUP	50.0000	51.5000	1
1313221R	05/21/20	N7	12351	KR446-01MS	50.0000	52.2000	1
1313222M	05/21/20	N7	12351	KR446-01MSD	50.0000	52.2000	1
1313077	05/21/20	N7	21516	ALB05-06	50.0000	51.5000	1
1313224	05/21/20	N7	12352	KR446-02	50.0000	51.5000	1
1313225	05/21/20	N7	12353	KR446-03	50.0000	51.5000	1
1313229FD	05/21/20	N7	12357	KR446-07FD	50.0000	51.5000	1
1313230	05/21/20	N7	12358	KR446-08	50.0000	51.5000	1
1313228	05/21/20	N7	12356	KR446-06	50.0000	51.5000	1
1313231	05/21/20	N7	12359	KR446-09*	50.0000	51.5000	1
1313727	05/22/20	N7	TT4CD	ALB06-06	50.0000	51.5000	1
1313723	05/22/20	N7	TT4BD	ALB06-02	50.0000	51.5000	1
1313729	05/22/20	N7	TT4AD	ALB06-08	50.0000	51.5000	1
1313732	05/22/20	N7	TT4DD	ALB06-11	50.0000	51.5000	1
1313725	05/22/20	N7	TT4ED	ALB06-04	50.0000	51.5000	1
1313997	05/22/20	N7	69411	CR694-11	50.0000	51.5000	1
1313989	05/22/20	N7	69403	CR694-03	50.0000	51.5000	1
1313995	05/22/20	N7	69409	CR694-09	50.0000	51.5000	1
1314001FB	05/22/20	N7	69415	CR694-15FB	50.0000	51.5000	1
1313991	05/22/20	N7	69405	CR694-05	50.0000	51.5000	1
1313406	05/21/20	N7	69308	CR693-08	50.0000	51.5000	1
1313402	05/21/20	N7	69304	CR693-04	50.0000	51.5000	1

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Table J-1-1
Non-Hazardous GWM Liquid Investigation-Derived Waste Disposal in Q2 2020

Collection Date	Well ID or Waste Generation Location	Container Type ^a	Number of Containers	Estimated Volume (Gallons)	Discharge Date	Effluent Discharge Location
5/5/2020	KAFB-016, KAFB-003, VA-2	Pail	1	3	6/4/2020	Golf Course
4/16/2020	Consolidated Q2 #5	Jerrican	1	2.5	6/4/2020	Golf Course
4/16/2020	KAFB-016, KAFB-003, VA-2	Pail	1	5	6/4/2020	Golf Course
4/9/2020	Consolidated Q2 #2	Jerrican	1	5	6/4/2020	Golf Course
4/15/2020	Consolidated Q2 #3	Jerrican	1	5	6/4/2020	Golf Course
4/28/2020	Consolidated Q2 #12	Poly Drum	1	49	6/4/2020	Golf Course
4/28/2020	Consolidated Q2 #11	Poly Drum	1	32	6/4/2020	Golf Course
4/29/2020	Consolidated Q2 #13	Poly Drum	1	52	6/4/2020	Golf Course
5/4/2020	Consolidated Q2 #16	Poly Drum	1	13.5	6/4/2020	Golf Course
5/5/2020	Consolidated Q2 #17	Poly Drum	1	41.7	6/4/2020	Golf Course
4/7/2020	KAFB-016, KAFB-003, VA-2	Pail	1	4	6/4/2020	Golf Course
4/20/2020	Consolidated Q2 #6	Poly Drum	1	50	6/4/2020	Golf Course
4/22/2020	Consolidated Q2 #7	Poly Drum	1	52	6/4/2020	Golf Course
4/22/2020	Consolidated Q2 #9	Poly Drum	1	46	6/4/2020	Golf Course
4/23/2020	Consolidated Q2 #8	Poly Drum	1	40	6/4/2020	Golf Course
4/23/2020	Consolidated Q2 #10	Poly Drum	1	42	6/4/2020	Golf Course
4/30/2020	Consolidated Q2 #14	Poly Drum	1	45	6/4/2020	Golf Course
5/1/2020	Consolidated Q2 #15	Poly Drum	1	45	6/4/2020	Golf Course
6/2/2020	KAFB-016, KAFB-003, KAFB-015	Pail	1	3	6/4/2020	Golf Course
6/2/2020	KAFB-003, VA-2	Pail	1	2	6/4/2020	Golf Course
4/24/2020	KAFB-106007, KAFB-106045, KAFB-3411	Poly Drum	1	37	6/4/2020	Golf Course
4/21/2020	KAFB-106018	Poly drum	1	10	6/4/2020	Golf Course
4/21/2020	KAFB-106017	Poly drum	1	10.2	6/4/2020	Golf Course
4/24/2020	KAFB-106010	Poly drum	1	14	6/4/2020	Golf Course
4/22/2020	KAFB-106065	Poly drum	1	9	6/4/2020	Golf Course
4/21/2020	KAFB-106094	Poly drum	1	12.5	6/4/2020	Golf Course
4/28/2020	KAFB-106020	Poly drum	1	11.6	6/4/2020	Golf Course
4/21/2020	KAFB-106060	Poly drum	1	6	6/4/2020	Golf Course
5/8/2020	KAFB-106096	Poly drum	1	18	6/4/2020	Golf Course
5/8/2020	KAFB-106018	Poly drum	1	10	6/4/2020	Golf Course
4/23/2020	KAFB-106019, ER202-02	Poly drum	1	18	6/4/2020	Golf Course
11/14/2019	Lab DI water + HCl	Poly drum	1	3	6/10/2020	Golf Course
			Total	697		

