LONGHORN ARMY AMMUNITION PLANT KARNACK, TEXAS

ADMINISTRATIVE RECORD

Volume 17

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KARNACK, TEXAS
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A. Title: (8b. cont'd) Appendix F (cont'd) to Report – Quarterly Evaluation Report, 2nd Quarter (April–June) 2020 Groundwater Treatment Plant, Longhorn Army Ammunition Plant, Karnack, Texas
Author(s): Bhate Environmental Associates, Inc.
Recipient: U.S. Army Corps of Engineers – Tulsa District
Date: August 27, 2020
Bate Stamp: 00977893 – 00978197

B. Title: (8c.) Appendix F (cont'd) to Report – Quarterly Evaluation Report, 2nd Quarter (April–June) 2020 Groundwater Treatment Plant, Longhorn Army Ammunition Plant, Karnack, Texas
Author(s): Bhate Environmental Associates, Inc.
Recipient: U.S. Army Corps of Engineers – Tulsa District
Date: August 27, 2020
Bate Stamp: 00978198 – 00978921

C. Title: (8d.) Appendix F (cont'd) to Report – Quarterly Evaluation Report, 2nd Quarter (April–June) 2020 Groundwater Treatment Plant, Longhorn Army Ammunition Plant, Karnack, Texas
Author(s): Bhate Environmental Associates, Inc.
Recipient: U.S. Army Corps of Engineers – Tulsa District
Date: August 27, 2020
Bate Stamp: 00978922 – 00979681

Sample Report

Ge	72	1	No Gas	4833159	0.65	4777860	101.16	70	120	
In	115	1	No Gas	5416336	1.45	5424891	99.84	70	120	
Bi	209	1	No Gas	4090977	0.84	4087764	100.08	70	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	020_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T08:53:47-05:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.052	33.8	110041	0.4	0.5	
Be	9	1	No Gas	0.003	58.7	78	16.1	0.5	
V	51	2	He	-0.027	-17.0	1456	2.1	2.5	
Cr	52	2	He	0.002	251.3	1443	3.2	2.5	
Fe	56	2	He	0.091	23.5	10728	3.2	100	
Se	78	2	He	-0.045	-421.6	114	20.7	1	
Sn	118	2	He	0.021	7.5	1613	2.0	2.5	
As	75	2	He	0.003	651.5	81	33.0	2.5	
Ca	44	2	He	5.739	39.2	527	20.5	100	
Na	23	2	He	-4.824	-5.0	80442	1.0	100	
Mg	24	2	He	0.134	7.7	687	2.2	100	
K	39	2	He	-4.761	-24.8	48212	3.1	100	
Mn	55	2	He	0.077	21.8	993	14.2	2.5	
Co	59	2	He	0.003	68.0	207	21.8	2.5	
Ni	60	2	He	0.014	90.5	267	25.5	2.5	
Cu	63	2	He	-0.007	-124.1	1613	7.5	1	
Zn	66	2	He	0.636	6.9	2184	4.1	2.5	
Al	27	2	He	-0.030	-689.7	347	20.9	5	
B	11	1	No Gas	3.450	8.2	34827	2.8	0.5	ICB Main CR1 Failed
Al	27	1	No Gas	0.095	36.3	34657	3.1	5	
Si	28	1	No Gas	-0.871	-22.4	508923	0.7	10	
P	31	1	No Gas	-1.837	-22.6	35168	1.9	10	
Ag	107	1	No Gas	-0.001	-71.5	333	9.6	2.5	
Cd	111	1	No Gas	0.002	124.3	27	78.1	1	
Sr	88	1	No Gas	0.003	89.1	2857	7.0	2.5	
Mo	95	1	No Gas	0.005	16.0	183	6.3	2.5	
Sn	118	1	No Gas	0.032	10.7	4291	1.8	5	
Sb	121	1	No Gas	0.030	14.3	1690	7.8	2.5	
Ba	137	1	No Gas	-0.003	-37.5	830	1.2	2.5	
Tl	205	1	No Gas	0.024	15.2	1653	10.6	1	
Tl	203	1	No Gas	0.021	13.4	700	8.0	1	
Pb	208	1	No Gas	0.004	28.6	1940	2.7	2.5	
U	238	1	No Gas	0.001	38.3	67	31.2	2.5	
Ca	43	2	He	3.663	102.2	20	50.0	100	
Sb	121	2	He	0.026	21.3	637	10.5	2.5	
Ti	47	2	He	0.021	86.6	7	86.6	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1920086	0.69	1931903	99.39	70	120	
Ge	72	2	He	1049087	1.12	1022077	102.64	70	120	
Ge	72	1	No Gas	4901318	0.11	4777860	102.58	70	120	
In	115	1	No Gas	5376172	0.27	5424891	99.10	70	120	
Bi	209	1	No Gas	4052532	2.50	4087764	99.14	70	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	021ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T08:55:56-05:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.481	7.3	118463	0.4	0	ICSA Main CR1 Failed
Be	9	1	No Gas	0.002	119.3	68	23.5	0	ICSA Main CR1 Failed
V	51	2	He	0.063	19.7	2208	5.1	0	ICSA Main CR1 Failed
Cr	52	2	He	0.983	4.7	12823	5.1	0	ICSA Main CR1 Failed
Fe	56	2	He	103420.007	0.8	1017328358	1.1	0	
Se	78	2	He	0.038	256.2	117	9.7	0	ICSA Main CR1 Failed
Sn	118	2	He	0.039	2.5	1677	1.9	0	ICSA Main CR1 Failed
As	75	2	He	0.112	28.9	240	19.4	0	ICSA Main CR1 Failed
Ca	44	2	He	103879.490	2.0	4546981	1.2	0	
Na	23	2	He	105130.341	2.1	137645998	1.4	0	
Mg	24	2	He	102930.351	1.5	71606776	0.9	0	
K	39	2	He	107630.997	1.5	85949739	0.7	0	
Mn	55	2	He	0.174	7.0	1640	4.6	0	ICSA Main CR1 Failed
Co	59	2	He	0.209	1.9	4051	1.1	0	ICSA Main CR1 Failed
Ni	60	2	He	0.217	9.8	1220	7.8	0	ICSA Main CR1 Failed
Cu	63	2	He	0.546	4.4	8820	2.8	0	ICSA Main CR1 Failed
Zn	66	2	He	0.488	10.8	1727	7.0	0	ICSA Main CR1 Failed
Al	27	2	He	102289.272	1.6	31627468	1.1	0	
B	11	1	No Gas	3.694	5.3	34738	1.5	0	
Al	27	1	No Gas	105680.393	1.6	3019858622	0.8	0	
Si	28	1	No Gas	25.992	6.4	872520	1.9	0	
P	31	1	No Gas	101230.929	1.1	149520774	0.4	0	
Ag	107	1	No Gas	0.012	11.0	777	6.6	0	ICSA Main CR1 Failed
Cd	111	1	No Gas	1.534	1.1	11132	1.8	0	ICSA Main CR1 Failed
Sr	88	1	No Gas	0.946	1.3	73281	0.3	0	ICSA Main CR1 Failed
Mo	95	1	No Gas	2100.462	0.6	28744932	1.3	0	
Sn	118	1	No Gas	0.040	39.3	4224	8.3	0	ICSA Main CR1 Failed
Sb	121	1	No Gas	0.036	15.9	1757	9.7	0	ICSA Main CR1 Failed
Ba	137	1	No Gas	0.077	5.9	1667	3.3	0	ICSA Main CR1 Failed
Tl	205	1	No Gas	0.015	9.6	1010	7.7	0	ICSA Main CR1 Failed
Tl	203	1	No Gas	0.013	30.5	437	20.8	0	ICSA Main CR1 Failed
Pb	208	1	No Gas	0.034	5.9	4024	3.6	0	ICSA Main CR1 Failed
U	238	1	No Gas	0.003	12.3	203	12.4	0	ICSA Main CR1 Failed
Ca	43	2	He	100621.409	2.2	257085	1.6	0	
Sb	121	2	He	0.031	25.9	653	15.1	0	ICSA Main CR1 Failed
Ti	47	2	He	2032.109	2.2	610935	1.4	0	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1858933	1.18	1931903	96.22	70	120	
Ge	72	2	He	980146	0.84	1022077	95.90	70	120	
Ge	72	1	No Gas	4534259	1.12	4777860	94.90	70	120	
In	115	1	No Gas	5038716	0.96	5424891	92.88	70	120	
Bi	209	1	No Gas	3707895	2.02	4087764	90.71	70	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	022ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T08:57:55-05:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	No Gas	106.039	1.492	2997715	0.93	100	106.0	180	120	ICSB Main CR1 Failed
Be	9	1	No Gas	101.674	0.533	660491	0.41	100	101.7	80	120	
V	51	2	He	104.463	2.944	1002093	0.64	100	104.5	80	120	
Cr	52	2	He	104.657	1.853	1235347	1.74	100	104.7	80	120	
Fe	56	2	He	114364.006	2.720	1134219956	0.60	100	114364.0	80	120	
Se	78	2	He	112.099	0.740	13751	2.26	100	112.1	80	120	
Sn	118	2	He	102.459	1.675	992373	0.27	100	102.5	80	120	
As	75	2	He	106.269	1.530	161260	1.44	100	106.3	80	120	
Ca	44	2	He	113911.478	2.839	5027392	0.30	100	113911.5	80	120	
Na	23	2	He	114771.647	2.434	151517351	0.52	100	114771.6	80	120	
Mg	24	2	He	112996.086	3.420	79253604	1.47	100	112996.1	80	120	
K	39	2	He	118060.758	2.298	95062689	0.66	100	118060.8	80	120	
Mn	55	2	He	100.061	1.896	740028	1.07	100	100.1	80	120	
Co	59	2	He	101.216	1.232	1914573	1.94	100	101.2	80	120	
Ni	60	2	He	98.891	2.793	477273	0.63	100	98.9	80	120	
Cu	63	2	He	99.742	2.980	1333366	0.33	100	99.7	80	120	
Zn	66	2	He	101.378	1.948	218142	1.02	100	101.4	80	120	
Al	27	2	He	102808.981	2.370	32054646	1.27	100	102809.0	80	120	ICSB Main CR1 Failed
B	11	1	No Gas	517.260	1.365	2142543	0.80	100	517.3	80	120	
Al	27	1	No Gas	103684.828	2.225	3016957822	0.97	100	103684.8	80	120	ICSB Main CR1 Failed
Si	28	1	No Gas	539.180	2.425	8705623	1.03	100	539.2	80	120	
P	31	1	No Gas	98359.463	1.858	147934541	0.60	100	98359.5	80	120	ICSB Main CR1 Failed
Ag	107	1	No Gas	100.629	2.047	3584379	1.01	100	100.6	80	120	
Cd	111	1	No Gas	102.434	1.744	740559	0.97	100	102.4	80	120	
Sr	88	1	No Gas	111.303	2.445	8311951	0.94	100	111.3	80	120	
Mo	95	1	No Gas	2238.808	2.383	30543906	0.40	100	2238.8	80	120	ICSB Main CR1 Failed
Sn	118	1	No Gas	110.446	1.523	2565785	2.47	100	110.4	80	120	
Sb	121	1	No Gas	106.411	3.368	3135042	2.11	100	106.4	80	120	
Ba	137	1	No Gas	108.671	2.451	1214028	2.64	100	108.7	80	120	
Tl	205	1	No Gas	103.786	1.318	5660973	1.21	100	103.8	80	120	
Tl	203	1	No Gas	106.081	0.525	2440027	0.52	100	106.1	80	120	
Pb	208	1	No Gas	104.812	1.137	7899876	1.60	100	104.8	80	120	
U	238	1	No Gas	110.452	1.505	7939349	1.94	100	110.5	80	120	
Ca	43	2	He	111023.294	3.249	285983	0.47	100	111023.3	80	120	
Sb	121	2	He	100.648	3.065	1247512	0.16	100	100.6	80	120	
Ti	47	2	He	2150.932	2.051	652137	1.27	100	2150.9	80	120	
Cu	63	1	No Gas	104.988	1.987	2814178	1.47	100	105.0	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1825056	0.64	1931903	94.47	70	120	
Ge	72	2	He	988716	2.99	1022077	96.74	70	120	
Ge	72	1	No Gas	4617464	1.25	4777860	96.64	70	120	
In	115	1	No Gas	5025394	2.65	5424891	92.64	70	120	
Bi	209	1	No Gas	3686456	0.55	4087764	90.18	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	029_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T09:25:10-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	98.434	2.046	2768546	1.81	100	98.4	90	110	
Be	9	1	No Gas	100.093	1.700	645127	0.54	100	100.1	90	110	
V	51	2	He	94.206	2.310	951016	1.56	100	94.2	90	110	
Cr	52	2	He	93.296	1.605	1158673	1.68	100	93.3	90	110	
Fe	56	2	He	9531.007	3.502	99432285	0.63	10000	95.3	90	110	
Se	78	2	He	95.648	2.910	12356	1.10	100	95.6	90	110	
Sn	118	2	He	92.553	1.108	930934	0.93	100	92.6	90	110	
As	75	2	He	98.330	2.244	156955	0.93	100	98.3	90	110	
Ca	44	2	He	9498.484	1.941	441311	0.95	10000	95.0	90	110	
Na	23	2	He	9497.939	2.968	13269240	1.17	10000	95.0	90	110	
Mg	24	2	He	9490.018	3.014	7002936	0.67	10000	94.9	90	110	
K	39	2	He	9667.716	1.973	8237335	1.15	10000	96.7	90	110	
Mn	55	2	He	91.676	3.238	713121	0.70	100	91.7	90	110	
Co	59	2	He	96.545	4.319	1919952	1.41	100	96.5	90	110	
Ni	60	2	He	93.453	4.136	474365	1.26	100	93.5	90	110	
Cu	63	2	He	97.145	2.529	1366334	0.58	100	97.1	90	110	
Zn	66	2	He	95.330	3.321	215780	0.72	100	95.3	90	110	
Al	27	2	He	94.644	4.025	31389	2.28	100	94.6	90	110	
B	11	1	No Gas	507.022	1.090	2084319	1.10	500	101.4	90	110	
Al	27	1	No Gas	101.417	1.703	3060885	1.38	100	101.4	90	110	
Si	28	1	No Gas	559.825	1.845	9261983	0.85	5000	11.2	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	500.827	1.934	810086	1.04	500	100.2	90	110	
Ag	107	1	No Gas	99.608	4.419	3732166	2.11	100	99.6	90	110	
Cd	111	1	No Gas	96.673	4.158	735125	0.81	100	96.7	90	110	
Sr	88	1	No Gas	96.110	4.066	7551119	1.70	100	96.1	90	110	
Mo	95	1	No Gas	100.240	4.495	1438680	1.78	100	100.2	90	110	
Sn	118	1	No Gas	97.090	0.618	2374799	3.83	100	97.1	90	110	
Sb	121	1	No Gas	101.910	1.278	3083411	0.90	100	101.9	90	110	
Ba	137	1	No Gas	96.648	3.187	1136315	3.39	100	96.6	90	110	
Tl	205	1	No Gas	102.520	1.424	5940785	1.11	100	102.5	90	110	
Tl	203	1	No Gas	102.474	3.623	2503209	1.30	100	102.5	90	110	
Pb	208	1	No Gas	98.019	0.709	7849398	1.84	100	98.0	90	110	
U	238	1	No Gas	91.557	1.719	6991258	1.33	100	91.6	90	110	
Ca	43	2	He	9470.952	2.241	25684	2.71	10000	94.7	90	110	
Sb	121	2	He	96.243	0.838	1255559	2.46	100	96.2	90	110	
Ti	47	2	He	94.467	2.518	30127	0.50	100	94.5	90	110	
Cu	63	1	No Gas	102.895	1.818	2832326	2.33	100	102.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1810994	1.31	1931903	93.74	70	120	
Ge	72	2	He	1040094	2.87	1022077	101.76	70	120	
Ge	72	1	No Gas	4741446	2.10	4777860	99.24	70	120	
In	115	1	No Gas	5289289	3.49	5424891	97.50	70	120	
Bi	209	1	No Gas	3917301	2.53	4087764	95.83	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	030_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T09:26:54-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	010CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.027	116.5	107342	1.6	0.5	
Be	9	1	No Gas	0.013	5.2	142	5.4	0.5	
V	51	2	He	-0.024	-18.4	1466	3.3	2.5	
Cr	52	2	He	-0.001	-1642.4	1397	7.6	2.5	
Fe	56	2	He	0.576	3.8	15646	1.8	100	
Se	78	2	He	-0.041	-103.0	113	4.4	2	
As	75	2	He	-0.002	-762.3	73	29.8	2.5	
Ca	44	2	He	3.354	81.4	410	31.1	100	
Na	23	2	He	-1.720	-32.7	83787	0.6	100	
Mg	24	2	He	0.471	17.9	927	7.0	100	
K	39	2	He	-3.772	-24.7	48469	1.4	100	
Mn	55	2	He	0.028	23.7	603	8.2	2.5	
Co	59	2	He	0.003	74.8	197	22.9	2.5	
Ni	60	2	He	0.009	82.5	237	16.0	2.5	
Cu	63	2	He	0.032	57.2	2130	12.2	2	
Zn	66	2	He	0.211	15.4	1203	6.3	2.5	
Al	27	2	He	-0.017	-1000.1	347	16.4	5	
B	11	1	No Gas	4.875	10.1	40238	5.4	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	0.198	10.7	37097	0.9	5	
Si	28	1	No Gas	1.837	25.8	542101	0.6	10	
P	31	1	No Gas	-1.894	-20.4	34403	1.2	10	
Ag	107	1	No Gas	0.003	78.1	507	19.2	2.5	
Cd	111	1	No Gas	0.006	49.6	53	39.0	1	
Sr	88	1	No Gas	0.007	43.7	3164	7.5	2.5	
Mo	95	1	No Gas	0.028	11.5	527	7.7	2.5	
Sn	118	1	No Gas	0.078	3.2	5448	2.6	5	
Sb	121	1	No Gas	0.104	15.4	3931	13.3	2.5	
Ba	137	1	No Gas	-0.013	-58.8	710	10.6	2.5	
Tl	205	1	No Gas	0.141	34.8	8720	32.6	1	
Tl	203	1	No Gas	0.136	36.0	3614	33.4	1	
Pb	208	1	No Gas	0.014	26.2	2794	10.2	2.5	
U	238	1	No Gas	0.006	10.5	483	9.3	2.5	
Ca	43	2	He	3.734	171.9	20	86.6	100	
Sb	121	2	He	0.080	9.0	1330	7.2	2.5	
Ti	47	2	He	0.021	86.6	7	86.6	2.5	
Cu	63	1	No Gas	0.007	109.6	5151	3.8	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1885013	2.18	1931903	97.57	70	120	
Ge	72	2	He	1036694	0.35	1022077	101.43	70	120	
Ge	72	1	No Gas	4807676	0.85	4777860	100.62	70	120	
In	115	1	No Gas	5380274	2.08	5424891	99.18	70	120	
Bi	209	1	No Gas	4067033	2.55	4087764	99.49	70	120	

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	051CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T10:55:12-05:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	No Gas	153482	0.00
Be	9	1	No Gas	38	70.83
V	51	2	He	2285	0.18
Cr	52	2	He	1573	0.10
Fe	56	2	He	13704	0.02
Se	78	2	He	130	4.10
Sn	118	2	He	1833	0.84
As	75	2	He	99	11.97
Ca	44	2	He	353	4.03
Na	23	2	He	135330	0.00
Mg	24	2	He	1360	0.42
K	39	2	He	66562	0.00
Mn	55	2	He	537	2.31
Co	59	2	He	240	1.74
Ni	60	2	He	227	9.20
Cu	63	2	He	2904	0.27
Zn	66	2	He	1160	0.68
Al	27	2	He	630	3.02
B	11	1	No Gas	26594	0.01
Al	27	1	No Gas	48913	0.00
Si	28	1	No Gas	726456	0.00
P	31	1	No Gas	47756	0.01
Ag	107	1	No Gas	1373	0.21
Cd	111	1	No Gas	23	382.35
Sr	88	1	No Gas	3444	0.12
Mo	95	1	No Gas	180	16.33
Sn	118	1	No Gas	4518	0.06
Sb	121	1	No Gas	670	1.18
Ba	137	1	No Gas	1323	0.26
Tl	205	1	No Gas	247	12.11
Tl	203	1	No Gas	60	100.15
Pb	208	1	No Gas	2207	0.33
U	238	1	No Gas	30	0.00
Ca	43	2	He	27	214.81
Sb	121	2	He	297	3.47
Ti	47	2	He	3	5196.15
Cu	63	1	No Gas	8306	0.07

Calibration Blank Report

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	1	No Gas	2755843	2.61
Ge	72	2	He	1558698	1.10

Calibration Blank Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Ge	72	1	No Gas	6887146	1.48
In	115	1	No Gas	7720244	3.19
Bi	209	1	No Gas	5354842	1.58

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	052CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T10:57:04-05:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	051CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	16011	0.01
V	51	2	He	23605	0.00
Cr	52	2	He	29205	0.01
Fe	56	2	He	2366320	0.00
Se	78	2	He	406	3.99
Sn	118	2	He	23522	0.00
As	75	2	He	3859	0.00
Ca	44	2	He	10448	0.02
Na	23	2	He	443984	0.00
Mg	24	2	He	166789	0.00
K	39	2	He	255694	0.00
Mn	55	2	He	17972	0.02
Co	59	2	He	42814	0.00
Ni	60	2	He	11068	0.03
Cu	63	2	He	33124	0.00
Zn	66	2	He	6505	0.04
Al	27	2	He	1820	0.16
B	11	1	No Gas	76034	0.00
Al	27	1	No Gas	172306	0.00
Si	28	1	No Gas	967704	0.00
P	31	1	No Gas	63850	0.00
Ag	107	1	No Gas	84253	0.00
Cd	111	1	No Gas	16604	0.03
Sr	88	1	No Gas	170882	0.00
Mo	95	1	No Gas	30228	0.01
Sn	118	1	No Gas	56419	0.00
Sb	121	1	No Gas	64452	0.00
Ba	137	1	No Gas	25643	0.01
Tl	205	1	No Gas	115890	0.00
Tl	203	1	No Gas	49567	0.01
Pb	208	1	No Gas	159070	0.00
U	238	1	No Gas	143416	0.00
Ca	43	2	He	630	3.15
Sb	121	2	He	25412	0.00
Cu	63	1	No Gas	72118	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2795306	1.84	2755843	101.43	70	120	

Calibration Standard Report

Ge	72	2	He	1517486	2.18	1558698	97.36	70	120	
Ge	72	1	No Gas	6886295	2.68	6887146	99.99	70	120	
In	115	1	No Gas	7640289	3.99	7720244	98.96	70	120	
Bi	209	1	No Gas	5528727	3.79	5354842	103.25	70	120	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	053CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T10:58:56-05:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	051CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	39316	0.00
V	51	2	He	55319	0.00
Cr	52	2	He	68826	0.00
Fe	56	2	He	5716396	0.00
Se	78	2	He	857	0.61
Sn	118	2	He	54785	0.00
As	75	2	He	9123	0.03
Ca	44	2	He	25858	0.00
Na	23	2	He	939434	0.00
Mg	24	2	He	412331	0.00
K	39	2	He	535309	0.00
Mn	55	2	He	42343	0.00
Co	59	2	He	109180	0.00
Ni	60	2	He	28791	0.01
Cu	63	2	He	79151	0.00
Zn	66	2	He	14558	0.01
Al	27	2	He	2844	0.02
B	11	1	No Gas	150026	0.00
Al	27	1	No Gas	291864	0.00
Si	28	1	No Gas	1274757	0.00
P	31	1	No Gas	92564	0.00
Ag	107	1	No Gas	211439	0.00
Cd	111	1	No Gas	40617	0.01
Sr	88	1	No Gas	418818	0.00
Mo	95	1	No Gas	75958	0.00
Sn	118	1	No Gas	131667	0.00
Sb	121	1	No Gas	160686	0.00
Ba	137	1	No Gas	61659	0.00
Tl	205	1	No Gas	289712	0.00
Tl	203	1	No Gas	120499	0.00
Pb	208	1	No Gas	403166	0.00
U	238	1	No Gas	367571	0.00
Ca	43	2	He	1607	0.47
Sb	121	2	He	64533	0.00
Cu	63	1	No Gas	166556	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2717870	2.64	2755843	98.62	70	120	

Calibration Standard Report

Ge	72	2	He	1517999	1.95	1558698	97.39	70	120	
Ge	72	1	No Gas	6861702	0.51	6887146	99.63	70	120	
In	115	1	No Gas	7516456	1.97	7720244	97.36	70	120	
Bi	209	1	No Gas	5455526	3.16	5354842	101.88	70	120	

Calibration Standard Report

Sample Table

Sample Name	10/50/100
Data File Name	054CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T11:00:48-05:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	051CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	82527	0.00
V	51	2	He	113256	0.00
Cr	52	2	He	138646	0.00
Fe	56	2	He	11975226	0.00
Se	78	2	He	1717	0.17
Sn	118	2	He	112820	0.00
As	75	2	He	18636	0.01
Ca	44	2	He	54321	0.00
Na	23	2	He	1773709	0.00
Mg	24	2	He	878300	0.00
K	39	2	He	1090243	0.00
Mn	55	2	He	86044	0.00
Co	59	2	He	224604	0.00
Ni	60	2	He	59490	0.00
Cu	63	2	He	159524	0.00
Zn	66	2	He	27585	0.01
Al	27	2	He	4287	0.01
B	11	1	No Gas	289141	0.00
Al	27	1	No Gas	447058	0.00
Si	28	1	No Gas	1768656	0.00
P	31	1	No Gas	147482	0.00
Ag	107	1	No Gas	440978	0.00
Cd	111	1	No Gas	85928	0.00
Sr	88	1	No Gas	901404	0.00
Mo	95	1	No Gas	159135	0.00
Sn	118	1	No Gas	274726	0.00
Sb	121	1	No Gas	337090	0.00
Ba	137	1	No Gas	128300	0.00
Tl	205	1	No Gas	607452	0.00
Tl	203	1	No Gas	257037	0.00
Pb	208	1	No Gas	827487	0.00
U	238	1	No Gas	782275	0.00
Ca	43	2	He	3184	0.33
Sb	121	2	He	134604	0.00
Cu	63	1	No Gas	342486	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2746624	0.55	2755843	99.67	70	120	

Calibration Standard Report

Ge	72	2	He	1496639	0.42	1558698	96.02	70	120	
Ge	72	1	No Gas	6783334	2.26	6887146	98.49	70	120	
In	115	1	No Gas	7508755	2.47	7720244	97.26	70	120	
Bi	209	1	No Gas	5471257	4.69	5354842	102.17	70	120	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	055CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T11:02:39-05:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	051CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	826867	0.00
V	51	2	He	1119197	0.00
Cr	52	2	He	1383794	0.00
Fe	56	2	He	116773725	0.00
Se	78	2	He	15186	0.00
Sn	118	2	He	1096747	0.00
As	75	2	He	186617	0.00
Ca	44	2	He	513863	0.00
Na	23	2	He	15889182	0.00
Mg	24	2	He	8164463	0.00
K	39	2	He	9668438	0.00
Mn	55	2	He	844934	0.00
Co	59	2	He	2288501	0.00
Ni	60	2	He	562446	0.00
Cu	63	2	He	1576343	0.00
Zn	66	2	He	259432	0.00
Al	27	2	He	36498	0.00
B	11	1	No Gas	2617259	0.00
Al	27	1	No Gas	3636200	0.00
Si	28	1	No Gas	10563431	0.00
P	31	1	No Gas	1029255	0.00
Ag	107	1	No Gas	4321987	0.00
Cd	111	1	No Gas	839179	0.00
Sr	88	1	No Gas	8569088	0.00
Mo	95	1	No Gas	1601034	0.00
Sn	118	1	No Gas	2681677	0.00
Sb	121	1	No Gas	3477598	0.00
Ba	137	1	No Gas	1287622	0.00
Tl	205	1	No Gas	6331910	0.00
Tl	203	1	No Gas	2698426	0.00
Pb	208	1	No Gas	8602913	0.00
U	238	1	No Gas	7975055	0.00
Ca	43	2	He	30046	0.00
Sb	121	2	He	1413784	0.00
Cu	63	1	No Gas	3326896	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2570285	0.52	2755843	93.27	70	120	

Calibration Standard Report

Ge	72	2	He	1475759	1.00	1558698	94.68	70	120	
Ge	72	1	No Gas	6742389	1.28	6887146	97.90	70	120	
In	115	1	No Gas	7473742	0.89	7720244	96.81	70	120	
Bi	209	1	No Gas	5322986	2.62	5354842	99.41	70	120	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	056CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T11:04:21-05:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	051CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	1569950	0.00
V	51	2	He	2172411	0.00
Cr	52	2	He	2658482	0.00
Fe	56	2	He	218811437	0.00
Se	78	2	He	28498	0.00
Sn	118	2	He	2195178	0.00
As	75	2	He	356880	0.00
Ca	44	2	He	1014869	0.00
Na	23	2	He	29694779	0.00
Mg	24	2	He	15604248	0.00
K	39	2	He	18569146	0.00
Mn	55	2	He	1689009	0.00
Co	59	2	He	4142572	0.00
Ni	60	2	He	1078322	0.00
Cu	63	2	He	2949158	0.00
Zn	66	2	He	490112	0.00
Al	27	2	He	68897	0.00
B	11	1	No Gas	4937598	0.00
Al	27	1	No Gas	6808534	0.00
Si	28	1	No Gas	18623433	0.00
P	31	1	No Gas	1920833	0.00
Ag	107	1	No Gas	8155549	0.00
Cd	111	1	No Gas	1618252	0.00
Sr	88	1	No Gas	17062116	0.00
Mo	95	1	No Gas	3110394	0.00
Sn	118	1	No Gas	5170264	0.00
Sb	121	1	No Gas	6492269	0.00
Ba	137	1	No Gas	2426422	0.00
Tl	205	1	No Gas	12093339	0.00
Tl	203	1	No Gas	5064301	0.00
Pb	208	1	No Gas	16318844	0.00
U	238	1	No Gas	14984756	0.00
Ca	43	2	He	57206	0.00
Sb	121	2	He	2696240	0.00
Cu	63	1	No Gas	6121414	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2544685	3.54	2755843	92.34	70	120	

Calibration Standard Report

Ge	72	2	He	1474249	1.84	1558698	94.58	70	120	
Ge	72	1	No Gas	6534975	1.58	6887146	94.89	70	120	
In	115	1	No Gas	7301870	2.67	7720244	94.58	70	120	
Bi	209	1	No Gas	5188881	2.34	5354842	96.90	70	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICCV
Data File Name	058_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T11:07:56-05:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	051CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	No Gas	101.677	2.275	3312607	1.91	100	101.7	90	110	
Be	9	1	No Gas	101.714	1.105	801765	1.24	100	101.7	90	110	
V	51	2	He	94.766	3.448	1075065	2.63	100	94.8	90	110	
Cr	52	2	He	96.547	0.241	1342857	0.62	100	96.5	90	110	
Fe	56	2	He	10017.776	1.409	115244592	0.61	10000	100.2	90	110	
Se	78	2	He	97.589	1.796	14669	0.97	100	97.6	90	110	
Sn	118	2	He	90.794	2.611	1035237	1.60	100	90.8	90	110	
As	75	2	He	100.400	2.313	187586	1.90	100	100.4	90	110	
Ca	44	2	He	9556.591	2.234	504434	1.41	10000	95.6	90	110	
Na	23	2	He	9907.236	1.010	15529078	0.49	10000	99.1	90	110	
Mg	24	2	He	9944.803	2.064	8124718	1.53	10000	99.4	90	110	
K	39	2	He	9982.030	1.948	9720574	1.51	10000	99.8	90	110	
Mn	55	2	He	93.815	1.967	822117	1.14	100	93.8	90	110	
Co	59	2	He	102.484	2.802	2248432	2.50	100	102.5	90	110	
Ni	60	2	He	98.242	2.643	554266	2.14	100	98.2	90	110	
Cu	63	2	He	102.342	2.121	1588052	2.08	100	102.3	90	110	
Zn	66	2	He	99.158	0.744	255528	1.26	100	99.2	90	110	
Al	27	2	He	98.559	2.522	35897	1.77	100	98.6	90	110	
B	11	1	No Gas	537.629	2.791	2677733	1.66	500	107.5	90	110	
Al	27	1	No Gas	100.799	1.289	3563729	1.07	100	100.8	90	110	
Si	28	1	No Gas	555.307	2.088	11055829	1.87	500	111.1	90	110	ICV Main CR1 Failed
P	31	1	No Gas	506.379	2.529	1023426	2.31	500	101.3	90	110	
Ag	107	1	No Gas	100.241	2.247	4198543	1.93	100	100.2	90	110	
Cd	111	1	No Gas	97.571	1.377	807268	0.83	100	97.6	90	110	
Sr	88	1	No Gas	97.126	2.343	8419973	1.39	100	97.1	90	110	
Mo	95	1	No Gas	99.635	1.400	1582263	0.46	100	99.6	90	110	
Sn	118	1	No Gas	96.716	1.580	2558524	1.76	100	96.7	90	110	
Sb	121	1	No Gas	99.183	2.320	3326926	1.96	100	99.2	90	110	
Ba	137	1	No Gas	96.842	3.149	1207505	2.16	100	96.8	90	110	
Tl	205	1	No Gas	102.333	2.899	6092896	1.47	100	102.3	90	110	
Tl	203	1	No Gas	102.970	5.196	2575435	1.38	100	103.0	90	110	
Pb	208	1	No Gas	99.693	1.356	8024877	2.71	100	99.7	90	110	
U	238	1	No Gas	98.001	2.232	7258476	2.46	100	98.0	90	110	
Ca	43	2	He	10082.759	5.333	30230	4.51	10000	100.8	90	110	
Sb	121	2	He	99.371	2.317	1402916	1.50	100	99.4	90	110	
Ti	47	2	He	95.687	1.350	34457	0.93	100	95.7	90	110	
Cu	63	1	No Gas	99.657	2.016	3164622	1.83	100	99.7	90	110	

QC ISTD Table

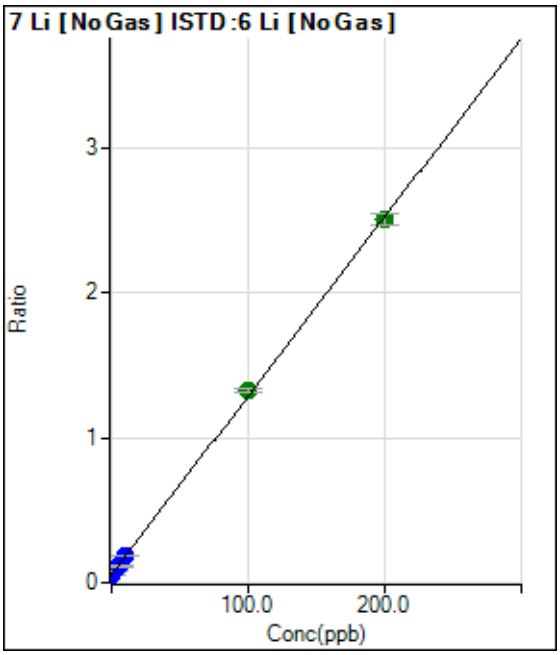
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2533005	2.19	2755843	91.91	70	120	
Ge	72	2	He	1529433	0.85	1558698	98.12	70	120	
Ge	72	1	No Gas	6700544	0.40	6887146	97.29	70	120	
In	115	1	No Gas	7445190	1.00	7720244	96.44	70	120	
Bi	209	1	No Gas	5091782	3.94	5354842	95.09	70	120	

Calibration for 058_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\041420A.b\
Analysis File: 041420A.batch.bin
DA Date-Time: 4/14/2020 8:58:31 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	051CALB.d	CAL BLK	4/14/2020 10:55:12 AM
2	052CALS.d	2/10/200	4/14/2020 10:57:04 AM
3	053CALS.d	5/25/500	4/14/2020 10:58:56 AM
4	054CALS.d	10/50/100	4/14/2020 11:00:48 AM
5	055CALS.d	100/500/10K	4/14/2020 11:02:39 AM
6	056CALS.d	200/1000/20K	4/14/2020 11:04:21 AM

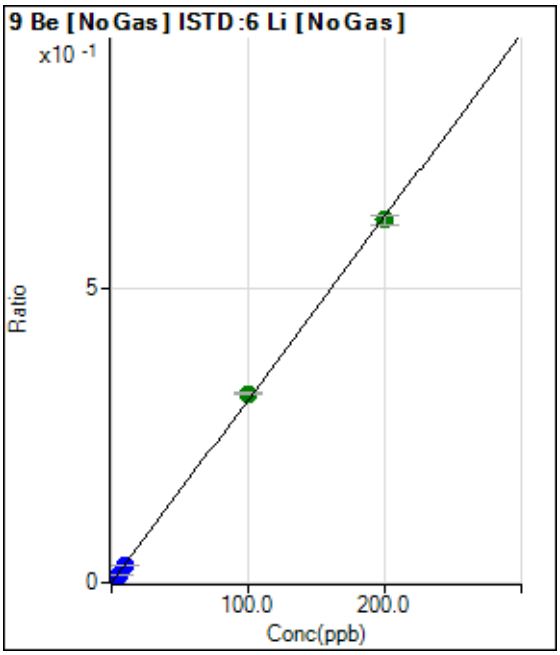
Calibration for 058_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	153482.29	0.0557	P	3.0
2	☐	2.000	1.842	219142.19	0.0784	P	1.2
3	☐	5.000	4.674	307802.44	0.1133	P	1.8
4	☐	10.000	10.091	494398.08	0.1800	P	0.7
5	☐	100.000	102.991	3403454.22	1.3242	A	1.5
6	☐	200.000	198.510	6358755.11	2.5007	A	3.1

y = 0.0123 * x + 0.0557
R = 0.9998
DL = 0.4113
BEC = 4.524

Weight: <None>
Min Conc: <None>

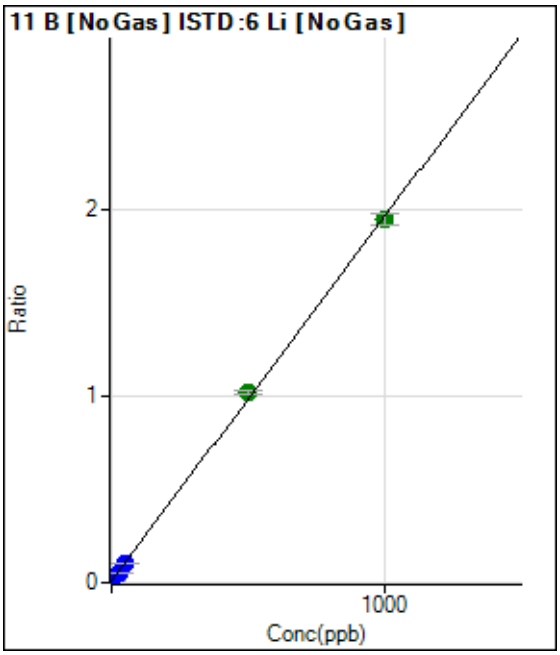


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	38.33	0.0000	P	29.6
2	☐	2.000	1.837	16010.85	0.0057	P	3.0
3	☐	5.000	4.646	39316.36	0.0145	P	2.9
4	☐	10.000	9.650	82527.01	0.0300	P	0.9
5	☐	100.000	103.365	826867.07	0.3217	A	1.1
6	☐	200.000	198.346	1569949.56	0.6173	A	2.5

y = 0.0031 * x + 1.3968E-005
R = 0.9998
DL = 0.003981
BEC = 0.004488

Weight: <None>
Min Conc: <None>

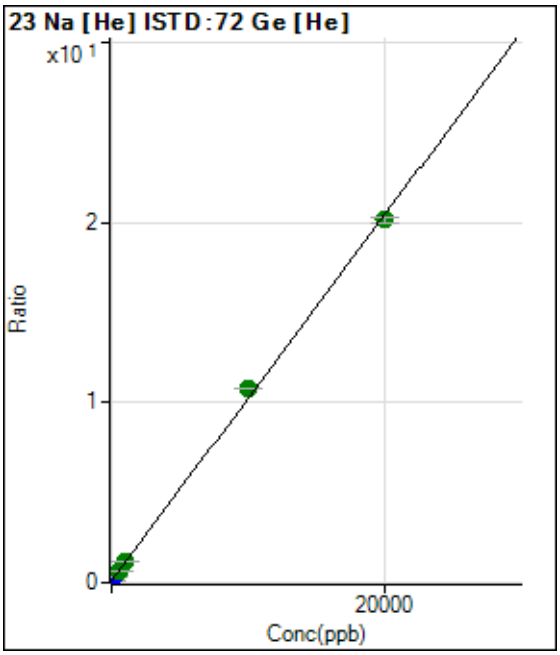
Calibration for 058_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26593.55	0.0097	P	2.3
2	☐	10.000	9.006	76034.32	0.0272	P	1.7
3	☐	25.000	23.383	150026.25	0.0552	P	2.7
4	☐	50.000	49.063	289140.56	0.1053	P	1.2
5	☐	500.000	517.538	2617259.34	1.0183	A	1.2
6	☐	1000.000	991.328	4937597.84	1.9417	A	3.3

y = 0.0019 * x + 0.0097
R = 0.9998
DL = 0.3466
BEC = 4.953

Weight: <None>
Min Conc: <None>

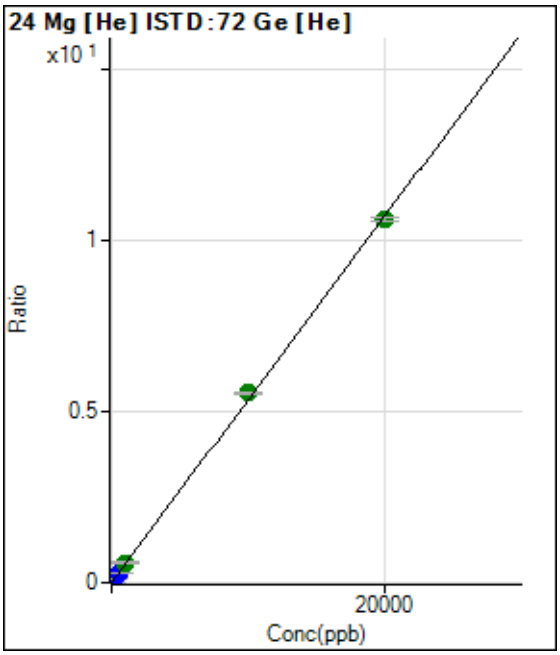


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	135330.39	0.0868	P	1.7
2	☐	200.000	202.541	443984.45	0.2926	P	1.7
3	☐	500.000	523.935	939433.55	0.6192	A	4.5
4	☐	1000.000	1080.872	1773708.77	1.1852	A	1.1
5	☐	10000.00	10510.37	15889182.26	10.7669	A	0.4
6	☐	20000.00	19740.14	29694778.72	20.1456	A	1.7

y = 0.0010 * x + 0.0868
R = 0.9995
DL = 4.461
BEC = 85.45

Weight: <None>
Min Conc: <None>

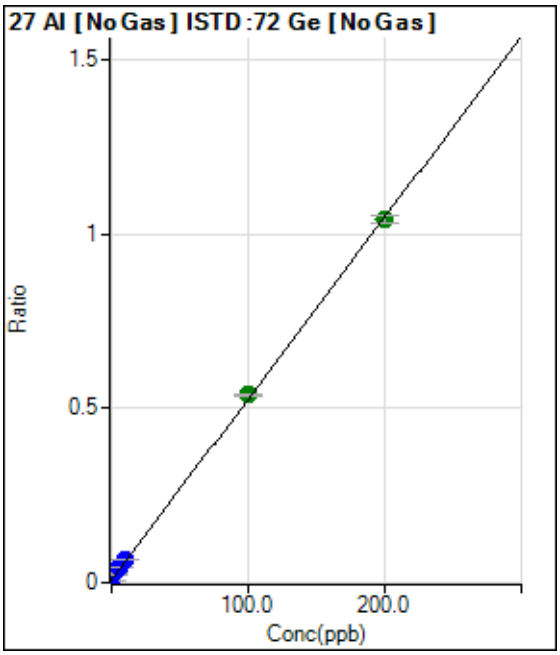
Calibration for 058_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1360.09	0.0009	P	6.6
2	☐	200.000	204.181	166789.50	0.1099	P	1.3
3	☐	500.000	506.990	412331.31	0.2717	P	1.4
4	☐	1000.000	1097.038	878300.35	0.5868	A	1.2
5	☐	10000.00	10356.09	8164462.79	5.5324	A	0.8
6	☐	20000.00	19816.88	15604247.68	10.5857	A	1.1

y = 5.3413E-004 * x + 8.7291E-004
R = 0.9998
DL = 0.3226
BEC = 1.634

Weight: <None>
Min Conc: <None>

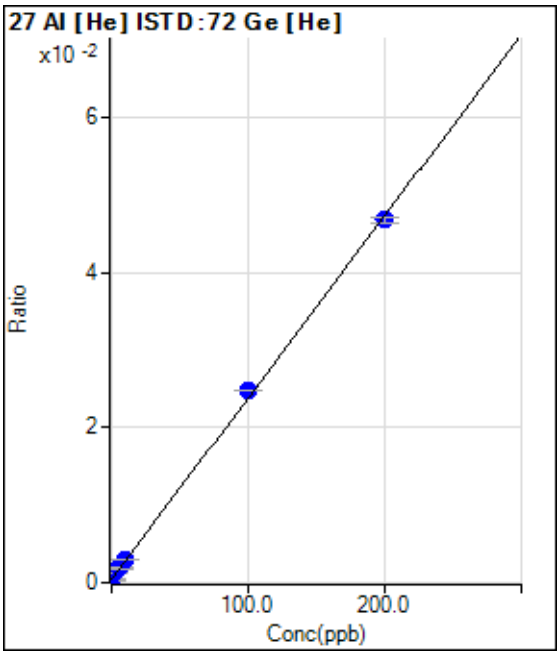


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	48913.14	0.0071	P	2.3
2	☐	2.000	3.445	172305.76	0.0250	P	4.3
3	☐	5.000	6.806	291863.88	0.0425	P	0.4
4	☐	10.000	11.298	447057.57	0.0659	P	1.9
5	☐	100.000	102.236	3636200.15	0.5394	A	1.5
6	☐	200.000	198.758	6808533.86	1.0418	A	1.9

y = 0.0052 * x + 0.0071
R = 0.9999
DL = 0.09617
BEC = 1.365

Weight: <None>
Min Conc: <None>

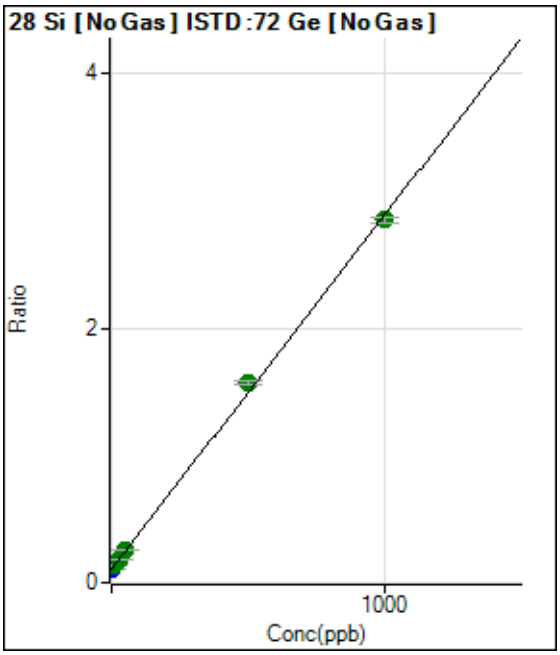
Calibration for 058_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	630.03	0.0004	P	19.8
2	☐	2.000	3.395	1820.15	0.0012	P	0.7
3	☐	5.000	6.276	2843.68	0.0019	P	1.8
4	☐	10.000	10.510	4287.40	0.0029	P	0.9
5	☐	100.000	103.932	36498.27	0.0247	P	0.7
6	☐	200.000	197.963	68896.97	0.0467	P	1.5

y = 2.3406E-004 * x + 4.0466E-004
R = 0.9997
DL = 1.026
BEC = 1.729

Weight: <None>
Min Conc: <None>

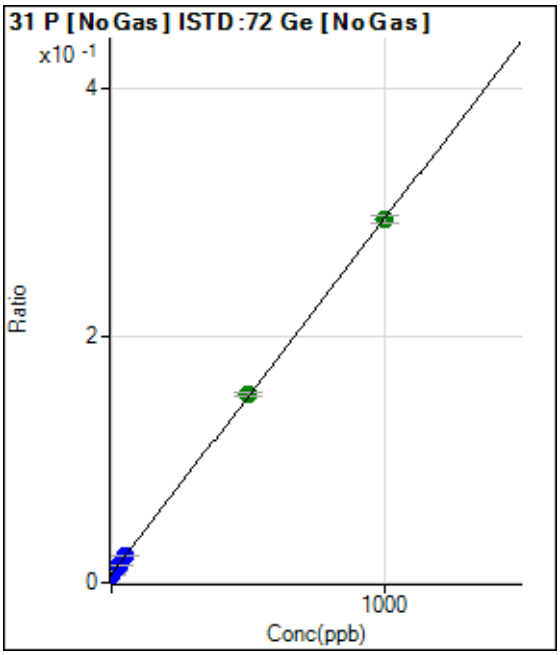


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	726456.11	0.1055	P	1.8
2	☐	10.000	12.619	967703.61	0.1406	A	3.2
3	☐	25.000	28.864	1274756.54	0.1858	A	0.1
4	☐	50.000	55.832	1768656.06	0.2608	A	1.6
5	☐	500.000	525.435	10563431.09	1.5669	A	1.6
6	☐	1000.000	986.868	18623432.64	2.8504	A	1.9

y = 0.0028 * x + 0.1055
R = 0.9996
DL = 2.034
BEC = 37.93

Weight: <None>
Min Conc: <None>

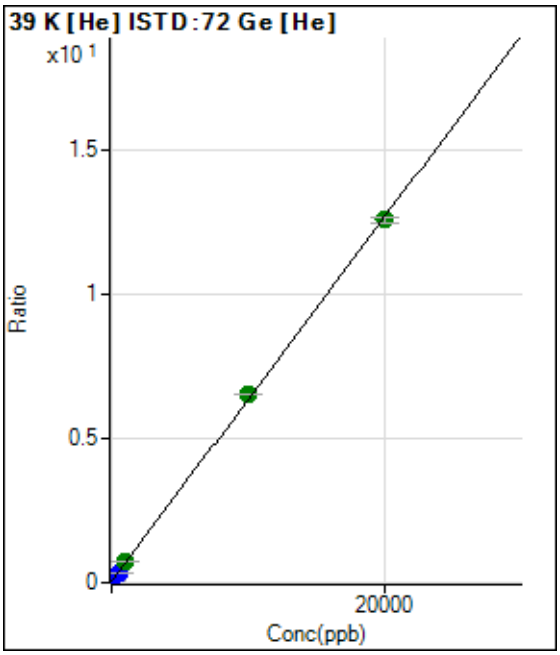
Calibration for 058_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	47755.82	0.0069	P	3.7
2	☐	10.000	8.129	63850.47	0.0093	P	2.4
3	☐	25.000	22.765	92564.27	0.0135	P	0.7
4	☐	50.000	51.443	147481.58	0.0217	P	1.9
5	☐	500.000	506.145	1029254.98	0.1527	A	2.4
6	☐	1000.000	996.930	1920832.52	0.2940	A	2.1

y = 2.8794E-004 * x + 0.0069
R = 1.0000
DL = 2.644
BEC = 24.09

Weight: <None>
Min Conc: <None>

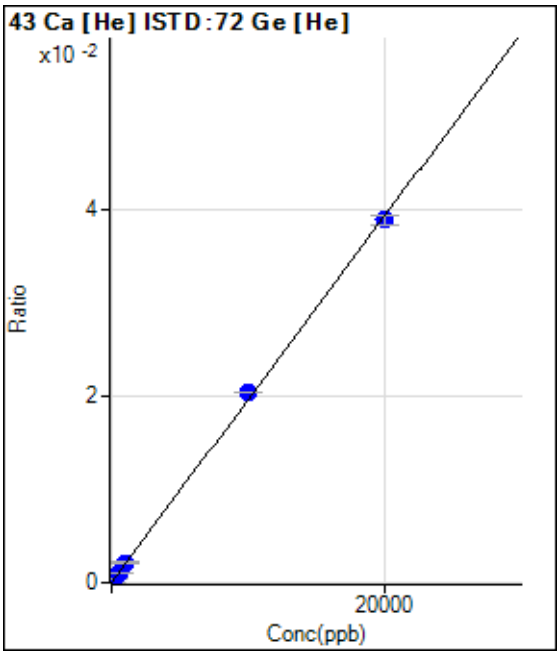


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	66561.86	0.0427	P	1.5
2	☐	200.000	198.938	255694.10	0.1685	P	1.3
3	☐	500.000	490.156	535309.43	0.3527	P	1.8
4	☐	1000.000	1084.230	1090243.37	0.7285	A	0.9
5	☐	10000.00	10291.19	9668437.57	6.5517	A	0.7
6	☐	20000.00	19850.44	18569146.39	12.5977	A	1.8

y = 6.3248E-004 * x + 0.0427
R = 0.9998
DL = 3.052
BEC = 67.51

Weight: <None>
Min Conc: <None>

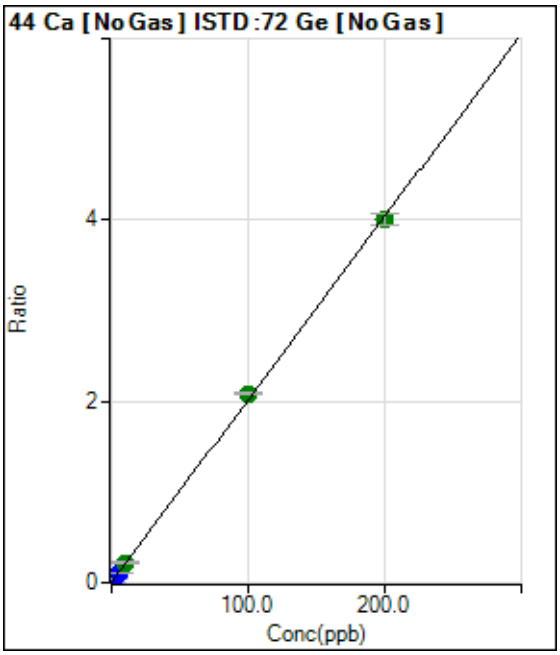
Calibration for 058_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26.67	0.0000	P	56.6
2	☐	200.000	203.605	630.03	0.0004	P	21.1
3	☐	500.000	532.058	1606.80	0.0011	P	9.0
4	☐	1000.000	1076.830	3183.76	0.0021	P	10.2
5	☐	10000.00	10383.68	30046.36	0.0204	P	0.9
6	☐	20000.00	19803.48	57205.55	0.0388	P	2.8

y = 1.9592E-006 * x + 1.7047E-005
R = 0.9997
DL = 14.76
BEC = 8.701

Weight: <None>
Min Conc: <None>

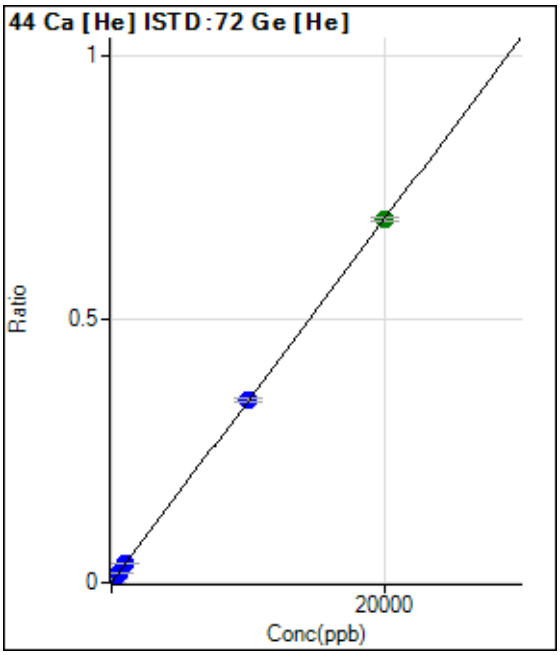


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	19881.29	0.0029	P	5.1
2	☐	2.000	2.000	297438.04	0.0432	P	2.0
3	☐	5.000	4.878	694423.48	0.1012	P	1.3
4	☐	10.000	10.873	1505548.94	0.2220	A	3.0
5	☐	100.000	103.276	14054082.71	2.0846	A	0.8
6	☐	200.000	198.322	26133416.28	4.0004	A	3.3

y = 0.0202 * x + 0.0029
R = 0.9998
DL = 0.02181
BEC = 0.1433

Weight: <None>
Min Conc: <None>

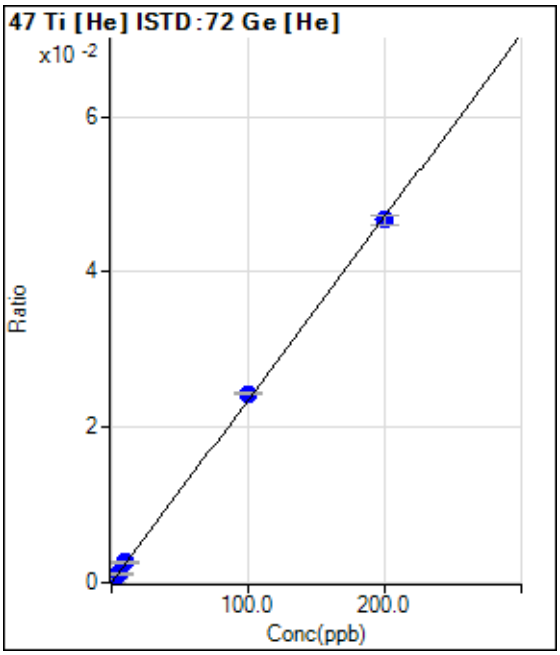
Calibration for 058_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	353.34	0.0002	P	13.3
2	☐	200.000	193.029	10447.50	0.0069	P	0.6
3	☐	500.000	487.422	25857.94	0.0170	P	2.3
4	☐	1000.000	1045.684	54320.70	0.0363	P	0.5
5	☐	10000.00	10089.72	513863.47	0.3482	P	2.1
6	☐	20000.00	19953.23	1014869.23	0.6885	A	1.2

y = 3.4493E-005 * x + 2.2650E-004
R = 1.0000
DL = 2.614
BEC = 6.567

Weight: <None>
Min Conc: <None>

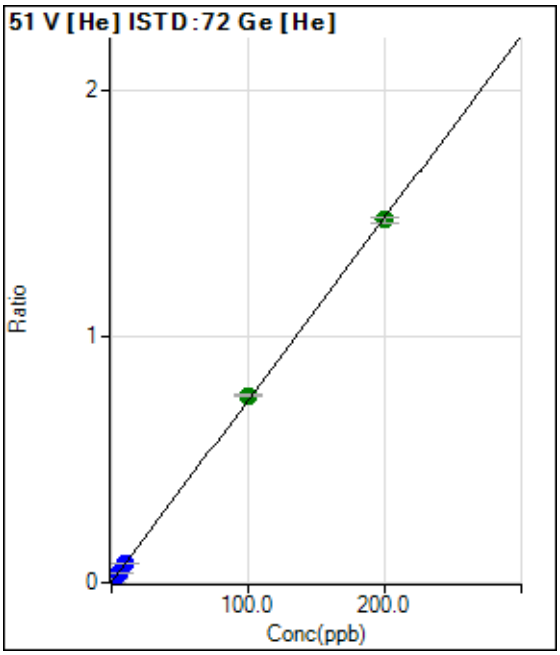


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3.33	0.0000	P	173.2
2	☐	2.000	1.992	713.37	0.0005	P	15.5
3	☐	5.000	4.882	1750.14	0.0012	P	11.0
4	☐	10.000	11.060	3900.63	0.0026	P	11.1
5	☐	100.000	103.125	35833.86	0.0243	P	1.2
6	☐	200.000	198.387	68839.38	0.0467	P	2.8

y = 2.3544E-004 * x + 2.1473E-006
R = 0.9998
DL = 0.04739
BEC = 0.009121

Weight: <None>
Min Conc: <None>

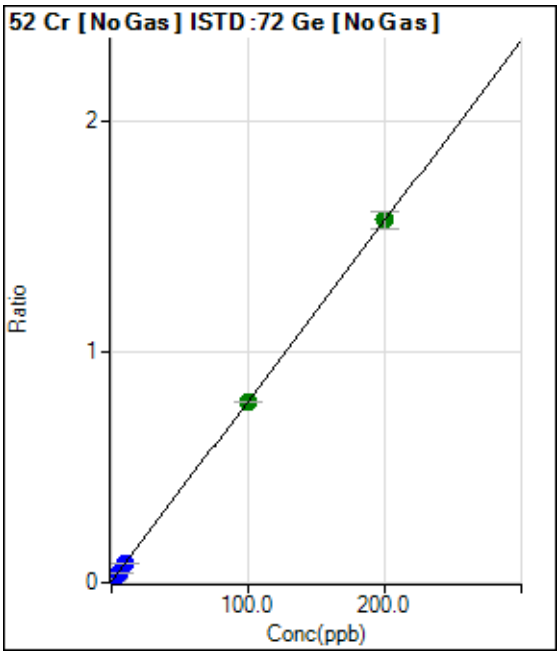
Calibration for 058_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2284.65	0.0015	P	4.2
2	☐	2.000	1.904	23604.80	0.0156	P	2.2
3	☐	5.000	4.725	55318.79	0.0364	P	1.8
4	☐	10.000	10.024	113255.63	0.0757	P	0.8
5	☐	100.000	102.249	1119196.76	0.7584	A	1.2
6	☐	200.000	198.882	2172410.68	1.4739	A	1.6

y = 0.0074 * x + 0.0015
R = 0.9999
DL = 0.02519
BEC = 0.198

Weight: <None>
Min Conc: <None>

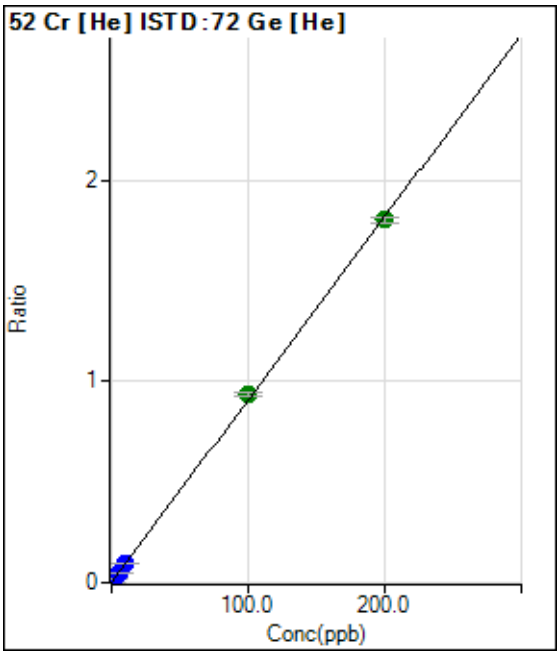


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33180.55	0.0048	P	3.4
2	☐	2.000	1.953	138518.03	0.0201	P	1.9
3	☐	5.000	4.828	292663.21	0.0427	P	1.2
4	☐	10.000	10.155	572117.49	0.0844	P	3.6
5	☐	100.000	99.100	5267846.38	0.7813	A	0.1
6	☐	200.000	200.447	10289977.34	1.5754	A	4.6

y = 0.0078 * x + 0.0048
R = 1.0000
DL = 0.06328
BEC = 0.6151

Weight: <None>
Min Conc: <None>

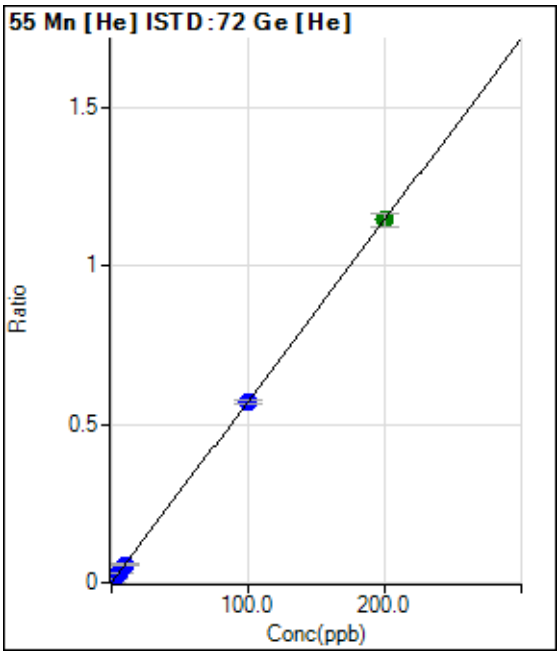
Calibration for 058_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1573.45	0.0010	P	0.9
2	☐	2.000	2.008	29204.82	0.0192	P	1.5
3	☐	5.000	4.881	68826.27	0.0453	P	2.6
4	☐	10.000	10.087	138645.52	0.0926	P	1.4
5	☐	100.000	103.117	1383793.52	0.9377	A	1.3
6	☐	200.000	198.440	2658482.36	1.8036	A	1.5

y = 0.0091 * x + 0.0010
R = 0.9998
DL = 0.003125
BEC = 0.1111

Weight: <None>
Min Conc: <None>

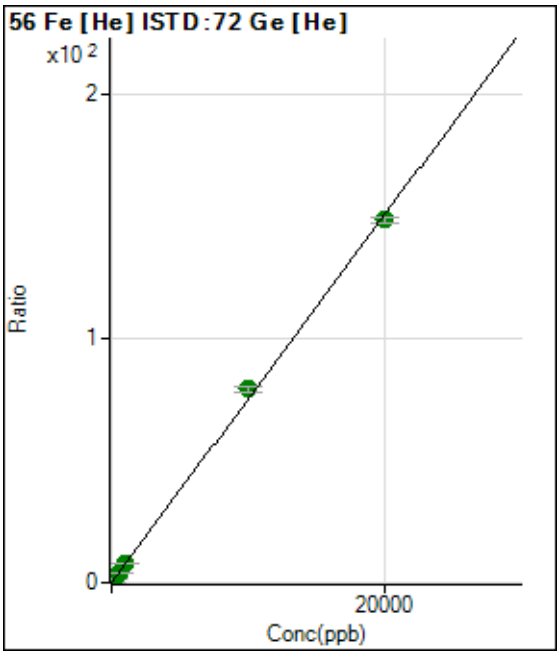


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	536.68	0.0003	P	12.0
2	☐	2.000	2.008	17972.13	0.0118	P	2.1
3	☐	5.000	4.812	42342.56	0.0279	P	2.3
4	☐	10.000	9.979	86044.21	0.0575	P	0.8
5	☐	100.000	99.934	844933.58	0.5726	P	2.3
6	☐	200.000	200.039	1689008.88	1.1459	A	3.6

y = 0.0057 * x + 3.4422E-004
R = 1.0000
DL = 0.02173
BEC = 0.06011

Weight: <None>
Min Conc: <None>

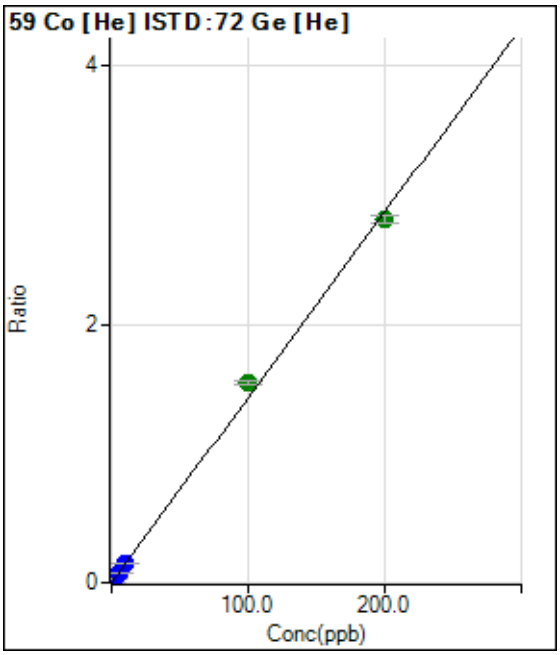
Calibration for 058_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13703.80	0.0088	P	1.7
2	☐	200.000	206.182	2366320.48	1.5596	A	0.9
3	☐	500.000	499.691	5716395.54	3.7672	A	3.0
4	☐	1000.000	1062.706	11975226.49	8.0019	A	2.3
5	☐	10000.00	10521.35	116773724.9	79.1447	A	3.2
6	☐	20000.00	19736.13	218811436.7	148.453	A	1.7

y = 0.0075 * x + 0.0088
R = 0.9995
DL = 0.05966
BEC = 1.169

Weight: <None>
Min Conc: <None>

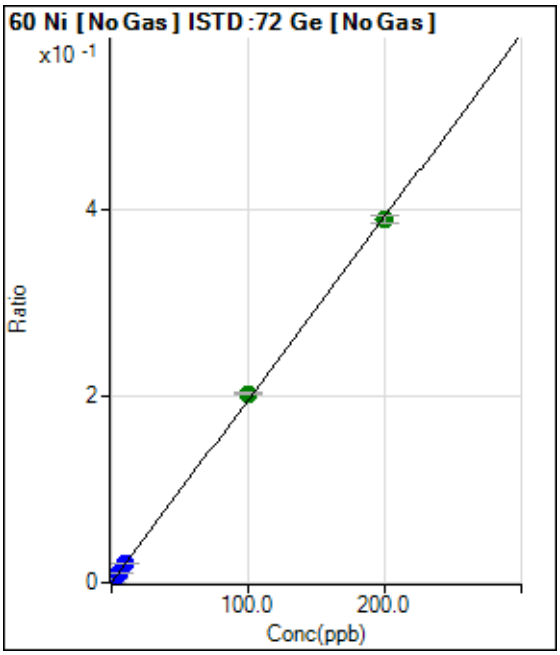


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	240.01	0.0002	P	4.1
2	☐	2.000	1.957	42814.27	0.0282	P	3.4
3	☐	5.000	5.005	109179.69	0.0719	P	2.7
4	☐	10.000	10.452	224603.54	0.1501	P	1.8
5	☐	100.000	108.107	2288500.80	1.5509	A	1.9
6	☐	200.000	195.924	4142571.61	2.8106	A	2.1

y = 0.0143 * x + 1.5398E-004
R = 0.9988
DL = 0.001326
BEC = 0.01073

Weight: <None>
Min Conc: <None>

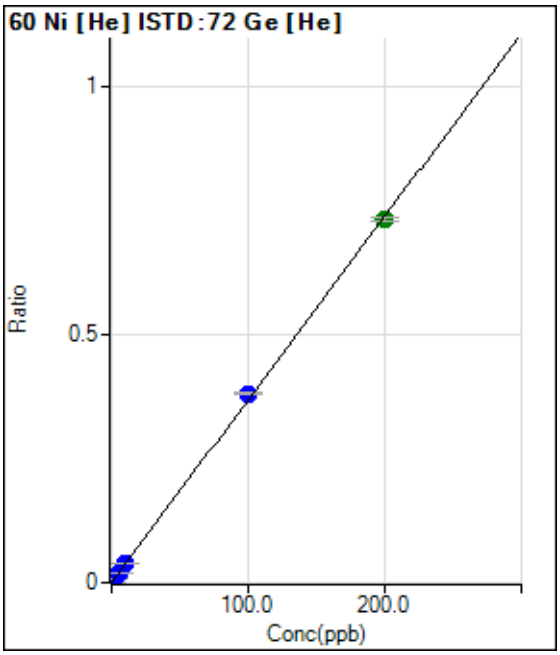
Calibration for 058_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	973.39	0.0001	P	5.6
2	☐	2.000	1.952	27267.69	0.0040	P	3.5
3	☐	5.000	5.012	68271.55	0.0099	P	1.1
4	☐	10.000	10.406	139043.48	0.0205	P	3.7
5	☐	100.000	103.191	1362501.49	0.2021	A	1.2
6	☐	200.000	198.384	2537653.71	0.3884	A	2.1

y = 0.0020 * x + 1.4141E-004
R = 0.9998
DL = 0.01208
BEC = 0.07226

Weight: <None>
Min Conc: <None>

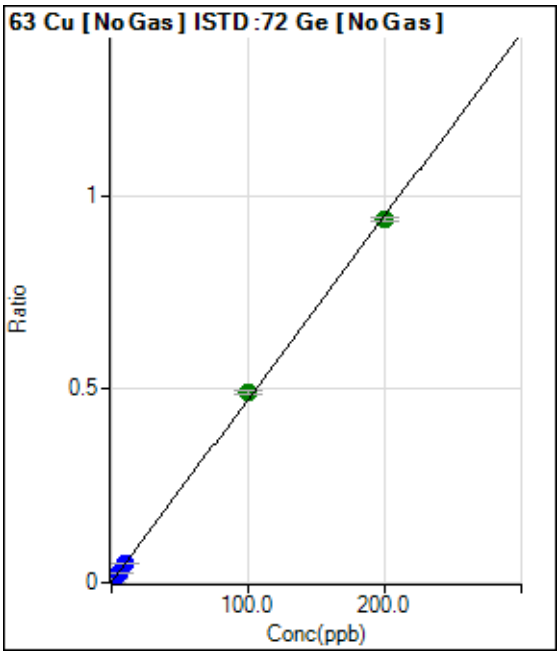


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	226.67	0.0001	P	19.7
2	☐	2.000	1.940	11067.99	0.0073	P	5.8
3	☐	5.000	5.106	28790.88	0.0190	P	3.4
4	☐	10.000	10.739	59489.98	0.0397	P	1.5
5	☐	100.000	103.317	562446.06	0.3812	P	1.4
6	☐	200.000	198.302	1078321.96	0.7314	A	1.1

y = 0.0037 * x + 1.4522E-004
R = 0.9998
DL = 0.02325
BEC = 0.03938

Weight: <None>
Min Conc: <None>

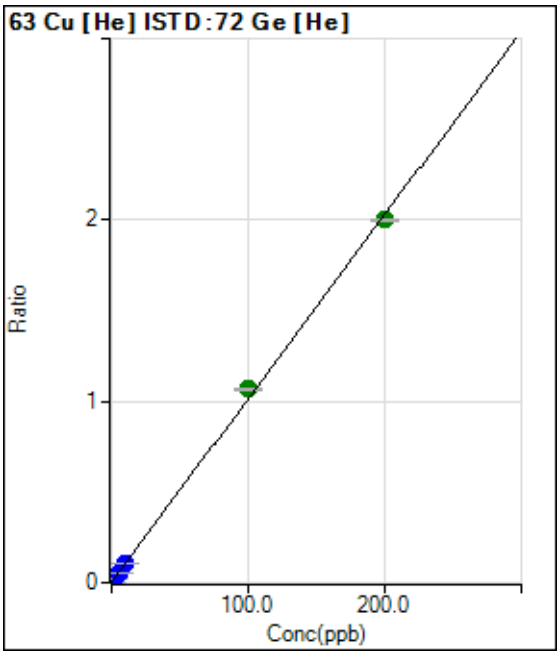
Calibration for 058_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8306.03	0.0012	P	7.2
2	☐	2.000	1.961	72117.83	0.0105	P	2.1
3	☐	5.000	4.880	166555.83	0.0243	P	1.2
4	☐	10.000	10.428	342486.45	0.0505	P	2.6
5	☐	100.000	104.143	3326896.00	0.4935	A	2.0
6	☐	200.000	197.911	6121414.07	0.9368	A	1.0

y = 0.0047 * x + 0.0012
R = 0.9997
DL = 0.05545
BEC = 0.2553

Weight: <None>
Min Conc: <None>

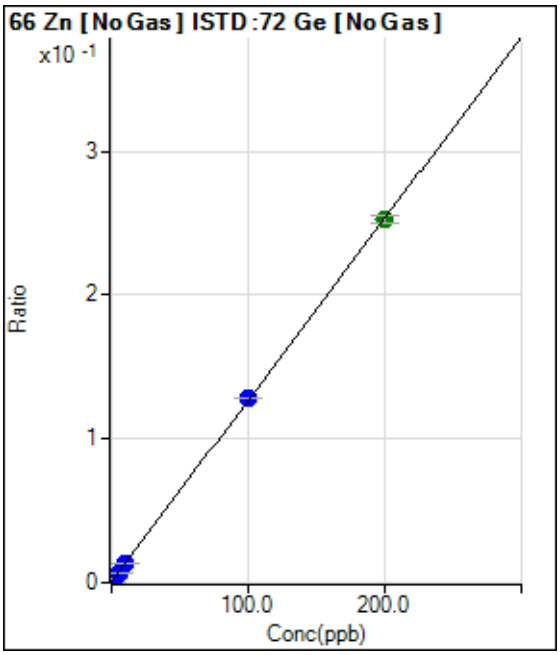


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2903.71	0.0019	P	7.3
2	☐	2.000	1.972	33124.14	0.0218	P	3.1
3	☐	5.000	4.965	79150.81	0.0521	P	1.1
4	☐	10.000	10.341	159523.62	0.1066	P	1.5
5	☐	100.000	105.287	1576342.95	1.0682	A	0.6
6	☐	200.000	197.341	2949157.87	2.0005	A	0.2

y = 0.0101 * x + 0.0019
R = 0.9995
DL = 0.04049
BEC = 0.1839

Weight: <None>
Min Conc: <None>

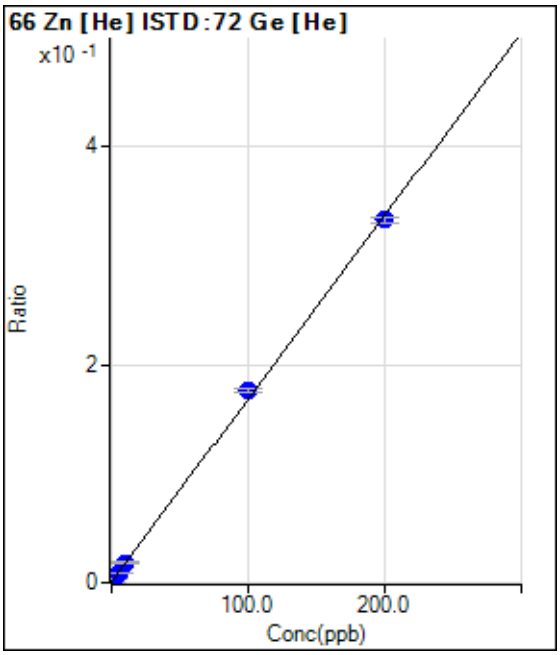
Calibration for 058_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4167.37	0.0006	P	1.7
2	☐	2.000	2.163	22957.03	0.0033	P	3.5
3	☐	5.000	5.097	48296.42	0.0070	P	2.1
4	☐	10.000	10.357	92755.93	0.0137	P	2.5
5	☐	100.000	101.190	865223.45	0.1283	P	0.8
6	☐	200.000	199.383	1648640.39	0.2523	A	2.0

y = 0.0013 * x + 6.0519E-004
R = 1.0000
DL = 0.0239
BEC = 0.4794

Weight: <None>
Min Conc: <None>

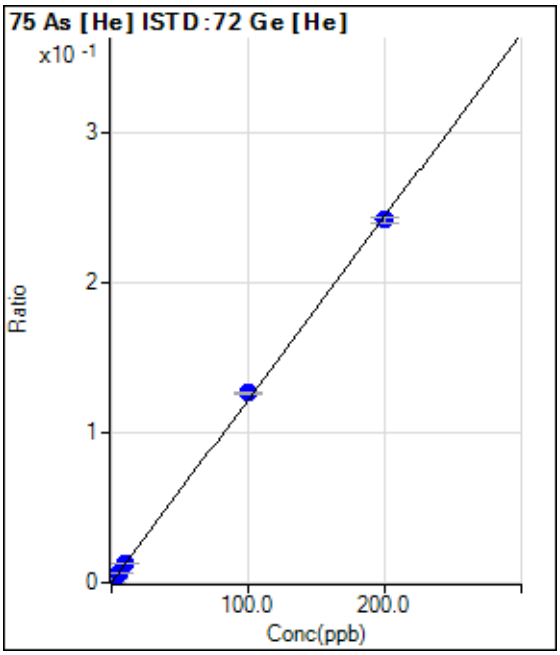


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1160.07	0.0007	P	6.9
2	☐	2.000	2.113	6504.98	0.0043	P	3.2
3	☐	5.000	5.274	14558.08	0.0096	P	1.2
4	☐	10.000	10.544	27585.14	0.0184	P	3.1
5	☐	100.000	104.369	259431.90	0.1758	P	1.8
6	☐	200.000	197.780	490111.50	0.3325	P	1.3

y = 0.0017 * x + 7.4395E-004
R = 0.9997
DL = 0.09236
BEC = 0.4435

Weight: <None>
Min Conc: <None>

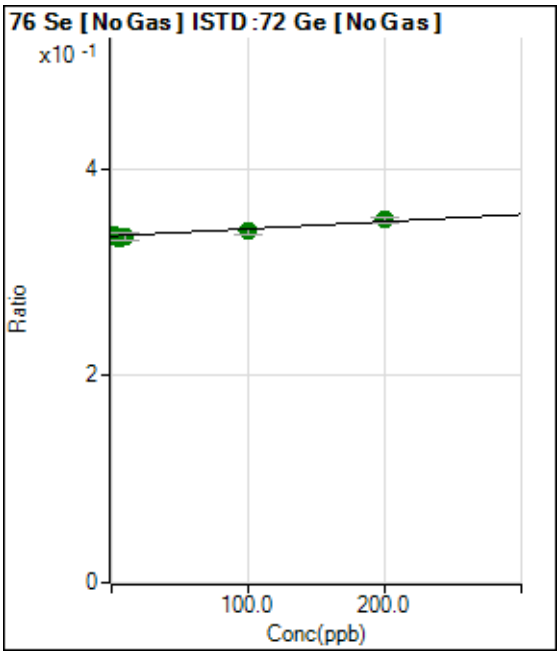
Calibration for 058_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	98.89	0.0001	P	12.9
2	☐	2.000	2.031	3859.46	0.0025	P	2.1
3	☐	5.000	4.871	9123.12	0.0060	P	3.4
4	☐	10.000	10.145	18636.23	0.0125	P	1.0
5	☐	100.000	103.513	186616.89	0.1265	P	0.9
6	☐	200.000	198.239	356880.21	0.2421	P	1.8

y = 0.0012 * x + 6.3502E-005
R = 0.9998
DL = 0.02005
BEC = 0.052

Weight: <None>
Min Conc: <None>

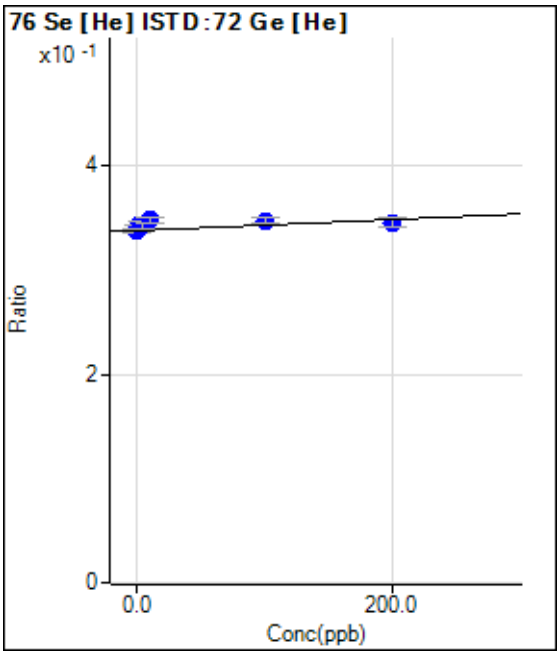


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2308282.88	0.3352	A	1.7
2	☐	2.000	15.737	2316258.56	0.3363	A	1.1
3	☐	5.000	-34.962	2283219.55	0.3327	A	0.7
4	☐	10.000	-11.254	2267738.61	0.3344	A	2.0
5	☐	100.000	59.398	2287785.43	0.3394	A	1.5
6	☐	200.000	222.226	2292096.53	0.3508	A	1.4

y = 7.0037E-005 * x + 0.3352
R = 0.9618
DL = 247.7
BEC = 4786

Weight: <None>
Min Conc: <None>

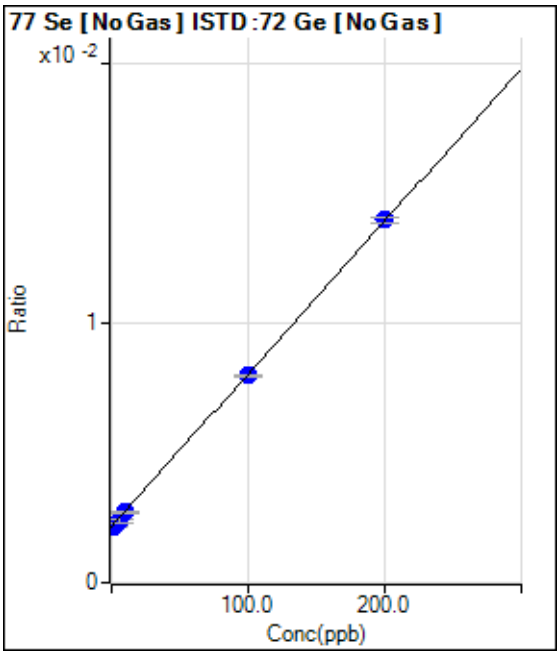
Calibration for 058_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	526607.17	0.3379	P	0.7
2	☐	2.000	103.922	521201.43	0.3435	P	0.1
3	☐	5.000	94.135	520448.48	0.3429	P	2.3
4	☐	10.000	191.667	521097.06	0.3482	P	1.6
5	☐	100.000	179.207	512812.04	0.3475	P	1.5
6	☐	200.000	148.065	509697.86	0.3458	P	2.5

y = 5.3829E-005 * x + 0.3379
R = 0.4261
DL = 140.6
BEC = 6277

Weight: <None>
Min Conc: <None>

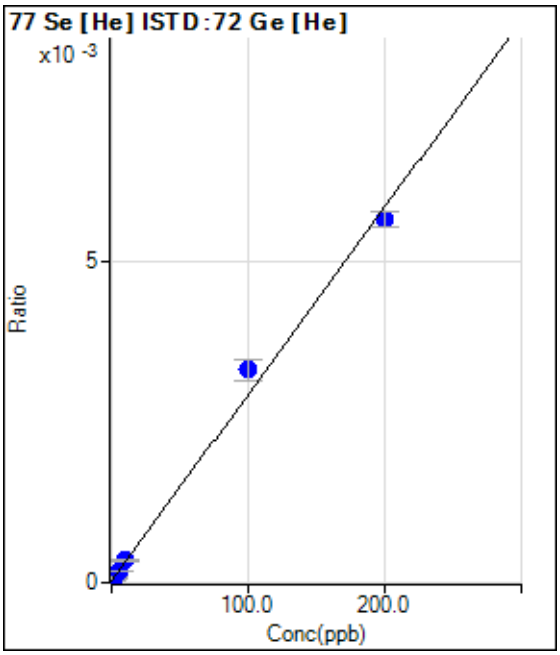


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	14915.18	0.0022	P	1.0
2	☐	2.000	-0.686	14634.80	0.0021	P	1.1
3	☐	5.000	2.958	16049.85	0.0023	P	5.9
4	☐	10.000	9.168	18349.48	0.0027	P	2.1
5	☐	100.000	98.697	53720.71	0.0080	P	0.7
6	☐	200.000	200.771	91272.59	0.0140	P	1.8

y = 5.8791E-005 * x + 0.0022
R = 0.9999
DL = 1.134
BEC = 36.84

Weight: <None>
Min Conc: <None>

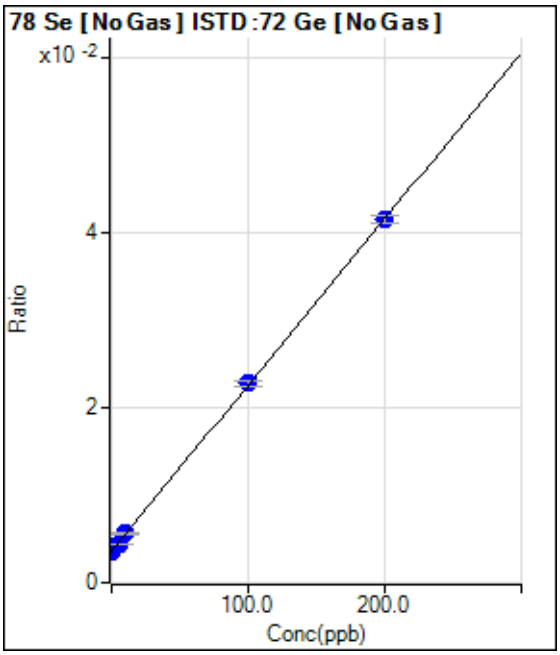
Calibration for 058_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	40.00	0.0000	P	25.9
2	☐	2.000	1.454	103.33	0.0001	P	30.2
3	☐	5.000	5.165	266.68	0.0002	P	6.3
4	☐	10.000	11.068	520.02	0.0003	P	7.3
5	☐	100.000	113.059	4884.31	0.0033	P	10.5
6	☐	200.000	193.419	8322.72	0.0056	P	4.1

y = 2.9063E-005 * x + 2.5709E-005
R = 0.9969
DL = 0.6885
BEC = 0.8846

Weight: <None>
Min Conc: <None>

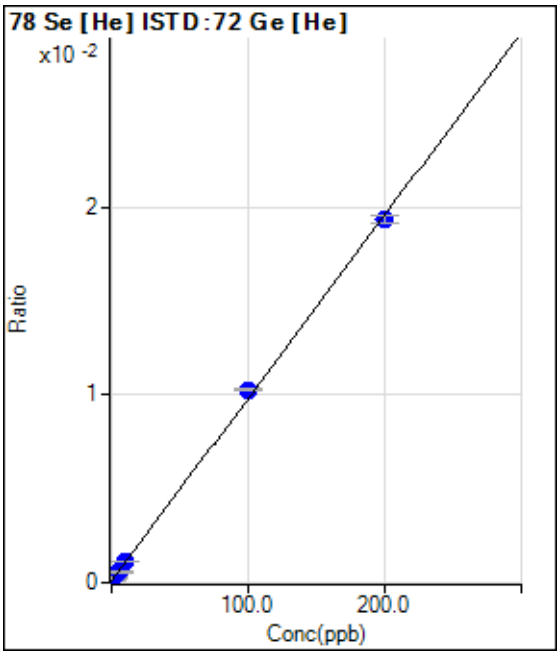


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	24829.78	0.0036	P	2.9
2	☐	2.000	2.457	28029.45	0.0041	P	1.9
3	☐	5.000	4.382	30441.52	0.0044	P	2.0
4	☐	10.000	10.602	38070.81	0.0056	P	2.8
5	☐	100.000	101.041	153351.20	0.0227	P	3.2
6	☐	200.000	199.460	270454.97	0.0414	P	2.2

y = 1.8946E-004 * x + 0.0036
R = 1.0000
DL = 1.671
BEC = 19.03

Weight: <None>
Min Conc: <None>

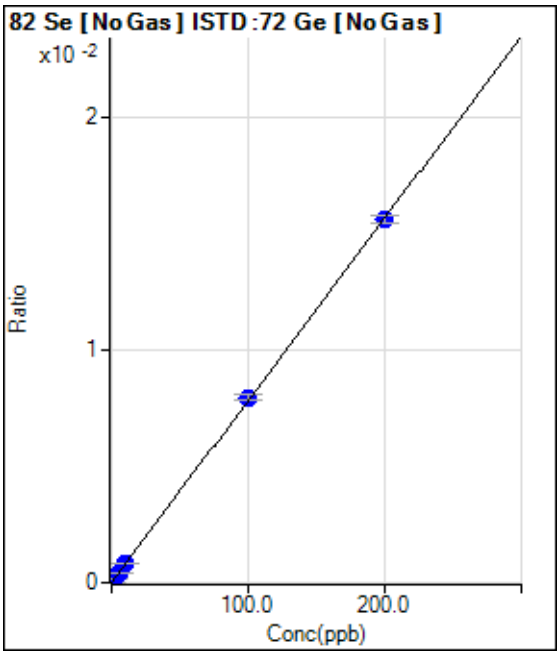
Calibration for 058_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	130.00	0.0001	P	6.1
2	☐	2.000	1.888	406.01	0.0003	P	15.6
3	☐	5.000	4.940	856.70	0.0006	P	6.9
4	☐	10.000	10.916	1716.78	0.0011	P	2.5
5	☐	100.000	104.757	15185.91	0.0103	P	1.1
6	☐	200.000	197.578	28498.05	0.0193	P	2.0

y = 9.7438E-005 * x + 8.3431E-005
R = 0.9996
DL = 0.1574
BEC = 0.8562

Weight: <None>
Min Conc: <None>

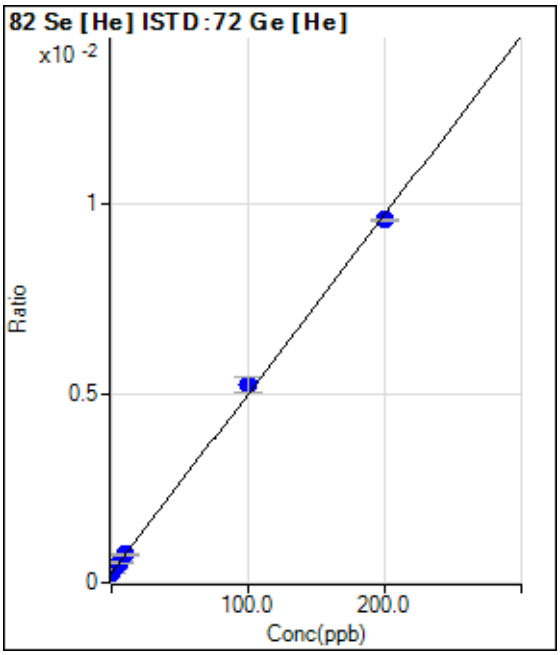


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	31.54	0.0000	P	1039.5
2	☐	2.000	2.247	1242.64	0.0002	P	12.4
3	☐	5.000	4.865	2642.27	0.0004	P	6.5
4	☐	10.000	10.370	5534.32	0.0008	P	2.2
5	☐	100.000	101.587	53638.88	0.0080	P	2.8
6	☐	200.000	199.189	101912.89	0.0156	P	2.0

y = 7.8287E-005 * x + 4.1836E-006
R = 1.0000
DL = 1.666
BEC = 0.05344

Weight: <None>
Min Conc: <None>

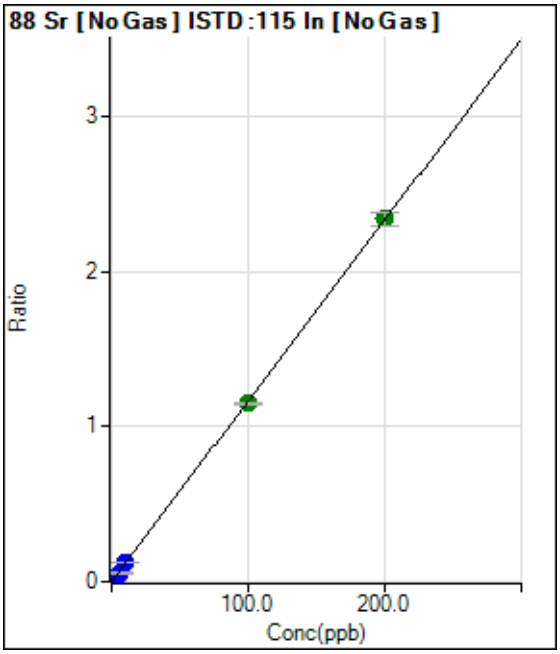
Calibration for 058_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	403.35	0.0003	P	13.4
2	☐	2.000	2.468	570.02	0.0004	P	5.0
3	☐	5.000	5.768	806.71	0.0005	P	6.8
4	☐	10.000	10.535	1133.40	0.0008	P	5.3
5	☐	100.000	105.527	7752.38	0.0053	P	7.7
6	☐	200.000	197.186	14147.70	0.0096	P	0.3

y = 4.7356E-005 * x + 2.5852E-004
R = 0.9995
DL = 2.19
BEC = 5.459

Weight: <None>
Min Conc: <None>

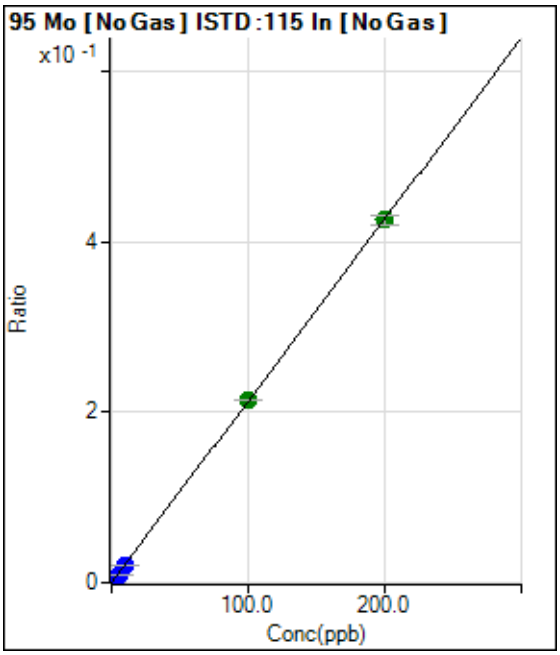


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3443.83	0.0004	P	1.1
2	☐	2.000	1.885	170881.60	0.0224	P	4.0
3	☐	5.000	4.749	418818.47	0.0557	P	2.0
4	☐	10.000	10.278	901404.42	0.1201	P	2.4
5	☐	100.000	98.454	8569087.58	1.1466	A	0.9
6	☐	200.000	200.766	17062115.58	2.3376	A	3.4

y = 0.0116 * x + 4.4598E-004
R = 1.0000
DL = 0.001213
BEC = 0.03831

Weight: <None>
Min Conc: <None>

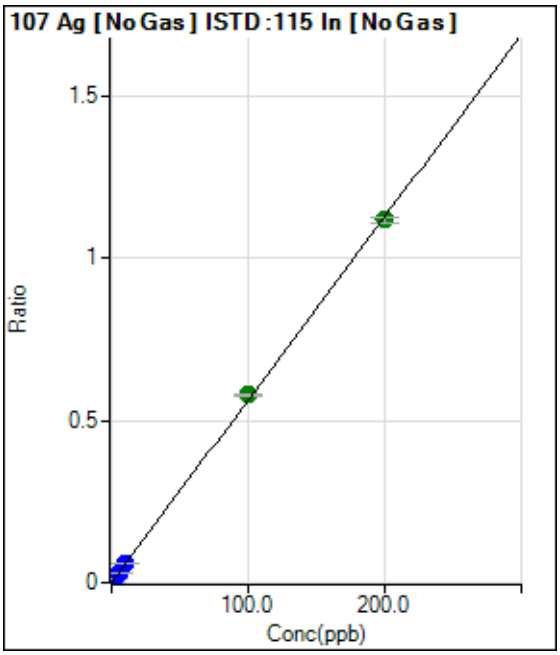
Calibration for 058_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	180.01	0.0000	P	29.7
2	☐	2.000	1.846	30228.14	0.0040	P	4.7
3	☐	5.000	4.727	75957.53	0.0101	P	0.3
4	☐	10.000	9.927	159134.60	0.0212	P	1.4
5	☐	100.000	100.425	1601034.45	0.2142	A	0.4
6	☐	200.000	199.800	3110394.33	0.4262	A	2.9

y = 0.0021 * x + 2.3351E-005
R = 1.0000
DL = 0.009739
BEC = 0.01095

Weight: <None>
Min Conc: <None>

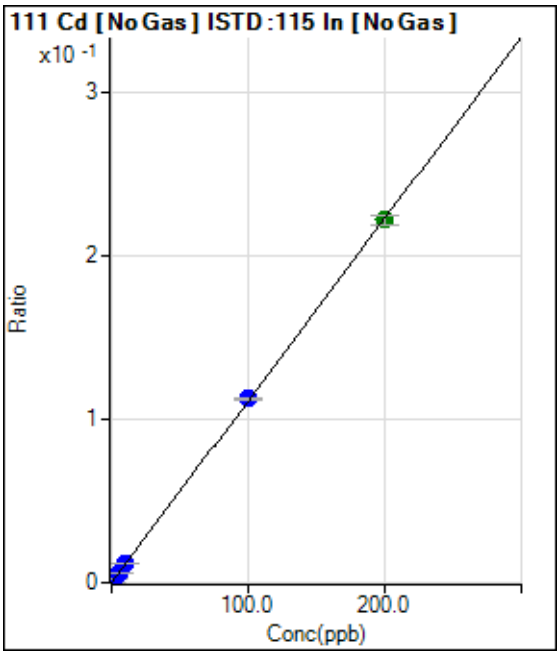


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1373.43	0.0002	P	4.2
2	☐	2.000	1.930	84252.65	0.0110	P	2.1
3	☐	5.000	4.971	211439.18	0.0281	P	2.4
4	☐	10.000	10.410	440977.94	0.0587	P	0.9
5	☐	100.000	102.786	4321986.71	0.5783	A	0.4
6	☐	200.000	198.588	8155549.25	1.1171	A	1.9

y = 0.0056 * x + 1.7802E-004
R = 0.9999
DL = 0.004012
BEC = 0.03165

Weight: <None>
Min Conc: <None>

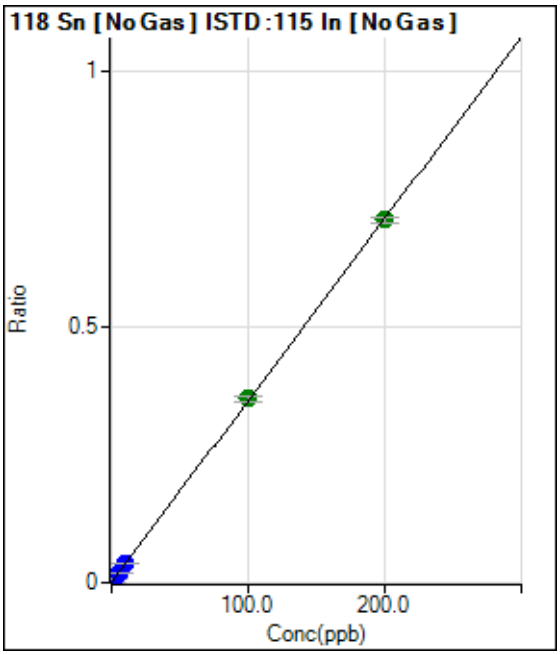
Calibration for 058_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23.33	0.0000	P	89.5
2	☐	2.000	1.953	16604.16	0.0022	P	2.7
3	☐	5.000	4.861	40616.70	0.0054	P	3.4
4	☐	10.000	10.294	85928.00	0.0114	P	2.0
5	☐	100.000	101.032	839178.89	0.1123	P	1.2
6	☐	200.000	199.473	1618252.32	0.2217	A	2.6

y = 0.0011 * x + 2.9719E-006
R = 1.0000
DL = 0.007177
BEC = 0.002674

Weight: <None>
Min Conc: <None>

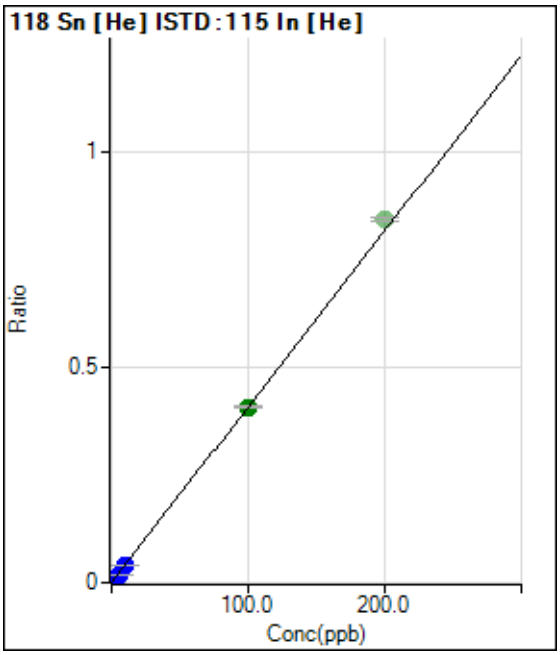


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4517.53	0.0006	P	0.6
2	☐	2.000	1.918	56418.83	0.0074	P	2.0
3	☐	5.000	4.774	131667.12	0.0175	P	1.2
4	☐	10.000	10.153	274725.52	0.0366	P	2.0
5	☐	100.000	100.992	2681677.46	0.3588	A	3.2
6	☐	200.000	199.503	5170264.09	0.7083	A	1.5

y = 0.0035 * x + 5.8520E-004
R = 1.0000
DL = 0.002761
BEC = 0.165

Weight: <None>
Min Conc: <None>

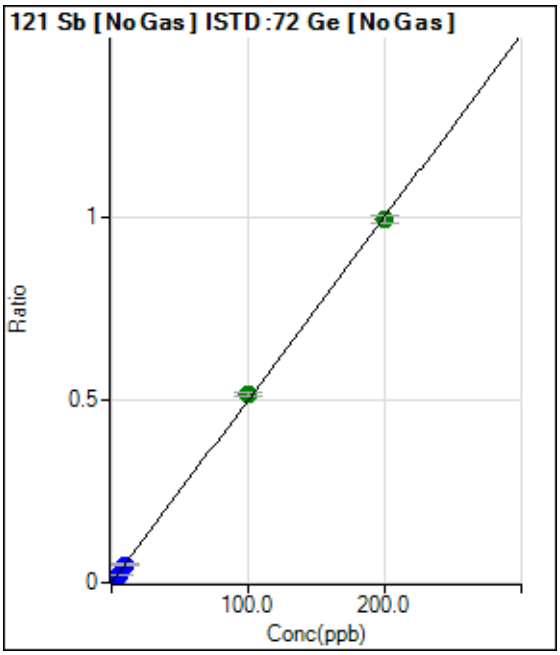
Calibration for 058_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1833.50	0.0007	P	15.1
2	☐	2.000	1.952	23521.67	0.0086	P	3.1
3	☐	5.000	4.645	54785.17	0.0196	P	1.6
4	☐	10.000	10.078	112820.15	0.0418	P	2.0
5	☐	100.000	100.011	1096747.07	0.4086	A	1.5
6	☑	200.000		2195177.88	0.8426	A	1.1

y = 0.0041 * x + 6.6408E-004
R = 1.0000
DL = 0.07389
BEC = 0.1628

Weight: <None>
Min Conc: <None>

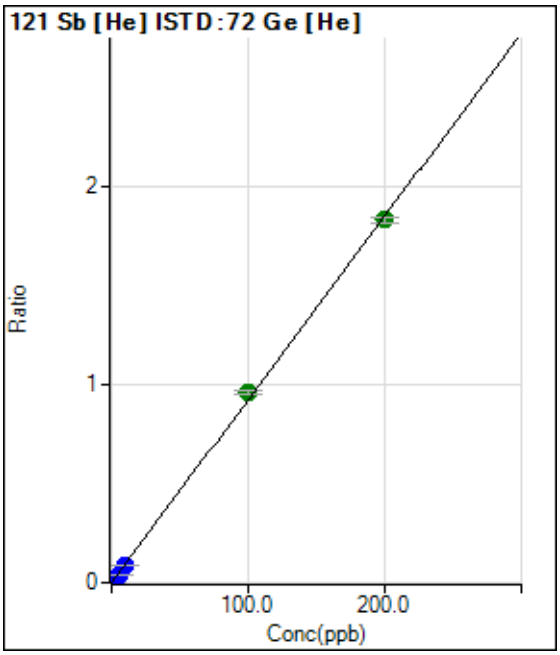


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	670.03	0.0001	P	9.2
2	☐	2.000	1.851	64452.40	0.0094	P	1.7
3	☐	5.000	4.659	160686.23	0.0234	P	2.0
4	☐	10.000	9.912	337089.89	0.0497	P	2.3
5	☐	100.000	103.036	3477598.07	0.5158	A	1.5
6	☐	200.000	198.496	6492269.07	0.9936	A	2.1

y = 0.0050 * x + 9.7372E-005
R = 0.9998
DL = 0.005383
BEC = 0.01945

Weight: <None>
Min Conc: <None>

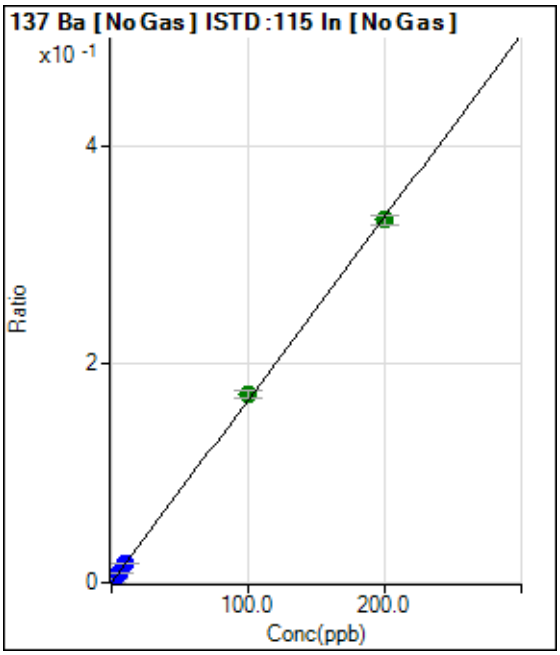
Calibration for 058_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	296.68	0.0002	P	10.4
2	☐	2.000	1.794	25411.85	0.0168	P	1.9
3	☐	5.000	4.585	64532.57	0.0425	P	0.5
4	☐	10.000	9.723	134603.99	0.0899	P	0.4
5	☐	100.000	103.783	1413784.35	0.9581	A	1.8
6	☐	200.000	198.135	2696239.96	1.8290	A	1.6

y = 0.0092 * x + 1.9035E-004
R = 0.9997
DL = 0.006432
BEC = 0.02062

Weight: <None>
Min Conc: <None>

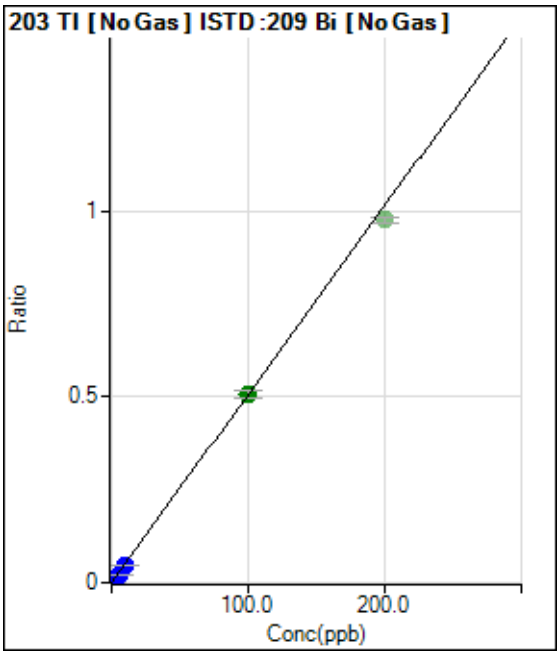


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1323.43	0.0002	P	0.8
2	☐	2.000	1.906	25642.53	0.0034	P	5.4
3	☐	5.000	4.801	61658.50	0.0082	P	2.3
4	☐	10.000	10.112	128299.52	0.0171	P	3.0
5	☐	100.000	102.871	1287621.54	0.1723	A	3.8
6	☐	200.000	198.565	2426422.26	0.3324	A	2.5

y = 0.0017 * x + 1.7141E-004
R = 0.9999
DL = 0.002405
BEC = 0.1024

Weight: <None>
Min Conc: <None>

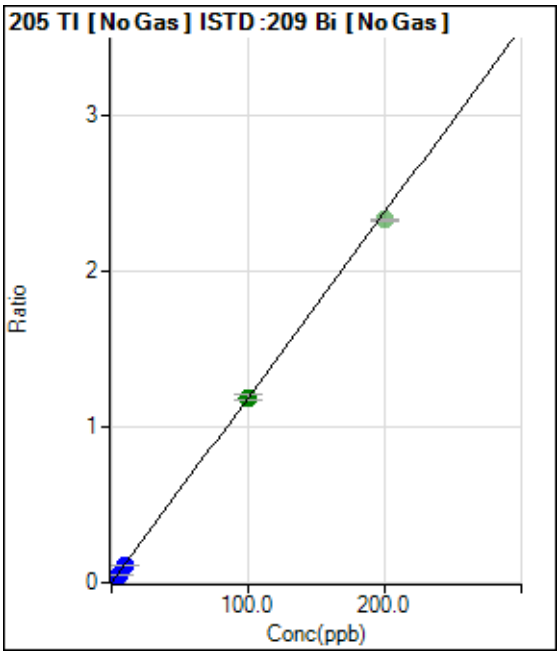
Calibration for 058_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	60.00	0.0000	P	61.2
2	☐	2.000	1.768	49566.67	0.0090	P	4.5
3	☐	5.000	4.360	120498.68	0.0221	P	4.7
4	☐	10.000	9.289	257036.68	0.0471	P	7.1
5	☐	100.000	100.108	2698425.79	0.5073	A	4.3
6	☑	200.000		5064301.07	0.9762	A	1.6

y = 0.0051 * x + 1.1241E-005
R = 1.0000
DL = 0.004074
BEC = 0.002218

Weight: <None>
Min Conc: <None>

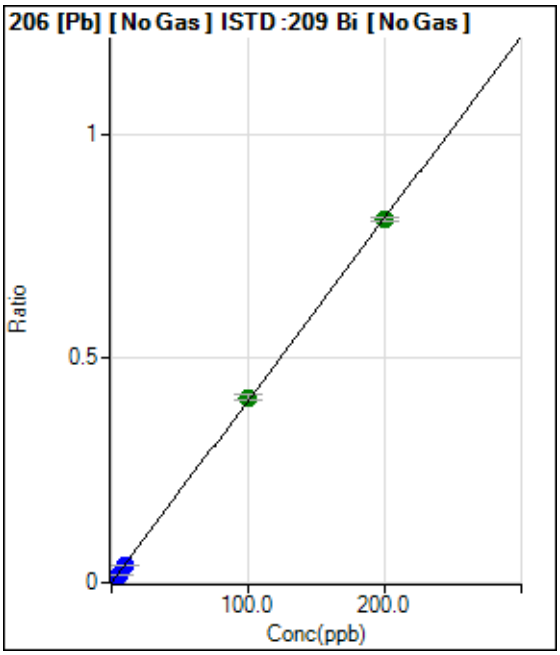


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	246.67	0.0000	P	30.1
2	☐	2.000	1.761	115889.83	0.0210	P	4.3
3	☐	5.000	4.466	289712.00	0.0531	P	4.4
4	☐	10.000	9.355	607451.76	0.1113	P	7.0
5	☐	100.000	100.096	6331910.12	1.1901	A	2.9
6	☑	200.000		12093338.57	2.3308	A	0.4

y = 0.0119 * x + 4.6080E-005
R = 1.0000
DL = 0.003505
BEC = 0.003876

Weight: <None>
Min Conc: <None>

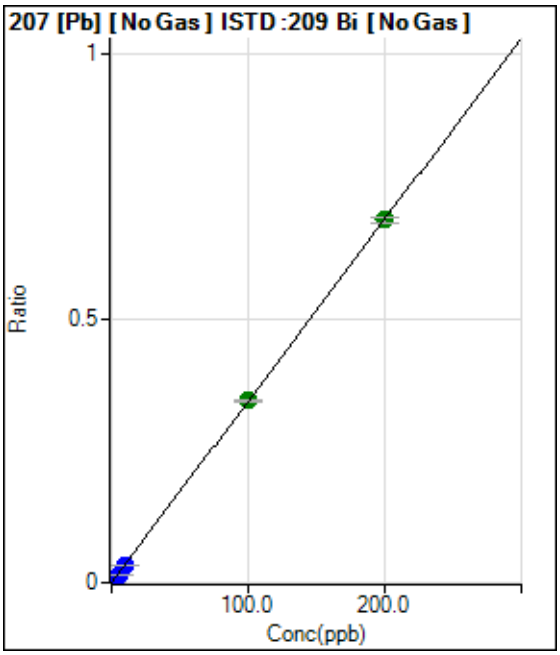
Calibration for 058_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	576.70	0.0001	P	6.2
2	☐	2.000	1.728	39370.38	0.0071	P	4.4
3	☐	5.000	4.456	99326.23	0.0182	P	1.7
4	☐	10.000	9.347	208010.19	0.0381	P	5.4
5	☐	100.000	101.789	2200845.33	0.4136	A	2.8
6	☐	200.000	199.155	4198284.52	0.8092	A	1.0

y = 0.0041 * x + 1.0775E-004
R = 0.9999
DL = 0.00497
BEC = 0.02652

Weight: <None>
Min Conc: <None>

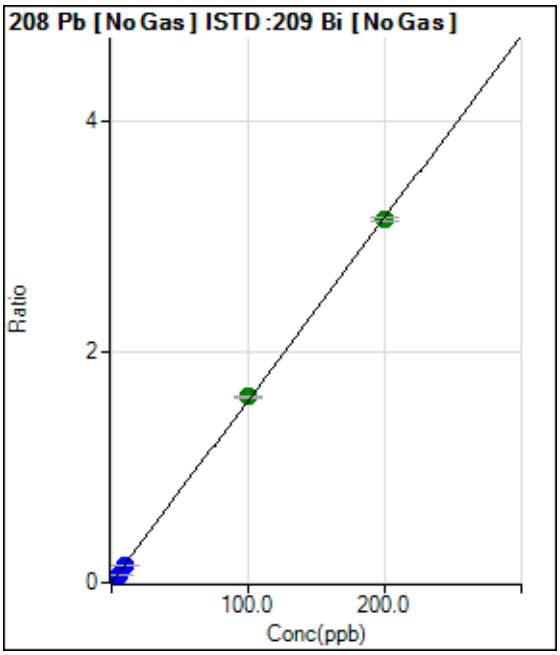


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	453.35	0.0001	P	19.8
2	☐	2.000	1.781	34271.39	0.0062	P	2.9
3	☐	5.000	4.652	87625.85	0.0161	P	2.2
4	☐	10.000	9.476	178461.99	0.0326	P	2.5
5	☐	100.000	100.292	1834212.68	0.3447	A	1.6
6	☐	200.000	199.891	3563290.36	0.6869	A	1.3

y = 0.0034 * x + 8.4772E-005
R = 1.0000
DL = 0.01469
BEC = 0.02467

Weight: <None>
Min Conc: <None>

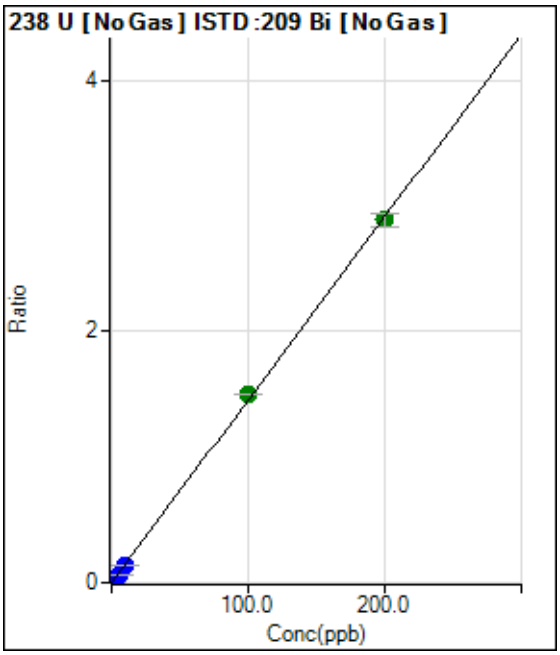
Calibration for 058_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2206.79	0.0004	P	7.7
2	☐	2.000	1.795	159070.35	0.0288	P	2.9
3	☐	5.000	4.649	403165.76	0.0739	P	1.4
4	☐	10.000	9.548	827486.56	0.1514	P	2.7
5	☐	100.000	102.215	8602913.05	1.6164	A	1.0
6	☐	200.000	198.926	16318843.51	3.1455	A	1.1

y = 0.0158 * x + 4.1221E-004
R = 0.9999
DL = 0.006051
BEC = 0.02607

Weight: <None>
Min Conc: <None>

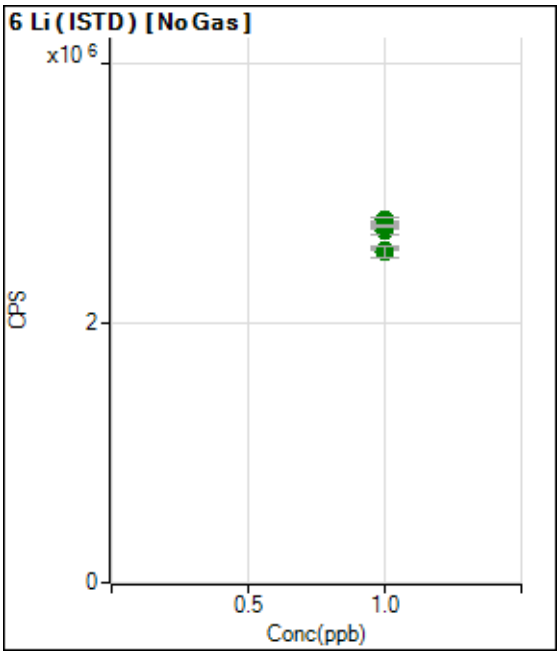


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	30.00	0.0000	P	1.6
2	☐	2.000	1.784	143416.47	0.0260	P	4.8
3	☐	5.000	4.630	367571.18	0.0674	P	0.8
4	☐	10.000	9.828	782275.27	0.1430	P	1.5
5	☐	100.000	102.954	7975055.30	1.4983	A	0.4
6	☐	200.000	198.543	14984756.03	2.8894	A	3.7

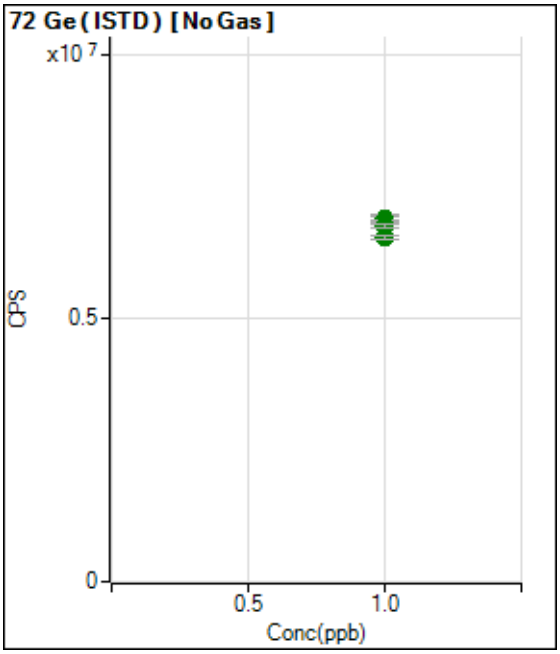
y = 0.0146 * x + 5.6033E-006
R = 0.9998
DL = 1.809E-05
BEC = 0.000385

Weight: <None>
Min Conc: <None>

Calibration for 058_ICV.d

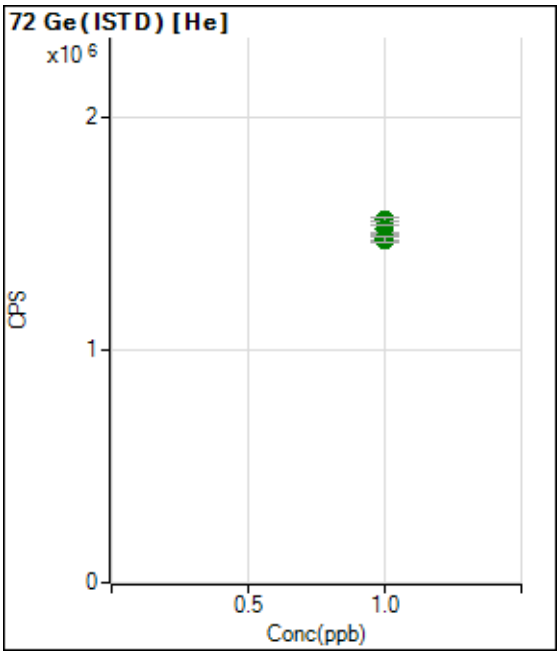


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2755843.10		A	2.6
2	☐	1.000		2795305.57		A	1.8
3	☐	1.000		2717869.68		A	2.6
4	☐	1.000		2746624.04		A	0.6
5	☐	1.000		2570284.96		A	0.5
6	☐	1.000		2544684.62		A	3.5

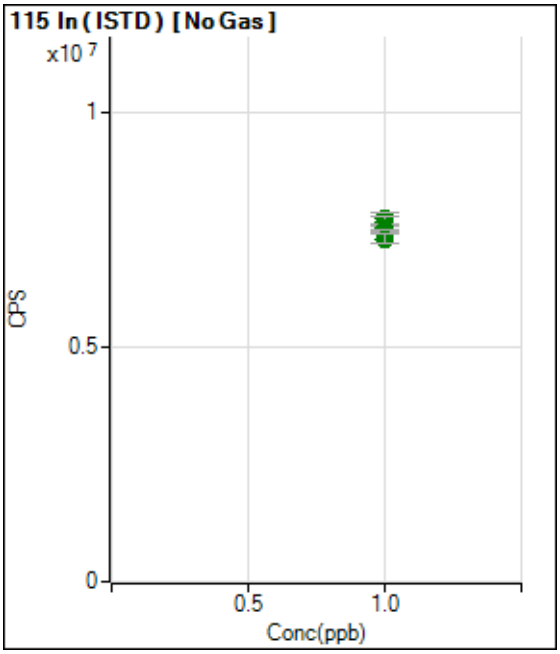


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		6887145.52		A	1.5
2	☐	1.000		6886294.69		A	2.7
3	☐	1.000		6861701.98		A	0.5
4	☐	1.000		6783334.27		A	2.3
5	☐	1.000		6742389.48		A	1.3
6	☐	1.000		6534974.69		A	1.6

Calibration for 058_ICV.d

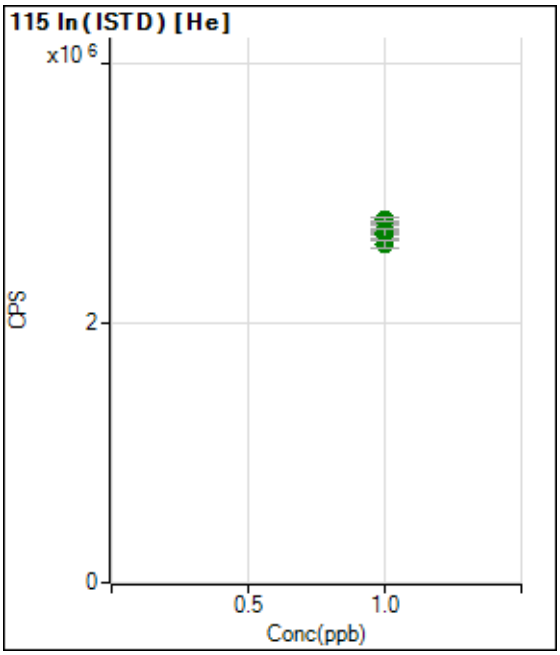


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1558698.15		A	1.1
2	☐	1.000		1517485.76		A	2.2
3	☐	1.000		1517999.14		A	2.0
4	☐	1.000		1496638.94		A	0.4
5	☐	1.000		1475759.46		A	1.0
6	☐	1.000		1474249.40		A	1.8

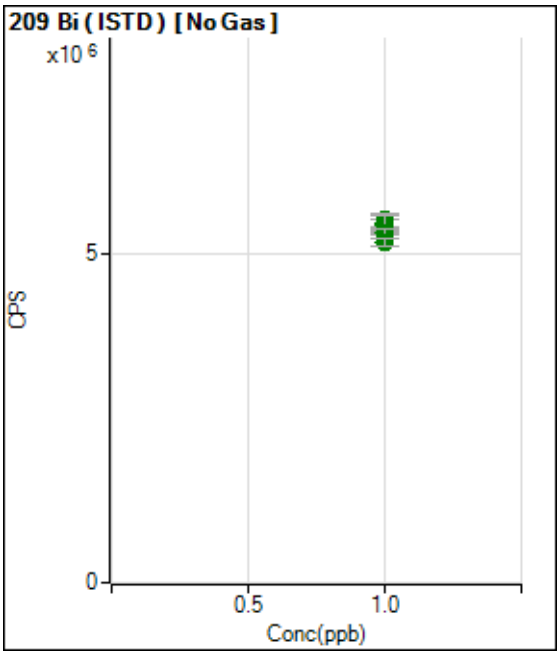


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		7720243.72		A	3.2
2	☐	1.000		7640288.98		A	4.0
3	☐	1.000		7516456.13		A	2.0
4	☐	1.000		7508754.98		A	2.5
5	☐	1.000		7473741.61		A	0.9
6	☐	1.000		7301870.36		A	2.7

Calibration for 058_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2760329.10		A	0.3
2	☐	1.000		2727321.36		A	2.2
3	☐	1.000		2793710.43		A	1.1
4	☐	1.000		2701074.35		A	1.2
5	☐	1.000		2684641.56		A	2.5
6	☐	1.000		2605474.05		A	2.1



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		5354842.42		A	1.6
2	☐	1.000		5528727.21		A	3.8
3	☐	1.000		5455525.96		A	3.2
4	☐	1.000		5471256.79		A	4.7
5	☐	1.000		5322986.38		A	2.6
6	☐	1.000		5188880.86		A	2.3

Sample Report

Sample Table

Sample Name	LLICCV2
Data File Name	059LCV2.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T11:09:38-05:00
Sample Type	LLCCV2
Dilution	1
Comment	
ISTD Ref FileName	051CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	1.983	1.983	5.05	214967	0.00	2	
Be	9	1	No Gas	1.868	1.868	2.27	15634	0.01	2	
V	51	2	He	1.811	1.811	3.72	22783	0.01	2	
Cr	52	2	He	1.913	1.913	4.95	28169	0.01	2	
Fe	56	2	He	201.846	201.846	2.27	2339285	0.01	200	
Se	78	2	He	2.013	2.013	10.42	428	0.47	2	
Sn	118	2	He	1.928	1.928	3.68	24083	0.01	2	
As	75	2	He	1.937	1.937	5.09	3721	0.05	2	
Ca	44	2	He	202.562	202.562	1.99	11051	1.83	200	
Na	23	2	He	187.183	187.183	3.07	424431	0.04	200	
Mg	24	2	He	197.443	197.443	2.42	162899	0.12	200	
K	39	2	He	189.834	189.834	2.59	249365	0.08	200	
Mn	55	2	He	1.893	1.893	5.91	17128	0.01	2	
Co	59	2	He	1.954	1.954	2.42	43176	0.00	2	
Ni	60	2	He	2.006	2.006	2.86	11558	0.02	2	
Cu	63	2	He	1.920	1.920	2.45	32650	0.01	2	
Zn	66	2	He	2.269	2.269	8.11	6972	0.03	2	
Al	27	2	He	3.166	3.166	10.15	1757	0.18	2	NewName Main CR1 Failed
B	11	1	No Gas	17.748	17.748	5.32	118642	0.01	10	NewName Main CR1 Failed
Al	27	1	No Gas	3.383	3.383	2.87	168071	0.00	2	NewName Main CR1 Failed
Si	28	1	No Gas	12.776	12.776	11.88	959012	0.00	10	
P	31	1	No Gas	8.024	8.024	5.20	62866	0.01	10	
Ag	107	1	No Gas	1.976	1.976	1.61	83676	0.00	2	
Cd	111	1	No Gas	2.011	2.011	3.43	16591	0.01	2	
Sr	88	1	No Gas	1.931	1.931	4.14	169848	0.00	2	
Mo	95	1	No Gas	1.944	1.944	3.75	30900	0.01	2	
Sn	118	1	No Gas	2.049	2.049	3.98	58173	0.00	2	
Sb	121	1	No Gas	1.910	1.910	2.50	65669	0.00	2	
Ba	137	1	No Gas	2.072	2.072	3.52	26962	0.01	2	
Tl	205	1	No Gas	1.933	1.933	1.40	121508	0.00	2	
Tl	203	1	No Gas	1.904	1.904	0.91	50269	0.00	2	
Pb	208	1	No Gas	1.910	1.910	4.01	164017	0.00	2	
U	238	1	No Gas	1.851	1.851	1.27	144443	0.00	2	
Ca	43	2	He	216.837	216.837	15.60	677	32.04	200	
Sb	121	2	He	1.817	1.817	3.31	25989	0.01	2	
Ti	47	2	He	1.821	1.821	3.15	660	0.28	200	
Cu	63	1	No Gas	1.948	1.948	1.26	70831	0.00	2	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2682749	1.63	2755843	97.35	70	120	
Ge	72	2	He	1532367	1.67	1558698	98.31	70	120	
Ge	72	1	No Gas	6800033	1.43	6887146	98.74	70	120	
In	115	1	No Gas	7410857	1.58	7720244	95.99	70	120	
Bi	209	1	No Gas	5360225	1.87	5354842	100.10	70	120	

Sample Report

Sample Table

Sample Name	LLICCV5
Data File Name	060LCV5.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T11:11:30-05:00
Sample Type	LLCCV5
Dilution	1
Comment	
ISTD Ref FileName	051CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	4.698	4.698	3.40	305454	0.00	5	
Be	9	1	No Gas	4.603	4.603	2.28	38559	0.01	5	
V	51	2	He	4.591	4.591	2.22	54651	0.01	5	
Cr	52	2	He	4.801	4.801	2.54	68773	0.01	5	
Fe	56	2	He	488.252	488.252	1.53	5674448	0.01	500	
Se	78	2	He	4.822	4.822	5.11	853	0.57	5	
Sn	118	2	He	4.569	4.569	1.84	54691	0.01	5	
As	75	2	He	4.785	4.785	1.01	9104	0.05	5	
Ca	44	2	He	476.496	476.496	0.65	25684	1.86	500	
Na	23	2	He	477.275	477.275	1.85	881461	0.05	500	
Mg	24	2	He	487.540	487.540	0.63	402766	0.12	500	
K	39	2	He	470.627	470.627	1.22	524647	0.09	500	
Mn	55	2	He	4.771	4.771	1.79	42643	0.01	5	
Co	59	2	He	4.869	4.869	1.54	107902	0.00	5	
Ni	60	2	He	5.081	5.081	3.48	29108	0.02	5	
Cu	63	2	He	4.833	4.833	3.46	78322	0.01	5	
Zn	66	2	He	5.218	5.218	3.29	14641	0.04	5	
Al	27	2	He	6.420	6.420	5.05	2940	0.22	5	
B	11	1	No Gas	27.183	27.183	4.25	168372	0.02	25	
Al	27	1	No Gas	6.766	6.766	2.13	285654	0.00	5	NewName2 Main CR1 Failed
Si	28	1	No Gas	27.321	27.321	5.64	1224719	0.00	25	
P	31	1	No Gas	22.122	22.122	7.29	89783	0.02	25	
Ag	107	1	No Gas	4.860	4.860	4.27	213474	0.00	5	
Cd	111	1	No Gas	4.892	4.892	2.12	42238	0.01	5	
Sr	88	1	No Gas	4.585	4.585	6.21	417368	0.00	5	
Mo	95	1	No Gas	4.629	4.629	5.08	76769	0.01	5	
Sn	118	1	No Gas	4.740	4.740	2.55	135077	0.00	5	
Sb	121	1	No Gas	4.707	4.707	0.93	159695	0.00	5	
Ba	137	1	No Gas	4.639	4.639	2.31	61591	0.01	5	
Tl	205	1	No Gas	4.438	4.438	5.38	287698	0.00	5	
Tl	203	1	No Gas	4.422	4.422	3.74	120494	0.00	5	
Pb	208	1	No Gas	4.700	4.700	3.20	413731	0.00	5	
U	238	1	No Gas	4.605	4.605	0.30	371226	0.00	5	
Ca	43	2	He	446.214	446.214	10.77	1373	32.49	500	
Sb	121	2	He	4.499	4.499	2.33	64301	0.01	5	
Ti	47	2	He	4.730	4.730	6.93	1720	0.27	5	
Cu	63	1	No Gas	5.058	5.058	2.08	169522	0.00	5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2689987	2.61	2755843	97.61	70	120	
Ge	72	2	He	1541501	0.56	1558698	98.90	70	120	
Ge	72	1	No Gas	6749928	1.62	6887146	98.01	70	120	
In	115	1	No Gas	7767241	3.93	7720244	100.61	70	120	
Bi	209	1	No Gas	5538855	2.02	5354842	103.44	70	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICCB
Data File Name	061_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T11:13:22-05:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	051CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.063	18.0	149496	0.6	0.5	
Be	9	1	No Gas	0.008	3.6	107	2.7	0.5	
V	51	2	He	-0.040	-10.9	1778	3.1	2.5	
Cr	52	2	He	0.020	84.3	1813	13.3	2.5	
Fe	56	2	He	0.112	20.9	14665	1.3	100	
Se	78	2	He	0.012	1058.0	129	14.0	1	
Sn	118	2	He	0.006	92.5	1890	3.5	2.5	
As	75	2	He	0.004	182.3	103	11.6	2.5	
Ca	44	2	He	5.363	37.8	627	17.6	100	
Na	23	2	He	-12.913	-4.4	112171	0.9	100	
Mg	24	2	He	-0.576	-16.5	860	8.4	100	
K	39	2	He	-3.670	-84.3	61451	5.2	100	
Mn	55	2	He	0.071	20.6	1140	10.3	2.5	
Co	59	2	He	0.002	125.6	270	16.1	2.5	
Ni	60	2	He	0.034	13.8	413	5.6	2.5	
Cu	63	2	He	-0.032	-23.9	2347	5.1	1	
Zn	66	2	He	0.669	5.1	2840	2.3	2.5	
Al	27	2	He	-0.307	-70.4	507	16.0	5	
B	11	1	No Gas	2.227	10.0	37032	3.6	0.5	ICB Main CR1 Failed
Al	27	1	No Gas	0.072	39.6	50342	1.4	5	
Si	28	1	No Gas	-1.345	-35.8	684867	1.0	10	
P	31	1	No Gas	-1.855	-27.7	43081	1.7	10	
Ag	107	1	No Gas	-0.012	-18.5	847	10.0	2.5	
Cd	111	1	No Gas	0.004	46.3	57	27.0	1	
Sr	88	1	No Gas	0.002	204.8	3644	10.1	2.5	
Mo	95	1	No Gas	0.003	100.4	227	21.8	2.5	
Sn	118	1	No Gas	-0.004	-58.5	4417	0.6	5	
Sb	121	1	No Gas	0.016	28.1	1210	13.1	2.5	
Ba	137	1	No Gas	-0.019	-111.0	1073	25.2	2.5	
Tl	205	1	No Gas	0.014	21.0	1120	16.5	1	
Tl	203	1	No Gas	0.016	39.8	473	33.9	1	
Pb	208	1	No Gas	0.003	63.6	2477	6.4	2.5	
U	238	1	No Gas	0.001	57.4	87	37.1	2.5	
Ca	43	2	He	0.282	2516.4	27	78.1	100	
Sb	121	2	He	0.009	67.0	420	21.4	2.5	
Ti	47	2	He	0.038	114.3	17	91.7	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2646138	0.47	2755843	96.02	70	120	
Ge	72	2	He	1521771	0.83	1558698	97.63	70	120	
Ge	72	1	No Gas	6731062	1.64	6887146	97.73	70	120	
In	115	1	No Gas	7716584	1.62	7720244	99.95	70	120	
Bi	209	1	No Gas	5372928	0.83	5354842	100.34	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	081_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T11:58:37-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	051CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	97.914	5.316	2912214	2.44	100	97.9	90	110	
Be	9	1	No Gas	99.457	5.144	714462	2.25	100	99.5	90	110	
V	51	2	He	94.358	0.725	1083618	1.93	100	94.4	90	110	
Cr	52	2	He	93.378	0.707	1314475	1.04	100	93.4	90	110	
Fe	56	2	He	9751.714	0.724	113543155	1.16	10000	97.5	90	110	
Se	78	2	He	99.080	1.305	15071	0.43	100	99.1	90	110	
Sn	118	2	He	89.295	2.585	1065035	2.26	100	89.3	90	110	CCV Main CR1-2 Failed
As	75	2	He	98.299	1.223	185878	0.87	100	98.3	90	110	
Ca	44	2	He	9384.596	1.503	501336	0.32	10000	93.8	90	110	
Na	23	2	He	9403.934	1.111	14924687	1.04	10000	94.0	90	110	
Mg	24	2	He	9417.355	0.766	7787085	1.06	10000	94.2	90	110	
K	39	2	He	9640.278	1.333	9503517	1.39	10000	96.4	90	110	
Mn	55	2	He	92.158	0.479	817404	0.81	100	92.2	90	110	
Co	59	2	He	99.993	0.956	2220315	1.13	100	100.0	90	110	
Ni	60	2	He	95.924	0.995	547743	0.86	100	95.9	90	110	
Cu	63	2	He	98.986	1.075	1554513	0.17	100	99.0	90	110	
Zn	66	2	He	96.318	2.256	251187	1.08	100	96.3	90	110	
Al	27	2	He	95.041	2.751	35055	2.06	100	95.0	90	110	
B	11	1	No Gas	519.429	4.012	2359466	1.48	500	103.9	90	110	
Al	27	1	No Gas	94.789	1.873	3418740	1.57	100	94.8	90	110	
Si	28	1	No Gas	551.136	0.439	11189887	0.05	5000	11.0	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	461.047	1.067	954023	0.81	500	92.2	90	110	
Ag	107	1	No Gas	95.570	6.250	4255187	4.68	100	95.6	90	110	
Cd	111	1	No Gas	94.734	2.900	833493	1.67	100	94.7	90	110	
Sr	88	1	No Gas	93.527	4.546	8621185	3.04	100	93.5	90	110	
Mo	95	1	No Gas	96.319	3.753	1626429	2.22	100	96.3	90	110	
Sn	118	1	No Gas	94.068	0.733	2646940	1.76	100	94.1	90	110	
Sb	121	1	No Gas	101.659	1.165	3475897	1.08	100	101.7	90	110	
Ba	137	1	No Gas	97.361	0.694	1291552	2.23	100	97.4	90	110	
Tl	205	1	No Gas	98.025	1.856	6347434	1.29	100	98.0	90	110	
Tl	203	1	No Gas	100.418	0.272	2733617	1.38	100	100.4	90	110	
Pb	208	1	No Gas	98.033	1.432	8579099	0.86	100	98.0	90	110	
U	238	1	No Gas	94.113	1.080	7580470	2.29	100	94.1	90	110	
Ca	43	2	He	9634.626	3.209	29238	2.22	10000	96.3	90	110	
Sb	121	2	He	99.610	1.200	1423553	2.39	100	99.6	90	110	
Ti	47	2	He	93.486	1.151	34072	1.77	100	93.5	90	110	
Cu	63	1	No Gas	98.960	1.629	3203089	1.17	100	99.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2310508	3.23	2755843	83.84	70	120	
Ge	72	2	He	1547878	1.24	1558698	99.31	70	120	
Ge	72	1	No Gas	6829779	0.46	6887146	99.17	70	120	
In	115	1	No Gas	7918780	1.55	7720244	102.57	70	120	
Bi	209	1	No Gas	5534435	1.59	5354842	103.35	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	082_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T12:00:20-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	051CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.039	230.3	137965	0.5	0.5	
Be	9	1	No Gas	0.018	24.3	172	18.7	0.5	
V	51	2	He	-0.026	-14.3	1952	3.9	2.5	
Cr	52	2	He	0.008	69.2	1660	6.5	2.5	
Fe	56	2	He	1.137	4.8	26603	2.0	100	
Se	78	2	He	0.004	671.6	129	5.0	2	
As	75	2	He	0.011	67.7	119	13.8	2.5	
Ca	44	2	He	2.814	30.1	497	10.1	100	
Na	23	2	He	-41.296	-2.1	68833	1.1	100	
Mg	24	2	He	-0.272	-22.2	1117	4.9	100	
K	39	2	He	-13.617	-12.8	52283	2.3	100	
Mn	55	2	He	0.046	18.6	933	6.2	2.5	
Co	59	2	He	0.004	70.5	330	18.9	2.5	
Ni	60	2	He	0.021	68.8	340	25.5	2.5	
Cu	63	2	He	-0.031	-31.9	2377	7.2	2	
Zn	66	2	He	0.130	18.0	1477	5.3	2.5	
Al	27	2	He	-0.138	-209.2	570	16.1	5	
B	11	1	No Gas	1.218	1.8	29533	2.4	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	0.453	11.2	64864	2.1	5	
Si	28	1	No Gas	6.478	13.7	846876	1.1	10	
P	31	1	No Gas	-5.814	-1.5	36081	1.3	10	
Ag	107	1	No Gas	-0.013	-8.5	863	8.2	2.5	
Cd	111	1	No Gas	0.007	35.9	90	29.4	1	
Sr	88	1	No Gas	0.006	33.6	4187	2.1	2.5	
Mo	95	1	No Gas	0.032	29.1	740	22.2	2.5	
Sn	118	1	No Gas	0.017	69.7	5221	3.9	5	
Sb	121	1	No Gas	0.117	10.7	4668	8.5	2.5	
Ba	137	1	No Gas	-0.019	-24.2	1127	7.5	2.5	
Tl	205	1	No Gas	0.081	39.9	5802	34.3	1	
Tl	203	1	No Gas	0.083	32.9	2444	28.4	1	
Pb	208	1	No Gas	0.044	13.0	6524	3.9	2.5	
U	238	1	No Gas	0.006	12.8	537	10.8	2.5	
Ca	43	2	He	-5.376	-107.1	10	173.2	100	
Sb	121	2	He	0.093	9.7	1613	6.1	2.5	
Ti	47	2	He	0.130	79.1	50	72.1	2.5	
Cu	63	1	No Gas	-0.049	-10.3	6702	1.6	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2455423	2.31	2755843	89.10	70	120	
Ge	72	2	He	1534356	2.03	1558698	98.44	70	120	
Ge	72	1	No Gas	6857300	0.92	6887146	99.57	70	120	
In	115	1	No Gas	8087691	3.03	7720244	104.76	70	120	
Bi	209	1	No Gas	5868562	4.21	5354842	109.59	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	089_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T12:15:38-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	051CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	95.287	2.390	2954948	2.01	100	95.3	90	110	
Be	9	1	No Gas	96.430	1.993	721468	2.14	100	96.4	90	110	
V	51	2	He	95.032	3.948	1070557	1.65	100	95.0	90	110	
Cr	52	2	He	95.289	2.249	1316276	0.49	100	95.3	90	110	
Fe	56	2	He	9725.471	2.076	111127085	1.09	10000	97.3	90	110	
Se	78	2	He	99.572	3.512	14860	1.07	100	99.6	90	110	
Sn	118	2	He	87.899	0.909	1025727	0.82	100	87.9	90	110	CCV Main CR1-2 Failed
As	75	2	He	99.318	2.071	184307	0.40	100	99.3	90	110	
Ca	44	2	He	9615.976	1.329	504206	1.10	10000	96.2	90	110	
Na	23	2	He	9579.264	2.704	14915862	0.83	10000	95.8	90	110	
Mg	24	2	He	9571.874	2.957	7766238	1.10	10000	95.7	90	110	
K	39	2	He	9872.365	2.906	9547940	0.48	10000	98.7	90	110	
Mn	55	2	He	93.924	1.592	817575	0.85	100	93.9	90	110	
Co	59	2	He	100.441	2.040	2188882	1.74	100	100.4	90	110	
Ni	60	2	He	96.720	2.721	541968	1.25	100	96.7	90	110	
Cu	63	2	He	98.864	3.176	1523464	1.11	100	98.9	90	110	
Zn	66	2	He	97.026	0.871	248390	1.72	100	97.0	90	110	
Al	27	2	He	100.003	4.100	36157	1.72	100	100.0	90	110	
B	11	1	No Gas	500.137	1.215	2366327	1.31	500	100.0	90	110	
Al	27	1	No Gas	96.943	1.884	3438828	0.54	100	96.9	90	110	
Si	28	1	No Gas	532.616	2.649	10662528	1.67	5000	10.7	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	465.551	3.201	947200	1.74	500	93.1	90	110	
Ag	107	1	No Gas	97.223	2.166	4237553	1.06	100	97.2	90	110	
Cd	111	1	No Gas	96.544	1.029	831315	1.09	100	96.5	90	110	
Sr	88	1	No Gas	94.359	1.754	8513213	0.39	100	94.4	90	110	
Mo	95	1	No Gas	97.485	1.637	1611223	1.67	100	97.5	90	110	
Sn	118	1	No Gas	93.559	3.543	2575298	2.59	100	93.6	90	110	
Sb	121	1	No Gas	101.545	0.789	3416157	0.77	100	101.5	90	110	
Ba	137	1	No Gas	95.433	2.919	1238427	2.12	100	95.4	90	110	
Tl	205	1	No Gas	101.162	5.002	6400046	3.37	100	101.2	90	110	
Tl	203	1	No Gas	102.368	3.808	2723274	3.41	100	102.4	90	110	
Pb	208	1	No Gas	99.264	1.973	8490390	1.58	100	99.3	90	110	
U	238	1	No Gas	91.062	2.992	7168793	3.54	100	91.1	90	110	
Ca	43	2	He	9665.443	3.388	28784	1.01	10000	96.7	90	110	
Sb	121	2	He	98.136	1.539	1376272	0.93	100	98.1	90	110	
Ti	47	2	He	94.938	3.745	33946	1.41	100	94.9	90	110	
Cu	63	1	No Gas	100.783	2.124	3209223	1.03	100	100.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2403804	0.27	2755843	87.23	70	120	
Ge	72	2	He	1519448	2.44	1558698	97.48	70	120	
Ge	72	1	No Gas	6720221	1.32	6887146	97.58	70	120	
In	115	1	No Gas	7748380	1.43	7720244	100.36	70	120	
Bi	209	1	No Gas	5409482	1.82	5354842	101.02	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	090_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T12:17:21-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	051CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.176	38.2	141867	0.3	0.5	
Be	9	1	No Gas	0.026	7.7	235	5.6	0.5	
V	51	2	He	-0.014	-98.8	2059	6.9	2.5	
Cr	52	2	He	0.003	633.9	1557	13.7	2.5	
Fe	56	2	He	1.158	7.5	26396	3.6	100	
Se	78	2	He	0.051	153.1	133	8.3	2	
As	75	2	He	0.006	109.0	107	11.3	2.5	
Ca	44	2	He	3.812	66.2	540	24.3	100	
Na	23	2	He	-23.116	-0.6	95552	0.3	100	
Mg	24	2	He	0.087	72.7	1387	3.4	100	
K	39	2	He	-10.260	-17.0	54616	2.6	100	
Mn	55	2	He	0.047	27.5	927	12.3	2.5	
Co	59	2	He	0.007	24.4	380	9.5	2.5	
Ni	60	2	He	0.012	116.8	283	26.5	2.5	
Cu	63	2	He	-0.010	-52.5	2664	2.7	2	
Zn	66	2	He	0.285	19.3	1843	7.7	2.5	
Al	27	2	He	-0.227	-67.7	530	9.8	5	
B	11	1	No Gas	3.062	12.1	38284	4.4	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	0.076	22.4	51549	1.3	5	
Si	28	1	No Gas	1.697	32.7	757739	0.4	10	
P	31	1	No Gas	-5.410	-11.3	36966	2.0	10	
Ag	107	1	No Gas	-0.007	-32.4	1127	6.8	2.5	
Cd	111	1	No Gas	0.006	60.1	80	43.3	1	
Sr	88	1	No Gas	0.004	65.2	3904	3.7	2.5	
Mo	95	1	No Gas	0.033	29.0	750	19.7	2.5	
Sn	118	1	No Gas	0.021	57.5	5275	5.1	5	
Sb	121	1	No Gas	0.122	3.3	4868	1.4	2.5	
Ba	137	1	No Gas	-0.010	-154.1	1243	14.1	2.5	
Tl	205	1	No Gas	0.093	34.9	6235	31.8	1	
Tl	203	1	No Gas	0.097	36.1	2697	33.6	1	
Pb	208	1	No Gas	0.039	13.9	5711	7.6	2.5	
U	238	1	No Gas	0.007	10.1	627	8.0	2.5	
Ca	43	2	He	2.572	73.7	33	17.3	100	
Sb	121	2	He	0.113	1.1	1857	0.8	2.5	
Ti	47	2	He	0.010	168.7	7	86.6	2.5	
Cu	63	1	No Gas	-0.055	-4.4	6515	0.9	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2451172	1.58	2755843	88.94	70	120	
Ge	72	2	He	1508464	0.48	1558698	96.78	70	120	
Ge	72	1	No Gas	6875809	1.47	6887146	99.84	70	120	
In	115	1	No Gas	8019625	1.94	7720244	103.88	70	120	
Bi	209	1	No Gas	5541279	1.79	5354842	103.48	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	100_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T12:39:18-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	051CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	96.499	2.141	2982230	0.66	100	96.5	90	110	
Be	9	1	No Gas	100.329	4.972	748462	4.67	100	100.3	90	110	
V	51	2	He	97.456	1.808	1065472	1.57	100	97.5	90	110	
Cr	52	2	He	98.397	2.572	1318550	1.02	100	98.4	90	110	
Fe	56	2	He	10072.359	0.712	111675002	1.71	10000	100.7	90	110	
Se	78	2	He	101.208	1.041	14657	0.84	100	101.2	90	110	
Sn	118	2	He	89.039	3.140	1025147	1.26	100	89.0	90	110	CCV Main CR1-2 Failed
As	75	2	He	101.907	1.463	183477	0.46	100	101.9	90	110	
Ca	44	2	He	9670.618	0.575	491977	1.59	10000	96.7	90	110	
Na	23	2	He	9698.257	2.065	14650933	1.48	10000	97.0	90	110	
Mg	24	2	He	9764.608	1.865	7687105	0.12	10000	97.6	90	110	
K	39	2	He	9854.388	0.985	9249334	1.78	10000	98.5	90	110	
Mn	55	2	He	95.686	0.443	808136	1.36	100	95.7	90	110	
Co	59	2	He	101.730	2.327	2150592	1.30	100	101.7	90	110	
Ni	60	2	He	98.836	2.368	537292	0.59	100	98.8	90	110	
Cu	63	2	He	101.541	2.887	1518058	1.43	100	101.5	90	110	
Zn	66	2	He	98.595	1.501	244824	0.78	100	98.6	90	110	
Al	27	2	He	99.027	1.804	34757	1.83	100	99.0	90	110	
B	11	1	No Gas	503.896	0.424	2377405	1.36	500	100.8	90	110	
Al	27	1	No Gas	95.456	0.602	3381997	0.41	100	95.5	90	110	
Si	28	1	No Gas	528.321	0.485	10567471	0.65	5000	10.6	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	473.455	0.596	961244	0.88	500	94.7	90	110	
Ag	107	1	No Gas	99.066	1.476	4227482	1.08	100	99.1	90	110	
Cd	111	1	No Gas	97.601	0.709	822773	1.17	100	97.6	90	110	
Sr	88	1	No Gas	95.334	0.874	8421083	0.72	100	95.3	90	110	
Mo	95	1	No Gas	98.269	1.057	1590002	0.65	100	98.3	90	110	
Sn	118	1	No Gas	93.822	1.739	2528743	1.70	100	93.8	90	110	
Sb	121	1	No Gas	100.222	1.524	3366669	1.87	100	100.2	90	110	
Ba	137	1	No Gas	94.434	1.046	1199918	1.41	100	94.4	90	110	
Tl	205	1	No Gas	95.794	1.303	6068054	2.60	100	95.8	90	110	
Tl	203	1	No Gas	96.029	0.910	2556953	2.45	100	96.0	90	110	
Pb	208	1	No Gas	96.916	0.510	8296451	2.15	100	96.9	90	110	
U	238	1	No Gas	91.760	2.551	7226042	0.83	100	91.8	90	110	
Ca	43	2	He	9979.588	1.769	28841	1.54	10000	99.8	90	110	
Sb	121	2	He	102.362	1.693	1392644	0.92	100	102.4	90	110	
Ti	47	2	He	95.942	3.560	33284	2.02	100	95.9	90	110	
Cu	63	1	No Gas	99.016	2.137	3148632	2.01	100	99.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2397254	1.40	2755843	86.99	70	120	
Ge	72	2	He	1473948	1.76	1558698	94.56	70	120	
Ge	72	1	No Gas	6709665	0.35	6887146	97.42	70	120	
In	115	1	No Gas	7585089	0.47	7720244	98.25	70	120	
Bi	209	1	No Gas	5412835	1.70	5354842	101.08	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	101_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T12:41:00-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	051CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.025	361.6	139507	1.0	0.5	
Be	9	1	No Gas	0.017	26.3	165	21.0	0.5	
V	51	2	He	-0.026	-16.8	1890	2.8	2.5	
Cr	52	2	He	0.002	110.2	1523	1.0	2.5	
Fe	56	2	He	0.735	10.8	21247	3.4	100	
Se	78	2	He	0.029	355.3	128	11.3	2	
As	75	2	He	-0.004	-150.7	88	12.2	2.5	
Ca	44	2	He	2.086	75.5	443	18.8	100	
Na	23	2	He	-25.598	-5.0	90274	1.3	100	
Mg	24	2	He	-0.117	-262.4	1203	20.3	100	
K	39	2	He	-7.611	-16.2	56242	2.8	100	
Mn	55	2	He	0.037	23.4	823	8.6	2.5	
Co	59	2	He	0.003	59.4	293	13.8	2.5	
Ni	60	2	He	0.018	43.8	317	14.9	2.5	
Cu	63	2	He	-0.034	-16.5	2250	4.0	2	
Zn	66	2	He	0.147	25.2	1470	5.4	2.5	
Al	27	2	He	-0.299	-62.7	497	13.1	5	
B	11	1	No Gas	6.535	6.7	55752	3.9	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	0.101	35.2	51549	1.9	5	
Si	28	1	No Gas	1.271	33.1	736975	0.6	10	
P	31	1	No Gas	-2.116	-18.7	42759	1.2	10	
Ag	107	1	No Gas	-0.014	-19.3	763	13.2	2.5	
Cd	111	1	No Gas	0.004	150.0	60	92.8	1	
Sr	88	1	No Gas	0.007	29.0	4101	1.8	2.5	
Mo	95	1	No Gas	0.029	59.8	660	41.7	2.5	
Sn	118	1	No Gas	0.034	36.4	5475	3.6	5	
Sb	121	1	No Gas	0.046	14.1	2220	9.9	2.5	
Ba	137	1	No Gas	-0.006	-55.9	1253	1.2	2.5	
Tl	205	1	No Gas	0.077	41.2	5125	36.3	1	
Tl	203	1	No Gas	0.081	40.9	2224	36.9	1	
Pb	208	1	No Gas	0.023	27.4	4174	9.5	2.5	
U	238	1	No Gas	0.007	4.6	593	2.6	2.5	
Ca	43	2	He	-0.691	-570.7	23	49.5	100	
Sb	121	2	He	0.035	11.7	763	6.7	2.5	
Ti	47	2	He	0.077	36.4	30	33.3	2.5	
Cu	63	1	No Gas	-0.072	-13.1	5845	4.6	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2490081	1.06	2755843	90.36	70	120	
Ge	72	2	He	1484419	0.93	1558698	95.23	70	120	
Ge	72	1	No Gas	6759414	0.64	6887146	98.15	70	120	
In	115	1	No Gas	7761999	3.02	7720244	100.54	70	120	
Bi	209	1	No Gas	5443496	3.63	5354842	101.66	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	113_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T13:05:09-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	051CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.061	75.1	138108	0.8	0.5	
Be	9	1	No Gas	0.020	16.3	187	13.5	0.5	
V	51	2	He	0.016	35.6	2220	4.3	2.5	
Cr	52	2	He	0.005	125.0	1483	6.8	2.5	
Fe	56	2	He	0.954	8.0	22369	2.5	100	
Se	78	2	He	-0.081	-144.5	106	16.8	2	
As	75	2	He	0.015	46.2	114	8.9	2.5	
Ca	44	2	He	1.158	108.8	373	16.1	100	
Na	23	2	He	-2.627	-96.1	117902	1.5	100	
Mg	24	2	He	-0.221	-121.3	1060	20.4	100	
K	39	2	He	-4.826	-37.6	55540	1.4	100	
Mn	55	2	He	0.021	27.5	650	8.6	2.5	
Co	59	2	He	0.004	7.0	297	1.9	2.5	
Ni	60	2	He	0.006	279.7	233	36.5	2.5	
Cu	63	2	He	-0.020	-57.0	2330	5.3	2	
Zn	66	2	He	-0.108	-40.2	790	14.6	2.5	
Al	27	2	He	-0.459	-60.2	417	21.8	5	
B	11	1	No Gas	7.557	6.4	59629	4.0	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	-0.031	-64.1	45006	1.0	5	
Si	28	1	No Gas	0.851	50.7	699348	0.9	10	
P	31	1	No Gas	-0.338	-137.2	44335	1.5	10	
Ag	107	1	No Gas	-0.011	-22.8	873	12.8	2.5	
Cd	111	1	No Gas	0.006	55.3	70	37.8	1	
Sr	88	1	No Gas	0.010	16.0	4287	3.9	2.5	
Mo	95	1	No Gas	0.029	11.8	650	8.1	2.5	
Sn	118	1	No Gas	0.037	38.6	5435	7.1	5	
Sb	121	1	No Gas	0.045	7.4	2084	5.6	2.5	
Ba	137	1	No Gas	-0.028	-21.4	950	7.3	2.5	
Tl	205	1	No Gas	0.064	36.6	4221	34.0	1	
Tl	203	1	No Gas	0.065	33.1	1754	31.7	1	
Pb	208	1	No Gas	0.013	9.7	3334	2.3	2.5	
U	238	1	No Gas	0.006	26.3	537	27.2	2.5	
Ca	43	2	He	2.191	285.2	30	57.7	100	
Sb	121	2	He	0.029	13.5	643	8.6	2.5	
Ti	47	2	He	0.011	158.4	7	86.6	2.5	
Cu	63	1	No Gas	-0.060	-24.4	5998	7.0	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2445553	0.23	2755843	88.74	70	120	
Ge	72	2	He	1401309	1.61	1558698	89.90	70	120	
Ge	72	1	No Gas	6483643	0.54	6887146	94.14	70	120	
In	115	1	No Gas	7599510	0.61	7720244	98.44	70	120	
Bi	209	1	No Gas	5337696	3.02	5354842	99.68	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	124_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T13:27:00-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	051CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	97.836	1.922	2940730	1.35	100	97.8	90	110	
Be	9	1	No Gas	98.809	1.973	717338	1.48	100	98.8	90	110	
V	51	2	He	97.194	1.264	1009193	2.37	100	97.2	90	110	
Cr	52	2	He	95.429	0.255	1214657	1.50	100	95.4	90	110	
Fe	56	2	He	9960.576	1.078	104862562	1.51	10000	99.6	90	110	
Se	78	2	He	99.775	2.935	13720	1.63	100	99.8	90	110	
Sn	118	2	He	89.969	1.866	975583	3.11	100	90.0	90	110	CCV Main CR1-2 Failed
As	75	2	He	101.147	1.242	172929	0.15	100	101.1	90	110	
Ca	44	2	He	9526.148	2.075	460109	0.94	10000	95.3	90	110	
Na	23	2	He	9708.126	0.669	13928527	1.83	10000	97.1	90	110	
Mg	24	2	He	9804.667	1.962	7329483	0.76	10000	98.0	90	110	
K	39	2	He	9925.141	1.963	8844050	0.89	10000	99.3	90	110	
Mn	55	2	He	93.100	0.465	746649	1.24	100	93.1	90	110	
Co	59	2	He	100.864	1.901	2025125	2.29	100	100.9	90	110	
Ni	60	2	He	97.184	0.567	501781	1.12	100	97.2	90	110	
Cu	63	2	He	99.863	0.576	1418055	0.85	100	99.9	90	110	
Zn	66	2	He	98.908	0.801	233225	0.77	100	98.9	90	110	
Al	27	2	He	98.045	1.384	32685	2.16	100	98.0	90	110	
B	11	1	No Gas	512.159	1.650	2350855	1.15	500	102.4	90	110	
Al	27	1	No Gas	98.076	0.832	3254907	0.69	100	98.1	90	110	
Si	28	1	No Gas	548.443	1.426	10254148	1.23	5000	11.0	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	489.337	2.558	929499	2.51	500	97.9	90	110	
Ag	107	1	No Gas	99.936	0.826	4076897	1.23	100	99.9	90	110	
Cd	111	1	No Gas	97.028	1.451	781818	0.22	100	97.0	90	110	
Sr	88	1	No Gas	95.399	2.627	8055062	2.30	100	95.4	90	110	
Mo	95	1	No Gas	98.717	1.546	1527145	2.76	100	98.7	90	110	
Sn	118	1	No Gas	97.649	2.508	2515368	1.42	100	97.6	90	110	
Sb	121	1	No Gas	103.334	2.489	3252557	2.38	100	103.3	90	110	
Ba	137	1	No Gas	97.182	1.867	1180245	0.94	100	97.2	90	110	
Tl	205	1	No Gas	99.036	1.324	5967366	1.43	100	99.0	90	110	
Tl	203	1	No Gas	100.172	2.412	2536661	0.31	100	100.2	90	110	
Pb	208	1	No Gas	98.068	1.266	7986008	1.63	100	98.1	90	110	
U	238	1	No Gas	95.500	2.224	7155293	0.95	100	95.5	90	110	
Ca	43	2	He	9702.197	1.153	26626	1.01	10000	97.0	90	110	
Sb	121	2	He	102.338	0.402	1322221	0.88	100	102.3	90	110	
Ti	47	2	He	96.639	1.672	31844	1.50	100	96.6	90	110	
Cu	63	1	No Gas	99.978	1.214	2979078	1.09	100	100.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2332710	0.55	2755843	84.65	70	120	
Ge	72	2	He	1399556	1.27	1558698	89.79	70	120	
Ge	72	1	No Gas	6287377	0.13	6887146	91.29	70	120	
In	115	1	No Gas	7251162	1.32	7720244	93.92	70	120	
Bi	209	1	No Gas	5150378	2.66	5354842	96.18	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	125_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T13:28:44-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	051CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.012	731.8	135907	1.1	0.5	
Be	9	1	No Gas	0.014	43.2	143	33.2	0.5	
V	51	2	He	0.001	655.9	2077	4.4	2.5	
Cr	52	2	He	0.007	83.7	1503	4.4	2.5	
Fe	56	2	He	0.997	6.5	22916	3.2	100	
Se	78	2	He	-0.097	-95.2	104	11.7	2	
As	75	2	He	0.011	69.4	109	12.7	2.5	
Ca	44	2	He	0.855	97.5	360	11.1	100	
Na	23	2	He	-11.584	-9.6	105570	1.4	100	
Mg	24	2	He	0.065	137.7	1277	5.0	100	
K	39	2	He	-7.414	-17.0	53458	2.2	100	
Mn	55	2	He	0.027	35.2	700	10.8	2.5	
Co	59	2	He	0.002	184.4	260	30.8	2.5	
Ni	60	2	He	0.017	12.5	293	3.9	2.5	
Cu	63	2	He	-0.054	-26.9	1850	11.7	2	
Zn	66	2	He	-0.152	-72.5	687	37.4	2.5	
Al	27	2	He	-0.361	-56.4	450	14.6	5	
B	11	1	No Gas	5.525	5.9	49688	3.5	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	-0.039	-136.8	44572	2.9	5	
Si	28	1	No Gas	-0.436	-199.5	673458	0.7	10	
P	31	1	No Gas	-1.892	-23.2	41272	0.9	10	
Ag	107	1	No Gas	-0.012	-26.7	797	18.9	2.5	
Cd	111	1	No Gas	0.006	108.1	70	75.6	1	
Sr	88	1	No Gas	0.014	9.0	4457	3.9	2.5	
Mo	95	1	No Gas	0.033	43.0	690	33.9	2.5	
Sn	118	1	No Gas	0.032	33.7	5141	5.9	5	
Sb	121	1	No Gas	0.034	19.6	1730	12.4	2.5	
Ba	137	1	No Gas	-0.035	-22.8	837	11.1	2.5	
Tl	205	1	No Gas	0.066	28.3	4381	27.9	1	
Tl	203	1	No Gas	0.070	28.0	1890	27.9	1	
Pb	208	1	No Gas	0.007	32.1	2807	8.6	2.5	
U	238	1	No Gas	0.006	35.6	503	33.9	2.5	
Ca	43	2	He	-1.456	-430.8	20	86.6	100	
Sb	121	2	He	0.024	14.1	583	7.9	2.5	
Ti	47	2	He	0.061	75.6	23	65.5	2.5	
Cu	63	1	No Gas	-0.099	-5.1	4781	2.3	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2433006	0.81	2755843	88.29	70	120	
Ge	72	2	He	1406445	0.51	1558698	90.23	70	120	
Ge	72	1	No Gas	6459792	2.15	6887146	93.79	70	120	
In	115	1	No Gas	7370012	1.72	7720244	95.46	70	120	
Bi	209	1	No Gas	5330956	2.44	5354842	99.55	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	136_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T13:50:30-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	051CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	98.291	1.234	2884887	0.71	100	98.3	90	110	
Be	9	1	No Gas	98.087	1.357	695478	0.62	100	98.1	90	110	
V	51	2	He	95.327	2.096	1022995	2.19	100	95.3	90	110	
Cr	52	2	He	95.257	1.433	1253109	1.27	100	95.3	90	110	
Fe	56	2	He	9673.786	0.839	105263048	0.92	10000	96.7	90	110	
Se	78	2	He	97.669	0.940	13886	0.76	100	97.7	90	110	
Sn	118	2	He	88.164	2.177	998639	1.93	100	88.2	90	110	CCV Main CR1-2 Failed
As	75	2	He	97.837	0.423	172902	0.25	100	97.8	90	110	
Ca	44	2	He	9493.068	0.380	473976	0.39	10000	94.9	90	110	
Na	23	2	He	9469.036	0.789	14043755	0.70	10000	94.7	90	110	
Mg	24	2	He	9377.480	2.052	7246474	1.94	10000	93.8	90	110	
K	39	2	He	9518.092	0.361	8769772	0.20	10000	95.2	90	110	
Mn	55	2	He	92.046	0.553	762979	0.52	100	92.0	90	110	
Co	59	2	He	99.854	1.475	2072127	1.46	100	99.9	90	110	
Ni	60	2	He	94.828	0.203	506059	0.18	100	94.8	90	110	
Cu	63	2	He	97.381	0.730	1429340	0.84	100	97.4	90	110	
Zn	66	2	He	96.404	0.673	234987	0.51	100	96.4	90	110	
Al	27	2	He	97.436	1.235	33574	1.05	100	97.4	90	110	
B	11	1	No Gas	511.420	2.253	2292506	1.15	500	102.3	90	110	
Al	27	1	No Gas	95.820	0.531	3253275	0.44	100	95.8	90	110	
Si	28	1	No Gas	524.014	0.398	10050002	0.25	5000	10.5	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	475.729	1.979	925409	2.08	500	95.1	90	110	
Ag	107	1	No Gas	95.652	2.747	4088383	2.78	100	95.7	90	110	
Cd	111	1	No Gas	96.060	2.399	811036	2.42	100	96.1	90	110	
Sr	88	1	No Gas	90.872	0.428	8039814	0.53	100	90.9	90	110	
Mo	95	1	No Gas	95.283	0.611	1544136	0.58	100	95.3	90	110	
Sn	118	1	No Gas	95.478	1.074	2577340	1.10	100	95.5	90	110	
Sb	121	1	No Gas	102.833	0.415	3310269	0.23	100	102.8	90	110	
Ba	137	1	No Gas	94.289	1.786	1199926	1.76	100	94.3	90	110	
Tl	205	1	No Gas	99.746	2.164	6322801	3.30	100	99.7	90	110	
Tl	203	1	No Gas	100.169	2.706	2669148	3.80	100	100.2	90	110	
Pb	208	1	No Gas	98.571	0.620	8442677	0.98	100	98.6	90	110	
U	238	1	No Gas	93.272	1.639	7351327	1.46	100	93.3	90	110	
Ca	43	2	He	9783.549	1.039	27752	0.95	10000	97.8	90	110	
Sb	121	2	He	97.976	0.524	1308395	0.56	100	98.0	90	110	
Ti	47	2	He	94.327	1.964	32128	2.07	100	94.3	90	110	
Cu	63	1	No Gas	99.985	1.481	3046827	1.18	100	100.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2278376	1.42	2755843	82.67	70	120	
Ge	72	2	He	1446517	0.18	1558698	92.80	70	120	
Ge	72	1	No Gas	6430095	0.51	6887146	93.36	70	120	
In	115	1	No Gas	7596942	0.11	7720244	98.40	70	120	
Bi	209	1	No Gas	5416292	1.40	5354842	101.15	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	137_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T13:52:13-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	051CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.017	376.2	134266	0.8	0.5	
Be	9	1	No Gas	0.014	1.5	137	2.1	0.5	
V	51	2	He	-0.018	-46.5	1961	6.5	2.5	
Cr	52	2	He	0.008	42.7	1593	3.0	2.5	
Fe	56	2	He	1.041	21.9	24424	9.5	100	
Se	78	2	He	0.020	793.7	125	16.9	2	
As	75	2	He	0.016	41.0	122	8.3	2.5	
Ca	44	2	He	1.982	82.4	433	18.7	100	
Na	23	2	He	-28.549	-3.5	85001	0.5	100	
Mg	24	2	He	-0.168	-75.3	1150	6.9	100	
K	39	2	He	-11.306	-7.0	52257	0.4	100	
Mn	55	2	He	0.011	15.9	600	2.9	2.5	
Co	59	2	He	0.002	67.9	263	7.9	2.5	
Ni	60	2	He	0.001	881.2	220	27.7	2.5	
Cu	63	2	He	-0.058	-8.6	1874	5.9	2	
Zn	66	2	He	-0.212	-29.7	570	26.0	2.5	
Al	27	2	He	-0.385	-54.6	463	17.4	5	
B	11	1	No Gas	2.306	16.3	33958	5.1	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	-0.036	-72.7	45200	0.7	5	
Si	28	1	No Gas	-2.188	-34.2	649774	0.4	10	
P	31	1	No Gas	-2.188	-19.5	41215	1.0	10	
Ag	107	1	No Gas	-0.014	-18.9	753	13.3	2.5	
Cd	111	1	No Gas	0.005	118.4	67	77.0	1	
Sr	88	1	No Gas	0.006	30.8	4071	2.1	2.5	
Mo	95	1	No Gas	0.029	43.1	657	29.0	2.5	
Sn	118	1	No Gas	0.012	93.0	4924	5.5	5	
Sb	121	1	No Gas	0.065	13.0	2757	8.2	2.5	
Ba	137	1	No Gas	-0.033	-21.0	913	10.7	2.5	
Tl	205	1	No Gas	0.082	27.6	5635	27.9	1	
Tl	203	1	No Gas	0.076	33.3	2177	33.9	1	
Pb	208	1	No Gas	0.010	25.6	3154	8.5	2.5	
U	238	1	No Gas	0.008	24.4	660	24.8	2.5	
Ca	43	2	He	-4.022	-100.7	13	86.6	100	
Sb	121	2	He	0.044	3.9	873	2.4	2.5	
Ti	47	2	He	0.030	226.1	13	173.2	2.5	
Cu	63	1	No Gas	-0.109	-5.6	4521	2.4	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2400495	1.02	2755843	87.11	70	120	
Ge	72	2	He	1470293	1.85	1558698	94.33	70	120	
Ge	72	1	No Gas	6537982	2.03	6887146	94.93	70	120	
In	115	1	No Gas	7833700	3.04	7720244	101.47	70	120	
Bi	209	1	No Gas	5600502	1.74	5354842	104.59	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	147_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T14:24:48-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	051CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	108.102	0.898	3023541	0.17	100	108.1	90	110	
Be	9	1	No Gas	104.871	0.828	711498	1.52	100	104.9	90	110	
V	51	2	He	104.575	1.086	1056398	0.35	100	104.6	90	110	
Cr	52	2	He	104.576	0.465	1295232	1.17	100	104.6	90	110	
Fe	56	2	He	10957.504	0.345	112262815	0.74	10000	109.6	90	110	
Se	78	2	He	108.449	1.127	14505	0.34	100	108.4	90	110	
Sn	118	2	He	105.638	1.743	1111424	2.02	100	105.6	90	110	
As	75	2	He	106.727	0.716	177583	0.78	100	106.7	90	110	
Ca	44	2	He	10527.405	1.208	494847	0.48	10000	105.3	90	110	
Na	23	2	He	10390.000	0.700	14497891	1.01	10000	103.9	90	110	
Mg	24	2	He	10475.152	0.837	7621451	0.34	10000	104.8	90	110	
K	39	2	He	10705.713	1.339	9279920	0.71	10000	107.1	90	110	
Mn	55	2	He	103.316	0.215	806301	0.61	100	103.3	90	110	
Co	59	2	He	112.758	1.602	2203296	2.24	100	112.8	90	110	CCV Main CR1-2 Failed
Ni	60	2	He	106.912	0.172	537187	0.81	100	106.9	90	110	
Cu	63	2	He	109.626	2.941	1514506	2.18	100	109.6	90	110	
Zn	66	2	He	107.598	1.128	246820	0.56	100	107.6	90	110	
Al	27	2	He	114.405	1.698	37020	0.96	100	114.4	90	110	CCV Main CR1-2 Failed
B	11	1	No Gas	545.864	0.309	2339994	0.61	500	109.2	90	110	
Al	27	1	No Gas	110.676	3.544	3576608	2.19	100	110.7	90	110	CCV Main CR1-2 Failed
Si	28	1	No Gas	560.991	1.846	10216014	0.28	5000	11.2	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	498.604	3.385	922968	2.63	500	99.7	90	110	
Ag	107	1	No Gas	106.599	1.877	4364645	2.17	100	106.6	90	110	
Cd	111	1	No Gas	107.256	1.545	867501	1.94	100	107.3	90	110	
Sr	88	1	No Gas	102.598	1.879	8695480	2.33	100	102.6	90	110	
Mo	95	1	No Gas	104.994	0.857	1629967	1.29	100	105.0	90	110	
Sn	118	1	No Gas	107.983	1.936	2791572	1.48	100	108.0	90	110	
Sb	121	1	No Gas	114.003	1.580	3500179	0.49	100	114.0	90	110	CCV Main CR1-2 Failed
Ba	137	1	No Gas	107.219	3.696	1306778	3.26	100	107.2	90	110	
Tl	205	1	No Gas	105.426	1.953	6558316	2.95	100	105.4	90	110	
Tl	203	1	No Gas	106.570	0.375	2786387	1.20	100	106.6	90	110	
Pb	208	1	No Gas	107.637	1.764	9049252	3.02	100	107.6	90	110	
U	238	1	No Gas	111.666	0.659	8637887	1.15	100	111.7	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	10913.299	0.870	29144	0.78	10000	109.1	90	110	
Sb	121	2	He	112.076	1.658	1409306	2.30	100	112.1	90	110	CCV Main CR1-2 Failed
Ti	47	2	He	104.455	0.970	33498	1.18	100	104.5	90	110	
Cu	63	1	No Gas	109.142	4.524	3170644	3.06	100	109.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2179750	0.73	2755843	79.10	70	120	
Ge	72	2	He	1362005	0.79	1558698	87.38	70	120	
Ge	72	1	No Gas	6133727	1.45	6887146	89.06	70	120	
In	115	1	No Gas	7277401	0.45	7720244	94.26	70	120	
Bi	209	1	No Gas	5315539	1.27	5354842	99.27	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	148_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T14:26:32-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	051CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.093	61.3	128197	0.3	0.5	
Be	9	1	No Gas	0.019	32.6	163	24.9	0.5	
V	51	2	He	-0.034	-26.5	1675	4.3	2.5	
Cr	52	2	He	0.005	449.4	1450	17.9	2.5	
Fe	56	2	He	0.809	4.2	20532	2.9	100	
Se	78	2	He	0.100	225.4	129	24.1	2	
As	75	2	He	0.009	96.3	102	13.2	2.5	
Ca	44	2	He	0.719	160.4	347	15.9	100	
Na	23	2	He	-19.076	-3.4	93055	0.8	100	
Mg	24	2	He	-0.306	-111.0	977	24.3	100	
K	39	2	He	-10.249	-13.3	49958	1.2	100	
Mn	55	2	He	0.017	49.3	607	10.7	2.5	
Co	59	2	He	0.004	109.2	293	29.0	2.5	
Ni	60	2	He	-0.003	-420.9	183	36.3	2.5	
Cu	63	2	He	-0.051	-13.8	1860	6.3	2	
Zn	66	2	He	-0.131	-14.3	723	5.2	2.5	
Al	27	2	He	-0.552	-11.1	380	4.6	5	
B	11	1	No Gas	2.855	12.6	34297	3.3	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	-0.070	-67.0	41934	1.4	5	
Si	28	1	No Gas	-3.347	-14.9	598581	0.8	10	
P	31	1	No Gas	-3.522	-14.2	36846	1.3	10	
Ag	107	1	No Gas	-0.011	-11.4	860	5.3	2.5	
Cd	111	1	No Gas	0.003	96.1	50	52.9	1	
Sr	88	1	No Gas	0.005	55.3	3791	6.5	2.5	
Mo	95	1	No Gas	0.026	47.2	590	31.8	2.5	
Sn	118	1	No Gas	0.025	28.5	5028	3.7	5	
Sb	121	1	No Gas	0.091	17.2	3441	12.5	2.5	
Ba	137	1	No Gas	-0.026	-8.2	950	4.2	2.5	
Tl	205	1	No Gas	0.088	31.0	5882	29.9	1	
Tl	203	1	No Gas	0.091	29.2	2527	28.9	1	
Pb	208	1	No Gas	0.011	36.3	3197	11.1	2.5	
U	238	1	No Gas	0.006	21.9	523	21.0	2.5	
Ca	43	2	He	3.645	211.0	33	62.4	100	
Sb	121	2	He	0.078	5.5	1253	4.0	2.5	
Ti	47	2	He	0.032	111.3	13	86.6	2.5	
Cu	63	1	No Gas	-0.101	-8.2	4551	3.7	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2254749	1.40	2755843	81.82	70	120	
Ge	72	2	He	1379709	1.21	1558698	88.52	70	120	
Ge	72	1	No Gas	6224322	2.20	6887146	90.38	70	120	
In	115	1	No Gas	7473596	1.41	7720244	96.81	70	120	
Bi	209	1	No Gas	5477080	0.45	5354842	102.28	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	149_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T14:28:25-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	051CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	99.738	2.855	2770975	0.46	100	99.7	90	110	
Be	9	1	No Gas	97.320	2.329	653669	0.88	100	97.3	90	110	
V	51	2	He	93.948	1.684	948877	2.22	100	93.9	90	110	
Cr	52	2	He	96.231	2.149	1191263	1.56	100	96.2	90	110	
Fe	56	2	He	9853.174	1.003	100896879	0.75	10000	98.5	90	110	
Se	78	2	He	100.107	1.385	13391	0.51	100	100.1	90	110	
Sn	118	2	He	89.094	1.965	969921	0.84	100	89.1	90	110	CCV Main CR1-2 Failed
As	75	2	He	99.220	1.336	165010	0.80	100	99.2	90	110	
Ca	44	2	He	9594.604	1.743	450781	0.52	10000	95.9	90	110	
Na	23	2	He	9483.969	2.052	13235870	1.09	10000	94.8	90	110	
Mg	24	2	He	9693.985	1.235	7049903	1.36	10000	96.9	90	110	
K	39	2	He	9716.267	1.677	8423346	1.06	10000	97.2	90	110	
Mn	55	2	He	94.073	1.190	733816	0.81	100	94.1	90	110	
Co	59	2	He	98.891	2.452	1930901	0.73	100	98.9	90	110	
Ni	60	2	He	96.259	1.357	483414	0.72	100	96.3	90	110	
Cu	63	2	He	97.788	3.590	1350366	2.09	100	97.8	90	110	
Zn	66	2	He	97.821	1.608	224365	0.51	100	97.8	90	110	
Al	27	2	He	98.820	4.020	32027	2.39	100	98.8	90	110	
B	11	1	No Gas	505.072	3.054	2144957	1.50	500	101.0	90	110	
Al	27	1	No Gas	92.165	1.628	3046474	2.23	100	92.2	90	110	
Si	28	1	No Gas	503.094	0.957	9413947	0.53	5000	10.1	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	449.564	2.285	853203	2.06	500	89.9	90	110	CCV Main CR1-2 Failed
Ag	107	1	No Gas	97.222	1.861	3995442	1.80	100	97.2	90	110	
Cd	111	1	No Gas	96.517	1.030	783517	1.03	100	96.5	90	110	
Sr	88	1	No Gas	92.531	1.929	7871109	1.70	100	92.5	90	110	
Mo	95	1	No Gas	95.258	1.783	1484263	1.52	100	95.3	90	110	
Sn	118	1	No Gas	93.455	2.061	2425689	1.96	100	93.5	90	110	
Sb	121	1	No Gas	101.987	1.754	3194351	2.04	100	102.0	90	110	
Ba	137	1	No Gas	96.729	0.533	1183554	0.32	100	96.7	90	110	
Tl	205	1	No Gas	98.517	1.645	6055749	1.06	100	98.5	90	110	
Tl	203	1	No Gas	101.184	2.353	2615079	3.36	100	101.2	90	110	
Pb	208	1	No Gas	97.365	1.362	8088977	1.60	100	97.4	90	110	
U	238	1	No Gas	95.300	1.784	7286848	2.84	100	95.3	90	110	
Ca	43	2	He	9736.383	3.304	25988	2.76	10000	97.4	90	110	
Sb	121	2	He	102.952	1.128	1293801	0.61	100	103.0	90	110	
Ti	47	2	He	95.944	4.126	30742	2.41	100	95.9	90	110	
Cu	63	1	No Gas	96.712	2.449	2867478	1.93	100	96.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2158804	2.48	2755843	78.34	70	120	
Ge	72	2	He	1361439	1.73	1558698	87.34	70	120	
Ge	72	1	No Gas	6256166	0.64	6887146	90.84	70	120	
In	115	1	No Gas	7304501	0.31	7720244	94.61	70	120	
Bi	209	1	No Gas	5253451	1.07	5354842	98.11	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	158_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T14:49:43-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	051CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	106.802	3.807	2993955	0.12	100	106.8	90	110	
Be	9	1	No Gas	102.037	4.915	693258	1.69	100	102.0	90	110	
V	51	2	He	101.100	0.996	1066683	0.60	100	101.1	90	110	
Cr	52	2	He	102.436	2.161	1324796	0.66	100	102.4	90	110	
Fe	56	2	He	10562.577	0.603	113017515	0.94	10000	105.6	90	110	
Se	78	2	He	106.644	1.741	14898	1.29	100	106.6	90	110	
Sn	118	2	He	102.847	3.025	1130591	2.65	100	102.8	90	110	
As	75	2	He	103.610	1.713	180035	1.13	100	103.6	90	110	
Ca	44	2	He	10196.645	2.602	500515	1.53	10000	102.0	90	110	
Na	23	2	He	9969.151	2.262	14530344	0.88	10000	99.7	90	110	
Mg	24	2	He	10161.974	0.983	7721671	0.86	10000	101.6	90	110	
K	39	2	He	10287.950	1.159	9316095	1.12	10000	102.9	90	110	
Mn	55	2	He	100.695	1.549	820661	0.97	100	100.7	90	110	
Co	59	2	He	108.535	2.177	2214373	0.81	100	108.5	90	110	
Ni	60	2	He	104.717	1.784	549434	0.30	100	104.7	90	110	
Cu	63	2	He	106.323	1.624	1534162	0.09	100	106.3	90	110	
Zn	66	2	He	106.349	1.721	254771	0.18	100	106.3	90	110	
Al	27	2	He	110.336	3.126	37304	2.18	100	110.3	90	110	CCV Main CR1-2 Failed
B	11	1	No Gas	546.834	1.892	2349210	1.70	500	109.4	90	110	
Al	27	1	No Gas	104.760	2.764	3573537	1.01	100	104.8	90	110	
Si	28	1	No Gas	537.294	2.270	10349048	0.35	5000	10.7	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	482.055	2.564	942731	1.63	500	96.4	90	110	
Ag	107	1	No Gas	104.782	2.212	4428945	0.91	100	104.8	90	110	
Cd	111	1	No Gas	103.090	1.077	860870	1.13	100	103.1	90	110	
Sr	88	1	No Gas	102.796	0.910	8996069	2.16	100	102.8	90	110	
Mo	95	1	No Gas	102.891	1.532	1649111	0.82	100	102.9	90	110	
Sn	118	1	No Gas	104.569	2.817	2790814	0.86	100	104.6	90	110	
Sb	121	1	No Gas	109.140	1.725	3534491	0.51	100	109.1	90	110	
Ba	137	1	No Gas	107.359	3.001	1350897	1.85	100	107.4	90	110	
Tl	205	1	No Gas	103.189	3.492	6811116	1.29	100	103.2	90	110	
Tl	203	1	No Gas	106.106	3.708	2943862	1.41	100	106.1	90	110	
Pb	208	1	No Gas	103.768	1.449	9260211	2.06	100	103.8	90	110	
U	238	1	No Gas	104.511	0.694	8584013	2.64	100	104.5	90	110	
Ca	43	2	He	10687.850	2.421	29816	3.57	10000	106.9	90	110	
Sb	121	2	He	109.497	2.720	1437547	1.20	100	109.5	90	110	
Ti	47	2	He	101.079	0.522	33855	1.62	100	101.1	90	110	
Cu	63	1	No Gas	106.710	2.211	3270969	1.50	100	106.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2185446	3.59	2755843	79.30	70	120	
Ge	72	2	He	1422502	1.55	1558698	91.26	70	120	
Ge	72	1	No Gas	6470298	2.00	6887146	93.95	70	120	
In	115	1	No Gas	7514884	1.96	7720244	97.34	70	120	
Bi	209	1	No Gas	5643634	2.28	5354842	105.39	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	159_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T14:51:26-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	051CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	-0.037	-298.5	128759	0.4	0.5	
Be	9	1	No Gas	0.014	45.9	132	34.5	0.5	
V	51	2	He	-0.049	-19.2	1600	5.2	2.5	
Cr	52	2	He	0.013	75.9	1630	7.0	2.5	
Fe	56	2	He	1.218	2.5	25998	2.4	100	
Se	78	2	He	0.155	64.9	143	10.5	2	
As	75	2	He	0.004	103.8	99	8.5	2.5	
Ca	44	2	He	0.240	232.5	340	8.8	100	
Na	23	2	He	-27.423	-6.3	85350	1.8	100	
Mg	24	2	He	-0.225	-24.6	1090	4.0	100	
K	39	2	He	-11.609	-14.2	51176	1.9	100	
Mn	55	2	He	0.080	13.4	1160	8.5	2.5	
Co	59	2	He	0.000	794.1	227	12.7	2.5	
Ni	60	2	He	0.009	162.7	257	29.2	2.5	
Cu	63	2	He	-0.061	-9.3	1797	5.9	2	
Zn	66	2	He	-0.187	-21.2	623	14.4	2.5	
Al	27	2	He	-0.490	-52.7	420	21.2	5	
B	11	1	No Gas	4.003	11.4	40647	3.0	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	-0.058	-13.0	44117	1.2	5	
Si	28	1	No Gas	-2.620	-3.9	637082	0.5	10	
P	31	1	No Gas	-4.179	-2.6	37184	0.8	10	
Ag	107	1	No Gas	-0.001	-263.1	1333	9.6	2.5	
Cd	111	1	No Gas	0.003	98.8	50	52.9	1	
Sr	88	1	No Gas	0.008	19.2	4161	3.1	2.5	
Mo	95	1	No Gas	0.019	66.7	500	42.1	2.5	
Sn	118	1	No Gas	0.014	152.2	4948	12.0	5	
Sb	121	1	No Gas	0.070	12.8	2900	9.7	2.5	
Ba	137	1	No Gas	-0.029	-11.7	950	4.2	2.5	
Tl	205	1	No Gas	0.086	40.1	5978	36.2	1	
Tl	203	1	No Gas	0.092	43.4	2617	40.2	1	
Pb	208	1	No Gas	0.008	42.2	3090	8.6	2.5	
U	238	1	No Gas	0.005	33.8	450	30.9	2.5	
Ca	43	2	He	-3.989	-134.7	13	114.6	100	
Sb	121	2	He	0.051	19.4	960	14.0	2.5	
Ti	47	2	He	0.020	1.8	10	0.0	2.5	
Cu	63	1	No Gas	-0.102	-5.8	4688	4.3	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2330378	2.09	2755843	84.56	70	120	
Ge	72	2	He	1447756	1.26	1558698	92.88	70	120	
Ge	72	1	No Gas	6486888	0.68	6887146	94.19	70	120	
In	115	1	No Gas	7776777	0.62	7720244	100.73	70	120	
Bi	209	1	No Gas	5678146	1.96	5354842	106.04	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	171_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T16:03:57-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	051CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.029	629.4	124775	0.1	0.5	
Be	9	1	No Gas	0.013	10.9	120	4.2	0.5	
V	51	2	He	-0.034	-46.1	1665	9.8	2.5	
Cr	52	2	He	0.008	172.5	1490	13.1	2.5	
Fe	56	2	He	0.992	10.5	22269	3.7	100	
Se	78	2	He	-0.047	-227.7	108	12.1	2	
As	75	2	He	0.008	56.3	101	8.3	2.5	
Ca	44	2	He	2.457	7.2	427	2.7	100	
Na	23	2	He	-26.738	-5.3	81772	1.1	100	
Mg	24	2	He	-0.051	-511.7	1160	17.2	100	
K	39	2	He	-12.600	-5.2	47603	0.7	100	
Mn	55	2	He	0.020	44.9	633	12.8	2.5	
Co	59	2	He	0.001	191.0	237	21.3	2.5	
Ni	60	2	He	0.016	28.3	280	9.4	2.5	
Cu	63	2	He	-0.066	-3.8	1640	0.6	2	
Zn	66	2	He	-0.164	-22.9	643	14.4	2.5	
Al	27	2	He	-0.329	-118.2	450	29.1	5	
B	11	1	No Gas	2.628	20.3	32848	3.6	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	0.005	484.6	44401	0.4	5	
Si	28	1	No Gas	-2.497	-37.3	613482	0.7	10	
P	31	1	No Gas	-4.553	-15.0	35009	1.9	10	
Ag	107	1	No Gas	-0.012	-12.7	837	10.8	2.5	
Cd	111	1	No Gas	0.005	19.1	67	8.7	1	
Sr	88	1	No Gas	0.009	20.8	4097	4.2	2.5	
Mo	95	1	No Gas	0.023	45.7	537	25.3	2.5	
Sn	118	1	No Gas	0.017	58.8	4828	1.9	5	
Sb	121	1	No Gas	0.080	16.5	3110	14.6	2.5	
Ba	137	1	No Gas	-0.028	-25.2	930	3.9	2.5	
Tl	205	1	No Gas	0.087	37.8	5835	34.3	1	
Tl	203	1	No Gas	0.088	34.0	2427	31.3	1	
Pb	208	1	No Gas	0.009	25.8	3090	5.0	2.5	
U	238	1	No Gas	0.006	23.6	473	20.5	2.5	
Ca	43	2	He	-4.986	-73.8	10	100.0	100	
Sb	121	2	He	0.055	9.4	960	5.5	2.5	
Ti	47	2	He	0.012	154.8	7	86.6	2.5	
Cu	63	1	No Gas	-0.103	-9.8	4474	4.8	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2227358	4.03	2755843	80.82	70	120	
Ge	72	2	He	1370842	1.53	1558698	87.95	70	120	
Ge	72	1	No Gas	6226984	1.98	6887146	90.41	70	120	
In	115	1	No Gas	7481663	5.47	7720244	96.91	70	120	
Bi	209	1	No Gas	5511071	1.86	5354842	102.92	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	173_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T16:12:57-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	051CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	95.977	1.571	2621856	0.64	100	96.0	90	110	
Be	9	1	No Gas	95.625	1.189	630417	0.64	100	95.6	90	110	
V	51	2	He	94.696	1.406	947351	2.48	100	94.7	90	110	
Cr	52	2	He	95.388	2.340	1169504	1.35	100	95.4	90	110	
Fe	56	2	He	9797.358	0.878	99366185	0.24	10000	98.0	90	110	
Se	78	2	He	100.627	1.790	13331	0.85	100	100.6	90	110	
Sn	118	2	He	87.477	0.891	955546	1.05	100	87.5	90	110	CCV Main CR1-2 Failed
As	75	2	He	99.391	1.438	163710	0.40	100	99.4	90	110	
Ca	44	2	He	9598.819	1.244	446690	0.30	10000	96.0	90	110	
Na	23	2	He	9364.416	2.785	12944964	1.74	10000	93.6	90	110	
Mg	24	2	He	9543.566	1.524	6873671	0.44	10000	95.4	90	110	
K	39	2	He	9728.086	1.740	8352703	0.64	10000	97.3	90	110	
Mn	55	2	He	93.509	1.316	722427	0.24	100	93.5	90	110	
Co	59	2	He	98.766	2.172	1910198	1.35	100	98.8	90	110	
Ni	60	2	He	96.268	1.781	478841	1.39	100	96.3	90	110	
Cu	63	2	He	98.891	0.815	1352874	0.47	100	98.9	90	110	
Zn	66	2	He	97.480	0.174	221472	0.92	100	97.5	90	110	
Al	27	2	He	96.647	0.701	31048	1.63	100	96.6	90	110	
B	11	1	No Gas	495.108	3.186	2064078	2.19	500	99.0	90	110	
Al	27	1	No Gas	92.875	0.514	2969841	1.17	100	92.9	90	110	
Si	28	1	No Gas	506.244	0.875	9162193	1.63	5000	10.1	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	459.752	2.938	843237	2.48	500	92.0	90	110	
Ag	107	1	No Gas	92.790	2.934	3864798	2.30	100	92.8	90	110	
Cd	111	1	No Gas	94.354	2.625	776203	0.79	100	94.4	90	110	
Sr	88	1	No Gas	87.179	3.419	7514675	1.49	100	87.2	90	110	CCV Main CR1-2 Failed
Mo	95	1	No Gas	91.118	4.425	1438747	3.46	100	91.1	90	110	
Sn	118	1	No Gas	92.743	0.192	2440327	2.12	100	92.7	90	110	
Sb	121	1	No Gas	105.399	0.932	3193941	0.90	100	105.4	90	110	
Ba	137	1	No Gas	94.903	3.474	1176590	1.19	100	94.9	90	110	
Tl	205	1	No Gas	101.216	2.560	6244191	1.64	100	101.2	90	110	
Tl	203	1	No Gas	100.618	0.966	2610140	2.73	100	100.6	90	110	
Pb	208	1	No Gas	97.706	1.904	8146292	0.81	100	97.7	90	110	
U	238	1	No Gas	93.336	3.280	7161414	2.98	100	93.3	90	110	
Ca	43	2	He	9821.769	2.684	25965	1.78	10000	98.2	90	110	
Sb	121	2	He	102.086	2.417	1270582	1.67	100	102.1	90	110	
Ti	47	2	He	94.243	1.599	29919	1.63	100	94.2	90	110	
Cu	63	1	No Gas	99.559	0.925	2856487	2.29	100	99.6	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2118419	1.60	2755843	76.87	70	120	
Ge	72	2	He	1348353	1.09	1558698	86.51	70	120	
Ge	72	1	No Gas	6053421	1.40	6887146	87.89	70	120	
In	115	1	No Gas	7405013	2.31	7720244	95.92	70	120	
Bi	209	1	No Gas	5273567	2.22	5354842	98.48	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	182_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T16:32:55-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	051CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	103.375	3.175	2855340	0.76	100	103.4	90	110	
Be	9	1	No Gas	102.312	3.503	684105	0.18	100	102.3	90	110	
V	51	2	He	101.780	2.497	1030598	1.87	100	101.8	90	110	
Cr	52	2	He	101.070	0.680	1254815	1.10	100	101.1	90	110	
Fe	56	2	He	10538.938	1.229	108235212	1.76	10000	105.4	90	110	
Se	78	2	He	106.926	1.363	14337	0.83	100	106.9	90	110	
Sn	118	2	He	99.041	1.999	1058928	1.88	100	99.0	90	110	
As	75	2	He	104.547	1.771	174357	0.99	100	104.5	90	110	
Ca	44	2	He	10242.755	0.643	482635	0.55	10000	102.4	90	110	
Na	23	2	He	9790.352	1.723	13699159	0.87	10000	97.9	90	110	
Mg	24	2	He	10063.303	1.177	7339259	1.00	10000	100.6	90	110	
K	39	2	He	10195.482	1.007	8861793	1.07	10000	102.0	90	110	
Mn	55	2	He	100.567	0.592	786708	0.44	100	100.6	90	110	
Co	59	2	He	106.205	1.758	2079868	0.99	100	106.2	90	110	
Ni	60	2	He	104.194	1.060	524765	0.99	100	104.2	90	110	
Cu	63	2	He	106.551	1.509	1475688	0.67	100	106.6	90	110	
Zn	66	2	He	105.188	1.174	241887	0.47	100	105.2	90	110	
Al	27	2	He	110.148	2.554	35753	3.03	100	110.1	90	110	CCV Main CR1-2 Failed
B	11	1	No Gas	528.991	3.621	2235670	1.08	500	105.8	90	110	
Al	27	1	No Gas	104.368	0.565	3386313	0.10	100	104.4	90	110	
Si	28	1	No Gas	540.783	1.732	9901888	1.19	5000	10.8	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	482.988	0.937	898204	0.52	500	96.6	90	110	
Ag	107	1	No Gas	101.865	0.467	4227120	1.94	100	101.9	90	110	
Cd	111	1	No Gas	102.127	3.304	837058	3.33	100	102.1	90	110	
Sr	88	1	No Gas	98.571	1.827	8465051	0.66	100	98.6	90	110	
Mo	95	1	No Gas	100.333	1.955	1578372	1.50	100	100.3	90	110	
Sn	118	1	No Gas	101.643	1.917	2663009	0.41	100	101.6	90	110	
Sb	121	1	No Gas	110.825	0.637	3413311	1.19	100	110.8	90	110	CCV Main CR1-2 Failed
Ba	137	1	No Gas	102.341	3.671	1263881	2.25	100	102.3	90	110	
Tl	205	1	No Gas	102.390	2.566	6545031	0.83	100	102.4	90	110	
Tl	203	1	No Gas	103.990	4.368	2793796	2.93	100	104.0	90	110	
Pb	208	1	No Gas	104.470	1.801	9025865	0.91	100	104.5	90	110	
U	238	1	No Gas	104.077	2.411	8274558	1.65	100	104.1	90	110	
Ca	43	2	He	10598.248	1.530	28369	0.81	10000	106.0	90	110	
Sb	121	2	He	109.165	0.918	1375838	0.83	100	109.2	90	110	
Ti	47	2	He	101.042	1.349	32482	1.98	100	101.0	90	110	
Cu	63	1	No Gas	108.104	0.519	3151228	0.31	100	108.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2150022	3.40	2755843	78.02	70	120	
Ge	72	2	He	1365240	0.85	1558698	87.59	70	120	
Ge	72	1	No Gas	6152028	0.66	6887146	89.33	70	120	
In	115	1	No Gas	7376193	2.25	7720244	95.54	70	120	
Bi	209	1	No Gas	5464285	1.76	5354842	102.04	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	183_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T16:34:40-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	051CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	-0.044	-126.2	125542	0.7	0.5	
Be	9	1	No Gas	0.017	36.5	155	28.7	0.5	
V	51	2	He	-0.036	-18.2	1650	3.3	2.5	
Cr	52	2	He	0.001	923.2	1397	6.2	2.5	
Fe	56	2	He	0.615	11.8	18449	3.3	100	
Se	78	2	He	0.064	101.2	123	6.6	2	
As	75	2	He	0.005	97.7	96	8.8	2.5	
Ca	44	2	He	3.697	18.4	487	5.9	100	
Na	23	2	He	-37.978	-0.9	66348	1.5	100	
Mg	24	2	He	-0.317	-83.2	967	19.4	100	
K	39	2	He	-11.113	-20.6	49045	3.3	100	
Mn	55	2	He	0.044	22.2	823	8.8	2.5	
Co	59	2	He	0.008	23.4	370	9.7	2.5	
Ni	60	2	He	0.019	52.8	297	17.0	2.5	
Cu	63	2	He	-0.077	-20.1	1490	13.7	2	
Zn	66	2	He	0.051	52.6	1140	6.1	2.5	
Al	27	2	He	-0.228	-163.7	483	25.3	5	
B	11	1	No Gas	2.999	12.4	35259	4.2	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	-0.129	-16.5	40008	0.3	5	
Si	28	1	No Gas	-1.908	-41.4	622955	0.9	10	
P	31	1	No Gas	-3.851	-16.6	36224	1.8	10	
Ag	107	1	No Gas	-0.018	-7.4	573	9.6	2.5	
Cd	111	1	No Gas	0.004	73.7	53	43.3	1	
Sr	88	1	No Gas	0.003	73.4	3524	4.6	2.5	
Mo	95	1	No Gas	0.026	16.7	590	11.9	2.5	
Sn	118	1	No Gas	0.032	37.6	5154	5.9	5	
Sb	121	1	No Gas	0.075	21.5	2944	17.1	2.5	
Ba	137	1	No Gas	-0.032	-18.9	873	8.7	2.5	
Tl	205	1	No Gas	0.090	29.0	5915	26.8	1	
Tl	203	1	No Gas	0.095	32.9	2574	30.9	1	
Pb	208	1	No Gas	0.012	26.2	3214	6.8	2.5	
U	238	1	No Gas	0.005	7.9	400	6.6	2.5	
Ca	43	2	He	-2.525	-83.6	17	34.6	100	
Sb	121	2	He	0.051	5.2	907	3.5	2.5	
Ti	47	2	He	0.011	155.5	7	86.6	2.5	
Cu	63	1	No Gas	-0.121	-11.9	3934	9.4	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2275362	0.53	2755843	82.57	70	120	
Ge	72	2	He	1375241	0.79	1558698	88.23	70	120	
Ge	72	1	No Gas	6218793	1.45	6887146	90.30	70	120	
In	115	1	No Gas	7391723	0.13	7720244	95.74	70	120	
Bi	209	1	No Gas	5391118	1.38	5354842	100.68	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	194_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T17:03:49-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	051CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	100.769	1.583	2741859	1.65	100	100.8	90	110	
Be	9	1	No Gas	99.286	1.259	653304	0.54	100	99.3	90	110	
V	51	2	He	98.383	5.630	988083	3.70	100	98.4	90	110	
Cr	52	2	He	100.268	3.740	1234921	2.49	100	100.3	90	110	
Fe	56	2	He	10271.461	3.254	104638865	1.28	10000	102.7	90	110	
Se	78	2	He	104.546	1.785	13912	0.98	100	104.5	90	110	
Sn	118	2	He	96.097	1.089	1023837	1.58	100	96.1	90	110	
As	75	2	He	101.799	2.324	168462	1.42	100	101.8	90	110	
Ca	44	2	He	9934.131	3.185	464364	1.25	10000	99.3	90	110	
Na	23	2	He	9745.957	3.389	13529494	1.57	10000	97.5	90	110	
Mg	24	2	He	9814.057	2.343	7101235	0.54	10000	98.1	90	110	
K	39	2	He	9966.980	2.000	8597162	1.41	10000	99.7	90	110	
Mn	55	2	He	98.331	1.928	763210	0.07	100	98.3	90	110	
Co	59	2	He	105.819	1.914	2056271	0.63	100	105.8	90	110	
Ni	60	2	He	101.713	2.542	508230	0.76	100	101.7	90	110	
Cu	63	2	He	104.227	2.932	1432193	1.36	100	104.2	90	110	
Zn	66	2	He	102.683	3.840	234251	1.85	100	102.7	90	110	
Al	27	2	He	106.227	2.214	34226	0.27	100	106.2	90	110	
B	11	1	No Gas	526.175	0.813	2188577	1.08	500	105.2	90	110	
Al	27	1	No Gas	101.133	0.122	3267369	0.68	100	101.1	90	110	
Si	28	1	No Gas	521.608	1.455	9529131	1.26	5000	10.4	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	462.859	2.435	858428	1.56	500	92.6	90	110	
Ag	107	1	No Gas	100.685	1.364	4131754	0.81	100	100.7	90	110	
Cd	111	1	No Gas	100.797	1.043	817151	1.63	100	100.8	90	110	
Sr	88	1	No Gas	99.198	1.686	8428905	3.43	100	99.2	90	110	
Mo	95	1	No Gas	99.915	1.422	1554590	0.64	100	99.9	90	110	
Sn	118	1	No Gas	100.807	1.667	2612308	0.57	100	100.8	90	110	
Sb	121	1	No Gas	109.285	1.211	3349938	1.03	100	109.3	90	110	
Ba	137	1	No Gas	102.732	3.651	1254800	2.08	100	102.7	90	110	
Tl	205	1	No Gas	102.429	3.250	6455190	2.92	100	102.4	90	110	
Tl	203	1	No Gas	102.195	2.517	2707899	3.43	100	102.2	90	110	
Pb	208	1	No Gas	103.602	1.201	8826521	3.04	100	103.6	90	110	
U	238	1	No Gas	100.949	1.603	7912487	1.55	100	100.9	90	110	
Ca	43	2	He	10353.755	1.535	27505	1.83	10000	103.5	90	110	
Sb	121	2	He	107.243	1.540	1341298	2.01	100	107.2	90	110	
Ti	47	2	He	100.372	4.360	32004	2.87	100	100.4	90	110	
Cu	63	1	No Gas	102.020	1.315	2960595	2.03	100	102.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2114337	1.27	2755843	76.72	70	120	
Ge	72	2	He	1354875	2.02	1558698	86.92	70	120	
Ge	72	1	No Gas	6123162	0.78	6887146	88.91	70	120	
In	115	1	No Gas	7295203	2.02	7720244	94.49	70	120	
Bi	209	1	No Gas	5386849	2.18	5354842	100.60	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	195_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T17:05:33-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	051CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	-0.059	-239.9	122726	0.8	0.5	
Be	9	1	No Gas	0.019	4.0	165	6.1	0.5	
V	51	2	He	-0.019	-43.3	1815	5.4	2.5	
Cr	52	2	He	0.006	173.0	1457	10.0	2.5	
Fe	56	2	He	0.615	4.1	18356	2.1	100	
Se	78	2	He	-0.010	-920.8	113	10.4	2	
As	75	2	He	0.003	593.1	91	27.7	2.5	
Ca	44	2	He	2.059	69.1	407	15.8	100	
Na	23	2	He	-23.278	-4.0	86409	0.5	100	
Mg	24	2	He	-0.407	-4.2	897	1.7	100	
K	39	2	He	-11.124	-15.0	48774	2.4	100	
Mn	55	2	He	0.043	19.0	810	7.5	2.5	
Co	59	2	He	0.003	35.2	270	7.4	2.5	
Ni	60	2	He	0.002	304.0	210	17.2	2.5	
Cu	63	2	He	-0.080	-8.9	1433	7.8	2	
Zn	66	2	He	0.068	47.6	1173	6.4	2.5	
Al	27	2	He	-0.362	-105.9	437	27.3	5	
B	11	1	No Gas	4.511	6.8	41168	2.1	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	-0.135	-18.9	40242	2.3	5	
Si	28	1	No Gas	-2.516	-28.5	619194	0.6	10	
P	31	1	No Gas	-4.824	-10.7	34864	1.0	10	
Ag	107	1	No Gas	-0.017	-5.6	593	5.1	2.5	
Cd	111	1	No Gas	0.005	12.7	67	8.7	1	
Sr	88	1	No Gas	0.003	18.0	3591	1.9	2.5	
Mo	95	1	No Gas	0.021	13.4	510	7.1	2.5	
Sn	118	1	No Gas	0.023	42.9	4958	5.6	5	
Sb	121	1	No Gas	0.058	15.4	2437	10.3	2.5	
Ba	137	1	No Gas	-0.030	-25.7	900	9.9	2.5	
Tl	205	1	No Gas	0.087	31.7	5882	32.5	1	
Tl	203	1	No Gas	0.088	35.3	2464	36.5	1	
Pb	208	1	No Gas	0.010	9.3	3170	4.9	2.5	
U	238	1	No Gas	0.005	29.5	437	29.5	2.5	
Ca	43	2	He	-6.218	-34.6	7	86.6	100	
Sb	121	2	He	0.041	3.5	783	2.7	2.5	
Ti	47	2	He	0.012	307.6	7	173.2	2.5	
Cu	63	1	No Gas	-0.113	-1.8	4241	2.9	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2233412	3.60	2755843	81.04	70	120	
Ge	72	2	He	1367821	1.04	1558698	87.75	70	120	
Ge	72	1	No Gas	6287624	1.69	6887146	91.30	70	120	
In	115	1	No Gas	7444096	1.82	7720244	96.42	70	120	
Bi	209	1	No Gas	5512938	2.27	5354842	102.95	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	196_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T17:07:26-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	051CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	104.401	3.120	2799862	1.73	100	104.4	90	110	
Be	9	1	No Gas	101.387	1.650	658645	0.68	100	101.4	90	110	
V	51	2	He	98.388	3.859	986320	1.66	100	98.4	90	110	
Cr	52	2	He	99.695	3.644	1225253	1.61	100	99.7	90	110	
Fe	56	2	He	10354.680	4.020	105258908	1.88	10000	103.5	90	110	
Se	78	2	He	103.809	2.777	13784	1.03	100	103.8	90	110	
Sn	118	2	He	96.366	1.621	1018939	0.59	100	96.4	90	110	
As	75	2	He	102.029	1.807	168502	0.66	100	102.0	90	110	
Ca	44	2	He	9871.323	2.283	460559	1.02	10000	98.7	90	110	
Na	23	2	He	9754.143	2.572	13514294	0.35	10000	97.5	90	110	
Mg	24	2	He	9791.943	1.683	7071449	0.60	10000	97.9	90	110	
K	39	2	He	9815.991	2.370	8449582	0.46	10000	98.2	90	110	
Mn	55	2	He	98.661	2.978	764101	0.98	100	98.7	90	110	
Co	59	2	He	106.431	2.987	2063694	1.32	100	106.4	90	110	
Ni	60	2	He	102.257	2.322	509926	0.79	100	102.3	90	110	
Cu	63	2	He	104.187	1.398	1429137	1.88	100	104.2	90	110	
Zn	66	2	He	102.865	1.264	234271	1.05	100	102.9	90	110	
Al	27	2	He	105.473	4.254	33912	2.86	100	105.5	90	110	
B	11	1	No Gas	526.603	1.803	2162323	0.73	500	105.3	90	110	
Al	27	1	No Gas	99.841	2.384	3224106	0.75	100	99.8	90	110	
Si	28	1	No Gas	524.880	3.637	9577825	1.77	5000	10.5	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	469.144	2.373	869064	0.83	500	93.8	90	110	
Ag	107	1	No Gas	101.459	1.523	4145473	1.71	100	101.5	90	110	
Cd	111	1	No Gas	100.953	1.326	814788	1.54	100	101.0	90	110	
Sr	88	1	No Gas	99.093	2.312	8380129	2.02	100	99.1	90	110	
Mo	95	1	No Gas	99.586	3.594	1542188	1.53	100	99.6	90	110	
Sn	118	1	No Gas	101.979	1.895	2631050	1.25	100	102.0	90	110	
Sb	121	1	No Gas	111.221	0.598	3407839	1.09	100	111.2	90	110	CCV Main CR1-2 Failed
Ba	137	1	No Gas	103.579	3.354	1259500	0.94	100	103.6	90	110	
Tl	205	1	No Gas	102.939	2.160	6450268	2.54	100	102.9	90	110	
Tl	203	1	No Gas	102.669	3.656	2703887	3.34	100	102.7	90	110	
Pb	208	1	No Gas	103.460	2.018	8762725	3.34	100	103.5	90	110	
U	238	1	No Gas	102.128	0.774	7959908	2.64	100	102.1	90	110	
Ca	43	2	He	10170.295	0.666	26967	2.51	10000	101.7	90	110	
Sb	121	2	He	105.659	3.819	1318190	1.63	100	105.7	90	110	
Ti	47	2	He	98.516	2.737	31353	0.65	100	98.5	90	110	
Cu	63	1	No Gas	103.534	1.880	3002834	2.01	100	103.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2087631	1.82	2755843	75.75	70	120	
Ge	72	2	He	1352153	2.22	1558698	86.75	70	120	
Ge	72	1	No Gas	6120788	1.66	6887146	88.87	70	120	
In	115	1	No Gas	7263604	2.49	7720244	94.09	70	120	
Bi	209	1	No Gas	5355179	1.92	5354842	100.01	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	197_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T17:09:11-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	051CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.097	92.7	124096	1.2	0.5	
Be	9	1	No Gas	0.023	5.3	187	6.2	0.5	
V	51	2	He	-0.022	-49.9	1770	4.6	2.5	
Cr	52	2	He	0.003	187.4	1410	7.5	2.5	
Fe	56	2	He	0.633	9.6	18359	1.1	100	
Se	78	2	He	0.092	116.7	125	12.0	2	
As	75	2	He	-0.002	-783.9	82	31.5	2.5	
Ca	44	2	He	2.978	65.3	447	21.2	100	
Na	23	2	He	-26.637	-6.0	80991	0.4	100	
Mg	24	2	He	-0.403	-28.4	890	6.7	100	
K	39	2	He	-12.758	-14.5	46935	3.0	100	
Mn	55	2	He	0.024	52.2	657	17.5	2.5	
Co	59	2	He	0.002	33.0	243	2.4	2.5	
Ni	60	2	He	0.019	3.0	290	3.4	2.5	
Cu	63	2	He	-0.080	-13.2	1420	10.4	2	
Zn	66	2	He	0.050	143.4	1120	12.1	2.5	
Al	27	2	He	-0.363	-37.7	433	10.4	5	
B	11	1	No Gas	4.626	7.8	40712	4.3	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	-0.104	-45.7	40362	2.4	5	
Si	28	1	No Gas	-2.441	-26.5	607116	0.3	10	
P	31	1	No Gas	-4.526	-17.6	34637	3.0	10	
Ag	107	1	No Gas	-0.015	-27.2	680	24.3	2.5	
Cd	111	1	No Gas	0.003	45.4	47	24.7	1	
Sr	88	1	No Gas	0.005	36.7	3677	3.6	2.5	
Mo	95	1	No Gas	0.030	50.2	633	36.2	2.5	
Sn	118	1	No Gas	0.037	10.1	5245	2.1	5	
Sb	121	1	No Gas	0.066	14.4	2627	9.7	2.5	
Ba	137	1	No Gas	-0.031	-42.4	870	19.2	2.5	
Tl	205	1	No Gas	0.089	32.7	6135	30.5	1	
Tl	203	1	No Gas	0.090	37.1	2544	35.2	1	
Pb	208	1	No Gas	0.013	27.5	3457	9.2	2.5	
U	238	1	No Gas	0.005	19.6	477	17.8	2.5	
Ca	43	2	He	7.730	104.4	43	48.0	100	
Sb	121	2	He	0.044	17.6	810	9.6	2.5	
Ti	47	2	He	0.012	155.2	7	86.6	2.5	
Cu	63	1	No Gas	-0.128	-1.5	3711	2.0	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2180621	1.89	2755843	79.13	70	120	
Ge	72	2	He	1355736	2.61	1558698	86.98	70	120	
Ge	72	1	No Gas	6151781	1.75	6887146	89.32	70	120	
In	115	1	No Gas	7322894	0.56	7720244	94.85	70	120	
Bi	209	1	No Gas	5643146	1.35	5354842	105.38	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	208_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T17:31:27-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	051CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	104.014	1.626	2792394	1.26	100	104.0	90	110	
Be	9	1	No Gas	101.568	1.573	660310	0.83	100	101.6	90	110	
V	51	2	He	99.718	2.809	994152	2.91	100	99.7	90	110	
Cr	52	2	He	100.554	1.198	1228929	1.13	100	100.6	90	110	
Fe	56	2	He	10303.674	0.883	104166648	0.99	10000	103.0	90	110	
Se	78	2	He	106.537	1.167	14063	1.13	100	106.5	90	110	
Sn	118	2	He	98.028	0.550	1029304	0.77	100	98.0	90	110	
As	75	2	He	103.567	1.332	170045	1.24	100	103.6	90	110	
Ca	44	2	He	10100.896	0.528	468546	0.58	10000	101.0	90	110	
Na	23	2	He	9864.927	0.408	13588648	0.37	10000	98.6	90	110	
Mg	24	2	He	9915.411	0.668	7118940	0.77	10000	99.2	90	110	
K	39	2	He	10026.618	0.411	8580248	0.52	10000	100.3	90	110	
Mn	55	2	He	98.592	0.557	759257	0.46	100	98.6	90	110	
Co	59	2	He	105.542	1.268	2034857	1.33	100	105.5	90	110	
Ni	60	2	He	103.478	0.203	513048	0.24	100	103.5	90	110	
Cu	63	2	He	104.197	0.402	1420756	0.36	100	104.2	90	110	
Zn	66	2	He	103.537	2.138	234408	2.18	100	103.5	90	110	
Al	27	2	He	106.862	1.785	34159	1.70	100	106.9	90	110	
B	11	1	No Gas	530.456	0.583	2179736	0.17	500	106.1	90	110	
Al	27	1	No Gas	100.336	0.693	3279815	0.72	100	100.3	90	110	
Si	28	1	No Gas	520.138	1.362	9615440	1.41	5000	10.4	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	464.150	2.503	870870	2.49	500	92.8	90	110	
Ag	107	1	No Gas	98.338	4.144	4165308	2.12	100	98.3	90	110	
Cd	111	1	No Gas	99.888	1.465	836089	1.18	100	99.9	90	110	
Sr	88	1	No Gas	92.975	1.271	8155173	1.35	100	93.0	90	110	
Mo	95	1	No Gas	98.385	0.805	1580856	1.81	100	98.4	90	110	
Sn	118	1	No Gas	99.700	2.062	2667660	0.58	100	99.7	90	110	
Sb	121	1	No Gas	108.151	1.372	3353992	1.34	100	108.2	90	110	
Ba	137	1	No Gas	99.357	4.197	1252868	1.55	100	99.4	90	110	
Tl	205	1	No Gas	100.308	2.747	6189141	2.56	100	100.3	90	110	
Tl	203	1	No Gas	103.564	3.824	2686019	3.65	100	103.6	90	110	
Pb	208	1	No Gas	102.492	1.498	8546390	1.32	100	102.5	90	110	
U	238	1	No Gas	102.427	0.549	7859963	0.45	100	102.4	90	110	
Ca	43	2	He	10088.239	3.949	26586	3.90	10000	100.9	90	110	
Sb	121	2	He	108.080	1.152	1340964	1.15	100	108.1	90	110	
Ti	47	2	He	99.891	0.522	31610	0.59	100	99.9	90	110	
Cu	63	1	No Gas	102.181	2.065	2999690	2.05	100	102.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2088943	0.75	2755843	75.80	70	120	
Ge	72	2	He	1343949	0.11	1558698	86.22	70	120	
Ge	72	1	No Gas	6194645	0.14	6887146	89.95	70	120	
In	115	1	No Gas	7533407	2.59	7720244	97.58	70	120	
Bi	209	1	No Gas	5272998	0.19	5354842	98.47	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	209_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T17:33:10-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	051CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.016	1227.5	124192	1.1	0.5	
Be	9	1	No Gas	0.022	24.4	185	23.4	0.5	
V	51	2	He	-0.032	-4.7	1693	1.4	2.5	
Cr	52	2	He	-0.006	-90.0	1320	5.0	2.5	
Fe	56	2	He	0.747	9.8	19831	2.7	100	
Se	78	2	He	0.058	61.9	123	4.1	2	
As	75	2	He	-0.004	-195.4	80	16.7	2.5	
Ca	44	2	He	3.564	64.1	480	21.1	100	
Na	23	2	He	-23.533	-3.3	86604	0.2	100	
Mg	24	2	He	-0.274	-23.7	1000	5.3	100	
K	39	2	He	-12.720	-12.6	47690	1.6	100	
Mn	55	2	He	0.039	16.4	780	5.1	2.5	
Co	59	2	He	0.003	57.2	270	13.4	2.5	
Ni	60	2	He	0.016	57.0	283	16.3	2.5	
Cu	63	2	He	-0.076	-17.4	1510	11.9	2	
Zn	66	2	He	0.000	20116.8	1023	18.2	2.5	
Al	27	2	He	-0.438	-79.6	417	27.8	5	
B	11	1	No Gas	5.237	12.1	44096	3.2	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	-0.157	-21.8	39764	1.2	5	
Si	28	1	No Gas	-2.636	-25.3	621083	0.1	10	
P	31	1	No Gas	-4.529	-2.1	35636	1.5	10	
Ag	107	1	No Gas	-0.016	-10.3	663	11.5	2.5	
Cd	111	1	No Gas	0.006	83.5	70	57.1	1	
Sr	88	1	No Gas	0.003	90.1	3671	6.2	2.5	
Mo	95	1	No Gas	0.029	13.2	653	10.4	2.5	
Sn	118	1	No Gas	0.082	12.5	6665	4.8	5	
Sb	121	1	No Gas	0.127	9.9	4641	9.7	2.5	
Ba	137	1	No Gas	-0.016	-7.3	1097	0.5	2.5	
Tl	205	1	No Gas	0.095	33.3	6255	32.8	1	
Tl	203	1	No Gas	0.097	25.7	2640	26.0	1	
Pb	208	1	No Gas	0.012	18.7	3257	6.8	2.5	
U	238	1	No Gas	0.007	7.2	613	7.4	2.5	
Ca	43	2	He	-2.540	-81.6	17	34.6	100	
Sb	121	2	He	0.100	8.4	1527	5.9	2.5	
Ti	47	2	He	0.032	147.7	13	114.6	2.5	
Cu	63	1	No Gas	-0.121	-8.4	4027	6.0	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2223043	3.15	2755843	80.67	70	120	
Ge	72	2	He	1376554	1.37	1558698	88.31	70	120	
Ge	72	1	No Gas	6328341	1.99	6887146	91.89	70	120	
In	115	1	No Gas	7610837	0.87	7720244	98.58	70	120	
Bi	209	1	No Gas	5408856	0.87	5354842	101.01	70	120	

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	218CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T19:51:57-05:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	No Gas	117561	0.00
Be	9	1	No Gas	20	0.00
V	51	2	He	1960	0.26
Cr	52	2	He	1323	0.69
Fe	56	2	He	10841	0.05
Se	78	2	He	103	13.33
Sn	118	2	He	1523	0.30
As	75	2	He	80	29.00
Ca	44	2	He	303	4.11
Na	23	2	He	54202	0.00
Mg	24	2	He	610	0.27
K	39	2	He	43707	0.00
Mn	55	2	He	483	3.16
Co	59	2	He	197	1.49
Ni	60	2	He	190	21.64
Cu	63	2	He	1300	0.30
Zn	66	2	He	697	2.11
Al	27	2	He	580	1.03
B	11	1	No Gas	14845	0.02
Al	27	1	No Gas	43709	0.00
Si	28	1	No Gas	542049	0.00
P	31	1	No Gas	34848	0.00
Ag	107	1	No Gas	357	1.82
Cd	111	1	No Gas	37	42.94
Sr	88	1	No Gas	3160	0.18
Mo	95	1	No Gas	140	22.24
Sn	118	1	No Gas	3564	0.25
Sb	121	1	No Gas	890	1.03
Ba	137	1	No Gas	2090	0.20
Tl	205	1	No Gas	333	6.75
Tl	203	1	No Gas	170	13.84
Pb	208	1	No Gas	1650	0.32
U	238	1	No Gas	33	51.96
Ca	43	2	He	10	0.00
Sb	121	2	He	327	4.62
Ti	47	2	He	3	5196.15
Cu	63	1	No Gas	3004	0.07

Calibration Blank Report

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	6	1	No Gas	2076007	0.77
Ge	72	2	He	1283119	0.75

Calibration Blank Report

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Ge	72	1	No Gas	5854434	0.09
In	115	1	No Gas	7184199	0.92
Bi	209	1	No Gas	5632659	1.59

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	219CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T19:53:50-05:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	218CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	11748	0.03
V	51	2	He	19170	0.01
Cr	52	2	He	23617	0.01
Fe	56	2	He	1923040	0.00
Se	78	2	He	331	0.92
Sn	118	2	He	20750	0.01
As	75	2	He	2921	0.06
Ca	44	2	He	8633	0.03
Na	23	2	He	297679	0.00
Mg	24	2	He	131893	0.00
K	39	2	He	196145	0.00
Mn	55	2	He	14301	0.01
Co	59	2	He	35547	0.00
Ni	60	2	He	9160	0.04
Cu	63	2	He	25999	0.00
Zn	66	2	He	5545	0.07
Al	27	2	He	1530	0.69
B	11	1	No Gas	51586	0.00
Al	27	1	No Gas	139006	0.00
Si	28	1	No Gas	702864	0.00
P	31	1	No Gas	47635	0.00
Ag	107	1	No Gas	77531	0.00
Cd	111	1	No Gas	14925	0.01
Sr	88	1	No Gas	153630	0.00
Mo	95	1	No Gas	26744	0.01
Sn	118	1	No Gas	51525	0.00
Sb	121	1	No Gas	59553	0.00
Ba	137	1	No Gas	25642	0.01
Tl	205	1	No Gas	117892	0.00
Tl	203	1	No Gas	49007	0.01
Pb	208	1	No Gas	161151	0.00
U	238	1	No Gas	148038	0.00
Ca	43	2	He	610	1.63
Sb	121	2	He	22607	0.01
Cu	63	1	No Gas	57264	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2110097	2.72	2076007	101.64	70	120	

Calibration Standard Report

Ge	72	2	He	1290211	2.38	1283119	100.55	70	120	
Ge	72	1	No Gas	5959027	0.78	5854434	101.79	70	120	
In	115	1	No Gas	7040830	0.58	7184199	98.00	70	120	
Bi	209	1	No Gas	5489551	3.15	5632659	97.46	70	120	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	220CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T19:55:42-05:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	218CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	29698	0.01
V	51	2	He	44807	0.00
Cr	52	2	He	55539	0.00
Fe	56	2	He	4681862	0.00
Se	78	2	He	727	1.00
Sn	118	2	He	49575	0.00
As	75	2	He	7613	0.04
Ca	44	2	He	21040	0.01
Na	23	2	He	661262	0.00
Mg	24	2	He	327682	0.00
K	39	2	He	423995	0.00
Mn	55	2	He	35313	0.01
Co	59	2	He	88916	0.00
Ni	60	2	He	23968	0.01
Cu	63	2	He	64995	0.00
Zn	66	2	He	11822	0.02
Al	27	2	He	2340	0.35
B	11	1	No Gas	108125	0.00
Al	27	1	No Gas	231166	0.00
Si	28	1	No Gas	957191	0.00
P	31	1	No Gas	70428	0.00
Ag	107	1	No Gas	187922	0.00
Cd	111	1	No Gas	38146	0.01
Sr	88	1	No Gas	375570	0.00
Mo	95	1	No Gas	67264	0.00
Sn	118	1	No Gas	123467	0.00
Sb	121	1	No Gas	146885	0.00
Ba	137	1	No Gas	59644	0.00
Tl	205	1	No Gas	289598	0.00
Tl	203	1	No Gas	121443	0.00
Pb	208	1	No Gas	406864	0.00
U	238	1	No Gas	369812	0.00
Ca	43	2	He	1290	0.81
Sb	121	2	He	57161	0.00
Cu	63	1	No Gas	138460	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2120843	2.27	2076007	102.16	70	120	

Calibration Standard Report

Ge	72	2	He	1300934	2.14	1283119	101.39	70	120	
Ge	72	1	No Gas	5954111	1.20	5854434	101.70	70	120	
In	115	1	No Gas	7154600	1.19	7184199	99.59	70	120	
Bi	209	1	No Gas	5485665	2.15	5632659	97.39	70	120	

Calibration Standard Report

Sample Table

Sample Name	10/50/100
Data File Name	221CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T19:57:35-05:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	218CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	61304	0.00
V	51	2	He	91377	0.00
Cr	52	2	He	114046	0.00
Fe	56	2	He	9806556	0.00
Se	78	2	He	1415	0.04
Sn	118	2	He	103241	0.00
As	75	2	He	15305	0.02
Ca	44	2	He	43489	0.01
Na	23	2	He	1348069	0.00
Mg	24	2	He	692858	0.00
K	39	2	He	841845	0.00
Mn	55	2	He	71577	0.00
Co	59	2	He	185659	0.00
Ni	60	2	He	48349	0.01
Cu	63	2	He	131898	0.00
Zn	66	2	He	22476	0.02
Al	27	2	He	3601	0.33
B	11	1	No Gas	211845	0.00
Al	27	1	No Gas	362356	0.00
Si	28	1	No Gas	1372765	0.00
P	31	1	No Gas	112860	0.00
Ag	107	1	No Gas	404437	0.00
Cd	111	1	No Gas	80570	0.00
Sr	88	1	No Gas	805956	0.00
Mo	95	1	No Gas	142117	0.00
Sn	118	1	No Gas	260719	0.00
Sb	121	1	No Gas	314927	0.00
Ba	137	1	No Gas	122666	0.00
Tl	205	1	No Gas	599715	0.00
Tl	203	1	No Gas	253210	0.00
Pb	208	1	No Gas	857645	0.00
U	238	1	No Gas	801178	0.00
Ca	43	2	He	2454	0.22
Sb	121	2	He	120858	0.00
Cu	63	1	No Gas	281853	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2054929	0.64	2076007	98.98	70	120	

Calibration Standard Report

Ge	72	2	He	1274945	1.78	1283119	99.36	70	120	
Ge	72	1	No Gas	5856828	0.23	5854434	100.04	70	120	
In	115	1	No Gas	7260771	2.23	7184199	101.07	70	120	
Bi	209	1	No Gas	5570838	1.70	5632659	98.90	70	120	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	222CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T19:59:26-05:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	218CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	614364	0.00
V	51	2	He	907539	0.00
Cr	52	2	He	1129008	0.00
Fe	56	2	He	97365099	0.00
Se	78	2	He	12914	0.02
Sn	118	2	He	976548	0.00
As	75	2	He	156544	0.00
Ca	44	2	He	437225	0.00
Na	23	2	He	12624036	0.00
Mg	24	2	He	6637793	0.00
K	39	2	He	7973459	0.00
Mn	55	2	He	713400	0.00
Co	59	2	He	1880216	0.00
Ni	60	2	He	471384	0.00
Cu	63	2	He	1320889	0.00
Zn	66	2	He	216397	0.00
Al	27	2	He	31035	0.01
B	11	1	No Gas	2017445	0.00
Al	27	1	No Gas	2932348	0.00
Si	28	1	No Gas	8308417	0.00
P	31	1	No Gas	799289	0.00
Ag	107	1	No Gas	3876816	0.00
Cd	111	1	No Gas	776424	0.00
Sr	88	1	No Gas	7872587	0.00
Mo	95	1	No Gas	1456187	0.00
Sn	118	1	No Gas	2524397	0.00
Sb	121	1	No Gas	3234429	0.00
Ba	137	1	No Gas	1195569	0.00
Tl	205	1	No Gas	6225833	0.00
Tl	203	1	No Gas	2637551	0.00
Pb	208	1	No Gas	8482722	0.00
U	238	1	No Gas	7903941	0.00
Ca	43	2	He	24973	0.01
Sb	121	2	He	1264523	0.00
Cu	63	1	No Gas	2744117	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1973480	1.49	2076007	95.06	70	120	

Calibration Standard Report

Ge	72	2	He	1282806	0.65	1283119	99.98	70	120	
Ge	72	1	No Gas	5809305	2.21	5854434	99.23	70	120	
In	115	1	No Gas	7061805	2.46	7184199	98.30	70	120	
Bi	209	1	No Gas	5278138	2.13	5632659	93.71	70	120	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	223CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T20:01:10-05:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	218CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	No Gas	1155516	0.00
V	51	2	He	1787766	0.00
Cr	52	2	He	2160007	0.00
Fe	56	2	He	184868571	0.00
Se	78	2	He	24441	0.00
Sn	118	2	He	1990122	0.00
As	75	2	He	295544	0.00
Ca	44	2	He	833558	0.00
Na	23	2	He	23811826	0.00
Mg	24	2	He	12539487	0.00
K	39	2	He	15096581	0.00
Mn	55	2	He	1376282	0.00
Co	59	2	He	3421602	0.00
Ni	60	2	He	902180	0.00
Cu	63	2	He	2478476	0.00
Zn	66	2	He	412887	0.00
Al	27	2	He	58875	0.00
B	11	1	No Gas	3793364	0.00
Al	27	1	No Gas	5495456	0.00
Si	28	1	No Gas	14861832	0.00
P	31	1	No Gas	1482542	0.00
Ag	107	1	No Gas	7381696	0.00
Cd	111	1	No Gas	1505987	0.00
Sr	88	1	No Gas	15317250	0.00
Mo	95	1	No Gas	2815525	0.00
Sn	118	1	No Gas	4748482	0.00
Sb	121	1	No Gas	5970506	0.00
Ba	137	1	No Gas	2272263	0.00
Tl	205	1	No Gas	11737576	0.00
Tl	203	1	No Gas	4891973	0.00
Pb	208	1	No Gas	16522800	0.00
U	238	1	No Gas	15503803	0.00
Ca	43	2	He	47780	0.00
Sb	121	2	He	2367390	0.00
Cu	63	1	No Gas	5104372	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1939909	1.52	2076007	93.44	70	120	

Calibration Standard Report

Ge	72	2	He	1270062	1.99	1283119	98.98	70	120	
Ge	72	1	No Gas	5724952	2.22	5854434	97.79	70	120	
In	115	1	No Gas	7014135	1.01	7184199	97.63	70	120	
Bi	209	1	No Gas	5393299	0.39	5632659	95.75	70	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICCV
Data File Name	225_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T20:04:47-05:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	218CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	No Gas	96.416	2.082	2527914	1.92	100	96.4	90	110	
Be	9	1	No Gas	99.455	0.286	605193	0.18	100	99.5	90	110	
V	51	2	He	97.022	3.920	892133	0.92	100	97.0	90	110	
Cr	52	2	He	98.259	3.675	1097770	0.99	100	98.3	90	110	
Fe	56	2	He	9881.418	3.251	94606472	0.34	10000	98.8	90	110	
Se	78	2	He	100.800	2.971	12810	1.07	100	100.8	90	110	
Sn	118	2	He	89.443	0.353	924177	0.41	100	89.4	90	110	ICV Main CR1 Failed
As	75	2	He	102.740	3.265	157458	0.22	100	102.7	90	110	
Ca	44	2	He	9832.022	3.266	424168	0.53	10000	98.3	90	110	
Na	23	2	He	9879.271	3.812	12219396	0.73	10000	98.8	90	110	
Mg	24	2	He	10060.235	4.748	6538140	2.38	10000	100.6	90	110	
K	39	2	He	9863.571	3.715	7733375	0.87	10000	98.6	90	110	
Mn	55	2	He	98.828	2.692	702087	0.45	100	98.8	90	110	
Co	59	2	He	104.559	1.221	1869946	2.08	100	104.6	90	110	
Ni	60	2	He	99.529	2.824	464353	0.36	100	99.5	90	110	
Cu	63	2	He	100.883	3.570	1298372	1.31	100	100.9	90	110	
Zn	66	2	He	100.729	2.963	215462	0.81	100	100.7	90	110	
Al	27	2	He	98.625	2.361	30324	1.02	100	98.6	90	110	
B	11	1	No Gas	488.465	0.806	1957425	0.93	500	97.7	90	110	
Al	27	1	No Gas	100.970	0.478	2877080	0.69	100	101.0	90	110	
Si	28	1	No Gas	544.809	1.269	8613724	1.35	500	109.0	90	110	
P	31	1	No Gas	511.787	1.312	796899	1.20	500	102.4	90	110	
Ag	107	1	No Gas	99.588	1.329	3748449	2.52	100	99.6	90	110	
Cd	111	1	No Gas	99.094	1.543	757797	1.59	100	99.1	90	110	
Sr	88	1	No Gas	97.049	3.389	7543257	2.56	100	97.0	90	110	
Mo	95	1	No Gas	99.961	2.714	1429770	1.79	100	100.0	90	110	
Sn	118	1	No Gas	98.220	2.638	2386196	4.79	100	98.2	90	110	
Sb	121	1	No Gas	102.208	0.676	3154115	0.47	100	102.2	90	110	
Ba	137	1	No Gas	97.309	1.976	1128125	0.95	100	97.3	90	110	
Tl	205	1	No Gas	102.601	3.519	6057312	2.78	100	102.6	90	110	
Tl	203	1	No Gas	105.705	2.608	2610383	1.98	100	105.7	90	110	
Pb	208	1	No Gas	100.446	1.658	8292261	1.42	100	100.4	90	110	
U	238	1	No Gas	94.514	1.909	7310336	1.67	100	94.5	90	110	
Ca	43	2	He	9738.008	2.377	24065	0.83	10000	97.4	90	110	
Sb	121	2	He	100.938	2.737	1241071	1.03	100	100.9	90	110	
Ti	47	2	He	99.385	5.564	29111	2.89	100	99.4	90	110	
Cu	63	1	No Gas	102.865	0.681	2710294	0.81	100	102.9	90	110	

QC ISTD Table

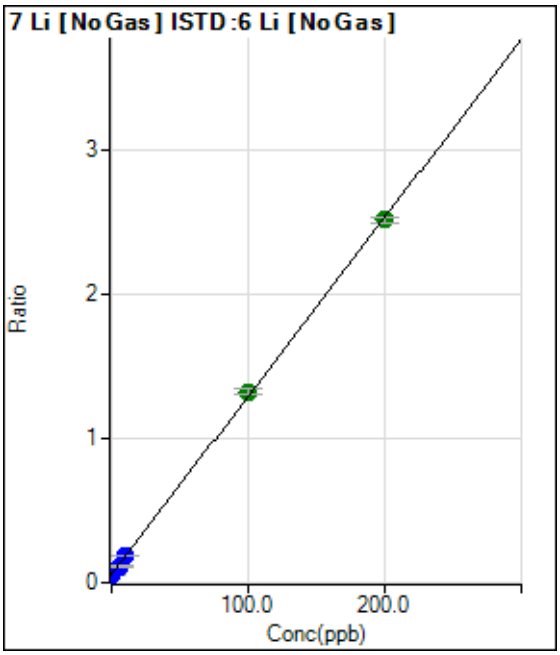
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2024532	0.19	2076007	97.52	70	120	
Ge	72	2	He	1304810	3.13	1283119	101.69	70	120	
Ge	72	1	No Gas	5836183	0.22	5854434	99.69	70	120	
In	115	1	No Gas	7090524	2.92	7184199	98.70	70	120	
Bi	209	1	No Gas	5337360	0.82	5632659	94.76	70	120	

Calibration for 225_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\041420A.b\
Analysis File: 041420A.batch.bin
DA Date-Time: 4/14/2020 8:58:31 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	218CALB.d	CAL BLK	4/14/2020 7:51:57 PM
2	219CALS.d	2/10/200	4/14/2020 7:53:50 PM
3	220CALS.d	5/25/500	4/14/2020 7:55:42 PM
4	221CALS.d	10/50/100	4/14/2020 7:57:35 PM
5	222CALS.d	100/500/10K	4/14/2020 7:59:26 PM
6	223CALS.d	200/1000/20K	4/14/2020 8:01:10 PM

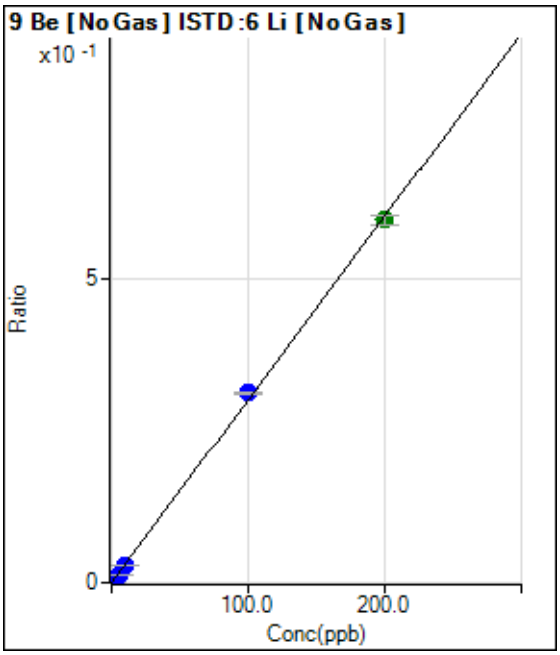
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	117560.68	0.0566	P	0.7
2	☐	2.000	1.774	165723.09	0.0786	P	1.6
3	☐	5.000	4.506	238155.57	0.1123	P	2.5
4	☐	10.000	10.442	381647.38	0.1857	P	1.1
5	☐	100.000	102.390	2609249.65	1.3225	A	2.7
6	☐	200.000	198.798	4877017.85	2.5144	A	1.6

y = 0.0124 * x + 0.0566
R = 0.9999
DL = 0.09319
BEC = 4.58

Weight: <None>
Min Conc: <None>

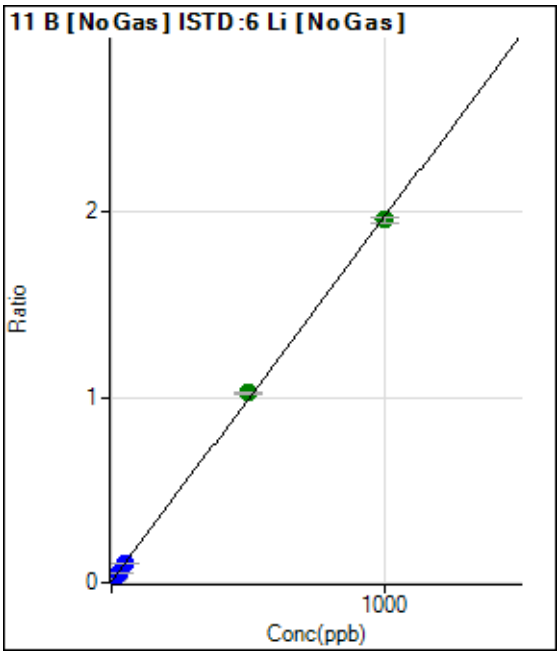


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20.00	0.0000	P	0.8
2	☐	2.000	1.849	11748.31	0.0056	P	2.2
3	☐	5.000	4.657	29698.05	0.0140	P	1.9
4	☐	10.000	9.923	61304.37	0.0298	P	0.3
5	☐	100.000	103.587	614364.04	0.3114	P	1.4
6	☐	200.000	198.221	1155516.03	0.5958	A	2.6

y = 0.0030 * x + 9.6343E-006
R = 0.9998
DL = 7.427E-05
BEC = 0.003205

Weight: <None>
Min Conc: <None>

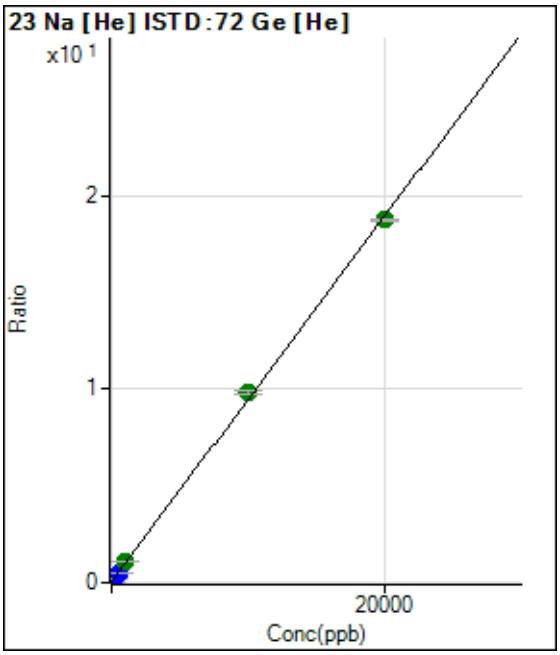
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	14844.61	0.0072	P	2.2
2	☐	10.000	8.810	51585.96	0.0245	P	2.9
3	☐	25.000	22.321	108125.34	0.0510	P	3.0
4	☐	50.000	48.835	211844.78	0.1031	P	1.4
5	☐	500.000	516.717	2017444.97	1.0224	A	0.9
6	☐	1000.000	991.778	3793364.21	1.9557	A	1.5

y = 0.0020 * x + 0.0072
R = 0.9998
DL = 0.24
BEC = 3.639

Weight: <None>
Min Conc: <None>

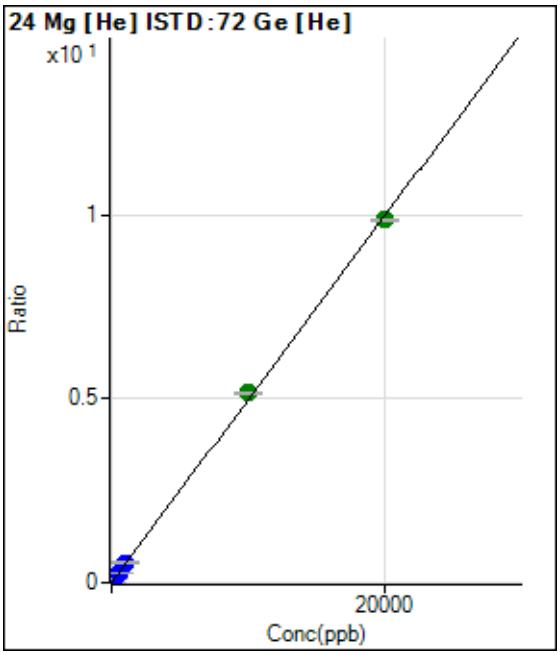


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	54201.96	0.0422	P	3.1
2	☐	200.000	199.661	297679.10	0.2308	P	2.4
3	☐	500.000	493.656	661261.68	0.5085	P	2.2
4	☐	1000.000	1075.172	1348069.04	1.0576	A	2.4
5	☐	10000.00	10374.87	12624036.48	9.8403	A	1.5
6	☐	20000.00	19808.96	23811826.31	18.7500	A	0.7

y = 9.4441E-004 * x + 0.0422
R = 0.9997
DL = 4.154
BEC = 44.74

Weight: <None>
Min Conc: <None>

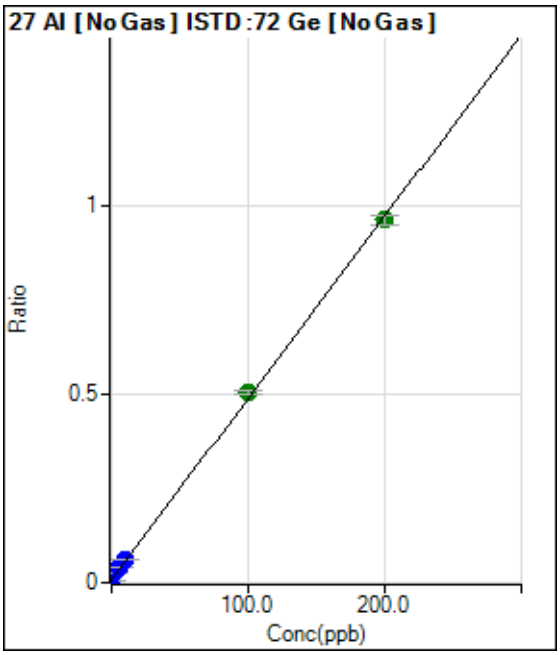
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	610.02	0.0005	P	2.1
2	☐	200.000	204.244	131892.96	0.1023	P	3.9
3	☐	500.000	504.543	327681.95	0.2520	P	2.8
4	☐	1000.000	1089.533	692857.99	0.5436	P	2.3
5	☐	10000.00	10379.82	6637792.61	5.1746	A	1.2
6	☐	20000.00	19805.45	12539487.31	9.8731	A	0.5

y = 4.9848E-004 * x + 4.7546E-004
R = 0.9997
DL = 0.06097
BEC = 0.9538

Weight: <None>
Min Conc: <None>

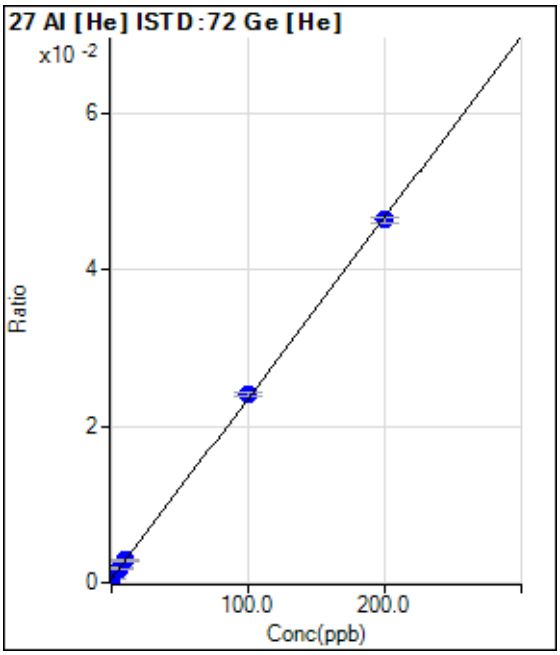


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	43708.86	0.0075	P	0.5
2	☐	2.000	3.299	139005.58	0.0233	P	0.9
3	☐	5.000	6.522	231166.06	0.0388	P	0.9
4	☐	10.000	11.314	362355.55	0.0619	P	0.2
5	☐	100.000	103.452	2932348.29	0.5049	A	2.0
6	☐	200.000	198.157	5495455.54	0.9603	A	2.8

y = 0.0048 * x + 0.0075
R = 0.9998
DL = 0.02327
BEC = 1.553

Weight: <None>
Min Conc: <None>

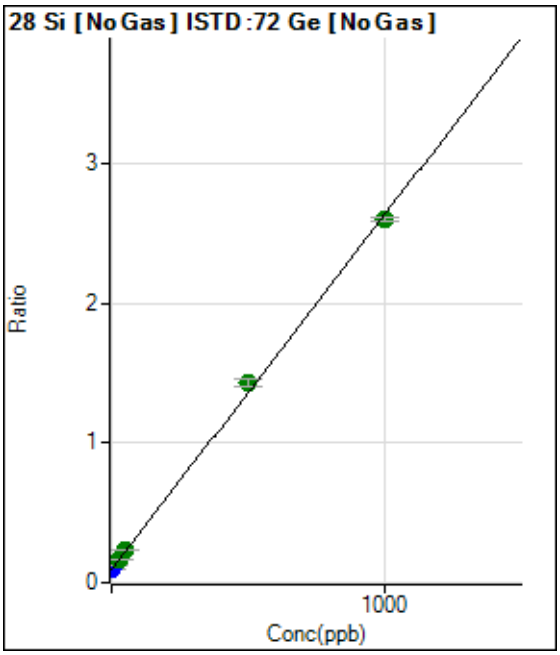
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	580.03	0.0005	P	6.6
2	☐	2.000	3.169	1530.12	0.0012	P	8.7
3	☐	5.000	5.819	2340.25	0.0018	P	6.0
4	☐	10.000	10.276	3600.55	0.0028	P	13.0
5	☐	100.000	102.694	31034.84	0.0242	P	1.9
6	☐	200.000	198.607	58874.68	0.0464	P	1.5

y = 2.3116E-004 * x + 4.5218E-004
R = 0.9999
DL = 0.3887
BEC = 1.956

Weight: <None>
Min Conc: <None>

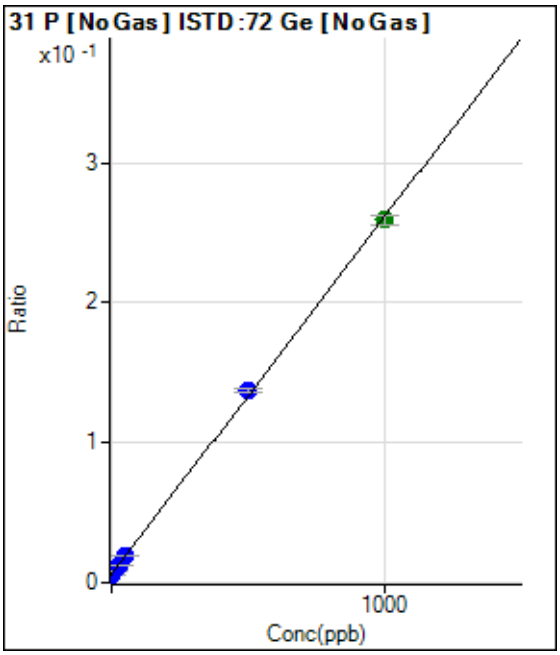


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	542048.82	0.0926	P	0.6
2	☐	10.000	9.991	702863.77	0.1180	P	1.4
3	☐	25.000	26.854	957190.77	0.1608	A	1.8
4	☐	50.000	55.848	1372764.77	0.2344	A	2.6
5	☐	500.000	527.070	8308417.17	1.4309	A	3.3
6	☐	1000.000	986.126	14861831.86	2.5964	A	1.2

y = 0.0025 * x + 0.0926
R = 0.9995
DL = 0.6942
BEC = 36.47

Weight: <None>
Min Conc: <None>

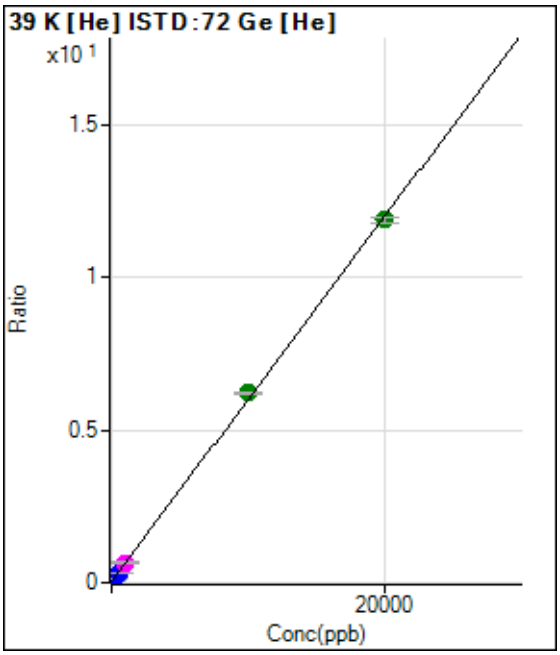
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	34847.55	0.0060	P	0.5
2	☐	10.000	8.003	47635.35	0.0080	P	1.8
3	☐	25.000	23.029	70428.23	0.0118	P	0.3
4	☐	50.000	52.191	112859.55	0.0193	P	0.8
5	☐	500.000	516.033	799289.31	0.1376	P	2.1
6	☐	1000.000	991.943	1482542.06	0.2591	A	2.9

y = 2.5517E-004 * x + 0.0060
R = 0.9998
DL = 0.3371
BEC = 23.33

Weight: <None>
Min Conc: <None>

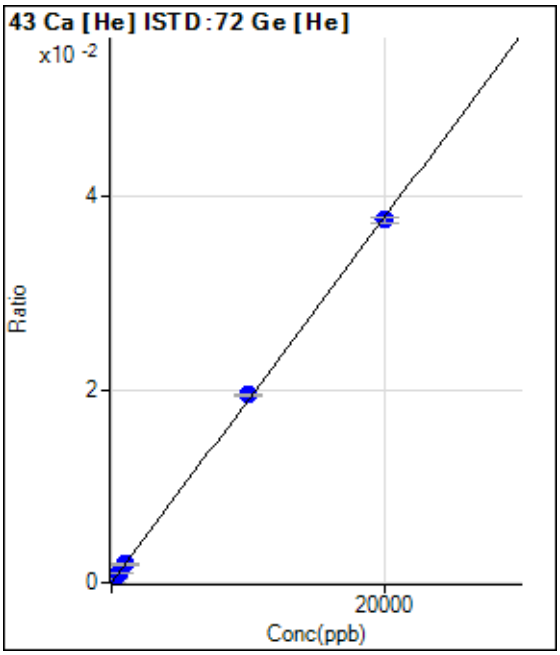


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	43707.13	0.0341	P	0.9
2	☐	200.000	197.438	196145.24	0.1521	P	3.4
3	☐	500.000	488.282	423994.90	0.3260	P	2.0
4	☐	1000.000	1047.639	841844.57	0.6604	M	1.6
5	☐	10000.00	10339.02	7973459.26	6.2156	A	0.5
6	☐	20000.00	19828.42	15096581.44	11.8891	A	1.8

y = 5.9788E-004 * x + 0.0341
R = 0.9998
DL = 1.461
BEC = 56.97

Weight: <None>
Min Conc: <None>

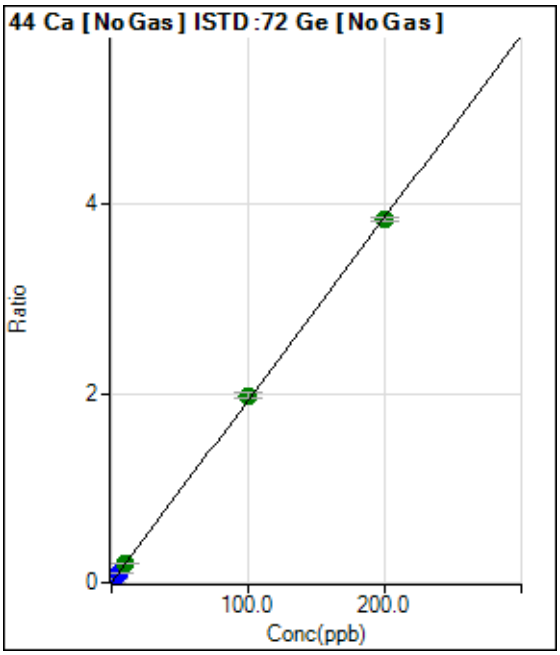
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10.00	0.0000	P	0.8
2	☐	200.000	245.917	610.02	0.0005	P	11.8
3	☐	500.000	520.171	1290.09	0.0010	P	12.0
4	☐	1000.000	1011.613	2453.60	0.0019	P	4.1
5	☐	10000.00	10273.87	24973.01	0.0195	P	1.5
6	☐	20000.00	19861.51	47779.81	0.0376	P	1.6

y = 1.8941E-006 * x + 7.7938E-006
R = 0.9999
DL = 0.09259
BEC = 4.115

Weight: <None>
Min Conc: <None>

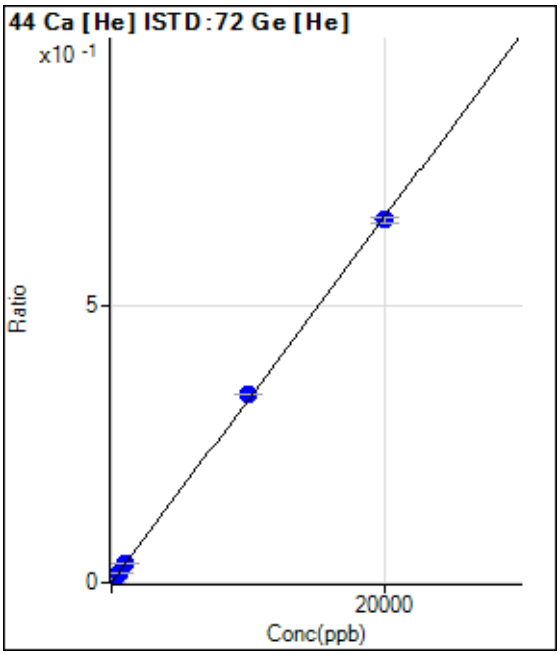


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	12455.81	0.0021	P	6.0
2	☐	2.000	1.998	242067.76	0.0406	P	0.8
3	☐	5.000	4.866	570878.83	0.0959	P	2.0
4	☐	10.000	10.707	1220883.58	0.2085	A	2.7
5	☐	100.000	102.339	11463469.00	1.9742	A	3.3
6	☐	200.000	198.799	21941067.18	3.8329	A	1.0

y = 0.0193 * x + 0.0021
R = 0.9999
DL = 0.01972
BEC = 0.1104

Weight: <None>
Min Conc: <None>

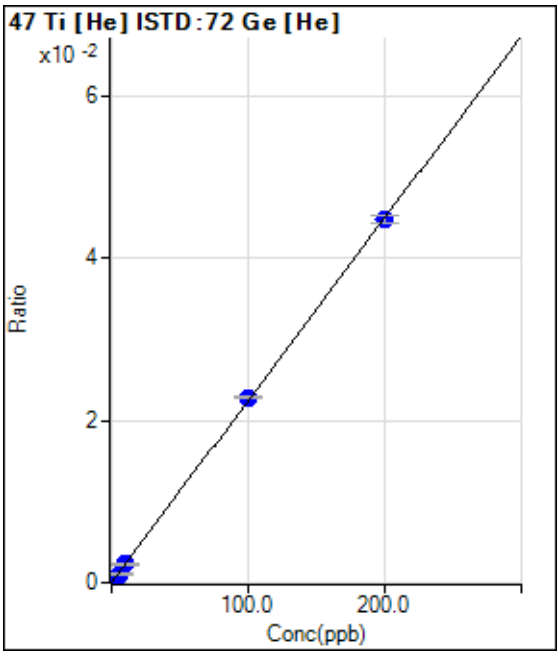
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	303.34	0.0002	P	13.0
2	☐	200.000	195.384	8632.86	0.0067	P	4.9
3	☐	500.000	482.327	21039.72	0.0162	P	4.5
4	☐	1000.000	1024.560	43488.99	0.0341	P	1.2
5	☐	10000.00	10302.09	437225.33	0.3408	P	0.4
6	☐	20000.00	19848.21	833558.27	0.6564	P	1.6

y = 3.3062E-005 * x + 2.3654E-004
R = 0.9998
DL = 2.799
BEC = 7.155

Weight: <None>
Min Conc: <None>

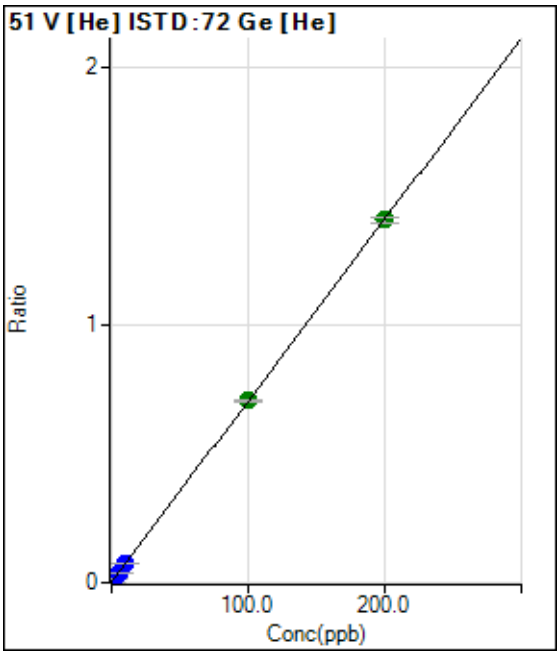


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3.33	0.0000	P	173.2
2	☐	2.000	2.031	593.36	0.0005	P	18.2
3	☐	5.000	4.565	1336.76	0.0010	P	10.9
4	☐	10.000	10.279	2950.37	0.0023	P	6.9
5	☐	100.000	101.723	29324.99	0.0229	P	1.5
6	☐	200.000	199.135	56824.37	0.0447	P	2.3

y = 2.2470E-004 * x + 2.6169E-006
R = 0.9999
DL = 0.06052
BEC = 0.01165

Weight: <None>
Min Conc: <None>

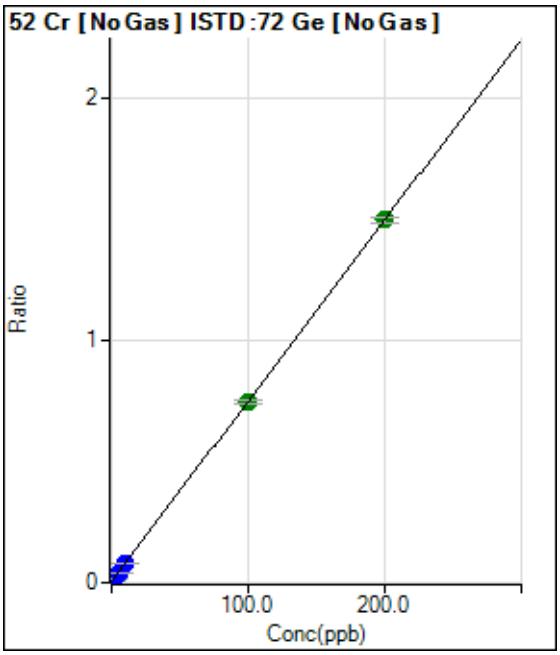
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1960.15	0.0015	P	4.8
2	☐	2.000	1.895	19170.12	0.0149	P	1.8
3	☐	5.000	4.679	44807.33	0.0345	P	1.9
4	☐	10.000	9.969	91376.72	0.0717	P	1.8
5	☐	100.000	100.315	907539.37	0.7075	A	1.2
6	☐	200.000	199.853	1787766.11	1.4079	A	1.5

y = 0.0070 * x + 0.0015
R = 1.0000
DL = 0.03121
BEC = 0.2171

Weight: <None>
Min Conc: <None>

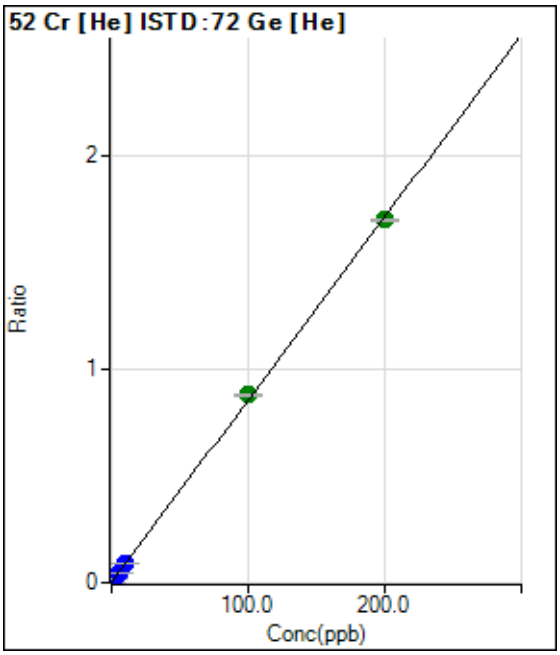


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	28914.21	0.0049	P	2.3
2	☐	2.000	1.915	114401.15	0.0192	P	0.7
3	☐	5.000	4.820	243077.09	0.0408	P	1.3
4	☐	10.000	10.348	480224.28	0.0820	P	0.0
5	☐	100.000	99.373	4326184.63	0.7449	A	1.9
6	☐	200.000	200.301	8565096.75	1.4964	A	1.5

y = 0.0074 * x + 0.0049
R = 1.0000
DL = 0.04568
BEC = 0.6633

Weight: <None>
Min Conc: <None>

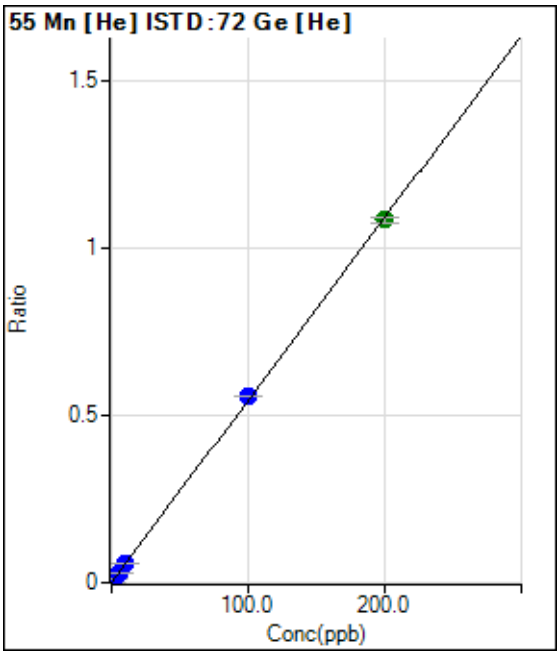
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1323.41	0.0010	P	9.6
2	☐	2.000	2.018	23617.44	0.0183	P	1.8
3	☐	5.000	4.870	55539.44	0.0427	P	3.7
4	☐	10.000	10.333	114045.58	0.0895	P	1.0
5	☐	100.000	102.724	1129007.95	0.8802	A	1.6
6	☐	200.000	198.625	2160006.94	1.7009	A	0.8

y = 0.0086 * x + 0.0010
R = 0.9999
DL = 0.03463
BEC = 0.1206

Weight: <None>
Min Conc: <None>

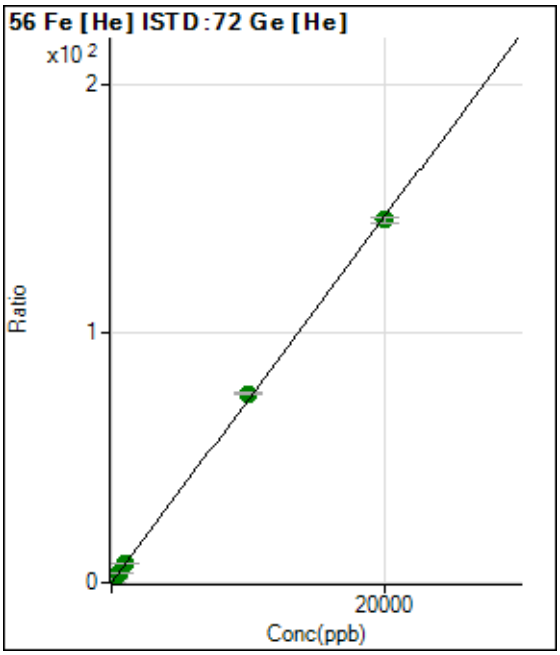


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	483.35	0.0004	P	15.1
2	☐	2.000	1.968	14301.03	0.0111	P	2.2
3	☐	5.000	4.919	35312.74	0.0272	P	4.3
4	☐	10.000	10.245	71577.32	0.0561	P	0.8
5	☐	100.000	102.091	713400.28	0.5561	P	0.6
6	☐	200.000	198.945	1376281.80	1.0834	A	1.7

y = 0.0054 * x + 3.7664E-004
R = 0.9999
DL = 0.03128
BEC = 0.06919

Weight: <None>
Min Conc: <None>

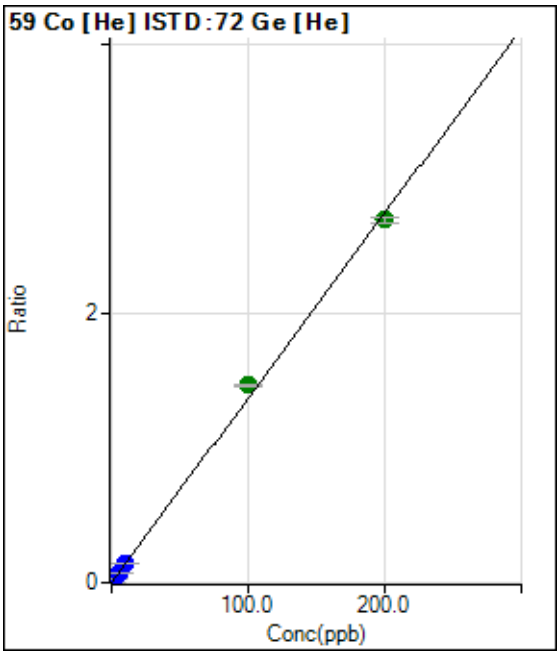
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10841.11	0.0085	P	5.9
2	☐	200.000	201.936	1923039.50	1.4910	A	2.5
3	☐	500.000	489.254	4681862.22	3.6004	A	3.0
4	☐	1000.000	1046.663	9806555.69	7.6927	A	1.1
5	☐	10000.00	10337.19	97365098.55	75.9010	A	0.4
6	☐	20000.00	19829.32	184868570.5	145.589	A	1.6

y = 0.0073 * x + 0.0085
R = 0.9998
DL = 0.2022
BEC = 1.151

Weight: <None>
Min Conc: <None>

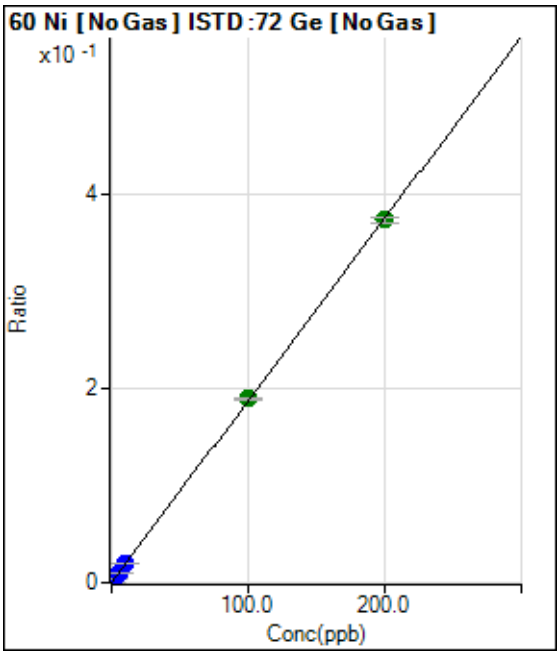


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	196.67	0.0002	P	2.4
2	☐	2.000	1.999	35546.69	0.0276	P	2.7
3	☐	5.000	4.976	88915.96	0.0684	P	3.0
4	☐	10.000	10.615	185659.09	0.1457	P	2.7
5	☐	100.000	106.907	1880216.01	1.4656	A	1.0
6	☐	200.000	196.516	3421601.62	2.6940	A	1.3

y = 0.0137 * x + 1.5326E-004
R = 0.9991
DL = 0.0007889
BEC = 0.01118

Weight: <None>
Min Conc: <None>

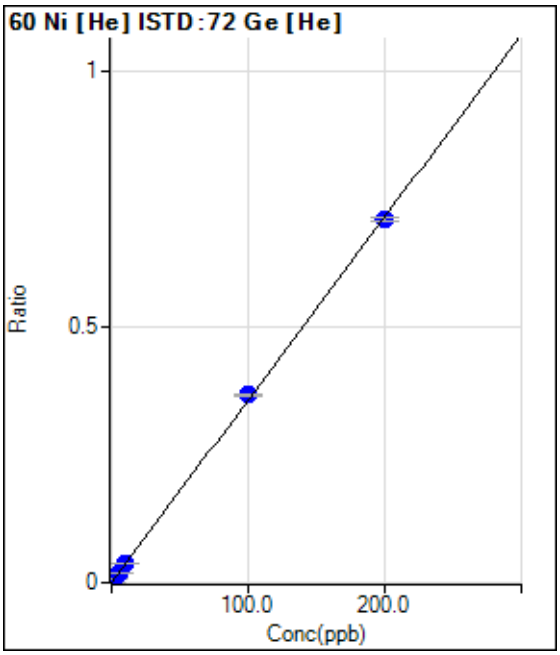
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	580.02	0.0001	P	6.0
2	☐	2.000	1.977	22669.21	0.0038	P	3.2
3	☐	5.000	5.113	57652.24	0.0097	P	1.2
4	☐	10.000	10.607	117023.01	0.0200	P	1.9
5	☐	100.000	101.234	1102684.33	0.1898	A	0.9
6	☐	200.000	199.350	2139117.42	0.3737	A	1.6

y = 0.0019 * x + 9.9073E-005
R = 1.0000
DL = 0.009438
BEC = 0.05286

Weight: <None>
Min Conc: <None>

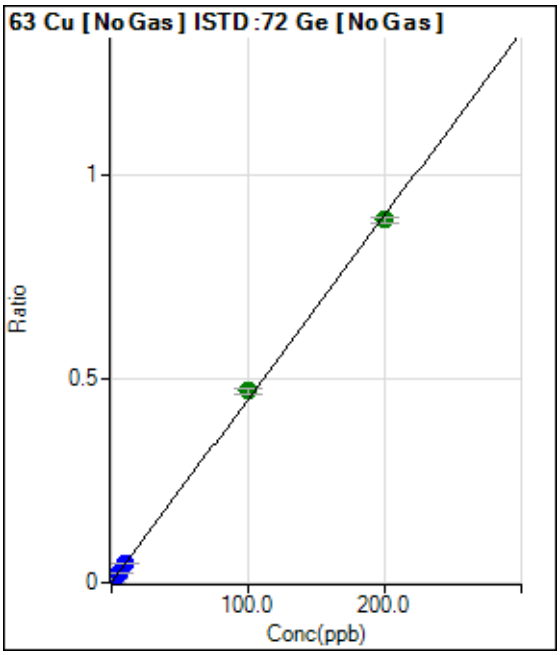


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	190.01	0.0001	P	40.7
2	☐	2.000	1.945	9159.88	0.0071	P	4.9
3	☐	5.000	5.110	23967.98	0.0184	P	0.2
4	☐	10.000	10.568	48349.49	0.0379	P	4.4
5	☐	100.000	102.710	471384.42	0.3675	P	1.3
6	☐	200.000	198.614	902179.57	0.7104	P	1.0

y = 0.0036 * x + 1.4784E-004
R = 0.9999
DL = 0.05052
BEC = 0.04134

Weight: <None>
Min Conc: <None>

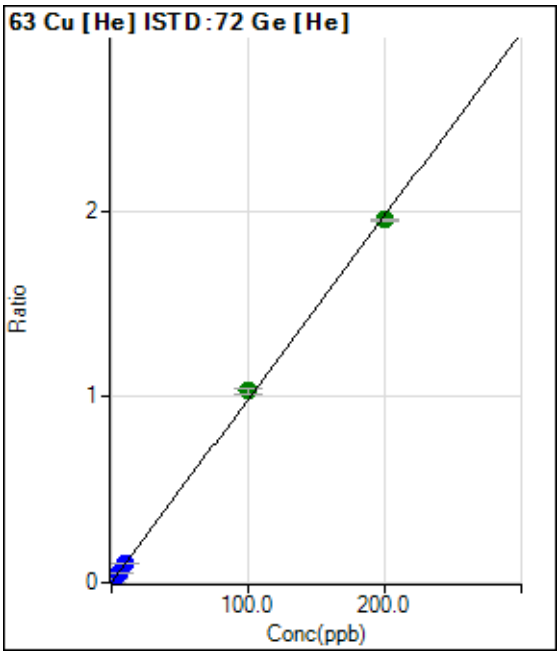
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3003.73	0.0005	P	2.3
2	☐	2.000	2.017	57264.18	0.0096	P	2.5
3	☐	5.000	5.044	138459.59	0.0233	P	2.9
4	☐	10.000	10.558	281852.52	0.0481	P	0.3
5	☐	100.000	104.661	2744117.04	0.4725	A	3.1
6	☐	200.000	197.640	5104372.01	0.8918	A	1.5

y = 0.0045 * x + 5.1308E-004
R = 0.9996
DL = 0.007849
BEC = 0.1138

Weight: <None>
Min Conc: <None>

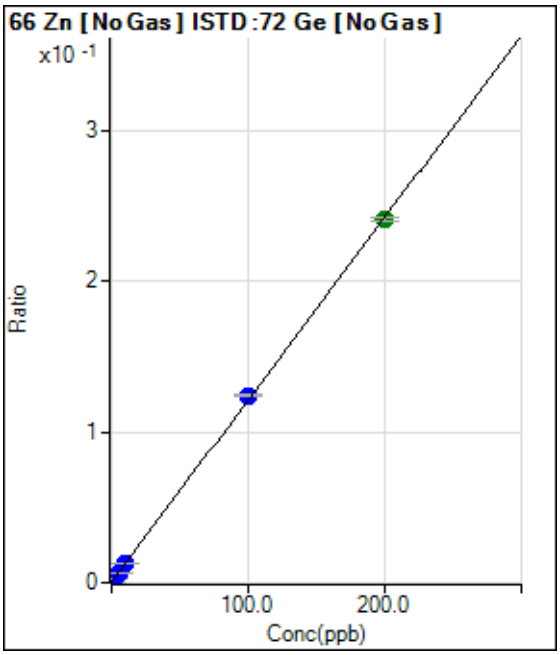


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1300.09	0.0010	P	4.3
2	☐	2.000	1.942	25998.54	0.0202	P	2.8
3	☐	5.000	4.965	64995.33	0.0500	P	2.3
4	☐	10.000	10.394	131898.34	0.1035	P	3.6
5	☐	100.000	104.337	1320889.12	1.0298	A	3.0
6	☐	200.000	197.813	2478475.59	1.9515	A	0.3

y = 0.0099 * x + 0.0010
R = 0.9997
DL = 0.01319
BEC = 0.1028

Weight: <None>
Min Conc: <None>

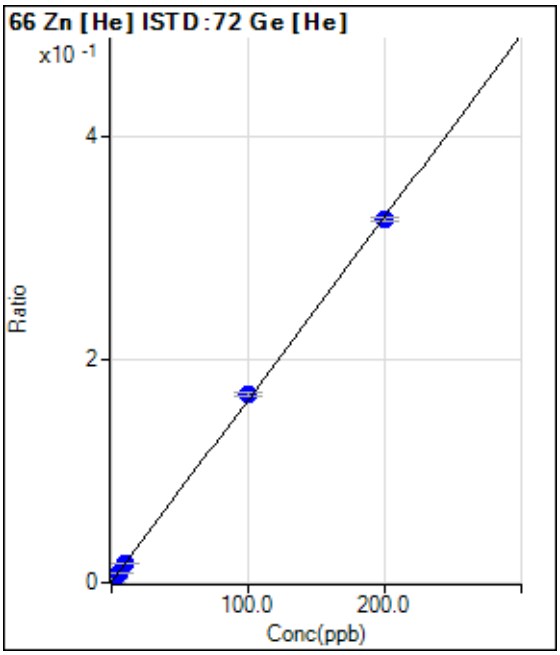
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2343.59	0.0004	P	3.2
2	☐	2.000	2.195	18209.20	0.0031	P	2.4
3	☐	5.000	5.105	39140.01	0.0066	P	1.2
4	☐	10.000	10.392	75958.88	0.0130	P	1.4
5	☐	100.000	102.265	720749.31	0.1241	P	1.2
6	☐	200.000	198.843	1378962.17	0.2409	A	1.0

y = 0.0012 * x + 4.0031E-004
R = 0.9999
DL = 0.0315
BEC = 0.331

Weight: <None>
Min Conc: <None>

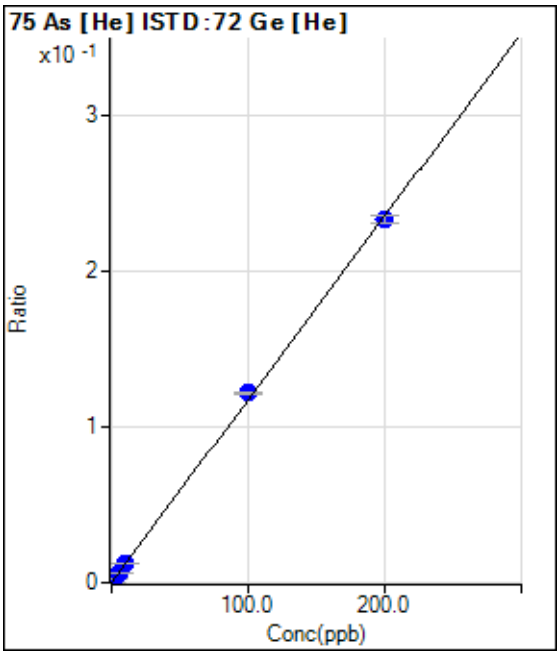


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	696.70	0.0005	P	15.5
2	☐	2.000	2.296	5544.56	0.0043	P	2.4
3	☐	5.000	5.228	11822.01	0.0091	P	3.5
4	☐	10.000	10.452	22475.60	0.0176	P	3.9
5	☐	100.000	102.854	216397.50	0.1687	P	2.1
6	☐	200.000	198.542	412886.66	0.3251	P	1.2

y = 0.0016 * x + 5.4338E-004
R = 0.9999
DL = 0.1543
BEC = 0.3324

Weight: <None>
Min Conc: <None>

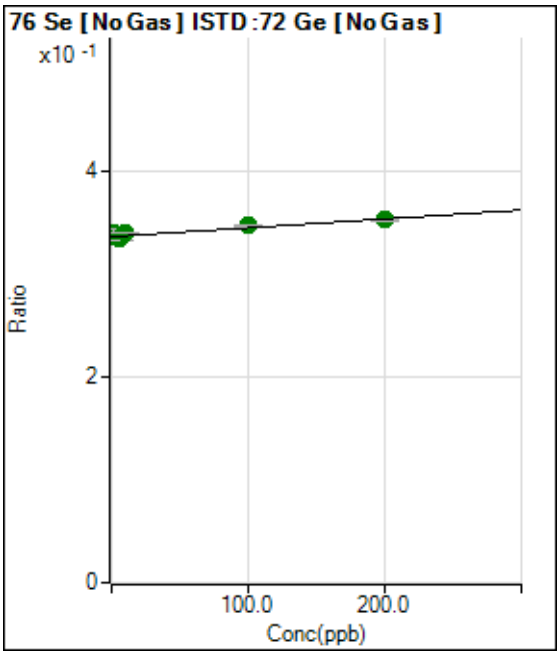
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	80.00	0.0001	P	22.9
2	☐	2.000	1.875	2921.45	0.0023	P	0.9
3	☐	5.000	4.929	7613.30	0.0059	P	2.4
4	☐	10.000	10.168	15305.37	0.0120	P	2.8
5	☐	100.000	103.826	156544.39	0.1220	P	1.1
6	☐	200.000	198.082	295544.41	0.2328	P	1.9

y = 0.0012 * x + 6.2322E-005
R = 0.9997
DL = 0.03638
BEC = 0.05305

Weight: <None>
Min Conc: <None>

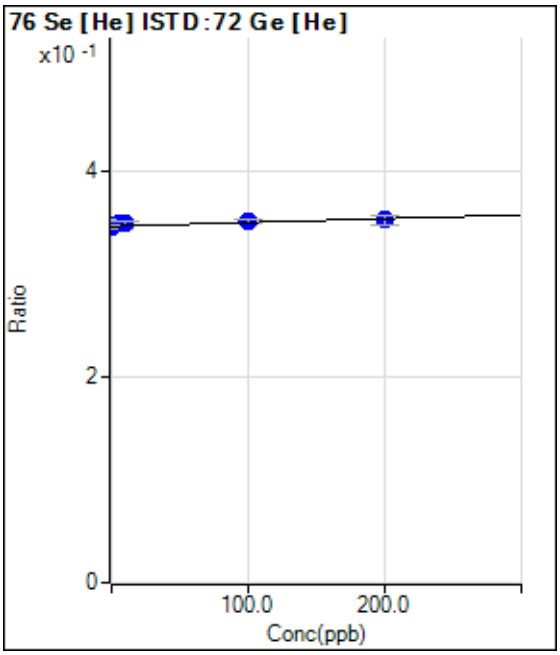


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1967477.42	0.3361	A	0.9
2	☐	2.000	34.690	2020141.95	0.3391	A	3.2
3	☐	5.000	-18.390	1991306.27	0.3345	A	1.4
4	☐	10.000	45.406	1991237.73	0.3400	A	0.2
5	☐	100.000	120.167	2012479.87	0.3464	A	0.3
6	☐	200.000	188.404	2016839.97	0.3523	A	0.8

y = 8.6316E-005 * x + 0.3361
R = 0.9550
DL = 105
BEC = 3893

Weight: <None>
Min Conc: <None>

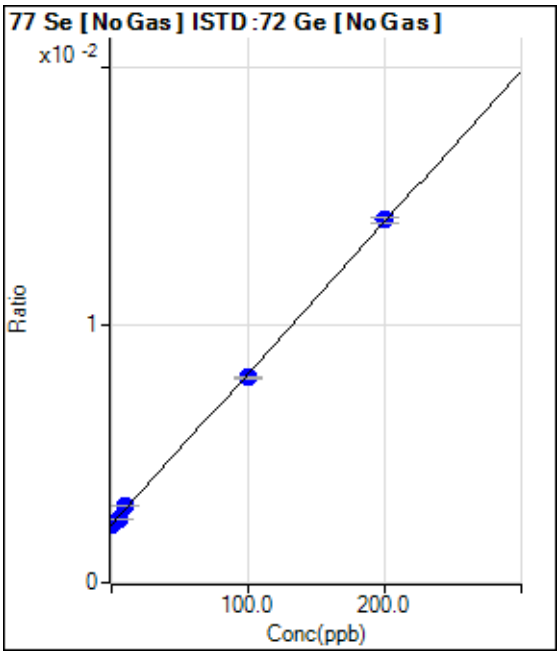
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	444365.30	0.3463	P	0.9
2	☐	2.000	49.205	449078.44	0.3482	P	1.7
3	☐	5.000	58.422	453237.47	0.3485	P	2.2
4	☐	10.000	87.603	445633.55	0.3496	P	1.3
5	☐	100.000	156.372	451742.30	0.3521	P	1.0
6	☐	200.000	166.126	447545.64	0.3525	P	2.7

y = 3.7163E-005 * x + 0.3463
R = 0.8626
DL = 242.2
BEC = 9319

Weight: <None>
Min Conc: <None>

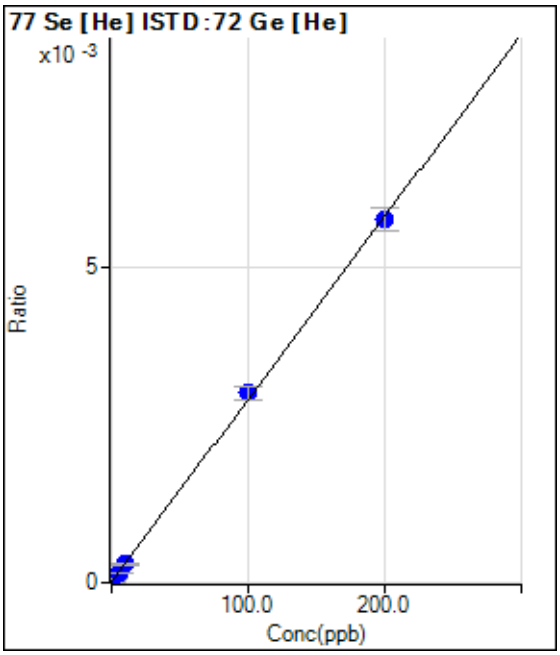


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13220.10	0.0023	P	2.8
2	☐	2.000	1.598	14017.56	0.0024	P	2.0
3	☐	5.000	3.938	14825.08	0.0025	P	0.8
4	☐	10.000	12.288	17458.33	0.0030	P	0.7
5	☐	100.000	97.167	46313.26	0.0080	P	1.3
6	☐	200.000	201.332	80701.47	0.0141	P	1.8

y = 5.8818E-005 * x + 0.0023
R = 0.9998
DL = 3.174
BEC = 38.39

Weight: <None>
Min Conc: <None>

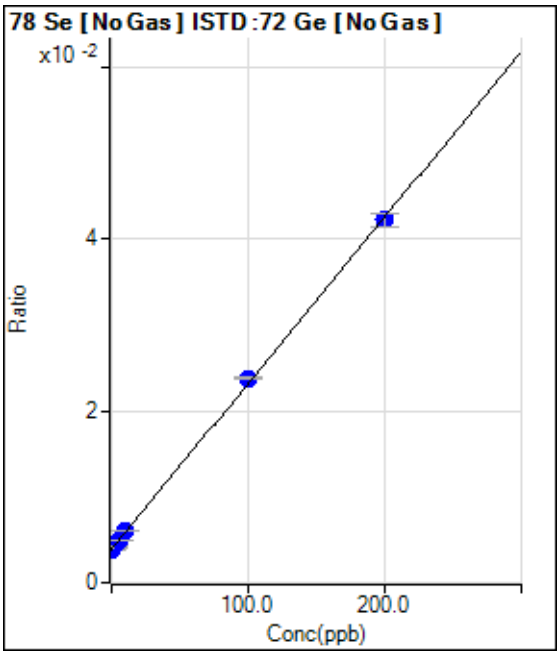
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0000	P	91.8
2	☐	2.000	2.506	110.00	0.0001	P	27.6
3	☐	5.000	4.873	200.01	0.0002	P	15.0
4	☐	10.000	9.959	383.34	0.0003	P	9.3
5	☐	100.000	103.394	3847.31	0.0030	P	7.8
6	☐	200.000	198.303	7282.09	0.0057	P	6.2

y = 2.8872E-005 * x + 1.3049E-005
R = 0.9998
DL = 1.245
BEC = 0.452

Weight: <None>
Min Conc: <None>

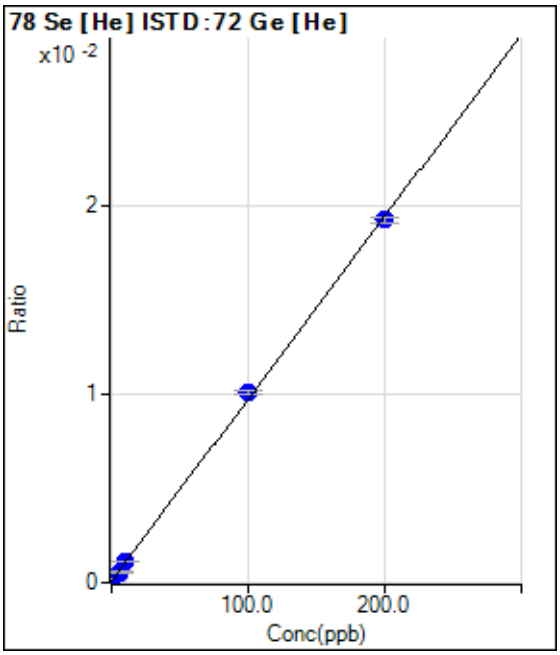


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	22802.87	0.0039	P	2.0
2	☐	2.000	1.535	24973.46	0.0042	P	2.5
3	☐	5.000	4.999	28934.73	0.0049	P	1.7
4	☐	10.000	10.675	34885.47	0.0060	P	0.3
5	☐	100.000	102.999	138157.59	0.0238	P	1.4
6	☐	200.000	198.472	241582.89	0.0422	P	3.5

y = 1.9310E-004 * x + 0.0039
R = 0.9998
DL = 1.193
BEC = 20.17

Weight: <None>
Min Conc: <None>

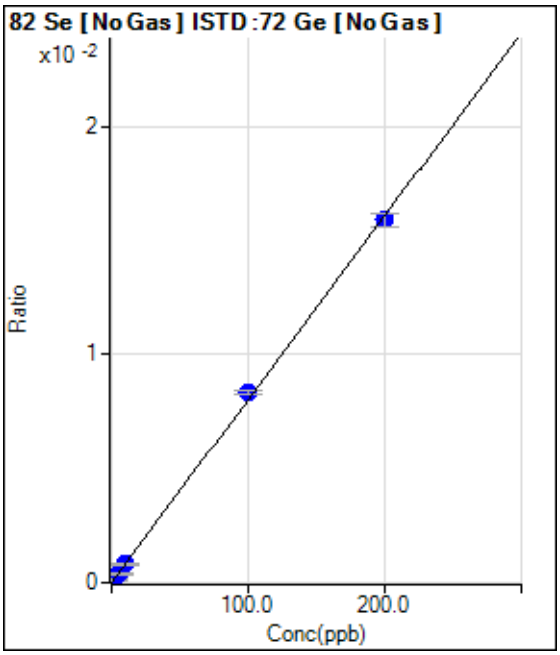
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	102.67	0.0001	P	14.4
2	☐	2.000	1.823	330.67	0.0003	P	1.9
3	☐	5.000	4.963	727.36	0.0006	P	9.2
4	☐	10.000	10.654	1414.75	0.0011	P	1.4
5	☐	100.000	103.328	12914.19	0.0101	P	2.3
6	☐	200.000	198.306	24441.43	0.0192	P	1.7

y = 9.6658E-005 * x + 8.0071E-005
R = 0.9998
DL = 0.3581
BEC = 0.8284

Weight: <None>
Min Conc: <None>

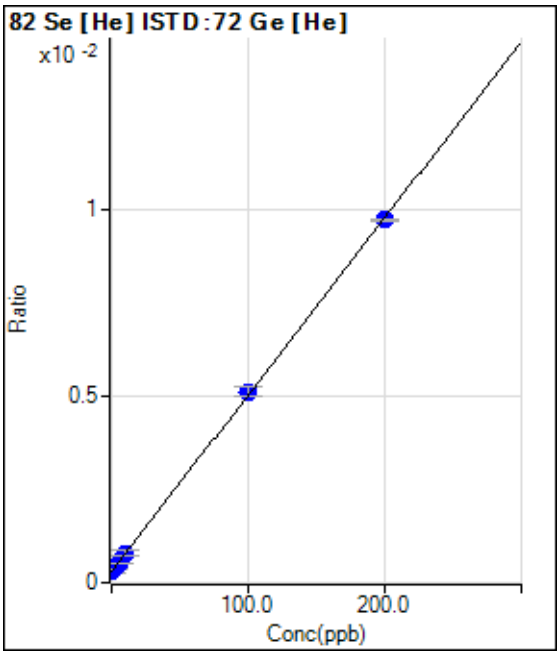


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-121.12	0.0000	P	-418.2
2	☐	2.000	1.646	665.61	0.0001	P	52.9
3	☐	5.000	5.023	2286.75	0.0004	P	19.3
4	☐	10.000	9.975	4585.96	0.0008	P	8.0
5	☐	100.000	103.878	48511.39	0.0083	P	1.2
6	☐	200.000	198.065	91198.06	0.0159	P	3.8

y = 8.0577E-005 * x - 2.0683E-005
R = 0.9997
DL = 3.22
BEC = -0.2567

Weight: <None>
Min Conc: <None>

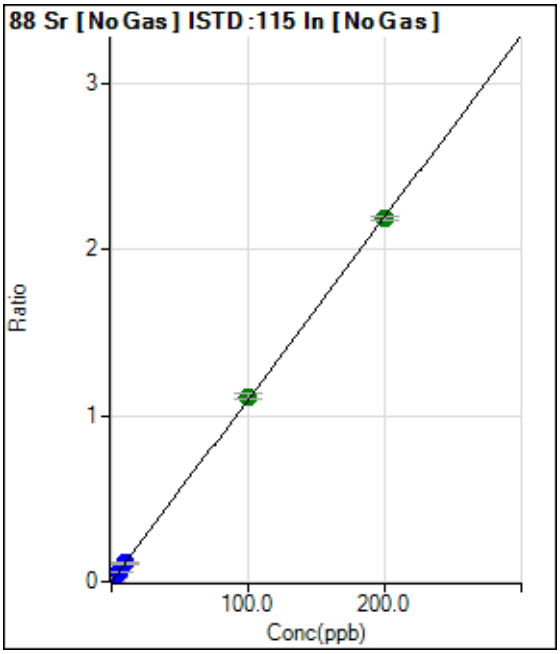
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	380.01	0.0003	P	28.6
2	☐	2.000	1.313	463.35	0.0004	P	10.7
3	☐	5.000	4.554	666.70	0.0005	P	5.4
4	☐	10.000	10.206	993.39	0.0008	P	18.4
5	☐	100.000	101.880	6571.74	0.0051	P	4.7
6	☐	200.000	199.068	12352.59	0.0097	P	0.7

y = 4.7363E-005 * x + 2.9656E-004
R = 0.9999
DL = 5.369
BEC = 6.261

Weight: <None>
Min Conc: <None>

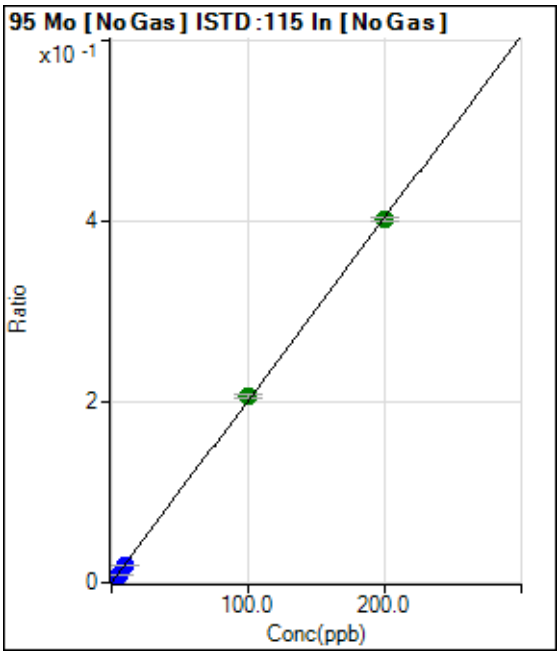


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3160.44	0.0004	P	4.9
2	☐	2.000	1.950	153629.64	0.0218	P	1.8
3	☐	5.000	4.749	375570.31	0.0525	P	1.5
4	☐	10.000	10.090	805955.98	0.1110	P	2.9
5	☐	100.000	101.691	7872586.96	1.1152	A	2.5
6	☐	200.000	199.157	15317249.77	2.1837	A	1.1

y = 0.0110 * x + 4.3983E-004
R = 0.9999
DL = 0.005954
BEC = 0.04012

Weight: <None>
Min Conc: <None>

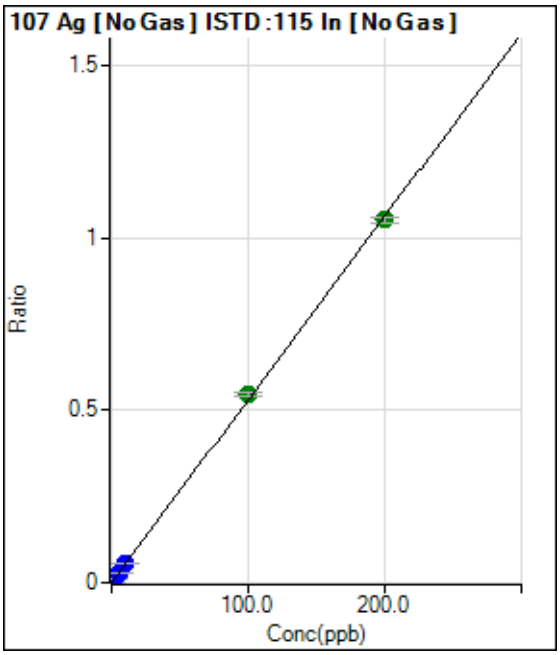
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	140.00	0.0000	P	30.4
2	☐	2.000	1.873	26743.89	0.0038	P	1.2
3	☐	5.000	4.650	67263.86	0.0094	P	0.5
4	☐	10.000	9.694	142117.06	0.0196	P	2.9
5	☐	100.000	102.212	1456186.70	0.2063	A	2.4
6	☐	200.000	198.919	2815524.96	0.4014	A	1.0

y = 0.0020 * x + 1.9451E-005
R = 0.9999
DL = 0.008797
BEC = 0.009639

Weight: <None>
Min Conc: <None>

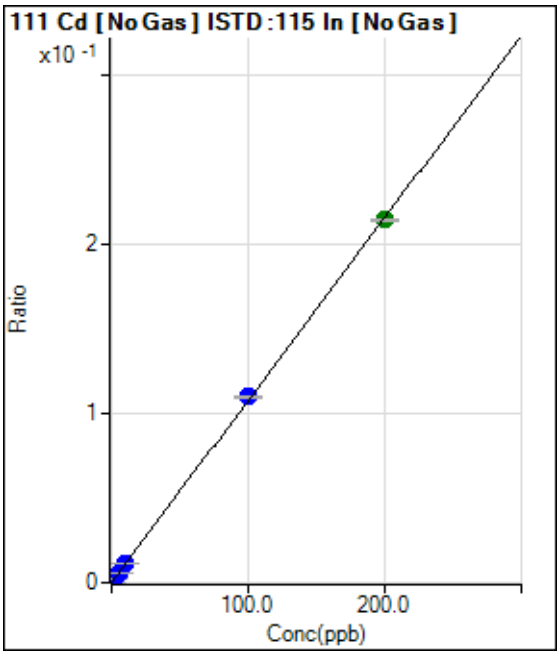


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	356.68	0.0000	P	5.6
2	☐	2.000	2.065	77531.23	0.0110	P	1.2
3	☐	5.000	4.938	187922.35	0.0263	P	0.5
4	☐	10.000	10.488	404437.09	0.0557	P	3.1
5	☐	100.000	103.436	3876816.19	0.5492	A	1.9
6	☐	200.000	198.259	7381696.14	1.0525	A	1.9

y = 0.0053 * x + 4.9631E-005
R = 0.9998
DL = 0.001573
BEC = 0.009349

Weight: <None>
Min Conc: <None>

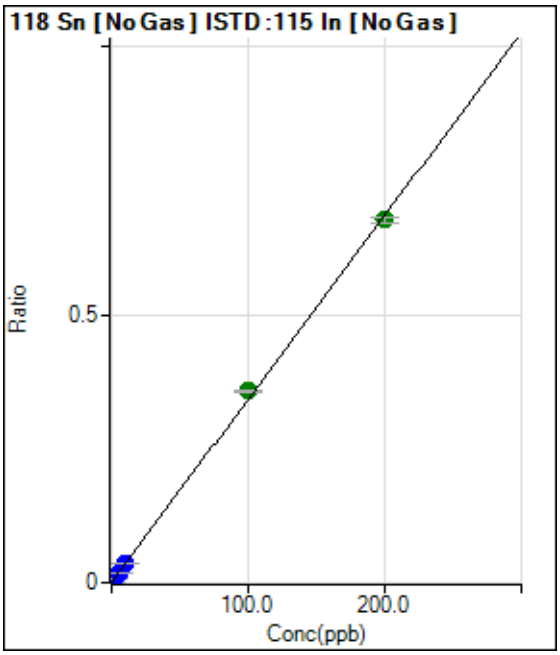
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36.67	0.0000	P	16.3
2	☐	2.000	1.960	14925.38	0.0021	P	1.5
3	☐	5.000	4.937	38145.78	0.0053	P	2.7
4	☐	10.000	10.282	80569.91	0.0111	P	1.2
5	☐	100.000	101.931	776423.51	0.1100	P	1.0
6	☐	200.000	199.022	1505987.22	0.2147	A	0.4

y = 0.0011 * x + 5.1074E-006
R = 0.9999
DL = 0.002317
BEC = 0.004734

Weight: <None>
Min Conc: <None>

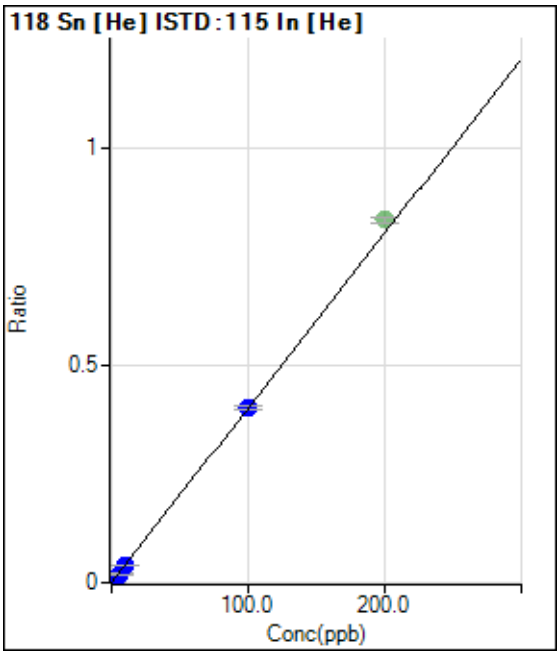


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3563.89	0.0005	P	8.3
2	☐	2.000	1.995	51525.31	0.0073	P	1.4
3	☐	5.000	4.901	123467.30	0.0173	P	1.7
4	☐	10.000	10.356	260719.36	0.0359	P	2.1
5	☐	100.000	104.370	2524397.20	0.3575	A	0.3
6	☐	200.000	197.800	4748482.43	0.6771	A	1.5

y = 0.0034 * x + 4.9588E-004
R = 0.9997
DL = 0.03625
BEC = 0.145

Weight: <None>
Min Conc: <None>

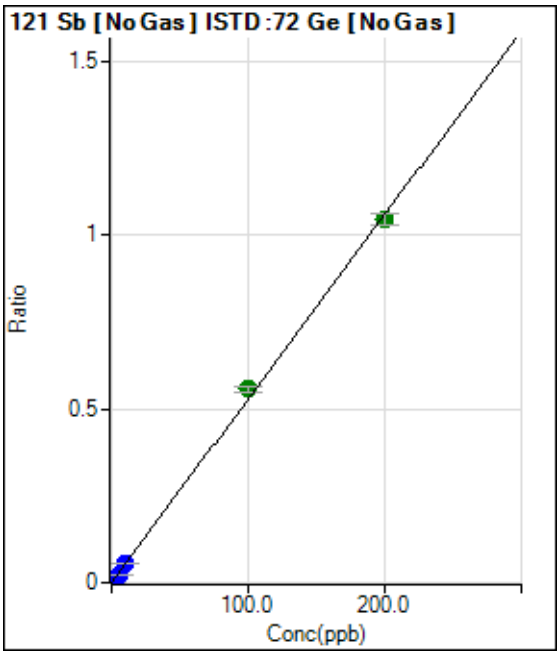
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1523.45	0.0006	P	5.5
2	☐	2.000	1.922	20750.06	0.0083	P	1.6
3	☐	5.000	4.782	49574.95	0.0198	P	2.3
4	☐	10.000	10.214	103241.28	0.0416	P	1.0
5	☐	100.000	99.991	976547.62	0.4016	P	1.7
6	☑	200.000		1990122.21	0.8338	A	1.9

y = 0.0040 * x + 6.1397E-004
R = 1.0000
DL = 0.0254
BEC = 0.1531

Weight: <None>
Min Conc: <None>

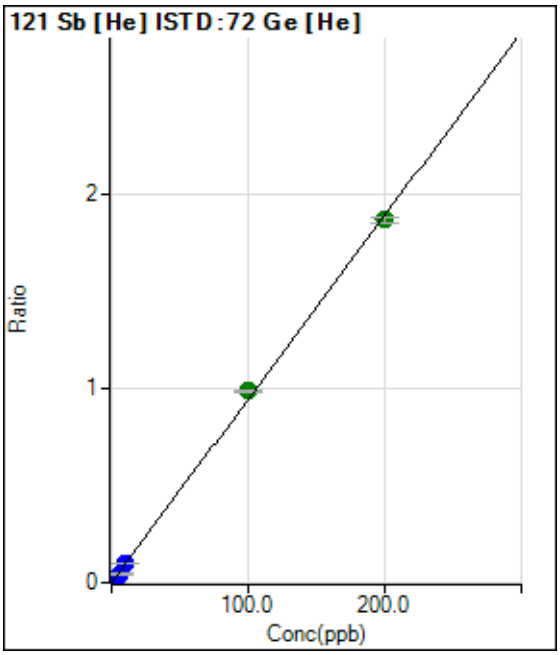


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	890.05	0.0002	P	9.1
2	☐	2.000	1.862	59552.51	0.0100	P	1.1
3	☐	5.000	4.638	146885.12	0.0247	P	0.9
4	☐	10.000	10.143	314927.15	0.0538	P	0.6
5	☐	100.000	105.334	3234429.32	0.5570	A	2.5
6	☐	200.000	197.336	5970505.75	1.0433	A	3.3

y = 0.0053 * x + 1.5202E-004
R = 0.9995
DL = 0.007875
BEC = 0.02876

Weight: <None>
Min Conc: <None>

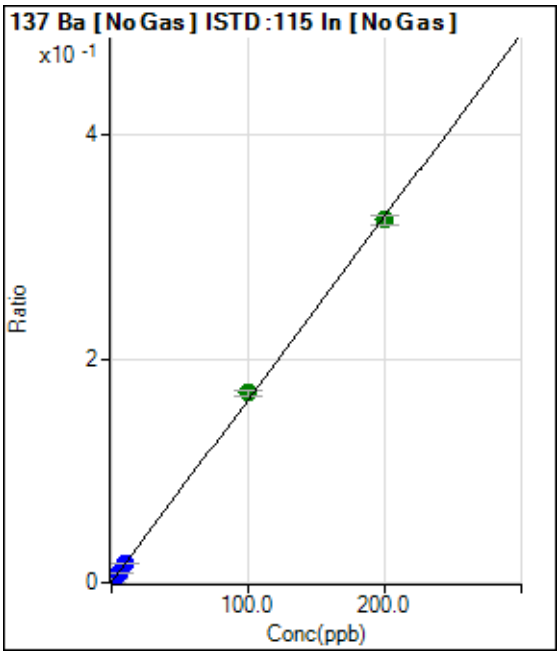
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	326.68	0.0003	P	14.6
2	☐	2.000	1.832	22606.54	0.0175	P	1.3
3	☐	5.000	4.637	57161.30	0.0440	P	3.0
4	☐	10.000	10.031	120857.61	0.0948	P	0.7
5	☐	100.000	104.549	1264523.29	0.9857	A	1.4
6	☐	200.000	197.735	2367390.22	1.8640	A	1.5

y = 0.0094 * x + 2.5446E-004
R = 0.9996
DL = 0.01182
BEC = 0.027

Weight: <None>
Min Conc: <None>

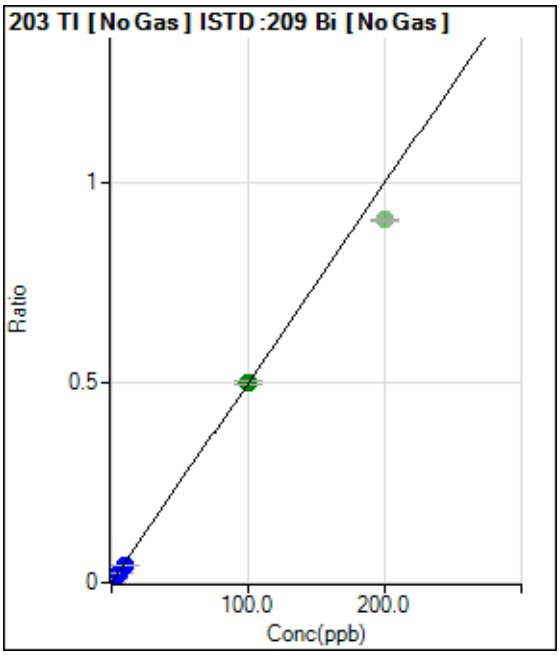


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2090.20	0.0003	P	3.5
2	☐	2.000	2.053	25642.29	0.0036	P	2.1
3	☐	5.000	4.928	59644.05	0.0083	P	1.4
4	☐	10.000	10.173	122665.95	0.0169	P	2.3
5	☐	100.000	103.561	1195568.76	0.1694	A	2.6
6	☐	200.000	198.212	2272263.46	0.3239	A	2.4

y = 0.0016 * x + 2.9089E-004
R = 0.9998
DL = 0.01848
BEC = 0.1782

Weight: <None>
Min Conc: <None>

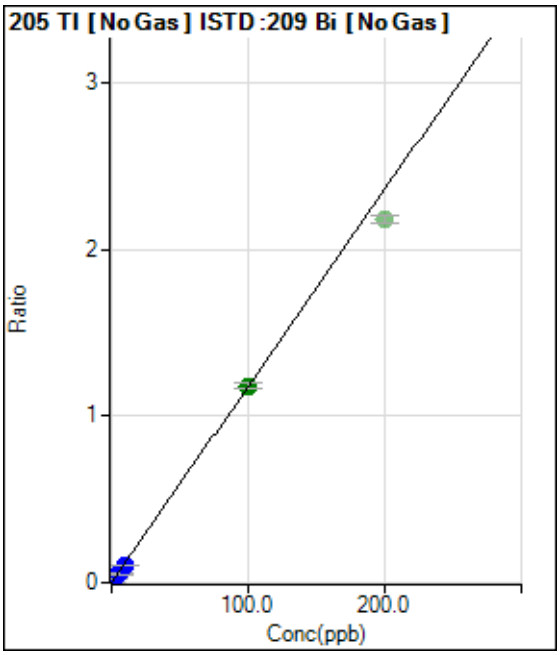
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	170.00	0.0000	P	24.6
2	☐	2.000	1.785	49007.41	0.0089	P	6.1
3	☐	5.000	4.432	121442.81	0.0221	P	2.9
4	☐	10.000	9.103	253210.47	0.0455	P	0.9
5	☐	100.000	100.122	2637551.00	0.4997	A	2.6
6	☑	200.000		4891973.05	0.9071	A	0.3

y = 0.0050 * x + 3.0226E-005
R = 1.0000
DL = 0.004461
BEC = 0.006057

Weight: <None>
Min Conc: <None>

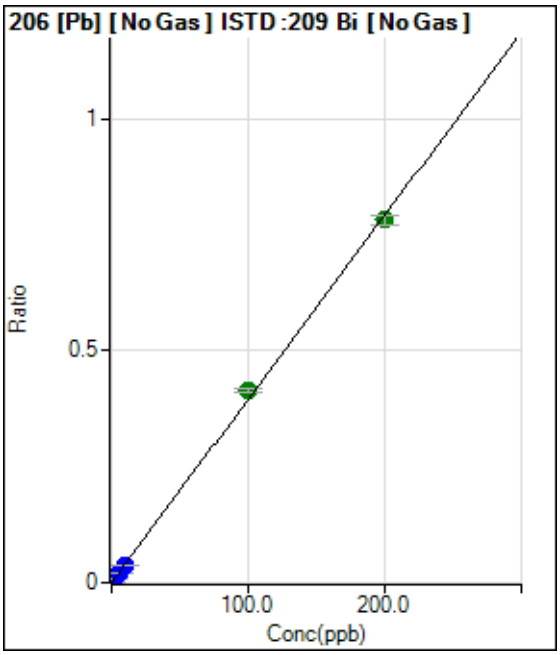


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	333.35	0.0001	P	21.0
2	☐	2.000	1.820	117891.97	0.0215	P	5.4
3	☐	5.000	4.479	289597.91	0.0528	P	4.0
4	☐	10.000	9.135	599715.38	0.1077	P	2.9
5	☐	100.000	100.116	6225833.24	1.1795	A	2.5
6	☑	200.000		11737576.07	2.1762	A	2.2

y = 0.0118 * x + 5.9050E-005
R = 1.0000
DL = 0.003153
BEC = 0.005013

Weight: <None>
Min Conc: <None>

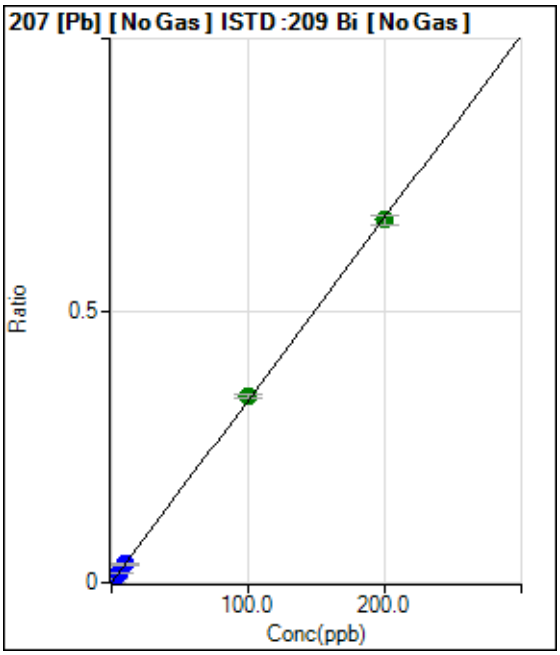
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	380.01	0.0001	P	3.7
2	☐	2.000	1.878	41052.38	0.0075	P	4.5
3	☐	5.000	4.770	103694.92	0.0189	P	2.9
4	☐	10.000	9.494	209246.67	0.0376	P	3.5
5	☐	100.000	104.601	2181426.94	0.4133	A	2.3
6	☐	200.000	197.732	4213805.35	0.7812	A	2.9

y = 0.0040 * x + 6.7440E-005
R = 0.9996
DL = 0.001883
BEC = 0.01707

Weight: <None>
Min Conc: <None>

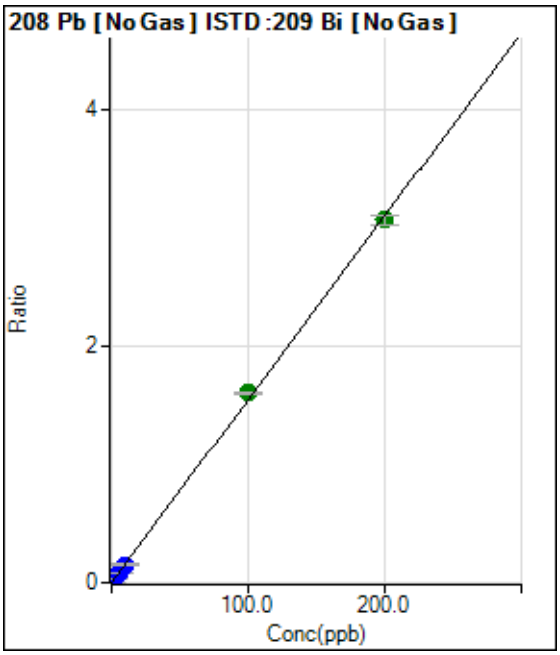


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	363.34	0.0001	P	10.3
2	☐	2.000	1.866	34709.61	0.0063	P	3.8
3	☐	5.000	4.863	89870.56	0.0164	P	1.5
4	☐	10.000	10.011	187496.27	0.0337	P	2.3
5	☐	100.000	102.353	1813194.29	0.3436	A	1.8
6	☐	200.000	198.828	3599494.11	0.6674	A	2.5

y = 0.0034 * x + 6.4469E-005
R = 0.9999
DL = 0.005931
BEC = 0.01921

Weight: <None>
Min Conc: <None>

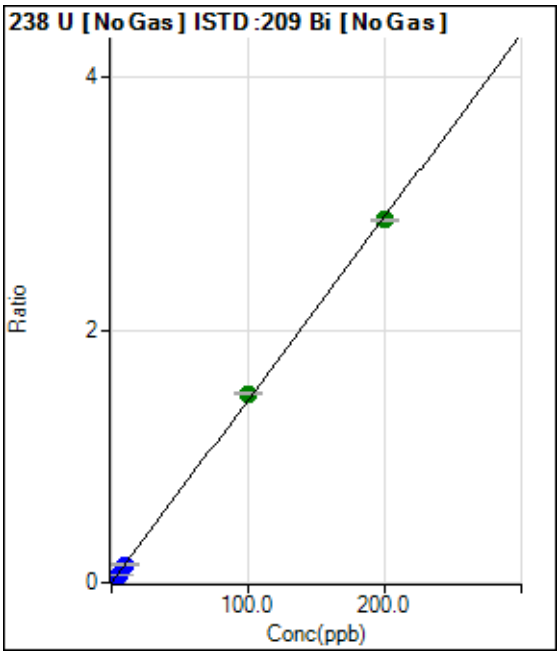
Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1650.08	0.0003	P	4.0
2	☐	2.000	1.880	161151.09	0.0294	P	2.6
3	☐	5.000	4.779	406863.95	0.0742	P	2.5
4	☐	10.000	9.938	857644.88	0.1540	P	2.0
5	☐	100.000	103.895	8482721.59	1.6070	A	1.0
6	☐	200.000	198.063	16522800.38	3.0634	A	2.9

y = 0.0155 * x + 2.9285E-004
R = 0.9997
DL = 0.002261
BEC = 0.01894

Weight: <None>
Min Conc: <None>

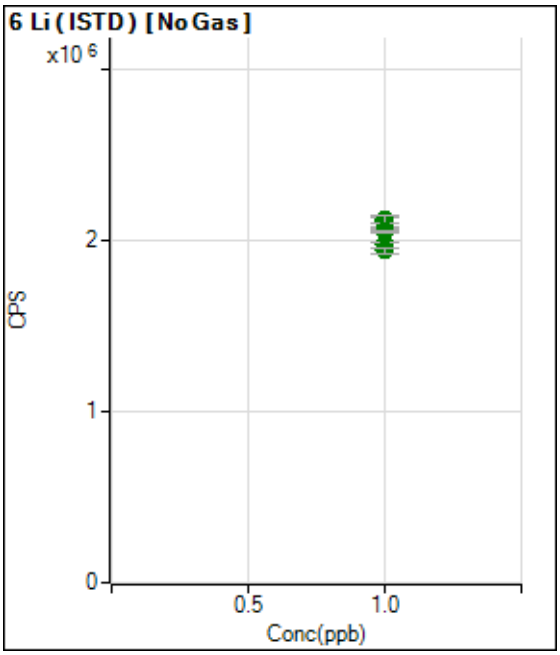


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33.33	0.0000	P	18.8
2	☐	2.000	1.861	148037.80	0.0270	P	3.2
3	☐	5.000	4.651	369811.87	0.0674	P	0.5
4	☐	10.000	9.926	801177.85	0.1439	P	3.5
5	☐	100.000	103.309	7903940.72	1.4972	A	1.4
6	☐	200.000	198.359	15503802.69	2.8747	A	0.5

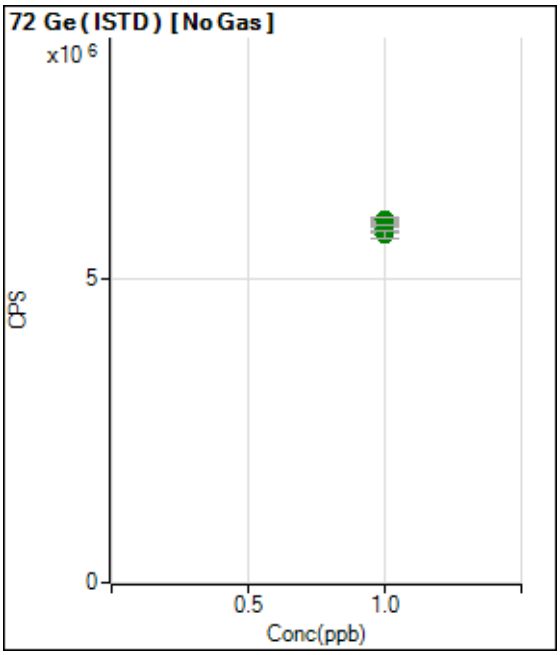
y = 0.0145 * x + 5.9284E-006
R = 0.9998
DL = 0.0002311
BEC = 0.0004091

Weight: <None>
Min Conc: <None>

Calibration for 225_ICV.d

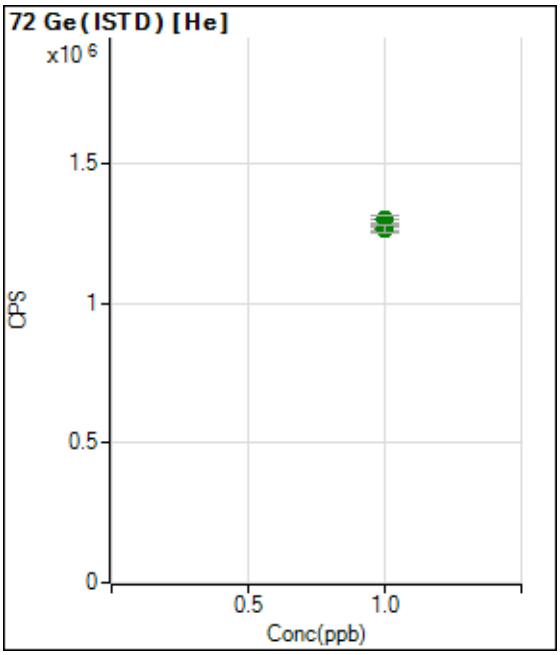


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2076006.97		A	0.8
2	☐	1.000		2110097.15		A	2.7
3	☐	1.000		2120843.18		A	2.3
4	☐	1.000		2054928.81		A	0.6
5	☐	1.000		1973480.47		A	1.5
6	☐	1.000		1939908.73		A	1.5

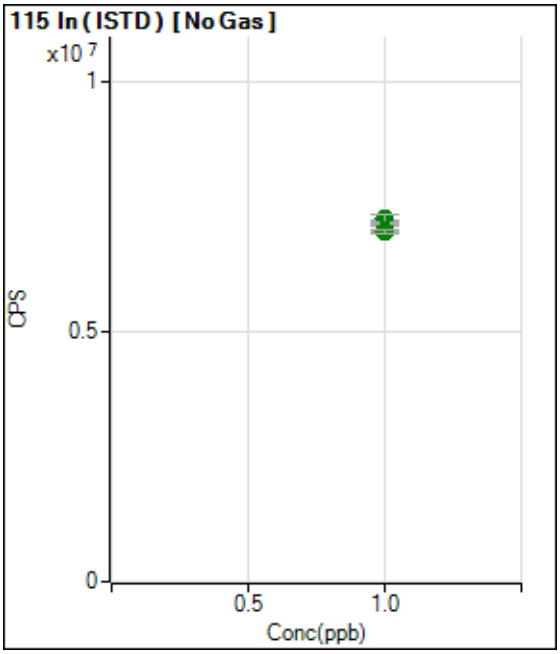


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		5854434.29		A	0.1
2	☐	1.000		5959027.00		A	0.8
3	☐	1.000		5954110.54		A	1.2
4	☐	1.000		5856828.25		A	0.2
5	☐	1.000		5809304.71		A	2.2
6	☐	1.000		5724952.21		A	2.2

Calibration for 225_ICV.d

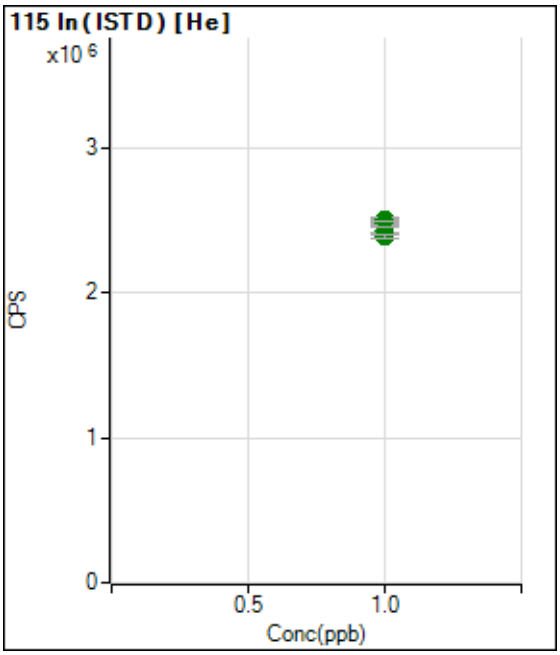


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1283118.52		A	0.8
2	☐	1.000		1290210.92		A	2.4
3	☐	1.000		1300933.81		A	2.1
4	☐	1.000		1274944.93		A	1.8
5	☐	1.000		1282806.44		A	0.6
6	☐	1.000		1270062.01		A	2.0

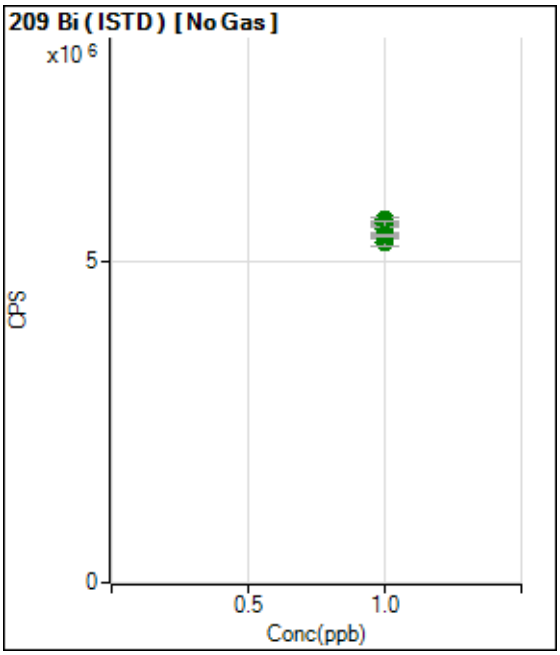


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		7184199.16		A	0.9
2	☐	1.000		7040829.79		A	0.6
3	☐	1.000		7154600.31		A	1.2
4	☐	1.000		7260771.49		A	2.2
5	☐	1.000		7061805.20		A	2.5
6	☐	1.000		7014134.89		A	1.0

Calibration for 225_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2482663.88		A	2.5
2	☐	1.000		2493912.51		A	2.3
3	☐	1.000		2506058.01		A	1.9
4	☐	1.000		2483642.03		A	1.1
5	☐	1.000		2432278.47		A	1.7
6	☐	1.000		2387123.49		A	1.3



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		5632659.08		A	1.6
2	☐	1.000		5489551.17		A	3.2
3	☐	1.000		5485664.92		A	2.2
4	☐	1.000		5570838.25		A	1.7
5	☐	1.000		5278137.53		A	2.1
6	☐	1.000		5393299.08		A	0.4

Sample Report

Sample Table

Sample Name	LLICCV2
Data File Name	226LCV2.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T20:06:32-05:00
Sample Type	LLCCV2
Dilution	1
Comment	
ISTD Ref FileName	218CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	1.984	1.984	5.48	169133	0.00	2	
Be	9	1	No Gas	1.895	1.895	2.09	11888	0.02	2	
V	51	2	He	1.824	1.824	3.23	18757	0.01	2	
Cr	52	2	He	1.952	1.952	1.53	23160	0.01	2	
Fe	56	2	He	199.843	199.843	1.87	1926405	0.01	200	
Se	78	2	He	2.011	2.011	15.48	358	0.56	2	
Sn	118	2	He	1.933	1.933	3.59	21665	0.01	2	
As	75	2	He	1.956	1.956	2.82	3081	0.06	2	
Ca	44	2	He	197.436	197.436	2.79	8830	2.24	200	
Na	23	2	He	199.444	199.444	1.73	301064	0.07	200	
Mg	24	2	He	202.102	202.102	0.91	132152	0.15	200	
K	39	2	He	194.684	194.684	2.43	196422	0.10	200	
Mn	55	2	He	1.954	1.954	1.64	14384	0.01	2	
Co	59	2	He	2.013	2.013	2.84	36228	0.01	2	
Ni	60	2	He	1.989	1.989	5.66	9483	0.02	2	
Cu	63	2	He	2.030	2.030	0.35	27455	0.01	2	
Zn	66	2	He	2.355	2.355	5.69	5735	0.04	2	
Al	27	2	He	2.993	2.993	6.87	1493	0.20	2	NewName Main CR1 Failed
B	11	1	No Gas	13.512	13.512	1.44	70233	0.02	10	NewName Main CR1 Failed
Al	27	1	No Gas	3.298	3.298	2.46	141554	0.00	2	NewName Main CR1 Failed
Si	28	1	No Gas	11.011	11.011	7.84	731638	0.00	10	
P	31	1	No Gas	7.928	7.928	6.28	48408	0.02	10	
Ag	107	1	No Gas	1.943	1.943	3.34	76730	0.00	2	
Cd	111	1	No Gas	1.940	1.940	4.32	15533	0.01	2	
Sr	88	1	No Gas	1.856	1.856	2.58	153858	0.00	2	
Mo	95	1	No Gas	1.834	1.834	4.07	27539	0.01	2	
Sn	118	1	No Gas	2.062	2.062	2.67	55886	0.00	2	
Sb	121	1	No Gas	1.895	1.895	2.78	61726	0.00	2	
Ba	137	1	No Gas	1.982	1.982	3.06	26110	0.01	2	
Tl	205	1	No Gas	2.065	2.065	2.22	124902	0.00	2	
Tl	203	1	No Gas	2.040	2.040	1.04	51659	0.00	2	
Pb	208	1	No Gas	1.921	1.921	1.17	163699	0.00	2	
U	238	1	No Gas	1.893	1.893	2.00	149738	0.00	2	
Ca	43	2	He	215.857	215.857	13.57	543	39.73	200	
Sb	121	2	He	1.919	1.919	1.60	23949	0.01	2	
Ti	47	2	He	1.843	1.843	23.37	543	0.34	200	
Cu	63	1	No Gas	2.049	2.049	3.23	59202	0.00	2	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2084240	1.42	2076007	100.40	70	120	
Ge	72	2	He	1305688	1.33	1283119	101.76	70	120	
Ge	72	1	No Gas	6070337	1.35	5854434	103.69	70	120	
In	115	1	No Gas	7405764	2.38	7184199	103.08	70	120	
Bi	209	1	No Gas	5455421	1.06	5632659	96.85	70	120	

Sample Report

Sample Table

Sample Name	LLICCV5
Data File Name	227LCV5.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T20:08:24-05:00
Sample Type	LLCCV5
Dilution	1
Comment	
ISTD Ref FileName	218CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	4.818	4.818	4.51	241207	0.00	5	
Be	9	1	No Gas	4.750	4.750	1.86	29661	0.02	5	
V	51	2	He	4.719	4.719	2.51	45562	0.01	5	
Cr	52	2	He	4.979	4.979	2.73	57237	0.01	5	
Fe	56	2	He	490.694	490.694	1.54	4736612	0.01	500	
Se	78	2	He	5.143	5.143	7.48	757	0.68	5	
Sn	118	2	He	4.812	4.812	3.45	50357	0.01	5	
As	75	2	He	4.846	4.846	1.92	7550	0.06	5	
Ca	44	2	He	497.609	497.609	4.92	21888	2.27	500	
Na	23	2	He	494.473	494.473	2.33	667935	0.07	500	
Mg	24	2	He	506.716	506.716	1.19	331969	0.15	500	
K	39	2	He	488.099	488.099	2.03	427460	0.11	500	
Mn	55	2	He	4.934	4.934	3.59	35717	0.01	5	
Co	59	2	He	5.055	5.055	0.30	91110	0.01	5	
Ni	60	2	He	5.181	5.181	1.28	24499	0.02	5	
Cu	63	2	He	4.977	4.977	3.20	65685	0.01	5	
Zn	66	2	He	5.240	5.240	2.22	11952	0.04	5	
Al	27	2	He	6.134	6.134	0.73	2454	0.25	5	
B	11	1	No Gas	25.331	25.331	3.55	118149	0.02	25	
Al	27	1	No Gas	6.675	6.675	1.36	236796	0.00	5	NewName2 Main CR1 Failed
Si	28	1	No Gas	26.927	26.927	2.78	963401	0.00	25	
P	31	1	No Gas	23.349	23.349	1.60	71290	0.03	25	
Ag	107	1	No Gas	4.978	4.978	1.17	191439	0.00	5	
Cd	111	1	No Gas	4.829	4.829	1.68	37708	0.01	5	
Sr	88	1	No Gas	4.826	4.826	2.82	385578	0.00	5	
Mo	95	1	No Gas	4.693	4.693	1.28	68613	0.01	5	
Sn	118	1	No Gas	4.915	4.915	1.32	125120	0.00	5	
Sb	121	1	No Gas	4.663	4.663	0.82	148455	0.00	5	
Ba	137	1	No Gas	4.911	4.911	4.35	60050	0.01	5	
Tl	205	1	No Gas	4.910	4.910	6.27	297731	0.00	5	
Tl	203	1	No Gas	4.868	4.868	4.25	123560	0.00	5	
Pb	208	1	No Gas	4.846	4.846	3.44	412228	0.00	5	
U	238	1	No Gas	4.753	4.753	2.46	377526	0.00	5	
Ca	43	2	He	535.698	535.698	12.43	1340	39.97	500	
Sb	121	2	He	4.602	4.602	5.78	57195	0.01	5	
Ti	47	2	He	5.056	5.056	9.65	1493	0.34	5	
Cu	63	1	No Gas	5.091	5.091	0.61	140503	0.00	5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2076548	1.88	2076007	100.03	70	120	
Ge	72	2	He	1311995	2.00	1283119	102.25	70	120	
Ge	72	1	No Gas	5985608	0.46	5854434	102.24	70	120	
In	115	1	No Gas	7231131	1.81	7184199	100.65	70	120	
Bi	209	1	No Gas	5483948	4.07	5632659	97.36	70	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICCB
Data File Name	228_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T20:10:16-05:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	218CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.038	144.1	120983	0.4	0.5	
Be	9	1	No Gas	0.014	13.5	108	9.6	0.5	
V	51	2	He	-0.039	-24.5	1672	7.0	2.5	
Cr	52	2	He	0.000	-22758.0	1370	13.3	2.5	
Fe	56	2	He	0.536	0.4	16487	2.0	100	
Se	78	2	He	0.085	161.7	117	13.0	1	
Sn	118	2	He	0.025	115.5	1787	14.2	2.5	
As	75	2	He	0.006	191.4	92	19.9	2.5	
Ca	44	2	He	12.461	23.0	863	14.8	100	
Na	23	2	He	0.910	112.6	57371	0.7	100	
Mg	24	2	He	0.789	9.2	1157	5.8	100	
K	39	2	He	2.946	15.4	47687	1.3	100	
Mn	55	2	He	0.099	5.6	1220	1.6	2.5	
Co	59	2	He	0.000	810.1	210	23.8	2.5	
Ni	60	2	He	0.035	24.3	363	9.7	2.5	
Cu	63	2	He	0.037	30.6	1830	6.0	1	
Zn	66	2	He	0.930	9.0	2747	6.9	2.5	
Al	27	2	He	1.757	164.8	1131	76.0	5	
B	11	1	No Gas	2.307	1.4	24755	1.1	0.5	ICB Main CR1 Failed
Al	27	1	No Gas	0.374	17.0	56067	1.0	5	
Si	28	1	No Gas	0.479	198.4	567828	0.2	10	
P	31	1	No Gas	0.069	753.4	36141	0.8	10	
Ag	107	1	No Gas	0.000	290.8	370	7.2	2.5	
Cd	111	1	No Gas	0.000	-1223.7	33	124.9	1	
Sr	88	1	No Gas	0.018	24.2	4624	6.8	2.5	
Mo	95	1	No Gas	0.059	14.8	997	11.8	2.5	
Sn	118	1	No Gas	0.032	26.2	4381	4.5	5	
Sb	121	1	No Gas	0.012	29.4	1293	7.9	2.5	
Ba	137	1	No Gas	-0.025	-86.7	1814	12.9	2.5	
Tl	205	1	No Gas	0.025	16.0	1824	10.2	1	
Tl	203	1	No Gas	0.022	32.5	710	23.1	1	
Pb	208	1	No Gas	0.013	16.0	2680	4.9	2.5	
U	238	1	No Gas	0.001	34.6	103	22.3	2.5	
Ca	43	2	He	13.080	35.3	43	26.6	100	
Sb	121	2	He	0.008	56.0	437	13.0	2.5	
Ti	47	2	He	0.011	181.3	7	86.6	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2118924	1.62	2076007	102.07	70	120	
Ge	72	2	He	1331268	2.05	1283119	103.75	70	120	
Ge	72	1	No Gas	6055815	2.42	5854434	103.44	70	120	
In	115	1	No Gas	7242160	1.59	7184199	100.81	70	120	
Bi	209	1	No Gas	5418241	3.25	5632659	96.19	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	237_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T20:27:28-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	218CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	102.681	0.958	2886878	1.13	100	102.7	90	110	
Be	9	1	No Gas	105.520	0.779	690429	0.75	100	105.5	90	110	
V	51	2	He	103.919	2.376	983677	0.97	100	103.9	90	110	
Cr	52	2	He	104.410	3.660	1200632	1.87	100	104.4	90	110	
Fe	56	2	He	10512.008	2.055	103609018	0.27	10000	105.1	90	110	
Se	78	2	He	104.183	2.338	13625	0.73	100	104.2	90	110	
Sn	118	2	He	102.203	1.187	1002723	0.58	100	102.2	90	110	
As	75	2	He	107.251	1.551	169224	0.54	100	107.3	90	110	
Ca	44	2	He	10399.974	1.971	461878	0.30	10000	104.0	90	110	
Na	23	2	He	10649.797	0.924	13559885	1.17	10000	106.5	90	110	
Mg	24	2	He	10446.326	1.668	6991006	0.13	10000	104.5	90	110	
K	39	2	He	10611.957	2.473	8562300	1.05	10000	106.1	90	110	
Mn	55	2	He	102.949	2.092	752807	0.65	100	102.9	90	110	
Co	59	2	He	108.362	2.964	1993970	1.21	100	108.4	90	110	
Ni	60	2	He	103.902	1.535	499038	1.03	100	103.9	90	110	
Cu	63	2	He	105.082	2.019	1392280	0.77	100	105.1	90	110	
Zn	66	2	He	106.563	2.176	234598	0.87	100	106.6	90	110	
Al	27	2	He	108.445	0.562	34266	1.80	100	108.4	90	110	
B	11	1	No Gas	525.145	0.283	2261615	0.04	500	105.0	90	110	
Al	27	1	No Gas	112.948	0.962	3308327	2.66	100	112.9	90	110	CCV Main CR1-2 Failed
Si	28	1	No Gas	609.601	3.187	9852265	0.52	5000	12.2	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	565.479	2.455	902494	0.87	500	113.1	90	110	CCV Main CR1-2 Failed
Ag	107	1	No Gas	108.532	2.255	3980871	1.50	100	108.5	90	110	
Cd	111	1	No Gas	104.485	1.047	778872	1.60	100	104.5	90	110	
Sr	88	1	No Gas	104.913	0.788	7949598	1.00	100	104.9	90	110	
Mo	95	1	No Gas	106.873	2.203	1490065	1.38	100	106.9	90	110	
Sn	118	1	No Gas	106.032	1.777	2509549	2.49	100	106.0	90	110	
Sb	121	1	No Gas	101.682	3.925	3228747	1.52	100	101.7	90	110	
Ba	137	1	No Gas	107.194	1.150	1211236	0.95	100	107.2	90	110	
Tl	205	1	No Gas	108.296	2.254	6035922	0.61	100	108.3	90	110	
Tl	203	1	No Gas	110.221	1.711	2569739	0.79	100	110.2	90	110	CCV Main CR1-2 Failed
Pb	208	1	No Gas	105.059	1.604	8187620	0.59	100	105.1	90	110	
U	238	1	No Gas	102.166	1.253	7460779	1.64	100	102.2	90	110	
Ca	43	2	He	10555.618	1.393	26853	1.87	10000	105.6	90	110	
Sb	121	2	He	104.637	0.517	1324520	1.29	100	104.6	90	110	
Ti	47	2	He	104.442	1.361	31510	0.98	100	104.4	90	110	
Cu	63	1	No Gas	108.839	2.070	2951561	1.37	100	108.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2176916	0.25	2076007	104.86	70	120	
Ge	72	2	He	1342686	1.80	1283119	104.64	70	120	
Ge	72	1	No Gas	6008994	2.51	5854434	102.64	70	120	
In	115	1	No Gas	6909595	0.83	7184199	96.18	70	120	
Bi	209	1	No Gas	5039590	2.20	5632659	89.47	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	238_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T20:29:13-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	218CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.035	340.4	131032	1.1	0.5	
Be	9	1	No Gas	0.029	17.3	220	16.4	0.5	
V	51	2	He	-0.028	-12.9	1798	2.9	2.5	
Cr	52	2	He	-0.001	-1977.5	1383	8.8	2.5	
Fe	56	2	He	0.908	10.9	20379	3.8	100	
Se	78	2	He	0.102	119.2	121	14.0	2	
As	75	2	He	0.018	88.2	112	21.5	2.5	
Ca	44	2	He	3.463	22.8	473	7.4	100	
Na	23	2	He	58.458	1.1	131417	0.5	100	
Mg	24	2	He	1.309	18.4	1520	9.7	100	
K	39	2	He	5.738	15.7	50557	0.9	100	
Mn	55	2	He	0.031	31.6	737	10.3	2.5	
Co	59	2	He	0.005	53.4	300	17.6	2.5	
Ni	60	2	He	0.015	117.9	270	31.6	2.5	
Cu	63	2	He	0.063	27.3	2204	11.3	2	
Zn	66	2	He	0.189	22.6	1150	9.2	2.5	
Al	27	2	He	-0.577	-41.6	430	17.6	5	
B	11	1	No Gas	12.889	7.8	74523	3.3	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	-0.179	-20.9	40105	2.0	5	
Si	28	1	No Gas	5.514	13.9	646978	1.2	10	
P	31	1	No Gas	1.475	27.9	38417	1.3	10	
Ag	107	1	No Gas	0.017	16.8	960	11.0	2.5	
Cd	111	1	No Gas	0.004	125.2	67	56.8	1	
Sr	88	1	No Gas	0.020	34.9	4598	9.9	2.5	
Mo	95	1	No Gas	0.036	31.6	640	23.6	2.5	
Sn	118	1	No Gas	0.165	10.3	7412	4.6	5	
Sb	121	1	No Gas	0.080	13.9	3501	9.3	2.5	
Ba	137	1	No Gas	-0.084	-9.5	1077	6.7	2.5	
Tl	205	1	No Gas	0.083	26.7	5301	28.5	1	
Tl	203	1	No Gas	0.088	24.2	2387	26.0	1	
Pb	208	1	No Gas	0.024	1.6	3380	4.8	2.5	
U	238	1	No Gas	0.005	9.7	423	13.0	2.5	
Ca	43	2	He	5.006	43.0	23	24.7	100	
Sb	121	2	He	0.054	15.3	1030	10.3	2.5	
Ti	47	2	He	0.022	154.2	10	100.0	2.5	
Cu	63	1	No Gas	0.092	5.0	5645	1.9	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2297665	3.21	2076007	110.68	70	120	
Ge	72	2	He	1348518	1.06	1283119	105.10	70	120	
Ge	72	1	No Gas	6070624	1.22	5854434	103.69	70	120	
In	115	1	No Gas	6989545	1.66	7184199	97.29	70	120	
Bi	209	1	No Gas	5077907	4.01	5632659	90.15	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	248_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T20:47:53-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	218CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	-0.021	-342.9	129721	0.9	0.5	
Be	9	1	No Gas	0.024	10.0	187	6.7	0.5	
V	51	2	He	-0.032	-24.7	1708	3.8	2.5	
Cr	52	2	He	0.004	350.6	1400	11.2	2.5	
Fe	56	2	He	0.677	4.0	17612	1.3	100	
Se	78	2	He	0.039	486.2	110	21.8	2	
As	75	2	He	0.014	177.3	103	37.2	2.5	
Ca	44	2	He	3.675	59.2	470	20.5	100	
Na	23	2	He	36.237	5.3	100332	2.0	100	
Mg	24	2	He	0.468	31.2	930	10.4	100	
K	39	2	He	5.646	17.4	49122	1.2	100	
Mn	55	2	He	0.026	19.1	677	4.8	2.5	
Co	59	2	He	0.004	73.6	270	19.2	2.5	
Ni	60	2	He	0.008	195.4	233	33.3	2.5	
Cu	63	2	He	0.029	48.7	1710	10.3	2	
Zn	66	2	He	0.216	12.6	1177	4.9	2.5	
Al	27	2	He	-0.560	-45.7	423	18.0	5	
B	11	1	No Gas	12.824	5.5	74439	4.1	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	-0.121	-51.2	41578	3.3	5	
Si	28	1	No Gas	2.998	19.8	605357	0.4	10	
P	31	1	No Gas	2.273	21.9	39477	3.1	10	
Ag	107	1	No Gas	0.010	21.6	730	9.9	2.5	
Cd	111	1	No Gas	0.001	151.1	43	26.6	1	
Sr	88	1	No Gas	0.016	22.6	4327	4.6	2.5	
Mo	95	1	No Gas	0.031	38.7	567	28.7	2.5	
Sn	118	1	No Gas	0.103	6.5	5928	2.9	5	
Sb	121	1	No Gas	0.058	24.0	2767	17.2	2.5	
Ba	137	1	No Gas	-0.090	-8.1	1003	9.3	2.5	
Tl	205	1	No Gas	0.080	41.7	5105	38.6	1	
Tl	203	1	No Gas	0.072	37.9	2004	34.3	1	
Pb	208	1	No Gas	0.017	18.5	2827	8.0	2.5	
U	238	1	No Gas	0.005	7.3	393	6.4	2.5	
Ca	43	2	He	14.692	57.8	47	44.6	100	
Sb	121	2	He	0.025	4.0	640	1.6	2.5	
Ti	47	2	He	0.169	151.9	53	142.0	2.5	
Cu	63	1	No Gas	0.040	14.4	4204	4.4	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2301754	2.02	2076007	110.87	70	120	
Ge	72	2	He	1312108	0.53	1283119	102.26	70	120	
Ge	72	1	No Gas	6042252	1.20	5854434	103.21	70	120	
In	115	1	No Gas	6992261	1.98	7184199	97.33	70	120	
Bi	209	1	No Gas	5122315	0.70	5632659	90.94	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	251_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T20:59:39-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	218CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	103.364	1.241	2901188	1.07	100	103.4	90	110	
Be	9	1	No Gas	107.342	1.016	701381	0.95	100	107.3	90	110	
V	51	2	He	107.484	2.375	988279	1.63	100	107.5	90	110	
Cr	52	2	He	108.446	2.392	1211577	1.73	100	108.4	90	110	
Fe	56	2	He	10656.319	1.819	102029158	0.87	10000	106.6	90	110	
Se	78	2	He	106.404	2.663	13516	2.34	100	106.4	90	110	
Sn	118	2	He	99.906	0.493	975820	0.72	100	99.9	90	110	
As	75	2	He	110.314	0.566	169083	0.70	100	110.3	90	110	CCV Main CR1-2 Failed
Ca	44	2	He	10575.044	1.532	456224	0.40	10000	105.8	90	110	
Na	23	2	He	10987.850	2.099	13586114	0.89	10000	109.9	90	110	
Mg	24	2	He	10827.305	1.173	7039363	1.57	10000	108.3	90	110	
K	39	2	He	10839.517	0.172	8496344	1.21	10000	108.4	90	110	
Mn	55	2	He	105.019	2.702	745929	1.63	100	105.0	90	110	
Co	59	2	He	111.450	2.640	1992249	1.53	100	111.5	90	110	CCV Main CR1-2 Failed
Ni	60	2	He	106.680	1.551	497687	0.54	100	106.7	90	110	
Cu	63	2	He	110.274	1.175	1419541	2.36	100	110.3	90	110	CCV Main CR1-2 Failed
Zn	66	2	He	107.574	0.481	230083	1.55	100	107.6	90	110	
Al	27	2	He	111.794	4.192	34281	2.90	100	111.8	90	110	CCV Main CR1-2 Failed
B	11	1	No Gas	537.414	1.815	2310873	1.66	500	107.5	90	110	
Al	27	1	No Gas	111.286	3.065	3280356	1.30	100	111.3	90	110	CCV Main CR1-2 Failed
Si	28	1	No Gas	602.165	2.516	9804563	1.06	5000	12.0	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	563.145	1.758	904916	0.31	500	112.6	90	110	CCV Main CR1-2 Failed
Ag	107	1	No Gas	113.045	1.694	4065241	0.96	100	113.0	90	110	CCV Main CR1-2 Failed
Cd	111	1	No Gas	106.449	2.252	777786	0.27	100	106.4	90	110	
Sr	88	1	No Gas	109.891	2.017	8162568	1.11	100	109.9	90	110	
Mo	95	1	No Gas	111.832	1.630	1528676	0.84	100	111.8	90	110	CCV Main CR1-2 Failed
Sn	118	1	No Gas	106.995	2.522	2481915	0.45	100	107.0	90	110	
Sb	121	1	No Gas	101.995	1.499	3261306	0.66	100	102.0	90	110	
Ba	137	1	No Gas	106.973	1.212	1185078	1.33	100	107.0	90	110	
Tl	205	1	No Gas	101.718	2.335	6032329	3.53	100	101.7	90	110	
Tl	203	1	No Gas	100.439	1.348	2522515	0.76	100	100.4	90	110	
Pb	208	1	No Gas	105.237	0.929	8193104	2.06	100	105.2	90	110	
U	238	1	No Gas	103.583	1.139	7555095	1.54	100	103.6	90	110	
Ca	43	2	He	10851.624	1.116	26813	0.45	10000	108.5	90	110	
Sb	121	2	He	106.467	1.831	1308905	0.84	100	106.5	90	110	
Ti	47	2	He	107.861	2.065	31607	0.89	100	107.9	90	110	
Cu	63	1	No Gas	109.418	2.752	2986652	1.77	100	109.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2173921	0.23	2076007	104.72	70	120	
Ge	72	2	He	1304161	1.20	1283119	101.64	70	120	
Ge	72	1	No Gas	6048019	1.74	5854434	103.31	70	120	
In	115	1	No Gas	6775031	2.15	7184199	94.30	70	120	
Bi	209	1	No Gas	5032977	1.31	5632659	89.35	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	259_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T21:14:37-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	218CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	102.249	0.401	2793275	0.92	100	102.2	90	110	
Be	9	1	No Gas	105.260	0.545	669087	0.47	100	105.3	90	110	
V	51	2	He	105.025	2.163	941939	1.37	100	105.0	90	110	
Cr	52	2	He	106.815	1.586	1164030	0.86	100	106.8	90	110	
Fe	56	2	He	10495.263	2.826	98004272	1.66	10000	105.0	90	110	
Se	78	2	He	101.685	3.018	12602	2.10	100	101.7	90	110	
Sn	118	2	He	100.169	1.527	973664	0.40	100	100.2	90	110	
As	75	2	He	107.195	1.608	160246	0.42	100	107.2	90	110	
Ca	44	2	He	10411.687	1.451	438126	0.48	10000	104.1	90	110	
Na	23	2	He	10771.438	1.005	12992829	0.37	10000	107.7	90	110	
Mg	24	2	He	10624.285	2.469	6736071	1.30	10000	106.2	90	110	
K	39	2	He	10534.446	2.967	8053244	1.78	10000	105.3	90	110	
Mn	55	2	He	102.834	1.317	712511	0.40	100	102.8	90	110	
Co	59	2	He	110.545	0.350	1927814	1.36	100	110.5	90	110	CCV Main CR1-2 Failed
Ni	60	2	He	105.871	1.164	481768	0.39	100	105.9	90	110	
Cu	63	2	He	107.269	1.334	1346626	0.41	100	107.3	90	110	
Zn	66	2	He	107.554	1.376	224347	0.37	100	107.6	90	110	
Al	27	2	He	105.872	0.732	31706	1.19	100	105.9	90	110	
B	11	1	No Gas	526.256	1.681	2201582	0.74	500	105.3	90	110	
Al	27	1	No Gas	112.120	0.927	3205356	1.18	100	112.1	90	110	CCV Main CR1-2 Failed
Si	28	1	No Gas	591.034	0.345	9343331	0.56	5000	11.8	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	547.222	2.235	853771	2.25	500	109.4	90	110	
Ag	107	1	No Gas	107.224	0.575	3976564	1.99	100	107.2	90	110	
Cd	111	1	No Gas	103.470	0.851	779646	0.58	100	103.5	90	110	
Sr	88	1	No Gas	103.895	1.245	7957668	0.61	100	103.9	90	110	
Mo	95	1	No Gas	104.999	1.851	1479876	0.90	100	105.0	90	110	
Sn	118	1	No Gas	104.880	2.401	2508728	1.29	100	104.9	90	110	
Sb	121	1	No Gas	105.201	0.870	3262051	0.80	100	105.2	90	110	
Ba	137	1	No Gas	103.908	3.674	1186640	2.37	100	103.9	90	110	
Tl	205	1	No Gas	102.344	2.531	6154746	1.04	100	102.3	90	110	
Tl	203	1	No Gas	102.156	4.140	2602035	2.65	100	102.2	90	110	
Pb	208	1	No Gas	105.586	1.803	8337475	0.32	100	105.6	90	110	
U	238	1	No Gas	105.413	2.601	7799992	2.89	100	105.4	90	110	
Ca	43	2	He	10446.243	2.580	25173	1.48	10000	104.5	90	110	
Sb	121	2	He	108.026	0.400	1295525	1.04	100	108.0	90	110	
Ti	47	2	He	102.714	3.208	29355	2.10	100	102.7	90	110	
Cu	63	1	No Gas	109.402	0.506	2896202	0.62	100	109.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2114899	0.95	2076007	101.87	70	120	
Ge	72	2	He	1272051	1.20	1283119	99.14	70	120	
Ge	72	1	No Gas	5864238	0.28	5854434	100.17	70	120	
In	115	1	No Gas	6985067	1.43	7184199	97.23	70	120	
Bi	209	1	No Gas	5106016	1.67	5632659	90.65	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	260_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T21:16:21-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	218CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.032	110.5	122887	0.5	0.5	
Be	9	1	No Gas	0.022	38.1	160	33.1	0.5	
V	51	2	He	-0.021	-31.8	1740	3.1	2.5	
Cr	52	2	He	0.006	31.0	1363	1.5	2.5	
Fe	56	2	He	0.651	1.4	16667	0.5	100	
Se	78	2	He	-0.084	-41.8	91	4.6	2	
As	75	2	He	0.020	23.2	108	6.4	2.5	
Ca	44	2	He	1.411	44.6	357	7.1	100	
Na	23	2	He	32.447	4.7	91821	1.6	100	
Mg	24	2	He	0.459	25.6	887	8.0	100	
K	39	2	He	6.085	19.9	47493	1.8	100	
Mn	55	2	He	0.124	19.3	1327	12.0	2.5	
Co	59	2	He	0.003	110.5	237	20.0	2.5	
Ni	60	2	He	0.005	112.3	210	12.6	2.5	
Cu	63	2	He	0.018	47.9	1497	7.0	2	
Zn	66	2	He	0.075	23.2	840	4.8	2.5	
Al	27	2	He	-0.377	-109.5	460	26.4	5	
B	11	1	No Gas	5.898	6.6	40380	4.2	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	0.013	978.1	44321	8.5	5	
Si	28	1	No Gas	2.198	21.4	577816	1.4	10	
P	31	1	No Gas	1.884	38.4	37859	2.1	10	
Ag	107	1	No Gas	0.007	31.0	630	15.1	2.5	
Cd	111	1	No Gas	0.004	100.6	67	45.8	1	
Sr	88	1	No Gas	0.003	106.2	3337	7.6	2.5	
Mo	95	1	No Gas	0.032	24.1	600	17.6	2.5	
Sn	118	1	No Gas	0.063	26.8	5024	6.4	5	
Sb	121	1	No Gas	0.050	9.4	2464	6.1	2.5	
Ba	137	1	No Gas	-0.104	-8.5	850	10.2	2.5	
Tl	205	1	No Gas	0.078	27.0	5158	24.5	1	
Tl	203	1	No Gas	0.081	34.6	2304	31.3	1	
Pb	208	1	No Gas	0.014	18.3	2714	7.2	2.5	
U	238	1	No Gas	0.008	29.8	607	28.2	2.5	
Ca	43	2	He	0.084	5010.4	10	100.0	100	
Sb	121	2	He	0.033	20.9	717	11.3	2.5	
Ti	47	2	He	0.024	149.1	10	100.0	2.5	
Cu	63	1	No Gas	0.021	12.6	3567	2.8	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2154827	0.28	2076007	103.80	70	120	
Ge	72	2	He	1259743	0.47	1283119	98.18	70	120	
Ge	72	1	No Gas	5886278	1.45	5854434	100.54	70	120	
In	115	1	No Gas	7066833	2.14	7184199	98.37	70	120	
Bi	209	1	No Gas	5283752	1.29	5632659	93.81	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	269_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T21:48:20-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	218CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	103.327	1.319	2610927	0.62	100	103.3	90	110	
Be	9	1	No Gas	104.675	2.254	615658	0.42	100	104.7	90	110	
V	51	2	He	102.140	2.322	912094	1.60	100	102.1	90	110	
Cr	52	2	He	102.826	2.915	1115441	0.41	100	102.8	90	110	
Fe	56	2	He	10369.530	2.019	96409762	0.53	10000	103.7	90	110	
Se	78	2	He	105.179	3.239	12972	1.08	100	105.2	90	110	
Sn	118	2	He	100.212	2.452	972060	0.69	100	100.2	90	110	
As	75	2	He	105.296	1.608	156724	1.22	100	105.3	90	110	
Ca	44	2	He	10398.660	1.966	435634	0.67	10000	104.0	90	110	
Na	23	2	He	10433.086	3.462	12526863	0.93	10000	104.3	90	110	
Mg	24	2	He	10619.843	3.256	6702538	0.97	10000	106.2	90	110	
K	39	2	He	10395.431	2.595	7913017	1.57	10000	104.0	90	110	
Mn	55	2	He	102.813	2.391	709142	0.18	100	102.8	90	110	
Co	59	2	He	109.548	1.755	1901817	1.06	100	109.5	90	110	
Ni	60	2	He	104.628	2.239	473969	0.65	100	104.6	90	110	
Cu	63	2	He	106.162	2.304	1326734	0.46	100	106.2	90	110	
Zn	66	2	He	105.957	2.626	220022	0.57	100	106.0	90	110	
Al	27	2	He	108.320	4.029	32271	2.17	100	108.3	90	110	
B	11	1	No Gas	518.889	3.161	2008729	1.47	500	103.8	90	110	
Al	27	1	No Gas	108.259	1.607	3008502	0.16	100	108.3	90	110	
Si	28	1	No Gas	572.309	0.644	8808193	1.28	5000	11.4	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	528.167	2.200	801804	1.25	500	105.6	90	110	
Ag	107	1	No Gas	105.755	2.066	3951486	1.56	100	105.8	90	110	
Cd	111	1	No Gas	103.121	2.671	782828	0.84	100	103.1	90	110	
Sr	88	1	No Gas	102.878	4.041	7936799	1.33	100	102.9	90	110	
Mo	95	1	No Gas	103.835	2.463	1474602	1.00	100	103.8	90	110	
Sn	118	1	No Gas	103.390	1.331	2492691	2.11	100	103.4	90	110	
Sb	121	1	No Gas	106.397	1.515	3206009	2.16	100	106.4	90	110	
Ba	137	1	No Gas	102.064	1.494	1175449	4.10	100	102.1	90	110	
Tl	205	1	No Gas	99.392	2.712	6291101	1.33	100	99.4	90	110	
Tl	203	1	No Gas	98.517	4.942	2641064	3.70	100	98.5	90	110	
Pb	208	1	No Gas	103.900	0.601	8636692	1.58	100	103.9	90	110	
U	238	1	No Gas	103.151	1.433	8034695	2.87	100	103.2	90	110	
Ca	43	2	He	10416.438	2.702	24990	0.92	10000	104.2	90	110	
Sb	121	2	He	105.517	4.044	1259262	1.53	100	105.5	90	110	
Ti	47	2	He	103.449	3.177	29432	0.71	100	103.4	90	110	
Cu	63	1	No Gas	108.166	0.730	2782503	1.20	100	108.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1957377	1.88	2076007	94.29	70	120	
Ge	72	2	He	1266671	2.52	1283119	98.72	70	120	
Ge	72	1	No Gas	5698668	1.58	5854434	97.34	70	120	
In	115	1	No Gas	7041068	3.46	7184199	98.01	70	120	
Bi	209	1	No Gas	5374123	1.60	5632659	95.41	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	270_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T21:50:05-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	218CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	-0.030	-80.4	117524	0.4	0.5	
Be	9	1	No Gas	0.023	7.5	165	6.1	0.5	
V	51	2	He	-0.055	-5.8	1467	3.3	2.5	
Cr	52	2	He	0.012	55.8	1467	7.0	2.5	
Fe	56	2	He	0.605	17.4	16604	5.8	100	
Se	78	2	He	0.071	81.6	112	6.2	2	
As	75	2	He	0.024	41.4	117	13.1	2.5	
Ca	44	2	He	2.487	53.2	410	12.2	100	
Na	23	2	He	17.125	15.5	75222	2.0	100	
Mg	24	2	He	0.737	9.5	1087	6.3	100	
K	39	2	He	0.315	676.6	44118	3.3	100	
Mn	55	2	He	0.112	4.0	1270	2.8	2.5	
Co	59	2	He	0.004	113.4	263	29.0	2.5	
Ni	60	2	He	0.015	68.8	257	15.7	2.5	
Cu	63	2	He	0.008	135.4	1403	11.8	2	
Zn	66	2	He	0.052	76.5	810	11.0	2.5	
Al	27	2	He	-0.510	-41.6	430	12.9	5	
B	11	1	No Gas	5.345	5.1	36872	2.5	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	-0.099	-21.2	41215	1.3	5	
Si	28	1	No Gas	0.076	321.1	547033	0.7	10	
P	31	1	No Gas	0.043	715.1	35158	1.0	10	
Ag	107	1	No Gas	0.008	24.7	683	11.8	2.5	
Cd	111	1	No Gas	0.002	349.5	50	91.7	1	
Sr	88	1	No Gas	0.051	11.9	7309	5.3	2.5	
Mo	95	1	No Gas	0.030	40.4	577	29.2	2.5	
Sn	118	1	No Gas	0.067	15.2	5275	3.4	5	
Sb	121	1	No Gas	0.078	11.2	3337	8.0	2.5	
Ba	137	1	No Gas	-0.105	-5.2	870	6.9	2.5	
Tl	205	1	No Gas	0.101	31.7	6785	30.1	1	
Tl	203	1	No Gas	0.095	38.0	2737	35.6	1	
Pb	208	1	No Gas	0.017	23.0	3014	11.0	2.5	
U	238	1	No Gas	0.007	21.3	570	20.2	2.5	
Ca	43	2	He	4.209	264.8	20	132.3	100	
Sb	121	2	He	0.052	21.9	953	11.9	2.5	
Ti	47	2	He	0.000	13993.4	3	173.2	2.5	
Cu	63	1	No Gas	0.013	53.9	3381	5.4	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2088987	0.75	2076007	100.63	70	120	
Ge	72	2	He	1288468	2.59	1283119	100.42	70	120	
Ge	72	1	No Gas	5896012	0.70	5854434	100.71	70	120	
In	115	1	No Gas	7283629	1.50	7184199	101.38	70	120	
Bi	209	1	No Gas	5420492	0.64	5632659	96.23	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	279_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T22:07:11-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	218CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	103.540	1.984	2843517	1.22	100	103.5	90	110	
Be	9	1	No Gas	102.482	2.718	655143	0.63	100	102.5	90	110	
V	51	2	He	106.925	0.819	966852	0.45	100	106.9	90	110	
Cr	52	2	He	105.657	1.278	1160856	0.79	100	105.7	90	110	
Fe	56	2	He	10488.093	1.039	98759705	1.61	10000	104.9	90	110	
Se	78	2	He	102.528	1.404	12811	1.48	100	102.5	90	110	
Sn	118	2	He	98.329	2.781	961550	0.77	100	98.3	90	110	
As	75	2	He	106.071	0.787	159878	1.07	100	106.1	90	110	
Ca	44	2	He	10508.458	1.908	445810	1.39	10000	105.1	90	110	
Na	23	2	He	10802.559	2.055	13136621	1.80	10000	108.0	90	110	
Mg	24	2	He	10697.274	1.043	6838560	0.46	10000	107.0	90	110	
K	39	2	He	10638.398	1.212	8200175	1.08	10000	106.4	90	110	
Mn	55	2	He	103.553	0.640	723381	0.46	100	103.6	90	110	
Co	59	2	He	107.971	1.183	1898246	1.37	100	108.0	90	110	
Ni	60	2	He	104.747	0.208	480577	0.67	100	104.7	90	110	
Cu	63	2	He	105.834	2.689	1339461	2.24	100	105.8	90	110	
Zn	66	2	He	105.547	0.495	221986	0.47	100	105.5	90	110	
Al	27	2	He	113.426	3.977	34210	4.54	100	113.4	90	110	CCV Main CR1-2 Failed
B	11	1	No Gas	541.876	3.608	2279185	0.94	500	108.4	90	110	
Al	27	1	No Gas	110.501	3.786	3233164	2.26	100	110.5	90	110	CCV Main CR1-2 Failed
Si	28	1	No Gas	576.390	3.589	9337575	1.52	5000	11.5	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	533.916	2.820	853499	2.63	500	106.8	90	110	
Ag	107	1	No Gas	103.927	2.095	3903607	0.38	100	103.9	90	110	
Cd	111	1	No Gas	101.111	2.662	771661	0.61	100	101.1	90	110	
Sr	88	1	No Gas	101.783	1.710	7897728	1.12	100	101.8	90	110	
Mo	95	1	No Gas	102.519	1.836	1464133	2.79	100	102.5	90	110	
Sn	118	1	No Gas	104.355	3.265	2528870	2.77	100	104.4	90	110	
Sb	121	1	No Gas	104.020	3.259	3300880	2.20	100	104.0	90	110	
Ba	137	1	No Gas	106.594	2.248	1233295	0.53	100	106.6	90	110	
Tl	205	1	No Gas	101.064	4.250	5841356	2.24	100	101.1	90	110	
Tl	203	1	No Gas	102.624	4.167	2512694	2.17	100	102.6	90	110	
Pb	208	1	No Gas	104.790	2.491	7954233	0.95	100	104.8	90	110	
U	238	1	No Gas	102.919	3.312	7325037	5.36	100	102.9	90	110	
Ca	43	2	He	10588.760	1.560	25728	1.04	10000	105.9	90	110	
Sb	121	2	He	106.351	2.881	1285685	2.28	100	106.4	90	110	
Ti	47	2	He	102.891	3.878	29649	3.50	100	102.9	90	110	
Cu	63	1	No Gas	106.838	1.654	2894833	0.49	100	106.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2128049	3.08	2076007	102.51	70	120	
Ge	72	2	He	1282397	0.63	1283119	99.94	70	120	
Ge	72	1	No Gas	6003256	1.95	5854434	102.54	70	120	
In	115	1	No Gas	7077268	2.47	7184199	98.51	70	120	
Bi	209	1	No Gas	4908906	2.08	5632659	87.15	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	280_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T22:08:55-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	218CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.349	37.2	132538	0.8	0.5	
Be	9	1	No Gas	0.019	16.1	147	12.0	0.5	
V	51	2	He	-0.059	-14.1	1440	4.4	2.5	
Cr	52	2	He	-0.005	-162.0	1280	7.5	2.5	
Fe	56	2	He	0.569	12.9	16383	4.0	100	
Se	78	2	He	0.064	204.8	112	15.6	2	
As	75	2	He	0.021	96.1	113	28.1	2.5	
Ca	44	2	He	3.107	20.3	440	6.0	100	
Na	23	2	He	117.522	2.6	198749	1.0	100	CCB Main CR1 Failed
Mg	24	2	He	0.526	46.0	957	16.2	100	
K	39	2	He	10.111	15.2	52026	2.4	100	
Mn	55	2	He	0.124	3.4	1363	2.2	2.5	
Co	59	2	He	0.003	140.7	243	25.1	2.5	
Ni	60	2	He	-0.005	-73.2	170	10.2	2.5	
Cu	63	2	He	0.049	27.8	1937	8.0	2	
Zn	66	2	He	0.033	223.7	777	21.3	2.5	
Al	27	2	He	-0.589	-13.0	410	6.5	5	
B	11	1	No Gas	33.348	4.0	158029	1.8	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	-0.061	-28.8	42836	1.2	5	
Si	28	1	No Gas	1.427	18.4	574778	0.8	10	
P	31	1	No Gas	0.656	45.9	36558	0.6	10	
Ag	107	1	No Gas	0.016	11.6	950	5.6	2.5	
Cd	111	1	No Gas	0.005	32.0	70	14.3	1	
Sr	88	1	No Gas	0.057	5.6	7412	4.1	2.5	
Mo	95	1	No Gas	0.031	31.1	567	23.0	2.5	
Sn	118	1	No Gas	0.080	11.4	5338	5.2	5	
Sb	121	1	No Gas	0.051	26.3	2510	17.2	2.5	
Ba	137	1	No Gas	-0.108	-8.7	790	14.9	2.5	
Tl	205	1	No Gas	0.073	31.6	4774	29.6	1	
Tl	203	1	No Gas	0.070	48.5	1964	44.6	1	
Pb	208	1	No Gas	0.014	11.3	2654	5.3	2.5	
U	238	1	No Gas	0.007	26.2	537	24.8	2.5	
Ca	43	2	He	1.325	181.6	13	43.3	100	
Sb	121	2	He	0.037	34.8	780	20.6	2.5	
Ti	47	2	He	0.000	-9001.1	3	173.2	2.5	
Cu	63	1	No Gas	0.075	13.5	5094	4.4	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2175566	1.83	2076007	104.80	70	120	
Ge	72	2	He	1297152	0.91	1283119	101.09	70	120	
Ge	72	1	No Gas	5974281	1.10	5854434	102.05	70	120	
In	115	1	No Gas	6933777	1.85	7184199	96.51	70	120	
Bi	209	1	No Gas	5176885	0.89	5632659	91.91	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	285_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T22:18:26-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	218CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	101.655	0.649	2675460	1.18	100	101.7	90	110	
Be	9	1	No Gas	104.463	0.447	639561	0.33	100	104.5	90	110	
V	51	2	He	100.576	1.116	901227	1.20	100	100.6	90	110	
Cr	52	2	He	103.510	1.386	1126873	1.19	100	103.5	90	110	
Fe	56	2	He	10235.516	0.959	95490095	0.62	10000	102.4	90	110	
Se	78	2	He	100.107	1.123	12396	1.08	100	100.1	90	110	
Sn	118	2	He	97.680	0.787	926629	0.20	100	97.7	90	110	
As	75	2	He	105.876	0.493	158115	0.34	100	105.9	90	110	
Ca	44	2	He	10218.439	0.835	429565	1.07	10000	102.2	90	110	
Na	23	2	He	10451.528	1.453	12595027	1.31	10000	104.5	90	110	
Mg	24	2	He	10486.285	0.522	6642302	0.37	10000	104.9	90	110	
K	39	2	He	10392.081	0.179	7937851	0.31	10000	103.9	90	110	
Mn	55	2	He	101.346	0.126	701484	0.40	100	101.3	90	110	
Co	59	2	He	106.267	0.597	1851143	1.02	100	106.3	90	110	
Ni	60	2	He	102.111	0.440	464186	0.74	100	102.1	90	110	
Cu	63	2	He	104.795	1.033	1314203	0.67	100	104.8	90	110	
Zn	66	2	He	103.643	0.554	215990	0.27	100	103.6	90	110	
Al	27	2	He	100.954	1.921	30227	1.85	100	101.0	90	110	
B	11	1	No Gas	537.479	2.004	2165409	1.41	500	107.5	90	110	
Al	27	1	No Gas	105.775	1.011	3023678	1.15	100	105.8	90	110	
Si	28	1	No Gas	556.367	1.385	8819224	1.40	5000	11.1	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	533.668	1.171	832720	1.03	500	106.7	90	110	
Ag	107	1	No Gas	105.531	2.849	3780556	3.35	100	105.5	90	110	
Cd	111	1	No Gas	102.022	1.506	742619	1.85	100	102.0	90	110	
Sr	88	1	No Gas	104.053	3.858	7697934	3.32	100	104.1	90	110	
Mo	95	1	No Gas	104.144	4.142	1417825	3.65	100	104.1	90	110	
Sn	118	1	No Gas	102.522	2.096	2369053	1.23	100	102.5	90	110	
Sb	121	1	No Gas	100.184	1.290	3103786	1.40	100	100.2	90	110	
Ba	137	1	No Gas	106.041	3.216	1169773	1.66	100	106.0	90	110	
Tl	205	1	No Gas	100.232	3.010	5939106	3.16	100	100.2	90	110	
Tl	203	1	No Gas	99.577	2.761	2499812	3.59	100	99.6	90	110	
Pb	208	1	No Gas	103.704	0.944	8069105	2.54	100	103.7	90	110	
U	238	1	No Gas	99.651	1.333	7264825	2.83	100	99.7	90	110	
Ca	43	2	He	10118.149	1.955	24362	2.41	10000	101.2	90	110	
Sb	121	2	He	102.897	1.314	1232615	0.97	100	102.9	90	110	
Ti	47	2	He	100.612	1.927	28730	2.34	100	100.6	90	110	
Cu	63	1	No Gas	104.214	0.135	2756497	0.03	100	104.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2036953	0.59	2076007	98.12	70	120	
Ge	72	2	He	1270616	0.49	1283119	99.03	70	120	
Ge	72	1	No Gas	5858945	0.16	5854434	100.08	70	120	
In	115	1	No Gas	6747651	1.79	7184199	93.92	70	120	
Bi	209	1	No Gas	5030935	3.01	5632659	89.32	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	286_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T22:20:10-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	218CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.154	32.4	127958	0.1	0.5	
Be	9	1	No Gas	0.021	5.4	160	5.4	0.5	
V	51	2	He	-0.047	-10.1	1538	3.2	2.5	
Cr	52	2	He	-0.009	-140.2	1223	11.0	2.5	
Fe	56	2	He	0.656	10.6	17038	3.5	100	
Se	78	2	He	0.095	58.7	115	6.6	2	
As	75	2	He	0.008	213.7	92	28.1	2.5	
Ca	44	2	He	2.266	27.4	400	6.6	100	
Na	23	2	He	78.200	0.8	149114	0.6	100	
Mg	24	2	He	0.754	13.3	1093	6.1	100	
K	39	2	He	7.719	2.7	49677	0.8	100	
Mn	55	2	He	0.113	9.9	1270	5.5	2.5	
Co	59	2	He	0.002	64.6	240	11.0	2.5	
Ni	60	2	He	0.014	146.6	253	36.7	2.5	
Cu	63	2	He	0.029	35.5	1670	7.8	2	
Zn	66	2	He	0.090	25.3	887	5.1	2.5	
Al	27	2	He	-0.552	-17.0	417	6.0	5	
B	11	1	No Gas	28.267	2.2	137057	2.4	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	-0.064	-57.7	42629	2.1	5	
Si	28	1	No Gas	1.774	54.4	578103	1.3	10	
P	31	1	No Gas	0.889	103.8	36786	2.2	10	
Ag	107	1	No Gas	0.015	11.6	897	5.5	2.5	
Cd	111	1	No Gas	0.002	214.9	50	60.0	1	
Sr	88	1	No Gas	0.015	13.2	4257	3.1	2.5	
Mo	95	1	No Gas	0.035	34.6	633	27.5	2.5	
Sn	118	1	No Gas	0.075	39.5	5328	13.8	5	
Sb	121	1	No Gas	0.043	15.6	2250	8.1	2.5	
Ba	137	1	No Gas	-0.113	-6.0	750	10.9	2.5	
Tl	205	1	No Gas	0.073	34.0	4744	32.9	1	
Tl	203	1	No Gas	0.068	35.4	1927	33.7	1	
Pb	208	1	No Gas	0.014	26.3	2624	12.3	2.5	
U	238	1	No Gas	0.008	20.5	650	20.8	2.5	
Ca	43	2	He	0.014	29436.5	10	100.0	100	
Sb	121	2	He	0.028	14.7	667	6.9	2.5	
Ti	47	2	He	0.011	175.2	7	86.6	2.5	
Cu	63	1	No Gas	0.048	26.3	4344	6.4	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2186324	1.11	2076007	105.31	70	120	
Ge	72	2	He	1284356	0.66	1283119	100.10	70	120	
Ge	72	1	No Gas	5955604	1.62	5854434	101.73	70	120	
In	115	1	No Gas	7080104	1.96	7184199	98.55	70	120	
Bi	209	1	No Gas	5167466	1.37	5632659	91.74	70	120	

Sample Report

Sample Table

Sample Name	MBLK-152654
Data File Name	287SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T22:22:09-05:00
Sample Type	Sample
Dilution	1
Comment	TW B152654
ISTD Ref FileName	218CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	0.090	0.090	66.66	131864	0.00	2000	
Be	9	1	No Gas	0.008	0.008	23.75	78	0.01	2000	
V	51	2	He	-0.070	-0.070	-3.77	1362	-0.01	2000	
Cr	52	2	He	0.091	0.091	24.46	2384	0.00	2000	
Fe	56	2	He	1.043	1.043	5.26	21213	0.00	200000	
Se	78	2	He	0.014	0.014	573.72	107	0.01	2000	
Sn	118	2	He	0.022	0.022	102.74	1733	0.00	200	
As	75	2	He	-0.006	-0.006	-213.43	73	-0.01	2000	
Ca	44	2	He	3.796	3.796	22.60	477	0.80	200000	
Na	23	2	He	72.389	72.389	4.97	145677	0.05	200000	
Mg	24	2	He	22.104	22.104	5.00	15135	0.15	200000	
K	39	2	He	6.326	6.326	30.45	49851	0.01	200000	
Mn	55	2	He	-0.014	-0.014	-37.00	393	0.00	2000	
Co	59	2	He	0.001	0.001	7.54	227	0.00	2000	
Ni	60	2	He	-0.017	-0.017	-20.42	117	-0.01	2000	
Cu	63	2	He	0.013	0.013	30.46	1510	0.00	2000	
Zn	66	2	He	-0.016	-0.016	-204.97	680	0.00	2000	
Al	27	2	He	8.366	8.366	0.76	3144	0.27	2000	
B	11	1	No Gas	22.850	22.850	0.86	118861	0.02	2000	
Al	27	1	No Gas	9.556	9.556	2.03	324360	0.00	2000	
Si	28	1	No Gas	101.726	101.726	3.61	2130539	0.00	2000	
Ag	107	1	No Gas	0.006	0.006	55.91	590	0.00	2000	
Cd	111	1	No Gas	-0.003	-0.003	-38.59	10	-0.03	2000	
Sr	88	1	No Gas	0.027	0.027	2.06	5208	0.00	2000	
Mo	95	1	No Gas	0.076	0.076	7.05	1230	0.01	2000	
Sn	118	1	No Gas	0.053	0.053	26.62	4794	0.00	2000	
Sb	121	1	No Gas	-0.006	-0.006	-33.14	723	0.00	2000	
Ba	137	1	No Gas	-0.053	-0.053	-3.91	1447	0.00	2000	
Tl	205	1	No Gas	0.005	0.005	2.74	597	0.00	2000	
Tl	203	1	No Gas	0.006	0.006	10.36	320	0.00	2000	
Pb	208	1	No Gas	0.003	0.003	63.09	1763	0.00	2000	
U	238	1	No Gas	0.001	0.001	52.60	77	0.00	2000	
Ca	43	2	He	5.304	5.304	119.34	23	22.73	200000	
Sb	121	2	He	-0.004	-0.004	-63.61	280	0.00	2000	
Ti	47	2	He	0.067	0.067	76.11	23	0.29	2000	
Cu	63	1	No Gas	0.032	0.032	40.11	3984	0.00	2000	
Zn	66	1	No Gas	-0.049	-0.049	-69.35	2074	0.00	2000	
Se	82	1	No Gas	0.511	0.511	51.98	124	0.41	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2283720	1.14	2076007	110.01	70	120	
Ge	72	2	He	1317471	1.79	1283119	102.68	70	120	
Ge	72	1	No Gas	6073463	1.58	5854434	103.74	70	120	

Sample Report

In	115	1	No Gas	7084027	1.55	7184199	98.61	70	120	
Bi	209	1	No Gas	5197373	1.70	5632659	92.27	70	120	

Sample Report

Sample Table

Sample Name	LCS-152654
Data File Name	288SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T22:24:08-05:00
Sample Type	Sample
Dilution	1
Comment	TW B152654
ISTD Ref FileName	218CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	0.094	0.094	95.48	131339	0.00	2000	
Be	9	1	No Gas	46.121	46.121	1.64	315084	0.01	2000	
V	51	2	He	46.606	46.606	2.76	428112	0.01	2000	
Cr	52	2	He	47.103	47.103	3.62	524999	0.01	2000	
Fe	56	2	He	4795.381	4795.381	3.34	45749743	0.01	200000	
Se	78	2	He	49.242	49.242	2.24	6289	0.78	2000	
Sn	118	2	He	0.049	0.049	13.42	1964	0.00	200	
As	75	2	He	49.204	49.204	3.82	75166	0.07	2000	
Ca	44	2	He	4645.559	4645.559	2.83	199865	2.32	200000	
Na	23	2	He	5009.922	5009.922	3.19	6201730	0.08	200000	
Mg	24	2	He	4986.820	4986.820	3.77	3229696	0.15	200000	
K	39	2	He	4968.310	4968.310	4.57	3902386	0.13	200000	
Mn	55	2	He	46.959	46.959	3.53	332582	0.01	2000	
Co	59	2	He	48.450	48.450	3.03	863063	0.01	2000	
Ni	60	2	He	47.977	47.977	4.23	223050	0.02	2000	
Cu	63	2	He	47.953	47.953	3.74	615550	0.01	2000	
Zn	66	2	He	50.545	50.545	2.70	108075	0.05	2000	
Al	27	2	He	53.014	53.014	4.59	16510	0.32	2000	
B	11	1	No Gas	22.452	22.452	1.89	116509	0.02	2000	
Al	27	1	No Gas	57.256	57.256	2.65	1741881	0.00	2000	
Si	28	1	No Gas	113.859	113.859	1.50	2351764	0.00	2000	
Ag	107	1	No Gas	49.908	49.908	3.04	1879324	0.00	2000	
Cd	111	1	No Gas	47.254	47.254	2.68	361577	0.01	2000	
Sr	88	1	No Gas	0.067	0.067	3.94	8356	0.00	2000	
Mo	95	1	No Gas	45.948	45.948	2.26	657820	0.01	2000	
Sn	118	1	No Gas	0.062	0.062	16.34	5014	0.00	2000	
Sb	121	1	No Gas	45.035	45.035	3.79	1467227	0.00	2000	
Ba	137	1	No Gas	44.403	44.403	2.96	516203	0.01	2000	
Tl	205	1	No Gas	47.631	47.631	5.26	2784913	0.00	2000	
Tl	203	1	No Gas	43.602	43.602	6.31	1079785	0.00	2000	
Pb	208	1	No Gas	47.453	47.453	2.78	3645175	0.00	2000	
U	238	1	No Gas	0.000	0.000	92.64	47	0.00	2000	
Ca	43	2	He	4640.721	4640.721	5.22	11428	40.61	200000	
Sb	121	2	He	45.903	45.903	3.02	562446	0.01	2000	
Ti	47	2	He	44.996	44.996	0.53	13147	0.34	2000	
Cu	63	1	No Gas	49.263	49.263	5.07	1371267	0.00	2000	
Zn	66	1	No Gas	48.228	48.228	1.30	361836	0.01	2000	
Se	82	1	No Gas	45.418	45.418	1.74	22426	0.20	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2273144	1.42	2076007	109.50	70	120	
Ge	72	2	He	1300033	3.19	1283119	101.32	70	120	
Ge	72	1	No Gas	6161733	1.77	5854434	105.25	70	120	

Sample Report

In	115	1	No Gas	7094880	2.04	7184199	98.76	70	120	
Bi	209	1	No Gas	4967328	2.72	5632659	88.19	70	120	

Sample Report

Sample Table

Sample Name	HS20040284-01SD
Data File Name	290SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T22:28:02-05:00
Sample Type	Sample
Dilution	5
Comment	TW B152654
ISTD Ref FileName	218CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	3.659	18.297	1.28	224045	0.00	2000	
Be	9	1	No Gas	0.018	0.092	6.86	143	0.01	2000	
V	51	2	He	0.055	0.276	12.63	2499	0.00	2000	
Cr	52	2	He	0.345	1.727	7.59	5201	0.01	2000	
Fe	56	2	He	71.046	355.231	3.37	691302	0.01	200000	
Se	78	2	He	0.187	0.933	42.83	128	0.15	2000	
Sn	118	2	He	-0.001	-0.005	-766.44	1457	0.00	200	
As	75	2	He	0.173	0.866	2.84	347	0.05	2000	
Ca	44	2	He	1805.831	9029.155	0.52	78185	2.31	200000	
Na	23	2	He	51244.315	256221.574	0.88	63179542	0.08	200000	
Mg	24	2	He	3961.897	19809.484	1.11	2576601	0.15	200000	
K	39	2	He	270.492	1352.460	1.18	255380	0.11	200000	
Mn	55	2	He	22.967	114.836	0.66	163574	0.01	2000	
Co	59	2	He	0.446	2.231	2.23	8179	0.01	2000	
Ni	60	2	He	1.013	5.064	4.08	4918	0.02	2000	
Cu	63	2	He	0.312	1.559	5.04	5331	0.01	2000	
Zn	66	2	He	11.667	58.334	1.58	25588	0.05	2000	
Al	27	2	He	16.945	84.726	10.59	5702	0.30	2000	
B	11	1	No Gas	27.165	135.825	2.47	133097	0.02	2000	
Al	27	1	No Gas	17.378	86.888	14.65	545735	0.00	2000	
Si	28	1	No Gas	3150.549	15752.744	0.73	48530188	0.01	2000	>LDR
Ag	107	1	No Gas	0.008	0.038	26.99	617	0.00	2000	
Cd	111	1	No Gas	0.021	0.104	34.16	190	0.01	2000	
Sr	88	1	No Gas	29.456	147.282	2.13	2222250	0.00	2000	
Mo	95	1	No Gas	0.250	1.250	10.66	3601	0.01	2000	
Sn	118	1	No Gas	0.025	0.126	44.90	4001	0.00	2000	
Sb	121	1	No Gas	0.064	0.320	12.72	2937	0.00	2000	
Ba	137	1	No Gas	18.162	90.809	1.39	205805	0.01	2000	
Tl	205	1	No Gas	0.009	0.043	11.69	783	0.00	2000	
Tl	203	1	No Gas	0.006	0.032	50.73	303	0.00	2000	
Pb	208	1	No Gas	0.026	0.132	2.02	3430	0.00	2000	
U	238	1	No Gas	0.076	0.379	2.03	5415	0.00	2000	
Ca	43	2	He	1878.277	9391.383	2.26	4651	40.39	200000	
Sb	121	2	He	0.052	0.258	16.52	967	0.01	2000	
Ti	47	2	He	0.170	0.851	10.86	53	0.32	2000	
Cu	63	1	No Gas	0.755	3.773	3.62	23484	0.00	2000	
Zn	66	1	No Gas	11.384	56.921	0.54	84979	0.01	2000	
Se	82	1	No Gas	0.902	4.511	47.33	311	0.29	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2199332	1.07	2076007	105.94	70	120	
Ge	72	2	He	1304398	0.68	1283119	101.66	70	120	
Ge	72	1	No Gas	5997222	0.35	5854434	102.44	70	120	

Sample Report

In	115	1	No Gas	6873838	1.40	7184199	95.68	70	120	
Bi	209	1	No Gas	4903361	1.09	5632659	87.05	70	120	

Sample Report

Sample Table

Sample Name	HS20040284-01MS
Data File Name	291SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T22:30:00-05:00
Sample Type	Sample
Dilution	1
Comment	TW B152654
ISTD Ref FileName	218CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	19.085	19.085	1.74	634344	0.00	2000	
Be	9	1	No Gas	48.833	48.833	2.20	318210	0.02	2000	
V	51	2	He	47.350	47.350	1.19	433360	0.01	2000	
Cr	52	2	He	48.498	48.498	2.44	538613	0.01	2000	
Fe	56	2	He	5105.816	5105.816	1.09	48541554	0.01	200000	
Se	78	2	He	48.394	48.394	1.67	6160	0.79	2000	
Sn	118	2	He	0.074	0.074	20.18	2130	0.00	200	
As	75	2	He	50.092	50.092	1.46	76263	0.07	2000	
Ca	44	2	He	14454.409	14454.409	1.17	619039	2.33	200000	
Na	23	2	He	283306.173	283306.173	1.33	346440915	0.08	200000	>LDR
Mg	24	2	He	25879.464	25879.464	1.93	16700826	0.15	200000	
K	39	2	He	6346.481	6346.481	0.86	4956830	0.13	200000	
Mn	55	2	He	173.754	173.754	2.22	1224954	0.01	2000	
Co	59	2	He	49.306	49.306	1.33	875209	0.01	2000	
Ni	60	2	He	51.207	51.207	1.22	237274	0.02	2000	
Cu	63	2	He	46.729	46.729	1.06	597863	0.01	2000	
Zn	66	2	He	107.990	107.990	2.33	229254	0.05	2000	
Al	27	2	He	131.369	131.369	6.04	39886	0.33	2000	
B	11	1	No Gas	48.203	48.203	2.00	220819	0.02	2000	
Al	27	1	No Gas	143.064	143.064	10.62	4068801	0.00	2000	
Si	28	1	No Gas	17225.196	17225.196	1.17	256486883	0.01	2000	>LDR
Ag	107	1	No Gas	48.593	48.593	2.96	1699062	0.00	2000	
Cd	111	1	No Gas	47.424	47.424	1.97	336946	0.01	2000	
Sr	88	1	No Gas	155.694	155.694	1.63	11243927	0.00	2000	
Mo	95	1	No Gas	49.424	49.424	2.20	656926	0.01	2000	
Sn	118	1	No Gas	0.082	0.082	3.47	5121	0.00	2000	
Sb	121	1	No Gas	46.818	46.818	2.05	1449165	0.00	2000	
Ba	137	1	No Gas	146.748	146.748	1.64	1580021	0.01	2000	
Tl	205	1	No Gas	47.345	47.345	1.08	2451812	0.00	2000	
Tl	203	1	No Gas	43.661	43.661	1.71	957764	0.00	2000	
Pb	208	1	No Gas	47.667	47.667	2.62	3241013	0.00	2000	
U	238	1	No Gas	0.434	0.434	2.24	27689	0.00	2000	
Ca	43	2	He	14921.868	14921.868	0.65	36602	40.77	200000	
Sb	121	2	He	44.803	44.803	1.44	547035	0.01	2000	
Ti	47	2	He	48.904	48.904	2.37	14234	0.34	2000	
Cu	63	1	No Gas	52.003	52.003	2.80	1375208	0.00	2000	
Zn	66	1	No Gas	106.609	106.609	1.12	756949	0.01	2000	
Se	82	1	No Gas	47.716	47.716	3.57	22375	0.21	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2168260	1.10	2076007	104.44	70	120	
Ge	72	2	He	1294787	1.52	1283119	100.91	70	120	
Ge	72	1	No Gas	5852584	1.25	5854434	99.97	70	120	
In	115	1	No Gas	6586677	1.27	7184199	91.68	70	120	
Bi	209	1	No Gas	4396010	1.61	5632659	78.05	70	120	

Sample Report

Sample Table

Sample Name	HS20040284-01MSD
Data File Name	292SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T22:31:58-05:00
Sample Type	Sample
Dilution	1
Comment	TW B152654
ISTD Ref FileName	218CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	18.470	18.470	0.37	639448	0.00	2000	
Be	9	1	No Gas	47.575	47.575	0.63	320862	0.01	2000	
V	51	2	He	47.534	47.534	1.68	433014	0.01	2000	
Cr	52	2	He	48.384	48.384	2.68	534845	0.01	2000	
Fe	56	2	He	5088.625	5088.625	1.35	48157168	0.01	200000	
Se	78	2	He	48.637	48.637	1.78	6161	0.79	2000	
Sn	118	2	He	0.031	0.031	47.13	1713	0.00	200	
As	75	2	He	50.410	50.410	1.63	76394	0.07	2000	
Ca	44	2	He	14524.053	14524.053	1.33	619120	2.35	200000	
Na	23	2	He	283113.552	283113.552	2.56	344565995	0.08	200000	>LDR
Mg	24	2	He	26086.081	26086.081	2.32	16756064	0.16	200000	
K	39	2	He	6392.780	6392.780	2.59	4968655	0.13	200000	
Mn	55	2	He	174.555	174.555	1.81	1225040	0.01	2000	
Co	59	2	He	49.265	49.265	2.31	870369	0.01	2000	
Ni	60	2	He	50.740	50.740	1.99	234015	0.02	2000	
Cu	63	2	He	46.689	46.689	2.53	594486	0.01	2000	
Zn	66	2	He	108.125	108.125	1.64	228501	0.05	2000	
Al	27	2	He	132.220	132.220	6.75	40004	0.33	2000	
B	11	1	No Gas	46.444	46.444	0.36	220790	0.02	2000	
Al	27	1	No Gas	147.370	147.370	21.59	4156263	0.00	2000	
Si	28	1	No Gas	17502.274	17502.274	1.23	258671776	0.01	2000	>LDR
Ag	107	1	No Gas	47.484	47.484	1.15	1661260	0.00	2000	
Cd	111	1	No Gas	46.731	46.731	1.30	332210	0.01	2000	
Sr	88	1	No Gas	156.864	156.864	2.43	11333677	0.00	2000	
Mo	95	1	No Gas	48.954	48.954	2.59	650946	0.01	2000	
Sn	118	1	No Gas	0.041	0.041	27.85	4187	0.00	2000	
Sb	121	1	No Gas	46.739	46.739	0.83	1436072	0.00	2000	
Ba	137	1	No Gas	145.942	145.942	1.46	1571901	0.01	2000	
Tl	205	1	No Gas	45.691	45.691	2.15	2429535	0.00	2000	
Tl	203	1	No Gas	42.103	42.103	1.32	948489	0.00	2000	
Pb	208	1	No Gas	46.953	46.953	2.35	3278478	0.00	2000	
U	238	1	No Gas	0.420	0.420	2.49	27509	0.00	2000	
Ca	43	2	He	14610.889	14610.889	3.26	35663	40.97	200000	
Sb	121	2	He	44.755	44.755	2.28	543888	0.01	2000	
Ti	47	2	He	49.895	49.895	3.85	14454	0.35	2000	
Cu	63	1	No Gas	52.050	52.050	1.91	1366405	0.00	2000	
Zn	66	1	No Gas	107.757	107.757	1.05	759386	0.01	2000	
Se	82	1	No Gas	47.609	47.609	2.69	22161	0.21	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2243826	0.68	2076007	108.08	70	120	
Ge	72	2	He	1288940	2.16	1283119	100.45	70	120	
Ge	72	1	No Gas	5809038	0.82	5854434	99.22	70	120	
In	115	1	No Gas	6589268	0.91	7184199	91.72	70	120	
Bi	209	1	No Gas	4514164	1.63	5632659	80.14	70	120	

Sample Report

Sample Table

Sample Name	HS20040284-01PDS
Data File Name	293SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T22:33:57-05:00
Sample Type	Sample
Dilution	1
Comment	TW B152654
ISTD Ref FileName	218CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	18.520	18.520	0.77	629488	0.00	2000	
Be	9	1	No Gas	107.870	107.870	1.66	714650	0.02	2000	
V	51	2	He	107.449	107.449	1.78	999506	0.01	2000	
Cr	52	2	He	106.561	106.561	1.48	1204516	0.01	2000	
Fe	56	2	He	10782.215	10782.215	1.94	104454955	0.01	200000	
Se	78	2	He	106.253	106.253	0.44	13656	0.78	2000	
Sn	118	2	He	0.093	0.093	29.66	2327	0.00	200	
As	75	2	He	110.282	110.282	1.08	170999	0.06	2000	
Ca	44	2	He	19718.087	19718.087	1.38	860337	2.29	200000	
Na	23	2	He	279685.647	279685.647	0.80	348533008	0.08	200000	>LDR
Mg	24	2	He	31385.472	31385.472	0.73	20642216	0.15	200000	
K	39	2	He	12268.479	12268.479	2.67	9720681	0.13	200000	
Mn	55	2	He	224.432	224.432	1.52	1612275	0.01	2000	
Co	59	2	He	108.770	108.770	0.56	1967335	0.01	2000	
Ni	60	2	He	104.987	104.987	2.11	495485	0.02	2000	
Cu	63	2	He	104.016	104.016	2.71	1354615	0.01	2000	
Zn	66	2	He	163.063	163.063	1.18	352429	0.05	2000	
Al	27	2	He	192.089	192.089	5.35	59169	0.32	2000	
B	11	1	No Gas	44.790	44.790	0.26	209720	0.02	2000	
Al	27	1	No Gas	198.776	198.776	8.51	5756759	0.00	2000	
Si	28	1	No Gas	16745.553	16745.553	1.19	254495416	0.01	2000	>LDR
Ag	107	1	No Gas	87.689	87.689	3.46	3137560	0.00	2000	
Cd	111	1	No Gas	101.374	101.374	2.23	737071	0.01	2000	
Sr	88	1	No Gas	148.854	148.854	2.23	11000977	0.00	2000	
Mo	95	1	No Gas	107.824	107.824	3.20	1466537	0.01	2000	
Sn	118	1	No Gas	0.113	0.113	11.42	5951	0.00	2000	
Sb	121	1	No Gas	94.888	94.888	1.17	2996522	0.00	2000	
Ba	137	1	No Gas	198.340	198.340	0.59	2184703	0.01	2000	
Tl	205	1	No Gas	99.066	99.066	2.17	5305223	0.00	2000	
Tl	203	1	No Gas	96.503	96.503	2.50	2189176	0.00	2000	
Pb	208	1	No Gas	103.685	103.685	0.77	7289574	0.00	2000	
U	238	1	No Gas	0.420	0.420	2.60	27689	0.00	2000	
Ca	43	2	He	19888.874	19888.874	2.35	49703	40.02	200000	
Sb	121	2	He	98.316	98.316	1.43	1223136	0.01	2000	
Ti	47	2	He	108.213	108.213	2.10	32081	0.34	2000	
Cu	63	1	No Gas	108.053	108.053	1.66	2913012	0.00	2000	
Zn	66	1	No Gas	161.609	161.609	1.35	1169721	0.01	2000	
Se	82	1	No Gas	100.704	100.704	3.63	48325	0.21	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2204087	0.37	2076007	106.17	70	120	
Ge	72	2	He	1319380	1.17	1283119	102.83	70	120	
Ge	72	1	No Gas	5972896	1.60	5854434	102.02	70	120	
In	115	1	No Gas	6740505	0.90	7184199	93.82	70	120	
Bi	209	1	No Gas	4544965	1.03	5632659	80.69	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	294_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T22:35:46-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	218CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	100.463	1.751	2774337	1.28	100	100.5	90	110	
Be	9	1	No Gas	103.477	1.875	664386	0.86	100	103.5	90	110	
V	51	2	He	101.824	4.025	925523	2.50	100	101.8	90	110	
Cr	52	2	He	103.828	3.259	1146721	1.75	100	103.8	90	110	
Fe	56	2	He	10330.551	1.971	97786542	0.46	10000	103.3	90	110	
Se	78	2	He	103.116	2.792	12952	1.43	100	103.1	90	110	
Sn	118	2	He	96.805	1.683	958070	1.44	100	96.8	90	110	
As	75	2	He	106.270	1.870	161025	0.52	100	106.3	90	110	
Ca	44	2	He	10091.018	2.019	430402	0.51	10000	100.9	90	110	
Na	23	2	He	10633.130	1.304	13001709	1.13	10000	106.3	90	110	
Mg	24	2	He	10495.560	2.786	6745134	1.78	10000	105.0	90	110	
K	39	2	He	10433.740	3.080	8085102	1.61	10000	104.3	90	110	
Mn	55	2	He	101.565	2.371	713239	0.93	100	101.6	90	110	
Co	59	2	He	108.604	1.938	1919458	0.58	100	108.6	90	110	
Ni	60	2	He	103.509	2.081	477410	0.92	100	103.5	90	110	
Cu	63	2	He	105.098	2.050	1337290	0.74	100	105.1	90	110	
Zn	66	2	He	103.697	1.345	219276	0.19	100	103.7	90	110	
Al	27	2	He	102.661	1.708	31185	2.70	100	102.7	90	110	
B	11	1	No Gas	525.988	1.790	2223021	1.79	500	105.2	90	110	
Al	27	1	No Gas	108.070	3.457	3146599	1.94	100	108.1	90	110	
Si	28	1	No Gas	590.032	3.598	9495445	1.55	5000	11.8	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	549.520	3.399	872680	2.41	500	109.9	90	110	
Ag	107	1	No Gas	105.194	1.882	3899140	0.34	100	105.2	90	110	
Cd	111	1	No Gas	101.724	1.057	766323	1.90	100	101.7	90	110	
Sr	88	1	No Gas	103.281	0.778	7908832	1.32	100	103.3	90	110	
Mo	95	1	No Gas	106.393	1.982	1499000	0.39	100	106.4	90	110	
Sn	118	1	No Gas	102.635	1.602	2454839	2.17	100	102.6	90	110	
Sb	121	1	No Gas	102.389	1.104	3232717	0.83	100	102.4	90	110	
Ba	137	1	No Gas	101.273	4.060	1156118	2.31	100	101.3	90	110	
Tl	205	1	No Gas	98.614	2.763	5758921	1.05	100	98.6	90	110	
Tl	203	1	No Gas	99.468	1.709	2461072	1.17	100	99.5	90	110	
Pb	208	1	No Gas	102.559	1.702	7865002	1.17	100	102.6	90	110	
U	238	1	No Gas	100.439	2.346	7219898	4.23	100	100.4	90	110	
Ca	43	2	He	10675.749	1.864	26078	0.76	10000	106.8	90	110	
Sb	121	2	He	106.143	1.648	1290146	0.22	100	106.1	90	110	
Ti	47	2	He	100.883	3.040	29225	1.77	100	100.9	90	110	
Cu	63	1	No Gas	107.465	1.732	2896618	1.02	100	107.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2136443	1.17	2076007	102.91	70	120	
Ge	72	2	He	1289424	1.50	1283119	100.49	70	120	
Ge	72	1	No Gas	5971778	1.87	5854434	102.00	70	120	
In	115	1	No Gas	6983148	1.76	7184199	97.20	70	120	
Bi	209	1	No Gas	4958883	2.22	5632659	88.04	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	295_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T22:37:30-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	218CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.119	13.9	126553	0.8	0.5	
Be	9	1	No Gas	0.037	6.1	262	4.8	0.5	
V	51	2	He	-0.038	-29.2	1612	5.6	2.5	
Cr	52	2	He	0.006	197.3	1390	8.7	2.5	
Fe	56	2	He	1.038	3.9	20622	2.5	100	
Se	78	2	He	0.085	186.5	113	17.7	2	
As	75	2	He	0.020	60.0	110	16.9	2.5	
Ca	44	2	He	2.736	71.2	420	20.3	100	
Na	23	2	He	84.894	2.2	157096	0.8	100	
Mg	24	2	He	1.828	8.6	1780	6.3	100	
K	39	2	He	7.858	18.3	49738	1.5	100	
Mn	55	2	He	0.136	14.3	1437	9.5	2.5	
Co	59	2	He	0.008	50.5	330	21.0	2.5	
Ni	60	2	He	0.013	151.3	250	36.0	2.5	
Cu	63	2	He	0.039	22.2	1790	5.3	2	
Zn	66	2	He	0.060	80.8	823	13.0	2.5	
Al	27	2	He	-0.551	-42.0	417	16.0	5	
B	11	1	No Gas	19.526	4.1	99150	3.9	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	-0.075	-49.4	42829	1.1	5	
Si	28	1	No Gas	4.579	35.7	628223	4.2	10	
P	31	1	No Gas	0.744	10.2	37026	1.4	10	
Ag	107	1	No Gas	0.016	14.5	947	10.6	2.5	
Cd	111	1	No Gas	0.007	20.7	87	13.3	1	
Sr	88	1	No Gas	0.012	27.8	4004	5.1	2.5	
Mo	95	1	No Gas	0.041	19.8	713	16.7	2.5	
Sn	118	1	No Gas	0.074	7.9	5274	1.2	5	
Sb	121	1	No Gas	0.284	4.7	9964	4.9	2.5	
Ba	137	1	No Gas	-0.095	-5.4	953	7.7	2.5	
Tl	205	1	No Gas	0.077	28.1	4971	26.3	1	
Tl	203	1	No Gas	0.075	33.4	2090	30.9	1	
Pb	208	1	No Gas	0.020	2.6	3107	1.3	2.5	
U	238	1	No Gas	0.006	18.4	470	16.9	2.5	
Ca	43	2	He	-0.020	-20886.7	10	100.0	100	
Sb	121	2	He	0.265	3.0	3534	2.6	2.5	
Ti	47	2	He	0.035	57.2	13	43.3	2.5	
Cu	63	1	No Gas	0.048	22.7	4394	8.0	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2178344	0.99	2076007	104.93	70	120	
Ge	72	2	He	1283303	0.73	1283119	100.01	70	120	
Ge	72	1	No Gas	6028136	1.38	5854434	102.97	70	120	
In	115	1	No Gas	7044088	1.78	7184199	98.05	70	120	
Bi	209	1	No Gas	5142559	0.39	5632659	91.30	70	120	

Sample Report

Sample Table

Sample Name	HS20040287-01
Data File Name	299SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T22:45:23-05:00
Sample Type	Sample
Dilution	1
Comment	TW B152654
ISTD Ref FileName	218CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	19.278	19.278	1.46	640430	0.00	2000	
Be	9	1	No Gas	0.159	0.159	6.65	1057	0.02	2000	
V	51	2	He	0.370	0.370	4.22	5317	0.01	2000	
Cr	52	2	He	1.893	1.893	2.04	22188	0.01	2000	
Fe	56	2	He	632.197	632.197	1.06	5987357	0.01	200000	
Se	78	2	He	0.410	0.410	38.50	154	0.27	2000	
Sn	118	2	He	0.008	0.008	164.93	1533	0.00	200	
As	75	2	He	0.918	0.918	2.58	1469	0.06	2000	
Ca	44	2	He	28753.950	28753.950	2.34	1224252	2.35	200000	
Na	23	2	He	158158.274	158158.274	2.06	192353424	0.08	200000	
Mg	24	2	He	21049.213	21049.213	1.55	13509958	0.16	200000	
K	39	2	He	1014.958	1014.958	1.88	825128	0.12	200000	
Mn	55	2	He	307.204	307.204	1.53	2153721	0.01	2000	
Co	59	2	He	5.287	5.287	2.16	93510	0.01	2000	
Ni	60	2	He	7.950	7.950	3.02	36793	0.02	2000	
Cu	63	2	He	2.451	2.451	2.99	32422	0.01	2000	
Zn	66	2	He	38.485	38.485	2.00	81706	0.05	2000	
Al	27	2	He	69.675	69.675	9.02	21302	0.33	2000	
B	11	1	No Gas	44.095	44.095	1.12	203622	0.02	2000	
Al	27	1	No Gas	76.087	76.087	7.67	2205500	0.00	2000	
Si	28	1	No Gas	20276.114	20276.114	2.62	304727389	0.01	2000	>LDR
Ag	107	1	No Gas	0.003	0.003	36.05	427	0.00	2000	
Cd	111	1	No Gas	0.135	0.135	10.04	1013	0.01	2000	
Sr	88	1	No Gas	506.477	506.477	2.12	37270448	0.00	2000	
Mo	95	1	No Gas	0.537	0.537	1.41	7406	0.01	2000	
Sn	118	1	No Gas	0.016	0.016	58.39	3687	0.00	2000	
Sb	121	1	No Gas	0.133	0.133	8.57	5044	0.00	2000	
Ba	137	1	No Gas	397.253	397.253	1.06	4355849	0.01	2000	
Tl	205	1	No Gas	0.007	0.007	11.67	680	0.00	2000	
Tl	203	1	No Gas	0.007	0.007	74.95	310	0.00	2000	
Pb	208	1	No Gas	0.105	0.105	1.69	9001	0.00	2000	
U	238	1	No Gas	0.530	0.530	2.08	36212	0.00	2000	
Ca	43	2	He	28745.738	28745.738	0.39	70118	41.00	200000	
Sb	121	2	He	0.137	0.137	9.98	1990	0.01	2000	
Ti	47	2	He	1.162	1.162	14.38	340	0.34	2000	
Cu	63	1	No Gas	3.730	3.730	2.08	102443	0.00	2000	
Zn	66	1	No Gas	37.496	37.496	1.84	270344	0.01	2000	
Se	82	1	No Gas	1.486	1.486	62.12	580	0.26	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2171288	0.99	2076007	104.59	70	120	
Ge	72	2	He	1287705	1.65	1283119	100.36	70	120	
Ge	72	1	No Gas	5910366	1.95	5854434	100.96	70	120	
In	115	1	No Gas	6713699	1.65	7184199	93.45	70	120	
Bi	209	1	No Gas	4713119	3.21	5632659	83.67	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	301_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T22:49:09-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	218CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	100.303	3.021	2685559	3.03	100	100.3	90	110	
Be	9	1	No Gas	104.250	0.633	648924	0.30	100	104.2	90	110	
V	51	2	He	101.514	0.602	916191	1.41	100	101.5	90	110	
Cr	52	2	He	103.236	1.080	1131937	0.07	100	103.2	90	110	
Fe	56	2	He	10209.982	0.585	95936955	0.43	10000	102.1	90	110	
Se	78	2	He	99.787	0.765	12446	0.66	100	99.8	90	110	
Sn	118	2	He	96.180	0.131	925287	0.76	100	96.2	90	110	
As	75	2	He	105.295	1.107	158373	0.62	100	105.3	90	110	
Ca	44	2	He	9982.567	0.849	422654	0.28	10000	99.8	90	110	
Na	23	2	He	10331.138	1.443	12539515	0.82	10000	103.3	90	110	
Mg	24	2	He	10258.341	1.551	6544396	1.20	10000	102.6	90	110	
K	39	2	He	10137.004	1.658	7800447	2.39	10000	101.4	90	110	
Mn	55	2	He	99.540	1.452	693914	1.13	100	99.5	90	110	
Co	59	2	He	107.732	1.858	1889918	0.84	100	107.7	90	110	
Ni	60	2	He	101.787	1.840	465990	0.86	100	101.8	90	110	
Cu	63	2	He	104.749	2.379	1323050	2.18	100	104.7	90	110	
Zn	66	2	He	103.851	1.224	217969	0.36	100	103.9	90	110	
Al	27	2	He	98.692	0.201	29776	1.18	100	98.7	90	110	
B	11	1	No Gas	519.718	1.527	2129419	1.10	500	103.9	90	110	
Al	27	1	No Gas	105.275	0.887	3061457	1.57	100	105.3	90	110	
Si	28	1	No Gas	559.344	0.632	9016158	1.28	5000	11.2	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	538.671	1.202	854614	0.44	500	107.7	90	110	
Ag	107	1	No Gas	103.829	4.066	3916135	1.08	100	103.8	90	110	
Cd	111	1	No Gas	100.844	2.384	773170	1.15	100	100.8	90	110	
Sr	88	1	No Gas	99.617	4.134	7761046	1.01	100	99.6	90	110	
Mo	95	1	No Gas	101.799	3.820	1459631	1.45	100	101.8	90	110	
Sn	118	1	No Gas	102.889	3.883	2504108	2.14	100	102.9	90	110	
Sb	121	1	No Gas	102.503	0.488	3230186	0.77	100	102.5	90	110	
Ba	137	1	No Gas	100.271	2.782	1165494	1.52	100	100.3	90	110	
Tl	205	1	No Gas	103.883	3.690	5900104	2.14	100	103.9	90	110	
Tl	203	1	No Gas	105.788	4.680	2545299	3.78	100	105.8	90	110	
Pb	208	1	No Gas	105.048	0.466	7836039	1.07	100	105.0	90	110	
U	238	1	No Gas	100.186	0.709	7002322	1.74	100	100.2	90	110	
Ca	43	2	He	10354.559	1.995	25107	1.45	10000	103.5	90	110	
Sb	121	2	He	102.909	1.336	1241582	0.46	100	102.9	90	110	
Ti	47	2	He	101.199	0.596	29105	1.02	100	101.2	90	110	
Cu	63	1	No Gas	105.328	1.804	2833644	1.17	100	105.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2071001	0.42	2076007	99.76	70	120	
Ge	72	2	He	1279771	1.01	1283119	99.74	70	120	
Ge	72	1	No Gas	5959749	0.72	5854434	101.80	70	120	
In	115	1	No Gas	7110309	3.19	7184199	98.97	70	120	
Bi	209	1	No Gas	4822770	1.54	5632659	85.62	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	302_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T22:50:54-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	218CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.189	12.4	124007	0.5	0.5	
Be	9	1	No Gas	0.028	9.7	195	9.2	0.5	
V	51	2	He	-0.050	-18.7	1535	5.3	2.5	
Cr	52	2	He	-0.005	-322.0	1287	14.4	2.5	
Fe	56	2	He	0.749	13.9	18189	5.4	100	
Se	78	2	He	0.050	66.1	111	3.8	2	
As	75	2	He	0.014	39.7	103	8.5	2.5	
Ca	44	2	He	1.041	27.2	353	3.3	100	
Na	23	2	He	54.576	0.8	122312	0.6	100	
Mg	24	2	He	1.046	7.8	1300	4.1	100	
K	39	2	He	6.161	7.2	49225	0.6	100	
Mn	55	2	He	0.114	16.1	1303	9.8	2.5	
Co	59	2	He	0.005	40.2	287	12.3	2.5	
Ni	60	2	He	0.004	76.7	213	7.2	2.5	
Cu	63	2	He	0.009	79.9	1440	6.4	2	
Zn	66	2	He	0.083	39.6	887	8.2	2.5	
Al	27	2	He	-0.087	-275.8	563	12.6	5	
B	11	1	No Gas	16.154	3.3	81790	3.2	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	-0.062	-110.2	43572	4.9	5	
Si	28	1	No Gas	2.183	9.3	596492	0.3	10	
P	31	1	No Gas	0.225	404.6	36528	3.6	10	
Ag	107	1	No Gas	0.009	16.8	700	8.9	2.5	
Cd	111	1	No Gas	0.002	130.3	57	44.4	1	
Sr	88	1	No Gas	0.012	11.1	4197	1.8	2.5	
Mo	95	1	No Gas	0.027	31.0	540	22.5	2.5	
Sn	118	1	No Gas	0.089	16.6	5815	5.6	5	
Sb	121	1	No Gas	0.074	15.3	3314	11.2	2.5	
Ba	137	1	No Gas	-0.090	-14.4	1053	14.3	2.5	
Tl	205	1	No Gas	0.075	24.7	4814	22.6	1	
Tl	203	1	No Gas	0.069	41.3	1917	37.5	1	
Pb	208	1	No Gas	0.016	21.9	2770	9.6	2.5	
U	238	1	No Gas	0.005	7.4	427	6.8	2.5	
Ca	43	2	He	10.732	78.5	37	56.8	100	
Sb	121	2	He	0.051	28.1	963	18.3	2.5	
Ti	47	2	He	0.000	-6648.8	3	173.2	2.5	
Cu	63	1	No Gas	0.023	16.0	3751	3.0	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2103048	0.68	2076007	101.30	70	120	
Ge	72	2	He	1304093	0.23	1283119	101.63	70	120	
Ge	72	1	No Gas	6078607	0.28	5854434	103.83	70	120	
In	115	1	No Gas	7279441	0.85	7184199	101.33	70	120	
Bi	209	1	No Gas	5107315	0.59	5632659	90.67	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	308_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T23:02:25-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	218CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	101.787	3.612	2728952	1.30	100	101.8	90	110	
Be	9	1	No Gas	104.485	2.072	651844	0.75	100	104.5	90	110	
V	51	2	He	103.557	0.943	918744	1.41	100	103.6	90	110	
Cr	52	2	He	105.618	3.020	1138222	1.79	100	105.6	90	110	
Fe	56	2	He	10481.025	2.378	96802202	1.21	10000	104.8	90	110	
Se	78	2	He	104.084	3.604	12754	2.22	100	104.1	90	110	
Sn	118	2	He	98.162	1.184	930482	2.09	100	98.2	90	110	
As	75	2	He	108.565	2.492	160500	1.09	100	108.6	90	110	
Ca	44	2	He	10169.001	1.010	423247	0.47	10000	101.7	90	110	
Na	23	2	He	10437.700	0.639	12454508	0.94	10000	104.4	90	110	
Mg	24	2	He	10591.855	1.832	6642222	0.52	10000	105.9	90	110	
K	39	2	He	10516.001	2.266	7951539	1.00	10000	105.2	90	110	
Mn	55	2	He	102.084	1.549	699547	0.15	100	102.1	90	110	
Co	59	2	He	111.243	1.096	1918554	0.41	100	111.2	90	110	CCV Main CR1-2 Failed
Ni	60	2	He	104.377	1.318	469761	0.27	100	104.4	90	110	
Cu	63	2	He	106.302	1.569	1319890	1.08	100	106.3	90	110	
Zn	66	2	He	105.704	1.429	218098	1.50	100	105.7	90	110	
Al	27	2	He	103.945	1.987	30794	0.84	100	103.9	90	110	
B	11	1	No Gas	517.878	3.739	2126262	1.77	500	103.6	90	110	
Al	27	1	No Gas	106.186	1.621	3101317	0.73	100	106.2	90	110	
Si	28	1	No Gas	560.281	2.575	9069782	1.03	5000	11.2	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	529.694	2.539	844677	0.47	500	105.9	90	110	
Ag	107	1	No Gas	106.344	2.358	3840337	0.64	100	106.3	90	110	
Cd	111	1	No Gas	102.288	1.663	750681	0.91	100	102.3	90	110	
Sr	88	1	No Gas	103.544	1.927	7725415	2.23	100	103.5	90	110	
Mo	95	1	No Gas	105.988	3.067	1454815	1.63	100	106.0	90	110	
Sn	118	1	No Gas	105.248	1.189	2452965	2.82	100	105.2	90	110	
Sb	121	1	No Gas	99.629	2.956	3153790	2.64	100	99.6	90	110	
Ba	137	1	No Gas	104.617	1.416	1164182	2.59	100	104.6	90	110	
Tl	205	1	No Gas	97.264	0.885	5817505	1.11	100	97.3	90	110	
Tl	203	1	No Gas	96.828	1.674	2453048	0.54	100	96.8	90	110	
Pb	208	1	No Gas	101.526	0.653	7972579	0.49	100	101.5	90	110	
U	238	1	No Gas	100.155	0.865	7368706	0.33	100	100.2	90	110	
Ca	43	2	He	10369.647	0.762	24719	1.08	10000	103.7	90	110	
Sb	121	2	He	104.993	2.888	1245070	1.47	100	105.0	90	110	
Ti	47	2	He	103.718	2.895	29318	1.82	100	103.7	90	110	
Cu	63	1	No Gas	104.966	1.579	2836787	0.60	100	105.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2076357	2.66	2076007	100.02	70	120	
Ge	72	2	He	1258139	1.44	1283119	98.05	70	120	
Ge	72	1	No Gas	5987844	2.19	5854434	102.28	70	120	
In	115	1	No Gas	6803887	1.81	7184199	94.71	70	120	
Bi	209	1	No Gas	5077037	1.14	5632659	90.14	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	309_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T23:04:09-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	218CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.055	98.4	123736	0.3	0.5	
Be	9	1	No Gas	0.033	24.1	237	23.4	0.5	
V	51	2	He	-0.046	-10.2	1553	4.1	2.5	
Cr	52	2	He	0.000	2552.7	1333	2.6	2.5	
Fe	56	2	He	0.854	11.7	19010	5.8	100	
Se	78	2	He	0.005	2326.9	104	13.5	2	
As	75	2	He	0.025	49.4	119	16.4	2.5	
Ca	44	2	He	0.977	108.7	347	12.0	100	
Na	23	2	He	40.436	4.8	103818	1.1	100	
Mg	24	2	He	1.175	11.2	1370	6.3	100	
K	39	2	He	5.519	34.7	48239	3.9	100	
Mn	55	2	He	0.050	9.6	840	4.1	2.5	
Co	59	2	He	0.008	27.9	333	10.5	2.5	
Ni	60	2	He	0.011	37.1	243	8.6	2.5	
Cu	63	2	He	0.009	100.3	1423	8.8	2	
Zn	66	2	He	-0.042	-114.5	613	17.4	2.5	
Al	27	2	He	-0.234	-121.5	513	15.6	5	
B	11	1	No Gas	14.389	5.3	76472	4.2	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	0.350	138.1	55123	23.9	5	
Si	28	1	No Gas	3.773	19.0	617041	0.6	10	
P	31	1	No Gas	1.145	63.3	37718	3.1	10	
Ag	107	1	No Gas	0.013	32.0	850	20.1	2.5	
Cd	111	1	No Gas	0.003	64.6	57	20.4	1	
Sr	88	1	No Gas	0.011	8.6	4051	0.9	2.5	
Mo	95	1	No Gas	0.040	15.9	713	14.0	2.5	
Sn	118	1	No Gas	0.089	14.9	5735	3.1	5	
Sb	121	1	No Gas	0.131	14.4	5088	10.7	2.5	
Ba	137	1	No Gas	-0.111	-5.8	790	11.3	2.5	
Tl	205	1	No Gas	0.069	29.8	4498	27.8	1	
Tl	203	1	No Gas	0.070	30.5	1974	28.1	1	
Pb	208	1	No Gas	0.020	15.7	3090	7.4	2.5	
U	238	1	No Gas	0.006	36.8	507	34.5	2.5	
Ca	43	2	He	2.697	87.0	17	34.6	100	
Sb	121	2	He	0.114	7.5	1720	7.3	2.5	
Ti	47	2	He	0.023	150.7	10	100.0	2.5	
Cu	63	1	No Gas	0.028	49.8	3851	8.7	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2159151	1.40	2076007	104.00	70	120	
Ge	72	2	He	1290915	1.32	1283119	100.61	70	120	
Ge	72	1	No Gas	6040521	1.50	5854434	103.18	70	120	
In	115	1	No Gas	7176666	2.63	7184199	99.90	70	120	
Bi	209	1	No Gas	5171549	0.64	5632659	91.81	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	314_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T23:13:45-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	218CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	101.821	1.567	2740827	0.37	100	101.8	90	110	
Be	9	1	No Gas	104.928	0.989	657137	0.66	100	104.9	90	110	
V	51	2	He	99.583	0.412	921192	2.56	100	99.6	90	110	
Cr	52	2	He	101.681	1.681	1142463	0.86	100	101.7	90	110	
Fe	56	2	He	10089.716	1.912	97159972	2.31	10000	100.9	90	110	
Se	78	2	He	99.922	3.234	12767	0.71	100	99.9	90	110	
Sn	118	2	He	96.691	1.491	936828	1.55	100	96.7	90	110	
As	75	2	He	104.164	2.575	160523	0.76	100	104.2	90	110	
Ca	44	2	He	9925.713	2.323	430585	0.36	10000	99.3	90	110	
Na	23	2	He	10254.626	2.353	12753677	0.80	10000	102.5	90	110	
Mg	24	2	He	10146.493	1.830	6633836	2.21	10000	101.5	90	110	
K	39	2	He	9984.347	1.993	7872083	0.55	10000	99.8	90	110	
Mn	55	2	He	98.573	1.908	704134	0.66	100	98.6	90	110	
Co	59	2	He	103.913	3.326	1867581	0.81	100	103.9	90	110	
Ni	60	2	He	100.785	2.384	472778	0.46	100	100.8	90	110	
Cu	63	2	He	102.759	3.641	1329614	1.52	100	102.8	90	110	
Zn	66	2	He	102.203	2.238	219813	1.11	100	102.2	90	110	
Al	27	2	He	98.333	4.040	30400	3.64	100	98.3	90	110	
B	11	1	No Gas	521.215	2.201	2148601	2.01	500	104.2	90	110	
Al	27	1	No Gas	105.631	3.696	3127423	1.15	100	105.6	90	110	
Si	28	1	No Gas	557.837	2.976	9158044	0.22	5000	11.2	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	534.167	1.301	863617	1.65	500	106.8	90	110	
Ag	107	1	No Gas	103.555	1.750	3880932	0.50	100	103.6	90	110	
Cd	111	1	No Gas	100.436	1.401	764903	0.98	100	100.4	90	110	
Sr	88	1	No Gas	99.760	1.721	7722867	0.58	100	99.8	90	110	
Mo	95	1	No Gas	101.513	3.799	1445824	2.34	100	101.5	90	110	
Sn	118	1	No Gas	101.164	3.264	2445810	2.21	100	101.2	90	110	
Sb	121	1	No Gas	99.681	2.672	3198993	0.33	100	99.7	90	110	
Ba	137	1	No Gas	101.795	4.018	1174867	1.86	100	101.8	90	110	
Tl	205	1	No Gas	98.223	1.887	5903229	1.04	100	98.2	90	110	
Tl	203	1	No Gas	100.381	3.121	2554993	0.44	100	100.4	90	110	
Pb	208	1	No Gas	101.603	1.562	8018458	2.02	100	101.6	90	110	
U	238	1	No Gas	98.223	1.063	7263990	2.83	100	98.2	90	110	
Ca	43	2	He	10186.608	5.689	25294	3.19	10000	101.9	90	110	
Sb	121	2	He	102.525	1.883	1267502	0.65	100	102.5	90	110	
Ti	47	2	He	97.413	3.519	28700	1.90	100	97.4	90	110	
Cu	63	1	No Gas	105.248	2.082	2884005	0.51	100	105.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2083798	1.42	2076007	100.38	70	120	
Ge	72	2	He	1311686	2.54	1283119	102.23	70	120	
Ge	72	1	No Gas	6071989	2.61	5854434	103.72	70	120	
In	115	1	No Gas	7060740	2.13	7184199	98.28	70	120	
Bi	209	1	No Gas	5103278	2.90	5632659	90.60	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	315_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T23:15:29-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	218CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.071	38.3	125360	1.5	0.5	
Be	9	1	No Gas	0.024	7.0	175	5.7	0.5	
V	51	2	He	-0.055	-4.5	1475	1.4	2.5	
Cr	52	2	He	-0.005	-157.0	1280	6.2	2.5	
Fe	56	2	He	0.635	27.7	16953	9.5	100	
Se	78	2	He	0.009	247.2	105	2.2	2	
As	75	2	He	0.011	138.1	98	25.6	2.5	
Ca	44	2	He	1.818	40.4	383	6.6	100	
Na	23	2	He	56.450	4.1	123563	0.7	100	
Mg	24	2	He	0.824	5.4	1147	4.1	100	
K	39	2	He	6.784	22.0	49289	0.7	100	
Mn	55	2	He	0.066	21.6	953	11.0	2.5	
Co	59	2	He	0.001	108.3	220	12.0	2.5	
Ni	60	2	He	0.002	573.1	200	25.0	2.5	
Cu	63	2	He	0.001	1961.2	1320	16.1	2	
Zn	66	2	He	-0.028	-71.9	643	7.0	2.5	
Al	27	2	He	-0.441	-32.6	453	10.4	5	
B	11	1	No Gas	12.217	4.9	67906	3.5	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	-0.026	-156.7	44465	2.6	5	
Si	28	1	No Gas	2.997	6.9	606958	0.3	10	
P	31	1	No Gas	1.137	53.2	37815	2.6	10	
Ag	107	1	No Gas	0.009	19.7	703	11.4	2.5	
Cd	111	1	No Gas	0.005	73.0	77	39.8	1	
Sr	88	1	No Gas	0.010	33.4	3997	6.5	2.5	
Mo	95	1	No Gas	0.026	23.6	523	19.6	2.5	
Sn	118	1	No Gas	0.097	5.8	5985	4.9	5	
Sb	121	1	No Gas	0.060	14.2	2844	9.4	2.5	
Ba	137	1	No Gas	-0.108	-4.1	830	5.3	2.5	
Tl	205	1	No Gas	0.079	34.2	5025	30.7	1	
Tl	203	1	No Gas	0.075	33.7	2057	29.8	1	
Pb	208	1	No Gas	0.016	22.6	2774	8.5	2.5	
U	238	1	No Gas	0.007	14.3	550	14.2	2.5	
Ca	43	2	He	-0.051	-8035.3	10	100.0	100	
Sb	121	2	He	0.055	14.9	1007	11.6	2.5	
Ti	47	2	He	0.000	401874.0	3	173.2	2.5	
Cu	63	1	No Gas	0.024	32.2	3761	5.4	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2180096	1.38	2076007	105.01	70	120	
Ge	72	2	He	1293358	1.66	1283119	100.80	70	120	
Ge	72	1	No Gas	6057724	0.32	5854434	103.47	70	120	
In	115	1	No Gas	7226421	2.64	7184199	100.59	70	120	
Bi	209	1	No Gas	5109635	2.20	5632659	90.71	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	321_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T23:26:54-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	218CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.041	178.2	127932	0.2	0.5	
Be	9	1	No Gas	0.017	4.8	137	5.6	0.5	
V	51	2	He	-0.039	-19.1	1656	3.5	2.5	
Cr	52	2	He	-0.003	-176.0	1330	3.8	2.5	
Fe	56	2	He	0.542	4.5	16430	1.8	100	
Se	78	2	He	-0.014	-185.7	104	3.8	2	
As	75	2	He	0.024	86.7	120	27.8	2.5	
Ca	44	2	He	0.859	98.5	350	9.9	100	
Na	23	2	He	99.993	0.7	180667	1.1	100	
Mg	24	2	He	0.614	31.2	1033	12.8	100	
K	39	2	He	9.399	10.7	52450	1.3	100	
Mn	55	2	He	0.045	19.7	820	8.4	2.5	
Co	59	2	He	0.006	54.0	320	20.5	2.5	
Ni	60	2	He	-0.005	-40.3	170	5.9	2.5	
Cu	63	2	He	0.013	34.7	1513	4.2	2	
Zn	66	2	He	-0.055	-31.7	600	5.8	2.5	
Al	27	2	He	-0.178	-288.1	543	28.7	5	
B	11	1	No Gas	11.636	4.5	67203	3.4	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	0.088	24.7	48384	1.3	5	
Si	28	1	No Gas	3.304	14.4	619125	0.3	10	
P	31	1	No Gas	0.347	261.8	37030	2.5	10	
Ag	107	1	No Gas	0.012	1.3	817	2.5	2.5	
Cd	111	1	No Gas	0.003	88.0	60	33.3	1	
Sr	88	1	No Gas	0.005	46.6	3494	6.7	2.5	
Mo	95	1	No Gas	0.065	17.4	1073	13.3	2.5	
Sn	118	1	No Gas	0.095	7.8	5865	2.2	5	
Sb	121	1	No Gas	0.092	11.0	3907	9.2	2.5	
Ba	137	1	No Gas	-0.107	-2.0	827	3.9	2.5	
Tl	205	1	No Gas	0.066	32.9	4248	29.1	1	
Tl	203	1	No Gas	0.059	32.1	1663	27.3	1	
Pb	208	1	No Gas	0.015	20.1	2660	6.3	2.5	
U	238	1	No Gas	0.007	21.5	527	17.9	2.5	
Ca	43	2	He	3.870	207.1	20	100.0	100	
Sb	121	2	He	0.074	23.4	1260	17.6	2.5	
Ti	47	2	He	0.000	-5304.9	3	173.2	2.5	
Cu	63	1	No Gas	0.043	15.9	4331	5.4	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2239398	1.71	2076007	107.87	70	120	
Ge	72	2	He	1321780	0.71	1283119	103.01	70	120	
Ge	72	1	No Gas	6132016	1.32	5854434	104.74	70	120	
In	115	1	No Gas	7133697	2.16	7184199	99.30	70	120	
Bi	209	1	No Gas	5128638	2.68	5632659	91.05	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	323_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T23:30:40-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	218CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	103.723	2.595	2770766	1.30	100	103.7	90	110	
Be	9	1	No Gas	102.505	2.038	637569	0.89	100	102.5	90	110	
V	51	2	He	98.937	2.912	895617	2.15	100	98.9	90	110	
Cr	52	2	He	101.490	1.507	1116253	0.42	100	101.5	90	110	
Fe	56	2	He	10073.591	0.828	94950529	0.44	10000	100.7	90	110	
Se	78	2	He	99.304	1.805	12424	0.85	100	99.3	90	110	
Sn	118	2	He	96.770	1.502	932538	0.82	100	96.8	90	110	
As	75	2	He	103.033	0.938	155457	0.29	100	103.0	90	110	
Ca	44	2	He	9869.455	1.651	419149	0.47	10000	98.7	90	110	
Na	23	2	He	10214.100	1.477	12436563	0.27	10000	102.1	90	110	
Mg	24	2	He	10219.597	0.543	6540846	1.69	10000	102.2	90	110	
K	39	2	He	9962.656	1.768	7689568	0.70	10000	99.6	90	110	
Mn	55	2	He	98.029	0.928	685538	0.77	100	98.0	90	110	
Co	59	2	He	104.773	1.479	1843888	1.25	100	104.8	90	110	
Ni	60	2	He	101.249	1.238	464995	0.28	100	101.2	90	110	
Cu	63	2	He	101.944	0.513	1291803	1.41	100	101.9	90	110	
Zn	66	2	He	102.061	1.093	214898	0.61	100	102.1	90	110	
Al	27	2	He	97.683	3.447	29562	2.26	100	97.7	90	110	
B	11	1	No Gas	508.102	1.602	2080675	0.42	500	101.6	90	110	
Al	27	1	No Gas	102.560	2.203	3018233	1.27	100	102.6	90	110	
Si	28	1	No Gas	515.697	2.231	8452578	1.14	5000	10.3	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	508.921	2.144	818835	1.21	500	101.8	90	110	
Ag	107	1	No Gas	102.473	2.391	3826852	1.26	100	102.5	90	110	
Cd	111	1	No Gas	98.487	0.999	747462	0.65	100	98.5	90	110	
Sr	88	1	No Gas	100.217	1.362	7731899	1.37	100	100.2	90	110	
Mo	95	1	No Gas	100.404	1.982	1425315	0.84	100	100.4	90	110	
Sn	118	1	No Gas	101.557	2.437	2447073	1.95	100	101.6	90	110	
Sb	121	1	No Gas	97.427	0.345	3106338	0.76	100	97.4	90	110	
Ba	137	1	No Gas	99.843	1.859	1148786	1.43	100	99.8	90	110	
Tl	205	1	No Gas	96.380	2.137	5729436	2.13	100	96.4	90	110	
Tl	203	1	No Gas	95.673	3.758	2408917	3.18	100	95.7	90	110	
Pb	208	1	No Gas	100.531	0.813	7846931	1.56	100	100.5	90	110	
U	238	1	No Gas	99.710	2.201	7291390	2.13	100	99.7	90	110	
Ca	43	2	He	10178.291	3.968	24753	3.03	10000	101.8	90	110	
Sb	121	2	He	101.237	0.374	1225345	1.11	100	101.2	90	110	
Ti	47	2	He	98.619	0.472	28453	1.70	100	98.6	90	110	
Cu	63	1	No Gas	102.357	2.364	2786305	2.39	100	102.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2069710	1.23	2076007	99.70	70	120	
Ge	72	2	He	1283795	1.23	1283119	100.05	70	120	
Ge	72	1	No Gas	6029807	0.94	5854434	103.00	70	120	
In	115	1	No Gas	7035382	1.15	7184199	97.93	70	120	
Bi	209	1	No Gas	5046306	1.51	5632659	89.59	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	331_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T23:46:01-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	218CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	96.522	2.405	2681224	0.99	100	96.5	90	110	
Be	9	1	No Gas	98.392	2.522	634326	0.44	100	98.4	90	110	
V	51	2	He	98.055	1.684	931497	1.61	100	98.1	90	110	
Cr	52	2	He	100.540	0.857	1160397	0.88	100	100.5	90	110	
Fe	56	2	He	9991.327	0.207	98817799	0.35	10000	99.9	90	110	
Se	78	2	He	98.027	1.777	12870	1.32	100	98.0	90	110	
Sn	118	2	He	97.235	1.990	982634	2.31	100	97.2	90	110	
As	75	2	He	99.344	0.958	157281	0.53	100	99.3	90	110	
Ca	44	2	He	9768.448	0.258	435345	0.49	10000	97.7	90	110	
Na	23	2	He	10210.671	0.577	13045836	0.24	10000	102.1	90	110	
Mg	24	2	He	9919.068	1.560	6660960	1.80	10000	99.2	90	110	
K	39	2	He	9962.884	0.977	8069222	0.61	10000	99.6	90	110	
Mn	55	2	He	98.680	0.233	724106	0.42	100	98.7	90	110	
Co	59	2	He	104.542	0.797	1930554	0.94	100	104.5	90	110	
Ni	60	2	He	99.005	0.591	477120	0.41	100	99.0	90	110	
Cu	63	2	He	99.768	1.916	1326459	1.85	100	99.8	90	110	
Zn	66	2	He	99.144	1.067	219064	0.66	100	99.1	90	110	
Al	27	2	He	95.155	2.672	30236	2.34	100	95.2	90	110	
B	11	1	No Gas	492.864	3.307	2092114	1.31	500	98.6	90	110	
Al	27	1	No Gas	99.439	1.963	3015881	0.88	100	99.4	90	110	
Si	28	1	No Gas	504.805	2.058	8535249	0.89	5000	10.1	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	505.213	2.463	837586	1.49	500	101.0	90	110	
Ag	107	1	No Gas	101.052	1.063	3949700	1.68	100	101.1	90	110	
Cd	111	1	No Gas	97.851	1.109	777166	1.78	100	97.9	90	110	
Sr	88	1	No Gas	99.795	2.151	8055518	0.47	100	99.8	90	110	
Mo	95	1	No Gas	99.818	1.365	1483074	2.19	100	99.8	90	110	
Sn	118	1	No Gas	100.239	1.328	2528133	2.79	100	100.2	90	110	
Sb	121	1	No Gas	99.747	2.704	3275432	1.59	100	99.7	90	110	
Ba	137	1	No Gas	100.309	3.518	1207353	1.45	100	100.3	90	110	
Tl	205	1	No Gas	95.421	4.801	6036598	6.63	100	95.4	90	110	
Tl	203	1	No Gas	94.094	1.796	2520613	3.64	100	94.1	90	110	
Pb	208	1	No Gas	100.525	1.245	8345238	2.75	100	100.5	90	110	
U	238	1	No Gas	99.122	3.256	7708250	3.33	100	99.1	90	110	
Ca	43	2	He	9939.850	2.869	25370	3.02	10000	99.4	90	110	
Sb	121	2	He	98.595	0.178	1252130	0.34	100	98.6	90	110	
Ti	47	2	He	97.203	1.587	29425	1.94	100	97.2	90	110	
Cu	63	1	No Gas	101.646	0.693	2850272	0.79	100	101.6	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2145741	2.37	2076007	103.36	70	120	
Ge	72	2	He	1347001	0.51	1283119	104.98	70	120	
Ge	72	1	No Gas	6211353	1.11	5854434	106.10	70	120	
In	115	1	No Gas	7363087	2.45	7184199	102.49	70	120	
Bi	209	1	No Gas	5367835	3.30	5632659	95.30	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	332_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-14T23:47:45-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	218CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.172	39.9	125925	0.7	0.5	
Be	9	1	No Gas	0.017	31.7	132	27.5	0.5	
V	51	2	He	-0.060	-16.0	1468	5.5	2.5	
Cr	52	2	He	-0.002	-466.7	1340	10.4	2.5	
Fe	56	2	He	0.412	26.4	15209	6.7	100	
Se	78	2	He	0.150	93.7	125	13.8	2	
As	75	2	He	0.008	102.4	94	13.4	2.5	
Ca	44	2	He	-0.078	-1218.7	310	12.9	100	
Na	23	2	He	192.087	1.0	296483	0.1	100	CCB Main CR1 Failed
Mg	24	2	He	0.272	17.5	810	4.5	100	
K	39	2	He	9.329	9.9	52548	1.0	100	
Mn	55	2	He	0.047	2.2	840	1.2	2.5	
Co	59	2	He	0.000	-1513.1	200	26.0	2.5	
Ni	60	2	He	-0.011	-50.0	143	17.6	2.5	
Cu	63	2	He	0.012	36.8	1503	4.0	2	
Zn	66	2	He	-0.045	-140.8	623	21.4	2.5	
Al	27	2	He	-0.260	-75.6	520	12.0	5	
B	11	1	No Gas	4.967	9.1	36240	5.3	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	0.191	22.7	51676	1.7	5	
Si	28	1	No Gas	0.294	152.9	575172	0.3	10	
P	31	1	No Gas	-2.179	-20.6	33257	2.2	10	
Ag	107	1	No Gas	0.016	12.7	1023	8.9	2.5	
Cd	111	1	No Gas	-0.001	-383.9	33	62.4	1	
Sr	88	1	No Gas	0.006	63.4	3781	8.3	2.5	
Mo	95	1	No Gas	0.030	16.2	607	14.4	2.5	
Sn	118	1	No Gas	0.051	16.6	5071	2.8	5	
Sb	121	1	No Gas	0.077	3.8	3431	3.5	2.5	
Ba	137	1	No Gas	-0.115	-11.0	777	19.5	2.5	
Tl	205	1	No Gas	0.074	46.2	5011	41.5	1	
Tl	203	1	No Gas	0.068	42.4	1987	37.1	1	
Pb	208	1	No Gas	0.013	38.9	2660	14.0	2.5	
U	238	1	No Gas	0.007	30.0	583	26.6	2.5	
Ca	43	2	He	1.212	380.7	13	86.6	100	
Sb	121	2	He	0.055	13.2	1023	9.5	2.5	
Ti	47	2	He	0.022	153.2	10	100.0	2.5	
Cu	63	1	No Gas	0.086	17.1	5548	6.8	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2143183	0.93	2076007	103.24	70	120	
Ge	72	2	He	1325671	0.73	1283119	103.32	70	120	
Ge	72	1	No Gas	6163148	1.47	5854434	105.27	70	120	
In	115	1	No Gas	7557980	2.92	7184199	105.20	70	120	
Bi	209	1	No Gas	5436373	2.20	5632659	96.52	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	340_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-15T00:03:25-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	218CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	97.911	3.462	2505013	1.69	100	97.9	90	110	
Be	9	1	No Gas	97.354	2.233	578570	1.39	100	97.4	90	110	
V	51	2	He	96.299	1.485	876659	0.39	100	96.3	90	110	
Cr	52	2	He	98.322	1.184	1087467	0.30	100	98.3	90	110	
Fe	56	2	He	9878.964	0.659	93635512	1.08	10000	98.8	90	110	
Se	78	2	He	99.396	1.224	12504	0.31	100	99.4	90	110	
Sn	118	2	He	96.785	2.297	966295	1.15	100	96.8	90	110	
As	75	2	He	98.787	1.321	149875	0.26	100	98.8	90	110	
Ca	44	2	He	9705.185	1.211	414477	0.46	10000	97.1	90	110	
Na	23	2	He	9875.925	0.872	12094082	0.95	10000	98.8	90	110	
Mg	24	2	He	9799.586	0.670	6306415	1.14	10000	98.0	90	110	
K	39	2	He	9842.225	1.682	7639392	0.98	10000	98.4	90	110	
Mn	55	2	He	97.835	1.273	687952	0.81	100	97.8	90	110	
Co	59	2	He	105.067	3.016	1858936	1.57	100	105.1	90	110	
Ni	60	2	He	99.155	1.352	457909	0.86	100	99.2	90	110	
Cu	63	2	He	100.175	0.169	1276450	1.53	100	100.2	90	110	
Zn	66	2	He	98.788	2.435	209153	1.14	100	98.8	90	110	
Al	27	2	He	93.142	1.897	28383	3.11	100	93.1	90	110	
B	11	1	No Gas	489.648	2.382	1916147	0.74	500	97.9	90	110	
Al	27	1	No Gas	97.447	1.166	2852149	0.48	100	97.4	90	110	
Si	28	1	No Gas	492.857	1.147	8052529	0.20	5000	9.9	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	485.675	0.503	778235	0.85	500	97.1	90	110	
Ag	107	1	No Gas	99.785	1.744	3909626	1.85	100	99.8	90	110	
Cd	111	1	No Gas	98.295	1.682	782552	1.43	100	98.3	90	110	
Sr	88	1	No Gas	98.112	1.479	7939882	0.30	100	98.1	90	110	
Mo	95	1	No Gas	97.429	1.383	1450989	1.18	100	97.4	90	110	
Sn	118	1	No Gas	100.029	2.548	2528785	2.99	100	100.0	90	110	
Sb	121	1	No Gas	100.971	2.741	3198489	1.59	100	101.0	90	110	
Ba	137	1	No Gas	98.858	0.940	1193457	2.41	100	98.9	90	110	
Tl	205	1	No Gas	95.427	4.299	6127326	0.66	100	95.4	90	110	
Tl	203	1	No Gas	94.876	6.430	2578914	2.07	100	94.9	90	110	
Pb	208	1	No Gas	100.618	2.496	8487063	1.98	100	100.6	90	110	
U	238	1	No Gas	98.921	2.280	7818846	2.82	100	98.9	90	110	
Ca	43	2	He	9794.130	2.857	23951	1.53	10000	97.9	90	110	
Sb	121	2	He	100.637	2.243	1224760	2.11	100	100.6	90	110	
Ti	47	2	He	98.972	1.647	28717	3.08	100	99.0	90	110	
Cu	63	1	No Gas	101.418	1.712	2743448	1.83	100	101.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1977635	1.76	2076007	95.26	70	120	
Ge	72	2	He	1290928	1.46	1283119	100.61	70	120	
Ge	72	1	No Gas	5992058	1.26	5854434	102.35	70	120	
In	115	1	No Gas	7380322	1.52	7184199	102.73	70	120	
Bi	209	1	No Gas	5457243	4.54	5632659	96.89	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	341_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-15T00:05:10-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	218CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.096	59.8	116248	0.5	0.5	
Be	9	1	No Gas	0.033	18.9	218	16.6	0.5	
V	51	2	He	-0.052	-6.5	1516	2.0	2.5	
Cr	52	2	He	-0.010	-12.3	1233	1.2	2.5	
Fe	56	2	He	0.817	7.1	18877	2.2	100	
Se	78	2	He	0.022	412.0	107	10.3	2	
As	75	2	He	0.020	60.4	112	16.4	2.5	
Ca	44	2	He	6.826	19.6	603	8.2	100	
Na	23	2	He	126.299	1.5	211009	0.3	100	CCB Main CR1 Failed
Mg	24	2	He	2.622	11.0	2327	6.7	100	
K	39	2	He	8.178	20.2	50885	2.1	100	
Mn	55	2	He	0.080	31.3	1060	16.4	2.5	
Co	59	2	He	0.004	88.7	277	23.5	2.5	
Ni	60	2	He	-0.001	-2676.5	190	55.0	2.5	
Cu	63	2	He	0.013	39.2	1490	4.7	2	
Zn	66	2	He	-0.048	-151.0	607	24.1	2.5	
Al	27	2	He	-0.180	-97.8	537	10.6	5	
B	11	1	No Gas	5.920	1.7	37762	1.3	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	0.148	7.0	50002	0.6	5	
Si	28	1	No Gas	0.465	37.0	573347	0.4	10	
P	31	1	No Gas	-2.926	-13.6	31830	2.0	10	
Ag	107	1	No Gas	0.014	32.1	927	18.3	2.5	
Cd	111	1	No Gas	0.002	126.3	57	40.8	1	
Sr	88	1	No Gas	0.049	18.2	7272	9.3	2.5	
Mo	95	1	No Gas	0.035	13.3	667	9.6	2.5	
Sn	118	1	No Gas	0.045	9.9	4854	3.2	5	
Sb	121	1	No Gas	0.343	3.0	12012	2.8	2.5	
Ba	137	1	No Gas	-0.097	-5.1	993	7.1	2.5	
Tl	205	1	No Gas	0.049	23.2	3594	24.3	1	
Tl	203	1	No Gas	0.047	32.8	1493	32.2	1	
Pb	208	1	No Gas	0.021	19.0	3440	12.8	2.5	
U	238	1	No Gas	0.006	38.5	533	39.3	2.5	
Ca	43	2	He	5.267	115.0	23	65.5	100	
Sb	121	2	He	0.281	3.9	3794	3.6	2.5	
Ti	47	2	He	0.057	121.5	20	100.0	2.5	
Cu	63	1	No Gas	0.040	17.9	4251	4.7	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2010696	1.16	2076007	96.85	70	120	
Ge	72	2	He	1306473	1.36	1283119	101.82	70	120	
Ge	72	1	No Gas	6114447	0.04	5854434	104.44	70	120	
In	115	1	No Gas	7476909	1.11	7184199	104.07	70	120	
Bi	209	1	No Gas	5576476	3.45	5632659	99.00	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	352_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-15T00:27:04-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	218CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	98.656	2.708	2906508	1.72	100	98.7	90	110	
Be	9	1	No Gas	97.903	1.997	670098	0.34	100	97.9	90	110	
V	51	2	He	99.405	0.456	975267	0.30	100	99.4	90	110	
Cr	52	2	He	98.737	1.094	1176986	1.10	100	98.7	90	110	
Fe	56	2	He	9984.485	0.161	101988728	0.07	10000	99.8	90	110	
Se	78	2	He	96.991	1.263	13154	1.40	100	97.0	90	110	
Sn	118	2	He	95.265	1.496	986802	0.72	100	95.3	90	110	
As	75	2	He	99.756	0.220	163116	0.32	100	99.8	90	110	
Ca	44	2	He	9823.407	0.734	452152	0.88	10000	98.2	90	110	
Na	23	2	He	10506.500	0.783	13862505	0.76	10000	105.1	90	110	
Mg	24	2	He	10035.875	3.298	6960282	3.31	10000	100.4	90	110	
K	39	2	He	10183.057	1.067	8517263	1.20	10000	101.8	90	110	
Mn	55	2	He	97.582	0.629	739532	0.56	100	97.6	90	110	
Co	59	2	He	103.767	1.223	1979066	1.19	100	103.8	90	110	
Ni	60	2	He	98.456	0.320	490040	0.24	100	98.5	90	110	
Cu	63	2	He	101.539	1.706	1394266	1.62	100	101.5	90	110	
Zn	66	2	He	99.142	0.930	226250	1.04	100	99.1	90	110	
Al	27	2	He	97.407	0.887	31954	0.78	100	97.4	90	110	
B	11	1	No Gas	499.584	2.569	2251248	0.38	500	99.9	90	110	
Al	27	1	No Gas	103.054	2.153	3250506	2.42	100	103.1	90	110	
Si	28	1	No Gas	523.195	2.144	9182792	2.09	5000	10.5	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	516.479	2.076	890102	2.01	500	103.3	90	110	
Ag	107	1	No Gas	100.507	0.877	3941830	1.98	100	100.5	90	110	
Cd	111	1	No Gas	97.306	1.178	775374	0.75	100	97.3	90	110	
Sr	88	1	No Gas	102.124	1.419	8272979	2.00	100	102.1	90	110	
Mo	95	1	No Gas	101.051	2.481	1506130	1.66	100	101.1	90	110	
Sn	118	1	No Gas	103.373	1.915	2615581	2.57	100	103.4	90	110	
Sb	121	1	No Gas	95.159	1.255	3251654	1.49	100	95.2	90	110	
Ba	137	1	No Gas	101.279	3.871	1223305	3.10	100	101.3	90	110	
Tl	205	1	No Gas	100.361	6.664	5899299	2.83	100	100.4	90	110	
Tl	203	1	No Gas	100.724	5.783	2508949	2.98	100	100.7	90	110	
Pb	208	1	No Gas	101.571	4.420	7843274	0.80	100	101.6	90	110	
U	238	1	No Gas	97.198	1.586	7038622	3.40	100	97.2	90	110	
Ca	43	2	He	9914.189	3.350	26135	3.50	10000	99.1	90	110	
Sb	121	2	He	96.244	0.400	1262368	0.33	100	96.2	90	110	
Ti	47	2	He	98.840	2.915	30902	3.06	100	98.8	90	110	
Cu	63	1	No Gas	99.623	1.152	2906341	0.42	100	99.6	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2277868	2.26	2076007	109.72	70	120	
Ge	72	2	He	1391171	0.15	1283119	108.42	70	120	
Ge	72	1	No Gas	6462166	0.75	5854434	110.38	70	120	
In	115	1	No Gas	7386695	1.12	7184199	102.82	70	120	
Bi	209	1	No Gas	4997664	3.71	5632659	88.73	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	353_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-15T00:28:48-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	218CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.438	33.5	137527	1.3	0.5	
Be	9	1	No Gas	0.022	26.7	165	21.0	0.5	
V	51	2	He	-0.038	-16.2	1689	1.9	2.5	
Cr	52	2	He	-0.005	-221.0	1320	11.9	2.5	
Fe	56	2	He	0.742	16.9	18600	6.3	100	
Se	78	2	He	0.121	212.9	123	26.1	2	
As	75	2	He	0.008	11.0	97	0.0	2.5	
Ca	44	2	He	12.265	8.7	860	7.0	100	
Na	23	2	He	209.776	1.3	321800	1.5	100	CCB Main CR1 Failed
Mg	24	2	He	4.108	5.2	3377	3.4	100	
K	39	2	He	14.778	9.6	57424	0.6	100	
Mn	55	2	He	0.151	8.5	1603	5.7	2.5	
Co	59	2	He	0.003	145.8	270	35.7	2.5	
Ni	60	2	He	-0.002	-721.5	190	32.9	2.5	
Cu	63	2	He	0.002	481.7	1387	9.8	2	
Zn	66	2	He	-0.020	-90.3	683	7.4	2.5	
Al	27	2	He	-0.181	-128.2	550	14.5	5	
B	11	1	No Gas	14.884	6.4	80653	3.5	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	0.259	13.1	54965	3.0	5	
Si	28	1	No Gas	3.561	18.6	641103	0.6	10	
P	31	1	No Gas	-0.703	-4.8	36421	1.2	10	
Ag	107	1	No Gas	0.013	25.8	893	17.1	2.5	
Cd	111	1	No Gas	0.000	1086.5	40	50.0	1	
Sr	88	1	No Gas	0.104	4.7	11735	2.2	2.5	
Mo	95	1	No Gas	0.029	2.6	583	2.0	2.5	
Sn	118	1	No Gas	0.082	17.3	5775	8.1	5	
Sb	121	1	No Gas	0.101	11.1	4344	9.9	2.5	
Ba	137	1	No Gas	-0.116	-4.6	760	10.4	2.5	
Tl	205	1	No Gas	0.049	40.5	3431	35.7	1	
Tl	203	1	No Gas	0.047	27.2	1430	22.9	1	
Pb	208	1	No Gas	0.009	26.6	2287	6.4	2.5	
U	238	1	No Gas	0.007	30.6	537	27.7	2.5	
Ca	43	2	He	17.024	88.3	53	71.0	100	
Sb	121	2	He	0.074	3.8	1273	2.0	2.5	
Ti	47	2	He	0.010	370.7	7	173.2	2.5	
Cu	63	1	No Gas	0.074	6.4	5334	3.6	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2217541	2.09	2076007	106.82	70	120	
Ge	72	2	He	1338860	1.50	1283119	104.34	70	120	
Ge	72	1	No Gas	6308972	1.18	5854434	107.76	70	120	
In	115	1	No Gas	7444392	1.88	7184199	103.62	70	120	
Bi	209	1	No Gas	5364459	2.00	5632659	95.24	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	364_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-15T00:50:37-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	218CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	98.539	1.810	2397629	0.88	100	98.5	90	110	
Be	9	1	No Gas	97.433	1.838	550744	0.83	100	97.4	90	110	
V	51	2	He	94.433	1.637	809717	0.34	100	94.4	90	110	
Cr	52	2	He	98.492	3.318	1025757	1.42	100	98.5	90	110	
Fe	56	2	He	9672.809	1.122	86348079	0.87	10000	96.7	90	110	
Se	78	2	He	96.037	0.417	11384	1.63	100	96.0	90	110	
Sn	118	2	He	97.607	0.375	889503	1.60	100	97.6	90	110	
As	75	2	He	99.291	1.413	141881	0.64	100	99.3	90	110	
Ca	44	2	He	9381.829	2.408	377334	0.79	10000	93.8	90	110	
Na	23	2	He	9744.119	2.101	11239235	1.87	10000	97.4	90	110	
Mg	24	2	He	9575.119	2.046	5802777	0.32	10000	95.8	90	110	
K	39	2	He	9424.425	2.161	6891203	1.05	10000	94.2	90	110	
Mn	55	2	He	94.279	1.437	624427	1.06	100	94.3	90	110	
Co	59	2	He	103.325	1.048	1722220	1.13	100	103.3	90	110	
Ni	60	2	He	97.890	1.536	425768	0.39	100	97.9	90	110	
Cu	63	2	He	99.466	2.123	1193484	0.22	100	99.5	90	110	
Zn	66	2	He	97.858	1.523	195162	0.51	100	97.9	90	110	
Al	27	2	He	91.424	3.777	26238	2.67	100	91.4	90	110	
B	11	1	No Gas	486.365	2.183	1810738	2.47	500	97.3	90	110	
Al	27	1	No Gas	96.018	1.493	2685610	0.92	100	96.0	90	110	
Si	28	1	No Gas	490.193	0.488	7654984	0.38	5000	9.8	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	485.529	1.342	743272	0.55	500	97.1	90	110	
Ag	107	1	No Gas	101.076	1.167	3692646	0.43	100	101.1	90	110	
Cd	111	1	No Gas	96.740	1.096	718170	0.61	100	96.7	90	110	
Sr	88	1	No Gas	99.953	1.028	7543991	2.04	100	100.0	90	110	
Mo	95	1	No Gas	98.678	1.005	1370400	1.16	100	98.7	90	110	
Sn	118	1	No Gas	102.117	2.100	2406747	1.07	100	102.1	90	110	
Sb	121	1	No Gas	100.595	1.725	3044793	0.97	100	100.6	90	110	
Ba	137	1	No Gas	99.682	3.644	1121698	2.56	100	99.7	90	110	
Tl	205	1	No Gas	93.250	2.019	5648156	0.60	100	93.3	90	110	
Tl	203	1	No Gas	94.523	0.877	2425880	2.19	100	94.5	90	110	
Pb	208	1	No Gas	99.428	0.193	7909525	2.41	100	99.4	90	110	
U	238	1	No Gas	99.810	1.974	7437589	1.96	100	99.8	90	110	
Ca	43	2	He	9543.059	2.521	21981	1.07	10000	95.4	90	110	
Sb	121	2	He	100.161	1.677	1148018	0.42	100	100.2	90	110	
Ti	47	2	He	95.425	2.240	26068	0.64	100	95.4	90	110	
Cu	63	1	No Gas	99.901	2.913	2581711	2.46	100	99.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1880877	1.33	2076007	90.60	70	120	
Ge	72	2	He	1215936	1.89	1283119	94.76	70	120	
Ge	72	1	No Gas	5724665	0.79	5854434	97.78	70	120	
In	115	1	No Gas	6882096	1.58	7184199	95.79	70	120	
Bi	209	1	No Gas	5143046	2.57	5632659	91.31	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	365_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-15T00:52:22-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	218CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.486	45.0	119811	1.5	0.5	
Be	9	1	No Gas	0.024	2.7	157	1.8	0.5	
V	51	2	He	-0.051	-14.8	1411	4.6	2.5	
Cr	52	2	He	-0.005	-188.4	1197	8.4	2.5	
Fe	56	2	He	0.525	11.7	14892	2.4	100	
Se	78	2	He	0.132	177.5	112	22.3	2	
As	75	2	He	0.003	82.6	80	4.2	2.5	
Ca	44	2	He	1.666	52.3	353	11.4	100	
Na	23	2	He	170.400	3.4	245849	0.8	100	CCB Main CR1 Failed
Mg	24	2	He	1.496	12.3	1477	5.5	100	
K	39	2	He	10.590	21.3	48875	1.4	100	
Mn	55	2	He	0.086	2.6	1023	1.5	2.5	
Co	59	2	He	0.002	155.5	220	25.3	2.5	
Ni	60	2	He	-0.002	-513.0	170	23.5	2.5	
Cu	63	2	He	0.020	28.2	1463	6.0	2	
Zn	66	2	He	-0.064	-79.4	530	18.2	2.5	
Al	27	2	He	-0.177	-213.8	497	19.3	5	
B	11	1	No Gas	12.728	7.1	61497	2.7	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	0.177	22.5	47348	1.3	5	
Si	28	1	No Gas	2.380	17.7	561540	0.8	10	
P	31	1	No Gas	-1.240	-13.8	32088	0.8	10	
Ag	107	1	No Gas	0.013	20.1	833	10.3	2.5	
Cd	111	1	No Gas	0.000	460.3	37	15.7	1	
Sr	88	1	No Gas	0.031	23.8	5408	8.9	2.5	
Mo	95	1	No Gas	0.026	35.1	493	24.4	2.5	
Sn	118	1	No Gas	0.078	38.2	5285	12.1	5	
Sb	121	1	No Gas	0.097	20.9	3777	15.7	2.5	
Ba	137	1	No Gas	-0.109	-8.2	780	12.2	2.5	
Tl	205	1	No Gas	0.053	33.6	3671	31.7	1	
Tl	203	1	No Gas	0.052	36.1	1557	33.3	1	
Pb	208	1	No Gas	0.008	43.3	2227	13.2	2.5	
U	238	1	No Gas	0.006	26.9	510	26.4	2.5	
Ca	43	2	He	-1.187	-213.7	7	86.6	100	
Sb	121	2	He	0.074	13.1	1147	8.9	2.5	
Ti	47	2	He	0.062	61.4	20	50.0	2.5	
Cu	63	1	No Gas	0.038	8.7	3907	3.3	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1914316	2.74	2076007	92.21	70	120	
Ge	72	2	He	1210440	1.92	1283119	94.34	70	120	
Ge	72	1	No Gas	5693702	1.25	5854434	97.25	70	120	
In	115	1	No Gas	6922858	1.91	7184199	96.36	70	120	
Bi	209	1	No Gas	5356594	1.06	5632659	95.10	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	367_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-15T00:56:20-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	218CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	No Gas	54.684	37.552	2067370	8.35	100	54.7	90	110	CCV Main CR1-2 Failed
Be	9	1	No Gas	50.992	38.338	429733	11.90	100	51.0	90	110	CCV Main CR1-2 Failed
V	51	2	He	95.024	0.928	796868	0.32	100	95.0	90	110	
Cr	52	2	He	97.930	2.978	997574	2.00	100	97.9	90	110	
Fe	56	2	He	9709.665	1.608	84762039	0.61	10000	97.1	90	110	
Se	78	2	He	96.457	1.344	11181	1.87	100	96.5	90	110	
Sn	118	2	He	96.813	2.104	880886	1.08	100	96.8	90	110	
As	75	2	He	100.058	1.040	139829	0.26	100	100.1	90	110	
Ca	44	2	He	9520.277	1.679	374492	0.47	10000	95.2	90	110	
Na	23	2	He	9696.383	1.403	10938807	1.85	10000	97.0	90	110	
Mg	24	2	He	9663.573	1.143	5727856	0.22	10000	96.6	90	110	
K	39	2	He	9586.466	1.356	6855537	1.68	10000	95.9	90	110	
Mn	55	2	He	95.880	1.737	620993	0.59	100	95.9	90	110	
Co	59	2	He	102.964	2.721	1678125	1.68	100	103.0	90	110	
Ni	60	2	He	98.491	0.924	418964	0.30	100	98.5	90	110	
Cu	63	2	He	100.632	3.359	1180753	2.13	100	100.6	90	110	
Zn	66	2	He	99.098	0.688	193286	0.74	100	99.1	90	110	
Al	27	2	He	92.249	2.083	25891	1.57	100	92.2	90	110	
B	11	1	No Gas	249.394	40.012	1392278	13.06	500	49.9	90	110	CCV Main CR1-2 Failed
Al	27	1	No Gas	66.122	22.414	2807285	10.39	100	66.1	90	110	CCV Main CR1-2 Failed
Si	28	1	No Gas	321.497	22.126	7926227	19.64	5000	6.4	90	110	CCV Main CR1-2 Failed
P	31	1	No Gas	247.167	43.376	575815	12.55	500	49.4	90	110	CCV Main CR1-2 Failed
Ag	107	1	No Gas	53.858	40.152	2882813	11.37	100	53.9	90	110	CCV Main CR1-2 Failed
Cd	111	1	No Gas	50.831	41.849	550983	13.08	100	50.8	90	110	CCV Main CR1-2 Failed
Sr	88	1	No Gas	52.295	40.688	5778662	11.86	100	52.3	90	110	CCV Main CR1-2 Failed
Mo	95	1	No Gas	51.991	42.696	1053304	13.83	100	52.0	90	110	CCV Main CR1-2 Failed
Sn	118	1	No Gas	54.457	42.560	1874763	13.62	100	54.5	90	110	CCV Main CR1-2 Failed
Sb	121	1	No Gas	52.481	39.963	2315181	12.83	100	52.5	90	110	CCV Main CR1-2 Failed
Ba	137	1	No Gas	52.800	43.247	867412	14.24	100	52.8	90	110	CCV Main CR1-2 Failed
Tl	205	1	No Gas	50.740	42.411	4532222	13.56	100	50.7	90	110	CCV Main CR1-2 Failed
Tl	203	1	No Gas	49.640	41.010	1881979	12.27	100	49.6	90	110	CCV Main CR1-2 Failed
Pb	208	1	No Gas	53.487	42.679	6274749	13.84	100	53.5	90	110	CCV Main CR1-2 Failed
U	238	1	No Gas	53.497	41.911	5884979	13.07	100	53.5	90	110	CCV Main CR1-2 Failed
Ca	43	2	He	9501.992	1.453	21407	0.75	10000	95.0	90	110	
Sb	121	2	He	100.250	2.262	1123943	2.91	100	100.3	90	110	
Ti	47	2	He	96.708	3.953	25838	3.58	100	96.7	90	110	
Cu	63	1	No Gas	54.392	39.304	2052855	12.13	100	54.4	90	110	CCV Main CR1-2 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	2989235	25.02	2076007	143.99	70	120	ISTD Failed
Ge	72	2	He	1189056	1.21	1283119	92.67	70	120	
Ge	72	1	No Gas	8924473	25.32	5854434	152.44	70	120	ISTD Failed
In	115	1	No Gas	10817013	25.98	7184199	150.57	70	120	ISTD Failed
Bi	209	1	No Gas	8194588	27.38	5632659	145.48	70	120	ISTD Failed

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	368_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-15T00:58:05-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	218CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.424	9.8	115968	0.4	0.5	
Be	9	1	No Gas	0.017	17.0	117	15.1	0.5	
V	51	2	He	-0.054	-15.0	1376	4.3	2.5	
Cr	52	2	He	-0.010	-24.4	1137	2.2	2.5	
Fe	56	2	He	0.625	8.2	15649	3.3	100	
Se	78	2	He	0.298	15.0	131	4.9	2	
As	75	2	He	0.000	-2527.6	74	14.4	2.5	
Ca	44	2	He	-0.008	-12328.2	283	12.4	100	
Na	23	2	He	146.134	3.4	216263	2.1	100	CCB Main CR1 Failed
Mg	24	2	He	1.489	19.4	1460	11.2	100	
K	39	2	He	9.091	13.4	47396	2.4	100	
Mn	55	2	He	0.068	17.5	897	7.8	2.5	
Co	59	2	He	0.004	36.1	247	8.4	2.5	
Ni	60	2	He	-0.001	-510.9	173	12.0	2.5	
Cu	63	2	He	0.018	40.1	1427	6.9	2	
Zn	66	2	He	-0.033	-30.9	587	3.9	2.5	
Al	27	2	He	-0.238	-145.5	477	20.4	5	
B	11	1	No Gas	12.031	4.6	57698	3.3	0.5	CCB Main CR1 Failed
Al	27	1	No Gas	0.144	57.4	47012	3.8	5	
Si	28	1	No Gas	0.130	372.5	535552	0.5	10	
P	31	1	No Gas	-1.749	-3.7	31740	1.8	10	
Ag	107	1	No Gas	0.013	22.5	830	12.8	2.5	
Cd	111	1	No Gas	0.004	109.1	63	48.2	1	
Sr	88	1	No Gas	0.013	29.7	4021	6.5	2.5	
Mo	95	1	No Gas	0.029	36.4	543	27.3	2.5	
Sn	118	1	No Gas	0.097	17.2	5728	6.2	5	
Sb	121	1	No Gas	0.103	16.8	4004	11.6	2.5	
Ba	137	1	No Gas	-0.101	-4.8	873	6.3	2.5	
Tl	205	1	No Gas	0.061	37.1	3971	36.0	1	
Tl	203	1	No Gas	0.060	38.8	1707	36.9	1	
Pb	208	1	No Gas	0.011	21.5	2397	9.7	2.5	
U	238	1	No Gas	0.007	26.8	563	26.4	2.5	
Ca	43	2	He	6.154	109.8	23	65.5	100	
Sb	121	2	He	0.064	2.9	1030	1.9	2.5	
Ti	47	2	He	0.001	2689.4	3	173.2	2.5	
Cu	63	1	No Gas	0.033	13.3	3804	4.4	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1874197	0.74	2076007	90.28	70	120	
Ge	72	2	He	1199877	0.94	1283119	93.51	70	120	
Ge	72	1	No Gas	5764463	1.55	5854434	98.46	70	120	
In	115	1	No Gas	6926884	0.69	7184199	96.42	70	120	
Bi	209	1	No Gas	5124136	1.75	5632659	90.97	70	120	

Sample Report

Sample Table

Sample Name	LLCCV2
Data File Name	370LCV2.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-15T01:01:50-05:00
Sample Type	LLCCV2
Dilution	1
Comment	
ISTD Ref FileName	218CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	2.229	2.229	2.70	157705	0.00	2	
Be	9	1	No Gas	1.888	1.888	3.61	10649	0.02	2	
V	51	2	He	1.842	1.842	1.95	17240	0.01	2	
Cr	52	2	He	1.957	1.957	1.26	21160	0.01	2	
Fe	56	2	He	199.937	199.937	0.78	1756699	0.01	200	
Se	78	2	He	1.960	1.960	4.82	321	0.61	2	
Sn	118	2	He	1.920	1.920	2.27	19451	0.01	2	
As	75	2	He	1.886	1.886	0.62	2710	0.07	2	
Ca	44	2	He	188.988	188.988	2.11	7716	2.45	200	
Na	23	2	He	330.577	330.577	1.27	421748	0.08	200	NewName Main CR1 Failed
Mg	24	2	He	194.218	194.218	1.67	115758	0.17	200	
K	39	2	He	194.836	194.836	0.39	179144	0.11	200	
Mn	55	2	He	1.995	1.995	3.04	13370	0.01	2	
Co	59	2	He	1.985	1.985	0.90	32566	0.01	2	
Ni	60	2	He	1.960	1.960	0.95	8516	0.02	2	
Cu	63	2	He	2.013	2.013	1.02	24823	0.01	2	
Zn	66	2	He	2.404	2.404	2.22	5324	0.05	2	
Al	27	2	He	2.787	2.787	30.04	1303	0.21	2	NewName Main CR1 Failed
B	11	1	No Gas	17.305	17.305	1.42	77088	0.02	10	NewName Main CR1 Failed
Al	27	1	No Gas	3.439	3.439	0.95	136316	0.00	2	NewName Main CR1 Failed
Si	28	1	No Gas	11.441	11.441	5.75	690812	0.00	10	
P	31	1	No Gas	7.319	7.319	6.08	44415	0.02	10	
Ag	107	1	No Gas	1.967	1.967	2.62	73638	0.00	2	
Cd	111	1	No Gas	1.868	1.868	2.27	14175	0.01	2	
Sr	88	1	No Gas	1.940	1.940	0.69	152328	0.00	2	
Mo	95	1	No Gas	1.864	1.864	1.40	26537	0.01	2	
Sn	118	1	No Gas	1.993	1.993	2.42	51325	0.00	2	
Sb	121	1	No Gas	1.894	1.894	0.99	57734	0.00	2	
Ba	137	1	No Gas	2.092	2.092	5.27	26006	0.01	2	
Tl	205	1	No Gas	1.777	1.777	2.87	111739	0.00	2	
Tl	203	1	No Gas	1.691	1.691	2.71	45063	0.00	2	
Pb	208	1	No Gas	1.875	1.875	2.36	155907	0.00	2	
U	238	1	No Gas	1.817	1.817	2.04	140206	0.00	2	
Ca	43	2	He	216.292	216.292	4.69	497	43.55	200	
Sb	121	2	He	1.918	1.918	1.81	21808	0.01	2	
Ti	47	2	He	1.611	1.611	23.30	433	0.37	200	
Cu	63	1	No Gas	2.046	2.046	1.74	55326	0.00	2	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1873475	0.84	2076007	90.24	70	120	
Ge	72	2	He	1189932	0.80	1283119	92.74	70	120	
Ge	72	1	No Gas	5679536	0.53	5854434	97.01	70	120	
In	115	1	No Gas	7018314	0.94	7184199	97.69	70	120	
Bi	209	1	No Gas	5323833	2.72	5632659	94.52	70	120	

Sample Report

Sample Table

Sample Name	LLCCV5
Data File Name	371LCV5.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-15T01:03:43-05:00
Sample Type	LLCCV5
Dilution	1
Comment	
ISTD Ref FileName	218CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	1	No Gas	4.924	4.924	3.81	221452	0.00	5	
Be	9	1	No Gas	4.681	4.681	2.28	26532	0.02	5	
V	51	2	He	4.562	4.562	0.55	40574	0.01	5	
Cr	52	2	He	4.782	4.782	1.63	50627	0.01	5	
Fe	56	2	He	486.067	486.067	1.04	4315919	0.01	500	
Se	78	2	He	5.048	5.048	3.68	685	0.74	5	
Sn	118	2	He	4.733	4.733	1.94	46299	0.01	5	
As	75	2	He	4.859	4.859	1.87	6962	0.07	5	
Ca	44	2	He	458.710	458.710	1.37	18583	2.47	500	
Na	23	2	He	602.508	602.508	1.99	737451	0.08	500	
Mg	24	2	He	474.261	474.261	0.67	285808	0.17	500	
K	39	2	He	467.494	467.494	2.23	378299	0.12	500	
Mn	55	2	He	4.731	4.731	2.22	31523	0.02	5	
Co	59	2	He	4.882	4.882	2.74	80930	0.01	5	
Ni	60	2	He	4.911	4.911	1.54	21367	0.02	5	
Cu	63	2	He	4.899	4.899	1.97	59500	0.01	5	
Zn	66	2	He	5.238	5.238	1.93	10988	0.05	5	
Al	27	2	He	5.634	5.634	9.11	2117	0.27	5	
B	11	1	No Gas	29.810	29.810	1.91	123847	0.02	25	
Al	27	1	No Gas	6.449	6.449	1.67	222141	0.00	5	
Si	28	1	No Gas	26.921	26.921	3.29	929520	0.00	25	
P	31	1	No Gas	21.048	21.048	2.52	65397	0.03	25	
Ag	107	1	No Gas	5.052	5.052	0.58	183584	0.00	5	
Cd	111	1	No Gas	4.889	4.889	1.75	36070	0.01	5	
Sr	88	1	No Gas	4.828	4.828	2.04	364590	0.00	5	
Mo	95	1	No Gas	4.767	4.767	1.14	65853	0.01	5	
Sn	118	1	No Gas	4.996	4.996	2.16	120128	0.00	5	
Sb	121	1	No Gas	4.731	4.731	0.70	145285	0.00	5	
Ba	137	1	No Gas	5.154	5.154	3.49	59464	0.01	5	
Tl	205	1	No Gas	4.591	4.591	1.23	283324	0.00	5	
Tl	203	1	No Gas	4.396	4.396	3.72	114909	0.00	5	
Pb	208	1	No Gas	4.754	4.754	2.09	386178	0.00	5	
U	238	1	No Gas	4.517	4.517	2.74	342755	0.00	5	
Ca	43	2	He	435.024	435.024	4.54	1003	43.36	500	
Sb	121	2	He	4.717	4.717	2.40	53948	0.01	5	
Ti	47	2	He	4.669	4.669	18.48	1270	0.37	5	
Cu	63	1	No Gas	4.996	4.996	2.50	133043	0.00	5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1885019	2.41	2076007	90.80	70	120	
Ge	72	2	He	1206539	0.66	1283119	94.03	70	120	

Sample Report

Ge	72	1	No Gas	5774761	1.61	5854434	98.64	70	120	
In	115	1	No Gas	6832153	1.11	7184199	95.10	70	120	
Bi	209	1	No Gas	5233208	2.11	5632659	92.91	70	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	372ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-15T01:05:35-05:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	218CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Li	7	1	No Gas	0.802	6.4	117632	0.4	0	ICSA Main CR1 Failed
Be	9	1	No Gas	0.003	188.8	32	87.0	0	ICSA Main CR1 Failed
V	51	2	He	0.012	100.6	1909	5.2	0	ICSA Main CR1 Failed
Cr	52	2	He	0.994	5.4	11318	4.4	0	ICSA Main CR1 Failed
Fe	56	2	He	101747.043	1.3	886353187	0.5	0	
Se	78	2	He	0.230	64.8	121	13.3	0	ICSA Main CR1 Failed
Sn	118	2	He	0.017	28.1	1483	2.4	0	ICSA Main CR1 Failed
As	75	2	He	0.117	6.8	238	5.3	0	ICSA Main CR1 Failed
Ca	44	2	He	99466.174	1.3	3902352	1.1	0	
Na	23	2	He	100968.033	0.4	113197858	0.4	0	
Mg	24	2	He	99020.132	1.1	58568567	0.3	0	
K	39	2	He	102595.298	1.6	72822076	0.9	0	
Mn	55	2	He	0.209	5.6	1800	4.5	0	ICSA Main CR1 Failed
Co	59	2	He	0.197	0.5	3391	1.2	0	ICSA Main CR1 Failed
Ni	60	2	He	0.236	17.9	1177	15.7	0	ICSA Main CR1 Failed
Cu	63	2	He	0.440	1.4	6345	1.3	0	ICSA Main CR1 Failed
Zn	66	2	He	0.382	29.6	1387	16.5	0	ICSA Main CR1 Failed
Al	27	2	He	94329.030	1.8	25872951	1.1	0	
B	11	1	No Gas	8.837	2.4	43333	2.3	0	
Al	27	1	No Gas	98537.402	1.2	2595381668	1.3	0	
Si	28	1	No Gas	22.546	6.4	820714	2.3	0	
P	31	1	No Gas	97339.310	2.5	136065651	1.4	0	
Ag	107	1	No Gas	0.016	15.1	860	9.9	0	ICSA Main CR1 Failed
Cd	111	1	No Gas	1.462	2.4	10171	1.9	0	ICSA Main CR1 Failed
Sr	88	1	No Gas	0.991	0.6	72684	0.9	0	ICSA Main CR1 Failed
Mo	95	1	No Gas	2112.665	1.8	27404151	0.9	0	
Sn	118	1	No Gas	0.028	21.0	3801	4.4	0	ICSA Main CR1 Failed
Sb	121	1	No Gas	0.021	16.7	1447	8.1	0	ICSA Main CR1 Failed
Ba	137	1	No Gas	0.046	38.4	2350	8.3	0	ICSA Main CR1 Failed
Tl	205	1	No Gas	0.007	34.2	660	18.9	0	ICSA Main CR1 Failed
Tl	203	1	No Gas	0.010	22.9	363	16.1	0	ICSA Main CR1 Failed
Pb	208	1	No Gas	0.030	9.5	3460	4.7	0	ICSA Main CR1 Failed
U	238	1	No Gas	0.003	17.2	237	13.6	0	ICSA Main CR1 Failed
Ca	43	2	He	97329.162	2.4	218734	1.8	0	
Sb	121	2	He	0.017	67.9	490	25.5	0	ICSA Main CR1 Failed
Ti	47	2	He	1958.915	0.8	522299	0.3	0	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1767758	0.63	2076007	85.15	70	120	
Ge	72	2	He	1186618	0.75	1283119	92.48	70	120	
Ge	72	1	No Gas	5477839	1.21	5854434	93.57	70	120	
In	115	1	No Gas	6428918	1.01	7184199	89.49	70	120	
Bi	209	1	No Gas	4614303	1.91	5632659	81.92	70	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	373ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\041420A.b
Acq Date Time	2020-04-15T01:07:34-05:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	218CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	No Gas	107.065	2.606	2506919	1.09	100	107.1	180	120	ICSB Main CR1 Failed
Be	9	1	No Gas	104.097	2.129	568281	0.83	100	104.1	80	120	
V	51	2	He	100.877	0.511	846426	0.28	100	100.9	80	120	
Cr	52	2	He	105.729	1.808	1077842	1.97	100	105.7	80	120	
Fe	56	2	He	114171.285	1.010	997323798	1.11	100	114171.3	80	120	ICSB Main CR1 Failed
Se	78	2	He	107.898	1.814	12504	2.05	100	107.9	80	120	
Sn	118	2	He	101.795	0.459	919454	1.23	100	101.8	80	120	
As	75	2	He	108.603	0.613	151873	0.78	100	108.6	80	120	
Ca	44	2	He	110761.387	0.351	4357320	0.68	100	110761.4	80	120	
Na	23	2	He	110487.838	0.407	124200338	0.27	100	110487.8	80	120	
Mg	24	2	He	111008.032	1.686	65836484	1.34	100	111008.0	80	120	
K	39	2	He	114256.469	0.304	81317797	0.15	100	114256.5	80	120	
Mn	55	2	He	99.735	0.906	646453	1.27	100	99.7	80	120	
Co	59	2	He	105.537	1.716	1721566	2.09	100	105.5	80	120	
Ni	60	2	He	100.536	0.875	427963	1.09	100	100.5	80	120	
Cu	63	2	He	99.493	1.081	1168443	0.86	100	99.5	80	120	
Zn	66	2	He	102.945	0.336	200900	0.68	100	102.9	80	120	
Al	27	2	He	95153.801	1.226	26170935	0.89	100	95153.8	80	120	ICSB Main CR1 Failed
B	11	1	No Gas	517.703	2.375	1860528	1.98	100	517.7	80	120	
Al	27	1	No Gas	98303.254	1.456	2643241027	2.15	100	98303.3	80	120	ICSB Main CR1 Failed
Si	28	1	No Gas	535.447	0.262	8119688	0.85	100	535.4	80	120	
P	31	1	No Gas	98273.382	0.088	140250251	0.79	100	98273.4	80	120	ICSB Main CR1 Failed
Ag	107	1	No Gas	102.392	1.721	3597673	0.85	100	102.4	80	120	
Cd	111	1	No Gas	103.625	1.088	739880	0.28	100	103.6	80	120	
Sr	88	1	No Gas	110.847	1.066	8045446	1.19	100	110.8	80	120	
Mo	95	1	No Gas	2200.619	1.945	29388514	1.31	100	2200.6	80	120	
Sn	118	1	No Gas	110.223	1.633	2498752	2.34	100	110.2	80	120	
Sb	121	1	No Gas	105.258	0.410	3112125	1.11	100	105.3	80	120	
Ba	137	1	No Gas	109.980	1.836	1190324	1.52	100	110.0	80	120	
Tl	205	1	No Gas	103.596	0.458	5702086	1.04	100	103.6	80	120	
Tl	203	1	No Gas	103.820	1.787	2420663	1.94	100	103.8	80	120	
Pb	208	1	No Gas	107.139	0.982	7742801	1.68	100	107.1	80	120	
U	238	1	No Gas	107.892	1.522	7304696	1.06	100	107.9	80	120	
Ca	43	2	He	109135.527	1.165	245948	0.98	100	109135.5	80	120	
Sb	121	2	He	106.047	1.588	1189587	1.63	100	106.0	80	120	
Ti	47	2	He	2095.607	0.699	560279	1.09	100	2095.6	80	120	ICSB Main CR1 Failed
Cu	63	1	No Gas	102.539	2.324	2588139	1.49	100	102.5	80	120	

QC ISTD Table

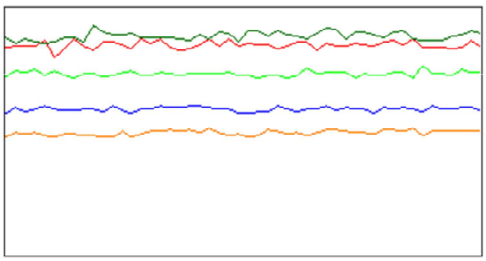
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	1	No Gas	1816628	1.42	2076007	87.51	70	120	
Ge	72	2	He	1189809	0.39	1283119	92.73	70	120	
Ge	72	1	No Gas	5591592	0.86	5854434	95.51	70	120	
In	115	1	No Gas	6618748	0.93	7184199	92.13	70	120	
Bi	209	1	No Gas	4672052	1.00	5632659	82.95	70	120	

Tune Check Report

Operator Name	ALSHS NoUser
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\041320A.b
Acq. Date-Time	4/13/2020 12:24:44 PM
Report Comment	---
Instrument Name	G8421A SG18523544

[No Gas]

Sensitivity



Sampling Period [sec]	0.514
Integration Time [sec]	0.1

Mass	Range	Count	Resp [cps/ug/l]	Resp (Required) [cps/ug/l]	Resp (Flag)
9	10000	8520	85195.24		
24	50000	36748	367479.81		
59	100000	59222	592219.47		
115	200000	99263	992627.84		
208	50000	44431	444308.06		

Mass	Resp Ratio	Resp Ratio (Required)	Resp Ratio (Flag)
9		-	
24		-	
59		-	
115		-	
208		-	

Mass	RSD%	RSD% (Required)	RSD% (Flag)
9	1.776	5.000	
24	1.357	5.000	
59	1.408	5.000	
115	1.887	5.000	
208	1.943	5.000	

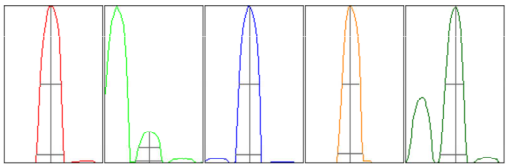
Mass	Background	Background (Required)	Background (Flag)
9	0.300		
24	0.100		
59	0.400		
115	1.000		
208	1.700		

Oxide/Doubly Charged Ratio

Oxide	156 / 140 0.822 %
Doubly Charged	70 / 140 0.887 %

Tune Check Report

Resolution/Axis



Integration Time [sec]	0.1
Acquisition Time [sec]	37.4
Y Axis	Linear

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	8626.29	8.95	8.90 - 9.10	
24	37622.85	23.90	23.90 - 24.10	
59	62012.82	58.90	58.90 - 59.10	
115	103891.83	114.90	114.90 - 115.10	
208	44608.48	208.05	207.90 - 208.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.65	0.828		
24	0.64	0.822		
59	0.60	0.779		
115	0.55	0.767		
208	0.57	0.808		

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas	0.60 L/min	Dilution Gas	0.40 L/min
RF Power	1600 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.80 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	9.1 V	Deflect	12.6 V
Extract 2	-195.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-90 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	---	OctP RF	190 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0002	QP Bias	-3.0 V
Mass Offset	125	Axis Offset	0.03		

Hardware Settings

Torch

Torch H	0.5 mm	Torch V	0.0 mm

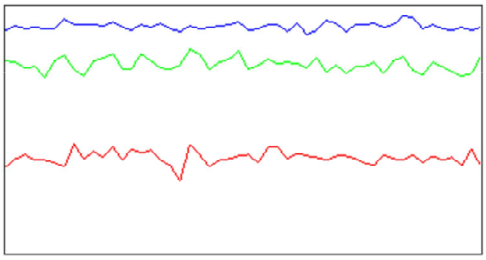
EM

Discriminator	3.2 mV	Analog HV	2390 V	Pulse HV	1162 V

[He]

Tune Check Report

Sensitivity



Sampling Period [sec]	0.306
Integration Time [sec]	0.1

Mass	Range	Count	Resp [cps/ug/l]	Resp (Required) [cps/ug/l]	Resp (Flag)
9	500	194	1937.13		
24	1000	765	7648.88		
59	20000	18389	183889.54		

Mass	Resp Ratio	Resp Ratio (Required)	Resp Ratio (Flag)
9		-	
24		-	
59		-	

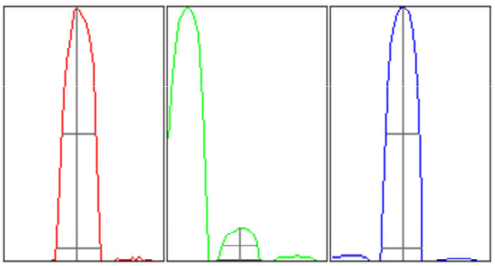
Mass	RSD%	RSD% (Required)	RSD% (Flag)
9	7.004	5.000	Fail
24	3.620	5.000	
59	1.604	5.000	

Mass	Background	Background (Required)	Background (Flag)
9	0.100		
24	0.000		
59	0.200		

Oxide/Doubly Charged Ratio

Oxide	156 / 140 0.282 %
Doubly Charged	70 / 140 0.931 %

Resolution/Axis



Integration Time [sec]	0.1
Acquisition Time [sec]	22.24
Y Axis	Linear

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	205.27	8.90	8.90 - 9.10	
24	769.74	23.90	23.90 - 24.10	
59	18958.97	58.90	58.90 - 59.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.65	0.827		
24	0.64	0.806		

Tune Check Report

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
59	0.61	0.779		

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas	0.60 L/min	Dilution Gas	0.40 L/min
RF Power	1600 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.80 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.0 V	Deflect	0.0 V
Extract 2	-195.0 V	Cell Entrance	-40 V	Plate Bias	-70 V
Omega Bias	-80 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discrimination	3.0 V
He Flow	5.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	---	OctP RF	200 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0002	QP Bias	-15.0 V
Mass Offset	125	Axis Offset	0.03		

Hardware Settings

Torch

Torch H	0.5 mm	Torch V	0.0 mm

EM

Discriminator	3.2 mV	Analog HV	2390 V	Pulse HV	1162 V

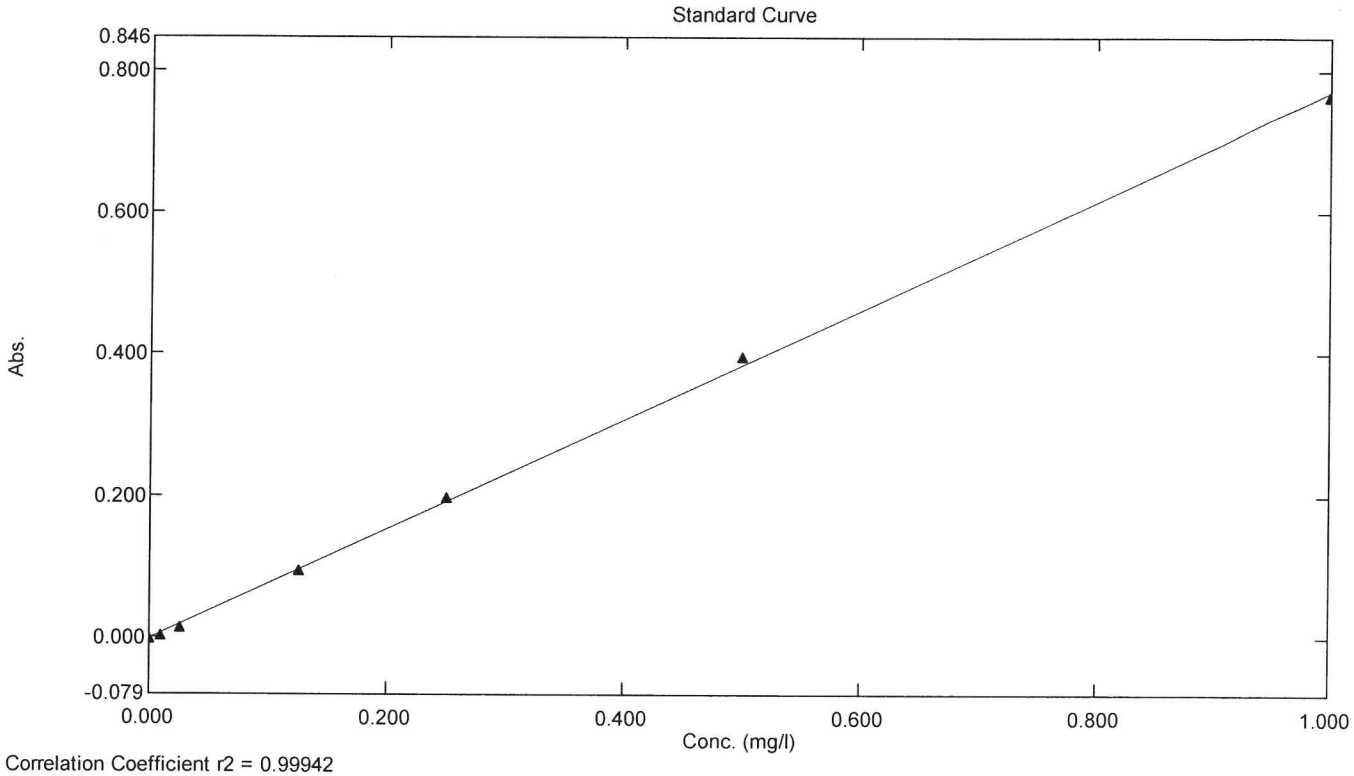
HS20040287 WC CHROME

ALS WO# HS20040287

Standard Table Report

04/30/2020 05:33:00 PM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\CR6+_UNKNOWN\2020\04082020CR6_W_.pho



Correlation Coefficient r2 = 0.99942

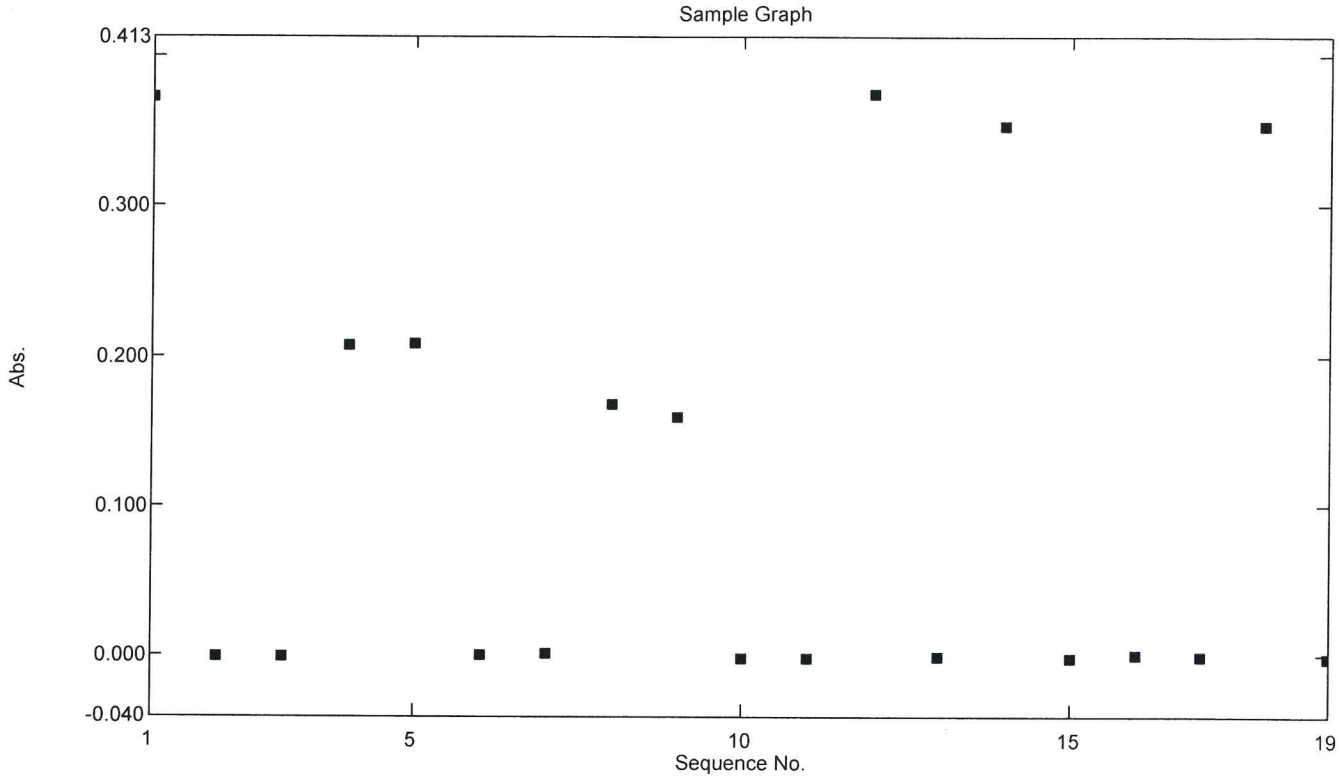
Standard Table

	Sample ID	Type	Ex	Conc	WL540.0	Wgt.Factor	Comments
1	STD1	Standard		0.000	-0.002	1.000	
2	STD2	Standard		0.010	0.002	1.000	
3	STD3	Standard		0.025	0.013	1.000	
4	STD4	Standard		0.125	0.094	1.000	
5	STD5	Standard		0.250	0.197	1.000	
6	STD6	Standard		0.500	0.397	1.000	
7	SYD7	Standard		1.000	0.763	1.000	
8							

Sample Table Report

04/30/2020 05:33:04 PM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\CR6+_UNKNOWN\2020\04082020CR6_W_.pho



Sample Table

	Sample ID	Type	Ex	Conc	WL540.0	Comments
1	CCV	Unknown		0.485	0.373	313102405 WC-14
2	CCB	Unknown		0.001	-0.001	313102507 WC-13
3	MBLK	Unknown		0.001	-0.001	313101607 WC-13
4	LCS	Unknown		0.271	0.207	313102404 WC-14
5	LCSD	Unknown		0.272	0.208	
6	20040287.01	Unknown		0.003	0.001	SAMP-BKG=TOTAL,12:55PM
7	20040287.01BKG	Unknown		0.004	0.001	-0.001 12:57PM
8	20040287.01MS	Unknown		0.219	0.168	12:58PM
9	20040287.01MSD	Unknown		0.209	0.160	12:58PM
10	20040284.01	Unknown		-0.000	-0.002	12:58PM ,0
11	20040284.01BKG	Unknown		-0.000	-0.002	12:59PM
12	CCV2	Unknown		0.488	0.375	
13	CCB2	Unknown		0.001	-0.000	
14	CCV3	Unknown		0.460	0.353	
15	CCB3	Unknown		-0.001	-0.002	
16	20040308.01	Unknown		0.003	0.001	4:55PM 0.002
17	20040308.01BKG	Unknown		0.001	-0.001	4:55PM
18	CCV4	Unknown		0.460	0.353	
19	CCB4	Unknown		-0.001	-0.002	

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WorkOrder: HS20040289

Longhorn GW Treatment Plant Weekly Samples

Bhate Environmental Associates, Inc.