^a Container types are described as follows:

Pail = 5-gallon plastic bucket with press-on plastic cover

Poly Drum = 55-gallon plastic drum sealed with plastic cover and locking-ring steel collar

Jerrican = 5-gallon plastic container with threaded cap

GWM = groundwater monitoring

ID = identification

Q2 = second quarter

DI = deionized

HCl = hydrochloric acid

Table J-1-2
Non-Hazardous Liquid IDW Disposal from Other Sources in Q2 2020

Collection Date	Well ID or Waste Generation Location	Container Type	Number of Containers	Estimated Volume^a (Gallons)	Discharge Date	Effluent Discharge Location	Manifest Number
NA	None	NA	0	0	NA	NA	NA
			Total	0			

^a No waste disposed of in this category during Q2 2020.

ID = Identification

IDW = Investigation Derived Waste

NA = not applicable

Q2 = second quarter

Table J-1-3
Non-Hazardous Liquid Investigation-Derived Waste Pending Disposal, Q2 2020

Collection Date	Well ID	Container Type	Number of Containers	Estimated Volume^a (Gallons)	Anticipated Disposal Location
NA	None	NA	0	0	NA
			Total	0	

^a No waste pending disposal in this category as of the end of Q2 2020.

ID = identification

NA = not applicable

Q2 = second quarter

Table J-1-4
Non-Hazardous Liquid Investigation-Derived Waste Pending Analysis, Q2 2020

Collection Date	Source	Container Type^a	Number of Containers	Estimated Volume (Gallons)	Anticipated Disposal Location
4/16/2020	Consolidated Q2 #4	Jerrican	1	2.5	GWTS
4/24/2020	KAFB-106014	Poly drum	1	13	GWTS
4/21/2020	KAFB-106067	Poly drum	1	14	GWTS
11/14/2019	Q4 2019 Calibration fluid	Poly drum	1	27	off site
11/7/2018	Fluid Calibration				
5/11/2020	Q2 2020 Calibration Fluid				
1/9/2020	Equip Rinsate	Poly drum	1	22.5	GWTS
4/28/2020	KAFB-106076	Poly drum	1	13.5	GWTS
4/24/2020	KAFB-106006	Poly drum	1	16	GWTS
4/23/2020	KAFB-106020	Poly drum	1	15.5	GWTS
6/23/2020	KAFB-106239	Steel drum	1	45	GWTS
6/25/2020	KAFB-106005-WR-1	Steel drum	1	40?	off site
6/30/2020	KAFB-106005-WR-2	Steel drum	1	45	off site
6/30/2020	KAFB-106005-WR-3	Steel drum	1	20	off site
			Total	234	

^a Container types are described as follows:

Jerrican = 5-gallon plastic container with threaded cap

Pail = 5-gallon plastic bucket with press-on plastic cover

Poly Drum = 55-gallon plastic drum sealed with plastic cover and locking-ring steel collar

Steel Drum = 55-gallon steel, open top drum with steel cover and locking-ring steel collar

GWTS = groundwater treatment system

ID = identification

Q2 = second quarter

Q4 = fourth quarter

Table J-1-5
Non-Hazardous Liquid Drilling Investigation-Derived Waste Disposal in Q2 2020

Collection Date	Well ID	Container Type	Number of Containers	Estimated Volume^a (Gallons)	Discharge Date	Effluent Discharge Location	Disposal Technician	Notes
NA	None	NA	0	0	NA	NA	NA	NA
			Total	0				