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

04-May-2020

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
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- HS20040289 WC P_ORTHO

HS20040289

ALS WO# HS20040289

HS20040289 Longhorn GW Treatment Plant Weekly Samples Final

ALS WO# HS20040289

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April 22, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20040289**

Laboratory Results for: **Longhorn GW Treatment Plant Weekly Samples**

Dear Marcia,

ALS Environmental received 2 sample(s) on Apr 08, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

ALS Houston, US Date: 22-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20040289

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20040289-01	LH18/24-SP650_040720	Water		07-Apr-2020 14:00	08-Apr-2020 08:22	☐
HS20040289-02	LH18/24-SP650_040720_BIX	Water		07-Apr-2020 14:00	08-Apr-2020 08:22	☐

ALS Houston, US Date: 22-Apr-20

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20040289

Work Order Comments

• The analysis for Perchlorate was subcontracted to ALS High Resolution Lab in Houston, TX. Final report attached.

The analysis for TOC was subcontracted to ALS Environmental in Kelso, WA. Final Report attached.

WetChemistry by Method E350.3

Batch ID: R359941

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method E365.3

Batch ID: R359818

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

ALS Houston, US Date: 22-Apr-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**

Project: Longhorn GW Treatment Plant Weekly Samples WorkOrder:HS20040289

Sample ID: LH18/24-SP650_040720 Lab ID:HS20040289-01

Collection Date: 07-Apr-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
AMMONIA AS N BY E350.3(ISE)		**Method:E350.3**						Analyst: YP
Nitrogen, Ammonia (As N)	**1.6**	a	**0.20**	**0.10**	**0.20**	**mg/L**	1	14-Apr-2020 12:00
ORTHO PHOSPHATE (PO4) AS P BY E365.3		**Method:E365.3**						Analyst: KVL
Phosphorus, Total Orthophosphate (As P)	**0.125**	a	**0.0100**	**0.0250**	**0.0250**	**mg/L**	1	09-Apr-2020 12:00
SUBCONTRACT ANALYSIS - TOC ANALYSIS		**Method:NA**						Analyst: SUBK
Subcontract Analysis	See Attached		0	0		NA	1	20-Apr-2020 14:06

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 22-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Sample ID: LH18/24-SP650_040720_BIX
Collection Date: 07-Apr-2020 14:00

ANALYTICAL REPORT
WorkOrder:HS20040289
Lab ID:HS20040289-02
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: CGG
Subcontract Analysis	**0**		**0**	**0**	**0**	**NA**	1	22-Apr-2020 15:35

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 22-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20040289

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R359818 (0)	**Test Name :** ORTHO PHOSPHATE (PO4) AS P BY E365.3				**Matrix:** Water	
HS20040289-01	LH18/24-SP650_040720	07 Apr 2020 14:00			09 Apr 2020 12:00	1
Batch ID: R359941 (0)	**Test Name :** AMMONIA AS N BY E350.3(ISE)				**Matrix:** Water	
HS20040289-01	LH18/24-SP650_040720	07 Apr 2020 14:00			14 Apr 2020 12:00	1
Batch ID: R360237 (0)	**Test Name :** SUBCONTRACT ANALYSIS - TOC ANALYSIS				**Matrix:** Water	
HS20040289-01	LH18/24-SP650_040720	07 Apr 2020 14:00			20 Apr 2020 14:06	1
Batch ID: R360393 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Water	
HS20040289-02	LH18/24-SP650_040720_BIX	07 Apr 2020 14:00			22 Apr 2020 15:35	1

ALS Houston, US Date: 22-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20040289

QC BATCH REPORT

Batch ID: R359818 (0) **Instrument:** UV-2450 **Method:** ORTHO PHOSPHATE (PO4) AS P BY E365.3

MBLK Sample ID: **MBLK-R359818** Units: **mg/L** Analysis Date: **09-Apr-2020 12:00**
Client ID: Run ID: **UV-2450_359818** SeqNo: **5550917** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.0250	0.0250								U

LCS Sample ID: **LCS-R359818** Units: **mg/L** Analysis Date: **09-Apr-2020 12:00**
Client ID: Run ID: **UV-2450_359818** SeqNo: **5550916** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.24	0.0250	0.25	0	96.0	85 - 115				

LCSD Sample ID: **LCSD-R359818** Units: **mg/L** Analysis Date: **09-Apr-2020 12:00**
Client ID: Run ID: **UV-2450_359818** SeqNo: **5550915** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.245	0.0250	0.25	0	98.0	85 - 115	0.24	2.06	20	

MS Sample ID: **HS20040289-01MS** Units: **mg/L** Analysis Date: **09-Apr-2020 12:00**
Client ID: **LH18/24-SP650_040720** Run ID: **UV-2450_359818** SeqNo: **5550919** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.364	0.0250	0.25	0.125	95.6	80 - 120				

MSD Sample ID: **HS20040289-01MSD** Units: **mg/L** Analysis Date: **09-Apr-2020 12:00**
Client ID: **LH18/24-SP650_040720** Run ID: **UV-2450_359818** SeqNo: **5550918** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.365	0.0250	0.25	0.125	96.0	80 - 120	0.364	0.274	20	

The following samples were analyzed in this batch: HS20040289-01

ALS Houston, US Date: 22-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20040289

QC BATCH REPORT

Batch ID: R359941 (0) **Instrument: WetChem_HS** **Method: AMMONIA AS N BY E350.3(ISE)**

MBLK Sample ID: **MBLK-R359941** Units: **mg/L** Analysis Date: **14-Apr-2020 12:00**
Client ID: Run ID: **WetChem_HS_359941** SeqNo: **5553741** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	0.10	0.20								U

LCS Sample ID: **LCS-R359941** Units: **mg/L** Analysis Date: **14-Apr-2020 12:00**
Client ID: Run ID: **WetChem_HS_359941** SeqNo: **5553740** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	10.19	0.20	10	0	102	80 - 120				

MS Sample ID: **HS20040205-01MS** Units: **mg/L** Analysis Date: **14-Apr-2020 12:00**
Client ID: Run ID: **WetChem_HS_359941** SeqNo: **5559334** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	10.75	0.20	10	0.134	106	80 - 120				

MSD Sample ID: **HS20040205-01MSD** Units: **mg/L** Analysis Date: **14-Apr-2020 12:00**
Client ID: Run ID: **WetChem_HS_359941** SeqNo: **5559335** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	10.75	0.20	10	0.134	106	80 - 120	10.75	0.0279	20	

The following samples were analyzed in this batch: HS20040289-01

ALS Houston, US Date: 22-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: **HS20040289**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
California	2919, 2019-2020	30-Apr-2020
Dept of Defense	ANAB L2231 V009	22-Dec-2021
Florida	E87611-28	30-Jun-2020
Illinois	2000322019-2	09-May-2020
Kansas	E-10352 2019-2020	31-Jul-2020
Kentucky	123043, 2019-2020	30-Apr-2020
Louisiana	03087, 2019-2020	30-Jun-2020
Maryland	343, 2019-2020	30-Jun-2020
North Carolina	624-2020	31-Dec-2020
North Dakota	R-193 2019-2020	30-Apr-2020
Oklahoma	2019-067	31-Aug-2020
Texas	T104704231-19-25	30-Apr-2020

ALS Houston, US Date: 22-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20040289

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20040289-01	LH18/24-SP650_040720	Login	4/8/2020 10:05:13 AM	PMG	WET005
HS20040289-01	LH18/24-SP650_040720	Login	4/8/2020 10:05:13 AM	PMG	WET005
HS20040289-01	LH18/24-SP650_040720	Login	4/8/2020 10:05:13 AM	PMG	Sub
HS20040289-02	LH18/24-SP650_040720_BIX	Login	4/8/2020 10:05:13 AM	PMG	Sub

ALS Houston, US Date: 22-Apr-20

Sample Receipt Checklist

Client Name: Bhate Environmental
Work Order: HS20040289
Date/Time Received: **08-Apr-2020 08:22**
Received by: **AC**

Checklist completed by: *Paresh M. Giga* eSignature 8-Apr-2020 Date
Reviewed by: *RJ Modashia* eSignature 8-Apr-2020 Date

Matrices: **Water**
Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	COC IDs:None
Samplers name present on COC?	Yes ☐	No ☑	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	

Temperature(s)/Thermometer(s):	2.5C U/C	IR25
Cooler(s)/Kit(s):	2759	
Date/Time sample(s) sent to storage:	4/8/2020 10:15	

Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stancliff Rd. Suite 210 Houston, TX. 77099 (281) 530-5656 ATTN: R.J Modashia

Project: BHATE
LONGHORN ARMY AMMN. PLANT (LHAAP)
GROUNDWATER TREATMENT PLANT (GWTP)
KARNACK, TEXAS

Project No. NWO1312.0150.0 16.0001

Job: GROUNDWATER TREATMENT PLANT WEEKLY SAMPLES

Prepared By: Scott Beesinger

P.O. Number

HS20040289
Bhate Environmental Associates, Inc.
Longhorn GW Treatment Plant Weekly Samples

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: AMMONIA-N	TOTAL ORGANIC CARBON	ORTHO-PHOSPHATE	PERCHLORATE	Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP650_040720	Water	04/07/20 / 14:00		3	X	X			H2SO4	
LH18/24-SP650_040720	Water	04/07/20 / 14:00		1			X		NONE	
LH18/24–SP650_040720_BIX	Water	04/07/20 / 14:00		1				X	NONE	

Additional Remarks: **Standard TAT on all parameters**

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	04/07/20	14:30	AC	08: 22	4/8/ 2020						

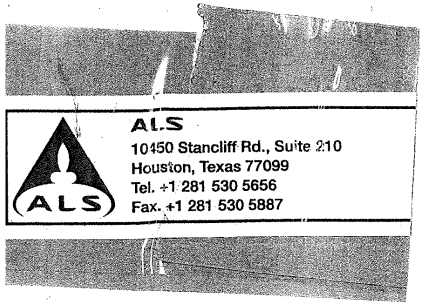
For Lab Use Only

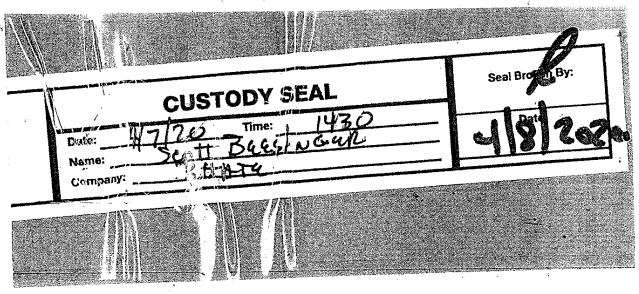
Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition

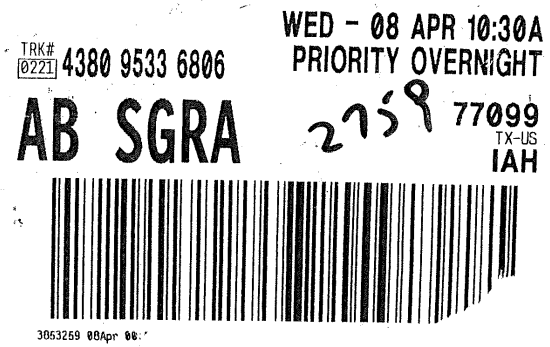
Remarks:

w/c 2.5 IR#35 CF0.0 2759

(Word) S:\l-ces\Forms\Chain of Custody - BiWeekly


ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887


CUSTODY SEAL
Seal Broken By:
Date:
Time:
Name:
Company:


TRK# 0221 4380 9533 6806
WED - 08 APR 10:30A
PRIORITY OVERNIGHT
AB SGRA
77099
TX-US
IAH

April 22, 2020 Service Request No:E2000303

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

Laboratory Results for: HS20040289

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory April 08, 2020
For your reference, these analyses have been assigned our service request number **E2000303.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental

Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2000303
Project:	HS20040289	**Date Received:**	04/08/20
Sample Matrix:	W		

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier IV. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

One sample was received for analysis at ALS Environmental in Houston on 04/08/20.

The sample was received in good condition and is consistent with the accompanying chain of custody form. The sample was stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2000143: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in lieu of a MS/MSD for this extraction batch. The LCS and DLCS recoveries are within QC limits.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: ALS Environmental - US **Service Request:**E2000303
Project: HS20040289

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2000303-001	LH18/24-SP650_040720_BIX	4/7/2020	1400

Service Request Summary

Folder #: **E2000303**
Client Name: ALS Environmental - US
Project Name: HS20040289
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 04/08/20
Internal Due Date: 4/22/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20040289
EDD: No EDD Specified

1 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
Location: EHRMS-WIC 10B
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2000303-001	LH18/24-SP650_040720_BIX	Water	04/07/20 1400	**IV**

Service Request Summary

Folder #:	**E2000303**
Client Name:	ALS Environmental - US
Project Name:	HS20040289
Project Number:	

Report To:	RJ Modashia ALS Laboratory Group 10450 Stancliff Road Houston, TX 77099-4338 USA
Phone Number:	281-530-5656
Cell Number:	
Fax Number:	281-530-5887
E-mail:	rj.modashia@alsglobal.com

Project Chemist:	Corey Grandits
Originating Lab:	HOUSTON
Logged By:	CGRANDITS
Date Received:	04/08/20
Internal Due Date:	4/22/2020
QAP:	LAB QAP
Qualifier Set:	Lab Standard
Formset:	Lab Standard
Merged?:	Y
Report to MDL?:	Y
P.O. Number:	HS20040289
EDD:	No EDD Specified

1 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved

Location: EHRMS-WIC 10B

Pressure Gas:

Data Qualifiers

Lab Standard

+	Possible Tedlar bag artifact.
A	TIC is a suspected aldol-condensation product
B	Analyte found in the associated method blank as well as in the sample.
BC	Reported results are not blank corrected.
BH	The back section of the tube yielded higher results than the front.
BT	Results indicated possible breakthrough; back section >=10% front section.
C	Result identification confirmed.
D	Compound identified in an analysis at a secondary dilution factor
D	Spike was diluted out
DE	Reported results are corrected for desorption efficiency.
E	Estimated value. Concentration above calibration range
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
H1	Sample analysis performed past holding time. See case narrative.
H2	Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
H3	Sample was received and analyzed past holding time.
H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
I	Internal standard not within the specified limits. See case narrative.
J	Estimated Value. Concentration found below MRL.
K	A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
K	Analyte was detected above the method reporting limit prior to normalization.
L1	Laboratory control sample recovery outside the specified limits; results may be biased high.
L2	Laboratory control sample recovery outside the specified limits; results may be biased low.
L3	Laboratory control sample recovery outside the specified limits.
M	Matrix interference; results may be biased high.
M	The duplicate injection precision not met.
M1	Matrix interference due to coelution with a non-target compound; results may be biased high.
N	Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
P	Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
P	Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
Q	Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
R	Duplicate Precision not met.
R1	Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
S	Surrogate recovery not within specified limits.

Data Qualifiers

Lab Standard

S	The reported value was determined by the Method of Standard Additions (MSA).
T	Analyte is a tentatively identified compound, result is estimated.
U	Compound was analyzed for, but was not detected (ND).
V1	The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
V2	The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
W	Result quantified, but the corresponding peak was detected outside the generated retention time window.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
X	See case narrative.
Y	Recovery outside limits
Y	The chromatogram resembles a petroleum product but does not match the calibration standard.
Z	The chromatogram does not resemble a petroleum product.
i	The MRL/MDL has been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

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ALS Environmental

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
Arizona Department of Health Services	AZ0793	5/27/2020
California Department of Health Services	2919	4/30/2020
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611	6/30/2020
Hawaii Department of Health	TX02694	4/30/2020
Illinois Environmental Protection Agency	2000322019-2	5/9/2020
Kansas Department of Health and Environment	E-10352	7/31/2020
Louisiana Department of Environmental Quality	03087	6/30/2020
Louisiana Department of Health and Hospitals	LA028-2020	12/31/2020
Maine Center for Disease Control and Prevention	201815	6/5/2020
Maryland Department of the Environment	343	6/30/2020
Minnesota Department of Health	1785988	12/31/2020
Nebraska Department of Health and Human Services	NE-OS-25-13	4/30/2020
Nevada Department of Concervation and Natural Resources	TX026932019-1	7/31/2020
New Hampshire Environmental Laboratory Accreditation Program	209419	4/24/2020
New Jersey Department of Environmental Protection	NLC190001	6/30/2020
New York Department of Health	11707	3/31/2021
Oklahoma Department of Environmental Quality	2019-067	8/31/2020
Pennsylvania Department of Environmental Protection	68-03441-013	6/30/2020
Tennessee Department of Environment and Concervation	04016	6/30/2020
Texas Commision on Environmental Quality	TX104704231-19-25	4/30/2020
United States Department of Agriculture	P330-19-00299	10/10/2022
Utah Department of Health Environmental Laboratory Certification	TX026932019-9	7/31/2020
Washington Department of Health	C819	11/14/2020
West Virginia Department of Environmental Protection	347	6/30/2020

ALS

Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

10450 Stancliff Rd, Ste 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **13661**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

Company: ALS Houston
Contact: RJ Modashia
Address: 10450 Stancliff Rd, Ste 210
Phone: +1 281 530 5656
Email: RJ.Modashia@alsglobal.com
Alternate Contact:
Email:

INVOICE INFORMATION:

Company: ALS Houston
Contact: Accounts Payable
Address: 10450 Stancliff Rd, Ste 210
Phone: +1 281 530 5656
Reference: HS20040289
TSR: Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20040289-02**	**LH18/24-SP650_040720_BIX**	**Water**	**07 Apr 2020 14:00**
	SUB_Perch-6850			22 Apr 2020

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: _____ Date/Time: 4/8/2020 11:42.

Received By: _____ Date/Time: 4/8/2020 11:42

Cooler ID(s): _____ Temperature(s): _____

ALS Environmental

Cooler Receipt Form

Project Chemist CH

Client/Project Air-H

Thermometer ID 5M04

Date/Time Received: 4/8/2026 Initials: CH

Date/Time Logged in: 4/8/2026 Initials CH

1. Method of delivery: ○ US Mail ○ Fed Ex ○ UPS ○ DHL ✓ ALS Courier ○ Client

2. Samples received in: ✓ Cooler ○ Box ○ Envelope ○ Other

3. Were custody seals on coolers? ○ Yes ✓ No

Were they intact? ○ Yes ○ No ✓ N/A

Were they signed and dated? ○ Yes ○ No ✓ N/A

If yes, how many and where?

4. Packing Material: ○ Inserts ✓ Baggies ○ Bubble Wrap ○ Gel Packs ✓ Wet Ice ○ Sleeves ○ Other

5. Foreign or Regulated Soil? ○ Yes ○ No Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
-		4/8/26	1142	CH	2.6 1.0	☒
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No

7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ✓ Yes ○ No

8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No

9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No

10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label:

HS-HRMSCoolerReceipt R1.0

ALS Environmental - Houston HRMS

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Houston, TX 77099
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F: +1 713 266 1599
www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6ºC.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10ºC.
- ✓ Air samples are shipped and stored cold, at 0 to 6ºC
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

Preparation Information Benchsheets

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 357146 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/DBOTROS **Prep Method:** Method **Prep Date/Time:** 4/20/20 09:32

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2000275-001	M1Q2014	.01	6850/ClO4 DOD			Water	10mL	
2	E2000275-002	PZ-373-NS	.01	6850/ClO4 DOD			Water	10mL	
3	E2000275-003	PZ-489-NS	.01	6850/ClO4 DOD			Water	10mL	
4	E2000287-001	LH18/24-SP650_033120_BIX	.01	6850/ClO4 DOD			Water	10mL	
5	E2000303-001	LH18/24-SP650_040720_BIX	.01	6850/ClO4 DOD			Water	10mL	
6	E2000304-001	LH18/24-SP650_040720_BIX	.01	6850/ClO4 DOD			Water	10mL	
7	E2000305-001	LH18/24-SP140_040720	.01	6850/ClO4 DOD			Water	10mL	
8	EQ2000143-01	MB		6850/ClO4 DOD			Liquid	10mL	
9	EQ2000143-02	LCS		6850/ClO4 DOD			Liquid	10mL	
10	EQ2000143-03	DLCS		6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 202037 Logbook Ref: Sodium Perchlorate Expires On: 05/22/2021

E2000275-001 100.00µL E2000275-002 100.00µL E2000275-003 100.00µL E2000287-001 100.00µL E2000303-001 100.00µL E2000304-001 100.00µL
E2000305-001 100.00µL EQ2000143-01 100.00µL EQ2000143-02 100.00µL EQ2000143-03 100.00µL

Name: Perchlorate Intermediate Stock1 Inventory ID 204799 Logbook Ref: 200657 1.0ug/mL KN Expires On: 05/15/2020

EQ2000143-02 1.00µL EQ2000143-03 1.00µL

Preparation Steps

Step: Preparation
Started: 4/20/20 09:32
Finished: 4/20/20 10:00
By: KBROWN
Comments

Comments: _____

Reviewed By: kn Date: 04/20/2020

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

Analytical Results

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000303
Project:	HS20040289	**Date Collected:**	4/ 7/20 1400
Sample Matrix:	Water	**Date Received:**	4/ 8/20
Sample Name:	LH18/24-SP650_040720_BIX	**Units:**	µg/L
Lab Code:	E2000303-001	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	4/20/20	4/22/20 13:16	357146	677638	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000303
Project:	HS20040289	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2000143-01	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	4/20/20	4/20/20 15:10	357146	677504	

Accuracy & Precision

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20040289
Sample Matrix: Water

Service Request: E2000303
Date Analyzed: 4/20/20

Lab Control Sample Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Units: µg/L
Basis: NA

Extraction Lot: 357146

	Lab Control Sample EQ2000143-02			Duplicate Lab Control Sample EQ2000143-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.112	0.100	112	0.113	0.100	113	84 - 119	1	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000303
Project:	HS20040289	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000143-02	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.112**		0.100	0.0500	0.0250	1	4/20/20	4/20/20 15:18	357146	677504	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000303
Project:	HS20040289	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000143-03	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.113**		0.100	0.0500	0.0250	1	4/20/20	4/20/20 15:26	357146	677504	

Initial Calibration

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

20200420

1st Review: Kneir
2nd Review: Hvan

ALS Environmental
LCMS01 -Shimadzu 8050

ICAL Date: 4/20/2020
Cal. Std. xp: 5/14/2020
ICAL ID: **EC2000003**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100803-09 **B:** MeOH 3100802-01

	Sample Name		File Name	Acquisition Method	Dilution	R	Comments	Date/Time
	null		20200420_001	Perchlorate6850b.lcm	1x	☒		4/20/2020 13:01
	null		20200420_002	Perchlorate6850b.lcm	1x	☒		4/20/2020 13:06
	DIBLK		20200420_003	Perchlorate6850b.lcm	1x	☒		4/20/2020 13:11
	IB		20200420_004	Perchlorate6850b.lcm	1x	☒		4/20/2020 13:19
	PERCHLORATE7		20200420_005	Perchlorate6850b.lcm	1x	☒	3100805-02	4/20/2020 13:27
	LODV		20200420_006	Perchlorate6850b.lcm	1x	☒		4/20/2020 13:35
	PERCHLORATE1		20200420_007	Perchlorate6850b.lcm	1x	☒	3100804-05	4/20/2020 13:43
	PERCHLORATE2		20200420_008	Perchlorate6850b.lcm	1x	☒	3100804-06	4/20/2020 13:51
	PERCHLORATE3		20200420_009	Perchlorate6850b.lcm	1x	☒	3100804-07	4/20/2020 13:58
	PERCHLORATE4		20200420_010	Perchlorate6850b.lcm	1x	☒	3100804-08	4/20/2020 14:06
	PERCHLORATE5		20200420_011	Perchlorate6850b.lcm	1x	☒	3100804-09	4/20/2020 14:14
	PERCHLORATE6		20200420_012	Perchlorate6850b.lcm	1x	☒	3100805-01	4/20/2020 14:22
	PERCHLORATE8		20200420_013	Perchlorate6850b.lcm	1x	☒	3100805-03	4/20/2020 14:30
	PERCHLORATE9		20200420_014	Perchlorate6850b.lcm	1x	☒	3100805-04	4/20/2020 14:38
	PERCHLORATE10		20200420_015	Perchlorate6850b.lcm	1x	☒	3100805-05	4/20/2020 14:46
	ICV		20200420_016	Perchlorate6850b.lcm	1x	☒	3100805-06	4/20/2020 14:54
	LODV		20200420_017	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:02
	EQ2000143-01		20200420_018	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:10
	EQ2000143-02		20200420_019	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:18
	EQ2000143-03		20200420_020	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:26
	E2000275-001		20200420_021	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:33
	E2000275-002		20200420_022	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:41
	E2000275-003		20200420_023	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:49
	E2000287-001		20200420_024	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:57
	E2000303-001		20200420_025	Perchlorate6850b.lcm	1x	☒		4/20/2020 16:05
	E2000304-001		20200420_026	Perchlorate6850b.lcm	1x	☒		4/20/2020 16:13
	E2000305-001		20200420_027	Perchlorate6850b.lcm	1x	☒		4/20/2020 16:21
	PERCHLORATE7		20200420_028	Perchlorate6850b.lcm	1x	☒	3100805-02	4/20/2020 16:29
	E2000303-001		20200420_029	Perchlorate6850b.lcm	1x	☒		4/20/2020 16:47
	E2000304-001		20200420_030	Perchlorate6850b.lcm	1x	☒		4/20/2020 16:55
	PERCHLORATE7		20200420_031	Perchlorate6850b.lcm	1x	☒	3100805-02	4/20/2020 17:02

Initial Calibration - Detailed Report

Calibration ID: EC2000003 **Instrument ID:** E-LCMS-01
Column Name: 1

#	Lab Code	Sample Name	File Location	Aquisition Date
08	EC2000003-08	PERCHLORATE7	20200420_005	04/20/2020 13:27
01	EC2000003-01	PERCHLORATE1	20200420_007	04/20/2020 13:43
02	EC2000003-02	PERCHLORATE2	20200420_008	04/20/2020 13:51
03	EC2000003-03	PERCHLORATE3	20200420_009	04/20/2020 13:58
04	EC2000003-04	PERCHLORATE4	20200420_010	04/20/2020 14:06
05	EC2000003-05	PERCHLORATE5	20200420_011	04/20/2020 14:14
06	EC2000003-06	PERCHLORATE6	20200420_012	04/20/2020 14:22
07	EC2000003-07	PERCHLORATE8	20200420_013	04/20/2020 14:30
09	EC2000003-09	PERCHLORATE9	20200420_014	04/20/2020 14:38
10	EC2000003-10	PERCHLORATE10	20200420_015	04/20/2020 14:46

Analyte **Curve Fit** **Weighting**

Perchlorate **Average RF** **RSD = 8.066** **Average RF = 0.1368**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.1000	0.1558	02	0.5000	0.1297	03	0.7000	0.1277	04	1.0000	0.1397
05	2.0000	0.1298	06	5.0000	0.1245	07	20.0000	0.1341	08	10.0000	0.1562
09	30.0000	0.1365	10	50.0000	0.1345						

Analyte

Perchlorate

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.1000	0.114	13.9	02	0.5000	0.474	-5.2	03	0.7000	0.653	-6.7
04	1.0000	1.02	2.1	05	2.0000	1.90	-5.1	06	5.0000	4.55	-9.0
07	20.0000	19.6	-2.0	08	10.0000	11.4	14.2	09	30.0000	29.9	-0.2
10	50.0000	49.1	-1.7								

Initial Calibration Verification Summary Report

Calibration ID:	EC2000003	**Instrument ID:**	E-LCMS-01
Datafile ID:	20200420_016	**Column Name:**	1

Analyte	Lab Code	Type	Curve Fit	True Value	Calc Conc	Units	Result	Criteria
Perchlorate	EC2000003-11	T	Average RF	10	11.345	ng/mL	13.4	<= 15

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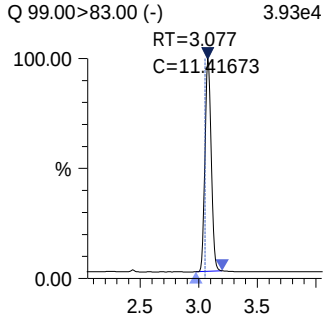
PERCHLORATE7

Date acquired: 4/20/2020 1:27:21 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_005.lcd
Vial: 3 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	4/20/2020 1:27:21 PM	144494	11.41673	20200420_005	3.077	25.0000	1.0000	3
Sodium Perchlorate-18O4_IS	PERCHLORATE7	4/20/2020 1:27:21 PM	92497	1.00000	20200420_005	3.076	25.0000	1.0000	3

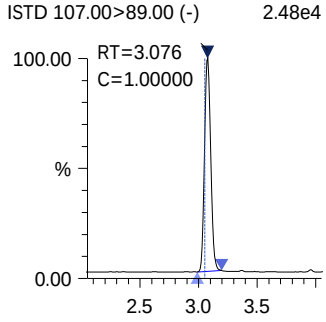
Perchlorate

Conc 11.41673
Area 144494



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 92497



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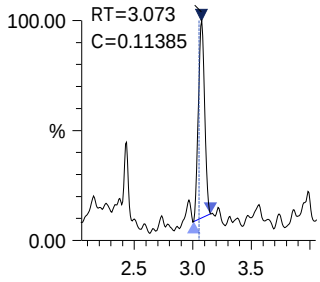
PERCHLORATE1

Date acquired: 4/20/2020 1:43:09 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_007.lcd
Vial: 5 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE1	4/20/2020 1:43:09 PM	1840	0.11385	20200420_007	3.073	25.0000	1.0000	5
Sodium Perchlorate-18O4_IS	PERCHLORATE1	4/20/2020 1:43:09 PM	118078	1.00000	20200420_007	3.073	25.0000	1.0000	5

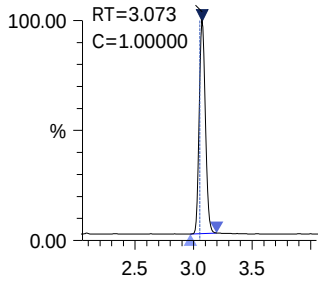
Perchlorate

Conc 0.11385
Area 1840
Q 99.00>83.00 (-) 5.37e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 118078
ISTD 107.00>89.00 (-) 3.18e4



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PERCHLORATE2

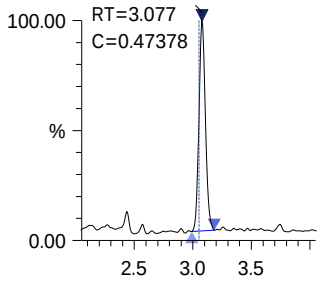
Date acquired: 4/20/2020 1:51:02 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_008.lcd
Vial: 6 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE2	4/20/2020 1:51:02 PM	7551	0.47378	20200420_008	3.077	25.0000	1.0000	6
Sodium Perchlorate-18O4_IS	PERCHLORATE2	4/20/2020 1:51:02 PM	116479	1.00000	20200420_008	3.075	25.0000	1.0000	6

Perchlorate

Conc 0.47378
Area 7551

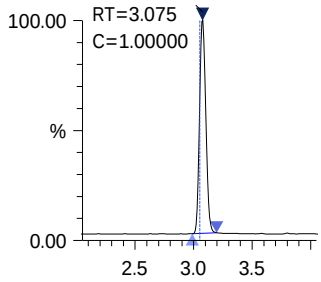
Q 99.00>83.00 (-) 2.00e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 116479

ISTD 107.00>89.00 (-) 3.08e4



ALS Group Houston

PERCHLORATE3

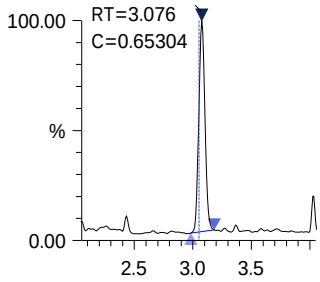
Date acquired: 4/20/2020 1:58:56 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_009.lcd
Vial: 7 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE3	4/20/2020 1:58:56 PM	11235	0.65304	20200420_009	3.076	25.0000	1.0000	7
Sodium Perchlorate-18O4_IS	PERCHLORATE3	4/20/2020 1:58:56 PM	125731	1.00000	20200420_009	3.073	25.0000	1.0000	7

Perchlorate

Conc 0.65304
Area 11235

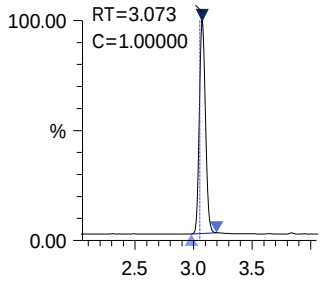
Q 99.00>83.00 (-) 3.12e3



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 125731

ISTD 107.00>89.00 (-) 3.41e4



ALS Group Houston

PERCHLORATE4

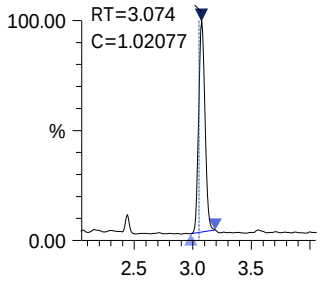
Date acquired: 4/20/2020 2:06:51 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_010.lcd
Vial: 8 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE4	4/20/2020 2:06:51 PM	16670	1.02077	20200420_010	3.074	25.0000	1.0000	8
Sodium Perchlorate-18O4_IS	PERCHLORATE4	4/20/2020 2:06:51 PM	119354	1.00000	20200420_010	3.074	25.0000	1.0000	8

Perchlorate

Conc 1.02077
Area 16670

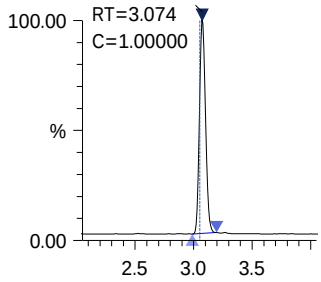
Q 99.00>83.00 (-) 4.51e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 119354

ISTD 107.00>89.00 (-) 3.26e4



ALS Group Houston

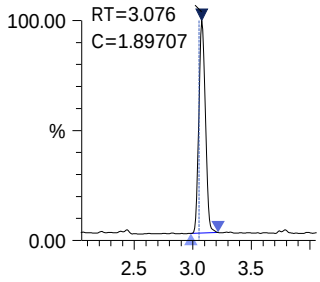
PERCHLORATE5

Date acquired: 4/20/2020 2:14:45 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_011.lcd
Vial: 9 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE5	4/20/2020 2:14:45 PM	33786	1.89707	20200420_011	3.076	25.0000	1.0000	9
Sodium Perchlorate-18O4_IS	PERCHLORATE5	4/20/2020 2:14:45 PM	130159	1.00000	20200420_011	3.075	25.0000	1.0000	9

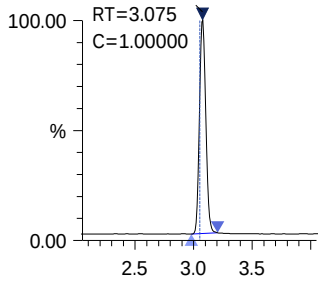
Perchlorate

Conc 1.89707
Area 33786
Q 99.00>83.00 (-) 8.73e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 130159
ISTD 107.00>89.00 (-) 3.41e4



ALS Group Houston

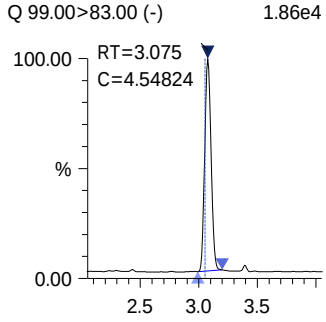
PERCHLORATE6

Date acquired: 4/20/2020 2:22:39 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_012.lcd
Vial: 10 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE6	4/20/2020 2:22:39 PM	69848	4.54824	20200420_012	3.075	25.0000	1.0000	10
Sodium Perchlorate-18O4_IS	PERCHLORATE6	4/20/2020 2:22:39 PM	112235	1.00000	20200420_012	3.074	25.0000	1.0000	10

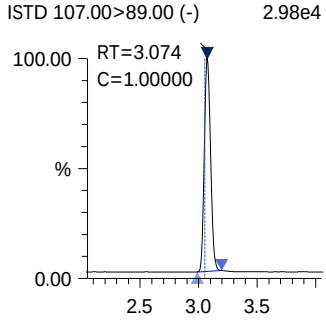
Perchlorate

Conc 4.54824
Area 69848



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 112235



ALS Group Houston

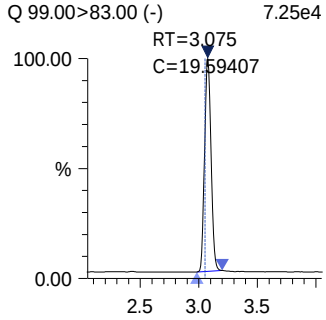
PERCHLORATE8

Date acquired: 4/20/2020 2:30:36 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_013.lcd
Vial: 11 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE8	4/20/2020 2:30:36 PM	275854	19.59407	20200420_013	3.075	25.0000	1.0000	11
Sodium Perchlorate-18O4_IS	PERCHLORATE8	4/20/2020 2:30:36 PM	102890	1.00000	20200420_013	3.072	25.0000	1.0000	11

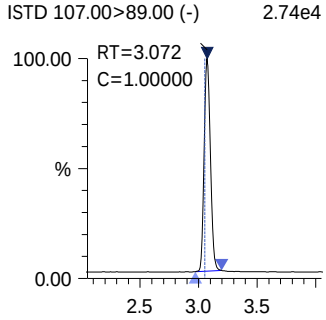
Perchlorate

Conc 19.59407
Area 275854



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 102890



ALS Group Houston

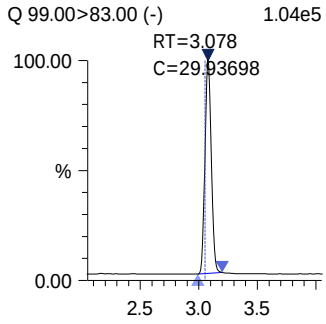
PERCHLORATE9

Date acquired: 4/20/2020 2:38:33 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_014.lcd
Vial: 12 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE9	4/20/2020 2:38:33 PM	390068	29.93698	20200420_014	3.078	25.0000	1.0000	12
Sodium Perchlorate-18O4_IS	PERCHLORATE9	4/20/2020 2:38:33 PM	95225	1.00000	20200420_014	3.075	25.0000	1.0000	12

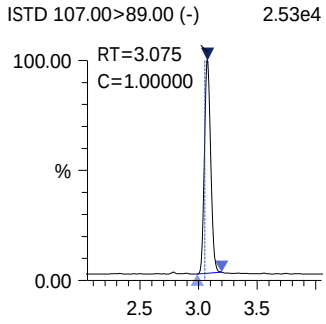
Perchlorate

Conc 29.93698
Area 390068



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 95225



ALS Group Houston

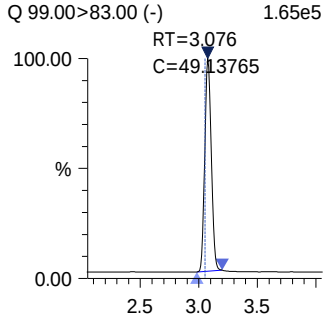
PERCHLORATE10

Date acquired: 4/20/2020 2:46:25 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_015.lcd
Vial: 13 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE10	4/20/2020 2:46:25 PM	632804	49.13765	20200420_015	3.076	25.0000	1.0000	13
Sodium Perchlorate-18O4_IS	PERCHLORATE10	4/20/2020 2:46:25 PM	94118	1.00000	20200420_015	3.075	25.0000	1.0000	13

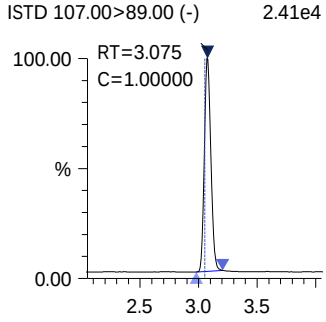
Perchlorate

Conc 49.13765
Area 632804



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 94118



ALS Group Houston

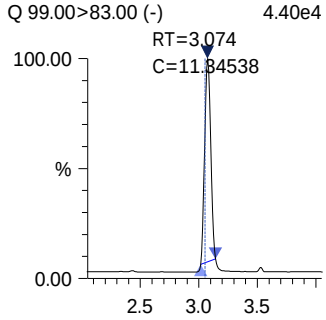
PERCHLORATEICV

Date acquired: 4/20/2020 2:54:20 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_016.lcd
Vial: 14 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATEICV	4/20/2020 2:54:20 PM	149807	11.34538	20200420_016	3.074	25.0000	1.0000	14
Sodium Perchlorate-18O4_IS	PERCHLORATEICV	4/20/2020 2:54:20 PM	96501	1.00000	20200420_016	3.072	25.0000	1.0000	14

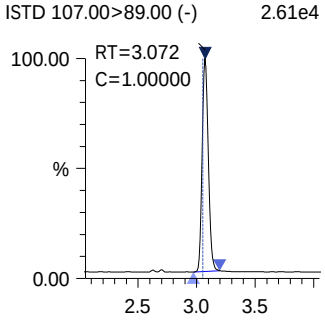
Perchlorate

Conc 11.34538
Area 149807



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 96501



Chromatograms and Selected Ion Monitoring

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 320, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

20200420

1st Review: Kneir
2nd Review: Hvan

ALS Environmental
LCMS01 -Shimadzu 8050

ICAL Date: 4/20/2020
Cal. Std. xp: 5/14/2020
ICAL ID: **EC2000003**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100803-09 **B:** MeOH 3100802-01

	Sample Name		File Name	Acquisition Method	Dilution	R	Comments	Date/Time
	null		20200420_001	Perchlorate6850b.lcm	1x	☒		4/20/2020 13:01
	null		20200420_002	Perchlorate6850b.lcm	1x	☒		4/20/2020 13:06
	DIBLK		20200420_003	Perchlorate6850b.lcm	1x	☒		4/20/2020 13:11
	IB		20200420_004	Perchlorate6850b.lcm	1x	☒		4/20/2020 13:19
	PERCHLORATE7		20200420_005	Perchlorate6850b.lcm	1x	☒	3100805-02	4/20/2020 13:27
	LODV		20200420_006	Perchlorate6850b.lcm	1x	☒		4/20/2020 13:35
	PERCHLORATE1		20200420_007	Perchlorate6850b.lcm	1x	☒	3100804-05	4/20/2020 13:43
	PERCHLORATE2		20200420_008	Perchlorate6850b.lcm	1x	☒	3100804-06	4/20/2020 13:51
	PERCHLORATE3		20200420_009	Perchlorate6850b.lcm	1x	☒	3100804-07	4/20/2020 13:58
	PERCHLORATE4		20200420_010	Perchlorate6850b.lcm	1x	☒	3100804-08	4/20/2020 14:06
	PERCHLORATE5		20200420_011	Perchlorate6850b.lcm	1x	☒	3100804-09	4/20/2020 14:14
	PERCHLORATE6		20200420_012	Perchlorate6850b.lcm	1x	☒	3100805-01	4/20/2020 14:22
	PERCHLORATE8		20200420_013	Perchlorate6850b.lcm	1x	☒	3100805-03	4/20/2020 14:30
	PERCHLORATE9		20200420_014	Perchlorate6850b.lcm	1x	☒	3100805-04	4/20/2020 14:38
	PERCHLORATE10		20200420_015	Perchlorate6850b.lcm	1x	☒	3100805-05	4/20/2020 14:46
	ICV		20200420_016	Perchlorate6850b.lcm	1x	☒	3100805-06	4/20/2020 14:54
	LODV		20200420_017	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:02
	EQ2000143-01		20200420_018	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:10
	EQ2000143-02		20200420_019	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:18
	EQ2000143-03		20200420_020	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:26
	E2000275-001		20200420_021	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:33
	E2000275-002		20200420_022	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:41
	E2000275-003		20200420_023	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:49
	E2000287-001		20200420_024	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:57
	E2000303-001		20200420_025	Perchlorate6850b.lcm	1x	☒		4/20/2020 16:05
	E2000304-001		20200420_026	Perchlorate6850b.lcm	1x	☒		4/20/2020 16:13
	E2000305-001		20200420_027	Perchlorate6850b.lcm	1x	☒		4/20/2020 16:21
	PERCHLORATE7		20200420_028	Perchlorate6850b.lcm	1x	☒	3100805-02	4/20/2020 16:29
	E2000303-001		20200420_029	Perchlorate6850b.lcm	1x	☒		4/20/2020 16:47
	E2000304-001		20200420_030	Perchlorate6850b.lcm	1x	☒		4/20/2020 16:55
	PERCHLORATE7		20200420_031	Perchlorate6850b.lcm	1x	☒	3100805-02	4/20/2020 17:02

20200422

ICAL Date: 4/20/2020
Cal. Std. xp: 5/14/2020
ICAL ID: EC2000003

1st Review: Kneir
2nd Review: Hvan

ALS Environmental
LCMS01 -Shimadzu 8050

Mobile Phases **A:** 0.75% Formic Acid/Water 3100803-09 **B:** MeOH 3100802-01

	Sample Name		File Name	Acquisition Method	Dilution	R	Comments	Date/Time
	null		20200422_001	Perchlorate6850b.lcm	1x	☒		4/22/2020 12:55
	IB		20200422_002	Perchlorate6850b.lcm	1x	☒		4/22/2020 13:00
	PERCHLORATE7		20200422_003	Perchlorate6850b.lcm	1x	☒	3100805-02	4/22/2020 13:08
	E2000303-001		20200422_004	Perchlorate6850b.lcm	1x	☒		4/22/2020 13:16
	E2000304-001		20200422_005	Perchlorate6850b.lcm	1x	☒		4/22/2020 13:24
	E2000305-001X250		20200422_006	Perchlorate6850b.lcm	250x	☒		4/22/2020 13:32
	PERCHLORATE7		20200422_007	Perchlorate6850b.lcm	1x	☒	3100805-02	4/22/2020 13:40

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20040289

Service Request: E2000303
Date Analyzed: 4/20/20 14:54

Internal Standard Area and RT Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID: I:\LCMS01\DATA\20200420\20200420_016
Instrument ID: E-LCMS-01
Analytical Method: 6850

Lab Code: EQ2000148-01
Analysis Lot: 677504
Signal ID: 1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	110,677	3.07
	Upper Limit ==>	166,016	5.07
	Lower Limit ==>	55,339	1.07
Associated Analyses			
Continuing Calibration Verification	EQ2000148-01	96,501	3.07
Method Blank	EQ2000143-01	113,200	3.08
Lab Control Sample	EQ2000143-02	84,678	3.07
Duplicate Lab Control Sample	EQ2000143-03	108,366	3.07

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000303
Project:	HS20040289	**Date Analyzed:**	4/20/20 16:29

Internal Standard Area and RT Summary

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID:	I:\LCMS01\DATA\20200420\20200420_028	**Lab Code:**	EQ2000148-02
Instrument ID:	E-LCMS-01	**Analysis Lot:**	677504
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	110,677	3.07
	Upper Limit ==>	166,016	5.07
	Lower Limit ==>	55,339	1.07
Associated Analyses			
Continuing Calibration Verification	EQ2000148-02	97,156	3.07

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000303
Project:	HS20040289	**Date Analyzed:**	4/22/20 13:08

Internal Standard Area and RT Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID:	I:\LCMS01\DATA\20200422\20200422_003	**Lab Code:**	EQ2000153-01
Instrument ID:	E-LCMS-01	**Analysis Lot:**	677638
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	110,677	3.07
	Upper Limit ==>	166,016	5.07
	Lower Limit ==>	55,339	1.07
Associated Analyses			
Continuing Calibration Verification	EQ2000153-01	76,714	3.08
LH18/24-SP650_040720_BIX	E2000303-001	103,138	3.07

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20040289

Service Request: E2000303
Date Analyzed: 4/22/20 13:40

Internal Standard Area and RT Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID: I:\LCMS01\DATA\20200422\20200422_007
Instrument ID: E-LCMS-01
Analytical Method: 6850

Lab Code: EQ2000153-02
Analysis Lot: 677638
Signal ID: 1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	110,677	3.07
	Upper Limit ==>	166,016	5.07
	Lower Limit ==>	55,339	1.07
Associated Analyses			
Continuing Calibration Verification	EQ2000153-02	93,873	3.02

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20040289

Service Request: E2000303
Date Analyzed: 4/20/20

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200420\20200420_016

Calibration Date: 4/20/20
Calibration ID: EC2000003
Analysis Lot: 677504
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	11.3	0.1368	0.1552	13.5	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20040289

Service Request: E2000303
Date Analyzed: 4/20/20

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200420\20200420_028

Calibration Date: 4/20/20
Calibration ID: EC2000003
Analysis Lot: 677504
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	11.3	0.1368	0.1543	12.7	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20040289

Service Request: E2000303
Date Analyzed: 4/22/20

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200422\20200422_003

Calibration Date: 4/20/20
Calibration ID: EC2000003
Analysis Lot: 677638
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	11.3	0.1368	0.1546	13.0	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20040289

Service Request: E2000303
Date Analyzed: 4/22/20

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200422\20200422_007

Calibration Date: 4/20/20
Calibration ID: EC2000003
Analysis Lot: 677638
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	10.8	0.1368	0.1481	8.3	NA	± 15 %	Average RF

ALS Group Houston

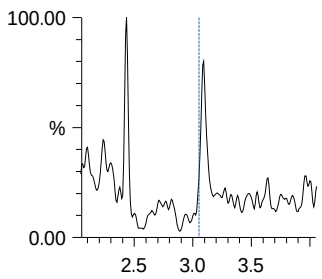
EQ2000143-01

Date acquired: 4/20/2020 3:10:11 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_018.lcd
Vial: 15 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000143-01	4/20/2020 3:10:11 PM	----	----	20200420_018	----	25.0000	1.0000	15
Sodium Perchlorate-18O4_IS	EQ2000143-01	4/20/2020 3:10:11 PM	113200	1.00000	20200420_018	3.076	25.0000	1.0000	15

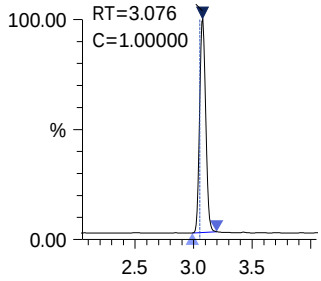
Perchlorate

Conc ----
Area ----
Q 99.00>83.00 (-) 2.29e2



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 113200
ISTD 107.00>89.00 (-) 3.08e4



ALS Group Houston

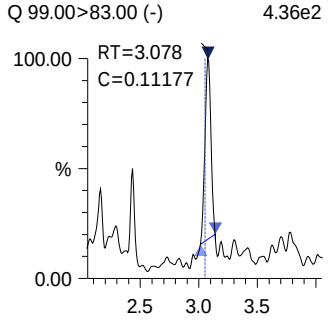
EQ2000143-02

Date acquired: 4/20/2020 3:18:04 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_019.lcd
Vial: 16 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000143-02	4/20/2020 3:18:04 PM	1295	0.11177	20200420_019	3.078	25.0000	1.0000	16
Sodium Perchlorate-18O4_IS	EQ2000143-02	4/20/2020 3:18:04 PM	84678	1.00000	20200420_019	3.072	25.0000	1.0000	16

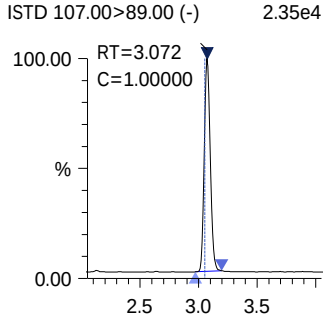
Perchlorate

Conc 0.11177
Area 1295



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 84678



ALS Group Houston

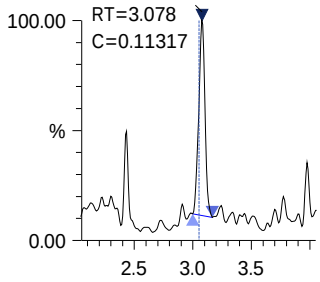
EQ2000143-03

Date acquired: 4/20/2020 3:26:00 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_020.lcd
Vial: 17 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000143-03	4/20/2020 3:26:00 PM	1678	0.11317	20200420_020	3.078	25.0000	1.0000	17
Sodium Perchlorate-18O4_IS	EQ2000143-03	4/20/2020 3:26:00 PM	108366	1.00000	20200420_020	3.072	25.0000	1.0000	17

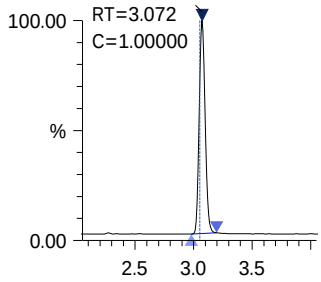
Perchlorate

Conc 0.11317
Area 1678
Q 99.00>83.00 (-) 4.97e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 108366
ISTD 107.00>89.00 (-) 3.03e4



ALS Group Houston

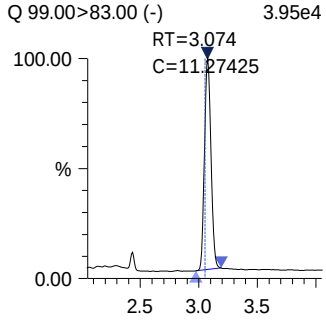
PERCHLORATE7

Date acquired: 4/20/2020 4:29:14 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_028.lcd
Vial: 3 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	4/20/2020 4:29:14 PM	149879	11.27425	20200420_028	3.074	25.0000	1.0000	3
Sodium Perchlorate-18O4_IS	PERCHLORATE7	4/20/2020 4:29:14 PM	97156	1.00000	20200420_028	3.073	25.0000	1.0000	3

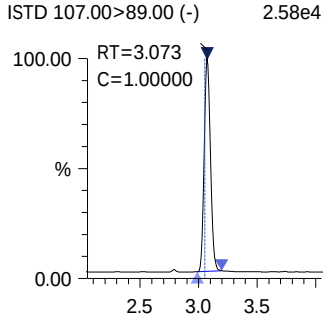
Perchlorate

Conc 11.27425
Area 149879



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 97156



ALS Group Houston

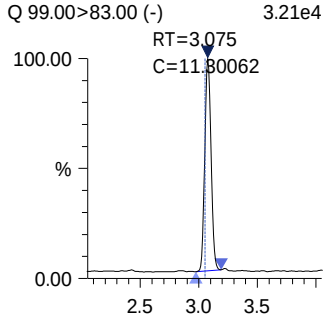
PERCHLORATE7

Date acquired: 4/22/2020 1:08:31 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200422\20200422_003.lcd
Vial: 3 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	4/22/2020 1:08:31 PM	118621	11.30062	20200422_003	3.075	25.0000	1.0000	3
Sodium Perchlorate-18O4_IS	PERCHLORATE7	4/22/2020 1:08:31 PM	76714	1.00000	20200422_003	3.075	25.0000	1.0000	3

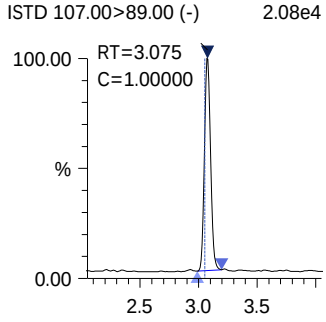
Perchlorate

Conc 11.30062
Area 118621



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 76714



ALS Group Houston

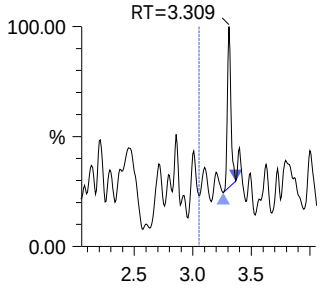
E2000303-001

Date acquired: 4/22/2020 1:16:27 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200422\20200422_004.lcd
Vial: 22 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	E2000303-001	4/22/2020 1:16:27 PM	----	----	20200422_004	----	25.0000	1.0000	22
Sodium Perchlorate-18O4_IS	E2000303-001	4/22/2020 1:16:27 PM	103138	1.00000	20200422_004	3.067	25.0000	1.0000	22

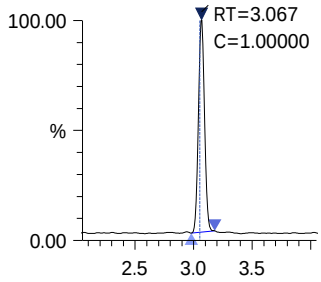
Perchlorate

Conc ----
Area ----
Q 99.00>83.00 (-) 6.33e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 103138
ISTD 107.00>89.00 (-) 2.82e4



ALS Group Houston

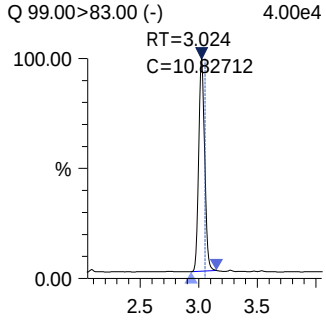
PERCHLORATE7

Date acquired: 4/22/2020 1:40:14 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200422\20200422_007.lcd
Vial: 3 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	4/22/2020 1:40:14 PM	139071	10.82712	20200422_007	3.024	25.0000	1.0000	3
Sodium Perchlorate-18O4_IS	PERCHLORATE7	4/22/2020 1:40:14 PM	93873	1.00000	20200422_007	3.021	25.0000	1.0000	3

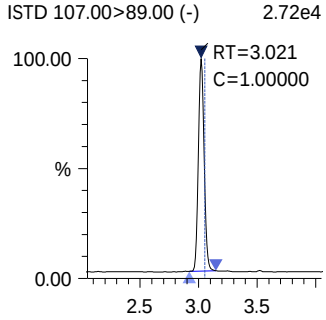
Perchlorate

Conc 10.82712
Area 139071



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 93873



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April 20, 2020

Analytical Report for Service Request No: K2003075

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

RE: HS20040289

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory April 10, 2020
For your reference, these analyses have been assigned our service request number **K2003075.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3350. You may also contact me via email at Kelley.Lovejoy@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Kelley Lovejoy

Kelley Lovejoy
Project Manager

RIGHT SOLUTIONS | RIGHT PARTNER

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Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water-	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Case Narrative

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1317 South 13th Ave, Kelso, WA 98626 | 1-360-577-7222 | www.alsglobal.com

ALS Environmental

Client: ALS Environmental - US
Project: HS20040289
Sample Matrix: Water

Service Request: K2003075
Date Received: 04/10/2020

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level IV requested by the client.

Sample Receipt:

One water sample was received for analysis at ALS Environmental on 04/10/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The sample was stored at minimum in accordance with the analytical method requirements.

General Chemistry:

No significant anomalies were noted with this analysis.

Approved by Kelley Lovejoy Date 04/20/2020

Chain of Custody

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K2003075

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Houston, TX 77099
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F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **13660**

SUBCONTRACT TO:

ALS Environmental Kelso
1317 S. 13th Avenue
Kelso, WA 98626

Phone: +1 360 501 3312

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	
Email:	

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20040289
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20040289-01**	**LH18/24-SP650_040720**	**Water**	**07 Apr 2020 14:00**
	TOC Analysis for DOD Level IV			22 Apr 2020

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: J. Modashia Date/Time: 4/9/20 18:00

Received By: Date/Time: 4/10/20 1000

Cooler ID(s): Temperature(s):

PC KL

Cooler Receipt and Preservation Form

Client ALS / Houston Service Request K20 030175

Received: 4/10/20 Opened: 4/10/20 By: [signature] Unloaded: 4/10/20 By: [signature]

1. Samples were received via? *USPS* (*Fed Ex*) *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA (Y) N If yes, how many and where? 2, front
   If present, were custody seals intact? (Y) N If present, were they signed and dated? (Y) N

Temp Blank	Sample 1	Sample 2	Sample 3	Sample 4	IR GUN	Cooler / COC ID NA	Tracking Number NA	Filed
0.0	—	—	—	—	39800488WS	13660	1251 0796 2862	
						13688		

4. Packing material: *Inserts* (*Baggies*) (*Bubble Wrap*) *Gel Packs* (*Wet Ice*) *Dry Ice* *Sleeves* _____
5. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
6. Were samples received in good condition (temperature, unbroken)? *Indicate in the table below.* NA (Y) N
   If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA (Y) N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA (Y) N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA (Y) N
11. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
12. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: _____

General Chemistry

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www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	K2003075
Project:	HS20040289	**Date Collected:**	04/7/20
Sample Matrix:	Water	**Date Received:**	04/10/20
Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA

Carbon, Total Organic

Sample Name	Lab Code	Result	LOQ	LOD	MDL	Dil.	Date Analyzed	Q
LH18/24-SP650_040720	K2003075-001	**2.72**	0.50	0.20	0.07	1	04/15/20 02:59	
Method Blank	K2003075-MB	ND U	0.50	0.20	0.07	1	04/15/20 07:41	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project HS20040289
Sample Matrix: Water

Service Request: K2003075
Date Collected: 04/07/20
Date Received: 04/10/20
Date Analyzed: 04/15/20

Replicate Sample Summary
General Chemistry Parameters

Sample Name: LH18/24-SP650_040720
Lab Code: K2003075-001

Units: mg/L
Basis: NA

Analyte Name	Analysis Method	LOQ	LOD	MDL	Sample Result	Duplicate Sample K2003075-001DUP Result	Average	RPD	RPD Limit
Carbon, Total Organic	SM 5310 C	0.50	0.20	0.07	2.72	2.63	2.68	3	10

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2003075
Project:	HS20040289	**Date Analyzed:**	04/15/20
Sample Matrix:	Water	**Date Extracted:**	NA

Lab Control Sample Summary
Carbon, Total Organic

Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA
		Analysis Lot:	676812

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2003075-LCS	22.0	25.0	88	83-117

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US **Service Request:** K2003075
Project: HS20040289

Continuing Calibration Verification (CCV) Summary

Carbon, Total Organic

Analysis Method: SM 5310 C **Units:** mg/L

	Analysis Lot	Lab Code	Date Analyzed	True Value	Measured Value	Percent Recovery	Acceptance Limits
CCV1	676812	KQ2005208-01	04/14/20 19:55	25.0	24.0	96	90-110
CCV2	676812	KQ2005208-02	04/15/20 02:01	25.0	23.2	93	90-110
CCV3	676812	KQ2005208-03	04/15/20 07:12	25.0	22.8	91	90-110
CCV4	676812	KQ2005208-04	04/15/20 11:28	25.0	26.3	105	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US **Service Request:**K2003075
Project: HS20040289

Continuing Calibration Blank (CCB) Summary
Carbon, Total Organic

Analysis Method: SM 5310 C **Units:**mg/L

	Analysis Lot	Lab Code	Date Analyzed	LOQ	LOD	MDL	Result	Q
CCB1	676812	KQ2005208-05	04/14/20 20:09	0.50	0.20	0.07	ND	U
CCB2	676812	KQ2005208-06	04/15/20 02:16	0.50	0.20	0.07	ND	U
CCB3	676812	KQ2005208-07	04/15/20 07:26	0.50	0.20	0.07	ND	U
CCB4	676812	KQ2005208-08	04/15/20 11:43	0.50	0.20	0.07	ND	U

Raw Data

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General Chemistry

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Work Request # Original ( ) K2003122, 3062, 3066, 3070, 3075, 3109, 3122

Tier: I I II II IV II II

Date Analyzed: 4/14/20

Analyst: SCP

Analysis: TOC

Run # TOC: 676812, 676813

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?	yes/no/NA
2.	Holding times met for all analyses and for all samples?	yes/no/NA
3.	Are calculations correct?	yes/no/NA
4.	Is the reporting basis correct? (Dry Weight)	yes/no/NA
5.	All quality control criteria met?	yes/no
6.	Is the calibration curve correlation coefficient ≥ 0.995?	yes/no/NA
7.	MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	yes/no/NA
8.	Are ICVs, CCVs, and CCBs all within acceptance limits?	yes/no/NA
9.	Are results for methods blanks all ND?	yes/no/NA
10.	Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	yes/no/NA
11.	Are all exceptions explained?	yes/no/NA
12.	Have all applicable service requests been reviewed?	yes/no/NA
13.	Are all samples labeled correctly?	yes/no/NA
14.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample, Form V)	yes/no/NA
15.	Are detection limits and units reported correctly?	yes/no/NA
16.	Is the unused space on the benchsheet crossed out?	yes/no/NA
17.	Was analysis turned in by the due date? (n-2) (If not record SR#)	yes/no/NA

COMMENTS: K2003122-1/ld, 3122-S/SD report a high %RSD. However these samples are less than 5x the MRL.

Final Approved by: QC Date: 4/16/20

DQREPORT

Analytical Results Summary

00978164

Instrument Name: K-TOC-03 **Analyst:** BDITZLER **Analysis Lot:** 676812 **Method/Testcode:** SM 5310 C/TOC T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
K2002978-001	Carbon, Total Organic	N/A		Water	11.15 mg/L	10 mL	223 mg/L	20	2	10			4/15/20 00:51:00	N	I
K2002978-002	Carbon, Total Organic	N/A		Water	2.33 mg/L	10 mL	2.33 mg/L	1	0.07	0.50			4/15/20 01:19:00	N	I
K2003062-001	Carbon, Total Organic	N/A		Drinking Water	0.80 mg/L	10 mL	0.80 mg/L	1	0.07	0.50			4/15/20 03:27:00	N	I
K2003066-001	Carbon, Total Organic	N/A		Water	0.99 mg/L	10 mL	0.99 mg/L	1	0.07	0.50			4/15/20 02:31:00	N	II
K2003070-002	Carbon, Total Organic	N/A		Water	18.03 mg/L	10 mL	18.0 mg/L	1	0.07	0.50			4/15/20 03:55:00	N	II
K2003075-001	Carbon, Total Organic	N/A		Water	2.72 mg/L	10 mL	2.72 mg/L	1	0.07	0.50			4/15/20 02:59:00	N	IV
K2003109-001	Carbon, Total Organic	N/A		Water	4.50 mg/L	10 mL	4.50 mg/L	1	0.07	0.50			4/15/20 04:23:00	N	II
K2003109-002	Carbon, Total Organic	N/A		Water	14.97 mg/L	10 mL	15.0 mg/L	1	0.07	0.50			4/15/20 04:51:00	N	II
K2003109-003	Carbon, Total Organic	N/A		Water	27.84 mg/L	10 mL	27.8 mg/L	1	0.07	0.50			4/15/20 05:19:00	N	II
K2003109-004	Carbon, Total Organic	N/A		Water	18.81 mg/L	10 mL	18.8 mg/L	1	0.07	0.50			4/15/20 05:47:00	N	II
K2003109-005	Carbon, Total Organic	N/A		Water	11.57 mg/L	10 mL	11.6 mg/L	1	0.07	0.50			4/15/20 06:15:00	N	II
K2003109-006	Carbon, Total Organic	N/A		Water	14.49 mg/L	10 mL	14.5 mg/L	1	0.07	0.50			4/15/20 06:43:00	N	II
K2003109-007	Carbon, Total Organic	N/A		Water	5.62 mg/L	10 mL	28.1 mg/L	5	0.4	2.5			4/15/20 08:11:00	N	II
K2003109-008	Carbon, Total Organic	N/A		Water	13.88 mg/L	10 mL	13.9 mg/L	1	0.07	0.50			4/15/20 08:39:00	N	II
KQ2005208-01	Carbon, Total Organic	CCV		Water	24.05 mg/L	10 mL	24.0 mg/L	1					4/14/20 19:55:00	N	I
KQ2005208-02	Carbon, Total Organic	CCV		Water	23.16 mg/L	10 mL	23.2 mg/L	1					4/15/20 02:01:00	N	I
KQ2005208-03	Carbon, Total Organic	CCV		Water	22.83 mg/L	10 mL	22.8 mg/L	1					4/15/20 07:12:00	N	I
KQ2005208-04	Carbon, Total Organic	CCV		Water	26.26 mg/L	10 mL	26.3 mg/L	1					4/15/20 11:28:00	N	I
KQ2005208-05	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			4/14/20 20:09:00	N	I
KQ2005208-06	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			4/15/20 02:16:00	N	I
KQ2005208-07	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			4/15/20 07:26:00	N	I
KQ2005208-08	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			4/15/20 11:43:00	N	I
KQ2005208-09	Carbon, Total Organic	MB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			4/15/20 07:41:00	N	I
KQ2005208-10	Carbon, Total Organic	LCS		Water	21.97 mg/L	10 mL	22.0 mg/L	1	0.07	0.50	88		4/15/20 07:56:00	N	I
KQ2005208-11	Carbon, Total Organic	MS	K2002978-002	Water	29.48 mg/L	10 mL	29.5 mg/L	1	0.07	0.50	109		4/15/20 01:47:00	N	I
KQ2005208-12	Carbon, Total Organic	DUP	K2002978-001	Water	11.37 mg/L	10 mL	227 mg/L	20	2	10		2	4/15/20 00:51:00	N	I
KQ2005208-13	Carbon, Total Organic	DUP	K2002978-002	Water	2.15 mg/L	10 mL	2.15 mg/L	1	0.07	0.50		8	4/15/20 01:19:00	N	I
KQ2005208-14	Carbon, Total Organic	DUP	K2003062-001	Drinking Water	0.75 mg/L	10 mL	0.75 mg/L	1	0.07	0.50		7	4/15/20 03:27:00	N	I
KQ2005208-15	Carbon, Total Organic	DUP	K2003066-001	Water	0.99 mg/L	10 mL	0.99 mg/L	1	0.07	0.50		<1	4/15/20 02:31:00	N	II
KQ2005208-16	Carbon, Total Organic	DUP	K2003075-001	Water	2.63 mg/L	10 mL	2.63 mg/L	1	0.07	0.50		3	4/15/20 02:59:00	N	IV
KQ2005208-17	Carbon, Total Organic	DUP	K2003070-002	Water	17.87 mg/L	10 mL	17.9 mg/L	1	0.07	0.50		<1	4/15/20 03:55:00	N	II
KQ2005208-18	Carbon, Total Organic	DUP	K2003109-003	Water	27.70 mg/L	10 mL	27.7 mg/L	1	0.07	0.50		<1	4/15/20 05:19:00	N	II
KQ2005208-19	Carbon, Total Organic	DUP	K2003109-004	Water	18.68 mg/L	10 mL	18.7 mg/L	1	0.07	0.50		<1	4/15/20 05:47:00	N	II
KQ2005208-20	Carbon, Total Organic	DUP	K2003109-005	Water	11.40 mg/L	10 mL	11.4 mg/L	1	0.07	0.50		1	4/15/20 06:15:00	N	II
KQ2005208-21	Carbon, Total Organic	DUP	K2003109-006	Water	14.37 mg/L	10 mL	14.4 mg/L	1	0.07	0.50		<1	4/15/20 06:43:00	N	II

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

00978165

Instrument Name: K-TOC-03 **Analyst:** BDITZLER **Analysis Lot:** 676812 **Method/Testcode:** SM 5310 C/TOC T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
KQ2005208-22	Carbon, Total Organic	DUP	K2003109-007	Water	5.50 mg/L	10 mL	27.5 mg/L	5	0.4	2.5		2	4/15/20 08:11:00	N	II
KQ2005208-23	Carbon, Total Organic	DUP	K2003109-008	Water	13.73 mg/L	10 mL	13.7 mg/L	1	0.07	0.50		1	4/15/20 08:39:00	N	II
KQ2005208-24	Carbon, Total Organic	DUP	K2003109-001	Water	4.43 mg/L	10 mL	4.43 mg/L	1	0.07	0.50		2	4/15/20 04:23:00	N	II
KQ2005208-25	Carbon, Total Organic	DUP	K2003109-002	Water	14.67 mg/L	10 mL	14.7 mg/L	1	0.07	0.50		2	4/15/20 04:51:00	N	II

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

00978166

Instrument Name: K-TOC-03 **Analyst:** BDITZLER **Analysis Lot:** 676813 **Method/Testcode:** SM 5310 C/TOC T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
K2003109-009	Carbon, Total Organic	N/A		Water	7.76 mg/L	10 mL	7.76 mg/L	1	0.07	0.50			4/15/20 09:07:00	N	II
K2003109-010	Carbon, Total Organic	N/A		Water	8.07 mg/L	10 mL	8.07 mg/L	1	0.07	0.50			4/15/20 10:04:00	N	II
K2003109-011	Carbon, Total Organic	N/A		Water	7.04 mg/L	10 mL	7.04 mg/L	1	0.07	0.50			4/15/20 10:32:00	N	II
K2003109-012	Carbon, Total Organic	N/A		Water	14.28 mg/L	10 mL	14.3 mg/L	1	0.07	0.50			4/15/20 11:00:00	N	II
K2003109-013	Carbon, Total Organic	N/A		Water	14.11 mg/L	10 mL	14.1 mg/L	1	0.07	0.50			4/15/20 11:58:00	N	II
K2003109-016	Carbon, Total Organic	N/A		Water	19.11 mg/L	10 mL	19.1 mg/L	1	0.07	0.50			4/15/20 12:26:00	N	II
K2003109-017	Carbon, Total Organic	N/A		Water	2.27 mg/L	10 mL	227 mg/L	100	7	50			4/15/20 12:54:00	N	II
K2003109-018	Carbon, Total Organic	N/A		Water	3.22 mg/L	10 mL	322 mg/L	100	7	50			4/15/20 13:22:00	N	II
K2003122-001	Carbon, Total Organic	N/A		Water	0.41 mg/L	10 mL	0.41 mg/L J	1	0.07	0.50			4/15/20 14:47:00	N	II
K2003122-002	Carbon, Total Organic	N/A		Water	0.44 mg/L	10 mL	0.44 mg/L J	1	0.07	0.50			4/15/20 15:15:00	N	II
K2003122-003	Carbon, Total Organic	N/A		Water	0.42 mg/L	10 mL	0.42 mg/L J	1	0.07	0.50			4/15/20 15:43:00	N	II
K2003122-004	Carbon, Total Organic	N/A		Water	0.37 mg/L	10 mL	0.37 mg/L J	1	0.07	0.50			4/15/20 16:11:00	N	II
K2003122-005	Carbon, Total Organic	N/A		Water	0.26 mg/L	10 mL	0.26 mg/L J	1	0.07	0.50			4/15/20 17:38:00	N	II
K2003122-006	Carbon, Total Organic	N/A		Water	0.34 mg/L	10 mL	0.34 mg/L J	1	0.07	0.50			4/15/20 18:06:00	N	II
K2003122-007	Carbon, Total Organic	N/A		Water	1.02 mg/L	10 mL	1.02 mg/L	1	0.07	0.50			4/15/20 18:34:00	N	II
K2003122-008	Carbon, Total Organic	N/A		Water	0.33 mg/L	10 mL	0.33 mg/L J	1	0.07	0.50			4/15/20 19:02:00	N	II
KQ2005210-01	Carbon, Total Organic	CCV		Water	22.83 mg/L	10 mL	22.8274 mg/L	1					4/15/20 07:12:00	N	II
KQ2005210-02	Carbon, Total Organic	CCV		Water	26.26 mg/L	10 mL	26.2577 mg/L	1					4/15/20 11:28:00	N	II
KQ2005210-03	Carbon, Total Organic	CCV		Water	25.78 mg/L	10 mL	25.7832 mg/L	1					4/15/20 16:39:00	N	II
KQ2005210-04	Carbon, Total Organic	CCV		Water	26.02 mg/L	10 mL	26.0179 mg/L	1					4/15/20 21:22:00	N	II
KQ2005210-05	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			4/15/20 07:26:00	N	II
KQ2005210-06	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			4/15/20 11:43:00	N	II
KQ2005210-07	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			4/15/20 16:53:00	N	II
KQ2005210-08	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			4/15/20 21:37:00	N	II
KQ2005210-09	Carbon, Total Organic	MB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			4/15/20 17:08:00	N	II
KQ2005210-10	Carbon, Total Organic	LCS		Water	25.92 mg/L	10 mL	25.9 mg/L	1	0.07	0.50			4/15/20 17:23:00	N	II
KQ2005210-11	Carbon, Total Organic	MS	K2003109-009	Water	34.79 mg/L	10 mL	34.8 mg/L	1	0.07	0.50			4/15/20 09:35:00	N	II
KQ2005210-12	Carbon, Total Organic	DUP	K2003109-016	Water	19.18 mg/L	10 mL	19.2 mg/L	1	0.07	0.50		<1	4/15/20 12:26:00	N	II
KQ2005210-13	Carbon, Total Organic	DUP	K2003109-017	Water	2.19 mg/L	10 mL	219 mg/L	100	7	50		4	4/15/20 12:54:00	N	II
KQ2005210-14	Carbon, Total Organic	DUP	K2003109-018	Water	3.27 mg/L	10 mL	327 mg/L	100	7	50		1	4/15/20 13:22:00	N	II
KQ2005210-15	Carbon, Total Organic	DUP	K2003109-009	Water	7.75 mg/L	10 mL	7.75 mg/L	1	0.07	0.50		<1	4/15/20 09:07:00	N	II
KQ2005210-16	Carbon, Total Organic	DUP	K2003109-010	Water	8.03 mg/L	10 mL	8.03 mg/L	1	0.07	0.50		<1	4/15/20 10:04:00	N	II
KQ2005210-17	Carbon, Total Organic	DUP	K2003109-011	Water	6.88 mg/L	10 mL	6.88 mg/L	1	0.07	0.50		2	4/15/20 10:32:00	N	II
KQ2005210-18	Carbon, Total Organic	DUP	K2003109-012	Water	14.19 mg/L	10 mL	14.2 mg/L	1	0.07	0.50		<1	4/15/20 11:00:00	N	II
KQ2005210-19	Carbon, Total Organic	DUP	K2003109-013	Water	13.97 mg/L	10 mL	14.0 mg/L	1	0.07	0.50		<1	4/15/20 11:58:00	N	II
KQ2005210-20	Carbon, Total Organic	DUP	K2003122-001	Water	0.47 mg/L	10 mL	0.47 mg/L J	1	0.07	0.50		13*	4/15/20 14:47:00	N	II

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

00978167

Instrument Name: K-TOC-03 **Analyst:** BDITZLER **Analysis Lot:** 676813 **Method/Testcode:** SM 5310 C/TOC T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
KQ2005210-21	Carbon, Total Organic	DUP	K2003122-002	Water	0.43 mg/L	10 mL	0.43 mg/L J	1	0.07	0.50		2	4/15/20 15:15:00	N	II
KQ2005210-22	Carbon, Total Organic	DUP	K2003122-003	Water	0.44 mg/L	10 mL	0.44 mg/L J	1	0.07	0.50		5	4/15/20 15:43:00	N	II
KQ2005210-23	Carbon, Total Organic	DUP	K2003122-004	Water	0.38 mg/L	10 mL	0.38 mg/L J	1	0.07	0.50		2	4/15/20 16:11:00	N	II
KQ2005210-24	Carbon, Total Organic	DUP	K2003122-005	Water	0.20 mg/L	10 mL	0.20 mg/L J	1	0.07	0.50		25*	4/15/20 17:38:00	N	II
KQ2005210-25	Carbon, Total Organic	DUP	K2003122-006	Water	0.31 mg/L	10 mL	0.31 mg/L J	1	0.07	0.50		8	4/15/20 18:06:00	N	II
KQ2005210-26	Carbon, Total Organic	DUP	K2003122-007	Water	1.05 mg/L	10 mL	1.05 mg/L	1	0.07	0.50		3	4/15/20 18:34:00	N	II
KQ2005210-27	Carbon, Total Organic	DUP	K2003122-008	Water	0.30 mg/L	10 mL	0.30 mg/L J	1	0.07	0.50		10	4/15/20 19:02:00	N	II

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

TOC: 676811, 676812, 676813
DOC: 676814

Schedule: 04142020

Version: 4
Instrument: Fusion1
Last Saved by: Fusion1 (Fusion1)
Last Saved on: 2020/04/14 17:26 - Tuesday

Position	Sample Type	Sample ID	Method ID (Calibration ID)	Reps	Use	State
(Clean)	Clean	Clean		1	True	Ready
(Clean)	Clean	Clean		1	True	Ready
(Clean)	Clean	Clean		1	True	Ready
(Blank)	Blank	Reagent/Acid Blank		1	True	Ready
D	Sample	RB	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
1	Sample	MB1	CAS_salt_010711 (CAS_salt_010711)	4	True	Ready
C	Check Standard	[TOC] LCS [24.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	4	True	Ready
2	Sample	ICS	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
3	Sample	LOD	CAS_salt_010711 (CAS_salt_010711)	4	True	Ready
4	Sample	LOQ	CAS_salt_010711 (CAS_salt_010711)	4	True	Ready
5	Sample	LOD	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
6	Sample	LOQ	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
7	Sample	K2002978-001.03 20x	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
8	Sample	K2002978-002.03	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
9	Sample	K2002978-002.03 ms	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
10	Sample	K2003066-001.01	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
11	Sample	K2003075-001.01	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
12	Sample	K2003062-001.01	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
13	Sample	K2003070-002.05	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
14	Sample	K2003109-001.05	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
15	Sample	K2003109-002.05	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
16	Sample	K2003109-003.05	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
17	Sample	K2003109-004.05	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
18	Sample	K2003109-005.05	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
19	Sample	K2003109-006.05	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
20	Sample	MB2	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
C	Check Standard	[TOC] LCS [24.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
21	Sample	K2003109-007.05 5x	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
22	Sample	K2003109-008.05	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
23	Sample	K2003109-009.05	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
24	Sample	K2003109-009.05 ms	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
25	Sample	RB	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
26	Sample	K2003109-010.05	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
27	Sample	K2003109-011.05	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
28	Sample	K2003109-012.05	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
29	Sample	K2003109-013.05	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
30	Sample	K2003109-016.11	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
31	Sample	K2003109-017.11 100x	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
32	Sample	K2003109-018.11 100x	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
33	Sample	K2003004-002.01	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
34	Sample	K2003004-003.01	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
35	Sample	K2003122-001.01	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
36	Sample	K2003122-002.01	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
37	Sample	K2003122-003.01	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
38	Sample	K2003122-004.01	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready

Schedule: 04142020

Position	Sample Type	Sample ID	Method ID (Calibration ID)	Reps	Use	State
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
39	Sample	MB3	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
C	Check Standard	[TOC] LCS [25.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
40	Sample	K2003122-005.01	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
41	Sample	K2003122-006.01	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
42	Sample	K2003122-007.01	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
43	Sample	K2003122-008.01	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
44	Sample	K2003024-001.01 doc	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
45	Sample	K2003024-002.01 doc	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
46	Sample	K2003024-003.01 doc	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
47	Sample	K2003024-004.01 doc	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
48	Sample	K2003024-005.01 doc	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
49	Sample	K2003024-006.01 doc	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
50	Sample	K2003024-007.01 doc	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
51	Sample	K2003024-008.01 doc	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
52	Sample	MB4	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
C	Check Standard	[TOC] LCS [25.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
					False	

Fusion Report - 04142020
Tuesday, April 14, 2020 05:06 PM

(View - Reps, Unused Reps, Meta-Data, Signature, History)
Printed on 2020/04/16 09:05 - Thursday

Report Summary Information

Company Location:	Gen Chem Lab		
Schedule Name:	04142020	Engine Version:	1.1.5.1
Instrument Name:	Fusion1	Firmware Version:	1.2.0696
Report Version:	1 of 1	Connection:	RS232 COM1
Report Creation by Operators (schedule version):	Fusion1 (Fusion1) (v2) Fusion1 (Fusion1) (v4)		
Comment:			

Report Results

Sample Type: Clean — From Schedule Version 2

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/04/14 17:06

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	13.56	21.82	8.27	49.67	07:58
2	TC Clean	44.26	48.10	3.84	49.39	07:18
3	TC Clean	7.99	11.97	3.99	49.39	07:03
4	TC Clean	4.66	8.60	3.95	49.37	07:01

Sample Type: Clean — From Schedule Version 4

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/04/14 17:40

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	1.79	5.60	3.81	49.62	08:01
2	TC Clean	11.01	14.89	3.88	49.39	07:18
3	TC Clean	3.23	7.09	3.86	49.39	07:00
4	TC Clean	2.58	6.25	3.67	49.40	07:01

Sample Type: Clean From Schedule Version 4

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/04/14 18:14

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	1.30	5.01	3.70	49.63	07:59
2	TC Clean	7.70	11.46	3.77	49.41	07:19
3	TC Clean	3.07	6.83	3.76	49.45	07:03
4	TC Clean	2.39	6.25	3.86	49.46	07:04

Sample Type: Blank (Creating v1373) From Schedule Version 4

	Pos	Analysis Type	Sample ID	Start Time
◆	(blank)		Reagent/Acid Blank	2020/04/14 18:48

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	1.10	4.96	3.85	49.68	07:59
2	TC Clean	10.21	14.00	3.79	49.49	07:18
3	TC Clean	4.66	8.44	3.78	49.53	07:02
4	TC Clean	3.18	6.90	3.71	49.55	07:02
5	Reagent Blank	4.38	8.28	3.89	49.58	08:12
6	Acid Blank	1.48	5.25	3.77	49.81	08:03

Sample Type: Sample From Schedule Version 4

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	D	TOC	RB	0.6779 ppm	0.0000 ppm	0.0000%	2020/04/14 19:40

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.6779	6.7790	11.89	15.75	3.86	49.58	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 4

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	24.0488 ppm (PASS)	0.0000 ppm	0%	2020/04/14 19:55

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	24.0488	240.4879	169.54	173.41	3.87	49.63	10:31

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 4

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/04/14 20:09

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	6.88	10.77	3.88	49.66	10:31

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	0 ppmC

Sample Type: Sample From Schedule Version 4

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	1	TOC	MB1	0.0000 ppm	0.0000 ppm	0.0000%	2020/04/14 20:24

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	6.17	9.99	3.82	49.69	10:26
2	TOC	0.0000	0.0000	5.99	9.79	3.80	49.68	10:29
3	TOC	0.0000	0.0000	5.96	9.70	3.74	49.69	10:25
4	TOC	0.0000	0.0000	5.73	9.52	3.79	49.71	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

Sample Type: Check Standard --> LCS From Schedule Version 4

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	C	TOC	25.0000	1:1	[TOC] LCS [24.0 ppm]	0 / infinity (NA / NA)	21.9873 ppm	0.0951 ppm	0.43%	2020/04/14 21:20

						(PASS)				

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	22.0581	220.5815	156.16	159.79	3.63	49.72	10:27
C	TOC	25.0 ppm	2	21.9853	219.8528	155.67	159.43	3.76	49.75	10:27
C	TOC	25.0 ppm	3	21.8535	218.5354	154.78	158.78	4.00	49.77	10:27
C	TOC	25.0 ppm	4	22.0521	220.5205	156.12	159.98	3.86	49.78	10:28

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	25 ppmC

Sample Type: Sample From Schedule Version 4

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	2	TOC	ICS	0.2333 ppm	0.0000 ppm	0.0000%	2020/04/14 22:16

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.2333	2.3329	8.90	12.85	3.95	49.78	10:31

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	3	TOC	LOD	0.0000 ppm	0.0000 ppm	0.0000%	2020/04/14 22:30

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	6.64	10.56	3.92	49.80	10:27
2	TOC	0.0000	0.0000	6.56	10.50	3.95	49.80	10:24
3	TOC	0.0000	0.0000	6.57	10.43	3.86	49.83	10:32
4	TOC	0.0000	0.0000	6.71	10.45	3.74	49.85	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	4	TOC	LOQ	0.2083 ppm	0.0288 ppm	13.8100%	2020/04/14 23:26

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.2256	2.2555	8.84	12.65	3.81	49.85	10:32
2	TOC	0.2086	2.0860	8.73	12.65	3.92	49.84	10:25
3	TOC	0.2315	2.3150	8.88	12.67	3.78	49.86	10:27
4	TOC	0.1677	1.6771	8.46	12.29	3.84	49.87	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC)	CAS_salt_010711	CAS_salt_010711

(v1373) (v4) (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	5	TOC	LOD	0.0000 ppm	0.0000 ppm	0.0000%	2020/04/15 00:22

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	6.78	10.48	3.69	49.86	10:31

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	6	TOC	LOQ	0.2201 ppm	0.0000 ppm	0.0000%	2020/04/15 00:36

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.2201	2.2005	8.81	12.60	3.80	49.86	10:33

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	7	TOC	K2002978-001.03 20x	11.2568 ppm	0.1560 ppm	1.3900%	2020/04/15 00:51

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	11.1465	111.4649	82.29	86.08	3.79	49.87	10:27
2	TOC	11.3672	113.6716	83.77	87.57	3.80	49.88	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	8	TOC	K2002978-002.03	2.2402 ppm	0.1208 ppm	5.3900%	2020/04/15 01:19

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.3256	23.2564	22.97	26.80	3.83	49.88	10:27
2	TOC	2.1548	21.5478	21.82	25.57	3.75	49.88	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	9	TOC	K2002978-002.03 ms	29.4825 ppm	0.0000 ppm	0.0000%	2020/04/15 01:47

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	29.4825	294.8248	205.60	209.48	3.88	49.89	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 4

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	23.1637 ppm (PASS)	0.0000 ppm	0%	2020/04/15 02:01

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	23.1637	231.6373	163.59	167.25	3.66	49.89	10:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 4

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/04/15 02:16

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	5.96	9.87	3.91	49.90	10:28

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	0 ppmC

Sample Type: Sample From Schedule Version 4

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	10	TOC	K2003066-001.01	0.9916 ppm	0.0035 ppm	0.3500%	2020/04/15 02:31

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.9940	9.9403	14.01	17.82	3.81	49.88	10:30
2	TOC	0.9891	9.8913	13.98	17.77	3.79	49.91	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time

◆	11	TOC	K2003075-001.01	2.6777 ppm	0.0651 ppm	2.4300%	2020/04/15 02:59

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.7237	27.2371	25.64	29.47	3.82	49.89	10:26
2	TOC	2.6317	26.3166	25.03	29.01	3.99	49.90	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	12	TOC	K2003062-001.01	0.7718 ppm	0.0369 ppm	4.7800%	2020/04/15 03:27

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.7979	7.9790	12.69	16.46	3.77	49.91	10:29
2	TOC	0.7457	7.4570	12.34	16.21	3.86	49.93	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	13	TOC	K2003070-002.05	17.9494 ppm	0.1181 ppm	0.6600%	2020/04/15 03:55

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	18.0329	180.3291	128.60	132.42	3.82	49.95	10:27
2	TOC	17.8659	178.6592	127.48	131.45	3.98	49.94	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	14	TOC	K2003109-001.05	4.4648 ppm	0.0520 ppm	1.1700%	2020/04/15 04:23

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	4.5016	45.0156	37.60	41.42	3.82	49.91	10:30
2	TOC	4.4280	44.2795	37.11	40.91	3.80	49.92	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	15	TOC	K2003109-002.05	14.8171 ppm	0.2109 ppm	1.4200%	2020/04/15 04:51

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	14.9663	149.6628	107.98	111.64	3.66	49.92	10:27
2	TOC	14.6680	146.6799	105.97	109.80	3.83	49.91	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	16	TOC	K2003109-003.05	27.7730 ppm	0.0992 ppm	0.3600%	2020/04/15 05:19

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	27.8431	278.4307	194.57	198.48	3.91	49.95	10:30
2	TOC	27.7028	277.0284	193.63	197.39	3.76	49.92	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	17	TOC	K2003109-004.05	18.7460 ppm	0.0884 ppm	0.4700%	2020/04/15 05:47

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	18.8085	188.0853	133.82	137.65	3.83	49.91	10:28
2	TOC	18.6835	186.8347	132.97	136.79	3.81	49.92	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	18	TOC	K2003109-005.05	11.4844 ppm	0.1156 ppm	1.0100%	2020/04/15 06:15

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	11.5661	115.6612	85.11	89.00	3.89	49.95	10:28
2	TOC	11.4027	114.0270	84.01	87.91	3.90	49.91	10:31

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	19	TOC	K2003109-006.05	14.4296 ppm	0.0874 ppm	0.6100%	2020/04/15 06:43

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	14.4913	144.9134	104.78	108.69	3.90	49.92	10:29
2	TOC	14.3678	143.6777	103.95	107.72	3.77	49.93	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 4

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	22.8274 ppm (PASS)	0.0000 ppm	0%	2020/04/15 07:12

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	22.8274	228.2737	161.33	165.30	3.97	49.92	10:34

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 4

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/04/15 07:26

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	7.43	11.26	3.83	49.93	10:34

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	0 ppmC

Sample Type: Sample From Schedule Version 4

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	20	TOC	MB2	0.0000 ppm	0.0000 ppm	0.0000%	2020/04/15 07:41

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	6.61	10.52	3.91	49.95	10:31

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

Sample Type: Check Standard --> LCS From Schedule Version 4

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	C	TOC	25.0000	1:1	[TOC] LCS [24.0 ppm]	0 / infinity (NA / NA)	21.9746 ppm (PASS)	0.0000 ppm	0%	2020/04/15 07:56

Pos	Base Analysis	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time

	Type									
C	TOC	25.0 ppm	1	21.9746	219.7458	155.60	159.39	3.79	49.91	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	25 ppmC

Sample Type: Sample From Schedule Version 4

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	21	TOC	K2003109-007.05 5x	5.5597 ppm	0.0843 ppm	1.5200%	2020/04/15 08:11

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	5.6193	56.1933	45.12	48.99	3.87	49.93	10:27
2	TOC	5.5001	55.0007	44.32	48.13	3.81	49.91	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	22	TOC	K2003109-008.05	13.8040 ppm	0.1027 ppm	0.7400%	2020/04/15 08:39

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	13.8766	138.7661	100.65	104.46	3.82	49.92	10:26
2	TOC	13.7313	137.3134	99.67	103.48	3.81	49.91	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	23	TOC	K2003109-009.05	7.7571 ppm	0.0068 ppm	0.0900%	2020/04/15 09:07

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	7.7619	77.6194	59.53	63.53	4.00	49.91	10:25
2	TOC	7.7523	77.5228	59.46	63.26	3.80	49.91	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	24	TOC	K2003109-009.05 ms	34.7861 ppm	0.0000 ppm	0.0000%	2020/04/15 09:35

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	34.7861	347.8614	241.26	245.18	3.91	49.90	10:32

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC)	CAS_salt_010711	CAS_salt_010711

(v1373) (v4) (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	25	TOC	RB	0.0000 ppm	0.0000 ppm	0.0000%	2020/04/15 09:50

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	6.43	10.25	3.82	49.91	10:32

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	26	TOC	K2003109-010.05	8.0474 ppm	0.0291 ppm	0.3600%	2020/04/15 10:04

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	8.0680	80.6797	61.58	65.54	3.95	49.88	10:29
2	TOC	8.0268	80.2678	61.31	65.19	3.89	49.87	10:31

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	27	TOC	K2003109-011.05	6.9590 ppm	0.1144 ppm	1.6400%	2020/04/15 10:32

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	7.0399	70.3986	54.67	58.54	3.87	49.88	10:28
2	TOC	6.8781	68.7807	53.58	57.54	3.96	49.87	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	28	TOC	K2003109-012.05	14.2356 ppm	0.0676 ppm	0.4700%	2020/04/15 11:00

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	14.2835	142.8346	103.38	107.26	3.87	49.84	10:28
2	TOC	14.1878	141.8784	102.74	106.45	3.71	49.83	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 4

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25	0 / infinity	26.2577	0.0000	0%	2020/04/15 11:28

					ppm [25 ppm]	(NA / NA)	ppm (PASS)	ppm		

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	26.2577	262.5772	184.40	188.22	3.82	49.82	10:33

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 4

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/04/15 11:43

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	5.89	9.66	3.77	49.81	10:33

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	0 ppmC

Sample Type: Sample From Schedule Version 4

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	29	TOC	K2003109-013.05	14.0367 ppm	0.0979 ppm	0.7000%	2020/04/15 11:58

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	14.1059	141.0591	102.19	106.09	3.90	49.79	10:29
2	TOC	13.9675	139.6747	101.26	105.15	3.89	49.80	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	30	TOC	K2003109-016.11	19.1449 ppm	0.0465 ppm	0.2400%	2020/04/15 12:26

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	19.1120	191.1203	135.86	139.59	3.74	49.76	10:29
2	TOC	19.1778	191.7775	136.30	140.00	3.71	49.76	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	31	TOC	K2003109-017.11 100x	2.2280 ppm	0.0607 ppm	2.7200%	2020/04/15 12:54

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.2709	22.7092	22.60	26.46	3.86	49.74	10:28
2	TOC	2.1851	21.8512	22.02	25.88	3.86	49.73	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	32	TOC	K2003109-018.11 100x	3.2463 ppm	0.0319 ppm	0.9800%	2020/04/15 13:22

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	3.2238	32.2378	29.01	32.76	3.75	49.72	10:25
2	TOC	3.2688	32.6884	29.31	33.16	3.85	49.70	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	33	TOC	K2003004-002.01	0.2715 ppm	0.0025 ppm	0.9300%	2020/04/15 13:50

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.2733	2.7329	9.17	12.86	3.70	49.69	10:31
2	TOC	0.2697	2.6972	9.14	12.88	3.73	49.65	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	34	TOC	K2003004-003.01	0.3504 ppm	0.0256 ppm	7.2900%	2020/04/15 14:19

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.3323	3.3232	9.56	13.30	3.74	49.65	10:27
2	TOC	0.3685	3.6845	9.81	13.48	3.67	49.70	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	35	TOC	K2003122-001.01	0.4391 ppm	0.0397 ppm	9.0500%	2020/04/15 14:47

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.4110	4.1098	10.09	13.84	3.75	49.78	10:28

2	TOC	0.4672	4.6719	10.47	14.11	3.64	49.82	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	36	TOC	K2003122-002.01	0.4314 ppm	0.0074 ppm	1.7100%	2020/04/15 15:15

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.4366	4.3656	10.26	14.01	3.75	49.80	10:25
2	TOC	0.4261	4.2615	10.19	13.93	3.74	49.86	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	37	TOC	K2003122-003.01	0.4319 ppm	0.0138 ppm	3.1900%	2020/04/15 15:43

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.4221	4.2213	10.17	13.83	3.66	49.89	10:29
2	TOC	0.4416	4.4161	10.30	14.09	3.80	49.87	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	38	TOC	K2003122-004.01	0.3793 ppm	0.0065 ppm	1.7200%	2020/04/15 16:11

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.3747	3.7470	9.85	13.88	4.03	49.89	10:29
2	TOC	0.3839	3.8392	9.91	13.86	3.95	49.91	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 4

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	25.7832 ppm (PASS)	0.0000 ppm	0%	2020/04/15 16:39

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.7832	257.8322	181.21	185.16	3.95	49.89	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 4

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/04/15 16:53

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	5.32	9.26	3.93	49.87	10:35

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	0 ppmC

Sample Type: Sample From Schedule Version 4

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	39	TOC	MB3	0.0000 ppm	0.0000 ppm	0.0000%	2020/04/15 17:08

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	4.66	8.43	3.77	49.92	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

Sample Type: Check Standard --> LCS From Schedule Version 4

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	C	TOC	25.0000	1:1	[TOC] LCS [25.0 ppm]	0 / infinity (NA / NA)	25.9157 ppm (PASS)	0.0000 ppm	0%	2020/04/15 17:23

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	25.9157	259.1571	182.10	185.88	3.78	49.91	10:33

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	25 ppmC

Sample Type: Sample From Schedule Version 4

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	40	TOC	K2003122-005.01	0.2270 ppm	0.0395 ppm	17.4100%	2020/04/15 17:38

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.2550	2.5500	9.04	13.05	4.01	49.89	10:30
2	TOC	0.1991	1.9909	8.67	12.53	3.86	49.84	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	41	TOC	K2003122-006.01	0.3261 ppm	0.0176 ppm	5.3800%	2020/04/15 18:06

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.3386	3.3857	9.60	13.41	3.80	49.79	10:32
2	TOC	0.3137	3.1373	9.44	13.27	3.83	49.75	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	42	TOC	K2003122-007.01	1.0386 ppm	0.0210 ppm	2.0200%	2020/04/15 18:34

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.0238	10.2377	14.21	18.08	3.87	49.71	10:26
2	TOC	1.0535	10.5351	14.41	18.42	4.01	49.72	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	43	TOC	K2003122-008.01	0.3172 ppm	0.0216 ppm	6.7900%	2020/04/15 19:02

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.3325	3.3247	9.56	13.29	3.73	49.68	10:26
2	TOC	0.3020	3.0199	9.36	13.04	3.68	49.66	10:24

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	44	TOC	K2003024-001.01 doc	0.0000 ppm	0.0000 ppm	0.0000%	2020/04/15 19:30

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	-3.91	0.00	3.91	49.63	10:25

2	TOC	0.0000	0.0000	-4.93	0.00	4.93	49.63	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	45	TOC	K2003024-002.01 doc	0.0000 ppm	0.0000 ppm	0.0000%	2020/04/15 19:58

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	-4.72	0.00	4.72	49.62	10:28
2	TOC	0.0000	0.0000	-5.27	0.00	5.27	49.61	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	46	TOC	K2003024-003.01 doc	14.0438 ppm	1.5793 ppm	11.2500%	2020/04/15 20:26

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	15.1605	151.6049	109.28	114.32	5.04	49.61	10:27
2	TOC	12.9270	129.2702	94.26	98.37	4.11	49.63	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	47	TOC	K2003024-004.01 doc	15.5456 ppm	0.1306 ppm	0.8400%	2020/04/15 20:54

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	15.6380	156.3796	112.49	116.69	4.20	49.64	10:27
2	TOC	15.4533	154.5328	111.25	115.19	3.94	49.67	10:31

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 4

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	26.0179 ppm (PASS)	0.0000 ppm	0%	2020/04/15 21:22

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	26.0179	260.1787	182.79	186.89	4.10	49.70	10:33

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 4

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/04/15 21:37

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	6.60	10.63	4.03	49.71	10:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	0 ppmC

Sample Type: Sample From Schedule Version 4

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	48	TOC	K2003024-005.01 doc	28.8889 ppm	0.0166 ppm	0.0600%	2020/04/15 21:52

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	28.9006	289.0062	201.68	205.65	3.97	49.71	10:26
2	TOC	28.8771	288.7712	201.53	205.59	4.07	49.71	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	49	TOC	K2003024-006.01 doc	0.0000 ppm	0.0000 ppm	0.0000%	2020/04/15 22:20

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	-3.97	0.00	3.97	49.75	10:29
2	TOC	0.0000	0.0000	-4.62	0.00	4.62	49.76	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	50	TOC	K2003024-007.01 doc	0.0000 ppm	0.0000 ppm	0.0000%	2020/04/15 22:48

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	-4.61	0.00	4.61	49.77	10:29

2	TOC	0.0000	0.0000	-4.68	0.00	4.68	49.79	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	51	TOC	K2003024-008.01 doc	0.0000 ppm	0.0000 ppm	0.0000%	2020/04/15 23:16

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	-4.51	0.00	4.51	49.80	10:27
2	TOC	0.0000	0.0000	-4.77	0.00	4.77	49.80	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	52	TOC	MB4	1.6331 ppm	0.0000 ppm	0.0000%	2020/04/15 23:44

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.6331	16.3314	18.31	23.08	4.77	49.86	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.3282 (IC) (v1373)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

Sample Type: Check Standard --> LCS From Schedule Version 4

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	C	TOC	25.0000	1:1	[TOC] LCS [25.0 ppm]	0 / infinity (NA / NA)	25.8625 ppm (PASS)	0.3700 ppm	1.43%	2020/04/15 23:59

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	26.1242	261.2419	183.50	187.47	3.97	49.85	10:26
C	TOC	25.0 ppm	2	25.6009	256.0091	179.98	184.05	4.07	49.89	10:27

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	25 ppmC

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 4

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	25.9791 ppm (PASS)	0.0000 ppm	0%	2020/04/16 00:27

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.9791	259.7906	182.53	186.44	3.92	49.89	10:33

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 4

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/04/16 00:42

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	6.72	10.77	4.04	49.92	10:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	0 ppmC

Meta Data Used in this Report

Blanks

Version	Reagent (Abs)	Acid (Abs)	DI IC (Abs)	DI TC (Abs)	DI TOC (Abs)	Save Time	Operator
v1372	1.3817	1.0480	0.0000	0.0000	0.0000	2020/04/09 13:40	Fusion1 (Fusion1)
v1373	1.4617	1.4750	0.0000	0.0000	0.0000	2020/04/14 19:40	Fusion1 (Fusion1)

Calibrations

Name: CAS_salt_010711 (TOC)

Version:	v32	Calibration curve formula:	TOC: y = 6.725x + 7.818
Ver Creation:	2020/03/11 15:55	r^2 value:	TOC: r^2 = 0.99921
Comment:			
Operator:	Fusion1 (Fusion1)		
Basic Analysis Type	TOC		

Basic Analysis Type: TOC

Sample ID	Y Raw Value	X Expected	Message	End Time

DI Water	5.8640	0.0000		2020/03/11 14:28
0.500 ppm	9.5210	0.5000		2020/03/11 14:42
1.0 ppm	12.5930	1.0000		2020/03/11 14:56
5.0 ppm	40.5270	5.0000		2020/03/11 15:10
10 ppm	79.5310	10.0000		2020/03/11 15:25
25 ppm	181.4610	25.0000		2020/03/11 15:39
50 ppm	340.5610	50.0000		2020/03/11 15:53

Methods

Name: CAS_salt_010711 (TOC)

Version: v4 Operator: Fusion1 (Fusion1)
Ver Creation: 2019/02/21 17:57
Comment:

Parameter	Value
SampleVolume	10.0 mL
Dilution	1:10
AcidVolume	0.5 ml
ReagentVolume	2.0 ml
UVReactorPrerinse	Off
UVReactorPrerinseVolume	5.0
NumberOfUVReactorPrerinses	1
ICSpargeTime	1.00 mins
DetectorSweepFlow	500 ml/min
PreSpargeTime	2.00 mins
SystemFlow	500 ml/min

Advanced Parameter	Value
NeedleRinseVolume	5.0 ml
VialPrimeVolume	2.0 ml
ICSamplePrimeVolume	2.0 ml
ICSpargeRinseVolume	12.0 ml
BaselineStabilizeTime	0.70 min
DetectorPressureFlow	150 ml/min
SyringeSpeedWaste	10
SyringeSpeedAcid	7
SyringeSpeedReagent	7
SyringeSpeedDIWater	7
NDIRPressurization	60 psig
SyringeSpeedSampleDispense	5
SyringeSpeedSampleAspirate	4
SyringeSpeedUVDispense	5
SyringeSpeedUVAspirate	5
SyringeSpeedICDispense	5
SyringeSpeedICAspirate	5
NDIRPressureStabilize	1.75 min
SampleMixing	Off
SampleMixingCycles	1
SampleMixingVolume	10.0
LowLevelFilterNDIR	Off

Acceptance / Approval

Electronic Signatures

Report				

Version	User Name	Acceptance	Reason	Date

Report History

Report History

Report Version	User Name	System Reason	User Reason	Date
1	Fusion1 (Fusion1)	Schedule completed	Schedule completed	2020/04/16 00:57

ALS Environmental

StarLIMS Run: 676812, 676813

Analysis: DOC/TOC

Method: SM 5310 C, 9060A, 415.1, 9060

CCV: 11-GEN-05-82C 50 ppm LCS: 11-GEN-05-79J 25.0 ppm

ICAL Date: 3/11/2020

ICAL ID: 19-GEN-8-7-E->J

ICS ID: 19-GEN-8-4-G

ICS TV: 25.0 ppm ICS % R < 1

Spike ID: 11-GEN-05-82C 0.05 ml of 5000 ppm stock ---> 10.0 ml = 25.0 ppm x dilution factor

Sodium Persulfate: 19-GEN-08-11-J

21 % H3PO4: 19-GEN-08-12-A

Equipment ID: K-TOC-03

PIPETTE ID: 124276B, 129001F, N11314F, Marge

FILTER ID: 16967789

Analyzed By: KD	Date Analyzed: 4/14/20
Reviewed By: JC	Date Reviewed: 4/16/20

HS20040289 WC NIT-AMN_W _ISE

ALS WO# HS20040289

NIT - AMMI-N - ISE

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Ion Selective Electrode Logbook

Analyst: YP	Date: 4/14/20 12:00 PM
Method: SM4500NH3-D/EPA 350.3 or SM4500 NH3 B-F	

Probe Calibration Date:	Cal Std ID:		
4/14/20	3100 601707		
Std Level		mV	Conc., mg/L:
STD 1 (mg/L):	0.2	138.5	0.201
STD 2 (mg/L):	1	98.5	1.010
STD 3 (mg/L):	5	57.0	5.013

Probe ID: SRI-15910		
Sodium Thiosulfate ID:		
Std Level	mV	Conc., mg/L:
STD 4 (mg/L): 10	38.6	10.041
STD 5 (mg/L): 50	-3.0	50.047

LSC / MS Spike ID:	3100601707
ICV Cal STD ID:	3100600817
DPD Reagent ID:	3100600909
ICAL Date & Slope:	101.1%I -59.6 mV

WO # / SX #	Bottle #	Initial g or ml	Final Vol. ml	Dilution Factor	Initial Conc. mg/L	Final Conc. mg/L	Chlorine Check (+/–)	Comments
ICV		50ml	50ml		9.851			
CCB					0.016			
MBLK					0.017			
LCS					10.194			
HS2004O205-01					0.134		-ve	
205-01MS					10.754		-ve	
205-01MSD					10.757		-ve	
-02					0.093		-ve	
-03					0.149		-ve	
-04					0.124		-ve	
-05					0.126		-ve	
HS2004O147-01					0.042		-ve	
CCV		50ml	50ml		10.522			
CCB		↓	↓		0.014			
HS2004O246-01		50ml	50ml		0.043		tve	Rechecked.
257-01		↓	↓		0.110		-ve	
289-01					1.573		-ve	
CCV		50ml	50ml		10.998			
CCB		↓	↓		0.018			

Batch ID: R#359940/359941	Reported By YP	Reviewed By: MD

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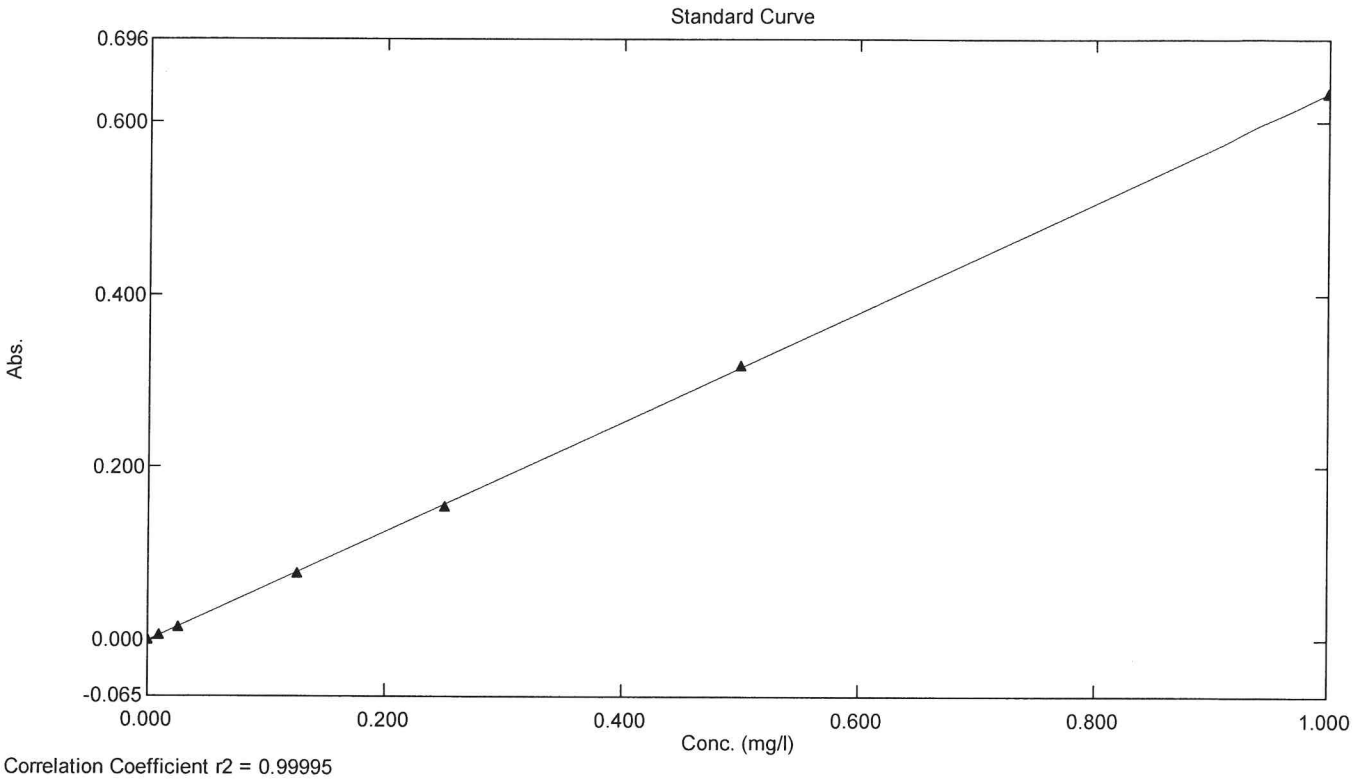
HS20040289 WC P_ORTHO

ALS WO# HS20040289

Standard Table Report

04/30/2020 05:33:32 PM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\O_PO4_UNKNOWN\2020\04092020_PORTHO.pho..



Correlation Coefficient r2 = 0.99995

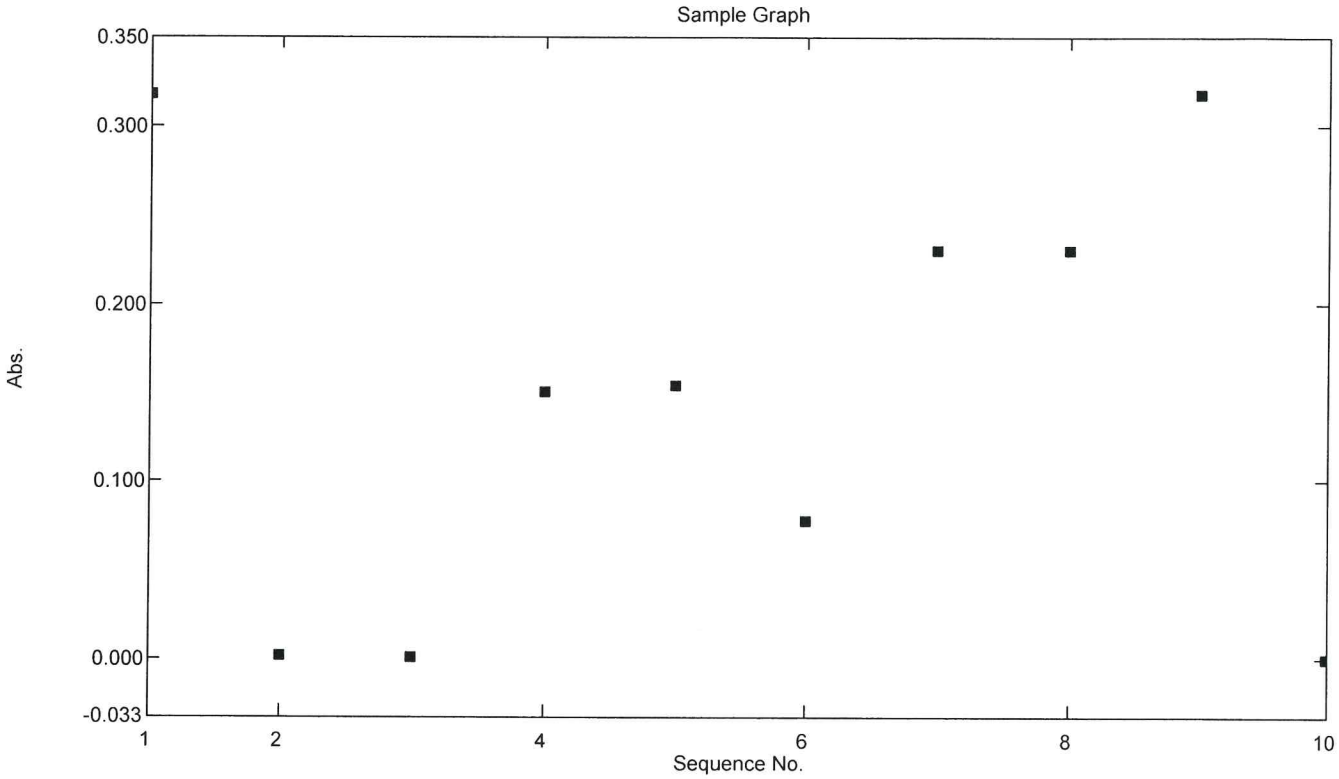
Standard Table

	Sample ID	Type	Ex	Conc	WL880.0	Wgt.Facto	Comments
1	STD1	Standard		0.000	-0.001	1.000	
2	STD2	Standard		0.010	0.006	1.000	
3	STD3	Standard		0.025	0.013	1.000	
4	STD4	Standard		0.125	0.077	1.000	
5	STD5	Standard		0.250	0.155	1.000	
6	STD6	Standard		0.500	0.319	1.000	
7	STD7	Standard		1.000	0.633	1.000	
8							

Sample Table Report

04/30/2020 05:33:35 PM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\O_PO4_UNKNOWN\2020\04092020_PORTHO.pho..



Sample Table

	Sample ID	Type	Ex	Conc	WL880.0	Comments
1	CCV	Unknown		0.503	0.318	313101509 WC-14
2	CCB	Unknown		0.005	0.001	
3	MBLK	Unknown		0.004	0.001	313102709 WC-11
4	LCS	Unknown		0.240	0.151	313101508 WC-14
5	LCSD	Unknown		0.245	0.154	
6	20040289.01	Unknown		0.125	0.078	12:01PM
7	20040289.01MS	Unknown		0.364	0.230	12:02PM
8	20040289.01MSD	Unknown		0.365	0.230	12:02PM
9	CCV2	Unknown		0.504	0.318	
10	CCB2	Unknown		0.002	-0.001	
11						

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WorkOrder: HS20040699

Longhorn GW Treatment Plant Bi Weekly Samples

Bhate Environmental Associates, Inc.

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

29-May-2020

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HS20040699

ALS WO# HS20040699

HS20040699 Longhorn GW Treatment Plant Bi Weekly Samples Final

ALS WO# HS20040699

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April 27, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20040699**

Laboratory Results for: **Longhorn GW Treatment Plant Bi Weekly Samples**

Dear Marcia,

ALS Environmental received 2 sample(s) on Apr 17, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

ALS Houston, US Date: 27-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
Work Order: HS20040699

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20040699-01	LH18/24-SP650_041620	Water		16-Apr-2020 14:00	17-Apr-2020 09:06	☐
HS20040699-02	Trip Blank	Water	CG 032420 -139	16-Apr-2020 00:00	17-Apr-2020 09:06	☐

ALS Houston, US Date: 27-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
Work Order: HS20040699

CASE NARRATIVE

GCMS Volatiles by Method SW8260

Batch ID: R360241

Sample ID: CCV

• Hexachlorobutadiene and n-Butylbenzene excceded %D limits fro CCV. Samples are ND for these compounds.

Sample ID: HS20040654-01MS

• MS and MSD are for an unrelated sample

Sample ID: VLCSW-200419

• 1,3_Dichloropropane exceeded QC limits for LCS. CCV is OK. Samples are ND for this compound.

WetChemistry by Method SW9056

Batch ID: R360508

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Batch ID: R360574

Sample ID: HS20040989-06MS

• MS and MSD are for an unrelated sample

ALS Houston, US Date: 27-Apr-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Bi Weekly Samples WorkOrder:HS20040699
Sample ID: LH18/24-SP650_041620 Lab ID:HS20040699-01
Collection Date: 16-Apr-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	19-Apr-2020 13:30
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	19-Apr-2020 13:30
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	19-Apr-2020 13:30
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	19-Apr-2020 13:30
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	19-Apr-2020 13:30
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	19-Apr-2020 13:30
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	19-Apr-2020 13:30
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	19-Apr-2020 13:30
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	19-Apr-2020 13:30
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	19-Apr-2020 13:30
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	19-Apr-2020 13:30
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	19-Apr-2020 13:30
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	19-Apr-2020 13:30
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	19-Apr-2020 13:30
1,2-Dichloroethane	**0.73**	J	**0.20**	**0.50**	**1.0**	**UG/L**	1	19-Apr-2020 13:30
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	19-Apr-2020 13:30
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	19-Apr-2020 13:30
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	19-Apr-2020 13:30
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	19-Apr-2020 13:30
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	19-Apr-2020 13:30
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	19-Apr-2020 13:30
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	19-Apr-2020 13:30
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	19-Apr-2020 13:30
2-Hexanone	1.0	U	1.0	1.0	2.0	UG/L	1	19-Apr-2020 13:30
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	19-Apr-2020 13:30
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	19-Apr-2020 13:30
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	UG/L	1	19-Apr-2020 13:30
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	19-Apr-2020 13:30
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	19-Apr-2020 13:30
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	19-Apr-2020 13:30
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	19-Apr-2020 13:30
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	19-Apr-2020 13:30
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	19-Apr-2020 13:30
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	19-Apr-2020 13:30
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	19-Apr-2020 13:30
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	19-Apr-2020 13:30
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	19-Apr-2020 13:30
Chloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	19-Apr-2020 13:30
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	19-Apr-2020 13:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 27-Apr-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Bi Weekly Samples WorkOrder:HS20040699
Sample ID: LH18/24-SP650_041620 Lab ID:HS20040699-01
Collection Date: 16-Apr-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	19-Apr-2020 13:30
cis-1,2-Dichloroethene	**21**		**0.20**	**0.50**	**1.0**	**UG/L**	1	19-Apr-2020 13:30
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	19-Apr-2020 13:30
Dibromochloromethane	1.0	U	0.30	1.0	1.0	UG/L	1	19-Apr-2020 13:30
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	19-Apr-2020 13:30
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	19-Apr-2020 13:30
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	19-Apr-2020 13:30
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	19-Apr-2020 13:30
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	19-Apr-2020 13:30
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	19-Apr-2020 13:30
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	19-Apr-2020 13:30
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	19-Apr-2020 13:30
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	19-Apr-2020 13:30
Naphthalene	1.0	U	0.30	1.0	1.0	UG/L	1	19-Apr-2020 13:30
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	19-Apr-2020 13:30
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	19-Apr-2020 13:30
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	19-Apr-2020 13:30
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	19-Apr-2020 13:30
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	19-Apr-2020 13:30
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	19-Apr-2020 13:30
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	19-Apr-2020 13:30
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	19-Apr-2020 13:30
Trichloroethene	**3.3**		**0.20**	**0.50**	**1.0**	**UG/L**	1	19-Apr-2020 13:30
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	19-Apr-2020 13:30
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	19-Apr-2020 13:30
Surr: 1,2-Dichloroethane-d4	*93.5*			**0**	*81-118*	*%REC*	*1*	*19-Apr-2020 13:30*
Surr: 4-Bromofluorobenzene	*101*			**0**	*85-114*	*%REC*	*1*	*19-Apr-2020 13:30*
Surr: Dibromofluoromethane	*88.4*			**0**	*80-119*	*%REC*	*1*	*19-Apr-2020 13:30*
Surr: Toluene-d8	*112*			**0**	*89-112*	*%REC*	*1*	*19-Apr-2020 13:30*
ANIONS BY SW9056A		**Method:SW9056**						Analyst: JHD
Chloride	**295**		**2.00**	**5.00**	**5.00**	**mg/L**	10	23-Apr-2020 21:21
Sulfate	**37.1**		**0.200**	**0.500**	**0.500**	**mg/L**	1	25-Apr-2020 04:03

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 27-Apr-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Bi Weekly Samples WorkOrder:HS20040699
Sample ID: Trip Blank Lab ID:HS20040699-02
Collection Date: 16-Apr-2020 00:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	19-Apr-2020 13:54
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	19-Apr-2020 13:54
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	19-Apr-2020 13:54
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	19-Apr-2020 13:54
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	19-Apr-2020 13:54
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	19-Apr-2020 13:54
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	19-Apr-2020 13:54
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	19-Apr-2020 13:54
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	19-Apr-2020 13:54
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	19-Apr-2020 13:54
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	19-Apr-2020 13:54
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	19-Apr-2020 13:54
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	19-Apr-2020 13:54
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	19-Apr-2020 13:54
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	19-Apr-2020 13:54
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	19-Apr-2020 13:54
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	19-Apr-2020 13:54
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	19-Apr-2020 13:54
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	19-Apr-2020 13:54
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	19-Apr-2020 13:54
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	19-Apr-2020 13:54
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	19-Apr-2020 13:54
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	19-Apr-2020 13:54
2-Hexanone	1.0	U	1.0	1.0	2.0	UG/L	1	19-Apr-2020 13:54
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	19-Apr-2020 13:54
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	19-Apr-2020 13:54
4-Methyl-2-pentanone	1.0	U	0.70	1.0	2.0	UG/L	1	19-Apr-2020 13:54
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	19-Apr-2020 13:54
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	19-Apr-2020 13:54
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	19-Apr-2020 13:54
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	19-Apr-2020 13:54
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	19-Apr-2020 13:54
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	19-Apr-2020 13:54
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	19-Apr-2020 13:54
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	19-Apr-2020 13:54
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	19-Apr-2020 13:54
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	19-Apr-2020 13:54
Chloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	19-Apr-2020 13:54
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	19-Apr-2020 13:54

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 27-Apr-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Bi Weekly Samples WorkOrder:HS20040699
Sample ID: Trip Blank Lab ID:HS20040699-02
Collection Date: 16-Apr-2020 00:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	19-Apr-2020 13:54
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	19-Apr-2020 13:54
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	19-Apr-2020 13:54
Dibromochloromethane	1.0	U	0.30	1.0	1.0	UG/L	1	19-Apr-2020 13:54
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	19-Apr-2020 13:54
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	19-Apr-2020 13:54
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	19-Apr-2020 13:54
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	19-Apr-2020 13:54
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	19-Apr-2020 13:54
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	19-Apr-2020 13:54
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	19-Apr-2020 13:54
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	19-Apr-2020 13:54
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	19-Apr-2020 13:54
Naphthalene	1.0	U	0.30	1.0	1.0	UG/L	1	19-Apr-2020 13:54
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	19-Apr-2020 13:54
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	19-Apr-2020 13:54
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	19-Apr-2020 13:54
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	19-Apr-2020 13:54
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	19-Apr-2020 13:54
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	19-Apr-2020 13:54
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	19-Apr-2020 13:54
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	19-Apr-2020 13:54
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	19-Apr-2020 13:54
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	19-Apr-2020 13:54
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	19-Apr-2020 13:54
Surr: 1,2-Dichloroethane-d4	*98.1*			**0**	*81-118*	*%REC*	*1*	*19-Apr-2020 13:54*
Surr: 4-Bromofluorobenzene	*91.1*			**0**	*85-114*	*%REC*	*1*	*19-Apr-2020 13:54*
Surr: Dibromofluoromethane	*96.1*			**0**	*80-119*	*%REC*	*1*	*19-Apr-2020 13:54*
Surr: Toluene-d8	*112*			**0**	*89-112*	*%REC*	*1*	*19-Apr-2020 13:54*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 27-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20040699

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R360241 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Water	
HS20040699-01	LH18/24-SP650_041620	16 Apr 2020 14:00			19 Apr 2020 13:30	1
HS20040699-02	Trip Blank	16 Apr 2020 00:00			19 Apr 2020 13:54	1
Batch ID: R360508 (0)	**Test Name :** ANIONS BY SW9056A				**Matrix:** Water	
HS20040699-01	LH18/24-SP650_041620	16 Apr 2020 14:00			23 Apr 2020 21:21	10
Batch ID: R360574 (0)	**Test Name :** ANIONS BY SW9056A				**Matrix:** Water	
HS20040699-01	LH18/24-SP650_041620	16 Apr 2020 14:00			25 Apr 2020 04:03	1

ALS Houston, US Date: 27-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20040699

QC BATCH REPORT

Batch ID: R360241 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-200419** Units: **UG/L** Analysis Date: **19-Apr-2020 12:42**
Client ID: Run ID: **VOA6_360241** SeqNo: **5559872** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	1.0	1.0								U
1,1,1-Trichloroethane	0.50	1.0								U
1,1,2,2-Tetrachloroethane	1.0	1.0								U
1,1,2-Trichloroethane	1.0	1.0								U
1,1-Dichloroethane	0.50	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,1-Dichloropropene	0.50	1.0								U
1,2,3-Trichlorobenzene	1.0	1.0								U
1,2,3-Trichloropropane	1.0	1.0								U
1,2,4-Trichlorobenzene	1.0	1.0								U
1,2,4-Trimethylbenzene	1.0	1.0								U
1,2-Dibromo-3-chloropropane	0.50	1.0								U
1,2-Dibromoethane	0.50	1.0								U
1,2-Dichlorobenzene	1.0	1.0								U
1,2-Dichloroethane	0.50	1.0								U
1,2-Dichloropropane	1.0	1.0								U
1,3,5-Trimethylbenzene	1.0	1.0								U
1,3-Dichlorobenzene	1.0	1.0								U
1,3-Dichloropropane	1.0	1.0								U
1,4-Dichlorobenzene	1.0	1.0								U
2,2-Dichloropropane	0.50	1.0								U
2-Butanone	1.0	2.0								U
2-Chlorotoluene	1.0	1.0								U
2-Hexanone	1.0	2.0								U
4-Chlorotoluene	1.0	1.0								U
4-Isopropyltoluene	1.0	1.0								U
4-Methyl-2-pentanone	1.0	2.0								U
Acetone	1.0	2.0								U
Benzene	0.50	1.0								U
Bromobenzene	1.0	1.0								U
Bromochloromethane	0.50	1.0								U
Bromodichloromethane	0.50	1.0								U
Bromoform	1.0	1.0								U
Bromomethane	1.0	1.0								U

ALS Houston, US Date: 27-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20040699

QC BATCH REPORT

Batch ID: R360241 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-200419** Units: **UG/L** Analysis Date: **19-Apr-2020 12:42**
Client ID: Run ID: **VOA6_360241** SeqNo: **5559872** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	1.0	2.0								U
Carbon tetrachloride	1.0	1.0								U
Chlorobenzene	1.0	1.0								U
Chloroethane	1.0	1.0								U
Chloroform	0.50	1.0								U
Chloromethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
cis-1,3-Dichloropropene	0.50	1.0								U
Dibromochloromethane	1.0	1.0								U
Dibromomethane	0.50	1.0								U
Dichlorodifluoromethane	1.0	1.0								U
Ethylbenzene	1.0	1.0								U
Hexachlorobutadiene	1.0	1.0								U
Isopropylbenzene	1.0	1.0								U
m,p-Xylene	1.0	2.0								U
Methylene chloride	1.0	2.0								U
Naphthalene	1.0	1.0								U
n-Butylbenzene	1.0	1.0								U
n-Propylbenzene	1.0	1.0								U
o-Xylene	1.0	1.0								U
sec-Butylbenzene	1.0	1.0								U
Styrene	1.0	1.0								U
tert-Butylbenzene	1.0	1.0								U
Tetrachloroethene	1.0	1.0								U
Toluene	0.50	1.0								U
trans-1,2-Dichloroethene	0.50	1.0								U
trans-1,3-Dichloropropene	0.50	1.0								U
Trichloroethene	0.50	1.0								U
Trichlorofluoromethane	1.0	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*56.7*	*1.0*	*50*	*0*	*113*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*49.4*	*1.0*	*50*	*0*	*98.8*	*85 - 114*				
Surr: Dibromofluoromethane	*48.84*	*1.0*	*50*	*0*	*97.7*	*80 - 119*				
Surr: Toluene-d8	*53.69*	*1.0*	*50*	*0*	*107*	*89 - 112*				

ALS Houston, US Date: 27-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20040699

QC BATCH REPORT

Batch ID: R360241 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-200419** Units: **UG/L** Analysis Date: **19-Apr-2020 11:54**
Client ID: Run ID: **VOA6_360241** SeqNo: **5559871** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	20.5	1.0	20	0	102	78 - 124				
1,1,1-Trichloroethane	19.65	1.0	20	0	98.3	74 - 131				
1,1,2,2-Tetrachloroethane	18.88	1.0	20	0	94.4	71 - 121				
1,1,2-Trichloroethane	22.51	1.0	20	0	113	80 - 119				
1,1-Dichloroethane	23.5	1.0	20	0	117	77 - 125				
1,1-Dichloroethene	19.29	1.0	20	0	96.4	71 - 131				
1,1-Dichloropropene	18.38	1.0	20	0	91.9	78 - 125				
1,2,3-Trichlorobenzene	22.48	1.0	20	0	112	69 - 129				
1,2,3-Trichloropropane	19.75	1.0	20	0	98.7	73 - 122				
1,2,4-Trichlorobenzene	22.33	1.0	20	0	112	69 - 130				
1,2,4-Trimethylbenzene	19.32	1.0	20	0	96.6	76 - 124				
1,2-Dibromo-3-chloropropane	20.94	1.0	20	0	105	62 - 128				
1,2-Dibromoethane	21.97	1.0	20	0	110	77 - 121				
1,2-Dichlorobenzene	19.93	1.0	20	0	99.7	80 - 119				
1,2-Dichloroethane	17.57	1.0	20	0	87.9	73 - 128				
1,2-Dichloropropane	19.13	1.0	20	0	95.7	78 - 122				
1,3,5-Trimethylbenzene	21.69	1.0	20	0	108	75 - 124				
1,3-Dichlorobenzene	19.09	1.0	20	0	95.5	80 - 119				
1,3-Dichloropropane	24.17	1.0	20	0	121	80 - 119				S
1,4-Dichlorobenzene	18.3	1.0	20	0	91.5	79 - 118				
2,2-Dichloropropane	22.92	1.0	20	0	115	60 - 139				
2-Butanone	39.94	2.0	40	0	99.8	56 - 143				
2-Chlorotoluene	21.53	1.0	20	0	108	79 - 122				
2-Hexanone	49.97	2.0	40	0	125	57 - 139				
4-Chlorotoluene	21.88	1.0	20	0	109	78 - 122				
4-Isopropyltoluene	17.97	1.0	20	0	89.9	77 - 127				
4-Methyl-2-pentanone	47.1	2.0	40	0	118	67 - 130				
Acetone	49.01	2.0	40	0	123	39 - 160				
Benzene	17.5	1.0	20	0	87.5	79 - 120				
Bromobenzene	19.39	1.0	20	0	96.9	80 - 120				
Bromochloromethane	19.57	1.0	20	0	97.9	78 - 123				
Bromodichloromethane	20.44	1.0	20	0	102	79 - 125				
Bromoform	21.4	1.0	20	0	107	66 - 130				
Bromomethane	22.05	1.0	20	0	110	53 - 141				

ALS Houston, US Date: 27-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20040699

QC BATCH REPORT

Batch ID: R360241 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-200419** Units: **UG/L** Analysis Date: **19-Apr-2020 11:54**
Client ID: Run ID: **VOA6_360241** SeqNo: **5559871** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	38.32	2.0	40	0	95.8	64 - 133				
Carbon tetrachloride	18.6	1.0	20	0	93.0	72 - 136				
Chlorobenzene	19.39	1.0	20	0	97.0	82 - 118				
Chloroethane	18.13	1.0	20	0	90.7	60 - 138				
Chloroform	21.25	1.0	20	0	106	79 - 124				
Chloromethane	18.46	1.0	20	0	92.3	50 - 139				
cis-1,2-Dichloroethene	21.33	1.0	20	0	107	78 - 123				
cis-1,3-Dichloropropene	19.61	1.0	20	0	98.0	75 - 124				
Dibromochloromethane	23.25	1.0	20	0	116	74 - 126				
Dibromomethane	20.17	1.0	20	0	101	79 - 123				
Dichlorodifluoromethane	18.76	1.0	20	0	93.8	32 - 152				
Ethylbenzene	19.08	1.0	20	0	95.4	79 - 121				
Hexachlorobutadiene	25.4	1.0	20	0	127	66 - 134				
Isopropylbenzene	18.67	1.0	20	0	93.3	72 - 131				
m,p-Xylene	38.44	2.0	40	0	96.1	80 - 121				
Methylene chloride	20.18	2.0	20	0	101	74 - 124				
Naphthalene	21.62	1.0	20	0	108	61 - 128				
n-Butylbenzene	18.46	1.0	20	0	92.3	75 - 128				
n-Propylbenzene	21.33	1.0	20	0	107	76 - 126				
o-Xylene	20.29	1.0	20	0	101	78 - 122				
sec-Butylbenzene	17.34	1.0	20	0	86.7	77 - 126				
Styrene	20.18	1.0	20	0	101	78 - 123				
tert-Butylbenzene	18.85	1.0	20	0	94.2	78 - 124				
Tetrachloroethene	20.91	1.0	20	0	105	74 - 129				
Toluene	20.45	1.0	20	0	102	80 - 121				
trans-1,2-Dichloroethene	22.99	1.0	20	0	115	75 - 124				
trans-1,3-Dichloropropene	19.91	1.0	20	0	99.6	73 - 127				
Trichloroethene	18.59	1.0	20	0	93.0	79 - 123				
Trichlorofluoromethane	18.67	1.0	20	0	93.4	65 - 141				
Vinyl chloride	18.77	1.0	20	0	93.9	58 - 137				
Surr: 1,2-Dichloroethane-d4	*46.05*	*1.0*	*50*	*0*	*92.1*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*48.37*	*1.0*	*50*	*0*	*96.7*	*85 - 114*				
Surr: Dibromofluoromethane	*47.97*	*1.0*	*50*	*0*	*95.9*	*80 - 119*				
Surr: Toluene-d8	*48.82*	*1.0*	*50*	*0*	*97.6*	*89 - 112*				

ALS Houston, US Date: 27-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20040699

QC BATCH REPORT

Batch ID: R360241 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20040654-01MS** Units: **UG/L** Analysis Date: **19-Apr-2020 14:42**
Client ID: Run ID: **VOA6_360241** SeqNo: **5559876** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	21.16	1.0	20	0	106	78 - 124				
1,1,1-Trichloroethane	20.45	1.0	20	0	102	74 - 131				
1,1,2,2-Tetrachloroethane	20.6	1.0	20	0	103	71 - 121				
1,1,2-Trichloroethane	20.08	1.0	20	0	100	80 - 119				
1,1-Dichloroethane	19.57	1.0	20	0	97.9	77 - 125				
1,1-Dichloroethene	20.95	1.0	20	0	105	71 - 131				
1,1-Dichloropropene	24.16	1.0	20	0	121	78 - 125				
1,2,3-Trichlorobenzene	13.89	1.0	20	0	69.5	69 - 129				
1,2,3-Trichloropropane	19.85	1.0	20	0	99.2	73 - 122				
1,2,4-Trichlorobenzene	17.16	1.0	20	0	85.8	69 - 130				
1,2,4-Trimethylbenzene	20.84	1.0	20	0	104	76 - 124				
1,2-Dibromo-3-chloropropane	19.47	1.0	20	0	97.4	62 - 128				
1,2-Dibromoethane	21.06	1.0	20	0	105	77 - 121				
1,2-Dichlorobenzene	20.69	1.0	20	0	103	80 - 119				
1,2-Dichloroethane	23.95	1.0	20	0	120	73 - 128				
1,2-Dichloropropane	21.1	1.0	20	0	106	78 - 122				
1,3,5-Trimethylbenzene	21.16	1.0	20	0	106	75 - 124				
1,3-Dichlorobenzene	20.31	1.0	20	0	102	80 - 119				
1,3-Dichloropropane	20.17	1.0	20	0	101	80 - 119				
1,4-Dichlorobenzene	19.51	1.0	20	0	97.6	79 - 118				
2,2-Dichloropropane	18.45	1.0	20	0	92.3	60 - 139				
2-Butanone	31.19	2.0	40	0	78.0	56 - 143				
2-Chlorotoluene	20.44	1.0	20	0	102	79 - 122				
2-Hexanone	40.42	2.0	40	0	101	57 - 139				
4-Chlorotoluene	20.12	1.0	20	0	101	78 - 122				
4-Isopropyltoluene	21.2	1.0	20	0	106	77 - 127				
4-Methyl-2-pentanone	55.34	2.0	40	0	138	67 - 130				S
Acetone	46.28	2.0	40	0	116	39 - 160				
Benzene	23.56	1.0	20	0	118	79 - 120				
Bromobenzene	22.61	1.0	20	0	113	80 - 120				
Bromochloromethane	17.79	1.0	20	0	89.0	78 - 123				
Bromodichloromethane	31.35	1.0	20	0	157	79 - 125				S
Bromoform	25.31	1.0	20	1.307	120	66 - 130				
Bromomethane	20.9	1.0	20	0	104	53 - 141				

ALS Houston, US Date: 27-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20040699

QC BATCH REPORT

Batch ID: R360241 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20040654-01MS** Units: **UG/L** Analysis Date: **19-Apr-2020 14:42**
Client ID: Run ID: **VOA6_360241** SeqNo: **5559876** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	37.63	2.0	40	0	94.1	64 - 133				
Carbon tetrachloride	23.44	1.0	20	0	117	72 - 136				
Chlorobenzene	20.52	1.0	20	0	103	82 - 118				
Chloroethane	18.62	1.0	20	0	93.1	60 - 138				
Chloroform	27.46	1.0	20	12.44	75.1	79 - 124				S
Chloromethane	17.71	1.0	20	0	88.5	50 - 139				
cis-1,2-Dichloroethene	18.21	1.0	20	0	91.0	78 - 123				
cis-1,3-Dichloropropene	24.97	1.0	20	0	125	75 - 124				S
Dibromochloromethane	29.05	1.0	20	7.836	106	74 - 126				
Dibromomethane	20.4	1.0	20	0	102	79 - 123				
Dichlorodifluoromethane	14.1	1.0	20	0	70.5	32 - 152				
Ethylbenzene	21.3	1.0	20	0	106	79 - 121				
Hexachlorobutadiene	20.64	1.0	20	0	103	66 - 134				
Isopropylbenzene	25.3	1.0	20	0	127	72 - 131				
m,p-Xylene	42.48	2.0	40	0	106	80 - 121				
Methylene chloride	17.32	2.0	20	0	86.6	74 - 124				
Naphthalene	15.23	1.0	20	0	76.2	61 - 128				
n-Butylbenzene	22.08	1.0	20	0	110	75 - 128				
n-Propylbenzene	20.85	1.0	20	0	104	76 - 126				
o-Xylene	25	1.0	20	0	125	78 - 122				S
sec-Butylbenzene	20.71	1.0	20	0	104	77 - 126				
Styrene	24.86	1.0	20	0	124	78 - 123				S
tert-Butylbenzene	21.42	1.0	20	0	107	78 - 124				
Tetrachloroethene	22.81	1.0	20	0	114	74 - 129				
Toluene	25.48	1.0	20	0	127	80 - 121				S
trans-1,2-Dichloroethene	21.46	1.0	20	0	107	75 - 124				
trans-1,3-Dichloropropene	20.98	1.0	20	0	105	73 - 127				
Trichloroethene	21.09	1.0	20	0	105	79 - 123				
Trichlorofluoromethane	20.99	1.0	20	0	105	65 - 141				
Vinyl chloride	19.19	1.0	20	0	95.9	58 - 137				
Surr: 1,2-Dichloroethane-d4	*54.44*	*1.0*	*50*	*0*	*109*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*60.56*	*1.0*	*50*	*0*	*121*	*85 - 114*				S
Surr: Dibromofluoromethane	*47.04*	*1.0*	*50*	*0*	*94.1*	*80 - 119*				
Surr: Toluene-d8	*61.69*	*1.0*	*50*	*0*	*123*	*89 - 112*				S

ALS Houston, US Date: 27-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20040699

QC BATCH REPORT

Batch ID: R360241 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20040654-01MSD** Units: **UG/L** Analysis Date: **19-Apr-2020 15:06**
Client ID: Run ID: **VOA6_360241** SeqNo: **5559877** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	20.94	1.0	20	0	105	78 - 124	21.16	1.05	20	
1,1,1-Trichloroethane	18.57	1.0	20	0	92.9	74 - 131	20.45	9.6	20	
1,1,2,2-Tetrachloroethane	19.46	1.0	20	0	97.3	71 - 121	20.6	5.72	20	
1,1,2-Trichloroethane	24.99	1.0	20	0	125	80 - 119	20.08	21.8	20	SR
1,1-Dichloroethane	20.28	1.0	20	0	101	77 - 125	19.57	3.56	20	
1,1-Dichloroethene	21.66	1.0	20	0	108	71 - 131	20.95	3.34	20	
1,1-Dichloropropene	18.22	1.0	20	0	91.1	78 - 125	24.16	28	20	R
1,2,3-Trichlorobenzene	21.87	1.0	20	0	109	69 - 129	13.89	44.6	20	R
1,2,3-Trichloropropane	20.15	1.0	20	0	101	73 - 122	19.85	1.5	20	
1,2,4-Trichlorobenzene	22.37	1.0	20	0	112	69 - 130	17.16	26.3	20	R
1,2,4-Trimethylbenzene	21.2	1.0	20	0	106	76 - 124	20.84	1.7	20	
1,2-Dibromo-3-chloropropane	20.03	1.0	20	0	100	62 - 128	19.47	2.85	20	
1,2-Dibromoethane	20.89	1.0	20	0	104	77 - 121	21.06	0.818	20	
1,2-Dichlorobenzene	21.3	1.0	20	0	106	80 - 119	20.69	2.89	20	
1,2-Dichloroethane	19.95	1.0	20	0	99.7	73 - 128	23.95	18.3	20	
1,2-Dichloropropane	20.52	1.0	20	0	103	78 - 122	21.1	2.8	20	
1,3,5-Trimethylbenzene	21.46	1.0	20	0	107	75 - 124	21.16	1.45	20	
1,3-Dichlorobenzene	22.05	1.0	20	0	110	80 - 119	20.31	8.21	20	
1,3-Dichloropropane	23.95	1.0	20	0	120	80 - 119	20.17	17.1	20	S
1,4-Dichlorobenzene	20	1.0	20	0	100.0	79 - 118	19.51	2.44	20	
2,2-Dichloropropane	20.16	1.0	20	0	101	60 - 139	18.45	8.82	20	
2-Butanone	37.09	2.0	40	0	92.7	56 - 143	31.19	17.3	20	
2-Chlorotoluene	20.39	1.0	20	0	102	79 - 122	20.44	0.229	20	
2-Hexanone	44.52	2.0	40	0	111	57 - 139	40.42	9.66	20	
4-Chlorotoluene	20.06	1.0	20	0	100	78 - 122	20.12	0.297	20	
4-Isopropyltoluene	22.23	1.0	20	0	111	77 - 127	21.2	4.76	20	
4-Methyl-2-pentanone	56.16	2.0	40	0	140	67 - 130	55.34	1.47	20	S
Acetone	53.26	2.0	40	0	133	39 - 160	46.28	14	20	
Benzene	20.99	1.0	20	0	105	79 - 120	23.56	11.5	20	
Bromobenzene	20.44	1.0	20	0	102	80 - 120	22.61	10.1	20	
Bromochloromethane	19.29	1.0	20	0	96.4	78 - 123	17.79	8.08	20	
Bromodichloromethane	31.34	1.0	20	0	157	79 - 125	31.35	0.0237	20	S
Bromoform	23.07	1.0	20	1.307	109	66 - 130	25.31	9.27	20	
Bromomethane	21.24	1.0	20	0	106	53 - 141	20.9	1.62	20	

ALS Houston, US Date: 27-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20040699

QC BATCH REPORT

Batch ID: R360241 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20040654-01MSD** Units: **UG/L** Analysis Date: **19-Apr-2020 15:06**
Client ID: Run ID: **VOA6_360241** SeqNo: **5559877** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	39.6	2.0	40	0	99.0	64 - 133	37.63	5.1	20	
Carbon tetrachloride	19.28	1.0	20	0	96.4	72 - 136	23.44	19.4	20	
Chlorobenzene	20.42	1.0	20	0	102	82 - 118	20.52	0.47	20	
Chloroethane	19.3	1.0	20	0	96.5	60 - 138	18.62	3.58	20	
Chloroform	28.74	1.0	20	12.44	81.5	79 - 124	27.46	4.58	20	
Chloromethane	18.25	1.0	20	0	91.2	50 - 139	17.71	2.99	20	
cis-1,2-Dichloroethene	19.55	1.0	20	0	97.7	78 - 123	18.21	7.11	20	
cis-1,3-Dichloropropene	24.35	1.0	20	0	122	75 - 124	24.97	2.51	20	
Dibromochloromethane	29.52	1.0	20	7.836	108	74 - 126	29.05	1.62	20	
Dibromomethane	20.58	1.0	20	0	103	79 - 123	20.4	0.889	20	
Dichlorodifluoromethane	14.19	1.0	20	0	71.0	32 - 152	14.1	0.661	20	
Ethylbenzene	21.2	1.0	20	0	106	79 - 121	21.3	0.476	20	
Hexachlorobutadiene	25.15	1.0	20	0	126	66 - 134	20.64	19.7	20	
Isopropylbenzene	23.06	1.0	20	0	115	72 - 131	25.3	9.29	20	
m,p-Xylene	42.36	2.0	40	0	106	80 - 121	42.48	0.274	20	
Methylene chloride	21.4	2.0	20	0	107	74 - 124	17.32	21.1	20	R
Naphthalene	23.01	1.0	20	0	115	61 - 128	15.23	40.7	20	R
n-Butylbenzene	22.63	1.0	20	0	113	75 - 128	22.08	2.44	20	
n-Propylbenzene	20.94	1.0	20	0	105	76 - 126	20.85	0.402	20	
o-Xylene	21.52	1.0	20	0	108	78 - 122	25	15	20	
sec-Butylbenzene	22.71	1.0	20	0	114	77 - 126	20.71	9.19	20	
Styrene	21.01	1.0	20	0	105	78 - 123	24.86	16.8	20	
tert-Butylbenzene	21.54	1.0	20	0	108	78 - 124	21.42	0.583	20	
Tetrachloroethene	24.52	1.0	20	0	123	74 - 129	22.81	7.21	20	
Toluene	25.98	1.0	20	0	130	80 - 121	25.48	1.96	20	S
trans-1,2-Dichloroethene	25.77	1.0	20	0	129	75 - 124	21.46	18.2	20	S
trans-1,3-Dichloropropene	25.44	1.0	20	0	127	73 - 127	20.98	19.2	20	S
Trichloroethene	20.37	1.0	20	0	102	79 - 123	21.09	3.47	20	
Trichlorofluoromethane	21.76	1.0	20	0	109	65 - 141	20.99	3.58	20	
Vinyl chloride	19.51	1.0	20	0	97.6	58 - 137	19.19	1.68	20	
Surr: 1,2-Dichloroethane-d4	*56.22*	*1.0*	*50*	*0*	*112*	*81 - 118*	*54.44*	*3.21*	*20*	
Surr: 4-Bromofluorobenzene	*50.63*	*1.0*	*50*	*0*	*101*	*85 - 114*	*60.56*	*17.9*	*20*	
Surr: Dibromofluoromethane	*44.85*	*1.0*	*50*	*0*	*89.7*	*80 - 119*	*47.04*	*4.77*	*20*	
Surr: Toluene-d8	*62.37*	*1.0*	*50*	*0*	*125*	*89 - 112*	*61.69*	*1.1*	*20*	S

ALS Houston, US Date: 27-Apr-20

Client:	Bhate Environmental Associates, Inc.
Project:	Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder:	HS20040699

QC BATCH REPORT

Batch ID:	**R360241 (0)**	**Instrument:**	**VOA6**	**Method:**	**VOLATILES ORGANICS BY METHOD 8260C**

The following samples were analyzed in this batch: HS20040699-01 HS20040699-02

ALS Houston, US Date: 27-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20040699

QC BATCH REPORT

Batch ID: R360508 (0) **Instrument: ICS-Integrion** **Method: ANIONS BY SW9056A**

MBLK Sample ID: **MBLK042320** Units: **mg/L** Analysis Date: **23-Apr-2020 19:14**
Client ID: Run ID: **ICS-Integrion_360508** SeqNo: **5564647** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	0.500	0.500								U

LCS Sample ID: **LCS** Units: **mg/L** Analysis Date: **23-Apr-2020 19:32**
Client ID: Run ID: **ICS-Integrion_360508** SeqNo: **5564648** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.9	0.500	20	0	99.5	80 - 120				

MS Sample ID: **HS20040845-09MS** Units: **mg/L** Analysis Date: **24-Apr-2020 00:04**
Client ID: Run ID: **ICS-Integrion_360508** SeqNo: **5564659** PrepDate: DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	3296	50.0	1000	2332	96.5	80 - 120				

MSD Sample ID: **HS20040845-09MSD** Units: **mg/L** Analysis Date: **24-Apr-2020 00:22**
Client ID: Run ID: **ICS-Integrion_360508** SeqNo: **5564660** PrepDate: DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	3325	50.0	1000	2332	99.3	80 - 120	3296	0.861	20	

The following samples were analyzed in this batch: HS20040699-01

ALS Houston, US Date: 27-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20040699

QC BATCH REPORT

Batch ID: R360574 (0) **Instrument: ICS-Integrion** **Method: ANIONS BY SW9056A**

MBLK Sample ID: **MBLK042420** Units: **mg/L** Analysis Date: **25-Apr-2020 08:35**
Client ID: Run ID: **ICS-Integrion_360574** SeqNo: **5565997** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	0.500	0.500								U

LCS Sample ID: **LCS** Units: **mg/L** Analysis Date: **25-Apr-2020 08:53**
Client ID: Run ID: **ICS-Integrion_360574** SeqNo: **5565998** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	19.73	0.500	20	0	98.6	80 - 120				

LCSD Sample ID: **LCSD** Units: **mg/L** Analysis Date: **25-Apr-2020 09:11**
Client ID: Run ID: **ICS-Integrion_360574** SeqNo: **5565999** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	19.6	0.500	20	0	98.0	80 - 120	19.73	0.665	20	

MS Sample ID: **HS20040989-06MS** Units: **mg/L** Analysis Date: **25-Apr-2020 06:10**
Client ID: Run ID: **ICS-Integrion_360574** SeqNo: **5565989** PrepDate: DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	8025	10.0	200	8176	-75.7	80 - 120				SEO

MSD Sample ID: **HS20040989-06MSD** Units: **mg/L** Analysis Date: **25-Apr-2020 06:28**
Client ID: Run ID: **ICS-Integrion_360574** SeqNo: **5565990** PrepDate: DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	8083	10.0	200	8176	-46.4	80 - 120	8025	0.726	20	SEO

The following samples were analyzed in this batch: HS20040699-01

ALS Houston, US Date: 27-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: **HS20040699**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
California	2919, 2019-2020	30-Apr-2020
Dept of Defense	ANAB L2231 V009	22-Dec-2021
Florida	E87611-28	30-Jun-2020
Illinois	2000322019-2	09-May-2020
Kansas	E-10352 2019-2020	31-Jul-2020
Kentucky	123043, 2019-2020	30-Apr-2020
Louisiana	03087, 2019-2020	30-Jun-2020
Maryland	343, 2019-2020	30-Jun-2020
North Carolina	624-2020	31-Dec-2020
North Dakota	R-193 2019-2020	30-Apr-2020
Oklahoma	2019-067	31-Aug-2020
Texas	T104704231-19-25	30-Apr-2020

ALS Houston, US Date: 27-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
Work Order: HS20040699

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20040699-01	LH18/24-SP650_041620	Login	4/17/2020 9:59:59 AM	JRM	WET005
HS20040699-01	LH18/24-SP650_041620	Login	4/17/2020 9:59:59 AM	JRM	VOA014
HS20040699-02	Trip Blank	Login	4/17/2020 9:59:59 AM	JRM	VOA014

ALS Houston, US Date: 27-Apr-20

Sample Receipt Checklist

Client Name: Bhate Environmental
Work Order: HS20040699
Date/Time Received: **17-Apr-2020 09:06**
Received by: **JRM**

Checklist completed by: *Jared R. Makan* eSignature 17-Apr-2020 Date
Reviewed by: *RJ Modashia* eSignature 17-Apr-2020 Date

Matrices: **Water**
Carrier name: **FedEx Priority Overnight**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Samplers name present on COC?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	

Temperature(s)/Thermometer(s):	1.3°C/1.3°C UC/C	IR11
Cooler(s)/Kit(s):	43535	
Date/Time sample(s) sent to storage:	04/17/2020 10:05	

Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stancliff Rd. Suite 210, Houston, Tx. 77099 ATTN: R.J. Modashia

Project: BHATE
LONGHORN ARMY AMMN. PLANT (LHAAP)
GROUNDWATER TREATMENT PLANT (GWTP)
KARNACK, TEXAS

Project No. NWO1312.0150.0 16.0001

Job: GROUNDWATER TREATMENT PLANT BI-WEEKLY SAMPLES

Prepared By: Scott Beesinger

P.O Number

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: VOC	Analyses: CHLORIDE, SULFATE	Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP650_041620	Water	04/16/20 / 14:00		3	3		HCL	
LH18/24-SP650_041620	Water	04/16/20 / 14:00		1		1	NONE	
Trip Blank	Water	04/16/20		2	2		HCL	

HS20040699
Bhate Environmental Associates, Inc.
Longhorn GW Treatment Plant Bi Weekly Samples

Additional Remarks: **Standard TAT on Chloride & Sulfate. 24 Hour TAT on VOC**

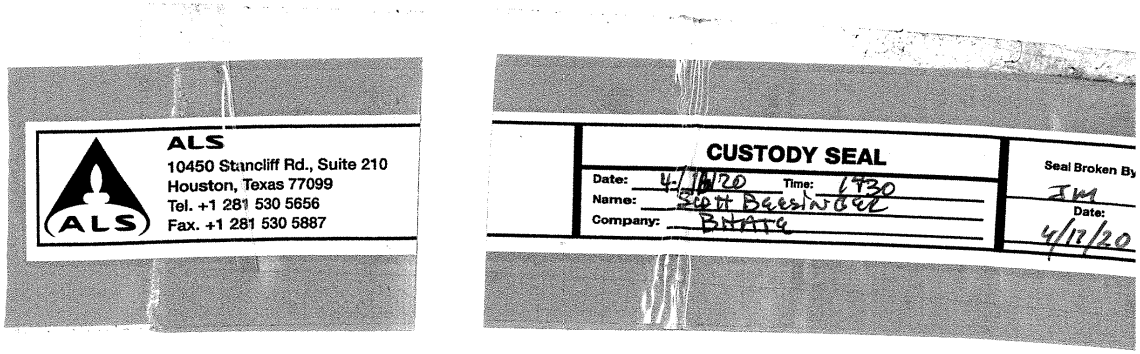
Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	04/16/20	14:30									

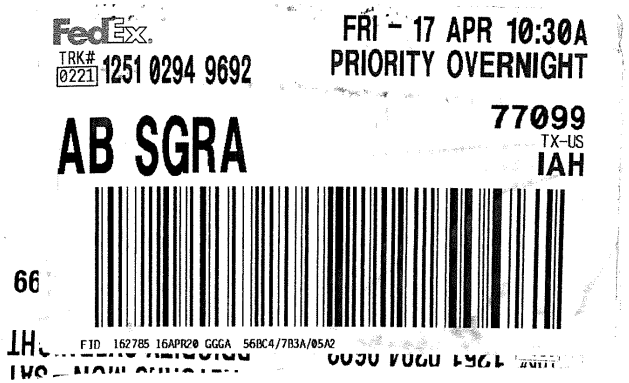
9For Lab Use Only

Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition
J. Mumm	4/17/20	09:06							

Remarks
Cooler 4353S IR 11
Temp 1.3°C CF 0.0

(Word) S:\1-ces\Forms\Chain of Custody - BiWeekly


ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887
CUSTODY SEAL
Date: 4/16/20
Time: 1730
Name: Scott Beesinger
Company: BNAFG
Seal Broken By
JM
Date:
4/17/20


FedEx
TRK# 0221 1251 0294 9692
FRI - 17 APR 10:30A
PRIORITY OVERNIGHT
AB SGRA
77099
TX-US
IAH
66
FID 162785 16APR20 GGGA 56BC4/7B3A/05A2

HS20040699 8260 Raw Data

ALS WO# HS20040699

MSVOA06 -Logbook

Batch: 40337
Date: 04-17-2020
Method: 8260
Comments:

Analyst: Presenta Cabascango
Reviewer:
Laboratory: Houston

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	04-17-2020 11:13 am	1.00	50 mL	50 mL	X041701.D	Liquid	Y	NA
2	*Auto find/ purged* VSTD000.25	ICAL1	04-17-2020 11:37 am	1.00	50 mL	50 mL	X041702.D	Liquid	Y	NA
3	*0.1 uL cal std/100 mL DI* VSTD000.5	ICAL2	04-17-2020 12:24 pm	1.00	50 mL	50 mL	X041703.D	Liquid	Y	NA
4	*0.10 uL cal std/50 mL DI* VSTD001	ICAL3	04-17-2020 12:48 pm	1.00	50 mL	50 mL	X041704.D	Liquid	Y	NA
5	*0.20 uL cal std/50 mL DI* VSTD002	ICAL4	04-17-2020 01:12 pm	1.00	50 mL	50 mL	X041705.D	Liquid	Y	NA
6	*0.40 uL cal std/50 mL DI* VSTD005	ICAL5	04-17-2020 01:36 pm	1.00	50 mL	50 mL	X041706.D	Liquid	Y	NA
7	*1.0 uL cal std/50 mL DI* VSTD020	ICAL6	04-17-2020 02:00 pm	1.00	50 mL	50 mL	X041707.D	Liquid	Y	NA
8	*4.0 uL cal std/50 mL DI* VSTD050	ICAL7	04-17-2020 02:24 pm	1.00	50 mL	50 mL	X041708.D	Liquid	Y	NA
9	*10 uL cal std/50 mL DI* VSTD100	ICAL8	04-17-2020 02:48 pm	1.00	50 mL	50 mL	X041709.D	Liquid	Y	NA
10	*20 uL cal std/50 mL DI* VSTD150	ICAL9	04-17-2020 03:12 pm	1.00	50 mL	50 mL	X041710.D	Liquid	Y	NA
11	*30 uL cal std/50 mL DI* VSTD200	ICAL	04-17-2020 03:36 pm	1.00	50 mL	50 mL	X041711.D	Liquid	Y	NA
12	*40 uL cal std/50 mL DI* BLANK	SAMP	04-17-2020 04:00 pm	1.00	50 mL	50 mL	X041712.D	Liquid	Y	NA
13	BLANK	SAMP	04-17-2020 04:24 pm	1.00	50 mL	50 mL	X041713.D	Liquid	Y	NA
14	CCV	CCV	04-17-2020 04:48 pm	1.00	50 mL	50 mL	X041714.D	Liquid	Y	NA
15	BLANK	SAMP	04-17-2020 05:12 pm	1.00	50 mL	50 mL	X041715.D	Liquid	Y	NA
16	VLCSW-200417	LCS	04-17-2020 05:36 pm	1.00	50 mL	50 mL	X041716.D	Liquid	Y	NA
17	BLANK	SAMP	04-17-2020 06:00 pm	1.00	50 mL	50 mL	X041717.D	Liquid	Y	NA
18	VBLKW-200417	MBLK	04-17-2020 06:24 pm	1.00	50 mL	50 mL	X041718.D	Liquid	Y	NA
19	HS20040737-01	SAMP	04-17-2020 06:48 pm	1.00	50 mL	50 mL	X041719.D	Liquid	Y	NA
20	HS20040317-13	SAMP	04-17-2020 07:12 pm	1.00	50 mL	50 mL	X041720.D	Liquid	Y	NA
21	HS20040317-14	SAMP	04-17-2020 07:36 pm	1.00	50 mL	50 mL	X041721.D	Liquid	Y	NA
22	HS20040317-15	SAMP	04-17-2020 08:00 pm	1.00	50 mL	50 mL	X041722.D	Liquid	Y	NA
23	HS20040317-16	SAMP	04-17-2020 08:24 pm	1.00	50 mL	50 mL	X041723.D	Liquid	Y	NA
24	HS20040611-25	SAMP	04-17-2020 08:48 pm	1.00	50 mL	50 mL	X041724.D	Liquid	Y	NA
25	HS20040611-24	SAMP	04-17-2020 09:12 pm	1.00	50 mL	50 mL	X041725.D	Liquid	Y	NA
26	HS20040611-24MS	MS	04-17-2020 09:36 pm	1.00	50 mL	50 mL	X041726.D	Liquid	Y	NA
27	HS20040611-24MSD	MSD	04-17-2020 10:00 pm	1.00	50 mL	50 mL	X041727.D	Liquid	Y	NA
28	HS20040679-12	SAMP	04-17-2020 10:24 pm	1.00	50 mL	50 mL	X041728.D	Liquid	Y	NA
29	HS20040689-01	SAMP	04-17-2020 10:48 pm	1.00	50 mL	50 mL	X041729.D	Liquid	Y	NA

MSVOA06 -Logbook

Chemical	Value
SURR SPK ID	31106-21-06
IS ID	31106-21-06
LCS/MS ID	
CAL STD ID	31106-25-01/02
BFB ID	31106-21-06
pH Paper	634-64-11

MSVOA06 -Logbook

Batch: 40338
Date: 04-19-2020
Method: 8260
Comments:

Analyst: Presenta Cabascango
Reviewer:
Laboratory: Houston

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	04-19-2020 10:18 am	1.00	50 mL	50 mL	X041901.D	Liquid	Y	NA
	Auto find/ purged									
2	ICV	ICV	04-19-2020 10:42 am	1.00	50 mL	50 mL	X041902.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
3	CCV	CCV	04-19-2020 11:06 am	1.00	50 mL	50 mL	X041903.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
4	CCB	SAMP	04-19-2020 11:30 am	1.00	50 mL	50 mL	X041904.D	Liquid	Y	NA
5	VLCSW-200419	LCS	04-19-2020 11:54 am	1.00	50 mL	50 mL	X041905.D	Liquid	Y	NA
	4.0 uL cal std/50 mL DI									
6	BLANK	SAMP	04-19-2020 12:18 pm	1.00	50 mL	50 mL	X041906.D	Liquid	Y	NA
7	VBLKW-200419	MBLK	04-19-2020 12:42 pm	1.00	50 mL	50 mL	X041907.D	Liquid	Y	NA
8	HS20040699-02n/r	SAMP	04-19-2020 01:06 pm	1.00	50 mL	50 mL	X041908.D	Liquid	Y	NA
9	HS20040699-01	SAMP	04-19-2020 01:30 pm	1.00	50 mL	50 mL	X041909.D	Liquid	Y	<2
10	HS20040699-02	SAMP	04-19-2020 01:54 pm	1.00	50 mL	50 mL	X041910.D	Liquid	Y	<2
11	HS20040654-01	SAMP	04-19-2020 02:18 pm	1.00	50 mL	50 mL	X041911.D	Liquid	Y	NA
	neat sample									
12	HS20040654-01MS	MS	04-19-2020 02:42 pm	1.00	50 mL	50 mL	X041912.D	Liquid	Y	NA
	3.5 uL cal std/40 mL samp									
13	HS20040654-01MSD	MSD	04-19-2020 03:06 pm	1.00	50 mL	50 mL	X041913.D	Liquid	Y	NA
	3.5 uL cal std/40 mL samp									
14	CCV-END	CCV	04-19-2020 03:30 pm	1.00	50 mL	50 mL	X041914.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
15	MBLK-152806	MBLK	04-19-2020 03:54 pm	20.00	2.5 mL	50 mL	X041915.D	Liquid	Y	NA
	tclps									
16	HS20040647-02	SAMP	04-19-2020 04:18 pm	20.00	2.5 mL	50 mL	X041916.D	Liquid	Y	na
17	HS20040647-01	SAMP	04-19-2020 04:42 pm	100.0(	500 µL	50 mL	X041917.D	Liquid	Y	na
18	HS20040654-02	SAMP	04-19-2020 05:06 pm	1.00	50 mL	50 mL	X041918.D	Liquid	Y	na
	neat samples									
19	HS20040654-03	SAMP	04-19-2020 05:30 pm	1.00	50 mL	50 mL	X041919.D	Liquid	Y	na
20	HS20040654-04	SAMP	04-19-2020 05:54 pm	1.00	50 mL	50 mL	X041920.D	Liquid	Y	na
21	HS20040654-05	SAMP	04-19-2020 06:18 pm	1.00	50 mL	50 mL	X041921.D	Liquid	Y	na
22	HS20040654-06	SAMP	04-19-2020 06:42 pm	1.00	50 mL	50 mL	X041922.D	Liquid	Y	na
23	HS20040654-07	SAMP	04-19-2020 07:06 pm	1.00	50 mL	50 mL	X041923.D	Liquid	Y	na
24	MBLK-152807	MBLK	04-19-2020 07:31 pm	20.00	2.5 mL	50 mL	X041924.D	Liquid	Y	na
	tclps									
25	HS20040645-01	SAMP	04-19-2020 07:55 pm	20.00	2.5 mL	50 mL	X041925.D	Liquid	Y	na
26	HS20040619-01	SAMP	04-19-2020 08:19 pm	5.00	10 mL	50 mL	X041926.D	Liquid	Y	<2
27	HS20040631-01	SAMP	04-19-2020 08:43 pm	1.00	50 mL	50 mL	X041927.D	Liquid	Y	<2
28	HS20040631-02	SAMP	04-19-2020 09:07 pm	1.00	50 mL	50 mL	X041928.D	Liquid	Y	<2
29	HS20040631-03	SAMP	04-19-2020 09:31 pm	1.00	50 mL	50 mL	X041929.D	Liquid	Y	<2
30	HS20040665-02	SAMP	04-19-2020 09:55 pm	1.00	50 mL	50 mL	X041930.D	Liquid	Y	<2
31	HS20040665-01ott	SAMP	04-19-2020 10:19 pm	1.00	50 mL	50 mL	X041931.D	Liquid	Y	<2

MSVOA06 -Logbook

Chemical	Value
SURR SPK ID	31106-21-06
IS ID	31106-21-06
CAL STD ID	31106-25-01/02
BFB ID	31106-21-06
pH Paper	634-64-11

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS20040699

Matrix Spike - Sample No.: CCV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
Xylenes (total)	150.00	150.68	100	80-120
1,2-Dichloroethylene (t	100.00	114.14	114	80-120
Dichlorodifluoromethane	50.00	49.71	99	80-120
Chloromethane	50.00	46.74	93	80-120
Vinyl Chloride	50.00	48.92	98	80-120
Bromomethane	50.00	49.72	99	80-120
Chloroethane	50.00	46.21	92	80-120
Trichlorofluoromethane	50.00	49.36	99	80-120
Acrolein	100.00	86.32	86	80-120
Acetone	100.00	110.44	110	80-120
1,1-Dichloroethene	50.00	49.26	98	80-120
Acrylonitrile	100.00	116.67	117	80-120
Methylene Chloride	50.00	49.90	100	80-120
Methyl tert-butyl ether	50.00	59.27	118	80-120
Carbon Disulfide	100.00	99.62	100	80-120
trans-1,2-Dichloroethen	50.00	59.54	119	80-120
1,1-Dichloroethane	50.00	59.64	119	80-120
2-Butanone	100.00	97.34	97	80-120
2,2-Dichloropropane	50.00	58.56	117	80-120
cis-1,2-Dichloroethene	50.00	54.60	109	80-120
Chloroform	50.00	53.43	107	80-120
Bromochloromethane	50.00	49.39	99	80-120
1,1,1-Trichloroethane	50.00	51.74	103	80-120
1,1-Dichloropropene	50.00	46.37	93	80-120
1,2-Dichloroethane	50.00	52.96	106	80-120
Carbon Tetrachloride	50.00	45.07	90	80-120
Benzene	50.00	49.04	98	80-120
Trichloroethene	50.00	48.84	98	80-120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

_____

FORM III VOA

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS20040699

Matrix Spike - Sample No.: CCV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
Bromodichloromethane	50.00	43.52	87	80-120
1,2-Dichloropropane	50.00	42.59	85	80-120
Dibromomethane	50.00	42.01	84	80-120
4-Methyl-2-Pentanone	100.00	88.84	89	80-120
cis-1,3-Dichloropropene	50.00	43.24	86	80-120
Toluene	50.00	51.18	102	80-120
trans-1,3-Dichloroprope	50.00	45.28	90	80-120
2-Hexanone	100.00	93.04	93	80-120
1,1,2-Trichloroethane	50.00	49.55	99	80-120
1,3-Dichloropropane	50.00	49.05	98	80-120
Dibromochloromethane	50.00	51.99	104	80-120
Tetrachloroethene	50.00	50.63	101	80-120
1,2-Dibromoethane	50.00	49.86	100	80-120
Chlorobenzene	50.00	49.09	98	80-120
1,1,1,2-Tetrachloroetha	50.00	51.85	104	80-120
Ethylbenzene	50.00	49.42	99	80-120
m,p-Xylenes	100.00	99.74	100	80-120
o-Xylene	50.00	50.93	102	80-120
Styrene	50.00	51.21	102	80-120
Bromoform	50.00	52.75	106	80-120
Isopropylbenzene	50.00	49.35	99	80-120
1,1,2,2-Tetrachloroetha	50.00	44.78	90	80-120
1,2,3-Trichloropropane	50.00	46.83	94	80-120
n-Propylbenzene	50.00	47.47	95	80-120
Bromobenzene	50.00	49.43	99	80-120
1,3,5-Trimethylbenzene	50.00	48.76	98	80-120
2-Chlorotoluene	50.00	48.44	97	80-120
4-Chlorotoluene	50.00	48.18	96	80-120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

_____

FORM III VOA

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS20040699

Matrix Spike - Sample No.: CCV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
tert-Butylbenzene	50.00	47.01	94	80-120
1,2,4-Trimethylbenzene	50.00	49.53	99	80-120
sec-Butylbenzene	50.00	45.80	92	80-120
p-Isopropyltoluene	50.00	48.56	97	80-120
1,3-Dichlorobenzene	50.00	50.26	100	80-120
1,4-Dichlorobenzene	50.00	48.62	97	80-120
n-Butylbenzene	50.00	59.62	119	80-120
1,2-Dichlorobenzene	50.00	56.42	113	80-120
1,2-Dibromo-3-Chloropro	50.00	47.58	95	80-120
1,2,4-Trichlorobenzene	50.00	47.28	94	80-120
Hexachlorobutadiene	50.00	51.86	104	80-120
Naphthalene	50.00	49.22	98	80-120
1,2,3-Trichlorobenzene	50.00	44.35	89	80-120
1-Chlorohexane	50.00	40.20	80	80-120
1,4-Dioxane	1000.00	906.14	91	80-120
Cyclohexane	50.00	46.14	92	80-120
Freon TF	50.00	45.56	91	80-120
Methylcyclohexane	50.00	40.09	80	80-120
Methyl Acetate	50.00	48.66	97	80-120
Dibromofluoromethane	50.00	51.75	104	80-120
1,2-Dichloroethane-d4	50.00	59.85	120	80-120
Toluene-d8	50.00	52.09	104	80-120
4-Bromofluorobenzene	50.00	51.73	103	80-120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

_____

FORM III VOA

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS20040699

Lab File ID: X041701 BFB Injection Date: 04/17/20

Instrument ID: VOA6 BFB Injection Time: 1113

GC Column: DB624 ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.9
75	30.0 - 60.0% of mass 95	46.2
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	5.8
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	90.7
175	5.0 - 9.0% of mass 174	7.1 (7.8)1
176	95.0 - 101.0% of mass 174	89.7 (98.9)1
177	5.0 - 9.0% of mass 176	5.3 (5.9)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD000.25	VSTD000.25	X041702	04/17/20	1137
02	VSTD000.5	VSTD000.5	X041703	04/17/20	1224
03	VSTD001	VSTD001	X041704	04/17/20	1248
04	VSTD002	VSTD002	X041705	04/17/20	1312
05	VSTD005	VSTD005	X041706	04/17/20	1336
06	VSTD020	VSTD020	X041707	04/17/20	1400
07	VSTD050	VSTD050	X041708	04/17/20	1424
08	VSTD100	VSTD100	X041709	04/17/20	1448
09	VSTD150	VSTD150	X041710	04/17/20	1512
10	VSTD200	VSTD200	X041711	04/17/20	1536
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS20040699

Instrument ID: VOA6 Calibration Date(s): 04/17/20 04/17/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1137 1536

LAB FILE ID: RF0.25: X041702 RF0.5: X041703 RF1: X041704
RF2: X041705 RF5: X041706 RF20: X041707

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
Dichlorodifluoromethane		0.428	0.526	0.482	0.431	0.512
Chloromethane		3100	7285	12373	30049	118663
Vinyl Chloride		0.782	0.799	0.782	0.757	0.795
Bromomethane		1810	3688	6572	14731	50345
Chloroethane		0.628	0.530	0.407	0.441	0.446
Trichlorofluoromethane		0.730	0.840	0.808	0.771	0.854
Acrolein		860	1463	2876	6096	25710
Acetone		5999	7976	10329	22226	73219
1,1-Dichloroethene		0.425	0.490	0.450	0.456	0.450
Iodomethane		2325	5619	11501	34526	164499
Acrylonitrile		2552	5010	10996	27211	106539
Methylene Chloride		0.619	0.658	0.620	0.580	0.639
Methyl tert-butyl ether		1.350	1.344	1.349	1.361	1.383
Carbon Disulfide		1.636	1.680	1.523	1.524	1.586
trans-1,2-Dichloroethene		0.440	0.442	0.414	0.416	0.440
Vinyl Acetate		12300	27951	48640	122457	491331
1,1-Dichloroethane		0.989	1.128	1.045	1.047	1.024
2-Butanone		1896	3997	6625	17409	95279
2,2-Dichloropropane		0.825	0.797	0.650	0.775	0.820
cis-1,2-Dichloroethene		0.640	0.572	0.488	0.522	0.631
Chloroform		0.995	1.016	0.837	0.837	1.033
Bromochloromethane		0.317	0.353	0.294	0.285	0.320
1,1,1-Trichloroethane		0.796	0.886	0.844	0.753	0.870
1,1-Dichloropropene		2662	6347	10706	24249	95389
1,2-Dichloroethane		0.455	0.572	0.570	0.586	0.602
Carbon Tetrachloride		2975	6546	10747	24009	94075
Benzene		1.216	1.452	1.352	1.390	1.522
Trichloroethene		0.308	0.340	0.355	0.330	0.341
Bromodichloromethane		0.427	0.400	0.374	0.474	0.436
2-Chloroethylvinyl ether		0.082	0.070	0.061	0.082	0.078
1,2-Dichloropropane		0.421	0.351	0.435	0.437	0.403
Dibromomethane		0.193	0.195	0.216	0.237	0.216
4-Methyl-2-Pentanone		4555	9367	16846	57260	174648
cis-1,3-Dichloropropene		0.519	0.505	0.474	0.570	0.539
Toluene		1.479	1.340	1.461	1.622	1.266
trans-1,3-Dichloropropene		0.465	0.449	0.415	0.434	0.561
2-Hexanone		0.422	0.338	0.315	0.359	0.395
1,1,2-Trichloroethane		0.278	0.237	0.296	0.310	0.303
1,3-Dichloropropane		0.566	0.599	0.605	0.613	0.618
Dibromochloromethane		0.381	0.327	0.392	0.393	0.393
Tetrachloroethene		0.269	0.292	0.315	0.297	0.299
1,2-Dibromoethane		0.346	0.315	0.353	0.378	0.376
Chlorobenzene		0.970	1.062	0.969	0.978	0.987
1,1,1,2-Tetrachloroethane		0.337	0.350	0.358	0.375	0.371

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS2004069

Instrument ID: VOA6 Calibration Date(s): 04/17/20 04/17/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1137 1536

LAB FILE ID: RF0.25: X041702 RF0.5: X041703 RF1: X041704
RF2: X041705 RF5: X041706 RF20: X041707

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
Ethylbenzene		0.486	0.552	0.500	0.492	0.520
m,p-Xylenes		0.576	0.671	0.611	0.618	0.630
o-Xylene		0.555	0.619	0.622	0.606	0.616
Styrene		0.905	1.099	0.996	1.060	1.075
Bromoform		0.227	0.242	0.251	0.270	0.261
Isopropylbenzene		1.368	1.637	1.528	1.541	1.543
1,1,2,2-Tetrachloroethane		0.890	1.061	0.770	0.948	1.005
1,2,3-Trichloropropane		0.727	0.887	0.651	0.767	0.842
Methacrylonitrile		0.877	0.675	0.649	0.615	0.830
n-Propylbenzene		3.271	4.287	3.201	3.492	4.123
Bromobenzene		0.935	1.025	0.795	0.932	0.973
1,3,5-Trimethylbenzene		2.210	3.025	2.303	2.390	2.841
2-Chlorotoluene		1.996	2.735	1.936	2.213	2.469
4-Chlorotoluene		2.605	3.226	2.304	2.407	2.870
Propionitrile		0.156	0.170	0.152	0.154	0.200
tert-Butylbenzene		2.155	2.476	2.046	2.015	2.360
1,2,4-Trimethylbenzene		2.436	2.899	2.566	2.418	2.877
sec-Butylbenzene		3.006	3.504	3.185	2.632	3.332
p-Isopropyltoluene		2.250	2.753	2.511	2.290	2.737
1,3-Dichlorobenzene		1.346	1.510	1.480	1.432	1.595
1,4-Dichlorobenzene		1.655	1.742	1.563	1.455	1.481
n-Butylbenzene		2.048	2.347	2.098	1.871	2.106
1,2-Dichlorobenzene		1.358	1.406	1.313	1.336	1.298
1,2-Dibromo-3-Chloropropane		0.080	0.070	0.083	0.084	0.078
1,2,4-Trichlorobenzene		0.292	0.252	0.312	0.335	0.370
Hexachlorobutadiene		916	1192	2359	5277	24144
Naphthalene		0.447	0.428	0.412	0.535	0.482
1,2,3-Trichlorobenzene		0.215	0.154	0.162	0.160	0.182
1-Chlorohexane		2379	6236	8602	20385	93411
1,4-Dioxane		0.006	0.005	0.005	0.007	0.006
n-Hexane		0.718		0.802	0.629	0.762
1,3-Butadiene		0.794	0.935	0.855	0.834	0.900
Cyclohexane		1.052	1.325	1.196	1.025	1.296
Freon TF		0.515	0.466	0.461	0.419	0.456
Methylcyclohexane		1.175	1.181	1.258	1.202	1.185
Methyl Acetate		1783	3528	6540	16747	87932
Tert-Butyl alcohol		6059	8926	18229	43802	183212
Isopropyl Alcohol		0.073	0.069	0.056	0.060	0.065
Acetaldehyde			5233	4802	17224	52305
Dibromofluoromethane		2033	3291	7438	19467	73267
1,2-Dichloroethane-d4		2269	4964	9219	23894	92798
Toluene-d8		1.359	1.099	1.138	1.442	1.151
4-Bromofluorobenzene		2907	5497	8241	22096	95087

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS2004069

Instrument ID: VOA6 Calibration Date(s): 04/17/20 04/17/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1137 1536

LAB FILE ID: RF50: X041708 RF100: X041709 RF150: X041710
RF200: X041711

COMPOUND	RF50	RF100	RF150	RF200
Dichlorodifluoromethane	0.528	0.574	0.551	0.580
Chloromethane	299144	608324	881802	1210478
Vinyl Chloride	0.849	0.903	0.876	0.888
Bromomethane	119933	247114	353545	475362
Chloroethane	0.456	0.463	0.450	0.447
Trichlorofluoromethane	0.878	0.932	0.882	0.898
Acrolein	63534	130690		
Acetone	175184	327224		
1,1-Dichloroethene	0.478	0.493	0.475	0.482
Iodomethane	426432	847761	1244830	1613829
Acrylonitrile	260305	641914		
Methylene Chloride	0.613	0.608	0.471	0.569
Methyl tert-butyl ether	1.363	1.741		
Carbon Disulfide	1.650	1.708	1.691	1.683
trans-1,2-Dichloroethene	0.448	0.548		
Vinyl Acetate	1163807	3107246		
1,1-Dichloroethane	1.034	1.341		
2-Butanone	233785	444724		
2,2-Dichloropropane	0.862	0.921	0.716	0.680
cis-1,2-Dichloroethene	0.640	0.638	0.531	0.504
Chloroform	1.048	1.089	1.021	0.980
Bromochloromethane	0.313	0.300	0.293	0.278
1,1,1-Trichloroethane	0.872	0.947	0.876	
1,1-Dichloropropene	203648	482724	682748	733736
1,2-Dichloroethane	0.529	0.618	0.551	0.541
Carbon Tetrachloride	203935	481453	672109	
Benzene	1.318	1.413	1.363	1.338
Trichloroethene	0.355	0.352	0.356	0.368
Bromodichloromethane	0.469	0.511	0.410	0.476
2-Chloroethylvinyl ether	0.103	0.073	0.073	0.085
1,2-Dichloropropane	0.430	0.465	0.368	0.431
Dibromomethane	0.241	0.246	0.193	0.230
4-Methyl-2-Pentanone	539384			
cis-1,3-Dichloropropene	0.711	0.493	0.501	0.581
Toluene	1.525	1.494	1.296	1.519
trans-1,3-Dichloropropene	0.605	0.442	0.452	
2-Hexanone	0.394	0.340	0.298	0.400
1,1,2-Trichloroethane	0.297	0.280	0.241	0.290
1,3-Dichloropropane	0.629	0.581	0.504	0.602
Dibromochloromethane	0.391	0.396	0.346	0.390
Tetrachloroethene	0.290	0.320	0.274	0.300
1,2-Dibromoethane	0.367	0.357	0.315	0.362
Chlorobenzene	0.974	0.982	1.005	0.981
1,1,1,2-Tetrachloroethane	0.366	0.378	0.383	0.368

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS2004069

Instrument ID: VOA6 Calibration Date(s): 04/17/20 04/17/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1137 1536

LAB FILE ID: RF50: X041708 RF100: X041709 RF150: X041710
RF200: X041711

COMPOUND	RF50	RF100	RF150	RF200
Ethylbenzene	0.518	0.531	0.546	0.524
m,p-Xylenes	0.599	0.643	0.659	0.636
o-Xylene	0.513	0.620	0.628	0.622
Styrene	0.905	1.059	1.082	1.073
Bromoform	0.233	0.273	0.264	0.264
Isopropylbenzene	1.305	1.590	1.583	1.531
1,1,2,2-Tetrachloroethane	0.818	0.713	0.910	0.822
1,2,3-Trichloropropane	0.708	0.619	0.763	0.698
Methacrylonitrile	0.863	0.874	0.829	0.758
n-Propylbenzene	3.630	3.372	4.074	3.798
Bromobenzene	0.894	0.807	0.912	0.955
1,3,5-Trimethylbenzene	2.582	2.402	2.815	2.652
2-Chlorotoluene	2.163	1.989	2.420	2.196
4-Chlorotoluene	2.504	2.301	2.821	2.560
Propionitrile	0.200	0.199	0.163	0.177
tert-Butylbenzene	2.157	1.954	2.297	2.215
1,2,4-Trimethylbenzene	2.657	2.378	2.858	2.696
sec-Butylbenzene	3.053	2.869	3.369	3.178
p-Isopropyltoluene	2.677	2.874	2.871	2.771
1,3-Dichlorobenzene	1.521	1.537	1.554	1.552
1,4-Dichlorobenzene	1.525	1.537	1.543	1.550
n-Butylbenzene	2.276	2.098	2.548	2.359
1,2-Dichlorobenzene	1.360	1.192	1.385	1.372
1,2-Dibromo-3-Chloropropane	0.079	0.071	0.076	0.082
1,2,4-Trichlorobenzene	0.315	0.290	0.334	0.365
Hexachlorobutadiene	45480	93895		
Naphthalene	0.472	0.432	0.496	0.548
1,2,3-Trichlorobenzene	0.158	0.141	0.168	0.185
1-Chlorohexane	235852	369591	671657	885058
1,4-Dioxane	0.005	0.007	0.005	0.005
n-Hexane	0.775	1.038	0.791	0.790
1,3-Butadiene	0.954	1.019	0.980	1.002
Cyclohexane	1.255	1.329	1.286	1.305
Freon TF	0.469	0.506	0.485	0.493
Methylcyclohexane	1.215	1.410	1.203	1.316
Methyl Acetate	206934	414240		
Tert-Butyl alcohol	414843	1029660		
Isopropyl Alcohol	0.066	0.064	0.062	0.062
Acetaldehyde	105754	193554	265677	352577
Dibromofluoromethane	168985	332106	479419	628372
1,2-Dichloroethane-d4	176751	464765		
Toluene-d8	1.273	1.257		
4-Bromofluorobenzene	191201	377194	655941	811763

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS2004069

Instrument ID: VOA6 Calibration Date(s): 04/17/20 04/17/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1137 1536

COMPOUND	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
Dichlorodifluoromethane	AVRG		0.51248447		10.858	15.000
Chloromethane	LINR	1.9e-002	0.96671029		0.9996571	0.9900000
Vinyl Chloride	AVRG		0.82563902		6.503	15.000
Bromomethane	LINR	3.757e-004	2.44891882		0.9997570	0.9900000
Chloroethane	AVRG		0.47431458		13.965	15.000
Trichlorofluoromethane	AVRG		0.84364769		7.641	15.000
Acrolein	2ORDR	9.521e-004	10.1459938	-2.4881536	0.9999646	0.9900000
Acetone	LINR	-4.24e-002	3.63564132		0.9997859	0.9900000
1,1-Dichloroethene	AVRG		0.46681266		4.814	15.000
Iodomethane	2ORDR	5.141e-002	1.33153722	1.706e-002	0.9997408	0.9900000
Acrylonitrile	2ORDR	-7.62e-003	2.65229283	-0.3709903	0.9999150	0.9900000
Methylene Chloride	AVRG		0.59754557		9.141	15.000
Methyl tert-butyl ether	AVRG		1.41308057		10.280	15.000
Carbon Disulfide	AVRG		1.63133340		4.339	15.000
trans-1,2-Dichloroethene	AVRG		0.44968211		10.064	15.000
Vinyl Acetate	2ORDR	-1.48e-002	0.60045348	-2.08e-002	0.9997296	0.9900000
1,1-Dichloroethane	AVRG		1.08692812		11.025	15.000
2-Butanone	LINR	2.175e-002	2.63305891		0.9996891	0.9900000
2,2-Dichloropropane	AVRG		0.78291427		11.196	15.000
cis-1,2-Dichloroethene	AVRG		0.57394885		11.193	15.000
Chloroform	AVRG		0.98413583		9.031	15.000
Bromochloromethane	AVRG		0.30586008		7.413	15.000
1,1,1-Trichloroethane	AVRG		0.85539416		6.898	15.000
1,1-Dichloropropene	LINR	-1.24e-002	2.10821363		0.9985408	0.9900000
1,2-Dichloroethane	AVRG		0.55833416		8.607	15.000
Carbon Tetrachloride	LINR	6.666e-004	2.05931908		0.9999187	0.9900000
Benzene	AVRG		1.37382361		6.290	15.000
Trichloroethene	AVRG		0.34496340		5.179	15.000
Bromodichloromethane	AVRG		0.44197044		9.908	15.000
2-Chloroethylvinyl ether	AVRG		7.869e-002		14.900	15.000
1,2-Dichloropropane	AVRG		0.41572973		8.644	15.000
Dibromomethane	AVRG		0.21845797		9.613	15.000
4-Methyl-2-Pentanone	2ORDR	-2.36e-002	2.40802518	-0.5637601	0.9966240	0.9900000
cis-1,3-Dichloropropene	AVRG		0.54381394		13.220	15.000
Toluene	AVRG		1.44463497		8.195	15.000
trans-1,3-Dichloropropene	AVRG		0.47814420		14.105	15.000
2-Hexanone	AVRG		0.36219203		11.768	15.000
1,1,2-Trichloroethane	AVRG		0.28135178		9.252	15.000
1,3-Dichloropropane	AVRG		0.59067371		6.337	15.000
Dibromochloromethane	AVRG		0.37895195		6.542	15.000
Tetrachloroethene	AVRG		0.29496513		5.616	15.000
1,2-Dibromoethane	AVRG		0.35194956		6.670	15.000
Chlorobenzene	AVRG		0.98981209		2.927	15.000
1,1,1,2-Tetrachloroethane	AVRG		0.36517853		3.961	15.000

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS2004069

Instrument ID: VOA6 Calibration Date(s): 04/17/20 04/17/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1137 1536

COMPOUND	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
Ethylbenzene	AVRG		0.51892582		4.416	15.000
m,p-Xylenes	AVRG		0.62710254		4.709	15.000
o-Xylene	AVRG		0.60019327		6.576	15.000
Styrene	AVRG		1.02826978		7.331	15.000
Bromoform	AVRG		0.25413940		6.464	15.000
Isopropylbenzene	AVRG		1.51394738		7.122	15.000
1,1,2,2-Tetrachloroethane	AVRG		0.88190189		12.757	15.000
1,2,3-Trichloropropane	AVRG		0.74016818		11.572	15.000
Methacrylonitrile	AVRG		0.77457343		13.370	15.000
n-Propylbenzene	AVRG		3.69422305		10.747	15.000
Bromobenzene	AVRG		0.91428203		8.129	15.000
1,3,5-Trimethylbenzene	AVRG		2.57993591		10.677	15.000
2-Chlorotoluene	AVRG		2.23534513		11.763	15.000
4-Chlorotoluene	AVRG		2.62213872		11.553	15.000
Propionitrile	AVRG		0.17455343		11.762	15.000
tert-Butylbenzene	AVRG		2.18607696		7.785	15.000
1,2,4-Trimethylbenzene	AVRG		2.64288367		7.788	15.000
sec-Butylbenzene	AVRG		3.12536521		8.615	15.000
p-Isopropyltoluene	AVRG		2.63703587		8.894	15.000
1,3-Dichlorobenzene	AVRG		1.50299128		5.006	15.000
1,4-Dichlorobenzene	AVRG		1.56133998		5.626	15.000
n-Butylbenzene	AVRG		2.19469326		9.314	15.000
1,2-Dichlorobenzene	AVRG		1.33559987		4.771	15.000
1,2-Dibromo-3-Chloropropane	AVRG		7.818e-002		6.418	15.000
1,2,4-Trichlorobenzene	AVRG		0.31860953		11.770	15.000
Hexachlorobutadiene	LINR	-3.13e-002	4.71671571		0.9960515	0.9900000
Naphthalene	AVRG		0.47248897		10.084	15.000
1,2,3-Trichlorobenzene	AVRG		0.16951207		12.900	15.000
1-Chlorohexane	2ORDR	-2.92e-002	2.60489258	-0.3564992	0.9901854	0.9900000
1,4-Dioxane	AVRG		5.801e-003		13.772	15.000
n-Hexane	AVRG		0.78828130		14.652	15.000
1,3-Butadiene	AVRG		0.91929308		8.566	15.000
Cyclohexane	AVRG		1.22990915		9.412	15.000
Freon TF	AVRG		0.47452339		6.161	15.000
Methylcyclohexane	AVRG		1.23831188		6.324	15.000
Methyl Acetate	2ORDR	9.429e-003	1.48461040	-4.51e-002	0.9998483	0.9900000
Tert-Butyl alcohol	2ORDR	-0.1741739	16.4721567	-1.4137569	0.9994648	0.9900000
Isopropyl Alcohol	AVRG		6.401e-002		7.910	15.000
Acetaldehyde	LINR	-0.3281407	13.3134101		0.9981487	0.9900000
Dibromofluoromethane	LINR	-1.14e-002	1.83711901		0.9996655	0.9900000
1,2-Dichloroethane-d4	2ORDR	-2.24e-002	1.88661637	-0.3797511	0.9964287	0.9900000
Toluene-d8	AVRG		1.24563148		10.062	15.000
4-Bromofluorobenzene	LINR	8.898e-003	2.10475670		0.9955872	0.9900000

FORM VI VOA

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200417p.b\X041701.D

Date : 17-APR-2020 11:13

Client ID: BFB

Instrument: voa6.i

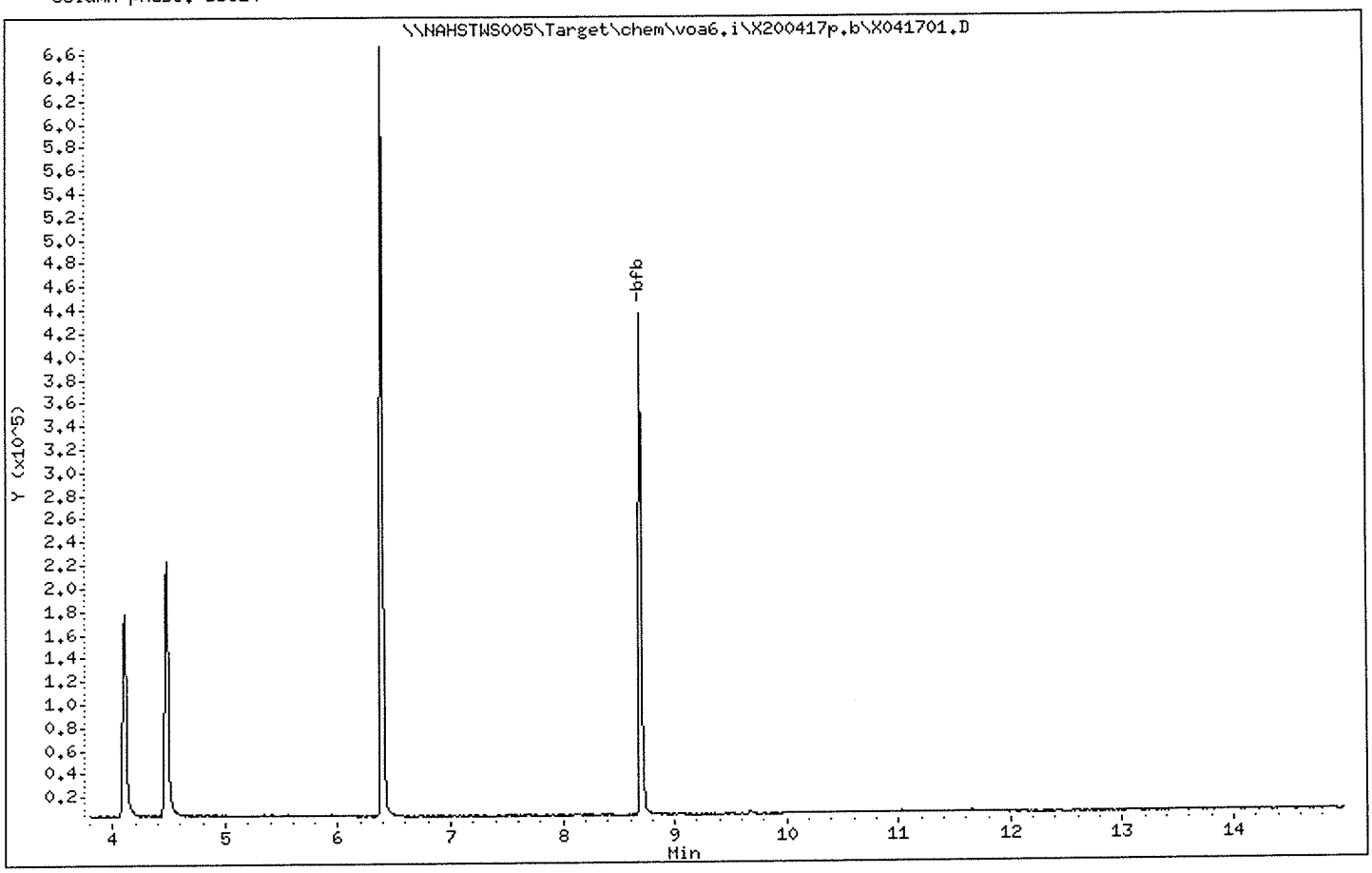
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200417p.b\X041701.D

Date : 17-APR-2020 11:13

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

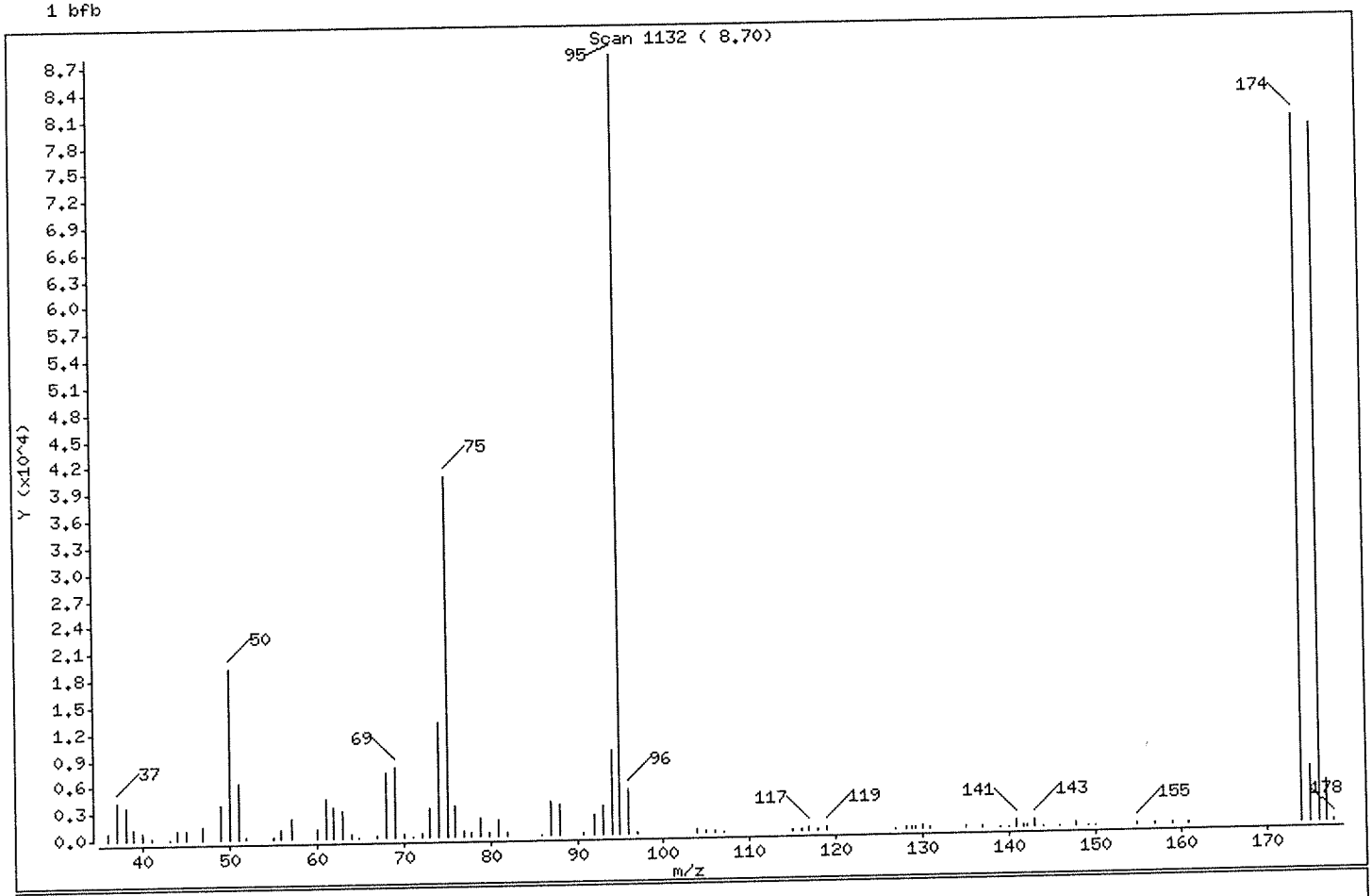
Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

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	21.86
75	30.00 - 60.00% of mass 95	46.17
96	5.00 - 9.00% of mass 95	5.78
173	Less than 2.00% of mass 174	0.00 (0.00)
174	Greater than 50.00% of mass 95	90.70
175	5.00 - 9.00% of mass 174	7.05 (7.78)
176	95.00 - 101.00% of mass 174	89.72 (98.92)
177	5.00 - 9.00% of mass 176	5.26 (5.87)

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200417p.b\X041701.D

Date : 17-APR-2020 11:13

Client ID: BFB Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0 Operator: PC

Column phase: DB624 Column diameter: 0.25

Data File: X041701.D
Spectrum: Scan 1132 (8.70)
Location of Maximum: 95.00
Number of points: 86

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	714	64.80	91	93.00	3187	139.00	50
37.00	4223	67.00	282	94.00	9534	140.00	55
38.10	3585	68.00	7308	95.00	88024	140.80	863
39.00	1170	69.00	7849	96.00	5087	141.60	201
40.00	749	70.00	476	96.90	154	142.00	152
41.00	125	71.20	57	103.90	457	142.80	862
43.10	70	72.10	432	105.00	168	144.00	52
44.00	1063	73.00	3209	106.00	214	145.90	66
45.00	912	74.00	12878	107.10	84	147.80	307
47.00	1350	75.00	40640	114.90	170	149.10	74
49.00	3850	76.00	3397	115.90	278	149.90	87
50.00	19240	76.90	581	116.90	436	154.90	298
51.00	6312	77.80	332	117.80	236	156.90	191
51.90	273	78.90	1936	118.90	456	159.00	163
55.10	283	79.90	499	126.90	52	160.80	107
55.90	1106	80.90	1909	128.10	226	174.00	79840
57.10	2314	82.00	420	128.70	162	175.00	6210
60.00	941	85.90	82	129.20	115	176.00	78976
61.00	4352	87.00	3836	129.90	425	177.00	4632
62.00	3536	88.00	3467	130.90	222	177.80	158
63.00	3131	90.80	238	134.90	150		
64.00	426	92.00	2277	136.90	205		

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200417p.b\X041702.D
Lab Smp Id: VSTD000.25 Client Smp ID: VSTD000.25
Inj Date : 17-APR-2020 11:37
Operator : PC Inst ID: voa6.i
Smp Info : VSTD000.25;VSTD000.25;1;1;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X200417p.b\8260W.m
Meth Date : 05-May-2020 12:52 voa6.i Quant Type: ISTD
Cal Date : 17-APR-2020 15:36 Cal File: X041711.D
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260_GB.sub
Target Version: 4.14
Processing Host: NAHSTW7066

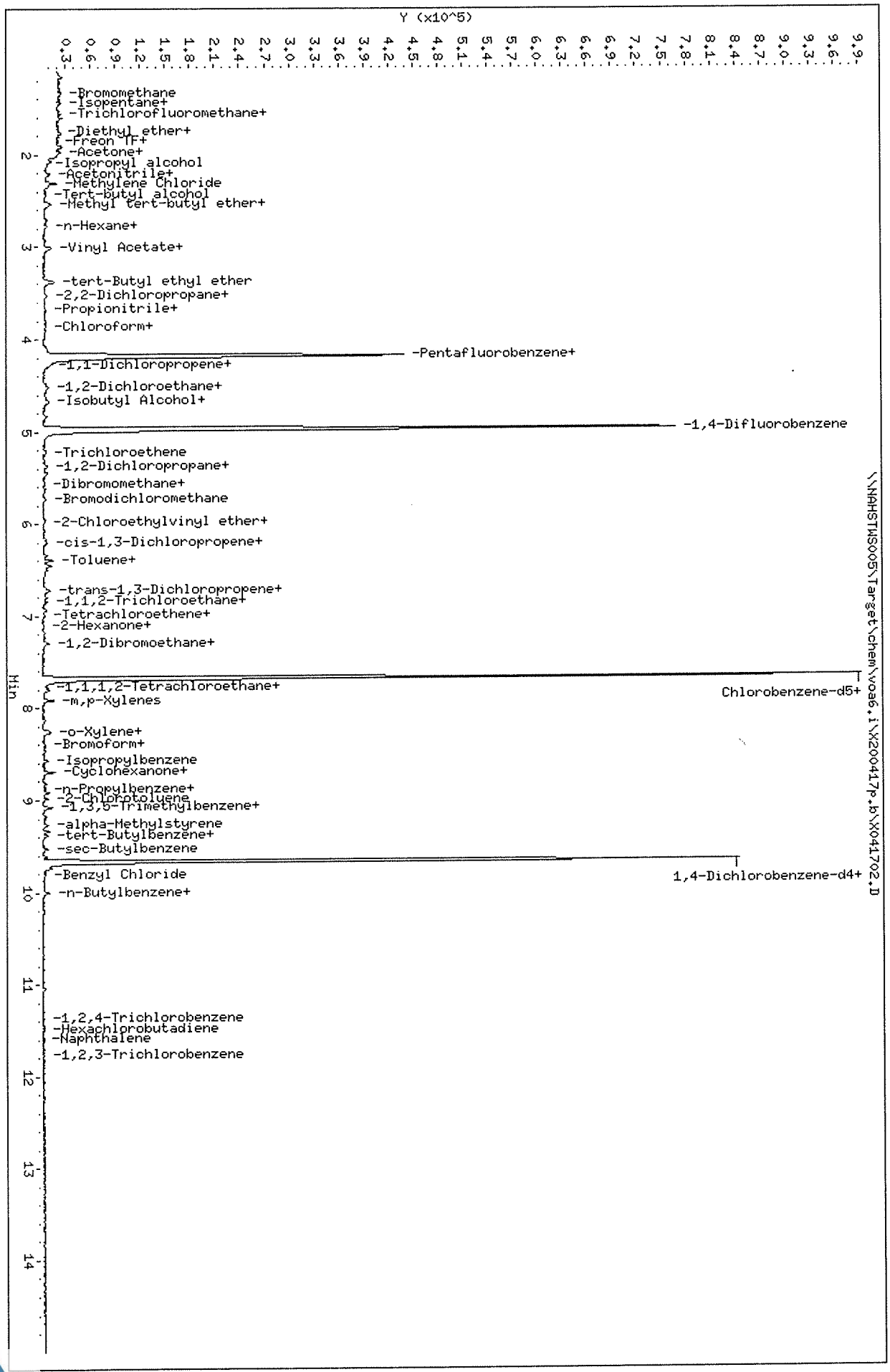
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
* 1	Pentafluorobenzene	168	4.182	4.182	(1.000)	329819	50.0000	
3	Chloromethane	50	1.073	1.073	(0.257)	2008	0.25000	1.24 (aM)
15	Iodomethane	142	2.033	2.033	(0.486)	1536	0.50000	2.88 (a)
24	2-Butanone	43	3.616	3.616	(0.865)	1115	0.50000	1.53 (aM)
$ 30	Dibromofluoromethane	113	4.103	4.103	(0.981)	1296	0.25000	(a)
$ 35	1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	843	0.25000	(TaM)
* 36	1,4-Difluorobenzene	114	4.970	4.970	(1.000)	569282	50.0000	
* 47	Chlorobenzene-d5	117	7.670	7.670	(1.000)	443993	50.0000	
$ 48	Toluene-d8	98	6.395	6.395	(0.834)	3675	0.25000	0.33 (aM)
$ 69	4-Bromofluorobenzene	95	8.688	8.688	(1.133)	1024	0.25000	0.68 (aM)
* 70	1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	212754	50.0000	
M 94	1,2-Dichloroethylene (total)	96				2137	0.50000	(a)
146	Methyl Acetate	43	2.241	2.241	(0.536)	1226	0.25000	0.74 (aM)

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200417p.b\X041702.D
Date : 17-APR-2020 11:37
Client ID: VSTD000.25
Sample Info: VSTD000.25;VSTD000.25;1;1;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

\\NAHSTWS005\Target\chem\voa6.i\X200417p.b\X041702.D

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200417p.b\X041703.D
Lab Smp Id: VSTD000.5 Client Smp ID: VSTD000.5
Inj Date : 17-APR-2020 12:24
Operator : PC Inst ID: voa6.i
Smp Info : VSTD000.5;VSTD000.5;1;2;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X200417p.b\8260W.m
Meth Date : 05-May-2020 12:52 voa6.i Quant Type: ISTD
Cal Date : 17-APR-2020 11:37 Cal File: X041702.D
Als bottle: 4 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260_GB.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

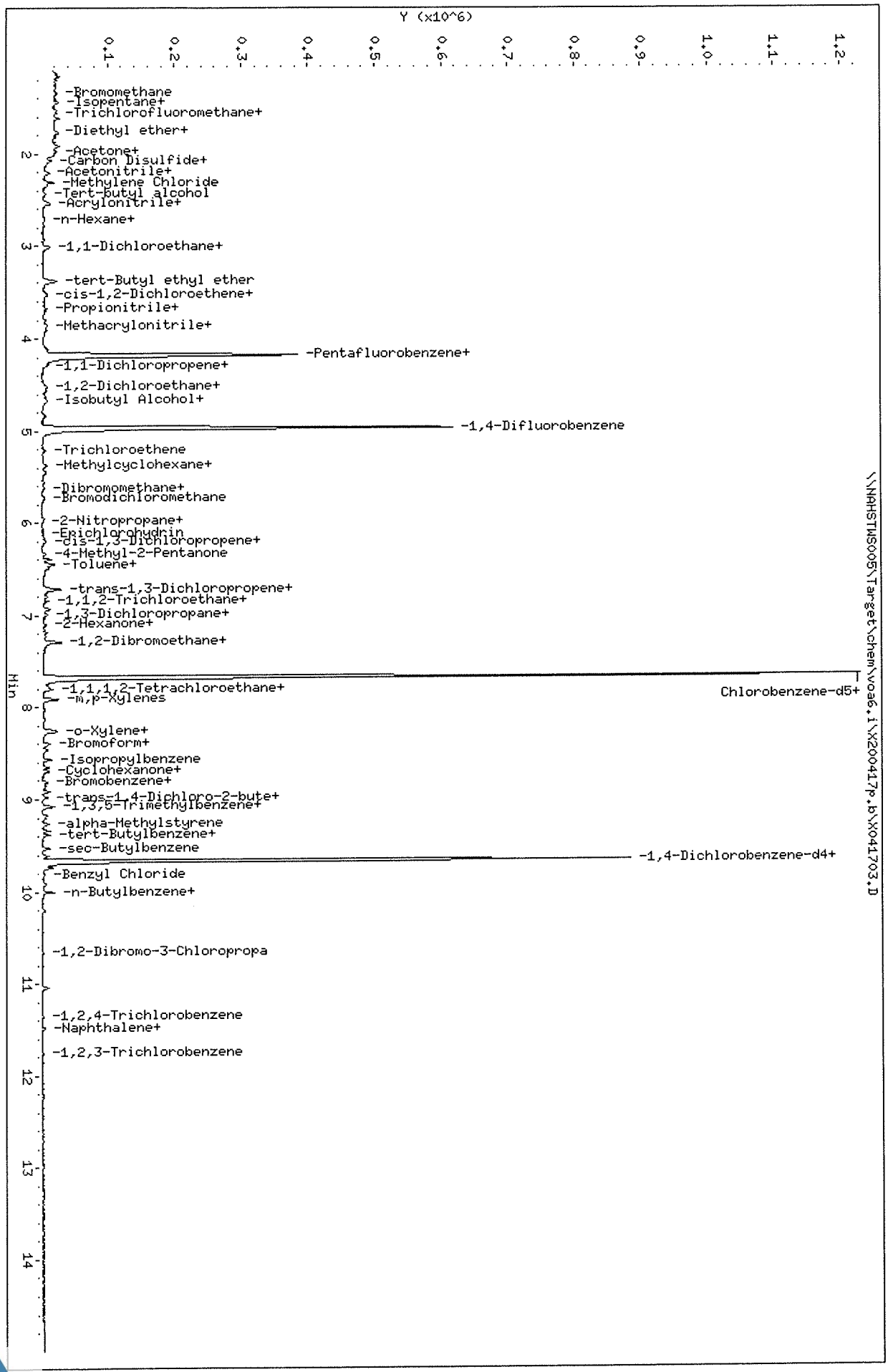
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	324114	50.0000	
	25 Methacrylonitrile	41	3.860	3.860	(0.923)	2844	0.50000	0.56(a)
	3 Chloromethane	50	1.074	1.074	(0.257)	3100	0.50000	1.41(aM)
	5 Vinyl Chloride	62	1.138	1.138	(0.272)	2533	0.50000	0.47(a)
	6 Bromomethane	94	1.339	1.339	(0.320)	1810	0.50000	0.70(aM)
	7 Chloroethane	64	1.403	1.403	(0.336)	2037	0.50000	0.66(aM)
	15 Iodomethane	142	2.033	2.033	(0.486)	2325	1.00000	3.04(a)
	19 Carbon Disulfide	76	2.069	2.069	(0.495)	10606	1.00000	1.00(a)
	20 trans-1,2-Dichloroethene	96	2.535	2.535	(0.606)	1428	0.50000	0.48(a)
	22 1,1-Dichloroethane	63	2.922	2.922	(0.699)	3206	0.50000	0.45(Ta)
	24 2-Butanone	43	3.609	3.609	(0.863)	1896	1.00000	1.85(aM)
	29 Bromochloromethane	128	3.810	3.810	(0.911)	1027	0.50000	0.51(a)
$	30 Dibromofluoromethane	113	4.104	4.104	(0.981)	2033	0.50000	0.00(a)
	34 Carbon Tetrachloride	117	4.261	4.261	(0.857)	2975	0.50000	0.65(a)
$	35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.072)	2269	0.50000	(TaM)
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	494594	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	514832	50.0000	
$	48 Toluene-d8	98	6.396	6.396	(0.834)	6995	0.50000	0.54(aM)
	50 Toluene	91	6.453	6.453	(0.841)	7613	0.50000	0.51(a)
	52 2-Hexanone	43	7.098	7.098	(0.925)	4343	1.00000	1.16(a)
	54 1,3-Dichloropropane	76	6.990	6.990	(0.911)	2914	0.50000	0.47(a)
	55 Dibromochloromethane	129	7.176	7.176	(0.936)	1962	0.50000	0.50(a)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
57	1,2-Dibromoethane	107	7.270	7.270	(0.948)	1780	0.50000	0.49(a)
59	Chlorobenzene	112	7.699	7.699	(1.004)	4996	0.50000	0.49(a)
60	1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	1736	0.50000	0.46(a)
62	m,p-Xylenes	106	7.907	7.907	(1.031)	5933	1.00000	0.91(a)
68	1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	1924	0.50000	0.50(aM)
$ 69	4-Bromofluorobenzene	95	8.695	8.695	(1.134)	2907	0.50000	1.03(aM)
* 70	1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	216048	50.0000	
74	Bromobenzene	156	8.817	8.817	(0.912)	2021	0.50000	0.51(a)
89	1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	174	0.50000	0.51(aM)
93	1,2,3-Trichlorobenzene	180	11.754	11.754	(1.216)	465	0.50000	0.63(aM)
M 94	1,2-Dichloroethylene (total)	96				3504	1.00000	(a)
138	Freon TF	101	1.919	1.919	(0.459)	1670	0.50000	0.54(a)
146	Methyl Acetate	43	2.241	2.241	(0.536)	1783	0.50000	0.87(aM)

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200417p.b\X041703.D
Date : 17-APR-2020 12:24
Client ID: VSTD000.5
Sample Info: VSTD000.5;VSTD000.5;1;2;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200417p.b\X041704.D
Lab Smp Id: VSTD001 Client Smp ID: VSTD001
Inj Date : 17-APR-2020 12:48
Operator : PC Inst ID: voa6.i
Smp Info : VSTD001;VSTD001;1;3;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X200417p.b\8260W.m
Meth Date : 05-May-2020 12:52 voa6.i Quant Type: ISTD
Cal Date : 17-APR-2020 12:24 Cal File: X041703.D
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260_GB.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	343567	50.0000	
140 1,3-Butadiene	54	1.159	1.159	(0.277)	6428	1.00000	1.01(a)
25 Methacrylonitrile	41	3.838	3.838	(0.918)	4639	1.00000	0.87(a)
136 n-Hexane	57	2.778	2.778	(0.664)	5741	1.00000	1.05(a)
4 Propionitrile	54	3.674	3.674	(0.878)	11702	10.0000	9.75(a)
2 Dichlorodifluoromethane	85	0.966	0.966	(0.231)	3614	1.00000	1.02(a)
3 Chloromethane	50	1.073	1.073	(0.257)	7285	1.00000	1.97(aM)
5 Vinyl Chloride	62	1.138	1.138	(0.272)	5490	1.00000	0.96(a)
6 Bromomethane	94	1.338	1.338	(0.320)	3688	1.00000	1.33(a)
7 Chloroethane	64	1.403	1.403	(0.336)	3642	1.00000	1.11(a)
8 Trichlorofluoromethane	101	1.561	1.561	(0.373)	5769	1.00000	0.99(a)
10 Acetone	43	1.976	1.976	(0.473)	7976	2.00000	2.10(a)
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	3371	1.00000	1.05(a)
15 Iodomethane	142	2.026	2.026	(0.485)	5619	2.00000	3.65(a)
17 Methylene Chloride	84	2.305	2.305	(0.551)	4525	1.00000	1.10(aM)
18 Methyl tert-butyl ether	73	2.542	2.542	(0.608)	9233	1.00000	0.95(a)
19 Carbon Disulfide	76	2.069	2.069	(0.495)	23085	2.00000	2.05(a)
20 trans-1,2-Dichloroethene	96	2.535	2.535	(0.606)	3034	1.00000	0.98(a)
22 1,1-Dichloroethane	63	2.929	2.929	(0.700)	7750	1.00000	1.03(a)
24 2-Butanone	43	3.602	3.602	(0.861)	3997	2.00000	2.61(a)
26 2,2-Dichloropropane	77	3.509	3.509	(0.839)	5478	1.00000	1.01(a)
27 cis-1,2-Dichloroethene	96	3.545	3.545	(0.848)	3931	1.00000	0.99(a)

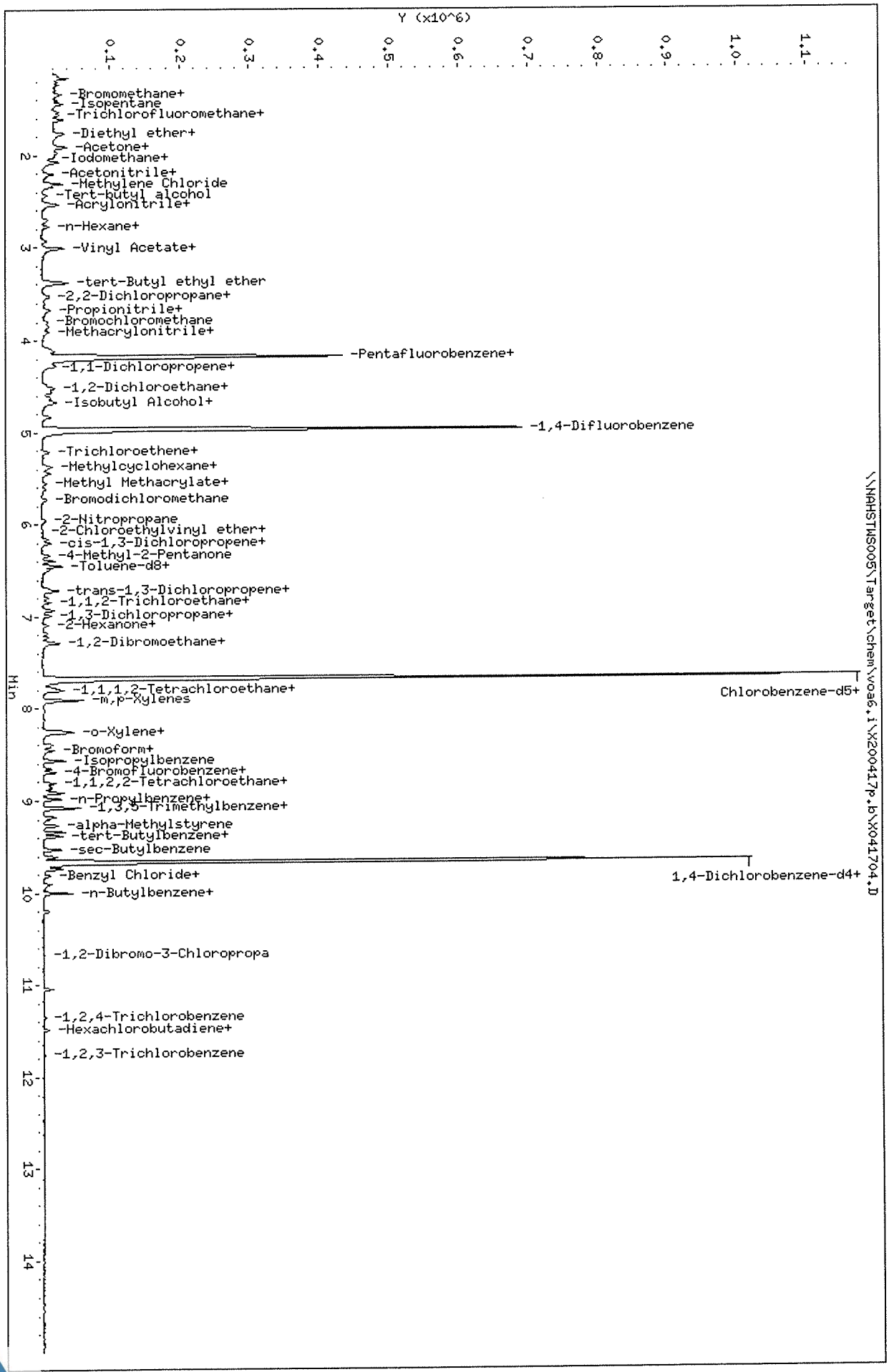
Data File: \\NAHSTWS005\Target\chem\voa6.i\X200417p.b\X041704.D Page 2
Report Date: 05-May-2020 12:52

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
	28 Chloroform	83	3.910	3.910	(0.935)	6980	1.00000	1.03(a)
	29 Bromochloromethane	128	3.795	3.795	(0.908)	2424	1.00000	1.15(aM)
$	30 Dibromofluoromethane	113	4.111	4.111	(0.983)	3291	1.00000	0.31(a)
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	6085	1.00000	1.03(a)
	32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	6347	1.00000	0.62(a)
	33 1,2-Dichloroethane	62	4.569	4.569	(0.919)	6166	1.00000	1.02(a)
	34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	6546	1.00000	1.28(a)
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	4964	1.00000	0.24(aM)
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	538565	50.0000	
	37 Benzene	78	4.519	4.519	(0.909)	15643	1.00000	1.05(a)
	38 Trichloroethene	130	5.214	5.214	(1.049)	3657	1.00000	0.98(a)
	39 Bromodichloromethane	83	5.729	5.729	(1.153)	4310	1.00000	0.90(aM)
	42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	3783	1.00000	0.84(aM)
	44 Dibromomethane	93	5.558	5.558	(1.118)	2100	1.00000	0.89(a)
	45 4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	9367	2.00000	1.02(a)
	46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	5437	1.00000	0.92(a)
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	509129	50.0000	
$	48 Toluene-d8	98	6.396	6.396	(0.834)	11194	1.00000	0.88(a)
	50 Toluene	91	6.453	6.453	(0.841)	13648	1.00000	0.92(a)
	51 trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	4837	1.00000	0.93(a)
	52 2-Hexanone	43	7.098	7.098	(0.925)	6890	2.00000	1.86(a)
	53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	2410	1.00000	0.84(a)
	54 1,3-Dichloropropane	76	6.990	6.990	(0.911)	6096	1.00000	1.01(a)
	55 Dibromochloromethane	129	7.184	7.184	(0.937)	3334	1.00000	0.86(a)
	56 Tetrachloroethene	164	6.933	6.933	(0.904)	2974	1.00000	0.99(a)
	57 1,2-Dibromoethane	107	7.269	7.269	(0.948)	3204	1.00000	0.89(a)
	59 Chlorobenzene	112	7.699	7.699	(1.004)	10811	1.00000	1.07(a)
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	3566	1.00000	0.95(a)
	61 Ethylbenzene	106	7.807	7.807	(1.018)	5621	1.00000	1.06(a)
	62 m,p-Xylenes	106	7.907	7.907	(1.031)	13660	2.00000	2.13(a)
	63 o-Xylene	106	8.244	8.244	(1.075)	6299	1.00000	1.03(a)
	64 Styrene	104	8.265	8.265	(1.078)	11190	1.00000	1.06(a)
	66 Bromoform	173	8.416	8.416	(1.097)	2469	1.00000	0.95(Ta)
	67 Isopropylbenzene	105	8.566	8.566	(1.117)	16671	1.00000	1.08(a)
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	4664	1.00000	1.20(a)
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	5497	1.00000	1.58(a)
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	219796	50.0000	
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	3899	1.00000	1.19(aM)
	73 n-Propylbenzene	91	8.917	8.917	(0.922)	18845	1.00000	1.16(a)
	74 Bromobenzene	156	8.810	8.810	(0.911)	4505	1.00000	1.12(a)
	75 1,3,5-Trimethylbenzene	105	9.075	9.075	(0.939)	13296	1.00000	1.17(a)
	76 2-Chlorotoluene	91	8.981	8.981	(0.929)	12023	1.00000	1.22(a)
	77 4-Chlorotoluene	91	9.075	9.075	(0.939)	14182	1.00000	1.23(aM)
	78 tert-Butylbenzene	119	9.340	9.340	(0.966)	10885	1.00000	1.13(a)
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	12745	1.00000	1.09(a)
	81 sec-Butylbenzene	105	9.526	9.526	(0.985)	15403	1.00000	1.12(a)
	82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	12101	1.00000	1.04(a)
	83 1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	6640	1.00000	1.00(a)
	84 1,4-Dichlorobenzene	146	9.691	9.691	(1.002)	7660	1.00000	1.11(a)
	87 n-Butylbenzene	91	9.999	9.999	(1.034)	10318	1.00000	1.06(a)
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	6181	1.00000	1.05(a)
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	307	1.00000	0.89(aM)
	90 1,2,4-Trichlorobenzene	180	11.352	11.352	(1.174)	1108	1.00000	0.79(aM)
	92 Naphthalene	128	11.553	11.553	(1.195)	1884	1.00000	0.90(a)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
93	1,2,3-Trichlorobenzene	180	11.754	11.754	(1.216)	675	1.00000	0.90(aM)
M 94	1,2-Dichloroethylene (total)	96				6965	2.00000	(a)
141	Cyclohexane	56	4.118	4.118	(0.985)	9102	1.00000	1.07(aH)
138	Freon TF	101	1.912	1.912	(0.457)	3205	1.00000	0.98(a)
146	Methyl Acetate	43	2.248	2.248	(0.538)	3528	1.00000	1.23(aM)
149	Isopropyl Alcohol	45	2.098	2.098	(0.502)	9551	20.0000	21.71

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.



Data File: \\NAHSTNS005\Target\chem\voa6.i\X200417p.b\X041704.D
Date : 17-APR-2020 12:48
Client ID: VSTD001
Sample Info: VSTD001;VSTD001;1;3;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200417p.b\X041705.D
Lab Smp Id: VSTD002 Client Smp ID: VSTD002
Inj Date : 17-APR-2020 13:12
Operator : PC Inst ID: voa6.i
Smp Info : VSTD002;VSTD002;1;4;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X200417p.b\8260W.m
Meth Date : 05-May-2020 12:52 voa6.i Quant Type: ISTD
Cal Date : 17-APR-2020 12:48 Cal File: X041704.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260_GB.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

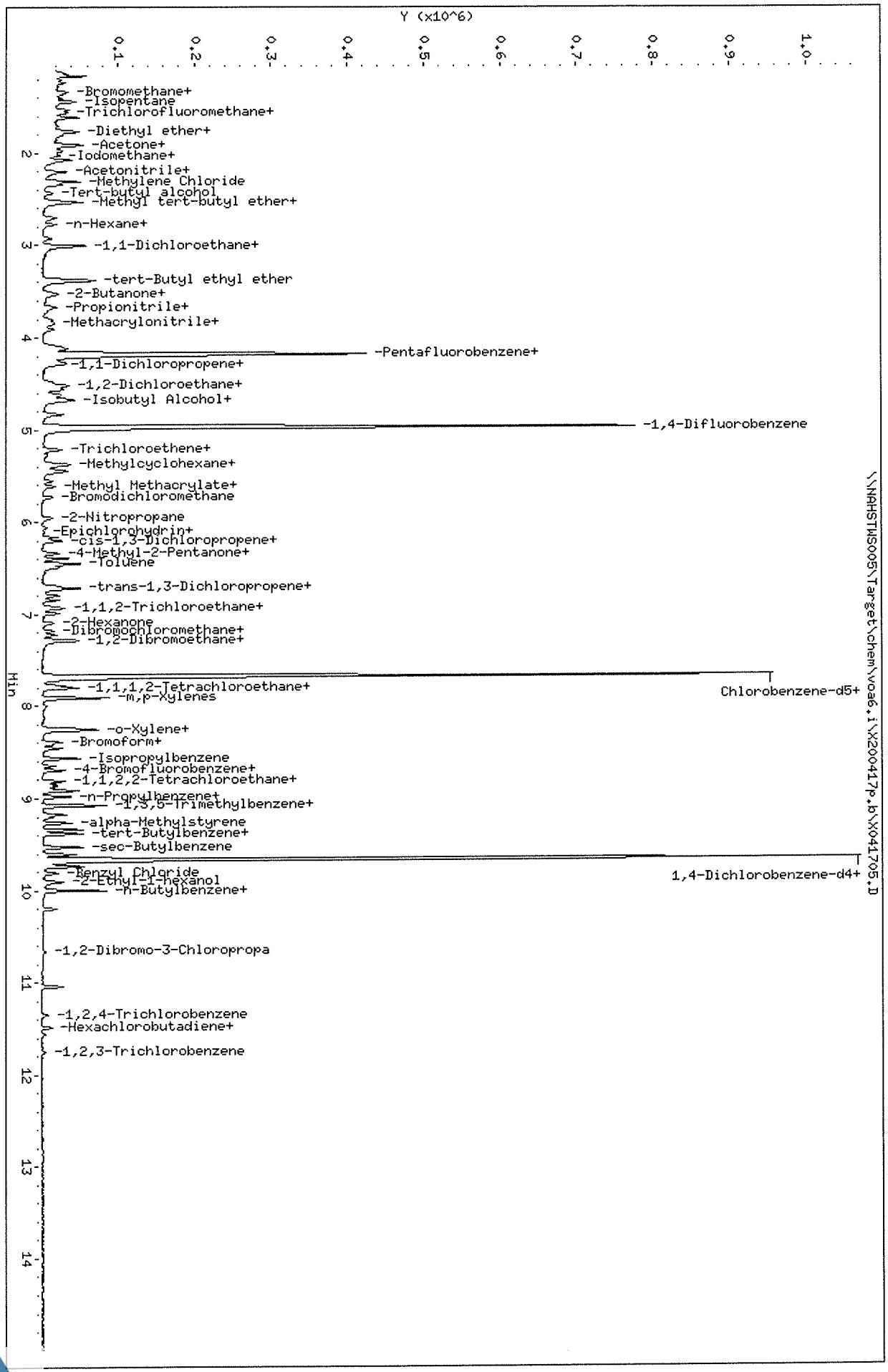
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1	Pentafluorobenzene	168	4.182	4.182	(1.000)	340114	50.0000	
140	1,3-Butadiene	54	1.159	1.159	(0.277)	11637	2.00000	1.86(a)
25	Methacrylonitrile	41	3.831	3.831	(0.916)	8824	2.00000	1.67(a)
136	n-Hexane	57	2.771	2.771	(0.663)	10911	2.00000	2.03(a)
4	Propionitrile	54	3.666	3.666	(0.877)	20653	20.0000	17.39(a)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	6564	2.00000	1.88(a)
3	Chloromethane	50	1.073	1.073	(0.257)	12373	2.00000	2.70(aM)
5	Vinyl Chloride	62	1.138	1.138	(0.272)	10635	2.00000	1.89(a)
6	Bromomethane	94	1.338	1.338	(0.320)	6572	2.00000	2.38(a)
7	Chloroethane	64	1.403	1.403	(0.336)	5535	2.00000	1.71(a)
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	10990	2.00000	1.91(a)
10	Acetone	43	1.976	1.976	(0.473)	10329	4.00000	3.40(a)
11	1,1-Dichloroethene	96	1.919	1.919	(0.459)	6127	2.00000	1.92(a)
15	Iodomethane	142	2.026	2.026	(0.485)	11501	4.00000	4.82(a)
17	Methylene Chloride	84	2.305	2.305	(0.551)	8439	2.00000	2.07(aM)
18	Methyl tert-butyl ether	73	2.535	2.535	(0.606)	18353	2.00000	1.90(a)
19	Carbon Disulfide	76	2.069	2.069	(0.495)	41450	4.00000	3.73(a)
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.606)	5636	2.00000	1.84(a)
21	Vinyl Acetate	43	3.007	3.007	(0.719)	48640	4.00000	3.53(aM)
22	1,1-Dichloroethane	63	2.929	2.929	(0.700)	14216	2.00000	1.92(a)
24	2-Butanone	43	3.595	3.595	(0.860)	6625	4.00000	3.65(a)
26	2,2-Dichloropropane	77	3.509	3.509	(0.839)	8846	2.00000	1.66(a)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
	27 cis-1,2-Dichloroethene	96	3.537	3.537	(0.846)	6637	2.00000	1.69(a)
	28 Chloroform	83	3.910	3.910	(0.935)	11390	2.00000	1.70(a)
	29 Bromochloromethane	128	3.803	3.803	(0.909)	3994	2.00000	1.91(a)
$	30 Dibromofluoromethane	113	4.111	4.111	(0.983)	7438	2.00000	1.43(a)
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	11482	2.00000	1.97(a)
	32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	10706	2.00000	1.38(a)
	33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	12818	2.00000	2.04(a)
	34 Carbon Tetrachloride	117	4.275	4.275	(0.860)	10747	2.00000	2.00(a)
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	9219	2.00000	1.42(aM)
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	561771	50.0000	
	37 Benzene	78	4.519	4.519	(0.909)	30384	2.00000	1.96(a)
	38 Trichloroethene	130	5.214	5.214	(1.049)	7981	2.00000	2.05(a)
	39 Bromodichloromethane	83	5.729	5.729	(1.153)	8402	2.00000	1.69(a)
	42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	9776	2.00000	2.09(aM)
	44 Dibromomethane	93	5.557	5.557	(1.118)	4847	2.00000	1.97(a)
	45 4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	16846	4.00000	3.47(a)
	46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	10656	2.00000	1.74(a)
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	431570	50.0000	
$	48 Toluene-d8	98	6.388	6.388	(0.833)	19645	2.00000	1.82(a)
	50 Toluene	91	6.453	6.453	(0.841)	25219	2.00000	2.02(a)
	51 trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	9330	2.00000	1.73(a)
	52 2-Hexanone	43	7.090	7.090	(0.924)	10863	4.00000	3.47(a)
	53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	5111	2.00000	2.10(a)
	54 1,3-Dichloropropane	76	6.990	6.990	(0.911)	10441	2.00000	2.04(a)
	55 Dibromochloromethane	129	7.183	7.183	(0.937)	6763	2.00000	2.06(a)
	56 Tetrachloroethene	164	6.933	6.933	(0.904)	5432	2.00000	2.13(a)
	57 1,2-Dibromoethane	107	7.269	7.269	(0.948)	6089	2.00000	2.00(a)
	58 1-Chlorohexane	55	7.699	7.699	(1.549)	8602	2.00000	0.53(aM)
	59 Chlorobenzene	112	7.699	7.699	(1.004)	16736	2.00000	1.95(a)
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	6188	2.00000	1.96(a)
	61 Ethylbenzene	106	7.807	7.807	(1.018)	8631	2.00000	1.92(a)
	62 m,p-Xylenes	106	7.907	7.907	(1.031)	21083	4.00000	3.89(a)
	63 o-Xylene	106	8.244	8.244	(1.075)	10738	2.00000	2.07(a)
	64 Styrene	104	8.265	8.265	(1.078)	17187	2.00000	1.93(a)
	66 Bromoform	173	8.416	8.416	(1.097)	4335	2.00000	1.97(Ta)
	67 Isopropylbenzene	105	8.566	8.566	(1.117)	26370	2.00000	2.01(a)
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	7372	2.00000	1.74(a)
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	8241	2.00000	2.45(a)
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	239285	50.0000	
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	6231	2.00000	1.75(aM)
	73 n-Propylbenzene	91	8.917	8.917	(0.922)	30641	2.00000	1.73(a)
	74 Bromobenzene	156	8.809	8.809	(0.911)	7614	2.00000	1.74(a)
	75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	22043	2.00000	1.78(a)
	76 2-Chlorotoluene	91	8.981	8.981	(0.929)	18532	2.00000	1.73(a)
	77 4-Chlorotoluene	91	9.075	9.075	(0.939)	22057	2.00000	1.75(a)
	78 tert-Butylbenzene	119	9.340	9.340	(0.966)	19585	2.00000	1.87(a)
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	24564	2.00000	1.94(a)
	81 sec-Butylbenzene	105	9.526	9.526	(0.985)	30484	2.00000	2.03(a)
	82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	24037	2.00000	1.90(a)
	83 1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	14165	2.00000	1.96(a)
	84 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	14960	2.00000	2.00(a)
	87 n-Butylbenzene	91	9.999	9.999	(1.034)	20086	2.00000	1.91(a)
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	12570	2.00000	1.96(a)
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	792	2.00000	2.11(a)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
90	1,2,4-Trichlorobenzene	180	11.345	11.345	(1.173)	2991	2.00000	1.96(a)
92	Naphthalene	128	11.553	11.553	(1.195)	3944	2.00000	1.74(a)
93	1,2,3-Trichlorobenzene	180	11.753	11.753	(1.216)	1554	2.00000	1.91(a)
M 94	1,2-Dichloroethylene (total)	96				12273	4.00000	(a)
141	Cyclohexane	56	4.132	4.132	(0.988)	16274	2.00000	1.94(aH)
138	Freon TF	101	1.911	1.911	(0.457)	6277	2.00000	1.94(a)
147	Methylcyclohexane	55	5.393	5.393	(1.085)	28281	2.00000	2.03(a)
146	Methyl Acetate	43	2.234	2.234	(0.534)	6540	2.00000	1.89(a)
148	Tert-Butyl alcohol	59	2.434	2.434	(0.582)	18229	40.0000	35.23(a)
149	Isopropyl Alcohol	45	2.098	2.098	(0.502)	15246	40.0000	35.01(T)

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200417p.b\X041705.D
Date : 17-APR-2020 13:12
Client ID: VSTD002
Sample Info: VSTD002;VSTD002;1;4;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200417p.b\X041706.D
Lab Smp Id: VSTD005 Client Smp ID: VSTD005
Inj Date : 17-APR-2020 13:36
Operator : PC Inst ID: voa6.i
Smp Info : VSTD005;VSTD005;1;5;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X200417p.b\8260W.m
Meth Date : 05-May-2020 12:52 voa6.i Quant Type: ISTD
Cal Date : 17-APR-2020 13:12 Cal File: X041705.D
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260_GB.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	337669	50.0000	
194 Acetaldehyde	44	1.210	1.210	(0.289)	17224	20.0000	17.54
140 1,3-Butadiene	54	1.159	1.159	(0.277)	28158	5.00000	4.53(a)
25 Methacrylonitrile	41	3.831	3.831	(0.916)	20778	5.00000	3.97
136 n-Hexane	57	2.771	2.771	(0.663)	21255	5.00000	3.99(a)
4 Propionitrile	54	3.659	3.659	(0.875)	51877	50.0000	44.00(a)
2 Dichlorodifluoromethane	85	0.966	0.966	(0.231)	14559	5.00000	4.20(a)
3 Chloromethane	50	1.073	1.073	(0.257)	30049	5.00000	5.25
5 Vinyl Chloride	62	1.138	1.138	(0.272)	25578	5.00000	4.58(a)
6 Bromomethane	94	1.338	1.338	(0.320)	14731	5.00000	5.36
7 Chloroethane	64	1.403	1.403	(0.336)	14907	5.00000	4.65(a)
8 Trichlorofluoromethane	101	1.561	1.561	(0.373)	26021	5.00000	4.56(a)
9 Acrolein	56	1.238	1.238	(0.296)	6096	10.0000	9.16(a)
10 Acetone	43	1.976	1.976	(0.473)	22226	10.0000	9.84
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	15406	5.00000	4.88(a)
15 Iodomethane	142	2.026	2.026	(0.485)	34526	10.0000	9.38
16 Acrylonitrile	53	2.535	2.535	(0.606)	27211	10.0000	10.18
17 Methylene Chloride	84	2.305	2.305	(0.551)	19568	5.00000	4.84(a)
18 Methyl tert-butyl ether	73	2.535	2.535	(0.606)	45959	5.00000	4.81(a)
19 Carbon Disulfide	76	2.069	2.069	(0.495)	102921	10.0000	9.34
20 trans-1,2-Dichloroethene	96	2.528	2.528	(0.604)	14037	5.00000	4.62(a)
21 Vinyl Acetate	43	3.000	3.000	(0.717)	122457	10.0000	10.01

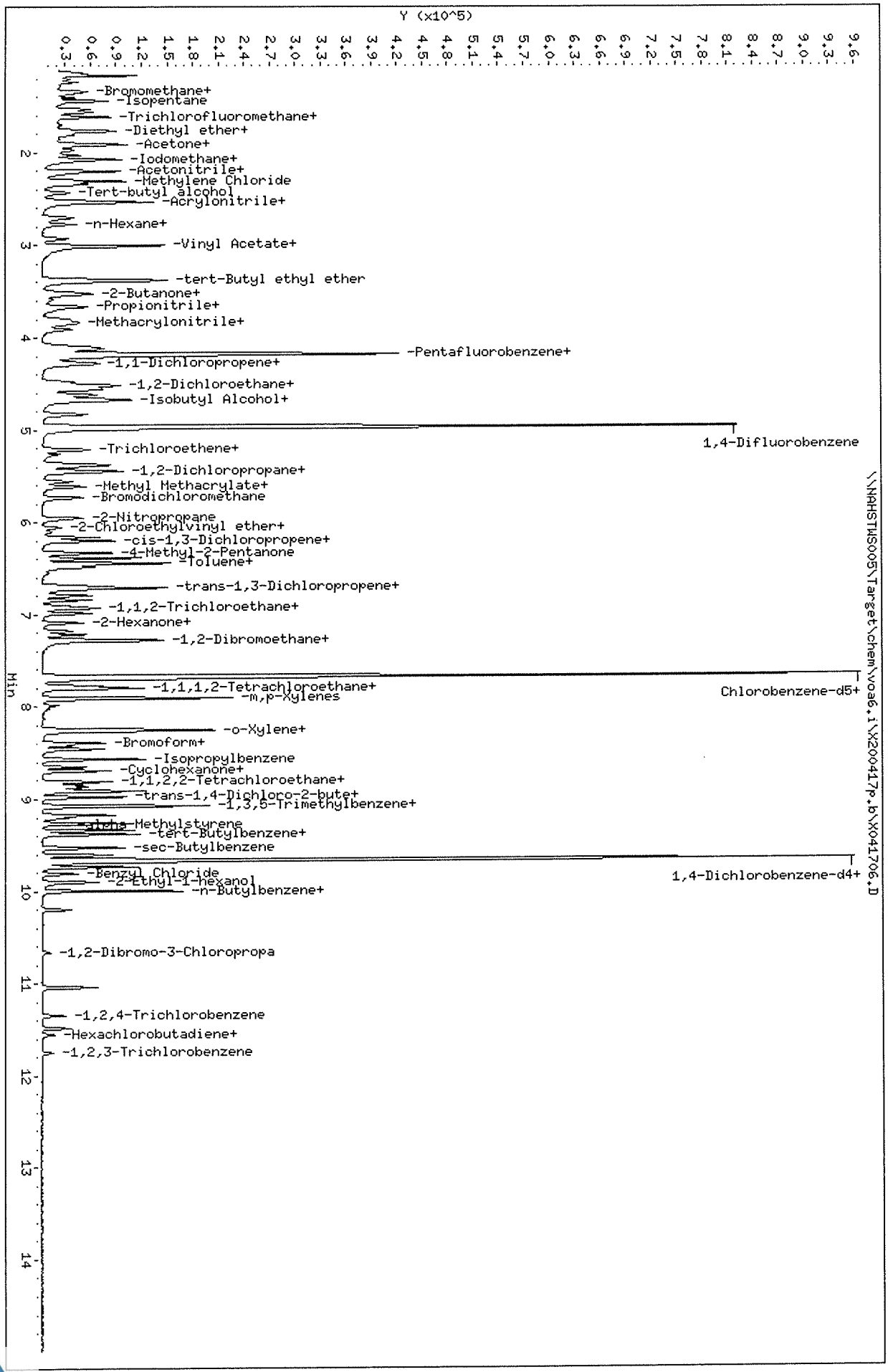
Data File: \\NAHSTWS005\Target\chem\voa6.i\X200417p.b\X041706.D Page 2
Report Date: 05-May-2020 12:52

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
22	1,1-Dichloroethane	63	2.921	2.921	(0.699)	35361	5.00000	4.81(a)
24	2-Butanone	43	3.580	3.580	(0.856)	17409	10.0000	7.87
26	2,2-Dichloropropane	77	3.509	3.509	(0.839)	26156	5.00000	4.94(a)
27	cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	17615	5.00000	4.54(a)
28	Chloroform	83	3.910	3.910	(0.935)	28274	5.00000	4.25(a)
29	Bromochloromethane	128	3.795	3.795	(0.908)	9637	5.00000	4.66(a)
$ 30	Dibromofluoromethane	113	4.103	4.103	(0.981)	19467	5.00000	4.72(a)
31	1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	25414	5.00000	4.39(a)
32	1,1-Dichloropropene	75	4.282	4.282	(0.862)	24249	5.00000	3.95(a)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	32710	5.00000	5.24
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	24009	5.00000	4.46(a)
$ 35	1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	23894	5.00000	5.46(M)
* 36	1,4-Difluorobenzene	114	4.970	4.970	(1.000)	558420	50.0000	
37	Benzene	78	4.519	4.519	(0.909)	77594	5.00000	5.05
38	Trichloroethene	130	5.207	5.207	(1.048)	18419	5.00000	4.78(a)
39	Bromodichloromethane	83	5.729	5.729	(1.153)	26470	5.00000	5.36
41	2-Chloroethylvinyl ether	63	6.052	6.052	(1.218)	9119	10.0000	10.37(a)
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	24405	5.00000	5.25
44	Dibromomethane	93	5.557	5.557	(1.118)	13216	5.00000	5.41
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	57260	10.0000	14.41(M)
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	31861	5.00000	5.24
* 47	Chlorobenzene-d5	117	7.671	7.671	(1.000)	428279	50.0000	
$ 48	Toluene-d8	98	6.388	6.388	(0.833)	61769	5.00000	5.78(M)
50	Toluene	91	6.446	6.446	(0.840)	69463	5.00000	5.61
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	24263	5.00000	4.54(a)
52	2-Hexanone	43	7.090	7.090	(0.924)	30739	10.0000	9.90
53	1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	13278	5.00000	5.50
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	26263	5.00000	5.19
55	Dibromochloromethane	129	7.176	7.176	(0.936)	16841	5.00000	5.18
56	Tetrachloroethene	164	6.933	6.933	(0.904)	12717	5.00000	5.03
57	1,2-Dibromoethane	107	7.262	7.262	(0.947)	16214	5.00000	5.37
58	1-Chlorohexane	55	7.699	7.699	(1.549)	20385	5.00000	3.27(aM)
59	Chlorobenzene	112	7.699	7.699	(1.004)	41903	5.00000	4.94(a)
60	1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	16048	5.00000	5.13
61	Ethylbenzene	106	7.800	7.800	(1.017)	21059	5.00000	4.73(a)
62	m,p-Xylenes	106	7.907	7.907	(1.031)	52961	10.0000	9.85(a)
63	o-Xylene	106	8.244	8.244	(1.075)	25965	5.00000	5.05
64	Styrene	104	8.265	8.265	(1.078)	45388	5.00000	5.15
66	Bromoform	173	8.416	8.416	(1.097)	11579	5.00000	5.31
67	Isopropylbenzene	105	8.566	8.566	(1.117)	66018	5.00000	5.09
68	1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	20013	5.00000	5.37
$ 69	4-Bromofluorobenzene	95	8.695	8.695	(1.134)	22096	5.00000	5.87(M)
* 70	1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	211190	50.0000	
71	1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	16190	5.00000	5.17(M)
73	n-Propylbenzene	91	8.917	8.917	(0.922)	73739	5.00000	4.72(a)
74	Bromobenzene	156	8.810	8.810	(0.911)	19689	5.00000	5.09
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	50484	5.00000	4.63(a)
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	46734	5.00000	4.94(a)
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	50842	5.00000	4.59(a)
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	42547	5.00000	4.60(a)
79	1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	51069	5.00000	4.57(a)
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	55591	5.00000	4.21(a)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	48360	5.00000	4.34(a)
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	30235	5.00000	4.76(a)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	30736	5.00000	4.66(a)
87	n-Butylbenzene	91	9.999	9.999	(1.034)	39516	5.00000	4.26(a)
88	1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	28224	5.00000	5.00
89	1,2-Dibromo-3-Chloropropane	155	10.665	10.665	(1.103)	1778	5.00000	5.38
90	1,2,4-Trichlorobenzene	180	11.345	11.345	(1.173)	7080	5.00000	5.26
92	Naphthalene	128	11.553	11.553	(1.195)	11291	5.00000	5.65(M)
93	1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	3379	5.00000	4.71(a)
M 94	1,2-Dichloroethylene (total)	96				31652	10.0000	(a)
135	1,4-Dioxane	88	5.600	5.600	(1.339)	4571	100.000	116.67
141	Cyclohexane	56	4.125	4.125	(0.986)	34612	5.00000	4.16(aH)
138	Freon TF	101	1.912	1.912	(0.457)	14136	5.00000	4.41(a)
147	Methylcyclohexane	55	5.386	5.386	(1.084)	67119	5.00000	4.85(a)
146	Methyl Acetate	43	2.234	2.234	(0.534)	16747	5.00000	4.14(a)
148	Tert-Butyl alcohol	59	2.434	2.434	(0.582)	43802	100.000	96.93
149	Isopropyl Alcohol	45	2.098	2.098	(0.502)	40414	100.000	93.49(T)

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200417p.b\X041706.D
Date : 17-APR-2020 13:36
Client ID: VSTD005
Sample Info: VSTD005;VSTD005;1;5;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200417p.b\X041707.D
Lab Smp Id: VSTD020 Client Smp ID: VSTD020
Inj Date : 17-APR-2020 14:00
Operator : PC Inst ID: voa6.i
Smp Info : VSTD020;VSTD020;1;6;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X200417p.b\8260W.m
Meth Date : 05-May-2020 12:52 voa6.i Quant Type: ISTD
Cal Date : 17-APR-2020 13:36 Cal File: X041706.D
Als bottle: 8 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260_GB.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	322676	50.0000	
194 Acetaldehyde	44	1.209	1.209	(0.289)	52305	80.0000	91.49
140 1,3-Butadiene	54	1.159	1.159	(0.277)	116108	20.0000	19.57
25 Methacrylonitrile	41	3.824	3.824	(0.914)	107144	20.0000	21.43
136 n-Hexane	57	2.771	2.771	(0.663)	98393	20.0000	19.34
4 Propionitrile	54	3.652	3.652	(0.873)	258529	200.000	229.50(a)
2 Dichlorodifluoromethane	85	0.966	0.966	(0.231)	66029	20.0000	19.96
3 Chloromethane	50	1.073	1.073	(0.257)	118663	20.0000	18.72
5 Vinyl Chloride	62	1.138	1.138	(0.272)	102662	20.0000	19.26
6 Bromomethane	94	1.338	1.338	(0.320)	50345	20.0000	19.12
7 Chloroethane	64	1.403	1.403	(0.335)	57510	20.0000	18.78
8 Trichlorofluoromethane	101	1.560	1.560	(0.373)	110299	20.0000	20.25
9 Acrolein	56	1.238	1.238	(0.296)	25710	40.0000	39.67
10 Acetone	43	1.976	1.976	(0.473)	73219	40.0000	39.12
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	58130	20.0000	19.29
15 Iodomethane	142	2.026	2.026	(0.484)	164499	40.0000	36.73
16 Acrylonitrile	53	2.534	2.534	(0.606)	106539	40.0000	41.38
17 Methylene Chloride	84	2.305	2.305	(0.551)	82485	20.0000	21.38
18 Methyl tert-butyl ether	73	2.534	2.534	(0.606)	178514	20.0000	19.57
19 Carbon Disulfide	76	2.069	2.069	(0.495)	409432	40.0000	38.89
20 trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	56784	20.0000	19.56
21 Vinyl Acetate	43	3.000	3.000	(0.717)	491331	40.0000	42.56

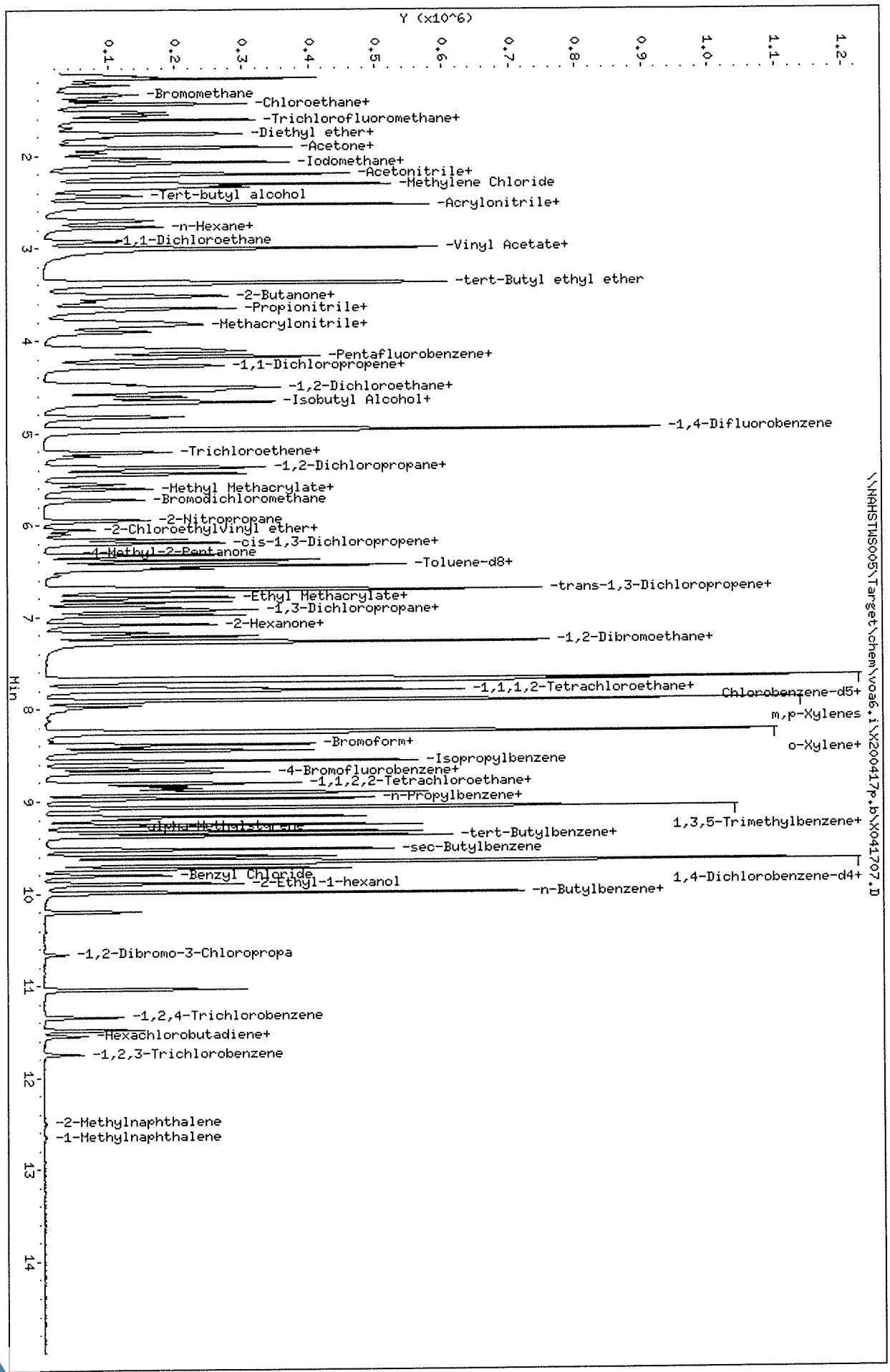
Data File: \\NAHSTWS005\Target\chem\voa6.i\X200417p.b\X041707.D Page 2
Report Date: 05-May-2020 12:52

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
	22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	132193	20.0000	18.84
	24 2-Butanone	43	3.580	3.580	(0.856)	95279	40.0000	39.96
	26 2,2-Dichloropropane	77	3.509	3.509	(0.839)	105882	20.0000	20.95
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	81406	20.0000	21.97
	28 Chloroform	83	3.910	3.910	(0.935)	133377	20.0000	21.00
	29 Bromochloromethane	128	3.795	3.795	(0.908)	41352	20.0000	20.94
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	73267	20.0000	20.28
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	112270	20.0000	20.33
	32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	95389	20.0000	20.59
	33 1,2-Dichloroethane	62	4.554	4.554	(0.916)	114184	20.0000	21.57
	34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	94075	20.0000	20.47
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	92798	20.0000	24.44(M)
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	473938	50.0000	
	37 Benzene	78	4.511	4.511	(0.908)	288521	20.0000	22.15
	38 Trichloroethene	130	5.206	5.206	(1.048)	64629	20.0000	19.76
	39 Bromodichloromethane	83	5.729	5.729	(1.153)	82746	20.0000	19.75
	41 2-Chloroethylvinyl ether	63	6.052	6.052	(1.218)	29726	40.0000	39.85
	42 1,2-Dichloropropane	63	5.436	5.436	(1.094)	76331	20.0000	19.37
	44 Dibromomethane	93	5.557	5.557	(1.118)	40978	20.0000	19.78
	45 4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	174648	40.0000	38.06(M)
	46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	102229	20.0000	19.83
*	47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	491178	50.0000	
$	48 Toluene-d8	98	6.388	6.388	(0.833)	226166	20.0000	18.48
	50 Toluene	91	6.446	6.446	(0.840)	248749	20.0000	17.52
	51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	106417	20.0000	23.48
	52 2-Hexanone	43	7.090	7.090	(0.924)	155247	40.0000	43.63
	53 1,1,2-Trichloroethane	83	6.839	6.839	(0.892)	59569	20.0000	21.55
	54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	121332	20.0000	20.91
	55 Dibromochloromethane	129	7.176	7.176	(0.936)	77307	20.0000	20.76
	56 Tetrachloroethene	164	6.933	6.933	(0.904)	58689	20.0000	20.25
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	73789	20.0000	21.34
	58 1-Chlorohexane	55	7.699	7.699	(1.549)	93411	20.0000	23.51(M)
	59 Chlorobenzene	112	7.699	7.699	(1.004)	193929	20.0000	19.94
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	72834	20.0000	20.30
	61 Ethylbenzene	106	7.799	7.799	(1.017)	102219	20.0000	20.05
	62 m,p-Xylenes	106	7.907	7.907	(1.031)	247470	40.0000	40.17
	63 o-Xylene	106	8.243	8.243	(1.075)	121137	20.0000	20.54
	64 Styrene	104	8.258	8.258	(1.077)	211259	20.0000	20.91
	66 Bromoform	173	8.415	8.415	(1.097)	51240	20.0000	20.52
	67 Isopropylbenzene	105	8.566	8.566	(1.117)	303112	20.0000	20.38
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	89228	20.0000	22.80
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	95087	20.0000	20.81
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	221877	50.0000	
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	74745	20.0000	22.75(M)
	73 n-Propylbenzene	91	8.917	8.917	(0.923)	365947	20.0000	22.32
	74 Bromobenzene	156	8.809	8.809	(0.912)	86350	20.0000	21.28
	75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	252121	20.0000	22.02
	76 2-Chlorotoluene	91	8.974	8.974	(0.929)	219130	20.0000	22.09
	77 4-Chlorotoluene	91	9.074	9.074	(0.939)	254709	20.0000	21.89
	78 tert-Butylbenzene	119	9.339	9.339	(0.967)	209424	20.0000	21.58
	79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.971)	255320	20.0000	21.77
	81 sec-Butylbenzene	105	9.526	9.526	(0.986)	295752	20.0000	21.32
	82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	242928	20.0000	20.75
	83 1,3-Dichlorobenzene	146	9.604	9.604	(0.994)	141568	20.0000	21.22

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	131421	20.0000	18.96	
87	n-Butylbenzene	91	9.998	9.998	(1.035)	186942	20.0000	19.19	
88	1,2-Dichlorobenzene	146	9.998	9.998	(1.035)	115178	20.0000	19.43	
89	1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.103)	6916	20.0000	19.93	
90	1,2,4-Trichlorobenzene	180	11.345	11.345	(1.174)	32823	20.0000	23.21	
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	24144	20.0000	24.09	
92	Naphthalene	128	11.546	11.546	(1.195)	42750	20.0000	20.38	
93	1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	16199	20.0000	21.53	
M 94	1,2-Dichloroethylene (total)	96				138190	40.0000		(a)
135	1,4-Dioxane	88	5.600	5.600	(1.339)	15441	400.000	412.46	
141	Cyclohexane	56	4.125	4.125	(0.986)	167238	20.0000	21.07	
138	Freon TF	101	1.911	1.911	(0.457)	58859	20.0000	19.22	
147	Methylcyclohexane	55	5.378	5.378	(1.082)	224643	20.0000	19.13	
146	Methyl Acetate	43	2.234	2.234	(0.534)	87932	20.0000	20.53	
148	Tert-Butyl alcohol	59	2.427	2.427	(0.580)	183212	400.000	436.13	
149	Isopropyl Alcohol	45	2.098	2.098	(0.502)	168345	400.000	407.55	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200417p.b\X041707.D
Date : 17-APR-2020 14:00
Client ID: VSTD020
Sample Info: VSTD020;VSTD020;1;6;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200417p.b\X041708.D
Lab Smp Id: VSTD050 Client Smp ID: VSTD050
Inj Date : 17-APR-2020 14:24
Operator : PC Inst ID: voa6.i
Smp Info : VSTD050;VSTD050;1;7;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X200417p.b\8260W.m
Meth Date : 05-May-2020 12:53 voa6.i Quant Type: ISTD
Cal Date : 17-APR-2020 14:00 Cal File: X041707.D
Als bottle: 9 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260_GB.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1	Pentafluorobenzene	168	4.182	4.182	(1.000)	305141	50.0000	
194	Acetaldehyde	44	1.210	1.210	(0.289)	105754	200.000	214.29
140	1,3-Butadiene	54	1.159	1.159	(0.277)	291204	50.0000	51.90
25	Methacrylonitrile	41	3.824	3.824	(0.914)	263335	50.0000	55.70
136	n-Hexane	57	2.771	2.771	(0.663)	236605	50.0000	49.18
4	Propionitrile	54	3.652	3.652	(0.873)	610649	500.000	573.23
2	Dichlorodifluoromethane	85	0.966	0.966	(0.231)	161095	50.0000	51.50
3	Chloromethane	50	1.073	1.073	(0.257)	299144	50.0000	48.33
5	Vinyl Chloride	62	1.138	1.138	(0.272)	259014	50.0000	51.40
6	Bromomethane	94	1.338	1.338	(0.320)	119933	50.0000	48.14
7	Chloroethane	64	1.403	1.403	(0.336)	139166	50.0000	48.07
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	268087	50.0000	52.06
9	Acrolein	56	1.238	1.238	(0.296)	63534	100.000	100.28
10	Acetone	43	1.969	1.969	(0.471)	175184	100.000	102.24
11	1,1-Dichloroethene	96	1.912	1.912	(0.457)	145882	50.0000	51.20
15	Iodomethane	142	2.026	2.026	(0.485)	426432	100.000	97.27
16	Acrylonitrile	53	2.535	2.535	(0.606)	260305	100.000	99.24
17	Methylene Chloride	84	2.305	2.305	(0.551)	186969	50.0000	51.27
18	Methyl tert-butyl ether	73	2.535	2.535	(0.606)	415914	50.0000	48.22
19	Carbon Disulfide	76	2.069	2.069	(0.495)	1007125	100.000	101.16
20	trans-1,2-Dichloroethene	96	2.528	2.528	(0.604)	136672	50.0000	49.80
21	Vinyl Acetate	43	3.000	3.000	(0.717)	1163807	100.000	98.66

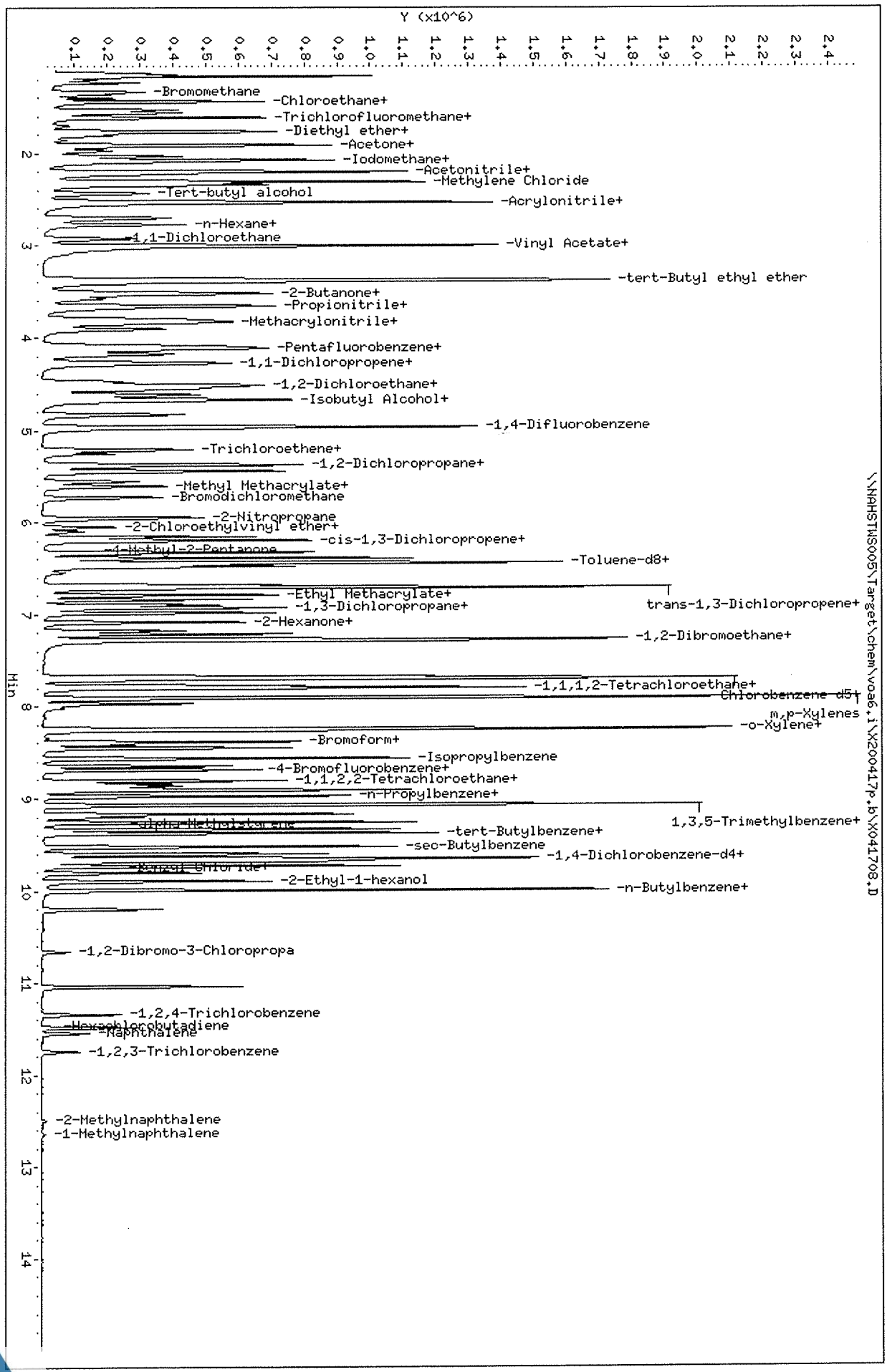
Data File: \\NAHSTWS005\Target\chem\voa6.i\X200417p.b\X041708.D Page 2
Report Date: 05-May-2020 12:53

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
	22 1,1-Dichloroethane	63	2.922	2.922	(0.699)	315402	50.0000	47.54
	24 2-Butanone	43	3.573	3.573	(0.854)	233785	100.000	101.95
	26 2,2-Dichloropropane	77	3.516	3.516	(0.841)	262918	50.0000	55.02
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	195316	50.0000	55.76
	28 Chloroform	83	3.910	3.910	(0.935)	319794	50.0000	53.24
	29 Bromochloromethane	128	3.795	3.795	(0.908)	95406	50.0000	51.11
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	168985	50.0000	50.29
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	265981	50.0000	50.95
	32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	203648	50.0000	49.63
	33 1,2-Dichloroethane	62	4.555	4.555	(0.916)	225927	50.0000	47.36
	34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	203935	50.0000	49.19
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	176751	50.0000	47.15
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	427152	50.0000	
	37 Benzene	78	4.512	4.512	(0.908)	563133	50.0000	47.98
	38 Trichloroethene	130	5.207	5.207	(1.048)	151739	50.0000	51.48
	39 Bromodichloromethane	83	5.729	5.729	(1.153)	200240	50.0000	53.03
	41 2-Chloroethylvinyl ether	63	6.052	6.052	(1.218)	88233	100.000	131.24
	42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	183709	50.0000	51.72
	44 Dibromomethane	93	5.558	5.558	(1.118)	102886	50.0000	55.12
	45 4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	539384	100.000	100.12
	46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	303637	50.0000	65.35
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	468143	50.0000	
$	48 Toluene-d8	98	6.388	6.388	(0.833)	596043	50.0000	51.10
	50 Toluene	91	6.446	6.446	(0.840)	714096	50.0000	52.79
	51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	258439	50.0000	63.26 (M)
	52 2-Hexanone	43	7.090	7.090	(0.924)	368684	100.000	108.71
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	138908	50.0000	52.73
	54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	294398	50.0000	53.23
	55 Dibromochloromethane	129	7.176	7.176	(0.936)	182992	50.0000	51.57
	56 Tetrachloroethene	164	6.933	6.933	(0.904)	135574	50.0000	49.09
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	171707	50.0000	52.10
	58 1-Chlorohexane	55	7.699	7.699	(1.549)	235852	50.0000	65.02
	59 Chlorobenzene	112	7.699	7.699	(1.004)	455835	50.0000	49.18
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	171133	50.0000	50.05
	61 Ethylbenzene	106	7.800	7.800	(1.017)	242368	50.0000	49.88
	62 m,p-Xylenes	106	7.907	7.907	(1.031)	561275	100.000	95.59
	63 o-Xylene	106	8.244	8.244	(1.075)	240143	50.0000	42.73
	64 Styrene	104	8.258	8.258	(1.077)	423638	50.0000	44.00
	66 Bromoform	173	8.416	8.416	(1.097)	109276	50.0000	45.92
	67 Isopropylbenzene	105	8.566	8.566	(1.117)	610768	50.0000	43.08
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	162353	50.0000	46.38
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	191201	50.0000	43.42
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	198456	50.0000	
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	140472	50.0000	47.81 (M)
	73 n-Propylbenzene	91	8.917	8.917	(0.922)	720360	50.0000	49.12
	74 Bromobenzene	156	8.810	8.810	(0.911)	177329	50.0000	48.86
	75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	512376	50.0000	50.03
	76 2-Chlorotoluene	91	8.974	8.974	(0.928)	429262	50.0000	48.38
	77 4-Chlorotoluene	91	9.075	9.075	(0.939)	496982	50.0000	47.75
	78 tert-Butylbenzene	119	9.340	9.340	(0.966)	428030	50.0000	49.33
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	527389	50.0000	50.27
	81 sec-Butylbenzene	105	9.526	9.526	(0.985)	605909	50.0000	48.84
	82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	531352	50.0000	50.76
	83 1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	301821	50.0000	50.59

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	302576	50.0000	48.82	
87	n-Butylbenzene	91	9.999	9.999	(1.034)	451606	50.0000	51.84	
88	1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	269907	50.0000	50.91	
89	1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	15691	50.0000	50.56	
90	1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	62604	50.0000	49.50	
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	45480	50.0000	52.48	
92	Naphthalene	128	11.546	11.546	(1.194)	93767	50.0000	49.99	
93	1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	31362	50.0000	46.61	
M 94	1,2-Dichloroethylene (total)	96				331988	100.000		(a)
135	1,4-Dioxane	88	5.600	5.600	(1.339)	33164	1000.00	936.78	
141	Cyclohexane	56	4.125	4.125	(0.986)	382861	50.0000	51.00	
138	Freon TF	101	1.912	1.912	(0.457)	143089	50.0000	49.41	
147	Methylcyclohexane	55	5.378	5.378	(1.082)	518934	50.0000	49.05	
146	Methyl Acetate	43	2.227	2.227	(0.532)	206934	50.0000	49.77	
148	Tert-Butyl alcohol	59	2.427	2.427	(0.580)	414843	1000.00	980.34	
149	Isopropyl Alcohol	45	2.098	2.098	(0.502)	400079	1000.00	1024.23	

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200417p.b\X041708.D
Date : 17-APR-2020 14:24
Client ID: VSTD050
Sample Info: VSTD050;VSTD050;1;7;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200417p.b\X041709.D
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Inj Date : 17-APR-2020 14:48
Operator : PC Inst ID: voa6.i
Smp Info : VSTD100;VSTD100;1;8;
Misc Info : HS18090001;WATER;0;1;
Comment :
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Meth Date : 05-May-2020 12:53 voa6.i Quant Type: ISTD
Cal Date : 17-APR-2020 14:24 Cal File: X041708.D
Als bottle: 10 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260_GB.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	295712	50.0000	
194 Acetaldehyde	44	1.209	1.209	(0.289)	193554	400.000	419.29
140 1,3-Butadiene	54	1.159	1.159	(0.277)	602949	100.000	110.89
25 Methacrylonitrile	41	3.824	3.824	(0.914)	517196	100.000	112.89
136 n-Hexane	57	2.771	2.771	(0.663)	613675	100.000	131.63
4 Propionitrile	54	3.652	3.652	(0.873)	1175813	1000.00	1138.96
2 Dichlorodifluoromethane	85	0.966	0.966	(0.231)	339702	100.000	112.07
3 Chloromethane	50	1.073	1.073	(0.257)	608324	100.000	100.38
5 Vinyl Chloride	62	1.138	1.138	(0.272)	533915	100.000	109.34
6 Bromomethane	94	1.331	1.331	(0.318)	247114	100.000	102.34
7 Chloroethane	64	1.396	1.396	(0.334)	273630	100.000	97.54
8 Trichlorofluoromethane	101	1.560	1.560	(0.373)	551534	100.000	110.53
9 Acrolein	56	1.238	1.238	(0.296)	130690	200.000	199.94
10 Acetone	43	1.969	1.969	(0.471)	327224	200.000	199.03
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	291445	100.000	105.56
15 Iodomethane	142	2.026	2.026	(0.485)	847761	200.000	200.44
16 Acrylonitrile	53	2.535	2.535	(0.606)	641914	200.000	200.08
17 Methylene Chloride	84	2.305	2.305	(0.551)	359771	100.000	101.80
18 Methyl tert-butyl ether	73	2.535	2.535	(0.606)	1029799	100.000	123.22
19 Carbon Disulfide	76	2.069	2.069	(0.495)	2019997	200.000	209.36
20 trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	323997	100.000	121.82
21 Vinyl Acetate	43	3.000	3.000	(0.717)	3107246	200.000	200.12

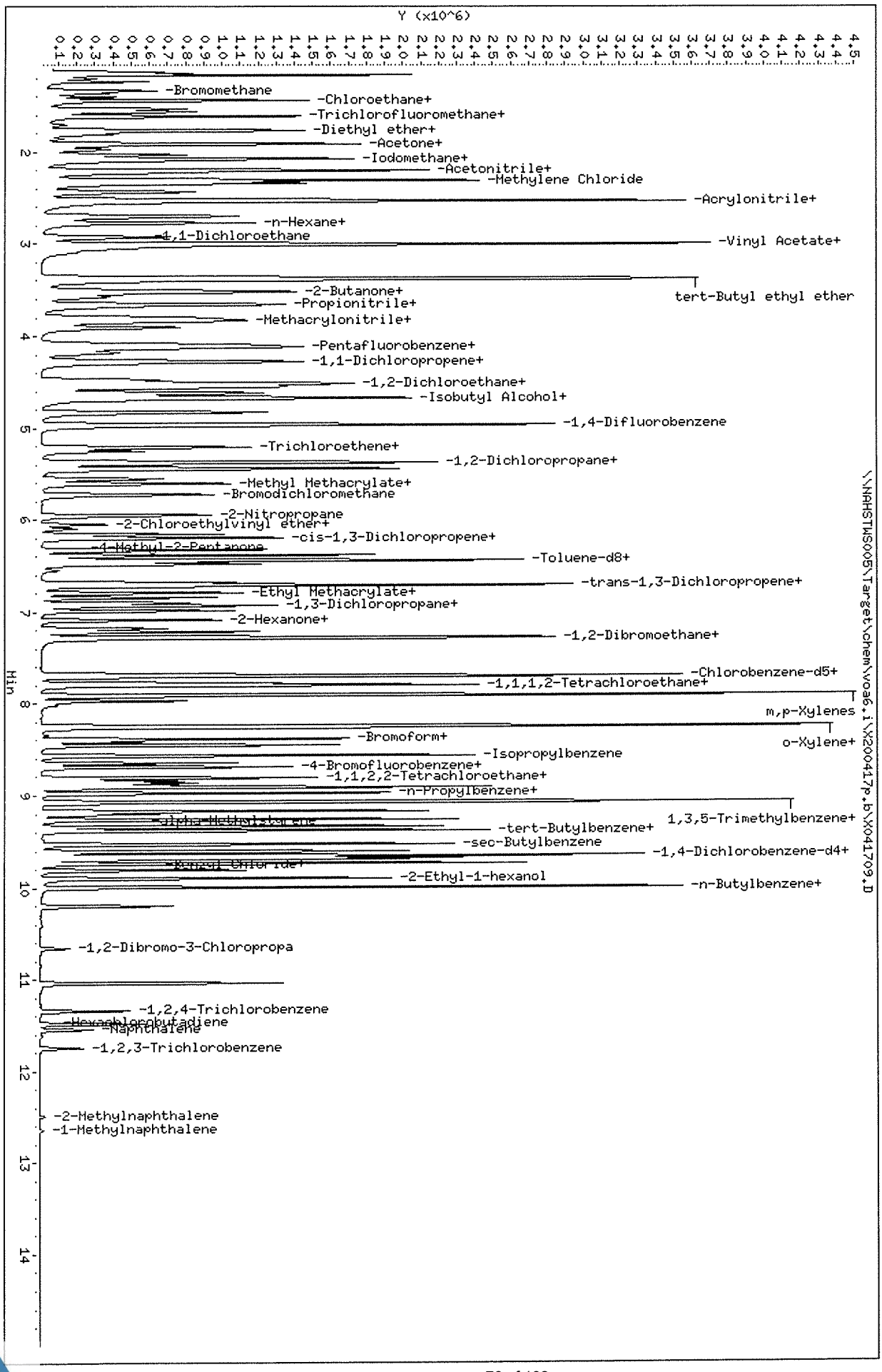
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Report Date: 05-May-2020 12:53

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
	22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	793391	100.000	123.42
	24 2-Butanone	43	3.573	3.573	(0.854)	444724	200.000	199.08
	26 2,2-Dichloropropane	77	3.509	3.509	(0.839)	544936	100.000	117.68
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	377248	100.000	111.13
	28 Chloroform	83	3.910	3.910	(0.935)	644133	100.000	110.66
	29 Bromochloromethane	128	3.795	3.795	(0.908)	177172	100.000	97.94
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	332106	100.000	102.59
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	560023	100.000	110.69
	32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	482724	100.000	102.68
	33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	609156	100.000	110.74
	34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	481453	100.000	100.67
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	464765	100.000	100.23
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	492571	50.0000	
	37 Benzene	78	4.512	4.512	(0.908)	1392367	100.000	102.87
	38 Trichloroethene	130	5.206	5.206	(1.048)	347022	100.000	102.11
	39 Bromodichloromethane	83	5.729	5.729	(1.153)	503679	100.000	115.68
	41 2-Chloroethylvinyl ether	63	6.052	6.052	(1.218)	144300	200.000	186.13
	42 1,2-Dichloropropane	63	5.436	5.436	(1.094)	458534	100.000	111.95
	44 Dibromomethane	93	5.557	5.557	(1.118)	241858	100.000	112.38
	45 4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	797237	200.000	126.94 (M)
	46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	485982	100.000	90.71
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	396563	50.0000	
$	48 Toluene-d8	98	6.388	6.388	(0.833)	996794	100.000	100.89
	50 Toluene	91	6.446	6.446	(0.840)	1184650	100.000	103.39
	51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	435978	100.000	92.55
	52 2-Hexanone	43	7.090	7.090	(0.924)	539205	200.000	187.70
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	222297	100.000	99.61
	54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	460498	100.000	98.29
	55 Dibromochloromethane	129	7.176	7.176	(0.936)	314543	100.000	104.65
	56 Tetrachloroethene	164	6.933	6.933	(0.904)	253561	100.000	108.38
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	282915	100.000	101.35
	58 1-Chlorohexane	55	7.699	7.699	(1.549)	369591	100.000	86.23
	59 Chlorobenzene	112	7.699	7.699	(1.004)	778597	100.000	99.17
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	300211	100.000	103.65
	61 Ethylbenzene	106	7.799	7.799	(1.017)	421331	100.000	102.37
	62 m,p-Xylenes	106	7.907	7.907	(1.031)	1020515	200.000	205.18
	63 o-Xylene	106	8.244	8.244	(1.075)	491823	100.000	103.31
	64 Styrene	104	8.258	8.258	(1.077)	840227	100.000	103.02
	66 Bromoform	173	8.415	8.415	(1.097)	216604	100.000	107.46
	67 Isopropylbenzene	105	8.566	8.566	(1.117)	1261293	100.000	105.04
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	317988	100.000	80.80
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	377194	100.000	100.54
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	223109	50.0000	
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	276405	100.000	83.68 (M)
	73 n-Propylbenzene	91	8.917	8.917	(0.922)	1504579	100.000	91.27
	74 Bromobenzene	156	8.809	8.809	(0.911)	360042	100.000	88.25
	75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	1071850	100.000	93.10
	76 2-Chlorotoluene	91	8.974	8.974	(0.928)	887697	100.000	88.99
	77 4-Chlorotoluene	91	9.074	9.074	(0.939)	1026653	100.000	87.74
	78 tert-Butylbenzene	119	9.340	9.340	(0.966)	872158	100.000	89.40
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	1061012	100.000	89.96
	81 sec-Butylbenzene	105	9.526	9.526	(0.985)	1280293	100.000	91.80
	82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	1282240	100.000	108.96
	83 1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	685830	100.000	102.26

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	685883	100.000	98.44	
87	n-Butylbenzene	91	9.999	9.999	(1.034)	936233	100.000	95.60	
88	1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	531782	100.000	89.22	
89	1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	31811	100.000	91.18	
90	1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	129644	100.000	91.18	
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	93895	100.000	97.68	
92	Naphthalene	128	11.546	11.546	(1.194)	192697	100.000	91.39	
93	1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	62998	100.000	83.28	
M 94	1,2-Dichloroethylene (total)	96				701245	200.000	(a)	
135	1,4-Dioxane	88	5.600	5.600	(1.339)	87141	2000.00	2539.96	
141	Cyclohexane	56	4.125	4.125	(0.986)	786058	100.000	108.06	
138	Freon TF	101	1.911	1.911	(0.457)	299228	100.000	106.62	
147	Methylcyclohexane	55	5.378	5.378	(1.082)	1388869	100.000	113.84	(A)
146	Methyl Acetate	43	2.227	2.227	(0.532)	414240	100.000	100.03	
148	Tert-Butyl alcohol	59	2.434	2.434	(0.582)	1029660	2000.00	2002.04	
149	Isopropyl Alcohol	45	2.098	2.098	(0.502)	755511	2000.00	1995.84	

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200417p.b\X041709.D
Date : 17-APR-2020 14:48
Client ID: VSTD100
Sample Info: VSTD100;VSTD100;1;8;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200417p.b\X041710.D
Lab Smp Id: VSTD150 Client Smp ID: VSTD150
Inj Date : 17-APR-2020 15:12
Operator : PC Inst ID: voa6.i
Smp Info : VSTD150;VSTD150;1;9;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X200417p.b\8260W.m
Meth Date : 05-May-2020 12:53 voa6.i Quant Type: ISTD
Cal Date : 17-APR-2020 14:48 Cal File: X041709.D
Als bottle: 11 Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260_GB.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	290206	50.0000	
194 Acetaldehyde	44	1.209	1.209	(0.289)	265677	600.000	592.99
140 1,3-Butadiene	54	1.159	1.159	(0.277)	853429	150.000	159.94
25 Methacrylonitrile	41	3.824	3.824	(0.914)	721596	150.000	160.50
136 n-Hexane	57	2.771	2.771	(0.663)	688873	150.000	150.56
4 Propionitrile	54	3.659	3.659	(0.875)	1418343	1500.00	1399.96
2 Dichlorodifluoromethane	85	0.966	0.966	(0.231)	479515	150.000	161.20
3 Chloromethane	50	1.073	1.073	(0.257)	881802	150.000	147.81
5 Vinyl Chloride	62	1.138	1.138	(0.272)	762641	150.000	159.14
6 Bromomethane	94	1.331	1.331	(0.318)	353545	150.000	149.18
7 Chloroethane	64	1.396	1.396	(0.334)	392153	150.000	142.44
8 Trichlorofluoromethane	101	1.560	1.560	(0.373)	767574	150.000	156.75
9 Acrolein	56	1.238	1.238	(0.296)	186530	300.000	274.71
10 Acetone	43	1.969	1.969	(0.471)	428172	300.000	266.08
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	413424	150.000	152.58
15 Iodomethane	142	2.026	2.026	(0.485)	1244830	300.000	303.84
16 Acrylonitrile	53	2.527	2.527	(0.604)	724870	300.000	215.13
17 Methylene Chloride	84	2.305	2.305	(0.551)	410287	150.000	118.29
18 Methyl tert-butyl ether	73	2.535	2.535	(0.606)	1180571	150.000	143.94
19 Carbon Disulfide	76	2.069	2.069	(0.495)	2944718	300.000	311.00
20 trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	378737	150.000	145.10
21 Vinyl Acetate	43	3.000	3.000	(0.717)	3183546	300.000	203.69

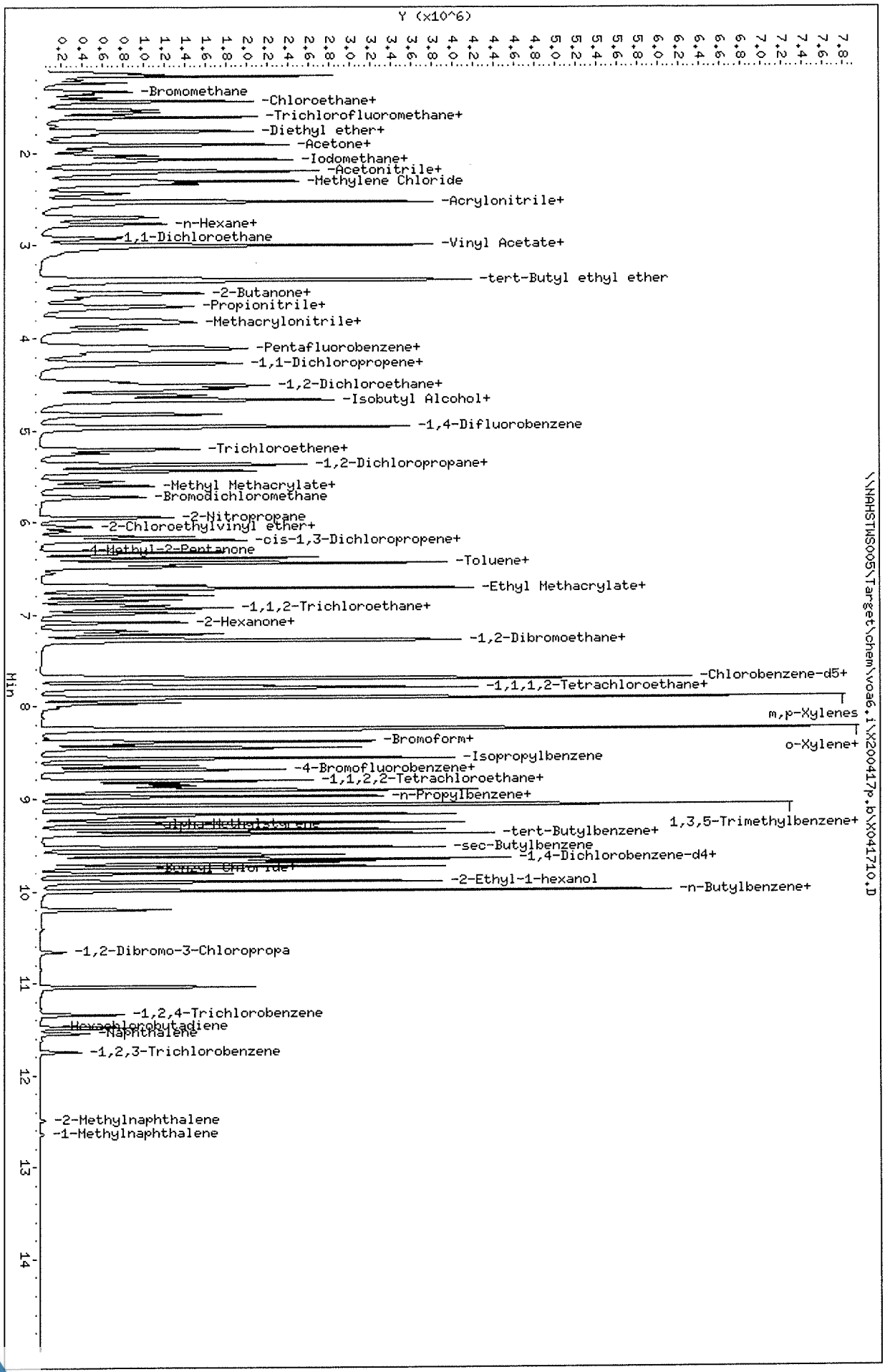
Data File: \\NAHSTWS005\Target\chem\voa6.i\X200417p.b\X041710.D Page 2
Report Date: 05-May-2020 12:53

			QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
	22	1,1-Dichloroethane	63	2.921	2.921	(0.699)	894447	150.000	141.78
	24	2-Butanone	43	3.573	3.573	(0.854)	464455	300.000	211.78
	26	2,2-Dichloropropane	77	3.509	3.509	(0.839)	623634	150.000	137.23
	27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	462019	150.000	138.69
	28	Chloroform	83	3.910	3.910	(0.935)	889334	150.000	155.69
	29	Bromochloromethane	128	3.795	3.795	(0.908)	255448	150.000	143.89
$	30	Dibromofluoromethane	113	4.103	4.103	(0.981)	479419	150.000	151.17
	31	1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	762876	150.000	153.65
	32	1,1-Dichloropropene	75	4.282	4.282	(0.862)	682748	150.000	155.08
	33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	763497	150.000	147.92
	34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	672109	150.000	149.75
$	35	1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	613843	150.000	113.45
*	36	1,4-Difluorobenzene	114	4.970	4.970	(1.000)	462205	50.0000	
	37	Benzene	78	4.512	4.512	(0.908)	1889778	150.000	148.80
	38	Trichloroethene	130	5.206	5.206	(1.048)	493585	150.000	154.78
	39	Bromodichloromethane	83	5.729	5.729	(1.153)	568850	150.000	139.23
	41	2-Chloroethylvinyl ether	63	6.052	6.052	(1.218)	203546	300.000	279.80
	42	1,2-Dichloropropane	63	5.436	5.436	(1.094)	510844	150.000	132.92
	44	Dibromomethane	93	5.557	5.557	(1.118)	268203	150.000	132.81
	45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	1165800	300.000	118.61(M)
	46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	695228	150.000	138.29
*	47	Chlorobenzene-d5	117	7.670	7.670	(1.000)	432815	50.0000	
$	48	Toluene-d8	98	6.388	6.388	(0.833)	1456969	150.000	135.12(M)
	50	Toluene	91	6.446	6.446	(0.840)	1682774	150.000	134.56
	51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	627076	150.000	141.87
	52	2-Hexanone	43	7.090	7.090	(0.924)	773045	300.000	246.56
	53	1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	313552	150.000	128.74
	54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	655086	150.000	128.12
	55	Dibromochloromethane	129	7.176	7.176	(0.936)	449048	150.000	136.89
	56	Tetrachloroethene	164	6.933	6.933	(0.904)	355705	150.000	139.31
	57	1,2-Dibromoethane	107	7.262	7.262	(0.947)	408915	150.000	134.22
	58	1-Chlorohexane	55	7.699	7.699	(1.549)	671657	150.000	150.16
	59	Chlorobenzene	112	7.699	7.699	(1.004)	1304438	150.000	152.24
	60	1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	497075	150.000	157.24
	61	Ethylbenzene	106	7.799	7.799	(1.017)	709587	150.000	157.96
	62	m,p-Xylenes	106	7.907	7.907	(1.031)	1710965	300.000	315.18
	63	o-Xylene	106	8.243	8.243	(1.075)	815887	150.000	157.03
	64	Styrene	104	8.258	8.258	(1.077)	1404901	150.000	157.83
	66	Bromoform	173	8.415	8.415	(1.097)	343392	150.000	156.09
	67	Isopropylbenzene	105	8.566	8.566	(1.117)	2055492	150.000	156.84
	68	1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	573102	150.000	154.70
$	69	4-Bromofluorobenzene	95	8.695	8.695	(1.134)	655941	150.000	159.93
*	70	1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	210023	50.0000	
	71	1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	480586	150.000	154.57(M)
	73	n-Propylbenzene	91	8.917	8.917	(0.922)	2566824	150.000	165.41
	74	Bromobenzene	156	8.809	8.809	(0.911)	574527	150.000	149.60
	75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	1773512	150.000	163.65
	76	2-Chlorotoluene	91	8.981	8.981	(0.929)	1524973	150.000	162.41
	77	4-Chlorotoluene	91	9.074	9.074	(0.939)	1777422	150.000	161.37
	78	tert-Butylbenzene	119	9.339	9.339	(0.966)	1447055	150.000	157.58
	79	1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	1800772	150.000	162.21
	81	sec-Butylbenzene	105	9.526	9.526	(0.985)	2122580	150.000	161.68
	82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	1808693	150.000	163.28
	83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	979358	150.000	155.12

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	972491	150.000	148.28	
87	n-Butylbenzene	91	9.998	9.998	(1.034)	1605608	150.000	174.16	
88	1,2-Dichlorobenzene	146	9.998	9.998	(1.034)	872892	150.000	155.59	
89	1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.102)	47830	150.000	145.63	
90	1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	210607	150.000	157.36	
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	151820	150.000	168.91	
92	Naphthalene	128	11.546	11.546	(1.194)	312555	150.000	157.48	
93	1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	105832	150.000	148.63	
M 94	1,2-Dichloroethylene (total)	96				840756	300.000	(a)	
135	1,4-Dioxane	88	5.600	5.600	(1.339)	94545	3000.00	2808.05	
141	Cyclohexane	56	4.125	4.125	(0.986)	1120064	150.000	156.90	
138	Freon TF	101	1.911	1.911	(0.457)	422174	150.000	153.28	
147	Methylcyclohexane	55	5.378	5.378	(1.082)	1667577	150.000	145.67	(A)
146	Methyl Acetate	43	2.227	2.227	(0.532)	482159	150.000	117.58	
148	Tert-Butyl alcohol	59	2.434	2.434	(0.582)	1090675	3000.00	2088.19	
149	Isopropyl Alcohol	45	2.098	2.098	(0.502)	1072176	3000.00	2886.11	

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200417p.b\X041710.D
Date : 17-APR-2020 15:12
Client ID: VSTD150
Sample Info: VSTD150;VSTD150;1;9;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200417p.b\X041711.D
Lab Smp Id: VSTD200 Client Smp ID: VSTD200
Inj Date : 17-APR-2020 15:36
Operator : PC Inst ID: voa6.i
Smp Info : VSTD200;VSTD200;1;10;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X200417p.b\8260W.m
Meth Date : 05-May-2020 12:53 voa6.i Quant Type: ISTD
Cal Date : 17-APR-2020 15:12 Cal File: X041710.D
Als bottle: 12 Calibration Sample, Level: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260_GB.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	291175	50.0000	
194 Acetaldehyde	44	1.210	1.210	(0.289)	352577	800.000	789.63
140 1,3-Butadiene	54	1.159	1.159	(0.277)	1166681	200.000	217.92(A)
25 Methacrylonitrile	41	3.817	3.817	(0.913)	883060	200.000	195.76
136 n-Hexane	57	2.771	2.771	(0.663)	920387	200.000	200.49(A)
4 Propionitrile	54	3.659	3.659	(0.875)	2064828	2000.00	2031.28(A)
2 Dichlorodifluoromethane	85	0.966	0.966	(0.231)	674993	200.000	226.16(A)
3 Chloromethane	50	1.073	1.073	(0.257)	1210478	200.000	201.89(A)
5 Vinyl Chloride	62	1.138	1.138	(0.272)	1034355	200.000	215.12(A)
6 Bromomethane	94	1.331	1.331	(0.318)	475362	200.000	199.91
7 Chloroethane	64	1.396	1.396	(0.334)	520934	200.000	188.59
8 Trichlorofluoromethane	101	1.553	1.553	(0.372)	1045693	200.000	212.84(A)
9 Acrolein	56	1.238	1.238	(0.296)	248581	400.000	342.46
10 Acetone	43	1.976	1.976	(0.473)	605045	400.000	375.61
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	562021	200.000	206.74(A)
15 Iodomethane	142	2.026	2.026	(0.485)	1613829	400.000	397.77
16 Acrylonitrile	53	2.535	2.535	(0.606)	936559	400.000	234.26
17 Methylene Chloride	84	2.298	2.298	(0.550)	662679	200.000	190.43
18 Methyl tert-butyl ether	73	2.535	2.535	(0.606)	1532680	200.000	186.25
19 Carbon Disulfide	76	2.069	2.069	(0.495)	3921355	400.000	412.77(A)
20 trans-1,2-Dichloroethene	96	2.528	2.528	(0.604)	499875	200.000	190.88
21 Vinyl Acetate	43	3.000	3.000	(0.717)	4190134	400.000	216.34

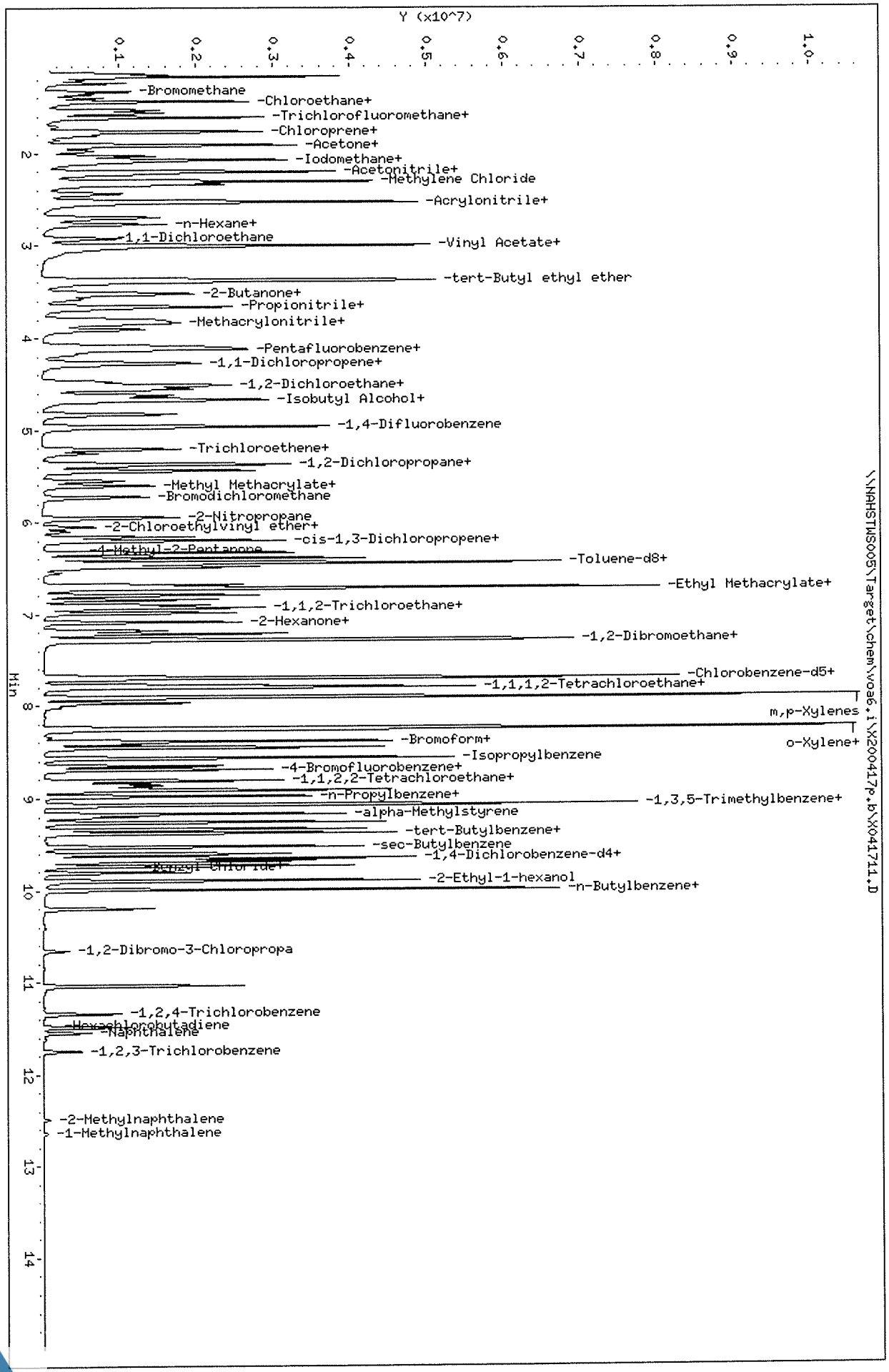
Data File: \\NAHSTWS005\Target\chem\voa6.i\X200417p.b\X041711.D Page 2
Report Date: 05-May-2020 12:53

		QUANT SIG					AMOUNTS	
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)
	22 1,1-Dichloroethane	63	2.922	2.922	(0.699)	1179386	200.000	186.32
	24 2-Butanone	43	3.573	3.573	(0.854)	618262	400.000	280.63
	26 2,2-Dichloropropane	77	3.516	3.516	(0.841)	791748	200.000	173.65
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	587107	200.000	175.65
	28 Chloroform	83	3.910	3.910	(0.935)	1141213	200.000	199.12
	29 Bromochloromethane	128	3.795	3.795	(0.908)	323912	200.000	181.85
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	628372	200.000	197.66
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	1030213	200.000	206.81(A)
	32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	733736	200.000	194.58
	33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	857178	200.000	193.73
	34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	765667	200.000	199.01
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	653619	200.000	114.95
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	396213	50.0000	
	37 Benzene	78	4.512	4.512	(0.908)	2120187	200.000	194.75
	38 Trichloroethene	130	5.207	5.207	(1.048)	582982	200.000	213.26(A)
	39 Bromodichloromethane	83	5.729	5.729	(1.153)	754195	200.000	215.34(A)
	41 2-Chloroethylvinyl ether	63	6.052	6.052	(1.218)	269094	400.000	431.51(A)
	42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	682650	200.000	207.21(A)
	44 Dibromomethane	93	5.558	5.558	(1.118)	364122	200.000	210.33(A)
	46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	920776	200.000	213.67(A)
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	444051	50.0000	
$	48 Toluene-d8	98	6.388	6.388	(0.833)	2266253	200.000	204.85(A)
	50 Toluene	91	6.446	6.446	(0.840)	2697614	200.000	210.26(A)
	51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	1030412	200.000	271.95(A)
	52 2-Hexanone	43	7.090	7.090	(0.924)	1419714	400.000	441.36(A)
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	514660	200.000	205.97(A)
	54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	1068900	200.000	203.76(A)
	55 Dibromochloromethane	129	7.176	7.176	(0.936)	693199	200.000	205.97(A)
	56 Tetrachloroethene	164	6.933	6.933	(0.904)	532934	200.000	203.44(A)
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	642716	200.000	205.62(A)
	58 1-Chlorohexane	55	7.699	7.699	(1.549)	885058	200.000	200.53(A)
	59 Chlorobenzene	112	7.699	7.699	(1.004)	1742857	200.000	198.26
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	654404	200.000	201.77(A)
	61 Ethylbenzene	106	7.800	7.800	(1.017)	931681	200.000	202.16(A)
	62 m,p-Xylenes	106	7.907	7.907	(1.031)	2261305	400.000	406.02(A)
	63 o-Xylene	106	8.244	8.244	(1.075)	1104973	200.000	207.29(A)
	64 Styrene	104	8.265	8.265	(1.078)	1906203	200.000	208.73(A)
	66 Bromoform	173	8.416	8.416	(1.097)	469021	200.000	207.80(A)
	67 Isopropylbenzene	105	8.566	8.566	(1.117)	2718828	200.000	202.21(A)
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	601842	200.000	186.43
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	811763	200.000	192.82
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	183025	50.0000	
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	511042	200.000	188.61(M)
	73 n-Propylbenzene	91	8.917	8.917	(0.922)	2780386	200.000	205.60(A)
	74 Bromobenzene	156	8.810	8.810	(0.911)	699365	200.000	208.96(A)
	75 1,3,5-Trimethylbenzene	105	9.075	9.075	(0.939)	1941331	200.000	205.56(A)
	76 2-Chlorotoluene	91	8.981	8.981	(0.929)	1607970	200.000	196.51
	77 4-Chlorotoluene	91	9.075	9.075	(0.939)	1874029	200.000	195.24
	78 tert-Butylbenzene	119	9.340	9.340	(0.966)	1621544	200.000	202.63(A)
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	1973379	200.000	203.98(A)
	81 sec-Butylbenzene	105	9.526	9.526	(0.985)	2326501	200.000	203.35(A)
	82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	2028652	200.000	210.16(A)
	83 1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	1135882	200.000	206.46(A)
	84 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	1134739	200.000	198.54

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
87	n-Butylbenzene	91	9.999	9.999	(1.034)	1726898	200.000	214.95(A)
88	1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	1004508	200.000	205.46(A)
89	1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	60149	200.000	210.16(A)
90	1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	267276	200.000	229.17(A)
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	183792	200.000	235.25(A)
92	Naphthalene	128	11.546	11.546	(1.194)	401473	200.000	232.12(A)
93	1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	135268	200.000	217.99(A)
M 94	1,2-Dichloroethylene (total)	96				1086982	400.000	(a)
135	1,4-Dioxane	88	5.601	5.601	(1.339)	127789	4000.00	3782.80
141	Cyclohexane	56	4.125	4.125	(0.986)	1519788	200.000	212.19(A)
138	Freon TF	101	1.912	1.912	(0.457)	574427	200.000	207.87(A)
147	Methylcyclohexane	55	5.378	5.378	(1.082)	2085227	200.000	212.50(A)
146	Methyl Acetate	43	2.227	2.227	(0.532)	810270	200.000	189.58
148	Tert-Butyl alcohol	59	2.434	2.434	(0.582)	1500865	4000.00	2358.48
149	Isopropyl Alcohol	45	2.098	2.098	(0.502)	1434784	4000.00	3849.34

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200417p.b\X041711.D
Date : 17-APR-2020 15:36
Client ID: VSTD200
Sample Info: VSTD200;VSTD200;1;10;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200419.b\X041902.D
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 19-APR-2020 10:42
Operator : PC Inst ID: voa6.i
Smp Info : CCV;CCV;2;;;ICV
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X200419.b\8260W.m
Meth Date : 05-May-2020 12:55 Qin.Xu Quant Type: ISTD
Cal Date : 17-APR-2020 15:36 Cal File: X041711.D
Als bottle: 2 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260_GB.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	301239	50.0000	
194 Acetaldehyde	44	1.210	1.210	(0.289)	95759	195.199	195.19
140 1,3-Butadiene	54	1.159	1.159	(0.277)	271286	48.9815	48.98
25 Methacrylonitrile	41	3.824	3.824	(0.914)	252809	54.1737	54.17
136 n-Hexane	57	2.771	2.771	(0.663)	266722	56.1612	56.16
4 Propionitrile	54	3.652	3.652	(0.873)	579681	551.213	551.21
2 Dichlorodifluoromethane	85	0.966	0.966	(0.231)	153498	49.7142	49.71
3 Chloromethane	50	1.073	1.073	(0.257)	285429	46.7485	46.74
5 Vinyl Chloride	62	1.138	1.138	(0.272)	243350	48.9215	48.92
6 Bromomethane	94	1.338	1.338	(0.320)	122291	49.7269	49.72
7 Chloroethane	64	1.403	1.403	(0.336)	132065	46.2147	46.21
8 Trichlorofluoromethane	101	1.561	1.561	(0.373)	250923	49.3672	49.36
9 Acrolein	56	1.238	1.238	(0.296)	55658	86.3272	86.32
10 Acetone	43	1.969	1.969	(0.471)	186542	110.449	110.44
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	138561	49.2671	49.26
15 Iodomethane	142	2.026	2.026	(0.485)	410557	94.8925	94.89
16 Acrylonitrile	53	2.535	2.535	(0.606)	310740	116.678	116.67
17 Methylene Chloride	84	2.305	2.305	(0.551)	179664	49.9055	49.90
18 Methyl tert-butyl ether	73	2.535	2.535	(0.606)	504663	59.2780	59.27
19 Carbon Disulfide	76	2.069	2.069	(0.495)	979174	99.6267	99.62
20 trans-1,2-Dichloroethene	96	2.528	2.528	(0.604)	161317	59.5434	59.54
21 Vinyl Acetate	43	3.000	3.000	(0.717)	1439723	119.039	119.03(M)

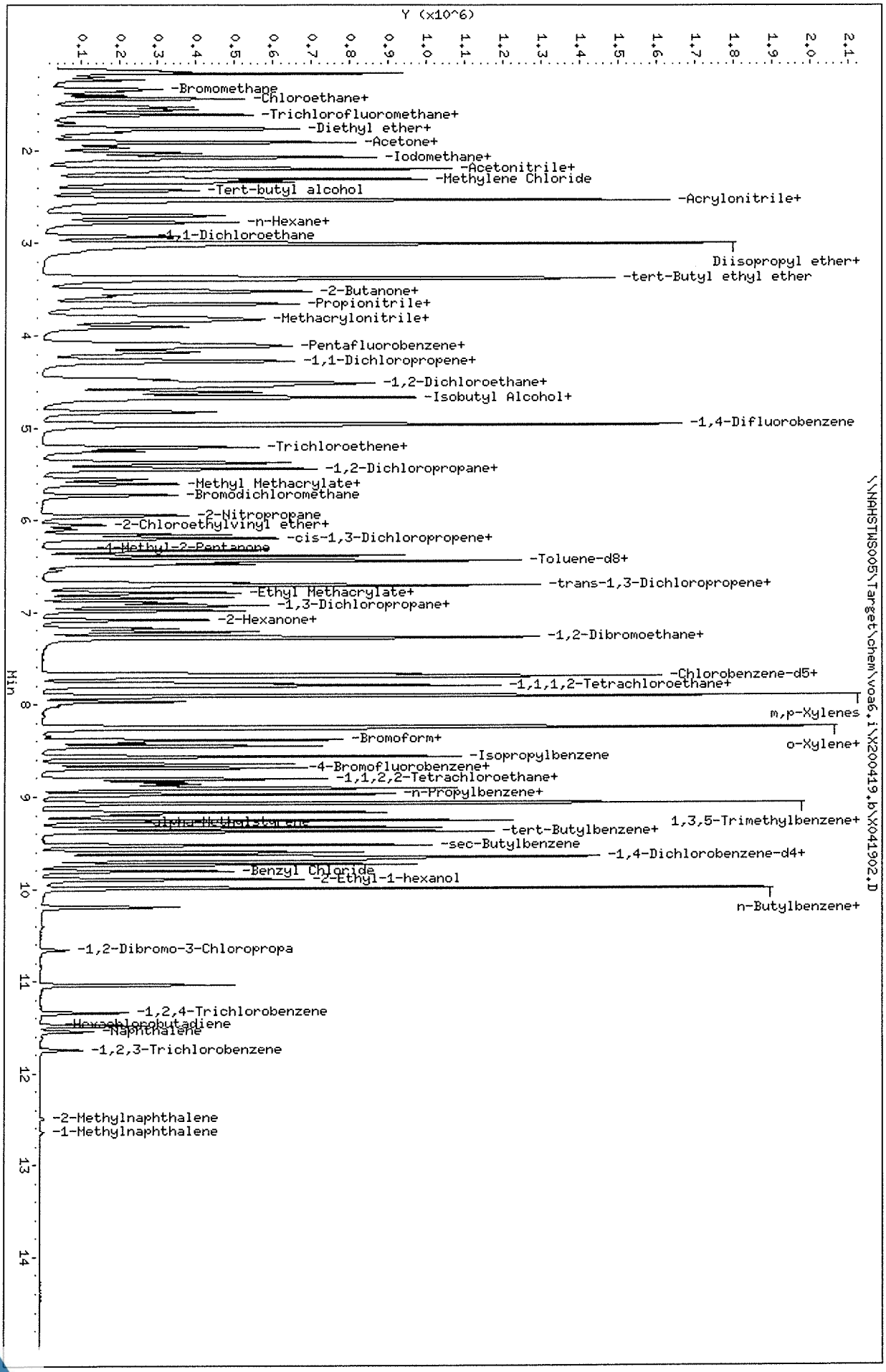
Data File: \\NAHSTWS005\Target\chem\voa6.i\X200419.b\X041902.D Page 2
Report Date: 05-May-2020 12:55

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
	22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	390574	59.6433	59.64
	24 2-Butanone	43	3.573	3.573	(0.854)	220242	97.3415	97.34
	26 2,2-Dichloropropane	77	3.509	3.509	(0.839)	276232	58.5624	58.56
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	188804	54.6005	54.60
	28 Chloroform	83	3.910	3.910	(0.935)	316809	53.4320	53.43
	29 Bromochloromethane	128	3.795	3.795	(0.908)	91015	49.3911	49.39
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	171605	51.7578	51.75
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	266684	51.7475	51.74
	32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	225320	46.3752	46.37
	33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	298934	52.9695	52.96
	34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	221070	45.0733	45.07
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	230081	59.8538	59.85(M)
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	505388	50.0000	
	37 Benzene	78	4.512	4.512	(0.908)	681038	49.0440	49.04
	38 Trichloroethene	130	5.206	5.206	(1.048)	170303	48.8421	48.84
	39 Bromodichloromethane	83	5.729	5.729	(1.153)	194440	43.5249	43.52
	41 2-Chloroethylvinyl ether	63	6.052	6.052	(1.218)	65106	81.8501	81.85
	42 1,2-Dichloropropane	63	5.436	5.436	(1.094)	178988	42.5949	42.59
	44 Dibromomethane	93	5.557	5.557	(1.118)	92782	42.0185	42.01
	45 4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	377667	88.8437	88.84
	46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	237734	43.2500	43.24
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	390848	50.0000	
$	48 Toluene-d8	98	6.388	6.388	(0.833)	507236	52.0934	52.09
	50 Toluene	91	6.446	6.446	(0.840)	578025	51.1859	51.18
	51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	218840	45.2807	45.28
	52 2-Hexanone	43	7.090	7.090	(0.924)	263437	93.0465	93.04
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	108987	49.5550	49.55
	54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	226506	49.0562	49.05
	55 Dibromochloromethane	129	7.176	7.176	(0.936)	154009	51.9905	51.99
	56 Tetrachloroethene	164	6.933	6.933	(0.904)	116750	50.6347	50.63
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	137199	49.8692	49.86
	58 1-Chlorohexane	55	7.699	7.699	(1.549)	169437	40.2042	40.20
	59 Chlorobenzene	112	7.699	7.699	(1.004)	379831	49.0908	49.09
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	148017	51.8524	51.85
	61 Ethylbenzene	106	7.800	7.800	(1.017)	200500	49.4278	49.42
	62 m,p-Xylenes	106	7.907	7.907	(1.031)	488956	99.7455	99.74
	63 o-Xylene	106	8.244	8.244	(1.075)	238990	50.9390	50.93
	64 Styrene	104	8.258	8.258	(1.077)	411659	51.2145	51.21
	66 Bromoform	173	8.416	8.416	(1.097)	104801	52.7540	52.75
	67 Isopropylbenzene	105	8.566	8.566	(1.117)	584142	49.3594	49.35
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	154315	44.7816	44.78
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	190492	51.7358	51.73
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	195370	50.0000	
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	135449	46.8336	46.83(M)
	73 n-Propylbenzene	91	8.917	8.917	(0.922)	685353	47.4792	47.47
	74 Bromobenzene	156	8.809	8.809	(0.911)	176620	49.4392	49.43
	75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	491585	48.7643	48.76
	76 2-Chlorotoluene	91	8.974	8.974	(0.928)	423149	48.4463	48.44
	77 4-Chlorotoluene	91	9.075	9.075	(0.939)	493682	48.1841	48.18
	78 tert-Butylbenzene	119	9.340	9.340	(0.966)	401615	47.0172	47.01
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	511555	49.5366	49.53
	81 sec-Butylbenzene	105	9.526	9.526	(0.985)	559393	45.8066	45.80
	82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	500366	48.5606	48.56
	83 1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	295219	50.2690	50.26

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
	84 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	296640	48.6233	48.62
	87 n-Butylbenzene	91	9.999	9.999	(1.034)	511341	59.6278	59.62
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	294487	56.4289	56.42
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	14536	47.5810	47.58
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	58863	47.2820	47.28
	91 Hexachlorobutadiene	225	11.488	11.488	(1.188)	44266	51.8693	51.86
	92 Naphthalene	128	11.546	11.546	(1.194)	90875	49.2226	49.22
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	29377	44.3526	44.35
M	94 1,2-Dichloroethylene (total)	96				350121	114.144	114.14
M	95 Xylenes (total)	106				727946	150.685	150.68
	135 1,4-Dioxane	88	5.600	5.600	(1.339)	31669	906.144	906.14
	141 Cyclohexane	56	4.125	4.125	(0.986)	341929	46.1447	46.14
	138 Freon TF	101	1.911	1.911	(0.457)	130267	45.5654	45.56
	147 Methylcyclohexane	55	5.378	5.378	(1.082)	485292	40.0930	40.09(M)
	146 Methyl Acetate	43	2.227	2.227	(0.532)	199595	48.6659	48.66
	148 Tert-Butyl alcohol	59	2.427	2.427	(0.580)	484659	1133.41	1133.40
	149 Isopropyl Alcohol	45	2.091	2.091	(0.500)	361449	937.325	937.32

QC Flag Legend

M - Compound response manually integrated.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200419.b\X041902.D
Date : 19-APR-2020 10:42
Client ID: CCV
Sample Info: CCV;CCV;2;;;ICV
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

MSVOA06 -Logbook

Batch: 40338
Date: 04-19-2020
Method: 8260
Comments:

Analyst: Presenta Cabascango
Reviewer:
Laboratory: Houston

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	04-19-2020 10:18 am	1.00	50 mL	50 mL	X041901.D	Liquid	Y	NA
	Auto find/ purged									
2	ICV	ICV	04-19-2020 10:42 am	1.00	50 mL	50 mL	X041902.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
3	CCV	CCV	04-19-2020 11:06 am	1.00	50 mL	50 mL	X041903.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
4	CCB	SAMP	04-19-2020 11:30 am	1.00	50 mL	50 mL	X041904.D	Liquid	Y	NA
5	VLCSW-200419	LCS	04-19-2020 11:54 am	1.00	50 mL	50 mL	X041905.D	Liquid	Y	NA
	4.0 uL cal std/50 mL DI									
6	BLANK	SAMP	04-19-2020 12:18 pm	1.00	50 mL	50 mL	X041906.D	Liquid	Y	NA
7	VBLKW-200419	MBLK	04-19-2020 12:42 pm	1.00	50 mL	50 mL	X041907.D	Liquid	Y	NA
8	HS20040699-02n/r	SAMP	04-19-2020 01:06 pm	1.00	50 mL	50 mL	X041908.D	Liquid	Y	NA
9	HS20040699-01	SAMP	04-19-2020 01:30 pm	1.00	50 mL	50 mL	X041909.D	Liquid	Y	<2
10	HS20040699-02	SAMP	04-19-2020 01:54 pm	1.00	50 mL	50 mL	X041910.D	Liquid	Y	<2
11	HS20040654-01	SAMP	04-19-2020 02:18 pm	1.00	50 mL	50 mL	X041911.D	Liquid	Y	NA
	neat sample									
12	HS20040654-01MS	MS	04-19-2020 02:42 pm	1.00	50 mL	50 mL	X041912.D	Liquid	Y	NA
	3.5 uL cal std/40 mL samp									
13	HS20040654-01MSD	MSD	04-19-2020 03:06 pm	1.00	50 mL	50 mL	X041913.D	Liquid	Y	NA
	3.5 uL cal std/40 mL samp									
14	CCV-END	CCV	04-19-2020 03:30 pm	1.00	50 mL	50 mL	X041914.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
15	MBLK-152806	MBLK	04-19-2020 03:54 pm	20.00	2.5 mL	50 mL	X041915.D	Liquid	Y	NA
	tclps									
16	HS20040647-02	SAMP	04-19-2020 04:18 pm	20.00	2.5 mL	50 mL	X041916.D	Liquid	Y	na
17	HS20040647-01	SAMP	04-19-2020 04:42 pm	100.0(	500 µL	50 mL	X041917.D	Liquid	Y	na
18	HS20040654-02	SAMP	04-19-2020 05:06 pm	1.00	50 mL	50 mL	X041918.D	Liquid	Y	na
	neat samples									
19	HS20040654-03	SAMP	04-19-2020 05:30 pm	1.00	50 mL	50 mL	X041919.D	Liquid	Y	na
20	HS20040654-04	SAMP	04-19-2020 05:54 pm	1.00	50 mL	50 mL	X041920.D	Liquid	Y	na
21	HS20040654-05	SAMP	04-19-2020 06:18 pm	1.00	50 mL	50 mL	X041921.D	Liquid	Y	na
22	HS20040654-06	SAMP	04-19-2020 06:42 pm	1.00	50 mL	50 mL	X041922.D	Liquid	Y	na
23	HS20040654-07	SAMP	04-19-2020 07:06 pm	1.00	50 mL	50 mL	X041923.D	Liquid	Y	na
24	MBLK-152807	MBLK	04-19-2020 07:31 pm	20.00	2.5 mL	50 mL	X041924.D	Liquid	Y	na
	tclps									
25	HS20040645-01	SAMP	04-19-2020 07:55 pm	20.00	2.5 mL	50 mL	X041925.D	Liquid	Y	na
26	HS20040619-01	SAMP	04-19-2020 08:19 pm	5.00	10 mL	50 mL	X041926.D	Liquid	Y	<2
27	HS20040631-01	SAMP	04-19-2020 08:43 pm	1.00	50 mL	50 mL	X041927.D	Liquid	Y	<2
28	HS20040631-02	SAMP	04-19-2020 09:07 pm	1.00	50 mL	50 mL	X041928.D	Liquid	Y	<2
29	HS20040631-03	SAMP	04-19-2020 09:31 pm	1.00	50 mL	50 mL	X041929.D	Liquid	Y	<2
30	HS20040665-02	SAMP	04-19-2020 09:55 pm	1.00	50 mL	50 mL	X041930.D	Liquid	Y	<2
31	HS20040665-01ott	SAMP	04-19-2020 10:19 pm	1.00	50 mL	50 mL	X041931.D	Liquid	Y	<2

MSVOA06 -Logbook

Chemical	Value
SURR SPK ID	31106-21-06
IS ID	31106-21-06
CAL STD ID	31106-25-01/02
BFB ID	31106-21-06
pH Paper	634-64-11

FORM 2
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS20040699

	CLIENT SAMPLE NO.	SMC1 #	SMC2 (DCE)#	SMC3 (TOL)#	OTHER #	TOT OUT
01	VLCSW-200419	96	92	98	97	0
02	VBLKW-200419	98	113	107	99	0
03	HS20040699-0	88	93	112	101	0
04	HS20040699-0	96	98	112	91	0
05	HS20040654-0	94	109	123	121	0
06	HS20040654-0	90	112	125	101	0
07						
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		QC LIMITS
SMC1	= Dibromofluoromethane	(71-125)
SMC2 (DCE)	= 1,2-Dichloroethane-d4	(70-125)
SMC3 (TOL)	= Toluene-d8	(75-125)
OTHER	= 4-Bromofluorobenzene	(72-125)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

VBLKW-200419

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS20040699

Lab File ID: X041907 Lab Sample ID: VBLKW-200419

Date Analyzed: 04/19/20 Time Analyzed: 1242

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Instrument ID: VOA6

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VLCSW-200419	VLCSW-200419	X041905	1154
02	HS20040699-0	HS20040699-01	X041909	1330
03	HS20040699-0	HS20040699-02	X041910	1354
04	HS20040654-0	HS20040654-01M	X041912	1442
05	HS20040654-0	HS20040654-01M	X041913	1506
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COMMENTS:

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS20040699

Lab File ID: X041901 BFB Injection Date: 04/19/20

Instrument ID: VOA6 BFB Injection Time: 1018

GC Column: DB624 ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	24.9
75	30.0 - 60.0% of mass 95	50.6
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.3 (0.5)1
174	Greater than 50.0% of mass 95	63.1
175	5.0 - 9.0% of mass 174	4.9 (7.8)1
176	95.0 - 101.0% of mass 174	62.3 (98.7)1
177	5.0 - 9.0% of mass 176	4.7 (7.5)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	CCV	CCV	X041903	04/19/20	1106
02	VLCSW-200419	VLCSW-200419	X041905	04/19/20	1154
03	VBLKW-200419	VBLKW-200419	X041907	04/19/20	1242
04	HS20040699-0	HS20040699-01	X041909	04/19/20	1330
05	HS20040699-0	HS20040699-02	X041910	04/19/20	1354
06	HS20040654-0	HS20040654-01M	X041912	04/19/20	1442
07	HS20040654-0	HS20040654-01M	X041913	04/19/20	1506
08	CCV-END	CCV-END	X041914	04/19/20	1530
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FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS20040699

Instrument ID: VOA6 Calibration Date: 04/19/20 Time: 1106

Lab File ID: X041903 Init. Calib. Date(s): 04/17/20 04/17/20

Init. Calib. Times: 1137 1536

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Dichlorodifluoromethane	0.5120000	0.5128981	0.5128981	0.1	-0.18	20.00	AVRG
Chloromethane	47.525090	50.000000	0.9635831	0.1	4.95	20.00	LINR
Vinyl Chloride	0.8260000	0.8185474	0.8185474	0.1	0.90	20.00	AVRG
Bromomethane	51.517133	50.000000	0.4205803	0.1	-3.03	20.00	LINR
Chloroethane	0.4740000	0.4544121	0.4544121	0.1	4.13	20.00	AVRG
Trichlorofluoromethane	0.8440000	0.8351220	0.8351220	0.1	1.05	20.00	AVRG
Acrolein	0.1070000	9.27e-002	9.27e-002	0.01	13.36	20.00	AVRG
Acetone	106.97858	100.00000	0.3000787	0.1	-6.98	20.00	LINR
1,1-Dichloroethene	0.4660000	0.4607818	0.4607818	0.1	1.12	20.00	AVRG
Iodomethane	97.516644	100.00000	0.7004805	0.1	2.48	20.00	2RDR
Acrylonitrile	99.109378	100.00000	0.4258399	0.05	0.89	20.00	2RDR
Methylene Chloride	0.5970000	0.4862267	0.4862267	0.1	18.55	20.00	AVRG
Methyl tert-butyl ether	1.4130000	1.3744619	1.3744619	0.1	2.73	20.00	AVRG
Carbon Disulfide	1.6310000	1.5555343	1.5555343	0.1	4.63	20.00	AVRG
trans-1,2-Dichloroethene	0.4500000	0.4460995	0.4460995	0.1	0.87	20.00	AVRG
Vinyl Acetate	97.813945	100.00000	1.8877165	0.01	2.19	20.00	2RDR
1,1-Dichloroethane	1.0870000	1.0400731	1.0400731	0.2	4.32	20.00	AVRG
2-Butanone	98.568752	100.00000	0.3702211	0.1	1.43	20.00	LINR
2,2-Dichloropropane	0.7830000	0.8450871	0.8450871	0.1	-7.93	20.00	AVRG
cis-1,2-Dichloroethene	0.5740000	0.6172593	0.6172593	0.1	-7.54	20.00	AVRG
Chloroform	0.9840000	0.9393243	0.9393243	0.2	4.54	20.00	AVRG
Bromochloromethane	0.3060000	0.3042672	0.3042672	0.1	0.57	20.00	AVRG
1,1,1-Trichloroethane	0.8560000	0.8628546	0.8628546	0.1	-0.80	20.00	AVRG
1,1-Dichloropropene	48.619241	50.000000	0.4671239	0.1	2.76	20.00	LINR
1,2-Dichloroethane	0.5580000	0.6085039	0.6085039	0.1	-9.05	20.00	AVRG
Carbon Tetrachloride	46.646747	50.000000	0.4527071	0.1	6.71	20.00	LINR
Benzene	1.3740000	1.3851381	1.3851381	0.5	-0.81	20.00	AVRG
Trichloroethene	0.3450000	0.3303933	0.3303933	0.2	4.23	20.00	AVRG
Bromodichloromethane	0.4420000	0.3903163	0.3903163	0.2	11.69	20.00	AVRG
2-Chloroethylvinyl ether	7.8e-002	6.62e-002	6.62e-002	0.001	15.13	20.00	AVRG
1,2-Dichloropropane	0.4160000	0.3598500	0.3598500	0.1	13.50	20.00	AVRG
Dibromomethane	0.2180000	0.1927713	0.1927713	0.1	11.57	20.00	AVRG
4-Methyl-2-Pentanone	84.375240	100.00000	0.4501774	0.1	15.62	20.00	2RDR
cis-1,3-Dichloropropene	0.5440000	0.4852526	0.4852526	0.2	10.80	20.00	AVRG
Toluene	1.4450000	1.3618772	1.3618772	0.4	5.75	20.00	AVRG
trans-1,3-Dichloropropene	0.4780000	0.4433202	0.4433202	0.1	7.26	20.00	AVRG
2-Hexanone	0.3620000	0.3112007	0.3112007	0.1	14.03	20.00	AVRG
1,1,2-Trichloroethane	0.2810000	0.2543503	0.2543503	0.1	9.48	20.00	AVRG
1,3-Dichloropropane	0.5910000	0.5344867	0.5344867	0.1	9.56	20.00	AVRG
Dibromochloromethane	0.3790000	0.3614951	0.3614951	0.1	4.62	20.00	AVRG
Tetrachloroethene	0.2950000	0.2786547	0.2786547	0.2	5.54	20.00	AVRG
1,2-Dibromoethane	0.3520000	0.3274801	0.3274801	0.1	6.96	20.00	AVRG

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS2004069

Instrument ID: VOA6 Calibration Date: 04/19/20 Time: 1106

Lab File ID: X041903 Init. Calib. Date(s): 04/17/20 04/17/20

Init. Calib. Times: 1137 1536

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE	
Chlorobenzene	0.9900000	0.9628445	0.9628445	0.5	2.74	20.00	AVRG	
1,1,1,2-Tetrachloroethane	0.3650000	0.3726524	0.3726524	0.1	-2.10	20.00	AVRG	
Ethylbenzene	0.5190000	0.5050708	0.5050708	0.1	2.68	20.00	AVRG	
m,p-Xylenes	0.6270000	0.6247603	0.6247603	0.1	0.36	20.00	AVRG	
o-Xylene	0.6000000	0.5732358	0.5732358	0.3	4.46	20.00	AVRG	
Styrene	1.0280000	0.9703790	0.9703790	0.3	5.60	20.00	AVRG	
Bromoform	0.2540000	0.2486749	0.2486749	0.1	2.10	20.00	AVRG	
Isopropylbenzene	1.5140000	1.4168998	1.4168998	0.1	6.41	20.00	AVRG	
1,1,2,2-Tetrachloroethane	0.8820000	0.8212452	0.8212452	0.3	6.89	20.00	AVRG	
1,2,3-Trichloropropane	0.7400000	0.6989374	0.6989374	0.1	5.55	20.00	AVRG	
Methacrylonitrile	0.7740000	0.7484203	0.7484203	0.1	3.30	20.00	AVRG	
n-Propylbenzene	3.6940000	3.6148371	3.6148371	0.1	2.14	20.00	AVRG	
Bromobenzene	0.9140000	0.9076619	0.9076619	0.1	0.69	20.00	AVRG	
1,3,5-Trimethylbenzene	2.5800000	2.6169029	2.6169029	0.1	-1.43	20.00	AVRG	
2-Chlorotoluene	2.2350000	2.1899378	2.1899378	0.1	2.02	20.00	AVRG	
4-Chlorotoluene	2.6220000	2.5490172	2.5490172	0.1	2.78	20.00	AVRG	
Propionitrile	0.1740000	0.1979806	0.1979806	0.01	-13.78	20.00	AVRG	
tert-Butylbenzene	2.1860000	2.1756714	2.1756714	0.1	0.47	20.00	AVRG	
1,2,4-Trimethylbenzene	2.6430000	2.7135209	2.7135209	0.1	-2.67	20.00	AVRG	
sec-Butylbenzene	3.1250000	3.0439089	3.0439089	0.1	2.59	20.00	AVRG	
p-Isopropyltoluene	2.6370000	2.6890174	2.6890174	0.1	-1.97	20.00	AVRG	
1,3-Dichlorobenzene	1.5030000	1.5435203	1.5435203	0.6	-2.70	20.00	AVRG	
1,4-Dichlorobenzene	1.5610000	1.5358911	1.5358911	0.4	1.61	20.00	AVRG	
n-Butylbenzene	2.1940000	2.7430867	2.7430867	0.5	-25.03	20.00	AVRG	<-
1,2-Dichlorobenzene	1.3360000	1.5544834	1.5544834	0.4	-16.35	20.00	AVRG	
1,2-Dibromo-3-Chloropropane	7.8e-002	8.68e-002	8.68e-002	0.05	-11.28	20.00	AVRG	
1,2,4-Trichlorobenzene	0.3180000	0.3801057	0.3801057	0.2	-19.53	20.00	LINR	<-
Hexachlorobutadiene	61.598727	50.000000	0.2678305	0.1	-23.20	20.00	AVRG	
Naphthalene	0.4720000	0.5653955	0.5653955	0.2	-19.79	20.00	AVRG	
1,2,3-Trichlorobenzene	0.1690000	0.1937269	0.1937269	0.1	-14.63	20.00	2RDR	
1-Chlorohexane	46.502908	50.000000	0.3889421	0.1	6.99	20.00	AVRG	
1,4-Dioxane	6.e-003	5.69e-003	5.69e-003	0.001	5.17	20.00	AVRG	
n-Hexane	0.7880000	0.7522623	0.7522623	0.1	4.54	20.00	AVRG	
1,3-Butadiene	0.9190000	0.9229761	0.9229761	0.1	-0.43	20.00	AVRG	
Cyclohexane	1.2300000	1.2226780	1.2226780	0.1	0.60	20.00	AVRG	
Freon TF	0.4740000	0.4506917	0.4506917	0.1	4.92	20.00	AVRG	
Methylcyclohexane	40.048781	50.000000	0.9590932	0.1	19.90	20.00	2RDR	
Methyl Acetate	40.194001	50.000000	0.5441112	0.1	19.61	20.00	2RDR	
Tert-Butyl alcohol	954.23249	1000.0000	6.59e-002	0.005	4.58	20.00	2RDR	
Isopropyl Alcohol	6.4e-002	5.54e-002	5.54e-002	0.005	13.44	20.00	AVRG	
Acetaldehyde	217.33591	200.00000	8.78e-002	0.001	-8.67	20.00	LINR	

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS2004069

Instrument ID: VOA6 Calibration Date: 04/19/20 Time: 1106

Lab File ID: X041903 Init. Calib. Date(s): 04/17/20 04/17/20

Init. Calib. Times: 1137 1536

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Dibromofluoromethane	50.012445	50.000000	0.5506633	0.1	-0.02	20.00	LINR
1,2-Dichloroethane-d4	58.548505	50.000000	0.7439159	0.1	-17.10	20.00	2RDR
Toluene-d8	1.2460000	1.1118906	1.1118906	0.1	10.76	20.00	AVRG
4-Bromofluorobenzene	45.001112	50.000000	0.4233860	0.1	10.0	20.00	LINR

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS20040699

Instrument ID: VOA6 Calibration Date: 04/19/20 Time: 1530

Lab File ID: X041914 Init. Calib. Date(s): 04/17/20 04/17/20

Init. Calib. Times: 1137 1536

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Dichlorodifluoromethane	0.5120000	0.4684944	0.4684944	0.1	8.50	50.00	AVRG
Chloromethane	47.055458	50.000000	0.9538670	0.1	5.89	50.00	LINR
Vinyl Chloride	0.8260000	0.7974211	0.7974211	0.1	3.46	50.00	AVRG
Bromomethane	48.378299	50.000000	0.3949458	0.1	3.24	50.00	LINR
Chloroethane	0.4740000	0.4244164	0.4244164	0.1	10.46	50.00	AVRG
Trichlorofluoromethane	0.8440000	0.7746999	0.7746999	0.1	8.21	50.00	AVRG
Acrolein	0.1070000	8.93e-002	8.93e-002	0.01	16.54	50.00	AVRG
Acetone	101.81809	100.00000	0.2858845	0.1	-1.82	50.00	LINR
1,1-Dichloroethene	0.4660000	0.4465599	0.4465599	0.1	4.17	50.00	AVRG
Iodomethane	96.577855	100.00000	0.6936733	0.1	3.42	50.00	2RDR
Acrylonitrile	99.704490	100.00000	0.4287886	0.05	0.30	50.00	2RDR
Methylene Chloride	0.5970000	0.4852232	0.4852232	0.1	18.72	50.00	AVRG
Methyl tert-butyl ether	1.4130000	1.3798105	1.3798105	0.1	2.35	50.00	AVRG
Carbon Disulfide	1.6310000	1.5717143	1.5717143	0.1	3.63	50.00	AVRG
trans-1,2-Dichloroethene	0.4500000	0.4350367	0.4350367	0.1	3.32	50.00	AVRG
Vinyl Acetate	98.495570	100.00000	1.9031011	0.01	1.50	50.00	2RDR
1,1-Dichloroethane	1.0870000	1.0205600	1.0205600	0.2	6.11	50.00	AVRG
2-Butanone	100.36948	100.00000	0.3770600	0.1	-0.37	50.00	LINR
2,2-Dichloropropane	0.7830000	0.7993566	0.7993566	0.1	-2.09	50.00	AVRG
cis-1,2-Dichloroethene	0.5740000	0.6119130	0.6119130	0.1	-6.60	50.00	AVRG
Chloroform	0.9840000	1.0481249	1.0481249	0.2	-6.52	50.00	AVRG
Bromochloromethane	0.3060000	0.3043796	0.3043796	0.1	0.53	50.00	AVRG
1,1,1-Trichloroethane	0.8560000	0.8456257	0.8456257	0.1	1.21	50.00	AVRG
1,1-Dichloropropene	50.659591	50.000000	0.4864801	0.1	-1.32	50.00	LINR
1,2-Dichloroethane	0.5580000	0.6167056	0.6167056	0.1	-10.52	50.00	AVRG
Carbon Tetrachloride	48.006645	50.000000	0.4659143	0.1	3.99	50.00	LINR
Benzene	1.3740000	1.4521543	1.4521543	0.5	-5.69	50.00	AVRG
Trichloroethene	0.3450000	0.3326005	0.3326005	0.2	3.59	50.00	AVRG
Bromodichloromethane	0.4420000	0.4450855	0.4450855	0.2	-0.70	50.00	AVRG
2-Chloroethylvinyl ether	7.8e-002	7.72e-002	7.72e-002	0.001	1.02	50.00	AVRG
1,2-Dichloropropane	0.4160000	0.4100001	0.4100001	0.1	1.44	50.00	AVRG
Dibromomethane	0.2180000	0.2199715	0.2199715	0.1	-0.90	50.00	AVRG
4-Methyl-2-Pentanone	100.60925	100.00000	0.5804719	0.1	-0.61	50.00	2RDR
cis-1,3-Dichloropropene	0.5440000	0.6554169	0.6554169	0.2	-20.48	50.00	AVRG
Toluene	1.4450000	1.4870205	1.4870205	0.4	-2.91	50.00	AVRG
trans-1,3-Dichloropropene	0.4780000	0.6171220	0.6171220	0.1	-29.10	50.00	AVRG
2-Hexanone	0.3620000	0.3830413	0.3830413	0.1	-5.81	50.00	AVRG
1,1,2-Trichloroethane	0.2810000	0.3017978	0.3017978	0.1	-7.40	50.00	AVRG
1,3-Dichloropropane	0.5910000	0.6239522	0.6239522	0.1	-5.58	50.00	AVRG
Dibromochloromethane	0.3790000	0.3869085	0.3869085	0.1	-2.09	50.00	AVRG
Tetrachloroethene	0.2950000	0.2681772	0.2681772	0.2	9.09	50.00	AVRG
1,2-Dibromoethane	0.3520000	0.3676256	0.3676256	0.1	-4.44	50.00	AVRG

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS2004069

Instrument ID: VOA6 Calibration Date: 04/19/20 Time: 1530

Lab File ID: X041914 Init. Calib. Date(s): 04/17/20 04/17/20

Init. Calib. Times: 1137 1536

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Chlorobenzene	0.9900000	0.9116328	0.9116328	0.5	7.92	50.00	AVRG
1,1,1,2-Tetrachloroethane	0.3650000	0.3311036	0.3311036	0.1	9.29	50.00	AVRG
Ethylbenzene	0.5190000	0.4453878	0.4453878	0.1	14.18	50.00	AVRG
m,p-Xylenes	0.6270000	0.5129001	0.5129001	0.1	18.20	50.00	AVRG
o-Xylene	0.6000000	0.5134998	0.5134998	0.3	14.42	50.00	AVRG
Styrene	1.0280000	0.9097014	0.9097014	0.3	11.51	50.00	AVRG
Bromoform	0.2540000	0.2371473	0.2371473	0.1	6.63	50.00	AVRG
Isopropylbenzene	1.5140000	1.2040162	1.2040162	0.1	20.47	50.00	AVRG
1,1,2,2-Tetrachloroethane	0.8820000	0.8180335	0.8180335	0.3	7.25	50.00	AVRG
1,2,3-Trichloropropane	0.7400000	0.7241137	0.7241137	0.1	2.15	50.00	AVRG
Methacrylonitrile	0.7740000	0.8516646	0.8516646	0.1	-10.03	50.00	AVRG
n-Propylbenzene	3.6940000	3.2586288	3.2586288	0.1	11.78	50.00	AVRG
Bromobenzene	0.9140000	0.8844075	0.8844075	0.1	3.24	50.00	AVRG
1,3,5-Trimethylbenzene	2.5800000	2.3463390	2.3463390	0.1	9.06	50.00	AVRG
2-Chlorotoluene	2.2350000	2.0672866	2.0672866	0.1	7.50	50.00	AVRG
4-Chlorotoluene	2.6220000	2.3709431	2.3709431	0.1	9.58	50.00	AVRG
Propionitrile	0.1740000	0.1987448	0.1987448	0.01	-14.22	50.00	AVRG
tert-Butylbenzene	2.1860000	1.9037095	1.9037095	0.1	12.91	50.00	AVRG
1,2,4-Trimethylbenzene	2.6430000	2.4598768	2.4598768	0.1	6.93	50.00	AVRG
sec-Butylbenzene	3.1250000	2.5899432	2.5899432	0.1	17.12	50.00	AVRG
p-Isopropyltoluene	2.6370000	2.2829525	2.2829525	0.1	13.43	50.00	AVRG
1,3-Dichlorobenzene	1.5030000	1.4414059	1.4414059	0.6	4.10	50.00	AVRG
1,4-Dichlorobenzene	1.5610000	1.4517094	1.4517094	0.4	7.00	50.00	AVRG
n-Butylbenzene	2.1940000	1.9146146	1.9146146	0.5	12.73	50.00	AVRG
1,2-Dichlorobenzene	1.3360000	1.3110693	1.3110693	0.4	1.87	50.00	AVRG
1,2-Dibromo-3-Chloropropane	7.8e-002	8.88e-002	8.88e-002	0.05	-13.85	50.00	AVRG
1,2,4-Trichlorobenzene	0.3180000	0.3262315	0.3262315	0.2	-2.59	50.00	AVRG
Hexachlorobutadiene	46.879728	50.000000	0.2054184	0.1	6.24	50.00	LINR
Naphthalene	0.4720000	0.5217593	0.5217593	0.2	-10.54	50.00	AVRG
1,2,3-Trichlorobenzene	0.1690000	0.1634599	0.1634599	0.1	3.28	50.00	AVRG
1-Chlorohexane	46.710562	50.000000	0.3907269	0.1	6.58	50.00	2RDR
1,4-Dioxane	6.e-003	5.96e-003	5.96e-003	0.001	0.67	50.00	AVRG
n-Hexane	0.7880000	0.5556611	0.5556611	0.1	29.48	50.00	AVRG
1,3-Butadiene	0.9190000	0.8585434	0.8585434	0.1	6.58	50.00	AVRG
Cyclohexane	1.2300000	0.9958535	0.9958535	0.1	19.04	50.00	AVRG
Freon TF	0.4740000	0.3839537	0.3839537	0.1	19.00	50.00	AVRG
Methylcyclohexane	41.119406	50.000000	0.9868324	0.1	17.76	50.00	2RDR
Methyl Acetate	39.570689	50.000000	0.5354297	0.1	20.86	50.00	2RDR
Tert-Butyl alcohol	982.96302	1000.0000	6.82e-002	0.005	1.70	50.00	2RDR
Isopropyl Alcohol	6.4e-002	6.44e-002	6.44e-002	0.005	-0.62	50.00	AVRG
Acetaldehyde	221.81830	200.00000	8.95e-002	0.001	-10.91	50.00	LINR

FORM VII VOA

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

Lab Code: ALS-HS Case No.: SAS No.: SDG No.: HS2004069

Instrument ID: VOA6 Calibration Date: 04/19/20 Time: 1530

Lab File ID: X041914 Init. Calib. Date(s): 04/17/20 04/17/20

Init. Calib. Times: 1137 1536

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Dibromofluoromethane	49.639002	50.000000	0.5465978	0.1	0.72	50.00	LINR
1,2-Dichloroethane-d4	54.837291	50.000000	0.6886321	0.1	-9.67	50.00	2RDR
Toluene-d8	1.2460000	1.2698881	1.2698881	0.1	-1.92	50.00	AVRG
4-Bromofluorobenzene	43.271644	50.000000	0.4069521	0.1	13.46	50.00	LINR

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

outputFile debug: C:\tp\envision\results\HS20040699/08a.01 Lab Code: AL

Lab File ID (Standard): X041903 Date Analyzed: 04/19/20

Instrument ID: VOA6 Time Analyzed: 1106

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

		IS1 AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CBZ) AREA #	RT #
	12 HOUR STD	295934	4.18	499208	4.97	429223	7.67
	UPPER LIMIT	591868	4.68	998416	5.47	858446	8.17
	LOWER LIMIT	147967	3.68	249604	4.47	214612	7.17
	CLIENT SAMPLE NO.						
01	VLCSW-200419	320348	4.18	477855	4.97	407280	7.67
02	VBLKW-200419	372648	4.18	621564	4.97	465385	7.67
03	HS20040699-0	349469	4.18	604759	4.97	452022	7.67
04	HS20040699-0	375814	4.18	530026	4.97	516899	7.67
05	HS20040654-0	368069	4.18	506292	4.97	454921	7.67
06	HS20040654-0	327134	4.18	495882	4.97	441701	7.67
07							
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18							
19							
20							

IS1 = Pentafluorobenzene
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

FORM VIII VOA

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS LABORATORY GROUP Contract:

outputFile debug: C:\tp\envision\results\HS20040699/08a.01 Lab Code: AL

Lab File ID (Standard): X041903 Date Analyzed: 04/19/20

Instrument ID: VOA6 Time Analyzed: 1106

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

		IS4 (DCB) AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	195564	9.66				
	UPPER LIMIT	391128	10.16				
	LOWER LIMIT	97782	9.16				
	CLIENT SAMPLE NO.						
01	VLCSW-200419	202431	9.66				
02	VBLKW-200419	220676	9.67				
03	HS20040699-0	237559	9.67				
04	HS20040699-0	219650	9.67				
05	HS20040654-0	228174	9.67				
06	HS20040654-0	217622	9.67				
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS4 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200419.b\X041901.D

Date : 19-APR-2020 10:18

Client ID: BFB

Instrument: voa6.i

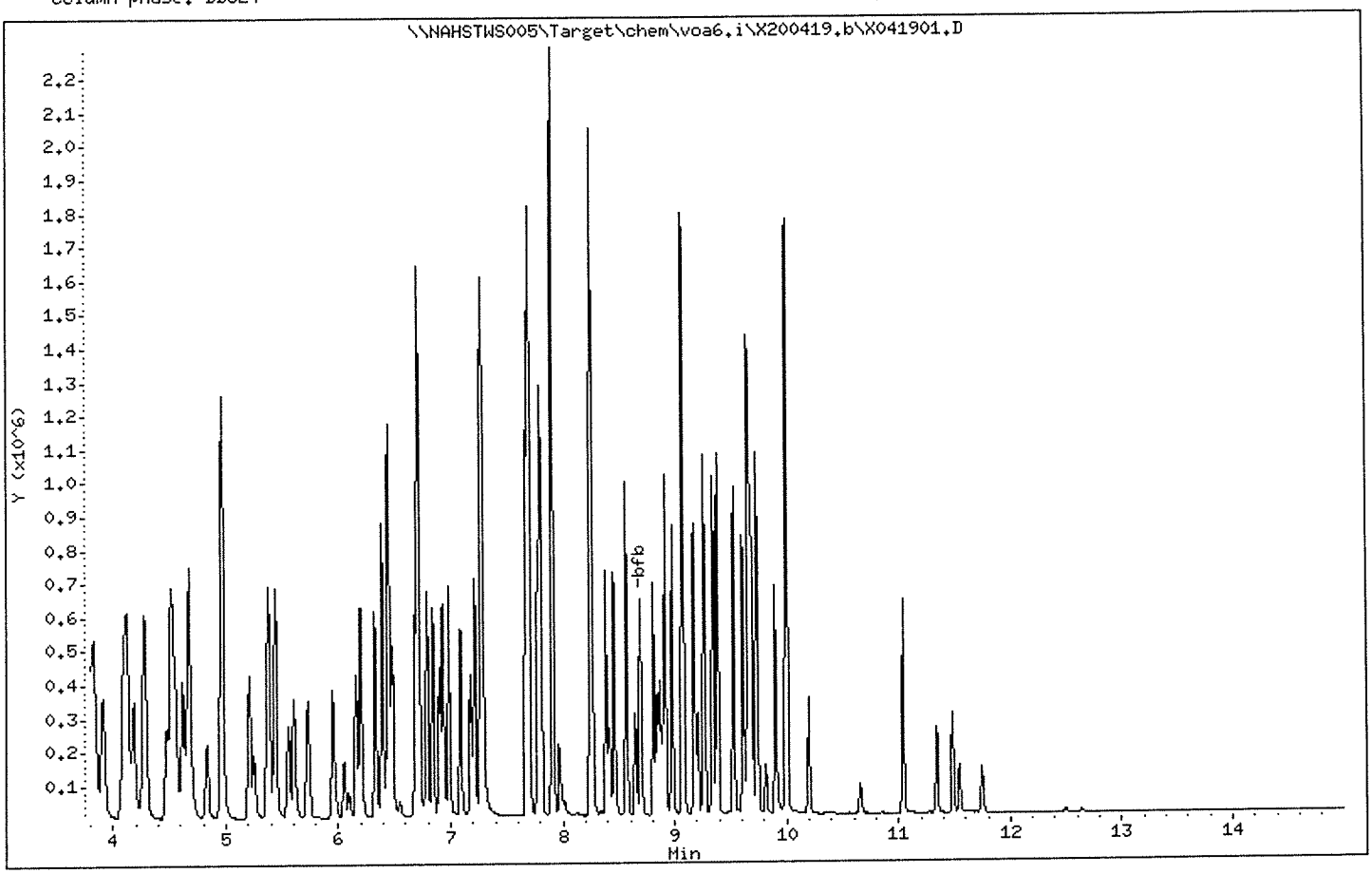
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200419.b\X041901.D

Date : 19-APR-2020 10:18

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

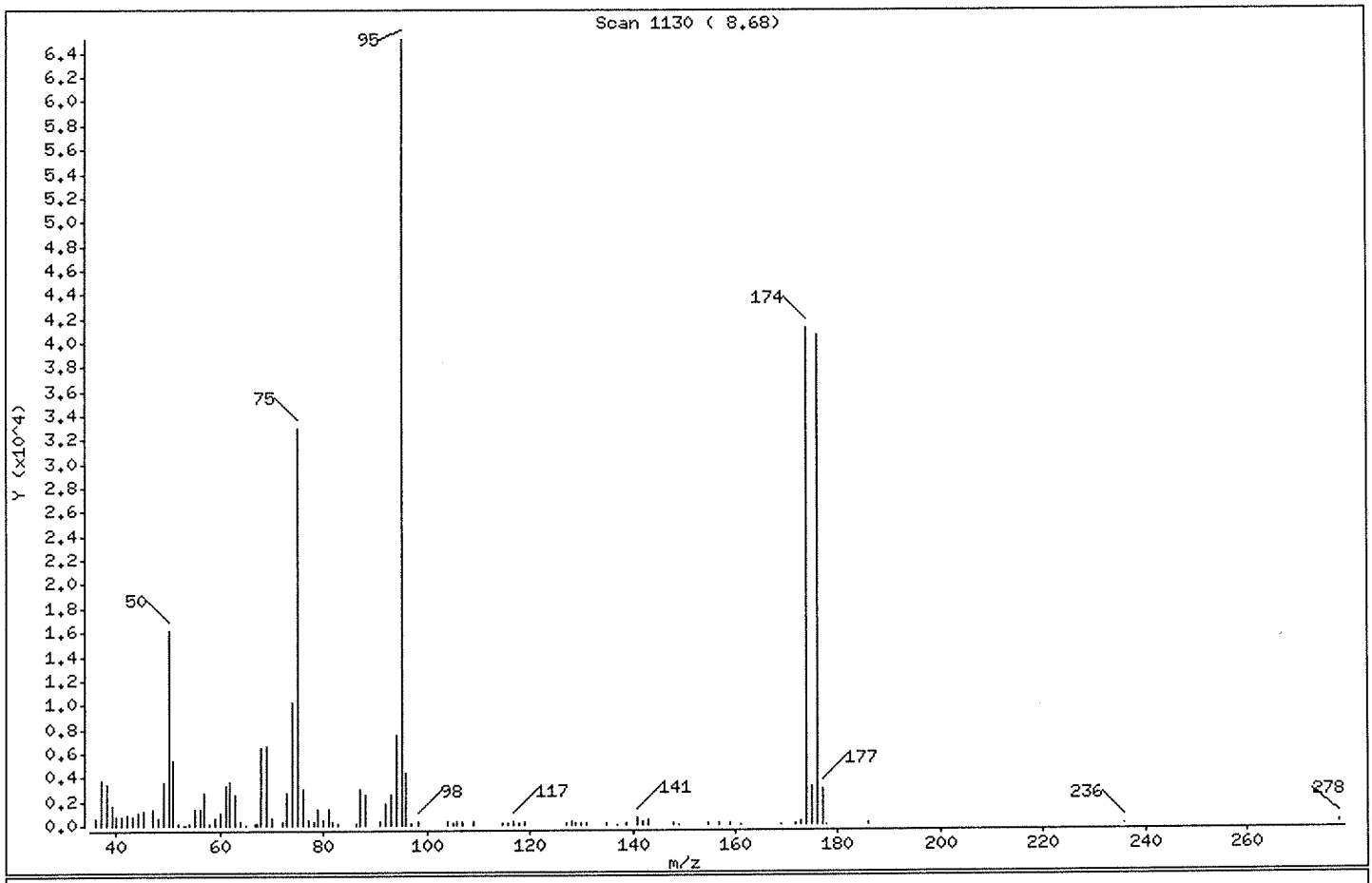
Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

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	24.93
75	30.00 - 60.00% of mass 95	50.56
96	5.00 - 9.00% of mass 95	6.60
173	Less than 2.00% of mass 174	0.35 (0.55)
174	Greater than 50.00% of mass 95	63.11
175	5.00 - 9.00% of mass 174	4.92 (7.80)
176	95.00 - 101.00% of mass 174	62.31 (98.74)
177	5.00 - 9.00% of mass 176	4.68 (7.51)

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200419.b\X041901.D

Date : 19-APR-2020 10:18

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

Data File: X041901.D
Spectrum: Scan 1130 (8.68)
Location of Maximum: 95.00
Number of points: 96

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.90	547	61.00	3269	90.90	316	138.80	90
37.00	3716	62.00	3551	92.00	1826	140.90	607
38.00	3414	63.00	2608	93.00	2572	142.00	246
39.00	1623	64.00	306	94.00	7485	142.90	506
40.00	817	65.10	65	95.00	65160	148.00	106
41.00	703	66.70	79	96.00	4298	148.90	69
42.00	831	67.10	128	97.00	204	154.80	172
43.10	710	68.00	6499	98.20	302	156.80	109
44.00	1110	69.10	6615	103.90	295	158.80	96
45.10	1209	70.00	620	105.00	190	160.90	70
47.10	1277	72.00	343	105.90	257	168.90	51
48.00	594	73.00	2771	106.80	299	171.70	94
49.00	3594	74.00	10217	109.00	287	172.90	226
50.00	16247	75.00	32944	114.80	141	174.00	41120
51.00	5467	76.00	2984	115.80	216	175.00	3207
52.00	194	77.00	520	116.90	367	176.00	40600
52.80	71	78.00	358	117.80	188	177.00	3049
53.20	61	78.90	1394	118.80	269	177.80	63
54.00	163	80.00	485	127.00	208	186.00	150
55.00	1333	81.00	1300	128.00	345	235.80	67
56.00	1381	81.80	300	129.00	207	278.10	91
57.00	2628	82.80	169	129.90	217		
58.00	181	86.20	116	131.00	130		
59.00	553	87.00	2959	135.00	142		
60.00	974	87.90	2493	137.00	69		

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200419.b\X041903.D
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 19-APR-2020 11:06
Operator : PC Inst ID: voa6.i
Smp Info : CCV;CCV;2;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X200419.b\8260W.m
Meth Date : 05-May-2020 14:26 voa6.i Quant Type: ISTD
Cal Date : 17-APR-2020 15:36 Cal File: X041711.D
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260_GB.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	295934	50.0000	
194 Acetaldehyde	44	1.210	1.210	(0.289)	103914	200.000	217.33
140 1,3-Butadiene	54	1.159	1.159	(0.277)	273140	50.0000	50.20
25 Methacrylonitrile	41	3.824	3.824	(0.914)	221483	50.0000	48.31
136 n-Hexane	57	2.771	2.771	(0.663)	222620	50.0000	47.71
4 Propionitrile	54	3.652	3.652	(0.873)	585892	500.000	567.10
2 Dichlorodifluoromethane	85	0.966	0.966	(0.231)	151784	50.0000	50.04
3 Chloromethane	50	1.073	1.073	(0.257)	285157	50.0000	47.52
5 Vinyl Chloride	62	1.138	1.138	(0.272)	242236	50.0000	49.57
6 Bromomethane	94	1.339	1.339	(0.320)	124464	50.0000	51.51
7 Chloroethane	64	1.403	1.403	(0.336)	134476	50.0000	47.90
8 Trichlorofluoromethane	101	1.561	1.561	(0.373)	247141	50.0000	49.49
9 Acrolein	56	1.238	1.238	(0.296)	54841	100.000	86.58
10 Acetone	43	1.969	1.969	(0.471)	177607	100.000	106.97
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	136361	50.0000	49.35
15 Iodomethane	142	2.026	2.026	(0.485)	414592	100.000	97.51
16 Acrylonitrile	53	2.535	2.535	(0.606)	252041	100.000	99.10
17 Methylene Chloride	84	2.306	2.306	(0.551)	143891	50.0000	40.68
18 Methyl tert-butyl ether	73	2.535	2.535	(0.606)	406750	50.0000	48.63
19 Carbon Disulfide	76	2.069	2.069	(0.495)	920671	100.000	95.35
20 trans-1,2-Dichloroethene	96	2.528	2.528	(0.604)	132016	50.0000	49.60
21 Vinyl Acetate	43	3.000	3.000	(0.717)	1117279	100.000	97.81

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200419.b\X041903.D Page 2
Report Date: 05-May-2020 14:26

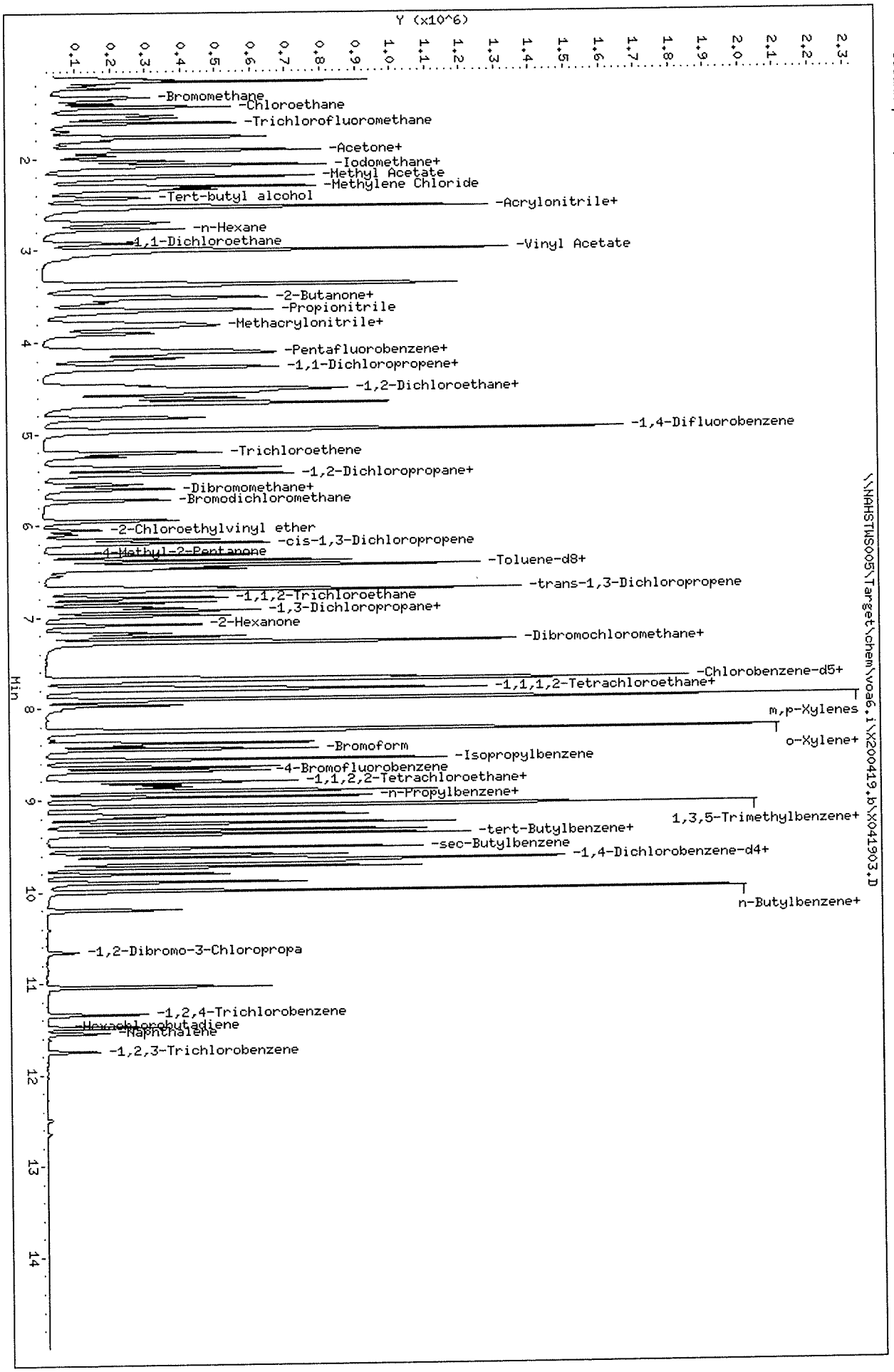
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
	22 1,1-Dichloroethane	63	2.922	2.922	(0.699)	307793	50.0000	47.84
	24 2-Butanone	43	3.573	3.573	(0.854)	219122	100.000	98.56
	26 2,2-Dichloropropane	77	3.516	3.516	(0.841)	250090	50.0000	53.97
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	182668	50.0000	53.77
	28 Chloroform	83	3.910	3.910	(0.935)	277978	50.0000	47.72
	29 Bromochloromethane	128	3.795	3.795	(0.908)	90043	50.0000	49.73
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	162960	50.0000	50.01
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	255348	50.0000	50.43
	32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	233192	50.0000	48.61
	33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	303770	50.0000	54.49
	34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	225995	50.0000	46.64
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	220150	50.0000	58.54
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	499208	50.0000	
	37 Benzene	78	4.512	4.512	(0.908)	691472	50.0000	50.41
	38 Trichloroethene	130	5.207	5.207	(1.048)	164935	50.0000	47.88
	39 Bromodichloromethane	83	5.729	5.729	(1.153)	194849	50.0000	44.15
	41 2-Chloroethylvinyl ether	63	6.052	6.052	(1.218)	66092	100.000	84.11
	42 1,2-Dichloropropane	63	5.436	5.436	(1.094)	179640	50.0000	43.27
	44 Dibromomethane	93	5.558	5.558	(1.118)	96233	50.0000	44.12
	45 4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	386453	100.000	84.37
	46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	242242	50.0000	44.61
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	429223	50.0000	
$	48 Toluene-d8	98	6.388	6.388	(0.833)	477249	50.0000	44.63
	50 Toluene	91	6.446	6.446	(0.840)	584549	50.0000	47.13
	51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	221309	50.0000	46.35
	52 2-Hexanone	43	7.083	7.083	(0.923)	267149	100.000	85.92
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	109173	50.0000	45.20
	54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	229414	50.0000	45.24
	55 Dibromochloromethane	129	7.176	7.176	(0.936)	155162	50.0000	47.69
	56 Tetrachloroethene	164	6.933	6.933	(0.904)	119605	50.0000	47.23
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	140562	50.0000	46.52
	58 1-Chlorohexane	55	7.699	7.699	(1.549)	194163	50.0000	46.50
	59 Chlorobenzene	112	7.699	7.699	(1.004)	413275	50.0000	48.63
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	159951	50.0000	51.02
	61 Ethylbenzene	106	7.800	7.800	(1.017)	216788	50.0000	48.66
	62 m,p-Xylenes	106	7.907	7.907	(1.031)	536323	100.000	99.62
	63 o-Xylene	106	8.244	8.244	(1.075)	246046	50.0000	47.75
	64 Styrene	104	8.258	8.258	(1.077)	416509	50.0000	47.18
	66 Bromoform	173	8.416	8.416	(1.097)	106737	50.0000	48.92
	67 Isopropylbenzene	105	8.566	8.566	(1.117)	608166	50.0000	46.79
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	160606	50.0000	46.56
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	181727	50.0000	45.00
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	195564	50.0000	
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	136687	50.0000	47.21 (M)
	73 n-Propylbenzene	91	8.917	8.917	(0.923)	706932	50.0000	48.92
	74 Bromobenzene	156	8.810	8.810	(0.912)	177506	50.0000	49.63
	75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	511772	50.0000	50.71
	76 2-Chlorotoluene	91	8.974	8.974	(0.929)	428273	50.0000	48.98
	77 4-Chlorotoluene	91	9.075	9.075	(0.939)	498496	50.0000	48.60
	78 tert-Butylbenzene	119	9.340	9.340	(0.967)	425483	50.0000	49.76
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	530667	50.0000	51.33
	81 sec-Butylbenzene	105	9.526	9.526	(0.986)	595279	50.0000	48.69
	82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	525875	50.0000	50.98
	83 1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	301857	50.0000	51.34

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200419.b\X041903.D
Report Date: 05-May-2020 14:26

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	300365	50.0000	49.18
87	n-Butylbenzene	91	9.999	9.999	(1.035)	536449	50.0000	62.49
88	1,2-Dichlorobenzene	146	9.999	9.999	(1.035)	304001	50.0000	58.19
89	1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	16967	50.0000	55.48
90	1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	74335	50.0000	59.65
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	52378	50.0000	61.59
92	Naphthalene	128	11.546	11.546	(1.195)	110571	50.0000	59.83
93	1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	37886	50.0000	57.14
M 94	1,2-Dichloroethylene (total)	96				314684	100.000	(a)
135	1,4-Dioxane	88	5.601	5.601	(1.339)	33704	1000.00	981.65
141	Cyclohexane	56	4.125	4.125	(0.986)	361832	50.0000	49.70
138	Freon TF	101	1.912	1.912	(0.457)	133375	50.0000	47.48
147	Methylcyclohexane	55	5.378	5.378	(1.082)	478787	50.0000	40.04 (M)
146	Methyl Acetate	43	2.227	2.227	(0.532)	161021	50.0000	40.19 (M)
148	Tert-Butyl alcohol	59	2.427	2.427	(0.580)	390143	1000.00	954.23
149	Isopropyl Alcohol	45	2.091	2.091	(0.500)	327666	1000.00	864.94

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200419.b\X041903.D
Date : 19-APR-2020 11:06
Client ID: CCV
Sample Info: CCV;CCV;2;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200419.b\X041905.D
Lab Smp Id: VLCSW-200419 Client Smp ID: VLCSW-200419
Inj Date : 19-APR-2020 11:54
Operator : PC Inst ID: voa6.i
Smp Info : VLCSW-200419;VLCSW-200419;3;;LCS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X200419.b\8260W.m
Meth Date : 05-May-2020 14:26 voa6.i Quant Type: ISTD
Cal Date : 17-APR-2020 15:36 Cal File: X041711.D
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260_GB.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	320348	50.0000	
194 Acetaldehyde	44	1.209	1.210	(0.289)	42113	71.1021	71.10
140 1,3-Butadiene	54	1.159	1.159	(0.277)	107062	18.1773	18.17
25 Methacrylonitrile	41	3.824	3.824	(0.914)	110342	22.2344	22.23
136 n-Hexane	57	2.771	2.771	(0.663)	99594	19.7197	19.71
4 Propionitrile	54	3.652	3.652	(0.873)	248687	222.368	222.36(a)
2 Dichlorodifluoromethane	85	0.966	0.966	(0.231)	61605	18.7622	18.76
3 Chloromethane	50	1.073	1.073	(0.257)	116082	18.4648	18.46
5 Vinyl Chloride	62	1.138	1.138	(0.272)	99301	18.7720	18.77
6 Bromomethane	94	1.338	1.339	(0.320)	57652	22.0550	22.05
7 Chloroethane	64	1.403	1.403	(0.336)	55099	18.1311	18.13
8 Trichlorofluoromethane	101	1.560	1.561	(0.373)	100936	18.6738	18.67
9 Acrolein	56	1.238	1.238	(0.296)	17097	24.9361	24.93
10 Acetone	43	1.969	1.969	(0.471)	90096	49.0059	49.00
11 1,1-Dichloroethene	96	1.911	1.912	(0.457)	57688	19.2882	19.28
15 Iodomethane	142	2.026	2.026	(0.485)	147649	33.4373	33.43
16 Acrylonitrile	53	2.535	2.535	(0.606)	130161	50.4397	50.43
17 Methylene Chloride	84	2.305	2.306	(0.551)	77258	20.1800	20.17
18 Methyl tert-butyl ether	73	2.535	2.535	(0.606)	214535	23.6962	23.69
19 Carbon Disulfide	76	2.069	2.069	(0.495)	400477	38.3162	38.31
20 trans-1,2-Dichloroethene	96	2.527	2.528	(0.604)	66242	22.9920	22.99
21 Vinyl Acetate	43	3.000	3.000	(0.717)	642004	55.2599	55.25

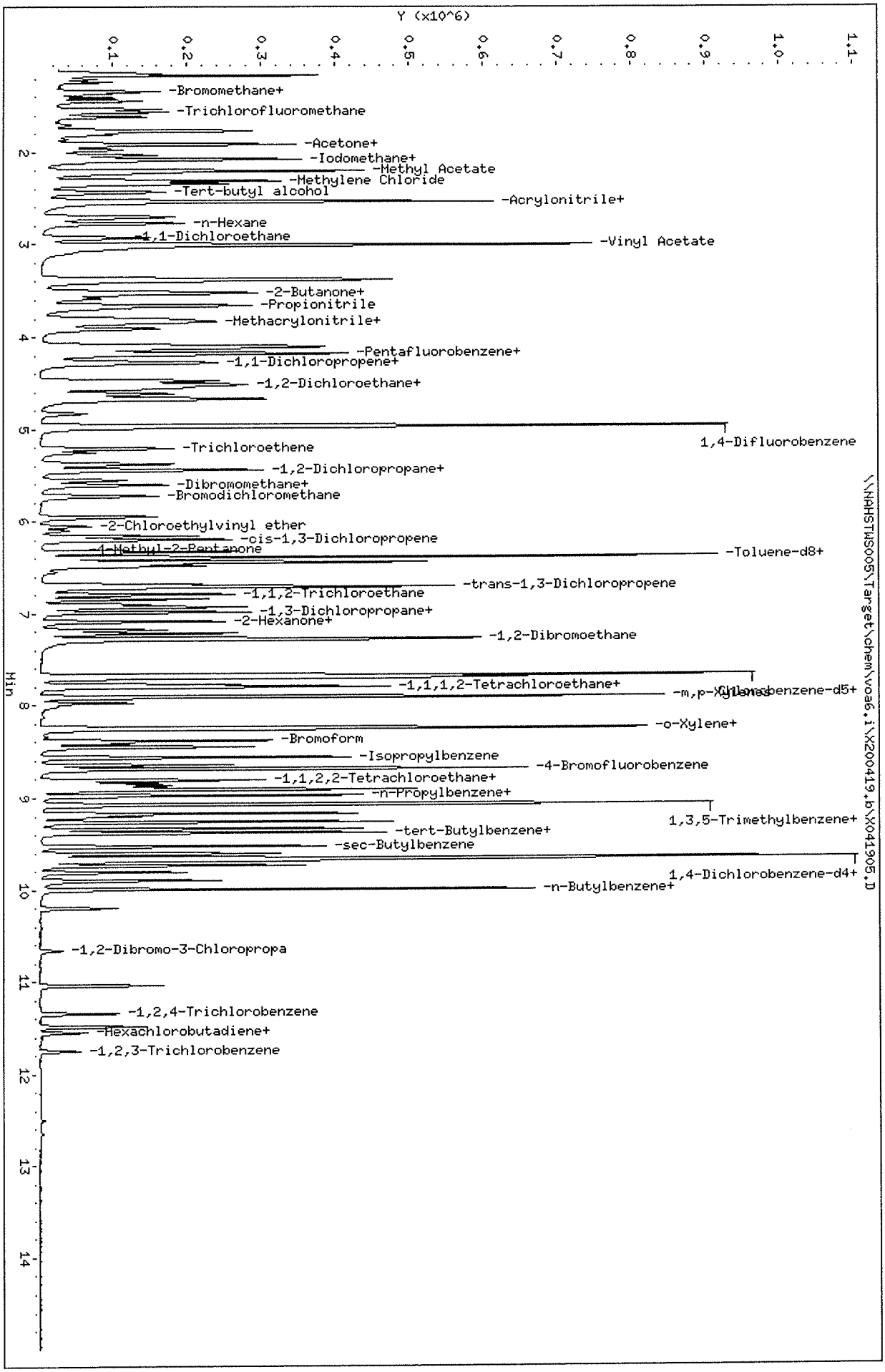
Data File: \\NAHSTWS005\Target\chem\voa6.i\X200419.b\X041905.D Page 2
Report Date: 05-May-2020 14:26

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
	22	1,1-Dichloroethane	63	2.921	2.922	(0.699)	163625	23.4962	23.49(M)
	24	2-Butanone	43	3.580	3.573	(0.856)	94531	39.9366	39.93
	26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	114981	22.9224	22.92
	27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	78418	21.3251	21.32
	28	Chloroform	83	3.910	3.910	(0.935)	133977	21.2483	21.24
	29	Bromochloromethane	128	3.795	3.795	(0.908)	38354	19.5720	19.57
$	30	Dibromofluoromethane	113	4.103	4.103	(0.981)	169295	47.9741	47.97
	31	1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	107715	19.6543	19.65
	32	1,1-Dichloropropene	75	4.282	4.283	(0.862)	86155	18.3844	18.38
	33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	93762	17.5714	17.57
	34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	86181	18.6032	18.60
$	35	1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	180686	46.0472	46.04
*	36	1,4-Difluorobenzene	114	4.970	4.970	(1.000)	477855	50.0000	
	37	Benzene	78	4.512	4.512	(0.908)	229803	17.5024	17.50
	38	Trichloroethene	130	5.206	5.207	(1.048)	61304	18.5947	18.59
	39	Bromodichloromethane	83	5.729	5.729	(1.153)	86357	20.4446	20.44
	41	2-Chloroethylvinyl ether	63	6.052	6.052	(1.218)	27357	36.3744	36.37
	42	1,2-Dichloropropane	63	5.443	5.436	(1.095)	76012	19.1313	19.13
	44	Dibromomethane	93	5.557	5.558	(1.118)	42120	20.1741	20.17
	45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	182444	47.0999	47.09
	46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	101896	19.6056	19.60
*	47	Chlorobenzene-d5	117	7.671	7.671	(1.000)	407280	50.0000	
$	48	Toluene-d8	98	6.388	6.388	(0.833)	495323	48.8175	48.81
	50	Toluene	91	6.446	6.446	(0.840)	240605	20.4467	20.44
	51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	91005	19.9150	19.91
	52	2-Hexanone	43	7.090	7.083	(0.924)	147432	49.9724	49.97
	53	1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	51585	22.5087	22.50
	54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	116303	24.1724	24.17
	55	Dibromochloromethane	129	7.176	7.176	(0.936)	71776	23.2526	23.25
	56	Tetrachloroethene	164	6.933	6.933	(0.904)	50248	20.9134	20.91
	57	1,2-Dibromoethane	107	7.262	7.262	(0.947)	62977	21.9674	21.96
	58	1-Chlorohexane	55	7.699	7.699	(1.549)	68488	16.8428	16.84
	59	Chlorobenzene	112	7.699	7.699	(1.004)	156364	19.3937	19.39
	60	1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	60975	20.4986	20.49
	61	Ethylbenzene	106	7.799	7.800	(1.017)	80635	19.0763	19.07
	62	m,p-Xylenes	106	7.907	7.907	(1.031)	196344	38.4376	38.43
	63	o-Xylene	106	8.244	8.244	(1.075)	99184	20.2874	20.28
	64	Styrene	104	8.258	8.258	(1.077)	169053	20.1833	20.18
	66	Bromoform	173	8.415	8.416	(1.097)	44300	21.3997	21.39
	67	Isopropylbenzene	105	8.566	8.566	(1.117)	230213	18.6679	18.66
	68	1,1,2,2-Tetrachloroethane	83	8.845	8.838	(0.915)	67402	18.8775	18.87
$	69	4-Bromofluorobenzene	95	8.688	8.688	(1.133)	185485	48.3727	48.37
*	70	1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	202431	50.0000	
	71	1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	59171	19.7457	19.74(M)
	73	n-Propylbenzene	91	8.917	8.917	(0.923)	319059	21.3325	21.33
	74	Bromobenzene	156	8.809	8.810	(0.912)	71766	19.3879	19.38
	75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	226546	21.6890	21.68
	76	2-Chlorotoluene	91	8.974	8.974	(0.929)	194881	21.5337	21.53
	77	4-Chlorotoluene	91	9.074	9.075	(0.939)	232315	21.8834	21.88
	78	tert-Butylbenzene	119	9.340	9.340	(0.967)	166809	18.8472	18.84
	79	1,2,4-Trimethylbenzene	105	9.382	9.383	(0.971)	206719	19.3195	19.31
	81	sec-Butylbenzene	105	9.526	9.526	(0.986)	219438	17.3422	17.34
	82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	191864	17.9709	17.97
	83	1,3-Dichlorobenzene	146	9.612	9.605	(0.995)	116178	19.0924	19.09

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	115687	18.3012	18.30
87	n-Butylbenzene	91	9.999	9.999	(1.035)	164032	18.4607	18.46
88	1,2-Dichlorobenzene	146	9.999	9.999	(1.035)	107789	19.9338	19.93
89	1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	6627	20.9357	20.93
90	1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	28807	22.3322	22.33
91	Hexachlorobutadiene	225	11.488	11.481	(1.189)	23149	25.4037	25.40
92	Naphthalene	128	11.546	11.546	(1.195)	41348	21.6150	21.61
93	1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	15429	22.4818	22.48
M 94	1,2-Dichloroethylene (total)	96				144660	44.3170	44.31
M 95	Xylenes (total)	106				295528	58.7250	58.72
135	1,4-Dioxane	88	5.600	5.601	(1.339)	14169	381.234	381.23
141	Cyclohexane	56	4.125	4.125	(0.986)	138998	17.6394	17.63
138	Freon TF	101	1.911	1.912	(0.457)	52301	17.2028	17.20
147	Methylcyclohexane	55	5.386	5.378	(1.084)	160094	14.5523	14.55(M)
146	Methyl Acetate	43	2.234	2.227	(0.534)	83902	19.7585	19.75
148	Tert-Butyl alcohol	59	2.427	2.427	(0.580)	206350	492.483	492.48
149	Isopropyl Alcohol	45	2.098	2.091	(0.502)	151848	370.289	370.28

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200419.b\X041905.D
Date : 19-APR-2020 11:54
Client ID: VLCSW-200419
Sample Info: VLCSW-200419;VLCSW-200419;3;;LCS
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200419.b\X041907.D Page 1
Report Date: 05-May-2020 14:26

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200419.b\X041907.D
Lab Smp Id: VBLKW-200419 Client Smp ID: VBLKW-200419
Inj Date : 19-APR-2020 12:42
Operator : PC Inst ID: voa6.i
Smp Info : VBLKW-200419;VBLKW-200419;3;;BLANK
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X200419.b\8260W.m
Meth Date : 05-May-2020 14:26 voa6.i Quant Type: ISTD
Cal Date : 17-APR-2020 15:36 Cal File: X041711.D
Als bottle: 7 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260_GB.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	372648	50.0000	
$ 30 Dibromofluoromethane	113	4.104	4.103	(0.981)	200435	48.8370	48.83
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	266873	56.6993	56.69
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	621564	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	465385	50.0000	
$ 48 Toluene-d8	98	6.389	6.388	(0.833)	622427	53.6854	53.68
$ 69 4-Bromofluorobenzene	95	8.695	8.688	(1.134)	216482	49.3981	49.39
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	220676	50.0000	

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200419.b\X041907.D

Date : 19-APR-2020 12:42

Client ID: VBLKW-200419

Instrument: voa6.i

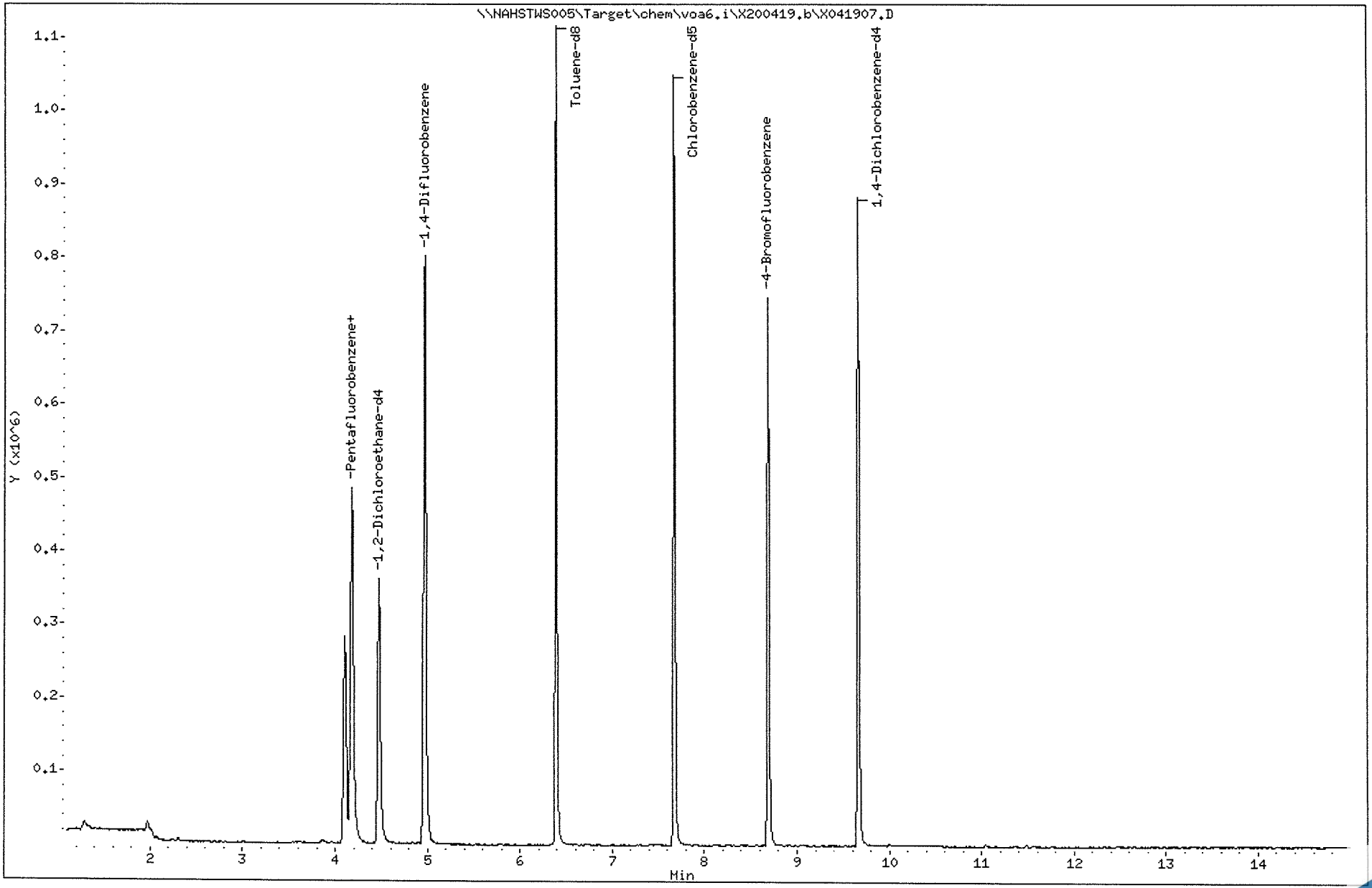
Sample Info: VBLKW-200419;VBLKW-200419;3;;BLANK

Purge Volume: 5.0

Operator: PC

Column phase: DB624

Column diameter: 0.18



ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200419.b\X041909.D
Lab Smp Id: HS20040699-01 Client Smp ID: HS20040699-01
Inj Date : 19-APR-2020 13:30
Operator : PC Inst ID: voa6.i
Smp Info : HS20040699-01;HS20040699-01;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X200419.b\8260W.m
Meth Date : 05-May-2020 14:26 voa6.i Quant Type: ISTD
Cal Date : 17-APR-2020 15:36 Cal File: X041711.D
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260_GB.sub
Target Version: 4.14
Processing Host: NAHSTW7066

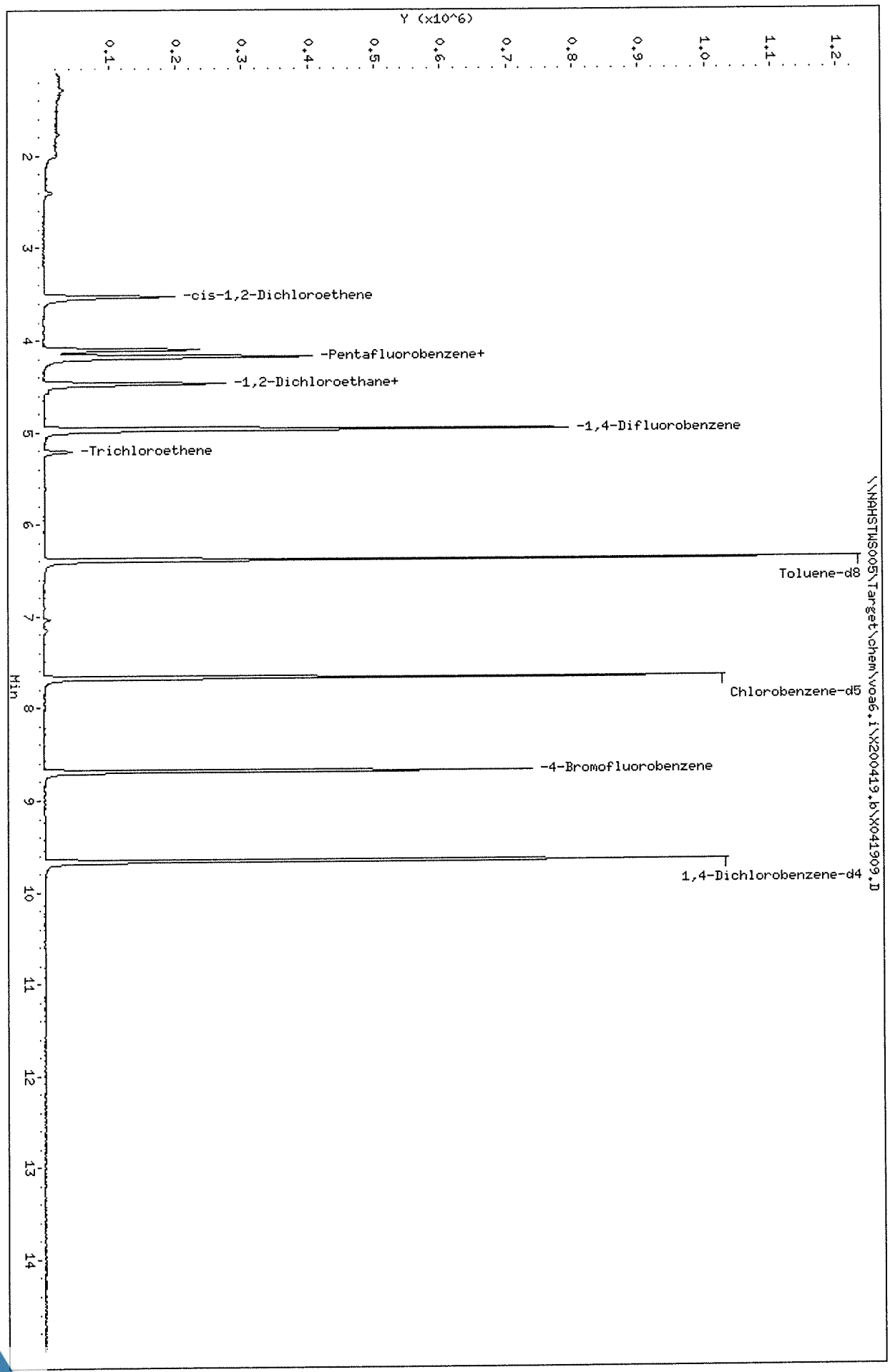
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1	Pentafluorobenzene	168	4.182	4.182	(1.000)	349469	50.0000	
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	86117	21.4673	21.46
$ 30	Dibromofluoromethane	113	4.103	4.103	(0.981)	170268	44.1847	44.18
33	1,2-Dichloroethane	62	4.569	4.562	(0.919)	4957	0.73403	0.73(a)
$ 35	1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	200414	46.7346	46.73
* 36	1,4-Difluorobenzene	114	4.970	4.970	(1.000)	604759	50.0000	
38	Trichloroethene	130	5.213	5.207	(1.049)	13726	3.28972	3.28(a)
* 47	Chlorobenzene-d5	117	7.670	7.671	(1.000)	452022	50.0000	
$ 48	Toluene-d8	98	6.388	6.388	(0.833)	628816	55.8399	55.83(M)
$ 69	4-Bromofluorobenzene	95	8.695	8.688	(1.134)	214751	50.4423	50.44
* 70	1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	237559	50.0000	
M 94	1,2-Dichloroethylene (total)	96				86117	21.4673	21.46

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200419.b\X041909.D
Date : 19-APR-2020 13:30
Client ID: HS20040699-01
Sample Info: HS20040699-01;HS20040699-01;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200419.b\X041910.D
Lab Smp Id: HS20040699-02 Client Smp ID: HS20040699-02
Inj Date : 19-APR-2020 13:54
Operator : PC Inst ID: voa6.i
Smp Info : HS20040699-02;HS20040699-02;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X200419.b\8260W.m
Meth Date : 05-May-2020 14:26 voa6.i Quant Type: ISTD
Cal Date : 17-APR-2020 15:36 Cal File: X041711.D
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260_GB.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

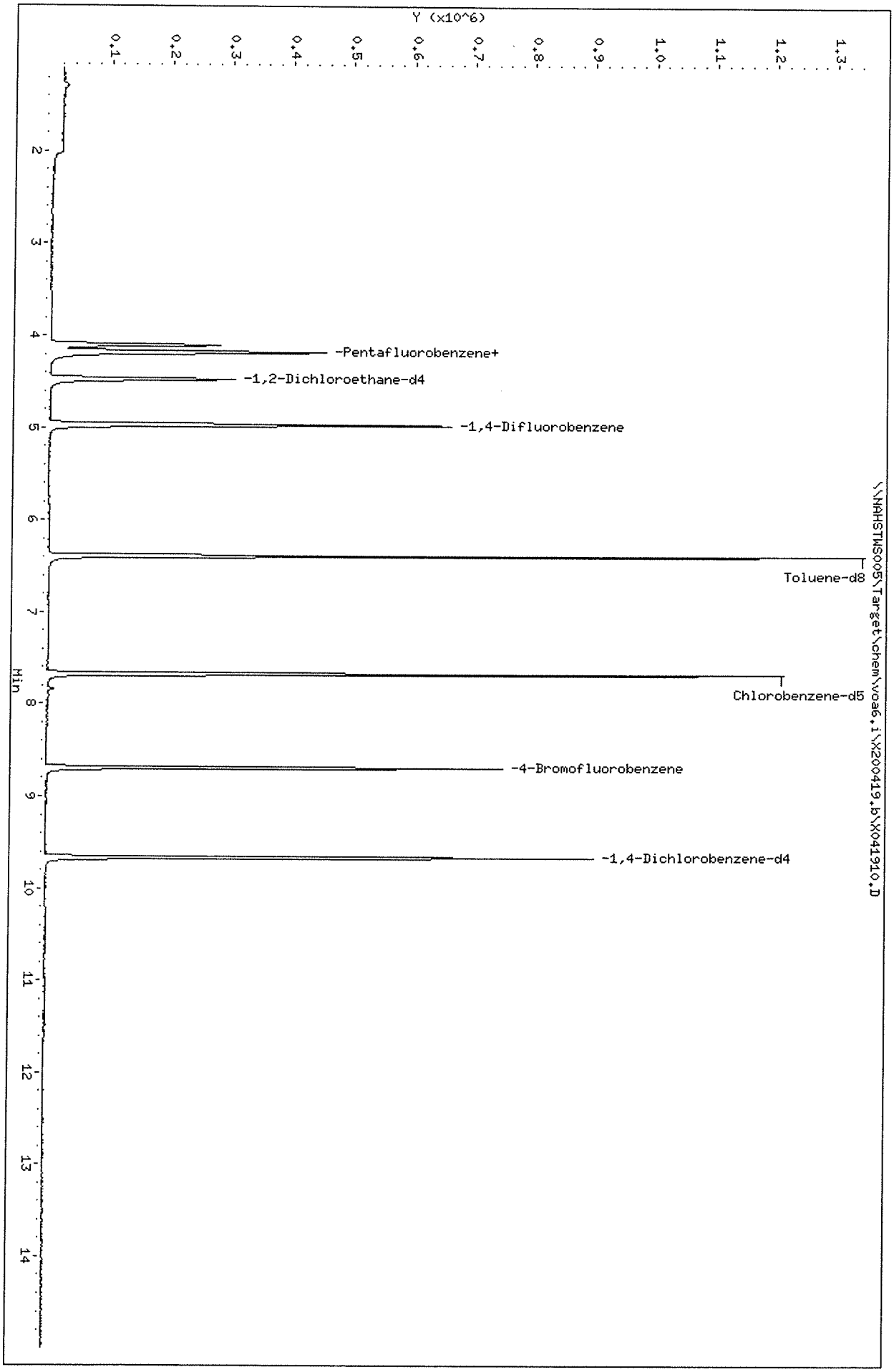
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	375814	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	198969	48.0625	48.06
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	227662	49.0584	49.05
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	530026	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	516899	50.0000	
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	720317	55.9369	55.93(M)
$ 69 4-Bromofluorobenzene	95	8.695	8.688	(1.134)	221618	45.5651	45.56
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	219650	50.0000	

QC Flag Legend

M - Compound response manually integrated.

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200419.b\X041910.D
Date : 19-APR-2020 13:54
Client ID: HS20040699-02
Sample Info: HS20040699-02;HS20040699-02;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200419.b\X041912.D
Report Date: 05-May-2020 14:27

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200419.b\X041912.D
Lab Smp Id: HS20040654-01MS Client Smp ID: HS20040654-01MS
Inj Date : 19-APR-2020 14:42
Operator : PC Inst ID: voa6.i
Smp Info : HS20040654-01MS;HS20040654-01MS;3;;MS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X200419.b\8260W.m
Meth Date : 05-May-2020 14:26 voa6.i Quant Type: ISTD
Cal Date : 17-APR-2020 15:36 Cal File: X041711.D
Als bottle: 12 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260_GB.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

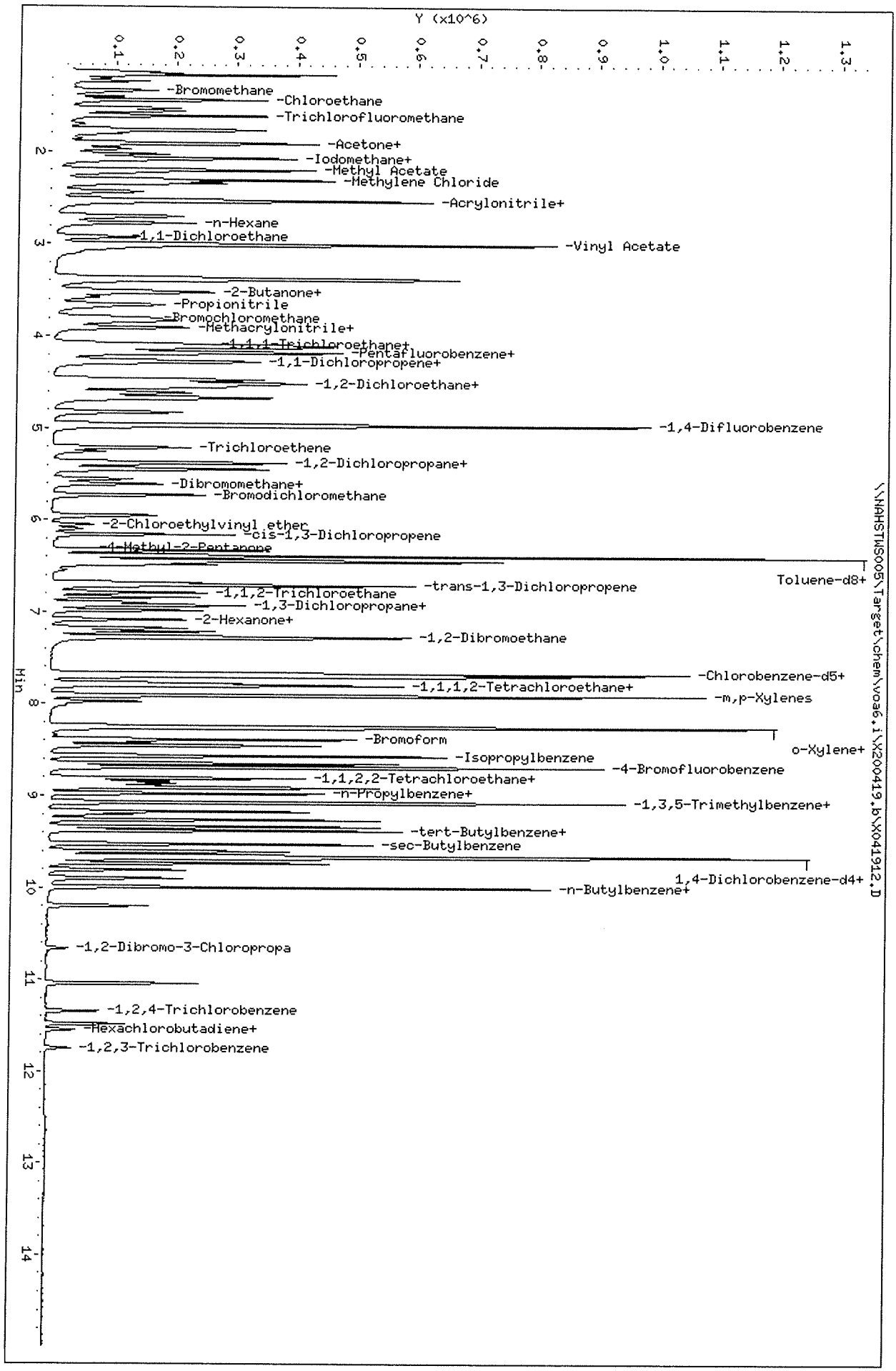
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	368069	50.0000	
194 Acetaldehyde	44	1.210	1.210	(0.289)	56498	85.7723	85.77
140 1,3-Butadiene	54	1.159	1.159	(0.277)	122121	18.0458	18.04
25 Methacrylonitrile	41	3.824	3.824	(0.914)	91358	16.0223	16.02
136 n-Hexane	57	2.771	2.771	(0.663)	123868	21.3461	21.34
4 Propionitrile	54	3.652	3.652	(0.873)	143990	112.058	112.05(a)
2 Dichlorodifluoromethane	85	0.966	0.966	(0.231)	53190	14.0991	14.09
3 Chloromethane	50	1.073	1.073	(0.257)	127618	17.7088	17.70
5 Vinyl Chloride	62	1.138	1.138	(0.272)	116606	19.1854	19.18
6 Bromomethane	94	1.339	1.339	(0.320)	62763	20.8982	20.89
7 Chloroethane	64	1.403	1.403	(0.336)	65011	18.6192	18.61
8 Trichlorofluoromethane	101	1.561	1.561	(0.373)	130360	20.9906	20.99
9 Acrolein	56	1.238	1.238	(0.296)	31676	40.2098	40.20
10 Acetone	43	1.969	1.969	(0.471)	97997	46.2795	46.27
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	72000	20.9522	20.95
15 Iodomethane	142	2.026	2.026	(0.485)	172576	33.9740	33.97
16 Acrylonitrile	53	2.535	2.535	(0.606)	85092	29.2863	29.28
17 Methylene Chloride	84	2.306	2.306	(0.551)	76200	17.3231	17.32
18 Methyl tert-butyl ether	73	2.535	2.535	(0.606)	203934	19.6048	19.60
19 Carbon Disulfide	76	2.069	2.069	(0.495)	451871	37.6281	37.62
20 trans-1,2-Dichloroethene	96	2.528	2.528	(0.604)	71055	21.4649	21.46
21 Vinyl Acetate	43	3.000	3.000	(0.717)	673352	50.7111	50.71

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
	22 1,1-Dichloroethane	63	2.922	2.922	(0.699)	156586	19.5701	19.57
	24 2-Butanone	43	3.581	3.573	(0.856)	84148	31.1859	31.18
	26 2,2-Dichloropropane	77	3.516	3.516	(0.841)	106353	18.4534	18.45
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	76920	18.2057	18.20
	28 Chloroform	83	3.910	3.910	(0.935)	198908	27.4560	27.45
	29 Bromochloromethane	128	3.803	3.795	(0.909)	40059	17.7917	17.79
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	190779	47.0419	47.04
	31 1,1,1-Trichloroethane	97	4.082	4.089	(0.976)	128747	20.4462	20.44
	32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	119006	24.1566	24.15
	33 1,2-Dichloroethane	62	4.555	4.562	(0.916)	135425	23.9538	23.95
	34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	115083	23.4381	23.43
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	251346	54.4443	54.44
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	506292	50.0000	
	37 Benzene	78	4.512	4.512	(0.908)	327796	23.5636	23.56
	38 Trichloroethene	130	5.207	5.207	(1.048)	73675	21.0919	21.09
	39 Bromodichloromethane	83	5.729	5.729	(1.153)	140285	31.3463	31.34
	41 2-Chloroethylvinyl ether	63	6.052	6.052	(1.218)	28318	35.5373	35.53
	42 1,2-Dichloropropane	63	5.436	5.436	(1.094)	88830	21.1017	21.10
	44 Dibromomethane	93	5.558	5.558	(1.118)	45119	20.3967	20.39
	45 4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	244248	55.3398	55.33
	46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	137522	24.9742	24.97
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	454921	50.0000	
$	48 Toluene-d8	98	6.388	6.388	(0.833)	699106	61.6861	61.68
	50 Toluene	91	6.446	6.446	(0.840)	334886	25.4784	25.47
	51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	101601	20.9850	20.98
	52 2-Hexanone	43	7.090	7.083	(0.924)	133207	40.4224	40.42
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	51405	20.0812	20.08
	54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	108394	20.1693	20.16
	55 Dibromochloromethane	129	7.176	7.176	(0.936)	100153	29.0478	29.04
	56 Tetrachloroethene	164	6.933	6.933	(0.904)	61227	22.8143	22.81
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	67437	21.0597	21.05
	58 1-Chlorohexane	55	7.699	7.699	(1.549)	99202	23.3774	23.37
	59 Chlorobenzene	112	7.699	7.699	(1.004)	184774	20.5174	20.51
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	70296	21.1573	21.15
	61 Ethylbenzene	106	7.800	7.800	(1.017)	100565	21.2998	21.29
	62 m,p-Xylenes	106	7.907	7.907	(1.031)	242353	42.4760	42.47
	63 o-Xylene	106	8.244	8.244	(1.075)	136534	25.0025	25.00
	64 Styrene	104	8.258	8.258	(1.077)	232562	24.8580	24.85
	66 Bromoform	173	8.416	8.416	(1.097)	58527	25.3115	25.31
	67 Isopropylbenzene	105	8.566	8.566	(1.117)	348539	25.3032	25.30
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.838	(0.915)	82913	20.6018	20.60
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	259866	60.5602	60.56
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	228174	50.0000	
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	67036	19.8464	19.84 (M)
	73 n-Propylbenzene	91	8.917	8.917	(0.922)	351582	20.8549	20.85
	74 Bromobenzene	156	8.810	8.810	(0.911)	94322	22.6067	22.60
	75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	249079	21.1559	21.15
	76 2-Chlorotoluene	91	8.974	8.974	(0.928)	208484	20.4377	20.43
	77 4-Chlorotoluene	91	9.075	9.075	(0.939)	240785	20.1223	20.12
	78 tert-Butylbenzene	119	9.340	9.340	(0.966)	213662	21.4173	21.41
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	251385	20.8432	20.84
	81 sec-Butylbenzene	105	9.526	9.526	(0.985)	295404	20.7119	20.71
	82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	255118	21.1997	21.19
	83 1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	139313	20.3114	20.31

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
	84 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	139042	19.5143	19.51
	87 n-Butylbenzene	91	9.999	9.999	(1.034)	221189	22.0848	22.08
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	126118	20.6921	20.69
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	6947	19.4705	19.47
	90 1,2,4-Trichlorobenzene	180	11.345	11.338	(1.173)	24951	17.1606	17.16
	91 Hexachlorobutadiene	225	11.481	11.481	(1.187)	21483	20.6391	20.63
	92 Naphthalene	128	11.546	11.546	(1.194)	32844	15.2324	15.23
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	10745	13.8902	13.89
M	94 1,2-Dichloroethylene (total)	96				147975	39.6706	39.67
M	95 Xylenes (total)	106				378887	67.4785	67.47
	135 1,4-Dioxane	88	5.601	5.601	(1.339)	16948	396.884	396.88
	141 Cyclohexane	56	4.125	4.125	(0.986)	195323	21.5735	21.57
	138 Freon TF	101	1.912	1.912	(0.457)	71053	20.3407	20.34
	147 Methylcyclohexane	55	5.378	5.378	(1.082)	252111	21.4693	21.46
	146 Methyl Acetate	43	2.234	2.227	(0.534)	98894	20.2533	20.25
	148 Tert-Butyl alcohol	59	2.434	2.427	(0.582)	187258	392.012	392.01
	149 Isopropyl Alcohol	45	2.098	2.091	(0.502)	169222	359.155	359.15

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200419.b\X041912.D
Date : 19-APR-2020 14:42
Client ID: HS20040654-01MS
Sample Info: HS20040654-01MS;HS20040654-01MS;3;;MS
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200419.b\X041913.D
Lab Smp Id: HS20040654-01MSD Client Smp ID: HS20040654-01MSD
Inj Date : 19-APR-2020 15:06
Operator : PC Inst ID: voa6.i
Smp Info : HS20040654-01MSD;HS20040654-01MSD;3;;MSD
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X200419.b\8260W.m
Meth Date : 05-May-2020 14:26 voa6.i Quant Type: ISTD
Cal Date : 17-APR-2020 15:36 Cal File: X041711.D
Als bottle: 12 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260_GB.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

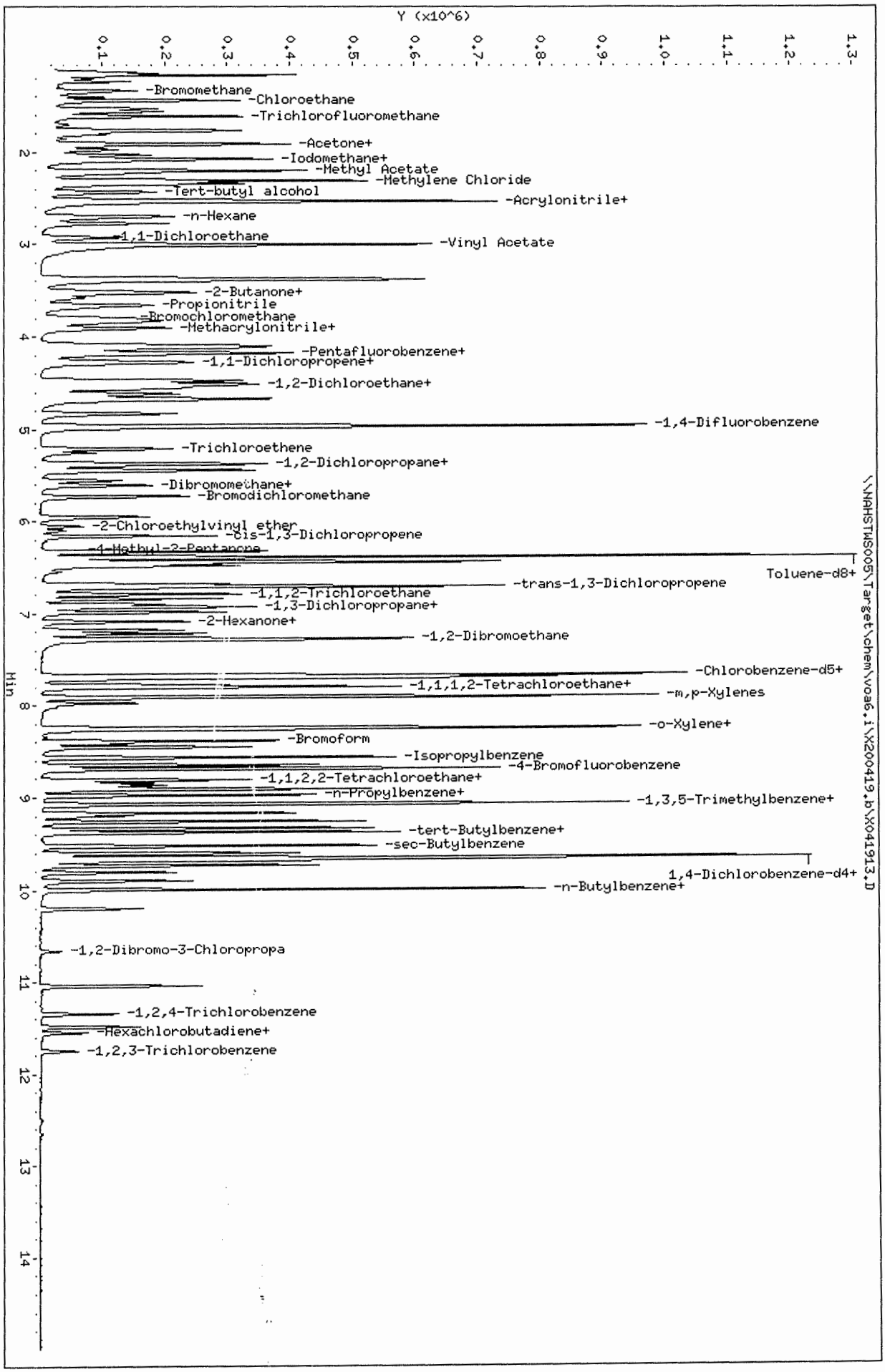
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	327134	50.0000	
194 Acetaldehyde	44	1.210	1.210	(0.289)	53133	91.7110	91.71
140 1,3-Butadiene	54	1.159	1.159	(0.277)	116375	19.3486	19.34
25 Methacrylonitrile	41	3.824	3.824	(0.914)	89598	17.6799	17.67
136 n-Hexane	57	2.771	2.771	(0.663)	110695	21.4630	21.46
4 Propionitrile	54	3.652	3.652	(0.873)	142224	124.534	124.53(a)
2 Dichlorodifluoromethane	85	0.966	0.966	(0.231)	47588	14.1926	14.19
3 Chloromethane	50	1.073	1.073	(0.257)	117059	18.2458	18.24
5 Vinyl Chloride	62	1.138	1.138	(0.272)	105391	19.5100	19.51
6 Bromomethane	94	1.339	1.339	(0.320)	56697	21.2404	21.24
7 Chloroethane	64	1.403	1.403	(0.336)	59889	19.2986	19.29
8 Trichlorofluoromethane	101	1.561	1.561	(0.373)	120082	21.7551	21.75
9 Acrolein	56	1.238	1.238	(0.296)	28312	40.4367	40.43
10 Acetone	43	1.969	1.969	(0.471)	99653	53.2560	53.25
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	66165	21.6636	21.66
15 Iodomethane	142	2.026	2.026	(0.485)	166373	36.6509	36.65
16 Acrylonitrile	53	2.535	2.535	(0.606)	100711	38.6877	38.68
17 Methylene Chloride	84	2.306	2.306	(0.551)	83670	21.4014	21.40
18 Methyl tert-butyl ether	73	2.535	2.535	(0.606)	237048	25.6397	25.63
19 Carbon Disulfide	76	2.069	2.069	(0.495)	422633	39.5972	39.59
20 trans-1,2-Dichloroethene	96	2.528	2.528	(0.604)	75830	25.7739	25.77
21 Vinyl Acetate	43	3.000	3.000	(0.717)	518590	44.2460	44.24

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
	22 1,1-Dichloroethane	63	2.922	2.922	(0.699)	144209	20.2785	20.27
	24 2-Butanone	43	3.581	3.573	(0.856)	89472	37.0948	37.09
	26 2,2-Dichloropropane	77	3.516	3.516	(0.841)	103245	20.1558	20.15
	27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	73406	19.5480	19.54
	28 Chloroform	83	3.910	3.910	(0.935)	185079	28.7439	28.74
	29 Bromochloromethane	128	3.795	3.795	(0.908)	38601	19.2895	19.28
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	161761	44.8516	44.85
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	103945	18.5730	18.57
	32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	88652	18.2243	18.22
	33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	110453	19.9469	19.94
	34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	92709	19.2836	19.28
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	231951	56.2208	56.22
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	495882	50.0000	
	37 Benzene	78	4.512	4.512	(0.908)	286005	20.9911	20.99
	38 Trichloroethene	130	5.207	5.207	(1.048)	69700	20.3728	20.37
	39 Bromodichloromethane	83	5.729	5.729	(1.153)	137368	31.3389	31.33
	41 2-Chloroethylvinyl ether	63	6.052	6.052	(1.218)	27355	35.0495	35.04
	42 1,2-Dichloropropane	63	5.436	5.436	(1.094)	84602	20.5192	20.51
	44 Dibromomethane	93	5.558	5.558	(1.118)	44586	20.5789	20.57
	45 4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	241186	56.1610	56.16
	46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	131355	24.3550	24.35
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	441701	50.0000	
$	48 Toluene-d8	98	6.388	6.388	(0.833)	686281	62.3669	62.36
	50 Toluene	91	6.446	6.446	(0.840)	331583	25.9822	25.98
	51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	120640	25.4404	25.44
	52 2-Hexanone	43	7.090	7.083	(0.924)	142462	44.5248	44.52
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	62119	24.9929	24.99
	54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	124974	23.9504	23.95
	55 Dibromochloromethane	129	7.176	7.176	(0.936)	98830	29.5220	29.52
	56 Tetrachloroethene	164	6.933	6.933	(0.904)	63893	24.5202	24.52
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	64944	20.8882	20.88
	58 1-Chlorohexane	55	7.699	7.699	(1.549)	94368	22.6822	22.68
	59 Chlorobenzene	112	7.699	7.699	(1.004)	178563	20.4212	20.42
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	67539	20.9359	20.93
	61 Ethylbenzene	106	7.800	7.800	(1.017)	97179	21.1987	21.19
	62 m,p-Xylenes	106	7.907	7.907	(1.031)	234666	42.3597	42.35
	63 o-Xylene	106	8.244	8.244	(1.075)	114111	21.5218	21.52
	64 Styrene	104	8.258	8.258	(1.077)	190818	21.0065	21.00
	66 Bromoform	173	8.416	8.416	(1.097)	51793	23.0696	23.06
	67 Isopropylbenzene	105	8.566	8.566	(1.117)	308372	23.0572	23.05
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	74678	19.4554	19.45
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	210632	50.6292	50.62
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	217622	50.0000	
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	64902	20.1463	20.14 (M)
	73 n-Propylbenzene	91	8.917	8.917	(0.922)	336675	20.9390	20.93
	74 Bromobenzene	156	8.810	8.810	(0.911)	81325	20.4367	20.43
	75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	241023	21.4643	21.46
	76 2-Chlorotoluene	91	8.974	8.974	(0.928)	198388	20.3910	20.39
	77 4-Chlorotoluene	91	9.075	9.075	(0.939)	228969	20.0626	20.06
	78 tert-Butylbenzene	119	9.340	9.340	(0.966)	204972	21.5425	21.54
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	243880	21.2014	21.20
	81 sec-Butylbenzene	105	9.526	9.526	(0.985)	308891	22.7076	22.70
	82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	255174	22.2325	22.23
	83 1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	144248	22.0506	22.05

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
	84 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	135885	19.9959	19.99
	87 n-Butylbenzene	91	9.999	9.999	(1.034)	216172	22.6304	22.63
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	123809	21.2982	21.29
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	6817	20.0326	20.03
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	31018	22.3677	22.36
	91 Hexachlorobutadiene	225	11.489	11.481	(1.188)	24649	25.1467	25.14
	92 Naphthalene	128	11.546	11.546	(1.194)	47314	23.0073	23.00
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	16136	21.8707	21.87
M	94 1,2-Dichloroethylene (total)	96				149236	45.3219	45.32
M	95 Xylenes (total)	106				348777	63.8815	63.88
	135 1,4-Dioxane	88	5.601	5.601	(1.339)	14709	387.553	387.55
	141 Cyclohexane	56	4.125	4.125	(0.986)	147312	18.3067	18.30
	138 Freon TF	101	1.912	1.912	(0.457)	65697	21.1608	21.16
	147 Methylcyclohexane	55	5.378	5.378	(1.082)	246172	21.4055	21.40
	146 Methyl Acetate	43	2.227	2.227	(0.532)	102603	23.5316	23.53
	148 Tert-Butyl alcohol	59	2.427	2.427	(0.580)	226727	528.155	528.15
	149 Isopropyl Alcohol	45	2.098	2.091	(0.502)	168399	402.131	402.13

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200419.b\X041913.D
Date : 19-APR-2020 15:06
Client ID: HS20040654-01HSD
Sample Info: HS20040654-01HSD;HS20040654-01HSD;3;;HSD
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200419.b\X041914.D
Lab Smp Id: CCV-END Client Smp ID: CCV-END
Inj Date : 19-APR-2020 15:30
Operator : PC Inst ID: voa6.i
Smp Info : CCV-END;CCV-END;2;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X200419.b\8260W.m
Meth Date : 05-May-2020 14:27 voa6.i Quant Type: ISTD
Cal Date : 17-APR-2020 15:36 Cal File: X041711.D
Als bottle: 13 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260_GB.sub
Target Version: 4.14
Processing Host: NAHSTW7066

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

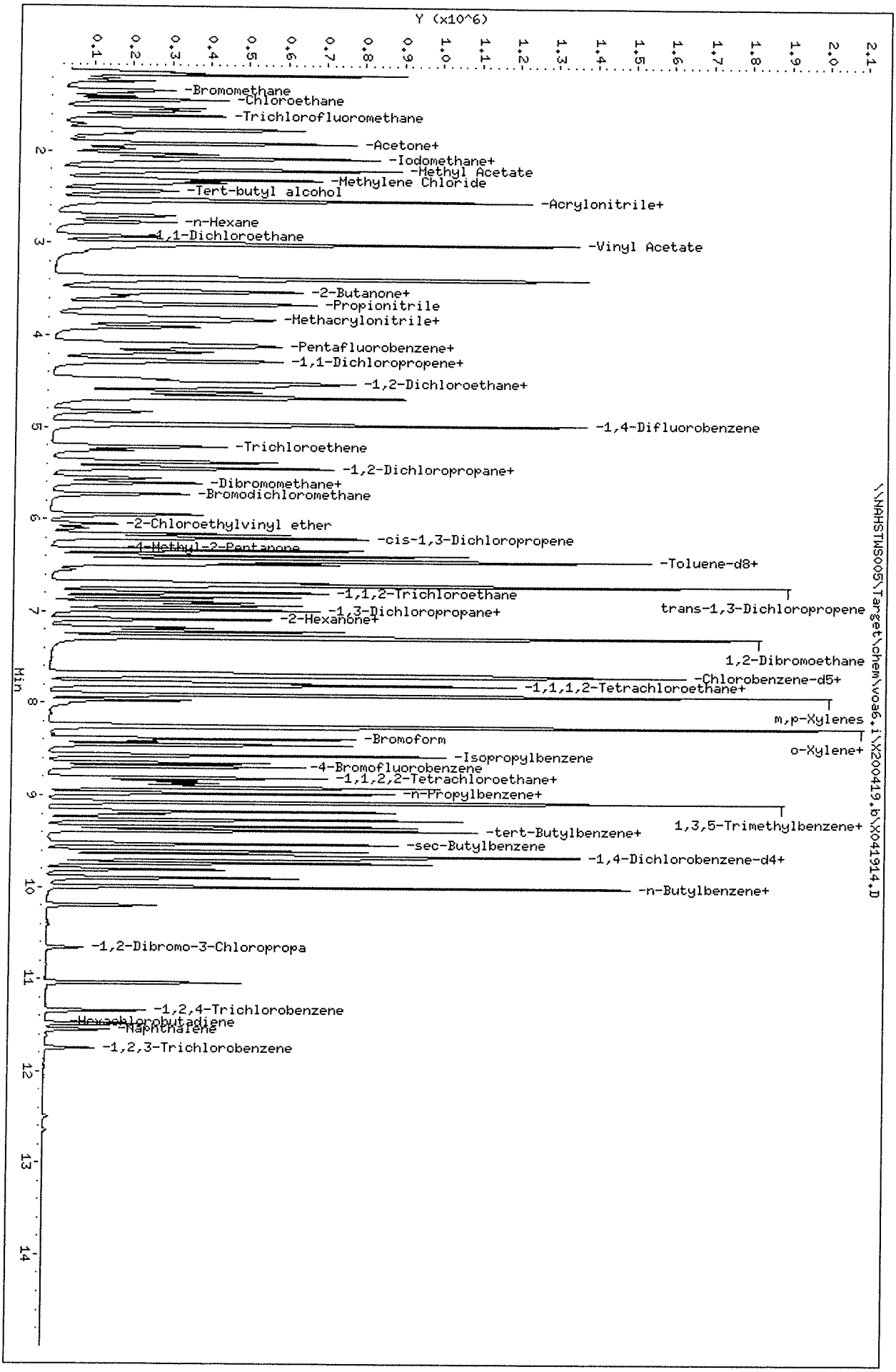
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1	Pentafluorobenzene	168	4.182	4.182	(1.000)	301216	50.0000	
194	Acetaldehyde	44	1.210	1.210	(0.289)	107797	200.000	221.81
140	1,3-Butadiene	54	1.159	1.159	(0.277)	258607	50.0000	46.69
25	Methacrylonitrile	41	3.824	3.824	(0.914)	256535	50.0000	54.97
136	n-Hexane	57	2.771	2.771	(0.663)	167374	50.0000	35.24
4	Propionitrile	54	3.652	3.652	(0.873)	598651	500.000	569.29
2	Dichlorodifluoromethane	85	0.966	0.966	(0.231)	141118	50.0000	45.70
3	Chloromethane	50	1.073	1.073	(0.257)	287320	50.0000	47.05
5	Vinyl Chloride	62	1.138	1.138	(0.272)	240196	50.0000	48.29
6	Bromomethane	94	1.338	1.338	(0.320)	118964	50.0000	48.37
7	Chloroethane	64	1.403	1.403	(0.336)	127841	50.0000	44.73
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	233352	50.0000	45.91
9	Acrolein	56	1.238	1.238	(0.296)	53826	100.000	83.49
10	Acetone	43	1.969	1.969	(0.471)	172226	100.000	101.81
11	1,1-Dichloroethene	96	1.911	1.911	(0.457)	134511	50.0000	47.83
15	Iodomethane	142	2.026	2.026	(0.485)	417891	100.000	96.57
16	Acrylonitrile	53	2.535	2.535	(0.606)	258316	100.000	99.70
17	Methylene Chloride	84	2.305	2.305	(0.551)	146157	50.0000	40.60
18	Methyl tert-butyl ether	73	2.535	2.535	(0.606)	415621	50.0000	48.82
19	Carbon Disulfide	76	2.069	2.069	(0.495)	946851	100.000	96.34
20	trans-1,2-Dichloroethene	96	2.528	2.528	(0.604)	131040	50.0000	48.37
21	Vinyl Acetate	43	3.000	3.000	(0.717)	1146489	100.000	98.49

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
22	1,1-Dichloroethane	63	2.921	2.921	(0.699)	307409	50.0000	46.94
24	2-Butanone	43	3.573	3.573	(0.854)	227153	100.000	100.36
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	240779	50.0000	51.05
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	184318	50.0000	53.30
28	Chloroform	83	3.910	3.910	(0.935)	315712	50.0000	53.25
29	Bromochloromethane	128	3.795	3.795	(0.908)	91684	50.0000	49.75
$ 30	Dibromofluoromethane	113	4.103	4.103	(0.981)	164644	50.0000	49.63
31	1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	254716	50.0000	49.42
32	1,1-Dichloropropene	75	4.282	4.282	(0.862)	212657	50.0000	50.65
33	1,2-Dichloroethane	62	4.555	4.555	(0.916)	269583	50.0000	55.22
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	203667	50.0000	48.00
$ 35	1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	207427	50.0000	54.83
* 36	1,4-Difluorobenzene	114	4.970	4.970	(1.000)	437134	50.0000	
37	Benzene	78	4.512	4.512	(0.908)	634786	50.0000	52.85
38	Trichloroethene	130	5.206	5.206	(1.048)	145391	50.0000	48.20
39	Bromodichloromethane	83	5.729	5.729	(1.153)	194562	50.0000	50.35
41	2-Chloroethylvinyl ether	63	6.052	6.052	(1.218)	67485	100.000	98.08
42	1,2-Dichloropropane	63	5.436	5.436	(1.094)	179225	50.0000	49.31
44	Dibromomethane	93	5.557	5.557	(1.118)	96157	50.0000	50.34
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	526560	100.000	100.60
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	286505	50.0000	60.26
* 47	Chlorobenzene-d5	117	7.671	7.671	(1.000)	453562	50.0000	
$ 48	Toluene-d8	98	6.388	6.388	(0.833)	575973	50.0000	50.97
50	Toluene	91	6.446	6.446	(0.840)	674456	50.0000	51.46
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	269765	50.0000	64.53
52	2-Hexanone	43	7.083	7.083	(0.923)	347466	100.000	105.75
53	1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	136884	50.0000	53.63
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	283001	50.0000	52.81
55	Dibromochloromethane	129	7.176	7.176	(0.936)	175487	50.0000	51.04
56	Tetrachloroethene	164	6.933	6.933	(0.904)	121635	50.0000	45.45
57	1,2-Dibromoethane	107	7.262	7.262	(0.947)	166741	50.0000	52.22
58	1-Chlorohexane	55	7.699	7.699	(1.549)	170800	50.0000	46.71
59	Chlorobenzene	112	7.692	7.692	(1.003)	413482	50.0000	46.05
60	1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	150176	50.0000	45.33
61	Ethylbenzene	106	7.800	7.800	(1.017)	202011	50.0000	42.91
62	m,p-Xylenes	106	7.907	7.907	(1.031)	465264	100.000	81.78
63	o-Xylene	106	8.244	8.244	(1.075)	232904	50.0000	42.77
64	Styrene	104	8.258	8.258	(1.077)	412606	50.0000	44.23
66	Bromoform	173	8.416	8.416	(1.097)	107561	50.0000	46.65
67	Isopropylbenzene	105	8.566	8.566	(1.117)	546096	50.0000	39.76
68	1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	160454	50.0000	46.37
$ 69	4-Bromofluorobenzene	95	8.688	8.688	(1.133)	184578	50.0000	43.27
* 70	1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	196146	50.0000	
71	1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	142032	50.0000	48.91 (M)
73	n-Propylbenzene	91	8.917	8.917	(0.923)	639167	50.0000	44.10
74	Bromobenzene	156	8.810	8.810	(0.912)	173473	50.0000	48.36
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	460225	50.0000	45.47
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	405490	50.0000	46.24
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	465051	50.0000	45.21
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	373405	50.0000	43.54
79	1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	482495	50.0000	46.53
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	508007	50.0000	41.43
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	447792	50.0000	43.28
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	282726	50.0000	47.95

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	284747	50.0000	46.48	
87	n-Butylbenzene	91	9.999	9.999	(1.035)	375544	50.0000	43.61	
88	1,2-Dichlorobenzene	146	9.999	9.999	(1.035)	257161	50.0000	49.08	
89	1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	17424	50.0000	56.80	
90	1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	63989	50.0000	51.19	
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	40292	50.0000	46.87	
92	Naphthalene	128	11.546	11.546	(1.195)	102341	50.0000	55.21	
93	1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	32062	50.0000	48.21	
M 94	1,2-Dichloroethylene (total)	96				315358	100.000		(a)
135	1,4-Dioxane	88	5.600	5.600	(1.339)	35898	1000.00	1027.22	
141	Cyclohexane	56	4.125	4.125	(0.986)	299967	50.0000	40.48	
138	Freon TF	101	1.911	1.911	(0.457)	115653	50.0000	40.45	
147	Methylcyclohexane	55	5.378	5.378	(1.082)	431378	50.0000	41.11	
146	Methyl Acetate	43	2.227	2.227	(0.532)	161280	50.0000	39.57	
148	Tert-Butyl alcohol	59	2.427	2.427	(0.580)	410756	1000.00	982.96	
149	Isopropyl Alcohol	45	2.098	2.098	(0.502)	387841	1000.00	1005.84	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200419.b\X041914.D
Date : 19-APR-2020 15:30
Client ID: CCV-END
Sample Info: CCV-END;CCV-END;2;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

HS20040699 Wet Chem Raw Data (IC)

ALS WO# HS20040699

Sequence: 042320
Last Update Operator: alshs.nouser

CD	Name	Comment	Type	Position	Dilution	Level	Instrument Method	Processing Method	Volume	Status	Inject Time
	STD1	2970209205	Calibration	GA1	1.0000	1	Anions Program 02052020.1	Anions Pro	5.0	Finished	2/5/2020 7:39:11 PM -0
	STD2	NEW PRGM	Calibration	GA2	1.0000	2	Anions Program 02052020.1	Anions Pro	5.0	Finished	2/5/2020 7:57:16 PM -0
	STD3		Calibration	GA3	1.0000	3	Anions Program 02052020.1	Anions Pro	5.0	Finished	2/5/2020 8:15:24 PM -0
	STD4		Calibration	GA4	1.0000	4	Anions Program 02052020.1	Anions Pro	5.0	Finished	2/5/2020 8:33:31 PM -0
	STD5	NO2/PO4	Calibration	GA5	1.0000	5	Anions Program 02052020.1	Anions Pro	5.0	Finished	2/5/2020 8:51:36 PM -0
	STD6	MAX 10PPM	Calibration	GA6	1.0000	6	Anions Program 02052020.1	Anions Pro	5.0	Finished	2/5/2020 9:09:41 PM -0
	ICV	2970209123	Unknown	GA7	1.0000		Anions Program 02052020.1	Anions Pro	5.0	Finished	2/5/2020 9:27:48 PM -0
	ICB		Unknown	GA8	1.0000		Anions Program 02052020.1	Anions Pro	5.0	Finished	2/5/2020 9:45:53 PM -0
	CCV1		Unknown	BA3	1.0000		Anions Program 02052020.1	Anions Pro	5.0	Finished	4/23/2020 4:13:09 PM -
	CCB		Unknown	BA4	1.0000		Anions Program 02052020.1	Anions Pro	5.0	Finished	4/23/2020 4:31:17 PM -
	MBLK042320	9056	Unknown	BB1	1.0000		Anions Program 02052020.1	Anions Pro	5.0	Finished	4/23/2020 7:14:25 PM -
	LCS		Unknown	BB2	1.0000		Anions Program 02052020.1	Anions Pro	5.0	Finished	4/23/2020 7:32:33 PM -
	CCV		Unknown	BA1	1.0000		Anions Program 02052020.1	Anions Pro	5.0	Finished	4/23/2020 7:50:39 PM -
	CCB		Unknown	BA2	1.0000		Anions Program 02052020.1	Anions Pro	5.0	Finished	4/23/2020 8:08:44 PM -
	HS20040699-01DF10		Unknown	BD3	10.0000		Anions Program 02052020.1	Anions Pro	5.0	Finished	4/23/2020 9:21:10 PM -
	HS20040845-09DF100		Unknown	BD8	100.0000		Anions Program 02052020.1	Anions Pro	5.0	Finished	4/23/2020 10:51:40 PM
	CCV1		Unknown	BA3	1.0000		Anions Program 02052020.1	Anions Pro	5.0	Finished	4/23/2020 11:27:55 PM
	CCB		Unknown	BA4	1.0000		Anions Program 02052020.1	Anions Pro	5.0	Finished	4/23/2020 11:46:00 PM
	HS20040845-09MSDF100		Unknown	BE2	100.0000		Anions Program 02052020.1	Anions Pro	5.0	Finished	4/24/2020 12:04:05 AM
	HS20040845-09MSDDF100		Unknown	BE3	100.0000		Anions Program 02052020.1	Anions Pro	5.0	Finished	4/24/2020 12:22:11 AM
	CCV		Unknown	BA1	1.0000		Anions Program 02052020.1	Anions Pro	5.0	Finished	4/24/2020 2:47:00 AM -
	CCB		Unknown	BA2	1.0000		Anions Program 02052020.1	Anions Pro	5.0	Finished	4/24/2020 3:05:06 AM -

Sequence: 042320
Last Update Operator: alshs.nouser

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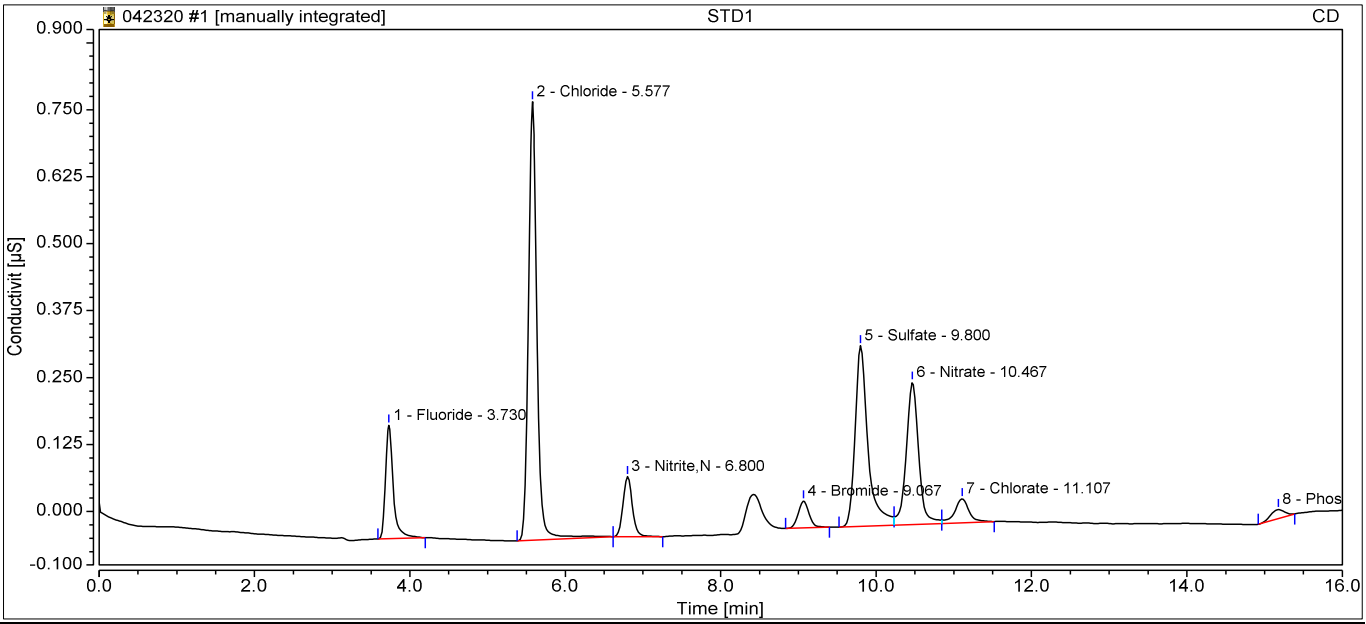
Sequence: 042320
Injection #6: STD6

Calibration

Peak No.	Peak Name	Cal.Type	Eval.Type	Number of Points	Rel.Std.Dev. %	Coeff.of Determination	C0 (Offset)	C1 (Slope)	C2 (Curve)
1	*Fluoride*	*Lin, WithOffset, 1/*	*Area*	*6*	*13.4314*	*0.99915*	*-0.0083*	*0.3414*	*0.0000*
2	Chloride	Lin, WithOffset, 1/	Area	6	2.2020	0.99998	-0.0141	0.2320	0.0000
3	Nitrite,N	Lin, WithOffset, 1/	Area	5	19.9747	0.99771	-0.0251	0.4962	0.0000
4	Bromide	Lin, WithOffset, 1/	Area	6	12.1436	0.99933	-0.0033	0.0991	0.0000
5	Sulfate	Lin, WithOffset, 1/	Area	6	4.2312	0.99991	-0.0170	0.1679	0.0000
6	Nitrate	Lin, WithOffset, 1/	Area	6	2.3081	0.99997	-0.0076	0.5843	0.0000
7	Chlorate	Lin, WithOffset, 1/	Area	6	9.7729	0.99945	0.0017	0.0949	0.0000
8	Phosphate	Lin, WithOffset, 1/	Area	5	18.6678	0.99857	-0.0214	0.2119	0.0000
Maximum					**19.9747**	0.99998			
Minimum					2.2020	**0.99771**			

1 STD1			
Sample Name:	**STD1**	*Injection Volume:*	**5.00**
Vial Number:	**GA1**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**02/05/2020 19:39**	*Sample Weight:*	**1.0000**

Run Time:



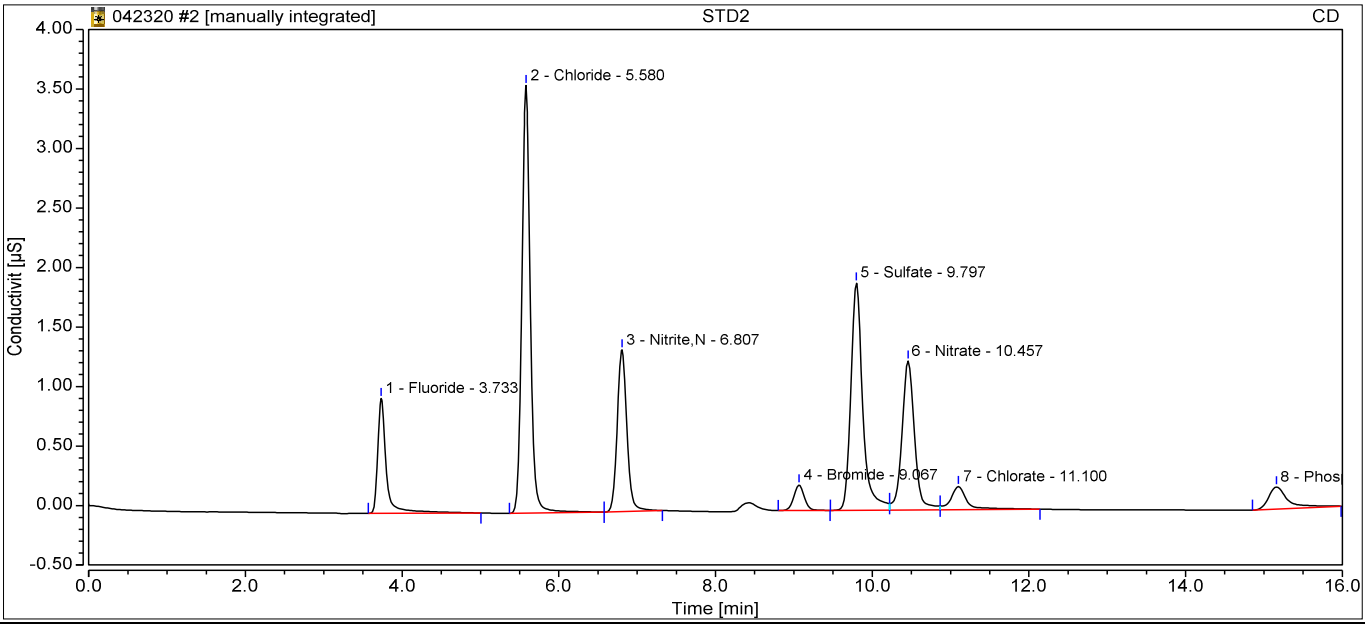
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	0.024	0.0955	0.0955	1.0000
2	5.58	Chloride	BMB	0.103	0.5065	0.5065	1.0000
3	6.80	Nitrite,N	BMB	0.016	0.0821	0.0821	1.0000
4	9.07	Bromide	BMB	0.008	0.1156	0.1156	1.0000
5	9.80	Sulfate	BM	0.065	0.4885	0.4885	1.0000
6	10.47	Nitrate	M	0.049	0.0974	0.0974	1.0000
7	11.11	Chlorate	MB	0.010	0.0834	0.0834	1.0000
8	15.18	Phosphate	BMB*	0.003	0.1173	0.1173	1.0000
Total:			**0.000**	**0.279**		**1.59**	

2 STD2

Sample Name:	**STD2**	*Injection Volume:*	**5.00**
Vial Number:	**GA2**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**02/05/2020 19:57**	*Sample Weight:*	**1.0000**

Run Time:

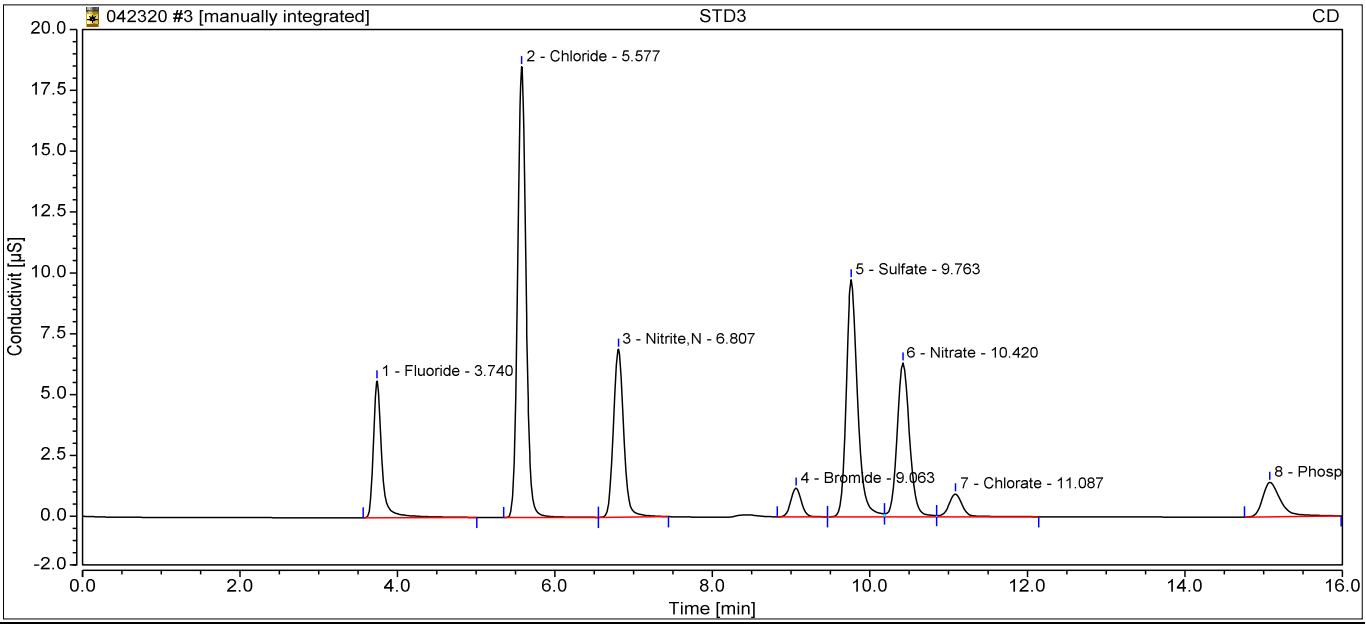


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	0.123	0.3833	0.3833	1.0000
2	5.58	Chloride	BMb*	0.449	1.9963	1.9963	1.0000
3	6.81	Nitrite,N	bMB*	0.194	0.4423	0.4423	1.0000
4	9.07	Bromide	BMB	0.034	0.3722	0.3722	1.0000
5	9.80	Sulfate	BM	0.335	2.0973	2.0973	1.0000
6	10.46	Nitrate	M	0.232	0.4103	0.4103	1.0000
7	11.10	Chlorate	MB	0.047	0.4759	0.4759	1.0000
8	15.16	Phosphate	BMB	0.053	0.3518	0.3518	1.0000
Total:			**0.000**	**1.467**		**6.53**	

3 STD3			
Sample Name:	**STD3**	*Injection Volume:*	**5.00**
Vial Number:	**GA3**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**02/05/2020 20:15**	*Sample Weight:*	**1.0000**

Run Time:

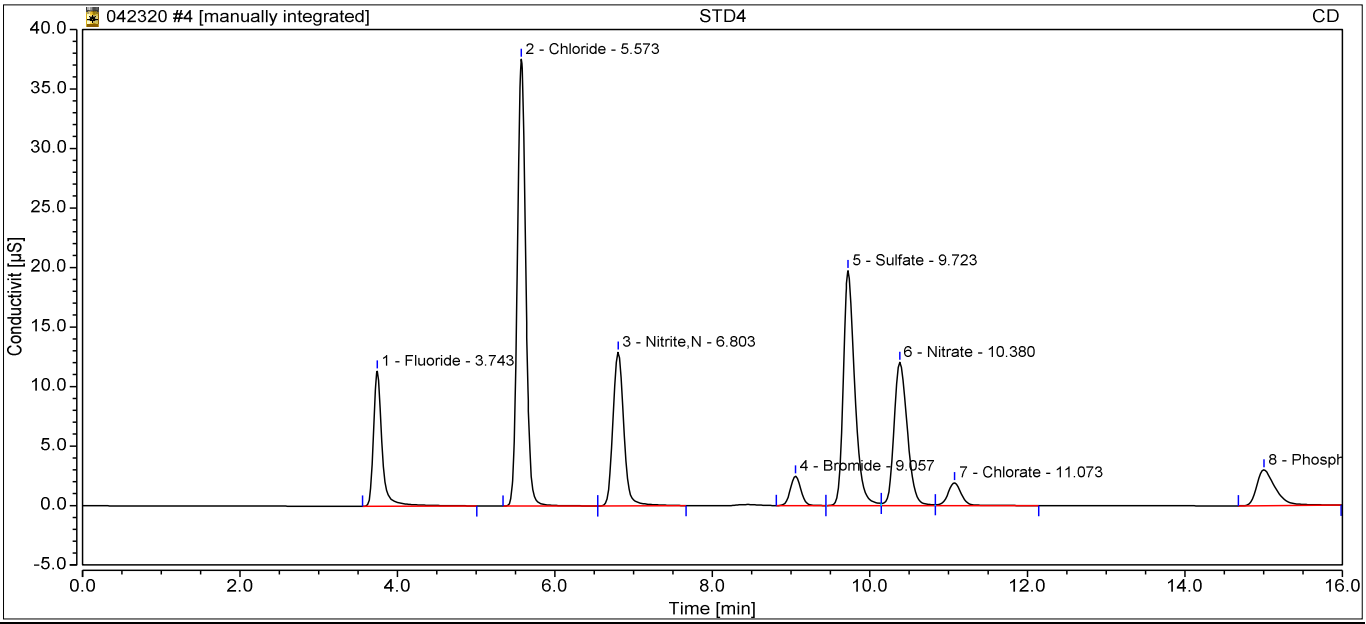


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	0.701	2.0769	2.0769	1.0000
2	5.58	Chloride	BMb*	2.284	9.9073	9.9073	1.0000
3	6.81	Nitrite,N	bMB*	1.029	2.1245	2.1245	1.0000
4	9.06	Bromide	BM	0.182	1.8657	1.8657	1.0000
5	9.76	Sulfate	M	1.624	9.7730	9.7730	1.0000
6	10.42	Nitrate	M	1.160	1.9980	1.9980	1.0000
7	11.09	Chlorate	MB	0.189	1.9689	1.9689	1.0000
8	15.08	Phosphate	BMB	0.374	1.8664	1.8664	1.0000
Total:			**0.000**	**7.542**		**31.58**	

4 STD4			
Sample Name:	**STD4**	*Injection Volume:*	**5.00**
Vial Number:	**GA4**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**02/05/2020 20:33**	*Sample Weight:*	**1.0000**

Run Time:

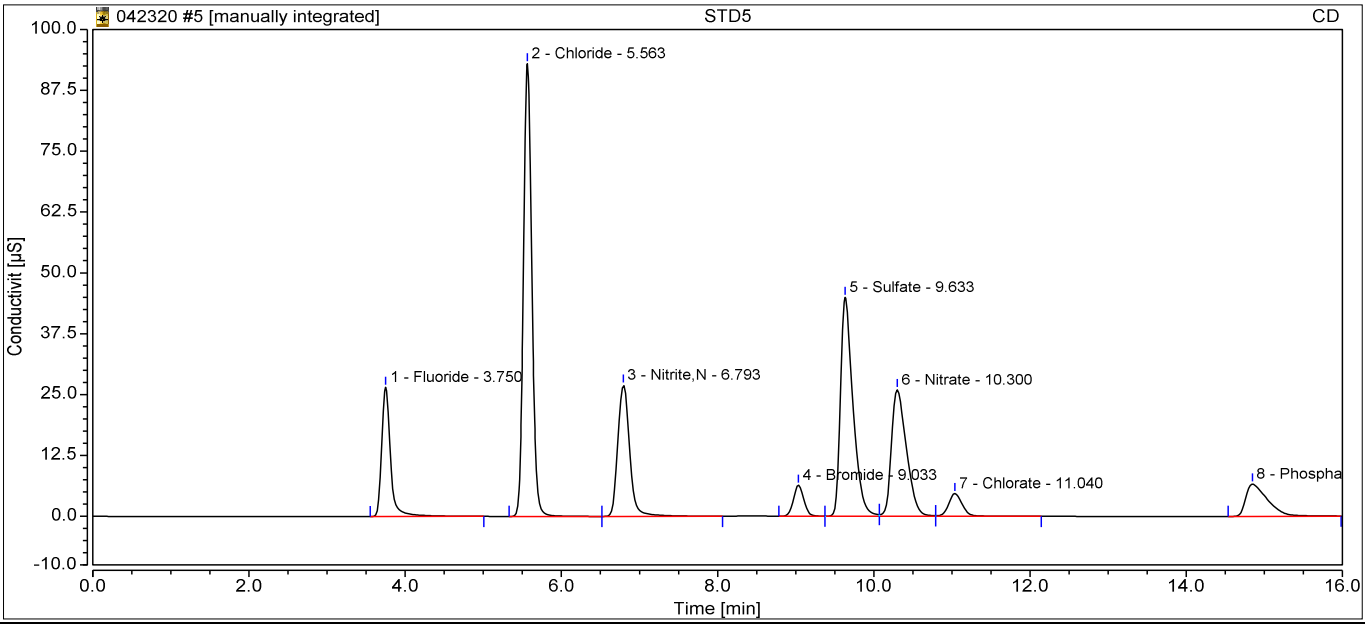


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	1.428	4.2080	4.2080	1.0000
2	5.57	Chloride	BMb*	4.627	20.0069	20.0069	1.0000
3	6.80	Nitrite,N	bMB*	2.046	4.1745	4.1745	1.0000
4	9.06	Bromide	BM	0.382	3.8871	3.8871	1.0000
5	9.72	Sulfate	M	3.337	19.9713	19.9713	1.0000
6	10.38	Nitrate	M	2.343	4.0228	4.0228	1.0000
7	11.07	Chlorate	MB	0.380	3.9830	3.9830	1.0000
8	15.00	Phosphate	BMB	0.824	3.9874	3.9874	1.0000
Total:			**0.000**	**15.366**		**64.24**	

5 STD5			
Sample Name:	**STD5**	*Injection Volume:*	**5.00**
Vial Number:	**GA5**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**02/05/2020 20:51**	*Sample Weight:*	**1.0000**

Run Time:



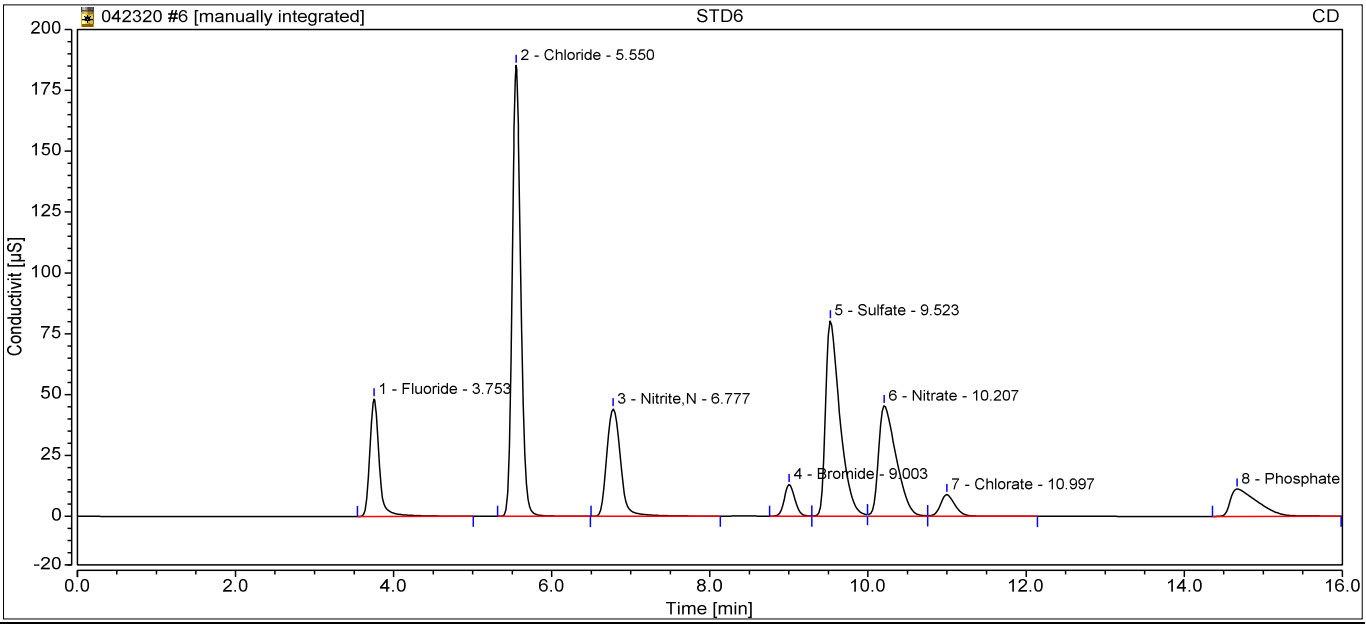
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.75	Fluoride	BMB	3.472	10.1940	10.1940	1.0000
2	5.56	Chloride	BMB	11.516	49.7057	49.7057	1.0000
3	6.79	Nitrite,N	BMB*	4.776	9.6766	9.6766	1.0000
4	9.03	Bromide	BM	0.981	9.9279	9.9279	1.0000
5	9.63	Sulfate	M	8.325	49.6811	49.6811	1.0000
6	10.30	Nitrate	M	5.799	9.9382	9.9382	1.0000
7	11.04	Chlorate	MB	0.944	9.9252	9.9252	1.0000
8	14.85	Phosphate	BMB	2.135	10.1771	10.1771	1.0000
Total:			**0.000**	**37.949**		**159.23**	

6 STD6

Sample Name:	**STD6**	*Injection Volume:*	**5.00**
Vial Number:	**GA6**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**02/05/2020 21:09**	*Sample Weight:*	**1.0000**

Run Time:



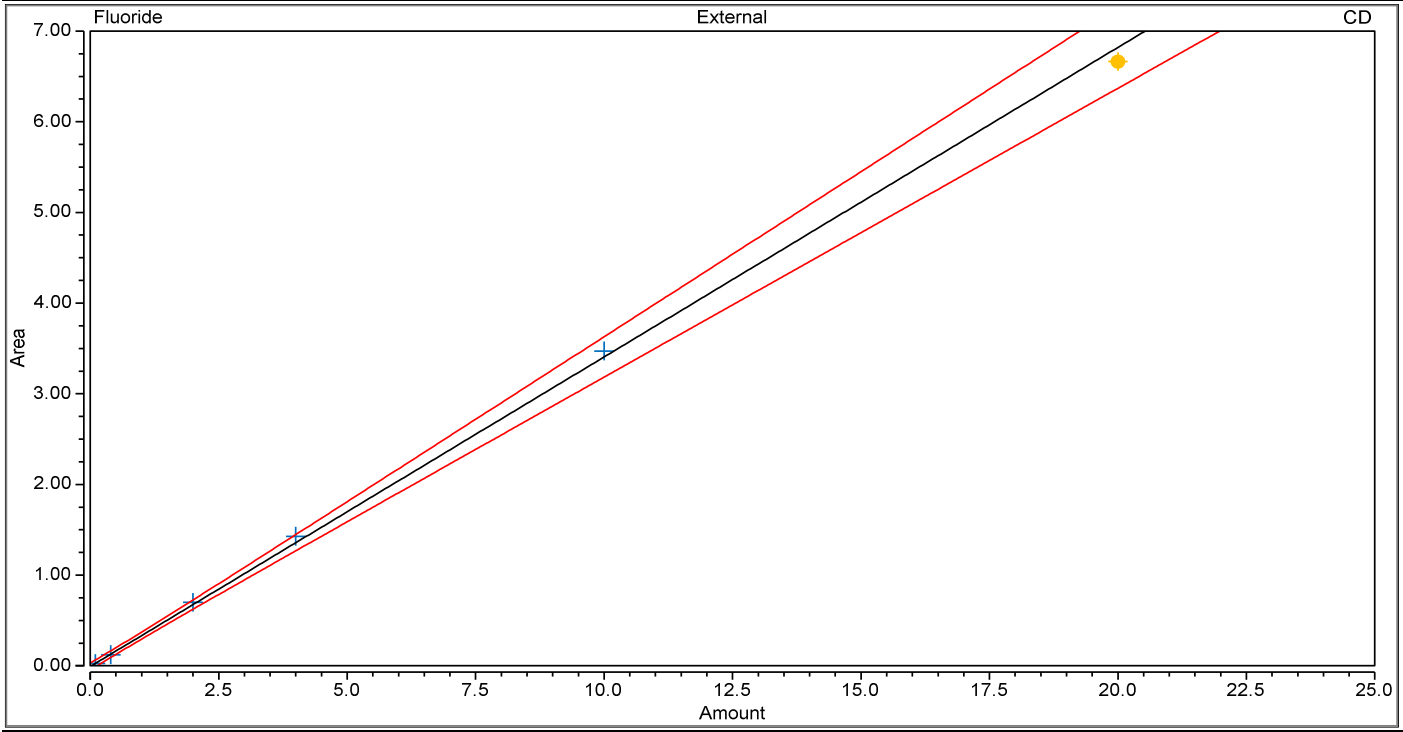
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.75	Fluoride	BMB	6.664	19.5424	19.5424	1.0000
2	5.55	Chloride	BMB	23.270	100.3774	100.3774	1.0000
3	6.78	Nitrite,N	BMB*	8.893	17.9725	17.9725	1.0000
4	9.00	Bromide	BM	2.012	20.3316	20.3316	1.0000
5	9.52	Sulfate	M	16.857	100.4888	100.4888	1.0000
6	10.21	Nitrate	M	11.698	20.0333	20.0333	1.0000
7	11.00	Chlorate	MB	1.906	20.0635	20.0635	1.0000
8	14.67	Phosphate	BMB	4.450	21.0985	21.0985	1.0000
Total:			**0.000**	**75.750**		**319.91**	

Calibration

Calibration Details	Fluoride		
Calibration Type	Lin, WithOffset, 1/A	*Offset (C0)*	-0.0083
Evaluation Type	Area	*Slope (C1)*	0.3414
Number of Calibration Points	6	*Curve (C2)*	0.0000
Number of disabled Calibration Points	0	*R-Square*	0.9991

Calibration Plot **Fluoride**

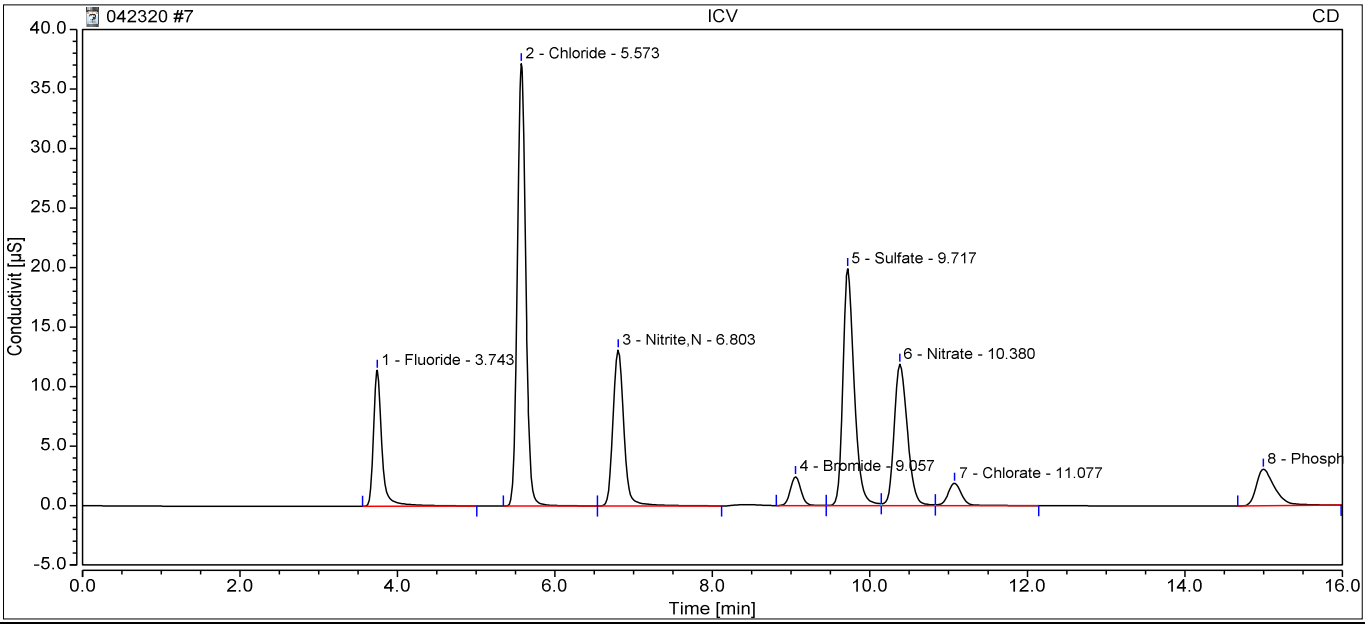


Calibration Results **Fluoride**

No.	Injection Name	Calibration Level	X Value CD Fluoride	Y Value CD Fluoride	Y Value CD Fluoride	Area µS*min CD Fluoride	Height µS CD Fluoride
1	STD1	1	0.1000	0.0243	0.0243	0.024	0.212
2	STD2	2	0.4000	0.1226	0.1226	0.123	0.964
3	STD3	3	2.0000	0.7008	0.7008	0.701	5.614
4	STD4	4	4.0000	1.4284	1.4284	1.428	11.345
5	STD5	5	10.0000	3.4723	3.4723	3.472	26.547
6	STD6	6	20.0000	6.6641	6.6641	6.664	48.233

7 ICV			
Sample Name:	**ICV**	*Injection Volume:*	**5.00**
Vial Number:	**GA7**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**02/05/2020 21:27**	*Sample Weight:*	**1.0000**

Run Time:



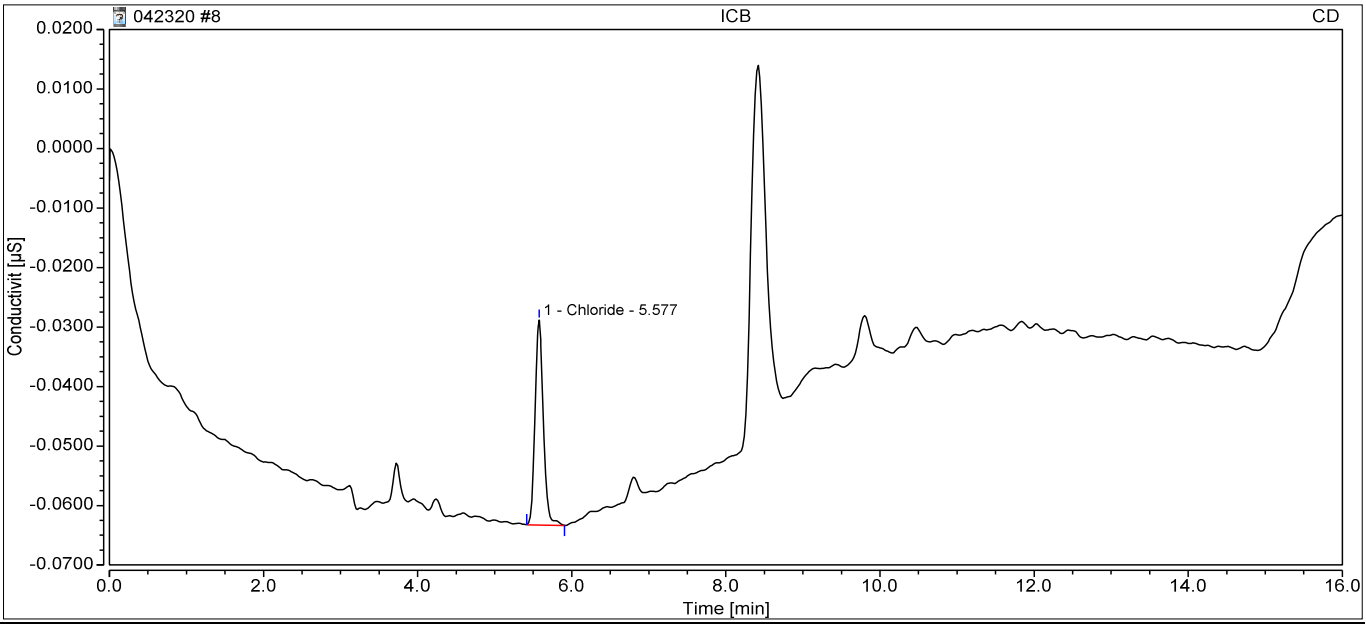
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	1.412	4.1607	4.1607	1.0000
2	5.57	Chloride	BMB	4.570	19.7627	19.7627	1.0000
3	6.80	Nitrite,N	BMB	2.081	4.2442	4.2442	1.0000
4	9.06	Bromide	BM	0.374	3.8104	3.8104	1.0000
5	9.72	Sulfate	M	3.327	19.9126	19.9126	1.0000
6	10.38	Nitrate	M	2.299	3.9478	3.9478	1.0000
7	11.08	Chlorate	MB	0.379	3.9799	3.9799	1.0000
8	15.00	Phosphate	BMB	0.835	4.0417	4.0417	1.0000
Total:			**0.000**	**15.278**		**63.86**	

8 ICB

Sample Name:	**ICB**	*Injection Volume:*	**5.00**
Vial Number:	**GA8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**02/05/2020 21:45**	*Sample Weight:*	**1.0000**

Run Time:

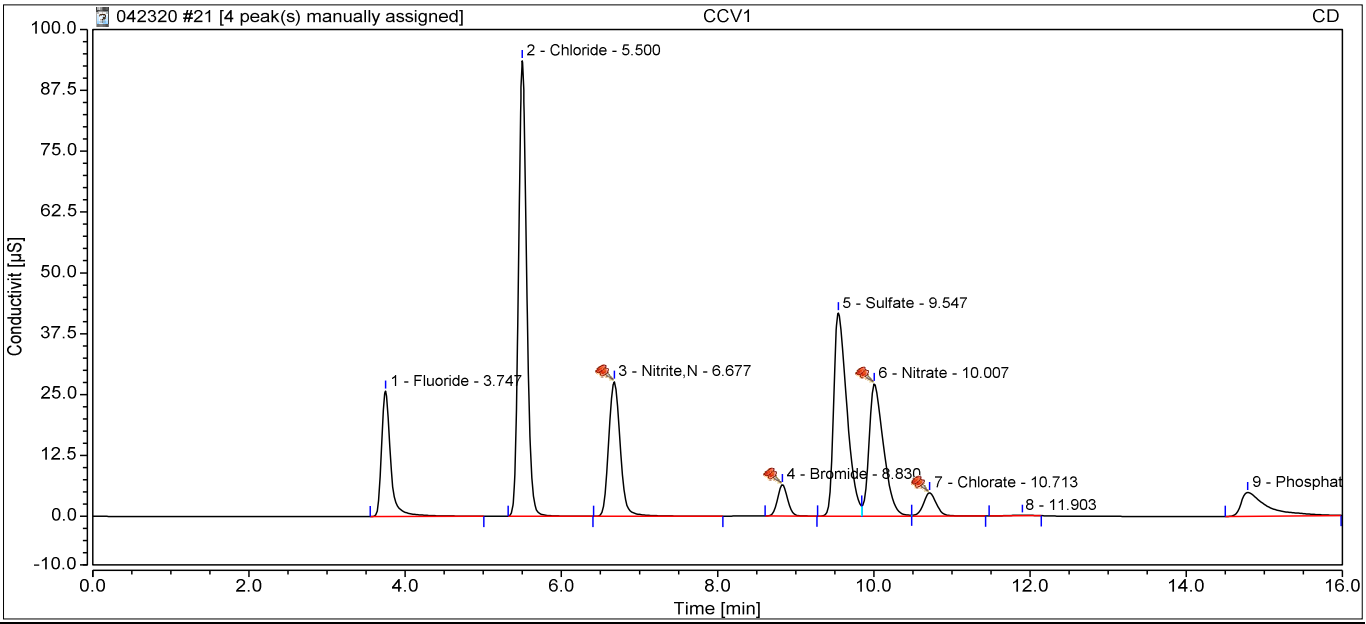


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.58	Chloride	BMB	0.004	0.0794	0.0794	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.004**		**0.08**	