^a No Q2 2020 waste was generated or disposed of in this category

ID = identification

NA = not applicable

Q2 = second quarter

Table J-2-1
Non-Hazardous Solid Waste Disposal in Q2 2020

Collection Date^a	Well ID	Matrix	Container Type	Number of Containers	Estimated Volume^a (cubic yards)	Disposal Date	Transporter	Disposal Location	Manifest Number
NA	None	NA	NA	0	0	NA	NA	NA	NA
				Total	0				

^a No Q2 2020 waste was generated or disposed of in the category

ID = identification

NA = not applicable

Q1 = first quarter

Table J-2-2a
Non-Hazardous Drilling Solid Investigation-Derived Waste Disposal, Q2 2020

IDW Yard Entry Date	EA Container ID	Matrix	Container Type	Estimated Volume^a (cubic yards)	Disposal Date	Transporter	Disposal Location	Manifest Number
NA	None	NA	0	0	NA	NA	NA	NA
			Total	0				

Table J-2-2b
Non-Hazardous Drilling Solid Special Waste Disposal, Q2 2020

IDW Yard Entry Date	EA Container ID	Matrix	Container Type	Estimated Volume^a (cubic yards)	Disposal Date	Transporter	Disposal Location	Manifest Number
NA	None	NA	0	0	NA	NA	NA	NA
			Total	0				

^a No Q2 2020 waste was generated or disposed of in this category

IDW = investigation derived waste

ID = identification

Q2 = second quarter

EA = EA Engineering, Science, and Technology, Inc., PBC

Table J-3-1
Hazardous Waste Disposal, Q2 2020

90-Day Entry Date	90-Day Deadline	Well Location/Drum ID	Matrix	Source	Container Type	Estimated Volume (gallons)	Disposal Date	Transporter	Disposal Facility	Manifest Number
3/20/2020	6/17/2020	KAFB-106149	Water	GWM	Jerrican in Steel Drum	40	6/2/2020	ACT	Advance Chemical Treatment, 6133 Edith Blvd NE, Albuquerque, NM 87112	012264129 FLE
4/16/2020	7/14/2020	Q2 2020 Consolidated Drum #1	Water	GWM	Jerrican in Steel Drum					
4/27/2020	7/25/2020	KAFB-106076, 059	Water	GWM	Jerrican in Steel Drum					
5/6/2020	8/4/2020	KAFB-106059	Water	GWM	Steel Drum					
5/15/2020	6/17/2020	Q2 2020 Consolidated Final	Water	GWM	Steel Drum					

^a Container types are described as follows:
Jerrican = 5-gallon plastic container with threaded cap
Steel Drum = 55-gallon steel, open top drum sealed with steel cover and locking-ring steel collar
ACT = Advanced Chemical Treatment
Blvd = boulevard
GWM = Groundwater monitoring
ID = Identification
NE = northeast
NM = New Mexico
Q2 = second quarter

Table J-3-2
Hazardous Waste Pending Disposal, Q2 2020

90-Day Entry Date	90-Day Deadline	Well Location ID	Matrix	Source	Container Type^a	Estimated Volume (gallons)	Disposal Date	Transporter	Disposal Facility	Manifest Number
6/25/2020	9/22/2020	KAFB-106028	Water	Well Rehab	Steel Drum	22	NA	NA	NA	NA
6/29/2020	9/26/2020	KAFB-106028	Water	Well Rehab	Steel Drum	30	NA	NA	NA	NA
Total						52				

^aContainer types are described as follows:

Steel Drum = 55-gallon steel, open top drum sealed with steel cover and locking-ring steel collar

ID = identification

NA = not applicable

Q2 = second quarter

Well Rehab = Well rehabilitation

Table J-3-3
2020 Running Total of Hazardous Waste Disposal

2020 Calendar Quarter	Calendar Months	Matrix	Source	Estimated Volume (gallons)	Transporter	Disposal Facility
Q1	January-March	Water	GWM	25	ACT	Advance Chemical Treatment, 6133 Edith Blvd NE, Albuquerque, NM 87112
Q2	April-June	Water	GWM	40	ACT	Advance Chemical Treatment, 6133 Edith Blvd NE, Albuquerque, NM 87112
Q3	July-September	-	-	-	-	-
Q4	October-December	-	-	-	-	-
2020 Running Total				65		

ACT = Advanced Chemical Treatment

Blvd = boulevard

GWM = Groundwater monitoring

NA = Not Applicable

NE = northeast

NM = New Mexico

- = to be determined

Q1 = first quarter

Q2 = second quarter

Q3 = third quarter

Q4 = fourth quarter