21 CCV1			
Sample Name:	**CCV1**	*Injection Volume:*	**5.00**
Vial Number:	**BA3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/23/2020 16:13**	*Sample Weight:*	**1.0000**

Run Time:



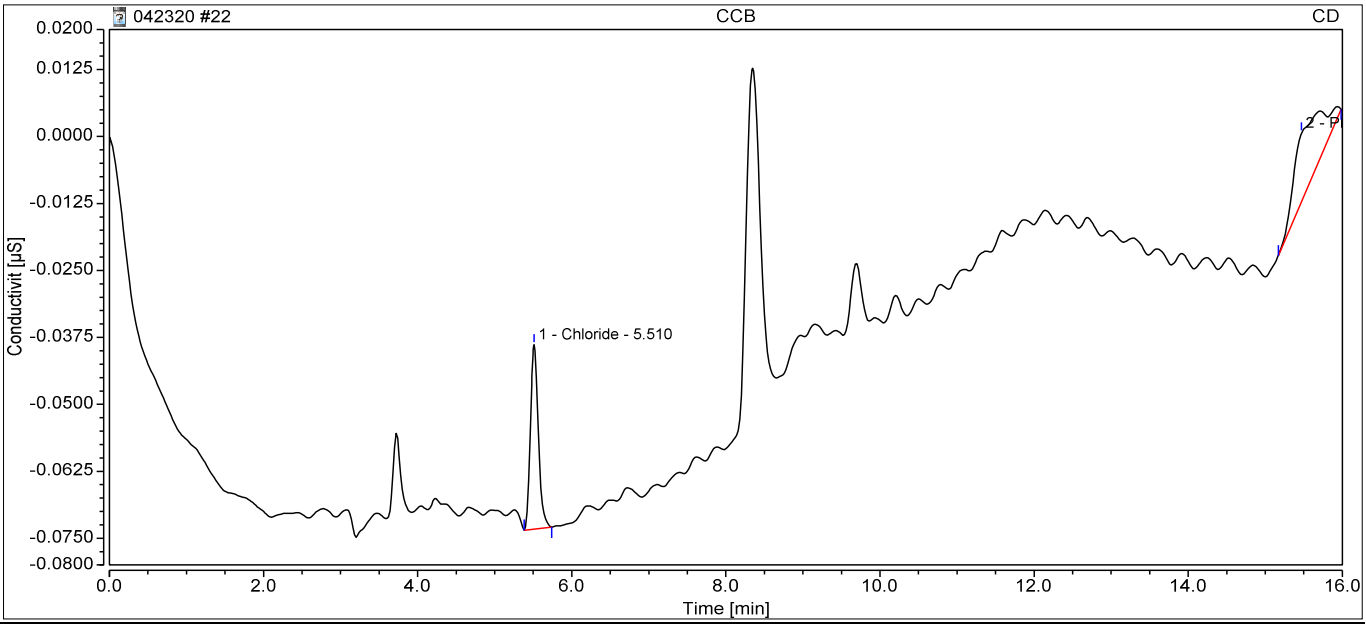
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.75	Fluoride	BMB	3.491	10.2483	10.2483	1.0000
2	5.50	Chloride	BMB	11.395	49.1837	49.1837	1.0000
3	6.68	Nitrite,N	BMB^	4.778	9.6808	9.6808	1.0000
4	8.83	Bromide	BMB^	0.966	9.7793	9.7793	1.0000
5	9.55	Sulfate	BM	8.213	49.0138	49.0138	1.0000
6	10.01	Nitrate	M ^	5.869	10.0578	10.0578	1.0000
7	10.71	Chlorate	MB^	0.925	9.7312	9.7312	1.0000
9	14.79	Phosphate	BMB	1.883	8.9861	8.9861	1.0000
Total:			**0.000**	**37.521**		**156.68**	

22 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**BA4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/23/2020 16:31**	*Sample Weight:*	**1.0000**

Run Time:



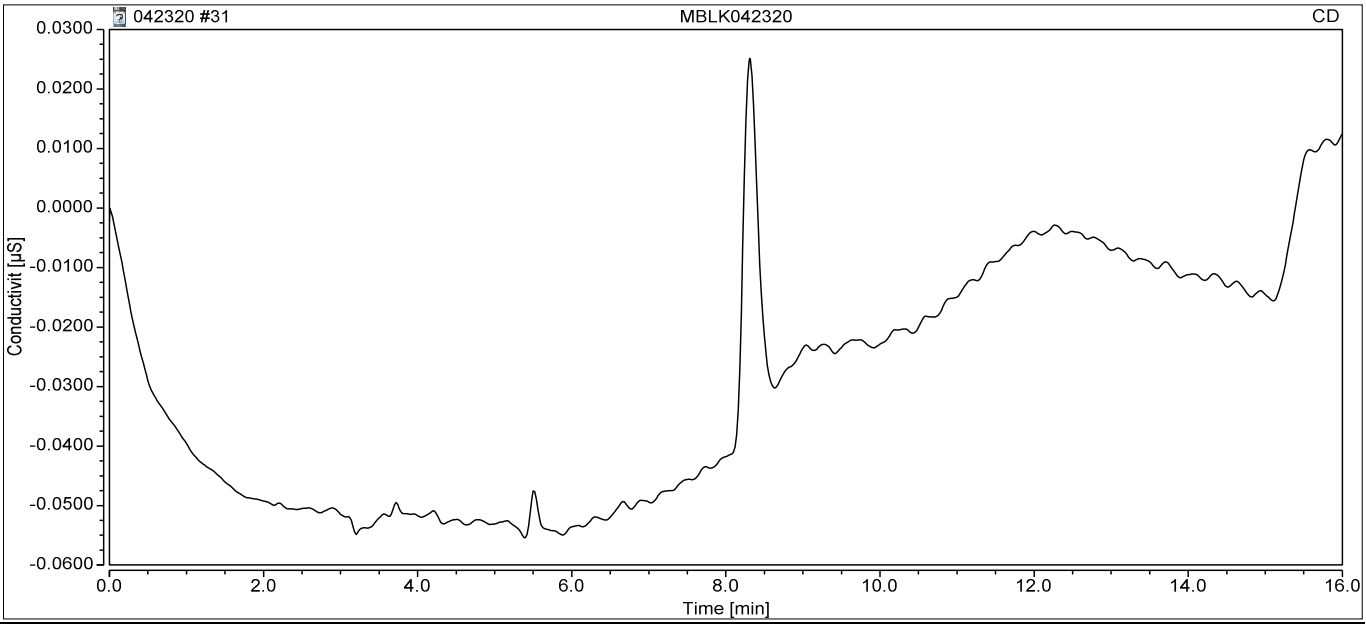
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.51	Chloride	BMB	0.004	0.0786	0.0786	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
2	15.47	Phosphate	BMB	0.005	0.1264	0.1264	1.0000
Total:			**0.000**	**0.009**		**0.21**	

31 MBLK042320

Sample Name:	**MBLK042320**	*Injection Volume:*	**5.00**
Vial Number:	**BB1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/23/2020 19:14**	*Sample Weight:*	**1.0000**

Run Time:



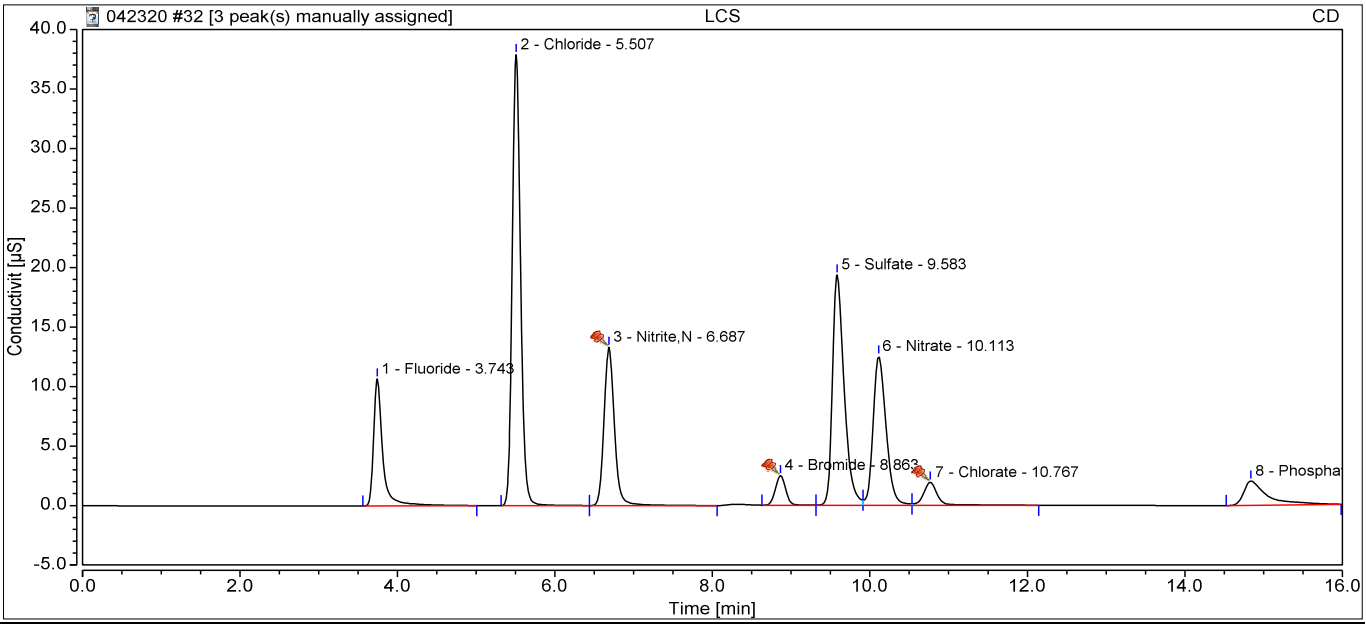
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.000**		**0.00**	

32 LCS

Sample Name:	**LCS**	*Injection Volume:*	**5.00**
Vial Number:	**BB2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/23/2020 19:32**	*Sample Weight:*	**1.0000**

Run Time:



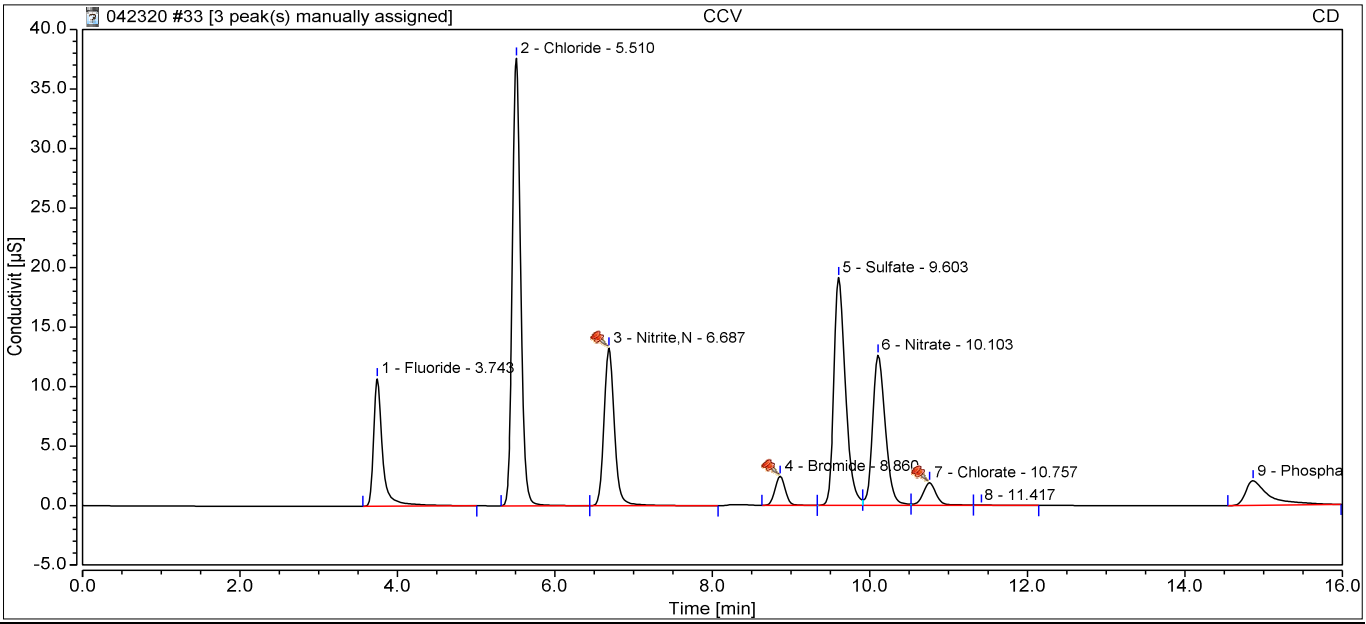
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	1.433	4.2214	4.2214	1.0000
2	5.51	Chloride	BMB	4.603	19.9024	19.9024	1.0000
3	6.69	Nitrite,N	BMB^	2.069	4.2196	4.2196	1.0000
4	8.86	Bromide	BM ^	0.373	3.7980	3.7980	1.0000
5	9.58	Sulfate	M	3.306	19.7907	19.7907	1.0000
6	10.11	Nitrate	M	2.366	4.0621	4.0621	1.0000
7	10.77	Chlorate	MB^	0.397	4.1616	4.1616	1.0000
8	14.84	Phosphate	BMB	0.710	3.4504	3.4504	1.0000
Total:			**0.000**	**15.256**		**63.61**	

33 CCV

Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**BA1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/23/2020 19:50**	*Sample Weight:*	**1.0000**

Run Time:



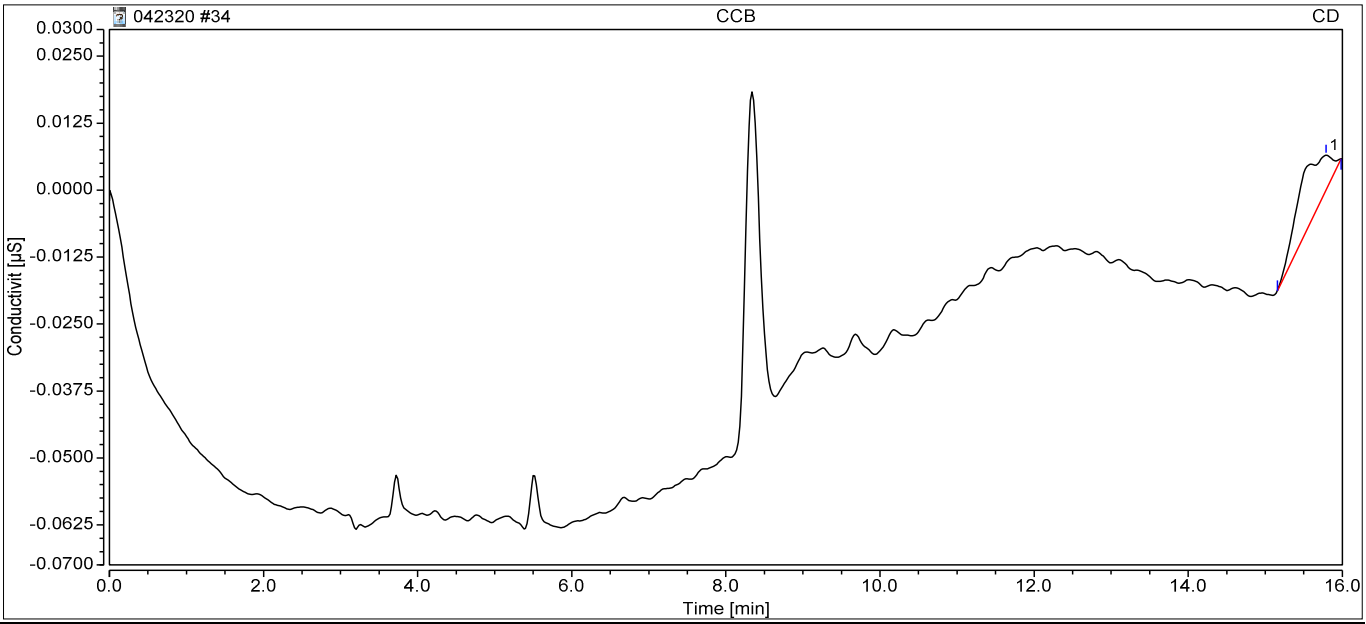
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	1.418	4.1760	4.1760	1.0000
2	5.51	Chloride	BMB	4.565	19.7413	19.7413	1.0000
3	6.69	Nitrite,N	BMB^	2.053	4.1889	4.1889	1.0000
4	8.86	Bromide	BM ^	0.370	3.7617	3.7617	1.0000
5	9.60	Sulfate	M	3.272	19.5859	19.5859	1.0000
6	10.10	Nitrate	M	2.348	4.0315	4.0315	1.0000
7	10.76	Chlorate	M ^	0.382	4.0034	4.0034	1.0000
9	14.87	Phosphate	BMB	0.722	3.5067	3.5067	1.0000
Total:			**0.000**	**15.129**		**63.00**	

34 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**BA2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/23/2020 20:08**	*Sample Weight:*	**1.0000**

Run Time:



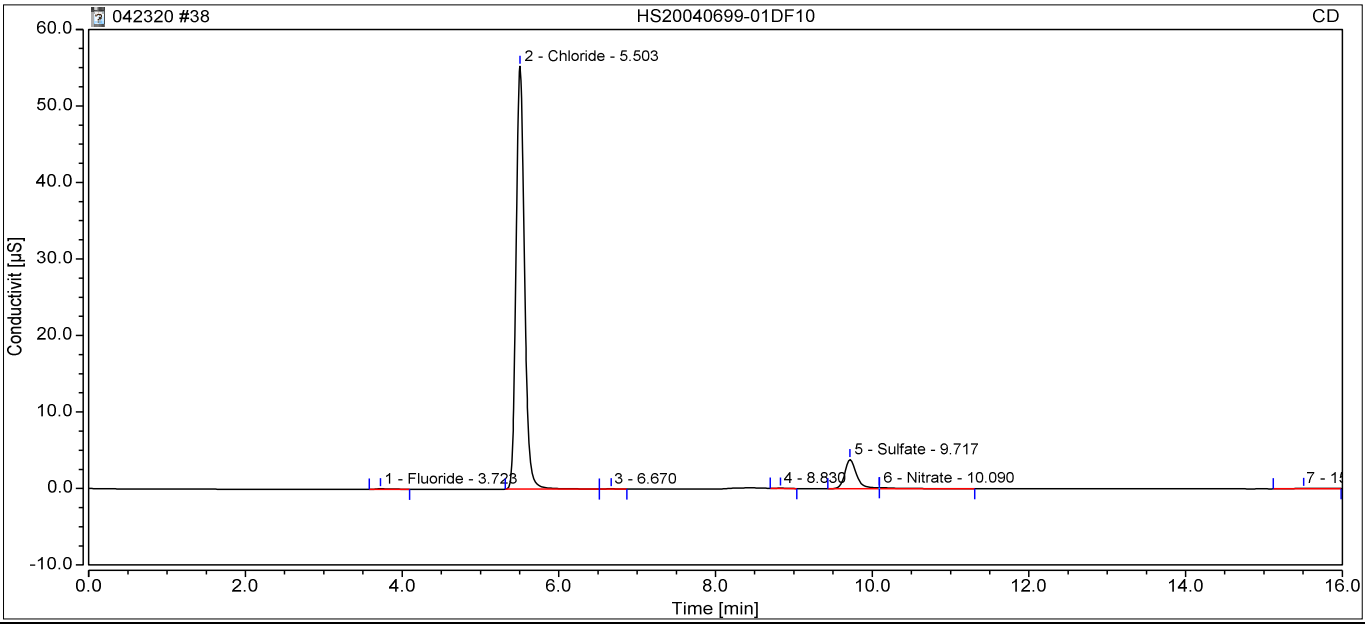
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.000**		**0.00**	

38 HS20040699-01DF10

Sample Name:	**HS20040699-01DF10**	*Injection Volume:*	**5.00**
Vial Number:	**BD3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**10.0000**
Recording Time:	**04/23/2020 21:21**	*Sample Weight:*	**1.0000**

Run Time:



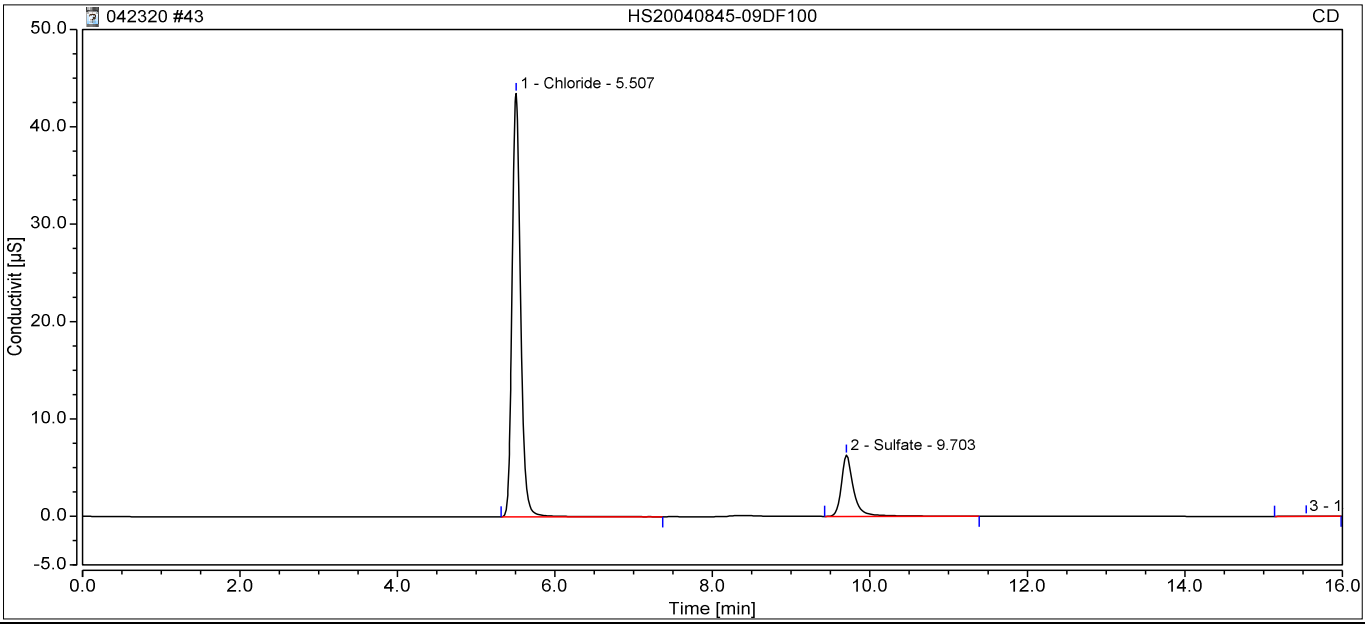
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	0.010	0.0528	0.5281	10.0000
2	5.50	Chloride	BMB	6.840	29.5493	295.4929	10.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	10.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	10.0000
5	9.72	Sulfate	BM	0.663	4.0515	40.5153	10.0000
6	10.09	Nitrate	MB	0.036	0.0754	0.7541	10.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	10.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	10.0000
Total:			**0.000**	**7.550**		**337.29**	

43 HS20040845-09DF100

Sample Name:	**HS20040845-09DF100**	*Injection Volume:*	**5.00**
Vial Number:	**BD8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**100.0000**
Recording Time:	**04/23/2020 22:51**	*Sample Weight:*	**1.0000**

Run Time:



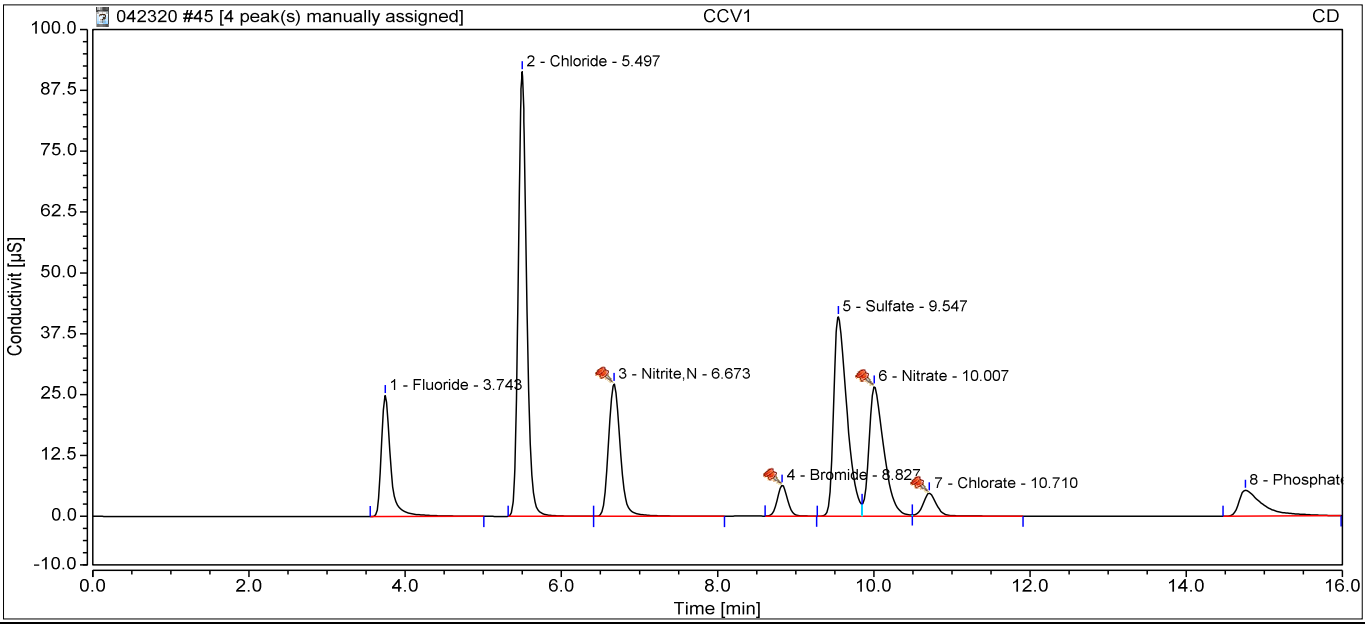
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	100.0000
1	5.51	Chloride	BMB	5.395	23.3182	2331.8208	100.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	100.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	100.0000
2	9.70	Sulfate	BMB	1.137	6.8700	686.9985	100.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	100.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	100.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	100.0000
Total:			**0.000**	**6.531**		**3018.82**	

45 CCV1

Sample Name:	**CCV1**	*Injection Volume:*	**5.00**
Vial Number:	**BA3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/23/2020 23:27**	*Sample Weight:*	**1.0000**

Run Time:



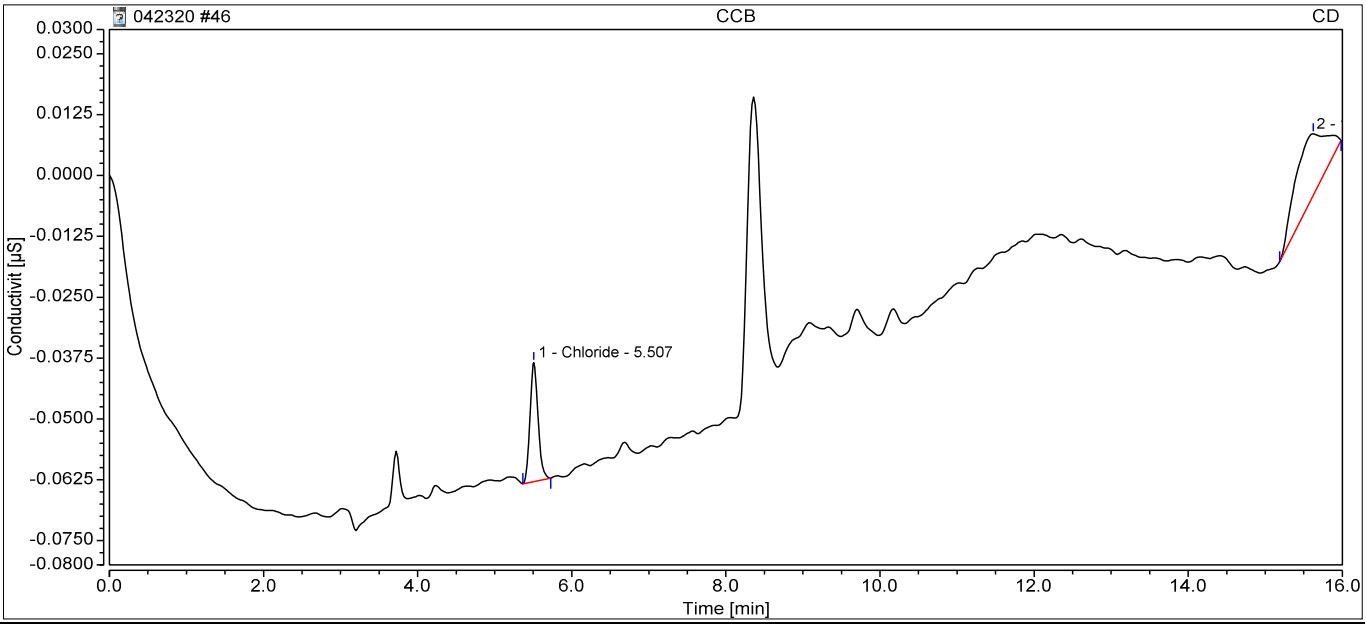
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	3.488	10.2398	10.2398	1.0000
2	5.50	Chloride	BMB	11.373	49.0906	49.0906	1.0000
3	6.67	Nitrite,N	BMB^	4.787	9.6989	9.6989	1.0000
4	8.83	Bromide	BMB^	0.962	9.7414	9.7414	1.0000
5	9.55	Sulfate	BM	8.136	48.5538	48.5538	1.0000
6	10.01	Nitrate	M ^	5.897	10.1061	10.1061	1.0000
7	10.71	Chlorate	MB^	0.953	10.0187	10.0187	1.0000
8	14.76	Phosphate	BMB	1.922	9.1724	9.1724	1.0000
Total:			**0.000**	**37.519**		**156.62**	

46 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**BA4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/23/2020 23:46**	*Sample Weight:*	**1.0000**

Run Time:



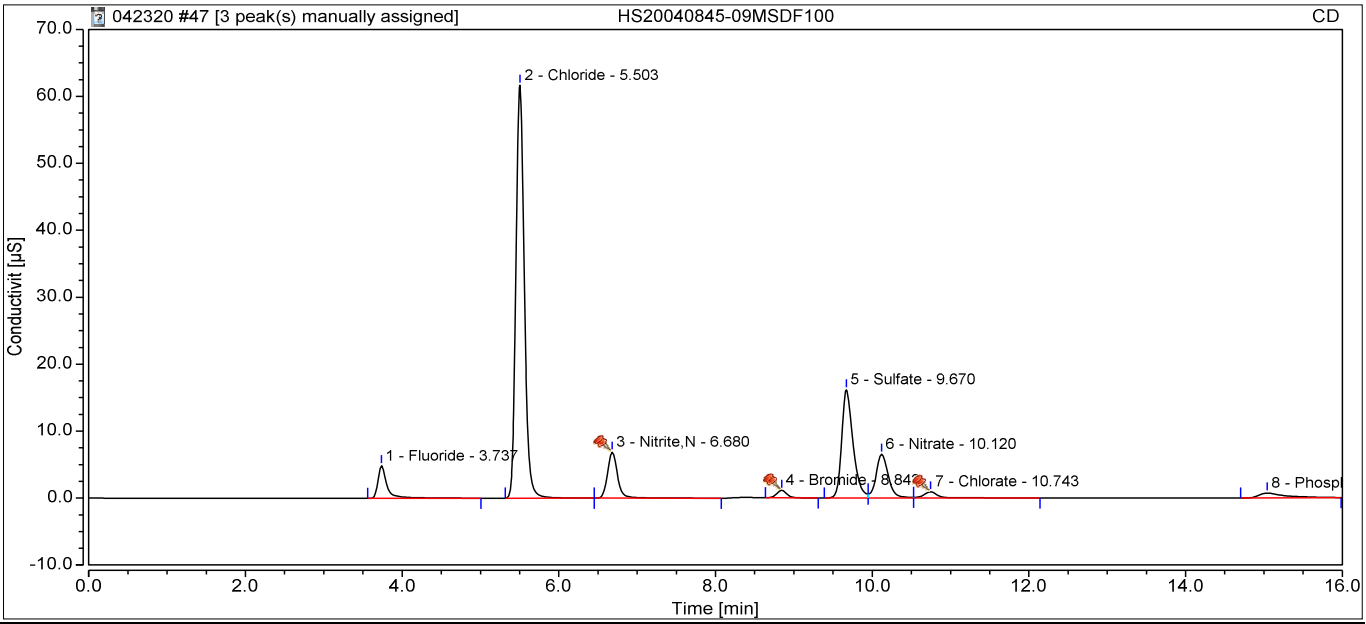
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.51	Chloride	BMB	0.003	0.0738	0.0738	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.003**		**0.07**	

47 HS20040845-09MSDF100

Sample Name:	**HS20040845-09MSDF100**	*Injection Volume:*	**5.00**
Vial Number:	**BE2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**100.0000**
Recording Time:	**04/24/2020 00:04**	*Sample Weight:*	**1.0000**

Run Time:



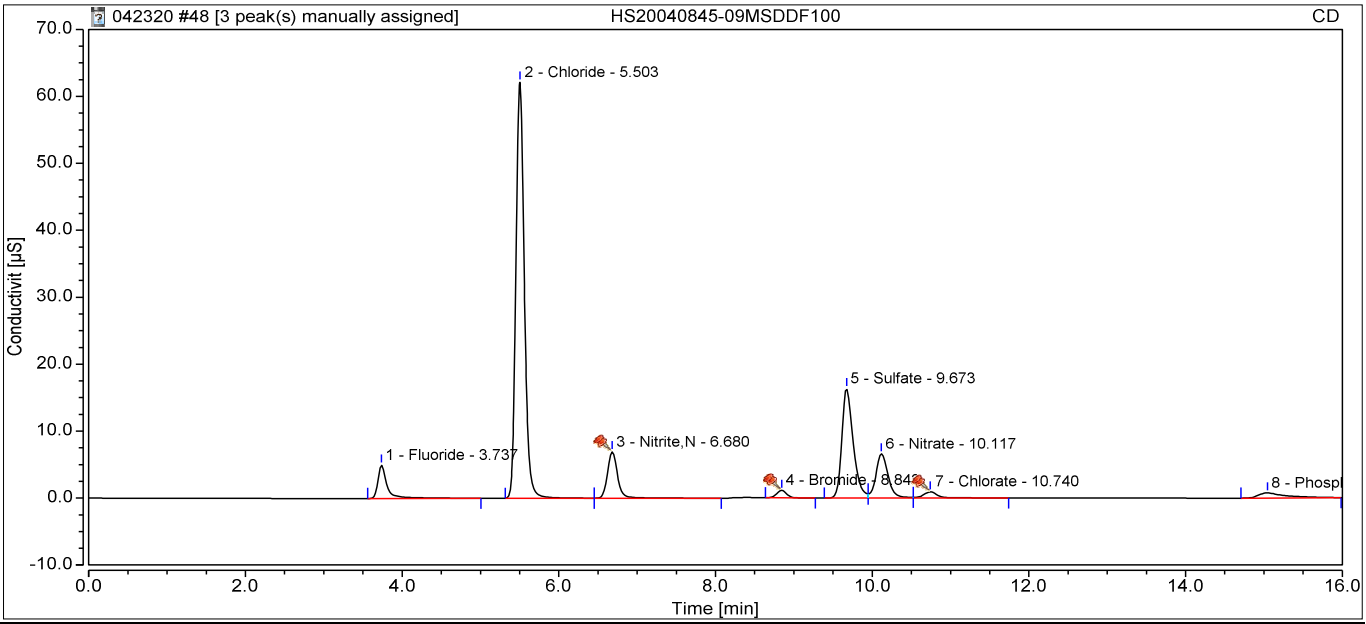
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	0.668	1.9794	197.9436	100.0000
2	5.50	Chloride	BMB	7.632	32.9642	3296.4239	100.0000
3	6.68	Nitrite,N	BMB^	1.024	2.1146	211.4574	100.0000
4	8.84	Bromide	BMB^	0.166	1.7119	171.1901	100.0000
5	9.67	Sulfate	BM	2.715	16.2725	1627.2511	100.0000
6	10.12	Nitrate	M	1.180	2.0320	203.2002	100.0000
7	10.74	Chlorate	MB^	0.201	2.1019	210.1876	100.0000
8	15.04	Phosphate	BMB	0.296	1.4968	149.6754	100.0000
Total:			**0.000**	**13.883**		**6067.33**	

48 HS20040845-09MSDDF100

Sample Name:	**HS20040845-09MSDDF100**	*Injection Volume:*	**5.00**
Vial Number:	**BE3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**100.0000**
Recording Time:	**04/24/2020 00:22**	*Sample Weight:*	**1.0000**

Run Time:



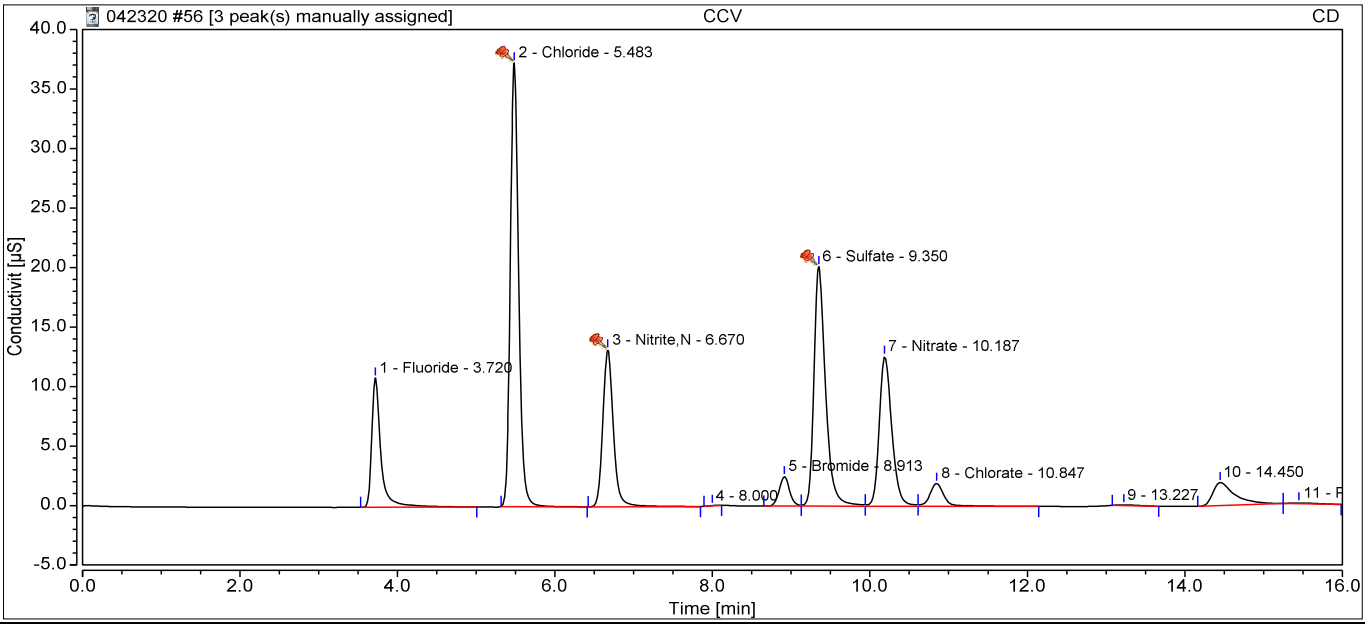
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	0.680	2.0172	201.7224	100.0000
2	5.50	Chloride	BMB	7.699	33.2491	3324.9132	100.0000
3	6.68	Nitrite,N	BMB^	1.032	2.1304	213.0437	100.0000
4	8.84	Bromide	BMB^	0.168	1.7247	172.4704	100.0000
5	9.67	Sulfate	BM	2.751	16.4862	1648.6202	100.0000
6	10.12	Nitrate	M	1.186	2.0435	204.3491	100.0000
7	10.74	Chlorate	MB^	0.189	1.9688	196.8791	100.0000
8	15.04	Phosphate	BMB	0.309	1.5586	155.8569	100.0000
Total:			**0.000**	**14.014**		**6117.85**	

56 CCV

Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**BA1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/24/2020 02:47**	*Sample Weight:*	**1.0000**

Run Time:



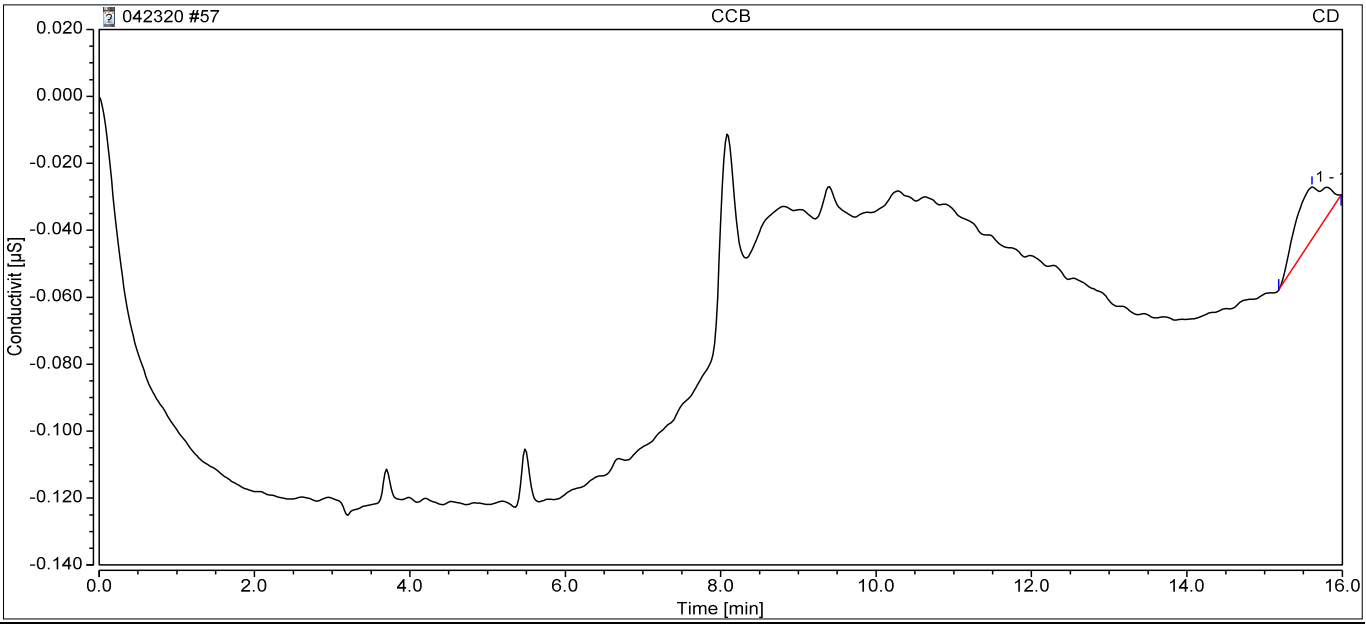
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	1.469	4.3266	4.3266	1.0000
2	5.48	Chloride	BMB^	4.581	19.8074	19.8074	1.0000
3	6.67	Nitrite,N	BMB^	2.071	4.2242	4.2242	1.0000
5	8.91	Bromide	BM	0.379	3.8599	3.8599	1.0000
6	9.35	Sulfate	M ^	3.404	20.3724	20.3724	1.0000
7	10.19	Nitrate	M	2.336	4.0104	4.0104	1.0000
8	10.85	Chlorate	MB	0.401	4.2031	4.2031	1.0000
11	15.45	Phosphate	BMB	0.025	0.2205	0.2205	1.0000
Total:			**0.000**	**14.665**		**61.02**	

57 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**BA2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/24/2020 03:05**	*Sample Weight:*	**1.0000**

Run Time:



Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.000**		**0.00**	

Sequence: 042420
Last Update Operator: alshs.nouser

CD	Name	Comment	Type	Position	Dilution	Level	Instrument Method	Processing Method	Volume	Status	Inject Time
	STD1	2970209205	Calibration	GA1	1.0000	1	Anions Program 02052020.1	Anions Pro	5.0	Finished	2/5/2020 7:39:11 PM -0
	STD2	NEW PRGM	Calibration	GA2	1.0000	2	Anions Program 02052020.1	Anions Pro	5.0	Finished	2/5/2020 7:57:16 PM -0
	STD3		Calibration	GA3	1.0000	3	Anions Program 02052020.1	Anions Pro	5.0	Finished	2/5/2020 8:15:24 PM -0
	STD4		Calibration	GA4	1.0000	4	Anions Program 02052020.1	Anions Pro	5.0	Finished	2/5/2020 8:33:31 PM -0
	STD5	NO2/PO4	Calibration	GA5	1.0000	5	Anions Program 02052020.1	Anions Pro	5.0	Finished	2/5/2020 8:51:36 PM -0
	STD6	MAX 10PPM	Calibration	GA6	1.0000	6	Anions Program 02052020.1	Anions Pro	5.0	Finished	2/5/2020 9:09:41 PM -0
	ICV	2970209123	Unknown	GA7	1.0000		Anions Program 02052020.1	Anions Pro	5.0	Finished	2/5/2020 9:27:48 PM -0
	ICB		Unknown	GA8	1.0000		Anions Program 02052020.1	Anions Pro	5.0	Finished	2/5/2020 9:45:53 PM -0
	CCV1		Unknown	GA4	1.0000		Anions Program 02052020.1	Anions Pro	5.0	Finished	4/25/2020 3:27:38 AM -
	CCB		Unknown	GA5	1.0000		Anions Program 02052020.1	Anions Pro	5.0	Finished	4/25/2020 3:45:43 AM -
	HS20040699-01		Unknown	RB3	1.0000		Anions Program 02052020.1	Anions Pro	5.0	Finished	4/25/2020 4:03:49 AM -
	HS20040989-06DF20		Unknown	RC1	20.0000		Anions Program 02052020.1	Anions Pro	5.0	Finished	4/25/2020 5:52:27 AM -
	HS20040989-06MSDF20		Unknown	RC2	20.0000		Anions Program 02052020.1	Anions Pro	5.0	Finished	4/25/2020 6:10:31 AM -
	HS20040989-06MSDDF20		Unknown	RC3	20.0000		Anions Program 02052020.1	Anions Pro	5.0	Finished	4/25/2020 6:28:40 AM -
	CCV		Unknown	GA2	1.0000		Anions Program 02052020.1	Anions Pro	5.0	Finished	4/25/2020 7:04:58 AM -
	CCB		Unknown	GA3	1.0000		Anions Program 02052020.1	Anions Pro	5.0	Finished	4/25/2020 7:23:03 AM -
	MBLK042420	9056_BATCH	Unknown	GB1	1.0000		Anions Program 02052020.1	Anions Pro	5.0	Finished	4/25/2020 8:35:29 AM -
	LCS	9056_W	Unknown	GB2	1.0000		Anions Program 02052020.1	Anions Pro	5.0	Finished	4/25/2020 8:53:34 AM -
	LCSD		Unknown	GB3	1.0000		Anions Program 02052020.1	Anions Pro	5.0	Finished	4/25/2020 9:11:42 AM -
	CCV1		Unknown	GA4	1.0000		Anions Program 02052020.1	Anions Pro	5.0	Finished	4/25/2020 9:29:49 AM -
	CCB		Unknown	GA5	1.0000		Anions Program 02052020.1	Anions Pro	5.0	Finished	4/25/2020 9:47:54 AM -

Sequence: 042420
Last Update Operator: alshs.nouser

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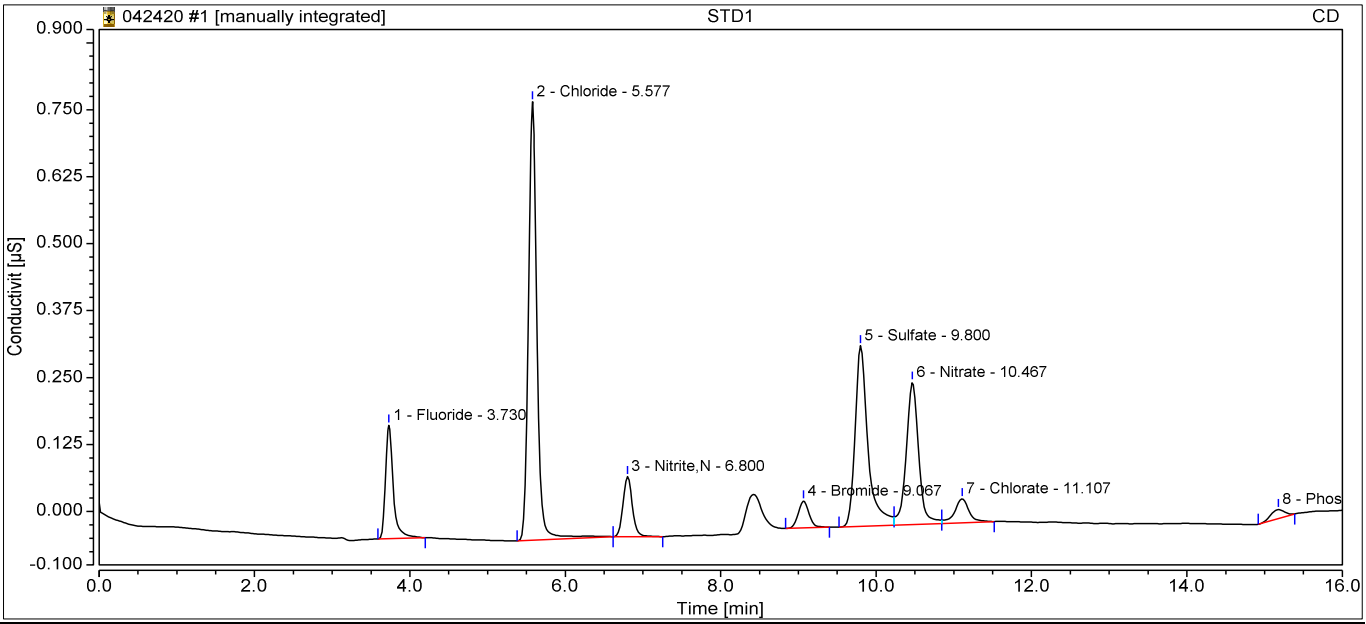
Sequence: 042320
Injection #6: STD6

Calibration

Peak No.	Peak Name	Cal.Type	Eval.Type	Number of Points	Rel.Std.Dev. %	Coeff.of Determination	C0 (Offset)	C1 (Slope)	C2 (Curve)
1	*Fluoride*	*Lin, WithOffset, 1/*	*Area*	*6*	*13.4314*	*0.99915*	*-0.0083*	*0.3414*	*0.0000*
2	Chloride	Lin, WithOffset, 1/	Area	6	2.2020	0.99998	-0.0141	0.2320	0.0000
3	Nitrite,N	Lin, WithOffset, 1/	Area	5	19.9747	0.99771	-0.0251	0.4962	0.0000
4	Bromide	Lin, WithOffset, 1/	Area	6	12.1436	0.99933	-0.0033	0.0991	0.0000
5	Sulfate	Lin, WithOffset, 1/	Area	6	4.2312	0.99991	-0.0170	0.1679	0.0000
6	Nitrate	Lin, WithOffset, 1/	Area	6	2.3081	0.99997	-0.0076	0.5843	0.0000
7	Chlorate	Lin, WithOffset, 1/	Area	6	9.7729	0.99945	0.0017	0.0949	0.0000
8	Phosphate	Lin, WithOffset, 1/	Area	5	18.6678	0.99857	-0.0214	0.2119	0.0000
Maximum					**19.9747**	0.99998			
Minimum					2.2020	**0.99771**			

1 STD1			
Sample Name:	**STD1**	*Injection Volume:*	**5.00**
Vial Number:	**GA1**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**02/05/2020 19:39**	*Sample Weight:*	**1.0000**

Run Time:

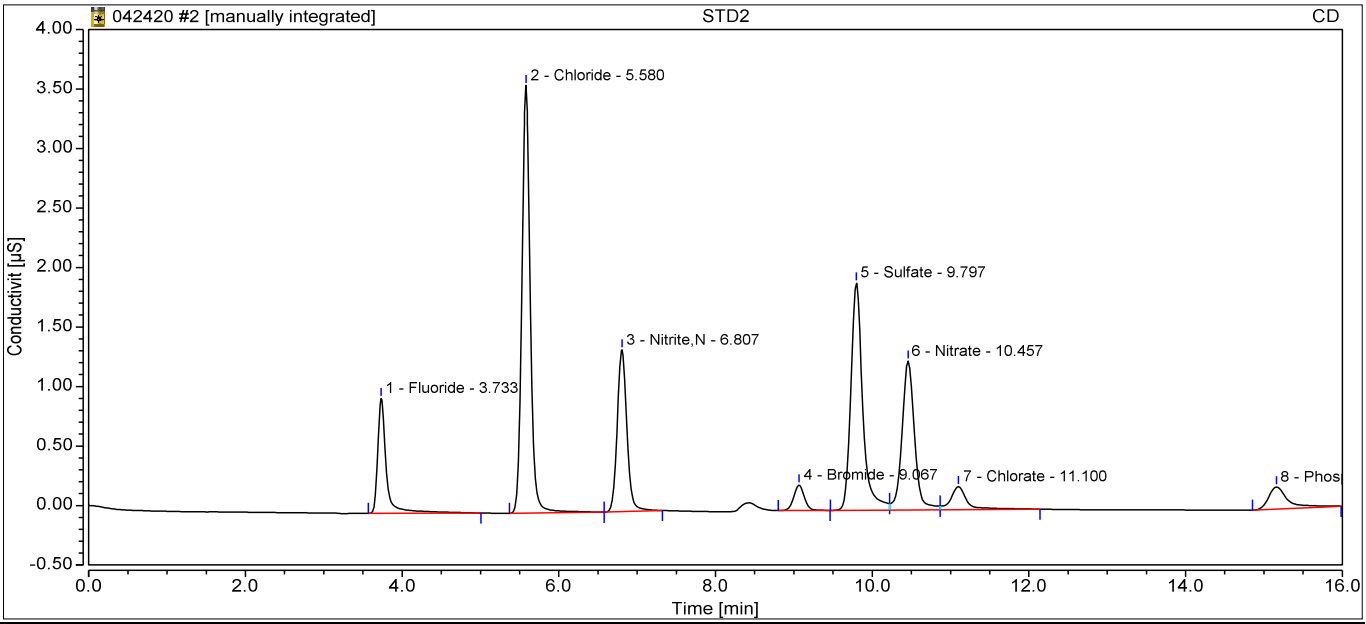


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	0.024	0.0955	0.0955	1.0000
2	5.58	Chloride	BMB	0.103	0.5065	0.5065	1.0000
3	6.80	Nitrite,N	BMB	0.016	0.0821	0.0821	1.0000
4	9.07	Bromide	BMB	0.008	0.1156	0.1156	1.0000
5	9.80	Sulfate	BM	0.065	0.4885	0.4885	1.0000
6	10.47	Nitrate	M	0.049	0.0974	0.0974	1.0000
7	11.11	Chlorate	MB	0.010	0.0834	0.0834	1.0000
8	15.18	Phosphate	BMB*	0.003	0.1173	0.1173	1.0000
Total:			**0.000**	**0.279**		**1.59**	

2 STD2			
Sample Name:	**STD2**	*Injection Volume:*	**5.00**
Vial Number:	**GA2**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**02/05/2020 19:57**	*Sample Weight:*	**1.0000**

Run Time:



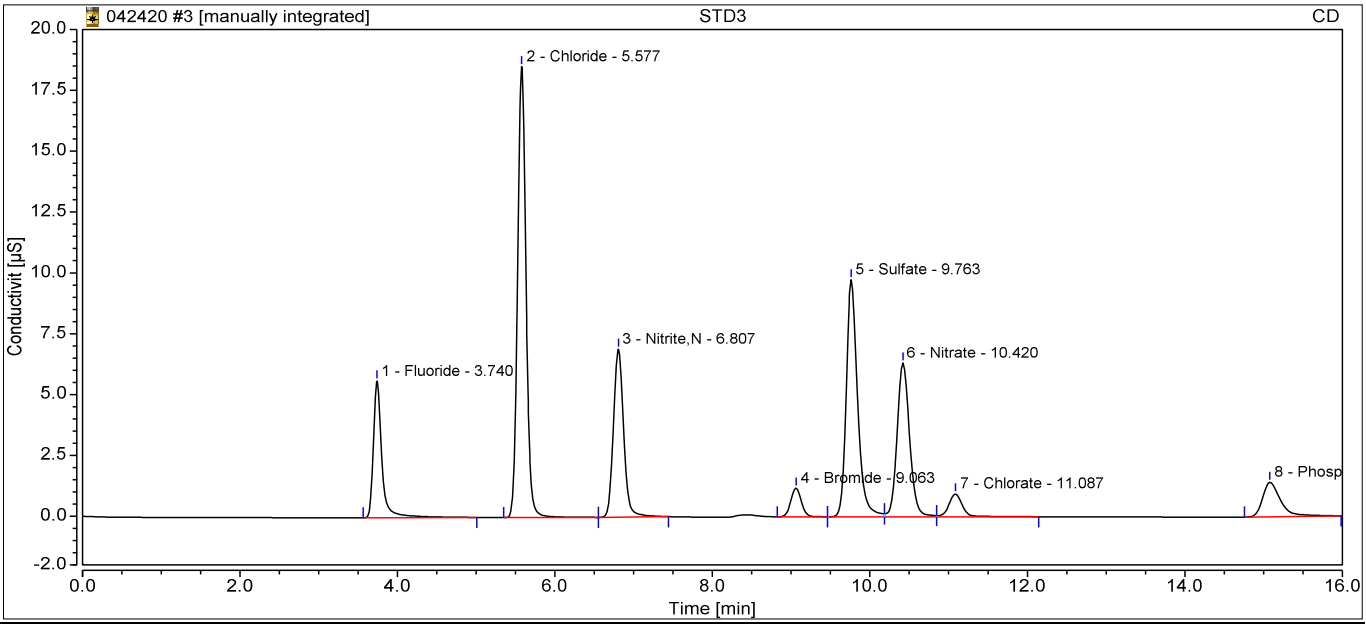
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	0.123	0.3833	0.3833	1.0000
2	5.58	Chloride	BMb*	0.449	1.9963	1.9963	1.0000
3	6.81	Nitrite,N	bMB*	0.194	0.4423	0.4423	1.0000
4	9.07	Bromide	BMB	0.034	0.3722	0.3722	1.0000
5	9.80	Sulfate	BM	0.335	2.0973	2.0973	1.0000
6	10.46	Nitrate	M	0.232	0.4103	0.4103	1.0000
7	11.10	Chlorate	MB	0.047	0.4759	0.4759	1.0000
8	15.16	Phosphate	BMB	0.053	0.3518	0.3518	1.0000
Total:			**0.000**	**1.467**		**6.53**	

3 STD3

Sample Name:	**STD3**	*Injection Volume:*	**5.00**
Vial Number:	**GA3**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**02/05/2020 20:15**	*Sample Weight:*	**1.0000**

Run Time:

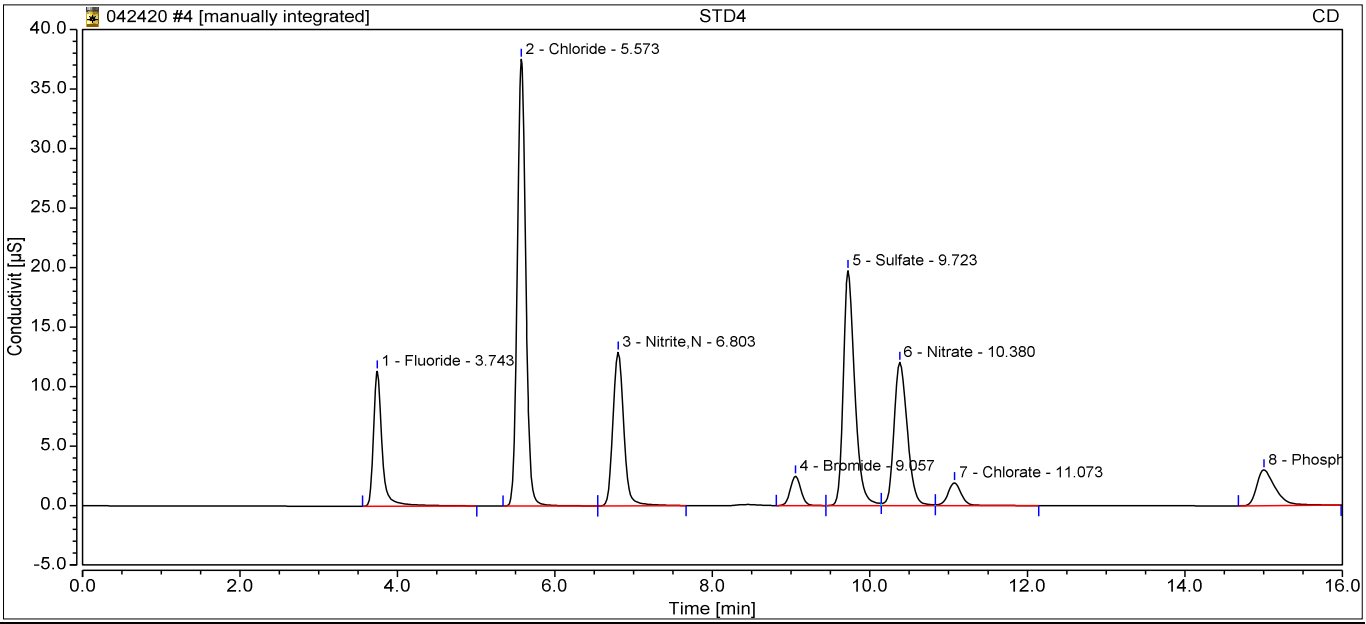


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	0.701	2.0769	2.0769	1.0000
2	5.58	Chloride	BMb*	2.284	9.9073	9.9073	1.0000
3	6.81	Nitrite,N	bMB*	1.029	2.1245	2.1245	1.0000
4	9.06	Bromide	BM	0.182	1.8657	1.8657	1.0000
5	9.76	Sulfate	M	1.624	9.7730	9.7730	1.0000
6	10.42	Nitrate	M	1.160	1.9980	1.9980	1.0000
7	11.09	Chlorate	MB	0.189	1.9689	1.9689	1.0000
8	15.08	Phosphate	BMB	0.374	1.8664	1.8664	1.0000
Total:			**0.000**	**7.542**		**31.58**	

4 STD4			
Sample Name:	**STD4**	*Injection Volume:*	**5.00**
Vial Number:	**GA4**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**02/05/2020 20:33**	*Sample Weight:*	**1.0000**

Run Time:

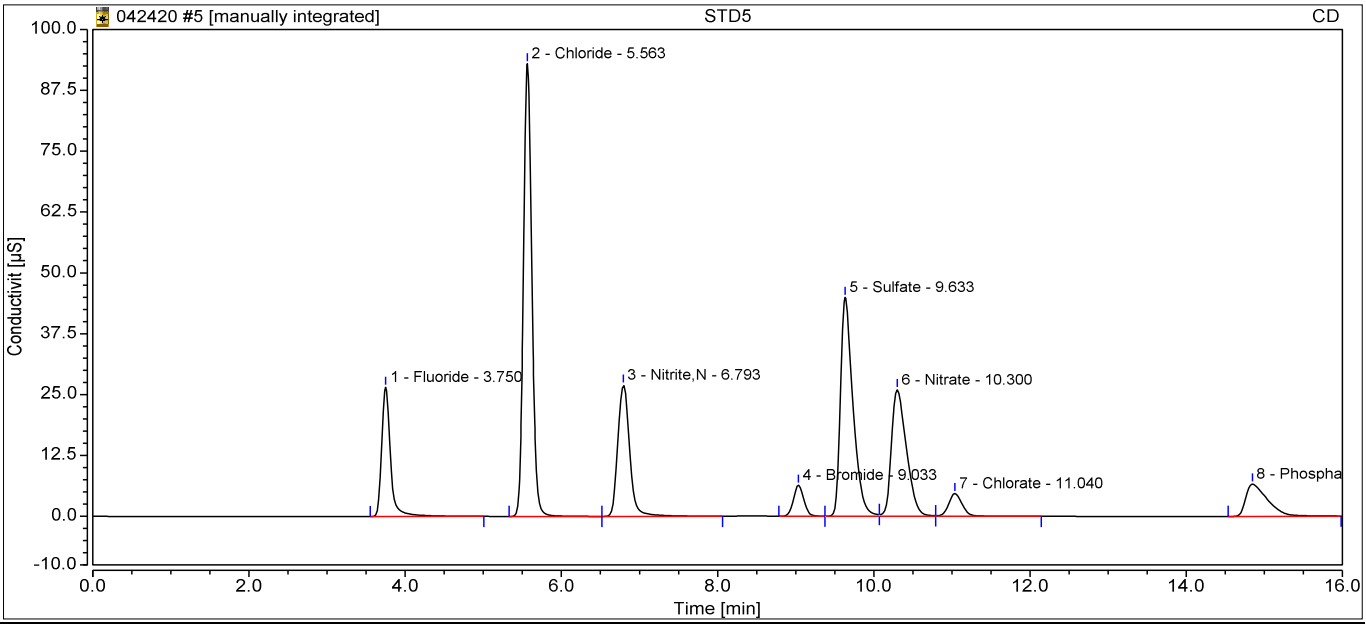


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	1.428	4.2080	4.2080	1.0000
2	5.57	Chloride	BMb*	4.627	20.0069	20.0069	1.0000
3	6.80	Nitrite,N	bMB*	2.046	4.1745	4.1745	1.0000
4	9.06	Bromide	BM	0.382	3.8871	3.8871	1.0000
5	9.72	Sulfate	M	3.337	19.9713	19.9713	1.0000
6	10.38	Nitrate	M	2.343	4.0228	4.0228	1.0000
7	11.07	Chlorate	MB	0.380	3.9830	3.9830	1.0000
8	15.00	Phosphate	BMB	0.824	3.9874	3.9874	1.0000
Total:			**0.000**	**15.366**		**64.24**	

5 STD5			
Sample Name:	**STD5**	*Injection Volume:*	**5.00**
Vial Number:	**GA5**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**02/05/2020 20:51**	*Sample Weight:*	**1.0000**

Run Time:



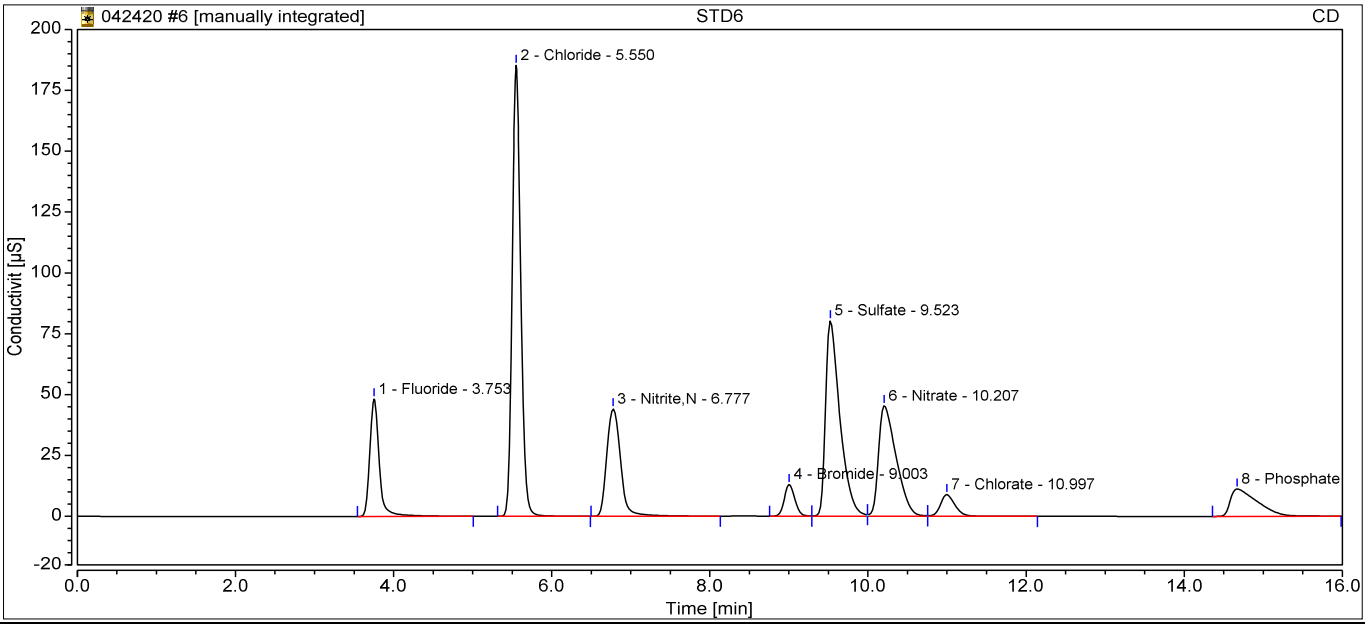
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.75	Fluoride	BMB	3.472	10.1940	10.1940	1.0000
2	5.56	Chloride	BMB	11.516	49.7057	49.7057	1.0000
3	6.79	Nitrite,N	BMB*	4.776	9.6766	9.6766	1.0000
4	9.03	Bromide	BM	0.981	9.9279	9.9279	1.0000
5	9.63	Sulfate	M	8.325	49.6811	49.6811	1.0000
6	10.30	Nitrate	M	5.799	9.9382	9.9382	1.0000
7	11.04	Chlorate	MB	0.944	9.9252	9.9252	1.0000
8	14.85	Phosphate	BMB	2.135	10.1771	10.1771	1.0000
Total:			**0.000**	**37.949**		**159.23**	

6 STD6

Sample Name:	**STD6**	*Injection Volume:*	**5.00**
Vial Number:	**GA6**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**02/05/2020 21:09**	*Sample Weight:*	**1.0000**

Run Time:



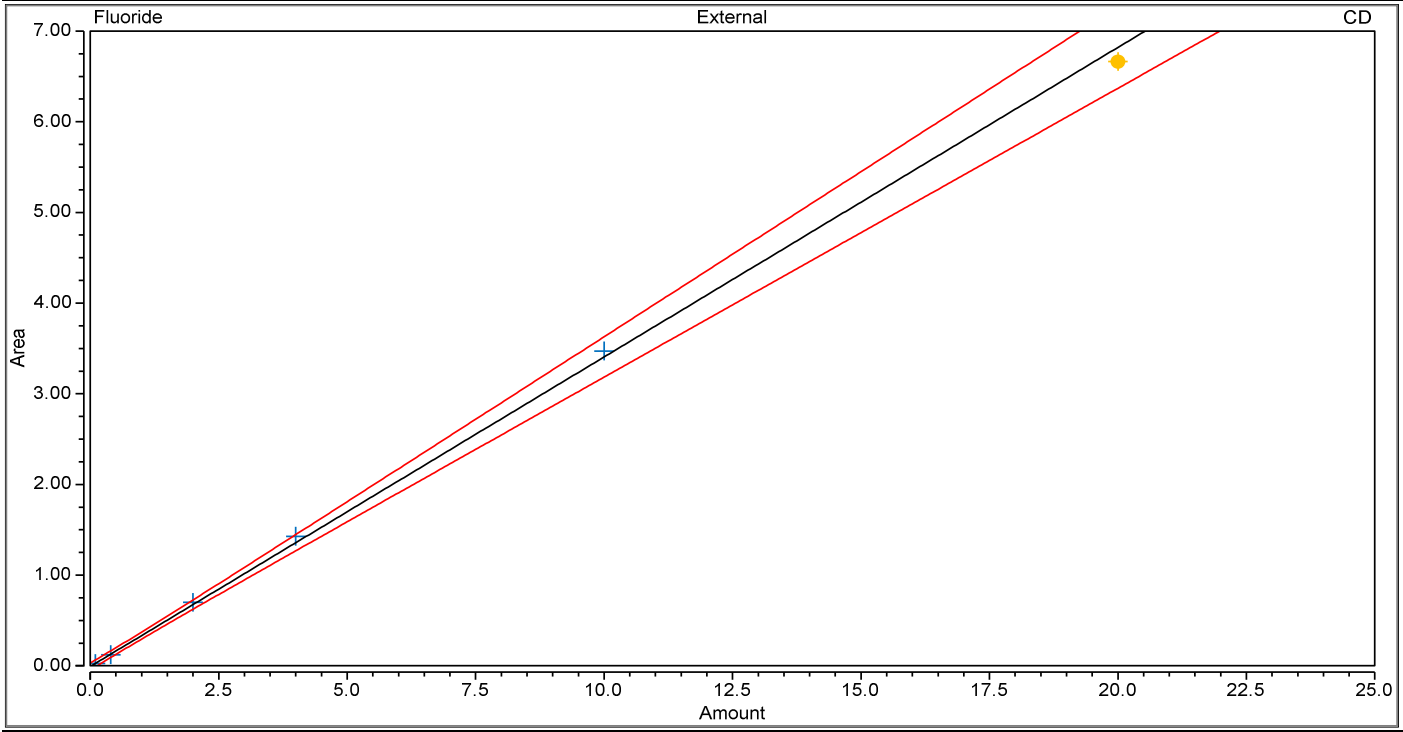
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.75	Fluoride	BMB	6.664	19.5424	19.5424	1.0000
2	5.55	Chloride	BMB	23.270	100.3774	100.3774	1.0000
3	6.78	Nitrite,N	BMB*	8.893	17.9725	17.9725	1.0000
4	9.00	Bromide	BM	2.012	20.3316	20.3316	1.0000
5	9.52	Sulfate	M	16.857	100.4888	100.4888	1.0000
6	10.21	Nitrate	M	11.698	20.0333	20.0333	1.0000
7	11.00	Chlorate	MB	1.906	20.0635	20.0635	1.0000
8	14.67	Phosphate	BMB	4.450	21.0985	21.0985	1.0000
Total:			**0.000**	**75.750**		**319.91**	

Calibration

Calibration Details	Fluoride		
Calibration Type	Lin, WithOffset, 1/A	*Offset (C0)*	-0.0083
Evaluation Type	Area	*Slope (C1)*	0.3414
Number of Calibration Points	6	*Curve (C2)*	0.0000
Number of disabled Calibration Points	0	*R-Square*	0.9991

Calibration Plot **Fluoride**

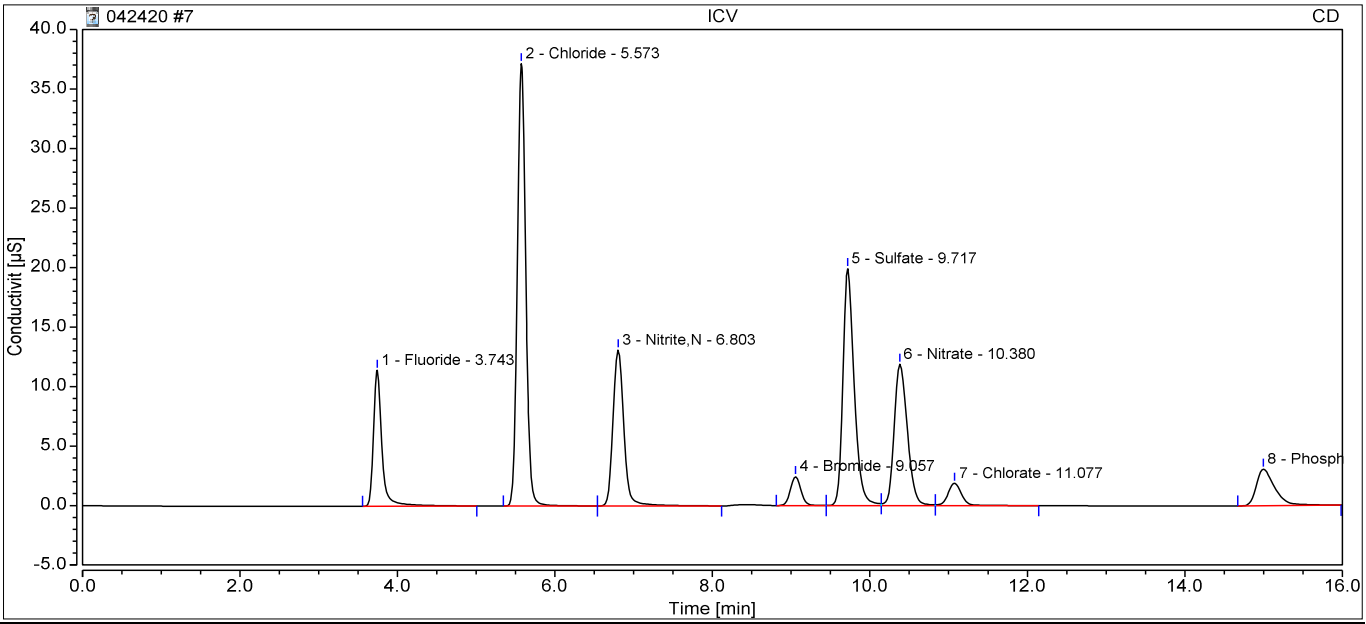


Calibration Results **Fluoride**

No.	Injection Name	Calibration Level	X Value CD Fluoride	Y Value CD Fluoride	Y Value CD Fluoride	Area µS*min CD Fluoride	Height µS CD Fluoride
1	STD1	1	0.1000	0.0243	0.0243	0.024	0.212
2	STD2	2	0.4000	0.1226	0.1226	0.123	0.964
3	STD3	3	2.0000	0.7008	0.7008	0.701	5.614
4	STD4	4	4.0000	1.4284	1.4284	1.428	11.345
5	STD5	5	10.0000	3.4723	3.4723	3.472	26.547
6	STD6	6	20.0000	6.6641	6.6641	6.664	48.233

7 ICV			
Sample Name:	**ICV**	*Injection Volume:*	**5.00**
Vial Number:	**GA7**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**02/05/2020 21:27**	*Sample Weight:*	**1.0000**

Run Time:



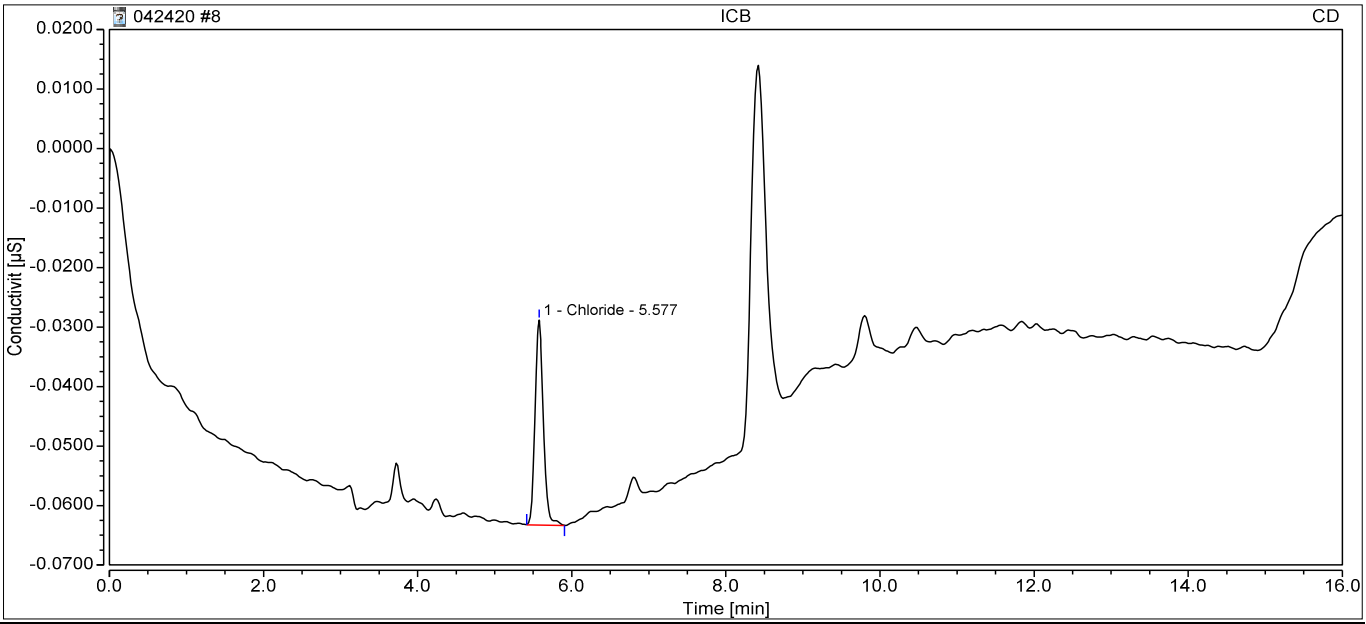
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	1.412	4.1607	4.1607	1.0000
2	5.57	Chloride	BMB	4.570	19.7627	19.7627	1.0000
3	6.80	Nitrite,N	BMB	2.081	4.2442	4.2442	1.0000
4	9.06	Bromide	BM	0.374	3.8104	3.8104	1.0000
5	9.72	Sulfate	M	3.327	19.9126	19.9126	1.0000
6	10.38	Nitrate	M	2.299	3.9478	3.9478	1.0000
7	11.08	Chlorate	MB	0.379	3.9799	3.9799	1.0000
8	15.00	Phosphate	BMB	0.835	4.0417	4.0417	1.0000
Total:			**0.000**	**15.278**		**63.86**	

8 ICB

Sample Name:	**ICB**	*Injection Volume:*	**5.00**
Vial Number:	**GA8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**02/05/2020 21:45**	*Sample Weight:*	**1.0000**

Run Time:



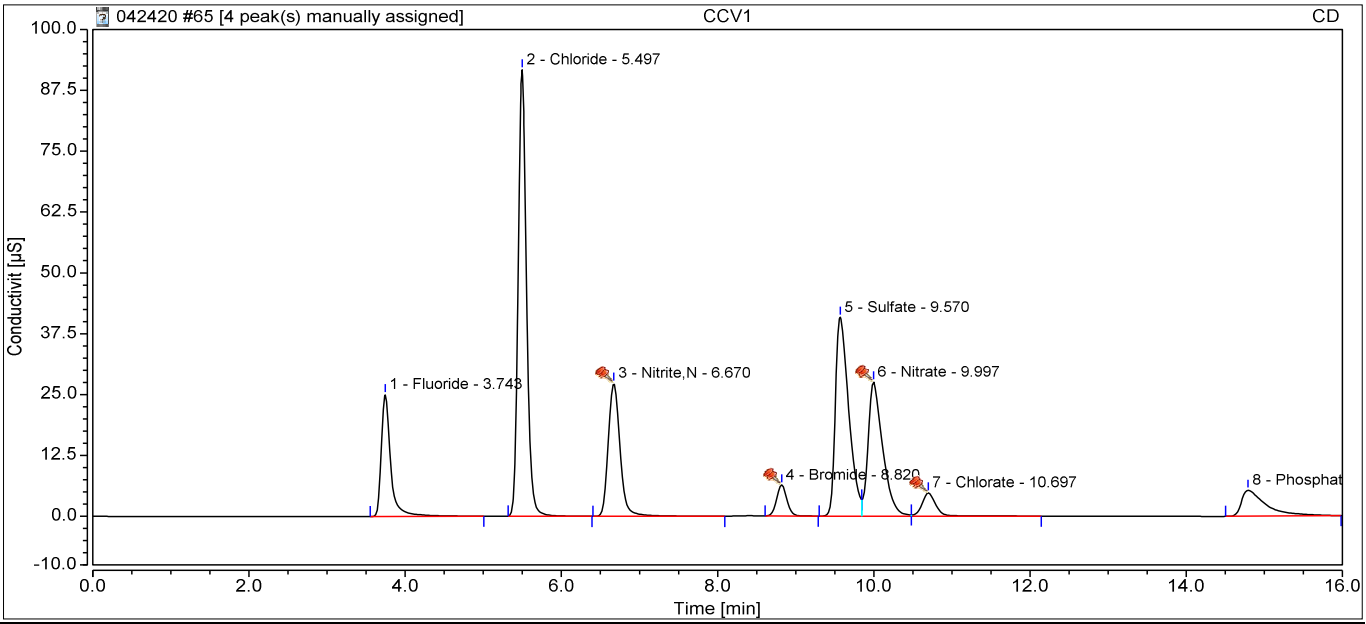
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.58	Chloride	BMB	0.004	0.0794	0.0794	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.004**		**0.08**	

65 CCV1

Sample Name:	**CCV1**	*Injection Volume:*	**5.00**
Vial Number:	**GA4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/25/2020 03:27**	*Sample Weight:*	**1.0000**

Run Time:



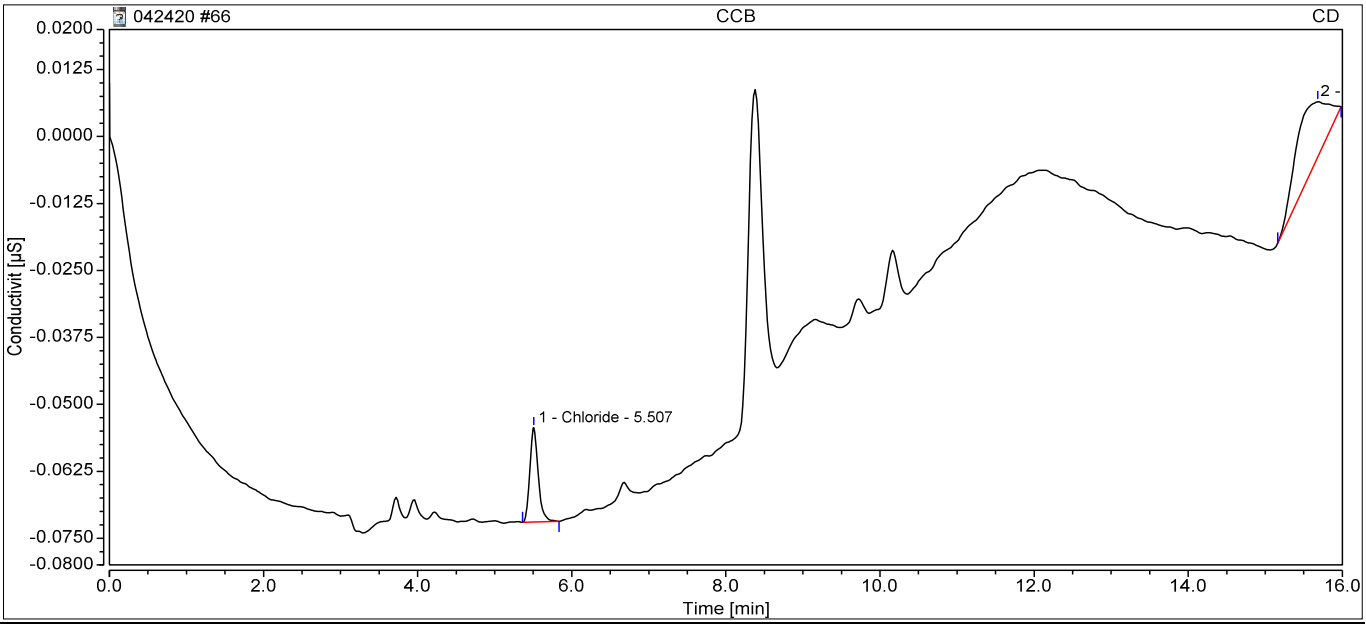
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	3.491	10.2497	10.2497	1.0000
2	5.50	Chloride	BMB	11.394	49.1804	49.1804	1.0000
3	6.67	Nitrite,N	BMB^	4.802	9.7293	9.7293	1.0000
4	8.82	Bromide	BMB^	0.965	9.7725	9.7725	1.0000
5	9.57	Sulfate	BM	8.128	48.5035	48.5035	1.0000
6	10.00	Nitrate	M ^	5.966	10.2238	10.2238	1.0000
7	10.70	Chlorate	MB^	0.970	10.1968	10.1968	1.0000
8	14.79	Phosphate	BMB	1.946	9.2842	9.2842	1.0000
Total:			**0.000**	**37.663**		**157.14**	

66 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**GA5**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/25/2020 03:45**	*Sample Weight:*	**1.0000**

Run Time:

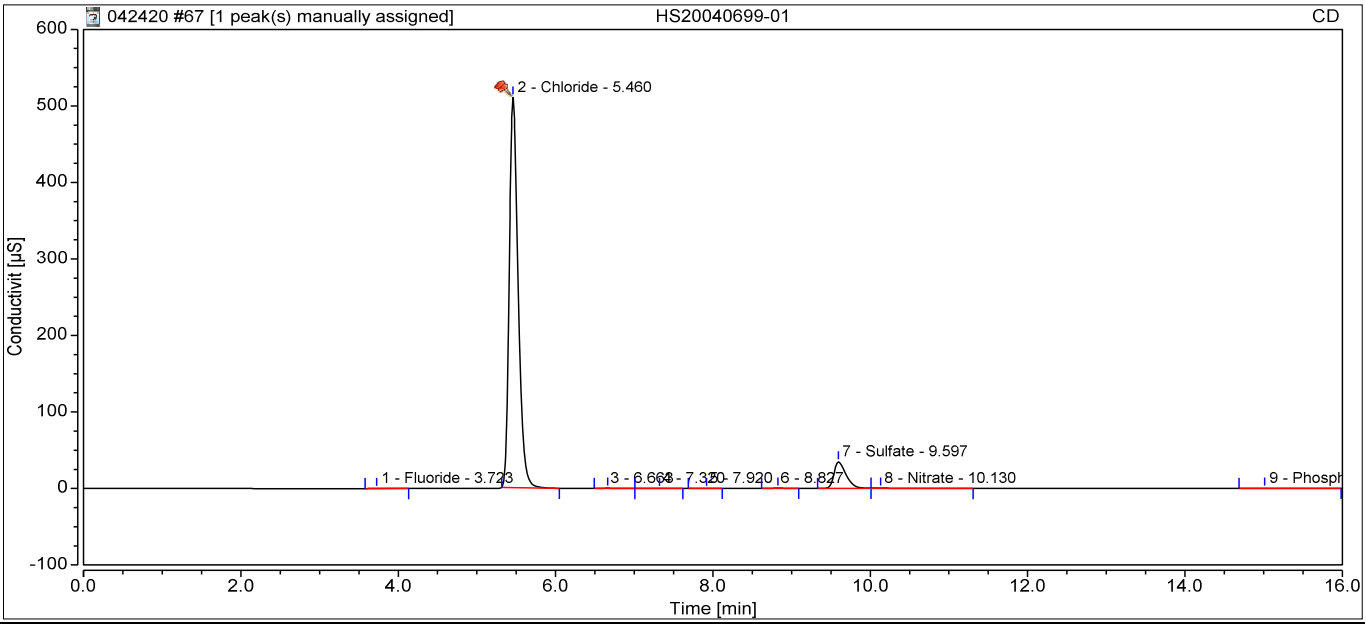


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.51	Chloride	BMB	0.002	0.0706	0.0706	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.002**		**0.07**	

67	*HS20040699-01*		
Sample Name:	**HS20040699-01**	*Injection Volume:*	**5.00**
Vial Number:	**RB3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/25/2020 04:03**	*Sample Weight:*	**1.0000**

Run Time:



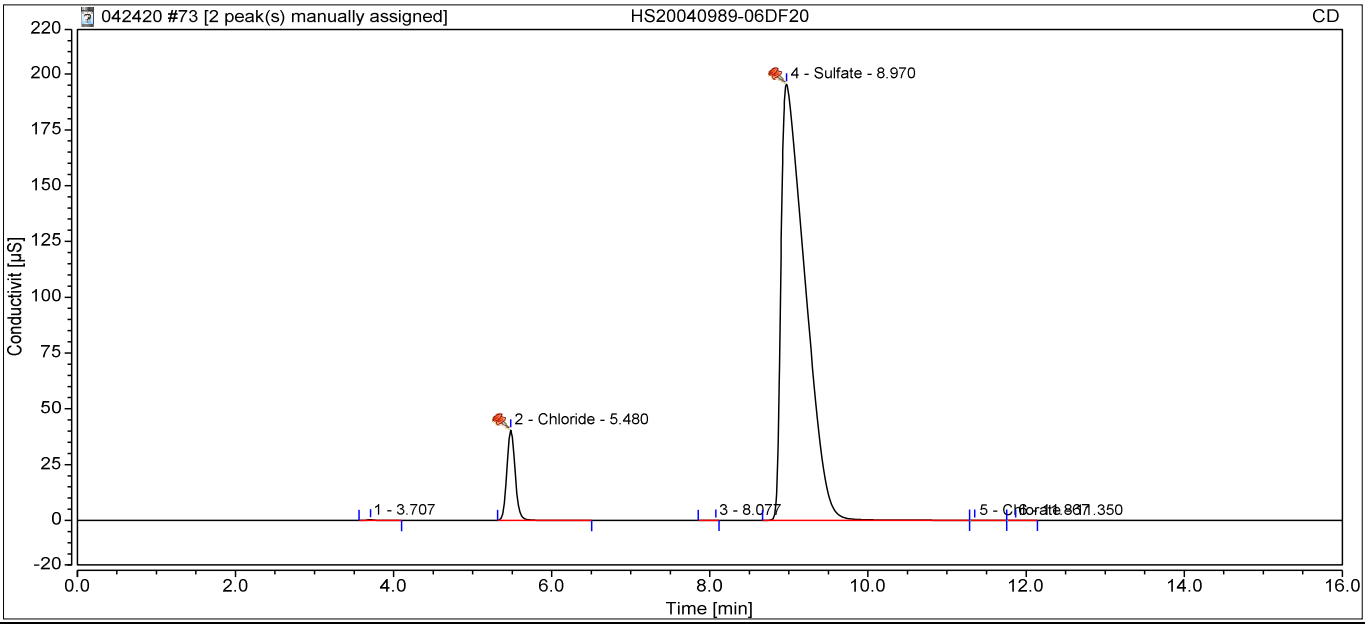
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	0.031	0.1146	0.1146	1.0000
2	5.46	Chloride	BMB^	67.094	289.3024	289.3024	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
7	9.60	Sulfate	BM	6.208	37.0688	37.0688	1.0000
8	10.13	Nitrate	MB	0.133	0.2397	0.2397	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
9	15.01	Phosphate	BMB	0.155	0.8314	0.8314	1.0000
Total:			**0.000**	**73.620**		**327.56**	

73 HS20040989-06DF20

Sample Name:	**HS20040989-06DF20**	*Injection Volume:*	**5.00**
Vial Number:	**RC1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**20.0000**
Recording Time:	**04/25/2020 05:52**	*Sample Weight:*	**1.0000**

Run Time:



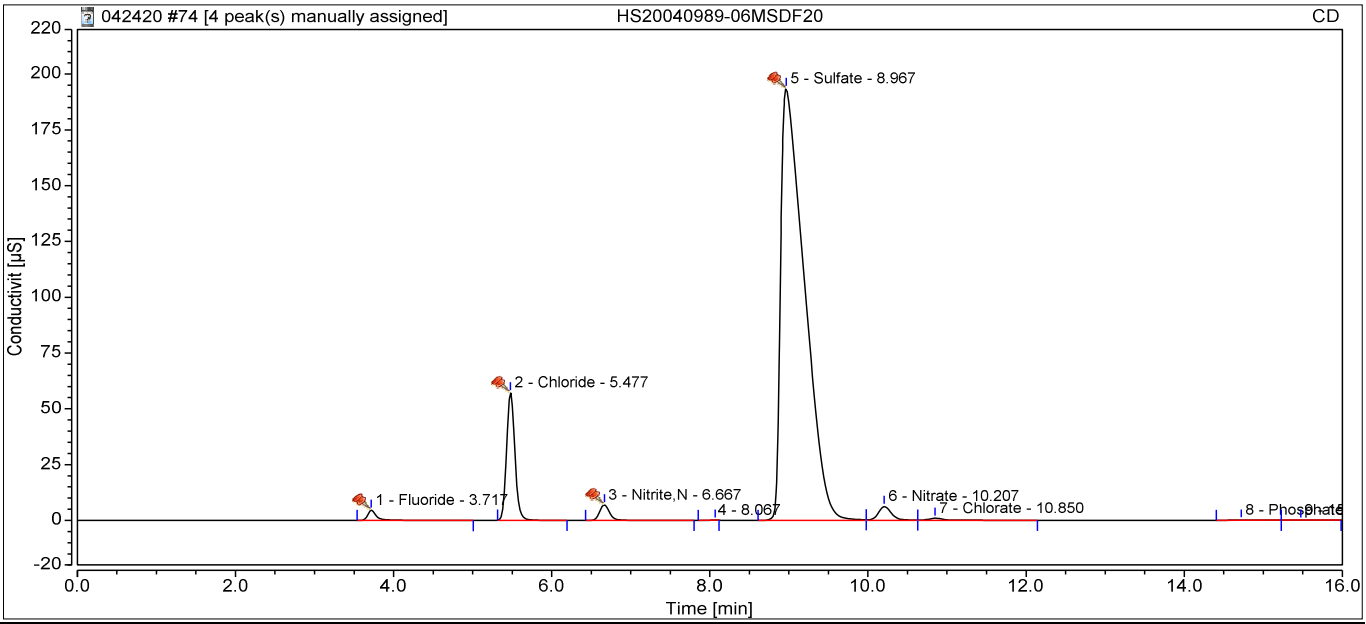
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	20.0000
2	5.48	Chloride	BMB^	4.944	21.3727	427.4541	20.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	20.0000
4	8.97	Sulfate	BM ^	68.627	408.7909	8175.8178	20.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	20.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	20.0000
5	11.35	Chlorate	M	0.007	0.0531	1.0623	20.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	20.0000
Total:			**0.000**	**73.577**		**8604.33**	

74 HS20040989-06MSDF20

Sample Name:	**HS20040989-06MSDF20**	*Injection Volume:*	**5.00**
Vial Number:	**RC2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**20.0000**
Recording Time:	**04/25/2020 06:10**	*Sample Weight:*	**1.0000**

Run Time:



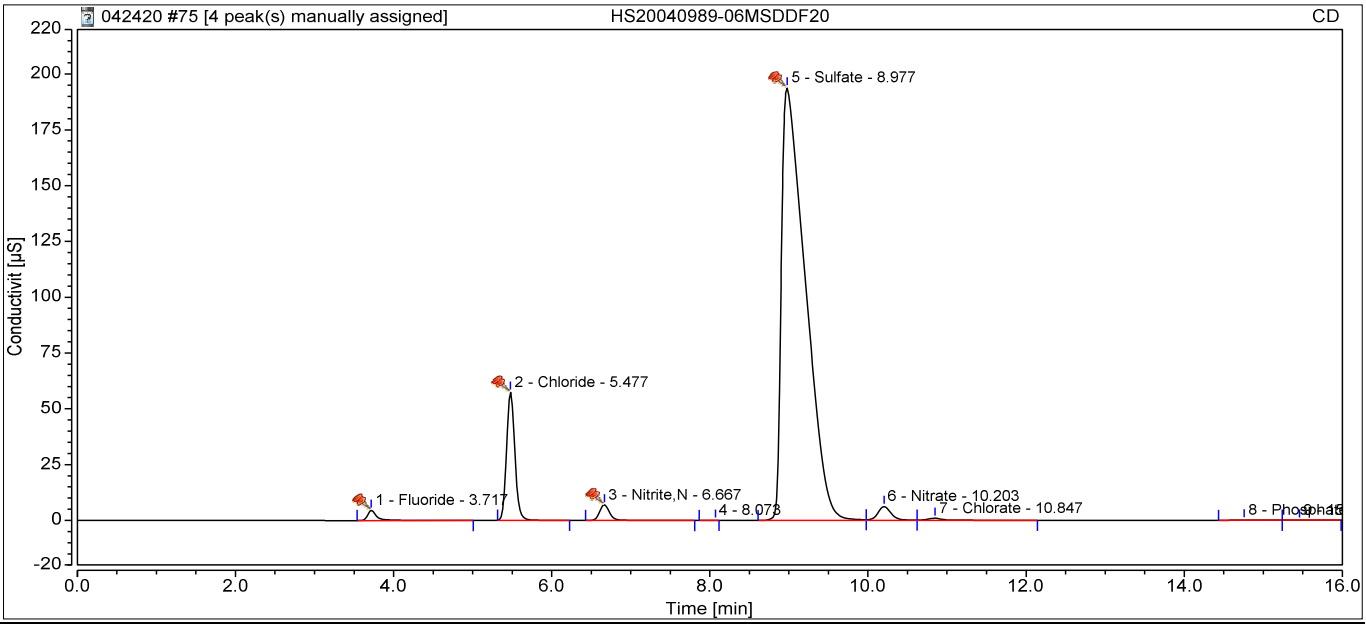
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB^	0.645	1.9141	38.2823	20.0000
2	5.48	Chloride	BMB^	6.980	30.1502	603.0047	20.0000
3	6.67	Nitrite,N	BMB^	1.037	2.1398	42.7957	20.0000
5	8.97	Sulfate	BM ^	67.356	401.2251	8024.5011	20.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	20.0000
6	10.21	Nitrate	M	1.210	2.0838	41.6765	20.0000
7	10.85	Chlorate	MB	0.227	2.3732	47.4630	20.0000
8	14.72	Phosphate	BMB	0.049	0.3343	6.6860	20.0000
Total:			**0.000**	**77.504**		**8804.41**	

75 HS20040989-06MSDDF20

Sample Name:	**HS20040989-06MSDDF20**	*Injection Volume:*	**5.00**
Vial Number:	**RC3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**20.0000**
Recording Time:	**04/25/2020 06:28**	*Sample Weight:*	**1.0000**

Run Time:



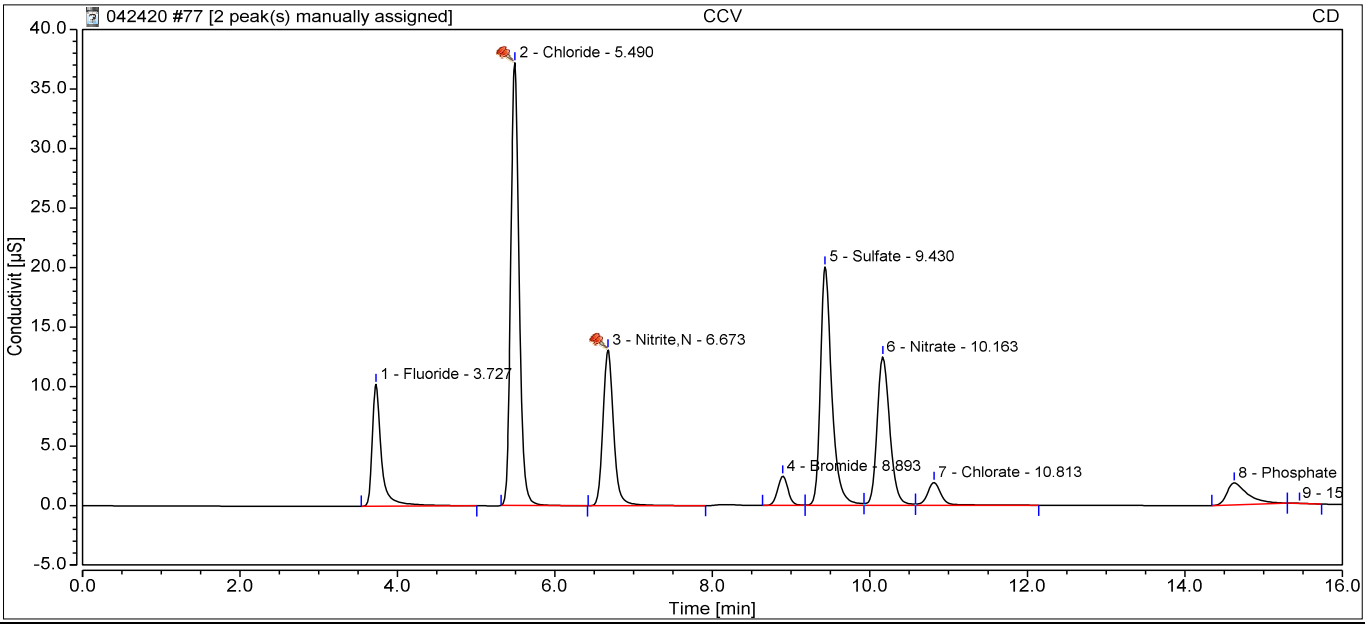
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB^	0.644	1.9092	38.1848	20.0000
2	5.48	Chloride	BMB^	6.994	30.2134	604.2681	20.0000
3	6.67	Nitrite,N	BMB^	1.038	2.1416	42.8324	20.0000
5	8.98	Sulfate	BM ^	67.847	404.1484	8082.9671	20.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	20.0000
6	10.20	Nitrate	M	1.215	2.0921	41.8429	20.0000
7	10.85	Chlorate	MB	0.226	2.3600	47.2005	20.0000
8	14.76	Phosphate	BMB	0.054	0.3558	7.1160	20.0000
Total:			**0.000**	**78.017**		**8864.41**	

77 CCV

Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**GA2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/25/2020 07:04**	*Sample Weight:*	**1.0000**

Run Time:



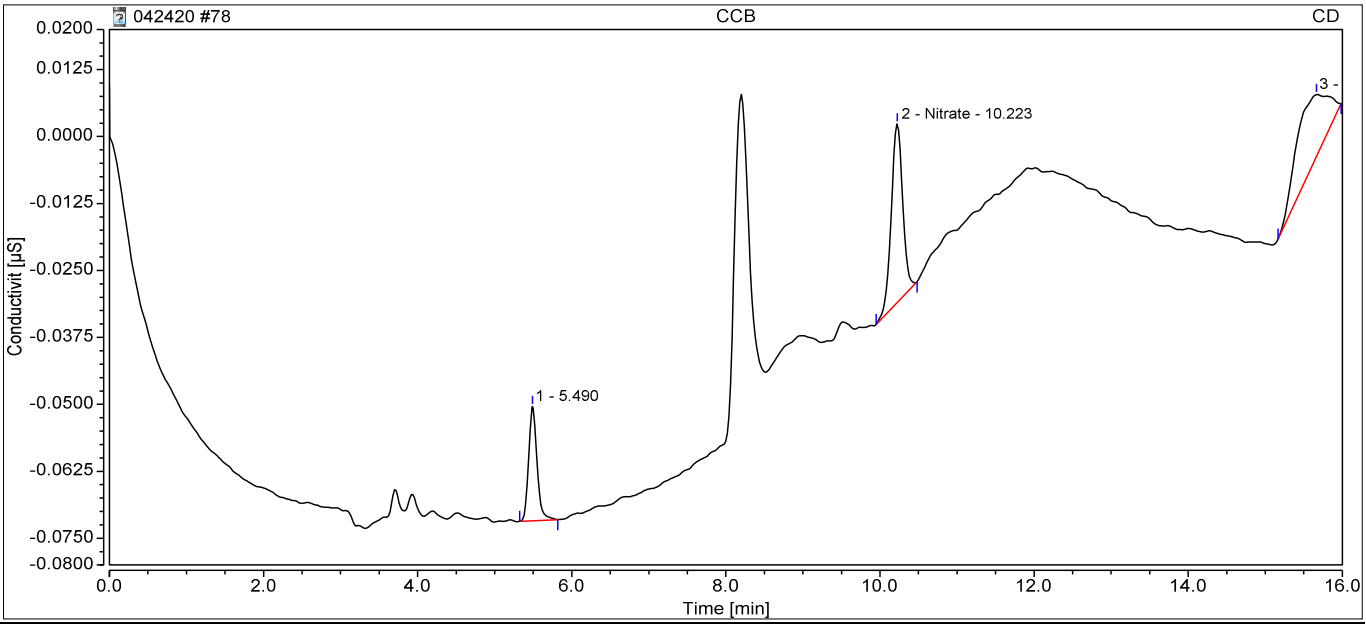
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	1.393	4.1042	4.1042	1.0000
2	5.49	Chloride	BMB^	4.581	19.8078	19.8078	1.0000
3	6.67	Nitrite,N	BMB^	2.069	4.2213	4.2213	1.0000
4	8.89	Bromide	BM	0.376	3.8313	3.8313	1.0000
5	9.43	Sulfate	M	3.356	20.0865	20.0865	1.0000
6	10.16	Nitrate	M	2.330	4.0012	4.0012	1.0000
7	10.81	Chlorate	MB	0.397	4.1599	4.1599	1.0000
8	14.63	Phosphate	BMB	0.563	2.7583	2.7583	1.0000
Total:			**0.000**	**15.065**		**62.97**	

78 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**GA3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/25/2020 07:23**	*Sample Weight:*	**1.0000**

Run Time:



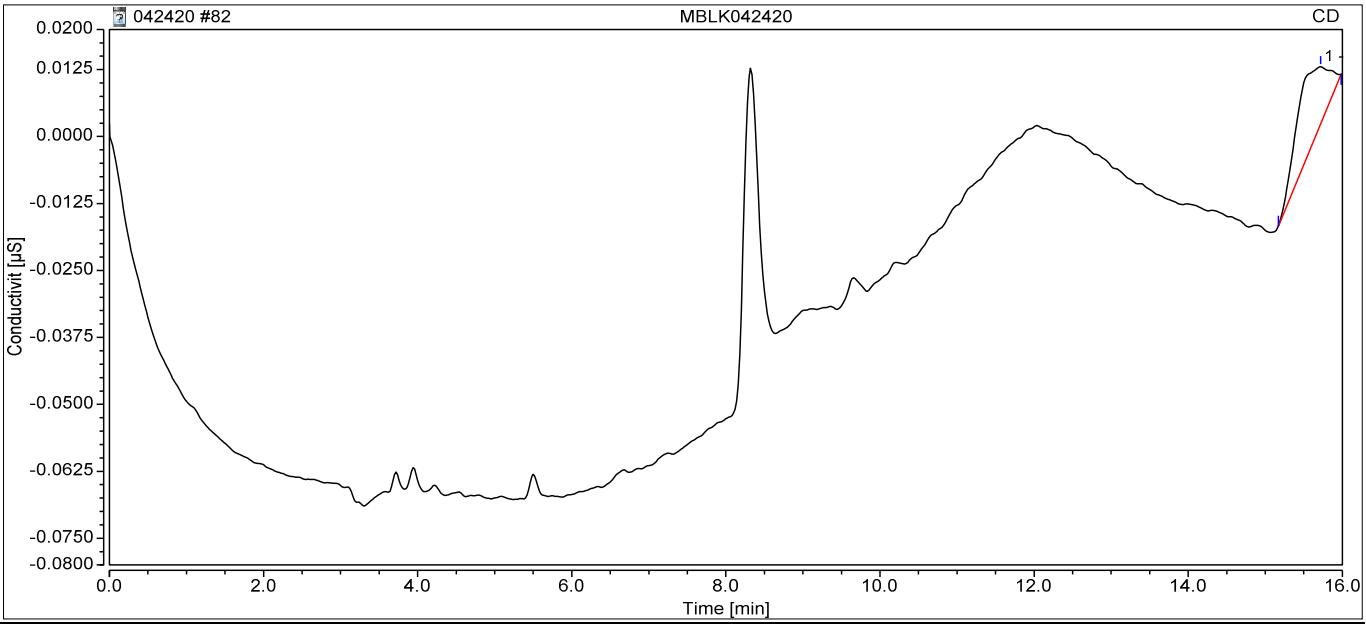
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
2	10.22	Nitrate	BMB	0.006	0.0228	0.0228	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.006**		**0.02**	

82 MBLK042420

Sample Name:	**MBLK042420**	*Injection Volume:*	**5.00**
Vial Number:	**GB1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/25/2020 08:35**	*Sample Weight:*	**1.0000**

Run Time:



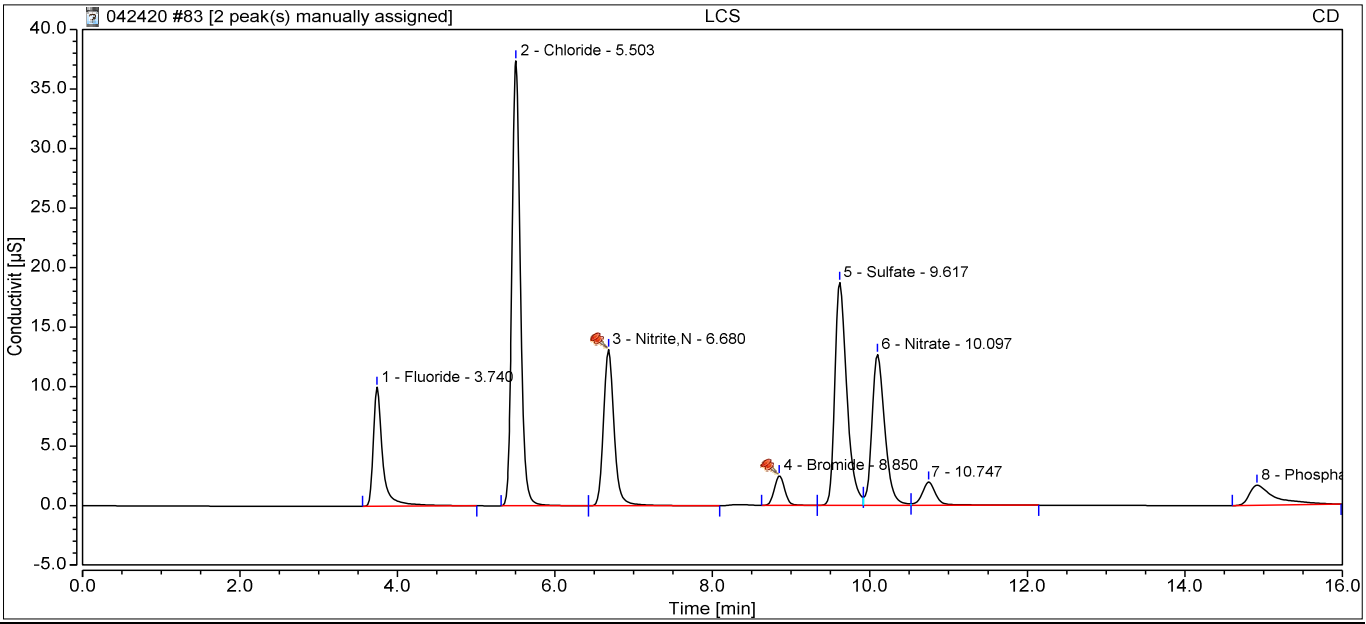
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.000**		**0.00**	

83 LCS

Sample Name:	**LCS**	*Injection Volume:*	**5.00**
Vial Number:	**GB2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/25/2020 08:53**	*Sample Weight:*	**1.0000**

Run Time:



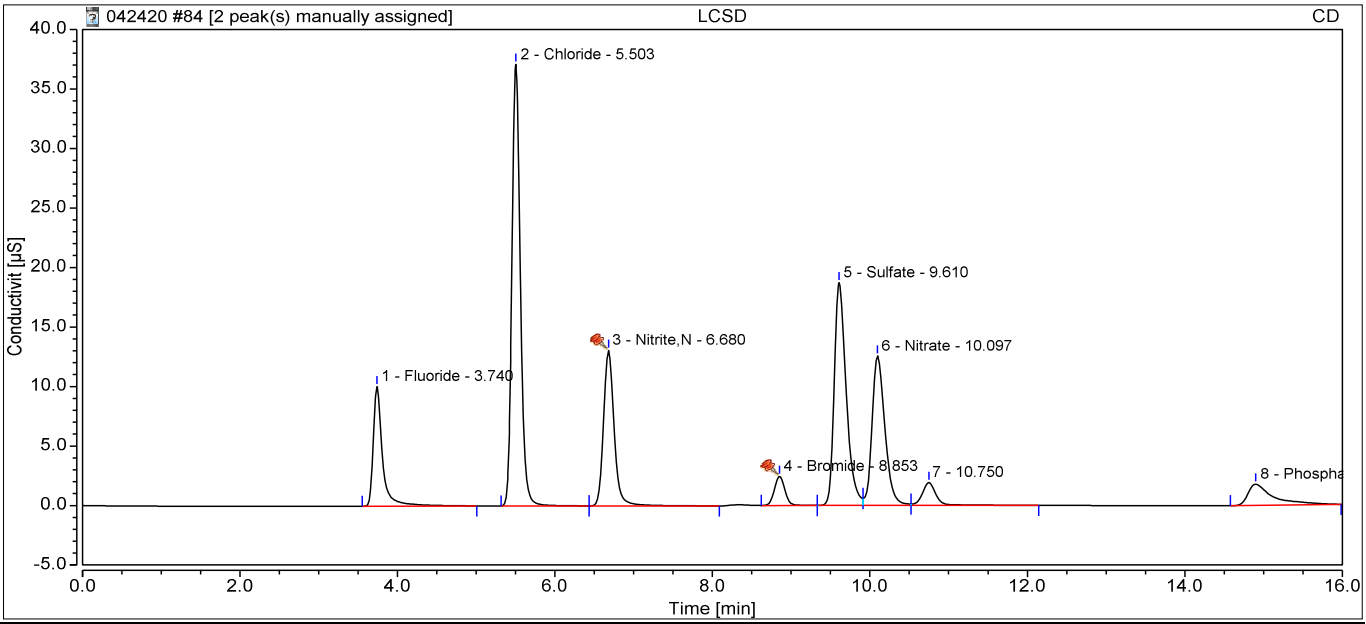
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	1.377	4.0576	4.0576	1.0000
2	5.50	Chloride	BMB	4.603	19.9027	19.9027	1.0000
3	6.68	Nitrite,N	BMB^	2.074	4.2296	4.2296	1.0000
4	8.85	Bromide	BMB^	0.376	3.8308	3.8308	1.0000
5	9.62	Sulfate	BM	3.295	19.7267	19.7267	1.0000
6	10.10	Nitrate	M	2.380	4.0866	4.0866	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
8	14.92	Phosphate	BMB	0.638	3.1124	3.1124	1.0000
Total:			**0.000**	**14.744**		**58.95**	

84 LCSD

Sample Name:	**LCSD**	*Injection Volume:*	**5.00**
Vial Number:	**GB3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/25/2020 09:11**	*Sample Weight:*	**1.0000**

Run Time:

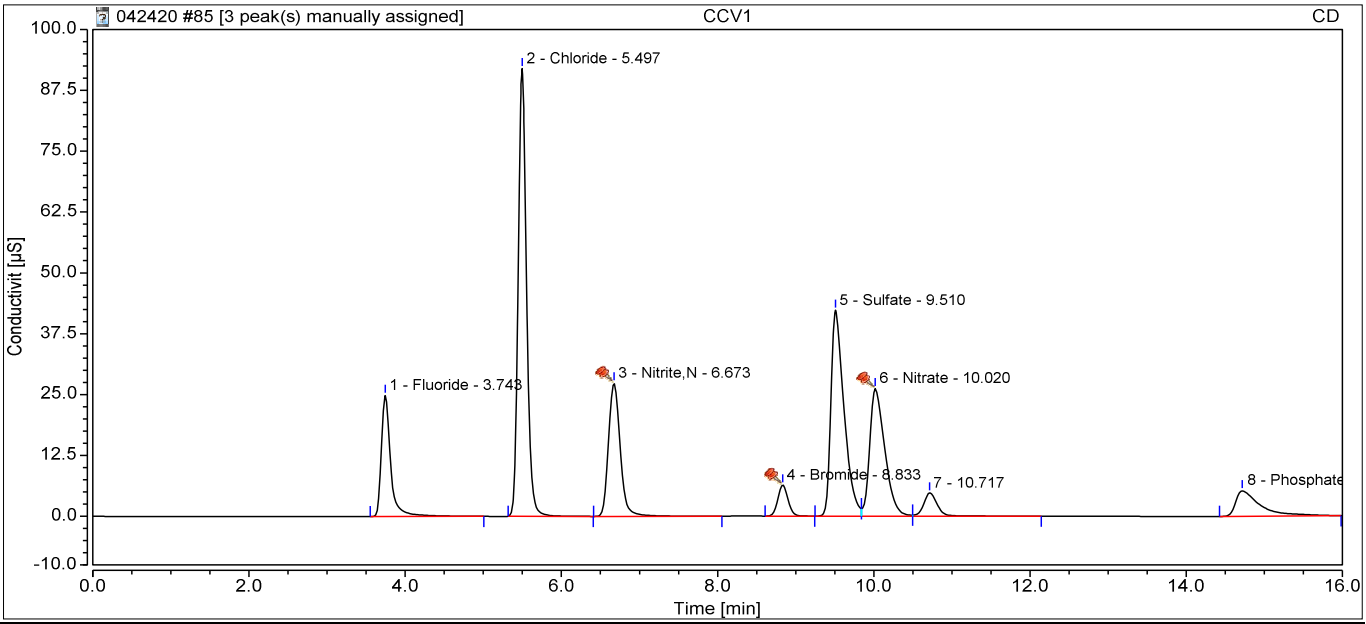


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	1.372	4.0416	4.0416	1.0000
2	5.50	Chloride	BMB	4.572	19.7727	19.7727	1.0000
3	6.68	Nitrite,N	BMB^	2.063	4.2079	4.2079	1.0000
4	8.85	Bromide	BM ^	0.374	3.8069	3.8069	1.0000
5	9.61	Sulfate	M	3.274	19.5960	19.5960	1.0000
6	10.10	Nitrate	M	2.361	4.0536	4.0536	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
8	14.90	Phosphate	BMB	0.667	3.2496	3.2496	1.0000
Total:			**0.000**	**14.683**		**58.73**	

85 CCV1			
Sample Name:	**CCV1**	*Injection Volume:*	**5.00**
Vial Number:	**GA4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/25/2020 09:29**	*Sample Weight:*	**1.0000**

Run Time:



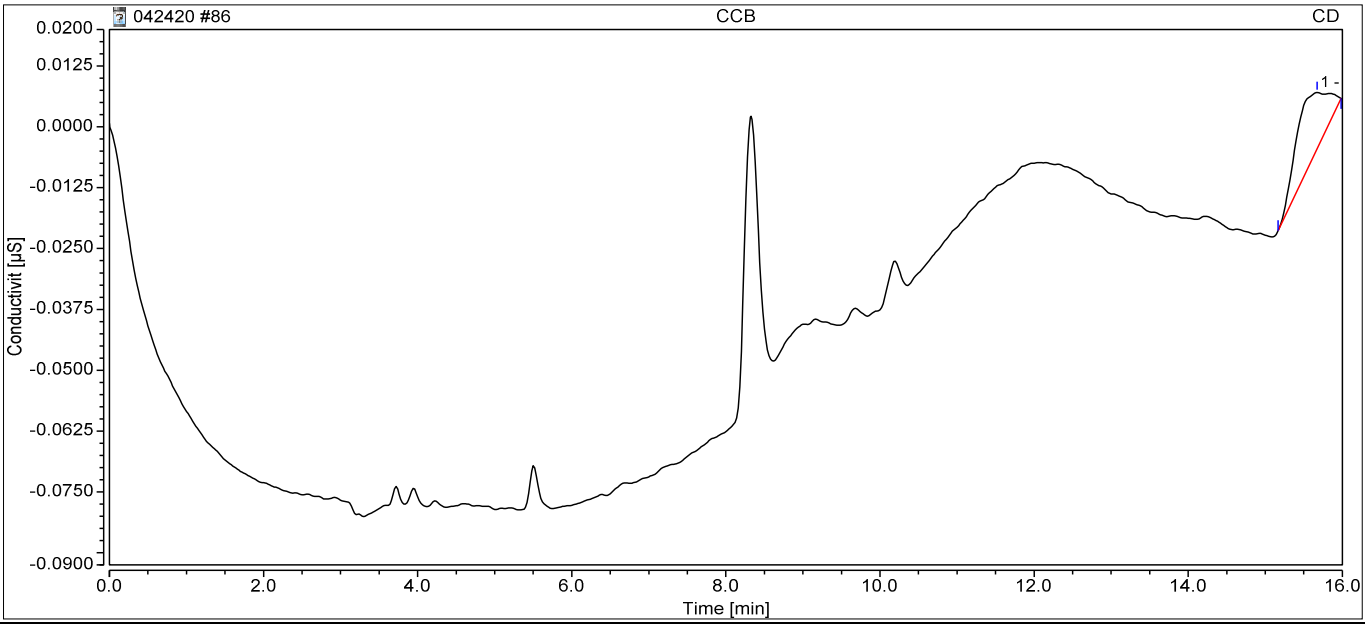
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	3.448	10.1229	10.1229	1.0000
2	5.50	Chloride	BMB	11.423	49.3041	49.3041	1.0000
3	6.67	Nitrite,N	BMB^	4.803	9.7305	9.7305	1.0000
4	8.83	Bromide	BMB^	0.969	9.8129	9.8129	1.0000
5	9.51	Sulfate	BM	8.252	49.2436	49.2436	1.0000
6	10.02	Nitrate	M ^	5.858	10.0379	10.0379	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
8	14.72	Phosphate	BMB	1.918	9.1510	9.1510	1.0000
Total:			**0.000**	**36.671**		**147.40**	

86 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**GA5**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**04/25/2020 09:47**	*Sample Weight:*	**1.0000**

Run Time:



Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chloride	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.000**		**0.00**	

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WorkOrder: HS20040700

Longhorn GW Treatment Plant Weekly Samples

Bhate Environmental Associates, Inc.

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

13-May-2020

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
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HS20040700

ALS WO# HS20040700

HS20040700 Longhorn GW Treatment Plant Weekly Samples Final

ALS WO# HS20040700

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April 30, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20040700**

Laboratory Results for: **Longhorn GW Treatment Plant Weekly Samples**

Dear Marcia,

ALS Environmental received 2 sample(s) on Apr 17, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

ALS Houston, US Date: 30-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20040700

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20040700-01	LH18/24-SP650_041620	Water		16-Apr-2020 14:00	17-Apr-2020 09:06	☐
HS20040700-02	LH18/24-SP650_041620_BIX	Water		16-Apr-2020 14:00	17-Apr-2020 09:06	☐

ALS Houston, US Date: 30-Apr-20

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20040700

Work Order Comments

• Analysis of Perchlorate was performed by ALS Houston TX, High Resolution. Laboratory. Final report attached.

The analysis for TOC was subcontracted to ALS Kelso, WA. Final report attached.

WetChemistry by Method E350.3

Batch ID: R360222

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method E365.3

Batch ID: R360171

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

ALS Houston, US Date: 30-Apr-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder:HS20040700
Sample ID: LH18/24-SP650_041620
Lab ID:HS20040700-01
Collection Date: 16-Apr-2020 14:00
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
AMMONIA AS N BY E350.3(ISE)		**Method:E350.3**						Analyst: YP
Nitrogen, Ammonia (As N)	**20**	a	**0.20**	**0.10**	**0.20**	**mg/L**	1	17-Apr-2020 13:15
ORTHO PHOSPHATE (PO4) AS P BY E365.3		**Method:E365.3**						Analyst: MZD
Phosphorus, Total Orthophosphate (As P)	**1.11**	a	**0.100**	**0.250**	**0.250**	**mg/L**	10	17-Apr-2020 13:00
SUBCONTRACT ANALYSIS - TOC ANALYSIS		**Method:NA**						Analyst: SUBK
Subcontract Analysis	See Attached		0	0		NA	1	30-Apr-2020 10:45

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 30-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Sample ID: LH18/24-SP650_041620_BIX
Collection Date: 16-Apr-2020 14:00

ANALYTICAL REPORT
WorkOrder:HS20040700
Lab ID:HS20040700-02
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	30-Apr-2020 15:22

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 30-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20040700

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R360171 (0)	**Test Name :** ORTHO PHOSPHATE (PO4) AS P BY E365.3				**Matrix:** Water	
HS20040700-01	LH18/24-SP650_041620	16 Apr 2020 14:00			17 Apr 2020 13:00	10
Batch ID: R360222 (0)	**Test Name :** AMMONIA AS N BY E350.3(ISE)				**Matrix:** Water	
HS20040700-01	LH18/24-SP650_041620	16 Apr 2020 14:00			17 Apr 2020 13:15	1
Batch ID: R360818 (0)	**Test Name :** SUBCONTRACT ANALYSIS - TOC ANALYSIS				**Matrix:** Water	
HS20040700-01	LH18/24-SP650_041620	16 Apr 2020 14:00			30 Apr 2020 10:45	1
Batch ID: R360870 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Water	
HS20040700-02	LH18/24-SP650_041620_BIX	16 Apr 2020 14:00			30 Apr 2020 15:22	1

ALS Houston, US Date: 30-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20040700

QC BATCH REPORT

Batch ID: R360171 (0) **Instrument:** UV-2450 **Method:** ORTHO PHOSPHATE (PO4) AS P BY E365.3

MBLK Sample ID: **MBLK-360171** Units: **mg/L** Analysis Date: **17-Apr-2020 13:00**
Client ID: Run ID: **UV-2450_360171** SeqNo: **5558412** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.0250	0.0250								U

LCS Sample ID: **LCS-360171** Units: **mg/L** Analysis Date: **17-Apr-2020 13:00**
Client ID: Run ID: **UV-2450_360171** SeqNo: **5558413** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.233	0.0250	0.25	0	93.2	85 - 115				

MS Sample ID: **HS20040700-01MS** Units: **mg/L** Analysis Date: **17-Apr-2020 13:00**
Client ID: **LH18/24-SP650_041620** Run ID: **UV-2450_360171** SeqNo: **5558415** PrepDate: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	3.33	0.250	2.5	1.11	88.8	80 - 120				

MSD Sample ID: **HS20040700-01MSD** Units: **mg/L** Analysis Date: **17-Apr-2020 13:00**
Client ID: **LH18/24-SP650_041620** Run ID: **UV-2450_360171** SeqNo: **5558416** PrepDate: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	3.38	0.250	2.5	1.11	90.8	80 - 120	3.33	1.49	20	

The following samples were analyzed in this batch: HS20040700-01

ALS Houston, US Date: 30-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20040700

QC BATCH REPORT

Batch ID: R360222 (0) **Instrument: WetChem_HS** **Method: AMMONIA AS N BY E350.3(ISE)**

MBLK Sample ID: **MBLK-R360222** Units: **mg/L** Analysis Date: **17-Apr-2020 13:15**
Client ID: Run ID: **WetChem_HS_360222** SeqNo: **5559446** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	0.10	0.20								U

LCS Sample ID: **LCS-R360222** Units: **mg/L** Analysis Date: **17-Apr-2020 13:15**
Client ID: Run ID: **WetChem_HS_360222** SeqNo: **5559445** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	10.04	0.20	10	0	100	80 - 120				

MS Sample ID: **HS20040490-02MS** Units: **mg/L** Analysis Date: **17-Apr-2020 13:15**
Client ID: Run ID: **WetChem_HS_360222** SeqNo: **5559448** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	11.15	0.20	10	0.039	111	80 - 120				

MSD Sample ID: **HS20040490-02MSD** Units: **mg/L** Analysis Date: **17-Apr-2020 13:15**
Client ID: Run ID: **WetChem_HS_360222** SeqNo: **5559447** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	11.18	0.20	10	0.039	111	80 - 120	11.15	0.242	20	

The following samples were analyzed in this batch: HS20040700-01

ALS Houston, US Date: 30-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: **HS20040700**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Dept of Defense	ANAB L2231 V009	22-Dec-2021
Florida	E87611-28	30-Jun-2020
Illinois	2000322019-2	09-May-2020
Kansas	E-10352 2019-2020	31-Jul-2020
Louisiana	03087, 2019-2020	30-Jun-2020
Maryland	343, 2019-2020	30-Jun-2020
North Carolina	624-2020	31-Dec-2020
Oklahoma	2019-067	31-Aug-2020

ALS Houston, US Date: 30-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20040700

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20040700-01	LH18/24-SP650_041620	Login	4/17/2020 10:11:35 AM	JRM	WET134
HS20040700-01	LH18/24-SP650_041620	Login	4/17/2020 10:11:35 AM	JRM	WET134
HS20040700-01	LH18/24-SP650_041620	Login	4/17/2020 10:11:35 AM	JRM	Sub
HS20040700-02	LH18/24-SP650_041620_BIX	Login	4/17/2020 10:11:35 AM	JRM	Sub

ALS Houston, US Date: 30-Apr-20

Sample Receipt Checklist

Client Name: Bhate Environmental
Work Order: HS20040700
Date/Time Received: **17-Apr-2020 09:06**
Received by: **JRM**

Checklist completed by: *Jared R. Makan* eSignature 17-Apr-2020 Date
Reviewed by: *RJ Modashia* eSignature 17-Apr-2020 Date

Matrices: **Water**
Carrier name: **FedEx Priority Overnight**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Samplers name present on COC?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	

Temperature(s)/Thermometer(s):	1.3°C/1.3°C UC/C	IR11
Cooler(s)/Kit(s):	43535	
Date/Time sample(s) sent to storage:	04/17/2020 10:13	

Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stancliff Rd. Suite 210 Houston, TX. 77099 (281) 530-5656 ATTN: R.J Modashia

Project: BHATE
LONGHORN ARMY AMMN. PLANT (LHAAP)
GROUNDWATER TREATMENT PLANT (GWTP)
KARNACK, TEXAS

Project No. NWO1312.0150.0 16.0001

Job: GROUNDWATER TREATMENT PLANT WEEKLY SAMPLES

Prepared By: Scott Beesinger

P.O. Number

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	AMMONIA-N	TOTAL ORGANIC CARBON	ORTHO-PHOSPHATE	PERCHLORATE							Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP650_041620	Water	04/16/20 / 14:00		3	X	X									H2SO4	
LH18/24-SP650_041620	Water	04/16/20 / 14:00		1			X								NONE	
LH18/24–SP650_041620_BIX	Water	04/16/20 / 14:00		1				X							NONE	

Additional Remarks: **Standard TAT on all parameters**

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	04/16/20	14:30									

For Lab Use Only

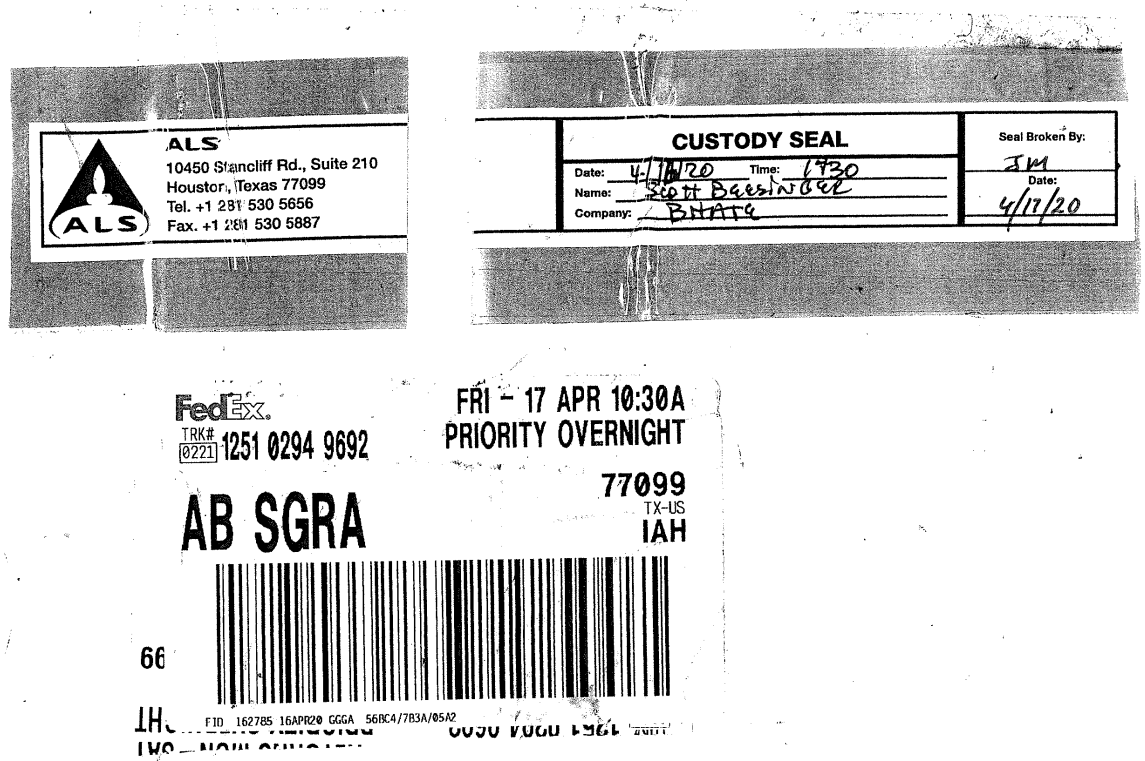
Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition
J. Hammond	4/17/20	09:06							

Remarks: Cooler-43535 1211
Temp 1.3°C CF0.0

HS20040700

Bhate Environmental Associates, Inc.
Longhorn GW Treatment Plant Weekly Samples

(Word) S:\1-ces\Forms\Chain of Custody - BiWeekly



ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

CUSTODY SEAL

Date: 4-17-20 Time: 1730
Name: Scott Boessinger
Company: BHATE

Seal Broken By: JM
Date: 4/17/20

FedEx
TRK# 0221 1251 0294 9692

FRI - 17 APR 10:30A
PRIORITY OVERNIGHT

77099
TX-US
IAH

AB SGRA

66

FID 162785 16APR20 GGGA 56BC4/7B3A/05A2

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April 29, 2020

Analytical Report for Service Request No: K2003345

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

RE: HS20040700

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory April 23, 2020
For your reference, these analyses have been assigned our service request number **K2003345.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3350. You may also contact me via email at Kelley.Lovejoy@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

for Kelley Lovejoy
Project Manager

RIGHT SOLUTIONS | RIGHT PARTNER

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Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water-	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Case Narrative

ALS Environmental—Kelso Laboratory
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www.alsglobal.com

1317 South 13th Ave, Kelso, WA 98626 | 1-360-577-7222 | www.alsglobal.com

Client: ALS Environmental - US
Project: HS20040700
Sample Matrix: Water

Service Request: K2003345
Date Received: 04/23/2020

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level IV requested by the client.

Sample Receipt:

One water sample was received for analysis at ALS Environmental on 04/23/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The sample was stored at minimum in accordance with the analytical method requirements.

General Chemistry:

No significant anomalies were noted with this analysis.

Approved by _____ Date 04/29/2020

Chain of Custody

ALS Environmental—Kelso Laboratory
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K2003345

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Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **13738**

SUBCONTRACT TO:

ALS Environmental Kelso
1317 S. 13th Avenue
Kelso, WA 98626

Phone: +1 360 501 3312

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	Jumoke M. Lawal
Email:	jumoke.lawal@alsglobal.com

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20040700
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20040700-01**	**LH18/24-SP650_041620**	**Water**	**16 Apr 2020 14:00**
	TOC Analysis for DOD Level IV			01 May 2020

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: J. Mummy Date/Time: 4/22/20 18:00

Received By: Date/Time: 4/23/2020 1030

Cooler ID(s): Temperature(s):

PC KL

Cooler Receipt and Preservation Form

Client ALS Houston Service Request K20 03345

Received: 4/23/2020 Opened: 4/23/2020 By: CG Unloaded: 4/23/2020 By: CG

1. Samples were received via? *USPS* (*Fed Ex*) *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA (Y) N If yes, how many and where? 2 Front
   If present, were custody seals intact? (Y) N If present, were they signed and dated? (Y) N

Temp Blank	Sample 1	Sample 2	Sample 3	Sample 4	IR GUN	Cooler / COC ID NA	Tracking Number NA	Filed
1.2	~				3980H88WS	13738	1251 0296 5563	

4. Packing material: *Inserts* (*Baggies*) (*Bubble Wrap*) *Gel Packs* (*Wet Ice*) *Dry Ice* *Sleeves* _____
5. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
6. Were samples received in good condition (temperature, unbroken)? *Indicate in the table below.* NA (Y) N
   If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA (Y) N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA (Y) N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA (Y) N
11. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
12. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: _____

General Chemistry

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	K2003345
Project:	HS20040700	**Date Collected:**	04/16/20
Sample Matrix:	Water	**Date Received:**	04/23/20
Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA

Carbon, Total Organic

Sample Name	Lab Code	Result	LOQ	LOD	MDL	Dil.	Date Analyzed	Q
LH18/24-SP650_041620	K2003345-001	**3.12**	0.50	0.20	0.07	1	04/26/20 16:27	
Method Blank	K2003345-MB	ND U	0.50	0.20	0.07	1	04/26/20 15:58	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project HS20040700
Sample Matrix: Water

Service Request: K2003345
Date Collected: 04/16/20
Date Received: 04/23/20
Date Analyzed: 04/26/20

Replicate Sample Summary
General Chemistry Parameters

Sample Name: LH18/24-SP650_041620
Lab Code: K2003345-001

Units: mg/L
Basis: NA

Analyte Name	Analysis Method	LOQ	LOD	MDL	Sample Result	Duplicate Sample K2003345-001DUP Result	Average	RPD	RPD Limit
Carbon, Total Organic	SM 5310 C	0.50	0.20	0.07	3.12	2.99	3.05	4	10

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2003345
Project:	HS20040700	**Date Analyzed:**	04/26/20
Sample Matrix:	Water	**Date Extracted:**	NA

Lab Control Sample Summary
Carbon, Total Organic

Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA
		Analysis Lot:	678054

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2003345-LCS	24.8	25.0	99	83-117

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US **Service Request:** K2003345
Project: HS20040700

Continuing Calibration Verification (CCV) Summary

Carbon, Total Organic

Analysis Method: SM 5310 C **Units:** mg/L

	Analysis Lot	Lab Code	Date Analyzed	True Value	Measured Value	Percent Recovery	Acceptance Limits
CCV1	678054	KQ2005604-01	04/26/20 00:45	25.0	24.9	100	90-110
CCV2	678054	KQ2005604-02	04/26/20 09:22	25.0	24.7	99	90-110
CCV3	678054	KQ2005604-03	04/26/20 15:01	25.0	24.7	99	90-110
CCV4	678054	KQ2005604-04	04/26/20 17:24	25.0	24.7	99	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US **Service Request:**K2003345
Project: HS20040700

Continuing Calibration Blank (CCB) Summary
Carbon, Total Organic

Analysis Method: SM 5310 C **Units:**mg/L

	Analysis Lot	Lab Code	Date Analyzed	LOQ	LOD	MDL	Result	Q
CCB1	678054	KQ2005604-05	04/26/20 00:59	0.50	0.20	0.07	ND	U
CCB2	678054	KQ2005604-06	04/26/20 09:37	0.50	0.20	0.07	ND	U
CCB3	678054	KQ2005604-07	04/26/20 15:15	0.50	0.20	0.07	ND	U
CCB4	678054	KQ2005604-08	04/26/20 17:38	0.50	0.20	0.07	ND	U

Raw Data

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General Chemistry

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Work Request # (Original) K2003360, 3344, 3345, 3384, 3388

Tier: IV IV IV II II

Date Analyzed: 4/25/20

Analyst: BDP

Analysis: TOC/DOC

TOC: 678052, 678054

Run # DOC: 678053

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?	yes/no/NA
2.	Holding times met for all analyses and for all samples?	yes/no/NA
3.	Are calculations correct?	yes/no/NA
4.	Is the reporting basis correct? (Dry Weight)	yes/no/NA
5.	All quality control criteria met?	yes/no
6.	Is the calibration curve correlation coefficient ≥ 0.995?	yes/no/NA
7.	MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	yes/no/NA
8.	Are ICVs, CCVs, and CCBs all within acceptance limits?	yes/no/NA
9.	Are results for methods blanks all ND?	yes/no/NA
10.	Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	yes/no/NA
11.	Are all exceptions explained?	yes/no/NA
12.	Have all applicable service requests been reviewed?	yes/no/NA
13.	Are all samples labeled correctly?	yes/no/NA
14.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample, Form V)	yes/no/NA
15.	Are detection limits and units reported correctly?	yes/no/NA
16.	Is the unused space on the benchsheet crossed out?	yes/no/NA
17.	Was analysis turned in by the due date? (n-2) (If not record SR#)	yes/no/NA

COMMENTS: K2003360-21/21d/21H/21q, 3360-23/23d/23H/23q, 3360-21DOC/21dDOC/21HDOC/21qDOC
K2003360-23DOC/23dDOC/23HDOC/23qDOC, 3384-1 Id report a high %RSD. However, these samples are less than 5x the MRL.

Final Approved by: _____ Date: 4/29/20

DQREPORT

Analytical Results Summary

Instrument Name: K-TOC-03 **Analyst:** BDITZLER **Analysis Lot:** 678052 **Method/Testcode:** 9060/TOC T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
K2003360-016	Carbon, Total Organic	N/A		Water	0.57 mg/L	10 mL	0.57 mg/L	1	0.07	0.50			4/25/20 18:56:00	Y	IV
K2003360-019	Carbon, Total Organic	N/A		Water	5.81 mg/L	10 mL	5.81 mg/L	1	0.07	0.50			4/25/20 21:02:00	N	IV
K2003360-021	Carbon, Total Organic	N/A		Water	1.08 mg/L	10 mL	1.08 mg/L	1	0.07	0.50			4/25/20 21:58:00	N	IV
K2003360-022	Carbon, Total Organic	N/A		Water	33.86 mg/L	10 mL	677 mg/L	20	2	10			4/25/20 22:53:00	N	IV
K2003360-023	Carbon, Total Organic	N/A		Water	0.62 mg/L	10 mL	0.62 mg/L	1	0.07	0.50			4/25/20 23:49:00	N	IV
K2003360-024	Carbon, Total Organic	N/A		Water	0.47 mg/L	10 mL	0.47 mg/L J	1	0.07	0.50			4/26/20 07:59:00	N	IV
KQ2005602-01	Carbon, Total Organic	CCV		Water	25.95 mg/L	10 mL	25.9 mg/L	1					4/25/20 16:20:00	N	IV
KQ2005602-02	Carbon, Total Organic	CCV		Water	24.88 mg/L	10 mL	24.9 mg/L	1					4/26/20 00:45:00	N	IV
KQ2005602-03	Carbon, Total Organic	CCV		Water	24.69 mg/L	10 mL	24.7 mg/L	1					4/26/20 09:22:00	N	IV
KQ2005602-04	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			4/25/20 16:35:00	N	IV
KQ2005602-05	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			4/26/20 00:59:00	N	IV
KQ2005602-06	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			4/26/20 09:37:00	N	IV
KQ2005602-07	Carbon, Total Organic	MB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			4/25/20 16:50:00	N	IV
KQ2005602-08	Carbon, Total Organic	MB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			4/25/20 16:50:00	N	IV
KQ2005602-09	Carbon, Total Organic	MB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			4/25/20 16:50:00	N	IV
KQ2005602-10	Carbon, Total Organic	MB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			4/25/20 16:50:00	N	IV
KQ2005602-11	Carbon, Total Organic	LCS		Water	25.04 mg/L	10 mL	25.0 mg/L	1	0.07	0.50	100		4/25/20 17:46:00	N	IV
KQ2005602-12	Carbon, Total Organic	LCS		Water	24.91 mg/L	10 mL	24.9 mg/L	1	0.07	0.50	100		4/25/20 17:46:00	N	IV
KQ2005602-13	Carbon, Total Organic	LCS		Water	24.66 mg/L	10 mL	24.7 mg/L	1	0.07	0.50	99		4/25/20 17:46:00	N	IV
KQ2005602-14	Carbon, Total Organic	LCS		Water	25.04 mg/L	10 mL	25.0 mg/L	1	0.07	0.50	100		4/25/20 17:46:00	N	IV
KQ2005602-15	Carbon, Total Organic	MS	K2003360-016	Water	27.85 mg/L	10 mL	27.9 mg/L	1	0.07	0.50	109		4/25/20 19:52:00	N	IV
KQ2005602-16	Carbon, Total Organic	MS	K2003360-016	Water	27.85 mg/L	10 mL	27.9 mg/L	1	0.07	0.50	109		4/25/20 19:52:00	N	IV
KQ2005602-17	Carbon, Total Organic	MS	K2003360-016	Water	27.96 mg/L	10 mL	28.0 mg/L	1	0.07	0.50	110		4/25/20 19:52:00	N	IV
KQ2005602-18	Carbon, Total Organic	MS	K2003360-016	Water	27.56 mg/L	10 mL	27.6 mg/L	1	0.07	0.50	108		4/25/20 19:52:00	N	IV
KQ2005602-19	Carbon, Total Organic	DUP	K2003360-016	Water	0.57 mg/L	10 mL	0.57 mg/L	1	0.07	0.50		<1	4/25/20 18:56:00	N	IV
KQ2005602-20	Carbon, Total Organic	TRP	K2003360-016	Water	0.59 mg/L	10 mL	0.59 mg/L	1	0.07	0.50		2	4/25/20 18:56:00	N	IV
KQ2005602-21	Carbon, Total Organic	QUAD	K2003360-016	Water	0.55 mg/L	10 mL	0.55 mg/L	1	0.07	0.50		3	4/25/20 18:56:00	N	IV
KQ2005602-22	Carbon, Total Organic	DUP	K2003360-019	Water	5.93 mg/L	10 mL	5.93 mg/L	1	0.07	0.50		2	4/25/20 21:02:00	N	IV
KQ2005602-23	Carbon, Total Organic	TRP	K2003360-019	Water	5.99 mg/L	10 mL	5.99 mg/L	1	0.07	0.50		2	4/25/20 21:02:00	N	IV
KQ2005602-24	Carbon, Total Organic	QUAD	K2003360-019	Water	6.13 mg/L	10 mL	6.13 mg/L	1	0.07	0.50		2	4/25/20 21:02:00	N	IV
KQ2005602-25	Carbon, Total Organic	DUP	K2003360-021	Water	0.70 mg/L	10 mL	0.70 mg/L	1	0.07	0.50		43*	4/25/20 21:58:00	N	IV
KQ2005602-26	Carbon, Total Organic	TRP	K2003360-021	Water	0.61 mg/L	10 mL	0.61 mg/L	1	0.07	0.50		31*	4/25/20 21:58:00	N	IV
KQ2005602-27	Carbon, Total Organic	QUAD	K2003360-021	Water	0.60 mg/L	10 mL	0.60 mg/L	1	0.07	0.50		30*	4/25/20 21:58:00	N	IV
KQ2005602-28	Carbon, Total Organic	DUP	K2003360-022	Water	33.21 mg/L	10 mL	664 mg/L	20	2	10		2	4/25/20 22:53:00	N	IV
KQ2005602-29	Carbon, Total Organic	TRP	K2003360-022	Water	33.29 mg/L	10 mL	666 mg/L	20	2	10		1	4/25/20 22:53:00	N	IV
KQ2005602-30	Carbon, Total Organic	QUAD	K2003360-022	Water	33.46 mg/L	10 mL	669 mg/L	20	2	10		<1	4/25/20 22:53:00	N	IV

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-TOC-03 **Analyst:** BDITZLER **Analysis Lot:** 678052 **Method/Testcode:** 9060/TOC T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
KQ2005602-31	Carbon, Total Organic	DUP	K2003360-023	Water	0.47 mg/L	10 mL	0.47 mg/L J	1	0.07	0.50		28*	4/25/20 23:49:00	N	IV
KQ2005602-32	Carbon, Total Organic	TRP	K2003360-023	Water	0.37 mg/L	10 mL	0.37 mg/L J	1	0.07	0.50		26*	4/25/20 23:49:00	N	IV
KQ2005602-33	Carbon, Total Organic	QUAD	K2003360-023	Water	0.36 mg/L	10 mL	0.36 mg/L J	1	0.07	0.50		27*	4/25/20 23:49:00	N	IV
KQ2005602-34	Carbon, Total Organic	DUP	K2003360-024	Water	0.43 mg/L	10 mL	0.43 mg/L J	1	0.07	0.50		10	4/26/20 07:59:00	N	IV
KQ2005602-35	Carbon, Total Organic	TRP	K2003360-024	Water	0.43 mg/L	10 mL	0.43 mg/L J	1	0.07	0.50		6	4/26/20 07:59:00	N	IV
KQ2005602-36	Carbon, Total Organic	QUAD	K2003360-024	Water	0.45 mg/L	10 mL	0.45 mg/L J	1	0.07	0.50		5	4/26/20 07:59:00	N	IV

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-TOC-03 **Analyst:** BDITZLER **Analysis Lot:** 678053 **Method/Testcode:** 9060/TOC D

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
K2003360-016	Carbon, Dissolved Organic (DOC)	N/A		Water	0.48 mg/L	10 mL	0.48 mg/L J	1	0.07	0.50			4/26/20 01:14:00	Y	IV
K2003360-019	Carbon, Dissolved Organic (DOC)	N/A		Water	4.75 mg/L	10 mL	4.75 mg/L	1	0.07	0.50			4/26/20 03:21:00	N	IV
K2003360-021	Carbon, Dissolved Organic (DOC)	N/A		Water	0.86 mg/L	10 mL	0.86 mg/L	1	0.07	0.50			4/26/20 04:16:00	N	IV
K2003360-022	Carbon, Dissolved Organic (DOC)	N/A		Water	33.39 mg/L	10 mL	668 mg/L	20	2	10			4/26/20 05:12:00	N	IV
K2003360-023	Carbon, Dissolved Organic (DOC)	N/A		Water	0.57 mg/L	10 mL	0.57 mg/L	1	0.07	0.50			4/26/20 06:08:00	N	IV
K2003360-024	Carbon, Dissolved Organic (DOC)	N/A		Water	0.51 mg/L	10 mL	0.51 mg/L	1	0.07	0.50			4/26/20 07:03:00	N	IV
KQ2005603-01	Carbon, Dissolved Organic (DOC)	CCV		Water	24.88 mg/L	10 mL	24.9 mg/L	1					4/26/20 00:45:00	N	IV
KQ2005603-02	Carbon, Dissolved Organic (DOC)	CCV		Water	24.69 mg/L	10 mL	24.7 mg/L	1					4/26/20 09:22:00	N	IV
KQ2005603-03	Carbon, Dissolved Organic (DOC)	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			4/26/20 00:59:00	N	IV
KQ2005603-04	Carbon, Dissolved Organic (DOC)	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			4/26/20 09:37:00	N	IV
KQ2005603-05	Carbon, Dissolved Organic (DOC)	MB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			4/26/20 09:52:00	N	IV
KQ2005603-06	Carbon, Dissolved Organic (DOC)	MB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			4/26/20 09:52:00	N	IV
KQ2005603-07	Carbon, Dissolved Organic (DOC)	MB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			4/26/20 09:52:00	N	IV
KQ2005603-08	Carbon, Dissolved Organic (DOC)	MB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			4/26/20 09:52:00	N	IV
KQ2005603-09	Carbon, Dissolved Organic (DOC)	LCS		Water	23.93 mg/L	10 mL	23.9 mg/L	1	0.07	0.50	96		4/26/20 10:48:00	N	IV
KQ2005603-10	Carbon, Dissolved Organic (DOC)	LCS		Water	24.18 mg/L	10 mL	24.2 mg/L	1	0.07	0.50	97		4/26/20 10:48:00	N	IV
KQ2005603-11	Carbon, Dissolved Organic (DOC)	LCS		Water	24.09 mg/L	10 mL	24.1 mg/L	1	0.07	0.50	96		4/26/20 10:48:00	N	IV
KQ2005603-12	Carbon, Dissolved Organic (DOC)	LCS		Water	24.08 mg/L	10 mL	24.1 mg/L	1	0.07	0.50	96		4/26/20 10:48:00	N	IV
KQ2005603-13	Carbon, Dissolved Organic (DOC)	MS	K2003360-016	Water	27.59 mg/L	10 mL	27.6 mg/L	1	0.07	0.50	108		4/26/20 02:10:00	N	IV
KQ2005603-14	Carbon, Dissolved Organic (DOC)	MS	K2003360-016	Water	27.41 mg/L	10 mL	27.4 mg/L	1	0.07	0.50	108		4/26/20 02:10:00	N	IV
KQ2005603-15	Carbon, Dissolved Organic (DOC)	MS	K2003360-016	Water	27.25 mg/L	10 mL	27.2 mg/L	1	0.07	0.50	107		4/26/20 02:10:00	N	IV
KQ2005603-16	Carbon, Dissolved Organic (DOC)	MS	K2003360-016	Water	27.76 mg/L	10 mL	27.8 mg/L	1	0.07	0.50	109		4/26/20 02:10:00	N	IV
KQ2005603-17	Carbon, Dissolved Organic (DOC)	DUP	K2003360-016	Water	0.51 mg/L	10 mL	0.51 mg/L	1	0.07	0.50		5	4/26/20 01:14:00	N	IV

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-TOC-03 **Analyst:** BDITZLER **Analysis Lot:** 678053 **Method/Testcode:** 9060/TOC D

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
KQ2005603-18	Carbon, Dissolved Organic (DOC)	TRP	K2003360-016	Water	0.49 mg/L	10 mL	0.49 mg/L J	1	0.07	0.50		3	4/26/20 01:14:00	N	IV
KQ2005603-19	Carbon, Dissolved Organic (DOC)	QUAD	K2003360-016	Water	0.48 mg/L	10 mL	0.48 mg/L J	1	0.07	0.50		3	4/26/20 01:14:00	N	IV
KQ2005603-20	Carbon, Dissolved Organic (DOC)	DUP	K2003360-019	Water	4.96 mg/L	10 mL	4.96 mg/L	1	0.07	0.50		4	4/26/20 03:21:00	N	IV
KQ2005603-21	Carbon, Dissolved Organic (DOC)	TRP	K2003360-019	Water	5.03 mg/L	10 mL	5.03 mg/L	1	0.07	0.50		3	4/26/20 03:21:00	N	IV
KQ2005603-22	Carbon, Dissolved Organic (DOC)	QUAD	K2003360-019	Water	5.18 mg/L	10 mL	5.18 mg/L	1	0.07	0.50		4	4/26/20 03:21:00	N	IV
KQ2005603-23	Carbon, Dissolved Organic (DOC)	DUP	K2003360-021	Water	0.61 mg/L	10 mL	0.61 mg/L	1	0.07	0.50		34*	4/26/20 04:16:00	N	IV
KQ2005603-24	Carbon, Dissolved Organic (DOC)	TRP	K2003360-021	Water	0.54 mg/L	10 mL	0.54 mg/L	1	0.07	0.50		25*	4/26/20 04:16:00	N	IV
KQ2005603-25	Carbon, Dissolved Organic (DOC)	QUAD	K2003360-021	Water	0.51 mg/L	10 mL	0.51 mg/L	1	0.07	0.50		25*	4/26/20 04:16:00	N	IV
KQ2005603-26	Carbon, Dissolved Organic (DOC)	DUP	K2003360-022	Water	33.04 mg/L	10 mL	661 mg/L	20	2	10		1	4/26/20 05:12:00	N	IV
KQ2005603-27	Carbon, Dissolved Organic (DOC)	TRP	K2003360-022	Water	33.03 mg/L	10 mL	661 mg/L	20	2	10		<1	4/26/20 05:12:00	N	IV
KQ2005603-28	Carbon, Dissolved Organic (DOC)	QUAD	K2003360-022	Water	33.42 mg/L	10 mL	668 mg/L	20	2	10		<1	4/26/20 05:12:00	N	IV
KQ2005603-29	Carbon, Dissolved Organic (DOC)	DUP	K2003360-023	Water	0.38 mg/L	10 mL	0.38 mg/L J	1	0.07	0.50		41*	4/26/20 06:08:00	N	IV
KQ2005603-30	Carbon, Dissolved Organic (DOC)	TRP	K2003360-023	Water	0.32 mg/L	10 mL	0.32 mg/L J	1	0.07	0.50		31*	4/26/20 06:08:00	N	IV
KQ2005603-31	Carbon, Dissolved Organic (DOC)	QUAD	K2003360-023	Water	0.29 mg/L	10 mL	0.29 mg/L J	1	0.07	0.50		32*	4/26/20 06:08:00	N	IV
KQ2005603-32	Carbon, Dissolved Organic (DOC)	DUP	K2003360-024	Water	0.47 mg/L	10 mL	0.47 mg/L J	1	0.07	0.50		8	4/26/20 07:03:00	N	IV
KQ2005603-33	Carbon, Dissolved Organic (DOC)	TRP	K2003360-024	Water	0.49 mg/L	10 mL	0.49 mg/L J	1	0.07	0.50		4	4/26/20 07:03:00	N	IV
KQ2005603-34	Carbon, Dissolved Organic (DOC)	QUAD	K2003360-024	Water	0.47 mg/L	10 mL	0.47 mg/L J	1	0.07	0.50		4	4/26/20 07:03:00	N	IV

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-TOC-03 **Analyst:** BDITZLER **Analysis Lot:** 678054 **Method/Testcode:** SM 5310 C/TOC T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
K2003344-001	Carbon, Total Organic	N/A		Water	2.41 mg/L	10 mL	2.41 mg/L	1	0.07	0.50			4/26/20 08:54:00	N	IV
K2003345-001	Carbon, Total Organic	N/A		Water	3.12 mg/L	10 mL	3.12 mg/L	1	0.07	0.50			4/26/20 16:27:00	N	IV
K2003384-001	Carbon, Total Organic	N/A		Water	1.50 mg/L	10 mL	1.50 mg/L	1	0.07	0.50			4/26/20 11:43:00	N	II
K2003384-002	Carbon, Total Organic	N/A		Water	1.52 mg/L	10 mL	1.52 mg/L	1	0.07	0.50			4/26/20 12:11:00	Y	II
K2003384-003	Carbon, Total Organic	N/A		Water	1.31 mg/L	10 mL	1.31 mg/L	1	0.07	0.50			4/26/20 13:09:00	N	II
K2003384-004	Carbon, Total Organic	N/A		Water	1.38 mg/L	10 mL	1.38 mg/L	1	0.07	0.50			4/26/20 13:37:00	N	II
K2003384-005	Carbon, Total Organic	N/A		Water	1.28 mg/L	10 mL	1.28 mg/L	1	0.07	0.50			4/26/20 14:05:00	N	II
K2003384-006	Carbon, Total Organic	N/A		Water	1.56 mg/L	10 mL	1.56 mg/L	1	0.07	0.50			4/26/20 14:33:00	N	II
K2003384-007	Carbon, Total Organic	N/A		Water	1.27 mg/L	10 mL	1.27 mg/L	1	0.07	0.50			4/26/20 15:30:00	N	II
K2003388-001	Carbon, Total Organic	N/A		Water	1.09 mg/L	10 mL	1.09 mg/L	1	0.07	0.50			4/26/20 16:56:00	N	II
KQ2005604-01	Carbon, Total Organic	CCV		Water	24.88 mg/L	10 mL	24.9 mg/L	1					4/26/20 00:45:00	N	IV
KQ2005604-02	Carbon, Total Organic	CCV		Water	24.69 mg/L	10 mL	24.7 mg/L	1					4/26/20 09:22:00	N	IV
KQ2005604-03	Carbon, Total Organic	CCV		Water	24.71 mg/L	10 mL	24.7 mg/L	1					4/26/20 15:01:00	N	IV
KQ2005604-04	Carbon, Total Organic	CCV		Water	24.70 mg/L	10 mL	24.7 mg/L	1					4/26/20 17:24:00	N	IV
KQ2005604-05	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			4/26/20 00:59:00	N	IV
KQ2005604-06	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			4/26/20 09:37:00	N	IV
KQ2005604-07	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			4/26/20 15:15:00	N	IV
KQ2005604-08	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			4/26/20 17:38:00	N	IV
KQ2005604-09	Carbon, Total Organic	MB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			4/26/20 15:58:00	N	IV
KQ2005604-10	Carbon, Total Organic	LCS		Water	24.80 mg/L	10 mL	24.8 mg/L	1	0.07	0.50	99		4/26/20 16:13:00	N	IV
KQ2005604-11	Carbon, Total Organic	MS	K2003384-002	Water	28.99 mg/L	10 mL	29.0 mg/L	1	0.07	0.50	110		4/26/20 12:39:00	N	II
KQ2005604-12	Carbon, Total Organic	DUP	K2003344-001	Water	2.42 mg/L	10 mL	2.42 mg/L	1	0.07	0.50		<1	4/26/20 08:54:00	N	IV
KQ2005604-13	Carbon, Total Organic	DUP	K2003345-001	Water	2.99 mg/L	10 mL	2.99 mg/L	1	0.07	0.50		4	4/26/20 16:27:00	N	IV
KQ2005604-14	Carbon, Total Organic	DUP	K2003384-007	Water	1.24 mg/L	10 mL	1.24 mg/L	1	0.07	0.50		2	4/26/20 15:30:00	N	II
KQ2005604-15	Carbon, Total Organic	DUP	K2003384-001	Water	1.35 mg/L	10 mL	1.35 mg/L	1	0.07	0.50		11*	4/26/20 11:43:00	N	II
KQ2005604-16	Carbon, Total Organic	DUP	K2003384-002	Water	1.48 mg/L	10 mL	1.48 mg/L	1	0.07	0.50		3	4/26/20 12:11:00	N	II
KQ2005604-17	Carbon, Total Organic	DUP	K2003384-003	Water	1.30 mg/L	10 mL	1.30 mg/L	1	0.07	0.50		<1	4/26/20 13:09:00	N	II
KQ2005604-18	Carbon, Total Organic	DUP	K2003384-004	Water	1.33 mg/L	10 mL	1.33 mg/L	1	0.07	0.50		4	4/26/20 13:37:00	N	II
KQ2005604-19	Carbon, Total Organic	DUP	K2003384-005	Water	1.30 mg/L	10 mL	1.30 mg/L	1	0.07	0.50		1	4/26/20 14:05:00	N	II
KQ2005604-20	Carbon, Total Organic	DUP	K2003384-006	Water	1.51 mg/L	10 mL	1.51 mg/L	1	0.07	0.50		4	4/26/20 14:33:00	N	II
KQ2005604-21	Carbon, Total Organic	DUP	K2003388-001	Water	1.08 mg/L	10 mL	1.08 mg/L	1	0.07	0.50		<1	4/26/20 16:56:00	N	II

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

TOC: 678052, 678054
DOC: 678053

Schedule: 04252020

Version: 3
Instrument: Fusion1
Last Saved by: Fusion1 (Fusion1)
Last Saved on: 2020/04/25 20:02 - Saturday

Position	Sample Type	Sample ID	Method ID (Calibration ID)	Reps	Use	State
(Clean)	Clean	Clean		1	True	Ready
(Clean)	Clean	Clean		1	True	Ready
(Clean)	Clean	Clean		1	True	Ready
(Blank)	Blank	Reagent/Acid Blank		1	True	Ready
D	Sample	RB	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
1	Sample	MB1	CAS_salt_010711 (CAS_salt_010711)	4	True	Ready
C	Check Standard	[TOC] LCS [24.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	4	True	Ready
2	Sample	ICS	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
3	Sample	K2003360-016.10	CAS_salt_010711 (CAS_salt_010711)	4	True	Ready
4	Sample	K2003360-016.10 ms	CAS_salt_010711 (CAS_salt_010711)	4	True	Ready
5	Sample	RB	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
6	Sample	K2003360-019.10	CAS_salt_010711 (CAS_salt_010711)	4	True	Ready
7	Sample	K2003360-021.10	CAS_salt_010711 (CAS_salt_010711)	4	True	Ready
8	Sample	K2003360-022.10 20x	CAS_salt_010711 (CAS_salt_010711)	4	True	Ready
9	Sample	K2003360-023.10	CAS_salt_010711 (CAS_salt_010711)	4	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
10	Sample	K2003360-016.09 doc	CAS_salt_010711 (CAS_salt_010711)	4	True	Ready
11	Sample	K2003360-016.09 ms doc	CAS_salt_010711 (CAS_salt_010711)	4	True	Ready
12	Sample	RB	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
13	Sample	K2003360-019.09 doc	CAS_salt_010711 (CAS_salt_010711)	4	True	Ready
14	Sample	K2003360-021.09 doc	CAS_salt_010711 (CAS_salt_010711)	4	True	Ready
15	Sample	K2003360-022.09 20x doc	CAS_salt_010711 (CAS_salt_010711)	4	True	Ready
16	Sample	K2003360-023.09 doc	CAS_salt_010711 (CAS_salt_010711)	4	True	Ready
17	Sample	K2003360-024.09 doc	CAS_salt_010711 (CAS_salt_010711)	4	True	Ready
18	Sample	K2003360-024.10	CAS_salt_010711 (CAS_salt_010711)	4	True	Ready
19	Sample	K2003344-001.01	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
20	Sample	MB2	CAS_salt_010711 (CAS_salt_010711)	4	True	Ready
C	Check Standard	[TOC] LCS [24.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	4	True	Ready
21	Sample	K2003384-001.06	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
22	Sample	K2003384-002.06	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
23	Sample	K2003384-002.06 ms	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
24	Sample	RB	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
25	Sample	K2003384-003.06	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
26	Sample	K2003384-004.06	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
27	Sample	K2003384-005.06	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
28	Sample	K2003384-006.06	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
29	Sample	K2003384-007.06	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
30	Sample	MB3	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
C	Check Standard	[TOC] LCS [25.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
35	Sample	K2003345-001.01	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
36	Sample	K2003388-001.01	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
					False	

Fusion Report - 04252020
Saturday, April 25, 2020 01:31 PM

(View - Reps, Unused Reps, Meta-Data, Signature, History)
Printed on 2020/04/28 09:20 - Tuesday

Report Summary Information

Company Location:	Gen Chem Lab		
Schedule Name:	04252020	Engine Version:	1.1.5.1
Instrument Name:	Fusion1	Firmware Version:	1.2.0696
Report Version:	1 of 1	Connection:	RS232 COM1
Report Creation by Operators (schedule version):	Fusion1 (Fusion1) (v2) Fusion1 (Fusion1) (v3)		
Comment:			

Report Results

Sample Type: Clean — From Schedule Version 2

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/04/25 13:31

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	16.08	20.68	4.60	49.89	08:01
2	TC Clean	11.76	15.96	4.20	49.65	07:17
3	TC Clean	3.20	7.29	4.08	49.65	07:00
4	TC Clean	2.46	6.46	4.00	49.65	07:02

Sample Type: Clean — From Schedule Version 2

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/04/25 14:06

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	1.18	5.25	4.07	49.87	08:00
2	TC Clean	5.86	9.90	4.05	49.62	07:19
3	TC Clean	1.96	6.12	4.16	49.64	07:02
4	TC Clean	1.73	5.57	3.84	49.64	07:02

Sample Type: Clean From Schedule Version 2

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/04/25 14:40

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	0.97	4.88	3.91	49.83	08:00
2	TC Clean	5.05	8.90	3.85	49.60	07:15
3	TC Clean	2.10	5.91	3.81	49.66	07:01
4	TC Clean	1.80	5.62	3.83	49.67	07:03

Sample Type: Blank (Creating v1377) From Schedule Version 2

	Pos	Analysis Type	Sample ID	Start Time
◆	(blank)		Reagent/Acid Blank	2020/04/25 15:14

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	1.09	4.83	3.74	49.80	07:57
2	TC Clean	5.09	9.10	4.01	49.59	07:17
3	TC Clean	2.15	6.16	4.01	49.64	07:04
4	TC Clean	2.07	5.96	3.90	49.63	07:01
5	Reagent Blank	5.61	9.55	3.94	49.58	08:11
6	Acid Blank	1.18	5.13	3.95	49.75	08:01

Sample Type: Sample From Schedule Version 2

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	D	TOC	RB	0.2482 ppm	0.0000 ppm	0.0000%	2020/04/25 16:05

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.2482	2.4819	9.08	12.74	3.66	49.63	10:31

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 2

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	25.9487 ppm (PASS)	0.0000 ppm	0%	2020/04/25 16:20

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.9487	259.4872	182.32	186.34	4.02	49.65	10:34

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 2

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/04/25 16:35

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	7.74	11.55	3.81	49.64	10:31

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	0 ppmC

Sample Type: Sample From Schedule Version 2

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	1	TOC	MB1	0.0000 ppm	0.0000 ppm	0.0000%	2020/04/25 16:50

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	6.80	10.67	3.87	49.68	10:30
2	TOC	0.0000	0.0000	6.73	10.68	3.95	49.63	10:29
3	TOC	0.0000	0.0000	6.67	10.55	3.88	49.64	10:28
4	TOC	0.0000	0.0000	6.52	10.49	3.97	49.59	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

Sample Type: Check Standard --> LCS From Schedule Version 2

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	C	TOC	25.0000	1:1	[TOC] LCS [24.0 ppm]	0 / infinity (NA / NA)	24.9130 ppm	0.1765 ppm	0.71%	2020/04/25 17:46

						(PASS)				

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	25.0430	250.4299	176.23	180.02	3.79	49.59	10:27
C	TOC	25.0 ppm	2	24.9089	249.0887	175.33	179.27	3.94	49.61	10:30
C	TOC	25.0 ppm	3	24.6648	246.6485	173.69	177.69	4.00	49.60	10:26
C	TOC	25.0 ppm	4	25.0351	250.3511	176.18	180.13	3.95	49.62	10:27

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	25 ppmC

Sample Type: Sample From Schedule Version 2

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	2	TOC	ICS	0.3286 ppm	0.0000 ppm	0.0000%	2020/04/25 18:42

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.3286	3.2863	9.62	13.55	3.93	49.64	10:31

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	3	TOC	K2003360-016.10	0.5670 ppm	0.0157 ppm	2.7600%	2020/04/25 18:56

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.5661	5.6611	11.22	15.17	3.95	49.64	10:28
2	TOC	0.5701	5.7012	11.24	15.12	3.87	49.63	10:30
3	TOC	0.5850	5.8499	11.34	15.14	3.80	49.64	10:29
4	TOC	0.5469	5.4692	11.09	15.00	3.92	49.68	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	4	TOC	K2003360-016.10 ms	27.8067 ppm	0.1740 ppm	0.6300%	2020/04/25 19:52

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	27.5573	275.5730	192.73	196.58	3.85	49.69	10:28
2	TOC	27.9625	279.6250	195.46	199.30	3.84	49.72	10:28
3	TOC	27.8535	278.5351	194.72	198.73	4.01	49.73	10:26
4	TOC	27.8537	278.5365	194.73	198.87	4.14	49.76	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC)	CAS_salt_010711	CAS_salt_010711

(v1377) (v4) (v32)

Sample Type: Sample From Schedule Version 3

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	5	TOC	RB	0.0000 ppm	0.0000 ppm	0.0000%	2020/04/25 20:47

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	7.24	11.19	3.96	49.80	10:33

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	6	TOC	K2003360-019.10	5.9654 ppm	0.1342 ppm	2.2500%	2020/04/25 21:02

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	5.8106	58.1059	46.49	50.41	3.92	49.80	10:28
2	TOC	5.9316	59.3163	47.30	51.22	3.92	49.83	10:28
3	TOC	5.9850	59.8501	47.66	51.66	4.00	49.85	10:25
4	TOC	6.1343	61.3431	48.66	52.53	3.87	49.87	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	7	TOC	K2003360-021.10	0.7482 ppm	0.2263 ppm	30.2500%	2020/04/25 21:58

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.0813	10.8135	14.68	18.55	3.86	49.91	10:31
2	TOC	0.6980	6.9800	12.10	16.14	4.04	49.93	10:28
3	TOC	0.6126	6.1265	11.53	15.54	4.01	49.96	10:26
4	TOC	0.6006	6.0060	11.45	15.33	3.89	49.99	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	8	TOC	K2003360-022.10 20x	33.4542 ppm	0.2906 ppm	0.8700%	2020/04/25 22:53

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	33.8590	338.5903	235.11	239.05	3.94	49.96	10:27
2	TOC	33.2067	332.0669	230.72	234.65	3.93	50.00	10:24
3	TOC	33.2867	332.8669	231.26	235.26	4.00	50.00	10:29
4	TOC	33.4644	334.6438	232.46	236.56	4.10	50.01	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	9	TOC	K2003360-023.10	0.4520 ppm	0.1210 ppm	26.7800%	2020/04/25 23:49

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.6180	6.1800	11.57	15.43	3.87	49.96	10:28
2	TOC	0.4656	4.6558	10.54	14.35	3.81	49.99	10:30
3	TOC	0.3683	3.6834	9.89	13.97	4.09	49.98	10:30
4	TOC	0.3560	3.5599	9.80	13.81	4.01	49.97	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 3

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	24.8751 ppm (PASS)	0.0000 ppm	0%	2020/04/26 00:45

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	24.8751	248.7511	175.10	179.08	3.98	49.96	10:35

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 3

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/04/26 00:59

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	6.78	10.67	3.88	49.96	10:31

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	0 ppmC

Sample Type: Sample From Schedule Version 3

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	10	TOC	K2003360-016.09 doc	0.4906 ppm	0.0136 ppm	2.7700%	2020/04/26 01:14

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.4836	4.8358	10.66	14.49	3.83	49.97	10:28
2	TOC	0.5083	5.0826	10.83	14.87	4.04	49.96	10:27
3	TOC	0.4934	4.9339	10.73	14.69	3.96	49.95	10:29
4	TOC	0.4770	4.7703	10.62	14.53	3.91	49.95	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	11	TOC	K2003360-016.09 ms doc	27.5036 ppm	0.2214 ppm	0.8000%	2020/04/26 02:10

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	27.7594	277.5938	194.09	198.00	3.91	49.90	10:30
2	TOC	27.2487	272.4874	190.66	194.58	3.92	49.91	10:28
3	TOC	27.4119	274.1187	191.75	195.76	4.01	49.87	10:29
4	TOC	27.5943	275.9432	192.98	196.94	3.96	49.91	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	12	TOC	RB	0.0000 ppm	0.0000 ppm	0.0000%	2020/04/26 03:06

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	6.84	10.70	3.86	49.87	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	13	TOC	K2003360-019.09 doc	4.9782 ppm	0.1798 ppm	3.6100%	2020/04/26 03:21

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	4.7458	47.4575	39.33	43.21	3.88	49.88	10:27
2	TOC	4.9593	49.5928	40.76	44.68	3.92	49.88	10:25
3	TOC	5.0298	50.2977	41.24	45.19	3.95	49.88	10:29
4	TOC	5.1780	51.7802	42.23	46.20	3.97	49.89	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	14	TOC	K2003360-021.09 doc	0.6314 ppm	0.1590 ppm	25.1800%	2020/04/26 04:16

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.8620	8.6202	13.21	17.11	3.90	49.90	10:28
2	TOC	0.6088	6.0878	11.50	15.44	3.94	49.90	10:30
3	TOC	0.5425	5.4246	11.06	14.99	3.93	49.95	10:24
4	TOC	0.5123	5.1228	10.86	14.76	3.90	49.90	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	15	TOC	K2003360-022.09 20x doc	33.2197 ppm	0.2141 ppm	0.6400%	2020/04/26 05:12

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	33.3918	333.9182	231.97	235.78	3.81	49.92	10:28
2	TOC	33.0393	330.3925	229.60	233.62	4.02	49.95	10:27
3	TOC	33.0297	330.2974	229.53	233.48	3.95	49.96	10:24
4	TOC	33.4178	334.1784	232.14	236.13	3.98	49.96	10:31

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	16	TOC	K2003360-023.09 doc	0.3916 ppm	0.1264 ppm	32.2700%	2020/04/26 06:08

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.5732	5.7324	11.26	15.24	3.98	49.99	10:28
2	TOC	0.3786	3.7860	9.96	13.78	3.83	49.98	10:26
3	TOC	0.3236	3.2358	9.59	13.37	3.78	49.98	10:28
4	TOC	0.2910	2.9101	9.37	13.10	3.74	49.97	10:24

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	17	TOC	K2003360-024.09 doc	0.4842 ppm	0.0191 ppm	3.9500%	2020/04/26 07:03

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.5105	5.1049	10.84	14.65	3.81	50.00	10:30
2	TOC	0.4692	4.6915	10.57	14.61	4.05	50.00	10:28
3	TOC	0.4863	4.8625	10.68	14.67	3.99	49.99	10:25
4	TOC	0.4709	4.7094	10.58	14.44	3.86	49.97	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	18	TOC	K2003360-024.10	0.4447 ppm	0.0222 ppm	4.9800%	2020/04/26 07:59

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.4730	4.7302	10.59	14.51	3.92	49.99	10:26
2	TOC	0.4272	4.2722	10.28	14.34	4.05	49.97	10:27
3	TOC	0.4269	4.2692	10.28	14.18	3.90	49.98	10:28
4	TOC	0.4518	4.5176	10.45	14.22	3.77	49.99	10:31

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	19	TOC	K2003344-001.01	2.4158 ppm	0.0013 ppm	0.0500%	2020/04/26 08:54

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.4149	24.1489	23.65	27.50	3.85	49.96	10:27
2	TOC	2.4167	24.1667	23.66	27.39	3.73	49.96	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

Sample Type: Check Standard --> CCV 25 ppm — From Schedule Version 3

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	24.6873 ppm (PASS)	0.0000 ppm	0%	2020/04/26 09:22

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	24.6873	246.8730	173.84	177.71	3.87	49.97	10:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	50 ppmC

Sample Type: Check Standard --> CCB — From Schedule Version 3

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/04/26 09:37

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	6.31	10.25	3.94	50.00	10:31

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	0 ppmC

Sample Type: Sample From Schedule Version 3

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	20	TOC	MB2	0.0000 ppm	0.0000 ppm	0.0000%	2020/04/26 09:52

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	5.76	9.78	4.02	49.93	10:30
2	TOC	0.0000	0.0000	5.62	9.61	3.99	49.96	10:30
3	TOC	0.0000	0.0000	5.30	9.23	3.93	49.92	10:25
4	TOC	0.0000	0.0000	5.31	9.09	3.78	49.97	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

Sample Type: Check Standard --> LCS From Schedule Version 3

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	C	TOC	25.0000	1:1	[TOC] LCS [24.0 ppm]	0 / infinity (NA / NA)	24.0702 ppm (PASS)	0.1034 ppm	0.43%	2020/04/26 10:48

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	23.9318	239.3176	168.76	172.66	3.90	49.92	10:29
C	TOC	25.0 ppm	2	24.1816	241.8158	170.44	174.30	3.86	49.96	10:26
C	TOC	25.0 ppm	3	24.0915	240.9146	169.83	174.09	4.26	49.93	10:27
C	TOC	25.0 ppm	4	24.0761	240.7615	169.73	173.65	3.92	49.91	10:28

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	25 ppmC

Sample Type: Sample From Schedule Version 3

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	21	TOC	K2003384-001.06	1.4273 ppm	0.1086 ppm	7.6100%	2020/04/26 11:43

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time

1	TOC	1.5041	15.0410	17.53	21.44	3.92	49.92	10:24
2	TOC	1.3505	13.5050	16.49	20.55	4.06	49.94	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	22	TOC	K2003384-002.06	1.4993 ppm	0.0342 ppm	2.2800%	2020/04/26 12:11

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.5234	15.2343	17.66	21.54	3.88	49.90	10:28
2	TOC	1.4751	14.7511	17.33	21.35	4.02	49.90	10:24

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	23	TOC	K2003384-002.06 ms	28.9878 ppm	0.0000 ppm	0.0000%	2020/04/26 12:39

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	28.9878	289.8779	202.35	206.24	3.89	49.91	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	24	TOC	RB	0.0000 ppm	0.0000 ppm	0.0000%	2020/04/26 12:54

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	6.27	10.32	4.05	49.88	10:34

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	25	TOC	K2003384-003.06	1.3051 ppm	0.0036 ppm	0.2700%	2020/04/26 13:09

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.3077	13.0767	16.20	20.19	3.98	49.86	10:26
2	TOC	1.3026	13.0261	16.17	20.12	3.95	49.87	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	26	TOC	K2003384-004.06	1.3537 ppm	0.0340 ppm	2.5100%	2020/04/26 13:37

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	27	TOC	K2003384-005.06	1.2927 ppm	0.0119 ppm	0.9200%	2020/04/26 14:05

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.2843	12.8432	16.05	19.83	3.78	49.85	10:26
2	TOC	1.3011	13.0113	16.16	19.92	3.76	49.84	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	28	TOC	K2003384-006.06	1.5339 ppm	0.0392 ppm	2.5600%	2020/04/26 14:33

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.5616	15.6165	17.91	21.76	3.85	49.82	10:30
2	TOC	1.5062	15.0618	17.54	21.39	3.85	49.79	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 3

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	24.7074 ppm (PASS)	0.0000 ppm	0%	2020/04/26 15:01

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	24.7074	247.0738	173.97	177.98	4.00	49.80	10:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 3

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈										

	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/04/26 15:15

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	5.93	9.81	3.88	49.81	10:28

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	0 ppmC

Sample Type: Sample From Schedule Version 3

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	29	TOC	K2003384-007.06	1.2585 ppm	0.0201 ppm	1.6000%	2020/04/26 15:30

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.2727	12.7273	15.97	19.91	3.94	49.81	10:31
2	TOC	1.2443	12.4432	15.78	19.64	3.86	49.79	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	30	TOC	MB3	0.0000 ppm	0.0000 ppm	0.0000%	2020/04/26 15:58

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	5.26	9.09	3.83	49.80	10:31

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

Sample Type: Check Standard --> LCS From Schedule Version 3

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	C	TOC	25.0000	1:1	[TOC] LCS [25.0 ppm]	0 / infinity (NA / NA)	24.8014 ppm (PASS)	0.0000 ppm	0%	2020/04/26 16:13

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	24.8014	248.0136	174.61	178.55	3.95	49.77	10:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	25 ppmC

Sample Type: Sample From Schedule Version 3

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	35	TOC	K2003345-001.01	3.0542 ppm	0.0939 ppm	3.0700%	2020/04/26 16:27

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	3.1206	31.2061	28.40	32.23	3.83	49.76	10:27
2	TOC	2.9878	29.8783	27.50	31.52	4.02	49.74	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	36	TOC	K2003388-001.01	1.0842 ppm	0.0064 ppm	0.5900%	2020/04/26 16:56

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.0888	10.8878	14.73	18.65	3.92	49.79	10:29
2	TOC	1.0797	10.7971	14.67	18.63	3.96	49.76	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 3

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	24.6955 ppm (PASS)	0.0000 ppm	0%	2020/04/26 17:24

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	24.6955	246.9548	173.89	177.80	3.90	49.76	10:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 3

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/04/26 17:38

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time

D	TOC	0 ppm	1	0.0000	0.0000	5.61	9.55	3.94	49.74	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	0 ppmC

Meta Data Used in this Report

Blanks

Version	Reagent (Abs)	Acid (Abs)	DI IC (Abs)	DI TC (Abs)	DI TOC (Abs)	Save Time	Operator
v1376	2.4970	1.4280	0.0000	0.0000	0.0000	2020/04/23 15:09	Fusion1 (Fusion1)
v1377	1.8707	1.1800	0.0000	0.0000	0.0000	2020/04/25 16:05	Fusion1 (Fusion1)

Calibrations

Name: CAS_salt_010711 (TOC)

Version: v32
Calibration curve formula: TOC: y = 6.725x + 7.818
Ver Creation: 2020/03/11 15:55
r^2 value: TOC: r^2 = 0.99921
Comment:
Operator: Fusion1 (Fusion1)
Basic Analysis Type: TOC

Basic Analysis Type: TOC

Sample ID	Y Raw Value	X Expected	Message	End Time
DI Water	5.8640	0.0000		2020/03/11 14:28
0.500 ppm	9.5210	0.5000		2020/03/11 14:42
1.0 ppm	12.5930	1.0000		2020/03/11 14:56
5.0 ppm	40.5270	5.0000		2020/03/11 15:10
10 ppm	79.5310	10.0000		2020/03/11 15:25
25 ppm	181.4610	25.0000		2020/03/11 15:39
50 ppm	340.5610	50.0000		2020/03/11 15:53

Methods

Name: CAS_salt_010711 (TOC)

Version: v4
Operator: Fusion1 (Fusion1)
Ver Creation: 2019/02/21 17:57
Comment:

Parameter	Value	Advanced Parameter	Value

SampleVolume	10.0 mL	NeedleRinseVolume	5.0 ml
Dilution	1:10	VialPrimeVolume	2.0 ml
AcidVolume	0.5 ml	ICSamplePrimeVolume	2.0 ml
ReagentVolume	2.0 ml	ICSpargeRinseVolume	12.0 ml
UVReactorPrerinse	Off	BaselineStabilizeTime	0.70 min
UVReactorPrerinseVolume	5.0	DetectorPressureFlow	150 ml/min
NumberOfUVReactorPrerinses	1	SyringeSpeedWaste	10
ICSpargeTime	1.00 mins	SyringeSpeedAcid	7
DetectorSweepFlow	500 ml/min	SyringeSpeedReagent	7
PreSpargeTime	2.00 mins	SyringeSpeedDIWater	7
SystemFlow	500 ml/min	NDIRPressurization	60 psig
		SyringeSpeedSampleDispense	5
		SyringeSpeedSampleAspirate	4
		SyringeSpeedUVDispense	5
		SyringeSpeedUVAspirate	5
		SyringeSpeedICDispense	5
		SyringeSpeedICAspirate	5
		NDIRPressureStabilize	1.75 min
		SampleMixing	Off
		SampleMixingCycles	1
		SampleMixingVolume	10.0
		LowLevelFilterNDIR	Off

Acceptance / Approval

Electronic Signatures

Report Version	User Name	Acceptance	Reason	Date

Report History

Report History

Report Version	User Name	System Reason	User Reason	Date
1	Fusion1 (Fusion1)	Schedule completed	Schedule completed	2020/04/26 17:53

ALS Environmental

StarLIMS Run: 678052, 678054, 678053

Analysis: DOC/TOC

Method: SM 5310 C, 9060A, 415.1, 9060

CCV: 11-GEN-05-82C 50 ppm LCS: 11-GEN-05-79J 25.0 ppm

ICAL Date: 3/11/2020

ICAL ID: 19-GEN-8-7-E->J

ICS ID: 19-GEN-8-4-G

ICS TV: 25.0 ppm ICS % R < 1

Spike ID: 11-GEN-05-82C 0.05 ml of 5000 ppm stock ---> 10.0 ml = 25.0 ppm x dilution factor

Sodium Persulfate: 19-GEN-08-14-N

21 % H3PO4: 19-GEN-08-12-A

Equipment ID: K-TOC-03

PIPETTE ID: 124276B, 129001F, N11314F, Marge

FILTER ID: 16967789

Analyzed By: BCD	Date Analyzed: 4/28/20
Reviewed By:	Date Reviewed: 4/29/20

April 30, 2020 Service Request No:E2000352

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

Laboratory Results for: HS20040700

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory April 17, 2020
For your reference, these analyses have been assigned our service request number **E2000352.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental

Certificate of Analysis

ALS Environmental - Houston HRMS
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Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2000352
Project:	HS20040700	**Date Received:**	04/17/20
Sample Matrix:	W		

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier IV. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

One sample was received for analysis at ALS Environmental in Houston on 04/17/20.

The sample was received in good condition and is consistent with the accompanying chain of custody form. The sample was stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2000162: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in lieu of a MS/MSD for this extraction batch. The LCS and DLCS recoveries are within QC limits.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: ALS Environmental - US **Service Request:**E2000352
Project: HS20040700

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2000352-001	LH18/24-SP650_041620_BIX	4/16/2020	1400

Service Request Summary

Folder #: **E2000352**
Client Name: ALS Environmental - US
Project Name: HS20040700
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 04/17/20
Internal Due Date: 5/1/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20040700
EDD: No EDD Specified

1 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
Location: EHRMS-WIC 7B
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2000352-001	LH18/24-SP650_041620_BIX	Water	04/16/20 1400	**IV**

Service Request Summary

Folder #: **E2000352**
Client Name: ALS Environmental - US
Project Name: HS20040700
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 04/17/20
Internal Due Date: 5/1/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20040700
EDD: No EDD Specified

1 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
Location: EHRMS-WIC 7B
Pressure Gas:

Data Qualifiers

Lab Standard

+	Possible Tedlar bag artifact.
A	TIC is a suspected aldol-condensation product
B	Analyte found in the associated method blank as well as in the sample.
BC	Reported results are not blank corrected.
BH	The back section of the tube yielded higher results than the front.
BT	Results indicated possible breakthrough; back section >=10% front section.
C	Result identification confirmed.
D	Compound identified in an analysis at a secondary dilution factor
D	Spike was diluted out
DE	Reported results are corrected for desorption efficiency.
E	Estimated value. Concentration above calibration range
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
H1	Sample analysis performed past holding time. See case narrative.
H2	Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
H3	Sample was received and analyzed past holding time.
H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
I	Internal standard not within the specified limits. See case narrative.
J	Estimated Value. Concentration found below MRL.
K	A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
K	Analyte was detected above the method reporting limit prior to normalization.
L1	Laboratory control sample recovery outside the specified limits; results may be biased high.
L2	Laboratory control sample recovery outside the specified limits; results may be biased low.
L3	Laboratory control sample recovery outside the specified limits.
M	Matrix interference; results may be biased high.
M	The duplicate injection precision not met.
M1	Matrix interference due to coelution with a non-target compound; results may be biased high.
N	Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
P	Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
P	Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
Q	Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
R	Duplicate Precision not met.
R1	Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
S	Surrogate recovery not within specified limits.

Data Qualifiers

Lab Standard

S	The reported value was determined by the Method of Standard Additions (MSA).
T	Analyte is a tentatively identified compound, result is estimated.
U	Compound was analyzed for, but was not detected (ND).
V1	The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
V2	The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
W	Result quantified, but the corresponding peak was detected outside the generated retention time window.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
X	See case narrative.
Y	Recovery outside limits
Y	The chromatogram resembles a petroleum product but does not match the calibration standard.
Z	The chromatogram does not resemble a petroleum product.
i	The MRL/MDL has been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

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State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
Arizona Department of Health Services	AZ0793	5/27/2020
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611	6/30/2020
Illinois Environmental Protection Agency	2000322019-2	5/9/2020
Kansas Department of Health and Environment	E-10352	7/31/2020
Louisiana Department of Environmental Quality	03087	6/30/2020
Louisiana Department of Health and Hospitals	LA028-2020	12/31/2020
Maine Center for Disease Control and Prevention	201815	6/5/2020
Maryland Department of the Environment	343	6/30/2020
Minnesota Department of Health	1785988	12/31/2020
Nevada Department of Concervation and Natural Resources	TX026932019-1	7/31/2020
New Jersey Department of Environmental Protection	NLC190001	6/30/2020
New York Department of Health	11707	3/31/2021
Oklahoma Department of Environmental Quality	2019-067	8/31/2020
Pennsylvania Department of Environmental Protection	68-03441-013	6/30/2020
Tennessee Department of Environment and Concervation	04016	6/30/2020
United States Department of Agriculture	P330-19-00299	10/10/2022
Utah Department of Health Environmental Laboratory Certification	TX026932019-9	7/31/2020
Washington Department of Health	C819	11/14/2020
West Virginia Department of Environmental Protection	347	6/30/2020

ALS

Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

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Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **13737**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	Jumoke M. Lawal
Email:	jumoke.lawal@alsglobal.com

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20040700
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20040700-02**	**LH18/24-SP650_041620_BIX**	**Water**	**16 Apr 2020 14:00**
	SUB_Perch-6850			01 May 2020

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: J. Mulligan Date/Time: 4/17/20 10:30

Received By: [illegible] Date/Time: 4/17/20 10:30

Cooler ID(s): Temperature(s):

Cooler Receipt Form

ALS Environmental

Project Chemist CA

Client/Project ALS-H

Thermometer ID GUN4

Date/Time Received: 4/17/20 Initials: CA Date/Time Logged in: 4/17/20 Initials CA

1. Method of delivery: ○ US Mail ○ Fed Ex ○ UPS ○ DHL ✓ ALS Courier ○ Client
2. Samples received in: ✓ Cooler ○ Box ○ Envelope ○ Other
3. Were custody seals on coolers? ○ Yes ✓ No
   Were they intact? ○ Yes ✓ No ✓ N/A
   Were they signed and dated? ○ Yes ✓ No ✓ N/A
   If yes, how many and where?
4. Packing Material: ○ Inserts ✓ Baggies ○ Bubble Wrap ○ Gel Packs ✓ Wet Ice ○ Sleeves ○ Other
5. Foreign or Regulated Soil? ○ Yes ○ No Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
–		4/17/20	1050	CA	1.7/2.1	☐
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No
7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ✓ Yes ○ No
8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No
9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No
10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label:

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Houston, TX 77099
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www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6ºC.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10ºC.
- ✓ Air samples are shipped and stored cold, at 0 to 6ºC
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

Preparation Information Benchsheets

ALS Environmental - Houston HRMS
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Preparation Information Benchsheet

Prep Run#: 357602 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/KBROWN **Prep Method:** Method **Prep Date/Time:** 4/29/20 09:00

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2000352-001	LH18/24-SP650_041620_BIX	.01	6850/ClO4 DOD			Water	10mL	
2	E2000362-001	LH18/24-SP650_042120_BIX	.01	6850/ClO4 DOD			Water	10mL	
3	E2000363-001	HBW7_042020	.01	6850/ClO4 DOD			Water	10mL	
4	E2000363-002	HBW10_042020	.01	6850/ClO4 DOD			Water	10mL	
5	E2000363-003	HBW1_042020	.01	6850/ClO4 DOD			Water	10mL	
6	E2000363-004	GPW1_042020	.01	6850/ClO4 DOD			Water	10mL	
7	E2000363-005	GPW3_042020	.01	6850/ClO4 DOD			Water	10mL	
8	E2000363-006	GPW3_042020_a	.01	6850/ClO4 DOD			Water	10mL	
9	E2000376-001	GM-MW-29D-20200423-01	.01	6850/ClO4			Ground Water	10mL	
10	E2000376-002	GM-MW-66D2-20200423-01	.01	6850/ClO4			Ground Water	10mL	
11	E2000376-003	GM-MW-89D-20200423-01	.01	6850/ClO4			Ground Water	10mL	
12	E2000376-004	GM-MW-98D-20200423-01	.01	6850/ClO4			Ground Water	10mL	
13	EQ2000162-01	MB		6850/ClO4 DOD			Liquid	10mL	
14	EQ2000162-02	LCS		6850/ClO4 DOD			Liquid	10mL	
15	EQ2000162-03	DLCS		6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 202037 Logbook Ref: Sodium Perchlorate Expires On: 05/22/2021

E2000352-001	100.00µL	E2000362-001	100.00µL	E2000363-001	100.00µL	E2000363-002	100.00µL	E2000363-003	100.00µL	E2000363-004	100.00µL
E2000363-005	100.00µL	E2000363-006	100.00µL	E2000376-001	100.00µL	E2000376-002	100.00µL	E2000376-003	100.00µL	E2000376-004	100.00µL
EQ2000162-01	100.00µL	EQ2000162-01	100.00µL	EQ2000162-02	100.00µL	EQ2000162-02	100.00µL	EQ2000162-03	100.00µL	EQ2000162-03	100.00µL

Name: Perchlorate Intermediate Stock1 Inventory ID 204799 Logbook Ref: 200657 1.0ug/mL KN Expires On: 05/15/2020

EQ2000162-02	1.00µL	EQ2000162-02	1.00µL	EQ2000162-03	1.00µL	EQ2000162-03	1.00µL

Preparation Steps

Step: Preparation
Started: 4/29/20 09:00
Finished: 4/29/20 10:00
By: KBROWN
Comments

Comments:

Preparation Information Benchsheet

Prep Run#: 357602
Team: Semivoa GCMS/KBROWN

Prep WorkFlow: GenExt28Day
Prep Method: Method

Status: Prepped
Prep Date/Time: 4/29/20 09:00

Reviewed By: KN Date: 04/29/20

Chain of Custody

Relinquished By: _____ Date: _____

Received By: _____ Date: _____

Extracts Examined
Yes No

Analytical Results

ALS Environmental - Houston HRMS
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www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000352
Project:	HS20040700	**Date Collected:**	4/16/20 1400
Sample Matrix:	Water	**Date Received:**	4/17/20
Sample Name:	LH18/24-SP650_041620_BIX	**Units:**	µg/L
Lab Code:	E2000352-001	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	4/29/20	4/29/20 13:29	357602	678630	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000352
Project:	HS20040700	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2000162-01	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	4/29/20	4/29/20 13:05	357602	678630	

Accuracy & Precision

ALS Environmental - Houston HRMS
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ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20040700
Sample Matrix: Water

Service Request: E2000352
Date Analyzed: 4/29/20

Lab Control Sample Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Units: µg/L
Basis: NA

Extraction Lot: 357602

	Lab Control Sample EQ2000162-02			Duplicate Lab Control Sample EQ2000162-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.115	0.100	115	0.118	0.100	118	84 - 119	2	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000352
Project:	HS20040700	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000162-02	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.115**		0.100	0.0500	0.0250	1	4/29/20	4/29/20 13:13	357602	678630	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000352
Project:	HS20040700	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000162-03	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.118**		0.100	0.0500	0.0250	1	4/29/20	4/29/20 15:11	357602	678630	

Initial Calibration

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

20200420

1st Review: Kneir
2nd Review: Hvan

ALS Environmental
LCMS01 -Shimadzu 8050

ICAL Date: 4/20/2020
Cal. Std. xp: 5/14/2020
ICAL ID: **EC2000003**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100803-09 **B:** MeOH 3100802-01

	Sample Name		File Name	Acquisition Method	Dilution	R	Comments	Date/Time
	null		20200420_001	Perchlorate6850b.lcm	1x	☒		4/20/2020 13:01
	null		20200420_002	Perchlorate6850b.lcm	1x	☒		4/20/2020 13:06
	DIBLK		20200420_003	Perchlorate6850b.lcm	1x	☒		4/20/2020 13:11
	IB		20200420_004	Perchlorate6850b.lcm	1x	☒		4/20/2020 13:19
	PERCHLORATE7		20200420_005	Perchlorate6850b.lcm	1x	☒	3100805-02	4/20/2020 13:27
	LODV		20200420_006	Perchlorate6850b.lcm	1x	☒		4/20/2020 13:35
	PERCHLORATE1		20200420_007	Perchlorate6850b.lcm	1x	☒	3100804-05	4/20/2020 13:43
	PERCHLORATE2		20200420_008	Perchlorate6850b.lcm	1x	☒	3100804-06	4/20/2020 13:51
	PERCHLORATE3		20200420_009	Perchlorate6850b.lcm	1x	☒	3100804-07	4/20/2020 13:58
	PERCHLORATE4		20200420_010	Perchlorate6850b.lcm	1x	☒	3100804-08	4/20/2020 14:06
	PERCHLORATE5		20200420_011	Perchlorate6850b.lcm	1x	☒	3100804-09	4/20/2020 14:14
	PERCHLORATE6		20200420_012	Perchlorate6850b.lcm	1x	☒	3100805-01	4/20/2020 14:22
	PERCHLORATE8		20200420_013	Perchlorate6850b.lcm	1x	☒	3100805-03	4/20/2020 14:30
	PERCHLORATE9		20200420_014	Perchlorate6850b.lcm	1x	☒	3100805-04	4/20/2020 14:38
	PERCHLORATE10		20200420_015	Perchlorate6850b.lcm	1x	☒	3100805-05	4/20/2020 14:46
	ICV		20200420_016	Perchlorate6850b.lcm	1x	☒	3100805-06	4/20/2020 14:54
	LODV		20200420_017	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:02
	EQ2000143-01		20200420_018	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:10
	EQ2000143-02		20200420_019	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:18
	EQ2000143-03		20200420_020	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:26
	E2000275-001		20200420_021	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:33
	E2000275-002		20200420_022	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:41
	E2000275-003		20200420_023	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:49
	E2000287-001		20200420_024	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:57
	E2000303-001		20200420_025	Perchlorate6850b.lcm	1x	☒		4/20/2020 16:05
	E2000304-001		20200420_026	Perchlorate6850b.lcm	1x	☒		4/20/2020 16:13
	E2000305-001		20200420_027	Perchlorate6850b.lcm	1x	☒		4/20/2020 16:21
	PERCHLORATE7		20200420_028	Perchlorate6850b.lcm	1x	☒	3100805-02	4/20/2020 16:29
	E2000303-001		20200420_029	Perchlorate6850b.lcm	1x	☒		4/20/2020 16:47
	E2000304-001		20200420_030	Perchlorate6850b.lcm	1x	☒		4/20/2020 16:55
	PERCHLORATE7		20200420_031	Perchlorate6850b.lcm	1x	☒	3100805-02	4/20/2020 17:02

Initial Calibration - Detailed Report

Calibration ID: EC2000003 **Instrument ID:** E-LCMS-01
Column Name: 1

#	Lab Code	Sample Name	File Location	Aquisition Date
08	EC2000003-08	PERCHLORATE7	20200420_005	04/20/2020 13:27
01	EC2000003-01	PERCHLORATE1	20200420_007	04/20/2020 13:43
02	EC2000003-02	PERCHLORATE2	20200420_008	04/20/2020 13:51
03	EC2000003-03	PERCHLORATE3	20200420_009	04/20/2020 13:58
04	EC2000003-04	PERCHLORATE4	20200420_010	04/20/2020 14:06
05	EC2000003-05	PERCHLORATE5	20200420_011	04/20/2020 14:14
06	EC2000003-06	PERCHLORATE6	20200420_012	04/20/2020 14:22
07	EC2000003-07	PERCHLORATE8	20200420_013	04/20/2020 14:30
09	EC2000003-09	PERCHLORATE9	20200420_014	04/20/2020 14:38
10	EC2000003-10	PERCHLORATE10	20200420_015	04/20/2020 14:46

Analyte **Curve Fit** **Weighting**

Perchlorate **Average RF** **RSD = 8.066** **Average RF = 0.1368**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.1000	0.1558	02	0.5000	0.1297	03	0.7000	0.1277	04	1.0000	0.1397
05	2.0000	0.1298	06	5.0000	0.1245	07	20.0000	0.1341	08	10.0000	0.1562
09	30.0000	0.1365	10	50.0000	0.1345						

Analyte

Perchlorate

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.1000	0.114	13.9	02	0.5000	0.474	-5.2	03	0.7000	0.653	-6.7
04	1.0000	1.02	2.1	05	2.0000	1.90	-5.1	06	5.0000	4.55	-9.0
07	20.0000	19.6	-2.0	08	10.0000	11.4	14.2	09	30.0000	29.9	-0.2
10	50.0000	49.1	-1.7								

Initial Calibration Verification Summary Report

Calibration ID:	EC2000003	**Instrument ID:**	E-LCMS-01
Datafile ID:	20200420_016	**Column Name:**	1

Analyte	Lab Code	Type	Curve Fit	True Value	Calc Conc	Units	Result	Criteria
Perchlorate	EC2000003-11	T	Average RF	10	11.345	ng/mL	13.4	<= 15

ALS Group Houston

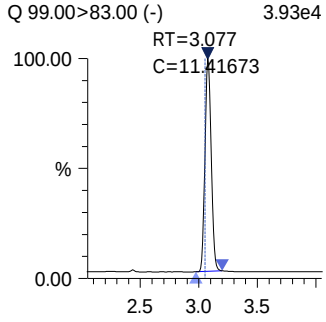
PERCHLORATE7

Date acquired: 4/20/2020 1:27:21 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_005.lcd
Vial: 3 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	4/20/2020 1:27:21 PM	144494	11.41673	20200420_005	3.077	25.0000	1.0000	3
Sodium Perchlorate-18O4_IS	PERCHLORATE7	4/20/2020 1:27:21 PM	92497	1.00000	20200420_005	3.076	25.0000	1.0000	3

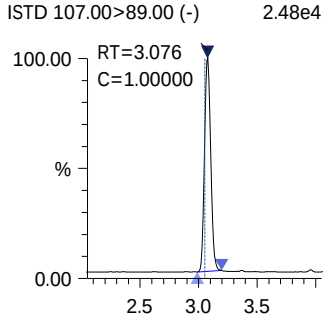
Perchlorate

Conc 11.41673
Area 144494



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 92497



ALS Group Houston

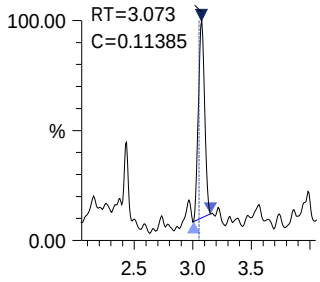
PERCHLORATE1

Date acquired: 4/20/2020 1:43:09 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_007.lcd
Vial: 5 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE1	4/20/2020 1:43:09 PM	1840	0.11385	20200420_007	3.073	25.0000	1.0000	5
Sodium Perchlorate-18O4_IS	PERCHLORATE1	4/20/2020 1:43:09 PM	118078	1.00000	20200420_007	3.073	25.0000	1.0000	5

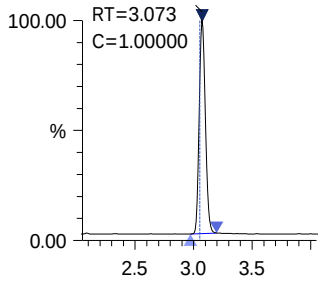
Perchlorate

Conc 0.11385
Area 1840
Q 99.00>83.00 (-) 5.37e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 118078
ISTD 107.00>89.00 (-) 3.18e4



ALS Group Houston

PERCHLORATE2

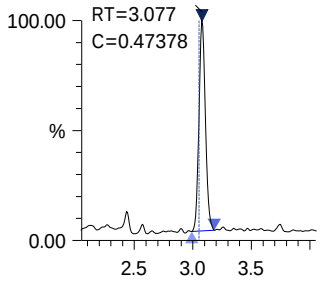
Date acquired: 4/20/2020 1:51:02 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_008.lcd
Vial: 6 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE2	4/20/2020 1:51:02 PM	7551	0.47378	20200420_008	3.077	25.0000	1.0000	6
Sodium Perchlorate-18O4_IS	PERCHLORATE2	4/20/2020 1:51:02 PM	116479	1.00000	20200420_008	3.075	25.0000	1.0000	6

Perchlorate

Conc 0.47378
Area 7551

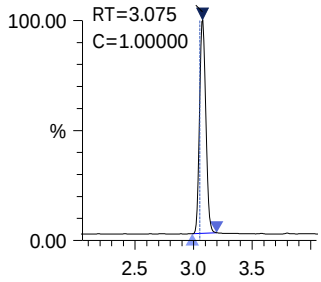
Q 99.00>83.00 (-) 2.00e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 116479

ISTD 107.00>89.00 (-) 3.08e4



ALS Group Houston

PERCHLORATE3

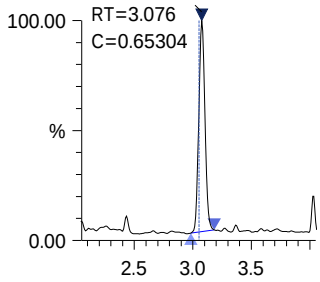
Date acquired: 4/20/2020 1:58:56 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_009.lcd
Vial: 7 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE3	4/20/2020 1:58:56 PM	11235	0.65304	20200420_009	3.076	25.0000	1.0000	7
Sodium Perchlorate-18O4_IS	PERCHLORATE3	4/20/2020 1:58:56 PM	125731	1.00000	20200420_009	3.073	25.0000	1.0000	7

Perchlorate

Conc 0.65304
Area 11235

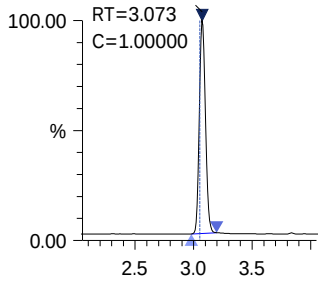
Q 99.00>83.00 (-) 3.12e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 125731

ISTD 107.00>89.00 (-) 3.41e4



ALS Group Houston

PERCHLORATE4

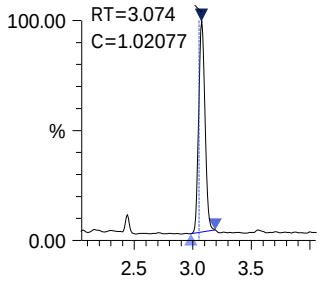
Date acquired: 4/20/2020 2:06:51 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_010.lcd
Vial: 8 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE4	4/20/2020 2:06:51 PM	16670	1.02077	20200420_010	3.074	25.0000	1.0000	8
Sodium Perchlorate-18O4_IS	PERCHLORATE4	4/20/2020 2:06:51 PM	119354	1.00000	20200420_010	3.074	25.0000	1.0000	8

Perchlorate

Conc 1.02077
Area 16670

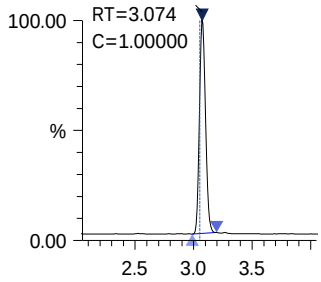
Q 99.00>83.00 (-) 4.51e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 119354

ISTD 107.00>89.00 (-) 3.26e4



ALS Group Houston

PERCHLORATE5

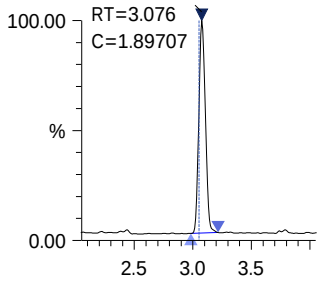
Date acquired: 4/20/2020 2:14:45 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_011.lcd
Vial: 9 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE5	4/20/2020 2:14:45 PM	33786	1.89707	20200420_011	3.076	25.0000	1.0000	9
Sodium Perchlorate-18O4_IS	PERCHLORATE5	4/20/2020 2:14:45 PM	130159	1.00000	20200420_011	3.075	25.0000	1.0000	9

Perchlorate

Conc 1.89707
Area 33786

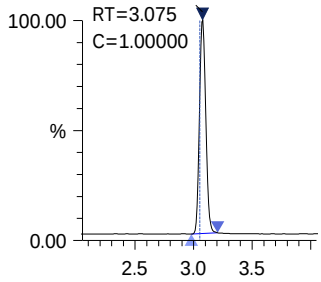
Q 99.00>83.00 (-) 8.73e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 130159

ISTD 107.00>89.00 (-) 3.41e4



ALS Group Houston

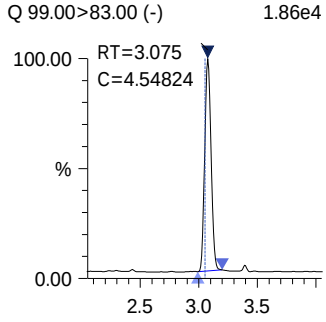
PERCHLORATE6

Date acquired: 4/20/2020 2:22:39 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_012.lcd
Vial: 10 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE6	4/20/2020 2:22:39 PM	69848	4.54824	20200420_012	3.075	25.0000	1.0000	10
Sodium Perchlorate-18O4_IS	PERCHLORATE6	4/20/2020 2:22:39 PM	112235	1.00000	20200420_012	3.074	25.0000	1.0000	10

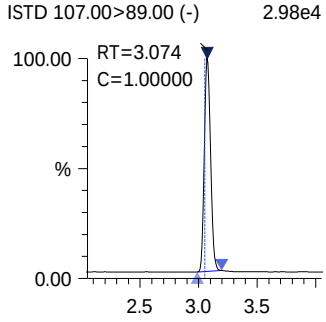
Perchlorate

Conc 4.54824
Area 69848



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 112235



ALS Group Houston

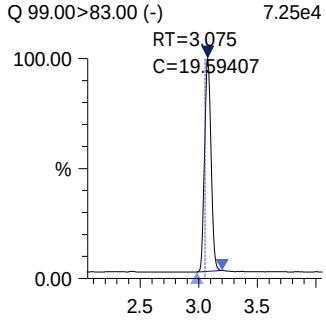
PERCHLORATE8

Date acquired: 4/20/2020 2:30:36 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_013.lcd
Vial: 11 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE8	4/20/2020 2:30:36 PM	275854	19.59407	20200420_013	3.075	25.0000	1.0000	11
Sodium Perchlorate-18O4_IS	PERCHLORATE8	4/20/2020 2:30:36 PM	102890	1.00000	20200420_013	3.072	25.0000	1.0000	11

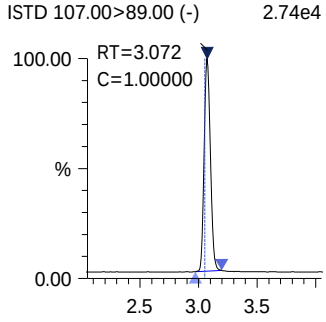
Perchlorate

Conc 19.59407
Area 275854



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 102890



ALS Group Houston

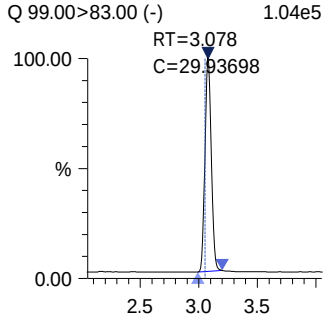
PERCHLORATE9

Date acquired: 4/20/2020 2:38:33 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_014.lcd
Vial: 12 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE9	4/20/2020 2:38:33 PM	390068	29.93698	20200420_014	3.078	25.0000	1.0000	12
Sodium Perchlorate-18O4_IS	PERCHLORATE9	4/20/2020 2:38:33 PM	95225	1.00000	20200420_014	3.075	25.0000	1.0000	12

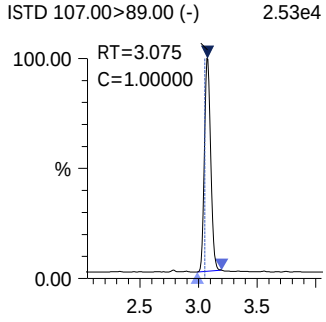
Perchlorate

Conc 29.93698
Area 390068



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 95225



ALS Group Houston

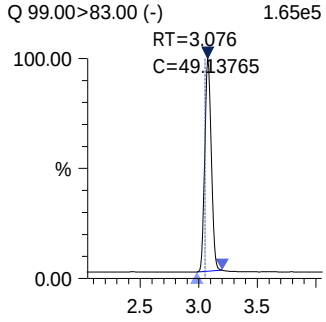
PERCHLORATE10

Date acquired: 4/20/2020 2:46:25 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_015.lcd
Vial: 13 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE10	4/20/2020 2:46:25 PM	632804	49.13765	20200420_015	3.076	25.0000	1.0000	13
Sodium Perchlorate-18O4_IS	PERCHLORATE10	4/20/2020 2:46:25 PM	94118	1.00000	20200420_015	3.075	25.0000	1.0000	13

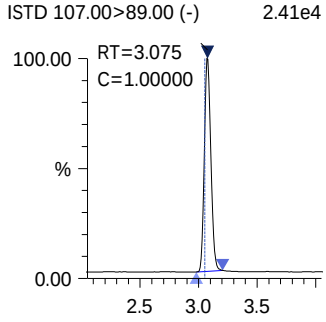
Perchlorate

Conc 49.13765
Area 632804



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 94118



ALS Group Houston

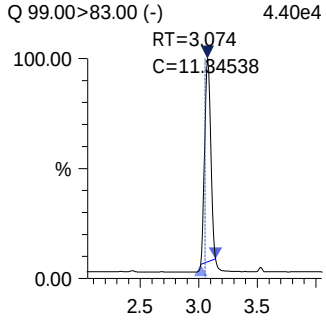
PERCHLORATEICV

Date acquired: 4/20/2020 2:54:20 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_016.lcd
Vial: 14 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATEICV	4/20/2020 2:54:20 PM	149807	11.34538	20200420_016	3.074	25.0000	1.0000	14
Sodium Perchlorate-18O4_IS	PERCHLORATEICV	4/20/2020 2:54:20 PM	96501	1.00000	20200420_016	3.072	25.0000	1.0000	14

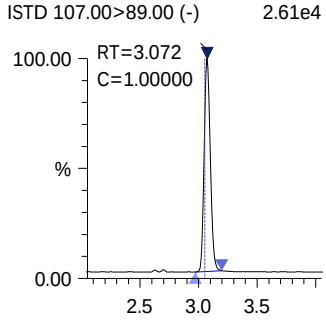
Perchlorate

Conc 11.34538
Area 149807



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 96501



Chromatograms and Selected Ion Monitoring

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 320, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

20200429

1st Review: Kneir
2nd Review: Hvan

ALS Environmental
LCMS01 -Shimadzu 8050

ICAL Date: 4/20/2020
Cal. Std. xp: 5/14/2020
ICAL ID: **EC2000003**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100803-09 **B:** MeOH 3100802-01

		File Name	Acquisition Method	Dilution	R	Comments	Date/Time
null		20200429_001	Perchlorate6850b.lcm	1x	☒		4/29/2020 12:09
null		20200429_002	Perchlorate6850b.lcm	1x	☒		4/29/2020 12:14
IB		20200429_003	Perchlorate6850b.lcm	1x	☒		4/29/2020 12:19
PERCHLORATE7		20200429_004	Perchlorate6850b.lcm	1x	☒	3100805-02	4/29/2020 12:27
LODV		20200429_005	Perchlorate6850b.lcm	1x	☒		4/29/2020 12:35
EQ2000162-01		20200429_006	Perchlorate6850b.lcm	1x	☒		4/29/2020 13:05
EQ2000162-02		20200429_007	Perchlorate6850b.lcm	1x	☒		4/29/2020 13:13
EQ2000162-03		20200429_008	Perchlorate6850b.lcm	1x		RR_high	4/29/2020 13:21
E2000352-001		20200429_009	Perchlorate6850b.lcm	1x	☒		4/29/2020 13:29
E2000362-001		20200429_010	Perchlorate6850b.lcm	1x	☒		4/29/2020 13:36
E2000363-001		20200429_011	Perchlorate6850b.lcm	1x	☒		4/29/2020 13:44
E2000363-002		20200429_012	Perchlorate6850b.lcm	1x	☒		4/29/2020 13:52
E2000363-003		20200429_013	Perchlorate6850b.lcm	1x	☒		4/29/2020 14:00
E2000363-004		20200429_014	Perchlorate6850b.lcm	1x	☒		4/29/2020 14:08
E2000363-005		20200429_015	Perchlorate6850b.lcm	1x	☒		4/29/2020 14:16
PERCHLORATE7		20200429_016	Perchlorate6850b.lcm	1x	☒	3100805-02	4/29/2020 14:24
E2000363-006		20200429_017	Perchlorate6850b.lcm	1x	☒		4/29/2020 14:32
E2000376-001		20200429_018	Perchlorate6850b.lcm	1x		DL-1000x	4/29/2020 14:40
E2000376-002		20200429_019	Perchlorate6850b.lcm	1x		RR_poss carryover	4/29/2020 14:48
E2000376-003		20200429_020	Perchlorate6850b.lcm	1x		DL-500x	4/29/2020 14:56
E2000376-004		20200429_021	Perchlorate6850b.lcm	1x		DL-1000x	4/29/2020 15:03
EQ2000162-03		20200429_022	Perchlorate6850b.lcm	1x	☒		4/29/2020 15:11
PERCHLORATE7		20200429_023	Perchlorate6850b.lcm	1x	☒	3100805-02	4/29/2020 15:19
EQ2000162-03		20200429_024	Perchlorate6850b.lcm	1x	☒		4/29/2020 15:49
E2000376-002		20200429_025	Perchlorate6850b.lcm	1x			4/29/2020 15:56
E2000376-001X1000		20200429_026	Perchlorate6850b.lcm	1000	☒		4/29/2020 16:04
E2000376-003X500		20200429_027	Perchlorate6850b.lcm	500	☒		4/29/2020 16:12
E2000376-004X1000		20200429_028	Perchlorate6850b.lcm	100	☒		4/29/2020 16:20
PERCHLORATE7		20200429_029	Perchlorate6850b.lcm	1x	☒	3100805-02	4/29/2020 16:28

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20040700

Service Request: E2000352
Date Analyzed: 4/29/20

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200429\20200429_004

Calibration Date: 4/20/20
Calibration ID: EC2000003
Analysis Lot: 678630
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	10.9	0.1368	0.1493	9.1	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20040700

Service Request: E2000352
Date Analyzed: 4/29/20

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200429\20200429_016

Calibration Date: 4/20/20
Calibration ID: EC2000003
Analysis Lot: 678630
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	11.5	0.1368	0.1573	14.9	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20040700

Service Request: E2000352
Date Analyzed: 4/29/20

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200429\20200429_023

Calibration Date: 4/20/20
Calibration ID: EC2000003
Analysis Lot: 678630
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	11.0	0.1368	0.1498	9.5	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20040700

Service Request: E2000352
Date Analyzed: 4/29/20 12:27

Internal Standard Area and RT Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID: I:\LCMS01\DATA\20200429\20200429_004
Instrument ID: E-LCMS-01
Analytical Method: 6850

Lab Code: EQ2000163-01
Analysis Lot: 678630
Signal ID: 1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	110,677	3.07
	Upper Limit ==>	166,016	5.07
	Lower Limit ==>	55,339	1.07
Associated Analyses			
Continuing Calibration Verification	EQ2000163-01	84,029	3.02
Method Blank	EQ2000162-01	105,800	2.96
Lab Control Sample	EQ2000162-02	104,252	3.02
LH18/24-SP650_041620_BIX	E2000352-001	82,368	3.00

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000352
Project:	HS20040700	**Date Analyzed:**	4/29/20 14:24

Internal Standard Area and RT Summary

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID:	I:\LCMS01\DATA\20200429\20200429_016	**Lab Code:**	EQ2000163-02
Instrument ID:	E-LCMS-01	**Analysis Lot:**	678630
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	110,677	3.07
	Upper Limit ==>	166,016	5.07
	Lower Limit ==>	55,339	1.07
Associated Analyses			
Continuing Calibration Verification	EQ2000163-02	101,114	3.02
Duplicate Lab Control Sample	EQ2000162-03	121,962	3.02

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000352
Project:	HS20040700	**Date Analyzed:**	4/29/20 15:19

Internal Standard Area and RT Summary

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID:	I:\LCMS01\DATA\20200429\20200429_023	**Lab Code:**	EQ2000163-03
Instrument ID:	E-LCMS-01	**Analysis Lot:**	678630
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	110,677	3.07
	Upper Limit ==>	166,016	5.07
	Lower Limit ==>	55,339	1.07
Associated Analyses			
Continuing Calibration Verification	EQ2000163-03	105,647	3.01

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group Houston

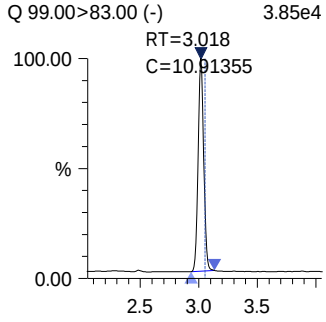
PERCHLORATE7

Date acquired: 4/29/2020 12:27:46 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200429\20200429_004.lcd
Vial: 3 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	4/29/2020 12:27:46 PM	125481	10.91355	20200429_004	3.018	25.0000	1.0000	3
Sodium Perchlorate-18O4_IS	PERCHLORATE7	4/29/2020 12:27:46 PM	84029	1.00000	20200429_004	3.016	25.0000	1.0000	3

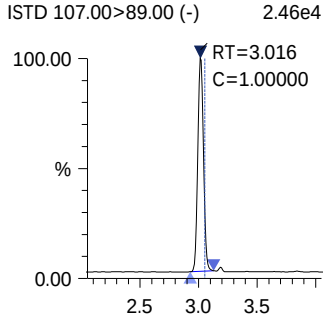
Perchlorate

Conc 10.91355
Area 125481



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 84029



ALS Group Houston

EQ2000162-01

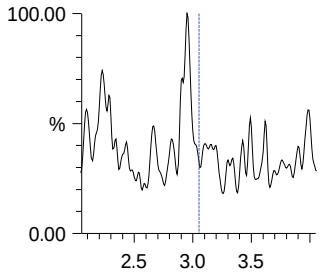
Date acquired: 4/29/2020 1:05:16 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200429\20200429_006.lcd
Vial: 5 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000162-01	4/29/2020 1:05:16 PM	----	----	20200429_006	----	25.0000	1.0000	5
Sodium Perchlorate-18O4_IS	EQ2000162-01	4/29/2020 1:05:16 PM	105800	1.00000	20200429_006	2.955	25.0000	1.0000	5

Perchlorate

Conc ----
Area ----

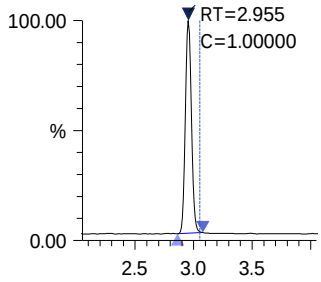
Q 99.00>83.00 (-) 3.44e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 105800

ISTD 107.00>89.00 (-) 3.02e4



ALS Group Houston

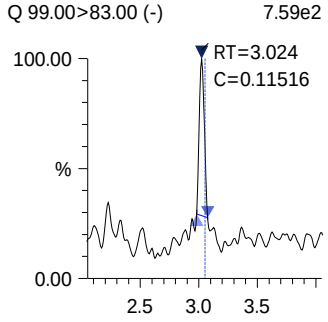
EQ2000162-02

Date acquired: 4/29/2020 1:13:11 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200429\20200429_007.lcd
Vial: 6 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000162-02	4/29/2020 1:13:11 PM	1643	0.11516	20200429_007	3.024	25.0000	1.0000	6
Sodium Perchlorate-18O4_IS	EQ2000162-02	4/29/2020 1:13:11 PM	104252	1.00000	20200429_007	3.018	25.0000	1.0000	6

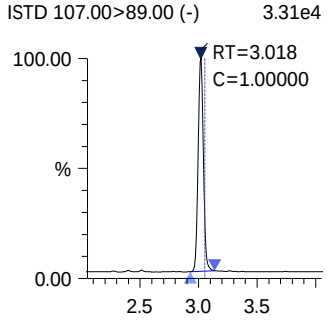
Perchlorate

Conc 0.11516
Area 1643



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 104252



ALS Group Houston

E2000352-001

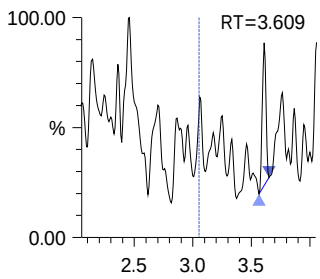
Date acquired: 4/29/2020 1:29:01 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200429\20200429_009.lcd
Vial: 8 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	E2000352-001	4/29/2020 1:29:01 PM	----	----	20200429_009	----	25.0000	1.0000	8
Sodium Perchlorate-18O4_IS	E2000352-001	4/29/2020 1:29:01 PM	82368	1.00000	20200429_009	3.004	25.0000	1.0000	8

Perchlorate

Conc ----
Area ----

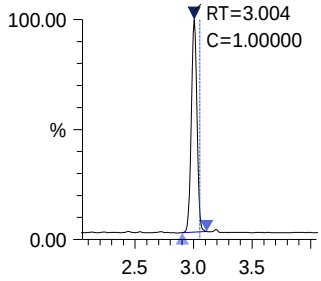
Q 99.00>83.00 (-) 2.87e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 82368

ISTD 107.00>89.00 (-) 2.44e4



ALS Group Houston

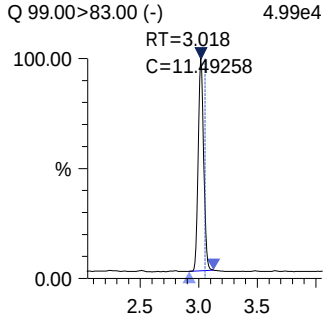
PERCHLORATE7

Date acquired: 4/29/2020 2:24:22 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200429\20200429_016.lcd
Vial: 3 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	4/29/2020 2:24:22 PM	159005	11.49258	20200429_016	3.018	25.0000	1.0000	3
Sodium Perchlorate-18O4_IS	PERCHLORATE7	4/29/2020 2:24:22 PM	101114	1.00000	20200429_016	3.016	25.0000	1.0000	3

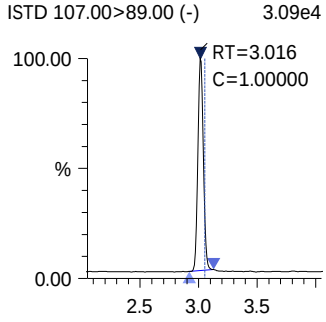
Perchlorate

Conc 11.49258
Area 159005



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 101114



ALS Group Houston

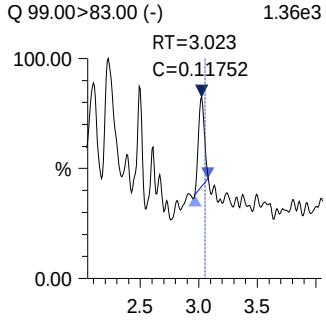
EQ2000162-03

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Data File: I:\LCMS01\DATA\20200429\20200429_022.lcd
Vial: 6 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000162-03	4/29/2020 3:11:50 PM	1961	0.11752	20200429_022	3.023	25.0000	1.0000	6
Sodium Perchlorate-18O4_IS	EQ2000162-03	4/29/2020 3:11:50 PM	121962	1.00000	20200429_022	3.016	25.0000	1.0000	6

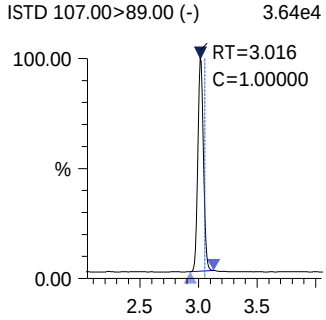
Perchlorate

Conc 0.11752
Area 1961



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 121962



ALS Group Houston

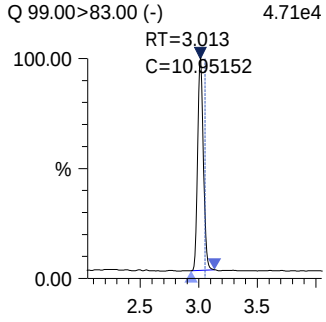
PERCHLORATE7

Date acquired: 4/29/2020 3:19:44 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200429\20200429_023.lcd
Vial: 3 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	4/29/2020 3:19:44 PM	158312	10.95152	20200429_023	3.013	25.0000	1.0000	3
Sodium Perchlorate-18O4_IS	PERCHLORATE7	4/29/2020 3:19:44 PM	105647	1.00000	20200429_023	3.012	25.0000	1.0000	3

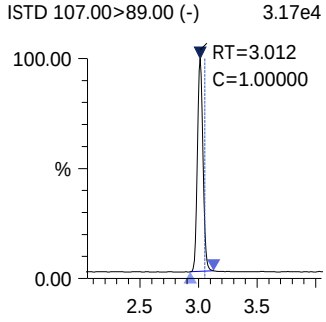
Perchlorate

Conc 10.95152
Area 158312



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 105647



HS20040700 NIT-AMM_W- E350.3

ALS WO# HS20040700

NH7_AMM_WJSE / E350.3

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Logbook **31105**

Ion Selective Electrode Logbook

Analyst: YP

Date: 4/17/20 1:15 PM

Method: SM4500NH3-D/EPA 350.3 or SM4500 NH3 B-F

Probe Calibration Date: 4/17/20

Cal Std ID: 3131034O5-10

Probe ID: SRI-15910

Std Level		mV	Conc., mg/L:
STD 1 (mg/L):	0.2	131.0	0.199
STD 2 (mg/L):	1	95.0	1.005
STD 3 (mg/L):	5	53.8	5.007

Sodium Thiosulfate ID:

Std Level	mV	Conc., mg/L:
STD 4 (mg/L): 10	34.5	10.003
STD 5 (mg/L): 50	-5.4	50.019

LSC / MS Spike ID: 3100601707

CV Cal STD ID: 3131034O5

DPD Reagent ID: 3100600909

ICAL Date & Slope: 97.6% / 57.6 mV

WO # / SX #	Bottle #	Initial g or ml	Final Vol. ml	Dilution Factor	Initial Conc. mg/L	Final Conc. mg/L	Chlorine Check (+/–)	Comments
ICV		50ml	50ml		10.016			
CCB					0.011			
MBLK					0.009			
LCS					10.038			
1S2004070O-01					20.05		-ve	
490-01					0.429		+ve	Redredued
-02					0.039		-ve	
-02MS					11.149		-ve	
-02MSD					11.176		-ve	
-03					0.033		-ve	
-04					0.032		-ve	
-05					0.036		-ve	
CCV					10.881			
CCB					0.014			
1S2004O432-01					0.123		-ve	
543-01					0.101		+ve	Redredued.
545-01					0.192		-ve	
340-25					~~1.176~~ (R1)	4/17		0.109
341-25					0.225			
CCV					10.954			
CCB					0.026			

Batch ID: 360221 / 360222

Reported By: YP

Reviewed By: KL

©2018 ALS Laboratory Group

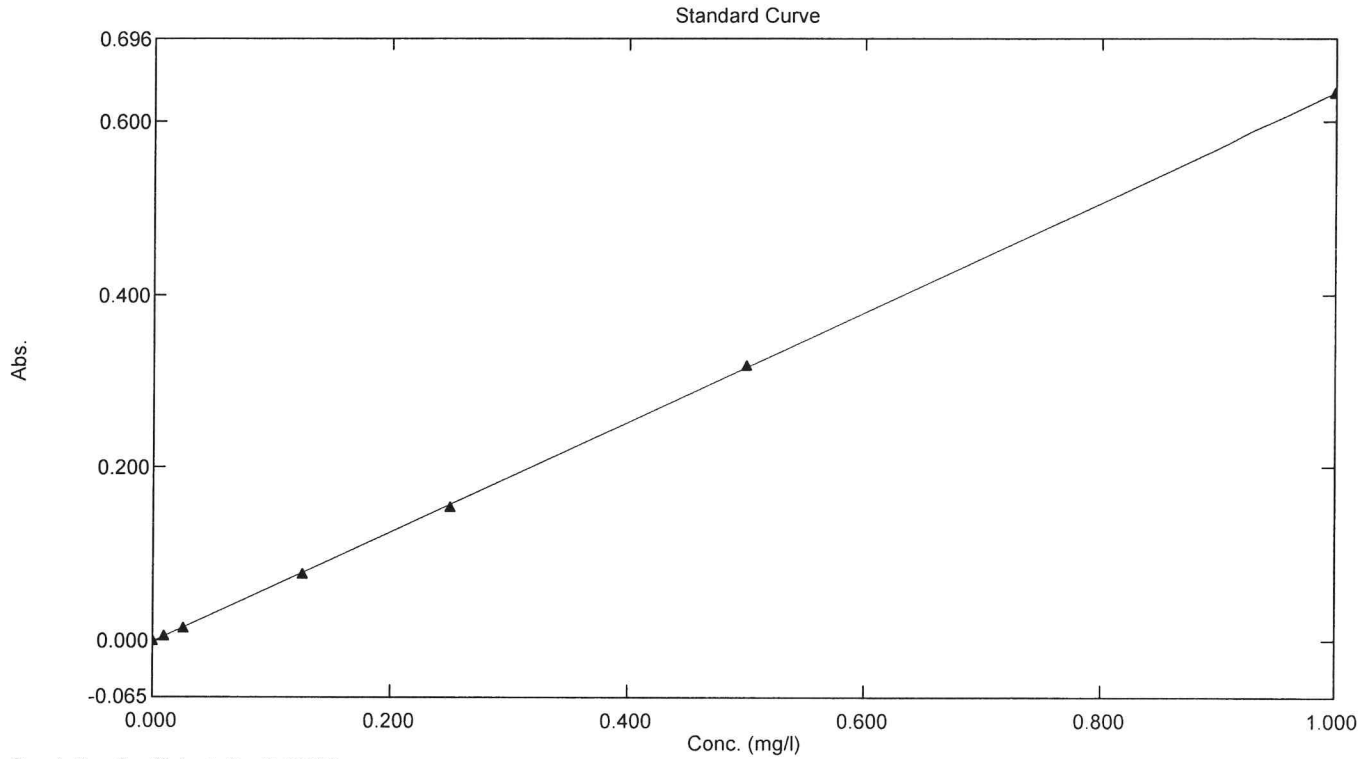
HS20040700 PORTHO WC

ALS WO# HS20040700

Standard Table Report

05/06/2020 11:20:50 AM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\O_PO4_UNKNOWN\2020\04172020_PORTHO.pho..



Correlation Coefficient r2 = 0.99995

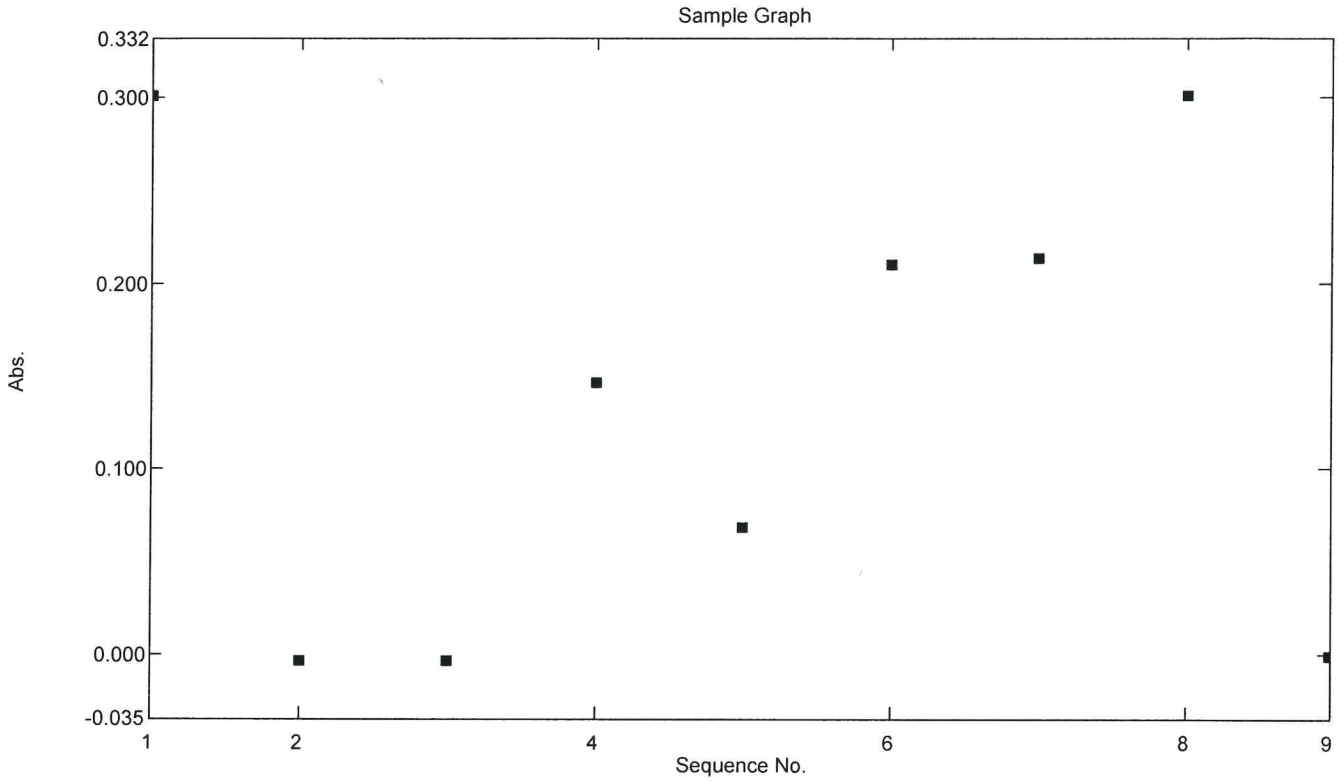
Standard Table

	Sample ID	Type	Ex	Conc	WL880.0	Wgt.Facto	Comments
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2	STD2	Standard		0.010	0.006	1.000	
3	STD3	Standard		0.025	0.013	1.000	
4	STD4	Standard		0.125	0.077	1.000	
5	STD5	Standard		0.250	0.155	1.000	
6	STD6	Standard		0.500	0.319	1.000	
7	STD7	Standard		1.000	0.633	1.000	
8							

Sample Table Report

05/06/2020 11:21:00 AM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\O_PO4_UNKNOWN\2020\04172020_PORTHO.pho..



Sample Table

	Sample ID	Type	Ex	Conc	WL880.0	Comments
1	CCV	Unknown		0.477	0.301	
2	CCB	Unknown		-0.003	-0.003	
3	MBLK	Unknown		-0.004	-0.004	
4	LCS	Unknown		0.233	0.146	
5	20040700.01	Unknown		0.111	0.069	PF:10X
6	20040700.01MS	Unknown		0.333	0.210	PF:10X,01:00PM
7	20040700.01MSD	Unknown		0.338	0.213	PF:10X,01:01PM
8	CCV2	Unknown		0.476	0.301	313101509 WC-14
9	CCB2	Unknown		0.001	-0.001	313101508 WC-14
10						

N17_AMM_WJSE / E350.3

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Logbook **31105**

Ion Selective Electrode Logbook

Analyst: YP			Date: 4/17/20 1:15 PM
Method: SM4500NH3-D/EPA 350.3 or SM4500 NH3 B-F			
Probe Calibration Date: 4/17/20	Cal Std ID: 313103405-10		Probe ID: SRI-15910

Std Level		mV	Conc., mg/L:
STD 1 (mg/L):	0.2	131.0	0.199
STD 2 (mg/L):	1	95.0	1.005
STD 3 (mg/L):	5	53.8	5.007

Sodium Thiosulfate ID:		
Std Level	mV	Conc., mg/L:
STD 4 (mg/L): 10	34.5	10.003
STD 5 (mg/L): 50	-5.8	50.019

LSC / MS Spike ID: 3100601707
ICV Cal STD ID: 313103405
DPD Reagent ID: 3100600909
ICAL Date & Slope: 97.6% / 57.6 mV

WO # / SX #	Bottle #	Initial g or ml	Final Vol. ml	Dilution Factor	Initial Conc. mg/L	Final Conc. mg/L	Chlorine Check (+/–)	Comments
ICV		50ml	50ml		10.016			
CCB					0.011			
MBLK					0.009			
LCS					10.038			
HS2004070 0-01					20.055		-ve	
490-01					0.429		+ve	Rechecked
-02					0.039		-ve	
-02MS					11.149		-ve	
-02MSD					11.176		-ve	
-03					0.033		-ve	
-04					0.032		-ve	
-05					0.036		-ve	
CCV					10.881			
CCB					0.014			
HS2004 0432-01					0.123		-ve	
545-01					0.101		+ve	Rechecked
340-25					0.192		-ve	
341-25					~~1.176~~ (10)	4/17		0.109
CCV					0.225			
CCB					10.954			
					0.026			

Batch ID: 360221 / 360222	Reported By YP	Reviewed By: KL

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Houston, TX 77099
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www.alsglobal.com

WorkOrder: HS20040851

Longhorn GW Treatment Plant Weekly Samples

Bhate Environmental Associates, Inc.

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

13-May-2020

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
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HS20040851

ALS WO# HS20040851

HS20040851 Longhorn GW Treatment Plant Weekly Samples Final

ALS WO# HS20040851

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887

April 30, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20040851**

Laboratory Results for: **Longhorn GW Treatment Plant Weekly Samples**

Dear Marcia,

ALS Environmental received 2 sample(s) on Apr 22, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

ALS Houston, US Date: 30-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20040851

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20040851-01	LH18/24-SP650_042120	Water		21-Apr-2020 14:00	22-Apr-2020 08:30	☐
HS20040851-02	LH18/24-SP650_042120_BIX	Water		21-Apr-2020 14:00	22-Apr-2020 08:30	☐

ALS Houston, US Date: 30-Apr-20

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20040851

Work Order Comments

• Analysis of Perchlorate was performed by ALS Houston TX, High Resolution. Laboratory. Final report attached.

The analysis for TOC was subcontracted to ALS Kelso, WA. Final report attached.

WetChemistry by Method E350.3

Batch ID: R360536

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method E365.3

Batch ID: R360509

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

ALS Houston, US Date: 30-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Sample ID: LH18/24-SP650_042120
Collection Date: 21-Apr-2020 14:00

ANALYTICAL REPORT
WorkOrder:HS20040851
Lab ID:HS20040851-01
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
AMMONIA AS N BY E350.3(ISE)		**Method:E350.3**						Analyst: MZD
Nitrogen, Ammonia (As N)	**4.6**	a	**0.20**	**0.10**	**0.20**	**mg/L**	1	23-Apr-2020 12:09
ORTHO PHOSPHATE (PO4) AS P BY E365.3		**Method:E365.3**						Analyst: MZD
Phosphorus, Total Orthophosphate (As P)	**0.792**	a	**0.0100**	**0.0250**	**0.0250**	**mg/L**	1	22-Apr-2020 08:56
SUBCONTRACT ANALYSIS - TOC ANALYSIS		**Method:NA**						Analyst: SUBK
Subcontract Analysis	See Attached		0	0		NA	1	30-Apr-2020 10:45

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 30-Apr-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder:HS20040851
Sample ID: LH18/24-SP650_042120_BIX
Lab ID:HS20040851-02
Collection Date: 21-Apr-2020 14:00
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	30-Apr-2020 15:22

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 30-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20040851

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R360509 (0)	**Test Name :** ORTHO PHOSPHATE (PO4) AS P BY E365.3				**Matrix:** Water	
HS20040851-01	LH18/24-SP650_042120	21 Apr 2020 14:00			22 Apr 2020 08:56	1
Batch ID: R360536 (0)	**Test Name :** AMMONIA AS N BY E350.3(ISE)				**Matrix:** Water	
HS20040851-01	LH18/24-SP650_042120	21 Apr 2020 14:00			23 Apr 2020 12:09	1
Batch ID: R360818 (0)	**Test Name :** SUBCONTRACT ANALYSIS - TOC ANALYSIS				**Matrix:** Water	
HS20040851-01	LH18/24-SP650_042120	21 Apr 2020 14:00			30 Apr 2020 10:45	1
Batch ID: R360870 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Water	
HS20040851-02	LH18/24-SP650_042120_BIX	21 Apr 2020 14:00			30 Apr 2020 15:22	1

ALS Houston, US Date: 30-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20040851

QC BATCH REPORT

Batch ID: R360509 (0) **Instrument:** UV-2450 **Method:** ORTHO PHOSPHATE (PO4) AS P BY E365.3

MBLK Sample ID: **MBLK-360509** Units: **mg/L** Analysis Date: **22-Apr-2020 08:56**
Client ID: Run ID: **UV-2450_360509** SeqNo: **5564669** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.0250	0.0250								U

LCS Sample ID: **LCS-360509** Units: **mg/L** Analysis Date: **22-Apr-2020 08:56**
Client ID: Run ID: **UV-2450_360509** SeqNo: **5564670** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.267	0.0250	0.25	0	107	85 - 115				

LCSD Sample ID: **LCSD-360509** Units: **mg/L** Analysis Date: **22-Apr-2020 08:56**
Client ID: Run ID: **UV-2450_360509** SeqNo: **5564671** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.264	0.0250	0.25	0	106	85 - 115	0.267	1.13	20	

MS Sample ID: **HS20040774-02MS** Units: **mg/L** Analysis Date: **22-Apr-2020 08:56**
Client ID: Run ID: **UV-2450_360509** SeqNo: **5564672** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.283	0.0250	0.25	0.019	106	80 - 120				

MSD Sample ID: **HS20040774-02MSD** Units: **mg/L** Analysis Date: **22-Apr-2020 08:56**
Client ID: Run ID: **UV-2450_360509** SeqNo: **5564673** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.266	0.0250	0.25	0.019	98.8	80 - 120	0.283	6.19	20	

The following samples were analyzed in this batch: HS20040851-01

ALS Houston, US Date: 30-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20040851

QC BATCH REPORT

Batch ID: R360536 (0) **Instrument: WetChem_HS** **Method: AMMONIA AS N BY E350.3(ISE)**

MBLK Sample ID: **MBLK-360536** Units: **mg/L** Analysis Date: **23-Apr-2020 12:09**
Client ID: Run ID: **WetChem_HS_360536** SeqNo: **5565144** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	0.10	0.20								U

LCS Sample ID: **LCS-360536** Units: **mg/L** Analysis Date: **23-Apr-2020 12:09**
Client ID: Run ID: **WetChem_HS_360536** SeqNo: **5565145** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	10.17	0.20	10	0	102	80 - 120				

MS Sample ID: **HS20040709-01MS** Units: **mg/L** Analysis Date: **23-Apr-2020 12:09**
Client ID: Run ID: **WetChem_HS_360536** SeqNo: **5565147** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	11.48	0.20	10	0.106	114	80 - 120				

MSD Sample ID: **HS20040709-01MSD** Units: **mg/L** Analysis Date: **23-Apr-2020 12:09**
Client ID: Run ID: **WetChem_HS_360536** SeqNo: **5565148** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	11.45	0.20	10	0.106	113	80 - 120	11.48	0.27	20	

The following samples were analyzed in this batch: HS20040851-01

ALS Houston, US Date: 30-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: **HS20040851**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Dept of Defense	ANAB L2231 V009	22-Dec-2021
Florida	E87611-28	30-Jun-2020
Illinois	2000322019-2	09-May-2020
Kansas	E-10352 2019-2020	31-Jul-2020
Louisiana	03087, 2019-2020	30-Jun-2020
Maryland	343, 2019-2020	30-Jun-2020
North Carolina	624-2020	31-Dec-2020
Oklahoma	2019-067	31-Aug-2020

ALS Houston, US Date: 30-Apr-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20040851

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20040851-01	LH18/24-SP650_042120	Login	4/22/2020 10:07:41 AM	PMG	WET230
HS20040851-01	LH18/24-SP650_042120	Login	4/22/2020 10:07:41 AM	PMG	WET230
HS20040851-01	LH18/24-SP650_042120	Login	4/22/2020 10:07:41 AM	PMG	Sub
HS20040851-02	LH18/24-SP650_042120_BIX	Login	4/22/2020 10:07:41 AM	PMG	Sub

ALS Houston, US Date: 30-Apr-20

Sample Receipt Checklist

Client Name: Bhate Environmental
Work Order: HS20040851
Date/Time Received: **22-Apr-2020 08:30**
Received by: **AC**

Checklist completed by: *Paresh M. Giga* eSignature — 22-Apr-2020 Date
Reviewed by: *RJ Modashia* eSignature — 22-Apr-2020 Date

Matrices: **Water**
Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	COC IDs:None
Samplers name present on COC?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☑	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	1.7C U/C	IR25	
Cooler(s)/Kit(s):	44190		
Date/Time sample(s) sent to storage:	4/22/2020 10:15		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes: Times Differ :
COC - 14:00 Labels - 14:30
Logged in per times on COC

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stancliff Rd. Suite 210 Houston, TX. 77099 (281) 530-5656 ATTN: R.J Modashia

Project: BHATE
LONGHORN ARMY AMMN. PLANT (LHAAP)
GROUNDWATER TREATMENT PLANT (GWTP)
KARNACK, TEXAS

Project No. NWO1312.0150.0 16.0001

Job: GROUNDWATER TREATMENT PLANT WEEKLY SAMPLES

Prepared By: Scott Beesinger

P.O. Number

HS20040851
Bhate Environmental Associates, Inc.
Longhorn GW Treatment Plant Weekly Samples

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: AMMONIA-N	TOTAL ORGANIC CARBON	ORTHO-PHOSPHATE	PERCHLORATE							Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP650_042120	Water	04/21/20 / 14:00		3	X	X									H2SO4	
LH18/24-SP650_042120	Water	04/21/20 / 14:00		1			X								NONE	
LH18/24–SP650_042120_BIX	Water	04/21/20 / 14:00		1				X							NONE	

Additional Remarks: **Standard TAT on all parameters**

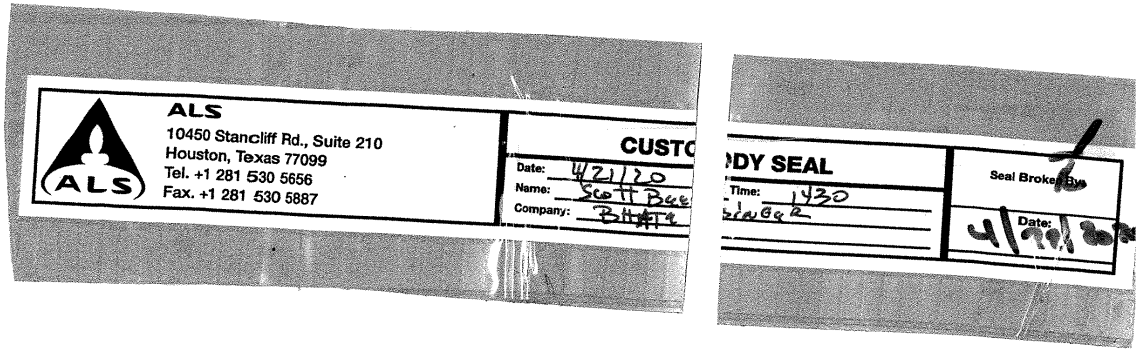
Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	04/21/20	14:30	AC	4/22/2020	08:30						

For Lab Use Only

Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition

Remarks:

(Word) S:\1-ces\Forms\Chain of Custody - BiWeekly



ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

CUSTO
Date: 4/21/20
Name: Scott Bee
Company: Bhate

DY SEAL
Time: 1430
Seal Broke
Date: 4/22/20

ORIGIN ID:SGRA (303) 597-2450
SCOTT BEESINGER
BHATE ENVIRONMENTAL ASSOCIATES
1203-B EAST GRAND AVE.
PMB202
MARSHALL, TX 75670
UNITED STATES US

SHIP DATE: 14APR20
ACTWGT: 1.00 LB MAN
CAD: 300130/CAFE3211
DIMS: 19x16x13 IN

TO CLIENT SERVICES
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON TX 77099
(281) 630-6656

44190.

REF: PERCHLORATE - BO 71424 - RJ
RMA:

FedEx Express

FedEx
TRK# 0221 1251 0296 3847

WED - 22 APR 10:30A
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US IAH

#475872 04/21 56BJ4/7B3A/FE4A

551C4/7B3A/104C

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April 29, 2020

Analytical Report for Service Request No: K2003344

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

RE: HS20040851

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory April 23, 2020
For your reference, these analyses have been assigned our service request number **K2003344.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3350. You may also contact me via email at Kelley.Lovejoy@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

for Kelley Lovejoy
Project Manager

RIGHT SOLUTIONS | RIGHT PARTNER

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Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water-	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Case Narrative

ALS Environmental—Kelso Laboratory
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1317 South 13th Ave, Kelso, WA 98626 | 1-360-577-7222 | www.alsglobal.com

Client: ALS Environmental - US
Project: HS20040851
Sample Matrix: Water

Service Request: K2003344
Date Received: 04/23/2020

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level IV requested by the client.

Sample Receipt:

One water sample was received for analysis at ALS Environmental on 04/23/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The sample was stored at minimum in accordance with the analytical method requirements.

General Chemistry:

No significant anomalies were noted with this analysis.

Approved by Noe D. Diaz Date 04/29/2020

Chain of Custody

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K2003344

10450 Stancliff Rd, Ste 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **13763**

SUBCONTRACT TO:

ALS Environmental Kelso
1317 S. 13th Avenue
Kelso, WA 98626

Phone: +1 360 501 3312

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	
Email:	

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20040851
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20040851-01**	**LH18/24-SP650_042120**	**Water**	**21 Apr 2020 14:00**
	TOC Analysis for DOD Level IV			06 May 2020

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: J. Modashia Date/Time: 4/22/20 18:00

Received By: C Gaines Date/Time: 4/23/2020 1030

Cooler ID(s): Temperature(s):

PC KL

Cooler Receipt and Preservation Form

Client ALS Houston Service Request K20 033444

Received: 4/23/2020 Opened: 4/23/2020 By: CG Unloaded: 4/23/2020 By: CG

1. Samples were received via? *USPS* (*Fed Ex*) *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA (Y) N If yes, how many and where? 2 Front
   If present, were custody seals intact? (Y) N If present, were they signed and dated? (Y) N

Temp Blank	Sample 1	Sample 2	Sample 3	Sample 4	IR GUN	Cooler / COC ID NA	Tracking Number NA	Filed
1.2	~	~	~	~	3980H88W/S	13763	1251 0296 5563	

4. Packing material: *Inserts* (*Baggies*) (*Bubble Wrap*) *Gel Packs* (*Wet Ice*) *Dry Ice* *Sleeves* _____
5. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
6. Were samples received in good condition (temperature, unbroken)? *Indicate in the table below.* NA (Y) N
   If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA (Y) N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA (Y) N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA (Y) N
11. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
12. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: _____

General Chemistry

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	K2003344
Project:	HS20040851	**Date Collected:**	04/21/20
Sample Matrix:	Water	**Date Received:**	04/23/20
Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA

Carbon, Total Organic

Sample Name	Lab Code	Result	LOQ	LOD	MDL	Dil.	Date Analyzed	Q
LH18/24-SP650_042120	K2003344-001	**2.41**	0.50	0.20	0.07	1	04/26/20 08:54	
Method Blank	K2003344-MB	ND U	0.50	0.20	0.07	1	04/26/20 15:58	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project HS20040851
Sample Matrix: Water

Service Request: K2003344
Date Collected: 04/21/20
Date Received: 04/23/20
Date Analyzed: 04/26/20

Replicate Sample Summary
General Chemistry Parameters

Sample Name: LH18/24-SP650_042120
Lab Code: K2003344-001

Units: mg/L
Basis: NA

Analyte Name	Analysis Method	LOQ	LOD	MDL	Sample Result	Duplicate Sample K2003344-001DUP Result	Average	RPD	RPD Limit
Carbon, Total Organic	SM 5310 C	0.50	0.20	0.07	2.41	2.42	2.42	<1	10

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2003344
Project:	HS20040851	**Date Analyzed:**	04/26/20
Sample Matrix:	Water	**Date Extracted:**	NA

Lab Control Sample Summary
Carbon, Total Organic

Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA
		Analysis Lot:	678054

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2003344-LCS	24.8	25.0	99	83-117

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US **Service Request:** K2003344
Project: HS20040851

Continuing Calibration Verification (CCV) Summary

Carbon, Total Organic

Analysis Method: SM 5310 C **Units:** mg/L

	Analysis Lot	Lab Code	Date Analyzed	True Value	Measured Value	Percent Recovery	Acceptance Limits
CCV1	678054	KQ2005604-01	04/26/20 00:45	25.0	24.9	100	90-110
CCV2	678054	KQ2005604-02	04/26/20 09:22	25.0	24.7	99	90-110
CCV3	678054	KQ2005604-03	04/26/20 15:01	25.0	24.7	99	90-110
CCV4	678054	KQ2005604-04	04/26/20 17:24	25.0	24.7	99	90-110

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US **Service Request:**K2003344
Project: HS20040851

Continuing Calibration Blank (CCB) Summary
Carbon, Total Organic

Analysis Method: SM 5310 C **Units:**mg/L

	Analysis Lot	Lab Code	Date Analyzed	LOQ	LOD	MDL	Result	Q
CCB1	678054	KQ2005604-05	04/26/20 00:59	0.50	0.20	0.07	ND	U
CCB2	678054	KQ2005604-06	04/26/20 09:37	0.50	0.20	0.07	ND	U
CCB3	678054	KQ2005604-07	04/26/20 15:15	0.50	0.20	0.07	ND	U
CCB4	678054	KQ2005604-08	04/26/20 17:38	0.50	0.20	0.07	ND	U

Raw Data

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General Chemistry

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Work Request # (Original) K2003360, 3344, 3345, 3384, 3388

Tier: IV IV IV II II

Date Analyzed: 4/25/20

Analyst: BDP

Analysis: TOC/DOC

TOC: 678052, 678054

Run # DOC: 678053

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?	yes/no/NA
2.	Holding times met for all analyses and for all samples?	yes/no/NA
3.	Are calculations correct?	yes/no/NA
4.	Is the reporting basis correct? (Dry Weight)	yes/no/NA
5.	All quality control criteria met?	yes/no
6.	Is the calibration curve correlation coefficient ≥ 0.995?	yes/no/NA
7.	MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	yes/no/NA
8.	Are ICVs, CCVs, and CCBs all within acceptance limits?	yes/no/NA
9.	Are results for methods blanks all ND?	yes/no/NA
10.	Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	yes/no/NA
11.	Are all exceptions explained?	yes/no/NA
12.	Have all applicable service requests been reviewed?	yes/no/NA
13.	Are all samples labeled correctly?	yes/no/NA
14.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample, Form V)	yes/no/NA
15.	Are detection limits and units reported correctly?	yes/no/NA
16.	Is the unused space on the benchsheet crossed out?	yes/no/NA
17.	Was analysis turned in by the due date? (n-2) (If not record SR#)	yes/no/NA

COMMENTS: K2003360-21/21d/21h/21q, 3360-23/23d/23h/23q, 3360-21DOC/21dDOC/21hDOC/21qDOC K2003360-23DOC/23dDOC/23hDOC/23qDOC, 3384-1/1d report a high %RSD. However, these samples are less than 5x the MRL.

Final Approved by: _____ Date: 4/29/20

DQREPORT

Analytical Results Summary

Instrument Name: K-TOC-03 **Analyst:** BDITZLER **Analysis Lot:** 678052 **Method/Testcode:** 9060/TOC T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
K2003360-016	Carbon, Total Organic	N/A		Water	0.57 mg/L	10 mL	0.57 mg/L	1	0.07	0.50			4/25/20 18:56:00	Y	IV
K2003360-019	Carbon, Total Organic	N/A		Water	5.81 mg/L	10 mL	5.81 mg/L	1	0.07	0.50			4/25/20 21:02:00	N	IV
K2003360-021	Carbon, Total Organic	N/A		Water	1.08 mg/L	10 mL	1.08 mg/L	1	0.07	0.50			4/25/20 21:58:00	N	IV
K2003360-022	Carbon, Total Organic	N/A		Water	33.86 mg/L	10 mL	677 mg/L	20	2	10			4/25/20 22:53:00	N	IV
K2003360-023	Carbon, Total Organic	N/A		Water	0.62 mg/L	10 mL	0.62 mg/L	1	0.07	0.50			4/25/20 23:49:00	N	IV
K2003360-024	Carbon, Total Organic	N/A		Water	0.47 mg/L	10 mL	0.47 mg/L J	1	0.07	0.50			4/26/20 07:59:00	N	IV
KQ2005602-01	Carbon, Total Organic	CCV		Water	25.95 mg/L	10 mL	25.9 mg/L	1					4/25/20 16:20:00	N	IV
KQ2005602-02	Carbon, Total Organic	CCV		Water	24.88 mg/L	10 mL	24.9 mg/L	1					4/26/20 00:45:00	N	IV
KQ2005602-03	Carbon, Total Organic	CCV		Water	24.69 mg/L	10 mL	24.7 mg/L	1					4/26/20 09:22:00	N	IV
KQ2005602-04	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			4/25/20 16:35:00	N	IV
KQ2005602-05	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			4/26/20 00:59:00	N	IV
KQ2005602-06	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			4/26/20 09:37:00	N	IV
KQ2005602-07	Carbon, Total Organic	MB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			4/25/20 16:50:00	N	IV
KQ2005602-08	Carbon, Total Organic	MB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			4/25/20 16:50:00	N	IV
KQ2005602-09	Carbon, Total Organic	MB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			4/25/20 16:50:00	N	IV
KQ2005602-10	Carbon, Total Organic	MB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			4/25/20 16:50:00	N	IV
KQ2005602-11	Carbon, Total Organic	LCS		Water	25.04 mg/L	10 mL	25.0 mg/L	1	0.07	0.50	100		4/25/20 17:46:00	N	IV
KQ2005602-12	Carbon, Total Organic	LCS		Water	24.91 mg/L	10 mL	24.9 mg/L	1	0.07	0.50	100		4/25/20 17:46:00	N	IV
KQ2005602-13	Carbon, Total Organic	LCS		Water	24.66 mg/L	10 mL	24.7 mg/L	1	0.07	0.50	99		4/25/20 17:46:00	N	IV
KQ2005602-14	Carbon, Total Organic	LCS		Water	25.04 mg/L	10 mL	25.0 mg/L	1	0.07	0.50	100		4/25/20 17:46:00	N	IV
KQ2005602-15	Carbon, Total Organic	MS	K2003360-016	Water	27.85 mg/L	10 mL	27.9 mg/L	1	0.07	0.50	109		4/25/20 19:52:00	N	IV
KQ2005602-16	Carbon, Total Organic	MS	K2003360-016	Water	27.85 mg/L	10 mL	27.9 mg/L	1	0.07	0.50	109		4/25/20 19:52:00	N	IV
KQ2005602-17	Carbon, Total Organic	MS	K2003360-016	Water	27.96 mg/L	10 mL	28.0 mg/L	1	0.07	0.50	110		4/25/20 19:52:00	N	IV
KQ2005602-18	Carbon, Total Organic	MS	K2003360-016	Water	27.56 mg/L	10 mL	27.6 mg/L	1	0.07	0.50	108		4/25/20 19:52:00	N	IV
KQ2005602-19	Carbon, Total Organic	DUP	K2003360-016	Water	0.57 mg/L	10 mL	0.57 mg/L	1	0.07	0.50		<1	4/25/20 18:56:00	N	IV
KQ2005602-20	Carbon, Total Organic	TRP	K2003360-016	Water	0.59 mg/L	10 mL	0.59 mg/L	1	0.07	0.50		2	4/25/20 18:56:00	N	IV
KQ2005602-21	Carbon, Total Organic	QUAD	K2003360-016	Water	0.55 mg/L	10 mL	0.55 mg/L	1	0.07	0.50		3	4/25/20 18:56:00	N	IV
KQ2005602-22	Carbon, Total Organic	DUP	K2003360-019	Water	5.93 mg/L	10 mL	5.93 mg/L	1	0.07	0.50		2	4/25/20 21:02:00	N	IV
KQ2005602-23	Carbon, Total Organic	TRP	K2003360-019	Water	5.99 mg/L	10 mL	5.99 mg/L	1	0.07	0.50		2	4/25/20 21:02:00	N	IV
KQ2005602-24	Carbon, Total Organic	QUAD	K2003360-019	Water	6.13 mg/L	10 mL	6.13 mg/L	1	0.07	0.50		2	4/25/20 21:02:00	N	IV
KQ2005602-25	Carbon, Total Organic	DUP	K2003360-021	Water	0.70 mg/L	10 mL	0.70 mg/L	1	0.07	0.50		43*	4/25/20 21:58:00	N	IV
KQ2005602-26	Carbon, Total Organic	TRP	K2003360-021	Water	0.61 mg/L	10 mL	0.61 mg/L	1	0.07	0.50		31*	4/25/20 21:58:00	N	IV
KQ2005602-27	Carbon, Total Organic	QUAD	K2003360-021	Water	0.60 mg/L	10 mL	0.60 mg/L	1	0.07	0.50		30*	4/25/20 21:58:00	N	IV
KQ2005602-28	Carbon, Total Organic	DUP	K2003360-022	Water	33.21 mg/L	10 mL	664 mg/L	20	2	10		2	4/25/20 22:53:00	N	IV
KQ2005602-29	Carbon, Total Organic	TRP	K2003360-022	Water	33.29 mg/L	10 mL	666 mg/L	20	2	10		1	4/25/20 22:53:00	N	IV
KQ2005602-30	Carbon, Total Organic	QUAD	K2003360-022	Water	33.46 mg/L	10 mL	669 mg/L	20	2	10		<1	4/25/20 22:53:00	N	IV

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-TOC-03 **Analyst:** BDITZLER **Analysis Lot:** 678052 **Method/Testcode:** 9060/TOC T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
KQ2005602-31	Carbon, Total Organic	DUP	K2003360-023	Water	0.47 mg/L	10 mL	0.47 mg/L J	1	0.07	0.50		28*	4/25/20 23:49:00	N	IV
KQ2005602-32	Carbon, Total Organic	TRP	K2003360-023	Water	0.37 mg/L	10 mL	0.37 mg/L J	1	0.07	0.50		26*	4/25/20 23:49:00	N	IV
KQ2005602-33	Carbon, Total Organic	QUAD	K2003360-023	Water	0.36 mg/L	10 mL	0.36 mg/L J	1	0.07	0.50		27*	4/25/20 23:49:00	N	IV
KQ2005602-34	Carbon, Total Organic	DUP	K2003360-024	Water	0.43 mg/L	10 mL	0.43 mg/L J	1	0.07	0.50		10	4/26/20 07:59:00	N	IV
KQ2005602-35	Carbon, Total Organic	TRP	K2003360-024	Water	0.43 mg/L	10 mL	0.43 mg/L J	1	0.07	0.50		6	4/26/20 07:59:00	N	IV
KQ2005602-36	Carbon, Total Organic	QUAD	K2003360-024	Water	0.45 mg/L	10 mL	0.45 mg/L J	1	0.07	0.50		5	4/26/20 07:59:00	N	IV

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-TOC-03 **Analyst:** BDITZLER **Analysis Lot:** 678053 **Method/Testcode:** 9060/TOC D

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
K2003360-016	Carbon, Dissolved Organic (DOC)	N/A		Water	0.48 mg/L	10 mL	0.48 mg/L J	1	0.07	0.50			4/26/20 01:14:00	Y	IV
K2003360-019	Carbon, Dissolved Organic (DOC)	N/A		Water	4.75 mg/L	10 mL	4.75 mg/L	1	0.07	0.50			4/26/20 03:21:00	N	IV
K2003360-021	Carbon, Dissolved Organic (DOC)	N/A		Water	0.86 mg/L	10 mL	0.86 mg/L	1	0.07	0.50			4/26/20 04:16:00	N	IV
K2003360-022	Carbon, Dissolved Organic (DOC)	N/A		Water	33.39 mg/L	10 mL	668 mg/L	20	2	10			4/26/20 05:12:00	N	IV
K2003360-023	Carbon, Dissolved Organic (DOC)	N/A		Water	0.57 mg/L	10 mL	0.57 mg/L	1	0.07	0.50			4/26/20 06:08:00	N	IV
K2003360-024	Carbon, Dissolved Organic (DOC)	N/A		Water	0.51 mg/L	10 mL	0.51 mg/L	1	0.07	0.50			4/26/20 07:03:00	N	IV
KQ2005603-01	Carbon, Dissolved Organic (DOC)	CCV		Water	24.88 mg/L	10 mL	24.9 mg/L	1					4/26/20 00:45:00	N	IV
KQ2005603-02	Carbon, Dissolved Organic (DOC)	CCV		Water	24.69 mg/L	10 mL	24.7 mg/L	1					4/26/20 09:22:00	N	IV
KQ2005603-03	Carbon, Dissolved Organic (DOC)	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			4/26/20 00:59:00	N	IV
KQ2005603-04	Carbon, Dissolved Organic (DOC)	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			4/26/20 09:37:00	N	IV
KQ2005603-05	Carbon, Dissolved Organic (DOC)	MB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			4/26/20 09:52:00	N	IV
KQ2005603-06	Carbon, Dissolved Organic (DOC)	MB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			4/26/20 09:52:00	N	IV
KQ2005603-07	Carbon, Dissolved Organic (DOC)	MB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			4/26/20 09:52:00	N	IV
KQ2005603-08	Carbon, Dissolved Organic (DOC)	MB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			4/26/20 09:52:00	N	IV
KQ2005603-09	Carbon, Dissolved Organic (DOC)	LCS		Water	23.93 mg/L	10 mL	23.9 mg/L	1	0.07	0.50	96		4/26/20 10:48:00	N	IV
KQ2005603-10	Carbon, Dissolved Organic (DOC)	LCS		Water	24.18 mg/L	10 mL	24.2 mg/L	1	0.07	0.50	97		4/26/20 10:48:00	N	IV
KQ2005603-11	Carbon, Dissolved Organic (DOC)	LCS		Water	24.09 mg/L	10 mL	24.1 mg/L	1	0.07	0.50	96		4/26/20 10:48:00	N	IV
KQ2005603-12	Carbon, Dissolved Organic (DOC)	LCS		Water	24.08 mg/L	10 mL	24.1 mg/L	1	0.07	0.50	96		4/26/20 10:48:00	N	IV
KQ2005603-13	Carbon, Dissolved Organic (DOC)	MS	K2003360-016	Water	27.59 mg/L	10 mL	27.6 mg/L	1	0.07	0.50	108		4/26/20 02:10:00	N	IV
KQ2005603-14	Carbon, Dissolved Organic (DOC)	MS	K2003360-016	Water	27.41 mg/L	10 mL	27.4 mg/L	1	0.07	0.50	108		4/26/20 02:10:00	N	IV
KQ2005603-15	Carbon, Dissolved Organic (DOC)	MS	K2003360-016	Water	27.25 mg/L	10 mL	27.2 mg/L	1	0.07	0.50	107		4/26/20 02:10:00	N	IV
KQ2005603-16	Carbon, Dissolved Organic (DOC)	MS	K2003360-016	Water	27.76 mg/L	10 mL	27.8 mg/L	1	0.07	0.50	109		4/26/20 02:10:00	N	IV
KQ2005603-17	Carbon, Dissolved Organic (DOC)	DUP	K2003360-016	Water	0.51 mg/L	10 mL	0.51 mg/L	1	0.07	0.50		5	4/26/20 01:14:00	N	IV

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-TOC-03 **Analyst:** BDITZLER **Analysis Lot:** 678053 **Method/Testcode:** 9060/TOC D

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
KQ2005603-18	Carbon, Dissolved Organic (DOC)	TRP	K2003360-016	Water	0.49 mg/L	10 mL	0.49 mg/L J	1	0.07	0.50		3	4/26/20 01:14:00	N	IV
KQ2005603-19	Carbon, Dissolved Organic (DOC)	QUAD	K2003360-016	Water	0.48 mg/L	10 mL	0.48 mg/L J	1	0.07	0.50		3	4/26/20 01:14:00	N	IV
KQ2005603-20	Carbon, Dissolved Organic (DOC)	DUP	K2003360-019	Water	4.96 mg/L	10 mL	4.96 mg/L	1	0.07	0.50		4	4/26/20 03:21:00	N	IV
KQ2005603-21	Carbon, Dissolved Organic (DOC)	TRP	K2003360-019	Water	5.03 mg/L	10 mL	5.03 mg/L	1	0.07	0.50		3	4/26/20 03:21:00	N	IV
KQ2005603-22	Carbon, Dissolved Organic (DOC)	QUAD	K2003360-019	Water	5.18 mg/L	10 mL	5.18 mg/L	1	0.07	0.50		4	4/26/20 03:21:00	N	IV
KQ2005603-23	Carbon, Dissolved Organic (DOC)	DUP	K2003360-021	Water	0.61 mg/L	10 mL	0.61 mg/L	1	0.07	0.50		34*	4/26/20 04:16:00	N	IV
KQ2005603-24	Carbon, Dissolved Organic (DOC)	TRP	K2003360-021	Water	0.54 mg/L	10 mL	0.54 mg/L	1	0.07	0.50		25*	4/26/20 04:16:00	N	IV
KQ2005603-25	Carbon, Dissolved Organic (DOC)	QUAD	K2003360-021	Water	0.51 mg/L	10 mL	0.51 mg/L	1	0.07	0.50		25*	4/26/20 04:16:00	N	IV
KQ2005603-26	Carbon, Dissolved Organic (DOC)	DUP	K2003360-022	Water	33.04 mg/L	10 mL	661 mg/L	20	2	10		1	4/26/20 05:12:00	N	IV
KQ2005603-27	Carbon, Dissolved Organic (DOC)	TRP	K2003360-022	Water	33.03 mg/L	10 mL	661 mg/L	20	2	10		<1	4/26/20 05:12:00	N	IV
KQ2005603-28	Carbon, Dissolved Organic (DOC)	QUAD	K2003360-022	Water	33.42 mg/L	10 mL	668 mg/L	20	2	10		<1	4/26/20 05:12:00	N	IV
KQ2005603-29	Carbon, Dissolved Organic (DOC)	DUP	K2003360-023	Water	0.38 mg/L	10 mL	0.38 mg/L J	1	0.07	0.50		41*	4/26/20 06:08:00	N	IV
KQ2005603-30	Carbon, Dissolved Organic (DOC)	TRP	K2003360-023	Water	0.32 mg/L	10 mL	0.32 mg/L J	1	0.07	0.50		31*	4/26/20 06:08:00	N	IV
KQ2005603-31	Carbon, Dissolved Organic (DOC)	QUAD	K2003360-023	Water	0.29 mg/L	10 mL	0.29 mg/L J	1	0.07	0.50		32*	4/26/20 06:08:00	N	IV
KQ2005603-32	Carbon, Dissolved Organic (DOC)	DUP	K2003360-024	Water	0.47 mg/L	10 mL	0.47 mg/L J	1	0.07	0.50		8	4/26/20 07:03:00	N	IV
KQ2005603-33	Carbon, Dissolved Organic (DOC)	TRP	K2003360-024	Water	0.49 mg/L	10 mL	0.49 mg/L J	1	0.07	0.50		4	4/26/20 07:03:00	N	IV
KQ2005603-34	Carbon, Dissolved Organic (DOC)	QUAD	K2003360-024	Water	0.47 mg/L	10 mL	0.47 mg/L J	1	0.07	0.50		4	4/26/20 07:03:00	N	IV

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-TOC-03 **Analyst:** BDITZLER **Analysis Lot:** 678054 **Method/Testcode:** SM 5310 C/TOC T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
K2003344-001	Carbon, Total Organic	N/A		Water	2.41 mg/L	10 mL	2.41 mg/L	1	0.07	0.50			4/26/20 08:54:00	N	IV
K2003345-001	Carbon, Total Organic	N/A		Water	3.12 mg/L	10 mL	3.12 mg/L	1	0.07	0.50			4/26/20 16:27:00	N	IV
K2003384-001	Carbon, Total Organic	N/A		Water	1.50 mg/L	10 mL	1.50 mg/L	1	0.07	0.50			4/26/20 11:43:00	N	II
K2003384-002	Carbon, Total Organic	N/A		Water	1.52 mg/L	10 mL	1.52 mg/L	1	0.07	0.50			4/26/20 12:11:00	Y	II
K2003384-003	Carbon, Total Organic	N/A		Water	1.31 mg/L	10 mL	1.31 mg/L	1	0.07	0.50			4/26/20 13:09:00	N	II
K2003384-004	Carbon, Total Organic	N/A		Water	1.38 mg/L	10 mL	1.38 mg/L	1	0.07	0.50			4/26/20 13:37:00	N	II
K2003384-005	Carbon, Total Organic	N/A		Water	1.28 mg/L	10 mL	1.28 mg/L	1	0.07	0.50			4/26/20 14:05:00	N	II
K2003384-006	Carbon, Total Organic	N/A		Water	1.56 mg/L	10 mL	1.56 mg/L	1	0.07	0.50			4/26/20 14:33:00	N	II
K2003384-007	Carbon, Total Organic	N/A		Water	1.27 mg/L	10 mL	1.27 mg/L	1	0.07	0.50			4/26/20 15:30:00	N	II
K2003388-001	Carbon, Total Organic	N/A		Water	1.09 mg/L	10 mL	1.09 mg/L	1	0.07	0.50			4/26/20 16:56:00	N	II
KQ2005604-01	Carbon, Total Organic	CCV		Water	24.88 mg/L	10 mL	24.9 mg/L	1					4/26/20 00:45:00	N	IV
KQ2005604-02	Carbon, Total Organic	CCV		Water	24.69 mg/L	10 mL	24.7 mg/L	1					4/26/20 09:22:00	N	IV
KQ2005604-03	Carbon, Total Organic	CCV		Water	24.71 mg/L	10 mL	24.7 mg/L	1					4/26/20 15:01:00	N	IV
KQ2005604-04	Carbon, Total Organic	CCV		Water	24.70 mg/L	10 mL	24.7 mg/L	1					4/26/20 17:24:00	N	IV
KQ2005604-05	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			4/26/20 00:59:00	N	IV
KQ2005604-06	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			4/26/20 09:37:00	N	IV
KQ2005604-07	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			4/26/20 15:15:00	N	IV
KQ2005604-08	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			4/26/20 17:38:00	N	IV
KQ2005604-09	Carbon, Total Organic	MB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			4/26/20 15:58:00	N	IV
KQ2005604-10	Carbon, Total Organic	LCS		Water	24.80 mg/L	10 mL	24.8 mg/L	1	0.07	0.50	99		4/26/20 16:13:00	N	IV
KQ2005604-11	Carbon, Total Organic	MS	K2003384-002	Water	28.99 mg/L	10 mL	29.0 mg/L	1	0.07	0.50	110		4/26/20 12:39:00	N	II
KQ2005604-12	Carbon, Total Organic	DUP	K2003344-001	Water	2.42 mg/L	10 mL	2.42 mg/L	1	0.07	0.50		<1	4/26/20 08:54:00	N	IV
KQ2005604-13	Carbon, Total Organic	DUP	K2003345-001	Water	2.99 mg/L	10 mL	2.99 mg/L	1	0.07	0.50		4	4/26/20 16:27:00	N	IV
KQ2005604-14	Carbon, Total Organic	DUP	K2003384-007	Water	1.24 mg/L	10 mL	1.24 mg/L	1	0.07	0.50		2	4/26/20 15:30:00	N	II
KQ2005604-15	Carbon, Total Organic	DUP	K2003384-001	Water	1.35 mg/L	10 mL	1.35 mg/L	1	0.07	0.50		11*	4/26/20 11:43:00	N	II
KQ2005604-16	Carbon, Total Organic	DUP	K2003384-002	Water	1.48 mg/L	10 mL	1.48 mg/L	1	0.07	0.50		3	4/26/20 12:11:00	N	II
KQ2005604-17	Carbon, Total Organic	DUP	K2003384-003	Water	1.30 mg/L	10 mL	1.30 mg/L	1	0.07	0.50		<1	4/26/20 13:09:00	N	II
KQ2005604-18	Carbon, Total Organic	DUP	K2003384-004	Water	1.33 mg/L	10 mL	1.33 mg/L	1	0.07	0.50		4	4/26/20 13:37:00	N	II
KQ2005604-19	Carbon, Total Organic	DUP	K2003384-005	Water	1.30 mg/L	10 mL	1.30 mg/L	1	0.07	0.50		1	4/26/20 14:05:00	N	II
KQ2005604-20	Carbon, Total Organic	DUP	K2003384-006	Water	1.51 mg/L	10 mL	1.51 mg/L	1	0.07	0.50		4	4/26/20 14:33:00	N	II
KQ2005604-21	Carbon, Total Organic	DUP	K2003388-001	Water	1.08 mg/L	10 mL	1.08 mg/L	1	0.07	0.50		<1	4/26/20 16:56:00	N	II

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

TOC: 678052, 678054
DOC: 678053

Schedule: 04252020

Version: 3
Instrument: Fusion1
Last Saved by: Fusion1 (Fusion1)
Last Saved on: 2020/04/25 20:02 - Saturday

Position	Sample Type	Sample ID	Method ID (Calibration ID)	Reps	Use	State
(Clean)	Clean	Clean		1	True	Ready
(Clean)	Clean	Clean		1	True	Ready
(Clean)	Clean	Clean		1	True	Ready
(Blank)	Blank	Reagent/Acid Blank		1	True	Ready
D	Sample	RB	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
1	Sample	MB1	CAS_salt_010711 (CAS_salt_010711)	4	True	Ready
C	Check Standard	[TOC] LCS [24.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	4	True	Ready
2	Sample	ICS	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
3	Sample	K2003360-016.10	CAS_salt_010711 (CAS_salt_010711)	4	True	Ready
4	Sample	K2003360-016.10 ms	CAS_salt_010711 (CAS_salt_010711)	4	True	Ready
5	Sample	RB	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
6	Sample	K2003360-019.10	CAS_salt_010711 (CAS_salt_010711)	4	True	Ready
7	Sample	K2003360-021.10	CAS_salt_010711 (CAS_salt_010711)	4	True	Ready
8	Sample	K2003360-022.10 20x	CAS_salt_010711 (CAS_salt_010711)	4	True	Ready
9	Sample	K2003360-023.10	CAS_salt_010711 (CAS_salt_010711)	4	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
10	Sample	K2003360-016.09 doc	CAS_salt_010711 (CAS_salt_010711)	4	True	Ready
11	Sample	K2003360-016.09 ms doc	CAS_salt_010711 (CAS_salt_010711)	4	True	Ready
12	Sample	RB	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
13	Sample	K2003360-019.09 doc	CAS_salt_010711 (CAS_salt_010711)	4	True	Ready
14	Sample	K2003360-021.09 doc	CAS_salt_010711 (CAS_salt_010711)	4	True	Ready
15	Sample	K2003360-022.09 20x doc	CAS_salt_010711 (CAS_salt_010711)	4	True	Ready
16	Sample	K2003360-023.09 doc	CAS_salt_010711 (CAS_salt_010711)	4	True	Ready
17	Sample	K2003360-024.09 doc	CAS_salt_010711 (CAS_salt_010711)	4	True	Ready
18	Sample	K2003360-024.10	CAS_salt_010711 (CAS_salt_010711)	4	True	Ready
19	Sample	K2003344-001.01	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
20	Sample	MB2	CAS_salt_010711 (CAS_salt_010711)	4	True	Ready
C	Check Standard	[TOC] LCS [24.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	4	True	Ready
21	Sample	K2003384-001.06	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
22	Sample	K2003384-002.06	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
23	Sample	K2003384-002.06 ms	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
24	Sample	RB	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
25	Sample	K2003384-003.06	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
26	Sample	K2003384-004.06	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
27	Sample	K2003384-005.06	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
28	Sample	K2003384-006.06	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
29	Sample	K2003384-007.06	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
30	Sample	MB3	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
C	Check Standard	[TOC] LCS [25.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
35	Sample	K2003345-001.01	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
36	Sample	K2003388-001.01	CAS_salt_010711 (CAS_salt_010711)	2	True	Ready
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True	Ready
					False	

Fusion Report - 04252020
Saturday, April 25, 2020 01:31 PM

(View - Reps, Unused Reps, Meta-Data, Signature, History)
Printed on 2020/04/28 09:20 - Tuesday

Report Summary Information

Company Location:	Gen Chem Lab		
Schedule Name:	04252020	Engine Version:	1.1.5.1
Instrument Name:	Fusion1	Firmware Version:	1.2.0696
Report Version:	1 of 1	Connection:	RS232 COM1
Report Creation by Operators (schedule version):	Fusion1 (Fusion1) (v2) Fusion1 (Fusion1) (v3)		
Comment:			

Report Results

Sample Type: Clean — From Schedule Version 2

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/04/25 13:31

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	16.08	20.68	4.60	49.89	08:01
2	TC Clean	11.76	15.96	4.20	49.65	07:17
3	TC Clean	3.20	7.29	4.08	49.65	07:00
4	TC Clean	2.46	6.46	4.00	49.65	07:02

Sample Type: Clean — From Schedule Version 2

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/04/25 14:06

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	1.18	5.25	4.07	49.87	08:00
2	TC Clean	5.86	9.90	4.05	49.62	07:19
3	TC Clean	1.96	6.12	4.16	49.64	07:02
4	TC Clean	1.73	5.57	3.84	49.64	07:02

Sample Type: Clean

From Schedule Version 2

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/04/25 14:40

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	0.97	4.88	3.91	49.83	08:00
2	TC Clean	5.05	8.90	3.85	49.60	07:15
3	TC Clean	2.10	5.91	3.81	49.66	07:01
4	TC Clean	1.80	5.62	3.83	49.67	07:03

Sample Type: Blank (Creating v1377)

From Schedule Version 2

	Pos	Analysis Type	Sample ID	Start Time
◆	(blank)		Reagent/Acid Blank	2020/04/25 15:14

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	1.09	4.83	3.74	49.80	07:57
2	TC Clean	5.09	9.10	4.01	49.59	07:17
3	TC Clean	2.15	6.16	4.01	49.64	07:04
4	TC Clean	2.07	5.96	3.90	49.63	07:01
5	Reagent Blank	5.61	9.55	3.94	49.58	08:11
6	Acid Blank	1.18	5.13	3.95	49.75	08:01

Sample Type: Sample

From Schedule Version 2

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	D	TOC	RB	0.2482 ppm	0.0000 ppm	0.0000%	2020/04/25 16:05

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.2482	2.4819	9.08	12.74	3.66	49.63	10:31

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

Sample Type: Check Standard --> CCV 25 ppm

From Schedule Version 2

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	25.9487 ppm (PASS)	0.0000 ppm	0%	2020/04/25 16:20

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.9487	259.4872	182.32	186.34	4.02	49.65	10:34

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	50 ppmC

Sample Type: Check Standard --> CCB — From Schedule Version 2

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/04/25 16:35

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	7.74	11.55	3.81	49.64	10:31

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	0 ppmC

Sample Type: Sample — From Schedule Version 2

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	1	TOC	MB1	0.0000 ppm	0.0000 ppm	0.0000%	2020/04/25 16:50

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	6.80	10.67	3.87	49.68	10:30
2	TOC	0.0000	0.0000	6.73	10.68	3.95	49.63	10:29
3	TOC	0.0000	0.0000	6.67	10.55	3.88	49.64	10:28
4	TOC	0.0000	0.0000	6.52	10.49	3.97	49.59	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

Sample Type: Check Standard --> LCS — From Schedule Version 2

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	C	TOC	25.0000	1:1	[TOC] LCS [24.0 ppm]	0 / infinity (NA / NA)	24.9130 ppm	0.1765 ppm	0.71%	2020/04/25 17:46

							(PASS)			

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	25.0430	250.4299	176.23	180.02	3.79	49.59	10:27
C	TOC	25.0 ppm	2	24.9089	249.0887	175.33	179.27	3.94	49.61	10:30
C	TOC	25.0 ppm	3	24.6648	246.6485	173.69	177.69	4.00	49.60	10:26
C	TOC	25.0 ppm	4	25.0351	250.3511	176.18	180.13	3.95	49.62	10:27

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	25 ppmC

Sample Type: Sample

From Schedule Version 2

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	2	TOC	ICS	0.3286 ppm	0.0000 ppm	0.0000%	2020/04/25 18:42

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.3286	3.2863	9.62	13.55	3.93	49.64	10:31

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	3	TOC	K2003360-016.10	0.5670 ppm	0.0157 ppm	2.7600%	2020/04/25 18:56

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.5661	5.6611	11.22	15.17	3.95	49.64	10:28
2	TOC	0.5701	5.7012	11.24	15.12	3.87	49.63	10:30
3	TOC	0.5850	5.8499	11.34	15.14	3.80	49.64	10:29
4	TOC	0.5469	5.4692	11.09	15.00	3.92	49.68	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	4	TOC	K2003360-016.10 ms	27.8067 ppm	0.1740 ppm	0.6300%	2020/04/25 19:52

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	27.5573	275.5730	192.73	196.58	3.85	49.69	10:28
2	TOC	27.9625	279.6250	195.46	199.30	3.84	49.72	10:28
3	TOC	27.8535	278.5351	194.72	198.73	4.01	49.73	10:26
4	TOC	27.8537	278.5365	194.73	198.87	4.14	49.76	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC)	CAS_salt_010711	CAS_salt_010711

(v1377) (v4) (v32)

Sample Type: Sample

From Schedule Version 3

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	5	TOC	RB	0.0000 ppm	0.0000 ppm	0.0000%	2020/04/25 20:47

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	7.24	11.19	3.96	49.80	10:33

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	6	TOC	K2003360-019.10	5.9654 ppm	0.1342 ppm	2.2500%	2020/04/25 21:02

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	5.8106	58.1059	46.49	50.41	3.92	49.80	10:28
2	TOC	5.9316	59.3163	47.30	51.22	3.92	49.83	10:28
3	TOC	5.9850	59.8501	47.66	51.66	4.00	49.85	10:25
4	TOC	6.1343	61.3431	48.66	52.53	3.87	49.87	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	7	TOC	K2003360-021.10	0.7482 ppm	0.2263 ppm	30.2500%	2020/04/25 21:58

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.0813	10.8135	14.68	18.55	3.86	49.91	10:31
2	TOC	0.6980	6.9800	12.10	16.14	4.04	49.93	10:28
3	TOC	0.6126	6.1265	11.53	15.54	4.01	49.96	10:26
4	TOC	0.6006	6.0060	11.45	15.33	3.89	49.99	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	8	TOC	K2003360-022.10 20x	33.4542 ppm	0.2906 ppm	0.8700%	2020/04/25 22:53

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	33.8590	338.5903	235.11	239.05	3.94	49.96	10:27
2	TOC	33.2067	332.0669	230.72	234.65	3.93	50.00	10:24
3	TOC	33.2867	332.8669	231.26	235.26	4.00	50.00	10:29
4	TOC	33.4644	334.6438	232.46	236.56	4.10	50.01	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	9	TOC	K2003360-023.10	0.4520 ppm	0.1210 ppm	26.7800%	2020/04/25 23:49

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.6180	6.1800	11.57	15.43	3.87	49.96	10:28
2	TOC	0.4656	4.6558	10.54	14.35	3.81	49.99	10:30
3	TOC	0.3683	3.6834	9.89	13.97	4.09	49.98	10:30
4	TOC	0.3560	3.5599	9.80	13.81	4.01	49.97	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 3

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	24.8751 ppm (PASS)	0.0000 ppm	0%	2020/04/26 00:45

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	24.8751	248.7511	175.10	179.08	3.98	49.96	10:35

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 3

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/04/26 00:59

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	6.78	10.67	3.88	49.96	10:31

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	0 ppmC

Sample Type: Sample From Schedule Version 3

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	10	TOC	K2003360-016.09 doc	0.4906 ppm	0.0136 ppm	2.7700%	2020/04/26 01:14

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.4836	4.8358	10.66	14.49	3.83	49.97	10:28
2	TOC	0.5083	5.0826	10.83	14.87	4.04	49.96	10:27
3	TOC	0.4934	4.9339	10.73	14.69	3.96	49.95	10:29
4	TOC	0.4770	4.7703	10.62	14.53	3.91	49.95	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	11	TOC	K2003360-016.09 ms doc	27.5036 ppm	0.2214 ppm	0.8000%	2020/04/26 02:10

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	27.7594	277.5938	194.09	198.00	3.91	49.90	10:30
2	TOC	27.2487	272.4874	190.66	194.58	3.92	49.91	10:28
3	TOC	27.4119	274.1187	191.75	195.76	4.01	49.87	10:29
4	TOC	27.5943	275.9432	192.98	196.94	3.96	49.91	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	12	TOC	RB	0.0000 ppm	0.0000 ppm	0.0000%	2020/04/26 03:06

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	6.84	10.70	3.86	49.87	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	13	TOC	K2003360-019.09 doc	4.9782 ppm	0.1798 ppm	3.6100%	2020/04/26 03:21

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	4.7458	47.4575	39.33	43.21	3.88	49.88	10:27
2	TOC	4.9593	49.5928	40.76	44.68	3.92	49.88	10:25
3	TOC	5.0298	50.2977	41.24	45.19	3.95	49.88	10:29
4	TOC	5.1780	51.7802	42.23	46.20	3.97	49.89	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	14	TOC	K2003360-021.09 doc	0.6314 ppm	0.1590 ppm	25.1800%	2020/04/26 04:16

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.8620	8.6202	13.21	17.11	3.90	49.90	10:28
2	TOC	0.6088	6.0878	11.50	15.44	3.94	49.90	10:30
3	TOC	0.5425	5.4246	11.06	14.99	3.93	49.95	10:24
4	TOC	0.5123	5.1228	10.86	14.76	3.90	49.90	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	15	TOC	K2003360-022.09 20x doc	33.2197 ppm	0.2141 ppm	0.6400%	2020/04/26 05:12

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	33.3918	333.9182	231.97	235.78	3.81	49.92	10:28
2	TOC	33.0393	330.3925	229.60	233.62	4.02	49.95	10:27
3	TOC	33.0297	330.2974	229.53	233.48	3.95	49.96	10:24
4	TOC	33.4178	334.1784	232.14	236.13	3.98	49.96	10:31

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	16	TOC	K2003360-023.09 doc	0.3916 ppm	0.1264 ppm	32.2700%	2020/04/26 06:08

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.5732	5.7324	11.26	15.24	3.98	49.99	10:28
2	TOC	0.3786	3.7860	9.96	13.78	3.83	49.98	10:26
3	TOC	0.3236	3.2358	9.59	13.37	3.78	49.98	10:28
4	TOC	0.2910	2.9101	9.37	13.10	3.74	49.97	10:24

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	17	TOC	K2003360-024.09 doc	0.4842 ppm	0.0191 ppm	3.9500%	2020/04/26 07:03

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.5105	5.1049	10.84	14.65	3.81	50.00	10:30
2	TOC	0.4692	4.6915	10.57	14.61	4.05	50.00	10:28
3	TOC	0.4863	4.8625	10.68	14.67	3.99	49.99	10:25
4	TOC	0.4709	4.7094	10.58	14.44	3.86	49.97	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	18	TOC	K2003360-024.10	0.4447 ppm	0.0222 ppm	4.9800%	2020/04/26 07:59

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.4730	4.7302	10.59	14.51	3.92	49.99	10:26
2	TOC	0.4272	4.2722	10.28	14.34	4.05	49.97	10:27
3	TOC	0.4269	4.2692	10.28	14.18	3.90	49.98	10:28
4	TOC	0.4518	4.5176	10.45	14.22	3.77	49.99	10:31

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	19	TOC	K2003344-001.01	2.4158 ppm	0.0013 ppm	0.0500%	2020/04/26 08:54

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.4149	24.1489	23.65	27.50	3.85	49.96	10:27
2	TOC	2.4167	24.1667	23.66	27.39	3.73	49.96	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

Sample Type: Check Standard --> CCV 25 ppm — From Schedule Version 3

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	24.6873 ppm (PASS)	0.0000 ppm	0%	2020/04/26 09:22

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	24.6873	246.8730	173.84	177.71	3.87	49.97	10:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	50 ppmC

Sample Type: Check Standard --> CCB — From Schedule Version 3

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/04/26 09:37

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	6.31	10.25	3.94	50.00	10:31

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	0 ppmC

Sample Type: Sample From Schedule Version 3

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	20	TOC	MB2	0.0000 ppm	0.0000 ppm	0.0000%	2020/04/26 09:52

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	5.76	9.78	4.02	49.93	10:30
2	TOC	0.0000	0.0000	5.62	9.61	3.99	49.96	10:30
3	TOC	0.0000	0.0000	5.30	9.23	3.93	49.92	10:25
4	TOC	0.0000	0.0000	5.31	9.09	3.78	49.97	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

Sample Type: Check Standard --> LCS From Schedule Version 3

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	C	TOC	25.0000	1:1	[TOC] LCS [24.0 ppm]	0 / infinity (NA / NA)	24.0702 ppm (PASS)	0.1034 ppm	0.43%	2020/04/26 10:48

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	23.9318	239.3176	168.76	172.66	3.90	49.92	10:29
C	TOC	25.0 ppm	2	24.1816	241.8158	170.44	174.30	3.86	49.96	10:26
C	TOC	25.0 ppm	3	24.0915	240.9146	169.83	174.09	4.26	49.93	10:27
C	TOC	25.0 ppm	4	24.0761	240.7615	169.73	173.65	3.92	49.91	10:28

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	25 ppmC

Sample Type: Sample From Schedule Version 3

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	21	TOC	K2003384-001.06	1.4273 ppm	0.1086 ppm	7.6100%	2020/04/26 11:43

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time

1	TOC	1.5041	15.0410	17.53	21.44	3.92	49.92	10:24
2	TOC	1.3505	13.5050	16.49	20.55	4.06	49.94	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	22	TOC	K2003384-002.06	1.4993 ppm	0.0342 ppm	2.2800%	2020/04/26 12:11

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.5234	15.2343	17.66	21.54	3.88	49.90	10:28
2	TOC	1.4751	14.7511	17.33	21.35	4.02	49.90	10:24

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	23	TOC	K2003384-002.06 ms	28.9878 ppm	0.0000 ppm	0.0000%	2020/04/26 12:39

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	28.9878	289.8779	202.35	206.24	3.89	49.91	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	24	TOC	RB	0.0000 ppm	0.0000 ppm	0.0000%	2020/04/26 12:54

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	6.27	10.32	4.05	49.88	10:34

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	25	TOC	K2003384-003.06	1.3051 ppm	0.0036 ppm	0.2700%	2020/04/26 13:09

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.3077	13.0767	16.20	20.19	3.98	49.86	10:26
2	TOC	1.3026	13.0261	16.17	20.12	3.95	49.87	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	26	TOC	K2003384-004.06	1.3537 ppm	0.0340 ppm	2.5100%	2020/04/26 13:37

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	27	TOC	K2003384-005.06	1.2927 ppm	0.0119 ppm	0.9200%	2020/04/26 14:05

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.2843	12.8432	16.05	19.83	3.78	49.85	10:26
2	TOC	1.3011	13.0113	16.16	19.92	3.76	49.84	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	28	TOC	K2003384-006.06	1.5339 ppm	0.0392 ppm	2.5600%	2020/04/26 14:33

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.5616	15.6165	17.91	21.76	3.85	49.82	10:30
2	TOC	1.5062	15.0618	17.54	21.39	3.85	49.79	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 3

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	24.7074 ppm (PASS)	0.0000 ppm	0%	2020/04/26 15:01

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	24.7074	247.0738	173.97	177.98	4.00	49.80	10:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 3

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈										

	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/04/26 15:15

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	5.93	9.81	3.88	49.81	10:28

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	0 ppmC

Sample Type: Sample — From Schedule Version 3

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	29	TOC	K2003384-007.06	1.2585 ppm	0.0201 ppm	1.6000%	2020/04/26 15:30

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.2727	12.7273	15.97	19.91	3.94	49.81	10:31
2	TOC	1.2443	12.4432	15.78	19.64	3.86	49.79	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	30	TOC	MB3	0.0000 ppm	0.0000 ppm	0.0000%	2020/04/26 15:58

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	5.26	9.09	3.83	49.80	10:31

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

Sample Type: Check Standard --> LCS — From Schedule Version 3

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	C	TOC	25.0000	1:1	[TOC] LCS [25.0 ppm]	0 / infinity (NA / NA)	24.8014 ppm (PASS)	0.0000 ppm	0%	2020/04/26 16:13

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	24.8014	248.0136	174.61	178.55	3.95	49.77	10:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	25 ppmC

Sample Type: Sample From Schedule Version 3

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	35	TOC	K2003345-001.01	3.0542 ppm	0.0939 ppm	3.0700%	2020/04/26 16:27

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	3.1206	31.2061	28.40	32.23	3.83	49.76	10:27
2	TOC	2.9878	29.8783	27.50	31.52	4.02	49.74	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	36	TOC	K2003388-001.01	1.0842 ppm	0.0064 ppm	0.5900%	2020/04/26 16:56

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.0888	10.8878	14.73	18.65	3.92	49.79	10:29
2	TOC	1.0797	10.7971	14.67	18.63	3.96	49.76	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.4100 (IC) (v1377)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 3

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	24.6955 ppm (PASS)	0.0000 ppm	0%	2020/04/26 17:24

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	24.6955	246.9548	173.89	177.80	3.90	49.76	10:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 3

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/04/26 17:38

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time

D	TOC	0 ppm	1	0.0000	0.0000	5.61	9.55	3.94	49.74	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)	0 ppmC

Meta Data Used in this Report

Blanks

Version	Reagent (Abs)	Acid (Abs)	DI IC (Abs)	DI TC (Abs)	DI TOC (Abs)	Save Time	Operator
v1376	2.4970	1.4280	0.0000	0.0000	0.0000	2020/04/23 15:09	Fusion1 (Fusion1)
v1377	1.8707	1.1800	0.0000	0.0000	0.0000	2020/04/25 16:05	Fusion1 (Fusion1)

Calibrations

Name: CAS_salt_010711 (TOC)

Version: v32
Calibration curve formula: TOC: y = 6.725x + 7.818
Ver Creation: 2020/03/11 15:55
r^2 value: TOC: r^2 = 0.99921
Comment:
Operator: Fusion1 (Fusion1)
Basic Analysis Type: TOC

Basic Analysis Type: TOC

Sample ID	Y Raw Value	X Expected	Message	End Time
DI Water	5.8640	0.0000		2020/03/11 14:28
0.500 ppm	9.5210	0.5000		2020/03/11 14:42
1.0 ppm	12.5930	1.0000		2020/03/11 14:56
5.0 ppm	40.5270	5.0000		2020/03/11 15:10
10 ppm	79.5310	10.0000		2020/03/11 15:25
25 ppm	181.4610	25.0000		2020/03/11 15:39
50 ppm	340.5610	50.0000		2020/03/11 15:53

Methods

Name: CAS_salt_010711 (TOC)

Version: v4
Operator: Fusion1 (Fusion1)
Ver Creation: 2019/02/21 17:57
Comment:

Parameter	Value	Advanced Parameter	Value

SampleVolume	10.0 mL	NeedleRinseVolume	5.0 ml
Dilution	1:10	VialPrimeVolume	2.0 ml
AcidVolume	0.5 ml	ICSamplePrimeVolume	2.0 ml
ReagentVolume	2.0 ml	ICSpargeRinseVolume	12.0 ml
UVReactorPrerinse	Off	BaselineStabilizeTime	0.70 min
UVReactorPrerinseVolume	5.0	DetectorPressureFlow	150 ml/min
NumberOfUVReactorPrerinses	1	SyringeSpeedWaste	10
ICSpargeTime	1.00 mins	SyringeSpeedAcid	7
DetectorSweepFlow	500 ml/min	SyringeSpeedReagent	7
PreSpargeTime	2.00 mins	SyringeSpeedDIWater	7
SystemFlow	500 ml/min	NDIRPressurization	60 psig
		SyringeSpeedSampleDispense	5
		SyringeSpeedSampleAspirate	4
		SyringeSpeedUVDispense	5
		SyringeSpeedUVAspirate	5
		SyringeSpeedICDispense	5
		SyringeSpeedICAspirate	5
		NDIRPressureStabilize	1.75 min
		SampleMixing	Off
		SampleMixingCycles	1
		SampleMixingVolume	10.0
		LowLevelFilterNDIR	Off

Acceptance / Approval

Electronic Signatures

Report Version	User Name	Acceptance	Reason	Date

Report History

Report History

Report Version	User Name	System Reason	User Reason	Date
1	Fusion1 (Fusion1)	Schedule completed	Schedule completed	2020/04/26 17:53

ALS Environmental

StarLIMS Run: 678052, 678054, 678053

Analysis: DOC/TOC

Method: SM 5310 C, 9060A, 415.1, 9060

CCV: 11-GEN-05-82C 50 ppm LCS: 11-GEN-05-79J 25.0 ppm

ICAL Date: 3/11/2020

ICAL ID: 19-GEN-8-7-E->J

ICS ID: 19-GEN-8-4-G

ICS TV: 25.0 ppm ICS % R < 1

Spike ID: 11-GEN-05-82C 0.05 ml of 5000 ppm stock ---> 10.0 ml = 25.0 ppm x dilution factor

Sodium Persulfate: 19-GEN-08-14-N

21 % H3PO4: 19-GEN-08-12-A

Equipment ID: K-TOC-03

PIPETTE ID: 124276B, 129001F, N11314F, Marge

FILTER ID: 16967789

Analyzed By: BOP	Date Analyzed: 25 4/28/20
Reviewed By:	Date Reviewed: 4/29/20

April 30, 2020 Service Request No:E2000362

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

Laboratory Results for: HS20040851

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory April 22, 2020
For your reference, these analyses have been assigned our service request number **E2000362.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental



Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental

Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2000362
Project:	HS20040851	**Date Received:**	04/22/20
Sample Matrix:	W		

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier IV. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

One sample was received for analysis at ALS Environmental in Houston on 04/22/20.

The sample was received in good condition and is consistent with the accompanying chain of custody form. The sample was stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2000162: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in lieu of a MS/MSD for this extraction batch. The LCS and DLCS recoveries are within QC limits.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: ALS Environmental - US **Service Request:**E2000362
Project: HS20040851

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2000362-001	LH18/24-SP650_042120_BIX	4/21/2020	1400

Service Request Summary

Folder #: **E2000362**
Client Name: ALS Environmental - US
Project Name: HS20040851
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 04/22/20
Internal Due Date: 5/6/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20040851
EDD: No EDD Specified

1 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
Location: EHRMS-WIC 7B
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2000362-001	LH18/24-SP650_042120_BIX	Water	04/21/20 1400	**IV**

Service Request Summary

Folder #: **E2000362**
Client Name: ALS Environmental - US
Project Name: HS20040851
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 04/22/20
Internal Due Date: 5/6/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20040851
EDD: No EDD Specified

1 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
Location: EHRMS-WIC 7B
Pressure Gas:

Data Qualifiers

Lab Standard

+	Possible Tedlar bag artifact.
A	TIC is a suspected aldol-condensation product
B	Analyte found in the associated method blank as well as in the sample.
BC	Reported results are not blank corrected.
BH	The back section of the tube yielded higher results than the front.
BT	Results indicated possible breakthrough; back section >=10% front section.
C	Result identification confirmed.
D	Compound identified in an analysis at a secondary dilution factor
D	Spike was diluted out
DE	Reported results are corrected for desorption efficiency.
E	Estimated value. Concentration above calibration range
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
H1	Sample analysis performed past holding time. See case narrative.
H2	Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
H3	Sample was received and analyzed past holding time.
H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
I	Internal standard not within the specified limits. See case narrative.
J	Estimated Value. Concentration found below MRL.
K	A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
K	Analyte was detected above the method reporting limit prior to normalization.
L1	Laboratory control sample recovery outside the specified limits; results may be biased high.
L2	Laboratory control sample recovery outside the specified limits; results may be biased low.
L3	Laboratory control sample recovery outside the specified limits.
M	Matrix interference; results may be biased high.
M	The duplicate injection precision not met.
M1	Matrix interference due to coelution with a non-target compound; results may be biased high.
N	Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
P	Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
P	Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
Q	Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
R	Duplicate Precision not met.
R1	Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
S	Surrogate recovery not within specified limits.

Data Qualifiers

Lab Standard

S	The reported value was determined by the Method of Standard Additions (MSA).
T	Analyte is a tentatively identified compound, result is estimated.
U	Compound was analyzed for, but was not detected (ND).
V1	The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
V2	The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
W	Result quantified, but the corresponding peak was detected outside the generated retention time window.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
X	See case narrative.
Y	Recovery outside limits
Y	The chromatogram resembles a petroleum product but does not match the calibration standard.
Z	The chromatogram does not resemble a petroleum product.
i	The MRL/MDL has been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

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State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
Arizona Department of Health Services	AZ0793	5/27/2020
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611	6/30/2020
Illinois Environmental Protection Agency	2000322019-2	5/9/2020
Kansas Department of Health and Environment	E-10352	7/31/2020
Louisiana Department of Environmental Quality	03087	6/30/2020
Louisiana Department of Health and Hospitals	LA028-2020	12/31/2020
Maine Center for Disease Control and Prevention	201815	6/5/2020
Maryland Department of the Environment	343	6/30/2020
Minnesota Department of Health	1785988	12/31/2020
Nevada Department of Concervation and Natural Resources	TX026932019-1	7/31/2020
New Jersey Department of Environmental Protection	NLC190001	6/30/2020
New York Department of Health	11707	3/31/2021
Oklahoma Department of Environmental Quality	2019-067	8/31/2020
Pennsylvania Department of Environmental Protection	68-03441-013	6/30/2020
Tennessee Department of Environment and Concervation	04016	6/30/2020
United States Department of Agriculture	P330-19-00299	10/10/2022
Utah Department of Health Environmental Laboratory Certification	TX026932019-9	7/31/2020
Washington Department of Health	C819	11/14/2020
West Virginia Department of Environmental Protection	347	6/30/2020

ALS

Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

E2000362 5
ALS Laboratory Group
HS20040851

10450 Stancliff Rd, Ste 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **13762**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	
Email:	

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20040851
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20040851-02**	**LH18/24-SP650_042120_BIX**	**Water**	**21 Apr 2020 14:00**
	SUB_Perch-6850			06 May 2020

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: _____ Date/Time: 4/22/2020

Received By: LORETA Date/Time: 4/22/20 1106

Cooler ID(s): _____ Temperature(s): _____

00978572

Cooler Receipt Form

ALS Environmental

Project Chemist CG

Client/Project ALS-H

Thermometer ID SMO4

Date/Time Received: 4/22/20 Initials: CG

Date/Time Logged in: 4/22/20 Initials CG

1. Method of delivery: ○ US Mail ○ Fed Ex ○ UPS ○ DHL ✓ ALS Courier ○ Client

2. Samples received in: ✓ Cooler ○ Box ○ Envelope ○ Other

3. Were custody seals on coolers? ○ Yes ✓ No

If yes, how many and where?

Were they intact? ○ Yes ○ No ✓ N/A

Were they signed and dated? ○ Yes ○ No ✓ N/A

4. Packing Material: ○ Inserts ✓ Baggies ○ Bubble Wrap ○ Gel Packs ✓ Wet Ice ○ Sleeves ○ Other

5. Foreign or Regulated Soil? ○ Yes ○ No Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
-		4/22/20	1100	CG	3.1/3.5	☒
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No

7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ✓ Yes ○ No

8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No

9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No

10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label: E2000362 5

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SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6ºC.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10ºC.
- ✓ Air samples are shipped and stored cold, at 0 to 6ºC
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

Preparation Information Benchsheets

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Preparation Information Benchsheet

Prep Run#: 357602 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/KBROWN **Prep Method:** Method **Prep Date/Time:** 4/29/20 09:00

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2000352-001	LH18/24-SP650_041620_BIX	.01	6850/ClO4 DOD			Water	10mL	
2	E2000362-001	LH18/24-SP650_042120_BIX	.01	6850/ClO4 DOD			Water	10mL	
3	E2000363-001	HBW7_042020	.01	6850/ClO4 DOD			Water	10mL	
4	E2000363-002	HBW10_042020	.01	6850/ClO4 DOD			Water	10mL	
5	E2000363-003	HBW1_042020	.01	6850/ClO4 DOD			Water	10mL	
6	E2000363-004	GPW1_042020	.01	6850/ClO4 DOD			Water	10mL	
7	E2000363-005	GPW3_042020	.01	6850/ClO4 DOD			Water	10mL	
8	E2000363-006	GPW3_042020_a	.01	6850/ClO4 DOD			Water	10mL	
9	E2000376-001	GM-MW-29D-20200423-01	.01	6850/ClO4			Ground Water	10mL	
10	E2000376-002	GM-MW-66D2-20200423-01	.01	6850/ClO4			Ground Water	10mL	
11	E2000376-003	GM-MW-89D-20200423-01	.01	6850/ClO4			Ground Water	10mL	
12	E2000376-004	GM-MW-98D-20200423-01	.01	6850/ClO4			Ground Water	10mL	
13	EQ2000162-01	MB		6850/ClO4 DOD			Liquid	10mL	
14	EQ2000162-02	LCS		6850/ClO4 DOD			Liquid	10mL	
15	EQ2000162-03	DLCS		6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 202037 Logbook Ref: Sodium Perchlorate Expires On: 05/22/2021

E2000352-001	100.00µL	E2000362-001	100.00µL	E2000363-001	100.00µL	E2000363-002	100.00µL	E2000363-003	100.00µL	E2000363-004	100.00µL
E2000363-005	100.00µL	E2000363-006	100.00µL	E2000376-001	100.00µL	E2000376-002	100.00µL	E2000376-003	100.00µL	E2000376-004	100.00µL
EQ2000162-01	100.00µL	EQ2000162-01	100.00µL	EQ2000162-02	100.00µL	EQ2000162-02	100.00µL	EQ2000162-03	100.00µL	EQ2000162-03	100.00µL

Name: Perchlorate Intermediate Stock1 Inventory ID 204799 Logbook Ref: 200657 1.0ug/mL KN Expires On: 05/15/2020

EQ2000162-02	1.00µL	EQ2000162-02	1.00µL	EQ2000162-03	1.00µL	EQ2000162-03	1.00µL

Preparation Steps

Step: Preparation
Started: 4/29/20 09:00
Finished: 4/29/20 10:00
By: KBROWN
Comments

Comments:

Preparation Information Benchsheet

Prep Run#: 357602
Team: Semivoa GCMS/KBROWN

Prep WorkFlow: GenExt28Day
Prep Method: Method

Status: Prepped
Prep Date/Time: 4/29/20 09:00

Reviewed By: KN Date: 04/29/20

Chain of Custody

Relinquished By: _____ Date: _____

Received By: _____ Date: _____

Extracts Examined
Yes No

Analytical Results

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ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000362
Project:	HS20040851	**Date Collected:**	4/21/20 1400
Sample Matrix:	Water	**Date Received:**	4/22/20
Sample Name:	LH18/24-SP650_042120_BIX	**Units:**	µg/L
Lab Code:	E2000362-001	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	4/29/20	4/29/20 13:36	357602	678630	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000362
Project:	HS20040851	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2000162-01	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	4/29/20	4/29/20 13:05	357602	678630	

Accuracy & Precision

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ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20040851
Sample Matrix: Water

Service Request: E2000362
Date Analyzed: 4/29/20

Lab Control Sample Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Units: µg/L
Basis: NA

Extraction Lot: 357602

	Lab Control Sample EQ2000162-02			Duplicate Lab Control Sample EQ2000162-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.115	0.100	115	0.118	0.100	118	84 - 119	2	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000362
Project:	HS20040851	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000162-02	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.115**		0.100	0.0500	0.0250	1	4/29/20	4/29/20 13:13	357602	678630	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000362
Project:	HS20040851	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000162-03	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.118**		0.100	0.0500	0.0250	1	4/29/20	4/29/20 15:11	357602	678630	

Initial Calibration

ALS Environmental - Houston HRMS
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20200420

1st Review: Kneir
2nd Review: Hvan

ALS Environmental
LCMS01 -Shimadzu 8050

ICAL Date: 4/20/2020
Cal. Std. xp: 5/14/2020
ICAL ID: **EC2000003**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100803-09 **B:** MeOH 3100802-01

	Sample Name		File Name	Acquisition Method	Dilution	R	Comments	Date/Time
	null		20200420_001	Perchlorate6850b.lcm	1x	☒		4/20/2020 13:01
	null		20200420_002	Perchlorate6850b.lcm	1x	☒		4/20/2020 13:06
	DIBLK		20200420_003	Perchlorate6850b.lcm	1x	☒		4/20/2020 13:11
	IB		20200420_004	Perchlorate6850b.lcm	1x	☒		4/20/2020 13:19
	PERCHLORATE7		20200420_005	Perchlorate6850b.lcm	1x	☒	3100805-02	4/20/2020 13:27
	LODV		20200420_006	Perchlorate6850b.lcm	1x	☒		4/20/2020 13:35
	PERCHLORATE1		20200420_007	Perchlorate6850b.lcm	1x	☒	3100804-05	4/20/2020 13:43
	PERCHLORATE2		20200420_008	Perchlorate6850b.lcm	1x	☒	3100804-06	4/20/2020 13:51
	PERCHLORATE3		20200420_009	Perchlorate6850b.lcm	1x	☒	3100804-07	4/20/2020 13:58
	PERCHLORATE4		20200420_010	Perchlorate6850b.lcm	1x	☒	3100804-08	4/20/2020 14:06
	PERCHLORATE5		20200420_011	Perchlorate6850b.lcm	1x	☒	3100804-09	4/20/2020 14:14
	PERCHLORATE6		20200420_012	Perchlorate6850b.lcm	1x	☒	3100805-01	4/20/2020 14:22
	PERCHLORATE8		20200420_013	Perchlorate6850b.lcm	1x	☒	3100805-03	4/20/2020 14:30
	PERCHLORATE9		20200420_014	Perchlorate6850b.lcm	1x	☒	3100805-04	4/20/2020 14:38
	PERCHLORATE10		20200420_015	Perchlorate6850b.lcm	1x	☒	3100805-05	4/20/2020 14:46
	ICV		20200420_016	Perchlorate6850b.lcm	1x	☒	3100805-06	4/20/2020 14:54
	LODV		20200420_017	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:02
	EQ2000143-01		20200420_018	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:10
	EQ2000143-02		20200420_019	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:18
	EQ2000143-03		20200420_020	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:26
	E2000275-001		20200420_021	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:33
	E2000275-002		20200420_022	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:41
	E2000275-003		20200420_023	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:49
	E2000287-001		20200420_024	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:57
	E2000303-001		20200420_025	Perchlorate6850b.lcm	1x	☒		4/20/2020 16:05
	E2000304-001		20200420_026	Perchlorate6850b.lcm	1x	☒		4/20/2020 16:13
	E2000305-001		20200420_027	Perchlorate6850b.lcm	1x	☒		4/20/2020 16:21
	PERCHLORATE7		20200420_028	Perchlorate6850b.lcm	1x	☒	3100805-02	4/20/2020 16:29
	E2000303-001		20200420_029	Perchlorate6850b.lcm	1x	☒		4/20/2020 16:47
	E2000304-001		20200420_030	Perchlorate6850b.lcm	1x	☒		4/20/2020 16:55
	PERCHLORATE7		20200420_031	Perchlorate6850b.lcm	1x	☒	3100805-02	4/20/2020 17:02

Initial Calibration - Detailed Report

Calibration ID: EC2000003 **Instrument ID:** E-LCMS-01
Column Name: 1

#	Lab Code	Sample Name	File Location	Aquisition Date
08	EC2000003-08	PERCHLORATE7	20200420_005	04/20/2020 13:27
01	EC2000003-01	PERCHLORATE1	20200420_007	04/20/2020 13:43
02	EC2000003-02	PERCHLORATE2	20200420_008	04/20/2020 13:51
03	EC2000003-03	PERCHLORATE3	20200420_009	04/20/2020 13:58
04	EC2000003-04	PERCHLORATE4	20200420_010	04/20/2020 14:06
05	EC2000003-05	PERCHLORATE5	20200420_011	04/20/2020 14:14
06	EC2000003-06	PERCHLORATE6	20200420_012	04/20/2020 14:22
07	EC2000003-07	PERCHLORATE8	20200420_013	04/20/2020 14:30
09	EC2000003-09	PERCHLORATE9	20200420_014	04/20/2020 14:38
10	EC2000003-10	PERCHLORATE10	20200420_015	04/20/2020 14:46

Analyte **Curve Fit** **Weighting**

Perchlorate **Average RF** **RSD = 8.066** **Average RF = 0.1368**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.1000	0.1558	02	0.5000	0.1297	03	0.7000	0.1277	04	1.0000	0.1397
05	2.0000	0.1298	06	5.0000	0.1245	07	20.0000	0.1341	08	10.0000	0.1562
09	30.0000	0.1365	10	50.0000	0.1345						

Analyte

Perchlorate

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.1000	0.114	13.9	02	0.5000	0.474	-5.2	03	0.7000	0.653	-6.7
04	1.0000	1.02	2.1	05	2.0000	1.90	-5.1	06	5.0000	4.55	-9.0
07	20.0000	19.6	-2.0	08	10.0000	11.4	14.2	09	30.0000	29.9	-0.2
10	50.0000	49.1	-1.7								

Initial Calibration Verification Summary Report

Calibration ID:	EC2000003	**Instrument ID:**	E-LCMS-01
Datafile ID:	20200420_016	**Column Name:**	1

Analyte	Lab Code	Type	Curve Fit	True Value	Calc Conc	Units	Result	Criteria
Perchlorate	EC2000003-11	T	Average RF	10	11.345	ng/mL	13.4	<= 15

ALS Group Houston

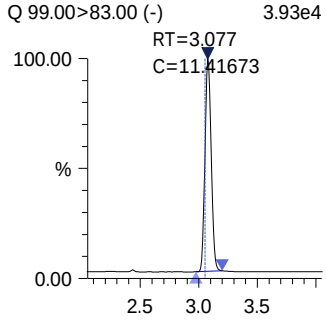
PERCHLORATE7

Date acquired: 4/20/2020 1:27:21 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_005.lcd
Vial: 3 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	4/20/2020 1:27:21 PM	144494	11.41673	20200420_005	3.077	25.0000	1.0000	3
Sodium Perchlorate-18O4_IS	PERCHLORATE7	4/20/2020 1:27:21 PM	92497	1.00000	20200420_005	3.076	25.0000	1.0000	3

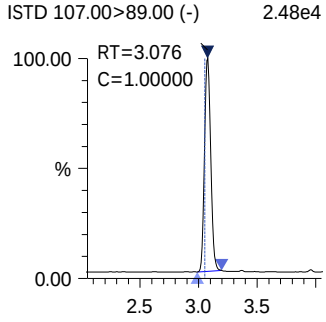
Perchlorate

Conc 11.41673
Area 144494



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 92497



ALS Group Houston

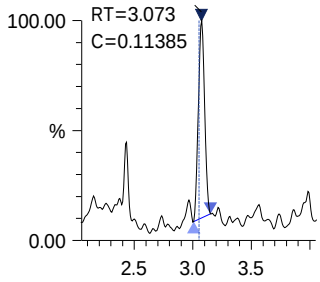
PERCHLORATE1

Date acquired: 4/20/2020 1:43:09 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_007.lcd
Vial: 5 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE1	4/20/2020 1:43:09 PM	1840	0.11385	20200420_007	3.073	25.0000	1.0000	5
Sodium Perchlorate-18O4_IS	PERCHLORATE1	4/20/2020 1:43:09 PM	118078	1.00000	20200420_007	3.073	25.0000	1.0000	5

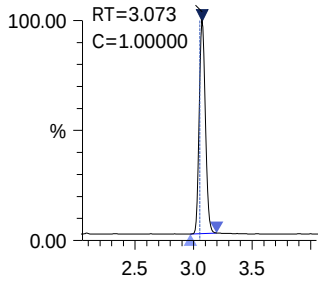
Perchlorate

Conc 0.11385
Area 1840
Q 99.00>83.00 (-) 5.37e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 118078
ISTD 107.00>89.00 (-) 3.18e4



ALS Group Houston

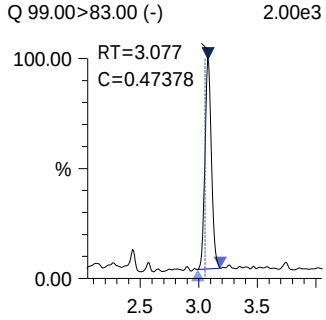
PERCHLORATE2

Date acquired: 4/20/2020 1:51:02 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_008.lcd
Vial: 6 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE2	4/20/2020 1:51:02 PM	7551	0.47378	20200420_008	3.077	25.0000	1.0000	6
Sodium Perchlorate-18O4_IS	PERCHLORATE2	4/20/2020 1:51:02 PM	116479	1.00000	20200420_008	3.075	25.0000	1.0000	6

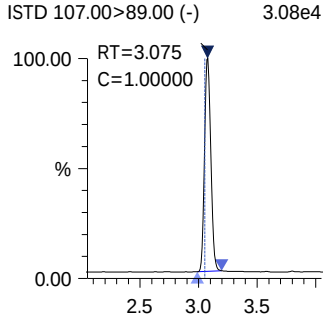
Perchlorate

Conc 0.47378
Area 7551



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 116479



ALS Group Houston

PERCHLORATE3

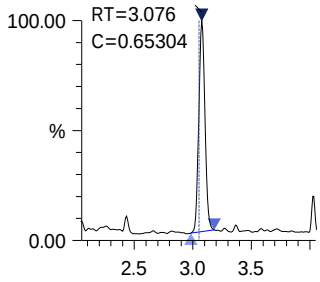
Date acquired: 4/20/2020 1:58:56 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_009.lcd
Vial: 7 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE3	4/20/2020 1:58:56 PM	11235	0.65304	20200420_009	3.076	25.0000	1.0000	7
Sodium Perchlorate-18O4_IS	PERCHLORATE3	4/20/2020 1:58:56 PM	125731	1.00000	20200420_009	3.073	25.0000	1.0000	7

Perchlorate

Conc 0.65304
Area 11235

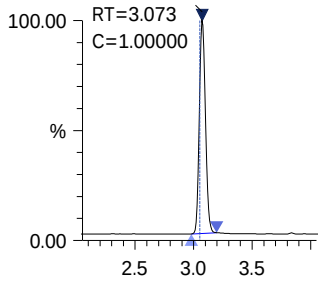
Q 99.00>83.00 (-) 3.12e3



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 125731

ISTD 107.00>89.00 (-) 3.41e4



ALS Group Houston

PERCHLORATE4

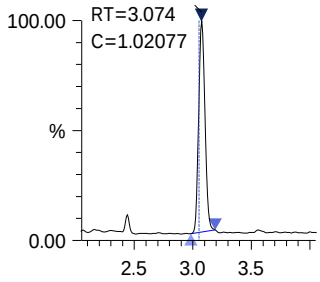
Date acquired: 4/20/2020 2:06:51 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_010.lcd
Vial: 8 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE4	4/20/2020 2:06:51 PM	16670	1.02077	20200420_010	3.074	25.0000	1.0000	8
Sodium Perchlorate-18O4_IS	PERCHLORATE4	4/20/2020 2:06:51 PM	119354	1.00000	20200420_010	3.074	25.0000	1.0000	8

Perchlorate

Conc 1.02077
Area 16670

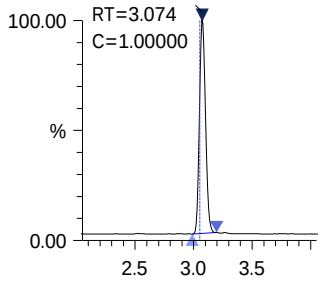
Q 99.00>83.00 (-) 4.51e3



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 119354

ISTD 107.00>89.00 (-) 3.26e4



ALS Group Houston

PERCHLORATE5

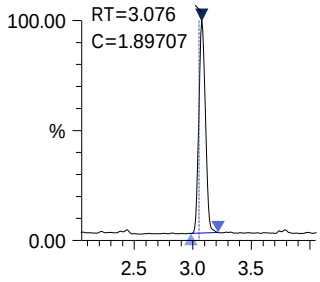
Date acquired: 4/20/2020 2:14:45 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_011.lcd
Vial: 9 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE5	4/20/2020 2:14:45 PM	33786	1.89707	20200420_011	3.076	25.0000	1.0000	9
Sodium Perchlorate-18O4_IS	PERCHLORATE5	4/20/2020 2:14:45 PM	130159	1.00000	20200420_011	3.075	25.0000	1.0000	9

Perchlorate

Conc 1.89707
Area 33786

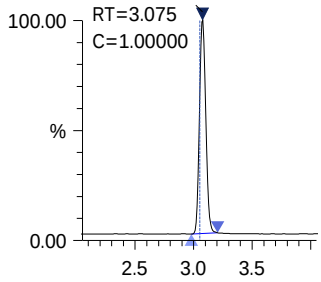
Q 99.00>83.00 (-) 8.73e3



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 130159

ISTD 107.00>89.00 (-) 3.41e4



ALS Group Houston

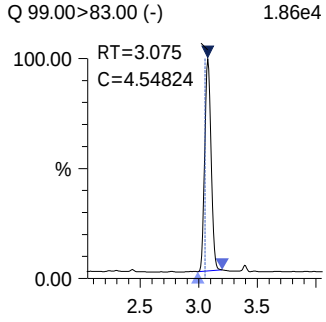
PERCHLORATE6

Date acquired: 4/20/2020 2:22:39 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_012.lcd
Vial: 10 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE6	4/20/2020 2:22:39 PM	69848	4.54824	20200420_012	3.075	25.0000	1.0000	10
Sodium Perchlorate-18O4_IS	PERCHLORATE6	4/20/2020 2:22:39 PM	112235	1.00000	20200420_012	3.074	25.0000	1.0000	10

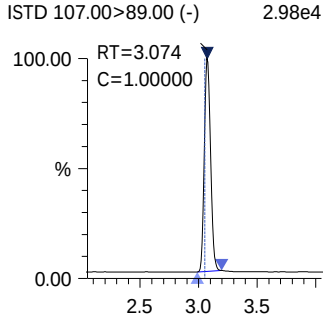
Perchlorate

Conc 4.54824
Area 69848



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 112235



ALS Group Houston

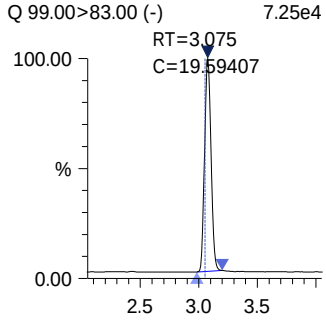
PERCHLORATE8

Date acquired: 4/20/2020 2:30:36 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_013.lcd
Vial: 11 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE8	4/20/2020 2:30:36 PM	275854	19.59407	20200420_013	3.075	25.0000	1.0000	11
Sodium Perchlorate-18O4_IS	PERCHLORATE8	4/20/2020 2:30:36 PM	102890	1.00000	20200420_013	3.072	25.0000	1.0000	11

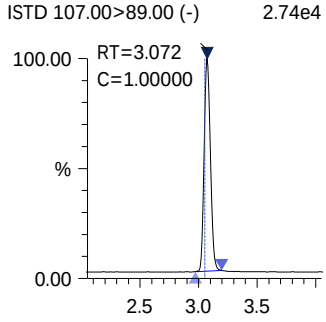
Perchlorate

Conc 19.59407
Area 275854



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 102890



ALS Group Houston

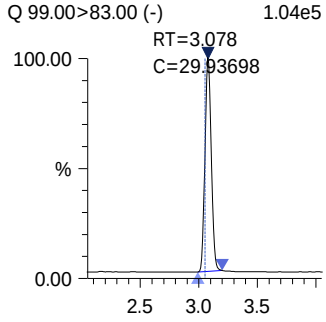
PERCHLORATE9

Date acquired: 4/20/2020 2:38:33 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_014.lcd
Vial: 12 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE9	4/20/2020 2:38:33 PM	390068	29.93698	20200420_014	3.078	25.0000	1.0000	12
Sodium Perchlorate-18O4_IS	PERCHLORATE9	4/20/2020 2:38:33 PM	95225	1.00000	20200420_014	3.075	25.0000	1.0000	12

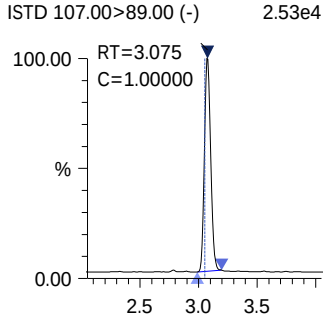
Perchlorate

Conc 29.93698
Area 390068



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 95225



ALS Group Houston

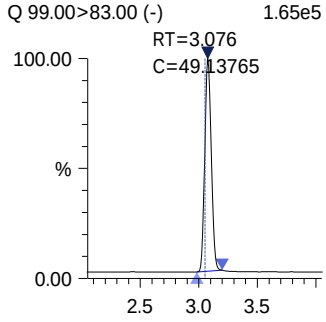
PERCHLORATE10

Date acquired: 4/20/2020 2:46:25 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_015.lcd
Vial: 13 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE10	4/20/2020 2:46:25 PM	632804	49.13765	20200420_015	3.076	25.0000	1.0000	13
Sodium Perchlorate-18O4_IS	PERCHLORATE10	4/20/2020 2:46:25 PM	94118	1.00000	20200420_015	3.075	25.0000	1.0000	13

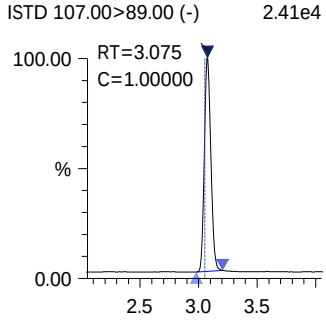
Perchlorate

Conc 49.13765
Area 632804



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 94118



ALS Group Houston

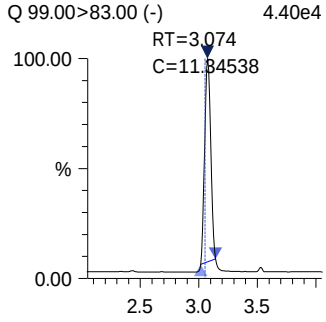
PERCHLORATEICV

Date acquired: 4/20/2020 2:54:20 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_016.lcd
Vial: 14 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATEICV	4/20/2020 2:54:20 PM	149807	11.34538	20200420_016	3.074	25.0000	1.0000	14
Sodium Perchlorate-18O4_IS	PERCHLORATEICV	4/20/2020 2:54:20 PM	96501	1.00000	20200420_016	3.072	25.0000	1.0000	14

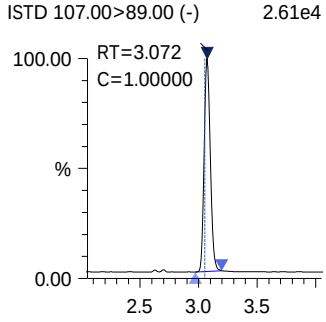
Perchlorate

Conc 11.34538
Area 149807



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 96501



Chromatograms and Selected Ion Monitoring

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 320, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

20200429

1st Review: Kneir
2nd Review: Hvan

ALS Environmental
LCMS01 -Shimadzu 8050

ICAL Date: 4/20/2020
Cal. Std. xp: 5/14/2020
ICAL ID: **EC2000003**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100803-09 **B:** MeOH 3100802-01

		File Name	Acquisition Method	Dilution	R	Comments	Date/Time
	null	20200429_001	Perchlorate6850b.lcm	1x	☒		4/29/2020 12:09
	null	20200429_002	Perchlorate6850b.lcm	1x	☒		4/29/2020 12:14
	IB	20200429_003	Perchlorate6850b.lcm	1x	☒		4/29/2020 12:19
	PERCHLORATE7	20200429_004	Perchlorate6850b.lcm	1x	☒	3100805-02	4/29/2020 12:27
	LODV	20200429_005	Perchlorate6850b.lcm	1x	☒		4/29/2020 12:35
	EQ2000162-01	20200429_006	Perchlorate6850b.lcm	1x	☒		4/29/2020 13:05
	EQ2000162-02	20200429_007	Perchlorate6850b.lcm	1x	☒		4/29/2020 13:13
	EQ2000162-03	20200429_008	Perchlorate6850b.lcm	1x		RR_high	4/29/2020 13:21
	E2000352-001	20200429_009	Perchlorate6850b.lcm	1x	☒		4/29/2020 13:29
	E2000362-001	20200429_010	Perchlorate6850b.lcm	1x	☒		4/29/2020 13:36
	E2000363-001	20200429_011	Perchlorate6850b.lcm	1x	☒		4/29/2020 13:44
	E2000363-002	20200429_012	Perchlorate6850b.lcm	1x	☒		4/29/2020 13:52
	E2000363-003	20200429_013	Perchlorate6850b.lcm	1x	☒		4/29/2020 14:00
	E2000363-004	20200429_014	Perchlorate6850b.lcm	1x	☒		4/29/2020 14:08
	E2000363-005	20200429_015	Perchlorate6850b.lcm	1x	☒		4/29/2020 14:16
	PERCHLORATE7	20200429_016	Perchlorate6850b.lcm	1x	☒	3100805-02	4/29/2020 14:24
	E2000363-006	20200429_017	Perchlorate6850b.lcm	1x	☒		4/29/2020 14:32
	E2000376-001	20200429_018	Perchlorate6850b.lcm	1x		DL-1000x	4/29/2020 14:40
	E2000376-002	20200429_019	Perchlorate6850b.lcm	1x		RR_poss carryover	4/29/2020 14:48
	E2000376-003	20200429_020	Perchlorate6850b.lcm	1x		DL-500x	4/29/2020 14:56
	E2000376-004	20200429_021	Perchlorate6850b.lcm	1x		DL-1000x	4/29/2020 15:03
	EQ2000162-03	20200429_022	Perchlorate6850b.lcm	1x	☒		4/29/2020 15:11
	PERCHLORATE7	20200429_023	Perchlorate6850b.lcm	1x	☒	3100805-02	4/29/2020 15:19
	EQ2000162-03	20200429_024	Perchlorate6850b.lcm	1x	☒		4/29/2020 15:49
	E2000376-002	20200429_025	Perchlorate6850b.lcm	1x			4/29/2020 15:56
	E2000376-001X1000	20200429_026	Perchlorate6850b.lcm	1000	☒		4/29/2020 16:04
	E2000376-003X500	20200429_027	Perchlorate6850b.lcm	500	☒		4/29/2020 16:12
	E2000376-004X1000	20200429_028	Perchlorate6850b.lcm	100	☒		4/29/2020 16:20
	PERCHLORATE7	20200429_029	Perchlorate6850b.lcm	1x	☒	3100805-02	4/29/2020 16:28

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20040851

Service Request: E2000362
Date Analyzed: 4/29/20

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200429\20200429_004

Calibration Date: 4/20/20
Calibration ID: EC2000003
Analysis Lot: 678630
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	10.9	0.1368	0.1493	9.1	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20040851

Service Request: E2000362
Date Analyzed: 4/29/20

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200429\20200429_016

Calibration Date: 4/20/20
Calibration ID: EC2000003
Analysis Lot: 678630
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	11.5	0.1368	0.1573	14.9	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20040851

Service Request: E2000362
Date Analyzed: 4/29/20

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200429\20200429_023

Calibration Date: 4/20/20
Calibration ID: EC2000003
Analysis Lot: 678630
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	11.0	0.1368	0.1498	9.5	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20040851

Service Request: E2000362
Date Analyzed: 4/29/20 12:27

Internal Standard Area and RT Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID: I:\LCMS01\DATA\20200429\20200429_004
Instrument ID: E-LCMS-01
Analytical Method: 6850

Lab Code: EQ2000163-01
Analysis Lot: 678630
Signal ID: 1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	110,677	3.07
	Upper Limit ==>	166,016	5.07
	Lower Limit ==>	55,339	1.07
Associated Analyses			
Continuing Calibration Verification	EQ2000163-01	84,029	3.02
Method Blank	EQ2000162-01	105,800	2.96
Lab Control Sample	EQ2000162-02	104,252	3.02
LH18/24-SP650_042120_BIX	E2000362-001	108,004	3.01

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20040851

Service Request: E2000362
Date Analyzed: 4/29/20 14:24

Internal Standard Area and RT Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID: I:\LCMS01\DATA\20200429\20200429_016
Instrument ID: E-LCMS-01
Analytical Method: 6850

Lab Code: EQ2000163-02
Analysis Lot: 678630
Signal ID: 1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	110,677	3.07
	Upper Limit ==>	166,016	5.07
	Lower Limit ==>	55,339	1.07
Associated Analyses			
Continuing Calibration Verification	EQ2000163-02	101,114	3.02
Duplicate Lab Control Sample	EQ2000162-03	121,962	3.02

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000362
Project:	HS20040851	**Date Analyzed:**	4/29/20 15:19

Internal Standard Area and RT Summary

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID:	I:\LCMS01\DATA\20200429\20200429_023	**Lab Code:**	EQ2000163-03
Instrument ID:	E-LCMS-01	**Analysis Lot:**	678630
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	110,677	3.07
	Upper Limit ==>	166,016	5.07
	Lower Limit ==>	55,339	1.07
Associated Analyses			
Continuing Calibration Verification	EQ2000163-03	105,647	3.01

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group Houston

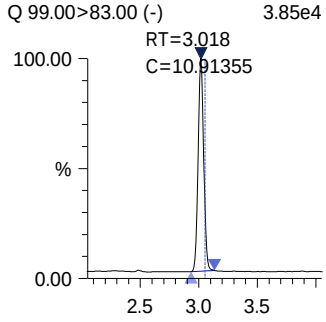
PERCHLORATE7

Date acquired: 4/29/2020 12:27:46 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200429\20200429_004.lcd
Vial: 3 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	4/29/2020 12:27:46 PM	125481	10.91355	20200429_004	3.018	25.0000	1.0000	3
Sodium Perchlorate-18O4_IS	PERCHLORATE7	4/29/2020 12:27:46 PM	84029	1.00000	20200429_004	3.016	25.0000	1.0000	3

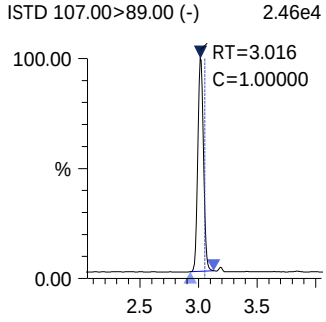
Perchlorate

Conc 10.91355
Area 125481



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 84029



ALS Group Houston

EQ2000162-01

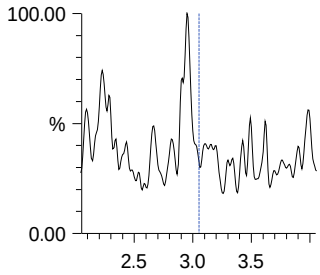
Date acquired: 4/29/2020 1:05:16 PM
Acquired by: System Administrator
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Vial: 5 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000162-01	4/29/2020 1:05:16 PM	----	----	20200429_006	----	25.0000	1.0000	5
Sodium Perchlorate-18O4_IS	EQ2000162-01	4/29/2020 1:05:16 PM	105800	1.00000	20200429_006	2.955	25.0000	1.0000	5

Perchlorate

Conc ----
Area ----

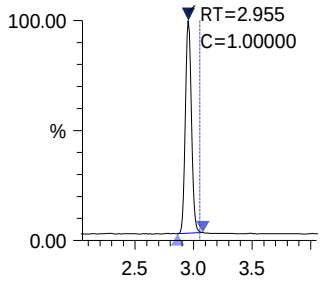
Q 99.00>83.00 (-) 3.44e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 105800

ISTD 107.00>89.00 (-) 3.02e4



ALS Group Houston

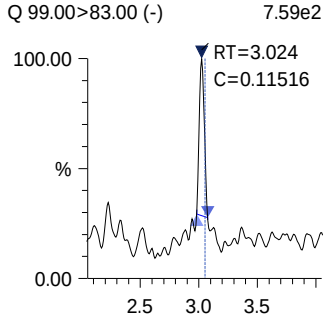
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Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200429\20200429_007.lcd
Vial: 6 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000162-02	4/29/2020 1:13:11 PM	1643	0.11516	20200429_007	3.024	25.0000	1.0000	6
Sodium Perchlorate-18O4_IS	EQ2000162-02	4/29/2020 1:13:11 PM	104252	1.00000	20200429_007	3.018	25.0000	1.0000	6

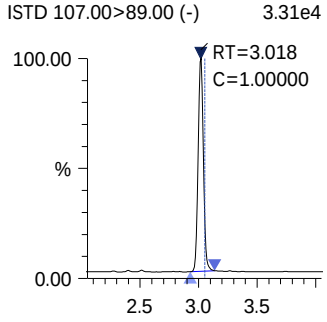
Perchlorate

Conc 0.11516
Area 1643



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 104252



ALS Group Houston

E2000362-001

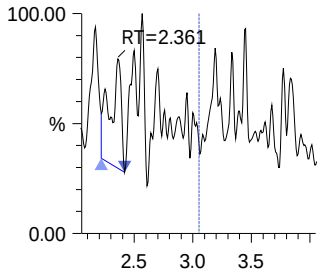
Date acquired: 4/29/2020 1:36:54 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200429\20200429_010.lcd
Vial: 9 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	E2000362-001	4/29/2020 1:36:54 PM	----	----	20200429_010	----	25.0000	1.0000	9
Sodium Perchlorate-18O4_IS	E2000362-001	4/29/2020 1:36:54 PM	108004	1.00000	20200429_010	3.008	25.0000	1.0000	9

Perchlorate

Conc ----
Area ----

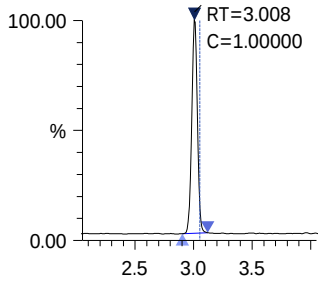
Q 99.00>83.00 (-) 2.54e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 108004

ISTD 107.00>89.00 (-) 3.21e4



ALS Group Houston

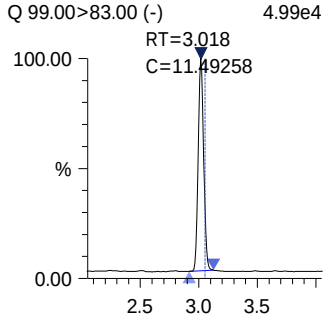
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Acquired by: System Administrator
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Vial: 3 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	4/29/2020 2:24:22 PM	159005	11.49258	20200429_016	3.018	25.0000	1.0000	3
Sodium Perchlorate-18O4_IS	PERCHLORATE7	4/29/2020 2:24:22 PM	101114	1.00000	20200429_016	3.016	25.0000	1.0000	3

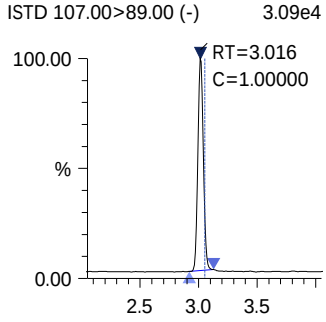
Perchlorate

Conc 11.49258
Area 159005



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 101114



ALS Group Houston

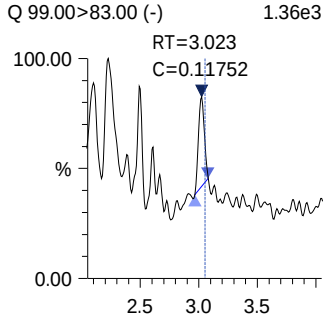
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Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200429\20200429_022.lcd
Vial: 6 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000162-03	4/29/2020 3:11:50 PM	1961	0.11752	20200429_022	3.023	25.0000	1.0000	6
Sodium Perchlorate-18O4_IS	EQ2000162-03	4/29/2020 3:11:50 PM	121962	1.00000	20200429_022	3.016	25.0000	1.0000	6

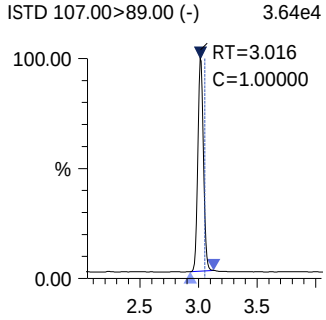
Perchlorate

Conc 0.11752
Area 1961



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 121962



ALS Group Houston

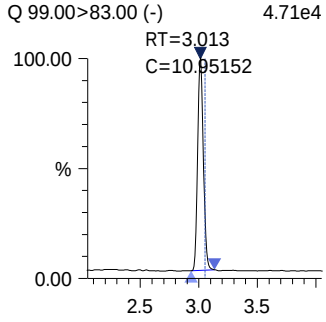
PERCHLORATE7

Date acquired: 4/29/2020 3:19:44 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200429\20200429_023.lcd
Vial: 3 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	4/29/2020 3:19:44 PM	158312	10.95152	20200429_023	3.013	25.0000	1.0000	3
Sodium Perchlorate-18O4_IS	PERCHLORATE7	4/29/2020 3:19:44 PM	105647	1.00000	20200429_023	3.012	25.0000	1.0000	3

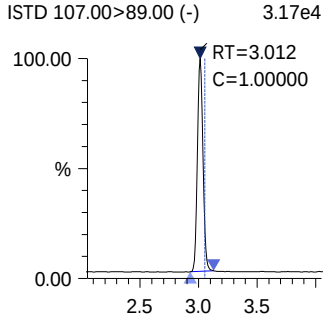
Perchlorate

Conc 10.95152
Area 158312



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 105647



HS20040851 NIT-AMM_W- E350.3

ALS WO# HS20040851

NIT- AMN- W-ISE

Logbook **31105**

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Ion Selective Electrode Logbook

Analyst: MD					Date: 4/23/20 12:35PM		
Method: SM4500NH3-D/EPA 350.3 or SM4500 NH3 B-F							
Probe Calibration Date: 4/23/20		Cal Std ID: 3131034605-102			Probe ID: S01-15910		
Std Level		mV	Conc., mg/L:		Sodium Thiosulfate ID:		
STD 1 (mg/L):	0.2	128.2	0.200		Std Level	mV	Conc., mg/L:
STD 2 (mg/L):	1	85.2	0.995		STD 4 (mg/L): 10	29.4	10.006
STD 3 (mg/L):	5	46.7	5.001		STD 5 (mg/L): 50	-12.0	50.023
LSC / MS Spike ID: 3100601707					ICAL Date & Slope: 100.5 % / -59.3 mV		
ICV Cal STD ID: 3131034605							
DPD Reagent ID: 3100EC0909							

WO # / SX #	Bottle #	Initial g or ml	Final Vol. ml	Dilution Factor	Initial Conc. mg/L	Final Conc. mg/L	Chlorine Check (+/–)	Comments
ICV		50ml	50ml		9.930			
CCB					0.016			
MBLK					0.017			
LCS					10.169			
MS 20040709-01					0.106		-ve	
709-01MS					11.484			
709-01MSD					11.453			
851-01					4.052		-ve	
794-01					0.025		+ve	Rechecked.
790-01					13.577		+ve	Rechecked.
CCV					9.791			
CCB					0.019			

Batch ID: 360534 ~~360536~~ / 360536 MD 4/28/20

Reported By MD

Reviewed By: RG 4/28/2020

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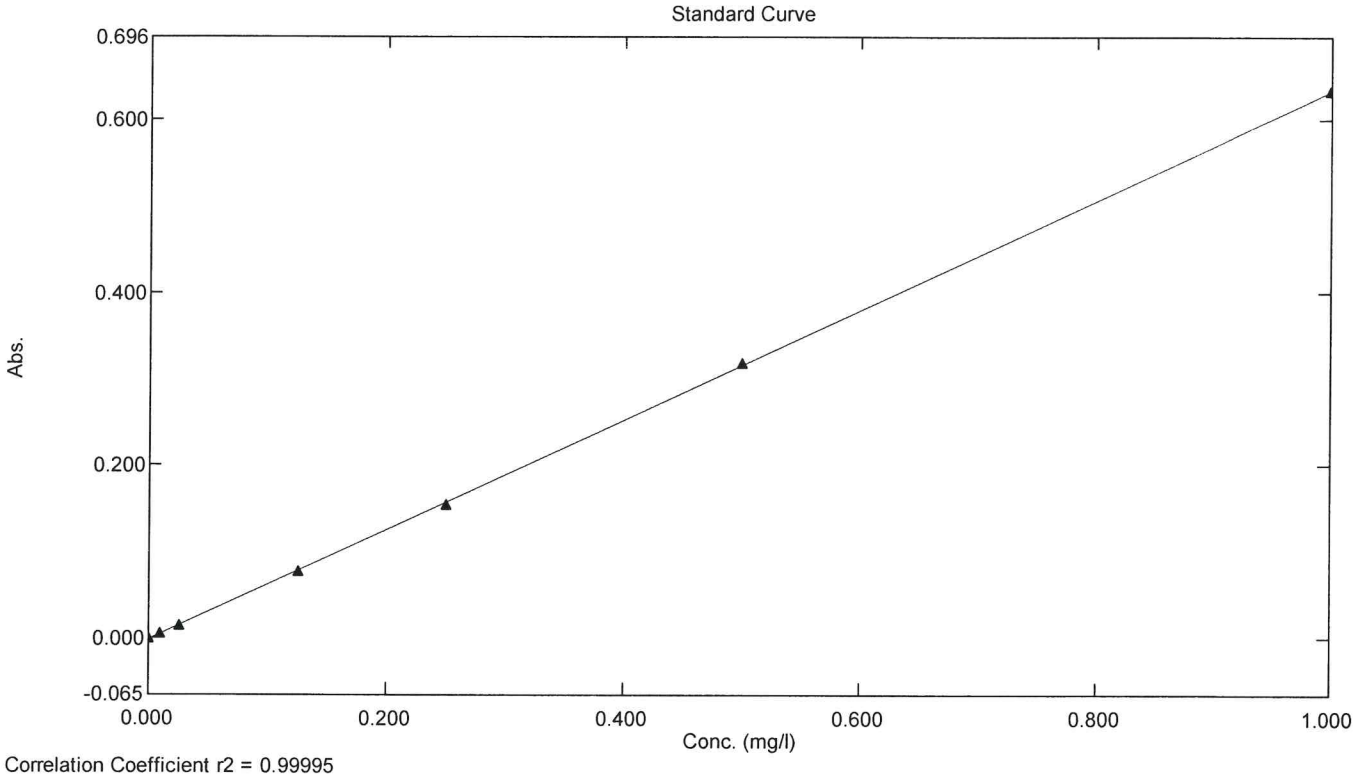
HS20040851 PORTHO WC

ALS WO# HS20040851

Standard Table Report

05/06/2020 11:21:39 AM

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Correlation Coefficient r2 = 0.99995

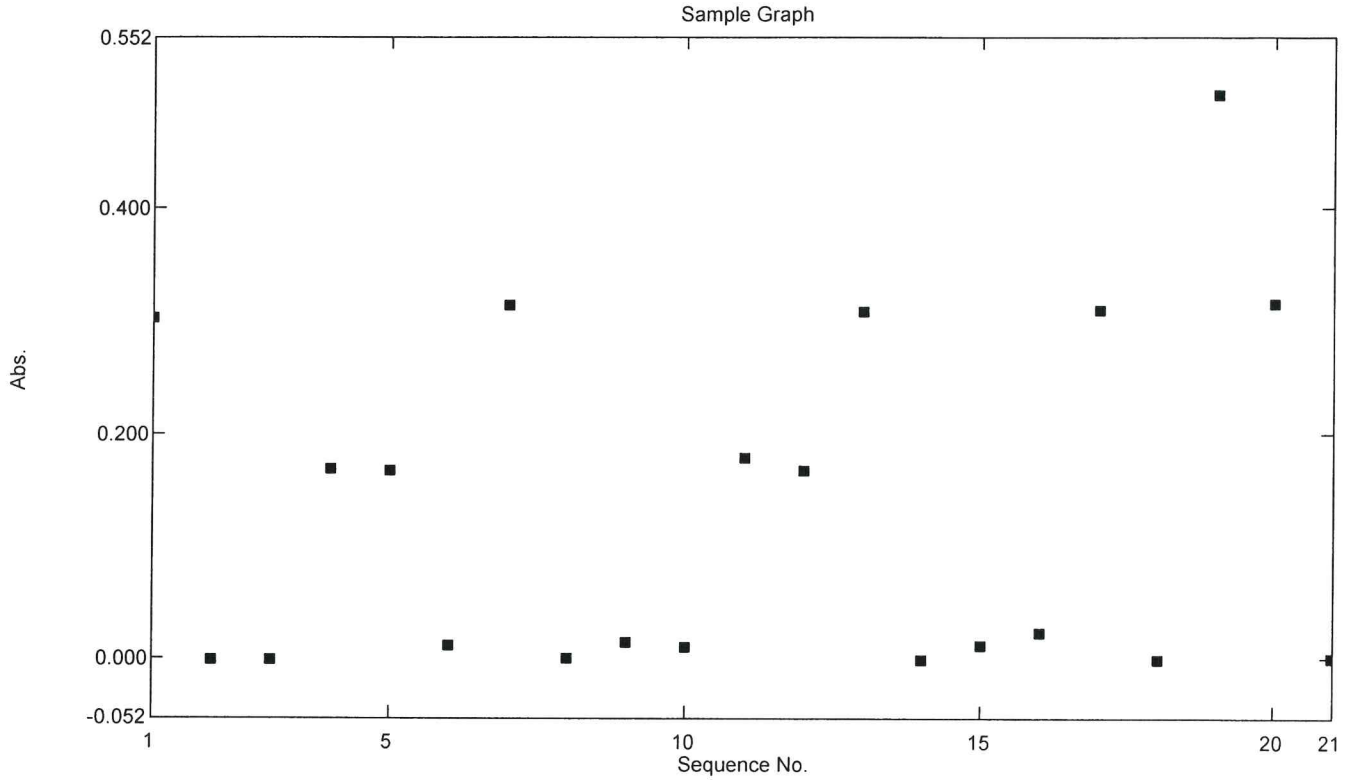
Standard Table

	Sample ID	Type	Ex	Conc	WL880.0	Wgt.Facto	Comments
1	STD1	Standard		0.000	-0.001	1.000	
2	STD2	Standard		0.010	0.006	1.000	
3	STD3	Standard		0.025	0.013	1.000	
4	STD4	Standard		0.125	0.077	1.000	
5	STD5	Standard		0.250	0.155	1.000	
6	STD6	Standard		0.500	0.319	1.000	
7	STD7	Standard		1.000	0.633	1.000	
8							

Sample Table Report

05/06/2020 11:21:28 AM

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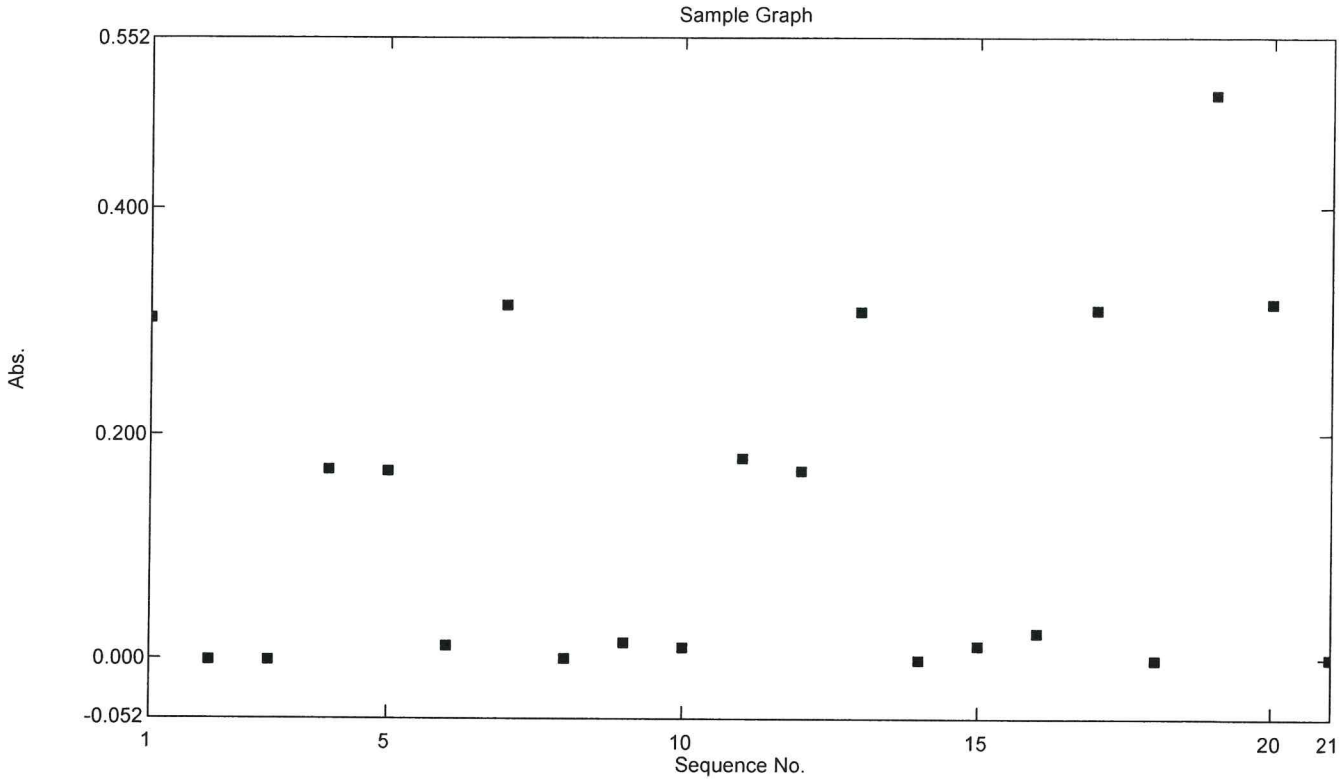
Sample Table

	Sample ID	Type	Ex	Conc	WL880.0	Comments
1	CCV	Unknown		0.478	0.302	313103401 WC-14
2	CCB	Unknown		-0.000	-0.002	
3	MBLK	Unknown		0.000	-0.002	
4	LCS	Unknown		0.267	0.168	313103402 WC-14
5	LCSD	Unknown		0.264	0.166	
6	20040774.03	Unknown		0.020	0.011	08:56AM
7	CCV2	Unknown		0.497	0.314	
8	CCB2	Unknown		0.002	-0.000	
9	20040774.01	Unknown		0.025	0.014	09:28AM
10	20040774.02	Unknown		0.019	0.010	09:28AM
11	20040774.02MS	Unknown		0.283	0.178	09:29AM
12	20040774.02MSD	Unknown		0.266	0.167	09:29AM
13	CCV3	Unknown		0.489	0.309	
14	CCB3	Unknown		0.001	-0.001	
15	20040340.16	Unknown		0.020	0.011	
16	20040341.16	Unknown		0.039	0.023	
17	CCV4	Unknown		0.491	0.310	
18	CCB4	Unknown		0.001	-0.001	C-313103609 UV-11
19	20040851.01	Unknown		0.792	0.501	

Sample Table Report

05/06/2020 11:21:28 AM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\O_PO4_UNKNOWN\2020\04222020_PORTHO.pho..



Sample Table

	Sample ID	Type	Ex	Conc	WL880.0	Comments
20	CCV5	Unknown		0.500	0.316	
21	CCB5	Unknown		0.003	0.000	
22						

NIT- AMN- W-ISE

Logbook **31105**

Ion Selective Electrode Logbook

ALS Laboratory Group — Analytical Chemistry & Testing Services

Analyst: MD

Date: 4/23/20 12:35PM

Method: SM4500NH3-D/EPA 350.3 or SM4500 NH3 B-F

Probe Calibration Date: 4/23/20

Cal Std ID: 3131034605-102

Probe ID: 501-15910

Std Level		mV	Conc., mg/L:
STD 1 (mg/L):	0.2	128.2	0.200
STD 2 (mg/L):	1	85.2	0.995
STD 3 (mg/L):	5	46.7	5.001

Sodium Thiosulfate ID:

Std Level	mV	Conc., mg/L:
STD 4 (mg/L): 10	29.4	10.006
STD 5 (mg/L): 50	-12.0	50.023

ISC / MS Spike ID: 3100601707

ICV Cal STD ID: 3131034605

DPD Reagent ID: 3100ECD909

ICAL Date & Slope: 100.5 % / -59.3 mV

WO # / SX #	Bottle #	Initial g or ml	Final Vol. ml	Dilution Factor	Initial Conc. mg/L	Final Conc. mg/L	Chlorine Check (+/–)	Comments
ICV		50ml	50ml		9.930			
CCB					0.016			
MBLK					0.017			
LCS					10.169			
MS200407 09-01					0.106		-ve	
709-01MS					11.484			
709-01MSD					11.453			
851-01					4.052		-ve	
794-01					0.025		+ve	Rechecked.
790-01					13.577		+ve	Rechecked.
CCV					9.791			
CCB					0.019			

Batch ID: 360534 ~~360536~~ / 360536 MD 4/28/20

Reported By: MD

Reviewed By: RG 4/28/2020

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F: +1 281 530 5887
www.alsglobal.com

WorkOrder: HS20041127

Longhorn GW Treatment Plant Bi Weekly Samples

Bhate Environmental Associates, Inc.

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

29-May-2020

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

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  - LH18/24-SP650_042820
  - Trip Blank
  - Dates Report
  - QC
  - Acronyms
  - Certifications
  - Sample Tracking Record
  - SampleReceiptCheckList
  - COC
- HS20041127 8260 Raw Data
- HS20041127 Wet Chem Raw Data (IC)

HS20041127

ALS WO# HS20041127

HS20041127 Longhorn GW Treatment Plant Bi Weekly Samples Final

ALS WO# HS20041127

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887

May 07, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20041127**

Laboratory Results for: **Longhorn GW Treatment Plant Bi Weekly Samples**

Dear Marcia,

ALS Environmental received 2 sample(s) on Apr 29, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

ALS Houston, US Date: 07-May-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
Work Order: HS20041127

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20041127-01	LH18/24-SP650_042820	Water		28-Apr-2020 14:00	29-Apr-2020 09:17	☐
HS20041127-02	Trip Blank	Water	CG 032420 -138	28-Apr-2020 00:00	29-Apr-2020 09:17	☐

ALS Houston, US Date: 07-May-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
Work Order: HS20041127

CASE NARRATIVE

GCMS Volatiles by Method SW8260

Batch ID: R360934

Sample ID: HS20041201-01

- MS and MSD are for an unrelated sample

WetChemistry by Method SW9056

Batch ID: R361140

Sample ID: LH18/24-SP650_042820 (HS20041127-01MS)

- The MS and/or MSD recovery was outside of the control; however, the result in the parent sample is greater than 4x the spike amount. chloride

ALS Houston, US Date: 07-May-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Bi Weekly Samples WorkOrder:HS20041127
Sample ID: LH18/24-SP650_042820 Lab ID:HS20041127-01
Collection Date: 28-Apr-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	30-Apr-2020 18:39
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	30-Apr-2020 18:39
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	30-Apr-2020 18:39
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	30-Apr-2020 18:39
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	30-Apr-2020 18:39
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	30-Apr-2020 18:39
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	30-Apr-2020 18:39
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	30-Apr-2020 18:39
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	30-Apr-2020 18:39
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	30-Apr-2020 18:39
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	30-Apr-2020 18:39
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	30-Apr-2020 18:39
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	30-Apr-2020 18:39
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	30-Apr-2020 18:39
1,2-Dichloroethane	**1.1**		**0.20**	**0.50**	**1.0**	**UG/L**	1	30-Apr-2020 18:39
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	30-Apr-2020 18:39
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	30-Apr-2020 18:39
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	30-Apr-2020 18:39
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	30-Apr-2020 18:39
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	30-Apr-2020 18:39
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	30-Apr-2020 18:39
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	30-Apr-2020 18:39
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	30-Apr-2020 18:39
2-Hexanone	1.0	U	1.0	1.0	2.0	UG/L	1	30-Apr-2020 18:39
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	30-Apr-2020 18:39
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	30-Apr-2020 18:39
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	30-Apr-2020 18:39
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	30-Apr-2020 18:39
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	30-Apr-2020 18:39
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	30-Apr-2020 18:39
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	30-Apr-2020 18:39
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	30-Apr-2020 18:39
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	30-Apr-2020 18:39
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	30-Apr-2020 18:39
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	30-Apr-2020 18:39
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	30-Apr-2020 18:39
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	30-Apr-2020 18:39
Chloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	30-Apr-2020 18:39
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	30-Apr-2020 18:39

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 07-May-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Bi Weekly Samples WorkOrder:HS20041127
Sample ID: LH18/24-SP650_042820 Lab ID:HS20041127-01
Collection Date: 28-Apr-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	30-Apr-2020 18:39
cis-1,2-Dichloroethene	**28**		**0.20**	**0.50**	**1.0**	**UG/L**	1	30-Apr-2020 18:39
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	30-Apr-2020 18:39
Dibromochloromethane	1.0	U	0.30	1.0	1.0	UG/L	1	30-Apr-2020 18:39
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	30-Apr-2020 18:39
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	30-Apr-2020 18:39
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	30-Apr-2020 18:39
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	30-Apr-2020 18:39
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	30-Apr-2020 18:39
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	30-Apr-2020 18:39
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	30-Apr-2020 18:39
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	30-Apr-2020 18:39
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	30-Apr-2020 18:39
Naphthalene	1.0	U	0.30	1.0	1.0	UG/L	1	30-Apr-2020 18:39
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	30-Apr-2020 18:39
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	30-Apr-2020 18:39
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	30-Apr-2020 18:39
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	30-Apr-2020 18:39
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	30-Apr-2020 18:39
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	30-Apr-2020 18:39
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	30-Apr-2020 18:39
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	30-Apr-2020 18:39
Trichloroethene	**4.4**		**0.20**	**0.50**	**1.0**	**UG/L**	1	30-Apr-2020 18:39
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	30-Apr-2020 18:39
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	30-Apr-2020 18:39
Surr: 1,2-Dichloroethane-d4	*117*			**0**	*81-118*	*%REC*	*1*	*30-Apr-2020 18:39*
Surr: 4-Bromofluorobenzene	*105*			**0**	*85-114*	*%REC*	*1*	*30-Apr-2020 18:39*
Surr: Dibromofluoromethane	*106*			**0**	*80-119*	*%REC*	*1*	*30-Apr-2020 18:39*
Surr: Toluene-d8	*107*			**0**	*89-112*	*%REC*	*1*	*30-Apr-2020 18:39*
ANIONS BY SW9056A		**Method:SW9056**						Analyst: JHD
Chloride	**294**		**2.00**	**5.00**	**5.00**	**mg/L**	10	05-May-2020 22:27
Sulfate	**41.3**		**0.200**	**0.500**	**0.500**	**mg/L**	1	05-May-2020 21:33

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 07-May-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Bi Weekly Samples WorkOrder:HS20041127
Sample ID: Trip Blank Lab ID:HS20041127-02
Collection Date: 28-Apr-2020 00:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	30-Apr-2020 17:51
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	30-Apr-2020 17:51
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	30-Apr-2020 17:51
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	30-Apr-2020 17:51
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	30-Apr-2020 17:51
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	30-Apr-2020 17:51
1,1-Dichloropropene	0.50	U	0.30	0.50	1.0	UG/L	1	30-Apr-2020 17:51
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	30-Apr-2020 17:51
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	30-Apr-2020 17:51
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	30-Apr-2020 17:51
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	30-Apr-2020 17:51
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	30-Apr-2020 17:51
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	30-Apr-2020 17:51
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	30-Apr-2020 17:51
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	30-Apr-2020 17:51
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	30-Apr-2020 17:51
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	30-Apr-2020 17:51
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	30-Apr-2020 17:51
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	30-Apr-2020 17:51
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	30-Apr-2020 17:51
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	30-Apr-2020 17:51
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	30-Apr-2020 17:51
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	30-Apr-2020 17:51
2-Hexanone	1.0	U	1.0	1.0	2.0	UG/L	1	30-Apr-2020 17:51
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	30-Apr-2020 17:51
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	30-Apr-2020 17:51
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	30-Apr-2020 17:51
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	30-Apr-2020 17:51
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	30-Apr-2020 17:51
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	30-Apr-2020 17:51
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	30-Apr-2020 17:51
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	30-Apr-2020 17:51
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	30-Apr-2020 17:51
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	30-Apr-2020 17:51
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	30-Apr-2020 17:51
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	30-Apr-2020 17:51
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	30-Apr-2020 17:51
Chloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	30-Apr-2020 17:51
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	30-Apr-2020 17:51

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 07-May-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Bi Weekly Samples WorkOrder:HS20041127
Sample ID: Trip Blank Lab ID:HS20041127-02
Collection Date: 28-Apr-2020 00:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	30-Apr-2020 17:51
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	30-Apr-2020 17:51
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	30-Apr-2020 17:51
Dibromochloromethane	1.0	U	0.30	1.0	1.0	UG/L	1	30-Apr-2020 17:51
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	30-Apr-2020 17:51
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	30-Apr-2020 17:51
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	30-Apr-2020 17:51
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	30-Apr-2020 17:51
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	30-Apr-2020 17:51
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	30-Apr-2020 17:51
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	30-Apr-2020 17:51
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	30-Apr-2020 17:51
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	30-Apr-2020 17:51
Naphthalene	1.0	U	0.30	1.0	1.0	UG/L	1	30-Apr-2020 17:51
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	30-Apr-2020 17:51
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	30-Apr-2020 17:51
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	30-Apr-2020 17:51
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	30-Apr-2020 17:51
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	30-Apr-2020 17:51
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	30-Apr-2020 17:51
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	30-Apr-2020 17:51
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	30-Apr-2020 17:51
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	30-Apr-2020 17:51
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	30-Apr-2020 17:51
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	30-Apr-2020 17:51
Surr: 1,2-Dichloroethane-d4	*118*			**0**	*81-118*	*%REC*	*1*	*30-Apr-2020 17:51*
Surr: 4-Bromofluorobenzene	*105*			**0**	*85-114*	*%REC*	*1*	*30-Apr-2020 17:51*
Surr: Dibromofluoromethane	*104*			**0**	*80-119*	*%REC*	*1*	*30-Apr-2020 17:51*
Surr: Toluene-d8	*106*			**0**	*89-112*	*%REC*	*1*	*30-Apr-2020 17:51*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 07-May-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20041127

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R360934 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Water	
HS20041127-01	LH18/24-SP650_042820	28 Apr 2020 14:00			30 Apr 2020 18:39	1
HS20041127-02	Trip Blank	28 Apr 2020 00:00			30 Apr 2020 17:51	1
Batch ID: R361140 (0)	**Test Name :** ANIONS BY SW9056A				**Matrix:** Water	
HS20041127-01	LH18/24-SP650_042820	28 Apr 2020 14:00			05 May 2020 22:27	10
HS20041127-01	LH18/24-SP650_042820	28 Apr 2020 14:00			05 May 2020 21:33	1

ALS Houston, US Date: 07-May-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20041127

QC BATCH REPORT

Batch ID: R360934 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-200430** Units: **UG/L** Analysis Date: **30-Apr-2020 17:27**
Client ID: Run ID: **VOA6_360934** SeqNo: **5572404** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	1.0	1.0								U
1,1,1-Trichloroethane	0.50	1.0								U
1,1,2,2-Tetrachloroethane	1.0	1.0								U
1,1,2-Trichloroethane	1.0	1.0								U
1,1-Dichloroethane	0.50	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,1-Dichloropropene	0.50	1.0								U
1,2,3-Trichlorobenzene	1.0	1.0								U
1,2,3-Trichloropropane	1.0	1.0								U
1,2,4-Trichlorobenzene	1.0	1.0								U
1,2,4-Trimethylbenzene	1.0	1.0								U
1,2-Dibromo-3-chloropropane	0.50	1.0								U
1,2-Dibromoethane	0.50	1.0								U
1,2-Dichlorobenzene	1.0	1.0								U
1,2-Dichloroethane	0.50	1.0								U
1,2-Dichloropropane	1.0	1.0								U
1,3,5-Trimethylbenzene	1.0	1.0								U
1,3-Dichlorobenzene	1.0	1.0								U
1,3-Dichloropropane	1.0	1.0								U
1,4-Dichlorobenzene	1.0	1.0								U
2,2-Dichloropropane	0.50	1.0								U
2-Butanone	1.0	2.0								U
2-Chlorotoluene	1.0	1.0								U
2-Hexanone	1.0	2.0								U
4-Chlorotoluene	1.0	1.0								U
4-Isopropyltoluene	1.0	1.0								U
4-Methyl-2-pentanone	2.0	2.0								U
Acetone	1.0	2.0								U
Benzene	0.50	1.0								U
Bromobenzene	1.0	1.0								U
Bromochloromethane	0.50	1.0								U
Bromodichloromethane	0.50	1.0								U
Bromoform	1.0	1.0								U
Bromomethane	1.0	1.0								U

ALS Houston, US Date: 07-May-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20041127

QC BATCH REPORT

Batch ID: R360934 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-200430** Units: **UG/L** Analysis Date: **30-Apr-2020 17:27**
Client ID: Run ID: **VOA6_360934** SeqNo: **5572404** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	1.0	2.0								U
Carbon tetrachloride	1.0	1.0								U
Chlorobenzene	1.0	1.0								U
Chloroethane	1.0	1.0								U
Chloroform	0.50	1.0								U
Chloromethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
cis-1,3-Dichloropropene	0.50	1.0								U
Dibromochloromethane	1.0	1.0								U
Dibromomethane	0.50	1.0								U
Dichlorodifluoromethane	1.0	1.0								U
Ethylbenzene	1.0	1.0								U
Hexachlorobutadiene	1.0	1.0								U
Isopropylbenzene	1.0	1.0								U
m,p-Xylene	1.0	2.0								U
Methylene chloride	1.0	2.0								U
Naphthalene	1.0	1.0								U
n-Butylbenzene	1.0	1.0								U
n-Propylbenzene	1.0	1.0								U
o-Xylene	1.0	1.0								U
sec-Butylbenzene	1.0	1.0								U
Styrene	1.0	1.0								U
tert-Butylbenzene	1.0	1.0								U
Tetrachloroethene	1.0	1.0								U
Toluene	0.50	1.0								U
trans-1,2-Dichloroethene	0.50	1.0								U
trans-1,3-Dichloropropene	0.50	1.0								U
Trichloroethene	0.50	1.0								U
Trichlorofluoromethane	1.0	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*58.64*	*1.0*	*50*	*0*	*117*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*52.26*	*1.0*	*50*	*0*	*105*	*85 - 114*				
Surr: Dibromofluoromethane	*52.04*	*1.0*	*50*	*0*	*104*	*80 - 119*				
Surr: Toluene-d8	*53.3*	*1.0*	*50*	*0*	*107*	*89 - 112*				

ALS Houston, US Date: 07-May-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20041127

QC BATCH REPORT

Batch ID: R360934 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-200430** Units: **UG/L** Analysis Date: **30-Apr-2020 16:39**
Client ID: Run ID: **VOA6_360934** SeqNo: **5572403** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	18.7	1.0	20	0	93.5	78 - 124				
1,1,1-Trichloroethane	19.91	1.0	20	0	99.5	74 - 131				
1,1,2,2-Tetrachloroethane	18.99	1.0	20	0	94.9	71 - 121				
1,1,2-Trichloroethane	20.12	1.0	20	0	101	80 - 119				
1,1-Dichloroethane	22.3	1.0	20	0	112	77 - 125				
1,1-Dichloroethene	19.15	1.0	20	0	95.8	71 - 131				
1,1-Dichloropropene	17.15	1.0	20	0	85.7	78 - 125				
1,2,3-Trichlorobenzene	15.06	1.0	20	0	75.3	69 - 129				
1,2,3-Trichloropropane	19.73	1.0	20	0	98.6	73 - 122				
1,2,4-Trichlorobenzene	16.67	1.0	20	0	83.4	69 - 130				
1,2,4-Trimethylbenzene	18.56	1.0	20	0	92.8	76 - 124				
1,2-Dibromo-3-chloropropane	16.83	1.0	20	0	84.2	62 - 128				
1,2-Dibromoethane	19.6	1.0	20	0	98.0	77 - 121				
1,2-Dichlorobenzene	18.15	1.0	20	0	90.7	80 - 119				
1,2-Dichloroethane	20.95	1.0	20	0	105	73 - 128				
1,2-Dichloropropane	19.67	1.0	20	0	98.3	78 - 122				
1,3,5-Trimethylbenzene	18.07	1.0	20	0	90.4	75 - 124				
1,3-Dichlorobenzene	17.72	1.0	20	0	88.6	80 - 119				
1,3-Dichloropropane	19.7	1.0	20	0	98.5	80 - 119				
1,4-Dichlorobenzene	17.29	1.0	20	0	86.4	79 - 118				
2,2-Dichloropropane	22.93	1.0	20	0	115	60 - 139				
2-Butanone	36.94	2.0	40	0	92.4	56 - 143				
2-Chlorotoluene	18.87	1.0	20	0	94.3	79 - 122				
2-Hexanone	37.96	2.0	40	0	94.9	57 - 139				
4-Chlorotoluene	19.16	1.0	20	0	95.8	78 - 122				
4-Isopropyltoluene	16.45	1.0	20	0	82.2	77 - 127				
4-Methyl-2-pentanone	41.55	2.0	40	0	104	67 - 130				
Acetone	43.43	2.0	40	0	109	39 - 160				
Benzene	18.58	1.0	20	0	92.9	79 - 120				
Bromobenzene	18	1.0	20	0	90.0	80 - 120				
Bromochloromethane	19.56	1.0	20	0	97.8	78 - 123				
Bromodichloromethane	22.03	1.0	20	0	110	79 - 125				
Bromoform	19.02	1.0	20	0	95.1	66 - 130				
Bromomethane	22.92	1.0	20	0	115	53 - 141				

ALS Houston, US Date: 07-May-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20041127

QC BATCH REPORT

Batch ID: R360934 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-200430** Units: **UG/L** Analysis Date: **30-Apr-2020 16:39**
Client ID: Run ID: **VOA6_360934** SeqNo: **5572403** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	37.51	2.0	40	0	93.8	64 - 133				
Carbon tetrachloride	16.85	1.0	20	0	84.3	72 - 136				
Chlorobenzene	18.18	1.0	20	0	90.9	82 - 118				
Chloroethane	17.9	1.0	20	0	89.5	60 - 138				
Chloroform	20.89	1.0	20	0	104	79 - 124				
Chloromethane	16.66	1.0	20	0	83.3	50 - 139				
cis-1,2-Dichloroethene	20.56	1.0	20	0	103	78 - 123				
cis-1,3-Dichloropropene	20.57	1.0	20	0	103	75 - 124				
Dibromochloromethane	19.63	1.0	20	0	98.1	74 - 126				
Dibromomethane	21.25	1.0	20	0	106	79 - 123				
Dichlorodifluoromethane	18.57	1.0	20	0	92.9	32 - 152				
Ethylbenzene	17.62	1.0	20	0	88.1	79 - 121				
Hexachlorobutadiene	19.03	1.0	20	0	95.2	66 - 134				
Isopropylbenzene	16.91	1.0	20	0	84.6	72 - 131				
m,p-Xylene	35.45	2.0	40	0	88.6	80 - 121				
Methylene chloride	19.45	2.0	20	0	97.2	74 - 124				
Naphthalene	15.49	1.0	20	0	77.5	61 - 128				
n-Butylbenzene	18.52	1.0	20	0	92.6	75 - 128				
n-Propylbenzene	17.99	1.0	20	0	89.9	76 - 126				
o-Xylene	18.21	1.0	20	0	91.1	78 - 122				
sec-Butylbenzene	16.5	1.0	20	0	82.5	77 - 126				
Styrene	18.56	1.0	20	0	92.8	78 - 123				
tert-Butylbenzene	16.43	1.0	20	0	82.1	78 - 124				
Tetrachloroethene	16.78	1.0	20	0	83.9	74 - 129				
Toluene	19.98	1.0	20	0	99.9	80 - 121				
trans-1,2-Dichloroethene	22.72	1.0	20	0	114	75 - 124				
trans-1,3-Dichloropropene	21.41	1.0	20	0	107	73 - 127				
Trichloroethene	18.11	1.0	20	0	90.6	79 - 123				
Trichlorofluoromethane	19.21	1.0	20	0	96.1	65 - 141				
Vinyl chloride	18.01	1.0	20	0	90.0	58 - 137				
Surr: 1,2-Dichloroethane-d4	*56.95*	*1.0*	*50*	*0*	*114*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*48.67*	*1.0*	*50*	*0*	*97.3*	*85 - 114*				
Surr: Dibromofluoromethane	*47.47*	*1.0*	*50*	*0*	*94.9*	*80 - 119*				
Surr: Toluene-d8	*46.96*	*1.0*	*50*	*0*	*93.9*	*89 - 112*				

ALS Houston, US Date: 07-May-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20041127

QC BATCH REPORT

Batch ID: R360934 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20041201-01MS** Units: **UG/L** Analysis Date: **30-Apr-2020 19:51**
Client ID: Run ID: **VOA6_360934** SeqNo: **5572408** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	21.26	1.0	20	0	106	78 - 124				
1,1,1-Trichloroethane	24.78	1.0	20	0	124	74 - 131				
1,1,2,2-Tetrachloroethane	20.04	1.0	20	0	100	71 - 121				
1,1,2-Trichloroethane	21.58	1.0	20	0	108	80 - 119				
1,1-Dichloroethane	25.68	1.0	20	0	128	77 - 125				S
1,1-Dichloroethene	23.75	1.0	20	0	119	71 - 131				
1,1-Dichloropropene	21.59	1.0	20	0	108	78 - 125				
1,2,3-Trichlorobenzene	11.83	1.0	20	0	59.2	69 - 129				S
1,2,3-Trichloropropane	20.53	1.0	20	0	103	73 - 122				
1,2,4-Trichlorobenzene	15.03	1.0	20	0	75.2	69 - 130				
1,2,4-Trimethylbenzene	22.67	1.0	20	0	113	76 - 124				
1,2-Dibromo-3-chloropropane	16.4	1.0	20	0	82.0	62 - 128				
1,2-Dibromoethane	21.15	1.0	20	0	106	77 - 121				
1,2-Dichlorobenzene	20.49	1.0	20	0	102	80 - 119				
1,2-Dichloroethane	24.04	1.0	20	0	120	73 - 128				
1,2-Dichloropropane	22.06	1.0	20	0	110	78 - 122				
1,3,5-Trimethylbenzene	23.14	1.0	20	0	116	75 - 124				
1,3-Dichlorobenzene	20.36	1.0	20	0	102	80 - 119				
1,3-Dichloropropane	20.74	1.0	20	0	104	80 - 119				
1,4-Dichlorobenzene	20.06	1.0	20	0	100	79 - 118				
2,2-Dichloropropane	26.35	1.0	20	0	132	60 - 139				
2-Butanone	32.31	2.0	40	0	80.8	56 - 143				
2-Chlorotoluene	23.05	1.0	20	0	115	79 - 122				
2-Hexanone	36.39	2.0	40	0	91.0	57 - 139				
4-Chlorotoluene	22.59	1.0	20	0	113	78 - 122				
4-Isopropyltoluene	22.4	1.0	20	0	112	77 - 127				
4-Methyl-2-pentanone	40.98	2.0	40	0	102	67 - 130				
Acetone	33.29	2.0	40	0	83.2	39 - 160				
Benzene	21.5	1.0	20	0	108	79 - 120				
Bromobenzene	20.62	1.0	20	0	103	80 - 120				
Bromochloromethane	21.63	1.0	20	0	108	78 - 123				
Bromodichloromethane	24.73	1.0	20	0	124	79 - 125				
Bromoform	19.87	1.0	20	0	99.4	66 - 130				
Bromomethane	26.22	1.0	20	0	131	53 - 141				

ALS Houston, US Date: 07-May-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20041127

QC BATCH REPORT

Batch ID: R360934 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20041201-01MS** Units: **UG/L** Analysis Date: **30-Apr-2020 19:51**
Client ID: Run ID: **VOA6_360934** SeqNo: **5572408** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	44.5	2.0	40	0	111	64 - 133				
Carbon tetrachloride	22.4	1.0	20	0	112	72 - 136				
Chlorobenzene	21.11	1.0	20	0	106	82 - 118				
Chloroethane	20.79	1.0	20	0	104	60 - 138				
Chloroform	24.39	1.0	20	0	122	79 - 124				
Chloromethane	19.03	1.0	20	0	95.2	50 - 139				
cis-1,2-Dichloroethene	23.36	1.0	20	0	117	78 - 123				
cis-1,3-Dichloropropene	22.51	1.0	20	0	113	75 - 124				
Dibromochloromethane	20.45	1.0	20	0	102	74 - 126				
Dibromomethane	23.04	1.0	20	0	115	79 - 123				
Dichlorodifluoromethane	24.09	1.0	20	0	120	32 - 152				
Ethylbenzene	21.76	1.0	20	0	109	79 - 121				
Hexachlorobutadiene	19.99	1.0	20	0	99.9	66 - 134				
Isopropylbenzene	22.52	1.0	20	0	113	72 - 131				
m,p-Xylene	43.11	2.0	40	0	108	80 - 121				
Methylene chloride	21.51	2.0	20	0	108	74 - 124				
Naphthalene	12.83	1.0	20	0	64.1	61 - 128				
n-Butylbenzene	24.84	1.0	20	0	124	75 - 128				
n-Propylbenzene	23.69	1.0	20	0	118	76 - 126				
o-Xylene	21.93	1.0	20	0	110	78 - 122				
sec-Butylbenzene	22.75	1.0	20	0	114	77 - 126				
Styrene	21.35	1.0	20	0	107	78 - 123				
tert-Butylbenzene	22.56	1.0	20	0	113	78 - 124				
Tetrachloroethene	21.38	1.0	20	0	107	74 - 129				
Toluene	23.21	1.0	20	0	116	80 - 121				
trans-1,2-Dichloroethene	26.92	1.0	20	0	135	75 - 124				S
trans-1,3-Dichloropropene	22.73	1.0	20	0	114	73 - 127				
Trichloroethene	20.97	1.0	20	0	105	79 - 123				
Trichlorofluoromethane	25.89	1.0	20	0	129	65 - 141				
Vinyl chloride	21.66	1.0	20	0	108	58 - 137				
Surr: 1,2-Dichloroethane-d4	*59.42*	*1.0*	*50*	*0*	*119*	*81 - 118*				S
Surr: 4-Bromofluorobenzene	*53.59*	*1.0*	*50*	*0*	*107*	*85 - 114*				
Surr: Dibromofluoromethane	*52.48*	*1.0*	*50*	*0*	*105*	*80 - 119*				
Surr: Toluene-d8	*52.43*	*1.0*	*50*	*0*	*105*	*89 - 112*				

ALS Houston, US Date: 07-May-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20041127

QC BATCH REPORT

Batch ID: R360934 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20041201-01MSD** Units: **UG/L** Analysis Date: **30-Apr-2020 20:15**
Client ID: Run ID: **VOA6_360934** SeqNo: **5572409** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	20.03	1.0	20	0	100	78 - 124	21.26	5.94	20	
1,1,1-Trichloroethane	23.54	1.0	20	0	118	74 - 131	24.78	5.13	20	
1,1,2,2-Tetrachloroethane	19.43	1.0	20	0	97.1	71 - 121	20.04	3.1	20	
1,1,2-Trichloroethane	21.41	1.0	20	0	107	80 - 119	21.58	0.789	20	
1,1-Dichloroethane	24.5	1.0	20	0	122	77 - 125	25.68	4.72	20	
1,1-Dichloroethene	22.16	1.0	20	0	111	71 - 131	23.75	6.93	20	
1,1-Dichloropropene	21.11	1.0	20	0	106	78 - 125	21.59	2.23	20	
1,2,3-Trichlorobenzene	13.03	1.0	20	0	65.1	69 - 129	11.83	9.59	20	S
1,2,3-Trichloropropane	20.01	1.0	20	0	100	73 - 122	20.53	2.54	20	
1,2,4-Trichlorobenzene	14.59	1.0	20	0	72.9	69 - 130	15.03	3.01	20	
1,2,4-Trimethylbenzene	21.93	1.0	20	0	110	76 - 124	22.67	3.32	20	
1,2-Dibromo-3-chloropropane	16.05	1.0	20	0	80.3	62 - 128	16.4	2.15	20	
1,2-Dibromoethane	20.67	1.0	20	0	103	77 - 121	21.15	2.31	20	
1,2-Dichlorobenzene	20.15	1.0	20	0	101	80 - 119	20.49	1.7	20	
1,2-Dichloroethane	23.13	1.0	20	0	116	73 - 128	24.04	3.84	20	
1,2-Dichloropropane	21.79	1.0	20	0	109	78 - 122	22.06	1.23	20	
1,3,5-Trimethylbenzene	22.12	1.0	20	0	111	75 - 124	23.14	4.52	20	
1,3-Dichlorobenzene	19.97	1.0	20	0	99.9	80 - 119	20.36	1.93	20	
1,3-Dichloropropane	20.47	1.0	20	0	102	80 - 119	20.74	1.29	20	
1,4-Dichlorobenzene	19.75	1.0	20	0	98.7	79 - 118	20.06	1.58	20	
2,2-Dichloropropane	24.87	1.0	20	0	124	60 - 139	26.35	5.75	20	
2-Butanone	32.52	2.0	40	0	81.3	56 - 143	32.31	0.666	20	
2-Chlorotoluene	21.76	1.0	20	0	109	79 - 122	23.05	5.79	20	
2-Hexanone	35.7	2.0	40	0	89.2	57 - 139	36.39	1.93	20	
4-Chlorotoluene	22.02	1.0	20	0	110	78 - 122	22.59	2.55	20	
4-Isopropyltoluene	21.5	1.0	20	0	107	77 - 127	22.4	4.12	20	
4-Methyl-2-pentanone	41.55	2.0	40	0	104	67 - 130	40.98	1.38	20	
Acetone	33.58	2.0	40	0	84.0	39 - 160	33.29	0.863	20	
Benzene	20.28	1.0	20	0	101	79 - 120	21.5	5.87	20	
Bromobenzene	20.11	1.0	20	0	101	80 - 120	20.62	2.51	20	
Bromochloromethane	21.04	1.0	20	0	105	78 - 123	21.63	2.79	20	
Bromodichloromethane	23.65	1.0	20	0	118	79 - 125	24.73	4.45	20	
Bromoform	19.51	1.0	20	0	97.6	66 - 130	19.87	1.84	20	
Bromomethane	24.51	1.0	20	0	123	53 - 141	26.22	6.76	20	

ALS Houston, US Date: 07-May-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20041127

QC BATCH REPORT

Batch ID: R360934 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20041201-01MSD** Units: **UG/L** Analysis Date: **30-Apr-2020 20:15**
Client ID: Run ID: **VOA6_360934** SeqNo: **5572409** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	42.42	2.0	40	0	106	64 - 133	44.5	4.78	20	
Carbon tetrachloride	21.34	1.0	20	0	107	72 - 136	22.4	4.81	20	
Chlorobenzene	19.58	1.0	20	0	97.9	82 - 118	21.11	7.54	20	
Chloroethane	19.7	1.0	20	0	98.5	60 - 138	20.79	5.39	20	
Chloroform	23.01	1.0	20	0	115	79 - 124	24.39	5.85	20	
Chloromethane	17.85	1.0	20	0	89.2	50 - 139	19.03	6.4	20	
cis-1,2-Dichloroethene	22.89	1.0	20	0	114	78 - 123	23.36	2.02	20	
cis-1,3-Dichloropropene	22.53	1.0	20	0	113	75 - 124	22.51	0.0518	20	
Dibromochloromethane	20.14	1.0	20	0	101	74 - 126	20.45	1.54	20	
Dibromomethane	22.96	1.0	20	0	115	79 - 123	23.04	0.326	20	
Dichlorodifluoromethane	22.04	1.0	20	0	110	32 - 152	24.09	8.91	20	
Ethylbenzene	20.71	1.0	20	0	104	79 - 121	21.76	4.94	20	
Hexachlorobutadiene	19.27	1.0	20	0	96.3	66 - 134	19.99	3.65	20	
Isopropylbenzene	21.57	1.0	20	0	108	72 - 131	22.52	4.31	20	
m,p-Xylene	40.94	2.0	40	0	102	80 - 121	43.11	5.17	20	
Methylene chloride	20.76	2.0	20	0	104	74 - 124	21.51	3.51	20	
Naphthalene	13.68	1.0	20	0	68.4	61 - 128	12.83	6.42	20	
n-Butylbenzene	24.52	1.0	20	0	123	75 - 128	24.84	1.32	20	
n-Propylbenzene	22.62	1.0	20	0	113	76 - 126	23.69	4.61	20	
o-Xylene	20.63	1.0	20	0	103	78 - 122	21.93	6.1	20	
sec-Butylbenzene	21.82	1.0	20	0	109	77 - 126	22.75	4.18	20	
Styrene	20.59	1.0	20	0	103	78 - 123	21.35	3.6	20	
tert-Butylbenzene	21.44	1.0	20	0	107	78 - 124	22.56	5.1	20	
Tetrachloroethene	20.31	1.0	20	0	102	74 - 129	21.38	5.15	20	
Toluene	21.91	1.0	20	0	110	80 - 121	23.21	5.8	20	
trans-1,2-Dichloroethene	25.01	1.0	20	0	125	75 - 124	26.92	7.38	20	S
trans-1,3-Dichloropropene	22.76	1.0	20	0	114	73 - 127	22.73	0.121	20	
Trichloroethene	20.23	1.0	20	0	101	79 - 123	20.97	3.58	20	
Trichlorofluoromethane	24.24	1.0	20	0	121	65 - 141	25.89	6.59	20	
Vinyl chloride	20.41	1.0	20	0	102	58 - 137	21.66	5.92	20	
Surr: 1,2-Dichloroethane-d4	*58.85*	*1.0*	*50*	*0*	*118*	*81 - 118*	*59.42*	*0.959*	*20*	
Surr: 4-Bromofluorobenzene	*53.96*	*1.0*	*50*	*0*	*108*	*85 - 114*	*53.59*	*0.701*	*20*	
Surr: Dibromofluoromethane	*52.36*	*1.0*	*50*	*0*	*105*	*80 - 119*	*52.48*	*0.231*	*20*	
Surr: Toluene-d8	*51.88*	*1.0*	*50*	*0*	*104*	*89 - 112*	*52.43*	*1.05*	*20*	

ALS Houston, US Date: 07-May-20

Client:	Bhate Environmental Associates, Inc.
Project:	Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder:	HS20041127

QC BATCH REPORT

Batch ID:	**R360934 (0)**	**Instrument:**	**VOA6**	**Method:**	**VOLATILES ORGANICS BY METHOD 8260C**

The following samples were analyzed in this batch: HS20041127-01 HS20041127-02

ALS Houston, US Date: 07-May-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: HS20041127

QC BATCH REPORT

Batch ID: R361140 (0) **Instrument:** ICS-Integrion **Method:** ANIONS BY SW9056A

MBLK Sample ID: **WBLKW1-050520** Units: **mg/L** Analysis Date: **05-May-2020 22:46**
Client ID: Run ID: **ICS-Integrion_361140** SeqNo: **5576522** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	0.500	0.500								U
Sulfate	0.500	0.500								U

LCS Sample ID: **WLCSW1-050520** Units: **mg/L** Analysis Date: **05-May-2020 23:04**
Client ID: Run ID: **ICS-Integrion_361140** SeqNo: **5576523** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.82	0.500	20	0	99.1	80 - 120				
Sulfate	19.61	0.500	20	0	98.1	80 - 120				

MS Sample ID: **HS20041127-01MS** Units: **mg/L** Analysis Date: **05-May-2020 21:51**
Client ID: **LH18/24-SP650_042820** Run ID: **ICS-Integrion_361140** SeqNo: **5576519** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	285.9	0.500	10	283.1	28.5	80 - 120				SEO
Sulfate	49.86	0.500	10	41.34	85.2	80 - 120				O

MSD Sample ID: **HS20041127-01MSD** Units: **mg/L** Analysis Date: **05-May-2020 22:09**
Client ID: **LH18/24-SP650_042820** Run ID: **ICS-Integrion_361140** SeqNo: **5576520** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	285	0.500	10	283.1	19.1	80 - 120	285.9	0.331	20	SEO
Sulfate	49.88	0.500	10	41.34	85.4	80 - 120	49.86	0.0447	20	O

The following samples were analyzed in this batch: HS20041127-01

ALS Houston, US Date: 07-May-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
WorkOrder: **HS20041127**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Dept of Defense	ANAB L2231 V009	22-Dec-2021
Florida	E87611-28	30-Jun-2020
Illinois	2000322019-2	09-May-2020
Kansas	E-10352 2019-2020	31-Jul-2020
Louisiana	03087, 2019-2020	30-Jun-2020
Maryland	343, 2019-2020	30-Jun-2020
North Carolina	624-2020	31-Dec-2020
Oklahoma	2019-067	31-Aug-2020
Texas	T104704231-20-26	30-Apr-2021

ALS Houston, US Date: 07-May-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Bi Weekly Samples
Work Order: HS20041127

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20041127-01	LH18/24-SP650_042820	Login	4/29/2020 10:54:48 AM	JRM	WET230
HS20041127-01	LH18/24-SP650_042820	Login	4/29/2020 10:54:48 AM	JRM	VOA197
HS20041127-02	Trip Blank	Login	4/29/2020 10:54:48 AM	JRM	VOA197

ALS Houston, US Date: 07-May-20

Sample Receipt Checklist

Client Name: Bhate Environmental
Work Order: HS20041127
Date/Time Received: **29-Apr-2020 09:17**
Received by: **AC**

Checklist completed by: *Jared R. Makan* eSignature 29-Apr-2020 Date
Reviewed by: *Corey Grandits* eSignature 29-Apr-2020 Date

Matrices: **Water**
Carrier name: **FedEx Priority Overnight**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Samplers name present on COC?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	

Temperature(s)/Thermometer(s):	1.6°C/1.6°C UC/C	IR11
Cooler(s)/Kit(s):	45883	
Date/Time sample(s) sent to storage:	04/29/2020 10:57	

Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stancliff Rd. Suite 210, Houston, Tx. 77099 ATTN: R.J. Modashia

Project: BHATE
LONGHORN ARMY AMMN. PLANT (LHAAP)
GROUNDWATER TREATMENT PLANT (GWTP)
KARNACK, TEXAS

Project No. NWO1312.0150.0 16.0001

Job:
GROUNDWATER TREATMENT PLANT BI-WEEKLY SAMPLES

Prepared By: Scott Beesinger

P.O Number

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: VOC	Analyses: CHLORIDE, SULFATE	Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP650_042820	Water	04/28/20 / 14:00		3	3		HCL	
LH18/24-SP650_042820	Water	04/28/20 / 14:00		1		1	NONE	
Trip Blank	Water	04/28/20		2	2		HCL	

Additional Remarks: Standard TAT on Chloride & Sulfate. 24 Hour TAT on VOC

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	04/28/20	14:30	AC	4/29/2020	09:17						

9For Lab Use Only

Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition

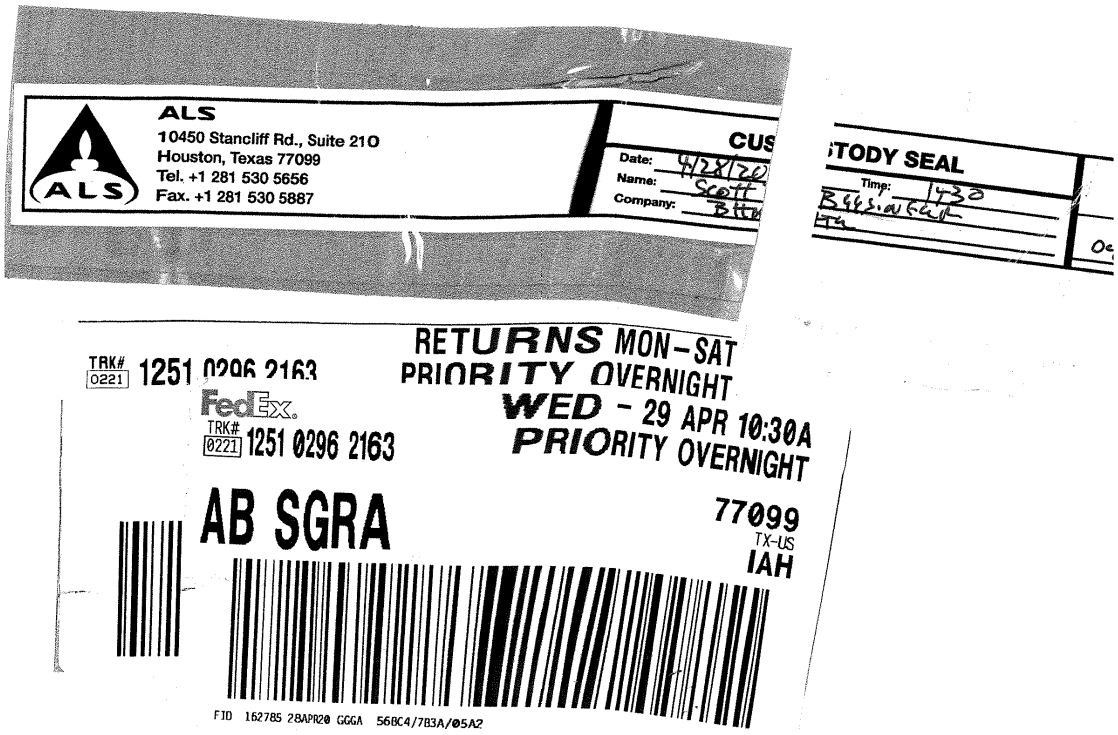
Remarks

HS20041127

Bhate Environmental Associates, Inc.
Longhorn GW Treatment Plant Bi Weekly Samples

(Word) S:\I-ces\Forms\Chain of Custody - BiWeekly

SIC
16
IRA
CCO
45883



ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

CUS
Date: 4/28/20
Name: Scott
Company: Bl

TODY SEAL
Time: 1430

TRK# 0221 1251 0296 2163

RETURNS MON-SAT
PRIORITY OVERNIGHT

FedEx.

TRK# 0221 1251 0296 2163

WED - 29 APR 10:30A
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US
IAH

FID 162785 28APR20 GGGA 568C4/7B3A/05A2

HS20041127 8260 Raw Data

ALS WO# HS20041127

FORM 2
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: ALS GROUP Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20041127

	CLIENT SAMPLE NO.	SMC1 #	SMC2 (DCE)#	SMC3 (TOL)#	OTHER #	TOT OUT
01	VLCSW-200430	95	114	94	97	0
02	VBLKW-200430	104	117	106	104	0
03	HS20041127-02	104	118	106	105	0
04	HS20041127-01	106	117	107	105	0
05	HS20041201-01	105	119	105	107	0
06	HS20041201-01	105	118	104	108	0
07						
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		QC LIMITS
SMC1	= Dibromofluoromethane	(74-125)
SMC2 (DCE)	= 1,2-Dichloroethane-d4	(71-125)
SMC3 (TOL)	= Toluene-d8	(78-123)
OTHER	= 4-Bromofluorobenzene	(70-125)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS GROUP Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20041127

Matrix Spike - Sample No.: 1CV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
Bromochloromethane	50.00	49.39	99	80-120
Vinyl Chloride	50.00	48.92	98	80-120
Chloromethane	50.00	46.74	93	80-120
Bromomethane	50.00	49.72	99	80-120
Chloroethane	50.00	46.21	92	80-120
Methylene Chloride	50.00	49.90	100	80-120
Acetone	100.00	110.44	110	80-120
Carbon Disulfide	100.00	99.62	100	80-120
1,1-Dichloroethene	50.00	49.26	98	80-120
trans-1,2-Dichloroethen	50.00	59.54	119	80-120
Carbon Tetrachloride	50.00	45.07	90	80-120
Bromodichloromethane	50.00	43.52	87	80-120
1,1-Dichloroethane	50.00	59.64	119	80-120
1,2-Dichloropropane	50.00	42.59	85	80-120
2-Butanone	100.00	97.34	97	80-120
cis-1,3-Dichloropropene	50.00	43.24	86	80-120
Dibromochloromethane	50.00	51.99	104	80-120
1,1,2-Trichloroethane	50.00	49.55	99	80-120
cis-1,2-Dichloroethene	50.00	54.60	109	80-120
Benzene	50.00	49.04	98	80-120
Chloroform	50.00	53.43	107	80-120
trans-1,3-Dichloroprope	50.00	45.28	90	80-120
Bromoform	50.00	52.75	106	80-120
1,1,1-Trichloroethane	50.00	51.74	103	80-120
4-Methyl-2-Pentanone	100.00	88.84	89	80-120
2-Hexanone	100.00	93.04	93	80-120
1,2-Dichloroethane	50.00	52.96	106	80-120
1,1,2,2-Tetrachloroetha	50.00	44.78	90	80-120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

_____

FORM III VOA

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS GROUP Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20041127

Matrix Spike - Sample No.: 1CV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
Trichloroethene	50.00	48.84	98	80-120
Toluene	50.00	51.18	102	80-120
Dichlorodifluoromethane	50.00	49.71	99	80-120
Trichlorofluoromethane	50.00	49.36	99	80-120
Tetrachloroethene	50.00	50.63	101	80-120
1,2-Dibromoethane	50.00	49.86	100	80-120
Chlorobenzene	50.00	49.09	98	80-120
1,3-Dichlorobenzene	50.00	50.26	100	80-120
1,4-Dichlorobenzene	50.00	48.62	97	80-120
Ethylbenzene	50.00	49.42	99	80-120
1,2-Dichlorobenzene	50.00	56.42	113	80-120
m,p-Xylenes	100.00	99.74	100	80-120
o-Xylene	50.00	50.93	102	80-120
Styrene	50.00	51.21	102	80-120
2,2-Dichloropropane	50.00	58.56	117	80-120
1,1-Dichloropropene	50.00	46.37	93	80-120
Dibromomethane	50.00	42.01	84	80-120
1,3-Dichloropropane	50.00	49.05	98	80-120
1,1,1,2-Tetrachloroetha	50.00	51.85	104	80-120
Isopropylbenzene	50.00	49.35	99	80-120
Bromobenzene	50.00	49.43	99	80-120
1,2,3-Trichloropropane	50.00	46.83	94	80-120
n-Propylbenzene	50.00	47.47	95	80-120
2-Chlorotoluene	50.00	48.44	97	80-120
1,3,5-Trimethylbenzene	50.00	48.76	98	80-120
4-Chlorotoluene	50.00	48.18	96	80-120
tert-Butylbenzene	50.00	47.01	94	80-120
1,2,4-Trimethylbenzene	50.00	49.53	99	80-120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS GROUP Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20041127

Matrix Spike - Sample No.: 1CV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
sec-Butylbenzene	50.00	45.80	92	80-120
p-Isopropyltoluene	50.00	48.56	97	80-120
n-Butylbenzene	50.00	59.62	119	80-120
1,2-Dibromo-3-Chloropro	50.00	47.58	95	80-120
1,2,4-Trichlorobenzene	50.00	47.28	94	80-120
Hexachlorobutadiene	50.00	51.86	104	80-120
Naphthalene	50.00	49.22	98	80-120
1,2,3-Trichlorobenzene	50.00	44.35	89	80-120
Dibromofluoromethane	50.00	51.75	104	80-120
1,2-Dichloroethane-d4	50.00	59.85	120	80-120
Toluene-d8	50.00	52.09	104	80-120
4-Bromofluorobenzene	50.00	51.73	103	80-120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

_____

FORM III VOA

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ALS GROUP Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20041127

Lab File ID: X041701 BFB Injection Date: 04/17/20

Instrument ID: VOA6 BFB Injection Time: 1113

GC Column: DB624 ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.9
75	30.0 - 60.0% of mass 95	46.2
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	5.8
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	90.7
175	5.0 - 9.0% of mass 174	7.1 (7.8)1
176	95.0 - 101.0% of mass 174	89.7 (98.9)1
177	5.0 - 9.0% of mass 176	5.3 (5.9)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD000.5	VSTD000.5	X041703	04/17/20	1224
02	VSTD001	VSTD001	X041704	04/17/20	1248
03	VSTD002	VSTD002	X041705	04/17/20	1312
04	VSTD005	VSTD005	X041706	04/17/20	1336
05	VSTD020	VSTD020	X041707	04/17/20	1400
06	VSTD050	VSTD050	X041708	04/17/20	1424
07	VSTD100	VSTD100	X041709	04/17/20	1448
08	VSTD150	VSTD150	X041710	04/17/20	1512
09	VSTD200	VSTD200	X041711	04/17/20	1536
10					
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FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS GROUP Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20041127

Instrument ID: VOA6 Calibration Date(s): 04/17/20 04/17/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1137 1536

LAB FILE ID: RF0.5: X041703 RF1: X041704 RF2: X041705
RF5: X041706 RF20: X041707 RF50: X041708

COMPOUND	RF0.5	RF1	RF2	RF5	RF20	RF50
Bromochloromethane	0.317	0.353	0.294	0.285	0.320	0.313
Vinyl Chloride	0.782	0.799	0.782	0.757	0.795	0.849
Chloromethane	3100	7285	12373	30049	118663	299144
Bromomethane	1810	3688	6572	14731	50345	119933
Chloroethane	0.628	0.530	0.407	0.441	0.446	0.456
Methylene Chloride	0.619	0.658	0.620	0.580	0.639	0.613
Acetone	5999	7976	10329	22226	73219	175184
Carbon Disulfide	1.636	1.680	1.523	1.524	1.586	1.650
1,1-Dichloroethene	0.425	0.490	0.450	0.456	0.450	0.478
trans-1,2-Dichloroethene	0.440	0.442	0.414	0.416	0.440	0.448
Carbon Tetrachloride	2975	6546	10747	24009	94075	203935
Bromodichloromethane	0.427	0.400	0.374	0.474	0.436	0.469
1,1-Dichloroethane	0.989	1.128	1.045	1.047	1.024	1.034
1,2-Dichloropropane	0.421	0.351	0.435	0.437	0.403	0.430
2-Butanone	1896	3997	6625	17409	95279	233785
cis-1,3-Dichloropropene	0.519	0.505	0.474	0.570	0.539	0.711
Dibromochloromethane	0.381	0.327	0.392	0.393	0.393	0.391
1,1,2-Trichloroethane	0.278	0.237	0.296	0.310	0.303	0.297
cis-1,2-Dichloroethene	0.640	0.572	0.488	0.522	0.631	0.640
Benzene	1.216	1.452	1.352	1.390	1.522	1.318
Chloroform	0.995	1.016	0.837	0.837	1.033	1.048
trans-1,3-Dichloropropene	0.465	0.449	0.415	0.434	0.561	0.605
Bromoform	0.227	0.242	0.251	0.270	0.261	0.233
1,1,1-Trichloroethane	0.796	0.886	0.844	0.753	0.870	0.872
4-Methyl-2-Pentanone	4555	9367	16846	57260	174648	539384
2-Hexanone	0.422	0.338	0.315	0.359	0.395	0.394
1,2-Dichloroethane	0.455	0.572	0.570	0.586	0.602	0.529
1,1,2,2-Tetrachloroethane	0.890	1.061	0.770	0.948	1.005	0.818
Trichloroethene	0.308	0.340	0.355	0.330	0.341	0.355
Toluene	1.479	1.340	1.461	1.622	1.266	1.525
Dichlorodifluoromethane	0.428	0.526	0.482	0.431	0.512	0.528
Trichlorofluoromethane	0.730	0.840	0.808	0.771	0.854	0.878
Tetrachloroethene	0.269	0.292	0.315	0.297	0.299	0.290
1,2-Dibromoethane	0.346	0.315	0.353	0.378	0.376	0.367
Chlorobenzene	0.970	1.062	0.969	0.978	0.987	0.974
1,3-Dichlorobenzene	1.346	1.510	1.480	1.432	1.595	1.521
1,4-Dichlorobenzene	1.655	1.742	1.563	1.455	1.481	1.525
Ethylbenzene	0.486	0.552	0.500	0.492	0.520	0.518
1,2-Dichlorobenzene	1.358	1.406	1.313	1.336	1.298	1.360
m,p-Xylenes	0.576	0.671	0.611	0.618	0.630	0.599
o-Xylene	0.555	0.619	0.622	0.606	0.616	0.513
Styrene	0.905	1.099	0.996	1.060	1.075	0.905
2,2-Dichloropropane	0.825	0.797	0.650	0.775	0.820	0.862
1,1-Dichloropropene	2662	6347	10706	24249	95389	203648

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS GROUP Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2004112

Instrument ID: VOA6 Calibration Date(s): 04/17/20 04/17/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1137 1536

LAB FILE ID: RF0.5: X041703 RF1: X041704 RF2: X041705
RF5: X041706 RF20: X041707 RF50: X041708

COMPOUND	RF0.5	RF1	RF2	RF5	RF20	RF50
Dibromomethane	0.193	0.195	0.216	0.237	0.216	0.241
1,3-Dichloropropane	0.566	0.599	0.605	0.613	0.618	0.629
1,1,1,2-Tetrachloroethane	0.337	0.350	0.358	0.375	0.371	0.366
Isopropylbenzene	1.368	1.637	1.528	1.541	1.543	1.305
Bromobenzene	0.935	1.025	0.795	0.932	0.973	0.894
1,2,3-Trichloropropane	0.727	0.887	0.651	0.767	0.842	0.708
n-Propylbenzene	3.271	4.287	3.201	3.492	4.123	3.630
2-Chlorotoluene	1.996	2.735	1.936	2.213	2.469	2.163
1,3,5-Trimethylbenzene	2.210	3.025	2.303	2.390	2.841	2.582
4-Chlorotoluene	2.605	3.226	2.304	2.407	2.870	2.504
tert-Butylbenzene	2.155	2.476	2.046	2.015	2.360	2.157
1,2,4-Trimethylbenzene	2.436	2.899	2.566	2.418	2.877	2.657
sec-Butylbenzene	3.006	3.504	3.185	2.632	3.332	3.053
p-Isopropyltoluene	2.250	2.753	2.511	2.290	2.737	2.677
n-Butylbenzene	2.048	2.347	2.098	1.871	2.106	2.276
1,2-Dibromo-3-Chloropropane	0.080	0.070	0.083	0.084	0.078	0.079
1,2,4-Trichlorobenzene	0.292	0.252	0.312	0.335	0.370	0.315
Hexachlorobutadiene	916	1192	2359	5277	24144	45480
Naphthalene	0.447	0.428	0.412	0.535	0.482	0.472
1,2,3-Trichlorobenzene	0.215	0.154	0.162	0.160	0.182	0.158
Dibromofluoromethane	2033	3291	7438	19467	73267	168985
1,2-Dichloroethane-d4	2269	4964	9219	23894	92798	176751
Toluene-d8	1.359	1.099	1.138	1.442	1.151	1.273
4-Bromofluorobenzene	2907	5497	8241	22096	95087	191201

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS GROUP Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2004112

Instrument ID: VOA6 Calibration Date(s): 04/17/20 04/17/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1137 1536

LAB FILE ID: RF100: X041709 RF150: X041710 RF200: X041711

COMPOUND	RF100	RF150	RF200
Bromochloromethane	0.300	0.293	0.278
Vinyl Chloride	0.903	0.876	0.888
Chloromethane	608324	881802	1210478
Bromomethane	247114	353545	475362
Chloroethane	0.463	0.450	0.447
Methylene Chloride	0.608	0.471	0.569
Acetone	327224		
Carbon Disulfide	1.708	1.691	1.683
1,1-Dichloroethene	0.493	0.475	0.482
trans-1,2-Dichloroethene	0.548		
Carbon Tetrachloride	481453	672109	
Bromodichloromethane	0.511	0.410	0.476
1,1-Dichloroethane	1.341		
1,2-Dichloropropane	0.465	0.368	0.431
2-Butanone	444724		
cis-1,3-Dichloropropene	0.493	0.501	0.581
Dibromochloromethane	0.396	0.346	0.390
1,1,2-Trichloroethane	0.280	0.241	0.290
cis-1,2-Dichloroethene	0.638	0.531	0.504
Benzene	1.413	1.363	1.338
Chloroform	1.089	1.021	0.980
trans-1,3-Dichloropropene	0.442	0.452	
Bromoform	0.273	0.264	0.264
1,1,1-Trichloroethane	0.947	0.876	
4-Methyl-2-Pentanone			
2-Hexanone	0.340	0.298	0.400
1,2-Dichloroethane	0.618	0.551	0.541
1,1,2,2-Tetrachloroethane	0.713	0.910	0.822
Trichloroethene	0.352	0.356	0.368
Toluene	1.494	1.296	1.519
Dichlorodifluoromethane	0.574	0.551	0.580
Trichlorofluoromethane	0.932	0.882	0.898
Tetrachloroethene	0.320	0.274	0.300
1,2-Dibromoethane	0.357	0.315	0.362
Chlorobenzene	0.982	1.005	0.981
1,3-Dichlorobenzene	1.537	1.554	1.552
1,4-Dichlorobenzene	1.537	1.543	1.550
Ethylbenzene	0.531	0.546	0.524
1,2-Dichlorobenzene	1.192	1.385	1.372
m,p-Xylenes	0.643	0.659	0.636
o-Xylene	0.620	0.628	0.622
Styrene	1.059	1.082	1.073
2,2-Dichloropropane	0.921	0.716	0.680
1,1-Dichloropropene	482724	682748	733736

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS GROUP Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2004112

Instrument ID: VOA6 Calibration Date(s): 04/17/20 04/17/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1137 1536

LAB FILE ID: RF100: X041709 RF150: X041710 RF200: X041711

COMPOUND	RF100	RF150	RF200
Dibromomethane	0.246	0.193	0.230
1,3-Dichloropropane	0.581	0.504	0.602
1,1,1,2-Tetrachloroethane	0.378	0.383	0.368
Isopropylbenzene	1.590	1.583	1.531
Bromobenzene	0.807	0.912	0.955
1,2,3-Trichloropropane	0.619	0.763	0.698
n-Propylbenzene	3.372	4.074	3.798
2-Chlorotoluene	1.989	2.420	2.196
1,3,5-Trimethylbenzene	2.402	2.815	2.652
4-Chlorotoluene	2.301	2.821	2.560
tert-Butylbenzene	1.954	2.297	2.215
1,2,4-Trimethylbenzene	2.378	2.858	2.696
sec-Butylbenzene	2.869	3.369	3.178
p-Isopropyltoluene	2.874	2.871	2.771
n-Butylbenzene	2.098	2.548	2.359
1,2-Dibromo-3-Chloropropane	0.071	0.076	0.082
1,2,4-Trichlorobenzene	0.290	0.334	0.365
Hexachlorobutadiene	93895		
Naphthalene	0.432	0.496	0.548
1,2,3-Trichlorobenzene	0.141	0.168	0.185
Dibromofluoromethane	332106	479419	628372
1,2-Dichloroethane-d4	464765		
Toluene-d8	1.257		
4-Bromofluorobenzene	377194	655941	811763

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS GROUP Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2004112

Instrument ID: VOA6 Calibration Date(s): 04/17/20 04/17/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1137 1536

COMPOUND	CURVE	COEFFICENTS A0	COEFFICENTS A1	COEFFICENTS A2	%RSD OR R^2	MAX %RSD OR R^2
Bromochloromethane	AVRG		0.30586008		7.413	15.000
Vinyl Chloride	AVRG		0.82563902		6.503	15.000
Chloromethane	LINR	1.9e-002	0.96671029		0.9996571	0.9900000
Bromomethane	LINR	3.757e-004	2.44891882		0.9997570	0.9900000
Chloroethane	AVRG		0.47431458		13.965	15.000
Methylene Chloride	AVRG		0.59754557		9.141	15.000
Acetone	LINR	-4.24e-002	3.63564132		0.9997859	0.9900000
Carbon Disulfide	AVRG		1.63133340		4.339	15.000
1,1-Dichloroethene	AVRG		0.46681266		4.814	15.000
trans-1,2-Dichloroethene	AVRG		0.44968211		10.064	15.000
Carbon Tetrachloride	LINR	6.666e-004	2.05931908		0.9999187	0.9900000
Bromodichloromethane	AVRG		0.44197044		9.908	15.000
1,1-Dichloroethane	AVRG		1.08692812		11.025	15.000
1,2-Dichloropropane	AVRG		0.41572973		8.644	15.000
2-Butanone	LINR	2.175e-002	2.63305891		0.9996891	0.9900000
cis-1,3-Dichloropropene	AVRG		0.54381394		13.220	15.000
Dibromochloromethane	AVRG		0.37895195		6.542	15.000
1,1,2-Trichloroethane	AVRG		0.28135178		9.252	15.000
cis-1,2-Dichloroethene	AVRG		0.57394885		11.193	15.000
Benzene	AVRG		1.37382361		6.290	15.000
Chloroform	AVRG		0.98413583		9.031	15.000
trans-1,3-Dichloropropene	AVRG		0.47814420		14.105	15.000
Bromoform	AVRG		0.25413940		6.464	15.000
1,1,1-Trichloroethane	AVRG		0.85539416		6.898	15.000
4-Methyl-2-Pentanone	2ORDR	-2.36e-002	2.40802518	-0.5637601	0.9966240	0.9900000
2-Hexanone	AVRG		0.36219203		11.768	15.000
1,2-Dichloroethane	AVRG		0.55833416		8.607	15.000
1,1,2,2-Tetrachloroethane	AVRG		0.88190189		12.757	15.000
Trichloroethene	AVRG		0.34496340		5.179	15.000
Toluene	AVRG		1.44463497		8.195	15.000
Dichlorodifluoromethane	AVRG		0.51248447		10.858	15.000
Trichlorofluoromethane	AVRG		0.84364769		7.641	15.000
Tetrachloroethene	AVRG		0.29496513		5.616	15.000
1,2-Dibromoethane	AVRG		0.35194956		6.670	15.000
Chlorobenzene	AVRG		0.98981209		2.927	15.000
1,3-Dichlorobenzene	AVRG		1.50299128		5.006	15.000
1,4-Dichlorobenzene	AVRG		1.56133998		5.626	15.000
Ethylbenzene	AVRG		0.51892582		4.416	15.000
1,2-Dichlorobenzene	AVRG		1.33559987		4.771	15.000
m,p-Xylenes	AVRG		0.62710254		4.709	15.000
o-Xylene	AVRG		0.60019327		6.576	15.000
Styrene	AVRG		1.02826978		7.331	15.000
2,2-Dichloropropane	AVRG		0.78291427		11.196	15.000
1,1-Dichloropropene	LINR	-1.24e-002	2.10821363		0.9985408	0.9900000

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS GROUP Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2004112

Instrument ID: VOA6 Calibration Date(s): 04/17/20 04/17/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1137 1536

COMPOUND	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
Dibromomethane	AVRG		0.21845797		9.613	15.000
1,3-Dichloropropane	AVRG		0.59067371		6.337	15.000
1,1,1,2-Tetrachloroethane	AVRG		0.36517853		3.961	15.000
Isopropylbenzene	AVRG		1.51394738		7.122	15.000
Bromobenzene	AVRG		0.91428203		8.129	15.000
1,2,3-Trichloropropane	AVRG		0.74016818		11.572	15.000
n-Propylbenzene	AVRG		3.69422305		10.747	15.000
2-Chlorotoluene	AVRG		2.23534513		11.763	15.000
1,3,5-Trimethylbenzene	AVRG		2.57993591		10.677	15.000
4-Chlorotoluene	AVRG		2.62213872		11.553	15.000
tert-Butylbenzene	AVRG		2.18607696		7.785	15.000
1,2,4-Trimethylbenzene	AVRG		2.64288367		7.788	15.000
sec-Butylbenzene	AVRG		3.12536521		8.615	15.000
p-Isopropyltoluene	AVRG		2.63703587		8.894	15.000
n-Butylbenzene	AVRG		2.19469326		9.314	15.000
1,2-Dibromo-3-Chloropropane	AVRG		7.818e-002		6.418	15.000
1,2,4-Trichlorobenzene	AVRG		0.31860953		11.770	15.000
Hexachlorobutadiene	LINR	-3.13e-002	4.71671571		0.9960515	0.9900000
Naphthalene	AVRG		0.47248897		10.084	15.000
1,2,3-Trichlorobenzene	AVRG		0.16951207		12.900	15.000
Dibromofluoromethane	LINR	-1.14e-002	1.83711901		0.9996655	0.9900000
1,2-Dichloroethane-d4	2ORDR	-2.24e-002	1.88661637	-0.3797511	0.9964287	0.9900000
Toluene-d8	AVRG		1.24563148		10.062	15.000
4-Bromofluorobenzene	LINR	8.898e-003	2.10475670		0.9955872	0.9900000

FORM VI VOA

MSVOA06 -Logbook

Batch: 40337
Date: 04-17-2020
Method: 8260
Comments:

Analyst: Presenta Cabascango
Reviewer:
Laboratory: Houston

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	04-17-2020 11:13 am	1.00	50 mL	50 mL	X041701.D	Liquid	Y	NA
2	*Auto find/ purged* VSTD000.25	ICAL1	04-17-2020 11:37 am	1.00	50 mL	50 mL	X041702.D	Liquid	Y	NA
3	*0.1 uL cal std/100 mL DI* VSTD000.5	ICAL2	04-17-2020 12:24 pm	1.00	50 mL	50 mL	X041703.D	Liquid	Y	NA
4	*0.10 uL cal std/50 mL DI* VSTD001	ICAL3	04-17-2020 12:48 pm	1.00	50 mL	50 mL	X041704.D	Liquid	Y	NA
5	*0.20 uL cal std/50 mL DI* VSTD002	ICAL4	04-17-2020 01:12 pm	1.00	50 mL	50 mL	X041705.D	Liquid	Y	NA
6	*0.40 uL cal std/50 mL DI* VSTD005	ICAL5	04-17-2020 01:36 pm	1.00	50 mL	50 mL	X041706.D	Liquid	Y	NA
7	*1.0 uL cal std/50 mL DI* VSTD020	ICAL6	04-17-2020 02:00 pm	1.00	50 mL	50 mL	X041707.D	Liquid	Y	NA
8	*4.0 uL cal std/50 mL DI* VSTD050	ICAL7	04-17-2020 02:24 pm	1.00	50 mL	50 mL	X041708.D	Liquid	Y	NA
9	*10 uL cal std/50 mL DI* VSTD100	ICAL8	04-17-2020 02:48 pm	1.00	50 mL	50 mL	X041709.D	Liquid	Y	NA
10	*20 uL cal std/50 mL DI* VSTD150	ICAL9	04-17-2020 03:12 pm	1.00	50 mL	50 mL	X041710.D	Liquid	Y	NA
11	*30 uL cal std/50 mL DI* VSTD200	ICAL	04-17-2020 03:36 pm	1.00	50 mL	50 mL	X041711.D	Liquid	Y	NA
12	*40 uL cal std/50 mL DI* BLANK	SAMP	04-17-2020 04:00 pm	1.00	50 mL	50 mL	X041712.D	Liquid	Y	NA
13	BLANK	SAMP	04-17-2020 04:24 pm	1.00	50 mL	50 mL	X041713.D	Liquid	Y	NA
14	CCV	CCV	04-17-2020 04:48 pm	1.00	50 mL	50 mL	X041714.D	Liquid	Y	NA
15	BLANK	SAMP	04-17-2020 05:12 pm	1.00	50 mL	50 mL	X041715.D	Liquid	Y	NA
16	VLCSW-200417	LCS	04-17-2020 05:36 pm	1.00	50 mL	50 mL	X041716.D	Liquid	Y	NA
17	BLANK	SAMP	04-17-2020 06:00 pm	1.00	50 mL	50 mL	X041717.D	Liquid	Y	NA
18	VBLKW-200417	MBLK	04-17-2020 06:24 pm	1.00	50 mL	50 mL	X041718.D	Liquid	Y	NA
19	HS20040737-01	SAMP	04-17-2020 06:48 pm	1.00	50 mL	50 mL	X041719.D	Liquid	Y	NA
20	HS20040317-13	SAMP	04-17-2020 07:12 pm	1.00	50 mL	50 mL	X041720.D	Liquid	Y	NA
21	HS20040317-14	SAMP	04-17-2020 07:36 pm	1.00	50 mL	50 mL	X041721.D	Liquid	Y	NA
22	HS20040317-15	SAMP	04-17-2020 08:00 pm	1.00	50 mL	50 mL	X041722.D	Liquid	Y	NA
23	HS20040317-16	SAMP	04-17-2020 08:24 pm	1.00	50 mL	50 mL	X041723.D	Liquid	Y	NA
24	HS20040611-25	SAMP	04-17-2020 08:48 pm	1.00	50 mL	50 mL	X041724.D	Liquid	Y	NA
25	HS20040611-24	SAMP	04-17-2020 09:12 pm	1.00	50 mL	50 mL	X041725.D	Liquid	Y	NA
26	HS20040611-24MS	MS	04-17-2020 09:36 pm	1.00	50 mL	50 mL	X041726.D	Liquid	Y	NA
27	HS20040611-24MSD	MSD	04-17-2020 10:00 pm	1.00	50 mL	50 mL	X041727.D	Liquid	Y	NA
28	HS20040679-12	SAMP	04-17-2020 10:24 pm	1.00	50 mL	50 mL	X041728.D	Liquid	Y	NA
29	HS20040689-01	SAMP	04-17-2020 10:48 pm	1.00	50 mL	50 mL	X041729.D	Liquid	Y	NA

MSVOA06 -Logbook

Chemical	Value
SURR SPK ID	31106-21-06
IS ID	31106-21-06
LCS/MS ID	
CAL STD ID	31106-25-01/02
BFB ID	31106-21-06
pH Paper	634-64-11

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200417.b\X041701.D

Date : 17-APR-2020 11:13

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

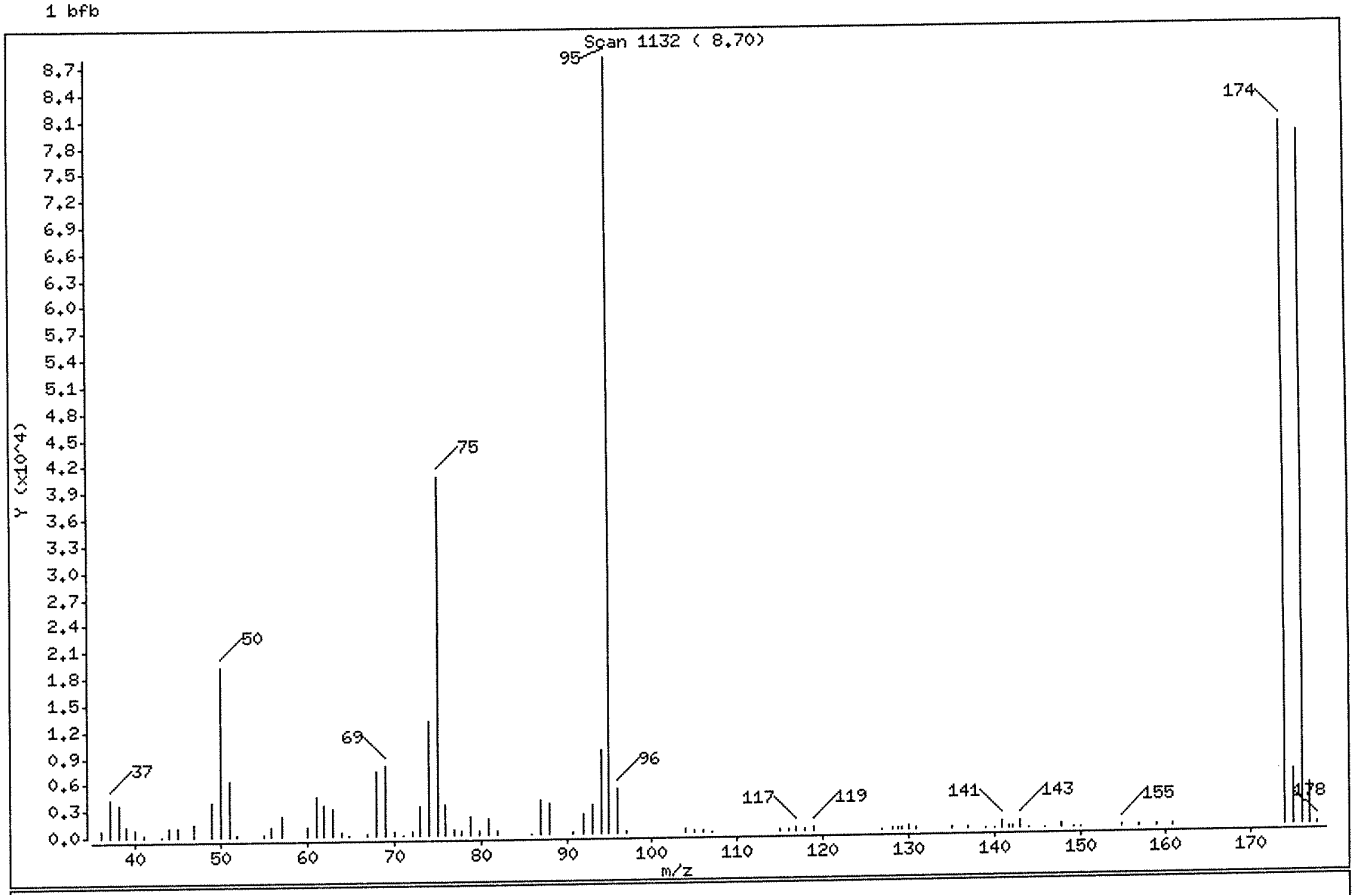
Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

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	21.86
75	30.00 - 60.00% of mass 95	46.17
96	5.00 - 9.00% of mass 95	5.78
173	Less than 2.00% of mass 174	0.00 (0.00)
174	Greater than 50.00% of mass 95	90.70
175	5.00 - 9.00% of mass 174	7.05 (7.78)
176	95.00 - 101.00% of mass 174	89.72 (98.92)
177	5.00 - 9.00% of mass 176	5.26 (5.87)

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200417.b\X041701.D

Date : 17-APR-2020 11:13

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

Data File: X041701.D
Spectrum: Scan 1132 (8.70)
Location of Maximum: 95.00
Number of points: 86

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	714	64.80	91	93.00	3187	139.00	50
37.00	4223	67.00	282	94.00	9534	140.00	55
38.10	3585	68.00	7308	95.00	88024	140.80	863
39.00	1170	69.00	7849	96.00	5087	141.60	201
40.00	749	70.00	476	96.90	154	142.00	152
41.00	125	71.20	57	103.90	457	142.80	862
43.10	70	72.10	432	105.00	168	144.00	52
44.00	1063	73.00	3209	106.00	214	145.90	66
45.00	912	74.00	12878	107.10	84	147.80	307
47.00	1350	75.00	40640	114.90	170	149.10	74
49.00	3850	76.00	3397	115.90	278	149.90	87
50.00	19240	76.90	581	116.90	436	154.90	298
51.00	6312	77.80	332	117.80	236	156.90	191
51.90	273	78.90	1936	118.90	456	159.00	163
55.10	283	79.90	499	126.90	52	160.80	107
55.90	1106	80.90	1909	128.10	226	174.00	79840
57.10	2314	82.00	420	128.70	162	175.00	6210
60.00	941	85.90	82	129.20	115	176.00	78976
61.00	4352	87.00	3836	129.90	425	177.00	4632
62.00	3536	88.00	3467	130.90	222	177.80	158
63.00	3131	90.80	238	134.90	150		
64.00	426	92.00	2277	136.90	205		

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200417.b\X041701.D

Date : 17-APR-2020 11:13

Client ID: BFB

Instrument: voa6.i

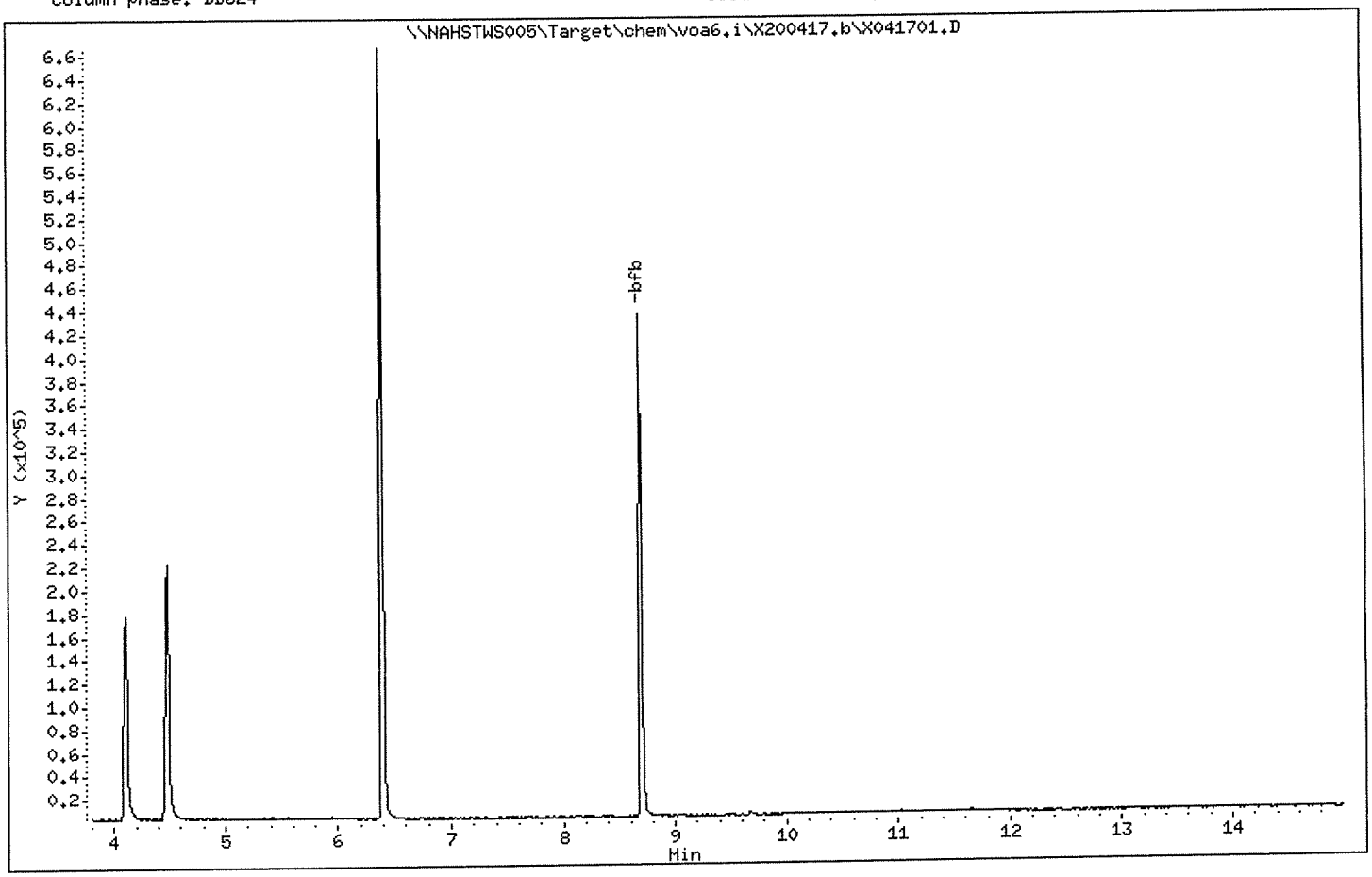
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200417.b\X041703.D Page 1
Report Date: 20-May-2020 16:09

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200417.b\X041703.D
Lab Smp Id: VSTD000.5 Client Smp ID: VSTD000.5
Inj Date : 17-APR-2020 12:24
Operator : PC Inst ID: voa6.i
Smp Info : VSTD000.5;VSTD000.5;1;2;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200417.b\8260W.m
Meth Date : 20-May-2020 16:09 voa6.i Quant Type: ISTD
Cal Date : 17-APR-2020 14:24 Cal File: X041708.D
Als bottle: 4 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0000000_Bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7142

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

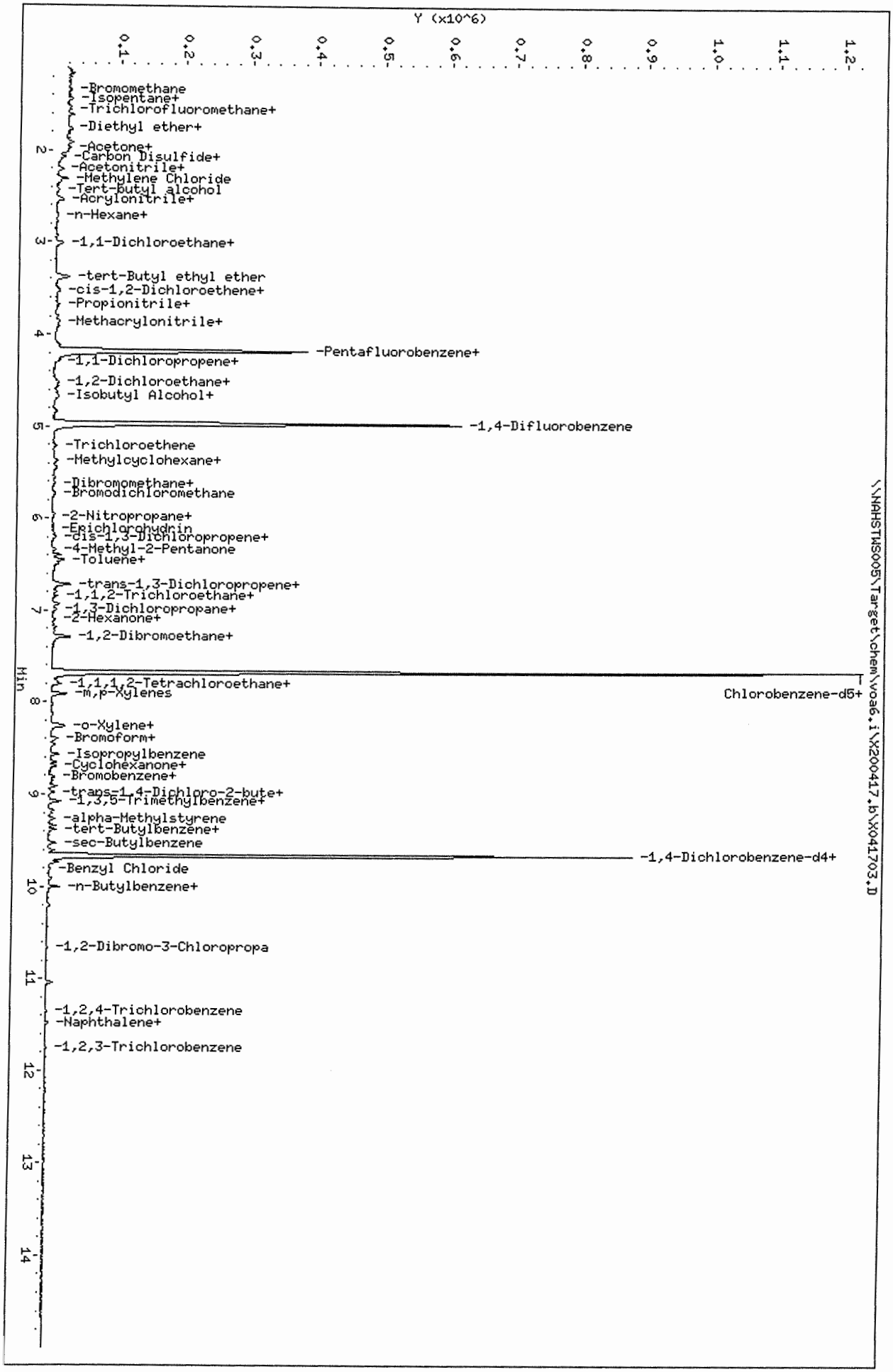
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	324114	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	494594	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	514832	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	216048	50.0000	
$	30 Dibromofluoromethane	113	4.104	4.104	(0.981)	2033	0.50000	0.00(a)
$	35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.072)	2269	0.50000	(TaM)
$	48 Toluene-d8	98	6.396	6.396	(0.834)	6995	0.50000	0.54(aM)
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	2907	0.50000	1.03(M)
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	1736	0.50000	0.46(a)
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	2581	0.50000	0.46(a)
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	1924	0.50000	0.50(aM)
	53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	1431	0.50000	0.49(a)
	22 1,1-Dichloroethane	63	2.922	2.922	(0.699)	3206	0.50000	0.45(Ta)
	11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	1379	0.50000	0.45(a)
	93 1,2,3-Trichlorobenzene	180	11.754	11.754	(1.216)	465	0.50000	0.63(aM)
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	1570	0.50000	0.49(aM)
	90 1,2,4-Trichlorobenzene	180	11.353	11.353	(1.174)	632	0.50000	0.45(aM)
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	5264	0.50000	0.46(a)
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	174	0.50000	0.51(aM)
	57 1,2-Dibromoethane	107	7.270	7.270	(0.948)	1780	0.50000	0.49(a)
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	2933	0.50000	0.50(a)
	33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	2252	0.50000	0.40(a)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	2082	0.50000	0.50(aM)
75	1,3,5-Trimethylbenzene	105	9.075	9.075	(0.939)	4775	0.50000	0.42(a)
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	2908	0.50000	0.44(a)
54	1,3-Dichloropropane	76	6.990	6.990	(0.911)	2914	0.50000	0.47(a)
84	1,4-Dichlorobenzene	146	9.684	9.684	(1.001)	3576	0.50000	0.53(a)
26	2,2-Dichloropropane	77	3.509	3.509	(0.839)	2673	0.50000	0.52(aM)
24	2-Butanone	43	3.609	3.609	(0.863)	1896	1.00000	1.85(aM)
76	2-Chlorotoluene	91	8.982	8.982	(0.929)	4312	0.50000	0.44(a)
52	2-Hexanone	43	7.098	7.098	(0.925)	4343	1.00000	1.16(a)
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	5629	0.50000	0.49(a)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	4860	0.50000	0.42(a)
10	Acetone	43	1.969	1.969	(0.471)	5999	1.00000	1.24(a)
37	Benzene	78	4.519	4.519	(0.909)	6015	0.50000	0.44(a)
74	Bromobenzene	156	8.817	8.817	(0.912)	2021	0.50000	0.51(a)
29	Bromochloromethane	128	3.810	3.810	(0.911)	1027	0.50000	0.51(a)
39	Bromodichloromethane	83	5.730	5.730	(1.153)	2112	0.50000	0.48(aM)
66	Bromoform	173	8.423	8.423	(1.098)	1171	0.50000	0.44(aM)
6	Bromomethane	94	1.339	1.339	(0.320)	1810	0.50000	0.70(aM)
34	Carbon Tetrachloride	117	4.261	4.261	(0.857)	2975	0.50000	0.65(a)
59	Chlorobenzene	112	7.699	7.699	(1.004)	4996	0.50000	0.49(a)
7	Chloroethane	64	1.403	1.403	(0.336)	2037	0.50000	0.66(aM)
28	Chloroform	83	3.917	3.917	(0.937)	3225	0.50000	0.50(a)
3	Chloromethane	50	1.074	1.074	(0.257)	3100	0.50000	1.41(aM)
27	cis-1,2-Dichloroethene	96	3.538	3.538	(0.846)	2076	0.50000	0.55(a)
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	2567	0.50000	0.47(a)
55	Dibromochloromethane	129	7.176	7.176	(0.936)	1962	0.50000	0.50(a)
44	Dibromomethane	93	5.558	5.558	(1.118)	955	0.50000	0.44(a)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	1389	0.50000	0.41(aM)
19	Carbon Disulfide	76	2.069	2.069	(0.495)	10606	1.00000	1.00(a)
61	Ethylbenzene	106	7.807	7.807	(1.018)	2504	0.50000	0.46(a)
67	Isopropylbenzene	105	8.566	8.566	(1.117)	7042	0.50000	0.45(a)
62	m,p-Xylenes	106	7.907	7.907	(1.031)	5933	1.00000	0.91(a)
17	Methylene Chloride	84	2.306	2.306	(0.551)	2007	0.50000	0.51(aM)
87	n-Butylbenzene	91	9.999	9.999	(1.034)	4425	0.50000	0.46(a)
73	n-Propylbenzene	91	8.917	8.917	(0.922)	7068	0.50000	0.44(a)
92	Naphthalene	128	11.567	11.567	(1.196)	965	0.50000	0.47(a)
63	o-Xylene	106	8.244	8.244	(1.075)	2856	0.50000	0.46(a)
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	6494	0.50000	0.48(a)
64	Styrene	104	8.272	8.272	(1.078)	4661	0.50000	0.44(a)
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	4656	0.50000	0.49(a)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	1385	0.50000	0.45(a)
50	Toluene	91	6.453	6.453	(0.841)	7613	0.50000	0.51(a)
20	trans-1,2-Dichloroethene	96	2.535	2.535	(0.606)	1428	0.50000	0.48(a)
51	trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	2301	0.50000	0.48(aM)
38	Trichloroethene	130	5.214	5.214	(1.049)	1523	0.50000	0.44(a)
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	2365	0.50000	0.43(a)
5	Vinyl Chloride	62	1.138	1.138	(0.272)	2533	0.50000	0.47(a)

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200417.b\X041703.D
Date : 17-APR-2020 12:24
Client ID: VSTD000.5
Sample Info: VSTD000.5;VSTD000.5;1;2;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200417.b\X041704.D
Lab Smp Id: VSTD001 Client Smp ID: VSTD001
Inj Date : 17-APR-2020 12:48
Operator : PC Inst ID: voa6.i
Smp Info : VSTD001;VSTD001;1;3;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200417.b\8260W.m
Meth Date : 20-May-2020 16:09 voa6.i Quant Type: ISTD
Cal Date : 17-APR-2020 12:24 Cal File: X041703.D
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0000000_Bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7142

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	343567	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	538565	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	509129	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	219796	50.0000	
$ 30 Dibromofluoromethane	113	4.111	4.111	(0.983)	3291	1.00000	0.31(a)
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	4964	1.00000	0.24(aM)
$ 48 Toluene-d8	98	6.396	6.396	(0.834)	11194	1.00000	0.88(a)
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	5497	1.00000	1.58
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	3566	1.00000	0.95(a)
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	6085	1.00000	1.03
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	4664	1.00000	1.20(a)
53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	2410	1.00000	0.84(a)
22 1,1-Dichloroethane	63	2.929	2.929	(0.700)	7750	1.00000	1.03
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	3371	1.00000	1.05(a)
32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	6347	1.00000	0.62(a)
93 1,2,3-Trichlorobenzene	180	11.754	11.754	(1.216)	675	1.00000	0.90(aM)
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	3899	1.00000	1.19(aM)
90 1,2,4-Trichlorobenzene	180	11.352	11.352	(1.174)	1108	1.00000	0.79(aM)
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	12745	1.00000	1.09(a)
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	307	1.00000	0.89(aM)
57 1,2-Dibromoethane	107	7.269	7.269	(0.948)	3204	1.00000	0.89(a)
88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	6181	1.00000	1.05(a)

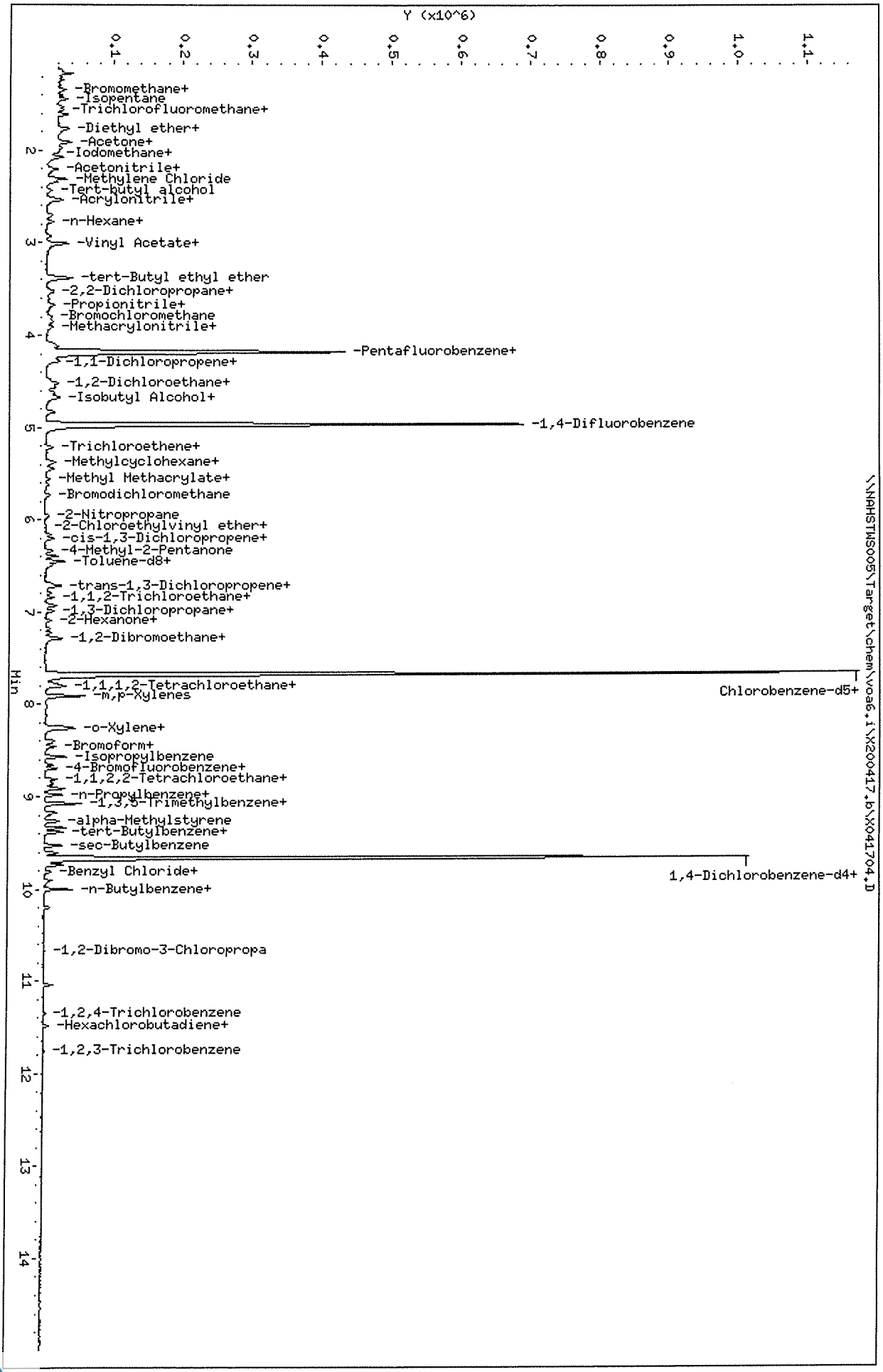
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	4.569	4.569	(0.919)	6166	1.00000	1.02
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	3783	1.00000	0.84 (aM)
75 1,3,5-Trimethylbenzene	105	9.075	9.075	(0.939)	13296	1.00000	1.17 (a)
83 1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	6640	1.00000	1.00 (a)
54 1,3-Dichloropropane	76	6.990	6.990	(0.911)	6096	1.00000	1.01 (a)
84 1,4-Dichlorobenzene	146	9.691	9.691	(1.002)	7660	1.00000	1.11 (a)
26 2,2-Dichloropropane	77	3.509	3.509	(0.839)	5478	1.00000	1.01 (a)
24 2-Butanone	43	3.602	3.602	(0.861)	3997	2.00000	2.61
76 2-Chlorotoluene	91	8.981	8.981	(0.929)	12023	1.00000	1.22 (a)
52 2-Hexanone	43	7.098	7.098	(0.925)	6890	2.00000	1.86 (a)
77 4-Chlorotoluene	91	9.075	9.075	(0.939)	14182	1.00000	1.23 (aM)
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	12101	1.00000	1.04 (a)
45 4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	9367	2.00000	1.02 (a)
10 Acetone	43	1.976	1.976	(0.473)	7976	2.00000	2.10 (a)
37 Benzene	78	4.519	4.519	(0.909)	15643	1.00000	1.05
74 Bromobenzene	156	8.810	8.810	(0.911)	4505	1.00000	1.12 (a)
29 Bromochloromethane	128	3.795	3.795	(0.908)	2424	1.00000	1.15 (aM)
39 Bromodichloromethane	83	5.729	5.729	(1.153)	4310	1.00000	0.90 (aM)
66 Bromoform	173	8.416	8.416	(1.097)	2469	1.00000	0.95 (Ta)
6 Bromomethane	94	1.338	1.338	(0.320)	3688	1.00000	1.33 (a)
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	6546	1.00000	1.28 (a)
59 Chlorobenzene	112	7.699	7.699	(1.004)	10811	1.00000	1.07
7 Chloroethane	64	1.403	1.403	(0.336)	3642	1.00000	1.11 (a)
28 Chloroform	83	3.910	3.910	(0.935)	6980	1.00000	1.03
3 Chloromethane	50	1.073	1.073	(0.257)	7285	1.00000	1.97 (aM)
27 cis-1,2-Dichloroethene	96	3.545	3.545	(0.848)	3931	1.00000	0.99 (a)
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	5437	1.00000	0.92 (a)
55 Dibromochloromethane	129	7.184	7.184	(0.937)	3334	1.00000	0.86 (a)
44 Dibromomethane	93	5.558	5.558	(1.118)	2100	1.00000	0.89 (a)
2 Dichlorodifluoromethane	85	0.966	0.966	(0.231)	3614	1.00000	1.02 (a)
19 Carbon Disulfide	76	2.069	2.069	(0.495)	23085	2.00000	2.05 (a)
61 Ethylbenzene	106	7.807	7.807	(1.018)	5621	1.00000	1.06
67 Isopropylbenzene	105	8.566	8.566	(1.117)	16671	1.00000	1.08 (a)
62 m,p-Xylenes	106	7.907	7.907	(1.031)	13660	2.00000	2.13
17 Methylene Chloride	84	2.305	2.305	(0.551)	4525	1.00000	1.10 (aM)
87 n-Butylbenzene	91	9.999	9.999	(1.034)	10318	1.00000	1.06 (a)
73 n-Propylbenzene	91	8.917	8.917	(0.922)	18845	1.00000	1.16 (a)
92 Naphthalene	128	11.553	11.553	(1.195)	1884	1.00000	0.90 (a)
63 o-Xylene	106	8.244	8.244	(1.075)	6299	1.00000	1.03
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	15403	1.00000	1.12 (a)
64 Styrene	104	8.265	8.265	(1.078)	11190	1.00000	1.06
78 tert-Butylbenzene	119	9.340	9.340	(0.966)	10885	1.00000	1.13 (a)
56 Tetrachloroethene	164	6.933	6.933	(0.904)	2974	1.00000	0.99 (a)
50 Toluene	91	6.453	6.453	(0.841)	13648	1.00000	0.92 (a)
20 trans-1,2-Dichloroethene	96	2.535	2.535	(0.606)	3034	1.00000	0.98 (a)
51 trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	4837	1.00000	0.93 (a)
38 Trichloroethene	130	5.214	5.214	(1.049)	3657	1.00000	0.98 (a)
8 Trichlorofluoromethane	101	1.561	1.561	(0.373)	5769	1.00000	0.99 (a)
5 Vinyl Chloride	62	1.138	1.138	(0.272)	5490	1.00000	0.96 (a)

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

QC Flag Legend

M - Compound response manually integrated.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200417.b\X041704.D
Date : 17-APR-2020 12:48
Client ID: VSTD001
Sample Info: VSTD001;VSTD001;1;3;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200417.b\X041705.D Page 1
Report Date: 20-May-2020 16:09

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200417.b\X041705.D
Lab Smp Id: VSTD002 Client Smp ID: VSTD002
Inj Date : 17-APR-2020 13:12
Operator : PC Inst ID: voa6.i
Smp Info : VSTD002;VSTD002;1;4;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200417.b\8260W.m
Meth Date : 20-May-2020 16:09 voa6.i Quant Type: ISTD
Cal Date : 17-APR-2020 12:48 Cal File: X041704.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0000000_Bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7142

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

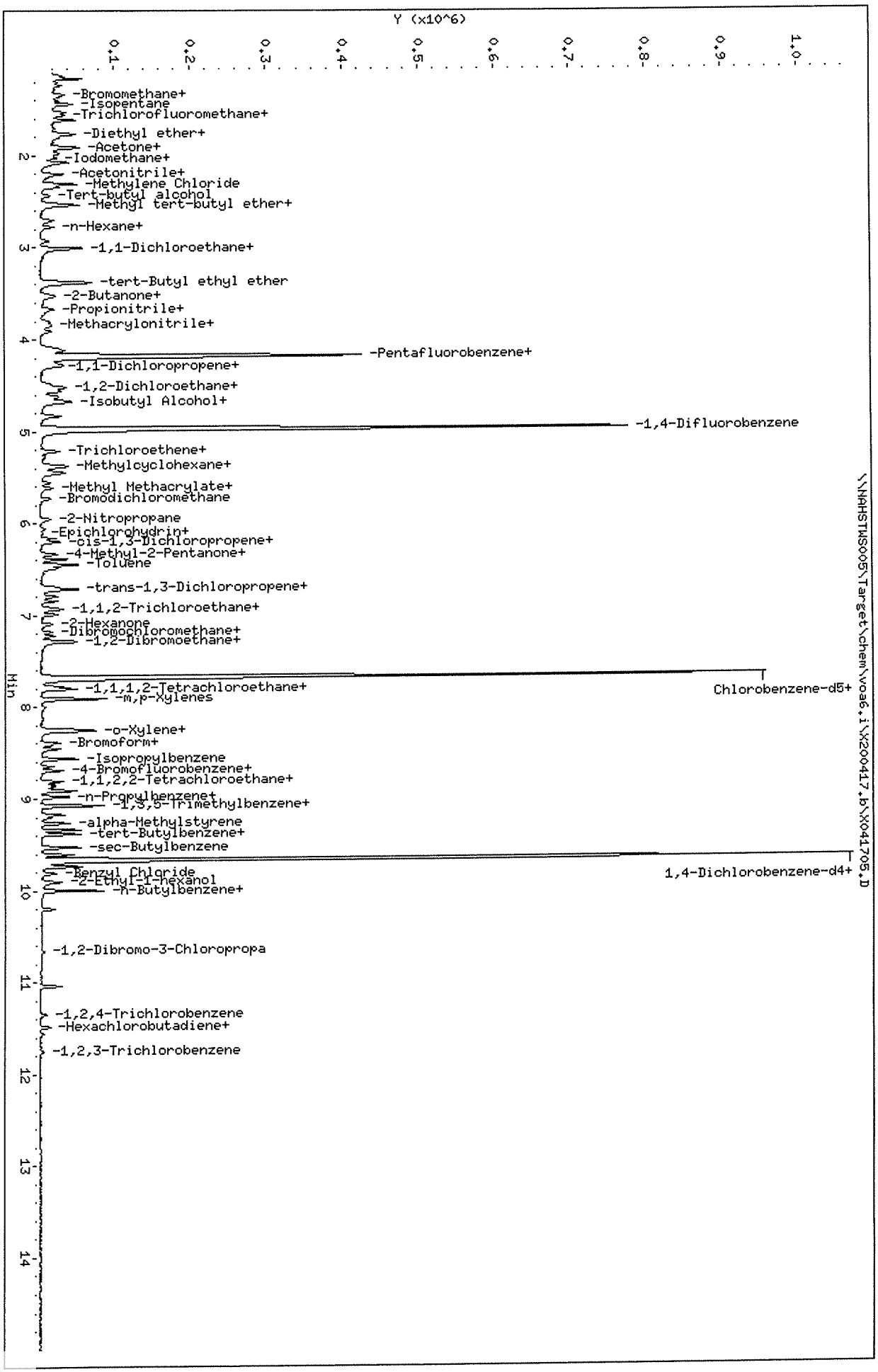
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	340114	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	561771	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	431570	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	239285	50.0000	
$ 30 Dibromofluoromethane	113	4.111	4.111	(0.983)	7438	2.00000	1.43
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	9219	2.00000	1.42(M)
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	19645	2.00000	1.82
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	8241	2.00000	2.45
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	6188	2.00000	1.96(a)
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	11482	2.00000	1.97
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	7372	2.00000	1.74(a)
53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	5111	2.00000	2.10(a)
22 1,1-Dichloroethane	63	2.929	2.929	(0.700)	14216	2.00000	1.92
11 1,1-Dichloroethene	96	1.919	1.919	(0.459)	6127	2.00000	1.92(a)
32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	10706	2.00000	1.38(a)
93 1,2,3-Trichlorobenzene	180	11.753	11.753	(1.216)	1554	2.00000	1.91(a)
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	6231	2.00000	1.75(aM)
90 1,2,4-Trichlorobenzene	180	11.345	11.345	(1.173)	2991	2.00000	1.96(a)
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	24564	2.00000	1.94(a)
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	792	2.00000	2.11(a)
57 1,2-Dibromoethane	107	7.269	7.269	(0.948)	6089	2.00000	2.00
88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	12570	2.00000	1.96(a)

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200417.b\X041705.D Page 2
Report Date: 20-May-2020 16:09

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	12818	2.00000	2.04
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	9776	2.00000	2.09(aM)
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	22043	2.00000	1.78(a)
83 1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	14165	2.00000	1.96(a)
54 1,3-Dichloropropane	76	6.990	6.990	(0.911)	10441	2.00000	2.04(a)
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	14960	2.00000	2.00(a)
26 2,2-Dichloropropane	77	3.509	3.509	(0.839)	8846	2.00000	1.66(a)
24 2-Butanone	43	3.595	3.595	(0.860)	6625	4.00000	3.65
76 2-Chlorotoluene	91	8.981	8.981	(0.929)	18532	2.00000	1.73(a)
52 2-Hexanone	43	7.090	7.090	(0.924)	10863	4.00000	3.47(a)
77 4-Chlorotoluene	91	9.075	9.075	(0.939)	22057	2.00000	1.75(a)
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	24037	2.00000	1.90(a)
45 4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	16846	4.00000	3.47(a)
10 Acetone	43	1.976	1.976	(0.473)	10329	4.00000	3.40(a)
37 Benzene	78	4.519	4.519	(0.909)	30384	2.00000	1.96
74 Bromobenzene	156	8.809	8.809	(0.911)	7614	2.00000	1.74(a)
29 Bromochloromethane	128	3.803	3.803	(0.909)	3994	2.00000	1.91(a)
39 Bromodichloromethane	83	5.729	5.729	(1.153)	8402	2.00000	1.69(a)
66 Bromoform	173	8.416	8.416	(1.097)	4335	2.00000	1.97(Ta)
6 Bromomethane	94	1.338	1.338	(0.320)	6572	2.00000	2.38(a)
34 Carbon Tetrachloride	117	4.275	4.275	(0.860)	10747	2.00000	2.00(a)
59 Chlorobenzene	112	7.699	7.699	(1.004)	16736	2.00000	1.95
7 Chloroethane	64	1.403	1.403	(0.336)	5535	2.00000	1.71(a)
28 Chloroform	83	3.910	3.910	(0.935)	11390	2.00000	1.70
3 Chloromethane	50	1.073	1.073	(0.257)	12373	2.00000	2.70(aM)
27 cis-1,2-Dichloroethene	96	3.537	3.537	(0.846)	6637	2.00000	1.69(a)
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	10656	2.00000	1.74(a)
55 Dibromochloromethane	129	7.183	7.183	(0.937)	6763	2.00000	2.06(a)
44 Dibromomethane	93	5.557	5.557	(1.118)	4847	2.00000	1.97(a)
2 Dichlorodifluoromethane	85	0.973	0.973	(0.233)	6564	2.00000	1.88(a)
19 Carbon Disulfide	76	2.069	2.069	(0.495)	41450	4.00000	3.73(a)
61 Ethylbenzene	106	7.807	7.807	(1.018)	8631	2.00000	1.92
91 Hexachlorobutadiene	225	11.488	11.488	(1.188)	2359	2.00000	0.75(a)
67 Isopropylbenzene	105	8.566	8.566	(1.117)	26370	2.00000	2.01(a)
62 m,p-Xylenes	106	7.907	7.907	(1.031)	21083	4.00000	3.89
17 Methylene Chloride	84	2.305	2.305	(0.551)	8439	2.00000	2.07(aM)
87 n-Butylbenzene	91	9.999	9.999	(1.034)	20086	2.00000	1.91(a)
73 n-Propylbenzene	91	8.917	8.917	(0.922)	30641	2.00000	1.73(a)
92 Naphthalene	128	11.553	11.553	(1.195)	3944	2.00000	1.74(a)
63 o-Xylene	106	8.244	8.244	(1.075)	10738	2.00000	2.07
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	30484	2.00000	2.03(a)
64 Styrene	104	8.265	8.265	(1.078)	17187	2.00000	1.93
78 tert-Butylbenzene	119	9.340	9.340	(0.966)	19585	2.00000	1.87(a)
56 Tetrachloroethene	164	6.933	6.933	(0.904)	5432	2.00000	2.13
50 Toluene	91	6.453	6.453	(0.841)	25219	2.00000	2.02
20 trans-1,2-Dichloroethene	96	2.535	2.535	(0.606)	5636	2.00000	1.84(a)
51 trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	9330	2.00000	1.73(a)
38 Trichloroethene	130	5.214	5.214	(1.049)	7981	2.00000	2.05
8 Trichlorofluoromethane	101	1.560	1.560	(0.373)	10990	2.00000	1.91(a)
5 Vinyl Chloride	62	1.138	1.138	(0.272)	10635	2.00000	1.89(a)

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200417.b\X041705.D
Date : 17-APR-2020 13:12
Client ID: VSTD002
Sample Info: VSTD002;VSTD002;1;4;
Purge Volume: 5.0
Column phase: DB624

\\NAHSTWS005\Target\chem\voa6.i\X200417.b\X041705.D
Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200417.b\X041706.D Page 1
Report Date: 20-May-2020 16:09

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200417.b\X041706.D
Lab Smp Id: VSTD005 Client Smp ID: VSTD005
Inj Date : 17-APR-2020 13:36
Operator : PC Inst ID: voa6.i
Smp Info : VSTD005;VSTD005;1;5;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200417.b\8260W.m
Meth Date : 20-May-2020 16:09 voa6.i Quant Type: ISTD
Cal Date : 17-APR-2020 13:12 Cal File: X041705.D
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0000000_Bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7142

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

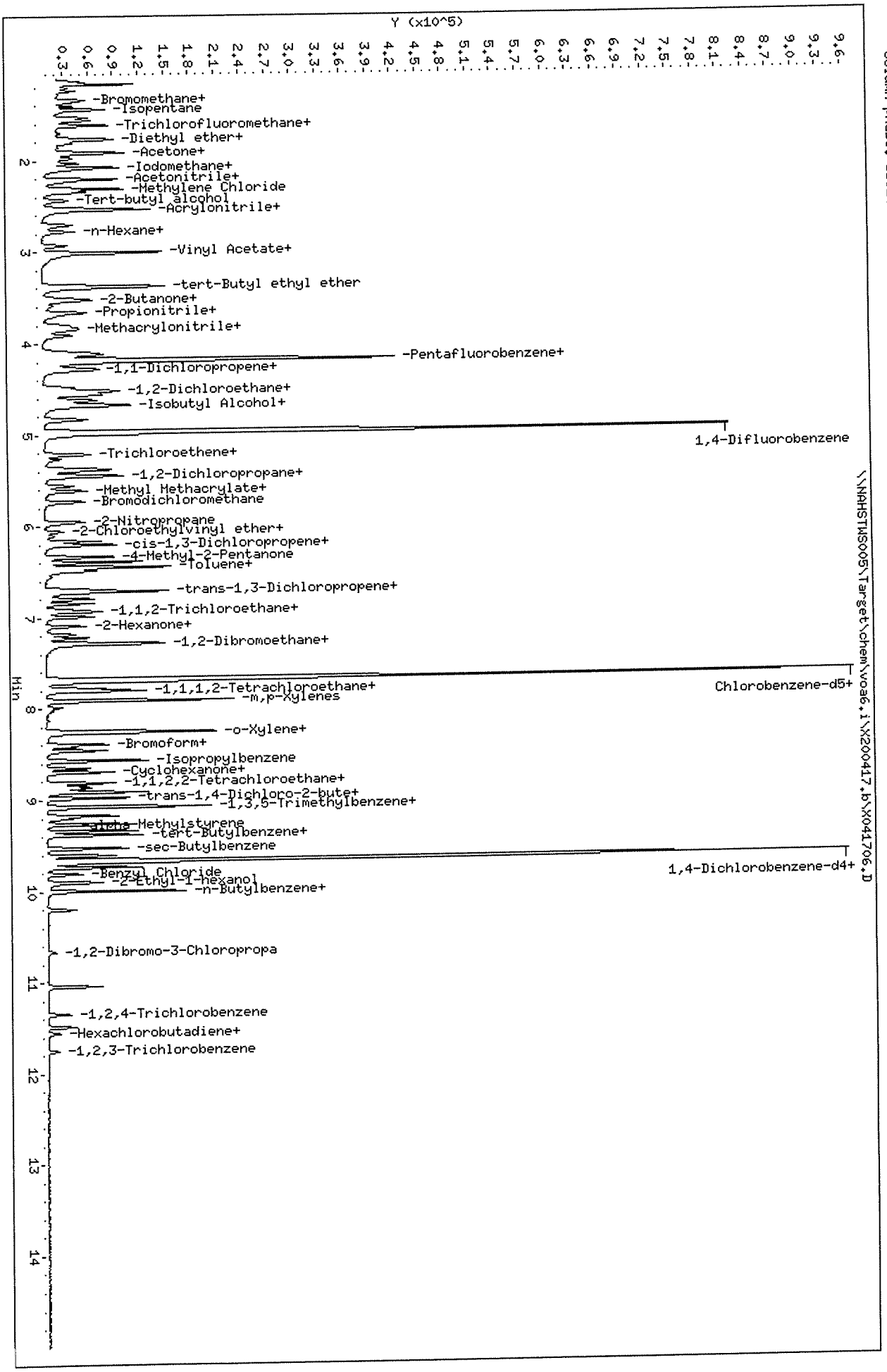
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	337669	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	558420	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	428279	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	211190	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	19467	5.00000	4.72
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	23894	5.00000	5.46(M)
$	48 Toluene-d8	98	6.388	6.388	(0.833)	61769	5.00000	5.78(M)
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	22096	5.00000	5.87(M)
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	16048	5.00000	5.13
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	25414	5.00000	4.39
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	20013	5.00000	5.37
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	13278	5.00000	5.50
	22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	35361	5.00000	4.81
	11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	15406	5.00000	4.88(a)
	32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	24249	5.00000	3.95(a)
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	3379	5.00000	4.71(a)
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	16190	5.00000	5.17(M)
	90 1,2,4-Trichlorobenzene	180	11.345	11.345	(1.173)	7080	5.00000	5.26
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	51069	5.00000	4.57(a)
	89 1,2-Dibromo-3-Chloropropane	155	10.665	10.665	(1.103)	1778	5.00000	5.38
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	16214	5.00000	5.37
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	28224	5.00000	5.00

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	32710	5.00000	5.24
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	24405	5.00000	5.25
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	50484	5.00000	4.63(a)
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	30235	5.00000	4.76(a)
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	26263	5.00000	5.19
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	30736	5.00000	4.66(a)
26	2,2-Dichloropropane	77	3.509	3.509	(0.839)	26156	5.00000	4.94(a)
24	2-Butanone	43	3.580	3.580	(0.856)	17409	10.0000	7.87
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	46734	5.00000	4.94(a)
52	2-Hexanone	43	7.090	7.090	(0.924)	30739	10.0000	9.90
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	50842	5.00000	4.59(a)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	48360	5.00000	4.34(a)
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	57260	10.0000	14.41(M)
10	Acetone	43	1.976	1.976	(0.473)	22226	10.0000	9.84
37	Benzene	78	4.519	4.519	(0.909)	77594	5.00000	5.05
74	Bromobenzene	156	8.810	8.810	(0.911)	19689	5.00000	5.09
29	Bromochloromethane	128	3.795	3.795	(0.908)	9637	5.00000	4.66(a)
39	Bromodichloromethane	83	5.729	5.729	(1.153)	26470	5.00000	5.36
66	Bromoform	173	8.416	8.416	(1.097)	11579	5.00000	5.31
6	Bromomethane	94	1.338	1.338	(0.320)	14731	5.00000	5.36
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	24009	5.00000	4.46(a)
59	Chlorobenzene	112	7.699	7.699	(1.004)	41903	5.00000	4.94
7	Chloroethane	64	1.403	1.403	(0.336)	14907	5.00000	4.65(a)
28	Chloroform	83	3.910	3.910	(0.935)	28274	5.00000	4.25
3	Chloromethane	50	1.073	1.073	(0.257)	30049	5.00000	5.25
27	cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	17615	5.00000	4.54(a)
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	31861	5.00000	5.24
55	Dibromochloromethane	129	7.176	7.176	(0.936)	16841	5.00000	5.18
44	Dibromomethane	93	5.557	5.557	(1.118)	13216	5.00000	5.41
2	Dichlorodifluoromethane	85	0.966	0.966	(0.231)	14559	5.00000	4.20(a)
19	Carbon Disulfide	76	2.069	2.069	(0.495)	102921	10.0000	9.34
61	Ethylbenzene	106	7.800	7.800	(1.017)	21059	5.00000	4.73
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	5277	5.00000	4.32(a)
67	Isopropylbenzene	105	8.566	8.566	(1.117)	66018	5.00000	5.09
62	m,p-Xylenes	106	7.907	7.907	(1.031)	52961	10.0000	9.85
17	Methylene Chloride	84	2.305	2.305	(0.551)	19568	5.00000	4.84(a)
87	n-Butylbenzene	91	9.999	9.999	(1.034)	39516	5.00000	4.26(a)
73	n-Propylbenzene	91	8.917	8.917	(0.922)	73739	5.00000	4.72(a)
92	Naphthalene	128	11.553	11.553	(1.195)	11291	5.00000	5.65(M)
63	o-Xylene	106	8.244	8.244	(1.075)	25965	5.00000	5.05
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	55591	5.00000	4.21(a)
64	Styrene	104	8.265	8.265	(1.078)	45388	5.00000	5.15
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	42547	5.00000	4.60(a)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	12717	5.00000	5.03
50	Toluene	91	6.446	6.446	(0.840)	69463	5.00000	5.61
20	trans-1,2-Dichloroethene	96	2.528	2.528	(0.604)	14037	5.00000	4.62(a)
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	24263	5.00000	4.54(a)
38	Trichloroethene	130	5.207	5.207	(1.048)	18419	5.00000	4.78
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	26021	5.00000	4.56(a)
5	Vinyl Chloride	62	1.138	1.138	(0.272)	25578	5.00000	4.58(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200417.b\X041706.D
Date : 17-APR-2020 13:36
Client ID: VSTD005
Sample Info: VSTD005;VSTD005;1;5;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200417.b\X041707.D
Lab Smp Id: VSTD020 Client Smp ID: VSTD020
Inj Date : 17-APR-2020 14:00
Operator : PC Inst ID: voa6.i
Smp Info : VSTD020;VSTD020;1;6;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200417.b\8260W.m
Meth Date : 20-May-2020 16:09 voa6.i Quant Type: ISTD
Cal Date : 17-APR-2020 13:36 Cal File: X041706.D
Als bottle: 8 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0000000_Bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7142

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

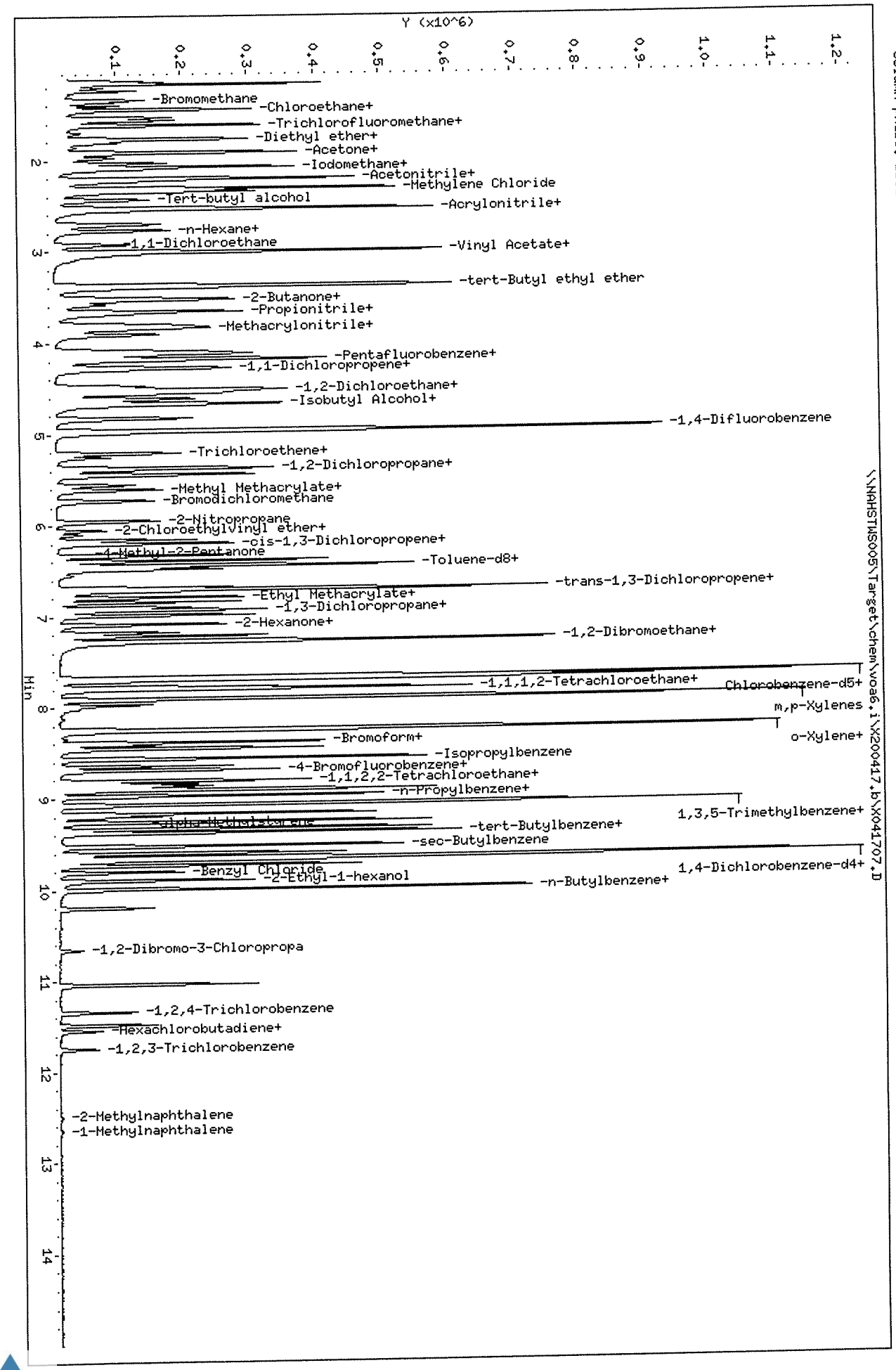
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	322676	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	473938	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	491178	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	221877	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	73267	20.0000	20.28
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	92798	20.0000	24.44(M)
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	226166	20.0000	18.48
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	95087	20.0000	20.81
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	72834	20.0000	20.30
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	112270	20.0000	20.33
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	89228	20.0000	22.80
53 1,1,2-Trichloroethane	83	6.839	6.839	(0.892)	59569	20.0000	21.55
22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	132193	20.0000	18.84
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	58130	20.0000	19.29
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	95389	20.0000	20.59
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	16199	20.0000	21.53
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	74745	20.0000	22.75(M)
90 1,2,4-Trichlorobenzene	180	11.345	11.345	(1.174)	32823	20.0000	23.21
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.971)	255320	20.0000	21.77
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.103)	6916	20.0000	19.93
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	73789	20.0000	21.34
88 1,2-Dichlorobenzene	146	9.998	9.998	(1.035)	115178	20.0000	19.43

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200417.b\X041707.D Page 2
Report Date: 20-May-2020 16:09

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.554	4.554	(0.916)	114184	20.0000	21.57
42	1,2-Dichloropropane	63	5.436	5.436	(1.094)	76331	20.0000	19.37
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	252121	20.0000	22.02
83	1,3-Dichlorobenzene	146	9.604	9.604	(0.994)	141568	20.0000	21.22
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	121332	20.0000	20.91
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	131421	20.0000	18.96
26	2,2-Dichloropropane	77	3.509	3.509	(0.839)	105882	20.0000	20.95
24	2-Butanone	43	3.580	3.580	(0.856)	95279	40.0000	39.96
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	219130	20.0000	22.09
52	2-Hexanone	43	7.090	7.090	(0.924)	155247	40.0000	43.63
77	4-Chlorotoluene	91	9.074	9.074	(0.939)	254709	20.0000	21.89
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	242928	20.0000	20.75
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	174648	40.0000	38.06 (M)
10	Acetone	43	1.976	1.976	(0.473)	73219	40.0000	39.12
37	Benzene	78	4.511	4.511	(0.908)	288521	20.0000	22.15
74	Bromobenzene	156	8.809	8.809	(0.912)	86350	20.0000	21.28
29	Bromochloromethane	128	3.795	3.795	(0.908)	41352	20.0000	20.94
39	Bromodichloromethane	83	5.729	5.729	(1.153)	82746	20.0000	19.75
66	Bromoform	173	8.415	8.415	(1.097)	51240	20.0000	20.52
6	Bromomethane	94	1.338	1.338	(0.320)	50345	20.0000	19.12
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	94075	20.0000	20.47
59	Chlorobenzene	112	7.699	7.699	(1.004)	193929	20.0000	19.94
7	Chloroethane	64	1.403	1.403	(0.335)	57510	20.0000	18.78
28	Chloroform	83	3.910	3.910	(0.935)	133377	20.0000	21.00
3	Chloromethane	50	1.073	1.073	(0.257)	118663	20.0000	18.72
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	81406	20.0000	21.97
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	102229	20.0000	19.83
55	Dibromochloromethane	129	7.176	7.176	(0.936)	77307	20.0000	20.76
44	Dibromomethane	93	5.557	5.557	(1.118)	40978	20.0000	19.78
2	Dichlorodifluoromethane	85	0.966	0.966	(0.231)	66029	20.0000	19.96
19	Carbon Disulfide	76	2.069	2.069	(0.495)	409432	40.0000	38.89
61	Ethylbenzene	106	7.799	7.799	(1.017)	102219	20.0000	20.05
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	24144	20.0000	24.09
67	Isopropylbenzene	105	8.566	8.566	(1.117)	303112	20.0000	20.38
62	m,p-Xylenes	106	7.907	7.907	(1.031)	247470	40.0000	40.17
17	Methylene Chloride	84	2.305	2.305	(0.551)	82485	20.0000	21.38
87	n-Butylbenzene	91	9.998	9.998	(1.035)	186942	20.0000	19.19
73	n-Propylbenzene	91	8.917	8.917	(0.923)	365947	20.0000	22.32
92	Naphthalene	128	11.546	11.546	(1.195)	42750	20.0000	20.38
63	o-Xylene	106	8.243	8.243	(1.075)	121137	20.0000	20.54
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	295752	20.0000	21.32
64	Styrene	104	8.258	8.258	(1.077)	211259	20.0000	20.91
78	tert-Butylbenzene	119	9.339	9.339	(0.967)	209424	20.0000	21.58
56	Tetrachloroethene	164	6.933	6.933	(0.904)	58689	20.0000	20.25
50	Toluene	91	6.446	6.446	(0.840)	248749	20.0000	17.52
20	trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	56784	20.0000	19.56
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	106417	20.0000	23.48
38	Trichloroethene	130	5.206	5.206	(1.048)	64629	20.0000	19.76
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	110299	20.0000	20.25
5	Vinyl Chloride	62	1.138	1.138	(0.272)	102662	20.0000	19.26

QC Flag Legend

M - Compound response manually integrated.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200417.b\X041707.D
Date : 17-APR-2020 14:00
Client ID: VSTD020
Sample Info: VSTD020;VSTD020;1;6;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200417.b\X041708.D Page 1
Report Date: 20-May-2020 16:09

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200417.b\X041708.D
Lab Smp Id: VSTD050 Client Smp ID: VSTD050
Inj Date : 17-APR-2020 14:24
Operator : PC Inst ID: voa6.i
Smp Info : VSTD050;VSTD050;1;7;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200417.b\8260W.m
Meth Date : 20-May-2020 16:09 voa6.i Quant Type: ISTD
Cal Date : 17-APR-2020 14:00 Cal File: X041707.D
Als bottle: 9 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0000000_Bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7142

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

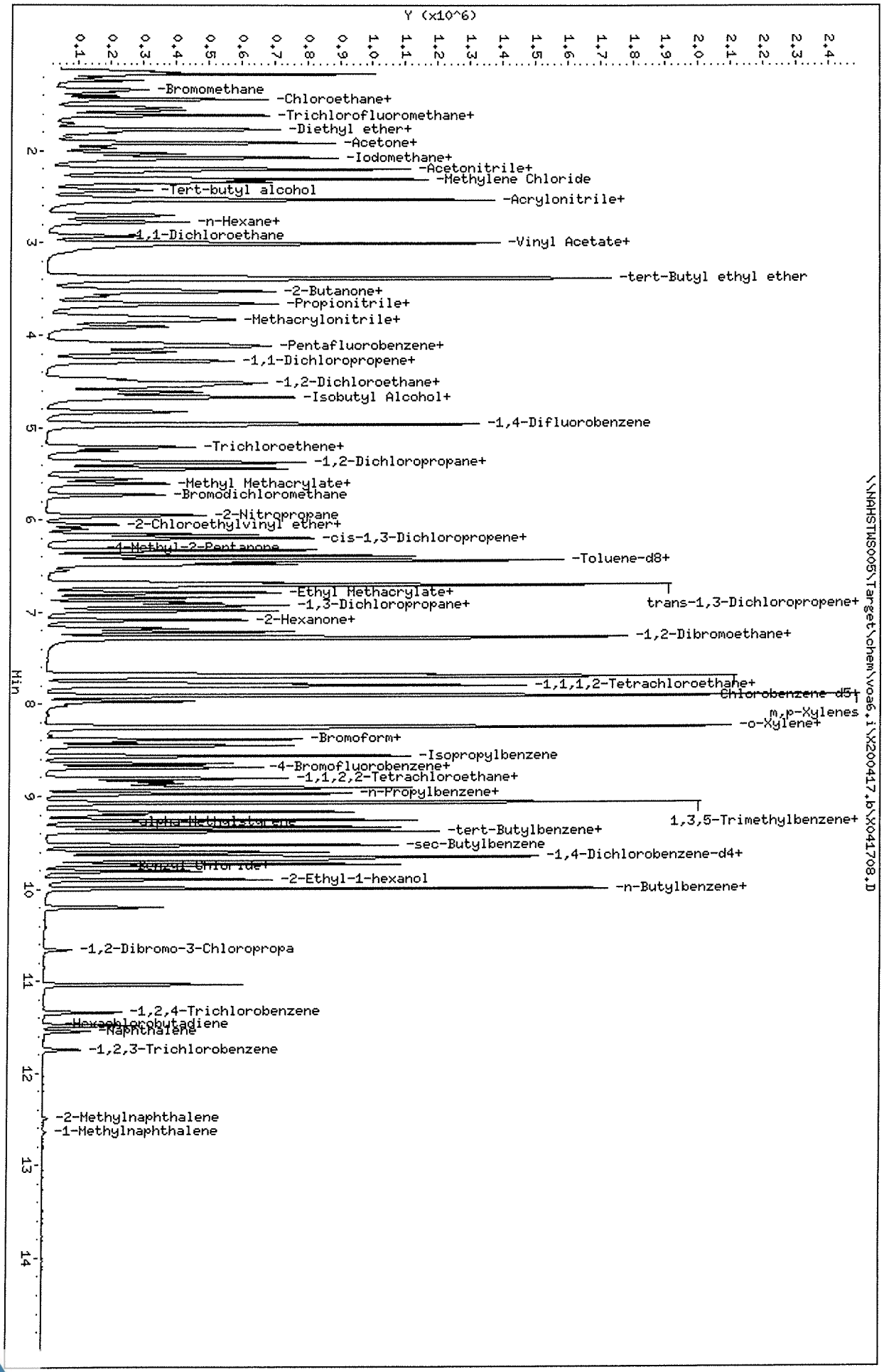
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	305141	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	427152	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	468143	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	198456	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	168985	50.0000	50.29
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	176751	50.0000	47.15
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	596043	50.0000	51.10
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	191201	50.0000	43.42
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	171133	50.0000	50.05
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	265981	50.0000	50.95
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	162353	50.0000	46.38
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	138908	50.0000	52.73
22 1,1-Dichloroethane	63	2.922	2.922	(0.699)	315402	50.0000	47.54
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	145882	50.0000	51.20
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	203648	50.0000	49.63
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	31362	50.0000	46.61
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	140472	50.0000	47.81 (M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	62604	50.0000	49.50
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	527389	50.0000	50.27
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	15691	50.0000	50.56
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	171707	50.0000	52.10
88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	269907	50.0000	50.91

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200417.b\X041708.D Page 2
Report Date: 20-May-2020 16:09

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.555	4.555	(0.916)	225927	50.0000	47.36
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	183709	50.0000	51.72
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	512376	50.0000	50.03
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	301821	50.0000	50.59
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	294398	50.0000	53.23
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	302576	50.0000	48.82
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	262918	50.0000	55.02
24	2-Butanone	43	3.573	3.573	(0.854)	233785	100.000	101.95
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	429262	50.0000	48.38
52	2-Hexanone	43	7.090	7.090	(0.924)	368684	100.000	108.71
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	496982	50.0000	47.75
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	531352	50.0000	50.76
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	539384	100.000	100.12
10	Acetone	43	1.969	1.969	(0.471)	175184	100.000	102.24
37	Benzene	78	4.512	4.512	(0.908)	563133	50.0000	47.98
74	Bromobenzene	156	8.810	8.810	(0.911)	177329	50.0000	48.86
29	Bromochloromethane	128	3.795	3.795	(0.908)	95406	50.0000	51.11
39	Bromodichloromethane	83	5.729	5.729	(1.153)	200240	50.0000	53.03
66	Bromoform	173	8.416	8.416	(1.097)	109276	50.0000	45.92
6	Bromomethane	94	1.338	1.338	(0.320)	119933	50.0000	48.14
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	203935	50.0000	49.19
59	Chlorobenzene	112	7.699	7.699	(1.004)	455835	50.0000	49.18
7	Chloroethane	64	1.403	1.403	(0.336)	139166	50.0000	48.07
28	Chloroform	83	3.910	3.910	(0.935)	319794	50.0000	53.24
3	Chloromethane	50	1.073	1.073	(0.257)	299144	50.0000	48.33
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	195316	50.0000	55.76
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	303637	50.0000	65.35
55	Dibromochloromethane	129	7.176	7.176	(0.936)	182992	50.0000	51.57
44	Dibromomethane	93	5.558	5.558	(1.118)	102886	50.0000	55.12
2	Dichlorodifluoromethane	85	0.966	0.966	(0.231)	161095	50.0000	51.50
19	Carbon Disulfide	76	2.069	2.069	(0.495)	1007125	100.000	101.16
61	Ethylbenzene	106	7.800	7.800	(1.017)	242368	50.0000	49.88
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	45480	50.0000	52.48
67	Isopropylbenzene	105	8.566	8.566	(1.117)	610768	50.0000	43.08
62	m,p-Xylenes	106	7.907	7.907	(1.031)	561275	100.000	95.59
17	Methylene Chloride	84	2.305	2.305	(0.551)	186969	50.0000	51.27
87	n-Butylbenzene	91	9.999	9.999	(1.034)	451606	50.0000	51.84
73	n-Propylbenzene	91	8.917	8.917	(0.922)	720360	50.0000	49.12
92	Naphthalene	128	11.546	11.546	(1.194)	93767	50.0000	49.99
63	o-Xylene	106	8.244	8.244	(1.075)	240143	50.0000	42.73
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	605909	50.0000	48.84
64	Styrene	104	8.258	8.258	(1.077)	423638	50.0000	44.00
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	428030	50.0000	49.33
56	Tetrachloroethene	164	6.933	6.933	(0.904)	135574	50.0000	49.09
50	Toluene	91	6.446	6.446	(0.840)	714096	50.0000	52.79
20	trans-1,2-Dichloroethene	96	2.528	2.528	(0.604)	136672	50.0000	49.80
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	258439	50.0000	63.26 (M)
38	Trichloroethene	130	5.207	5.207	(1.048)	151739	50.0000	51.48
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	268087	50.0000	52.06
5	Vinyl Chloride	62	1.138	1.138	(0.272)	259014	50.0000	51.40

QC Flag Legend

M - Compound response manually integrated.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200417.b\X041708.D
Date : 17-APR-2020 14:24
Client ID: VSTD050
Sample Info: VSTD050;VSTD050;1;7;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200417.b\X041709.D
Lab Smp Id: VSTD100 Client Smp ID: VSTD100
Inj Date : 17-APR-2020 14:48
Operator : PC Inst ID: voa6.i
Smp Info : VSTD100;VSTD100;1;8;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200417.b\8260W.m
Meth Date : 20-May-2020 16:09 voa6.i Quant Type: ISTD
Cal Date : 17-APR-2020 14:24 Cal File: X041708.D
Als bottle: 10 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0000000_Bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7142

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

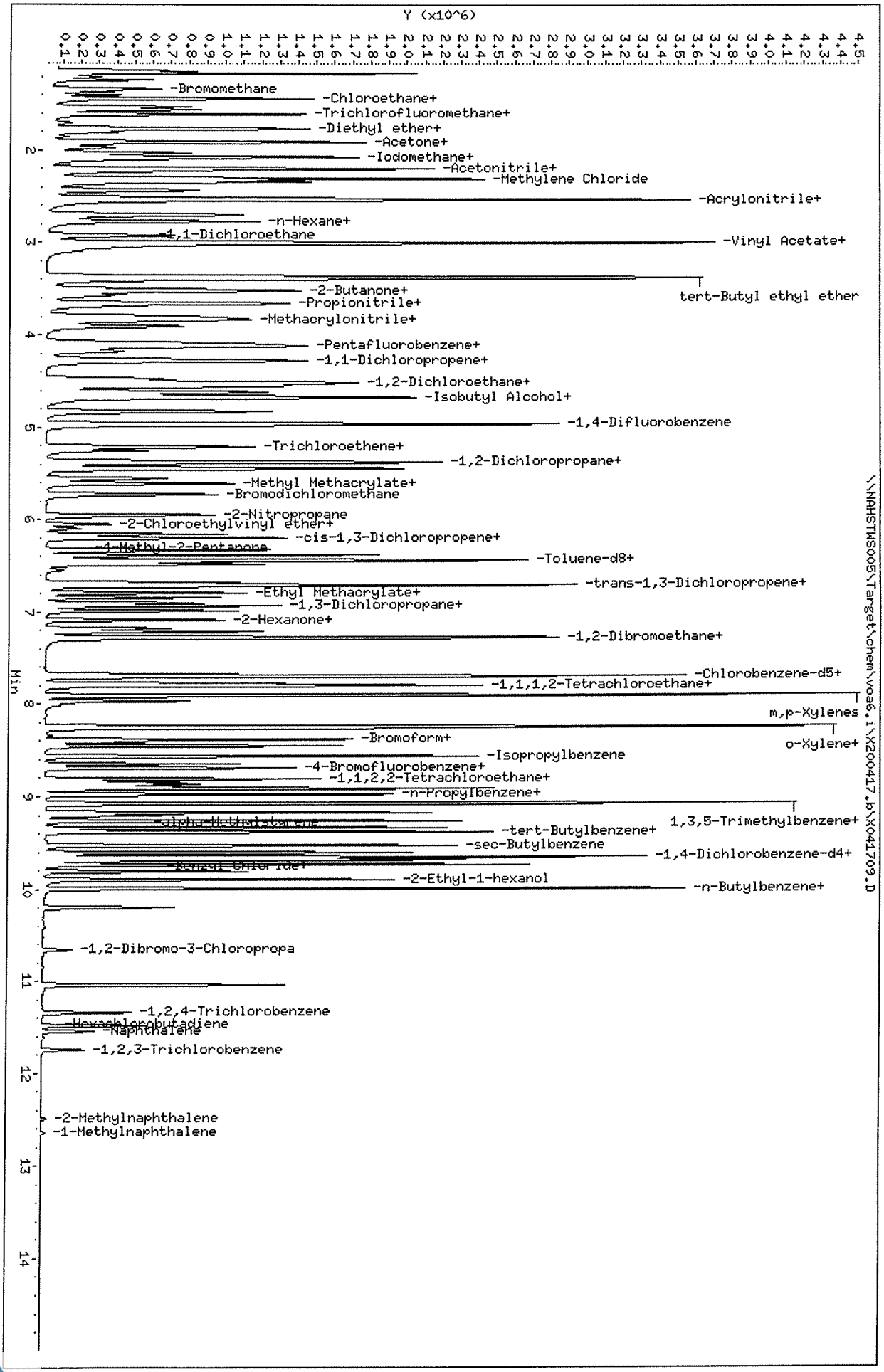
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	295712	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	492571	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	396563	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	223109	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	332106	100.000	102.59
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	464765	100.000	100.23
$	48 Toluene-d8	98	6.388	6.388	(0.833)	996794	100.000	100.89
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	377194	100.000	100.54
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	300211	100.000	103.65
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	560023	100.000	110.69(A)
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	317988	100.000	80.80
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	222297	100.000	99.61
	22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	793391	100.000	123.42(A)
	11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	291445	100.000	105.56
	32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	482724	100.000	102.68
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	62998	100.000	83.28
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	276405	100.000	83.68(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	129644	100.000	91.18
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	1061012	100.000	89.96
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	31811	100.000	91.18
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	282915	100.000	101.35(A)
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	531782	100.000	89.22

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200417.b\X041709.D Page 2
Report Date: 20-May-2020 16:09

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	609156	100.000	110.74(A)
42	1,2-Dichloropropane	63	5.436	5.436	(1.094)	458534	100.000	111.95
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	1071850	100.000	93.10
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	685830	100.000	102.26
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	460498	100.000	98.29
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	685883	100.000	98.44
26	2,2-Dichloropropane	77	3.509	3.509	(0.839)	544936	100.000	117.68
24	2-Butanone	43	3.573	3.573	(0.854)	444724	200.000	199.08
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	887697	100.000	88.99
52	2-Hexanone	43	7.090	7.090	(0.924)	539205	200.000	187.70
77	4-Chlorotoluene	91	9.074	9.074	(0.939)	1026653	100.000	87.74
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	1282240	100.000	108.96
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	797237	200.000	126.94(M)
10	Acetone	43	1.969	1.969	(0.471)	327224	200.000	199.03
37	Benzene	78	4.512	4.512	(0.908)	1392367	100.000	102.87(A)
74	Bromobenzene	156	8.809	8.809	(0.911)	360042	100.000	88.25
29	Bromochloromethane	128	3.795	3.795	(0.908)	177172	100.000	97.94
39	Bromodichloromethane	83	5.729	5.729	(1.153)	503679	100.000	115.68
66	Bromoform	173	8.415	8.415	(1.097)	216604	100.000	107.46
6	Bromomethane	94	1.331	1.331	(0.318)	247114	100.000	102.34
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	481453	100.000	100.67
59	Chlorobenzene	112	7.699	7.699	(1.004)	778597	100.000	99.17
7	Chloroethane	64	1.396	1.396	(0.334)	273630	100.000	97.54
28	Chloroform	83	3.910	3.910	(0.935)	644133	100.000	110.66(A)
3	Chloromethane	50	1.073	1.073	(0.257)	608324	100.000	100.38
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	377248	100.000	111.13(A)
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	485982	100.000	90.71
55	Dibromochloromethane	129	7.176	7.176	(0.936)	314543	100.000	104.65
44	Dibromomethane	93	5.557	5.557	(1.118)	241858	100.000	112.38
2	Dichlorodifluoromethane	85	0.966	0.966	(0.231)	339702	100.000	112.07
19	Carbon Disulfide	76	2.069	2.069	(0.495)	2019997	200.000	209.36
61	Ethylbenzene	106	7.799	7.799	(1.017)	421331	100.000	102.37(A)
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	93895	100.000	97.68
67	Isopropylbenzene	105	8.566	8.566	(1.117)	1261293	100.000	105.04
62	m,p-Xylenes	106	7.907	7.907	(1.031)	1020515	200.000	205.18(A)
17	Methylene Chloride	84	2.305	2.305	(0.551)	359771	100.000	101.80
87	n-Butylbenzene	91	9.999	9.999	(1.034)	936233	100.000	95.60
73	n-Propylbenzene	91	8.917	8.917	(0.922)	1504579	100.000	91.27
92	Naphthalene	128	11.546	11.546	(1.194)	192697	100.000	91.39
63	o-Xylene	106	8.244	8.244	(1.075)	491823	100.000	103.31(A)
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	1280293	100.000	91.80
64	Styrene	104	8.258	8.258	(1.077)	840227	100.000	103.02(A)
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	872158	100.000	89.40
56	Tetrachloroethene	164	6.933	6.933	(0.904)	253561	100.000	108.38(A)
50	Toluene	91	6.446	6.446	(0.840)	1184650	100.000	103.39(A)
20	trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	323997	100.000	121.82
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	435978	100.000	92.55
38	Trichloroethene	130	5.206	5.206	(1.048)	347022	100.000	102.11(A)
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	551534	100.000	110.53
5	Vinyl Chloride	62	1.138	1.138	(0.272)	533915	100.000	109.34

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200417.b\X041709.D
Date : 17-APR-2020 14:48
Client ID: VSTD100
Sample Info: VSTD100;VSTD100;1;8;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200417.b\X041710.D
Lab Smp Id: VSTD150 Client Smp ID: VSTD150
Inj Date : 17-APR-2020 15:12
Operator : PC Inst ID: voa6.i
Smp Info : VSTD150;VSTD150;1;9;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200417.b\8260W.m
Meth Date : 20-May-2020 16:09 voa6.i Quant Type: ISTD
Cal Date : 17-APR-2020 14:48 Cal File: X041709.D
Als bottle: 11 Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0000000_Bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7142

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

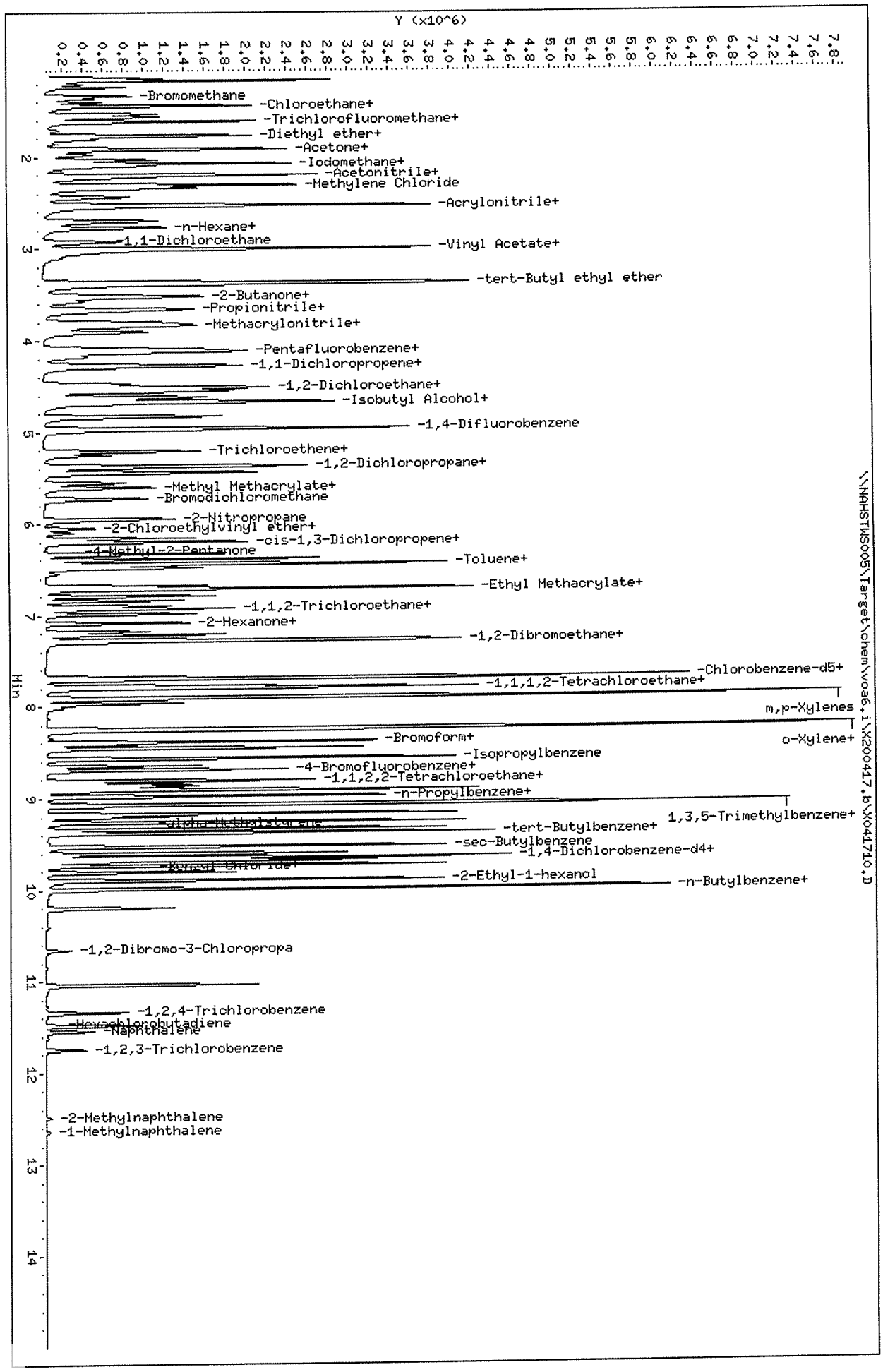
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	290206	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	462205	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	432815	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	210023	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	479419	150.000	151.17
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	613843	150.000	113.45
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1456969	150.000	135.12(M)
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	655941	150.000	159.93
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	497075	150.000	157.24
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	762876	150.000	153.65(A)
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	573102	150.000	154.70
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	313552	150.000	128.74
22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	894447	150.000	141.78(A)
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	413424	150.000	152.58
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	682748	150.000	155.08
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	105832	150.000	148.63
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	480586	150.000	154.57(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	210607	150.000	157.36
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	1800772	150.000	162.21
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.102)	47830	150.000	145.63
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	408915	150.000	134.22(A)
88 1,2-Dichlorobenzene	146	9.998	9.998	(1.034)	872892	150.000	155.59

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200417.b\X041710.D Page 2
Report Date: 20-May-2020 16:09

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	763497	150.000	147.92(A)
42 1,2-Dichloropropane	63	5.436	5.436	(1.094)	510844	150.000	132.92
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	1773512	150.000	163.65
83 1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	979358	150.000	155.12
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	655086	150.000	128.12
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	972491	150.000	148.28
26 2,2-Dichloropropane	77	3.509	3.509	(0.839)	623634	150.000	137.23
24 2-Butanone	43	3.573	3.573	(0.854)	464455	300.000	211.78(A)
76 2-Chlorotoluene	91	8.981	8.981	(0.929)	1524973	150.000	162.41
52 2-Hexanone	43	7.090	7.090	(0.924)	773045	300.000	246.56
77 4-Chlorotoluene	91	9.074	9.074	(0.939)	1777422	150.000	161.37
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	1808693	150.000	163.28
45 4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	1165800	300.000	118.61(M)
10 Acetone	43	1.969	1.969	(0.471)	428172	300.000	266.08
37 Benzene	78	4.512	4.512	(0.908)	1889778	150.000	148.80(A)
74 Bromobenzene	156	8.809	8.809	(0.911)	574527	150.000	149.60
29 Bromochloromethane	128	3.795	3.795	(0.908)	255448	150.000	143.89
39 Bromodichloromethane	83	5.729	5.729	(1.153)	568850	150.000	139.23
66 Bromoform	173	8.415	8.415	(1.097)	343392	150.000	156.09
6 Bromomethane	94	1.331	1.331	(0.318)	353545	150.000	149.18
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	672109	150.000	149.75
59 Chlorobenzene	112	7.699	7.699	(1.004)	1304438	150.000	152.24(A)
7 Chloroethane	64	1.396	1.396	(0.334)	392153	150.000	142.44
28 Chloroform	83	3.910	3.910	(0.935)	889334	150.000	155.69(A)
3 Chloromethane	50	1.073	1.073	(0.257)	881802	150.000	147.81
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	462019	150.000	138.69(A)
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	695228	150.000	138.29
55 Dibromochloromethane	129	7.176	7.176	(0.936)	449048	150.000	136.89
44 Dibromomethane	93	5.557	5.557	(1.118)	268203	150.000	132.81
2 Dichlorodifluoromethane	85	0.966	0.966	(0.231)	479515	150.000	161.20
19 Carbon Disulfide	76	2.069	2.069	(0.495)	2944718	300.000	311.00
61 Ethylbenzene	106	7.799	7.799	(1.017)	709587	150.000	157.96(A)
91 Hexachlorobutadiene	225	11.481	11.481	(1.187)	151820	150.000	168.91
67 Isopropylbenzene	105	8.566	8.566	(1.117)	2055492	150.000	156.84
62 m,p-Xylenes	106	7.907	7.907	(1.031)	1710965	300.000	315.18(A)
17 Methylene Chloride	84	2.305	2.305	(0.551)	410287	150.000	118.29
87 n-Butylbenzene	91	9.998	9.998	(1.034)	1605608	150.000	174.16
73 n-Propylbenzene	91	8.917	8.917	(0.922)	2566824	150.000	165.41
92 Naphthalene	128	11.546	11.546	(1.194)	312555	150.000	157.48
63 o-Xylene	106	8.243	8.243	(1.075)	815887	150.000	157.03(A)
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	2122580	150.000	161.68
64 Styrene	104	8.258	8.258	(1.077)	1404901	150.000	157.83(A)
78 tert-Butylbenzene	119	9.339	9.339	(0.966)	1447055	150.000	157.58
56 Tetrachloroethene	164	6.933	6.933	(0.904)	355705	150.000	139.31(A)
50 Toluene	91	6.446	6.446	(0.840)	1682774	150.000	134.56(A)
20 trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	378737	150.000	145.10
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	627076	150.000	141.87
38 Trichloroethene	130	5.206	5.206	(1.048)	493585	150.000	154.78(A)
8 Trichlorofluoromethane	101	1.560	1.560	(0.373)	767574	150.000	156.75
5 Vinyl Chloride	62	1.138	1.138	(0.272)	762641	150.000	159.14

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200417.b\X041710.D
Date : 17-APR-2020 15:12
Client ID: VSTD150
Sample Info: VSTD150;VSTD150;1;9;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200417.b\X041711.D
Lab Smp Id: VSTD200 Client Smp ID: VSTD200
Inj Date : 17-APR-2020 15:36
Operator : PC Inst ID: voa6.i
Smp Info : VSTD200;VSTD200;1;10;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200417.b\8260W.m
Meth Date : 20-May-2020 16:09 voa6.i Quant Type: ISTD
Cal Date : 17-APR-2020 15:12 Cal File: X041710.D
Als bottle: 12 Calibration Sample, Level: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0000000_Bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7142

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	291175	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	396213	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	444051	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	183025	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	628372	200.000	197.66
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	653619	200.000	114.95
$	48 Toluene-d8	98	6.388	6.388	(0.833)	2266253	200.000	204.85(A)
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	811763	200.000	192.82
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	654404	200.000	201.77(A)
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	1030213	200.000	206.81(A)
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	601842	200.000	186.43
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	514660	200.000	205.97(A)
	22 1,1-Dichloroethane	63	2.922	2.922	(0.699)	1179386	200.000	186.32(A)
	11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	562021	200.000	206.74(A)
	32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	733736	200.000	194.58
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	135268	200.000	217.99(A)
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	511042	200.000	188.61(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	267276	200.000	229.17(A)
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	1973379	200.000	203.98(A)
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	60149	200.000	210.16(A)
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	642716	200.000	205.62(A)
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	1004508	200.000	205.46(A)

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200417.b\X041711.D Page 2
Report Date: 20-May-2020 16:10

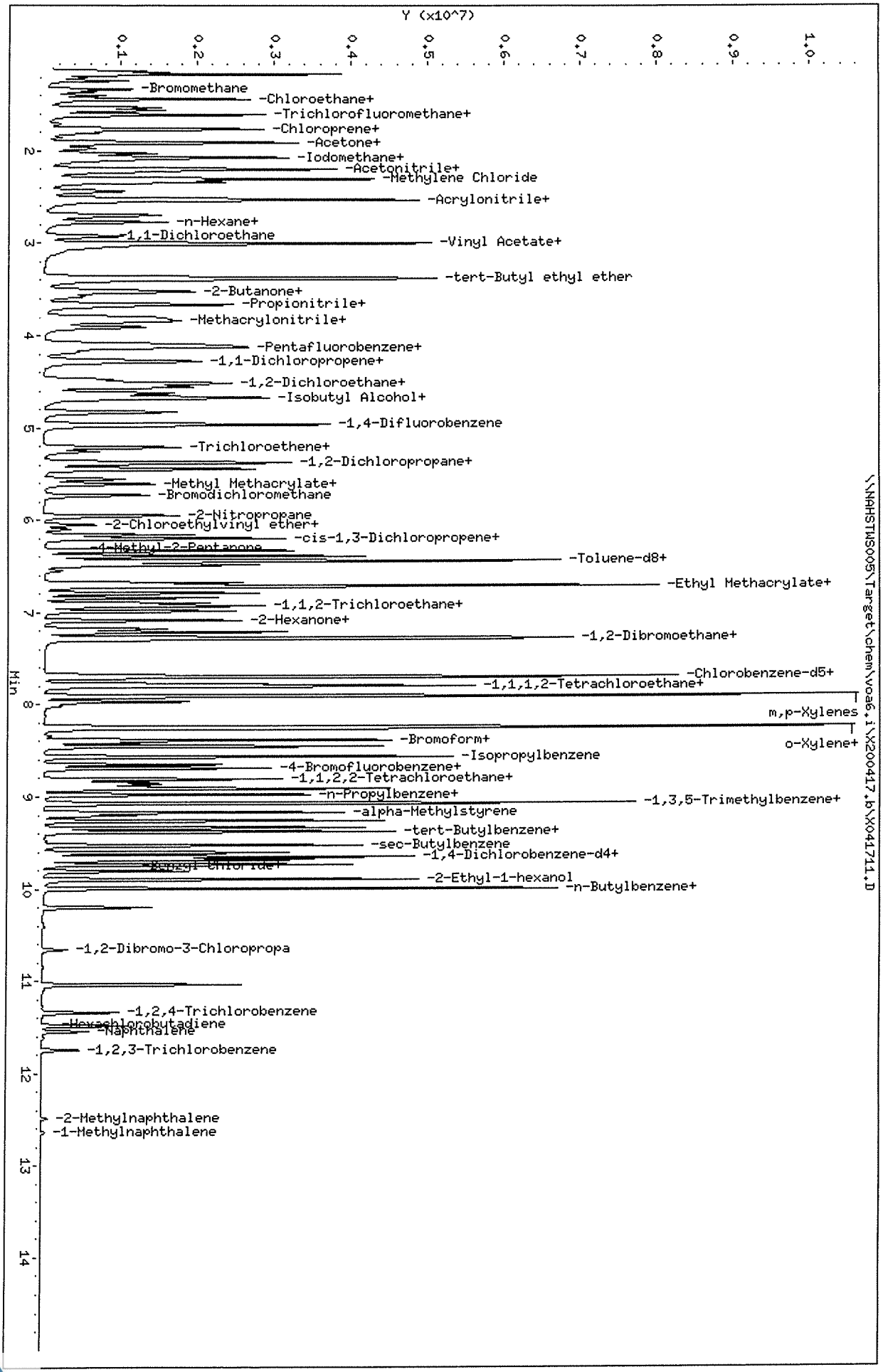
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	857178	200.000	193.73(A)
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	682650	200.000	207.21(A)
75	1,3,5-Trimethylbenzene	105	9.075	9.075	(0.939)	1941331	200.000	205.56(A)
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	1135882	200.000	206.46(A)
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	1068900	200.000	203.76(A)
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	1134739	200.000	198.54
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	791748	200.000	173.65
24	2-Butanone	43	3.573	3.573	(0.854)	618262	400.000	280.63(A)
76	2-Chlorotoluene	91	8.981	8.981	(0.929)	1607970	200.000	196.51
52	2-Hexanone	43	7.090	7.090	(0.924)	1419714	400.000	441.36(A)
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	1874029	200.000	195.24
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	2028652	200.000	210.16(A)
10	Acetone	43	1.976	1.976	(0.473)	605045	400.000	375.61
37	Benzene	78	4.512	4.512	(0.908)	2120187	200.000	194.75(A)
74	Bromobenzene	156	8.810	8.810	(0.911)	699365	200.000	208.96(A)
29	Bromochloromethane	128	3.795	3.795	(0.908)	323912	200.000	181.85
39	Bromodichloromethane	83	5.729	5.729	(1.153)	754195	200.000	215.34(A)
66	Bromoform	173	8.416	8.416	(1.097)	469021	200.000	207.80(A)
6	Bromomethane	94	1.331	1.331	(0.318)	475362	200.000	199.91
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	765667	200.000	199.01
59	Chlorobenzene	112	7.699	7.699	(1.004)	1742857	200.000	198.26(A)
7	Chloroethane	64	1.396	1.396	(0.334)	520934	200.000	188.59
28	Chloroform	83	3.910	3.910	(0.935)	1141213	200.000	199.12(A)
3	Chloromethane	50	1.073	1.073	(0.257)	1210478	200.000	201.89(A)
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	587107	200.000	175.65(A)
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	920776	200.000	213.67(A)
55	Dibromochloromethane	129	7.176	7.176	(0.936)	693199	200.000	205.97(A)
44	Dibromomethane	93	5.558	5.558	(1.118)	364122	200.000	210.33(A)
2	Dichlorodifluoromethane	85	0.966	0.966	(0.231)	674993	200.000	226.16(A)
19	Carbon Disulfide	76	2.069	2.069	(0.495)	3921355	400.000	412.77(A)
61	Ethylbenzene	106	7.800	7.800	(1.017)	931681	200.000	202.16(A)
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	183792	200.000	235.25(A)
67	Isopropylbenzene	105	8.566	8.566	(1.117)	2718828	200.000	202.21(A)
62	m,p-Xylenes	106	7.907	7.907	(1.031)	2261305	400.000	406.02(A)
17	Methylene Chloride	84	2.298	2.298	(0.550)	662679	200.000	190.43
87	n-Butylbenzene	91	9.999	9.999	(1.034)	1726898	200.000	214.95(A)
73	n-Propylbenzene	91	8.917	8.917	(0.922)	2780386	200.000	205.60(A)
92	Naphthalene	128	11.546	11.546	(1.194)	401473	200.000	232.12(A)
63	o-Xylene	106	8.244	8.244	(1.075)	1104973	200.000	207.29(A)
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	2326501	200.000	203.35(A)
64	Styrene	104	8.265	8.265	(1.078)	1906203	200.000	208.73(A)
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	1621544	200.000	202.63(A)
56	Tetrachloroethene	164	6.933	6.933	(0.904)	532934	200.000	203.44(A)
50	Toluene	91	6.446	6.446	(0.840)	2697614	200.000	210.26(A)
20	trans-1,2-Dichloroethene	96	2.528	2.528	(0.604)	499875	200.000	190.88
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	1030412	200.000	271.95(A)
38	Trichloroethene	130	5.207	5.207	(1.048)	582982	200.000	213.26(A)
8	Trichlorofluoromethane	101	1.553	1.553	(0.372)	1045693	200.000	212.84(A)
5	Vinyl Chloride	62	1.138	1.138	(0.272)	1034355	200.000	215.12(A)

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

QC Flag Legend

M - Compound response manually integrated.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200417.b\X041711.D
Date : 17-APR-2020 15:36
Client ID: VSTD200
Sample Info: VSTD200;VSTD200;1;10;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

MSVOA06 -Logbook

Batch: 40338
Date: 04-19-2020
Method: 8260
Comments:

Analyst: Presenta Cabascango
Reviewer:
Laboratory: Houston

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	04-19-2020 10:18 am	1.00	50 mL	50 mL	X041901.D	Liquid	Y	NA
	Auto find/ purged									
2	ICV	ICV	04-19-2020 10:42 am	1.00	50 mL	50 mL	X041902.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
3	CCV	CCV	04-19-2020 11:06 am	1.00	50 mL	50 mL	X041903.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
4	CCB	SAMP	04-19-2020 11:30 am	1.00	50 mL	50 mL	X041904.D	Liquid	Y	NA
5	VLCSW-200419	LCS	04-19-2020 11:54 am	1.00	50 mL	50 mL	X041905.D	Liquid	Y	NA
	4.0 uL cal std/50 mL DI									
6	BLANK	SAMP	04-19-2020 12:18 pm	1.00	50 mL	50 mL	X041906.D	Liquid	Y	NA
7	VBLKW-200419	MBLK	04-19-2020 12:42 pm	1.00	50 mL	50 mL	X041907.D	Liquid	Y	NA
8	HS20040699-02n/r	SAMP	04-19-2020 01:06 pm	1.00	50 mL	50 mL	X041908.D	Liquid	Y	NA
9	HS20040699-01	SAMP	04-19-2020 01:30 pm	1.00	50 mL	50 mL	X041909.D	Liquid	Y	<2
10	HS20040699-02	SAMP	04-19-2020 01:54 pm	1.00	50 mL	50 mL	X041910.D	Liquid	Y	<2
11	HS20040654-01	SAMP	04-19-2020 02:18 pm	1.00	50 mL	50 mL	X041911.D	Liquid	Y	NA
	neat sample									
12	HS20040654-01MS	MS	04-19-2020 02:42 pm	1.00	50 mL	50 mL	X041912.D	Liquid	Y	NA
	3.5 uL cal std/40 mL samp									
13	HS20040654-01MSD	MSD	04-19-2020 03:06 pm	1.00	50 mL	50 mL	X041913.D	Liquid	Y	NA
	3.5 uL cal std/40 mL samp									
14	CCV-END	CCV	04-19-2020 03:30 pm	1.00	50 mL	50 mL	X041914.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
15	MBLK-152806	MBLK	04-19-2020 03:54 pm	20.00	2.5 mL	50 mL	X041915.D	Liquid	Y	NA
	tclps									
16	HS20040647-02	SAMP	04-19-2020 04:18 pm	20.00	2.5 mL	50 mL	X041916.D	Liquid	Y	na
17	HS20040647-01	SAMP	04-19-2020 04:42 pm	100.0(	500 µL	50 mL	X041917.D	Liquid	Y	na
18	HS20040654-02	SAMP	04-19-2020 05:06 pm	1.00	50 mL	50 mL	X041918.D	Liquid	Y	na
	neat samples									
19	HS20040654-03	SAMP	04-19-2020 05:30 pm	1.00	50 mL	50 mL	X041919.D	Liquid	Y	na
20	HS20040654-04	SAMP	04-19-2020 05:54 pm	1.00	50 mL	50 mL	X041920.D	Liquid	Y	na
21	HS20040654-05	SAMP	04-19-2020 06:18 pm	1.00	50 mL	50 mL	X041921.D	Liquid	Y	na
22	HS20040654-06	SAMP	04-19-2020 06:42 pm	1.00	50 mL	50 mL	X041922.D	Liquid	Y	na
23	HS20040654-07	SAMP	04-19-2020 07:06 pm	1.00	50 mL	50 mL	X041923.D	Liquid	Y	na
24	MBLK-152807	MBLK	04-19-2020 07:31 pm	20.00	2.5 mL	50 mL	X041924.D	Liquid	Y	na
	tclps									
25	HS20040645-01	SAMP	04-19-2020 07:55 pm	20.00	2.5 mL	50 mL	X041925.D	Liquid	Y	na
26	HS20040619-01	SAMP	04-19-2020 08:19 pm	5.00	10 mL	50 mL	X041926.D	Liquid	Y	<2
27	HS20040631-01	SAMP	04-19-2020 08:43 pm	1.00	50 mL	50 mL	X041927.D	Liquid	Y	<2
28	HS20040631-02	SAMP	04-19-2020 09:07 pm	1.00	50 mL	50 mL	X041928.D	Liquid	Y	<2
29	HS20040631-03	SAMP	04-19-2020 09:31 pm	1.00	50 mL	50 mL	X041929.D	Liquid	Y	<2
30	HS20040665-02	SAMP	04-19-2020 09:55 pm	1.00	50 mL	50 mL	X041930.D	Liquid	Y	<2
31	HS20040665-01ott	SAMP	04-19-2020 10:19 pm	1.00	50 mL	50 mL	X041931.D	Liquid	Y	<2

MSVOA06 -Logbook

Chemical	Value
SURR SPK ID	31106-21-06
IS ID	31106-21-06
CAL STD ID	31106-25-01/02
BFB ID	31106-21-06
pH Paper	634-64-11

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ALS GROUP Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20041127

Lab File ID: X041901 BFB Injection Date: 04/19/20

Instrument ID: VOA6 BFB Injection Time: 1018

GC Column: DB624 ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	24.9
75	30.0 - 60.0% of mass 95	50.6
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.3 (0.5)1
174	Greater than 50.0% of mass 95	63.1
175	5.0 - 9.0% of mass 174	4.9 (7.8)1
176	95.0 - 101.0% of mass 174	62.3 (98.7)1
177	5.0 - 9.0% of mass 176	4.7 (7.5)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	1CV	1CV	X041902	04/19/20	1042
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200419.b\X041901.D

Date : 19-APR-2020 10:18

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

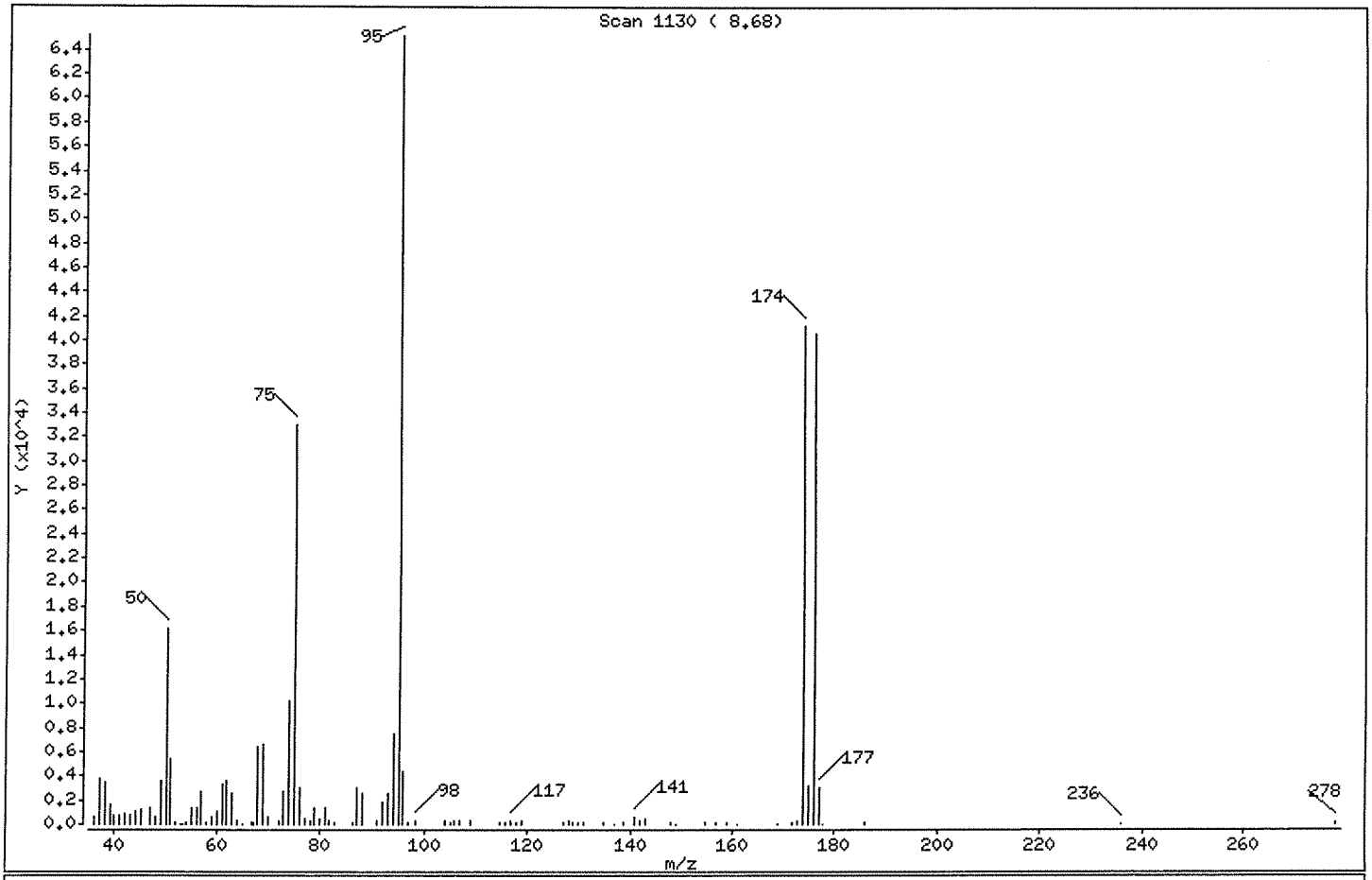
Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

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	24.93
75	30.00 - 60.00% of mass 95	50.56
96	5.00 - 9.00% of mass 95	6.60
173	Less than 2.00% of mass 174	0.35 (0.55)
174	Greater than 50.00% of mass 95	63.11
175	5.00 - 9.00% of mass 174	4.92 (7.80)
176	95.00 - 101.00% of mass 174	62.31 (98.74)
177	5.00 - 9.00% of mass 176	4.68 (7.51)

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200419.b\X041901.D

Date : 19-APR-2020 10:18

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

Data File: X041901.D
Spectrum: Scan 1130 (8.68)
Location of Maximum: 95.00
Number of points: 96

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.90	547	61.00	3269	90.90	316	138.80	90
37.00	3716	62.00	3551	92.00	1826	140.90	607
38.00	3414	63.00	2608	93.00	2572	142.00	246
39.00	1623	64.00	306	94.00	7485	142.90	506
40.00	817	65.10	65	95.00	65160	148.00	106
41.00	703	66.70	79	96.00	4298	148.90	69
42.00	831	67.10	128	97.00	204	154.80	172
43.10	710	68.00	6499	98.20	302	156.80	109
44.00	1110	69.10	6615	103.90	295	158.80	96
45.10	1209	70.00	620	105.00	190	160.90	70
47.10	1277	72.00	343	105.90	257	168.90	51
48.00	594	73.00	2771	106.80	299	171.70	94
49.00	3594	74.00	10217	109.00	287	172.90	226
50.00	16247	75.00	32944	114.80	141	174.00	41120
51.00	5467	76.00	2984	115.80	216	175.00	3207
52.00	194	77.00	520	116.90	367	176.00	40600
52.80	71	78.00	358	117.80	188	177.00	3049
53.20	61	78.90	1394	118.80	269	177.80	63
54.00	163	80.00	485	127.00	208	186.00	150
55.00	1333	81.00	1300	128.00	345	235.80	67
56.00	1381	81.80	300	129.00	207	278.10	91
57.00	2628	82.80	169	129.90	217		
58.00	181	86.20	116	131.00	130		
59.00	553	87.00	2959	135.00	142		
60.00	974	87.90	2493	137.00	69		

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200419.b\X041901.D

Date : 19-APR-2020 10:18

Client ID: BFB

Instrument: voa6.i

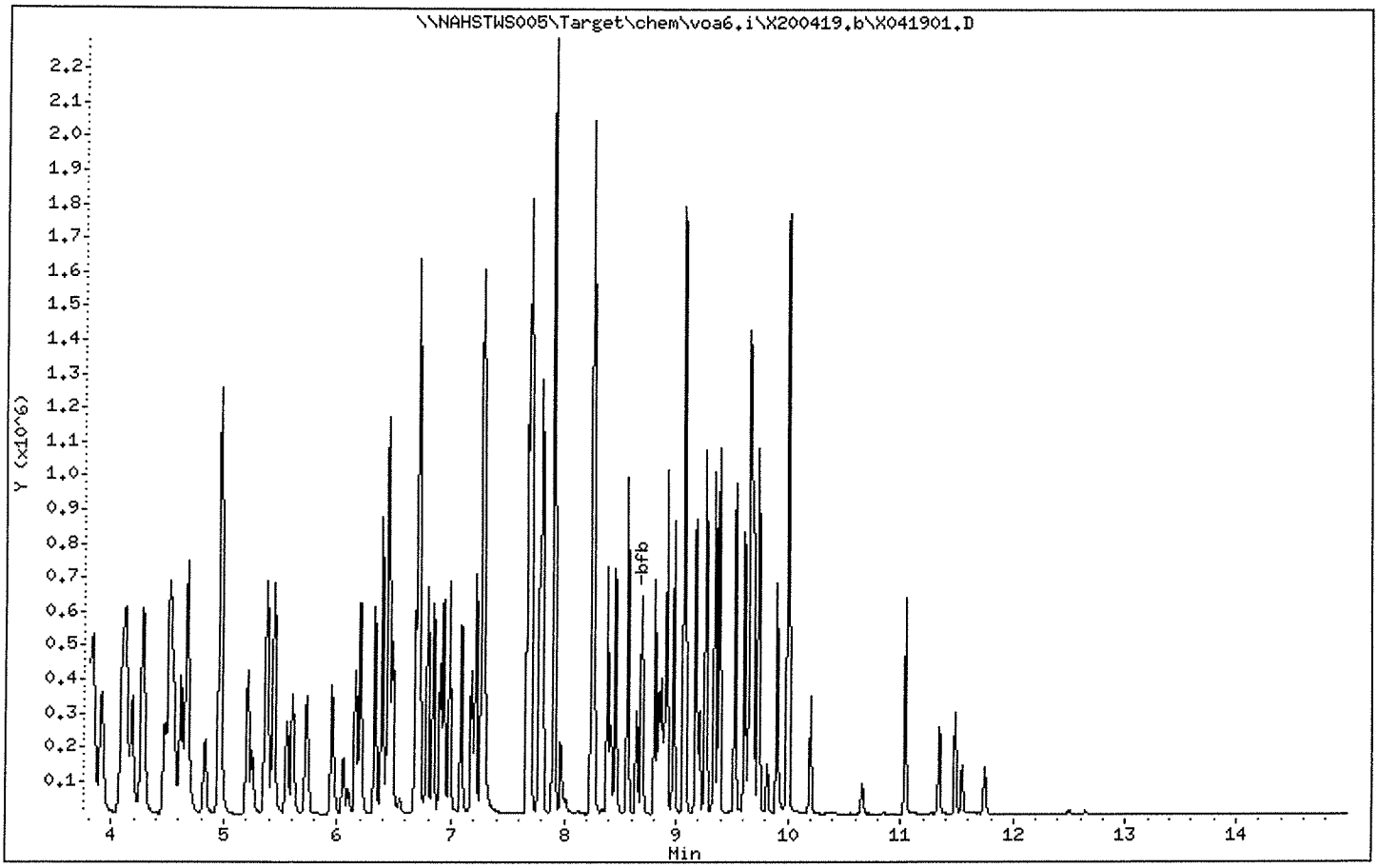
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200419.b\X041902.D
Lab Smp Id: 1CV Client Smp ID: 1CV
Inj Date : 19-APR-2020 10:42
Operator : PC Inst ID: voa6.i
Smp Info : CCV;CCV;2;;;ICV
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X200419.b\8260W.m
Meth Date : 05-May-2020 14:56 voa6.i Quant Type: ISTD
Cal Date : 17-APR-2020 15:36 Cal File: X041711.D
Als bottle: 2 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0000000_Bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7142

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

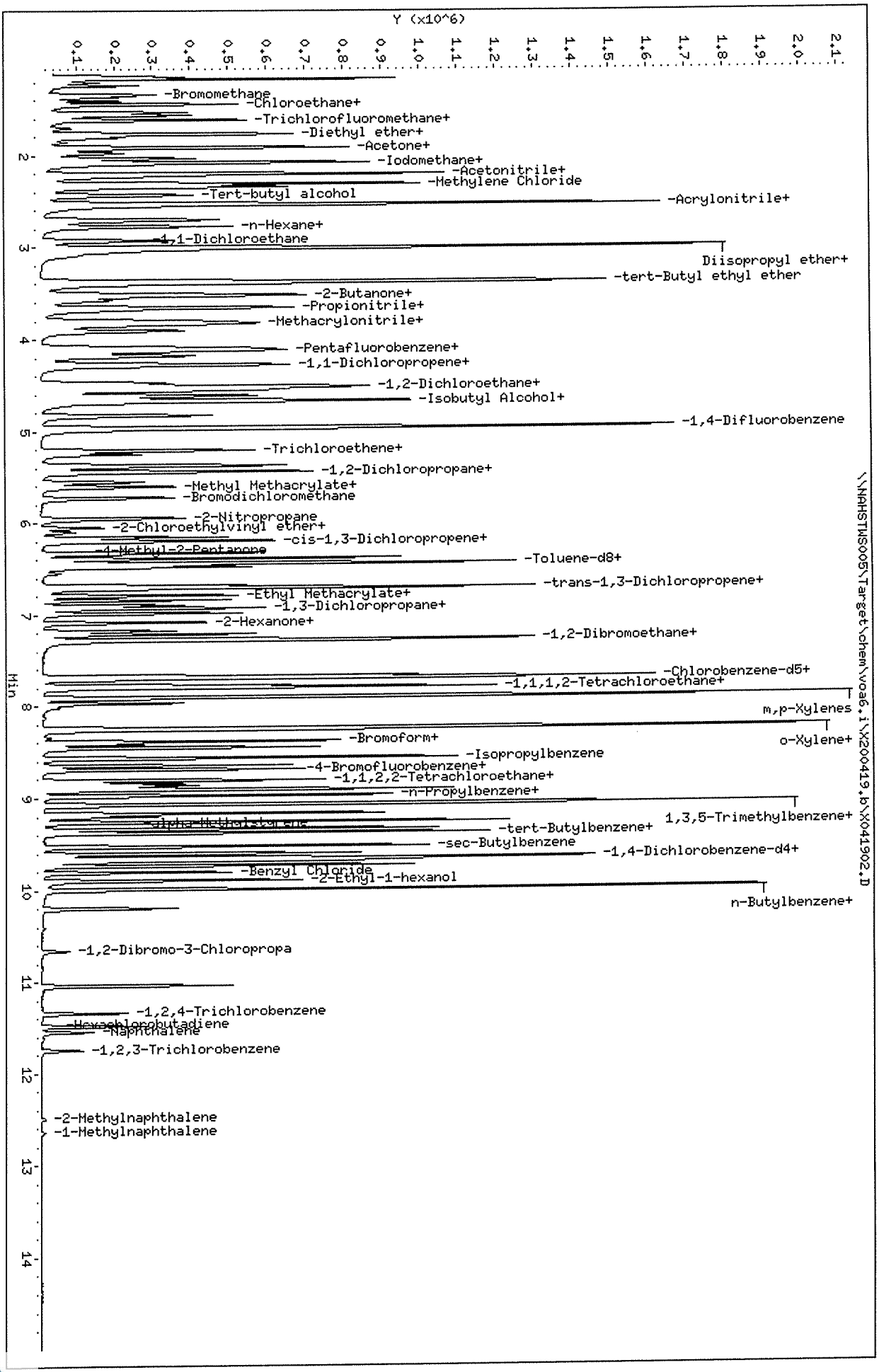
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	301239	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	505388	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	390848	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	195370	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	171605	51.7578	51.75
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	230081	59.8538	59.85(M)
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	507236	52.0934	52.09
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	190492	51.7358	51.73
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	148017	51.8524	51.85
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	266684	51.7475	51.74
68 1,1,2,2-Tetrachloroethane	83	8.845	8.838	(0.915)	154315	44.7816	44.78
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	108987	49.5550	49.55
22 1,1-Dichloroethane	63	2.921	2.922	(0.699)	390574	59.6433	59.64
11 1,1-Dichloroethene	96	1.911	1.912	(0.457)	138561	49.2671	49.26
32 1,1-Dichloropropene	75	4.282	4.283	(0.862)	225320	46.3752	46.37
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	29377	44.3526	44.35
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	135449	46.8336	46.83(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	58863	47.2820	47.28
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	511555	49.5366	49.53
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	14536	47.5810	47.58
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	137199	49.8692	49.86
88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	294487	56.4289	56.42

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200419.b\X041902.D Page 2
Report Date: 20-May-2020 16:39

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	298934	52.9695	52.96
42	1,2-Dichloropropane	63	5.436	5.436	(1.094)	178988	42.5949	42.59
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	491585	48.7643	48.76
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	295219	50.2690	50.26
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	226506	49.0562	49.05
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	296640	48.6233	48.62
26	2,2-Dichloropropane	77	3.509	3.516	(0.839)	276232	58.5624	58.56
24	2-Butanone	43	3.573	3.573	(0.854)	220242	97.3415	97.34
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	423149	48.4463	48.44
52	2-Hexanone	43	7.090	7.083	(0.924)	263437	93.0465	93.04
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	493682	48.1841	48.18
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	500366	48.5606	48.56
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	377667	88.8437	88.84
10	Acetone	43	1.969	1.969	(0.471)	186542	110.449	110.44
37	Benzene	78	4.512	4.512	(0.908)	681038	49.0440	49.04
74	Bromobenzene	156	8.809	8.810	(0.911)	176620	49.4392	49.43
29	Bromochloromethane	128	3.795	3.795	(0.908)	91015	49.3911	49.39
39	Bromodichloromethane	83	5.729	5.729	(1.153)	194440	43.5249	43.52
66	Bromoform	173	8.416	8.416	(1.097)	104801	52.7540	52.75
6	Bromomethane	94	1.338	1.339	(0.320)	122291	49.7269	49.72
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	221070	45.0733	45.07
59	Chlorobenzene	112	7.699	7.699	(1.004)	379831	49.0908	49.09
7	Chloroethane	64	1.403	1.403	(0.336)	132065	46.2147	46.21
28	Chloroform	83	3.910	3.910	(0.935)	316809	53.4320	53.43
3	Chloromethane	50	1.073	1.073	(0.257)	285429	46.7485	46.74
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	188804	54.6005	54.60
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	237734	43.2500	43.24
55	Dibromochloromethane	129	7.176	7.176	(0.936)	154009	51.9905	51.99
44	Dibromomethane	93	5.557	5.558	(1.118)	92782	42.0185	42.01
2	Dichlorodifluoromethane	85	0.966	0.966	(0.231)	153498	49.7142	49.71
19	Carbon Disulfide	76	2.069	2.069	(0.495)	979174	99.6267	99.62
61	Ethylbenzene	106	7.800	7.800	(1.017)	200500	49.4278	49.42
91	Hexachlorobutadiene	225	11.488	11.481	(1.188)	44266	51.8693	51.86
67	Isopropylbenzene	105	8.566	8.566	(1.117)	584142	49.3594	49.35
62	m,p-Xylenes	106	7.907	7.907	(1.031)	488956	99.7455	99.74
17	Methylene Chloride	84	2.305	2.306	(0.551)	179664	49.9055	49.90
87	n-Butylbenzene	91	9.999	9.999	(1.034)	511341	59.6278	59.62
73	n-Propylbenzene	91	8.917	8.917	(0.922)	685353	47.4792	47.47
92	Naphthalene	128	11.546	11.546	(1.194)	90875	49.2226	49.22
63	o-Xylene	106	8.244	8.244	(1.075)	238990	50.9390	50.93
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	559393	45.8066	45.80
64	Styrene	104	8.258	8.258	(1.077)	411659	51.2145	51.21
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	401615	47.0172	47.01
56	Tetrachloroethene	164	6.933	6.933	(0.904)	116750	50.6347	50.63
50	Toluene	91	6.446	6.446	(0.840)	578025	51.1859	51.18
20	trans-1,2-Dichloroethene	96	2.528	2.528	(0.604)	161317	59.5434	59.54
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	218840	45.2807	45.28
38	Trichloroethene	130	5.206	5.207	(1.048)	170303	48.8421	48.84
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	250923	49.3672	49.36
5	Vinyl Chloride	62	1.138	1.138	(0.272)	243350	48.9215	48.92

QC Flag Legend

M - Compound response manually integrated.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200419.b\X041902.D
Date : 19-APR-2020 10:42
Client ID: ICV
Sample Info: CCV;CCV;2;;;ICV
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

MSVOA06 -Logbook

Batch: 40419
Date: 04-30-2020
Method: 8260
Comments:

Analyst: Presenta Cabascango
Reviewer:
Laboratory: Houston

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	04-30-2020 03:03 pm	1.00	50 mL	50 mL	X043001.D	Liquid	Y	NA
	Auto find/ purged									
2	CCV	CCV	04-30-2020 03:27 pm	1.00	50 mL	50 mL	X043002a.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
3	CCV	CCV	04-30-2020 03:51 pm	1.00	50 mL	50 mL	X043003.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
4	CCB	SAMP	04-30-2020 04:15 pm	1.00	50 mL	50 mL	X043004.D	Liquid	Y	NA
5	VLCSW-200430	LCS	04-30-2020 04:39 pm	1.00	50 mL	50 mL	X043005.D	Liquid	Y	NA
	4.0 uL cal std/50 mL DI									
6	BLANK	SAMP	04-30-2020 05:03 pm	1.00	50 mL	50 mL	X043006.D	Liquid	Y	NA
7	VBLKW-200430	MBLK	04-30-2020 05:27 pm	1.00	50 mL	50 mL	X043007.D	Liquid	Y	NA
8	HS20041127-02	SAMP	04-30-2020 05:51 pm	1.00	50 mL	50 mL	X043008.D	Liquid	Y	<2
9	HS20041127-01	SAMP	04-30-2020 06:39 pm	1.00	50 mL	50 mL	X043009.D	Liquid	Y	<2
10	HS20041201-01	SAMP	04-30-2020 07:27 pm	1.00	50 mL	50 mL	X043010.D	Liquid	Y	<2
11	HS20041201-01MS	MS	04-30-2020 07:51 pm	1.00	50 mL	50 mL	X043011.D	Liquid	Y	<2
	3.5 uL cal std/40 mL samp									
12	HS20041201-01MSD	MSD	04-30-2020 08:15 pm	1.00	50 mL	50 mL	X043012.D	Liquid	Y	<2
	3.5 uL cal std/40 mL samp									
13	CCV-END	CCV	04-30-2020 08:39 pm	1.00	50 mL	50 mL	X043013.D	Liquid	Y	NA
	10 uL cal std/50 mL DI									
14	HS20041102-03	SAMP	04-30-2020 09:03 pm	25.00	2 mL	50 mL	X043014.D	Liquid	Y	<2
15	HS20041202-01	SAMP	04-30-2020 09:27 pm	1.00	50 mL	50 mL	X043015.D	Liquid	Y	<2
16	HS20041102-01	SAMP	04-30-2020 09:51 pm	5.00	10 mL	50 mL	X043016.D	Liquid	Y	NA
17	HS20041102-01	SAMP	04-30-2020 10:15 pm	25.00	2 mL	50 mL	X043017.D	Liquid	Y	NA
18	MBLK-153138	MBLK	04-30-2020 10:39 pm	20.00	2.5 mL	50 mL	X043018.D	Liquid	Y	NA
	tclps									
19	HS20041110-01	SAMP	04-30-2020 11:03 pm	20.00	2.5 mL	50 mL	X043019.D	Liquid	Y	NA
20	HS20041163-01	SAMP	04-30-2020 11:27 pm	100.0(	500 µL	50 mL	X043020.D	Liquid	Y	NA

Chemical	Value
SURR SPK ID	31106-26-06
IS ID	31106-26-06
CAL STD ID	31106-27-01/02
BFB ID	31106-26-06
pH Paper	634-64-11

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ALS GROUP Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20041127

Lab File ID: X043001 BFB Injection Date: 04/30/20

Instrument ID: VOA6 BFB Injection Time: 1503

GC Column: DB624 ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	30.6
75	30.0 - 60.0% of mass 95	53.2
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.9
173	Less than 2.0% of mass 174	0.6 (1.0)1
174	Greater than 50.0% of mass 95	59.5
175	5.0 - 9.0% of mass 174	4.2 (7.1)1
176	95.0 - 101.0% of mass 174	57.2 (96.1)1
177	5.0 - 9.0% of mass 176	3.8 (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:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	CCV	CCV	X043003	04/30/20	1551
02	VLCSW-200430	VLCSW-200430	X043005	04/30/20	1639
03	VBLKW-200430	VBLKW-200430	X043007	04/30/20	1727
04	HS20041127-0	HS20041127-02	X043008	04/30/20	1751
05	HS20041127-0	HS20041127-01	X043009	04/30/20	1839
06	HS20041201-0	HS20041201-01M	X043011	04/30/20	1951
07	HS20041201-0	HS20041201-01M	X043012	04/30/20	2015
08	CCV-END	CCV-END	X043013	04/30/20	2039
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS GROUP Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20041127

Instrument ID: VOA6 Calibration Date: 04/30/20 Time: 1551

Lab File ID: X043003 Init. Calib. Date(s): 04/17/20 04/17/20

Init. Calib. Times: 1137 1536

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Bromochloromethane	0.3060000	0.2886039	0.2886039	0.1	5.68	20.00	AVRG
Vinyl Chloride	0.8260000	0.7315984	0.7315984	0.1	11.43	20.00	AVRG
Chloromethane	40.187347	50.000000	0.8117746	0.1	19.62	20.00	LINR
Bromomethane	51.078239	50.000000	0.4169959	0.1	-2.16	20.00	LINR
Chloroethane	0.4740000	0.4083177	0.4083177	0.1	13.86	20.00	AVRG
Methylene Chloride	0.5970000	0.5590240	0.5590240	0.1	6.36	20.00	AVRG
Acetone	105.14429	100.00000	0.2950334	0.1	-5.14	20.00	LINR
Carbon Disulfide	1.6310000	1.4968806	1.4968806	0.1	8.22	20.00	AVRG
1,1-Dichloroethene	0.4660000	0.4377883	0.4377883	0.1	6.05	20.00	AVRG
trans-1,2-Dichloroethene	0.4500000	0.5126755	0.5126755	0.1	-13.93	20.00	AVRG
Carbon Tetrachloride	43.302402	50.000000	0.4202270	0.1	13.40	20.00	LINR
Bromodichloromethane	0.4420000	0.4833157	0.4833157	0.2	-9.35	20.00	AVRG
1,1-Dichloroethane	1.0870000	1.2052436	1.2052436	0.2	-10.88	20.00	AVRG
1,2-Dichloropropane	0.4160000	0.4066209	0.4066209	0.1	2.25	20.00	AVRG
2-Butanone	88.394161	100.00000	0.3315793	0.1	11.60	20.00	LINR
cis-1,3-Dichloropropene	0.5440000	0.5643457	0.5643457	0.2	-3.74	20.00	AVRG
Dibromochloromethane	0.3790000	0.3754844	0.3754844	0.1	0.93	20.00	AVRG
1,1,2-Trichloroethane	0.2810000	0.2854991	0.2854991	0.1	-1.60	20.00	AVRG
cis-1,2-Dichloroethene	0.5740000	0.5974390	0.5974390	0.1	-4.08	20.00	AVRG
Benzene	1.3740000	1.2771604	1.2771604	0.5	7.05	20.00	AVRG
Chloroform	0.9840000	1.0468090	1.0468090	0.2	-6.38	20.00	AVRG
trans-1,3-Dichloropropene	0.4780000	0.5340427	0.5340427	0.1	-11.72	20.00	AVRG
Bromoform	0.2540000	0.2517206	0.2517206	0.1	0.90	20.00	AVRG
1,1,1-Trichloroethane	0.8560000	0.8849528	0.8849528	0.1	-3.38	20.00	AVRG
4-Methyl-2-Pentanone	91.054417	100.00000	0.5001522	0.1	8.94	20.00	2RDR
2-Hexanone	0.3620000	0.3500864	0.3500864	0.1	3.29	20.00	AVRG
1,2-Dichloroethane	0.5580000	0.5704495	0.5704495	0.1	-2.23	20.00	AVRG
1,1,2,2-Tetrachloroethane	0.8820000	0.8250907	0.8250907	0.3	6.45	20.00	AVRG
Trichloroethene	0.3450000	0.3137447	0.3137447	0.2	9.06	20.00	AVRG
Toluene	1.4450000	1.4700541	1.4700541	0.4	-1.73	20.00	AVRG
Dichlorodifluoromethane	0.5120000	0.4851766	0.4851766	0.1	5.24	20.00	AVRG
Trichlorofluoromethane	0.8440000	0.8221762	0.8221762	0.1	2.58	20.00	AVRG
Tetrachloroethene	0.2950000	0.2680926	0.2680926	0.2	9.12	20.00	AVRG
1,2-Dibromoethane	0.3520000	0.3523626	0.3523626	0.1	-0.10	20.00	AVRG
Chlorobenzene	0.9900000	0.9268926	0.9268926	0.5	6.37	20.00	AVRG
1,3-Dichlorobenzene	1.5030000	1.4216930	1.4216930	0.6	5.41	20.00	AVRG
1,4-Dichlorobenzene	1.5610000	1.4226674	1.4226674	0.4	8.86	20.00	AVRG
Ethylbenzene	0.5190000	0.4969135	0.4969135	0.1	4.26	20.00	AVRG
1,2-Dichlorobenzene	1.3360000	1.2610756	1.2610756	0.4	5.61	20.00	AVRG
m,p-Xylenes	0.6270000	0.6025234	0.6025234	0.1	3.90	20.00	AVRG
o-Xylene	0.6000000	0.5864570	0.5864570	0.3	2.26	20.00	AVRG
Styrene	1.0280000	1.0776897	1.0776897	0.3	-4.83	20.00	AVRG

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS GROUP Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2004112

Instrument ID: VOA6 Calibration Date: 04/30/20 Time: 1551

Lab File ID: X043003 Init. Calib. Date(s): 04/17/20 04/17/20

Init. Calib. Times: 1137 1536

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
2,2-Dichloropropane	0.7830000	0.9087854	0.9087854	0.1	-16.06	20.00	AVRG
1,1-Dichloropropene	44.571748	50.000000	0.4287266	0.1	10.86	20.00	LINR
Dibromomethane	0.2180000	0.2273207	0.2273207	0.1	-4.28	20.00	AVRG
1,3-Dichloropropane	0.5910000	0.5812408	0.5812408	0.1	1.65	20.00	AVRG
1,1,1,2-Tetrachloroethane	0.3650000	0.3602042	0.3602042	0.1	1.31	20.00	AVRG
Isopropylbenzene	1.5140000	1.4693400	1.4693400	0.1	2.95	20.00	AVRG
Bromobenzene	0.9140000	0.8385606	0.8385606	0.1	8.25	20.00	AVRG
1,2,3-Trichloropropane	0.7400000	0.7236029	0.7236029	0.1	2.22	20.00	AVRG
n-Propylbenzene	3.6940000	3.6431672	3.6431672	0.1	1.38	20.00	AVRG
2-Chlorotoluene	2.2350000	2.2169904	2.2169904	0.1	0.80	20.00	AVRG
1,3,5-Trimethylbenzene	2.5800000	2.5008774	2.5008774	0.1	3.07	20.00	AVRG
4-Chlorotoluene	2.6220000	2.6080126	2.6080126	0.1	0.53	20.00	AVRG
tert-Butylbenzene	2.1860000	1.9668172	1.9668172	0.1	10.03	20.00	AVRG
1,2,4-Trimethylbenzene	2.6430000	2.6301129	2.6301129	0.1	0.49	20.00	AVRG
sec-Butylbenzene	3.1250000	2.8638379	2.8638379	0.1	8.36	20.00	AVRG
p-Isopropyltoluene	2.6370000	2.4826374	2.4826374	0.1	5.85	20.00	AVRG
n-Butylbenzene	2.1940000	2.2861220	2.2861220	0.5	-4.20	20.00	AVRG
1,2-Dibromo-3-Chloropropane	7.8e-002	6.71e-002	6.71e-002	0.05	13.97	20.00	AVRG
1,2,4-Trichlorobenzene	0.3180000	0.2628441	0.2628441	0.2	17.34	20.00	AVRG
Hexachlorobutadiene	42.936389	50.000000	0.1886977	0.1	14.13	20.00	LINR
Naphthalene	0.4720000	0.4158424	0.4158424	0.2	11.90	20.00	AVRG
1,2,3-Trichlorobenzene	0.1690000	0.1356450	0.1356450	0.1	19.74	20.00	AVRG
Dibromofluoromethane	45.314762	50.000000	0.4995215	0.1	9.37	20.00	LINR
1,2-Dichloroethane-d4	54.595666	50.000000	0.6850916	0.1	-9.19	20.00	2RDR
Toluene-d8	1.2460000	1.1197331	1.1197331	0.1	10.13	20.00	AVRG
4-Bromofluorobenzene	47.628185	50.000000	0.4483492	0.1	4.74	20.00	LINR

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS GROUP Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20041127

Lab File ID (Standard): X043003 Date Analyzed: 04/30/20

Instrument ID: VOA6 Time Analyzed: 1551

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

		IS1 AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CBZ) AREA #	RT #
	12 HOUR STD	277938	4.18	473318	4.97	436905	7.67
	UPPER LIMIT	555876	4.68	946636	5.47	873810	8.17
	LOWER LIMIT	138969	3.68	236659	4.47	218453	7.17
	CLIENT SAMPLE NO.						
01	VLCSW-200430	273077	4.18	455947	4.97	419274	7.67
02	VBLKW-200430	288963	4.18	480633	4.97	435062	7.67
03	HS20041127-02	292439	4.18	483912	4.97	434256	7.67
04	HS20041127-01	277621	4.18	469156	4.97	424438	7.67
05	HS20041201-01	274338	4.18	459351	4.97	429620	7.67
06	HS20041201-01	269100	4.18	450893	4.97	431612	7.67
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS1 = Pentafluorobenzene
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS GROUP Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20041127

Lab File ID (Standard): X043003 Date Analyzed: 04/30/20

Instrument ID: VOA6 Time Analyzed: 1551

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

		IS4 (DCB) AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	216558	9.67				
	UPPER LIMIT	433116	10.17				
	LOWER LIMIT	108279	9.17				
	CLIENT SAMPLE NO.						
01	VLCSW-200430	195804	9.67				
02	VBLKW-200430	195944	9.67				
03	HS20041127-02	188886	9.67				
04	HS20041127-01	185529	9.67				
05	HS20041201-01	203916	9.66				
06	HS20041201-01	203736	9.66				
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS4 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200430.b\X043001.D Page 2

Date : 30-APR-2020 15:03

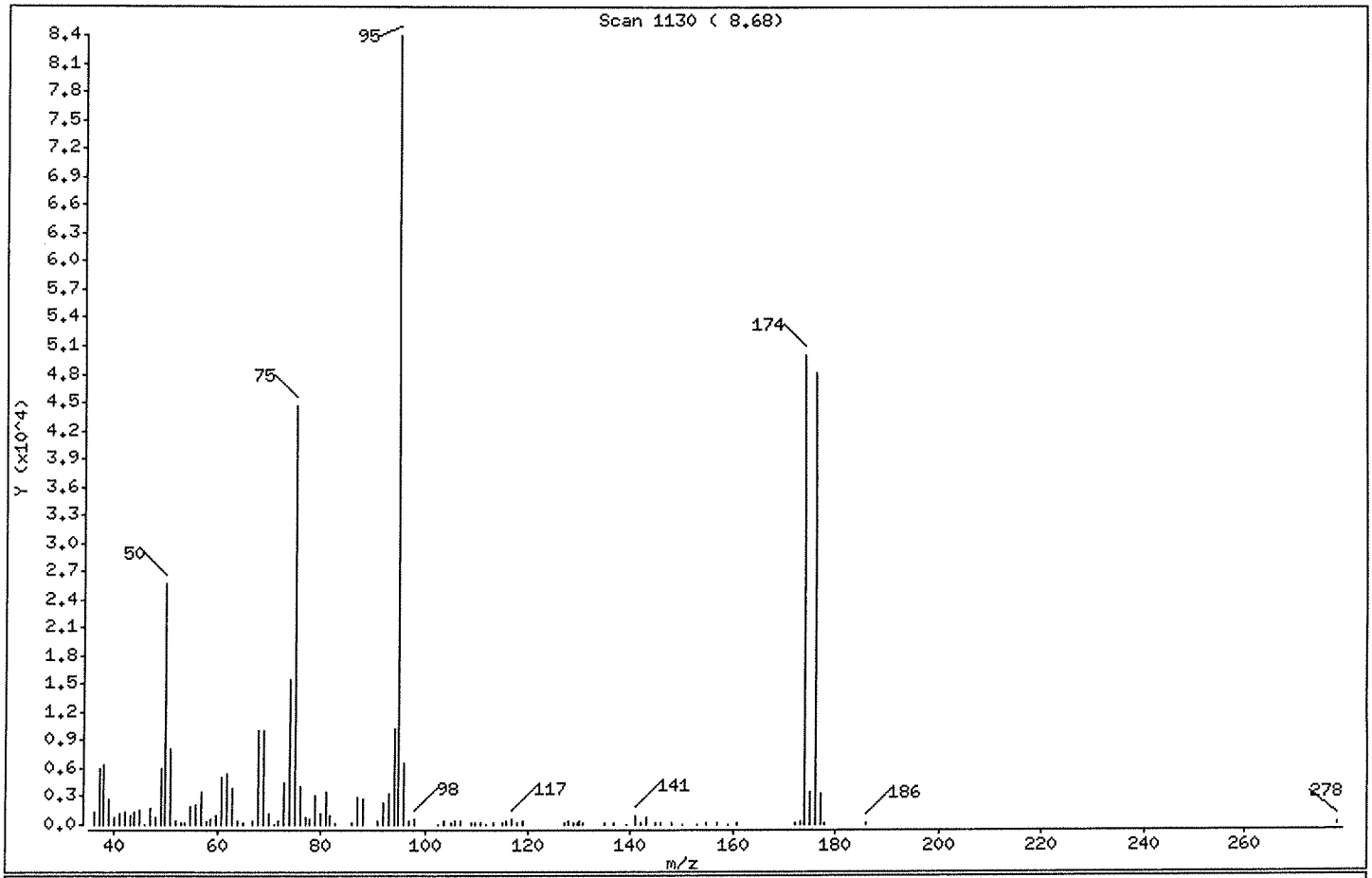
Client ID: BFB Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0 Operator: PC

Column phase: DB624 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	30.65
75	30.00 - 60.00% of mass 95	53.19
96	5.00 - 9.00% of mass 95	7.87
173	Less than 2.00% of mass 174	0.57 (0.95)
174	Greater than 50.00% of mass 95	59.54
175	5.00 - 9.00% of mass 174	4.22 (7.08)
176	95.00 - 101.00% of mass 174	57.21 (96.08)
177	5.00 - 9.00% of mass 176	3.81 (6.66)

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200430.b\X043001.D

Date : 30-APR-2020 15:03

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

Data File: X043001.D
Spectrum: Scan 1130 (8.68)
Location of Maximum: 95.00
Number of points: 103

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1383	62.00	5487	93.00	3318	130.70	111
37.00	6014	63.00	3874	94.00	10285	134.90	146
38.00	6332	64.00	359	95.00	84032	136.80	181
39.00	2766	65.00	194	96.00	6613	139.00	84
39.90	771	67.00	378	96.90	317	140.80	903
41.00	1120	68.00	10051	97.90	558	142.00	186
42.00	1386	69.00	10022	102.80	72	142.90	690
43.00	907	70.00	1087	103.80	471	144.80	128
43.90	1319	71.10	74	105.00	178	145.80	122
45.00	1500	72.00	451	105.80	387	147.90	271
46.10	66	73.00	4387	107.00	391	150.00	77
47.00	1821	74.00	15516	108.90	190	153.00	51
48.00	727	75.00	44696	109.80	107	154.80	230
49.00	5981	76.00	4138	110.90	102	156.80	187
50.00	25752	77.00	695	111.90	59	158.80	50
51.00	8132	77.90	493	113.10	148	160.80	119
52.00	462	78.90	3100	115.10	161	172.00	127
53.00	121	79.90	1082	115.80	326	173.00	477
53.90	118	80.90	3387	116.90	504	173.90	50032
55.00	1845	81.90	875	117.90	260	174.90	3542
55.90	2057	82.90	244	118.80	380	175.90	48072
57.00	3543	86.00	145	126.90	276	176.90	3202
57.90	348	86.90	2874	127.80	343	177.80	97
58.90	511	88.00	2701	128.90	198	186.00	163
59.90	924	90.90	408	129.70	279	278.00	234
61.00	5098	92.00	2339	130.00	300		

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200430.b\X043001.D

Date : 30-APR-2020 15:03

Client ID: BFB

Instrument: voa6.i

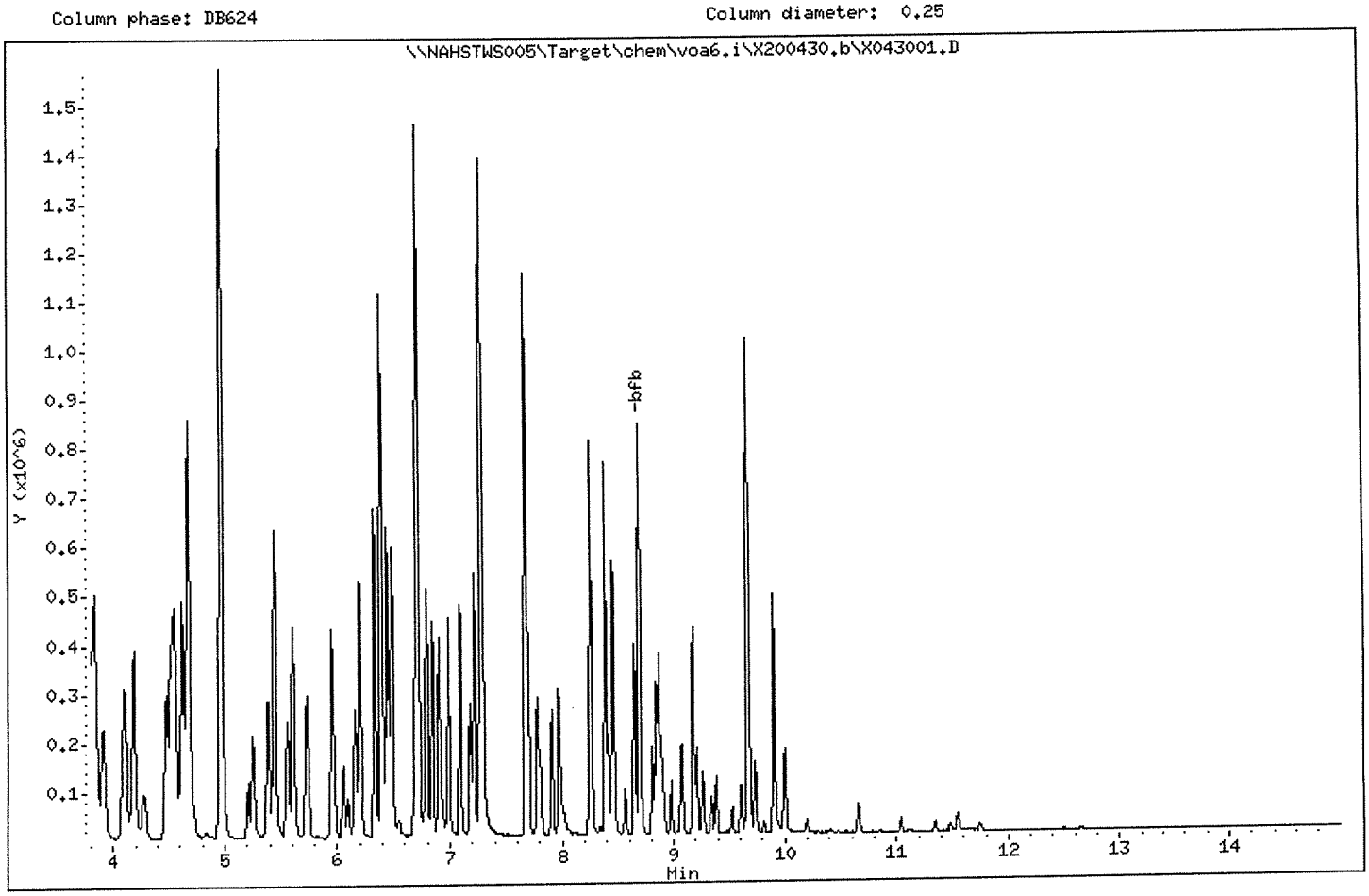
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200430.b\X043003.D
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 30-APR-2020 15:51
Operator : PC Inst ID: voa6.i
Smp Info : CCV;CCV;2;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200430.b\8260W.m
Meth Date : 20-May-2020 16:45 voa6.i Quant Type: ISTD
Cal Date : 17-APR-2020 14:24 Cal File: X041708.D
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0000000_Bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7142

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

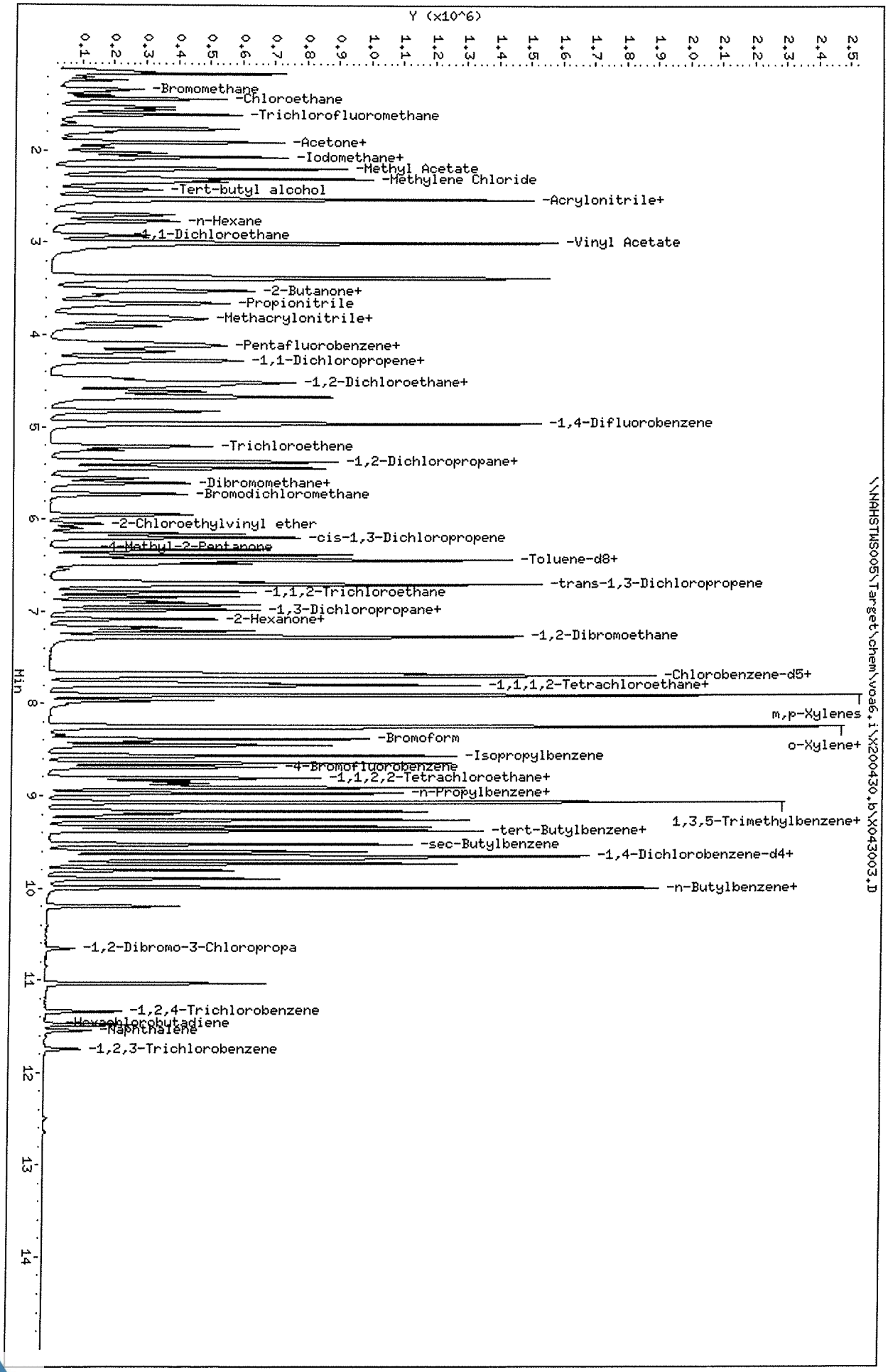
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	277938	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	473318	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	436905	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	216558	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	138836	50.0000	45.31
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	190413	50.0000	54.59
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	489217	50.0000	44.94
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	195886	50.0000	47.62
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	157375	50.0000	49.31
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	245962	50.0000	51.72
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	178680	50.0000	46.77
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	124736	50.0000	50.73
22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	334983	50.0000	55.44
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	121678	50.0000	46.89
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	202924	50.0000	44.57
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	29375	50.0000	40.01(M)
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	156702	50.0000	48.88(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	56921	50.0000	41.24
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	569572	50.0000	49.75
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.102)	14533	50.0000	42.91
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	153949	50.0000	50.05
88 1,2-Dichlorobenzene	146	9.998	9.998	(1.034)	273096	50.0000	47.21

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	270004	50.0000	51.08
42	1,2-Dichloropropane	63	5.436	5.436	(1.094)	192461	50.0000	48.90
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	541585	50.0000	48.46
83	1,3-Dichlorobenzene	146	9.604	9.604	(0.993)	307879	50.0000	47.29
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	253947	50.0000	49.20
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	308090	50.0000	45.55
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	252586	50.0000	58.03
24	2-Butanone	43	3.573	3.573	(0.854)	184317	100.000	88.39
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	480107	50.0000	49.58
52	2-Hexanone	43	7.083	7.083	(0.923)	305909	100.000	96.65
77	4-Chlorotoluene	91	9.074	9.074	(0.939)	564786	50.0000	49.73
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	537635	50.0000	47.07
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	437038	100.000	91.05
10	Acetone	43	1.969	1.969	(0.471)	164002	100.000	105.14
37	Benzene	78	4.512	4.512	(0.908)	604503	50.0000	46.48
74	Bromobenzene	156	8.809	8.809	(0.911)	181597	50.0000	45.85
29	Bromochloromethane	128	3.795	3.795	(0.908)	80214	50.0000	47.17
39	Bromodichloromethane	83	5.729	5.729	(1.153)	228762	50.0000	54.67
66	Bromoform	173	8.415	8.415	(1.097)	109978	50.0000	49.52
6	Bromomethane	94	1.338	1.338	(0.320)	115899	50.0000	51.07
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	198901	50.0000	43.30
59	Chlorobenzene	112	7.699	7.699	(1.004)	404964	50.0000	46.82
7	Chloroethane	64	1.403	1.403	(0.336)	113487	50.0000	43.04
28	Chloroform	83	3.910	3.910	(0.935)	290948	50.0000	53.18
3	Chloromethane	50	1.073	1.073	(0.257)	225623	50.0000	40.18 (M)
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	166051	50.0000	52.04
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	267115	50.0000	51.88
55	Dibromochloromethane	129	7.176	7.176	(0.936)	164051	50.0000	49.54
44	Dibromomethane	93	5.557	5.557	(1.118)	107595	50.0000	52.02
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	134849	50.0000	47.33
19	Carbon Disulfide	76	2.069	2.069	(0.495)	832080	100.000	91.75
61	Ethylbenzene	106	7.799	7.799	(1.017)	217104	50.0000	47.87
91	Hexachlorobutadiene	225	11.488	11.488	(1.188)	40864	50.0000	42.93
67	Isopropylbenzene	105	8.566	8.566	(1.117)	641962	50.0000	48.52
62	m,p-Xylenes	106	7.907	7.907	(1.031)	526491	100.000	96.08
17	Methylene Chloride	84	2.305	2.305	(0.551)	155374	50.0000	46.77
87	n-Butylbenzene	91	9.998	9.998	(1.034)	495078	50.0000	52.08
73	n-Propylbenzene	91	8.917	8.917	(0.922)	788957	50.0000	49.30
92	Naphthalene	128	11.546	11.546	(1.194)	90054	50.0000	44.00
63	o-Xylene	106	8.243	8.243	(1.075)	256226	50.0000	48.85
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	620187	50.0000	45.81
64	Styrene	104	8.258	8.258	(1.077)	470848	50.0000	52.40
78	tert-Butylbenzene	119	9.339	9.339	(0.966)	425930	50.0000	44.98
56	Tetrachloroethene	164	6.933	6.933	(0.904)	117131	50.0000	45.44
50	Toluene	91	6.446	6.446	(0.840)	642274	50.0000	50.87
20	trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	142492	50.0000	57.00
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	252772	50.0000	55.84
38	Trichloroethene	130	5.206	5.206	(1.048)	148501	50.0000	45.47
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	228514	50.0000	48.72
5	Vinyl Chloride	62	1.138	1.138	(0.272)	203339	50.0000	44.30

QC Flag Legend

M - Compound response manually integrated.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200430.b\X043003.D
Date : 30-APR-2020 15:51
Client ID: CCV
Sample Info: CCV;CCV;2;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200430.b\X043005.D Page 1
Report Date: 20-May-2020 16:45

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200430.b\X043005.D
Lab Smp Id: VLCSW-200430 Client Smp ID: VLCSW-200430
Inj Date : 30-APR-2020 16:39
Operator : PC Inst ID: voa6.i
Smp Info : VLCSW-200430;VLCSW-200430;3;;LCS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200430.b\8260W.m
Meth Date : 20-May-2020 16:45 voa6.i Quant Type: ISTD
Cal Date : 17-APR-2020 14:24 Cal File: X041708.D
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0000000_Bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7142

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

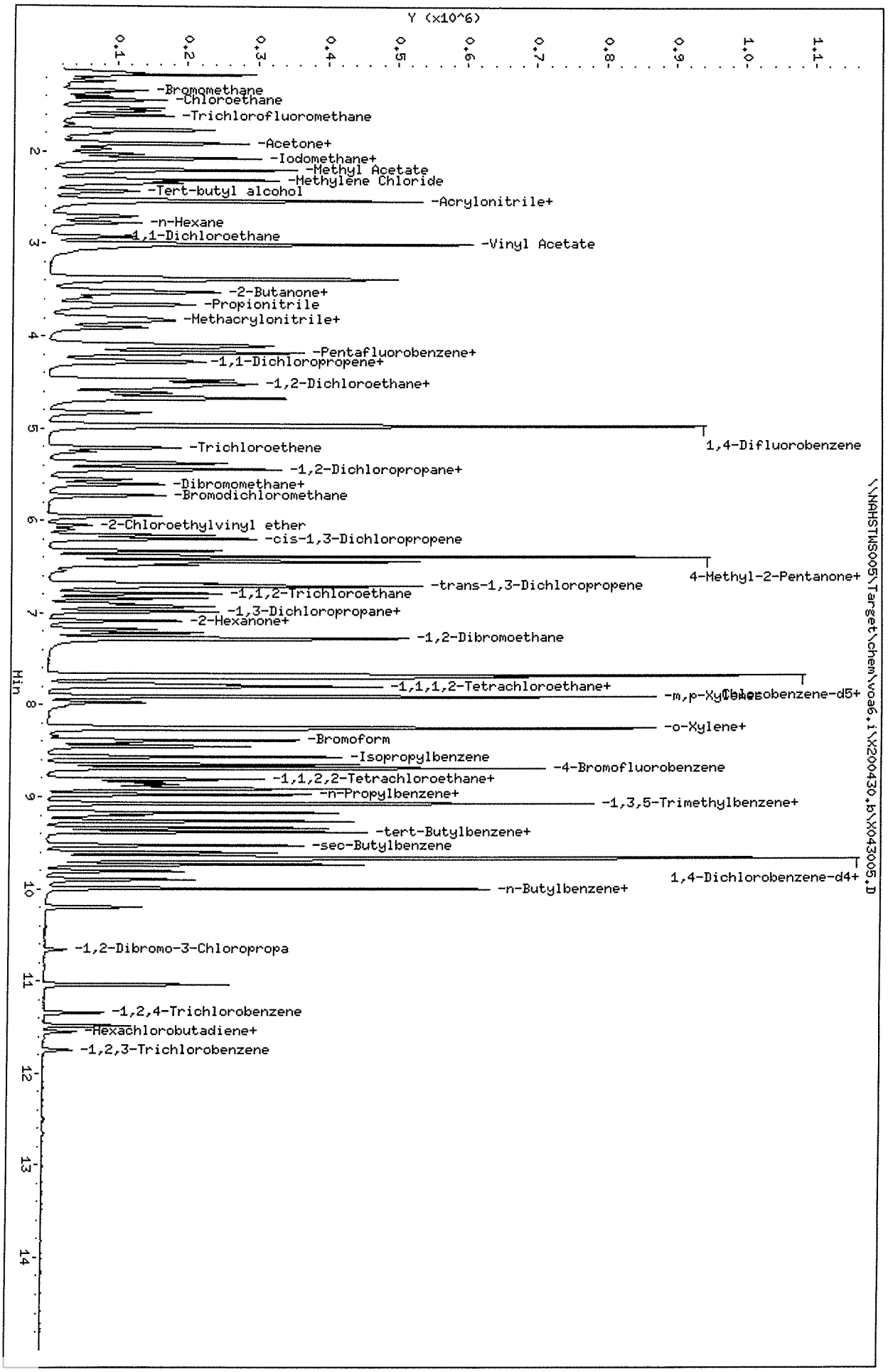
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	273077	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	455947	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	419274	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	195804	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	142825	47.4733	47.47
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	196597	56.9527	56.95
$	48 Toluene-d8	98	6.388	6.388	(0.833)	490557	46.9647	46.96
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	192118	48.6665	48.66
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	57270	18.7023	18.70
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	93011	19.9092	19.90
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.838	(0.915)	65573	18.9869	18.98
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	47469	20.1202	20.12
	22 1,1-Dichloroethane	63	2.922	2.921	(0.699)	132397	22.3029	22.30
	11 1,1-Dichloroethene	96	1.912	1.911	(0.457)	48824	19.1503	19.15
	32 1,1-Dichloropropene	75	4.283	4.282	(0.862)	76865	17.1499	17.14
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	9999	15.0628	15.06
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	57179	19.7267	19.72(M)
	90 1,2,4-Trichlorobenzene	180	11.345	11.338	(1.173)	20802	16.6723	16.67
	79 1,2,4-Trimethylbenzene	105	9.383	9.382	(0.970)	192082	18.5591	18.55
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.657	(1.102)	5153	16.8300	16.83
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	57838	19.5977	19.59
	88 1,2-Dichlorobenzene	146	9.999	9.998	(1.034)	94916	18.1473	18.14

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	106655	20.9480	20.94
42	1,2-Dichloropropane	63	5.443	5.436	(1.095)	74560	19.6676	19.66
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	182612	18.0746	18.07
83	1,3-Dichlorobenzene	146	9.605	9.604	(0.993)	104271	17.7156	17.71
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	97587	19.7023	19.70
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	105688	17.2853	17.28
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	98048	22.9303	22.93
24	2-Butanone	43	3.581	3.573	(0.856)	74371	36.9423	36.94
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	165143	18.8653	18.86
52	2-Hexanone	43	7.090	7.083	(0.924)	115281	37.9569	37.95
77	4-Chlorotoluene	91	9.075	9.074	(0.939)	196732	19.1588	19.15
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	169832	16.4457	16.44
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	163790	41.5549	41.55
10	Acetone	43	1.969	1.969	(0.471)	68430	43.4332	43.43
37	Benzene	78	4.512	4.512	(0.908)	232808	18.5833	18.58
74	Bromobenzene	156	8.810	8.809	(0.911)	64465	18.0050	18.00
29	Bromochloromethane	128	3.795	3.795	(0.908)	32682	19.5646	19.56
39	Bromodichloromethane	83	5.729	5.729	(1.153)	88791	22.0309	22.03
66	Bromoform	173	8.416	8.415	(1.097)	40535	19.0209	19.02
6	Bromomethane	94	1.339	1.338	(0.320)	51070	22.9182	22.91
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	74470	16.8508	16.85
59	Chlorobenzene	112	7.699	7.699	(1.004)	150889	18.1793	18.17
7	Chloroethane	64	1.403	1.403	(0.336)	46363	17.8974	17.89
28	Chloroform	83	3.910	3.910	(0.935)	112286	20.8908	20.89
3	Chloromethane	50	1.073	1.073	(0.257)	88733	16.6558	16.65
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	64443	20.5583	20.55
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	102008	20.5702	20.57
55	Dibromochloromethane	129	7.176	7.176	(0.936)	62373	19.6284	19.62
44	Dibromomethane	93	5.558	5.557	(1.118)	42329	21.2484	21.24
2	Dichlorodifluoromethane	85	0.966	0.973	(0.231)	51987	18.5737	18.57
19	Carbon Disulfide	76	2.069	2.069	(0.495)	334232	37.5137	37.51
61	Ethylbenzene	106	7.800	7.799	(1.017)	76666	17.6185	17.61
91	Hexachlorobutadiene	225	11.481	11.488	(1.187)	17100	19.0308	19.03
67	Isopropylbenzene	105	8.566	8.566	(1.117)	214680	16.9104	16.91
62	m,p-Xylenes	106	7.907	7.907	(1.031)	186403	35.4476	35.44
17	Methylene Chloride	84	2.306	2.305	(0.551)	63472	19.4489	19.44
87	n-Butylbenzene	91	9.999	9.998	(1.034)	159163	18.5190	18.51
73	n-Propylbenzene	91	8.917	8.917	(0.922)	260217	17.9871	17.98
92	Naphthalene	128	11.546	11.546	(1.194)	28670	15.4947	15.49
63	o-Xylene	106	8.244	8.243	(1.075)	91665	18.2131	18.21
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	201912	16.4972	16.49
64	Styrene	104	8.258	8.258	(1.077)	160075	18.5647	18.56
78	tert-Butylbenzene	119	9.340	9.339	(0.966)	140614	16.4252	16.42
56	Tetrachloroethene	164	6.933	6.933	(0.904)	41497	16.7771	16.77
50	Toluene	91	6.446	6.446	(0.840)	241992	19.9763	19.97
20	trans-1,2-Dichloroethene	96	2.528	2.527	(0.604)	55800	22.7203	22.72
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	93348	21.4093	21.40
38	Trichloroethene	130	5.207	5.206	(1.048)	56974	18.1117	18.11
8	Trichlorofluoromethane	101	1.561	1.560	(0.373)	88524	19.2125	19.21
5	Vinyl Chloride	62	1.138	1.138	(0.272)	81205	18.0085	18.00

QC Flag Legend

M - Compound response manually integrated.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200430.b\X043005.D
Date : 30-APR-2020 16:39
Client ID: VLCSW-200430
Sample Info: VLCSW-200430;VLCSW-200430;3;;LCS
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200430.b\X043007.D
Lab Smp Id: VBLKW-200430 Client Smp ID: VBLKW-200430
Inj Date : 30-APR-2020 17:27
Operator : PC Inst ID: voa6.i
Smp Info : VBLKW-200430;VBLKW-200430;3;;BLANK
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200430.b\8260W.m
Meth Date : 20-May-2020 16:45 voa6.i Quant Type: ISTD
Cal Date : 17-APR-2020 14:24 Cal File: X041708.D
Als bottle: 7 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0000000_Bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7142

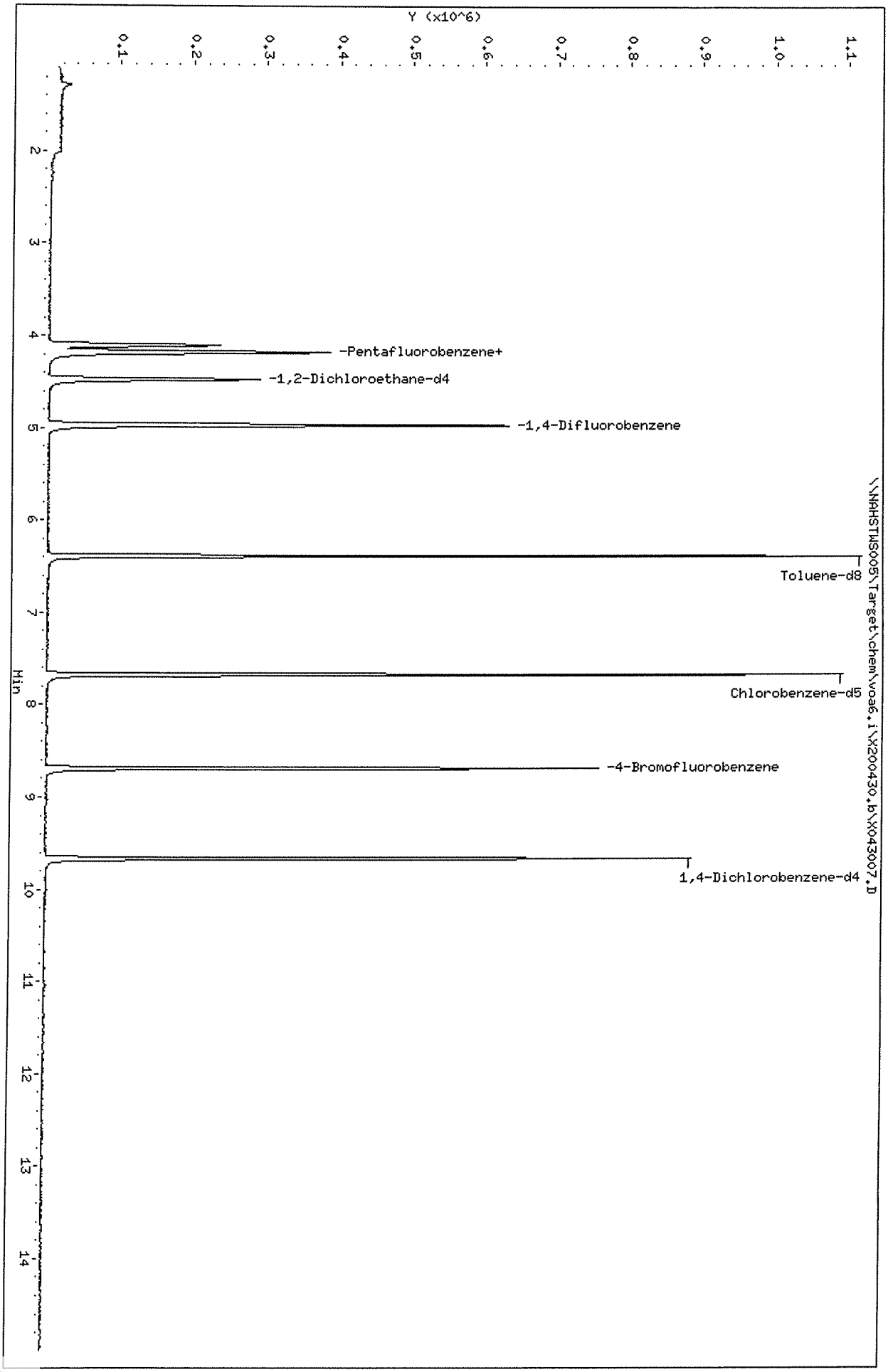
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	288963	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	480633	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	435062	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	195944	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	165484	52.0350	52.03
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	215349	58.6365	58.63(M)
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	577686	53.2993	53.29
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	214211	52.2607	52.26

QC Flag Legend

M - Compound response manually integrated.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200430.b\X043007.D
Date : 30-APR-2020 17:27
Client ID: VBLKW-200430
Sample Info: VBLKW-200430;VBLKW-200430;3;;BLANK
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200430.b\X043008.D
Lab Smp Id: HS20041127-02 Client Smp ID: HS20041127-02
Inj Date : 30-APR-2020 17:51
Operator : PC Inst ID: voa6.i
Smp Info : HS20041127-02;HS20041127-02;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200430.b\8260W.m
Meth Date : 20-May-2020 16:45 voa6.i Quant Type: ISTD
Cal Date : 17-APR-2020 14:24 Cal File: X041708.D
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0000000_Bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7142

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	292439	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	483912	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	434256	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	188886	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	167090	51.9142	51.91
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	219012	58.8784	58.87(M)
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	573399	53.0019	53.00
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	215385	52.6414	52.64

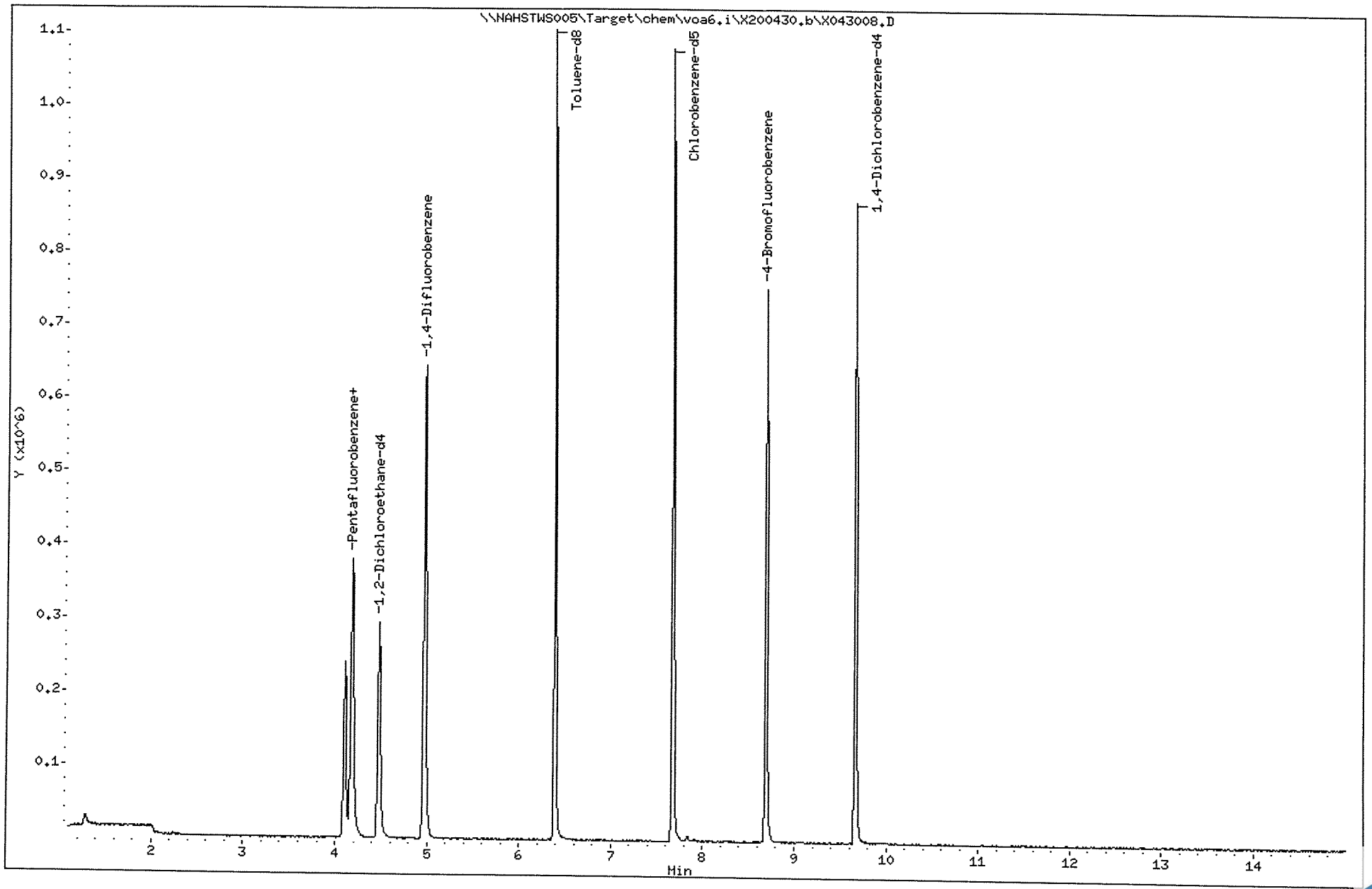
QC Flag Legend

M - Compound response manually integrated.

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200430.b\X043008.D
Date : 30-APR-2020 17:51
Client ID: HS20041127-02
Sample Info: HS20041127-02;HS20041127-02;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i

Operator: PC
Column diameter: 0.18



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200430.b\X043009.D Page 1
Report Date: 20-May-2020 16:46

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200430.b\X043009.D
Lab Smp Id: HS20041127-01 Client Smp ID: HS20041127-01
Inj Date : 30-APR-2020 18:39
Operator : PC Inst ID: voa6.i
Smp Info : HS20041127-01;HS20041127-01;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
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Meth Date : 20-May-2020 16:45 voa6.i Quant Type: ISTD
Cal Date : 17-APR-2020 14:24 Cal File: X041708.D
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0000000_Bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7142

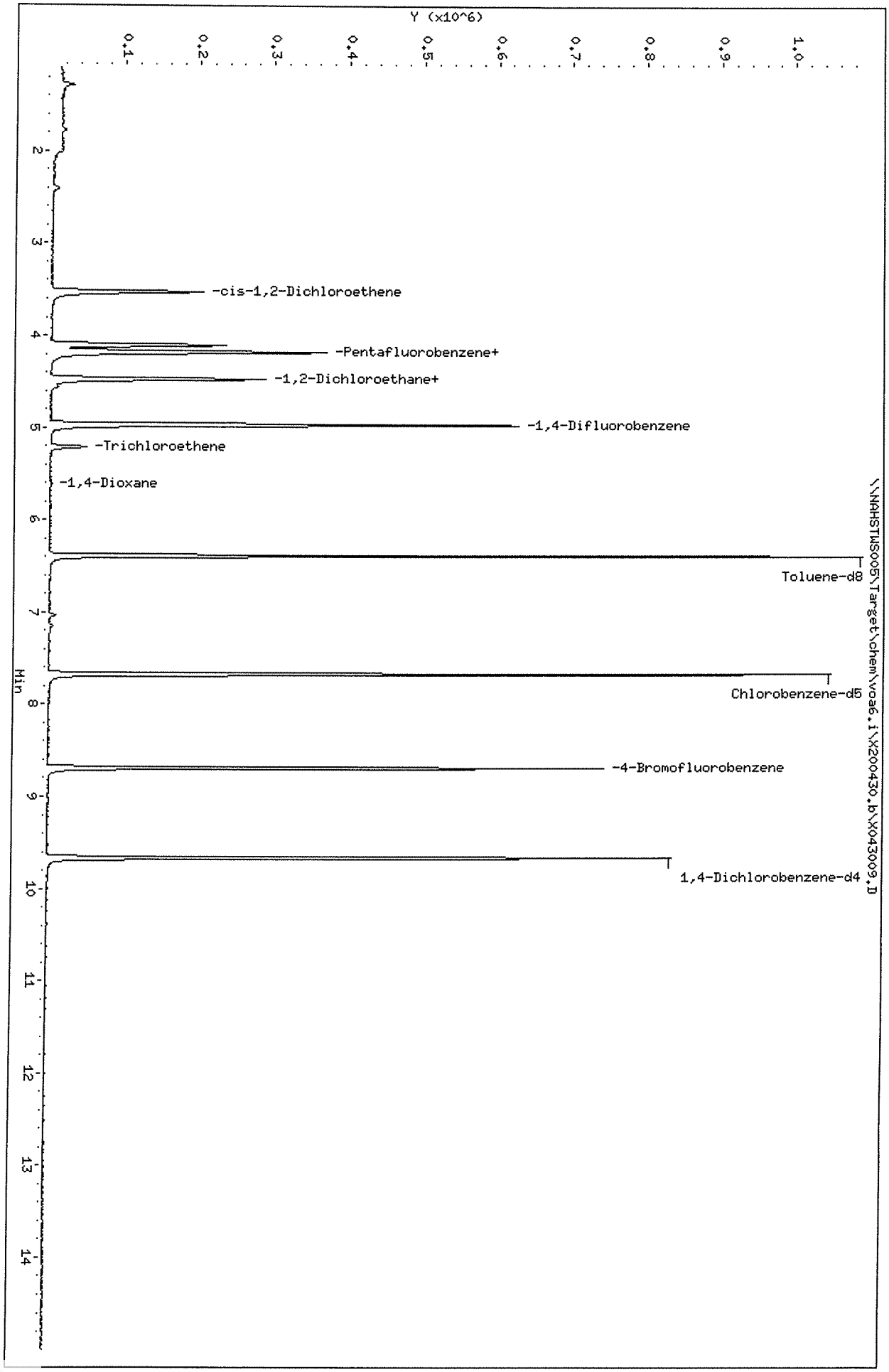
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	277621	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	469156	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	424438	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	185529	50.0000	
$ 30 Dibromofluoromethane	113	4.104	4.103	(0.981)	162255	53.1158	53.11
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	206473	58.5357	58.53(M)
$ 48 Toluene-d8	98	6.389	6.388	(0.833)	567253	53.6467	53.64
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	210906	52.7383	52.73
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	5688	1.08572	1.08
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	89758	28.1655	28.16
38 Trichloroethene	130	5.207	5.206	(1.048)	14241	4.39967	4.39

QC Flag Legend

M - Compound response manually integrated.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200430.b\X043009.D
Date : 30-APR-2020 18:39
Client ID: HS20041127-01
Sample Info: HS20041127-01;HS20041127-01;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200430.b\X043009.D

Date : 30-APR-2020 18:39

Client ID: HS20041127-01

Instrument: voa6.i

Sample Info: HS20041127-01;HS20041127-01;;;

Purge Volume: 5.0

Operator: PC

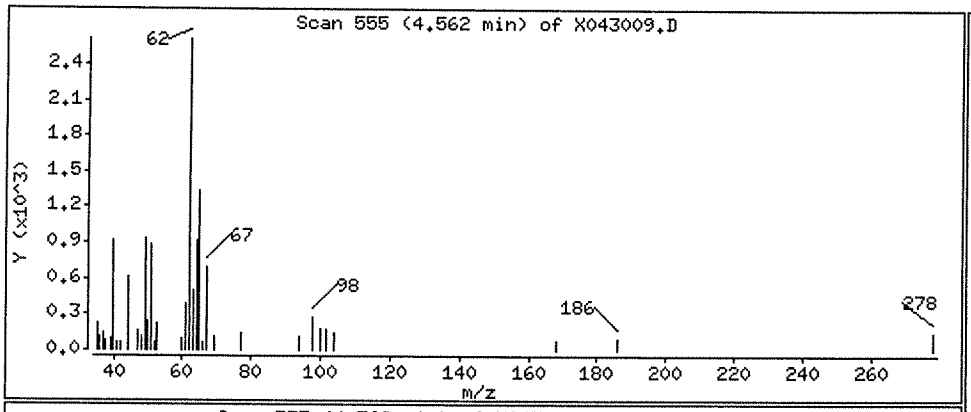
Column phase: DB624

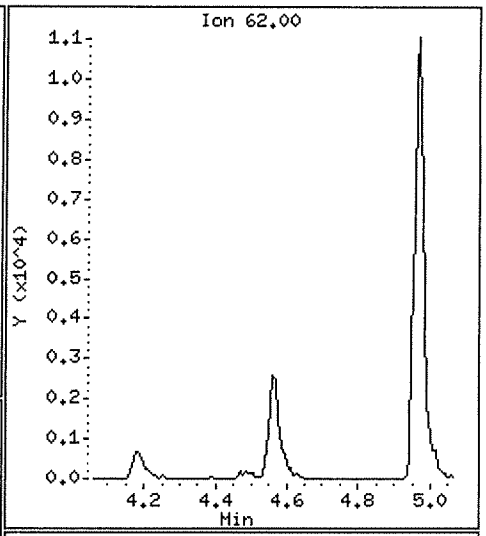
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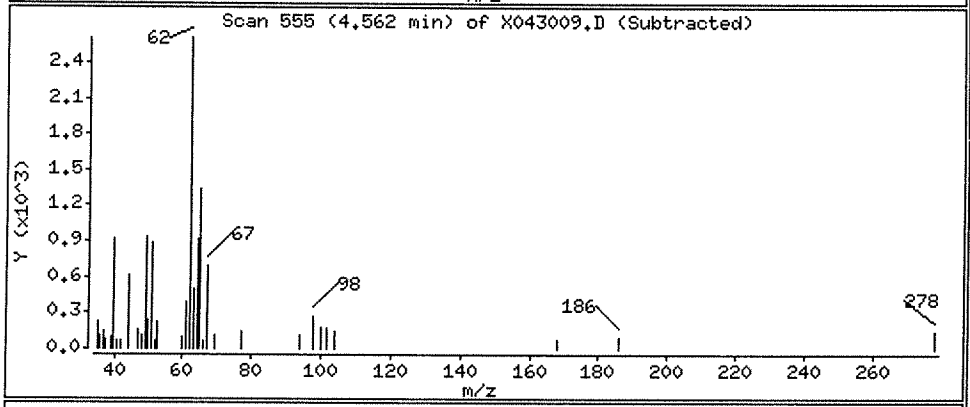
33 1,2-Dichloroethane

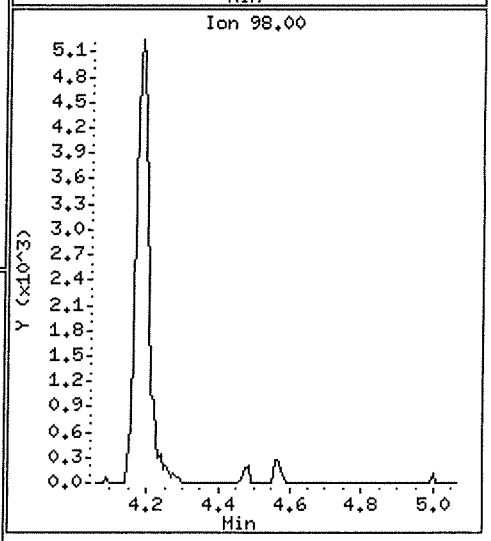
Concentration: 1.08 ug/l

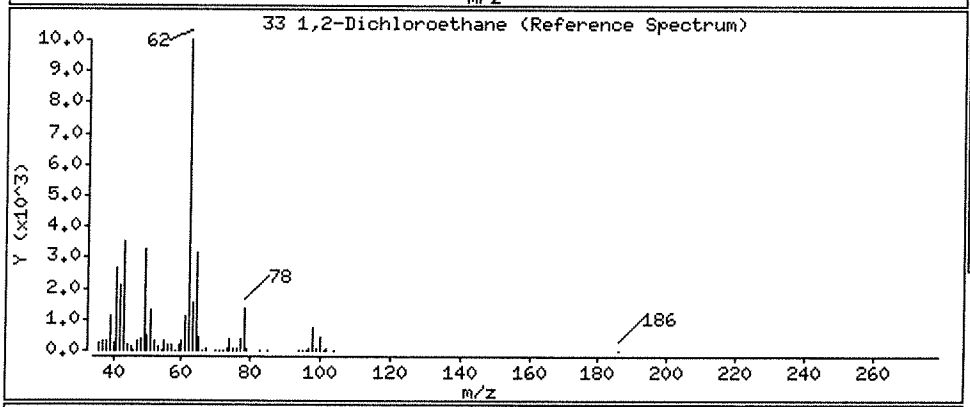
Review Code:

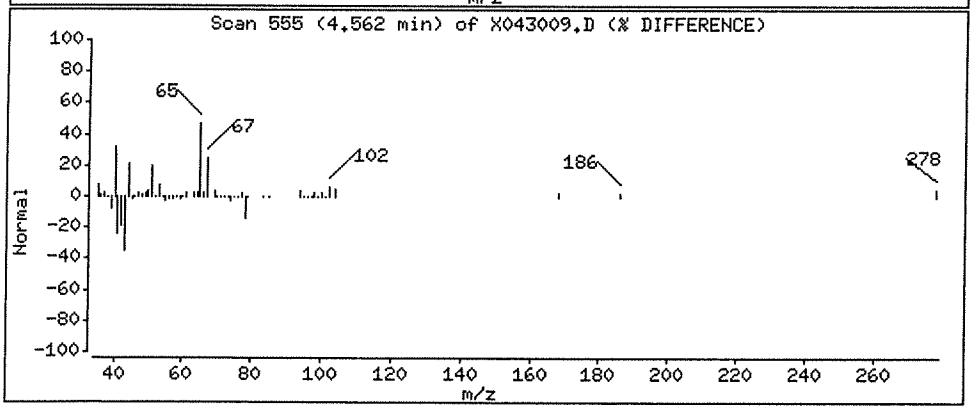












Data File: \\NAHSTWS005\Target\chem\voa6.i\X200430.b\X043009.D

Date : 30-APR-2020 18:39

Client ID: HS20041127-01

Instrument: voa6.i

Sample Info: HS20041127-01;HS20041127-01;;;

Purge Volume: 5.0

Operator: PC

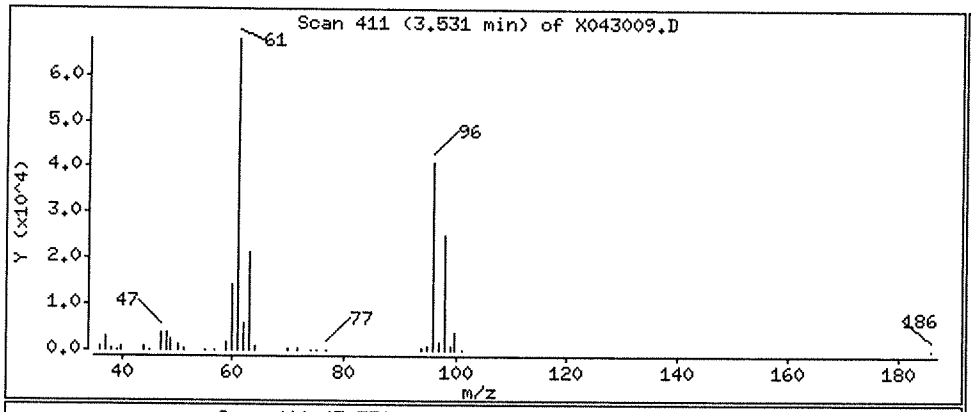
Column phase: DB624

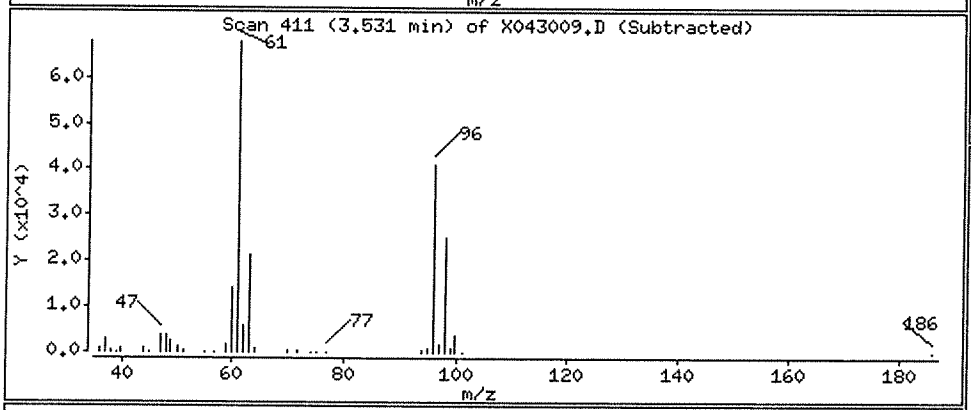
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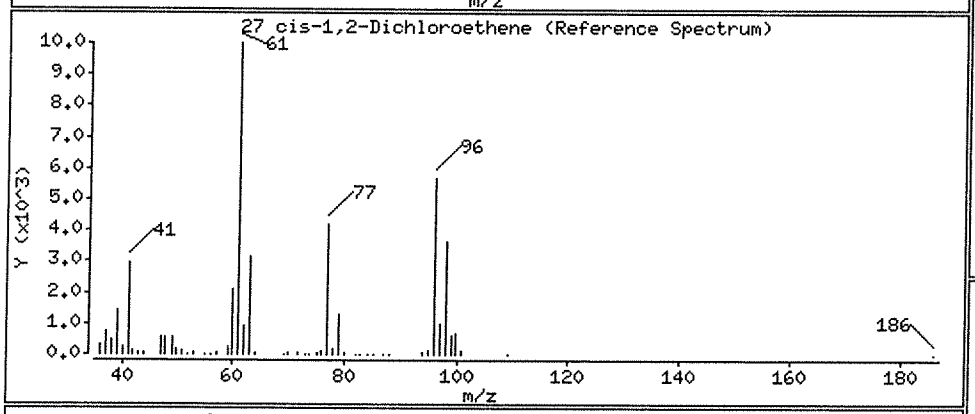
27 cis-1,2-Dichloroethene

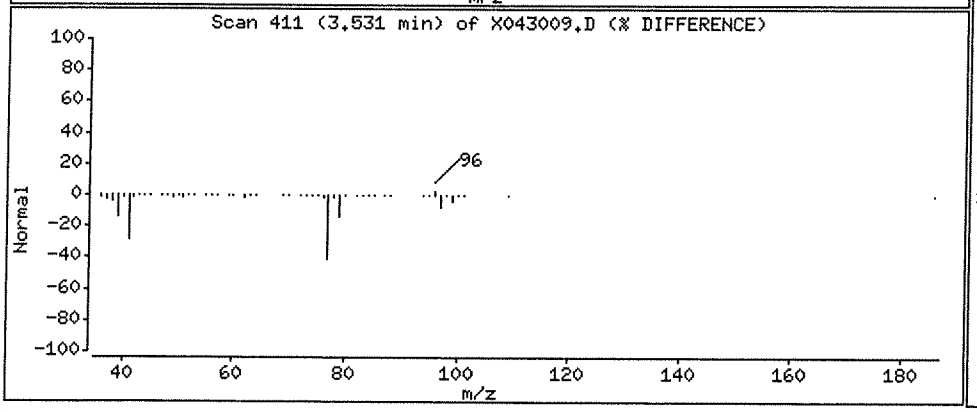
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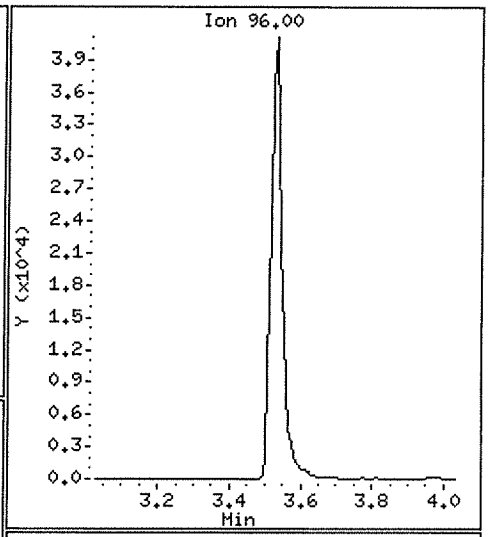
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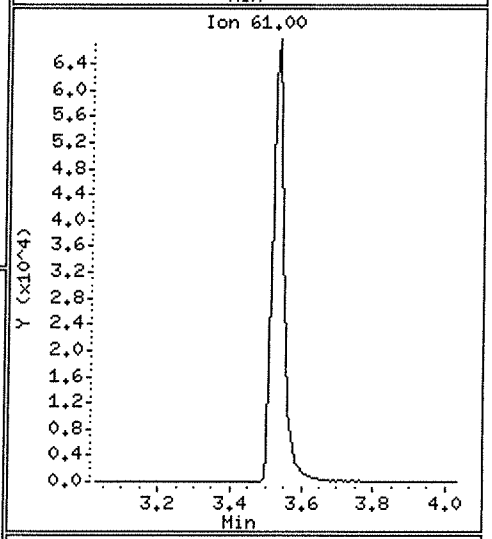


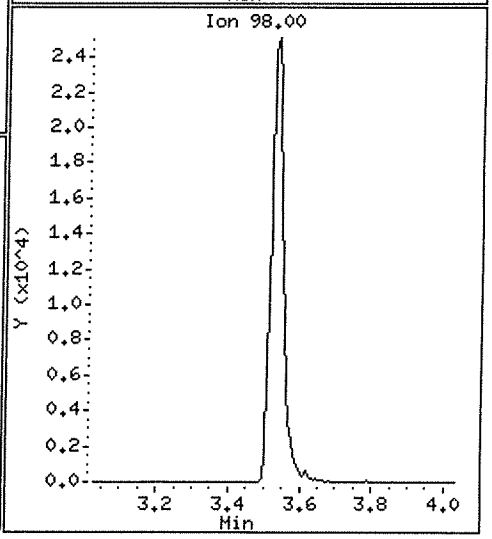












Data File: \\NAHSTWS005\Target\chem\voa6.i\X200430.b\X043009.D

Date : 30-APR-2020 18:39

Client ID: HS20041127-01

Instrument: voa6.i

Sample Info: HS20041127-01;HS20041127-01;;;

Purge Volume: 5.0

Operator: PC

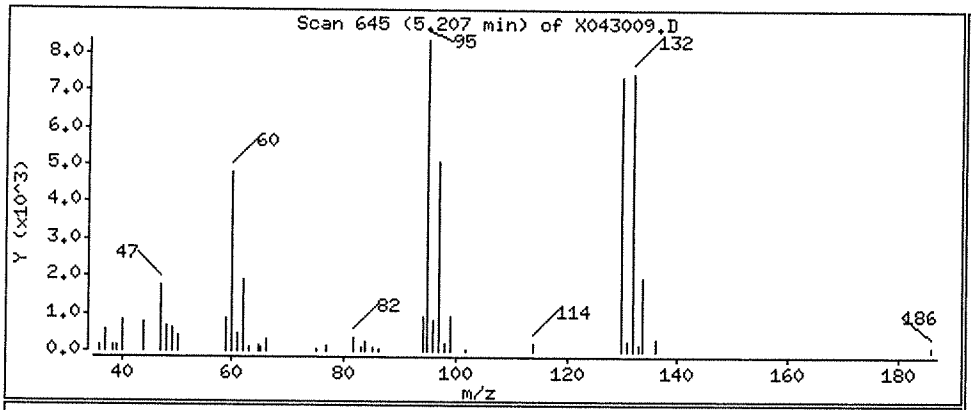
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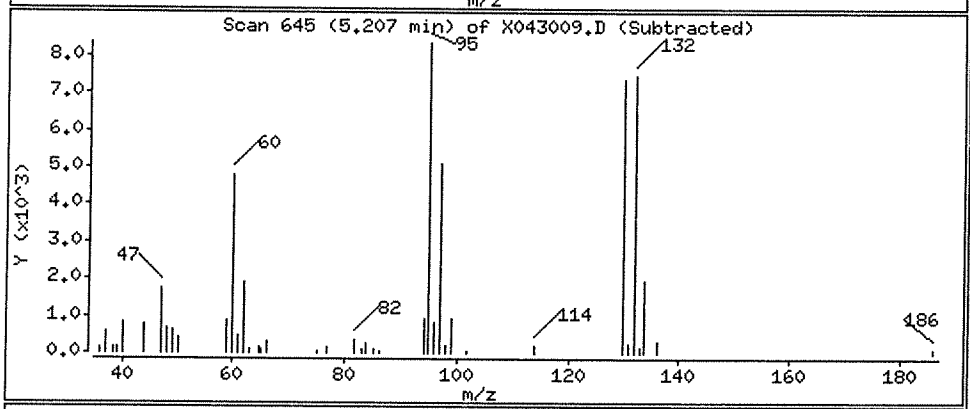
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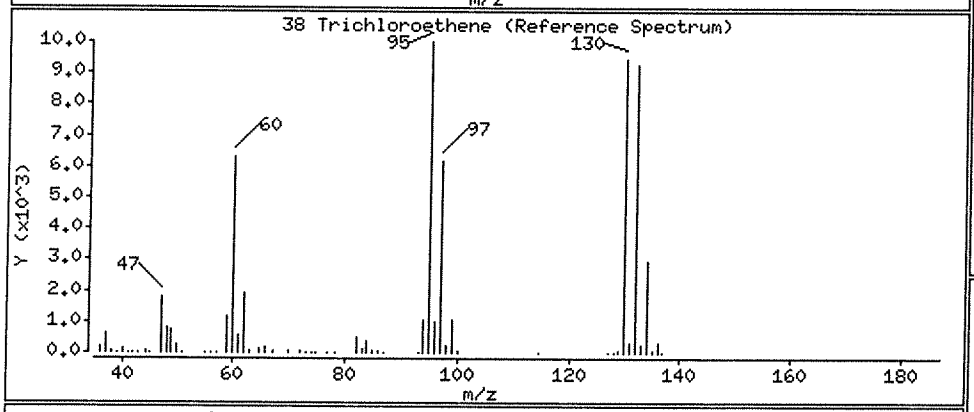
38 Trichloroethene

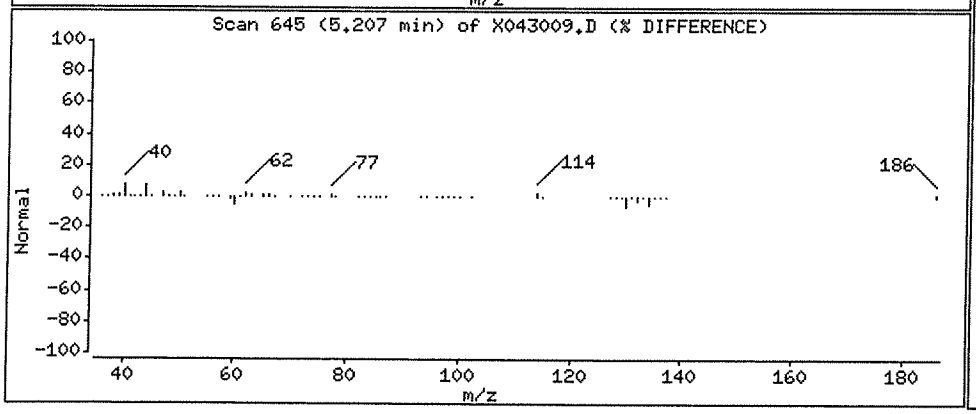
Concentration: 4.39 ug/l

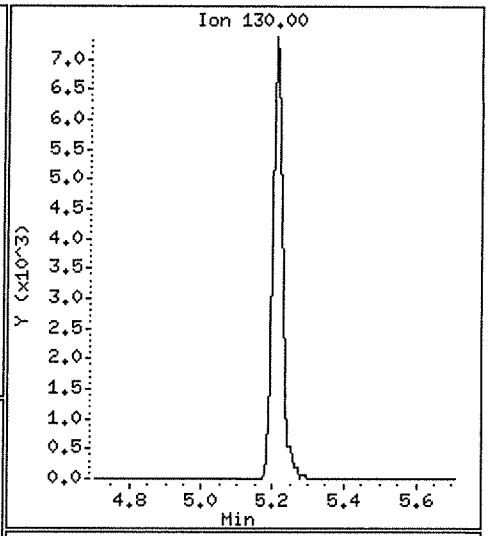
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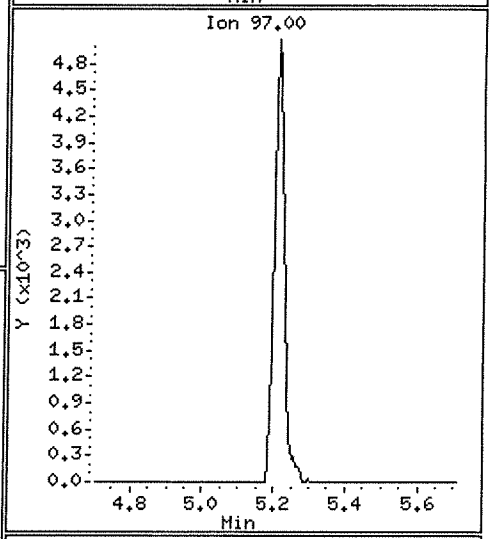


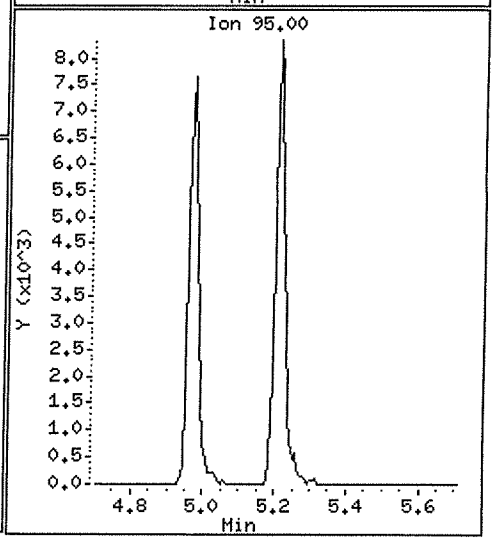












Data File: \\NAHSTWS005\Target\chem\voa6.i\X200430.b\X043011.D Page 1
Report Date: 20-May-2020 16:46

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200430.b\X043011.D
Lab Smp Id: HS20041201-01MS Client Smp ID: HS20041201-01MS
Inj Date : 30-APR-2020 19:51
Operator : PC Inst ID: voa6.i
Smp Info : HS20041201-01MS;HS20041201-01MS;3;;MS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X200430.b\8260W.m
Meth Date : 20-May-2020 16:45 voa6.i Quant Type: ISTD
Cal Date : 17-APR-2020 14:24 Cal File: X041708.D
Als bottle: 13 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0000000_Bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7142

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

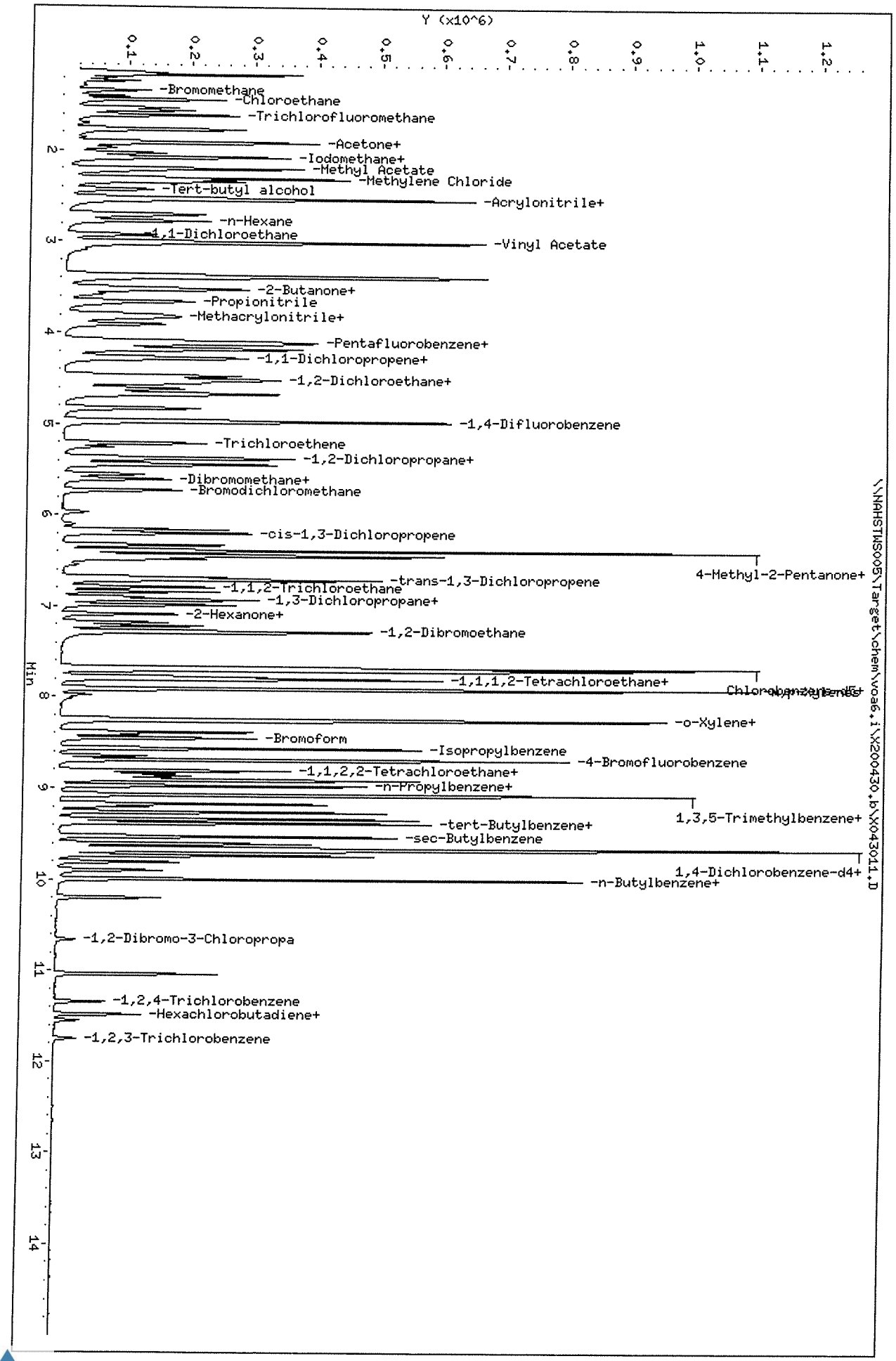
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	274338	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	459351	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	429620	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.669	(1.000)	203916	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	158430	52.4775	52.47
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	207711	59.4187	59.41
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	561165	52.4308	52.43
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	216941	53.5858	53.58
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	66695	21.2556	21.25
31 1,1,1-Trichloroethane	97	4.082	4.089	(0.976)	116308	24.7815	24.78
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	72079	20.0404	20.04
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	52168	21.5794	21.57
22 1,1-Dichloroethane	63	2.922	2.921	(0.699)	153159	25.6818	25.68
11 1,1-Dichloroethene	96	1.912	1.911	(0.457)	60827	23.7486	23.74
32 1,1-Dichloropropene	75	4.283	4.282	(0.862)	96781	21.5884	21.58
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	8181	11.8338	11.83
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	61966	20.5278	20.52(M)
90 1,2,4-Trichlorobenzene	180	11.345	11.338	(1.174)	19533	15.0324	15.03
79 1,2,4-Trimethylbenzene	105	9.383	9.382	(0.971)	244318	22.6671	22.66
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.657	(1.103)	5230	16.4020	16.40
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	63961	21.1505	21.15
88 1,2-Dichlorobenzene	146	9.999	9.998	(1.035)	111625	20.4929	20.49

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200430.b\X043011.D Page 2
Report Date: 20-May-2020 16:46

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	123297	24.0372	24.03
42	1,2-Dichloropropane	63	5.436	5.436	(1.094)	84270	22.0642	22.06
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	243475	23.1400	23.14
83	1,3-Dichlorobenzene	146	9.605	9.604	(0.994)	124812	20.3619	20.36
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	105241	20.7359	20.73
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	127747	20.0619	20.06
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	113172	26.3456	26.34
24	2-Butanone	43	3.581	3.573	(0.856)	65057	32.3078	32.30
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	210168	23.0537	23.05
52	2-Hexanone	43	7.090	7.083	(0.924)	113252	36.3909	36.39
77	4-Chlorotoluene	91	9.075	9.074	(0.939)	241557	22.5883	22.58
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	240940	22.4033	22.40
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	165327	40.9804	40.98
10	Acetone	43	1.969	1.969	(0.471)	53445	33.2945	33.29
37	Benzene	78	4.512	4.512	(0.908)	271381	21.5017	21.50
74	Bromobenzene	156	8.810	8.809	(0.912)	76877	20.6174	20.61
29	Bromochloromethane	128	3.795	3.795	(0.908)	36301	21.6312	21.63
39	Bromodichloromethane	83	5.729	5.729	(1.153)	100418	24.7311	24.73
66	Bromoform	173	8.416	8.415	(1.097)	43400	19.8748	19.87
6	Bromomethane	94	1.339	1.338	(0.320)	58714	26.2247	26.22
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	99767	22.3966	22.39
59	Chlorobenzene	112	7.699	7.699	(1.004)	179545	21.1109	21.11
7	Chloroethane	64	1.403	1.403	(0.336)	54103	20.7893	20.78
28	Chloroform	83	3.910	3.910	(0.935)	131710	24.3920	24.39
3	Chloromethane	50	1.073	1.073	(0.257)	102623	19.0309	19.03
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	73556	23.3576	23.35
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	112484	22.5147	22.51
55	Dibromochloromethane	129	7.176	7.176	(0.936)	66585	20.4493	20.44
44	Dibromomethane	93	5.558	5.557	(1.118)	46237	23.0381	23.03
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	67747	24.0931	24.09
19	Carbon Disulfide	76	2.069	2.069	(0.495)	398287	44.4977	44.49
61	Ethylbenzene	106	7.800	7.799	(1.017)	97035	21.7625	21.76
91	Hexachlorobutadiene	225	11.489	11.488	(1.189)	18635	19.9867	19.98
67	Isopropylbenzene	105	8.566	8.566	(1.117)	292985	22.5227	22.52
62	m,p-Xylenes	106	7.907	7.907	(1.031)	232276	43.1073	43.10
17	Methylene Chloride	84	2.306	2.305	(0.551)	70510	21.5062	21.50
87	n-Butylbenzene	91	9.999	9.998	(1.035)	222373	24.8443	24.84
73	n-Propylbenzene	91	8.917	8.917	(0.923)	356862	23.6862	23.68
92	Naphthalene	128	11.546	11.546	(1.195)	24716	12.8264	12.82
63	o-Xylene	106	8.244	8.243	(1.075)	113095	21.9300	21.92
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	290007	22.7524	22.75
64	Styrene	104	8.258	8.258	(1.077)	188603	21.3465	21.34
78	tert-Butylbenzene	119	9.340	9.339	(0.967)	201109	22.5572	22.55
56	Tetrachloroethene	164	6.933	6.933	(0.904)	54182	21.3781	21.37
50	Toluene	91	6.446	6.446	(0.840)	288149	23.2137	23.21
20	trans-1,2-Dichloroethene	96	2.528	2.527	(0.604)	66423	26.9214	26.92
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	99849	22.7306	22.73
38	Trichloroethene	130	5.207	5.206	(1.048)	66452	20.9682	20.96
8	Trichlorofluoromethane	101	1.561	1.560	(0.373)	119831	25.8876	25.88
5	Vinyl Chloride	62	1.138	1.138	(0.272)	98121	21.6599	21.65

QC Flag Legend

M - Compound response manually integrated.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200430.b\X043011.D
Date : 30-APR-2020 19:51
Client ID: HS20041201-01MS
Sample Info: HS20041201-01MS;HS20041201-01MS;3;;MS
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200430.b\X043012.D Page 1
Report Date: 20-May-2020 16:46

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200430.b\X043012.D
Lab Smp Id: HS20041201-01MSD Client Smp ID: HS20041201-01MSD
Inj Date : 30-APR-2020 20:15
Operator : PC Inst ID: voa6.i
Smp Info : HS20041201-01MSD;HS20041201-01MSD;3;;MSD
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X200430.b\8260W.m
Meth Date : 20-May-2020 16:45 voa6.i Quant Type: ISTD
Cal Date : 17-APR-2020 14:24 Cal File: X041708.D
Als bottle: 13 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0000000_Bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7142

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

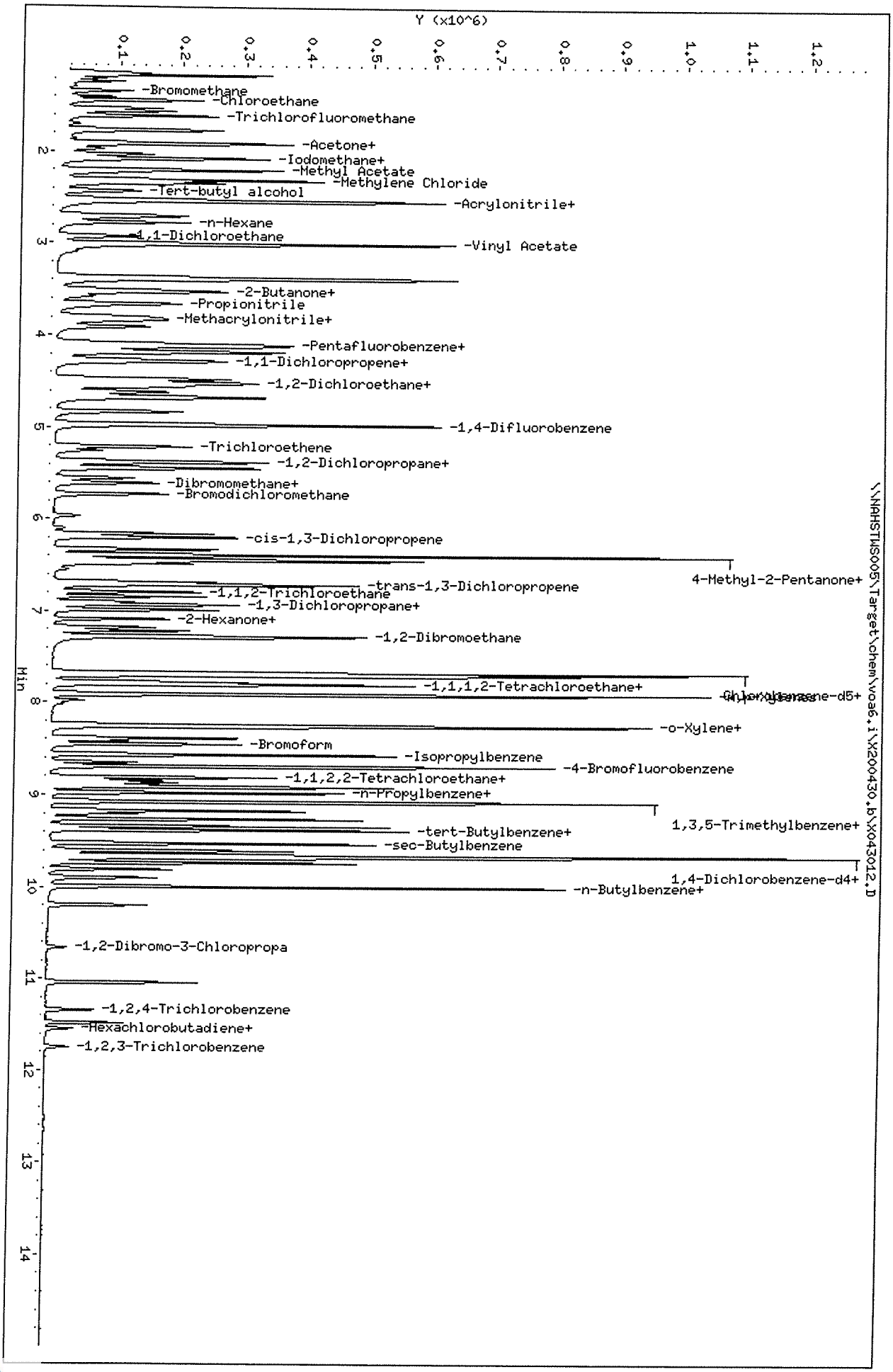
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	269100	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	450893	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.670	(1.000)	431612	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.669	(1.000)	203736	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	155050	52.3563	52.35
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	201423	58.8514	58.85
$	48 Toluene-d8	98	6.389	6.388	(0.833)	557887	51.8840	51.88
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	219494	53.9630	53.96
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	63136	20.0285	20.02
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	108377	23.5411	23.54
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.838	(0.915)	69815	19.4281	19.42
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	51998	21.4098	21.40
	22 1,1-Dichloroethane	63	2.922	2.921	(0.699)	143304	24.4971	24.49
	11 1,1-Dichloroethene	96	1.912	1.911	(0.457)	55671	22.1586	22.15
	32 1,1-Dichloropropene	75	4.283	4.282	(0.862)	92963	21.1125	21.11
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	8997	13.0256	13.02
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	60356	20.0121	20.01(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	18937	14.5866	14.58
	79 1,2,4-Trimethylbenzene	105	9.383	9.382	(0.971)	236132	21.9270	21.92
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.657	(1.103)	5114	16.0524	16.05
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	62788	20.6668	20.66
	88 1,2-Dichlorobenzene	146	9.999	9.998	(1.035)	109647	20.1476	20.14

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200430.b\X043012.D Page 2
Report Date: 20-May-2020 16:46

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	116464	23.1310	23.13
42	1,2-Dichloropropane	63	5.436	5.436	(1.094)	81704	21.7936	21.79
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	232507	22.1172	22.11
83	1,3-Dichlorobenzene	146	9.612	9.604	(0.995)	122318	19.9727	19.97
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	104373	20.4700	20.46
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	125630	19.7469	19.74
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	104811	24.8742	24.87
24	2-Butanone	43	3.581	3.573	(0.856)	64256	32.5236	32.52
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	198164	21.7562	21.75
52	2-Hexanone	43	7.090	7.083	(0.924)	111602	35.6952	35.69
77	4-Chlorotoluene	91	9.075	9.074	(0.939)	235265	22.0193	22.01
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	230998	21.4978	21.49
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	168580	41.5481	41.54
10	Acetone	43	1.976	1.969	(0.473)	52852	33.5832	33.58
37	Benzene	78	4.512	4.512	(0.908)	251189	20.2752	20.27
74	Bromobenzene	156	8.810	8.809	(0.912)	74906	20.1066	20.10
29	Bromochloromethane	128	3.795	3.795	(0.908)	34629	21.0365	21.03
39	Bromodichloromethane	83	5.730	5.729	(1.153)	94277	23.6542	23.65
66	Bromoform	173	8.416	8.415	(1.097)	42807	19.5128	19.51
6	Bromomethane	94	1.339	1.338	(0.320)	53826	24.5107	24.51
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	93321	21.3441	21.34
59	Chlorobenzene	112	7.699	7.699	(1.004)	167275	19.5774	19.57
7	Chloroethane	64	1.403	1.403	(0.336)	50283	19.6975	19.69
28	Chloroform	83	3.910	3.910	(0.935)	121853	23.0058	23.00
3	Chloromethane	50	1.074	1.073	(0.257)	94088	17.8498	17.84
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	70709	22.8906	22.89
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	110470	22.5263	22.52
55	Dibromochloromethane	129	7.176	7.176	(0.936)	65869	20.1360	20.13
44	Dibromomethane	93	5.558	5.557	(1.118)	45238	22.9632	22.96
2	Dichlorodifluoromethane	85	0.966	0.973	(0.231)	60788	22.0391	22.03
19	Carbon Disulfide	76	2.069	2.069	(0.495)	372456	42.4217	42.42
61	Ethylbenzene	106	7.800	7.799	(1.017)	92781	20.7124	20.71
91	Hexachlorobutadiene	225	11.481	11.488	(1.188)	17999	19.2696	19.26
67	Isopropylbenzene	105	8.566	8.566	(1.117)	281931	21.5729	21.57
62	m,p-Xylenes	106	7.907	7.907	(1.031)	221595	40.9353	40.93
17	Methylene Chloride	84	2.306	2.305	(0.551)	66778	20.7644	20.76
87	n-Butylbenzene	91	9.999	9.998	(1.035)	219255	24.5176	24.51
73	n-Propylbenzene	91	8.917	8.917	(0.923)	340466	22.6179	22.61
92	Naphthalene	128	11.546	11.546	(1.195)	26331	13.6766	13.67
63	o-Xylene	106	8.244	8.243	(1.075)	106894	20.6319	20.63
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	277876	21.8199	21.81
64	Styrene	104	8.258	8.258	(1.077)	182768	20.5906	20.59
78	tert-Butylbenzene	119	9.340	9.339	(0.967)	190943	21.4358	21.43
56	Tetrachloroethene	164	6.933	6.933	(0.904)	51701	20.3051	20.30
50	Toluene	91	6.446	6.446	(0.840)	273165	21.9050	21.90
20	trans-1,2-Dichloroethene	96	2.528	2.527	(0.604)	60519	25.0059	25.00
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	98129	22.7580	22.75
38	Trichloroethene	130	5.207	5.206	(1.048)	62933	20.2303	20.23
8	Trichlorofluoromethane	101	1.561	1.560	(0.373)	110040	24.2352	24.23
5	Vinyl Chloride	62	1.138	1.138	(0.272)	90710	20.4137	20.41

QC Flag Legend

M - Compound response manually integrated.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200430.b\X043012.D
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Sample Info: HS20041201-01HSD;HS20041201-01HSD;3;;HSD
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200430.b\X043013.D
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Inj Date : 30-APR-2020 20:39
Operator : PC Inst ID: voa6.i
Smp Info : CCV-END;CCV-END;2;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X200430.b\8260W.m
Meth Date : 20-May-2020 16:46 voa6.i Quant Type: ISTD
Cal Date : 17-APR-2020 14:24 Cal File: X041708.D
Als bottle: 14 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0000000_Bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7142

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
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Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

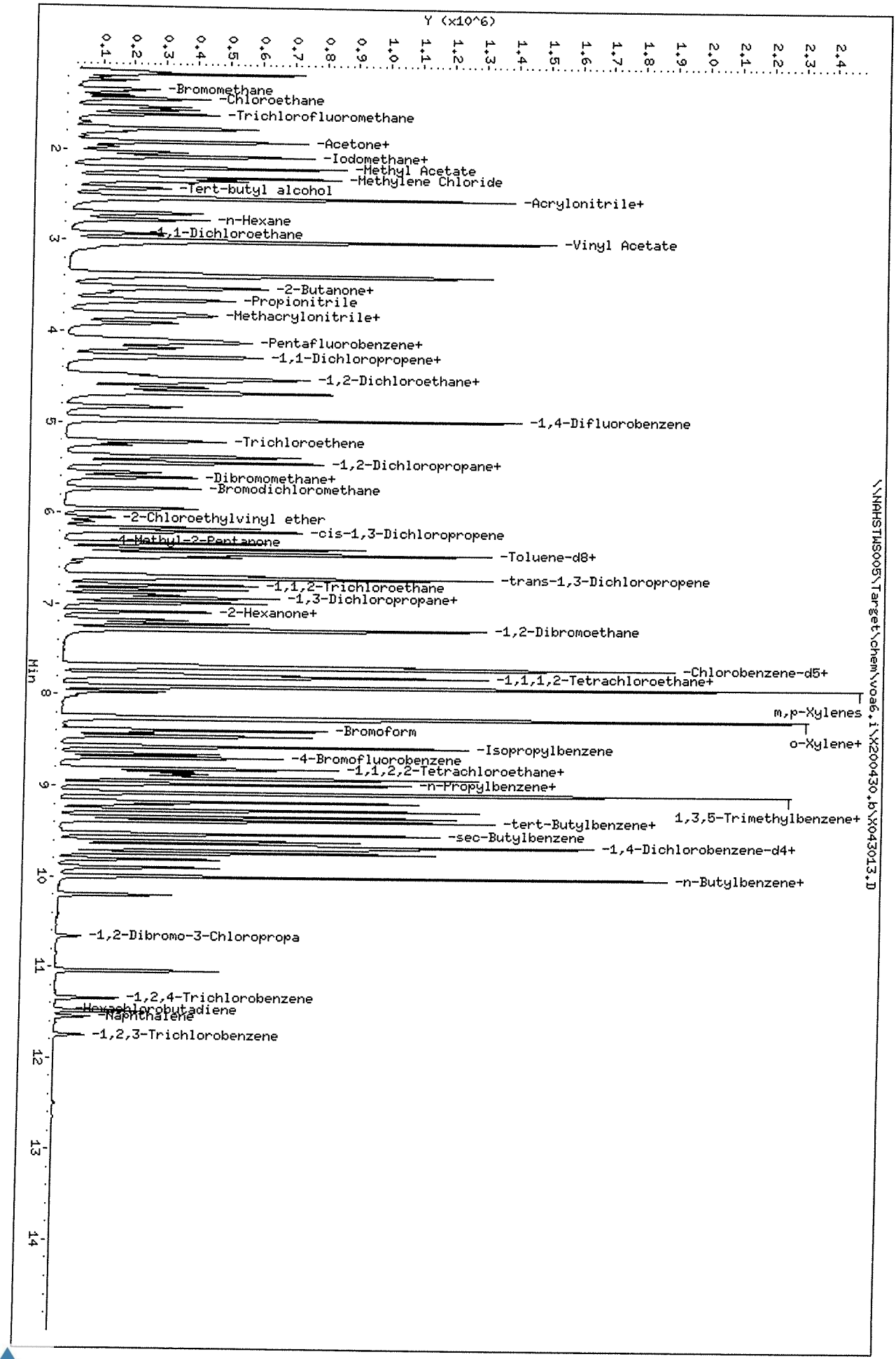
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	261537	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	442980	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	405538	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	199434	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	135657	50.0000	47.07
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	185823	50.0000	56.31
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	476798	50.0000	47.19
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	189960	50.0000	49.73
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	151164	50.0000	51.03
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	243883	50.0000	54.50
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	167393	50.0000	47.58
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	121594	50.0000	53.28
22 1,1-Dichloroethane	63	2.922	2.922	(0.699)	325431	50.0000	57.23
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	124761	50.0000	51.09
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	203660	50.0000	47.84
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	22412	50.0000	33.14
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	144857	50.0000	49.06(M)
90 1,2,4-Trichlorobenzene	180	11.345	11.345	(1.173)	49601	50.0000	39.03
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	570850	50.0000	54.15
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	12564	50.0000	40.28
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	148600	50.0000	52.05
88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	266197	50.0000	49.96

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200430.b\X043013.D Page 2
Report Date: 20-May-2020 16:46

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.555	4.555	(0.916)	271475	50.0000	54.88
42	1,2-Dichloropropane	63	5.436	5.436	(1.094)	188437	50.0000	51.16
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	557583	50.0000	54.18
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.993)	298925	50.0000	49.86
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	245811	50.0000	51.30
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	302347	50.0000	48.54
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	237458	50.0000	57.98
24	2-Butanone	43	3.581	3.581	(0.856)	154269	100.000	78.74
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	471936	50.0000	52.93
52	2-Hexanone	43	7.090	7.090	(0.924)	265768	100.000	90.46
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	560148	50.0000	53.55
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	542843	50.0000	51.60
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	401016	100.000	90.31
10	Acetone	43	1.969	1.969	(0.471)	117466	100.000	79.52
37	Benzene	78	4.512	4.512	(0.908)	596200	50.0000	48.98
74	Bromobenzene	156	8.810	8.810	(0.911)	176491	50.0000	48.39
29	Bromochloromethane	128	3.795	3.795	(0.908)	80196	50.0000	50.12
39	Bromodichloromethane	83	5.729	5.729	(1.153)	219985	50.0000	56.18
66	Bromoform	173	8.416	8.416	(1.097)	104050	50.0000	50.47
6	Bromomethane	94	1.338	1.338	(0.320)	111265	50.0000	52.11
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	204708	50.0000	47.61
59	Chlorobenzene	112	7.699	7.699	(1.004)	395653	50.0000	49.28
7	Chloroethane	64	1.403	1.403	(0.336)	115219	50.0000	46.44
28	Chloroform	83	3.910	3.910	(0.935)	287735	50.0000	55.89
3	Chloromethane	50	1.073	1.073	(0.257)	215591	50.0000	40.79
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	162201	50.0000	54.02
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	258998	50.0000	53.75
55	Dibromochloromethane	129	7.176	7.176	(0.936)	156346	50.0000	50.86
44	Dibromomethane	93	5.558	5.558	(1.118)	104395	50.0000	53.93
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	137725	50.0000	51.37
19	Carbon Disulfide	76	2.069	2.069	(0.495)	841951	100.000	98.66
61	Ethylbenzene	106	7.800	7.800	(1.017)	213259	50.0000	50.66
91	Hexachlorobutadiene	225	11.489	11.489	(1.188)	39753	50.0000	45.44
67	Isopropylbenzene	105	8.566	8.566	(1.117)	649674	50.0000	52.90
62	m,p-Xylenes	106	7.907	7.907	(1.031)	519337	100.000	102.10
17	Methylene Chloride	84	2.305	2.305	(0.551)	155335	50.0000	49.69
87	n-Butylbenzene	91	9.999	9.999	(1.034)	499761	50.0000	57.08
73	n-Propylbenzene	91	8.917	8.917	(0.922)	803606	50.0000	54.53
92	Naphthalene	128	11.546	11.546	(1.194)	68612	50.0000	36.40
63	o-Xylene	106	8.244	8.244	(1.075)	255121	50.0000	52.40
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	652612	50.0000	52.35
64	Styrene	104	8.258	8.258	(1.077)	448484	50.0000	53.77
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	448369	50.0000	51.42
56	Tetrachloroethene	164	6.933	6.933	(0.904)	116014	50.0000	48.49
50	Toluene	91	6.446	6.446	(0.840)	630754	50.0000	53.83
20	trans-1,2-Dichloroethene	96	2.528	2.528	(0.604)	139383	50.0000	59.25
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	235820	50.0000	55.66
38	Trichloroethene	130	5.207	5.207	(1.048)	148456	50.0000	48.57
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	242626	50.0000	54.98
5	Vinyl Chloride	62	1.138	1.138	(0.272)	201983	50.0000	46.76

QC Flag Legend

M - Compound response manually integrated.



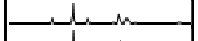
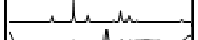
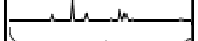
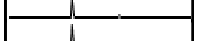
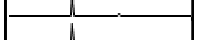
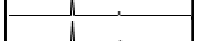
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Date : 30-APR-2020 20:39
Client ID: CCV-END
Sample Info: CCV-END;CCV-END;2;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6,i
Operator: PC
Column diameter: 0.18

HS20041127 Wet Chem Raw Data (IC)

ALS WO# HS20041127

Sequence: 050520
Last Update Operator: alshs.nouser

CD	Name	Comment	Type	Position	Dilution	Level	Instrument Method	Processing Method	Volume [ul]	Status
	STD1	2970209205	Calibration	GA1	1.0000	1	Anions Program 02052020.1	Anions Pro	5.0	Finished
	STD2	NEW PRGM	Calibration	GA2	1.0000	2	Anions Program 02052020.1	Anions Pro	5.0	Finished
	STD3		Calibration	GA3	1.0000	3	Anions Program 02052020.1	Anions Pro	5.0	Finished
	STD4		Calibration	GA4	1.0000	4	Anions Program 02052020.1	Anions Pro	5.0	Finished
	STD5	NO2/PO4	Calibration	GA5	1.0000	5	Anions Program 02052020.1	Anions Pro	5.0	Finished
	STD6	MAX 10PPM	Calibration	GA6	1.0000	6	Anions Program 02052020.1	Anions Pro	5.0	Finished
	ICV	2970209123	Unknown	GA7	1.0000		Anions Program 02052020.1	Anions Pro	5.0	Finished
	ICB		Unknown	GA8	1.0000		Anions Program 02052020.1	Anions Pro	5.0	Finished
	CCV		Unknown	RA2	1.0000		Anions Program 02052020.1	Anions Pro	5.0	Finished
	CCB		Unknown	RB1	1.0000		Anions Program 02052020.1	Anions Pro	5.0	Finished
	HS20041127-01		Unknown	RD8	1.0000		Anions Program 02052020.1	Anions Pro	5.0	Finished
	HS20041127-01MS		Unknown	RE1	1.0000		Anions Program 02052020.1	Anions Pro	5.0	Finished
	HS20041127-01MSD		Unknown	RE2	1.0000		Anions Program 02052020.1	Anions Pro	5.0	Finished
	HS20041127-01DF10		Unknown	RE3	10.0000		Anions Program 02052020.1	Anions Pro	5.0	Finished
	WBLKW1-050520		Unknown	RA3	1.0000		Anions Program 02052020.1	Anions Pro	5.0	Finished
	WLCSW1-050520		Unknown	RB2	1.0000		Anions Program 02052020.1	Anions Pro	5.0	Finished
	CCV1		Unknown	RA4	1.0000		Anions Program 02052020.1	Anions Pro	5.0	Finished
	CCB		Unknown	RA5	1.0000		Anions Program 02052020.1	Anions Pro	5.0	Finished

Sequence: 050520
Last Update Operator: alshs.nouser

Inject Time
2/5/2020 7:39:11 PM -06:00
2/5/2020 7:57:16 PM -06:00
2/5/2020 8:15:24 PM -06:00
2/5/2020 8:33:31 PM -06:00
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2/5/2020 9:27:48 PM -06:00
2/5/2020 9:45:53 PM -06:00
5/5/2020 7:45:07 PM -05:00
5/5/2020 8:03:12 PM -05:00
5/5/2020 9:33:42 PM -05:00
5/5/2020 9:51:46 PM -05:00
5/5/2020 10:09:54 PM -05:00
5/5/2020 10:27:59 PM -05:00
5/5/2020 10:46:04 PM -05:00
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5/5/2020 11:40:24 PM -05:00

Sequence: 042320
Injection #6: STD6

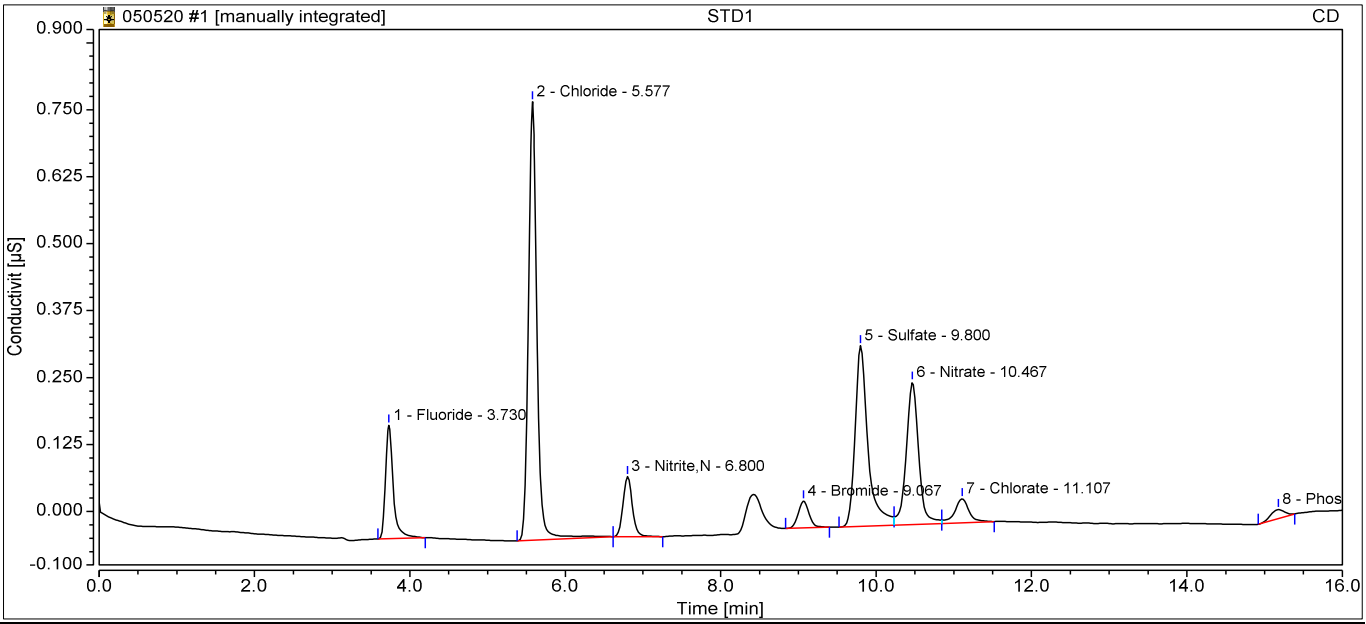
Calibration

Peak No.	Peak Name	Cal.Type	Eval.Type	Number of Points	Rel.Std.Dev. %	Coeff.of Determination	C0 (Offset)	C1 (Slope)	C2 (Curve)
1	*Fluoride*	*Lin, WithOffset, 1/*	*Area*	*6*	*13.4314*	*0.99915*	*-0.0083*	*0.3414*	*0.0000*
2	Chloride	Lin, WithOffset, 1/	Area	6	2.2020	0.99998	-0.0141	0.2320	0.0000
3	Nitrite,N	Lin, WithOffset, 1/	Area	5	19.9747	0.99771	-0.0251	0.4962	0.0000
4	Bromide	Lin, WithOffset, 1/	Area	6	12.1436	0.99933	-0.0033	0.0991	0.0000
5	Sulfate	Lin, WithOffset, 1/	Area	6	4.2312	0.99991	-0.0170	0.1679	0.0000
6	Nitrate	Lin, WithOffset, 1/	Area	6	2.3081	0.99997	-0.0076	0.5843	0.0000
7	Chlorate	Lin, WithOffset, 1/	Area	6	9.7729	0.99945	0.0017	0.0949	0.0000
8	Phosphate	Lin, WithOffset, 1/	Area	5	18.6678	0.99857	-0.0214	0.2119	0.0000
Maximum					**19.9747**	0.99998			
Minimum					2.2020	**0.99771**			

1 STD1

Sample Name:	**STD1**	*Injection Volume:*	**5.00**
Vial Number:	**GA1**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**02/05/2020 19:39**	*Sample Weight:*	**1.0000**

Run Time:



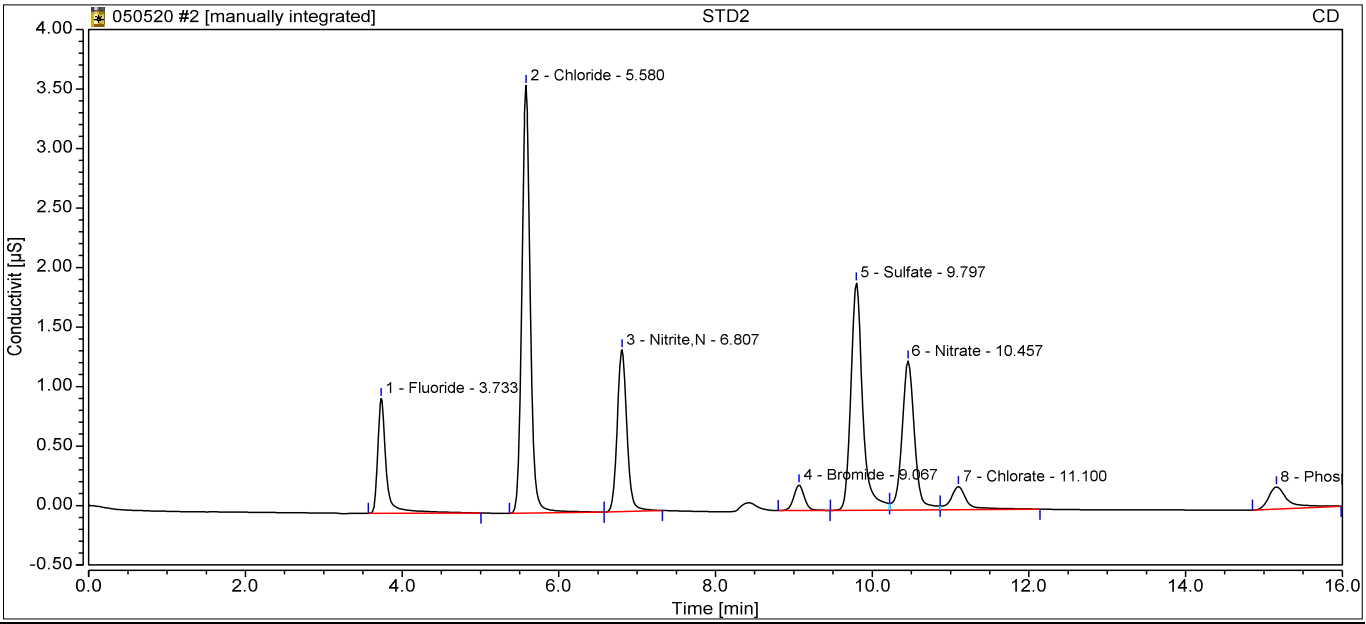
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	0.024	0.0955	0.0955	1.0000
2	5.58	Chloride	BMB	0.103	0.5065	0.5065	1.0000
3	6.80	Nitrite,N	BMB	0.016	0.0821	0.0821	1.0000
4	9.07	Bromide	BMB	0.008	0.1156	0.1156	1.0000
5	9.80	Sulfate	BM	0.065	0.4885	0.4885	1.0000
6	10.47	Nitrate	M	0.049	0.0974	0.0974	1.0000
7	11.11	Chlorate	MB	0.010	0.0834	0.0834	1.0000
8	15.18	Phosphate	BMB*	0.003	0.1173	0.1173	1.0000
Total:			**0.000**	**0.279**		**1.59**	

2 STD2

Sample Name:	**STD2**	*Injection Volume:*	**5.00**
Vial Number:	**GA2**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**02/05/2020 19:57**	*Sample Weight:*	**1.0000**

Run Time:



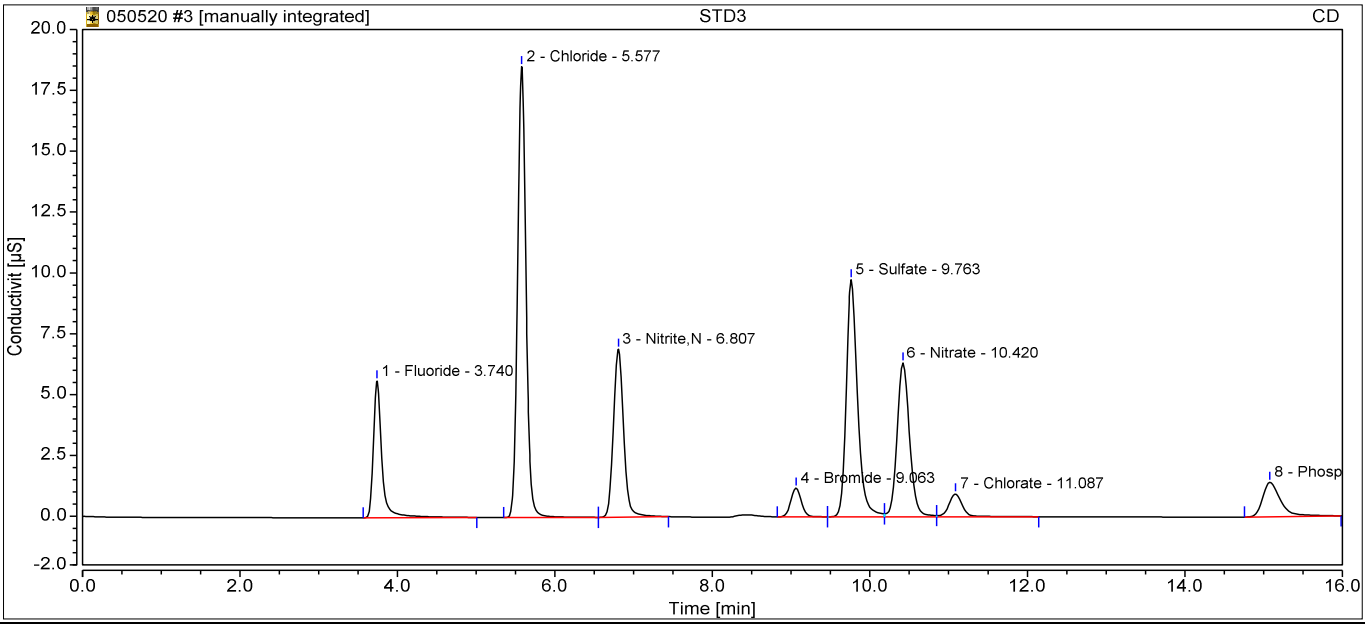
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	0.123	0.3833	0.3833	1.0000
2	5.58	Chloride	BMb*	0.449	1.9963	1.9963	1.0000
3	6.81	Nitrite,N	bMB*	0.194	0.4423	0.4423	1.0000
4	9.07	Bromide	BMB	0.034	0.3722	0.3722	1.0000
5	9.80	Sulfate	BM	0.335	2.0973	2.0973	1.0000
6	10.46	Nitrate	M	0.232	0.4103	0.4103	1.0000
7	11.10	Chlorate	MB	0.047	0.4759	0.4759	1.0000
8	15.16	Phosphate	BMB	0.053	0.3518	0.3518	1.0000
Total:			**0.000**	**1.467**		**6.53**	

3 STD3

Sample Name:	**STD3**	*Injection Volume:*	**5.00**
Vial Number:	**GA3**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**02/05/2020 20:15**	*Sample Weight:*	**1.0000**

Run Time:



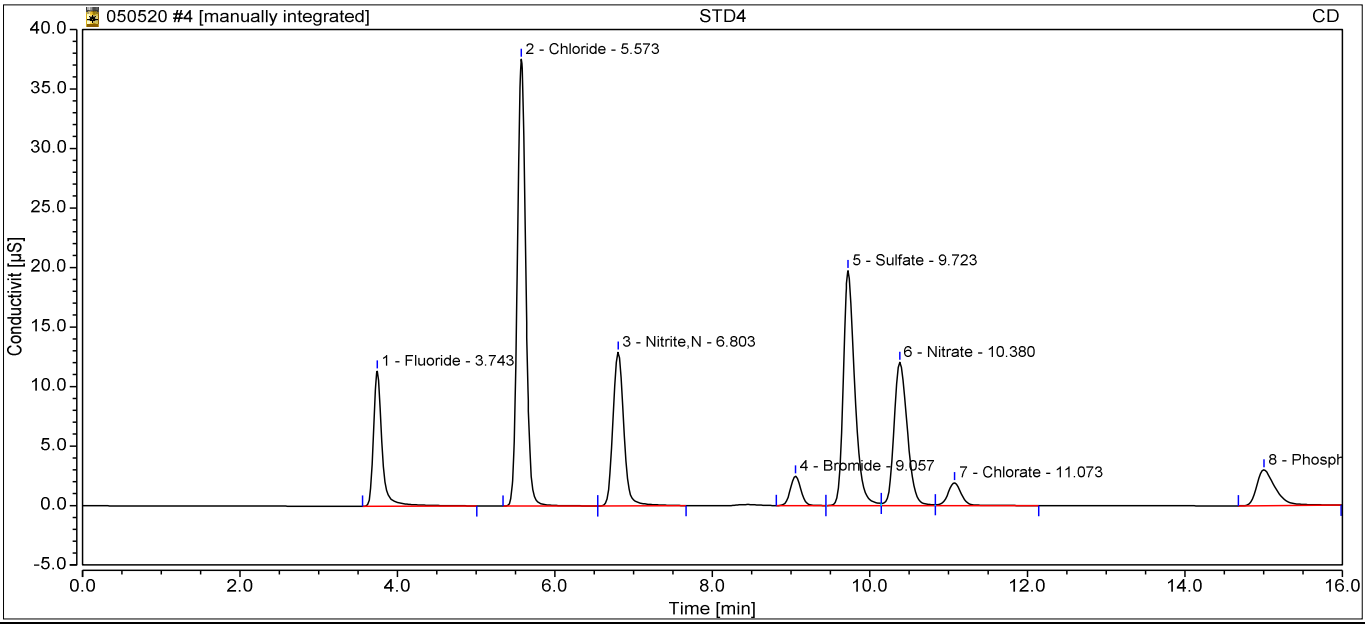
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	0.701	2.0769	2.0769	1.0000
2	5.58	Chloride	BMb*	2.284	9.9073	9.9073	1.0000
3	6.81	Nitrite,N	bMB*	1.029	2.1245	2.1245	1.0000
4	9.06	Bromide	BM	0.182	1.8657	1.8657	1.0000
5	9.76	Sulfate	M	1.624	9.7730	9.7730	1.0000
6	10.42	Nitrate	M	1.160	1.9980	1.9980	1.0000
7	11.09	Chlorate	MB	0.189	1.9689	1.9689	1.0000
8	15.08	Phosphate	BMB	0.374	1.8664	1.8664	1.0000
Total:			**0.000**	**7.542**		**31.58**	

4 STD4

Sample Name:	**STD4**	*Injection Volume:*	**5.00**
Vial Number:	**GA4**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**02/05/2020 20:33**	*Sample Weight:*	**1.0000**

Run Time:

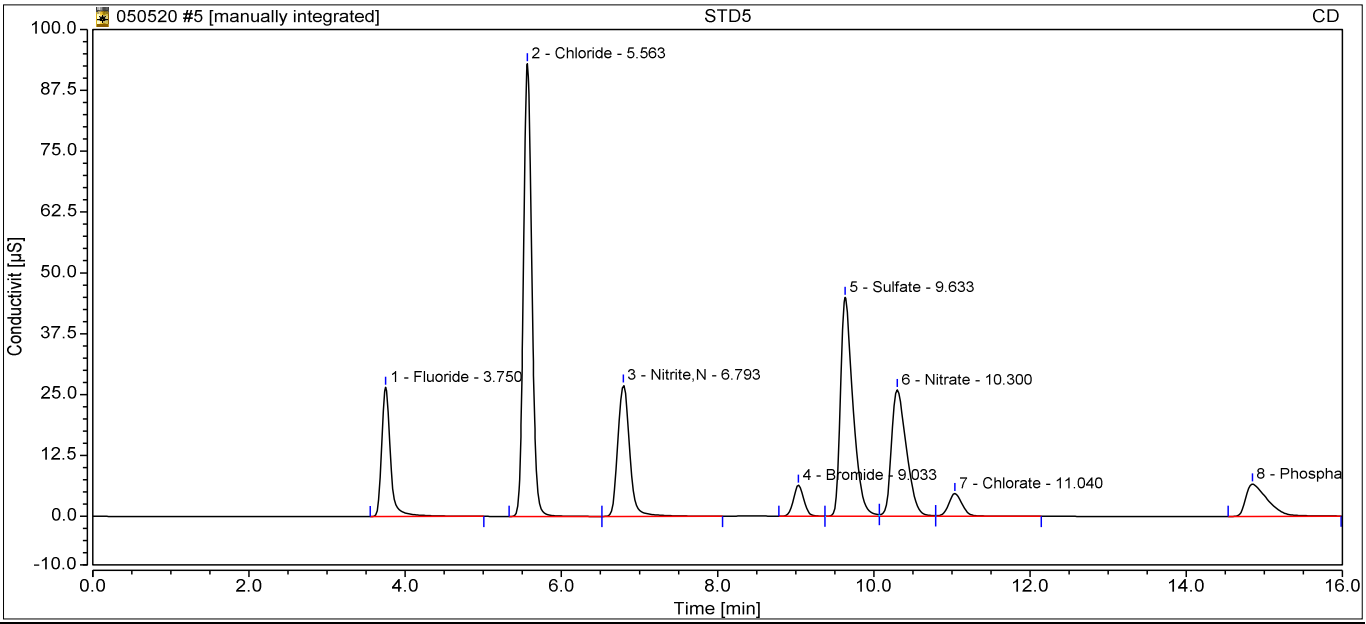


Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	1.428	4.2080	4.2080	1.0000
2	5.57	Chloride	BMb*	4.627	20.0069	20.0069	1.0000
3	6.80	Nitrite,N	bMB*	2.046	4.1745	4.1745	1.0000
4	9.06	Bromide	BM	0.382	3.8871	3.8871	1.0000
5	9.72	Sulfate	M	3.337	19.9713	19.9713	1.0000
6	10.38	Nitrate	M	2.343	4.0228	4.0228	1.0000
7	11.07	Chlorate	MB	0.380	3.9830	3.9830	1.0000
8	15.00	Phosphate	BMB	0.824	3.9874	3.9874	1.0000
Total:			**0.000**	**15.366**		**64.24**	

5 STD5			
Sample Name:	**STD5**	*Injection Volume:*	**5.00**
Vial Number:	**GA5**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**02/05/2020 20:51**	*Sample Weight:*	**1.0000**

Run Time:



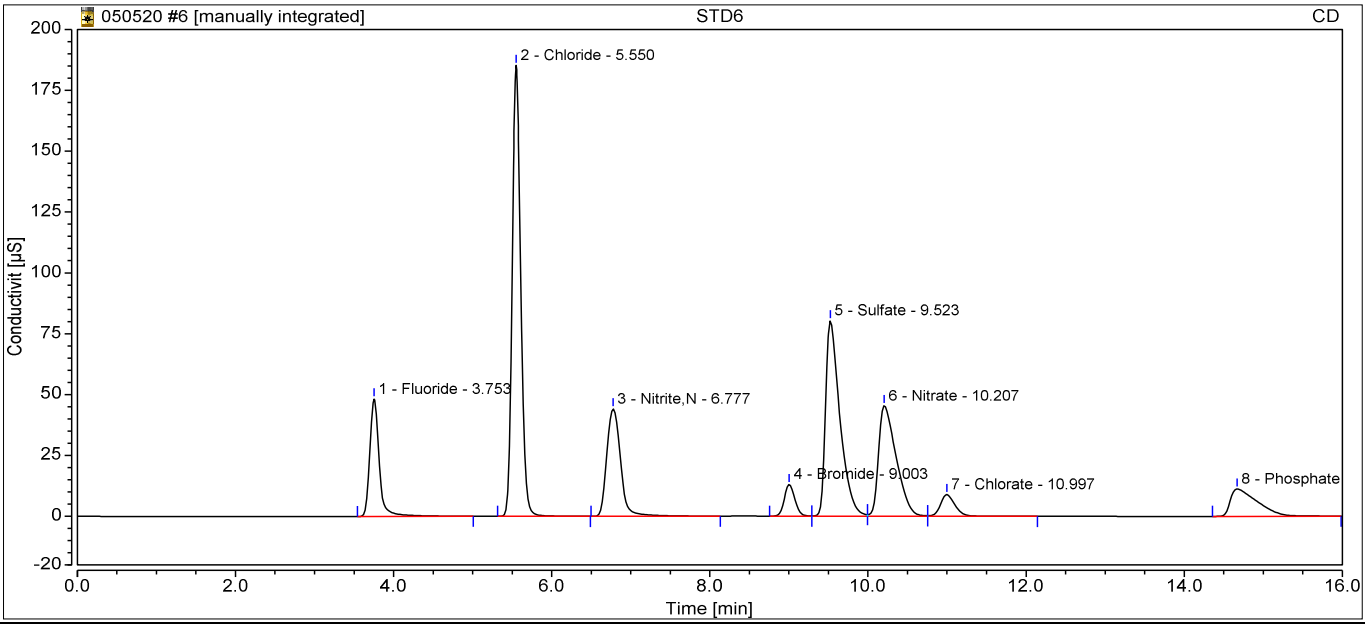
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.75	Fluoride	BMB	3.472	10.1940	10.1940	1.0000
2	5.56	Chloride	BMB	11.516	49.7057	49.7057	1.0000
3	6.79	Nitrite,N	BMB*	4.776	9.6766	9.6766	1.0000
4	9.03	Bromide	BM	0.981	9.9279	9.9279	1.0000
5	9.63	Sulfate	M	8.325	49.6811	49.6811	1.0000
6	10.30	Nitrate	M	5.799	9.9382	9.9382	1.0000
7	11.04	Chlorate	MB	0.944	9.9252	9.9252	1.0000
8	14.85	Phosphate	BMB	2.135	10.1771	10.1771	1.0000
Total:			**0.000**	**37.949**		**159.23**	

6 STD6

Sample Name:	**STD6**	*Injection Volume:*	**5.00**
Vial Number:	**GA6**	*Channel:*	**CD**
Sample Type:	**Calibration Standard**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**02/05/2020 21:09**	*Sample Weight:*	**1.0000**

Run Time:



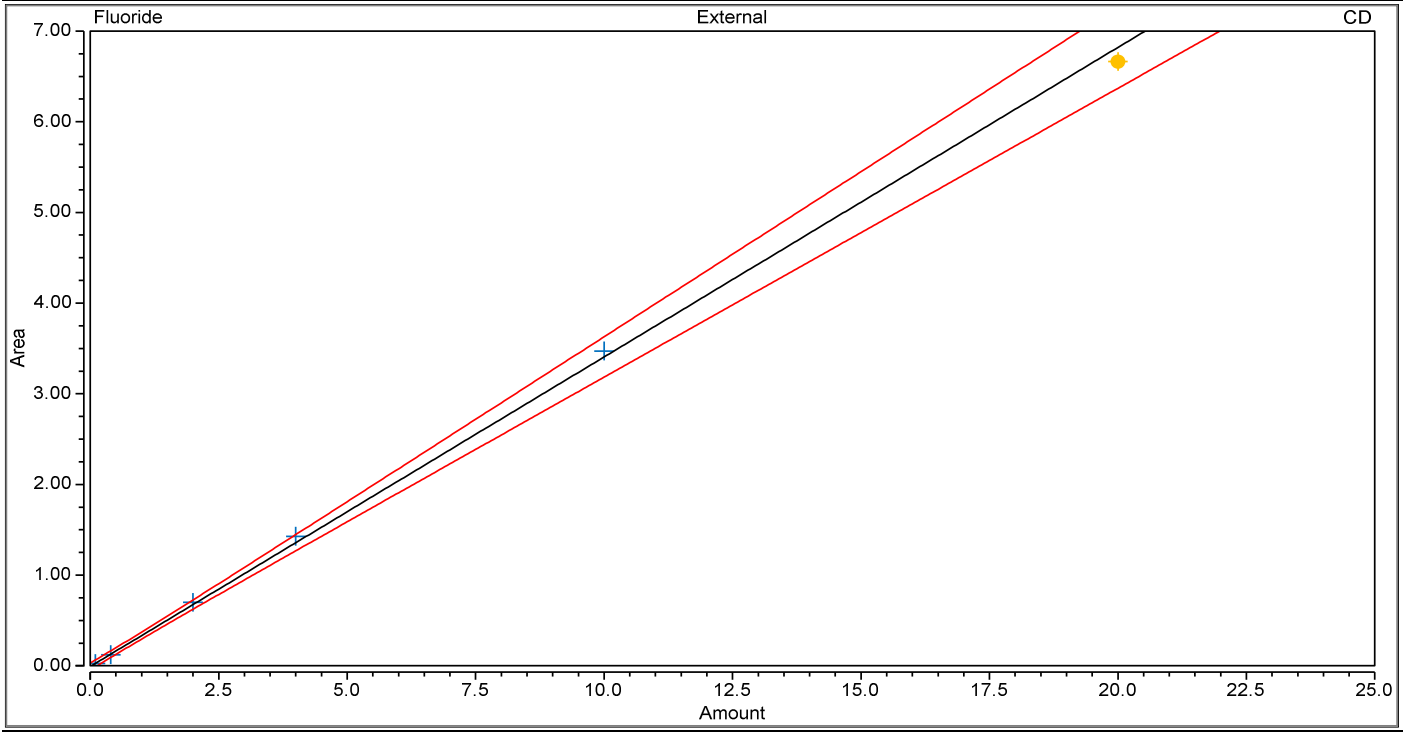
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.75	Fluoride	BMB	6.664	19.5424	19.5424	1.0000
2	5.55	Chloride	BMB	23.270	100.3774	100.3774	1.0000
3	6.78	Nitrite,N	BMB*	8.893	17.9725	17.9725	1.0000
4	9.00	Bromide	BM	2.012	20.3316	20.3316	1.0000
5	9.52	Sulfate	M	16.857	100.4888	100.4888	1.0000
6	10.21	Nitrate	M	11.698	20.0333	20.0333	1.0000
7	11.00	Chlorate	MB	1.906	20.0635	20.0635	1.0000
8	14.67	Phosphate	BMB	4.450	21.0985	21.0985	1.0000
Total:			**0.000**	**75.750**		**319.91**	

Calibration

Calibration Details	Fluoride		
Calibration Type	Lin, WithOffset, 1/A	*Offset (C0)*	-0.0083
Evaluation Type	Area	*Slope (C1)*	0.3414
Number of Calibration Points	6	*Curve (C2)*	0.0000
Number of disabled Calibration Points	0	*R-Square*	0.9991

Calibration Plot **Fluoride**



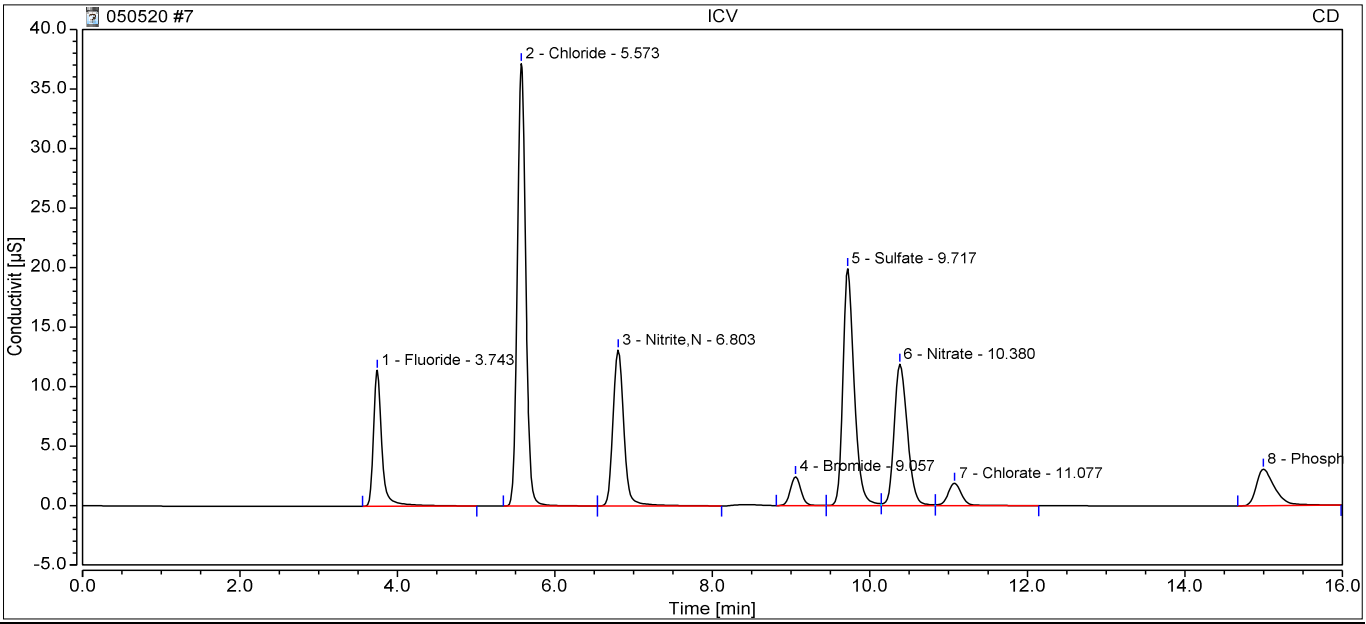
Calibration Results **Fluoride**

No.	Injection Name	Calibration Level	X Value CD Fluoride	Y Value CD Fluoride	Y Value CD Fluoride	Area µS*min CD Fluoride	Height µS CD Fluoride
1	STD1	1	0.1000	0.0243	0.0243	0.024	0.212
2	STD2	2	0.4000	0.1226	0.1226	0.123	0.964
3	STD3	3	2.0000	0.7008	0.7008	0.701	5.614
4	STD4	4	4.0000	1.4284	1.4284	1.428	11.345
5	STD5	5	10.0000	3.4723	3.4723	3.472	26.547
6	STD6	6	20.0000	6.6641	6.6641	6.664	48.233

7 ICV

Sample Name:	**ICV**	*Injection Volume:*	**5.00**
Vial Number:	**GA7**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**02/05/2020 21:27**	*Sample Weight:*	**1.0000**

Run Time:



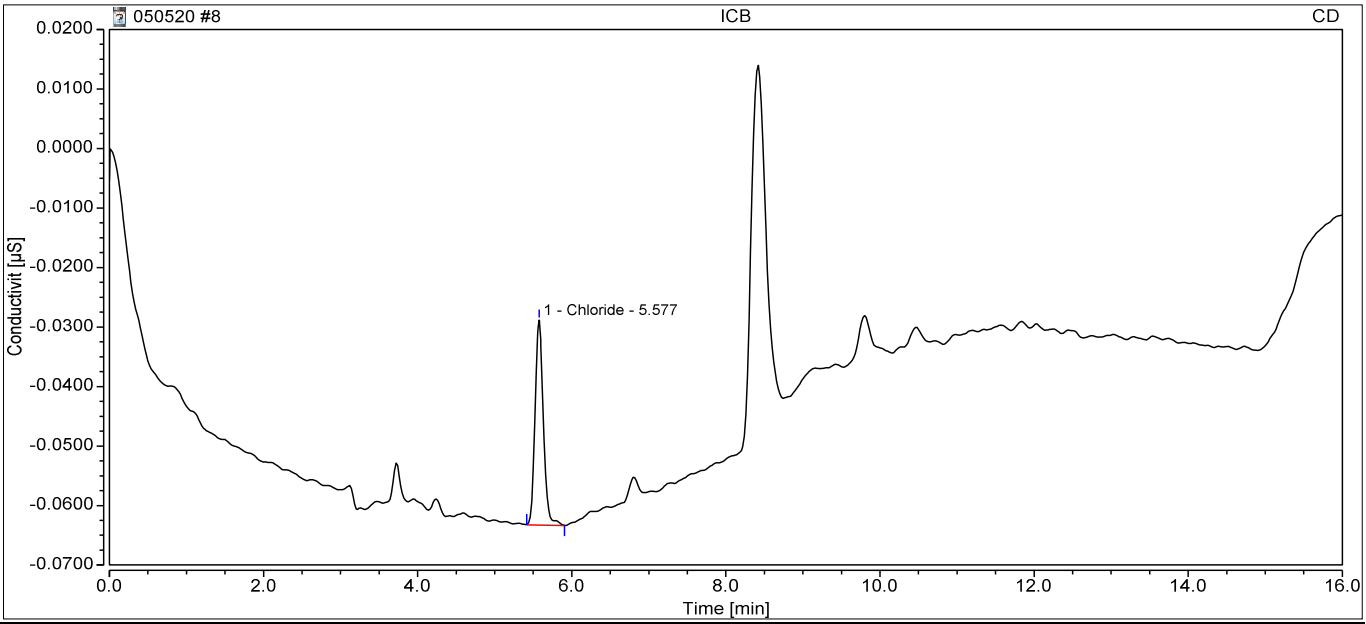
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	1.412	4.1607	4.1607	1.0000
2	5.57	Chloride	BMB	4.570	19.7627	19.7627	1.0000
3	6.80	Nitrite,N	BMB	2.081	4.2442	4.2442	1.0000
4	9.06	Bromide	BM	0.374	3.8104	3.8104	1.0000
5	9.72	Sulfate	M	3.327	19.9126	19.9126	1.0000
6	10.38	Nitrate	M	2.299	3.9478	3.9478	1.0000
7	11.08	Chlorate	MB	0.379	3.9799	3.9799	1.0000
8	15.00	Phosphate	BMB	0.835	4.0417	4.0417	1.0000
Total:			**0.000**	**15.278**		**63.86**	

8 ICB

Sample Name:	**ICB**	*Injection Volume:*	**5.00**
Vial Number:	**GA8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**02/05/2020 21:45**	*Sample Weight:*	**1.0000**

Run Time:



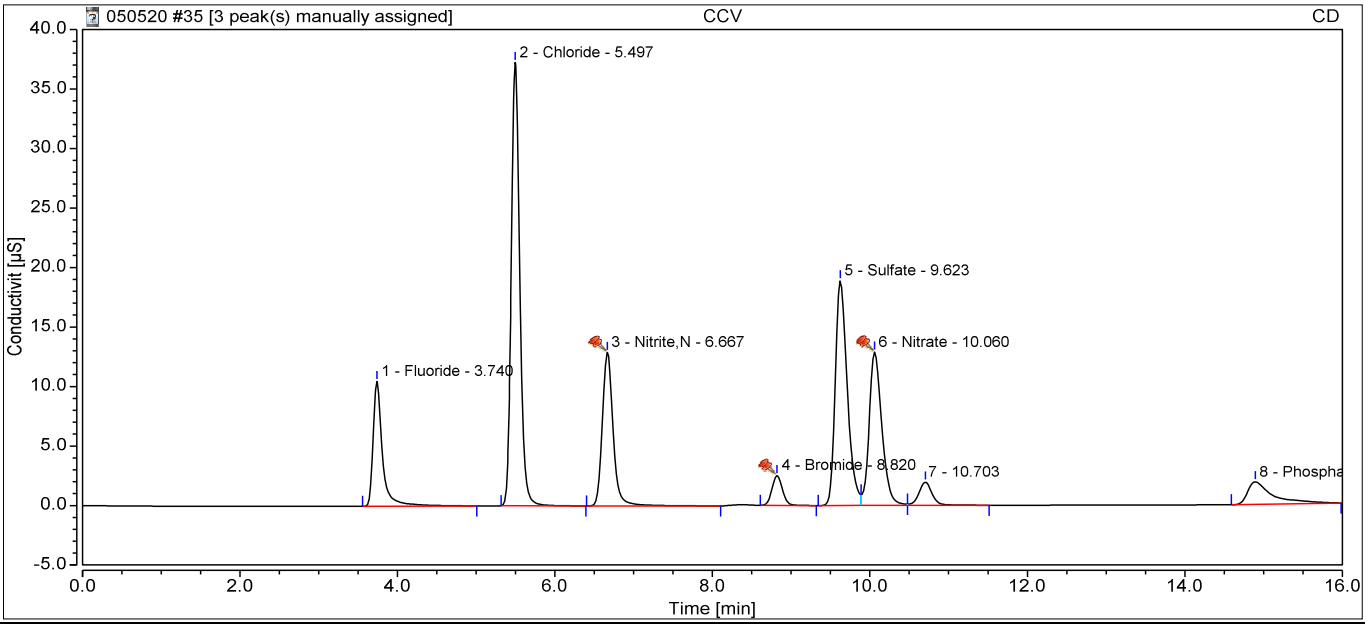
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.58	Chloride	BMB	0.004	0.0794	0.0794	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.004**		**0.08**	

35 CCV

Sample Name:	**CCV**	*Injection Volume:*	**5.00**
Vial Number:	**RA2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**05/05/2020 19:45**	*Sample Weight:*	**1.0000**

Run Time:



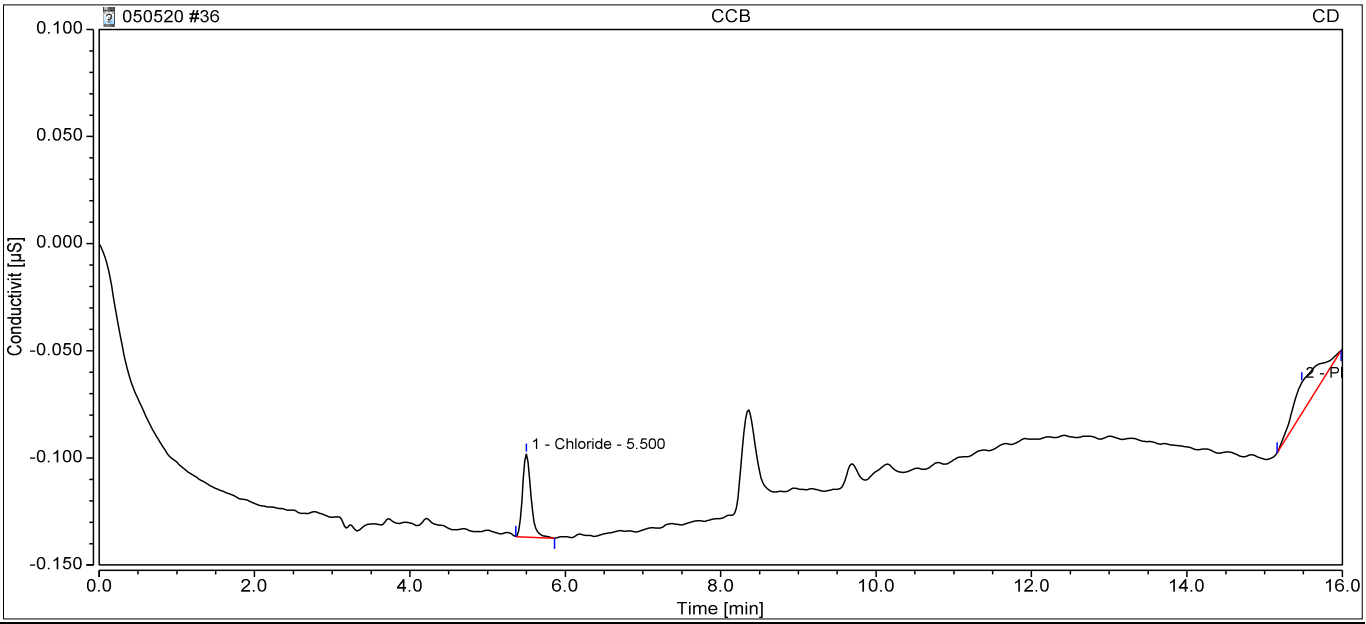
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	1.441	4.2450	4.2450	1.0000
2	5.50	Chloride	BMB	4.638	20.0539	20.0539	1.0000
3	6.67	Nitrite,N	BMB^	2.072	4.2272	4.2272	1.0000
4	8.82	Bromide	BMB^	0.381	3.8769	3.8769	1.0000
5	9.62	Sulfate	BM	3.325	19.9007	19.9007	1.0000
6	10.06	Nitrate	M ^	2.401	4.1227	4.1227	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
8	14.90	Phosphate	BMB	0.705	3.4267	3.4267	1.0000
Total:			**0.000**	**14.963**		**59.85**	

36 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**RB1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**05/05/2020 20:03**	*Sample Weight:*	**1.0000**

Run Time:



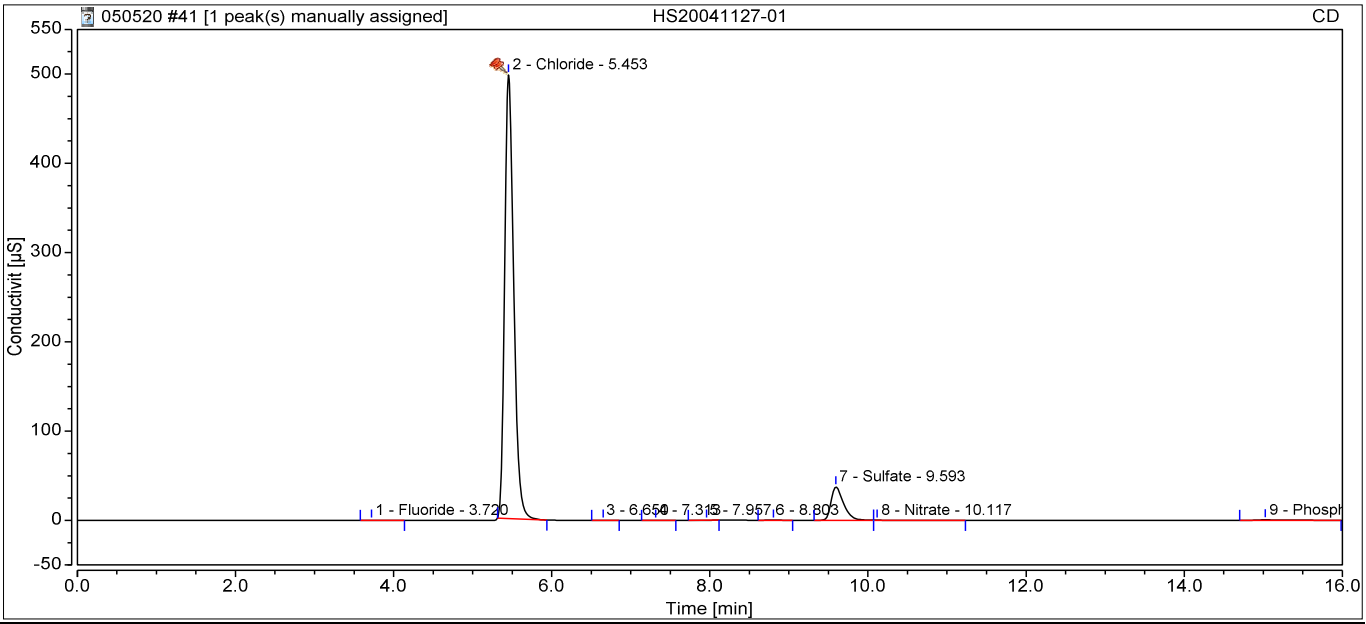
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.50	Chloride	BMB	0.005	0.0820	0.0820	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
2	15.48	Phosphate	BMB	0.006	0.1300	0.1300	1.0000
Total:			**0.000**	**0.011**		**0.21**	

41 HS20041127-01

Sample Name:	**HS20041127-01**	*Injection Volume:*	**5.00**
Vial Number:	**RD8**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**05/05/2020 21:33**	*Sample Weight:*	**1.0000**

Run Time:



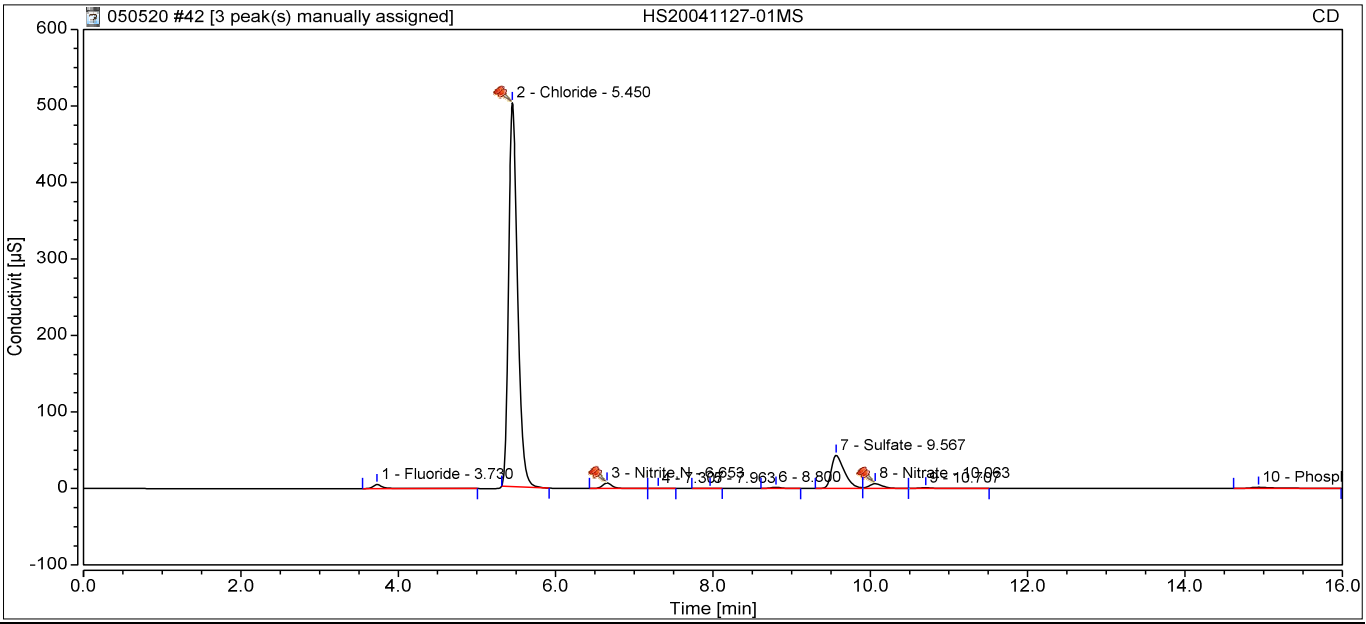
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	0.027	0.1019	0.1019	1.0000
2	5.45	Chloride	BMB^	65.651	283.0791	283.0791	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
7	9.59	Sulfate	BM	6.925	41.3432	41.3432	1.0000
8	10.12	Nitrate	MB	0.057	0.1097	0.1097	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
9	15.03	Phosphate	BMB	0.271	1.3785	1.3785	1.0000
Total:			**0.000**	**72.930**		**326.01**	

42 HS20041127-01MS

Sample Name:	**HS20041127-01MS**	*Injection Volume:*	**5.00**
Vial Number:	**RE1**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**05/05/2020 21:51**	*Sample Weight:*	**1.0000**

Run Time:



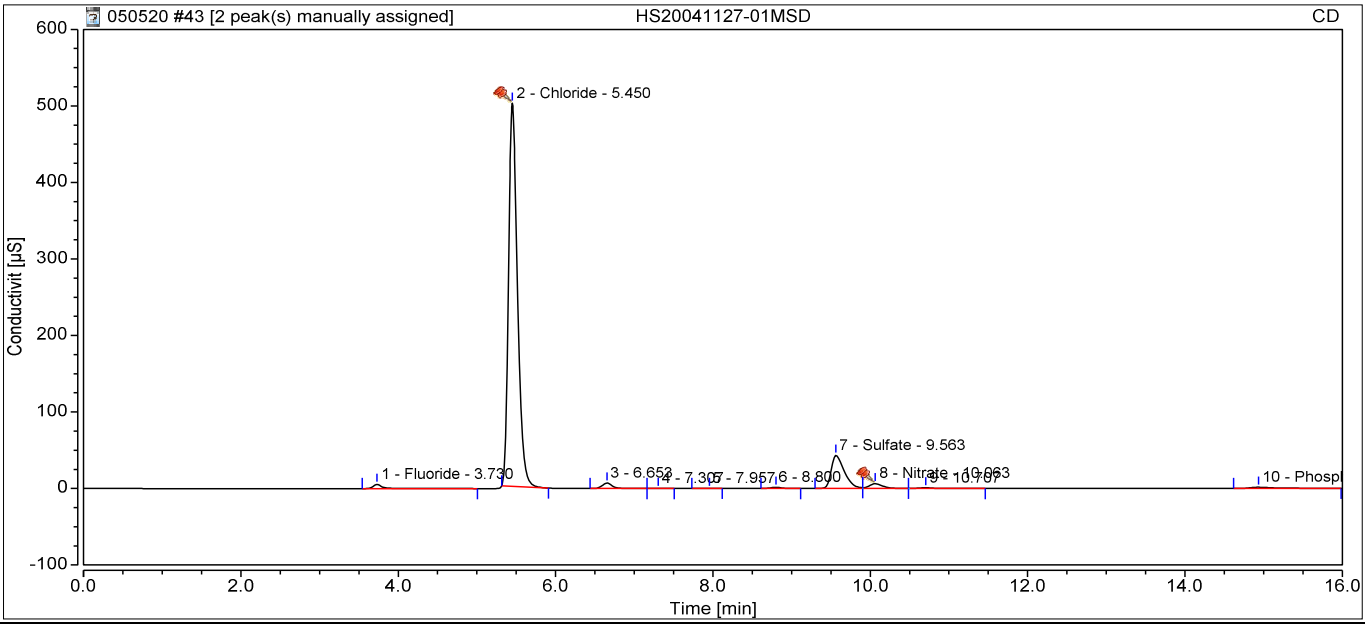
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	0.749	2.2166	2.2166	1.0000
2	5.45	Chloride	BMB^	66.313	285.9331	285.9331	1.0000
3	6.65	Nitrite,N	BMB^	1.047	2.1614	2.1614	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
7	9.57	Sulfate	BM	8.355	49.8602	49.8602	1.0000
8	10.06	Nitrate	M ^	1.258	2.1657	2.1657	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
10	14.93	Phosphate	BMB	0.633	3.0902	3.0902	1.0000
Total:			**0.000**	**78.355**		**345.43**	

43 HS20041127-01MSD

Sample Name:	**HS20041127-01MSD**	*Injection Volume:*	**5.00**
Vial Number:	**RE2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**05/05/2020 22:09**	*Sample Weight:*	**1.0000**

Run Time:



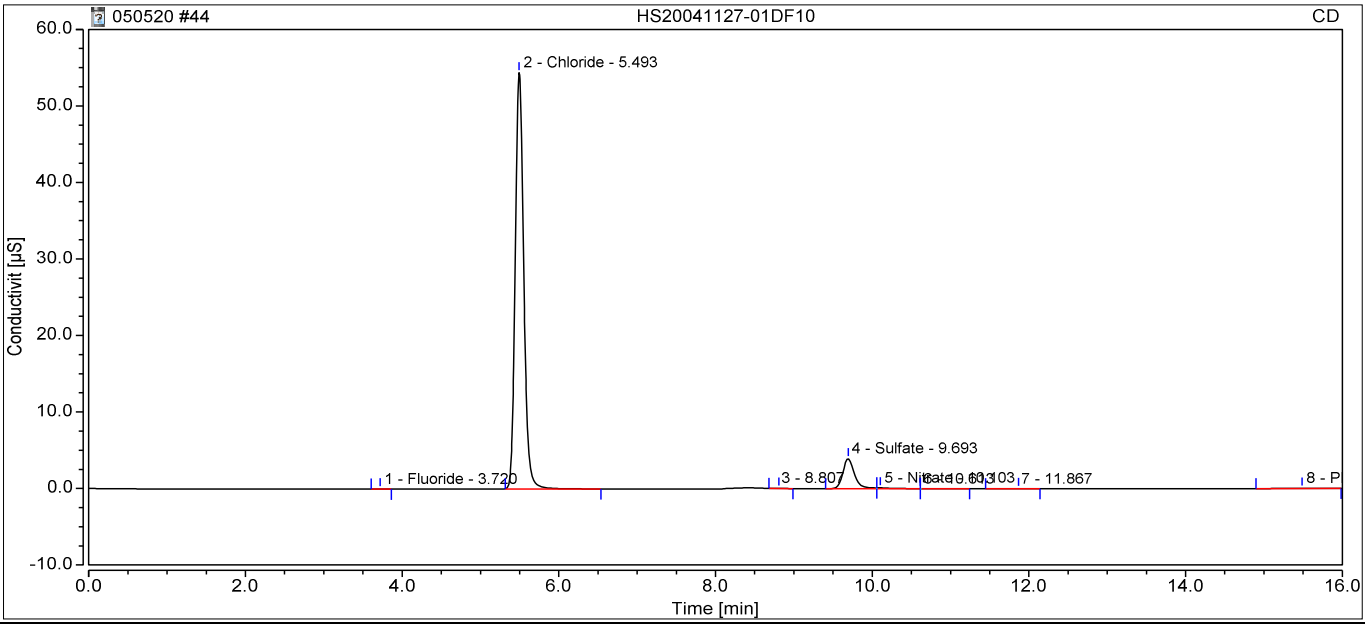
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.73	Fluoride	BMB	0.749	2.2175	2.2175	1.0000
2	5.45	Chloride	BMB^	66.093	284.9871	284.9871	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
7	9.56	Sulfate	BM	8.359	49.8825	49.8825	1.0000
8	10.06	Nitrate	M ^	1.256	2.1629	2.1629	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
10	14.93	Phosphate	BMB	0.644	3.1380	3.1380	1.0000
Total:			**0.000**	**77.101**		**342.39**	

44 HS20041127-01DF10

Sample Name:	**HS20041127-01DF10**	*Injection Volume:*	**5.00**
Vial Number:	**RE3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**10.0000**
Recording Time:	**05/05/2020 22:27**	*Sample Weight:*	**1.0000**

Run Time:



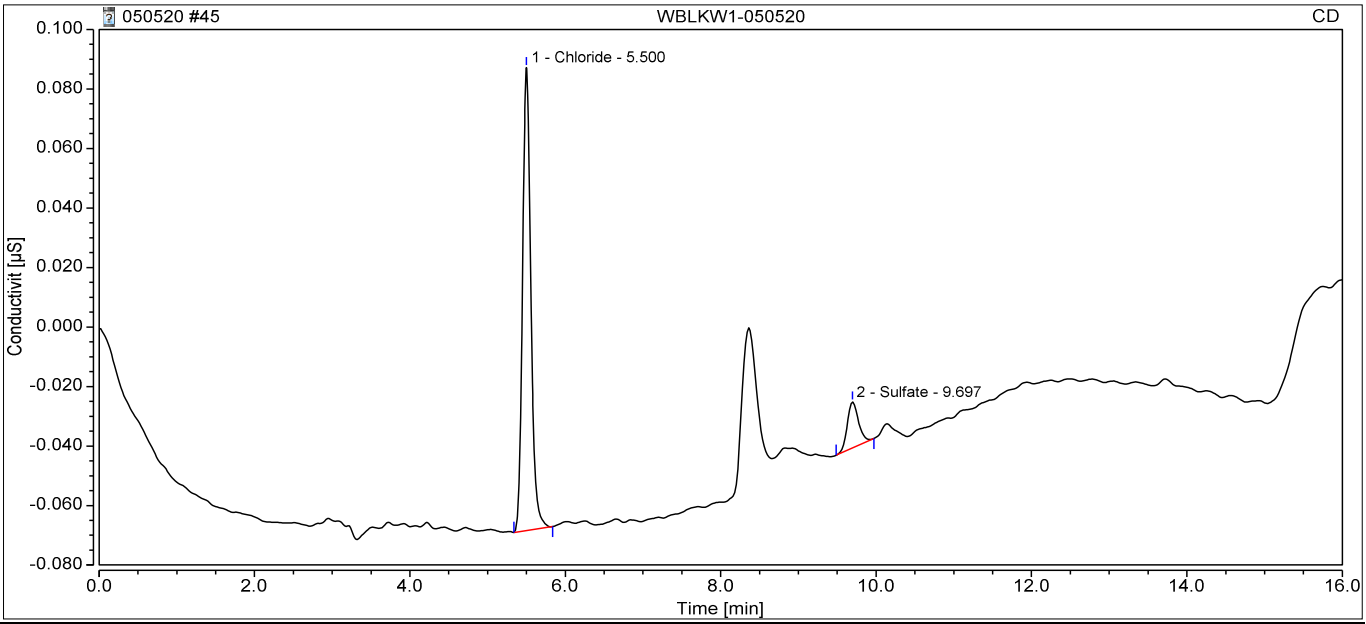
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.72	Fluoride	BMB	0.002	0.0309	0.3094	10.0000
2	5.49	Chloride	BMB	6.798	29.3649	293.6486	10.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	10.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	10.0000
4	9.69	Sulfate	BM	0.677	4.1310	41.3103	10.0000
5	10.10	Nitrate	M	0.027	0.0600	0.5997	10.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	10.0000
8	15.49	Phosphate	BMB	0.020	0.1969	1.9690	10.0000
Total:			**0.000**	**7.524**		**337.84**	

45 WBLKW1-050520

Sample Name:	**WBLKW1-050520**	*Injection Volume:*	**5.00**
Vial Number:	**RA3**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**05/05/2020 22:46**	*Sample Weight:*	**1.0000**

Run Time:



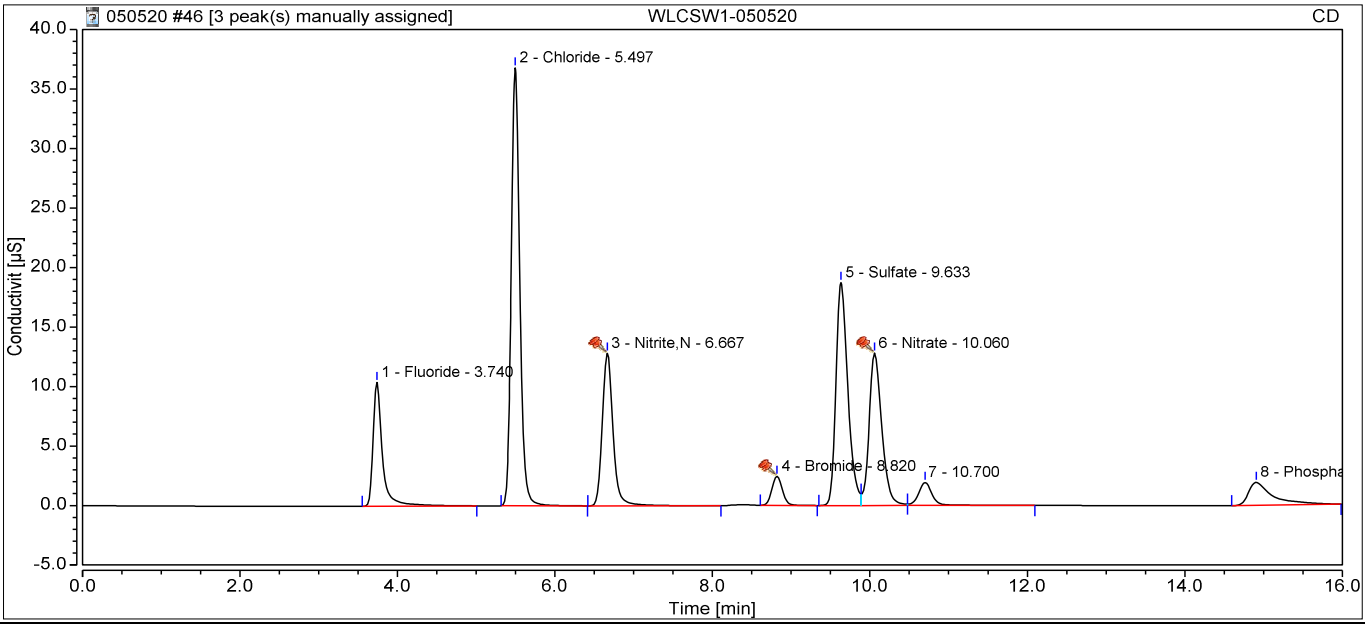
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.50	Chloride	BMB	0.019	0.1441	0.1441	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
2	9.70	Sulfate	BMB	0.003	0.1166	0.1166	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Phosphate	n.a.	n.a.	n.a.	n.a.	1.0000
Total:			**0.000**	**0.022**		**0.26**	

46 WLCSW1-050520

Sample Name:	**WLCSW1-050520**	*Injection Volume:*	**5.00**
Vial Number:	**RB2**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**05/05/2020 23:04**	*Sample Weight:*	**1.0000**

Run Time:



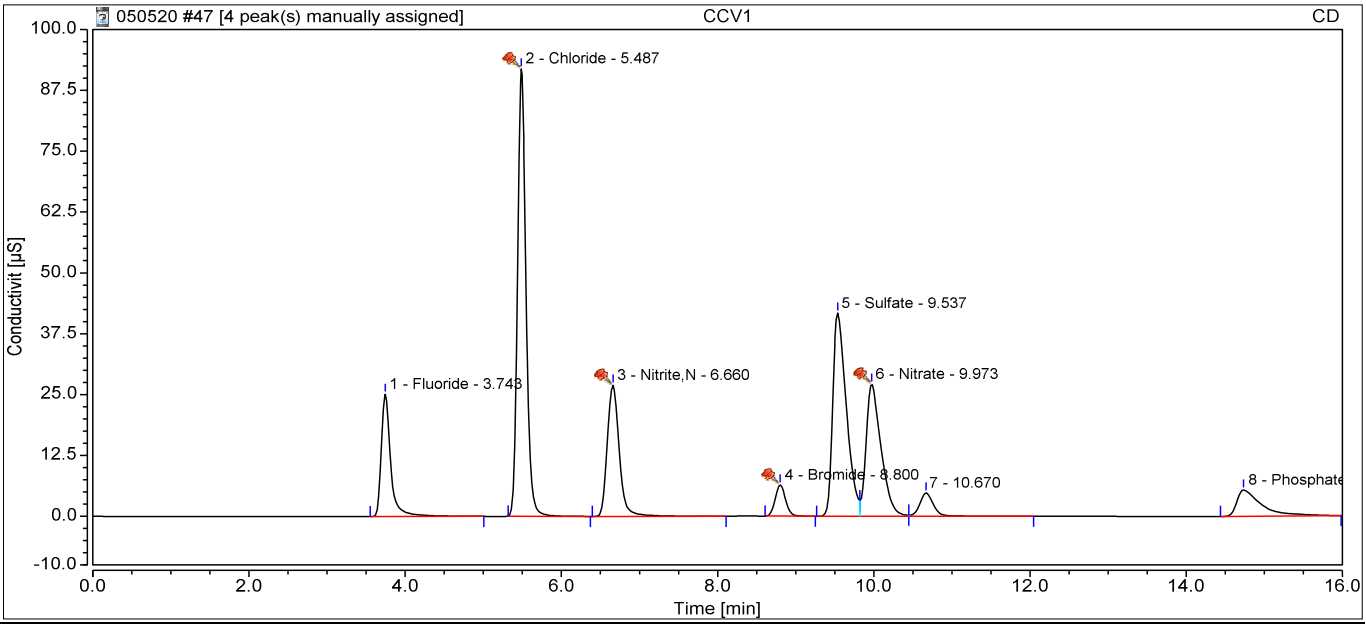
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	1.423	4.1932	4.1932	1.0000
2	5.50	Chloride	BMB	4.583	19.8178	19.8178	1.0000
3	6.67	Nitrite,N	BMB^	2.054	4.1910	4.1910	1.0000
4	8.82	Bromide	BMB^	0.375	3.8147	3.8147	1.0000
5	9.63	Sulfate	BM	3.276	19.6130	19.6130	1.0000
6	10.06	Nitrate	M ^	2.381	4.0873	4.0873	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
8	14.91	Phosphate	BMB	0.694	3.3736	3.3736	1.0000
Total:			**0.000**	**14.786**		**59.09**	

47 CCV1

Sample Name:	**CCV1**	*Injection Volume:*	**5.00**
Vial Number:	**RA4**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**05/05/2020 23:22**	*Sample Weight:*	**1.0000**

Run Time:



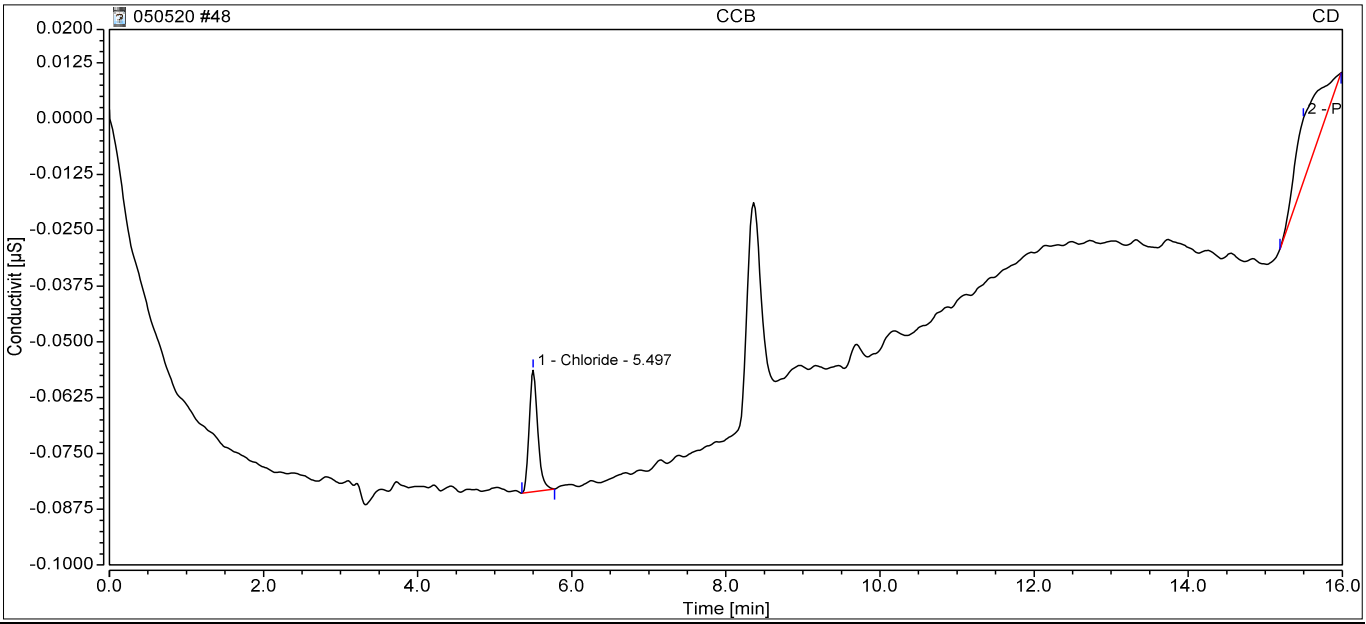
Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
1	3.74	Fluoride	BMB	3.519	10.3321	10.3321	1.0000
2	5.49	Chloride	BMB^	11.521	49.7296	49.7296	1.0000
3	6.66	Nitrite,N	BMB^	4.820	9.7646	9.7646	1.0000
4	8.80	Bromide	BMB^	0.978	9.9025	9.9025	1.0000
5	9.54	Sulfate	BM	8.428	50.2911	50.2911	1.0000
6	9.97	Nitrate	M ^	6.008	10.2949	10.2949	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
8	14.74	Phosphate	BMB	1.977	9.4321	9.4321	1.0000
Total:			**0.000**	**37.252**		**149.75**	

48 CCB

Sample Name:	**CCB**	*Injection Volume:*	**5.00**
Vial Number:	**RA5**	*Channel:*	**CD**
Sample Type:	**Unknown**	*Wavelength:*	**210**
Control Program:	**Anions Program 02052020.1**	*Bandwidth:*	**n.a.**
Quantif. Method:	**Anions Processing Method**	*Dilution Factor:*	**1.0000**
Recording Time:	**05/05/2020 23:40**	*Sample Weight:*	**1.0000**

Run Time:



Integration Results

No.	Retention min	Peak Name	Peak Type	Area µS*min	Amount ppm	Concentration ppm	Dilution
n.a.	n.a.	Fluoride	n.a.	n.a.	n.a.	n.a.	1.0000
1	5.50	Chloride	BMB	0.004	0.0761	0.0761	1.0000
n.a.	n.a.	Nitrite,N	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Bromide	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Sulfate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Nitrate	n.a.	n.a.	n.a.	n.a.	1.0000
n.a.	n.a.	Chlorate	n.a.	n.a.	n.a.	n.a.	1.0000
2	15.49	Phosphate	BMB	0.006	0.1294	0.1294	1.0000
Total:			**0.000**	**0.010**		**0.21**	

ALS Environmental

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WorkOrder: HS20041130

Longhorn GW Treatment Plant Weekly Samples

Bhate Environmental Associates, Inc.

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

26-May-2020

ALS Environmental
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HS20041130 Longhorn GW Treatment Plant Weekly Samples Final Level II

ALS WO# HS20041130

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May 13, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20041130**

Laboratory Results for: **Longhorn GW Treatment Plant Weekly Samples**

Dear Marcia,

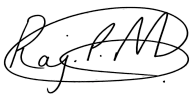
ALS Environmental received 2 sample(s) on Apr 29, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,



Generated By: COREY.GRANDITS
RJ Modashia
Project Manager

ALS Houston, US Date: 13-May-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20041130

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20041130-01	LH18/24-SP650_042820	Water		28-Apr-2020 14:00	29-Apr-2020 09:17	☐
HS20041130-02	LH18/24-SP650_042820_BIX	Water		28-Apr-2020 14:00	29-Apr-2020 09:17	☐

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Houston, US Date: 13-May-20

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20041130

Work Order Comments

- The analysis for Perchlorate was subcontracted to ALS High-Res in Houston, TX. Final report attached.

  The analysis for TOC was subcontracted to ALS Kelso, WA. Final report attached.

Subcontracted by Method NA

Batch ID: R361193

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method E350.3

Batch ID: R361024

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method E365.3

Batch ID: R360748

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

ALS Houston, US Date: 13-May-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Weekly Samples WorkOrder:HS20041130
Sample ID: LH18/24-SP650_042820 Lab ID:HS20041130-01
Collection Date: 28-Apr-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
AMMONIA AS N BY E350.3(ISE)		**Method:E350.3**						Analyst: YP
Nitrogen, Ammonia (As N)	**21**	a	**0.20**	**0.10**	**0.20**	**mg/L**	1	04-May-2020 11:00
ORTHO PHOSPHATE (PO4) AS P BY E365.3		**Method:E365.3**						Analyst: KVL
Phosphorus, Total Orthophosphate (As P)	**1.96**	a	**0.0500**	**0.125**	**0.125**	**mg/L**	5	29-Apr-2020 13:00
SUBCONTRACT ANALYSIS - TOC ANALYSIS		**Method:NA**						Analyst: SUBK
Subcontract Analysis	See Attached		0	0		NA	1	07-May-2020 10:39

Note: See Qualifiers Page for a list of qualifiers and their explanation.

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Houston, US Date: 13-May-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder:HS20041130
Sample ID: LH18/24-SP650_042820_BIX
Lab ID:HS20041130-02
Collection Date: 28-Apr-2020 14:00
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	13-May-2020 15:37

Note: See Qualifiers Page for a list of qualifiers and their explanation.

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20041130

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R360748 (0)	**Test Name :** ORTHO PHOSPHATE (PO4) AS P BY E365.3				**Matrix:** Water	
HS20041130-01	LH18/24-SP650_042820	28 Apr 2020 14:00			29 Apr 2020 13:00	5
Batch ID: R361024 (0)	**Test Name :** AMMONIA AS N BY E350.3(ISE)				**Matrix:** Water	
HS20041130-01	LH18/24-SP650_042820	28 Apr 2020 14:00			04 May 2020 11:00	1
Batch ID: R361193 (0)	**Test Name :** SUBCONTRACT ANALYSIS - TOC ANALYSIS				**Matrix:** Water	
HS20041130-01	LH18/24-SP650_042820	28 Apr 2020 14:00			07 May 2020 10:39	1
Batch ID: R361494 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Water	
HS20041130-02	LH18/24-SP650_042820_BIX	28 Apr 2020 14:00			13 May 2020 15:37	1

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Houston, US Date: 13-May-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20041130

QC BATCH REPORT

Batch ID: R360748 (0) **Instrument:** UV-2450 **Method:** ORTHO PHOSPHATE (PO4) AS P BY E365.3

MBLK Sample ID: **MBLK-R360748** Units: **mg/L** Analysis Date: **29-Apr-2020 13:00**
Client ID: Run ID: **UV-2450_360748** SeqNo: **5569417** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.0250	0.0250								U

LCS Sample ID: **LCS-R360748** Units: **mg/L** Analysis Date: **29-Apr-2020 13:00**
Client ID: Run ID: **UV-2450_360748** SeqNo: **5569416** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.255	0.0250	0.25	0	102	85 - 115				

LCSD Sample ID: **LCSD-R360748** Units: **mg/L** Analysis Date: **29-Apr-2020 13:00**
Client ID: Run ID: **UV-2450_360748** SeqNo: **5569415** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.257	0.0250	0.25	0	103	85 - 115	0.255	0.781	20	

MS Sample ID: **HS20041130-01MS** Units: **mg/L** Analysis Date: **29-Apr-2020 13:00**
Client ID: **LH18/24-SP650_042820** Run ID: **UV-2450_360748** SeqNo: **5569419** PrepDate: DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	3.185	0.125	1.25	1.96	98.0	80 - 120				

MSD Sample ID: **HS20041130-01MSD** Units: **mg/L** Analysis Date: **29-Apr-2020 13:00**
Client ID: **LH18/24-SP650_042820** Run ID: **UV-2450_360748** SeqNo: **5569418** PrepDate: DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	3.225	0.125	1.25	1.96	101	80 - 120	3.185	1.25	20	

The following samples were analyzed in this batch: HS20041130-01

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ALS Houston, US Date: 13-May-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: HS20041130

QC BATCH REPORT

Batch ID: R361024 (0) **Instrument: WetChem_HS** **Method: AMMONIA AS N BY E350.3(ISE)**

MBLK Sample ID: **MBLK-R361024** Units: **mg/L** Analysis Date: **04-May-2020 11:00**
Client ID: Run ID: **WetChem_HS_361024** SeqNo: **5574048** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	0.10	0.20								U

LCS Sample ID: **LCS-R361024** Units: **mg/L** Analysis Date: **04-May-2020 11:00**
Client ID: Run ID: **WetChem_HS_361024** SeqNo: **5574047** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	10.43	0.20	10	0	104	80 - 120				

MS Sample ID: **HS20041130-01MS** Units: **mg/L** Analysis Date: **04-May-2020 11:00**
Client ID: **LH18/24-SP650_042820** Run ID: **WetChem_HS_361024** SeqNo: **5574050** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	32.74	0.20	10	21.27	115	80 - 120				

MSD Sample ID: **HS20041130-01MSD** Units: **mg/L** Analysis Date: **04-May-2020 11:00**
Client ID: **LH18/24-SP650_042820** Run ID: **WetChem_HS_361024** SeqNo: **5574049** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (As N)	32.83	0.20	10	21.27	116	80 - 120	32.74	0.284	20	

The following samples were analyzed in this batch: HS20041130-01

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ALS Houston, US Date: 13-May-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
WorkOrder: **HS20041130**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

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CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
Dept of Defense	ANAB L2231 V009	22-Dec-2021
Florida	E87611-28	30-Jun-2020
Kansas	E-10352 2019-2020	31-Jul-2020
Louisiana	03087, 2019-2020	30-Jun-2020
Maryland	343, 2019-2020	30-Jun-2020
North Carolina	624-2020	31-Dec-2020
Oklahoma	2019-141	31-Aug-2020
Texas	T104704231-20-26	30-Apr-2021

ALS Houston, US Date: 13-May-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Weekly Samples
Work Order: HS20041130

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20041130-01	LH18/24-SP650_042820	Login	4/29/2020 11:34:36 AM	JRM	WET275
HS20041130-01	LH18/24-SP650_042820	Login	4/29/2020 11:34:36 AM	JRM	WET275
HS20041130-01	LH18/24-SP650_042820	Login	4/29/2020 11:34:36 AM	JRM	Sub
HS20041130-02	LH18/24-SP650_042820_BIX	Login	4/29/2020 11:34:36 AM	JRM	Sub

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ALS Houston, US Date: 13-May-20

Sample Receipt Checklist

Work Order ID: HS20041130 **Date/Time Received:** 29-Apr-2020 09:17

Client Name: Bhate Environmental **Received by:** Asad Chaudhry

Completed By:	/S/ Jared R. Makan	29-Apr-2020 11:35	**Reviewed by:**	/S/ Corey Grandits	29-Apr-2020 15:35
	eSignature	Date/Time		eSignature	Date/Time

Matrices: **Water** Carrier name: **FedEx Priority Overnight**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Samplers name present on COC?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	

Temperature(s)/Thermometer(s):	1.6°C/1.6°C UC/C	IR11
Cooler(s)/Kit(s):	45883	
Date/Time sample(s) sent to storage:	04/29/2020 11:36	

Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stancliff Rd. Suite 210 Houston, TX. 77099 (281) 530-5656 ATTN: R.J Modashia

Project: BHATE
LONGHORN ARMY AMMN. PLANT (LHAAP)
GROUNDWATER TREATMENT PLANT (GWTP)
KARNACK, TEXAS

Project No. NWO1312.0150.0 16.0001

Job: GROUNDWATER TREATMENT PLANT WEEKLY SAMPLES

Prepared By: Scott Beesinger

P.O. Number

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: AMMONIA-N	TOTAL ORGANIC CARBON	ORTHO-PHOSPHATE	PERCHLORATE	Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP650_042820	Water	04/28/20 / 14:00		3	X	X			H2SO4	
LH18/24-SP650_042820	Water	04/28/20 / 14:00		1			X		NONE	
LH18/24–SP650_042820_BIX	Water	04/28/20 / 14:00		1				X	NONE	

Additional Remarks: **Standard TAT on all parameters**

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	04/28/20	14:30	AC	4/29/2020	09:17						

For Lab Use Only

Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition

Remarks:

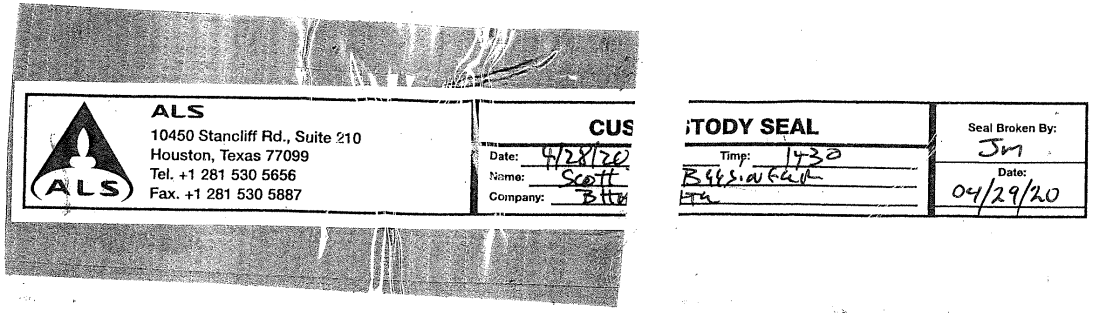
HS20041130

Bhate Environmental Associates, Inc.
Longhorn GW Treatment Plant Weekly Samples

(Word) S:\1-ces\Forms\Chain of Custody - BiWeekly

OIC
1.6
IR#11
CFe.0
45883

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ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

CUS
Date: 4/28/20
Name: Scott
Company: Bttt

TODY SEAL
Time: 1430
Bgg Signature

Seal Broken By:
Jm
Date:
04/29/20

TRK# 0221 1251 0296 2163

RETURNS MON-SAT
PRIORITY OVERNIGHT

FedEx.

TRK# 0221 1251 0296 2163

WED - 29 APR 10:30A
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US
IAH

FID 162785 28APR20 GGGA 568C4/7B3A/05A2

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May 12, 2020 Service Request No:E2000382

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

Laboratory Results for: HS20041130

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory April 29, 2020
For your reference, these analyses have been assigned our service request number **E2000382.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental



Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental

Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2000382
Project:	HS20041130	**Date Received:**	04/29/20
Sample Matrix:	W		

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier IV. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

One sample was received for analysis at ALS Environmental in Houston on 04/29/20.

The sample was received in good condition and is consistent with the accompanying chain of custody form. The sample was stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2000173: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in lieu of a MS/MSD for this extraction batch.

DOD Certification is held for the method/matrix/analytes provided in this report.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

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Client: ALS Environmental - US **Service Request:**E2000382
Project: HS20041130

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2000382-001	LH18/24-SP650_042820_BIX	4/28/2020	1400

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Service Request Summary

Folder #: **E2000382**
Client Name: ALS Environmental - US
Project Name: HS20041130
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 04/29/20
Internal Due Date: 5/12/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20041130
EDD: No EDD Specified

1 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
Location: EHRMS-WIC 7B
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2000382-001	LH18/24-SP650_042820_BIX	Water	04/28/20 1400	**IV**

Print
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Service Request Summary

Folder #:	**E2000382**
Client Name:	ALS Environmental - US
Project Name:	HS20041130
Project Number:	

Report To:	RJ Modashia ALS Laboratory Group 10450 Stancliff Road Houston, TX 77099-4338 USA
Phone Number:	281-530-5656
Cell Number:	
Fax Number:	281-530-5887
E-mail:	rj.modashia@alsglobal.com

Project Chemist:	Corey Grandits
Originating Lab:	HOUSTON
Logged By:	CGRANDITS
Date Received:	04/29/20
Internal Due Date:	5/12/2020
QAP:	LAB QAP
Qualifier Set:	Lab Standard
Formset:	Lab Standard
Merged?:	Y
Report to MDL?:	Y
P.O. Number:	HS20041130
EDD:	No EDD Specified

1 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved

Location: EHRMS-WIC 7B

Pressure Gas:

Print
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Data Qualifiers

Lab Standard

+	Possible Tedlar bag artifact.
A	TIC is a suspected aldol-condensation product
B	Analyte found in the associated method blank as well as in the sample.
BC	Reported results are not blank corrected.
BH	The back section of the tube yielded higher results than the front.
BT	Results indicated possible breakthrough; back section >=10% front section.
C	Result identification confirmed.
D	Compound identified in an analysis at a secondary dilution factor
D	Spike was diluted out
DE	Reported results are corrected for desorption efficiency.
E	Estimated value. Concentration above calibration range
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
H1	Sample analysis performed past holding time. See case narrative.
H2	Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
H3	Sample was received and analyzed past holding time.
H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
I	Internal standard not within the specified limits. See case narrative.
J	Estimated Value. Concentration found below MRL.
K	A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
K	Analyte was detected above the method reporting limit prior to normalization.
L1	Laboratory control sample recovery outside the specified limits; results may be biased high.
L2	Laboratory control sample recovery outside the specified limits; results may be biased low.
L3	Laboratory control sample recovery outside the specified limits.
M	Matrix interference; results may be biased high.
M	The duplicate injection precision not met.
M1	Matrix interference due to coelution with a non-target compound; results may be biased high.
N	Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
P	Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
P	Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
Q	Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
R	Duplicate Precision not met.
R1	Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
S	Surrogate recovery not within specified limits.

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Data Qualifiers

Lab Standard

S	The reported value was determined by the Method of Standard Additions (MSA).
T	Analyte is a tentatively identified compound, result is estimated.
U	Compound was analyzed for, but was not detected (ND).
V1	The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
V2	The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
W	Result quantified, but the corresponding peak was detected outside the generated retention time window.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
X	See case narrative.
Y	Recovery outside limits
Y	The chromatogram resembles a petroleum product but does not match the calibration standard.
Z	The chromatogram does not resemble a petroleum product.
i	The MRL/MDL has been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

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10450 Stancliff Rd, Houston, TX 77099 | 281-530-5656 | www.alsglobal.com

ALS Environmental

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
Arizona Department of Health Services	AZ0793	5/27/2020
Arkansas Department of Environmental Quality	20-030-0	3/26/2021
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611	6/30/2020
Hawaii Department of Health	2020	4/30/2021
Kansas Department of Health and Environment	E-10352	7/31/2020
Louisiana Department of Environmental Quality	03087	6/30/2020
Louisiana Department of Health and Hospitals	LA028-2020	12/31/2020
Maine Center for Disease Control and Prevention	201815	6/5/2020
Maryland Department of the Environment	343	6/30/2020
Minnesota Department of Health	1785988	12/31/2020
Nevada Department of Concervation and Natural Resources	TX026932019-1	7/31/2020
New Hampshire Environmental Laboratory Accreditation Program	209420	4/24/2021
New Jersey Department of Environmental Protection	NLC190001	6/30/2020
New York Department of Health	11707	3/31/2021
Oklahoma Department of Environmental Quality	2019-067	8/31/2020
Pennsylvania Department of Environmental Protection	68-03441-013	6/30/2020
Tennessee Department of Environment and Concervation	04016-2020	4/30/2021
Texas Commision on Environmental Quality	T104704231-20-26	4/30/2021
United States Department of Agriculture	P330-19-00299	10/10/2022
Utah Department of Health Environmental Laboratory Certification	TX026932019-9	7/31/2020
Washington Department of Health	C819	11/14/2020
West Virginia Department of Environmental Protection	347	6/30/2020

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Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

10450 Stancliff Rd, Ste 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

E2000382 **5**
ALS Laboratory Group
HS20041130

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **13818**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	Jumoke M. Lawal
Email:	jumoke.lawal@alsglobal.com

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20041130
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20041130-02**	**LH18/24-SP650_042820_BIX**	**Water**	**28 Apr 2020 14:00**
	SUB_Perch-6850			07 May 2020

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: J. Mallard Date/Time: 4/29/20 14:54

Received By: Date/Time: 4/29/20 14:54

Cooler ID(s): Temperature(s):

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Cooler Receipt Form

ALS Environmental

Project Chemist CH

Client/Project ALS-H

Thermometer ID 9211

Date/Time Received: 4/29/20 Initials: CH

Date/Time Logged in: 4/29/20 Initials CH

1. Method of delivery: ○ US Mail ○ Fed Ex ○ UPS ○ DHL ✓ ALS Courier ○ Client

2. Samples received in: ✓ Cooler ○ Box ○ Envelope ○ Other

3. Were custody seals on coolers? ○ Yes ✓ No
   Were they intact? ○ Yes ○ No ✓ N/A
   Were they signed and dated? ○ Yes ○ No ✓ N/A
   If yes, how many and where?

4. Packing Material: ○ Inserts ✓ Baggies ✓ Bubble Wrap ○ Gel Packs ✓ Wet Ice ○ Sleeves ○ Other

5. Foreign or Regulated Soil? ○ Yes ○ No Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
—		4/29/20	1455	CH	1.0	☑
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No
7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ✓ Yes ○ No
8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No
9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No
10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label: E2000382 5
ALS Laboratory Group
HS20041130

10450 Stancliff Rd., Suite 210
Houston, TX 77099
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www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6ºC.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10ºC.
- ✓ Air samples are shipped and stored cold, at 0 to 6ºC
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

Preparation Information Benchsheets

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 358306 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/KBROWN **Prep Method:** Method **Prep Date/Time:** 5/12/20 09:34

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2000382-001	LH18/24-SP650_042820_BIX	.01	6850/ClO4 DOD			Water	10mL	
2	E2000404-001	04WW02-200504	.01	6850/ClO4 DOD			Ground Water	10mL	
3	E2000404-002	04WW06-200504	.01	6850/ClO4 DOD			Ground Water	10mL	
4	E2000404-003	LHSMW02-200504	.01	6850/ClO4 DOD			Ground Water	10mL	
5	E2000404-004	LHSMW02-200504-FD	.01	6850/ClO4 DOD			Ground Water	10mL	
6	E2000404-005	04WW11-200504	.01	6850/ClO4 DOD			Ground Water	10mL	
7	E2000404-006	04WW04-200504	.01	6850/ClO4 DOD			Ground Water	10mL	
8	E2000405-001	04WW05-200505	.01	6850/ClO4 DOD			Ground Water	10mL	
9	E2000405-002	04WW09-200505	.01	6850/ClO4 DOD			Ground Water	10mL	
10	E2000405-003	04WW10-200505	.01	6850/ClO4 DOD			Ground Water	10mL	
11	E2000405-004	04WW10-200505-FD	.01	6850/ClO4 DOD			Ground Water	10mL	
12	E2000405-005	04WW07-200505	.01	6850/ClO4 DOD			Ground Water	10mL	
13	E2000406-001	04WW08-200504	.01	6850/ClO4 DOD			Ground Water	10mL	
14	E2000406-002	LHSMW01-200504	.01	6850/ClO4 DOD			Ground Water	10mL	
15	E2000406-003	04WW01-200504	.01	6850/ClO4 DOD			Ground Water	10mL	
16	E2000407-001	LH18/24-SP650_050520_BIX	.01	6850/ClO4 DOD			Water	10mL	
17	E2000408-001	LH18/24-SP140_050520	.01	6850/ClO4 DOD			Water	10mL	
18	E2000409-001	LH18/24-SP650_050520_BIX	.01	6850/ClO4 DOD			Water	10mL	
19	EQ2000173-01	MB		6850/ClO4 DOD			Liquid	10mL	
20	EQ2000173-02	LCS		6850/ClO4 DOD			Liquid	10mL	
21	EQ2000173-03	DLCS		6850/ClO4 DOD			Liquid	10mL	
22	EQ2000173-04	04WW06-200504 MS	.01	6850/ClO4 DOD			Liquid	10mL	
23	EQ2000173-05	04WW06-200504 DMS	.01	6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 202037 Logbook Ref: Sodium Perchlorate Expires On: 05/22/2021

E2000382-001	100.00µL	E2000404-001	100.00µL	E2000404-002	100.00µL	E2000404-003	100.00µL	E2000404-004	100.00µL	E2000404-005	100.00µL
E2000404-006	100.00µL	E2000405-001	100.00µL	E2000405-002	100.00µL	E2000405-003	100.00µL	E2000405-004	100.00µL	E2000405-005	100.00µL
E2000406-001	100.00µL	E2000406-002	100.00µL	E2000406-003	100.00µL	E2000407-001	100.00µL	E2000408-001	100.00µL	E2000409-001	100.00µL
EQ2000173-01	100.00µL	EQ2000173-02	100.00µL	EQ2000173-03	100.00µL	EQ2000173-04	100.00µL	EQ2000173-05	100.00µL		

Name: Perchlorate Intermediate Stock1 Inventory ID 204799 Logbook Ref: 200657 1.0ug/mL KN Expires On: 05/15/2020

EQ2000173-02	1.00µL	EQ2000173-03	1.00µL	EQ2000173-04	1.00µL	EQ2000173-05	1.00µL

RIGHT SOLUTIONS | RIGHT PARTNER

Preparation Information Benchsheet

Prep Run#: 358306 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/KBROWN **Prep Method:** Method **Prep Date/Time:** 5/12/20 09:34

Preparation Steps

Step: Preparation
Started: 5/12/20 09:34
Finished: 5/12/20 12:00
By: KBROWN
Comments

Comments: _____

Reviewed By: GR Date: 5/12/2020

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

RIGHT SOLUTIONS | RIGHT PARTNER

Preparation Information Benchsheet

Prep Run#: 358306 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/KBROWN **Prep Method:** Method **Prep Date/Time:** 5/12/20 09:34

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2000382-001	LH18/24-SP650_042820_BIX	.01	6850/ClO4 DOD			Water	10mL	
2	E2000404-001	04WW02-200504	.01	6850/ClO4 DOD			Ground Water	10mL	
3	E2000404-002	04WW06-200504	.01	6850/ClO4 DOD			Ground Water	10mL	
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5	E2000404-004	LHSMW02-200504-FD	.01	6850/ClO4 DOD			Ground Water	10mL	
6	E2000404-005	04WW11-200504	.01	6850/ClO4 DOD			Ground Water	10mL	
7	E2000404-006	04WW04-200504	.01	6850/ClO4 DOD			Ground Water	10mL	
8	E2000405-001	04WW05-200505	.01	6850/ClO4 DOD			Ground Water	10mL	
9	E2000405-002	04WW09-200505	.01	6850/ClO4 DOD			Ground Water	10mL	
10	E2000405-003	04WW10-200505	.01	6850/ClO4 DOD			Ground Water	10mL	
11	E2000405-004	04WW10-200505-FD	.01	6850/ClO4 DOD			Ground Water	10mL	
12	E2000405-005	04WW07-200505	.01	6850/ClO4 DOD			Ground Water	10mL	
13	E2000406-001	04WW08-200504	.01	6850/ClO4 DOD			Ground Water	10mL	
14	E2000406-002	LHSMW01-200504	.01	6850/ClO4 DOD			Ground Water	10mL	
15	E2000406-003	04WW01-200504	.01	6850/ClO4 DOD			Ground Water	10mL	
16	E2000407-001	LH18/24-SP650_050520_BIX	.01	6850/ClO4 DOD			Water	10mL	
17	E2000408-001	LH18/24-SP140_050520	.01	6850/ClO4 DOD			Water	10mL	
18	E2000409-001	LH18/24-SP650_050520_BIX	.01	6850/ClO4 DOD			Water	10mL	
19	EQ2000173-01	MB		6850/ClO4 DOD			Liquid	10mL	
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23	EQ2000173-05	04WW06-200504 DMS	.01	6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 202037 Logbook Ref: Sodium Perchlorate Expires On: 05/22/2021

E2000382-001	100.00µL	E2000404-001	100.00µL	E2000404-002	100.00µL	E2000404-003	100.00µL	E2000404-004	100.00µL	E2000404-005	100.00µL
E2000404-006	100.00µL	E2000405-001	100.00µL	E2000405-002	100.00µL	E2000405-003	100.00µL	E2000405-004	100.00µL	E2000405-005	100.00µL
E2000406-001	100.00µL	E2000406-002	100.00µL	E2000406-003	100.00µL	E2000407-001	100.00µL	E2000408-001	100.00µL	E2000409-001	100.00µL
EQ2000173-01	100.00µL	EQ2000173-02	100.00µL	EQ2000173-03	100.00µL	EQ2000173-04	100.00µL	EQ2000173-05	100.00µL		

Name: Perchlorate Intermediate Stock1 Inventory ID 204799 Logbook Ref: 200657 1.0ug/mL KN Expires On: 05/15/2020

EQ2000173-02	1.00µL	EQ2000173-03	1.00µL	EQ2000173-04	1.00µL	EQ2000173-05	1.00µL

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Preparation Information Benchsheet

Prep Run#: 358306
Team: Semivoa GCMS/KBROWN

Prep WorkFlow: GenExt28Day
Prep Method: Method

Status: Prepped
Prep Date/Time: 5/12/20 09:34

Preparation Steps

Step: Preparation
Started: 5/12/20 09:34
Finished: 5/12/20 12:00
By: KBROWN
Comments

Comments: _____

Reviewed By: GR Date: 5/12/2020

Chain of Custody

Relinquished By: _____ Date: _____

Received By: _____ Date: _____

Extracts Examined
Yes No

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Analytical Results

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000382
Project:	HS20041130	**Date Collected:**	4/28/20 1400
Sample Matrix:	Water	**Date Received:**	4/29/20
Sample Name:	LH18/24-SP650_042820_BIX	**Units:**	µg/L
Lab Code:	E2000382-001	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	5/12/20	5/12/20 13:37	358306	679868	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000382
Project:	HS20041130	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2000173-01	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	5/12/20	5/12/20 12:50	358306	679868	

Accuracy & Precision

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20041130
Sample Matrix: Water

Service Request: E2000382
Date Analyzed: 5/12/20

Lab Control Sample Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Units: µg/L
Basis: NA

Extraction Lot: 358306

	Lab Control Sample EQ2000173-02			Duplicate Lab Control Sample EQ2000173-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.105	0.100	105	0.107	0.100	107	84 - 119	2	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Waiprev
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ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000382
Project:	HS20041130	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000173-02	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.105**		0.100	0.0500	0.0250	1	5/12/20	5/12/20 12:58	358306	679868	

Valpreo
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ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000382
Project:	HS20041130	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000173-03	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.107**		0.100	0.0500	0.0250	1	5/12/20	5/12/20 13:06	358306	679868	

Valpreo
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May 07, 2020

Analytical Report for Service Request No: K2003509

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

RE: HS20041130

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory May 01, 2020
For your reference, these analyses have been assigned our service request number **K2003509.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3350. You may also contact me via email at Kelley.Lovejoy@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

for Kelley Lovejoy
Project Manager

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Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

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Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

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ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water-	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Case Narrative

ALS Environmental—Kelso Laboratory
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Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

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ALS Environmental

Client: ALS Environmental - US
Project: HS20041130
Sample Matrix: Water

Service Request: K2003509
Date Received: 05/01/2020

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level IV requested by the client.

Sample Receipt:

One water sample was received for analysis at ALS Environmental on 05/01/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The sample was stored at minimum in accordance with the analytical method requirements.

General Chemistry:

No significant anomalies were noted with this analysis.

Approved by Noe D. Dan Date 05/07/2020

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Chain of Custody

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K2003509

10450 Stancliff Rd, Ste 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **13817**

SUBCONTRACT TO:

ALS Environmental Kelso
1317 S. 13th Avenue
Kelso, WA 98626

Phone: +1 360 501 3312

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	Jumoke M. Lawal
Email:	jumoke.lawal@alsglobal.com

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20041130
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20041130-01**	**LH18/24-SP650_042820**	**Water**	**28 Apr 2020 14:00**
	TOC Analysis for DOD Level IV			07 May 2020

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: _____ Date/Time: 4/30/2020 1800

Received By: _____ Date/Time: 5/1/2020 0915

Cooler ID(s): _____ Temperature(s): _____

PC KL

Cooler Receipt and Preservation Form

Client ALS Houston Service Request K20 03509

Received: 5/1/2020 Opened: 5/1/2020 By: CG Unloaded: 5/1/2020 By: CG

1. Samples were received via? USPS (Fed Ex) UPS DHL PDX Courier Hand Delivered
2. Samples were received in: (circle) (Cooler) Box Envelope Other _____ NA
3. Were custody seals on coolers? NA (Y) N If yes, how many and where? 2 Front
   If present, were custody seals intact? (Y) N If present, were they signed and dated? (Y) N

Temp Blank	Sample 1	Sample 2	Sample 3	Sample 4	IR GUN	Cooler / COC ID NA	Tracking Number NA	Filed
0.5					3980H80W/S	13817	1251 0296 7290	

4. Packing material: Inserts (Baggies) (Bubble Wrap) Gel Packs (Wet Ice) Dry Ice Sleeves _____
5. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
6. Were samples received in good condition (temperature, unbroken)? *Indicate in the table below.* NA (Y) N
   If applicable, tissue samples were received: *Frozen Partially Thawed Thawed*
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA (Y) N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA (Y) N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA (Y) N
11. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
12. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: _____

RUSH

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General Chemistry

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	K2003509
Project:	HS20041130	**Date Collected:**	04/28/20
Sample Matrix:	Water	**Date Received:**	05/1/20
Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA

Carbon, Total Organic

Sample Name	Lab Code	Result	LOQ	LOD	MDL	Dil.	Date Analyzed	Q
LH18/24-SP650_042820	K2003509-001	**2.18**	0.50	0.20	0.07	1	05/03/20 20:23	
Method Blank	K2003509-MB	ND U	0.50	0.20	0.07	1	05/03/20 14:13	

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ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project HS20041130
Sample Matrix: Water

Service Request: K2003509
Date Collected: 04/28/20
Date Received: 05/01/20
Date Analyzed: 05/03/20

Replicate Sample Summary
General Chemistry Parameters

Sample Name: LH18/24-SP650_042820
Lab Code: K2003509-001

Units: mg/L
Basis: NA

Analyte Name	Analysis Method	LOQ	LOD	MDL	Sample Result	Duplicate Sample K2003509-001DUP Result	Average	RPD	RPD Limit
Carbon, Total Organic	SM 5310 C	0.50	0.20	0.07	2.18	2.08	2.13	5	10

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K2003509
Project:	HS20041130	**Date Analyzed:**	05/03/20
Sample Matrix:	Water	**Date Extracted:**	NA

Lab Control Sample Summary
Carbon, Total Organic

Analysis Method:	SM 5310 C	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA
		Analysis Lot:	678685

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2003509-LCS	22.9	25.0	91	83-117

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ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US **Service Request:** K2003509
Project: HS20041130

Continuing Calibration Verification (CCV) Summary

Carbon, Total Organic

Analysis Method: SM 5310 C **Units:** mg/L

	Analysis Lot	Lab Code	Date Analyzed	True Value	Measured Value	Percent Recovery	Acceptance Limits
CCV1	678685	KQ2005873-01	05/03/20 07:37	25.0	25.5	102	90-110
CCV2	678685	KQ2005873-02	05/03/20 13:43	25.0	25.3	101	90-110
CCV3	678685	KQ2005873-03	05/03/20 18:27	25.0	25.4	102	90-110
CCV4	678685	KQ2005873-22	05/03/20 21:47	25.0	25.2	101	90-110

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ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US **Service Request:**K2003509
Project: HS20041130

Continuing Calibration Blank (CCB) Summary
Carbon, Total Organic

Analysis Method: SM 5310 C **Units:**mg/L

	Analysis Lot	Lab Code	Date Analyzed	LOQ	LOD	MDL	Result	Q
CCB1	678685	KQ2005873-04	05/03/20 07:52	0.50	0.20	0.07	ND	U
CCB2	678685	KQ2005873-05	05/03/20 13:58	0.50	0.20	0.07	ND	U
CCB3	678685	KQ2005873-06	05/03/20 18:42	0.50	0.20	0.07	ND	U
CCB4	678685	KQ2005873-23	05/03/20 22:02	0.50	0.20	0.07	ND	U

Raw Data

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Work Request # Original ( ) K2003404, 5872, 3417, 3418, 3475, 3486, 3509, 3513, 3542 (BW 5/6/20)

Tier: IV IV I II IC IC IV I II

Date Analyzed: 5/2/20

Analyst: BW

Analysis: TOC/DOC

Run # TOC: 678684, 678685; DOC: 678686

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?	yes/no/NA
2.	Holding times met for all analyses and for all samples?	yes/no/NA
3.	Are calculations correct?	yes/no/NA
4.	Is the reporting basis correct? (Dry Weight)	yes/no/NA
5.	All quality control criteria met?	yes/no
6.	Is the calibration curve correlation coefficient ≥ 0.995?	yes/no/NA
7.	MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	yes/no/NA
8.	Are ICVs, CCVs, and CCBs all within acceptance limits?	yes/no/NA
9.	Are results for methods blanks all ND?	yes/no/NA
10.	Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	yes/no/NA
11.	Are all exceptions explained?	yes/no/NA
12.	Have all applicable service requests been reviewed?	yes/no/NA
13.	Are all samples labeled correctly?	yes/no/NA
14.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample, Form V)	yes/no/NA
15.	Are detection limits and units reported correctly?	yes/no/NA
16.	Is the unused space on the benchsheet crossed out?	yes/no/NA
17.	Was analysis turned in by the due date? (n-2) (If not record SR#)	yes/no/NA

COMMENTS:

Final Approved by: [signature] Date: 5/6/20

DQREPORT

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Analytical Results Summary

Instrument Name: K-TOC-03 **Analyst:** BDITZLER **Analysis Lot:** 678684 **Method/Testcode:** 9060A/TOC T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	T
K2003404-001	Carbon, Total Organic (TOC)	N/A		Storm Water	5.66 mg/L	10 mL	5.66 mg/L	1		0.50			5/3/20 01:49:00	N	
K2003404-002	Carbon, Total Organic (TOC)	N/A		Storm Water	3.40 mg/L	10 mL	3.40 mg/L	1		0.50			5/3/20 02:44:00	N	
K2003404-003	Carbon, Total Organic (TOC)	N/A		Storm Water	3.27 mg/L	10 mL	3.27 mg/L	1		0.50			5/3/20 04:50:00	N	
K2003404-004	Carbon, Total Organic (TOC)	N/A		Storm Water	3.29 mg/L	10 mL	3.29 mg/L	1		0.50			5/3/20 05:46:00	N	
K2003404-005	Carbon, Total Organic (TOC)	N/A		Storm Water	5.04 mg/L	10 mL	5.04 mg/L	1		0.50			5/3/20 06:41:00	N	
K2003404-006	Carbon, Total Organic (TOC)	N/A		Storm Water	5.53 mg/L	10 mL	5.53 mg/L	1		0.50			5/3/20 08:06:00	N	
K2003404-007	Carbon, Total Organic (TOC)	N/A		Storm Water	14.45 mg/L	10 mL	14.5 mg/L	1		0.50			5/3/20 09:02:00	N	
K2003404-008	Carbon, Total Organic (TOC)	N/A		Storm Water	10.25 mg/L	10 mL	10.2 mg/L	1		0.50			5/3/20 09:58:00	N	
KQ2005872-01	Carbon, Total Organic (TOC)	CCV		Storm Water	25.58 mg/L	10 mL	25.6 mg/L	1					5/2/20 23:13:00	N	
KQ2005872-02	Carbon, Total Organic (TOC)	CCV		Storm Water	25.55 mg/L	10 mL	25.5 mg/L	1					5/3/20 07:37:00	N	
KQ2005872-03	Carbon, Total Organic (TOC)	CCV		Storm Water	25.27 mg/L	10 mL	25.3 mg/L	1					5/3/20 13:43:00	N	
KQ2005872-04	Carbon, Total Organic (TOC)	CCB		Storm Water	0.00 mg/L	10 mL	0.50 mg/L U	1		0.50			5/2/20 23:28:00	N	
KQ2005872-05	Carbon, Total Organic (TOC)	CCB		Storm Water	0.00 mg/L	10 mL	0.50 mg/L U	1		0.50			5/3/20 07:52:00	N	
KQ2005872-06	Carbon, Total Organic (TOC)	CCB		Storm Water	0.00 mg/L	10 mL	0.50 mg/L U	1		0.50			5/3/20 13:58:00	N	
KQ2005872-07	Carbon, Total Organic (TOC)	MB		Storm Water	0.00 mg/L	10 mL	0.50 mg/L U	1		0.50			5/2/20 23:42:00	N	
KQ2005872-08	Carbon, Total Organic (TOC)	LCS		Storm Water	23.26 mg/L	10 mL	23.3 mg/L	1		0.50	93		5/3/20 00:38:00	N	
KQ2005872-09	Carbon, Total Organic (TOC)	MB		Storm Water	0.00 mg/L	10 mL	0.50 mg/L U	1		0.50			5/2/20 23:42:00	N	
KQ2005872-10	Carbon, Total Organic (TOC)	MB		Storm Water	0.00 mg/L	10 mL	0.50 mg/L U	1		0.50			5/2/20 23:42:00	N	
KQ2005872-11	Carbon, Total Organic (TOC)	MB		Storm Water	0.00 mg/L	10 mL	0.50 mg/L U	1		0.50			5/2/20 23:42:00	N	
KQ2005872-12	Carbon, Total Organic (TOC)	LCS		Storm Water	23.16 mg/L	10 mL	23.2 mg/L	1		0.50	93		5/3/20 00:38:00	N	
KQ2005872-13	Carbon, Total Organic (TOC)	LCS		Storm Water	23.49 mg/L	10 mL	23.5 mg/L	1		0.50	94		5/3/20 00:38:00	N	

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

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Analytical Results Summary

Instrument Name: K-TOC-03 **Analyst:** BDITZLER **Analysis Lot:** 678684 **Method/Testcode:** 9060A/TOC T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	T
KQ2005872-14	Carbon, Total Organic (TOC)	LCS		Storm Water	23.37 mg/L	10 mL	23.4 mg/L	1		0.50	93		5/3/20 00:38:00	N	
KQ2005872-15	Carbon, Total Organic (TOC)	MS	K2003404-002	Storm Water	25.86 mg/L	10 mL	103 mg/L	4		2.0	100		5/3/20 03:40:00	N	
KQ2005872-16	Carbon, Total Organic (TOC)	MS	K2003404-002	Storm Water	25.85 mg/L	10 mL	103 mg/L	4		2.0	100		5/3/20 03:40:00	N	
KQ2005872-17	Carbon, Total Organic (TOC)	MS	K2003404-002	Storm Water	26.09 mg/L	10 mL	104 mg/L	4		2.0	101		5/3/20 03:40:00	N	
KQ2005872-18	Carbon, Total Organic (TOC)	MS	K2003404-002	Storm Water	25.92 mg/L	10 mL	104 mg/L	4		2.0	100		5/3/20 03:40:00	N	
KQ2005872-19	Carbon, Total Organic (TOC)	DUP	K2003404-001	Storm Water	5.98 mg/L	10 mL	5.98 mg/L	1		0.50		5	5/3/20 01:49:00	N	
KQ2005872-20	Carbon, Total Organic (TOC)	TRP	K2003404-001	Storm Water	6.03 mg/L	10 mL	6.03 mg/L	1		0.50		3	5/3/20 01:49:00	N	
KQ2005872-21	Carbon, Total Organic (TOC)	QUAD	K2003404-001	Storm Water	6.04 mg/L	10 mL	6.04 mg/L	1		0.50		3	5/3/20 01:49:00	N	
KQ2005872-22	Carbon, Total Organic (TOC)	DUP	K2003404-002	Storm Water	3.37 mg/L	10 mL	3.37 mg/L	1		0.50		<1	5/3/20 02:44:00	N	
KQ2005872-23	Carbon, Total Organic (TOC)	TRP	K2003404-002	Storm Water	3.38 mg/L	10 mL	3.38 mg/L	1		0.50		<1	5/3/20 02:44:00	N	
KQ2005872-24	Carbon, Total Organic (TOC)	QUAD	K2003404-002	Storm Water	3.36 mg/L	10 mL	3.36 mg/L	1		0.50		<1	5/3/20 02:44:00	N	
KQ2005872-25	Carbon, Total Organic (TOC)	DUP	K2003404-003	Storm Water	3.27 mg/L	10 mL	3.27 mg/L	1		0.50		<1	5/3/20 04:50:00	N	
KQ2005872-26	Carbon, Total Organic (TOC)	TRP	K2003404-003	Storm Water	3.37 mg/L	10 mL	3.37 mg/L	1		0.50		2	5/3/20 04:50:00	N	
KQ2005872-27	Carbon, Total Organic (TOC)	QUAD	K2003404-003	Storm Water	3.36 mg/L	10 mL	3.36 mg/L	1		0.50		2	5/3/20 04:50:00	N	
KQ2005872-28	Carbon, Total Organic (TOC)	DUP	K2003404-004	Storm Water	3.22 mg/L	10 mL	3.22 mg/L	1		0.50		2	5/3/20 05:46:00	N	
KQ2005872-29	Carbon, Total Organic (TOC)	TRP	K2003404-004	Storm Water	3.18 mg/L	10 mL	3.18 mg/L	1		0.50		2	5/3/20 05:46:00	N	
KQ2005872-30	Carbon, Total Organic (TOC)	QUAD	K2003404-004	Storm Water	3.18 mg/L	10 mL	3.18 mg/L	1		0.50		2	5/3/20 05:46:00	N	
KQ2005872-31	Carbon, Total Organic (TOC)	DUP	K2003404-005	Storm Water	5.00 mg/L	10 mL	5.00 mg/L	1		0.50		<1	5/3/20 06:41:00	N	
KQ2005872-32	Carbon, Total Organic (TOC)	TRP	K2003404-005	Storm Water	5.03 mg/L	10 mL	5.03 mg/L	1		0.50		<1	5/3/20 06:41:00	N	
KQ2005872-33	Carbon, Total Organic (TOC)	QUAD	K2003404-005	Storm Water	5.02 mg/L	10 mL	5.02 mg/L	1		0.50		<1	5/3/20 06:41:00	N	
KQ2005872-34	Carbon, Total Organic (TOC)	DUP	K2003404-006	Storm Water	5.53 mg/L	10 mL	5.53 mg/L	1		0.50		<1	5/3/20 08:06:00	N	

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

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Analytical Results Summary

Instrument Name: K-TOC-03 **Analyst:** BDITZLER **Analysis Lot:** 678684 **Method/Testcode:** 9060A/TOC T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	T
KQ2005872-35	Carbon, Total Organic (TOC)	TRP	K2003404-006	Storm Water	5.60 mg/L	10 mL	5.60 mg/L	1		0.50		<1	5/3/20 08:06:00	N	
KQ2005872-36	Carbon, Total Organic (TOC)	QUAD	K2003404-006	Storm Water	5.58 mg/L	10 mL	5.58 mg/L	1		0.50		<1	5/3/20 08:06:00	N	
KQ2005872-37	Carbon, Total Organic (TOC)	DUP	K2003404-007	Storm Water	14.48 mg/L	10 mL	14.5 mg/L	1		0.50		<1	5/3/20 09:02:00	N	
KQ2005872-38	Carbon, Total Organic (TOC)	TRP	K2003404-007	Storm Water	14.70 mg/L	10 mL	14.7 mg/L	1		0.50		<1	5/3/20 09:02:00	N	
KQ2005872-39	Carbon, Total Organic (TOC)	QUAD	K2003404-007	Storm Water	14.47 mg/L	10 mL	14.5 mg/L	1		0.50		<1	5/3/20 09:02:00	N	
KQ2005872-40	Carbon, Total Organic (TOC)	DUP	K2003404-008	Storm Water	10.29 mg/L	10 mL	10.3 mg/L	1		0.50		<1	5/3/20 09:58:00	N	
KQ2005872-41	Carbon, Total Organic (TOC)	TRP	K2003404-008	Storm Water	10.39 mg/L	10 mL	10.4 mg/L	1		0.50		<1	5/3/20 09:58:00	N	
KQ2005872-42	Carbon, Total Organic (TOC)	QUAD	K2003404-008	Storm Water	10.45 mg/L	10 mL	10.4 mg/L	1		0.50		<1	5/3/20 09:58:00	N	

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# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-TOC-03 **Analyst:** BDITZLER **Analysis Lot:** 678685 **Method/Testcode:** SM 5310 C/TOC T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?
K2003417-001	Carbon, Total Organic	N/A		Water	3.58 mg/L	10 mL	3.58 mg/L	1	0.07	0.50			5/3/20 11:51:00	N
K2003417-002	Carbon, Total Organic	N/A		Water	2.17 mg/L	10 mL	2.17 mg/L	1	0.07	0.50			5/3/20 12:19:00	N
K2003417-003	Carbon, Total Organic	N/A		Water	2.13 mg/L	10 mL	2.13 mg/L	1	0.07	0.50			5/3/20 12:47:00	N
K2003417-004	Carbon, Total Organic	N/A		Water	2.11 mg/L	10 mL	2.11 mg/L	1	0.07	0.50			5/3/20 13:15:00	N
K2003417-005	Carbon, Total Organic	N/A		Water	1.99 mg/L	10 mL	1.99 mg/L	1	0.07	0.50			5/3/20 14:42:00	N
K2003418-001	Carbon, Total Organic	N/A		Water	3.73 mg/L	10 mL	3.73 mg/L	1	0.07	0.50			5/3/20 15:10:00	N
K2003418-003	Carbon, Total Organic	N/A		Water	2.68 mg/L	10 mL	2.68 mg/L	1	0.07	0.50			5/3/20 15:38:00	N
K2003475-001	Carbon, Total Organic	N/A		Water	3.01 mg/L	10 mL	3.01 mg/L	1	0.07	0.50			5/3/20 10:54:00	N
K2003486-001	Carbon, Total Organic	N/A		Water	0.54 mg/L	10 mL	0.54 mg/L	1	0.07	0.50			5/3/20 16:06:00	N
K2003486-002	Carbon, Total Organic	N/A		Water	0.91 mg/L	10 mL	0.91 mg/L	1	0.07	0.50			5/3/20 16:34:00	N
K2003486-003	Carbon, Total Organic	N/A		Water	0.79 mg/L	10 mL	0.79 mg/L	1	0.07	0.50			5/3/20 17:03:00	N
K2003486-004	Carbon, Total Organic	N/A		Water	0.86 mg/L	10 mL	0.86 mg/L	1	0.07	0.50			5/3/20 17:31:00	N
K2003509-001	Carbon, Total Organic	N/A		Water	2.18 mg/L	10 mL	2.18 mg/L	1	0.07	0.50			5/3/20 20:23:00	N
K2003513-001	Carbon, Total Organic	N/A		Water	3.24 mg/L	10 mL	65 mg/L	20	2	10			5/3/20 21:19:00	N
K2003542-001	Carbon, Total Organic	N/A		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			5/3/20 20:51:00	N
KQ2005873-01	Carbon, Total Organic	CCV		Water	25.55 mg/L	10 mL	25.5 mg/L	1					5/3/20 07:37:00	N
KQ2005873-02	Carbon, Total Organic	CCV		Water	25.27 mg/L	10 mL	25.3 mg/L	1					5/3/20 13:43:00	N
KQ2005873-03	Carbon, Total Organic	CCV		Water	25.39 mg/L	10 mL	25.4 mg/L	1					5/3/20 18:27:00	N
KQ2005873-04	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			5/3/20 07:52:00	N
KQ2005873-05	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			5/3/20 13:58:00	N
KQ2005873-06	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			5/3/20 18:42:00	N
KQ2005873-07	Carbon, Total Organic	MB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			5/3/20 14:13:00	N
KQ2005873-08	Carbon, Total Organic	LCS		Water	22.85 mg/L	10 mL	22.9 mg/L	1	0.07	0.50	91		5/3/20 14:27:00	N
KQ2005873-09	Carbon, Total Organic	MS	K2003475-001	Water	28.57 mg/L	10 mL	28.6 mg/L	1	0.07	0.50	102		5/3/20 11:22:00	N
KQ2005873-10	Carbon, Total Organic	DUP	K2003417-001	Water	3.50 mg/L	10 mL	3.50 mg/L	1	0.07	0.50		2	5/3/20 11:51:00	N
KQ2005873-11	Carbon, Total Organic	DUP	K2003417-002	Water	2.13 mg/L	10 mL	2.13 mg/L	1	0.07	0.50		2	5/3/20 12:19:00	N
KQ2005873-12	Carbon, Total Organic	DUP	K2003417-003	Water	2.14 mg/L	10 mL	2.14 mg/L	1	0.07	0.50		<1	5/3/20 12:47:00	N
KQ2005873-13	Carbon, Total Organic	DUP	K2003417-004	Water	2.06 mg/L	10 mL	2.06 mg/L	1	0.07	0.50		3	5/3/20 13:15:00	N
KQ2005873-14	Carbon, Total Organic	DUP	K2003417-005	Water	1.88 mg/L	10 mL	1.88 mg/L	1	0.07	0.50		6	5/3/20 14:42:00	N
KQ2005873-15	Carbon, Total Organic	DUP	K2003418-001	Water	3.77 mg/L	10 mL	3.77 mg/L	1	0.07	0.50		1	5/3/20 15:10:00	N
KQ2005873-16	Carbon, Total Organic	DUP	K2003418-003	Water	2.68 mg/L	10 mL	2.68 mg/L	1	0.07	0.50		<1	5/3/20 15:38:00	N
KQ2005873-17	Carbon, Total Organic	DUP	K2003475-001	Water	2.80 mg/L	10 mL	2.80 mg/L	1	0.07	0.50		7	5/3/20 10:54:00	N
KQ2005873-18	Carbon, Total Organic	DUP	K2003486-001	Water	0.57 mg/L	10 mL	0.57 mg/L	1	0.07	0.50		7	5/3/20 16:06:00	N
KQ2005873-19	Carbon, Total Organic	DUP	K2003486-002	Water	0.88 mg/L	10 mL	0.88 mg/L	1	0.07	0.50		3	5/3/20 16:34:00	N
KQ2005873-20	Carbon, Total Organic	DUP	K2003486-003	Water	0.81 mg/L	10 mL	0.81 mg/L	1	0.07	0.50		1	5/3/20 17:03:00	N
KQ2005873-21	Carbon, Total Organic	DUP	K2003486-004	Water	0.86 mg/L	10 mL	0.86 mg/L	1	0.07	0.50		<1	5/3/20 17:31:00	N

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

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Analytical Results Summary

Instrument Name: K-TOC-03 **Analyst:** BDITZLER **Analysis Lot:** 678685 **Method/Testcode:** SM 5310 C/TOC T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	T
KQ2005873-22	Carbon, Total Organic	CCV		Water	25.22 mg/L	10 mL	25.2 mg/L	1					5/3/20 21:47:00	N	
KQ2005873-23	Carbon, Total Organic	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			5/3/20 22:02:00	N	
KQ2005873-24	Carbon, Total Organic	DUP	K2003509-001	Water	2.08 mg/L	10 mL	2.08 mg/L	1	0.07	0.50		5	5/3/20 20:23:00	N	
KQ2005873-25	Carbon, Total Organic	DUP	K2003513-001	Water	3.19 mg/L	10 mL	64 mg/L	20	2	10		2	5/3/20 21:19:00	N	
KQ2005873-26	Carbon, Total Organic	DUP	K2003542-001	Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50		NC	5/3/20 20:51:00	N	

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# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-TOC-03 **Analyst:** BDITZLER **Analysis Lot:** 678686 **Method/Testcode:** SM 5310 C/TOC D

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	T
K2003418-002	Carbon, Dissolved Organic (DOC)	N/A		Water	3.57 mg/L	10 mL	3.57 mg/L	1	0.07	0.50			5/3/20 17:59:00	N	
K2003418-004	Carbon, Dissolved Organic (DOC)	N/A		Water	2.58 mg/L	10 mL	2.58 mg/L	1	0.07	0.50			5/3/20 19:25:00	N	
KQ2005874-01	Carbon, Dissolved Organic (DOC)	CCV		Water	25.27 mg/L	10 mL	25.3 mg/L	1					5/3/20 13:43:00	N	
KQ2005874-02	Carbon, Dissolved Organic (DOC)	CCV		Water	25.39 mg/L	10 mL	25.4 mg/L	1					5/3/20 18:27:00	N	
KQ2005874-03	Carbon, Dissolved Organic (DOC)	CCV		Water	25.22 mg/L	10 mL	25.2 mg/L	1					5/3/20 21:47:00	N	
KQ2005874-04	Carbon, Dissolved Organic (DOC)	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			5/3/20 13:58:00	N	
KQ2005874-05	Carbon, Dissolved Organic (DOC)	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			5/3/20 18:42:00	N	
KQ2005874-06	Carbon, Dissolved Organic (DOC)	CCB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			5/3/20 22:02:00	N	
KQ2005874-07	Carbon, Dissolved Organic (DOC)	MB		Water	0.00 mg/L	10 mL	0.50 mg/L U	1	0.07	0.50			5/3/20 19:54:00	N	
KQ2005874-08	Carbon, Dissolved Organic (DOC)	LCS		Water	22.72 mg/L	10 mL	22.7 mg/L	1	0.07	0.50	91		5/3/20 20:08:00	N	
KQ2005874-09	Carbon, Dissolved Organic (DOC)	MS	K2003418-002	Water	29.78 mg/L	10 mL	29.8 mg/L	1	0.07	0.50	105		5/3/20 18:56:00	N	
KQ2005874-10	Carbon, Dissolved Organic (DOC)	DUP	K2003418-002	Water	3.61 mg/L	10 mL	3.61 mg/L	1	0.07	0.50		1	5/3/20 17:59:00	N	
KQ2005874-11	Carbon, Dissolved Organic (DOC)	DUP	K2003418-004	Water	2.58 mg/L	10 mL	2.58 mg/L	1	0.07	0.50		<1	5/3/20 19:25:00	N	

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

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TOC: 678684, 678685
DOC: 678686

Schedule: 05022020

Version: 2
Instrument: Fusion1
Last Saved by: Fusion1 (Fusion1)
Last Saved on: 2020/05/02 14:08 - Saturday

Position	Sample Type	Sample ID	Method ID (Calibration ID)	Reps	Use
(Clean)	Clean	Clean		1	True
(Clean)	Clean	Clean		1	True
(Clean)	Clean	Clean		1	True
(Blank)	Blank	Reagent/Acid Blank		1	True
15	Sample	RB	CAS_salt_010711 (CAS_salt_010711)	1	True
D	Cal Standard	[TOC] CAS_salt_010711 CAL [DI Water]	CAS_salt_010711 (CAS_salt_010711)	1	True
A	Cal Standard	[TOC] CAS_salt_010711 CAL [0.500 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True
A	Cal Standard	[TOC] CAS_salt_010711 CAL [1.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True
A	Cal Standard	[TOC] CAS_salt_010711 CAL [5.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True
B	Cal Standard	[TOC] CAS_salt_010711 CAL [10 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True
B	Cal Standard	[TOC] CAS_salt_010711 CAL [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True
B	Cal Standard	[TOC] CAS_salt_010711 CAL [50 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True
15	Sample	RB	CAS_salt_010711 (CAS_salt_010711)	1	True
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True
1	Sample	MB1	CAS_salt_010711 (CAS_salt_010711)	4	True
C	Check Standard	[TOC] LCS [24.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	4	True
2	Sample	ICS	CAS_salt_010711 (CAS_salt_010711)	1	True
3	Sample	K2003404-001.25	CAS_salt_010711 (CAS_salt_010711)	4	True
4	Sample	K2003404-002.25	CAS_salt_010711 (CAS_salt_010711)	4	True
5	Sample	K2003404-002.25 ms 4x	CAS_salt_010711 (CAS_salt_010711)	4	True
6	Sample	RB	CAS_salt_010711 (CAS_salt_010711)	1	True
7	Sample	K2003404-003.25	CAS_salt_010711 (CAS_salt_010711)	4	True
8	Sample	K2003404-004.25	CAS_salt_010711 (CAS_salt_010711)	4	True
9	Sample	K2003404-005.25	CAS_salt_010711 (CAS_salt_010711)	4	True
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True
10	Sample	K2003404-006.25	CAS_salt_010711 (CAS_salt_010711)	4	True
11	Sample	K2003404-007.25	CAS_salt_010711 (CAS_salt_010711)	4	True
12	Sample	K2003404-008.25	CAS_salt_010711 (CAS_salt_010711)	4	True
13	Sample	K2003475-001.01	CAS_salt_010711 (CAS_salt_010711)	2	True
14	Sample	K2003475-001.01 ms	CAS_salt_010711 (CAS_salt_010711)	1	True
15	Sample	RB	CAS_salt_010711 (CAS_salt_010711)	1	True
16	Sample	K2003417-001.01	CAS_salt_010711 (CAS_salt_010711)	2	True
17	Sample	K2003417-002.01	CAS_salt_010711 (CAS_salt_010711)	2	True
18	Sample	K2003417-003.01	CAS_salt_010711 (CAS_salt_010711)	2	True
19	Sample	K2003417-004.01	CAS_salt_010711 (CAS_salt_010711)	2	True
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True
20	Sample	MB2	CAS_salt_010711 (CAS_salt_010711)	1	True
C	Check Standard	[TOC] LCS [24.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True
21	Sample	K2003417-005.01	CAS_salt_010711 (CAS_salt_010711)	2	True
22	Sample	K2003418-001.01	CAS_salt_010711 (CAS_salt_010711)	2	True
23	Sample	K2003418-003.01	CAS_salt_010711 (CAS_salt_010711)	2	True
24	Sample	K2003486-001.03	CAS_salt_010711 (CAS_salt_010711)	2	True
25	Sample	K2003486-002.03	CAS_salt_010711 (CAS_salt_010711)	2	True
26	Sample	K2003486-003.03	CAS_salt_010711 (CAS_salt_010711)	2	True
27	Sample	K2003486-004.03	CAS_salt_010711 (CAS_salt_010711)	2	True
28	Sample	K2003418-002.02 doc	CAS_salt_010711 (CAS_salt_010711)	2	True
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True
29	Sample	K2003418-002.02 ms doc	CAS_salt_010711 (CAS_salt_010711)	1	True
30	Sample	RB	CAS_salt_010711 (CAS_salt_010711)	1	True
31	Sample	K2003418-004.02 doc	CAS_salt_010711 (CAS_salt_010711)	2	True

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Schedule: 05022020

Position	Sample Type	Sample ID	Method ID (Calibration ID)	Reps	Use
32	Sample	MB3	CAS_salt_010711 (CAS_salt_010711)	1	True
C	Check Standard	[TOC] LCS [25.0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True
33	Sample	K2003509-001.01	CAS_salt_010711 (CAS_salt_010711)	2	True
34	Sample	K2003542-001.03	CAS_salt_010711 (CAS_salt_010711)	2	True
35	Sample	K2003513-001.02 20x	CAS_salt_010711 (CAS_salt_010711)	2	True
B	Check Standard	[TOC] CCV 25 ppm [25 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True
D	Check Standard	[TOC] CCB [0 ppm]	CAS_salt_010711 (CAS_salt_010711)	1	True
					False

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Fusion Report - 05022020
Saturday, May 02, 2020 07:08 PM

(View - Reps, Unused Reps, Meta-Data, Signature, History)
Printed on 2020/05/05 09:20 - Tuesday

Report Summary Information

Company Location:	Gen Chem Lab		
Schedule Name:	05022020	Engine Version:	1.1.5.1
Instrument Name:	Fusion1	Firmware Version:	1.2.0696
Report Version:	1 of 1	Connection:	RS232 COM1
Report Creation by Operators (schedule version):	Fusion1 (Fusion1) (v2)		
Comment:			

Report Results

Sample Type: Clean — From Schedule Version 2

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/05/02 19:08

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	14.01	19.42	5.41	49.61	05:27
2	TC Clean	12.79	16.92	4.14	49.79	07:18
3	TC Clean	4.87	8.84	3.97	49.82	07:01
4	TC Clean	2.44	6.57	4.13	49.81	07:00

Sample Type: Clean — From Schedule Version 2

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/05/02 19:40

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	1.11	5.09	3.98	49.65	05:15
2	TC Clean	6.53	10.54	4.01	49.86	07:17
3	TC Clean	2.02	6.03	4.01	49.88	07:03
4	TC Clean	1.74	5.75	4.01	50.01	03:58

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Sample Type: Clean — From Schedule Version 2

	Pos	Analysis Type	Sample ID	Start Time
◆	(clean)		Clean	2020/05/02 20:08

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	0.81	4.84	4.04	49.54	05:23
2	TC Clean	5.06	9.11	4.05	50.00	04:07
3	TC Clean	2.05	6.12	4.06	49.96	03:47
4	TC Clean	1.58	5.63	4.05	49.96	03:48

Sample Type: Blank (Creating v1379) — From Schedule Version 2

	Pos	Analysis Type	Sample ID	Start Time
◆	(blank)		Reagent/Acid Blank	2020/05/02 20:30

Rep #	Base Analysis Type	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	IC Clean	0.91	4.92	4.01	49.52	05:14
2	TC Clean	5.28	9.38	4.09	50.03	04:02
3	TC Clean	2.20	6.27	4.07	49.99	03:46
4	TC Clean	1.74	6.07	4.33	49.93	03:53
5	Reagent Blank	7.17	11.36	4.18	49.97	05:04
6	Acid Blank	1.36	5.48	4.11	49.61	05:30

Sample Type: Sample — From Schedule Version 2

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	15	TOC	RB	0.7001 ppm	0.0000 ppm	0.0000%	2020/05/02 21:03

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.7001	7.0007	12.22	16.46	4.24	49.90	10:33

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 7.5140 (IC) (v1379)	CAS_salt_010711 (v4)	CAS_salt_010711 (v32)

Sample Type: Calibration Standard: CAS_salt_010711 CAL (Creating calibration — From Schedule Version 2

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CAS_salt_010711 v33)

	Pos	BAT	Concentration (ppm)	STD Conc	Dil	Sample ID	Result (Abs)	Std. Dev. (Abs)	RSD	Start Time
◈	D	TOC	0.0000	0 ppmC	1:1	[TOC] CAS_salt_010711 CAL [DI Water]	9.3880	0.0000	0%	2020/05/02 21:18
◈	A	TOC	0.5000	5 ppmC	1:10	[TOC] CAS_salt_010711 CAL [0.500 ppm]	13.0770	0.0000	0%	2020/05/02 21:33
◈	A	TOC	1.0000	5 ppmC	1:5	[TOC] CAS_salt_010711 CAL [1.0 ppm]	16.2650	0.0000	0%	2020/05/02 21:47
◈	A	TOC	5.0000	5 ppmC	1:1	[TOC] CAS_salt_010711 CAL [5.0 ppm]	45.8600	0.0000	0%	2020/05/02 22:01
◈	B	TOC	10.0000	50 ppmC	1:5	[TOC] CAS_salt_010711 CAL [10 ppm]	83.1130	0.0000	0%	2020/05/02 22:15
◈	B	TOC	25.0000	50 ppmC	1:2	[TOC] CAS_salt_010711 CAL [25 ppm]	192.2330	0.0000	0%	2020/05/02 22:30
◈	B	TOC	50.0000	50 ppmC	1:1	[TOC] CAS_salt_010711 CAL [50 ppm]	360.0980	0.0000	0%	2020/05/02 22:44

Pos	Base Analysis Type	ID	Rep #	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	DI Water	1	9.39	13.52	4.14	49.95	10:29
A	TOC	0.500 ppm	1	13.08	17.13	4.06	49.99	10:31
A	TOC	1.0 ppm	1	16.26	20.37	4.10	49.97	10:32
A	TOC	5.0 ppm	1	45.86	49.85	3.99	50.00	10:30
B	TOC	10 ppm	1	83.11	87.11	4.00	50.03	10:32
B	TOC	25 ppm	1	192.23	196.19	3.96	50.01	10:30
B	TOC	50 ppm	1	360.10	364.12	4.03	49.99	10:30

Completion State
Success - All Update Conditions met

Method
CAS_salt_010711 (v4)

Success Action
Auto (always)

Sample Type: Sample From Schedule Version 2

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	15	TOC	RB	0.0371 ppm	0.0000 ppm	0.0000%	2020/05/02 22:58

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time

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1	TOC	0.0371	0.3706	10.42	14.46	4.05	50.02	10:35

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 10.1569 (IC) (v1379)	CAS_salt_010711 (v4)	CAS_salt_010711 (v33)

Sample Type: Check Standard --> CCV 25 ppm — From Schedule Version 2

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	25.5833 ppm (PASS)	0.0000 ppm	0%	2020/05/02 23:13

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.5833	255.8330	191.03	194.94	3.92	50.00	10:31

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v33)	50 ppmC

Sample Type: Check Standard --> CCB — From Schedule Version 2

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/05/02 23:28

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	9.38	13.39	4.00	50.01	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v33)	0 ppmC

Sample Type: Sample — From Schedule Version 2

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	1	TOC	MB1	0.0000 ppm	0.0000 ppm	0.0000%	2020/05/02 23:42

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	9.02	12.90	3.88	50.00	10:27
2	TOC	0.0000	0.0000	8.59	12.63	4.04	50.00	10:27
3	TOC	0.0000	0.0000	8.52	12.59	4.07	50.02	10:29
4	TOC	0.0000	0.0000	8.55	12.55	4.00	49.97	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 10.1569 (IC)	CAS_salt_010711	CAS_salt_010711

(v1379) (v4) (v33)

Sample Type: Check Standard --> LCS From Schedule Version 2

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	C	TOC	25.0000	1:1	[TOC] LCS [24.0 ppm]	0 / infinity (NA / NA)	23.3179 ppm (PASS)	0.1403 ppm	0.60%	2020/05/03 00:38

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	23.2613	232.6130	174.66	178.62	3.96	49.99	10:29
C	TOC	25.0 ppm	2	23.1584	231.5841	173.94	178.06	4.12	50.00	10:26
C	TOC	25.0 ppm	3	23.4855	234.8552	176.24	180.41	4.17	49.99	10:28
C	TOC	25.0 ppm	4	23.3663	233.6631	175.40	179.40	4.00	50.01	10:24

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v33)	25 ppmC

Sample Type: Sample From Schedule Version 2

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	2	TOC	ICS	0.2731 ppm	0.0000 ppm	0.0000%	2020/05/03 01:34

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.2731	2.7306	12.08	16.20	4.12	49.96	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 10.1569 (IC) (v1379)	CAS_salt_010711 (v4)	CAS_salt_010711 (v33)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	3	TOC	K2003404-001.25	5.9273 ppm	0.1810 ppm	3.0500%	2020/05/03 01:49

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	5.6590	56.5899	50.03	54.14	4.11	49.94	10:27
2	TOC	5.9782	59.7816	52.28	56.15	3.87	49.91	10:26
3	TOC	6.0292	60.2925	52.64	56.59	3.95	49.91	10:24
4	TOC	6.0429	60.4287	52.74	56.71	3.97	49.87	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 10.1569 (IC) (v1379)	CAS_salt_010711 (v4)	CAS_salt_010711 (v33)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	4	TOC	K2003404-002.25	3.3794 ppm	0.0190 ppm	0.5600%	2020/05/03 02:44

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	3.4035	34.0355	34.14	38.00	3.86	49.89	10:25
2	TOC	3.3706	33.7063	33.91	37.66	3.75	49.88	10:29
3	TOC	3.3840	33.8397	34.00	37.91	3.91	49.86	10:27
4	TOC	3.3593	33.5927	33.83	37.64	3.82	49.84	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 10.1569 (IC) (v1379)	CAS_salt_010711 (v4)	CAS_salt_010711 (v33)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	5	TOC	K2003404-002.25 ms 4x	25.9323 ppm	0.1127 ppm	0.4300%	2020/05/03 03:40

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	25.9228	259.2279	192.82	196.74	3.92	49.87	10:24
2	TOC	26.0944	260.9436	194.03	198.07	4.04	49.86	10:29
3	TOC	25.8501	258.5013	192.31	196.34	4.03	49.92	10:25
4	TOC	25.8618	258.6176	192.39	196.51	4.12	49.86	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 10.1569 (IC) (v1379)	CAS_salt_010711 (v4)	CAS_salt_010711 (v33)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	6	TOC	RB	0.0000 ppm	0.0000 ppm	0.0000%	2020/05/03 04:36

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	9.72	13.70	3.98	49.88	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 10.1569 (IC) (v1379)	CAS_salt_010711 (v4)	CAS_salt_010711 (v33)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	7	TOC	K2003404-003.25	3.3177 ppm	0.0533 ppm	1.6100%	2020/05/03 04:50

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	3.2709	32.7086	33.20	37.16	3.96	49.90	10:25
2	TOC	3.2727	32.7270	33.22	37.22	4.00	49.91	10:25
3	TOC	3.3708	33.7077	33.91	37.89	3.98	49.90	10:29
4	TOC	3.3564	33.5643	33.81	37.86	4.06	49.94	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 10.1569 (IC) (v1379)	CAS_salt_010711 (v4)	CAS_salt_010711 (v33)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	8	TOC	K2003404-004.25	3.2153 ppm	0.0506 ppm	1.5700%	2020/05/03 05:46

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	3.2853	32.8534	33.31	37.23	3.92	49.92	10:29
2	TOC	3.2195	32.1949	32.84	36.85	4.00	49.95	10:28
3	TOC	3.1789	31.7890	32.56	36.47	3.91	49.94	10:23
4	TOC	3.1775	31.7748	32.55	36.56	4.01	49.94	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 10.1569 (IC) (v1379)	CAS_salt_010711 (v4)	CAS_salt_010711 (v33)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	9	TOC	K2003404-005.25	5.0236 ppm	0.0191 ppm	0.3800%	2020/05/03 06:41

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	5.0437	50.4365	45.70	49.69	3.99	49.95	10:24
2	TOC	5.0002	50.0023	45.39	49.36	3.97	49.95	10:27
3	TOC	5.0336	50.3358	45.63	49.55	3.93	49.96	10:31
4	TOC	5.0170	50.1697	45.51	49.53	4.02	49.96	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 10.1569 (IC) (v1379)	CAS_salt_010711 (v4)	CAS_salt_010711 (v33)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 2

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	25.5465 ppm (PASS)	0.0000 ppm	0%	2020/05/03 07:37

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.5465	255.4654	190.77	194.69	3.92	49.97	10:31

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v33)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 2

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/05/03 07:52

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	9.16	13.03	3.86	49.97	10:34

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v33)	0 ppmC

Sample Type: Sample

From Schedule Version 2

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	10	TOC	K2003404-006.25	5.5617 ppm	0.0345 ppm	0.6200%	2020/05/03 08:06

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	5.5311	55.3113	49.13	53.16	4.03	49.96	10:27
2	TOC	5.5337	55.3368	49.15	53.19	4.04	49.94	10:29
3	TOC	5.5994	55.9939	49.61	53.53	3.91	49.97	10:28
4	TOC	5.5826	55.8264	49.50	53.37	3.88	49.94	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 10.1569 (IC) (v1379)	CAS_salt_010711 (v4)	CAS_salt_010711 (v33)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	11	TOC	K2003404-007.25	14.5236 ppm	0.1157 ppm	0.8000%	2020/05/03 09:02

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	14.4514	144.5143	111.99	116.02	4.03	49.95	10:31
2	TOC	14.4771	144.7712	112.17	116.08	3.91	49.94	10:27
3	TOC	14.6964	146.9638	113.71	117.62	3.91	49.94	10:24
4	TOC	14.4696	144.6960	112.12	116.22	4.11	49.93	10:25

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 10.1569 (IC) (v1379)	CAS_salt_010711 (v4)	CAS_salt_010711 (v33)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	12	TOC	K2003404-008.25	10.3457 ppm	0.0923 ppm	0.8900%	2020/05/03 09:58

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	10.2481	102.4807	82.37	86.46	4.09	49.98	10:30
2	TOC	10.2912	102.9122	82.67	86.72	4.05	49.95	10:27
3	TOC	10.3945	103.9453	83.40	87.36	3.95	49.96	10:29
4	TOC	10.4490	104.4902	83.79	87.60	3.82	49.93	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 10.1569 (IC) (v1379)	CAS_salt_010711 (v4)	CAS_salt_010711 (v33)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	13	TOC	K2003475-001.01	2.9091 ppm	0.1483 ppm	5.1000%	2020/05/03 10:54

Rep	Base	ppm	µg	Adjusted	NDIR (Abs)	Baseline	Pressure	Run

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#	Analysis Type			(Abs)		(Abs)	(psig)	Time
1	TOC	3.0140	30.1400	31.39	35.24	3.84	49.94	10:30
2	TOC	2.8042	28.0425	29.92	33.87	3.95	49.94	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 10.1569 (IC) (v1379)	CAS_salt_010711 (v4)	CAS_salt_010711 (v33)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	14	TOC	K2003475-001.01 ms	28.5668 ppm	0.0000 ppm	0.0000%	2020/05/03 11:22

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	28.5668	285.6679	211.45	215.29	3.84	49.90	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 10.1569 (IC) (v1379)	CAS_salt_010711 (v4)	CAS_salt_010711 (v33)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	15	TOC	RB	0.0000 ppm	0.0000 ppm	0.0000%	2020/05/03 11:37

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	8.92	13.01	4.08	49.90	10:32

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 10.1569 (IC) (v1379)	CAS_salt_010711 (v4)	CAS_salt_010711 (v33)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	16	TOC	K2003417-001.01	3.5430 ppm	0.0541 ppm	1.5300%	2020/05/03 11:51

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	3.5812	35.8123	35.39	39.32	3.93	49.92	10:28
2	TOC	3.5047	35.0473	34.85	38.85	4.00	49.92	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 10.1569 (IC) (v1379)	CAS_salt_010711 (v4)	CAS_salt_010711 (v33)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	17	TOC	K2003417-002.01	2.1517 ppm	0.0238 ppm	1.1100%	2020/05/03 12:19

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.1685	21.6847	25.44	29.43	4.00	49.94	10:28
2	TOC	2.1348	21.3484	25.20	29.22	4.02	49.94	10:31

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 10.1569 (IC) (v1379)	CAS_salt_010711 (v4)	CAS_salt_010711 (v33)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time

◆	18	TOC	K2003417-003.01	2.1345 ppm	0.0105 ppm	0.4900%	2020/05/03 12:47

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.1270	21.2703	25.14	29.09	3.94	49.91	10:28
2	TOC	2.1419	21.4193	25.25	29.32	4.07	49.93	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 10.1569 (IC) (v1379)	CAS_salt_010711 (v4)	CAS_salt_010711 (v33)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	19	TOC	K2003417-004.01	2.0845 ppm	0.0379 ppm	1.8200%	2020/05/03 13:15

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.1113	21.1128	25.03	28.96	3.93	49.89	10:27
2	TOC	2.0576	20.5763	24.66	28.64	3.98	49.92	10:24

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 10.1569 (IC) (v1379)	CAS_salt_010711 (v4)	CAS_salt_010711 (v33)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 2

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	25.2700 ppm (PASS)	0.0000 ppm	0%	2020/05/03 13:43

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.2700	252.6995	188.82	192.75	3.93	49.88	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v33)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 2

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/05/03 13:58

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	9.03	12.99	3.96	49.91	10:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v33)	0 ppmC

Sample Type: Sample From Schedule Version 2

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	20	TOC	MB2	0.0000 ppm	0.0000 ppm	0.0000%	2020/05/03 14:13

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	7.99	12.08	4.09	49.93	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 10.1569 (IC) (v1379)	CAS_salt_010711 (v4)	CAS_salt_010711 (v33)

Sample Type: Check Standard --> LCS From Schedule Version 2

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	C	TOC	25.0000	1:1	[TOC] LCS [24.0 ppm]	0 / infinity (NA / NA)	22.8520 ppm (PASS)	0.0000 ppm	0%	2020/05/03 14:27

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	22.8520	228.5202	171.78	175.86	4.08	49.91	10:31

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v33)	25 ppmC

Sample Type: Sample From Schedule Version 2

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	21	TOC	K2003417-005.01	1.9382 ppm	0.0802 ppm	4.1400%	2020/05/03 14:42

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	1.9949	19.9491	24.21	28.21	4.00	49.95	10:29
2	TOC	1.8815	18.8152	23.42	27.50	4.09	49.91	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 10.1569 (IC) (v1379)	CAS_salt_010711 (v4)	CAS_salt_010711 (v33)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	22	TOC	K2003418-001.01	3.7493 ppm	0.0303 ppm	0.8100%	2020/05/03 15:10

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	3.7278	37.2782	36.43	40.62	4.19	49.92	10:26
2	TOC	3.7707	37.7068	36.73	40.67	3.95	49.89	10:27

Dilution	Blank Contribution	Method	Calibration

1:10	(TC) 10.1569 (IC) (v1379)	CAS_salt_010711 (v4)	CAS_salt_010711 (v33)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	23	TOC	K2003418-003.01	2.6799 ppm	0.0006 ppm	0.0200%	2020/05/03 15:38

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.6804	26.8035	29.04	32.95	3.90	49.92	10:26
2	TOC	2.6795	26.7950	29.04	33.04	4.01	49.92	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 10.1569 (IC) (v1379)	CAS_salt_010711 (v4)	CAS_salt_010711 (v33)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	24	TOC	K2003486-001.03	0.5536 ppm	0.0256 ppm	4.6200%	2020/05/03 16:06

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.5355	5.3546	13.93	17.91	3.98	49.90	10:28
2	TOC	0.5717	5.7165	14.18	18.07	3.88	49.90	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 10.1569 (IC) (v1379)	CAS_salt_010711 (v4)	CAS_salt_010711 (v33)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	25	TOC	K2003486-002.03	0.8967 ppm	0.0186 ppm	2.0700%	2020/05/03 16:34

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.9098	9.0983	16.57	20.51	3.94	49.86	10:30
2	TOC	0.8836	8.8358	16.38	20.50	4.11	49.84	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 10.1569 (IC) (v1379)	CAS_salt_010711 (v4)	CAS_salt_010711 (v33)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	26	TOC	K2003486-003.03	0.7994 ppm	0.0084 ppm	1.0500%	2020/05/03 17:03

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.7935	7.9346	15.75	19.83	4.08	49.85	10:28
2	TOC	0.8054	8.0538	15.83	19.94	4.11	49.81	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 10.1569 (IC) (v1379)	CAS_salt_010711 (v4)	CAS_salt_010711 (v33)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	27	TOC	K2003486-004.03	0.8602 ppm	0.0051 ppm	0.5900%	2020/05/03 17:31

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.8566	8.5661	16.19	20.27	4.08	49.84	10:32
2	TOC	0.8639	8.6385	16.24	20.13	3.88	49.83	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 10.1569 (IC) (v1379)	CAS_salt_010711 (v4)	CAS_salt_010711 (v33)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◈	28	TOC	K2003418-002.02 doc	3.5881 ppm	0.0256 ppm	0.7100%	2020/05/03 17:59

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	3.5700	35.7002	35.31	39.23	3.92	49.82	10:27
2	TOC	3.6062	36.0620	35.57	39.40	3.84	49.85	10:27

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 10.1569 (IC) (v1379)	CAS_salt_010711 (v4)	CAS_salt_010711 (v33)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 2

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	25.3937 ppm (PASS)	0.0000 ppm	0%	2020/05/03 18:27

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.3937	253.9370	189.69	193.73	4.03	49.85	10:35

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v33)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 2

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/05/03 18:42

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	7.96	11.95	3.99	49.85	10:34

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v33)	0 ppmC

Sample Type: Sample From Schedule Version 2

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	29	TOC	K2003418-002.02 ms doc	29.7772 ppm	0.0000 ppm	0.0000%	2020/05/03 18:56

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	29.7772	297.7718	219.98	223.98	3.99	49.86	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 10.1569 (IC) (v1379)	CAS_salt_010711 (v4)	CAS_salt_010711 (v33)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	30	TOC	RB	0.0000 ppm	0.0000 ppm	0.0000%	2020/05/03 19:11

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	8.26	12.22	3.95	49.87	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 10.1569 (IC) (v1379)	CAS_salt_010711 (v4)	CAS_salt_010711 (v33)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	31	TOC	K2003418-004.02 doc	2.5782 ppm	0.0026 ppm	0.1000%	2020/05/03 19:25

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.5800	25.8002	28.34	32.31	3.98	49.86	10:31
2	TOC	2.5763	25.7633	28.31	32.33	4.02	49.89	10:28

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 10.1569 (IC) (v1379)	CAS_salt_010711 (v4)	CAS_salt_010711 (v33)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	32	TOC	MB3	0.0000 ppm	0.0000 ppm	0.0000%	2020/05/03 19:54

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	7.71	11.74	4.03	49.89	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 10.1569 (IC) (v1379)	CAS_salt_010711 (v4)	CAS_salt_010711 (v33)

Sample Type: Check Standard --> LCS From Schedule Version 2

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	C	TOC	25.0000	1:1	[TOC] LCS [25.0 ppm]	0 / infinity (NA / NA)	22.7163 ppm (PASS)	0.0000 ppm	0%	2020/05/03 20:08

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Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
C	TOC	25.0 ppm	1	22.7163	227.1635	170.82	175.06	4.24	49.89	10:33

Completion State	Success Action	Method	Calibration	STD Conc - Pos C
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v33)	25 ppmC

Sample Type: Sample From Schedule Version 2

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	33	TOC	K2003509-001.01	2.1338 ppm	0.0702 ppm	3.2900%	2020/05/03 20:23

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	2.1835	21.8351	25.54	29.64	4.10	49.92	10:28
2	TOC	2.0842	20.8417	24.84	28.88	4.04	49.91	10:26

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 10.1569 (IC) (v1379)	CAS_salt_010711 (v4)	CAS_salt_010711 (v33)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	34	TOC	K2003542-001.03	0.0000 ppm	0.0000 ppm	0.0000%	2020/05/03 20:51

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	0.0000	0.0000	8.26	12.24	3.98	49.96	10:29
2	TOC	0.0000	0.0000	7.86	11.89	4.03	50.00	10:30

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 10.1569 (IC) (v1379)	CAS_salt_010711 (v4)	CAS_salt_010711 (v33)

	Pos	Analysis Type	Sample ID	Result (ppmC)	Std. Dev. (ppmC)	RSD	Start Time
◆	35	TOC	K2003513-001.02 20x	3.2188 ppm	0.0366 ppm	1.1400%	2020/05/03 21:19

Rep #	Base Analysis Type	ppm	µg	Adjusted (Abs)	NDIR (Abs)	Baseline (Abs)	Pressure (psig)	Run Time
1	TOC	3.2447	32.4475	33.02	37.02	4.00	49.97	10:27
2	TOC	3.1929	31.9295	32.66	36.71	4.05	50.01	10:29

Dilution	Blank Contribution	Method	Calibration
1:10	(TC) 10.1569 (IC) (v1379)	CAS_salt_010711 (v4)	CAS_salt_010711 (v33)

Sample Type: Check Standard --> CCV 25 ppm From Schedule Version 2

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◆	B	TOC	25.0000	1:2	[TOC] CCV 25 ppm [25 ppm]	0 / infinity (NA / NA)	25.2187 ppm	0.0000 ppm	0%	2020/05/03 21:47

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							(PASS)			

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
B	TOC	25 ppm	1	25.2187	252.1872	188.46	192.50	4.04	50.03	10:32

Completion State	Success Action	Method	Calibration	STD Conc - Pos B
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v33)	50 ppmC

Sample Type: Check Standard --> CCB From Schedule Version 2

	Pos	BAT	Concentration (ppm)	Dil	Sample ID	Min / Max (% dev)	Result	Std. Dev.	RSD	Start Time
◈	D	TOC	0.0000	1:1	[TOC] CCB [0 ppm]	0 / infinity (NA / NA)	0.0000 ppm (PASS)	0.0000 ppm	0%	2020/05/03 22:02

Pos	Base Analysis Type	ID	Rep #	ppm	µg	Adjusted	NDIR	Baseline	Pressure	Run Time
D	TOC	0 ppm	1	0.0000	0.0000	8.10	11.93	3.83	50.01	10:30

Completion State	Success Action	Method	Calibration	STD Conc - Pos D
Success - Criteria met.	Do Nothing	CAS_salt_010711 (v4)	CAS_salt_010711 (v33)	0 ppmC

Meta Data Used in this Report

Blanks

Version	Reagent (Abs)	Acid (Abs)	DI IC (Abs)	DI TC (Abs)	DI TOC (Abs)	Save Time	Operator
v1378	1.7597	1.6520	0.0000	0.0000	0.0000	2020/04/30 18:27	Fusion1 (Fusion1)
v1379	2.3910	1.3620	0.0000	0.0000	0.0000	2020/05/02 21:03	Fusion1 (Fusion1)

Calibrations

Name: CAS_salt_010711 (TOC)

Version:	v32	Calibration curve formula:	TOC: y = 6.725x + 7.818
Ver Creation:	2020/03/11 15:55	r^2 value:	TOC: r^2 = 0.99921
Comment:			
Operator:	Fusion1 (Fusion1)		
Basic Analysis Type	TOC		

Basic Analysis Type: TOC

Sample ID	Y Raw Value	X Expected	Message	End Time
DI Water	5.8640	0.0000		2020/03/11 14:28
0.500 ppm	9.5210	0.5000		2020/03/11 14:42
1.0 ppm	12.5930	1.0000		2020/03/11 14:56
5.0 ppm	40.5270	5.0000		2020/03/11 15:10
10 ppm	79.5310	10.0000		2020/03/11 15:25
25 ppm	181.4610	25.0000		2020/03/11 15:39
50 ppm	340.5610	50.0000		2020/03/11 15:53

Name: CAS_salt_010711 (TOC)

Version: v33

Ver Creation: 2020/05/02 22:58

Comment:

Operator: Fusion1 (Fusion1)

Basic Analysis Type: TOC

Calibration curve formula: TOC: y = 7.047x + 10.754

r^2 value: TOC: r^2 = 0.99955

Basic Analysis Type: TOC

Sample ID	Y Raw Value	X Expected	Message	End Time
DI Water	9.3880	0.0000		2020/05/02 21:31
0.500 ppm	13.0770	0.5000		2020/05/02 21:46
1.0 ppm	16.2650	1.0000		2020/05/02 22:00
5.0 ppm	45.8600	5.0000		2020/05/02 22:14
10 ppm	83.1130	10.0000		2020/05/02 22:29
25 ppm	192.2330	25.0000		2020/05/02 22:43
50 ppm	360.0980	50.0000		2020/05/02 22:57

Methods

Name: CAS_salt_010711 (TOC)

Version: v4

Ver Creation: 2019/02/21 17:57

Comment:

Operator: Fusion1 (Fusion1)

Parameter	Value
SampleVolume	10.0 mL
Dilution	1:10
AcidVolume	0.5 ml
ReagentVolume	2.0 ml
UVReactorPrerinse	Off
UVReactorPrerinseVolume	5.0
NumberOfUVReactorPrerinses	1
ICSpargeTime	1.00 mins
DetectorSweepFlow	500 ml/min
PreSpargeTime	2.00 mins

Advanced Parameter	Value
NeedleRinseVolume	5.0 ml
VialPrimeVolume	2.0 ml
ICSamplePrimeVolume	2.0 ml
ICSpargeRinseVolume	12.0 ml
BaselineStabilizeTime	0.70 min
DetectorPressureFlow	150 ml/min
SyringeSpeedWaste	10
SyringeSpeedAcid	7
SyringeSpeedReagent	7
SyringeSpeedDIWater	7

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SystemFlow	500 ml/min	NDIRPressurization	60 psig
		SyringeSpeedSampleDispense	5
		SyringeSpeedSampleAspirate	4
		SyringeSpeedUVDispense	5
		SyringeSpeedUVAspirate	5
		SyringeSpeedICDispense	5
		SyringeSpeedICAspirate	5
		NDIRPressureStabilize	1.75 min
		SampleMixing	Off
		SampleMixingCycles	1
		SampleMixingVolume	10.0
		LowLevelFilterNDIR	Off

Acceptance / Approval

Electronic Signatures

Report Version	User Name	Acceptance	Reason	Date

Report History

Report History

Report Version	User Name	System Reason	User Reason	Date
1	Fusion1 (Fusion1)	Schedule completed	Schedule completed	2020/05/03 22:17

StarLIMS Run: 678684, 678685, 678686

Analysis: DOC/TOC

Method: SM 5310 C, 9060A, 415.1, 9060

CCV: 11-GEN-05-82C 50 ppm LCS: 11-GEN-05-79J 25.0 ppm

ICAL Date: 5/2/20

ICAL ID: 19-GEN-16-G->L

ICS ID: 19-GEN-8-4-G

ICS TV: 25.0 ppm ICS % R < 1

Spike ID: 11-GEN-05-82C 0.05 ml of 5000 ppm stock ---> 10.0 ml = 25.0 ppm x dilution factor

Sodium Persulfate: 19-GEN-08-15-E

21 % H3PO4: 19-GEN-08-15-A

Equipment ID: K-TOC-03

PIPETTE ID: 124276B, 129001F, N11314F, Marge

FILTER ID: 16967789

Analyzed By: BCP	Date Analyzed: 5/7/20
Reviewed By: JC	Date Reviewed: 5/6/20

HS20041130 - Sub Perch Final (E2000382)
Level IV

ALS WO# HS20041130

May 26, 2020 Service Request No:E2000382

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

Laboratory Results for: HS20041130

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory April 29, 2020
For your reference, these analyses have been assigned our service request number **E2000382.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental



Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental

Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2000382
Project:	HS20041130	**Date Received:**	04/29/20
Sample Matrix:	W		

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier IV. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

One sample was received for analysis at ALS Environmental in Houston on 04/29/20.

The sample was received in good condition and is consistent with the accompanying chain of custody form. The sample was stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2000173: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in lieu of a MS/MSD for this extraction batch.

DOD Certification is held for the method/matrix/analytes provided in this report.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: ALS Environmental - US **Service Request:**E2000382
Project: HS20041130

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2000382-001	LH18/24-SP650_042820_BIX	4/28/2020	1400

Service Request Summary

Folder #: **E2000382**
Client Name: ALS Environmental - US
Project Name: HS20041130
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 04/29/20
Internal Due Date: 5/12/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20041130
EDD: No EDD Specified

1 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
Location: EHRMS-WIC 7B
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2000382-001	LH18/24-SP650_042820_BIX	Water	04/28/20 1400	**IV**

Service Request Summary

Folder #: **E2000382**
Client Name: ALS Environmental - US
Project Name: HS20041130
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 04/29/20
Internal Due Date: 5/12/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20041130
EDD: No EDD Specified

1 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
Location: EHRMS-WIC 7B
Pressure Gas:

Data Qualifiers

Lab Standard

+	Possible Tedlar bag artifact.
A	TIC is a suspected aldol-condensation product
B	Analyte found in the associated method blank as well as in the sample.
BC	Reported results are not blank corrected.
BH	The back section of the tube yielded higher results than the front.
BT	Results indicated possible breakthrough; back section >=10% front section.
C	Result identification confirmed.
D	Compound identified in an analysis at a secondary dilution factor
D	Spike was diluted out
DE	Reported results are corrected for desorption efficiency.
E	Estimated value. Concentration above calibration range
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
H1	Sample analysis performed past holding time. See case narrative.
H2	Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
H3	Sample was received and analyzed past holding time.
H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
I	Internal standard not within the specified limits. See case narrative.
J	Estimated Value. Concentration found below MRL.
K	A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
K	Analyte was detected above the method reporting limit prior to normalization.
L1	Laboratory control sample recovery outside the specified limits; results may be biased high.
L2	Laboratory control sample recovery outside the specified limits; results may be biased low.
L3	Laboratory control sample recovery outside the specified limits.
M	Matrix interference; results may be biased high.
M	The duplicate injection precision not met.
M1	Matrix interference due to coelution with a non-target compound; results may be biased high.
N	Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
P	Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
P	Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
Q	Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
R	Duplicate Precision not met.
R1	Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
S	Surrogate recovery not within specified limits.

Data Qualifiers

Lab Standard

S	The reported value was determined by the Method of Standard Additions (MSA).
T	Analyte is a tentatively identified compound, result is estimated.
U	Compound was analyzed for, but was not detected (ND).
V1	The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
V2	The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
W	Result quantified, but the corresponding peak was detected outside the generated retention time window.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
X	See case narrative.
Y	Recovery outside limits
Y	The chromatogram resembles a petroleum product but does not match the calibration standard.
Z	The chromatogram does not resemble a petroleum product.
i	The MRL/MDL has been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

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ALS Environmental

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
Arizona Department of Health Services	AZ0793	5/27/2020
Arkansas Department of Environmental Quality	20-030-0	3/26/2021
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611	6/30/2020
Hawaii Department of Health	2020	4/30/2021
Kansas Department of Health and Environment	E-10352	7/31/2020
Louisiana Department of Environmental Quality	03087	6/30/2020
Louisiana Department of Health and Hospitals	LA028-2020	12/31/2020
Maine Center for Disease Control and Prevention	201815	6/5/2020
Maryland Department of the Environment	343	6/30/2020
Minnesota Department of Health	1785988	12/31/2020
Nevada Department of Concervation and Natural Resources	TX026932019-1	7/31/2020
New Hampshire Environmental Laboratory Accreditation Program	209420	4/24/2021
New Jersey Department of Environmental Protection	NLC190001	6/30/2020
New York Department of Health	11707	3/31/2021
Oklahoma Department of Environmental Quality	2019-067	8/31/2020
Pennsylvania Department of Environmental Protection	68-03441-013	6/30/2020
Tennessee Department of Environment and Concervation	04016-2020	4/30/2021
Texas Commision on Environmental Quality	T104704231-20-26	4/30/2021
United States Department of Agriculture	P330-19-00299	10/10/2022
Utah Department of Health Environmental Laboratory Certification	TX026932019-9	7/31/2020
Washington Department of Health	C819	11/14/2020
West Virginia Department of Environmental Protection	347	6/30/2020

ALS

Chain of Custody

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F: +1 281 530 5887
www.alsglobal.com

E2000382 5
ALS Laboratory Group
HS20041130

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **13818**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	Jumoke M. Lawal
Email:	jumoke.lawal@alsglobal.com

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20041130
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20041130-02**	**LH18/24-SP650_042820_BIX**	**Water**	**28 Apr 2020 14:00**
	SUB_Perch-6850			07 May 2020

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: J. Mallory Date/Time: 4/29/20 14:54

Received By: Date/Time: 4/29/20 14:54

Cooler ID(s): Temperature(s):

ALS Environmental

Cooler Receipt Form

Project Chemist CH

Client/Project ALS-H

Thermometer ID 9211

Date/Time Received: 4/29/20 Initials: CH

Date/Time Logged in: 4/29/20 Initials CH

1. Method of delivery: ○ US Mail ○ Fed Ex ○ UPS ○ DHL ✓ ALS Courier ○ Client

2. Samples received in: ✓ Cooler ○ Box ○ Envelope ○ Other

3. Were custody seals on coolers? ○ Yes ✓ No
   Were they intact? ○ Yes ○ No ✓ N/A
   Were they signed and dated? ○ Yes ○ No ✓ N/A
   If yes, how many and where?

4. Packing Material: ○ Inserts ✓ Baggies ✓ Bubble Wrap ○ Gel Packs ✓ Wet Ice ○ Sleeves ○ Other

5. Foreign or Regulated Soil? ○ Yes ○ No Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
-		4/29/20	1455	CH	1.0	☑
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No
7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ✓ Yes ○ No
8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No
9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No
10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label: E2000382 5
ALS Laboratory Group
HS20041130

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F: +1 713 266 1599
www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6ºC.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10ºC.
- ✓ Air samples are shipped and stored cold, at 0 to 6ºC
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

Preparation Information Benchsheets

ALS Environmental - Houston HRMS
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Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 358306 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/KBROWN **Prep Method:** Method **Prep Date/Time:** 5/12/20 09:34

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2000382-001	LH18/24-SP650_042820_BIX	.01	6850/ClO4 DOD			Water	10mL	
2	E2000404-001	04WW02-200504	.01	6850/ClO4 DOD			Ground Water	10mL	
3	E2000404-002	04WW06-200504	.01	6850/ClO4 DOD			Ground Water	10mL	
4	E2000404-003	LHSMW02-200504	.01	6850/ClO4 DOD			Ground Water	10mL	
5	E2000404-004	LHSMW02-200504-FD	.01	6850/ClO4 DOD			Ground Water	10mL	
6	E2000404-005	04WW11-200504	.01	6850/ClO4 DOD			Ground Water	10mL	
7	E2000404-006	04WW04-200504	.01	6850/ClO4 DOD			Ground Water	10mL	
8	E2000405-001	04WW05-200505	.01	6850/ClO4 DOD			Ground Water	10mL	
9	E2000405-002	04WW09-200505	.01	6850/ClO4 DOD			Ground Water	10mL	
10	E2000405-003	04WW10-200505	.01	6850/ClO4 DOD			Ground Water	10mL	
11	E2000405-004	04WW10-200505-FD	.01	6850/ClO4 DOD			Ground Water	10mL	
12	E2000405-005	04WW07-200505	.01	6850/ClO4 DOD			Ground Water	10mL	
13	E2000406-001	04WW08-200504	.01	6850/ClO4 DOD			Ground Water	10mL	
14	E2000406-002	LHSMW01-200504	.01	6850/ClO4 DOD			Ground Water	10mL	
15	E2000406-003	04WW01-200504	.01	6850/ClO4 DOD			Ground Water	10mL	
16	E2000407-001	LH18/24-SP650_050520_BIX	.01	6850/ClO4 DOD			Water	10mL	
17	E2000408-001	LH18/24-SP140_050520	.01	6850/ClO4 DOD			Water	10mL	
18	E2000409-001	LH18/24-SP650_050520_BIX	.01	6850/ClO4 DOD			Water	10mL	
19	EQ2000173-01	MB		6850/ClO4 DOD			Liquid	10mL	
20	EQ2000173-02	LCS		6850/ClO4 DOD			Liquid	10mL	
21	EQ2000173-03	DLCS		6850/ClO4 DOD			Liquid	10mL	
22	EQ2000173-04	04WW06-200504 MS	.01	6850/ClO4 DOD			Liquid	10mL	
23	EQ2000173-05	04WW06-200504 DMS	.01	6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 202037 Logbook Ref: Sodium Perchlorate Expires On: 05/22/2021

E2000382-001	100.00µL	E2000404-001	100.00µL	E2000404-002	100.00µL	E2000404-003	100.00µL	E2000404-004	100.00µL	E2000404-005	100.00µL
E2000404-006	100.00µL	E2000405-001	100.00µL	E2000405-002	100.00µL	E2000405-003	100.00µL	E2000405-004	100.00µL	E2000405-005	100.00µL
E2000406-001	100.00µL	E2000406-002	100.00µL	E2000406-003	100.00µL	E2000407-001	100.00µL	E2000408-001	100.00µL	E2000409-001	100.00µL
EQ2000173-01	100.00µL	EQ2000173-02	100.00µL	EQ2000173-03	100.00µL	EQ2000173-04	100.00µL	EQ2000173-05	100.00µL		

Name: Perchlorate Intermediate Stock1 Inventory ID 204799 Logbook Ref: 200657 1.0ug/mL KN Expires On: 05/15/2020

EQ2000173-02	1.00µL	EQ2000173-03	1.00µL	EQ2000173-04	1.00µL	EQ2000173-05	1.00µL

Preparation Information Benchsheet

Prep Run#: 358306 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/KBROWN **Prep Method:** Method **Prep Date/Time:** 5/12/20 09:34

Preparation Steps

Step: Preparation
Started: 5/12/20 09:34
Finished: 5/12/20 12:00
By: KBROWN
Comments

Comments: _____

Reviewed By: GR Date: 5/12/2020

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

Preparation Information Benchsheet

Prep Run#: 358306 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/KBROWN **Prep Method:** Method **Prep Date/Time:** 5/12/20 09:34

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2000382-001	LH18/24-SP650_042820_BIX	.01	6850/ClO4 DOD			Water	10mL	
2	E2000404-001	04WW02-200504	.01	6850/ClO4 DOD			Ground Water	10mL	
3	E2000404-002	04WW06-200504	.01	6850/ClO4 DOD			Ground Water	10mL	
4	E2000404-003	LHSMW02-200504	.01	6850/ClO4 DOD			Ground Water	10mL	
5	E2000404-004	LHSMW02-200504-FD	.01	6850/ClO4 DOD			Ground Water	10mL	
6	E2000404-005	04WW11-200504	.01	6850/ClO4 DOD			Ground Water	10mL	
7	E2000404-006	04WW04-200504	.01	6850/ClO4 DOD			Ground Water	10mL	
8	E2000405-001	04WW05-200505	.01	6850/ClO4 DOD			Ground Water	10mL	
9	E2000405-002	04WW09-200505	.01	6850/ClO4 DOD			Ground Water	10mL	
10	E2000405-003	04WW10-200505	.01	6850/ClO4 DOD			Ground Water	10mL	
11	E2000405-004	04WW10-200505-FD	.01	6850/ClO4 DOD			Ground Water	10mL	
12	E2000405-005	04WW07-200505	.01	6850/ClO4 DOD			Ground Water	10mL	
13	E2000406-001	04WW08-200504	.01	6850/ClO4 DOD			Ground Water	10mL	
14	E2000406-002	LHSMW01-200504	.01	6850/ClO4 DOD			Ground Water	10mL	
15	E2000406-003	04WW01-200504	.01	6850/ClO4 DOD			Ground Water	10mL	
16	E2000407-001	LH18/24-SP650_050520_BIX	.01	6850/ClO4 DOD			Water	10mL	
17	E2000408-001	LH18/24-SP140_050520	.01	6850/ClO4 DOD			Water	10mL	
18	E2000409-001	LH18/24-SP650_050520_BIX	.01	6850/ClO4 DOD			Water	10mL	
19	EQ2000173-01	MB		6850/ClO4 DOD			Liquid	10mL	
20	EQ2000173-02	LCS		6850/ClO4 DOD			Liquid	10mL	
21	EQ2000173-03	DLCS		6850/ClO4 DOD			Liquid	10mL	
22	EQ2000173-04	04WW06-200504 MS	.01	6850/ClO4 DOD			Liquid	10mL	
23	EQ2000173-05	04WW06-200504 DMS	.01	6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 202037 Logbook Ref: Sodium Perchlorate Expires On: 05/22/2021

E2000382-001	100.00µL	E2000404-001	100.00µL	E2000404-002	100.00µL	E2000404-003	100.00µL	E2000404-004	100.00µL	E2000404-005	100.00µL
E2000404-006	100.00µL	E2000405-001	100.00µL	E2000405-002	100.00µL	E2000405-003	100.00µL	E2000405-004	100.00µL	E2000405-005	100.00µL
E2000406-001	100.00µL	E2000406-002	100.00µL	E2000406-003	100.00µL	E2000407-001	100.00µL	E2000408-001	100.00µL	E2000409-001	100.00µL
EQ2000173-01	100.00µL	EQ2000173-02	100.00µL	EQ2000173-03	100.00µL	EQ2000173-04	100.00µL	EQ2000173-05	100.00µL		

Name: Perchlorate Intermediate Stock1 Inventory ID 204799 Logbook Ref: 200657 1.0ug/mL KN Expires On: 05/15/2020

EQ2000173-02	1.00µL	EQ2000173-03	1.00µL	EQ2000173-04	1.00µL	EQ2000173-05	1.00µL

Preparation Information Benchsheet

Prep Run#: 358306
Team: Semivoa GCMS/KBROWN
Prep WorkFlow: GenExt28Day
Prep Method: Method
Status: Prepped
Prep Date/Time: 5/12/20 09:34

Preparation Steps

Step: Preparation
Started: 5/12/20 09:34
Finished: 5/12/20 12:00
By: KBROWN
Comments

Comments: _____

Reviewed By: GR Date: 5/12/2020

Chain of Custody

Relinquished By: _____ Date: _____

Received By: _____ Date: _____

Extracts Examined
Yes No

Analytical Results

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www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000382
Project:	HS20041130	**Date Collected:**	4/28/20 1400
Sample Matrix:	Water	**Date Received:**	4/29/20
Sample Name:	LH18/24-SP650_042820_BIX	**Units:**	µg/L
Lab Code:	E2000382-001	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	5/12/20	5/12/20 13:37	358306	679868	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000382
Project:	HS20041130	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2000173-01	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	5/12/20	5/12/20 12:50	358306	679868	

Accuracy & Precision

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ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20041130
Sample Matrix: Water

Service Request: E2000382
Date Analyzed: 5/12/20

Lab Control Sample Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Units: µg/L
Basis: NA

Extraction Lot: 358306

	Lab Control Sample EQ2000173-02			Duplicate Lab Control Sample EQ2000173-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.105	0.100	105	0.107	0.100	107	84 - 119	2	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000382
Project:	HS20041130	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000173-02	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.105**		0.100	0.0500	0.0250	1	5/12/20	5/12/20 12:58	358306	679868	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000382
Project:	HS20041130	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000173-03	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.107**		0.100	0.0500	0.0250	1	5/12/20	5/12/20 13:06	358306	679868	

Initial Calibration

ALS Environmental - Houston HRMS
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Phone (713)266-1599 Fax (713)266-0130
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20200420

1st Review: Kneir
2nd Review: Hvan

ALS Environmental
LCMS01 -Shimadzu 8050

ICAL Date: 4/20/2020
Cal. Std. xp: 5/14/2020
ICAL ID: **EC2000003**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100803-09 **B:** MeOH 3100802-01

	Sample Name		File Name	Acquisition Method	Dilution	R	Comments	Date/Time
	null		20200420_001	Perchlorate6850b.lcm	1x	☒		4/20/2020 13:01
	null		20200420_002	Perchlorate6850b.lcm	1x	☒		4/20/2020 13:06
	DIBLK		20200420_003	Perchlorate6850b.lcm	1x	☒		4/20/2020 13:11
	IB		20200420_004	Perchlorate6850b.lcm	1x	☒		4/20/2020 13:19
	PERCHLORATE7		20200420_005	Perchlorate6850b.lcm	1x	☒	3100805-02	4/20/2020 13:27
	LODV		20200420_006	Perchlorate6850b.lcm	1x	☒		4/20/2020 13:35
	PERCHLORATE1		20200420_007	Perchlorate6850b.lcm	1x	☒	3100804-05	4/20/2020 13:43
	PERCHLORATE2		20200420_008	Perchlorate6850b.lcm	1x	☒	3100804-06	4/20/2020 13:51
	PERCHLORATE3		20200420_009	Perchlorate6850b.lcm	1x	☒	3100804-07	4/20/2020 13:58
	PERCHLORATE4		20200420_010	Perchlorate6850b.lcm	1x	☒	3100804-08	4/20/2020 14:06
	PERCHLORATE5		20200420_011	Perchlorate6850b.lcm	1x	☒	3100804-09	4/20/2020 14:14
	PERCHLORATE6		20200420_012	Perchlorate6850b.lcm	1x	☒	3100805-01	4/20/2020 14:22
	PERCHLORATE8		20200420_013	Perchlorate6850b.lcm	1x	☒	3100805-03	4/20/2020 14:30
	PERCHLORATE9		20200420_014	Perchlorate6850b.lcm	1x	☒	3100805-04	4/20/2020 14:38
	PERCHLORATE10		20200420_015	Perchlorate6850b.lcm	1x	☒	3100805-05	4/20/2020 14:46
	ICV		20200420_016	Perchlorate6850b.lcm	1x	☒	3100805-06	4/20/2020 14:54
	LODV		20200420_017	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:02
	EQ2000143-01		20200420_018	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:10
	EQ2000143-02		20200420_019	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:18
	EQ2000143-03		20200420_020	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:26
	E2000275-001		20200420_021	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:33
	E2000275-002		20200420_022	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:41
	E2000275-003		20200420_023	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:49
	E2000287-001		20200420_024	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:57
	E2000303-001		20200420_025	Perchlorate6850b.lcm	1x	☒		4/20/2020 16:05
	E2000304-001		20200420_026	Perchlorate6850b.lcm	1x	☒		4/20/2020 16:13
	E2000305-001		20200420_027	Perchlorate6850b.lcm	1x	☒		4/20/2020 16:21
	PERCHLORATE7		20200420_028	Perchlorate6850b.lcm	1x	☒	3100805-02	4/20/2020 16:29
	E2000303-001		20200420_029	Perchlorate6850b.lcm	1x	☒		4/20/2020 16:47
	E2000304-001		20200420_030	Perchlorate6850b.lcm	1x	☒		4/20/2020 16:55
	PERCHLORATE7		20200420_031	Perchlorate6850b.lcm	1x	☒	3100805-02	4/20/2020 17:02

Initial Calibration - Detailed Report

Calibration ID: EC2000003 **Instrument ID:** E-LCMS-01
Column Name: 1

#	Lab Code	Sample Name	File Location	Aquisition Date
08	EC2000003-08	PERCHLORATE7	20200420_005	04/20/2020 13:27
01	EC2000003-01	PERCHLORATE1	20200420_007	04/20/2020 13:43
02	EC2000003-02	PERCHLORATE2	20200420_008	04/20/2020 13:51
03	EC2000003-03	PERCHLORATE3	20200420_009	04/20/2020 13:58
04	EC2000003-04	PERCHLORATE4	20200420_010	04/20/2020 14:06
05	EC2000003-05	PERCHLORATE5	20200420_011	04/20/2020 14:14
06	EC2000003-06	PERCHLORATE6	20200420_012	04/20/2020 14:22
07	EC2000003-07	PERCHLORATE8	20200420_013	04/20/2020 14:30
09	EC2000003-09	PERCHLORATE9	20200420_014	04/20/2020 14:38
10	EC2000003-10	PERCHLORATE10	20200420_015	04/20/2020 14:46

Analyte **Curve Fit** **Weighting**

Perchlorate **Average RF** **RSD = 8.066** **Average RF = 0.1368**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.1000	0.1558	02	0.5000	0.1297	03	0.7000	0.1277	04	1.0000	0.1397
05	2.0000	0.1298	06	5.0000	0.1245	07	20.0000	0.1341	08	10.0000	0.1562
09	30.0000	0.1365	10	50.0000	0.1345						

Analyte

Perchlorate

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.1000	0.114	13.9	02	0.5000	0.474	-5.2	03	0.7000	0.653	-6.7
04	1.0000	1.02	2.1	05	2.0000	1.90	-5.1	06	5.0000	4.55	-9.0
07	20.0000	19.6	-2.0	08	10.0000	11.4	14.2	09	30.0000	29.9	-0.2
10	50.0000	49.1	-1.7								

Initial Calibration Verification Summary Report

Calibration ID:	EC2000003	**Instrument ID:**	E-LCMS-01
Datafile ID:	20200420_016	**Column Name:**	1

Analyte	Lab Code	Type	Curve Fit	True Value	Calc Conc	Units	Result	Criteria
Perchlorate	EC2000003-11	T	Average RF	10	11.345	ng/mL	13.4	<= 15

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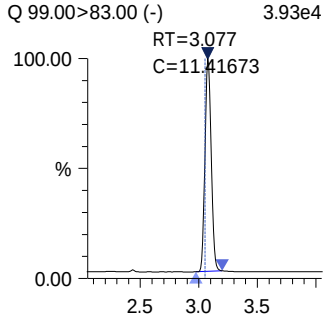
PERCHLORATE7

Date acquired: 4/20/2020 1:27:21 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_005.lcd
Vial: 3 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	4/20/2020 1:27:21 PM	144494	11.41673	20200420_005	3.077	25.0000	1.0000	3
Sodium Perchlorate-18O4_IS	PERCHLORATE7	4/20/2020 1:27:21 PM	92497	1.00000	20200420_005	3.076	25.0000	1.0000	3

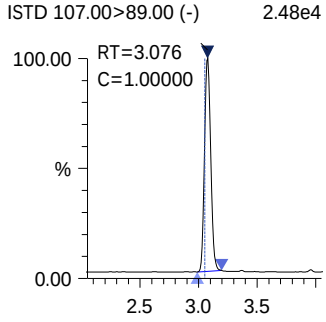
Perchlorate

Conc 11.41673
Area 144494



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 92497



ALS Group Houston

PERCHLORATE1

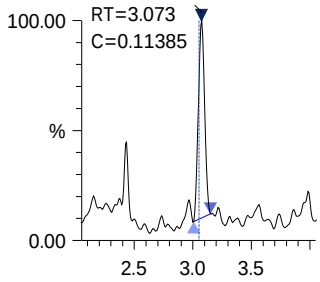
Date acquired: 4/20/2020 1:43:09 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_007.lcd
Vial: 5 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE1	4/20/2020 1:43:09 PM	1840	0.11385	20200420_007	3.073	25.0000	1.0000	5
Sodium Perchlorate-18O4_IS	PERCHLORATE1	4/20/2020 1:43:09 PM	118078	1.00000	20200420_007	3.073	25.0000	1.0000	5

Perchlorate

Conc 0.11385
Area 1840

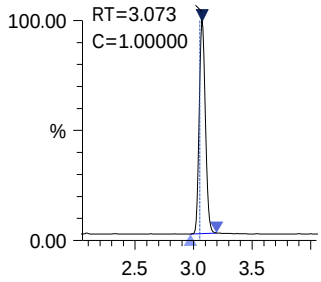
Q 99.00>83.00 (-) 5.37e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 118078

ISTD 107.00>89.00 (-) 3.18e4



ALS Group Houston

PERCHLORATE2

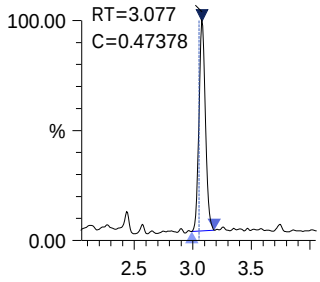
Date acquired: 4/20/2020 1:51:02 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_008.lcd
Vial: 6 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE2	4/20/2020 1:51:02 PM	7551	0.47378	20200420_008	3.077	25.0000	1.0000	6
Sodium Perchlorate-18O4_IS	PERCHLORATE2	4/20/2020 1:51:02 PM	116479	1.00000	20200420_008	3.075	25.0000	1.0000	6

Perchlorate

Conc 0.47378
Area 7551

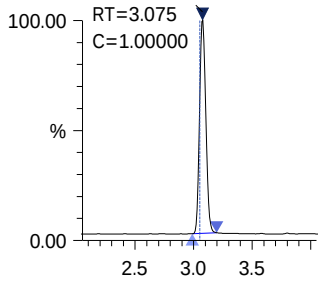
Q 99.00>83.00 (-) 2.00e3



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 116479

ISTD 107.00>89.00 (-) 3.08e4



ALS Group Houston

PERCHLORATE3

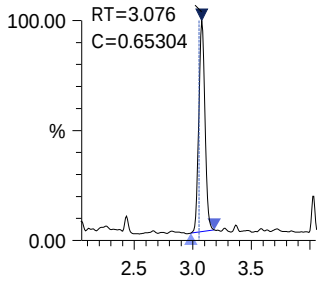
Date acquired: 4/20/2020 1:58:56 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_009.lcd
Vial: 7 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE3	4/20/2020 1:58:56 PM	11235	0.65304	20200420_009	3.076	25.0000	1.0000	7
Sodium Perchlorate-18O4_IS	PERCHLORATE3	4/20/2020 1:58:56 PM	125731	1.00000	20200420_009	3.073	25.0000	1.0000	7

Perchlorate

Conc 0.65304
Area 11235

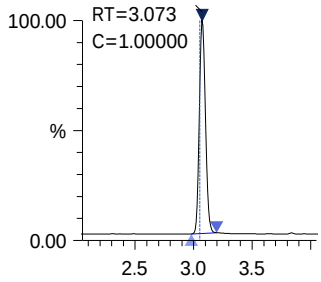
Q 99.00>83.00 (-) 3.12e3



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 125731

ISTD 107.00>89.00 (-) 3.41e4



ALS Group Houston

PERCHLORATE4

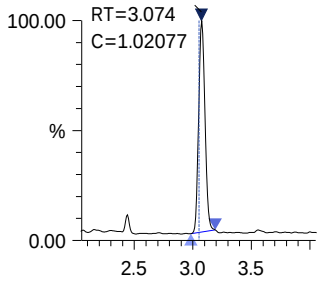
Date acquired: 4/20/2020 2:06:51 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_010.lcd
Vial: 8 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE4	4/20/2020 2:06:51 PM	16670	1.02077	20200420_010	3.074	25.0000	1.0000	8
Sodium Perchlorate-18O4_IS	PERCHLORATE4	4/20/2020 2:06:51 PM	119354	1.00000	20200420_010	3.074	25.0000	1.0000	8

Perchlorate

Conc 1.02077
Area 16670

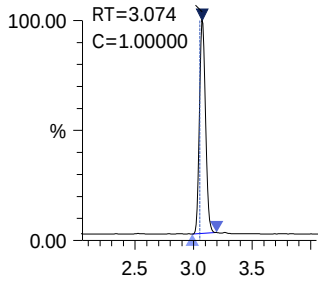
Q 99.00>83.00 (-) 4.51e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 119354

ISTD 107.00>89.00 (-) 3.26e4



ALS Group Houston

PERCHLORATE5

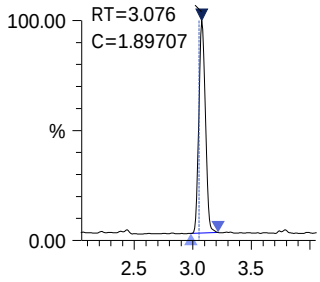
Date acquired: 4/20/2020 2:14:45 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_011.lcd
Vial: 9 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE5	4/20/2020 2:14:45 PM	33786	1.89707	20200420_011	3.076	25.0000	1.0000	9
Sodium Perchlorate-18O4_IS	PERCHLORATE5	4/20/2020 2:14:45 PM	130159	1.00000	20200420_011	3.075	25.0000	1.0000	9

Perchlorate

Conc 1.89707
Area 33786

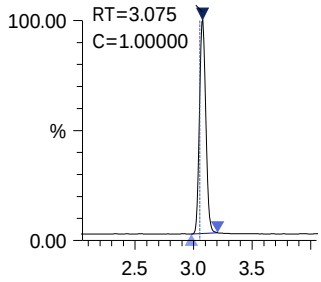
Q 99.00>83.00 (-) 8.73e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 130159

ISTD 107.00>89.00 (-) 3.41e4



ALS Group Houston

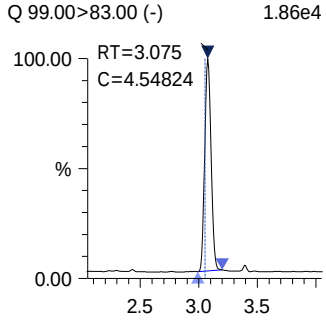
PERCHLORATE6

Date acquired: 4/20/2020 2:22:39 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_012.lcd
Vial: 10 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE6	4/20/2020 2:22:39 PM	69848	4.54824	20200420_012	3.075	25.0000	1.0000	10
Sodium Perchlorate-18O4_IS	PERCHLORATE6	4/20/2020 2:22:39 PM	112235	1.00000	20200420_012	3.074	25.0000	1.0000	10

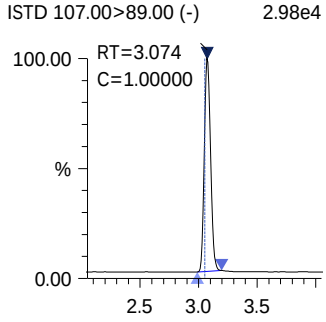
Perchlorate

Conc 4.54824
Area 69848



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 112235



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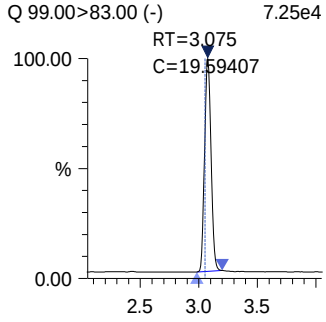
PERCHLORATE8

Date acquired: 4/20/2020 2:30:36 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_013.lcd
Vial: 11 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE8	4/20/2020 2:30:36 PM	275854	19.59407	20200420_013	3.075	25.0000	1.0000	11
Sodium Perchlorate-18O4_IS	PERCHLORATE8	4/20/2020 2:30:36 PM	102890	1.00000	20200420_013	3.072	25.0000	1.0000	11

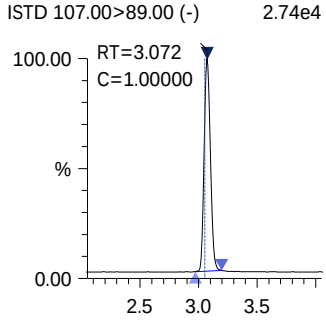
Perchlorate

Conc 19.59407
Area 275854



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 102890



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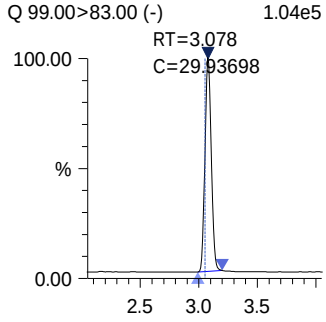
PERCHLORATE9

Date acquired: 4/20/2020 2:38:33 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_014.lcd
Vial: 12 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE9	4/20/2020 2:38:33 PM	390068	29.93698	20200420_014	3.078	25.0000	1.0000	12
Sodium Perchlorate-18O4_IS	PERCHLORATE9	4/20/2020 2:38:33 PM	95225	1.00000	20200420_014	3.075	25.0000	1.0000	12

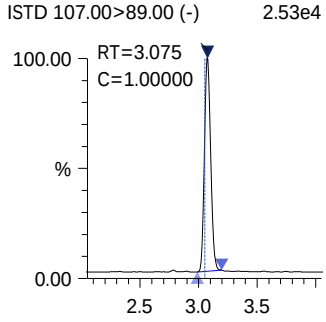
Perchlorate

Conc 29.93698
Area 390068



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 95225



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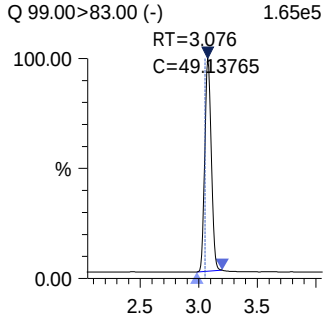
PERCHLORATE10

Date acquired: 4/20/2020 2:46:25 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_015.lcd
Vial: 13 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE10	4/20/2020 2:46:25 PM	632804	49.13765	20200420_015	3.076	25.0000	1.0000	13
Sodium Perchlorate-18O4_IS	PERCHLORATE10	4/20/2020 2:46:25 PM	94118	1.00000	20200420_015	3.075	25.0000	1.0000	13

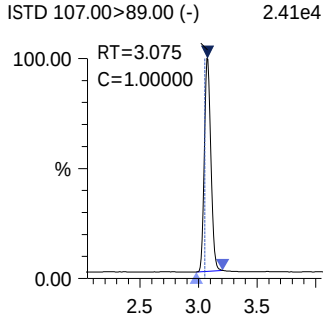
Perchlorate

Conc 49.13765
Area 632804



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 94118



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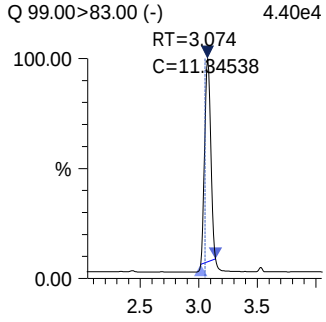
PERCHLORATEICV

Date acquired: 4/20/2020 2:54:20 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_016.lcd
Vial: 14 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATEICV	4/20/2020 2:54:20 PM	149807	11.34538	20200420_016	3.074	25.0000	1.0000	14
Sodium Perchlorate-18O4_IS	PERCHLORATEICV	4/20/2020 2:54:20 PM	96501	1.00000	20200420_016	3.072	25.0000	1.0000	14

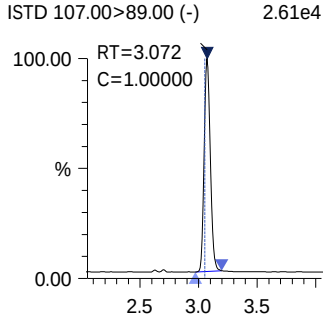
Perchlorate

Conc 11.34538
Area 149807



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 96501



Chromatograms and Selected Ion Monitoring

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 320, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

20200512

1st Review: Kneir
2nd Review: Hvan

ALS Environmental
LCMS01 -Shimadzu 8050

ICAL Date: 4/20/2020
Cal. Std. xp: 5/14/2020
ICAL ID: **EC2000003**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100803-09 **B:** MeOH 3100802-01

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
	null		20200512_001	Perchlorate6850b.lcm	1x	☒		5/12/2020 12:09
	null		20200512_002	Perchlorate6850b.lcm	1x	☒		5/12/2020 12:14
	IB		20200512_003	Perchlorate6850b.lcm	1x	☒		5/12/2020 12:19
	PERCHLORATE7		20200512_004	Perchlorate6850b.lcm	1x	☒	3100805-02	5/12/2020 12:27
	LODV		20200512_005	Perchlorate6850b.lcm	1x	☒		5/12/2020 12:35
	EQ2000173-01		20200512_006	Perchlorate6850b.lcm	1x	☒		5/12/2020 12:50
	EQ2000173-02		20200512_007	Perchlorate6850b.lcm	1x	☒		5/12/2020 12:58
	EQ2000173-03		20200512_008	Perchlorate6850b.lcm	1x	☒		5/12/2020 13:06
	E2000404-002		20200512_009	Perchlorate6850b.lcm	1x	☒		5/12/2020 13:13
	EQ2000173-04		20200512_010	Perchlorate6850b.lcm	1x	☒		5/12/2020 13:21
	EQ2000173-05		20200512_011	Perchlorate6850b.lcm	1x	☒	do not use	5/12/2020 13:29
	E2000382-001		20200512_012	Perchlorate6850b.lcm	1x	☒		5/12/2020 13:37
	PERCHLORATE7		20200512_013	Perchlorate6850b.lcm	1x	☒	3100805-02	5/12/2020 13:45
	E2000404-001		20200512_014	Perchlorate6850b.lcm	1x	☒		5/12/2020 13:53
	E2000404-003		20200512_015	Perchlorate6850b.lcm	1x	☒		5/12/2020 14:01
	E2000404-004		20200512_016	Perchlorate6850b.lcm	1x	☒		5/12/2020 14:09
	E2000404-005		20200512_017	Perchlorate6850b.lcm	1x	☒		5/12/2020 14:17
	E2000404-006		20200512_018	Perchlorate6850b.lcm	1x	☒		5/12/2020 14:25
	E2000405-001		20200512_019	Perchlorate6850b.lcm	1x	☒		5/12/2020 14:32
	E2000405-002		20200512_020	Perchlorate6850b.lcm	1x	☒		5/12/2020 14:40
	E2000405-003		20200512_021	Perchlorate6850b.lcm	1x	☒		5/12/2020 14:48
	E2000405-004		20200512_022	Perchlorate6850b.lcm	1x	☒		5/12/2020 14:56
	E2000405-005		20200512_023	Perchlorate6850b.lcm	1x	☒		5/12/2020 15:04
	PERCHLORATE7		20200512_024	Perchlorate6850b.lcm	1x	☒	3100805-02	5/12/2020 15:12
	E2000406-001		20200512_025	Perchlorate6850b.lcm	1x	☒		5/12/2020 15:20
	E2000406-002		20200512_26	Perchlorate6850b.lcm	1x	☒		5/12/2020 15:28
	E2000406-003		20200512_027	Perchlorate6850b.lcm	1x	☒		5/12/2020 15:36
	E2000407-001		20200512_028	Perchlorate6850b.lcm	1x	☒		5/12/2020 15:44
	E2000408-001		20200512_029	Perchlorate6850b.lcm	1x	☒	dilution	5/12/2020 15:51
	E2000409-001		20200512_030	Perchlorate6850b.lcm	1x	☒	RR-poss carry-over	5/12/2020 15:59
	EQ2000173-05		20200512_031	Perchlorate6850b.lcm	1x	☒	do not use	5/12/2020 16:07
	PERCHLORATE7		20200512_032	Perchlorate6850b.lcm	1x	☒	3100805-02	5/12/2020 16:15

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20041130

Service Request: E2000382
Date Analyzed: 5/12/20

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200512\20200512_004

Calibration Date: 4/20/20
Calibration ID: EC2000003
Analysis Lot: 679868
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	10.9	0.1368	0.1485	8.5	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20041130

Service Request: E2000382
Date Analyzed: 5/12/20

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200512\20200512_013

Calibration Date: 4/20/20
Calibration ID: EC2000003
Analysis Lot: 679868
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	11.0	0.1368	0.1502	9.7	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20041130

Service Request: E2000382
Date Analyzed: 5/12/20 12:27

Internal Standard Area and RT Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID: I:\LCMS01\DATA\20200512\20200512_004
Instrument ID: E-LCMS-01
Analytical Method: 6850

Lab Code: EQ2000176-01
Analysis Lot: 679868
Signal ID: 1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	110,677	3.07
	Upper Limit ==>	166,016	5.07
	Lower Limit ==>	55,339	1.07
Associated Analyses			
Continuing Calibration Verification	EQ2000176-01	77,004	3.01
Method Blank	EQ2000173-01	95,026	2.94
Lab Control Sample	EQ2000173-02	108,592	3.00
Duplicate Lab Control Sample	EQ2000173-03	109,300	3.00
Batch QC	E2000404-002	104,595	2.99
Batch QCMS	EQ2000173-04	114,639	2.99
LH18/24-SP650_042820_BIX	E2000382-001	92,379	2.98

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000382
Project:	HS20041130	**Date Analyzed:**	5/12/20 13:45

Internal Standard Area and RT Summary

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID:	I:\LCMS01\DATA\20200512\20200512_013	**Lab Code:**	EQ2000176-02
Instrument ID:	E-LCMS-01	**Analysis Lot:**	679868
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	110,677	3.07
	Upper Limit ==>	166,016	5.07
	Lower Limit ==>	55,339	1.07
Associated Analyses			
Continuing Calibration Verification	EQ2000176-02	99,187	2.99

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group Houston

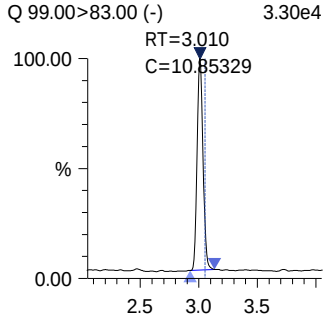
PERCHLORATE7

Date acquired: 5/12/2020 12:27:44 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200512\20200512_004.lcd
Vial: 3 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	5/12/2020 12:27:44 PM	114355	10.85329	20200512_004	3.010	25.0000	1.0000	3
Sodium Perchlorate-18O4_IS	PERCHLORATE7	5/12/2020 12:27:44 PM	77004	1.00000	20200512_004	3.008	25.0000	1.0000	3

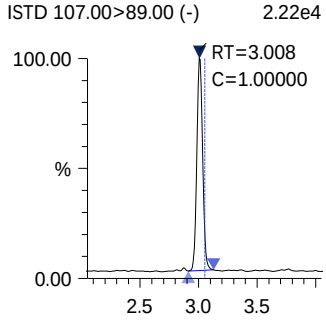
Perchlorate

Conc 10.85329
Area 114355



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 77004



ALS Group Houston

EQ2000173-01

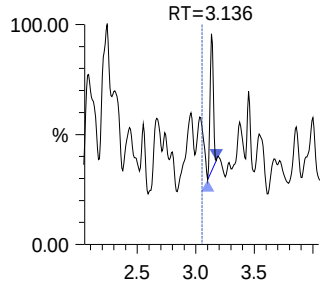
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Acquired by: System Administrator
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Vial: 5 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000173-01	5/12/2020 12:50:12 PM	----	----	20200512_006	----	25.0000	1.0000	5
Sodium Perchlorate-18O4_IS	EQ2000173-01	5/12/2020 12:50:12 PM	95026	1.00000	20200512_006	2.942	25.0000	1.0000	5

Perchlorate

Conc ----
Area ----

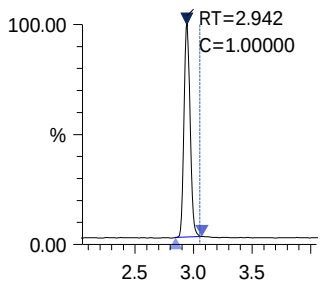
Q 99.00>83.00 (-) 3.00e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 95026

ISTD 107.00>89.00 (-) 2.66e4



ALS Group Houston

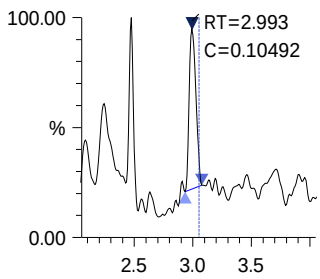
EQ2000173-02

Date acquired: 5/12/2020 12:58:07 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200512\20200512_007.lcd
Vial: 6 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000173-02	5/12/2020 12:58:07 PM	1559	0.10492	20200512_007	2.993	25.0000	1.0000	6
Sodium Perchlorate-18O4_IS	EQ2000173-02	5/12/2020 12:58:07 PM	108592	1.00000	20200512_007	3.004	25.0000	1.0000	6

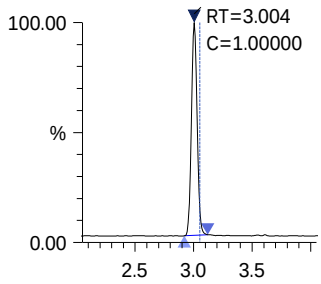
Perchlorate

Conc 0.10492
Area 1559
Q 99.00>83.00 (-) 5.16e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 108592
ISTD 107.00>89.00 (-) 3.19e4



ALS Group Houston

EQ2000173-03

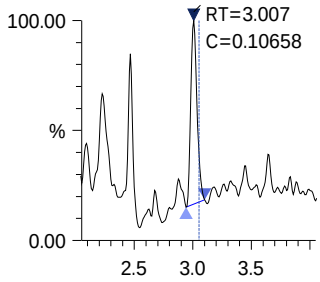
Date acquired: 5/12/2020 1:06:00 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200512\20200512_008.lcd
Vial: 7 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000173-03	5/12/2020 1:06:00 PM	1594	0.10658	20200512_008	3.007	25.0000	1.0000	7
Sodium Perchlorate-18O4_IS	EQ2000173-03	5/12/2020 1:06:00 PM	109300	1.00000	20200512_008	3.004	25.0000	1.0000	7

Perchlorate

Conc 0.10658
Area 1594

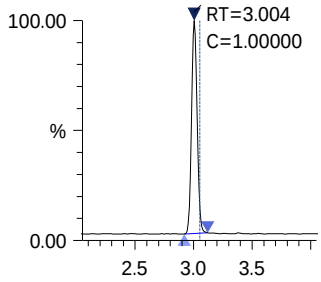
Q 99.00>83.00 (-) 4.99e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 109300

ISTD 107.00>89.00 (-) 3.26e4



ALS Group Houston

E2000382-001

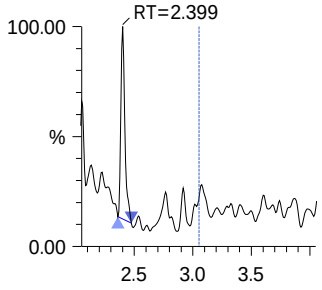
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Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200512\20200512_012.lcd
Vial: 11 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	E2000382-001	5/12/2020 1:37:37 PM	----	----	20200512_012	----	25.0000	1.0000	11
Sodium Perchlorate-18O4_IS	E2000382-001	5/12/2020 1:37:37 PM	92379	1.00000	20200512_012	2.979	25.0000	1.0000	11

Perchlorate

Conc ----
Area ----

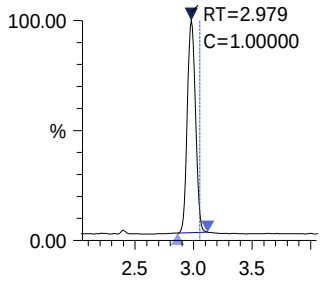
Q 99.00>83.00 (-) 6.19e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 92379

ISTD 107.00>89.00 (-) 1.92e4



ALS Group Houston

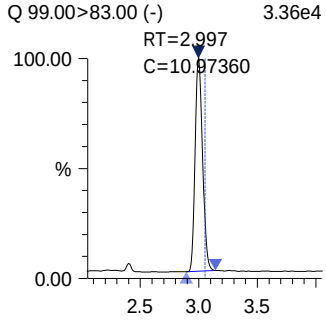
PERCHLORATE7

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Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200512\20200512_013.lcd
Vial: 3 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	5/12/2020 1:45:33 PM	148931	10.97360	20200512_013	2.997	25.0000	1.0000	3
Sodium Perchlorate-18O4_IS	PERCHLORATE7	5/12/2020 1:45:33 PM	99187	1.00000	20200512_013	2.994	25.0000	1.0000	3

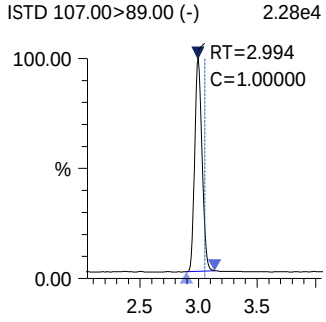
Perchlorate

Conc 10.97360
Area 148931



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 99187



HS20041130 NIT_AMN_W_ISE WC

ALS WO# HS20041130

NH3_AMM_ISE_W /350.3

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Logbook **31105**

Ion Selective Electrode Logbook

Analyst: YP			Date: 5/4/20 11:00 AM
Method: SM4500NH3-D/EPA 350.3 or SM4500 NH3 B-F			
Probe Calibration Date: 5/4/20	Cal Std ID: 3131045O5-09		Probe ID: X01-11806

Std Level		mV	Conc., mg/L:
STD 1 (mg/L):	0.2	131.5	0.200
STD 2 (mg/L):	1	92.3	1.002
STD 3 (mg/L):	5	57.3	5.002

Sodium Thiosulfate ID:

Std Level	mV	Conc., mg/L:
STD 4 (mg/L): 10	33.6	10.011
STD 5 (mg/L): 50	-7.3	50.030

LSC / MS Spike ID:	3100600819
ICV Cal STD ID:	3131045O4
DPD Reagent ID:	3100601821

ICAL Date & Slope: 99.0% / -55.4

WO # / SX #	Bottle #	Initial g or ml	Final Vol. ml	Dilution Factor	Initial Conc. mg/L	Final Conc. mg/L	Chlorine Check (+/ –)	Comments
ICV		50ml	50ml		10.165			
CCB					0.009			
MBLK					0.015			
LCS					10.433			
HS200540994-01					43.080		+ve	Rechecked.
HS200541080-01					0.110		+ve	Rechecked.
1084-01					0.274		-ve	
1072-01		10 ml		5X	13.510		+ve	Rechecked.
1138-01		50ml			0.305		-ve	
-02					0.215		-ve	
-03					0.216		-ve	
-04					0.216		-ve	
CCV					10.890			
CCB					0.007			
HS200541130-01					21.269		-ve	
30-01MS					32.741		-ve	
30-01MSD					32.834		-ve	
HS200550028-01		10 ml		5X	12.979		+ve	Rechecked.
CCV		50ml			10.789			
CCB					0.018			
HS200550028-01		25ml		2X	27.365		+ve	(Treated with thiosulfate - 25ml) (High in CL)

Batch ID: 361022 / 361024	Reported By YP	Reviewed By: MD

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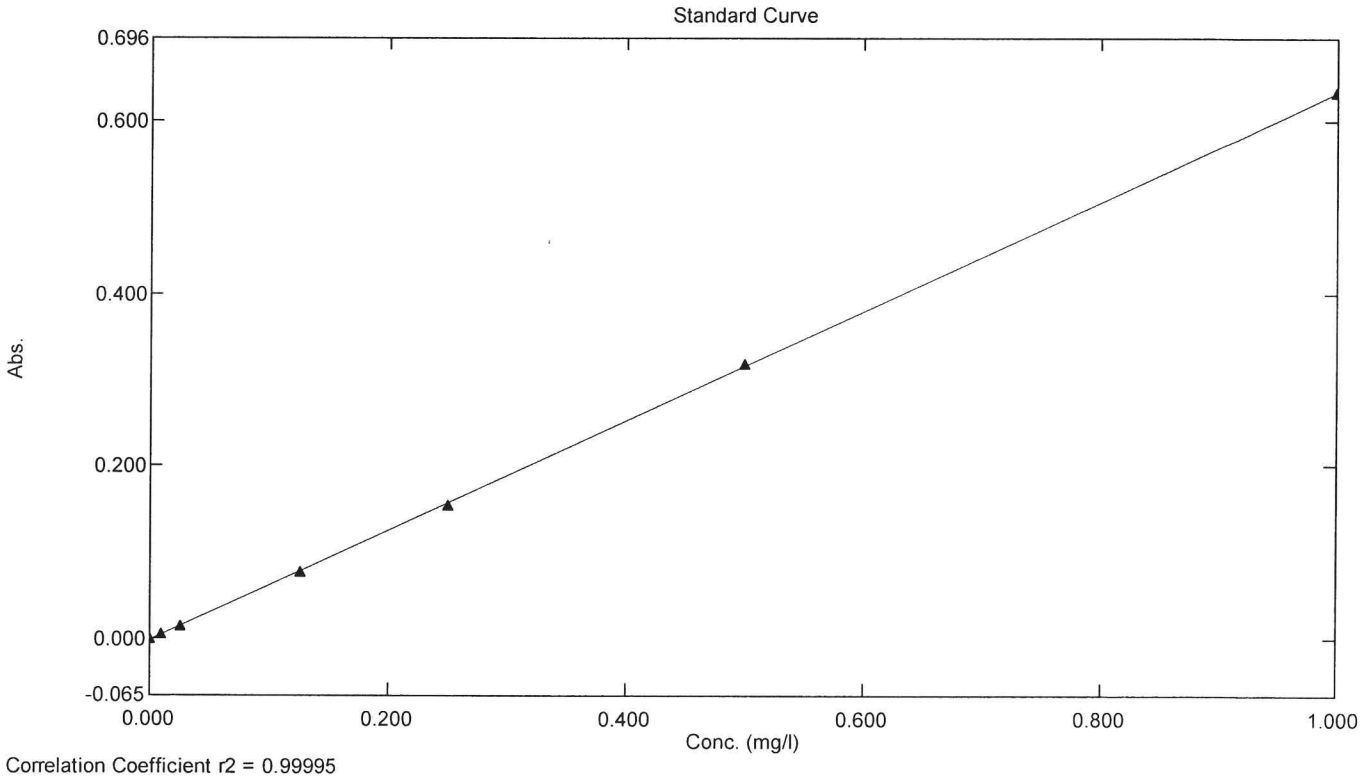
HS20041130 WC P_ORTHO

ALS WO# HS20041130

Standard Table Report

05/22/2020 03:23:58 PM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\O_PO4_UNKNOWN\2020\04292020_PORTHO.pho..



Correlation Coefficient r2 = 0.99995

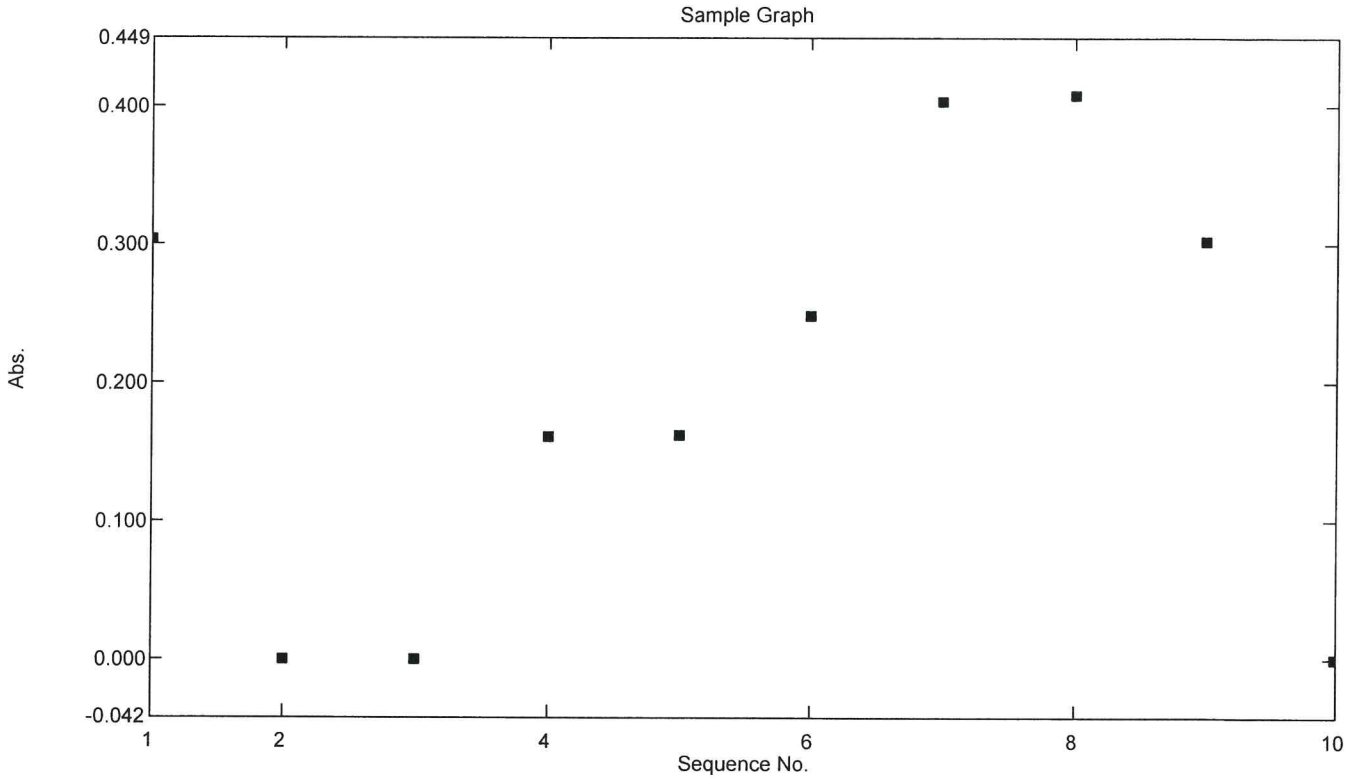
Standard Table

	Sample ID	Type	Ex	Conc	WL880.0	Wgt.Facto	Comments
1	STD1	Standard		0.000	-0.001	1.000	
2	STD2	Standard		0.010	0.006	1.000	
3	STD3	Standard		0.025	0.013	1.000	
4	STD4	Standard		0.125	0.077	1.000	
5	STD5	Standard		0.250	0.155	1.000	
6	STD6	Standard		0.500	0.319	1.000	
7	STD7	Standard		1.000	0.633	1.000	
8							

Sample Table Report

05/22/2020 03:23:56 PM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\O_PO4_UNKNOWN\2020\04292020_PORTHO.pho..



Sample Table

	Sample ID	Type	Ex	Conc	WL880.0	Comments
1	CCV	Unknown		0.479	0.303	313103401 WC-14
2	CCB	Unknown		0.002	-0.000	
3	MBLK	Unknown		0.002	-0.001	313104309 WC-11
4	LCS	Unknown		0.255	0.160	313103402 WC-14
5	LCSD	Unknown		0.257	0.161	
6	20041130.01	Unknown		0.392	0.247	PF-5X,1:03PM
7	20041130.01MS	Unknown		0.637	0.403	PF-5X,1;04PM
8	20041130.01MSD	Unknown		0.645	0.408	PF-5X,1:05PM
9	CCV2	Unknown		0.479	0.302	
10	CCB2	Unknown		0.002	-0.001	
11						

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www.alsglobal.com

WorkOrder: HS20050176

Longhorn GW Treatment Plant Monthly Effluent Samples

Bhate Environmental Associates, Inc.

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

04-Jun-2020

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

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  - LH18/24-SP650_050520_BIX
  - Trip Blank
  - Weight/Volume Log
  - Dates Report
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Form 5A - ICPMS05_361332 MS
Form 5B - ICPMS05_361332 PDS
Form 7 - ICPMS05_361332 LCS
Form 8 - ICPMS05_361332 SD
HS20050176 WC CR

HS20050176

ALS WO# HS20050176

HS20050176 Longhorn GW Treatment Plant Monthly Effluent Samples Final

ALS WO# HS20050176

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T: +1 281 530 5656
F: +1 281 530 5887

May 21, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20050176**

Laboratory Results for: **Longhorn GW Treatment Plant Monthly Effluent Samples**

Dear Marcia,

ALS Environmental received 3 sample(s) on May 06, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

ALS Houston, US Date: 21-May-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
Work Order: HS20050176

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20050176-01	LH18/24-SP650_050520	Water		05-May-2020 14:00	06-May-2020 09:00	☐
HS20050176-02	LH18/24-SP650_050520_BIX	Water		05-May-2020 14:00	06-May-2020 09:00	☐
HS20050176-03	Trip Blank	Water	CG-041420-11	05-May-2020 14:00	06-May-2020 09:00	☐

ALS Houston, US Date: 21-May-20

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
Work Order: HS20050176

Work Order Comments

• Analysis of Perchlorate was performed by ALS Houston TX, High Resolution. Laboratory. Final report attached

GCMS Semivolatiles by Method SW8270SIM

Batch ID: 153402

Sample ID: LH18/24-SP650_050520 (HS20050176-01)

• The surrogate recoveries could not be determined due to dilution below the calibration range.

Sample ID: MBLK-153402

• One or more surrogate recoveries were above the upper control limits. No target analytes were detected in the sample. The high surrogate recoveries did not impact the non-detect results for target analytes.

Sample ID: LCS/LCSD-153402

• An LCS/LCSD was performed as batch quality control.

GCMS Volatiles by Method SW8260

Batch ID: R361200

Sample ID: LH18/24-SP650_050520 (HS20050176-01MSD)

• MS/MSD RPD recovered above the RPD limits for 1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene, Naphthalene

Metals by Method SW6020

Batch ID: 153375

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method SW7196

Batch ID: R361188

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

ALS Houston, US Date: 21-May-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Monthly Effluent Samples WorkOrder:HS20050176
Sample ID: LH18/24-SP650_050520 Lab ID:HS20050176-01
Collection Date: 05-May-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	06-May-2020 16:21
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	06-May-2020 16:21
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	06-May-2020 16:21
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	06-May-2020 16:21
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	06-May-2020 16:21
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	06-May-2020 16:21
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	UG/L	1	06-May-2020 16:21
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	06-May-2020 16:21
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	06-May-2020 16:21
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	06-May-2020 16:21
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	06-May-2020 16:21
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	06-May-2020 16:21
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	06-May-2020 16:21
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	06-May-2020 16:21
1,2-Dichloroethane	**0.94**	J	**0.20**	**0.50**	**1.0**	**UG/L**	1	06-May-2020 16:21
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	06-May-2020 16:21
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	06-May-2020 16:21
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	06-May-2020 16:21
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	06-May-2020 16:21
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	06-May-2020 16:21
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	06-May-2020 16:21
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	06-May-2020 16:21
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	06-May-2020 16:21
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	06-May-2020 16:21
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	06-May-2020 16:21
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	06-May-2020 16:21
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	06-May-2020 16:21
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	06-May-2020 16:21
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	06-May-2020 16:21
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	06-May-2020 16:21
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	06-May-2020 16:21
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	06-May-2020 16:21
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	06-May-2020 16:21
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	06-May-2020 16:21
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	06-May-2020 16:21
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	06-May-2020 16:21
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	06-May-2020 16:21
Chloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	06-May-2020 16:21
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	06-May-2020 16:21

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 21-May-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Monthly Effluent Samples WorkOrder:HS20050176
Sample ID: LH18/24-SP650_050520 Lab ID:HS20050176-01
Collection Date: 05-May-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C		**Method:SW8260**						Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	06-May-2020 16:21
cis-1,2-Dichloroethene	**21**		**0.20**	**0.50**	**1.0**	**UG/L**	1	06-May-2020 16:21
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	06-May-2020 16:21
Dibromochloromethane	1.0	U	0.30	1.0	1.0	UG/L	1	06-May-2020 16:21
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	06-May-2020 16:21
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	06-May-2020 16:21
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	06-May-2020 16:21
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	06-May-2020 16:21
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	06-May-2020 16:21
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	06-May-2020 16:21
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	06-May-2020 16:21
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	06-May-2020 16:21
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	06-May-2020 16:21
Naphthalene	1.0	U	0.30	1.0	1.0	UG/L	1	06-May-2020 16:21
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	06-May-2020 16:21
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	06-May-2020 16:21
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	06-May-2020 16:21
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	06-May-2020 16:21
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	06-May-2020 16:21
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	06-May-2020 16:21
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	06-May-2020 16:21
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	06-May-2020 16:21
Trichloroethene	**3.8**		**0.20**	**0.50**	**1.0**	**UG/L**	1	06-May-2020 16:21
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	06-May-2020 16:21
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	06-May-2020 16:21
Surr: 1,2-Dichloroethane-d4	*92.1*			**0**	*81-118*	*%REC*	*1*	*06-May-2020 16:21*
Surr: 4-Bromofluorobenzene	*93.8*			**0**	*85-114*	*%REC*	*1*	*06-May-2020 16:21*
Surr: Dibromofluoromethane	*90.7*			**0**	*80-119*	*%REC*	*1*	*06-May-2020 16:21*
Surr: Toluene-d8	*106*			**0**	*89-112*	*%REC*	*1*	*06-May-2020 16:21*
SEMIVOLATILES SIM		**Method:SW8270SIM**				Prep:SW3510 / 11-May-2020		Analyst: ACN
1,4-Dioxane	**34**	a	**1.0**	**0**	**1.0**	**ug/L**	100	14-May-2020 17:53
Surr: 2-Fluorobiphenyl	*0*	*S*		0	*40-140*	*%REC*	*100*	*14-May-2020 17:53*
Surr: 4-Terphenyl-d14	*0*	*S*		0	*40-140*	*%REC*	*100*	*14-May-2020 17:53*
Surr: Nitrobenzene-d5	*0*	*S*		0	*40-140*	*%REC*	*100*	*14-May-2020 17:53*
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 08-May-2020		Analyst: JC
Barium	**0.0644**		**0.00190**	**0.00250**	**0.00500**	**mg/L**	1	11-May-2020 14:56
Lead	0.00100	U	0.000600	0.00100	0.00500	mg/L	1	11-May-2020 14:56
Selenium	0.00250	U	0.00110	0.00250	0.00500	mg/L	1	11-May-2020 14:56
Silver	0.000500	U	0.000200	0.000500	0.00500	mg/L	1	11-May-2020 14:56

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 21-May-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder:HS20050176
Sample ID: LH18/24-SP650_050520
Lab ID:HS20050176-01
Collection Date: 05-May-2020 14:00
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
HEXAVALENT CHROMIUM BY SW7196A		**Method:SW7196**						Analyst: TH
Chromium, Hexavalent	0.0100	U	0.00600	0.0100	0.0100	mg/L	1	06-May-2020 13:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 21-May-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**

Project: Longhorn GW Treatment Plant Monthly Effluent Samples WorkOrder:HS20050176

Sample ID: LH18/24-SP650_050520_BIX Lab ID:HS20050176-02

Collection Date: 05-May-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	21-May-2020 10:37

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 21-May-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**
Project: Longhorn GW Treatment Plant Monthly Effluent Samples WorkOrder:HS20050176
Sample ID: Trip Blank Lab ID:HS20050176-03
Collection Date: 05-May-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
1,1,1,2-Tetrachloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	06-May-2020 15:57
1,1,1-Trichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	06-May-2020 15:57
1,1,2,2-Tetrachloroethane	1.0	U	0.50	1.0	1.0	UG/L	1	06-May-2020 15:57
1,1,2-Trichloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	06-May-2020 15:57
1,1-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	06-May-2020 15:57
1,1-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	06-May-2020 15:57
1,1-Dichloropropene	1.0	U	0.30	1.0	1.0	UG/L	1	06-May-2020 15:57
1,2,3-Trichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	06-May-2020 15:57
1,2,3-Trichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	06-May-2020 15:57
1,2,4-Trichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	06-May-2020 15:57
1,2,4-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	06-May-2020 15:57
1,2-Dibromo-3-chloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	06-May-2020 15:57
1,2-Dibromoethane	0.50	U	0.20	0.50	1.0	UG/L	1	06-May-2020 15:57
1,2-Dichlorobenzene	1.0	U	0.50	1.0	1.0	UG/L	1	06-May-2020 15:57
1,2-Dichloroethane	0.50	U	0.20	0.50	1.0	UG/L	1	06-May-2020 15:57
1,2-Dichloropropane	1.0	U	0.50	1.0	1.0	UG/L	1	06-May-2020 15:57
1,3,5-Trimethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	06-May-2020 15:57
1,3-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	06-May-2020 15:57
1,3-Dichloropropane	1.0	U	0.30	1.0	1.0	UG/L	1	06-May-2020 15:57
1,4-Dichlorobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	06-May-2020 15:57
2,2-Dichloropropane	0.50	U	0.20	0.50	1.0	UG/L	1	06-May-2020 15:57
2-Butanone	1.0	U	0.50	1.0	2.0	UG/L	1	06-May-2020 15:57
2-Chlorotoluene	1.0	U	0.30	1.0	1.0	UG/L	1	06-May-2020 15:57
2-Hexanone	2.0	U	1.0	2.0	2.0	UG/L	1	06-May-2020 15:57
4-Chlorotoluene	1.0	U	0.40	1.0	1.0	UG/L	1	06-May-2020 15:57
4-Isopropyltoluene	1.0	U	0.30	1.0	1.0	UG/L	1	06-May-2020 15:57
4-Methyl-2-pentanone	2.0	U	0.70	2.0	2.0	UG/L	1	06-May-2020 15:57
Acetone	1.0	U	0.40	1.0	2.0	UG/L	1	06-May-2020 15:57
Benzene	0.50	U	0.20	0.50	1.0	UG/L	1	06-May-2020 15:57
Bromobenzene	1.0	U	0.40	1.0	1.0	UG/L	1	06-May-2020 15:57
Bromochloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	06-May-2020 15:57
Bromodichloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	06-May-2020 15:57
Bromoform	1.0	U	0.40	1.0	1.0	UG/L	1	06-May-2020 15:57
Bromomethane	1.0	U	0.40	1.0	1.0	UG/L	1	06-May-2020 15:57
Carbon disulfide	1.0	U	0.60	1.0	2.0	UG/L	1	06-May-2020 15:57
Carbon tetrachloride	1.0	U	0.50	1.0	1.0	UG/L	1	06-May-2020 15:57
Chlorobenzene	1.0	U	0.30	1.0	1.0	UG/L	1	06-May-2020 15:57
Chloroethane	1.0	U	0.30	1.0	1.0	UG/L	1	06-May-2020 15:57
Chloroform	0.50	U	0.20	0.50	1.0	UG/L	1	06-May-2020 15:57

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 21-May-20

Client: Bhate Environmental Associates, Inc.
ANALYTICAL REPORT
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder:HS20050176
Sample ID: Trip Blank
Lab ID:HS20050176-03
Collection Date: 05-May-2020 14:00
Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES ORGANICS BY METHOD 8260C	**Method:SW8260**							Analyst: PC
Chloromethane	0.50	U	0.20	0.50	1.0	UG/L	1	06-May-2020 15:57
cis-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	06-May-2020 15:57
cis-1,3-Dichloropropene	0.50	U	0.10	0.50	1.0	UG/L	1	06-May-2020 15:57
Dibromochloromethane	1.0	U	0.30	1.0	1.0	UG/L	1	06-May-2020 15:57
Dibromomethane	0.50	U	0.20	0.50	1.0	UG/L	1	06-May-2020 15:57
Dichlorodifluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	06-May-2020 15:57
Ethylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	06-May-2020 15:57
Hexachlorobutadiene	1.0	U	1.0	1.0	1.0	UG/L	1	06-May-2020 15:57
Isopropylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	06-May-2020 15:57
m,p-Xylene	1.0	U	0.50	1.0	2.0	UG/L	1	06-May-2020 15:57
Methylene chloride	1.0	U	0.40	1.0	2.0	UG/L	1	06-May-2020 15:57
n-Butylbenzene	1.0	U	0.40	1.0	1.0	UG/L	1	06-May-2020 15:57
n-Propylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	06-May-2020 15:57
Naphthalene	1.0	U	0.30	1.0	1.0	UG/L	1	06-May-2020 15:57
o-Xylene	1.0	U	0.30	1.0	1.0	UG/L	1	06-May-2020 15:57
sec-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	06-May-2020 15:57
Styrene	1.0	U	0.30	1.0	1.0	UG/L	1	06-May-2020 15:57
tert-Butylbenzene	1.0	U	0.30	1.0	1.0	UG/L	1	06-May-2020 15:57
Tetrachloroethene	1.0	U	0.30	1.0	1.0	UG/L	1	06-May-2020 15:57
Toluene	0.50	U	0.20	0.50	1.0	UG/L	1	06-May-2020 15:57
trans-1,2-Dichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	06-May-2020 15:57
trans-1,3-Dichloropropene	0.50	U	0.20	0.50	1.0	UG/L	1	06-May-2020 15:57
Trichloroethene	0.50	U	0.20	0.50	1.0	UG/L	1	06-May-2020 15:57
Trichlorofluoromethane	1.0	U	0.30	1.0	1.0	UG/L	1	06-May-2020 15:57
Vinyl chloride	0.50	U	0.20	0.50	1.0	UG/L	1	06-May-2020 15:57
Surr: 1,2-Dichloroethane-d4	*91.8*			**0**	*81-118*	*%REC*	*1*	*06-May-2020 15:57*
Surr: 4-Bromofluorobenzene	*91.0*			**0**	*85-114*	*%REC*	*1*	*06-May-2020 15:57*
Surr: Dibromofluoromethane	*90.8*			**0**	*80-119*	*%REC*	*1*	*06-May-2020 15:57*
Surr: Toluene-d8	*107*			**0**	*89-112*	*%REC*	*1*	*06-May-2020 15:57*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Weight / Prep Log

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20050176

Batch ID: 153375 **Start Date:** 08 May 2020 09:30 **End Date:** 08 May 2020 13:30
Method: WATER - SW3010A **Prep Code:** 3010A

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20050176-01		10 (mL)	10 (mL)	1

Batch ID: 153402 **Start Date:** 11 May 2020 07:00 **End Date:** 11 May 2020 12:30
Method: SV AQ SEP FUN EXTRACT-LOWLEV - 3510C **Prep Code:** 3510_B_SIM

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20050176-01	1	1000 (mL)	1 (mL)	0.001

ALS Houston, US Date: 21-May-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20050176

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 153375 (0)	**Test Name :** METALS BY ICPMS BY SW6020A				**Matrix:** Water	
HS20050176-01	LH18/24-SP650_050520	05 May 2020 14:00		08 May 2020 13:30	11 May 2020 14:56	1
Batch ID: 153402 (0)	**Test Name :** SEMIVOLATILES SIM				**Matrix:** Water	
HS20050176-01	LH18/24-SP650_050520	05 May 2020 14:00		11 May 2020 11:44	14 May 2020 17:53	100
Batch ID: R361188 (0)	**Test Name :** HEXAVALENT CHROMIUM BY SW7196A				**Matrix:** Water	
HS20050176-01	LH18/24-SP650_050520	05 May 2020 14:00			06 May 2020 13:30	1
Batch ID: R361200 (0)	**Test Name :** VOLATILES ORGANICS BY METHOD 8260C				**Matrix:** Water	
HS20050176-01	LH18/24-SP650_050520	05 May 2020 14:00			06 May 2020 16:21	1
HS20050176-03	Trip Blank	05 May 2020 14:00			06 May 2020 15:57	1
Batch ID: R361905 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Water	
HS20050176-02	LH18/24-SP650_050520_BIX	05 May 2020 14:00			21 May 2020 10:37	1

ALS Houston, US Date: 21-May-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20050176

QC BATCH REPORT

Batch ID: 153375 (0) **Instrument: ICPMS05** **Method: METALS BY ICPMS BY SW6020A**

MBLK Sample ID: **MBLK-153375** Units: **mg/L** Analysis Date: **11-May-2020 14:51**
Client ID: Run ID: **ICPMS05_361332** SeqNo: **5580067** PrepDate: **08-May-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	0.00250	0.00500								U
Lead	0.00100	0.00500								U
Selenium	0.00250	0.00500								U
Silver	0.000500	0.00500								U

LCS Sample ID: **LCS-153375** Units: **mg/L** Analysis Date: **11-May-2020 14:53**
Client ID: Run ID: **ICPMS05_361332** SeqNo: **5580068** PrepDate: **08-May-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	0.04753	0.00500	0.05	0	95.1	86 - 114				
Lead	0.04531	0.00500	0.05	0	90.6	88 - 115				
Selenium	0.0481	0.00500	0.05	0	96.2	80 - 120				
Silver	0.05004	0.00500	0.05	0	100	85 - 116				

MS Sample ID: **HS20050176-01MS** Units: **mg/L** Analysis Date: **11-May-2020 15:00**
Client ID: **LH18/24-SP650_050520** Run ID: **ICPMS05_361332** SeqNo: **5580071** PrepDate: **08-May-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	0.1113	0.00500	0.05	0.06443	93.7	86 - 114				
Lead	0.04493	0.00500	0.05	0.000183	89.5	88 - 115				
Selenium	0.04955	0.00500	0.05	0.000589	97.9	80 - 120				
Silver	0.04705	0.00500	0.05	-0.000056	94.2	85 - 116				

MSD Sample ID: **HS20050176-01MSD** Units: **mg/L** Analysis Date: **11-May-2020 15:03**
Client ID: **LH18/24-SP650_050520** Run ID: **ICPMS05_361332** SeqNo: **5580072** PrepDate: **08-May-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	0.118	0.00500	0.05	0.06443	107	86 - 114	0.1113	5.87	20	
Lead	0.04828	0.00500	0.05	0.000183	96.2	88 - 115	0.04493	7.21	20	
Selenium	0.05251	0.00500	0.05	0.000589	104	80 - 120	0.04955	5.81	20	
Silver	0.04913	0.00500	0.05	-0.000056	98.4	85 - 116	0.04705	4.33	20	

ALS Houston, US Date: 21-May-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20050176

QC BATCH REPORT

Batch ID: 153375 (0) **Instrument:** ICPMS05 **Method:** METALS BY ICPMS BY SW6020A

PDS Sample ID: **HS20050176-01PDS** Units: **mg/L** Analysis Date: **11-May-2020 15:05**
Client ID: **LH18/24-SP650_050520** Run ID: **ICPMS05_361332** SeqNo: **5580073** PrepDate: **08-May-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	0.1684	0.00500	0.1	0.06443	104	80 - 120				
Lead	0.09596	0.00500	0.1	0.000183	95.8	80 - 120				
Selenium	0.1007	0.00500	0.1	0.000589	100	80 - 120				
Silver	0.09566	0.00500	0.1	-0.000056	95.7	80 - 120				

SD Sample ID: **HS20050176-01SD** Units: **mg/L** Analysis Date: **11-May-2020 14:58**
Client ID: **LH18/24-SP650_050520** Run ID: **ICPMS05_361332** SeqNo: **5580070** PrepDate: **08-May-2020** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Barium	0.06623	0.0250					0.06443	2.79	10	
Lead	0.00500	0.0250					0.000183	0	10	U
Selenium	0.0125	0.0250					0.000589	0	10	U
Silver	0.00250	0.0250					-0.000056	0	10	U

The following samples were analyzed in this batch: HS20050176-01

ALS Houston, US Date: 21-May-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20050176

QC BATCH REPORT

Batch ID: 153402 (0) **Instrument: SV-6** **Method: SEMIVOLATILES SIM**

MBLK Sample ID: **MBLK-153402** Units: **ug/L** Analysis Date: **14-May-2020 16:17**
Client ID: Run ID: **SV-6_361631** SeqNo: **5585959** PrepDate: **11-May-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0	0.010								U
Surr: 2-Fluorobiphenyl	*0.1025*	*0*	*0.08*	*0*	*128*	*40 - 140*				
Surr: 4-Terphenyl-d14	*0.1309*	*0*	*0.08*	*0*	*164*	*40 - 140*				S
Surr: Nitrobenzene-d5	*0.08456*	*0*	*0.08*	*0*	*106*	*40 - 140*				

LCS Sample ID: **LCS-153402** Units: **ug/L** Analysis Date: **14-May-2020 16:36**
Client ID: Run ID: **SV-6_361631** SeqNo: **5585960** PrepDate: **11-May-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0.0991	0.010	0.08	0	124	40 - 140				
Surr: 2-Fluorobiphenyl	*0.08779*	*0*	*0.08*	*0*	*110*	*40 - 140*				
Surr: 4-Terphenyl-d14	*0.08685*	*0*	*0.08*	*0*	*109*	*40 - 140*				
Surr: Nitrobenzene-d5	*0.08407*	*0*	*0.08*	*0*	*105*	*40 - 140*				

LCSD Sample ID: **LCSD-153402** Units: **ug/L** Analysis Date: **14-May-2020 16:56**
Client ID: Run ID: **SV-6_361631** SeqNo: **5585961** PrepDate: **11-May-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,4-Dioxane	0.108	0.010	0.08	0	135	40 - 140	0.0991	8.59	20	
Surr: 2-Fluorobiphenyl	*0.08316*	*0*	*0.08*	*0*	*104*	*40 - 140*	*0.08779*	*5.41*	*20*	
Surr: 4-Terphenyl-d14	*0.09304*	*0*	*0.08*	*0*	*116*	*40 - 140*	*0.08685*	*6.88*	*20*	
Surr: Nitrobenzene-d5	*0.07856*	*0*	*0.08*	*0*	*98.2*	*40 - 140*	*0.08407*	*6.78*	*20*	

The following samples were analyzed in this batch: HS20050176-01

ALS Houston, US Date: 21-May-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20050176

QC BATCH REPORT

Batch ID: R361200 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-200506** Units: **UG/L** Analysis Date: **06-May-2020 15:09**
Client ID: Run ID: **VOA6_361200** SeqNo: **5577457** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	1.0	1.0								U
1,1,1-Trichloroethane	0.50	1.0								U
1,1,2,2-Tetrachloroethane	1.0	1.0								U
1,1,2-Trichloroethane	1.0	1.0								U
1,1-Dichloroethane	0.50	1.0								U
1,1-Dichloroethene	0.50	1.0								U
1,1-Dichloropropene	1.0	1.0								U
1,2,3-Trichlorobenzene	1.0	1.0								U
1,2,3-Trichloropropane	1.0	1.0								U
1,2,4-Trichlorobenzene	1.0	1.0								U
1,2,4-Trimethylbenzene	1.0	1.0								U
1,2-Dibromo-3-chloropropane	0.50	1.0								U
1,2-Dibromoethane	0.50	1.0								U
1,2-Dichlorobenzene	1.0	1.0								U
1,2-Dichloroethane	0.50	1.0								U
1,2-Dichloropropane	1.0	1.0								U
1,3,5-Trimethylbenzene	1.0	1.0								U
1,3-Dichlorobenzene	1.0	1.0								U
1,3-Dichloropropane	1.0	1.0								U
1,4-Dichlorobenzene	1.0	1.0								U
2,2-Dichloropropane	0.50	1.0								U
2-Butanone	1.0	2.0								U
2-Chlorotoluene	1.0	1.0								U
2-Hexanone	2.0	2.0								U
4-Chlorotoluene	1.0	1.0								U
4-Isopropyltoluene	1.0	1.0								U
4-Methyl-2-pentanone	2.0	2.0								U
Acetone	1.0	2.0								U
Benzene	0.50	1.0								U
Bromobenzene	1.0	1.0								U
Bromochloromethane	0.50	1.0								U
Bromodichloromethane	0.50	1.0								U
Bromoform	1.0	1.0								U
Bromomethane	1.0	1.0								U

ALS Houston, US Date: 21-May-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20050176

QC BATCH REPORT

Batch ID: R361200 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MBLK Sample ID: **VBLKW-200506** Units: **UG/L** Analysis Date: **06-May-2020 15:09**
Client ID: Run ID: **VOA6_361200** SeqNo: **5577457** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	1.0	2.0								U
Carbon tetrachloride	1.0	1.0								U
Chlorobenzene	1.0	1.0								U
Chloroethane	1.0	1.0								U
Chloroform	0.50	1.0								U
Chloromethane	0.50	1.0								U
cis-1,2-Dichloroethene	0.50	1.0								U
cis-1,3-Dichloropropene	0.50	1.0								U
Dibromochloromethane	1.0	1.0								U
Dibromomethane	0.50	1.0								U
Dichlorodifluoromethane	1.0	1.0								U
Ethylbenzene	1.0	1.0								U
Hexachlorobutadiene	1.0	1.0								U
Isopropylbenzene	1.0	1.0								U
m,p-Xylene	1.0	2.0								U
Methylene chloride	1.0	2.0								U
Naphthalene	1.0	1.0								U
n-Butylbenzene	1.0	1.0								U
n-Propylbenzene	1.0	1.0								U
o-Xylene	1.0	1.0								U
sec-Butylbenzene	1.0	1.0								U
Styrene	1.0	1.0								U
tert-Butylbenzene	1.0	1.0								U
Tetrachloroethene	1.0	1.0								U
Toluene	0.50	1.0								U
trans-1,2-Dichloroethene	0.50	1.0								U
trans-1,3-Dichloropropene	0.50	1.0								U
Trichloroethene	0.50	1.0								U
Trichlorofluoromethane	1.0	1.0								U
Vinyl chloride	0.50	1.0								U
Surr: 1,2-Dichloroethane-d4	*45.07*	*1.0*	*50*	*0*	*90.1*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*47.85*	*1.0*	*50*	*0*	*95.7*	*85 - 114*				
Surr: Dibromofluoromethane	*44.79*	*1.0*	*50*	*0*	*89.6*	*80 - 119*				
Surr: Toluene-d8	*52.76*	*1.0*	*50*	*0*	*106*	*89 - 112*				

ALS Houston, US Date: 21-May-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20050176

QC BATCH REPORT

Batch ID: R361200 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-200506** Units: **UG/L** Analysis Date: **06-May-2020 15:33**
Client ID: Run ID: **VOA6_361200** SeqNo: **5577458** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	20.38	1.0	20	0	102	78 - 124				
1,1,1-Trichloroethane	19.88	1.0	20	0	99.4	74 - 131				
1,1,2,2-Tetrachloroethane	19.53	1.0	20	0	97.6	71 - 121				
1,1,2-Trichloroethane	20.83	1.0	20	0	104	80 - 119				
1,1-Dichloroethane	20.15	1.0	20	0	101	77 - 125				
1,1-Dichloroethene	21.49	1.0	20	0	107	71 - 131				
1,1-Dichloropropene	19.14	1.0	20	0	95.7	78 - 125				
1,2,3-Trichlorobenzene	15.13	1.0	20	0	75.6	69 - 129				
1,2,3-Trichloropropane	20.51	1.0	20	0	103	73 - 122				
1,2,4-Trichlorobenzene	16.57	1.0	20	0	82.9	69 - 130				
1,2,4-Trimethylbenzene	18.07	1.0	20	0	90.4	76 - 124				
1,2-Dibromo-3-chloropropane	20.8	1.0	20	0	104	62 - 128				
1,2-Dibromoethane	21.57	1.0	20	0	108	77 - 121				
1,2-Dichlorobenzene	19.17	1.0	20	0	95.8	80 - 119				
1,2-Dichloroethane	20.31	1.0	20	0	102	73 - 128				
1,2-Dichloropropane	20.61	1.0	20	0	103	78 - 122				
1,3,5-Trimethylbenzene	17.56	1.0	20	0	87.8	75 - 124				
1,3-Dichlorobenzene	19.02	1.0	20	0	95.1	80 - 119				
1,3-Dichloropropane	20.15	1.0	20	0	101	80 - 119				
1,4-Dichlorobenzene	18.36	1.0	20	0	91.8	79 - 118				
2,2-Dichloropropane	20.08	1.0	20	0	100	60 - 139				
2-Butanone	38.08	2.0	40	0	95.2	56 - 143				
2-Chlorotoluene	18.49	1.0	20	0	92.5	79 - 122				
2-Hexanone	40.45	2.0	40	0	101	57 - 139				
4-Chlorotoluene	18.45	1.0	20	0	92.3	78 - 122				
4-Isopropyltoluene	16.73	1.0	20	0	83.7	77 - 127				
4-Methyl-2-pentanone	39.68	2.0	40	0	99.2	67 - 130				
Acetone	45.18	2.0	40	0	113	39 - 160				
Benzene	21.12	1.0	20	0	106	79 - 120				
Bromobenzene	20.48	1.0	20	0	102	80 - 120				
Bromochloromethane	20.64	1.0	20	0	103	78 - 123				
Bromodichloromethane	21.2	1.0	20	0	106	79 - 125				
Bromoform	19.28	1.0	20	0	96.4	66 - 130				
Bromomethane	23.23	1.0	20	0	116	53 - 141				

ALS Houston, US Date: 21-May-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20050176

QC BATCH REPORT

Batch ID: R361200 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

LCS Sample ID: **VLCSW-200506** Units: **UG/L** Analysis Date: **06-May-2020 15:33**
Client ID: Run ID: **VOA6_361200** SeqNo: **5577458** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	40.43	2.0	40	0	101	64 - 133				
Carbon tetrachloride	18.34	1.0	20	0	91.7	72 - 136				
Chlorobenzene	20.02	1.0	20	0	100	82 - 118				
Chloroethane	19.94	1.0	20	0	99.7	60 - 138				
Chloroform	20.86	1.0	20	0	104	79 - 124				
Chloromethane	18.53	1.0	20	0	92.6	50 - 139				
cis-1,2-Dichloroethene	21.09	1.0	20	0	105	78 - 123				
cis-1,3-Dichloropropene	20.83	1.0	20	0	104	75 - 124				
Dibromochloromethane	20.58	1.0	20	0	103	74 - 126				
Dibromomethane	20.75	1.0	20	0	104	79 - 123				
Dichlorodifluoromethane	15.63	1.0	20	0	78.2	32 - 152				
Ethylbenzene	19.72	1.0	20	0	98.6	79 - 121				
Hexachlorobutadiene	17.11	1.0	20	0	85.5	66 - 134				
Isopropylbenzene	18.8	1.0	20	0	94.0	72 - 131				
m,p-Xylene	38.72	2.0	40	0	96.8	80 - 121				
Methylene chloride	20.26	2.0	20	0	101	74 - 124				
Naphthalene	15.9	1.0	20	0	79.5	61 - 128				
n-Butylbenzene	15.72	1.0	20	0	78.6	75 - 128				
n-Propylbenzene	17.03	1.0	20	0	85.2	76 - 126				
o-Xylene	19.88	1.0	20	0	99.4	78 - 122				
sec-Butylbenzene	16.11	1.0	20	0	80.5	77 - 126				
Styrene	19.72	1.0	20	0	98.6	78 - 123				
tert-Butylbenzene	16.74	1.0	20	0	83.7	78 - 124				
Tetrachloroethene	18.95	1.0	20	0	94.7	74 - 129				
Toluene	20.03	1.0	20	0	100	80 - 121				
trans-1,2-Dichloroethene	21.37	1.0	20	0	107	75 - 124				
trans-1,3-Dichloropropene	21.48	1.0	20	0	107	73 - 127				
Trichloroethene	19.89	1.0	20	0	99.4	79 - 123				
Trichlorofluoromethane	19.82	1.0	20	0	99.1	65 - 141				
Vinyl chloride	18.96	1.0	20	0	94.8	58 - 137				
Surr: 1,2-Dichloroethane-d4	*52.29*	*1.0*	*50*	*0*	*105*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*52.75*	*1.0*	*50*	*0*	*106*	*85 - 114*				
Surr: Dibromofluoromethane	*51.25*	*1.0*	*50*	*0*	*103*	*80 - 119*				
Surr: Toluene-d8	*51.12*	*1.0*	*50*	*0*	*102*	*89 - 112*				

ALS Houston, US Date: 21-May-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20050176

QC BATCH REPORT

Batch ID: R361200 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20050176-01MS** Units: **UG/L** Analysis Date: **06-May-2020 16:45**
Client ID: **LH18/24-SP650_050520** Run ID: **VOA6_361200** SeqNo: **5577461** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	20.99	1.0	20	0	105	78 - 124				
1,1,1-Trichloroethane	19.32	1.0	20	0	96.6	74 - 131				
1,1,2,2-Tetrachloroethane	19.49	1.0	20	0	97.4	71 - 121				
1,1,2-Trichloroethane	19.9	1.0	20	0	99.5	80 - 119				
1,1-Dichloroethane	18.11	1.0	20	0	90.6	77 - 125				
1,1-Dichloroethene	21.31	1.0	20	0	107	71 - 131				
1,1-Dichloropropene	20.34	1.0	20	0	102	78 - 125				
1,2,3-Trichlorobenzene	13.94	1.0	20	0	69.7	69 - 129				
1,2,3-Trichloropropane	19.9	1.0	20	0	99.5	73 - 122				
1,2,4-Trichlorobenzene	14.87	1.0	20	0	74.3	69 - 130				
1,2,4-Trimethylbenzene	21.45	1.0	20	0	107	76 - 124				
1,2-Dibromo-3-chloropropane	19.32	1.0	20	0	96.6	62 - 128				
1,2-Dibromoethane	20.92	1.0	20	0	105	77 - 121				
1,2-Dichlorobenzene	20.27	1.0	20	0	101	80 - 119				
1,2-Dichloroethane	20.34	1.0	20	0.9404	97.0	73 - 128				
1,2-Dichloropropane	19.46	1.0	20	0	97.3	78 - 122				
1,3,5-Trimethylbenzene	21.66	1.0	20	0	108	75 - 124				
1,3-Dichlorobenzene	20.72	1.0	20	0	104	80 - 119				
1,3-Dichloropropane	20.02	1.0	20	0	100	80 - 119				
1,4-Dichlorobenzene	19.88	1.0	20	0	99.4	79 - 118				
2,2-Dichloropropane	18.72	1.0	20	0	93.6	60 - 139				
2-Butanone	31.52	2.0	40	0	78.8	56 - 143				
2-Chlorotoluene	20.84	1.0	20	0	104	79 - 122				
2-Hexanone	38.04	2.0	40	0	95.1	57 - 139				
4-Chlorotoluene	21.52	1.0	20	0	108	78 - 122				
4-Isopropyltoluene	22.43	1.0	20	0	112	77 - 127				
4-Methyl-2-pentanone	38.73	2.0	40	0	96.8	67 - 130				
Acetone	32.52	2.0	40	0	81.3	39 - 160				
Benzene	20.49	1.0	20	0	102	79 - 120				
Bromobenzene	20.67	1.0	20	0	103	80 - 120				
Bromochloromethane	18.1	1.0	20	0	90.5	78 - 123				
Bromodichloromethane	19.66	1.0	20	0	98.3	79 - 125				
Bromoform	19.31	1.0	20	0	96.5	66 - 130				
Bromomethane	18.95	1.0	20	0	94.8	53 - 141				

ALS Houston, US Date: 21-May-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20050176

QC BATCH REPORT

Batch ID: R361200 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MS Sample ID: **HS20050176-01MS** Units: **UG/L** Analysis Date: **06-May-2020 16:45**
Client ID: **LH18/24-SP650_050520** Run ID: **VOA6_361200** SeqNo: **5577461** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Carbon disulfide	45.93	2.0	40	0	115	64 - 133				
Carbon tetrachloride	20.29	1.0	20	0	101	72 - 136				
Chlorobenzene	20.97	1.0	20	0	105	82 - 118				
Chloroethane	17.9	1.0	20	0	89.5	60 - 138				
Chloroform	18.26	1.0	20	0	91.3	79 - 124				
Chloromethane	16.48	1.0	20	0	82.4	50 - 139				
cis-1,2-Dichloroethene	39.02	1.0	20	20.84	90.9	78 - 123				
cis-1,3-Dichloropropene	19.36	1.0	20	0	96.8	75 - 124				
Dibromochloromethane	20.16	1.0	20	0	101	74 - 126				
Dibromomethane	19.11	1.0	20	0	95.6	79 - 123				
Dichlorodifluoromethane	15.27	1.0	20	0	76.4	32 - 152				
Ethylbenzene	21.88	1.0	20	0	109	79 - 121				
Hexachlorobutadiene	18.95	1.0	20	0	94.7	66 - 134				
Isopropylbenzene	23.03	1.0	20	0	115	72 - 131				
m,p-Xylene	44.34	2.0	40	0	111	80 - 121				
Methylene chloride	17.71	2.0	20	0	88.5	74 - 124				
Naphthalene	14.66	1.0	20	0	73.3	61 - 128				
n-Butylbenzene	21.96	1.0	20	0	110	75 - 128				
n-Propylbenzene	21.52	1.0	20	0	108	76 - 126				
o-Xylene	23.05	1.0	20	0	115	78 - 122				
sec-Butylbenzene	21.91	1.0	20	0	110	77 - 126				
Styrene	22.85	1.0	20	0	114	78 - 123				
tert-Butylbenzene	21.85	1.0	20	0	109	78 - 124				
Tetrachloroethene	22.18	1.0	20	0	111	74 - 129				
Toluene	21.49	1.0	20	0	107	80 - 121				
trans-1,2-Dichloroethene	19.72	1.0	20	0	98.6	75 - 124				
trans-1,3-Dichloropropene	19.56	1.0	20	0	97.8	73 - 127				
Trichloroethene	24.8	1.0	20	3.775	105	79 - 123				
Trichlorofluoromethane	19.08	1.0	20	0	95.4	65 - 141				
Vinyl chloride	17.01	1.0	20	0	85.1	58 - 137				
Surr: 1,2-Dichloroethane-d4	*45.2*	*1.0*	*50*	*0*	*90.4*	*81 - 118*				
Surr: 4-Bromofluorobenzene	*51.74*	*1.0*	*50*	*0*	*103*	*85 - 114*				
Surr: Dibromofluoromethane	*44.66*	*1.0*	*50*	*0*	*89.3*	*80 - 119*				
Surr: Toluene-d8	*51.94*	*1.0*	*50*	*0*	*104*	*89 - 112*				

ALS Houston, US Date: 21-May-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20050176

QC BATCH REPORT

Batch ID: R361200 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20050176-01MSD** Units: **UG/L** Analysis Date: **06-May-2020 17:09**
Client ID: **LH18/24-SP650_050520** Run ID: **VOA6_361200** SeqNo: **5577462** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	21.05	1.0	20	0	105	78 - 124	20.99	0.287	20	
1,1,1-Trichloroethane	18.76	1.0	20	0	93.8	74 - 131	19.32	2.92	20	
1,1,2,2-Tetrachloroethane	19.56	1.0	20	0	97.8	71 - 121	19.49	0.384	20	
1,1,2-Trichloroethane	20.52	1.0	20	0	103	80 - 119	19.9	3.09	20	
1,1-Dichloroethane	17.46	1.0	20	0	87.3	77 - 125	18.11	3.65	20	
1,1-Dichloroethene	19.45	1.0	20	0	97.2	71 - 131	21.31	9.16	20	
1,1-Dichloropropene	19.6	1.0	20	0	98.0	78 - 125	20.34	3.74	20	
1,2,3-Trichlorobenzene	20.54	1.0	20	0	103	69 - 129	13.94	38.2	20	R
1,2,3-Trichloropropane	19.93	1.0	20	0	99.7	73 - 122	19.9	0.146	20	
1,2,4-Trichlorobenzene	19.03	1.0	20	0	95.1	69 - 130	14.87	24.6	20	R
1,2,4-Trimethylbenzene	22.95	1.0	20	0	115	76 - 124	21.45	6.78	20	
1,2-Dibromo-3-chloropropane	19.68	1.0	20	0	98.4	62 - 128	19.32	1.85	20	
1,2-Dibromoethane	20.55	1.0	20	0	103	77 - 121	20.92	1.8	20	
1,2-Dichlorobenzene	22.25	1.0	20	0	111	80 - 119	20.27	9.31	20	
1,2-Dichloroethane	20.39	1.0	20	0.9404	97.2	73 - 128	20.34	0.252	20	
1,2-Dichloropropane	19.2	1.0	20	0	96.0	78 - 122	19.46	1.34	20	
1,3,5-Trimethylbenzene	21.09	1.0	20	0	105	75 - 124	21.66	2.66	20	
1,3-Dichlorobenzene	22.96	1.0	20	0	115	80 - 119	20.72	10.3	20	
1,3-Dichloropropane	20.3	1.0	20	0	102	80 - 119	20.02	1.38	20	
1,4-Dichlorobenzene	21.26	1.0	20	0	106	79 - 118	19.88	6.72	20	
2,2-Dichloropropane	17.94	1.0	20	0	89.7	60 - 139	18.72	4.25	20	
2-Butanone	34.13	2.0	40	0	85.3	56 - 143	31.52	7.98	20	
2-Chlorotoluene	20.41	1.0	20	0	102	79 - 122	20.84	2.08	20	
2-Hexanone	38.88	2.0	40	0	97.2	57 - 139	38.04	2.2	20	
4-Chlorotoluene	20.37	1.0	20	0	102	78 - 122	21.52	5.46	20	
4-Isopropyltoluene	23.18	1.0	20	0	116	77 - 127	22.43	3.27	20	
4-Methyl-2-pentanone	39.12	2.0	40	0	97.8	67 - 130	38.73	1	20	
Acetone	30.84	2.0	40	0	77.1	39 - 160	32.52	5.3	20	
Benzene	20.32	1.0	20	0	102	79 - 120	20.49	0.831	20	
Bromobenzene	20.41	1.0	20	0	102	80 - 120	20.67	1.26	20	
Bromochloromethane	17.7	1.0	20	0	88.5	78 - 123	18.1	2.22	20	
Bromodichloromethane	19.88	1.0	20	0	99.4	79 - 125	19.66	1.14	20	
Bromoform	18.74	1.0	20	0	93.7	66 - 130	19.31	2.98	20	
Bromomethane	18.64	1.0	20	0	93.2	53 - 141	18.95	1.67	20	

ALS Houston, US Date: 21-May-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20050176

QC BATCH REPORT

Batch ID: R361200 (0) **Instrument:** VOA6 **Method:** VOLATILES ORGANICS BY METHOD 8260C

MSD Sample ID: **HS20050176-01MSD** Units: **UG/L** Analysis Date: **06-May-2020 17:09**
Client ID: **LH18/24-SP650_050520** Run ID: **VOA6_361200** SeqNo: **5577462** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Carbon disulfide	37.73	2.0	40	0	94.3	64 - 133	45.93	19.6	20	
Carbon tetrachloride	19.93	1.0	20	0	99.6	72 - 136	20.29	1.83	20	
Chlorobenzene	20.64	1.0	20	0	103	82 - 118	20.97	1.59	20	
Chloroethane	16.74	1.0	20	0	83.7	60 - 138	17.9	6.72	20	
Chloroform	18.2	1.0	20	0	91.0	79 - 124	18.26	0.306	20	
Chloromethane	16.08	1.0	20	0	80.4	50 - 139	16.48	2.46	20	
cis-1,2-Dichloroethene	38.57	1.0	20	20.84	88.7	78 - 123	39.02	1.16	20	
cis-1,3-Dichloropropene	19.43	1.0	20	0	97.2	75 - 124	19.36	0.363	20	
Dibromochloromethane	20.82	1.0	20	0	104	74 - 126	20.16	3.23	20	
Dibromomethane	19.02	1.0	20	0	95.1	79 - 123	19.11	0.481	20	
Dichlorodifluoromethane	15.34	1.0	20	0	76.7	32 - 152	15.27	0.452	20	
Ethylbenzene	22.02	1.0	20	0	110	79 - 121	21.88	0.637	20	
Hexachlorobutadiene	22.26	1.0	20	0	111	66 - 134	18.95	16.1	20	
Isopropylbenzene	21.76	1.0	20	0	109	72 - 131	23.03	5.65	20	
m,p-Xylene	43.72	2.0	40	0	109	80 - 121	44.34	1.4	20	
Methylene chloride	17.78	2.0	20	0	88.9	74 - 124	17.71	0.44	20	
Naphthalene	19.3	1.0	20	0	96.5	61 - 128	14.66	27.3	20	R
n-Butylbenzene	23.9	1.0	20	0	119	75 - 128	21.96	8.45	20	
n-Propylbenzene	21.12	1.0	20	0	106	76 - 126	21.52	1.92	20	
o-Xylene	21.91	1.0	20	0	110	78 - 122	23.05	5.04	20	
sec-Butylbenzene	24.11	1.0	20	0	121	77 - 126	21.91	9.56	20	
Styrene	21.27	1.0	20	0	106	78 - 123	22.85	7.19	20	
tert-Butylbenzene	22.56	1.0	20	0	113	78 - 124	21.85	3.17	20	
Tetrachloroethene	22.15	1.0	20	0	111	74 - 129	22.18	0.112	20	
Toluene	21.11	1.0	20	0	106	80 - 121	21.49	1.77	20	
trans-1,2-Dichloroethene	18.69	1.0	20	0	93.4	75 - 124	19.72	5.35	20	
trans-1,3-Dichloropropene	19.71	1.0	20	0	98.6	73 - 127	19.56	0.789	20	
Trichloroethene	24.29	1.0	20	3.775	103	79 - 123	24.8	2.08	20	
Trichlorofluoromethane	18.43	1.0	20	0	92.1	65 - 141	19.08	3.49	20	
Vinyl chloride	16.23	1.0	20	0	81.1	58 - 137	17.01	4.72	20	
Surr: 1,2-Dichloroethane-d4	*44.53*	*1.0*	*50*	*0*	*89.1*	*81 - 118*	*45.2*	*1.5*	*20*	
Surr: 4-Bromofluorobenzene	*48.01*	*1.0*	*50*	*0*	*96.0*	*85 - 114*	*51.74*	*7.48*	*20*	
Surr: Dibromofluoromethane	*44.38*	*1.0*	*50*	*0*	*88.8*	*80 - 119*	*44.66*	*0.624*	*20*	
Surr: Toluene-d8	*52.22*	*1.0*	*50*	*0*	*104*	*89 - 112*	*51.94*	*0.54*	*20*	

ALS Houston, US Date: 21-May-20

Client:	Bhate Environmental Associates, Inc.
Project:	Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder:	HS20050176

QC BATCH REPORT

Batch ID:	**R361200 (0)**	**Instrument:**	**VOA6**	**Method:**	**VOLATILES ORGANICS BY METHOD 8260C**

The following samples were analyzed in this batch: HS20050176-01 HS20050176-03

ALS Houston, US Date: 21-May-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20050176

QC BATCH REPORT

Batch ID: R361188 (0) **Instrument: UV-2450** **Method: HEXAVALENT CHROMIUM BY SW7196A**

MBLK Sample ID: **MBLK-R361188** Units: **mg/L** Analysis Date: **06-May-2020 13:30**
Client ID: Run ID: **UV-2450_361188** SeqNo: **5577350** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.0100	0.0100								U

LCS Sample ID: **LCS-R361188** Units: **mg/L** Analysis Date: **06-May-2020 13:30**
Client ID: Run ID: **UV-2450_361188** SeqNo: **5577349** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.273	0.0100	0.25	0	109	90 - 111				

MS Sample ID: **HS20050177-01MS** Units: **mg/L** Analysis Date: **06-May-2020 13:30**
Client ID: Run ID: **UV-2450_361188** SeqNo: **5577352** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.259	0.0100	0.25	0.006	101	90 - 111				

MSD Sample ID: **HS20050177-01MSD** Units: **mg/L** Analysis Date: **06-May-2020 13:30**
Client ID: Run ID: **UV-2450_361188** SeqNo: **5577351** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.262	0.0100	0.25	0.006	102	90 - 111	0.259	1.15	20	

The following samples were analyzed in this batch: HS20050176-01

ALS Houston, US Date: 21-May-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: **HS20050176**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
Dept of Defense	ANAB L2231 V009	22-Dec-2021
Florida	E87611-28	30-Jun-2020
Kansas	E-10352 2019-2020	31-Jul-2020
Louisiana	03087, 2019-2020	30-Jun-2020
Maryland	343, 2019-2020	30-Jun-2020
North Carolina	624-2020	31-Dec-2020
Oklahoma	2019-141	31-Aug-2020
Texas	T104704231-20-26	30-Apr-2021

ALS Houston, US Date: 21-May-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
Work Order: HS20050176

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20050176-01	LH18/24-SP650_050520	Login	5/6/2020 11:53:31 AM	PMG	EXT053
HS20050176-01	LH18/24-SP650_050520	Login	5/6/2020 11:53:31 AM	PMG	WET134
HS20050176-01	LH18/24-SP650_050520	Login	5/6/2020 11:53:31 AM	PMG	MET063
HS20050176-01	LH18/24-SP650_050520	Login	5/6/2020 11:53:31 AM	PMG	VOA123
HS20050176-02	LH18/24-SP650_050520_BIX	Login	5/6/2020 11:53:31 AM	PMG	Sub
HS20050176-03	Trip Blank	Login	5/6/2020 11:53:31 AM	PMG	VOA123

ALS Houston, US Date: 21-May-20

Sample Receipt Checklist

Work Order ID: HS20050176 **Date/Time Received:** 06-May-2020 09:00

Client Name: Bhate Environmental **Received by:** Asad Chaudhry

Completed By: /S/ Paresh M. Giga (eSignature) 06-May-2020 11:55 (Date/Time) **Reviewed by:** /S/ RJ Modashia (eSignature) 06-May-2020 14:47 (Date/Time)

Matrices: **Water** Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	COC IDs:None
Samplers name present on COC?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	1.4C U/.C	IR25	
Cooler(s)/Kit(s):	43868		
Date/Time sample(s) sent to storage:	5/6/2020 12:10		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes: VOC no-longer 24Hr.TAT per RJ email

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stancliff Rd., Suite 210 Houston, TX 77099 (281) 530 – 5656 ATTN: RJ Modashia

Project: BHATE
LONGHORN ARMY AMMN. PLANT (LHAAP)
GROUNDWATER TREATMENT PLANT (GWTP)
KARNACK, TEXAS

Project No. NWO1312.0150.0 16.0001

Job: GROUNDWATER TREATMENT PLANT MONTHLY EFFLUENT SAMPLES

Prepared By: Scott Beesinger

P.O. Number

HS20050176
Bhate Environmental Associates. Inc.
Longhorn GW Treatment Plant Monthly Effluent Sample

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: VOLATILES	SILVER, SELENIUM, LEAD, BARIUM	HEXAVALENT CHROMIUM	1, 4 - DIOXANE	PERCHLORATE	Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP650_050520	Water	05/05/20 / 14:00		3	X					HCL	
LH18/24-SP650_050520	Water	05/05/20 / 14:00		2			X	X		NONE	
LH18/24-SP650_050520_BIX	Water	05/05/20 / 14:00		1					X	NONE	
LH18/24-SP650_050520	Water	05/05/20 / 14:00		1		X				HNO3	
Trip Blank	Water	05/05/20		2	X					HCL	

Additional Remarks: **24 HR TAT on VOC's. Standard TAT on all other parameters**

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	05/05/20	14:30							AC	5/6/20	09:00

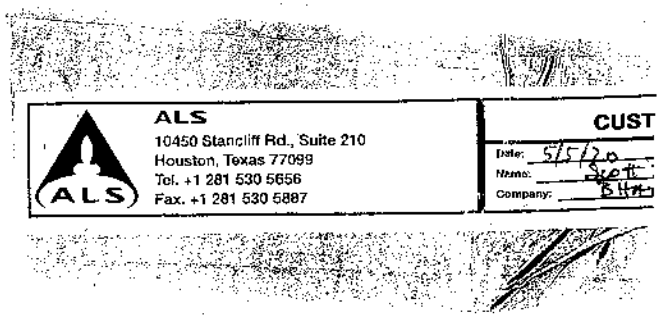
For Lab Use Only

Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition

Remarks:

v/c 1.4 IR#25 cf0.0 43863

(Word) S:\U-ees\Forms\Chain of Custody - BiWeekly



ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

CUST
Date: 5/5/20
Name: Scott
Company: BHA

ODY SEAL
Time: 1430
Seal Broke By:
Date: 5/6/2020

ORIGIN ID:SGRA (308) 537-2450
SCOTT BEESINGER
BHATE ENVIRONMENTAL ASSOCIATES
1203-B EAST GRAND AVE.
PMB202
MARSHALL, TX 75670
UNITED STATES US

SHIP DATE: 07APR20
ACTWGT: 1.00 LB MAN
CAD: 5001307CAFE3211
DIMS: 26x14x14 IN

TO CLIENT SERVICES
ALS LABORATORY GROUP
10450 STANCLIEF ROAD
SUITE 210
HOUSTON TX 77099
(281) 530-5656

J3868

REF: ADDITIONAL BOTTLES - BO 71321 - RJ

RMA:

FedEx Express

E

FedEx
TRK# 0221 1251 0296 2152

WED - 06 MAY 10:30A
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US IAH

May 20, 2020 Service Request No:E2000407

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

Laboratory Results for: HS20050176

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory May 06, 2020
For your reference, these analyses have been assigned our service request number **E2000407.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental



Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental

Certificate of Analysis

ALS Environmental - Houston HRMS
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ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2000407
Project:	HS20050176	**Date Received:**	05/06/20
Sample Matrix:	W		

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier IV. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

One sample was received for analysis at ALS Environmental in Houston on 05/06/20.

The sample was received in good condition and is consistent with the accompanying chain of custody form. The sample was stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2000173: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in addition to a MS/MSD for this extraction batch. MS/MSD performed on an unrelated sample.

DOD Certification is held for the method/matrix/analytes provided in this report.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: ALS Environmental - US **Service Request:**E2000407
Project: HS20050176

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2000407-001	LH18/24-SP650_050520_BIX	5/5/2020	1400

Service Request Summary

Folder #: **E2000407**
Client Name: ALS Environmental - US
Project Name: HS20050176
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 05/06/20
Internal Due Date: 5/20/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20050176
EDD: No EDD Specified

1 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
Location: EHRMS-WIC 3B
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2000407-001	LH18/24-SP650_050520_BIX	Water	05/05/20 1400	**IV**

Service Request Summary

Folder #: **E2000407**
Client Name: ALS Environmental - US
Project Name: HS20050176
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 05/06/20
Internal Due Date: 5/20/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20050176
EDD: No EDD Specified

1 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
Location: EHRMS-WIC 3B
Pressure Gas:

Data Qualifiers

Lab Standard

+	Possible Tedlar bag artifact.
A	TIC is a suspected aldol-condensation product
B	Analyte found in the associated method blank as well as in the sample.
BC	Reported results are not blank corrected.
BH	The back section of the tube yielded higher results than the front.
BT	Results indicated possible breakthrough; back section >=10% front section.
C	Result identification confirmed.
D	Compound identified in an analysis at a secondary dilution factor
D	Spike was diluted out
DE	Reported results are corrected for desorption efficiency.
E	Estimated value. Concentration above calibration range
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
H1	Sample analysis performed past holding time. See case narrative.
H2	Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
H3	Sample was received and analyzed past holding time.
H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
I	Internal standard not within the specified limits. See case narrative.
J	Estimated Value. Concentration found below MRL.
K	A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
K	Analyte was detected above the method reporting limit prior to normalization.
L1	Laboratory control sample recovery outside the specified limits; results may be biased high.
L2	Laboratory control sample recovery outside the specified limits; results may be biased low.
L3	Laboratory control sample recovery outside the specified limits.
M	Matrix interference; results may be biased high.
M	The duplicate injection precision not met.
M1	Matrix interference due to coelution with a non-target compound; results may be biased high.
N	Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
P	Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
P	Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
Q	Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
R	Duplicate Precision not met.
R1	Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
S	Surrogate recovery not within specified limits.

Data Qualifiers

Lab Standard

S	The reported value was determined by the Method of Standard Additions (MSA).
T	Analyte is a tentatively identified compound, result is estimated.
U	Compound was analyzed for, but was not detected (ND).
V1	The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
V2	The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
W	Result quantified, but the corresponding peak was detected outside the generated retention time window.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
X	See case narrative.
Y	Recovery outside limits
Y	The chromatogram resembles a petroleum product but does not match the calibration standard.
Z	The chromatogram does not resemble a petroleum product.
i	The MRL/MDL has been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

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ALS Environmental

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
Arizona Department of Health Services	AZ0793	5/27/2020
Arkansas Department of Environmental Quality	20-030-0	3/26/2021
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611	6/30/2020
Hawaii Department of Health	2020	4/30/2021
Kansas Department of Health and Environment	E-10352	7/31/2020
Louisiana Department of Environmental Quality	03087	6/30/2020
Louisiana Department of Health and Hospitals	LA028-2020	12/31/2020
Maine Center for Disease Control and Prevention	201815	6/5/2020
Maryland Department of the Environment	343	6/30/2020
Minnesota Department of Health	1785988	12/31/2020
Nevada Department of Concervation and Natural Resources	TX026932019-1	7/31/2020
New Hampshire Environmental Laboratory Accreditation Program	209420	4/24/2021
New Jersey Department of Environmental Protection	NLC190001	6/30/2020
New York Department of Health	11707	3/31/2021
Oklahoma Department of Environmental Quality	2019-067	8/31/2020
Pennsylvania Department of Environmental Protection	68-03441-013	6/30/2020
Tennessee Department of Environment and Concervation	04016-2020	4/30/2021
Texas Commision on Environmental Quality	T104704231-20-26	4/30/2021
United States Department of Agriculture	P330-19-00299	10/10/2022
Utah Department of Health Environmental Laboratory Certification	TX026932019-9	7/31/2020
Washington Department of Health	C819	11/14/2020
West Virginia Department of Environmental Protection	347	6/30/2020

ALS

Chain of Custody

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E2000407 **5**
ALS Laboratory Group
HS20050176

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **13859**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	
Email:	

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20050176
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20050176-02**	**LH18/24-SP650_050520_BIX**	**Water**	**05 May 2020 14:00**
	SUB_Perch-6850			20 May 2020

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: J. Modashia Date/Time: 5/6/20 14:40

Received By: [illegible] Date/Time: 5/6/20 14:40

Cooler ID(s): Temperature(s):

ALS Environmental

Cooler Receipt Form

Project Chemist CH

Client/Project ALS-H

Thermometer ID SMOM / IR 11

Date/Time Received: 5/6/20 Initials: CH Date/Time Logged in: 5/6/20 Initials CH

1. Method of delivery: ○ US Mail ○ Fed Ex ○ UPS ○ DHL ✓ ALS Courier ○ Client

2. Samples received in: ✓ Cooler ○ Box ○ Envelope ○ Other

3. Were custody seals on coolers? ○ Yes ✓ No If yes, how many and where?

Were they intact? ○ Yes ○ No ✓ N/A

Were they signed and dated? ○ Yes ○ No ✓ N/A

4. Packing Material: ○ Inserts ✓ Baggies ○ Bubble Wrap ○ Gel Packs ✓ Wet Ice ○ Sleeves ○ Other

5. Foreign or Regulated Soil? ○ Yes ○ No Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
-		5/6/20	1440	CH	1.5	☒
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No

7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ✓ Yes ○ No

8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No

9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No

10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label: E2000407 5

ALS Laboratory Group HS20050176

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SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6ºC.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10ºC.
- ✓ Air samples are shipped and stored cold, at 0 to 6ºC
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

Preparation Information Benchsheets

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www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 358306 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/KBROWN **Prep Method:** Method **Prep Date/Time:** 5/12/20 09:34

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2000382-001	LH18/24-SP650_042820_BIX	.01	6850/ClO4 DOD			Water	10mL	
2	E2000404-001	04WW02-200504	.01	6850/ClO4 DOD			Ground Water	10mL	
3	E2000404-002	04WW06-200504	.01	6850/ClO4 DOD			Ground Water	10mL	
4	E2000404-003	LHSMW02-200504	.01	6850/ClO4 DOD			Ground Water	10mL	
5	E2000404-004	LHSMW02-200504-FD	.01	6850/ClO4 DOD			Ground Water	10mL	
6	E2000404-005	04WW11-200504	.01	6850/ClO4 DOD			Ground Water	10mL	
7	E2000404-006	04WW04-200504	.01	6850/ClO4 DOD			Ground Water	10mL	
8	E2000405-001	04WW05-200505	.01	6850/ClO4 DOD			Ground Water	10mL	
9	E2000405-002	04WW09-200505	.01	6850/ClO4 DOD			Ground Water	10mL	
10	E2000405-003	04WW10-200505	.01	6850/ClO4 DOD			Ground Water	10mL	
11	E2000405-004	04WW10-200505-FD	.01	6850/ClO4 DOD			Ground Water	10mL	
12	E2000405-005	04WW07-200505	.01	6850/ClO4 DOD			Ground Water	10mL	
13	E2000406-001	04WW08-200504	.01	6850/ClO4 DOD			Ground Water	10mL	
14	E2000406-002	LHSMW01-200504	.01	6850/ClO4 DOD			Ground Water	10mL	
15	E2000406-003	04WW01-200504	.01	6850/ClO4 DOD			Ground Water	10mL	
16	E2000407-001	LH18/24-SP650_050520_BIX	.01	6850/ClO4 DOD			Water	10mL	
17	E2000408-001	LH18/24-SP140_050520	.01	6850/ClO4 DOD			Water	10mL	
18	E2000409-001	LH18/24-SP650_050520_BIX	.01	6850/ClO4 DOD			Water	10mL	
19	EQ2000173-01	MB		6850/ClO4 DOD			Liquid	10mL	
20	EQ2000173-02	LCS		6850/ClO4 DOD			Liquid	10mL	
21	EQ2000173-03	DLCS		6850/ClO4 DOD			Liquid	10mL	
22	EQ2000173-04	04WW06-200504 MS	.01	6850/ClO4 DOD			Liquid	10mL	
23	EQ2000173-05	04WW06-200504 DMS	.01	6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 202037 Logbook Ref: Sodium Perchlorate Expires On: 05/22/2021

E2000382-001	100.00µL	E2000404-001	100.00µL	E2000404-002	100.00µL	E2000404-003	100.00µL	E2000404-004	100.00µL	E2000404-005	100.00µL
E2000404-006	100.00µL	E2000405-001	100.00µL	E2000405-002	100.00µL	E2000405-003	100.00µL	E2000405-004	100.00µL	E2000405-005	100.00µL
E2000406-001	100.00µL	E2000406-002	100.00µL	E2000406-003	100.00µL	E2000407-001	100.00µL	E2000408-001	100.00µL	E2000409-001	100.00µL
EQ2000173-01	100.00µL	EQ2000173-02	100.00µL	EQ2000173-03	100.00µL	EQ2000173-04	100.00µL	EQ2000173-05	100.00µL		

Name: Perchlorate Intermediate Stock1 Inventory ID 204799 Logbook Ref: 200657 1.0ug/mL KN Expires On: 05/15/2020

EQ2000173-02	1.00µL	EQ2000173-03	1.00µL	EQ2000173-04	1.00µL	EQ2000173-05	1.00µL

Preparation Information Benchsheet

Prep Run#: 358306 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/KBROWN **Prep Method:** Method **Prep Date/Time:** 5/12/20 09:34

Preparation Steps

Step: Preparation
Started: 5/12/20 09:34
Finished: 5/12/20 12:00
By: KBROWN
Comments

Comments: _____

Reviewed By: GR Date: 5/12/2020

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

Analytical Results

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ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000407
Project:	HS20050176	**Date Collected:**	5/ 5/20 1400
Sample Matrix:	Water	**Date Received:**	5/ 6/20
Sample Name:	LH18/24-SP650_050520_BIX	**Units:**	µg/L
Lab Code:	E2000407-001	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	5/12/20	5/12/20 15:44	358306	680007	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000407
Project:	HS20050176	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2000173-01	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	5/12/20	5/12/20 12:50	358306	679868	

Accuracy & Precision

ALS Environmental - Houston HRMS
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ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20050176
Sample Matrix: Water

Service Request: E2000407
Date Analyzed: 5/12/20

Lab Control Sample Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Units: µg/L
Basis: NA

Extraction Lot: 358306

	Lab Control Sample EQ2000173-02			Duplicate Lab Control Sample EQ2000173-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.105	0.100	105	0.107	0.100	107	84 - 119	2	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000407
Project:	HS20050176	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000173-02	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.105**		0.100	0.0500	0.0250	1	5/12/20	5/12/20 12:58	358306	679868	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000407
Project:	HS20050176	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000173-03	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.107**		0.100	0.0500	0.0250	1	5/12/20	5/12/20 13:06	358306	679868	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000407
Project:	HS20050176	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	5/12/20 - 5/13/20

Matrix Spike Summary

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Sample Name:	Batch QC	**Units:**	µg/L
Lab Code:	E2000404-002	**Basis:**	NA

Analytical Method: 6850
Prep Method: Method

		Batch QCMS			Batch QCDMS					
		Matrix Spike			**Duplicate Matrix Spike**					
		EQ2000173-04			EQ2000173-05					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	ND	0.111	0.100	111	0.0929	0.100	93	84 - 119	18 *	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000407
Project:	HS20050176	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Batch QC	**Units:**	µg/L
Lab Code:	EQ2000173-04	**Basis:**	NA
Run Type:	Matrix Spike		

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.111**		0.100	0.0500	0.0250	1	5/12/20	5/12/20 13:21	358306	679868	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000407
Project:	HS20050176	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Batch QC	**Units:**	µg/L
Lab Code:	EQ2000173-05	**Basis:**	NA
Run Type:	Duplicate Matrix Spike		

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.0929**	J	0.100	0.0500	0.0250	1	5/12/20	5/13/20 14:12	358306	680124	

Initial Calibration

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

20200420

1st Review: Kneir
2nd Review: Hvan

ALS Environmental
LCMS01 -Shimadzu 8050

ICAL Date: 4/20/2020
Cal. Std. xp: 5/14/2020
ICAL ID: **EC2000003**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100803-09 **B:** MeOH 3100802-01

	Sample Name		File Name	Acquisition Method	Dilution	R	Comments	Date/Time
	null		20200420_001	Perchlorate6850b.lcm	1x	☒		4/20/2020 13:01
	null		20200420_002	Perchlorate6850b.lcm	1x	☒		4/20/2020 13:06
	DIBLK		20200420_003	Perchlorate6850b.lcm	1x	☒		4/20/2020 13:11
	IB		20200420_004	Perchlorate6850b.lcm	1x	☒		4/20/2020 13:19
	PERCHLORATE7		20200420_005	Perchlorate6850b.lcm	1x	☒	3100805-02	4/20/2020 13:27
	LODV		20200420_006	Perchlorate6850b.lcm	1x	☒		4/20/2020 13:35
	PERCHLORATE1		20200420_007	Perchlorate6850b.lcm	1x	☒	3100804-05	4/20/2020 13:43
	PERCHLORATE2		20200420_008	Perchlorate6850b.lcm	1x	☒	3100804-06	4/20/2020 13:51
	PERCHLORATE3		20200420_009	Perchlorate6850b.lcm	1x	☒	3100804-07	4/20/2020 13:58
	PERCHLORATE4		20200420_010	Perchlorate6850b.lcm	1x	☒	3100804-08	4/20/2020 14:06
	PERCHLORATE5		20200420_011	Perchlorate6850b.lcm	1x	☒	3100804-09	4/20/2020 14:14
	PERCHLORATE6		20200420_012	Perchlorate6850b.lcm	1x	☒	3100805-01	4/20/2020 14:22
	PERCHLORATE8		20200420_013	Perchlorate6850b.lcm	1x	☒	3100805-03	4/20/2020 14:30
	PERCHLORATE9		20200420_014	Perchlorate6850b.lcm	1x	☒	3100805-04	4/20/2020 14:38
	PERCHLORATE10		20200420_015	Perchlorate6850b.lcm	1x	☒	3100805-05	4/20/2020 14:46
	ICV		20200420_016	Perchlorate6850b.lcm	1x	☒	3100805-06	4/20/2020 14:54
	LODV		20200420_017	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:02
	EQ2000143-01		20200420_018	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:10
	EQ2000143-02		20200420_019	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:18
	EQ2000143-03		20200420_020	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:26
	E2000275-001		20200420_021	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:33
	E2000275-002		20200420_022	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:41
	E2000275-003		20200420_023	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:49
	E2000287-001		20200420_024	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:57
	E2000303-001		20200420_025	Perchlorate6850b.lcm	1x	☒		4/20/2020 16:05
	E2000304-001		20200420_026	Perchlorate6850b.lcm	1x	☒		4/20/2020 16:13
	E2000305-001		20200420_027	Perchlorate6850b.lcm	1x	☒		4/20/2020 16:21
	PERCHLORATE7		20200420_028	Perchlorate6850b.lcm	1x	☒	3100805-02	4/20/2020 16:29
	E2000303-001		20200420_029	Perchlorate6850b.lcm	1x	☒		4/20/2020 16:47
	E2000304-001		20200420_030	Perchlorate6850b.lcm	1x	☒		4/20/2020 16:55
	PERCHLORATE7		20200420_031	Perchlorate6850b.lcm	1x	☒	3100805-02	4/20/2020 17:02

Initial Calibration - Detailed Report

Calibration ID: EC2000003 **Instrument ID:** E-LCMS-01
Column Name: 1

#	Lab Code	Sample Name	File Location	Aquisition Date
08	EC2000003-08	PERCHLORATE7	20200420_005	04/20/2020 13:27
01	EC2000003-01	PERCHLORATE1	20200420_007	04/20/2020 13:43
02	EC2000003-02	PERCHLORATE2	20200420_008	04/20/2020 13:51
03	EC2000003-03	PERCHLORATE3	20200420_009	04/20/2020 13:58
04	EC2000003-04	PERCHLORATE4	20200420_010	04/20/2020 14:06
05	EC2000003-05	PERCHLORATE5	20200420_011	04/20/2020 14:14
06	EC2000003-06	PERCHLORATE6	20200420_012	04/20/2020 14:22
07	EC2000003-07	PERCHLORATE8	20200420_013	04/20/2020 14:30
09	EC2000003-09	PERCHLORATE9	20200420_014	04/20/2020 14:38
10	EC2000003-10	PERCHLORATE10	20200420_015	04/20/2020 14:46

Analyte **Curve Fit** **Weighting**

Perchlorate **Average RF** **RSD = 8.066** **Average RF = 0.1368**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.1000	0.1558	02	0.5000	0.1297	03	0.7000	0.1277	04	1.0000	0.1397
05	2.0000	0.1298	06	5.0000	0.1245	07	20.0000	0.1341	08	10.0000	0.1562
09	30.0000	0.1365	10	50.0000	0.1345						

Analyte

Perchlorate

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.1000	0.114	13.9	02	0.5000	0.474	-5.2	03	0.7000	0.653	-6.7
04	1.0000	1.02	2.1	05	2.0000	1.90	-5.1	06	5.0000	4.55	-9.0
07	20.0000	19.6	-2.0	08	10.0000	11.4	14.2	09	30.0000	29.9	-0.2
10	50.0000	49.1	-1.7								

Initial Calibration Verification Summary Report

Calibration ID:	EC2000003	**Instrument ID:**	E-LCMS-01
Datafile ID:	20200420_016	**Column Name:**	1

Analyte	Lab Code	Type	Curve Fit	True Value	Calc Conc	Units	Result	Criteria
Perchlorate	EC2000003-11	T	Average RF	10	11.345	ng/mL	13.4	<= 15

ALS Group Houston

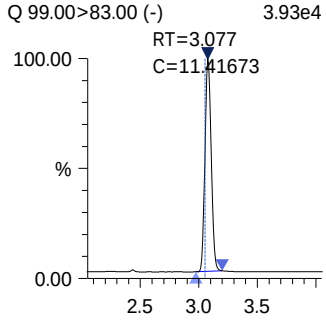
PERCHLORATE7

Date acquired: 4/20/2020 1:27:21 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_005.lcd
Vial: 3 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	4/20/2020 1:27:21 PM	144494	11.41673	20200420_005	3.077	25.0000	1.0000	3
Sodium Perchlorate-18O4_IS	PERCHLORATE7	4/20/2020 1:27:21 PM	92497	1.00000	20200420_005	3.076	25.0000	1.0000	3

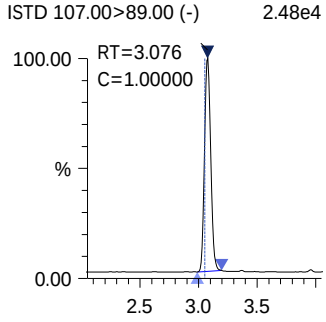
Perchlorate

Conc 11.41673
Area 144494



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 92497



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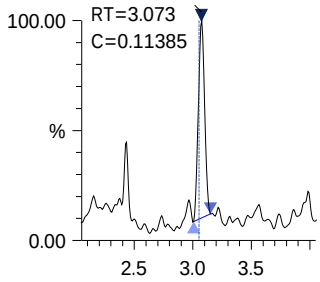
PERCHLORATE1

Date acquired: 4/20/2020 1:43:09 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_007.lcd
Vial: 5 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE1	4/20/2020 1:43:09 PM	1840	0.11385	20200420_007	3.073	25.0000	1.0000	5
Sodium Perchlorate-18O4_IS	PERCHLORATE1	4/20/2020 1:43:09 PM	118078	1.00000	20200420_007	3.073	25.0000	1.0000	5

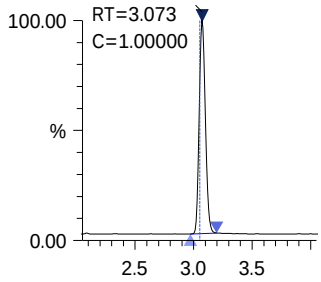
Perchlorate

Conc 0.11385
Area 1840
Q 99.00>83.00 (-) 5.37e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 118078
ISTD 107.00>89.00 (-) 3.18e4



ALS Group Houston

PERCHLORATE2

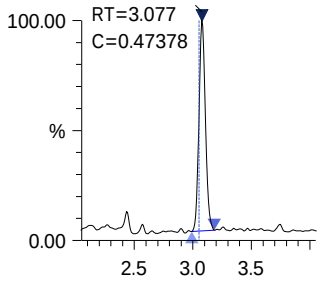
Date acquired: 4/20/2020 1:51:02 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_008.lcd
Vial: 6 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE2	4/20/2020 1:51:02 PM	7551	0.47378	20200420_008	3.077	25.0000	1.0000	6
Sodium Perchlorate-18O4_IS	PERCHLORATE2	4/20/2020 1:51:02 PM	116479	1.00000	20200420_008	3.075	25.0000	1.0000	6

Perchlorate

Conc 0.47378
Area 7551

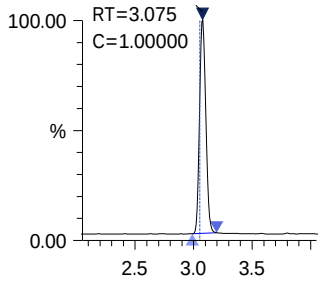
Q 99.00>83.00 (-) 2.00e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 116479

ISTD 107.00>89.00 (-) 3.08e4



ALS Group Houston

PERCHLORATE3

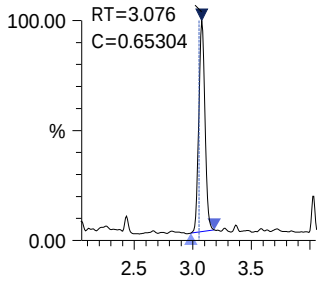
Date acquired: 4/20/2020 1:58:56 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_009.lcd
Vial: 7 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE3	4/20/2020 1:58:56 PM	11235	0.65304	20200420_009	3.076	25.0000	1.0000	7
Sodium Perchlorate-18O4_IS	PERCHLORATE3	4/20/2020 1:58:56 PM	125731	1.00000	20200420_009	3.073	25.0000	1.0000	7

Perchlorate

Conc 0.65304
Area 11235

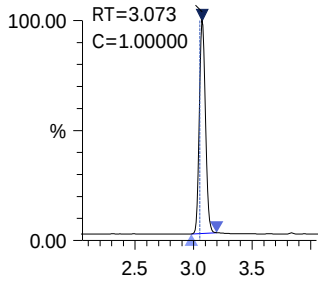
Q 99.00>83.00 (-) 3.12e3



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 125731

ISTD 107.00>89.00 (-) 3.41e4



ALS Group Houston

PERCHLORATE4

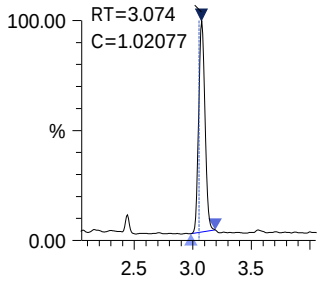
Date acquired: 4/20/2020 2:06:51 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_010.lcd
Vial: 8 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE4	4/20/2020 2:06:51 PM	16670	1.02077	20200420_010	3.074	25.0000	1.0000	8
Sodium Perchlorate-18O4_IS	PERCHLORATE4	4/20/2020 2:06:51 PM	119354	1.00000	20200420_010	3.074	25.0000	1.0000	8

Perchlorate

Conc 1.02077
Area 16670

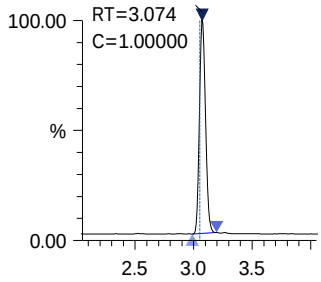
Q 99.00>83.00 (-) 4.51e3



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 119354

ISTD 107.00>89.00 (-) 3.26e4



ALS Group Houston

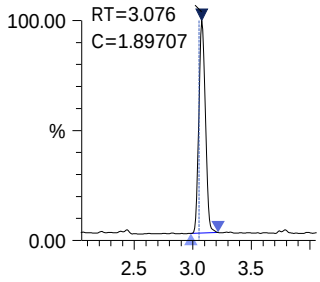
PERCHLORATE5

Date acquired: 4/20/2020 2:14:45 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_011.lcd
Vial: 9 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE5	4/20/2020 2:14:45 PM	33786	1.89707	20200420_011	3.076	25.0000	1.0000	9
Sodium Perchlorate-18O4_IS	PERCHLORATE5	4/20/2020 2:14:45 PM	130159	1.00000	20200420_011	3.075	25.0000	1.0000	9

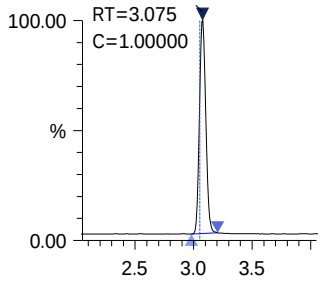
Perchlorate

Conc 1.89707
Area 33786
Q 99.00>83.00 (-) 8.73e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 130159
ISTD 107.00>89.00 (-) 3.41e4



ALS Group Houston

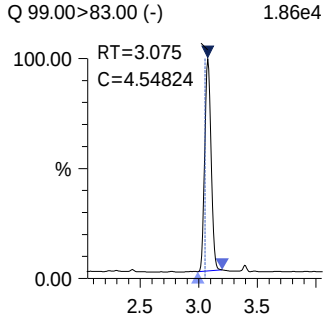
PERCHLORATE6

Date acquired: 4/20/2020 2:22:39 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_012.lcd
Vial: 10 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE6	4/20/2020 2:22:39 PM	69848	4.54824	20200420_012	3.075	25.0000	1.0000	10
Sodium Perchlorate-18O4_IS	PERCHLORATE6	4/20/2020 2:22:39 PM	112235	1.00000	20200420_012	3.074	25.0000	1.0000	10

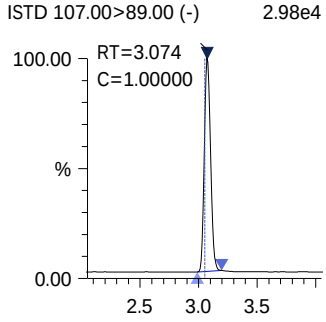
Perchlorate

Conc 4.54824
Area 69848



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 112235



ALS Group Houston

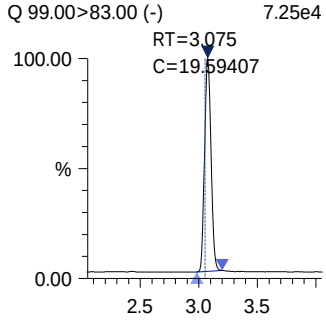
PERCHLORATE8

Date acquired: 4/20/2020 2:30:36 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_013.lcd
Vial: 11 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE8	4/20/2020 2:30:36 PM	275854	19.59407	20200420_013	3.075	25.0000	1.0000	11
Sodium Perchlorate-18O4_IS	PERCHLORATE8	4/20/2020 2:30:36 PM	102890	1.00000	20200420_013	3.072	25.0000	1.0000	11

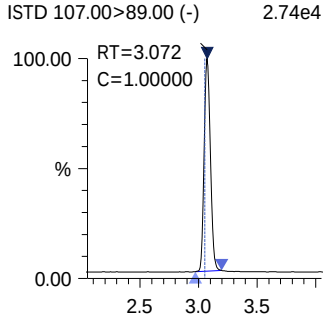
Perchlorate

Conc 19.59407
Area 275854



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 102890



ALS Group Houston

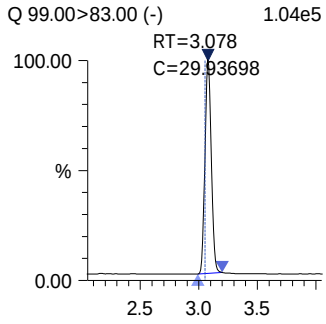
PERCHLORATE9

Date acquired: 4/20/2020 2:38:33 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_014.lcd
Vial: 12 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE9	4/20/2020 2:38:33 PM	390068	29.93698	20200420_014	3.078	25.0000	1.0000	12
Sodium Perchlorate-18O4_IS	PERCHLORATE9	4/20/2020 2:38:33 PM	95225	1.00000	20200420_014	3.075	25.0000	1.0000	12

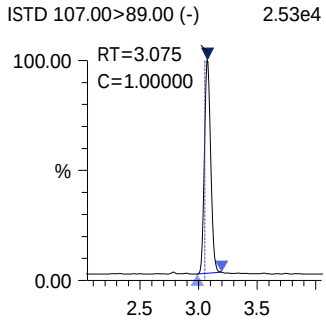
Perchlorate

Conc 29.93698
Area 390068



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 95225



ALS Group Houston

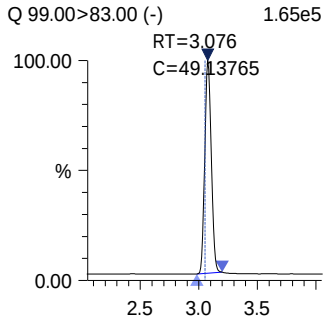
PERCHLORATE10

Date acquired: 4/20/2020 2:46:25 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_015.lcd
Vial: 13 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE10	4/20/2020 2:46:25 PM	632804	49.13765	20200420_015	3.076	25.0000	1.0000	13
Sodium Perchlorate-18O4_IS	PERCHLORATE10	4/20/2020 2:46:25 PM	94118	1.00000	20200420_015	3.075	25.0000	1.0000	13

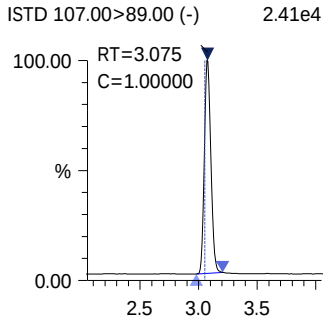
Perchlorate

Conc 49.13765
Area 632804



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 94118



ALS Group Houston

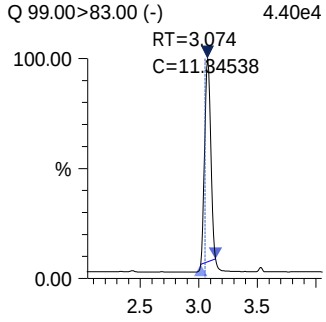
PERCHLORATEICV

Date acquired: 4/20/2020 2:54:20 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_016.lcd
Vial: 14 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATEICV	4/20/2020 2:54:20 PM	149807	11.34538	20200420_016	3.074	25.0000	1.0000	14
Sodium Perchlorate-18O4_IS	PERCHLORATEICV	4/20/2020 2:54:20 PM	96501	1.00000	20200420_016	3.072	25.0000	1.0000	14

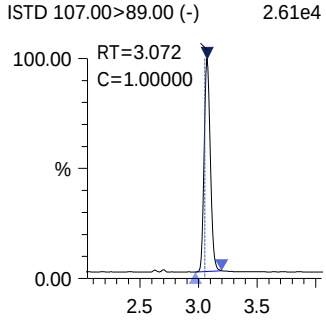
Perchlorate

Conc 11.34538
Area 149807



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 96501



Chromatograms and Selected Ion Monitoring

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 320, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

20200512

ICAL Date: 4/20/2020
Cal. Std. xp: 5/14/2020
ICAL ID: **EC2000003**

1st Review: Kneir
2nd Review: Hvan

ALS Environmental
LCMS01 -Shimadzu 8050

Mobile Phases **A:** 0.75% Formic Acid/Water 3100803-09 **B:** MeOH 3100802-01

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
	null		20200512_001	Perchlorate6850b.lcm	1x	☒		5/12/2020 12:09
	null		20200512_002	Perchlorate6850b.lcm	1x	☒		5/12/2020 12:14
	IB		20200512_003	Perchlorate6850b.lcm	1x	☒		5/12/2020 12:19
	PERCHLORATE7		20200512_004	Perchlorate6850b.lcm	1x	☒	3100805-02	5/12/2020 12:27
	LODV		20200512_005	Perchlorate6850b.lcm	1x	☒		5/12/2020 12:35
	EQ2000173-01		20200512_006	Perchlorate6850b.lcm	1x	☒		5/12/2020 12:50
	EQ2000173-02		20200512_007	Perchlorate6850b.lcm	1x	☒		5/12/2020 12:58
	EQ2000173-03		20200512_008	Perchlorate6850b.lcm	1x	☒		5/12/2020 13:06
	E2000404-002		20200512_009	Perchlorate6850b.lcm	1x	☒		5/12/2020 13:13
	EQ2000173-04		20200512_010	Perchlorate6850b.lcm	1x	☒		5/12/2020 13:21
	EQ2000173-05		20200512_011	Perchlorate6850b.lcm	1x	☒	do not use	5/12/2020 13:29
	E2000382-001		20200512_012	Perchlorate6850b.lcm	1x	☒		5/12/2020 13:37
	PERCHLORATE7		20200512_013	Perchlorate6850b.lcm	1x	☒	3100805-02	5/12/2020 13:45
	E2000404-001		20200512_014	Perchlorate6850b.lcm	1x	☒		5/12/2020 13:53
	E2000404-003		20200512_015	Perchlorate6850b.lcm	1x	☒		5/12/2020 14:01
	E2000404-004		20200512_016	Perchlorate6850b.lcm	1x	☒		5/12/2020 14:09
	E2000404-005		20200512_017	Perchlorate6850b.lcm	1x	☒		5/12/2020 14:17
	E2000404-006		20200512_018	Perchlorate6850b.lcm	1x	☒		5/12/2020 14:25
	E2000405-001		20200512_019	Perchlorate6850b.lcm	1x	☒		5/12/2020 14:32
	E2000405-002		20200512_020	Perchlorate6850b.lcm	1x	☒		5/12/2020 14:40
	E2000405-003		20200512_021	Perchlorate6850b.lcm	1x	☒		5/12/2020 14:48
	E2000405-004		20200512_022	Perchlorate6850b.lcm	1x	☒		5/12/2020 14:56
	E2000405-005		20200512_023	Perchlorate6850b.lcm	1x	☒		5/12/2020 15:04
	PERCHLORATE7		20200512_024	Perchlorate6850b.lcm	1x	☒	3100805-02	5/12/2020 15:12
	E2000406-001		20200512_025	Perchlorate6850b.lcm	1x	☒		5/12/2020 15:20
	E2000406-002		20200512_26	Perchlorate6850b.lcm	1x	☒		5/12/2020 15:28
	E2000406-003		20200512_027	Perchlorate6850b.lcm	1x	☒		5/12/2020 15:36
	E2000407-001		20200512_028	Perchlorate6850b.lcm	1x	☒		5/12/2020 15:44
	E2000408-001		20200512_029	Perchlorate6850b.lcm	1x	☒	dilution	5/12/2020 15:51
	E2000409-001		20200512_030	Perchlorate6850b.lcm	1x	☒	RR-poss carry-over	5/12/2020 15:59
	EQ2000173-05		20200512_031	Perchlorate6850b.lcm	1x	☒	do not use	5/12/2020 16:07
	PERCHLORATE7		20200512_032	Perchlorate6850b.lcm	1x	☒	3100805-02	5/12/2020 16:15

20200513

1st Review: Kneir
2nd Review: Hvan

ALS Environmental
LCMS01 -Shimadzu 8050

ICAL Date: 4/20/2020
Cal. Std. xp: 5/14/2020
ICAL ID: **EC2000003**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100803-09 **B:** MeOH 3100802-01

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
	null		20200513_001	Perchlorate6850b.lcm	1x	☒		5/13/2020 11:40
	null		20200513_002	Perchlorate6850b.lcm	1x	☒		5/13/2020 11:45
	IB		20200513_003	Perchlorate6850b.lcm	1x	☒		5/13/2020 11:50
	PERCHLORATE7		20200513_004	Perchlorate6850b.lcm	1x	☒	3100805-02	5/13/2020 11:58
	LODV		20200513_005	Perchlorate6850b.lcm	1x	☒		5/13/2020 12:06
	EQ2000179-01		20200513_006	Perchlorate6850b.lcm	1x	☒		5/13/2020 12:14
	EQ2000179-02		20200513_007	Perchlorate6850b.lcm	1x	☒		5/13/2020 12:22
	EQ2000179-03		20200513_008	Perchlorate6850b.lcm	1x	☒		5/13/2020 12:29
	EQ2000179-04		20200513_009	Perchlorate6850b.lcm	1x	☒		5/13/2020 12:37
	EQ2000179-05		20200513_010	Perchlorate6850b.lcm	1x	☒		5/13/2020 12:45
	E2000410-001		20200513_011	Perchlorate6850b.lcm	1x	☒		5/13/2020 12:53
	E2000410-002		20200513_012	Perchlorate6850b.lcm	1x	☒		5/13/2020 13:01
	E2000410-003		20200513_013	Perchlorate6850b.lcm	1x	☒		5/13/2020 13:09
	E2000410-004		20200513_014	Perchlorate6850b.lcm	1x	☒		5/13/2020 13:17
	E2000410-005		20200513_015	Perchlorate6850b.lcm	1x	☒		5/13/2020 13:25
	PERCHLORATE7		20200513_016	Perchlorate6850b.lcm	1x	☒	3100805-02	5/13/2020 13:33
	E2000410-006		20200513_017	Perchlorate6850b.lcm	1x	☒		5/13/2020 13:41
	E2000410-007		20200513_018	Perchlorate6850b.lcm	1x	☒		5/13/2020 13:49
	E2000408-001X200		20200513_019	Perchlorate6850b.lcm	200x	☒		5/13/2020 13:56
	PERCHLORATE7		20200513_020	Perchlorate6850b.lcm	1x	☒	3100805-02	5/13/2020 14:04
	EQ2000173-05		20200513_021	Perchlorate6850b.lcm	1x	☒		5/13/2020 14:12
	E2000409-001		20200513_022	Perchlorate6850b.lcm	1x	☒		5/13/2020 14:20
	PERCHLORATE7		20200513_023	Perchlorate6850b.lcm	1x	☒	3100805-02	5/13/2020 14:28

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20050176

Service Request: E2000407
Date Analyzed: 5/12/20

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200512\20200512_004

Calibration Date: 4/20/20
Calibration ID: EC2000003
Analysis Lot: 679868
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	10.9	0.1368	0.1485	8.5	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20050176

Service Request: E2000407
Date Analyzed: 5/12/20

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200512\20200512_013

Calibration Date: 4/20/20
Calibration ID: EC2000003
Analysis Lot: 679868
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	11.0	0.1368	0.1502	9.7	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20050176

Service Request: E2000407
Date Analyzed: 5/12/20

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200512\20200512_013

Calibration Date: 4/20/20
Calibration ID: EC2000003
Analysis Lot: 680007
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	11.0	0.1368	0.1502	9.7	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20050176

Service Request: E2000407
Date Analyzed: 5/12/20

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200512\20200512_024

Calibration Date: 4/20/20
Calibration ID: EC2000003
Analysis Lot: 680007
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	11.0	0.1368	0.1505	10.0	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20050176

Service Request: E2000407
Date Analyzed: 5/12/20

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200512\20200512_032

Calibration Date: 4/20/20
Calibration ID: EC2000003
Analysis Lot: 680007
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	11.0	0.1368	0.1511	10.4	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20050176

Service Request: E2000407
Date Analyzed: 5/13/20

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200513\20200513_004

Calibration Date: 4/20/20
Calibration ID: EC2000003
Analysis Lot: 680124
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	11.1	0.1368	0.1520	11.1	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20050176

Service Request: E2000407
Date Analyzed: 5/13/20

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200513\20200513_016

Calibration Date: 4/20/20
Calibration ID: EC2000003
Analysis Lot: 680124
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	11.3	0.1368	0.1546	13.0	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20050176

Service Request: E2000407
Date Analyzed: 5/13/20

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200513\20200513_020

Calibration Date: 4/20/20
Calibration ID: EC2000003
Analysis Lot: 680124
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	10.7	0.1368	0.1461	6.8	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20050176

Service Request: E2000407
Date Analyzed: 5/13/20

Continuing Calibration Verification Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
File ID: I:\LCMS01\DATA\20200513\20200513_023

Calibration Date: 4/20/20
Calibration ID: EC2000003
Analysis Lot: 680124
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Perchlorate	10.0	11.1	0.1368	0.1523	11.3	NA	± 15 %	Average RF

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000407
Project:	HS20050176	**Date Analyzed:**	5/12/20 12:27

Internal Standard Area and RT Summary

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID:	I:\LCMS01\DATA\20200512\20200512_004	**Lab Code:**	EQ2000176-01
Instrument ID:	E-LCMS-01	**Analysis Lot:**	679868
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	110,677	3.07
	Upper Limit ==>	166,016	5.07
	Lower Limit ==>	55,339	1.07
Associated Analyses			
Continuing Calibration Verification	EQ2000176-01	77,004	3.01
Method Blank	EQ2000173-01	95,026	2.94
Lab Control Sample	EQ2000173-02	108,592	3.00
Duplicate Lab Control Sample	EQ2000173-03	109,300	3.00
Batch QC	E2000404-002	104,595	2.99
Batch QCMS	EQ2000173-04	114,639	2.99

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000407
Project:	HS20050176	**Date Analyzed:**	5/12/20 13:45

Internal Standard Area and RT Summary

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID:	I:\LCMS01\DATA\20200512\20200512_013	**Lab Code:**	EQ2000176-02
Instrument ID:	E-LCMS-01	**Analysis Lot:**	679868
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	110,677	3.07
	Upper Limit ==>	166,016	5.07
	Lower Limit ==>	55,339	1.07
Associated Analyses			
Continuing Calibration Verification	EQ2000176-02	99,187	2.99

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000407
Project:	HS20050176	**Date Analyzed:**	5/12/20 13:45

Internal Standard Area and RT Summary

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID:	I:\LCMS01\DATA\20200512\20200512_013	**Lab Code:**	EQ2000180-01
Instrument ID:	E-LCMS-01	**Analysis Lot:**	680007
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	110,677	3.07
	Upper Limit ==>	166,016	5.07
	Lower Limit ==>	55,339	1.07
Associated Analyses			
Continuing Calibration Verification	EQ2000180-01	99,187	2.99

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000407
Project:	HS20050176	**Date Analyzed:**	5/12/20 15:12

Internal Standard Area and RT Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID:	I:\LCMS01\DATA\20200512\20200512_024	**Lab Code:**	EQ2000180-02
Instrument ID:	E-LCMS-01	**Analysis Lot:**	680007
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	110,677	3.07
	Upper Limit ==>	166,016	5.07
	Lower Limit ==>	55,339	1.07
Associated Analyses			
Continuing Calibration Verification	EQ2000180-02	103,620	2.99
LH18/24-SP650_050520_BIX	E2000407-001	124,043	2.97

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000407
Project:	HS20050176	**Date Analyzed:**	5/12/20 16:15

Internal Standard Area and RT Summary

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID:	I:\LCMS01\DATA\20200512\20200512_032	**Lab Code:**	EQ2000180-03
Instrument ID:	E-LCMS-01	**Analysis Lot:**	680007
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	110,677	3.07
	Upper Limit ==>	166,016	5.07
	Lower Limit ==>	55,339	1.07
Associated Analyses			
Continuing Calibration Verification	EQ2000180-03	111,449	2.99

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000407
Project:	HS20050176	**Date Analyzed:**	5/13/20 11:58

Internal Standard Area and RT Summary

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID:	I:\LCMS01\DATA\20200513\20200513_004	**Lab Code:**	EQ2000186-01
Instrument ID:	E-LCMS-01	**Analysis Lot:**	680124
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	110,677	3.07
	Upper Limit ==>	166,016	5.07
	Lower Limit ==>	55,339	1.07
Associated Analyses			
Continuing Calibration Verification	EQ2000186-01	106,329	3.00

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000407
Project:	HS20050176	**Date Analyzed:**	5/13/20 13:33

Internal Standard Area and RT Summary

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID:	I:\LCMS01\DATA\20200513\20200513_016	**Lab Code:**	EQ2000186-02
Instrument ID:	E-LCMS-01	**Analysis Lot:**	680124
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	110,677	3.07
	Upper Limit ==>	166,016	5.07
	Lower Limit ==>	55,339	1.07
Associated Analyses			
Continuing Calibration Verification	EQ2000186-02	116,942	3.00

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000407
Project:	HS20050176	**Date Analyzed:**	5/13/20 14:04

Internal Standard Area and RT Summary

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID:	I:\LCMS01\DATA\20200513\20200513_020	**Lab Code:**	EQ2000186-03
Instrument ID:	E-LCMS-01	**Analysis Lot:**	680124
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	110,677	3.07
	Upper Limit ==>	166,016	5.07
	Lower Limit ==>	55,339	1.07
Associated Analyses			
Continuing Calibration Verification	EQ2000186-03	120,816	3.00
Batch QCDMS	EQ2000173-05	141,444	2.98

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000407
Project:	HS20050176	**Date Analyzed:**	5/13/20 14:28

Internal Standard Area and RT Summary

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

File ID:	I:\LCMS01\DATA\20200513\20200513_023	**Lab Code:**	EQ2000186-04
Instrument ID:	E-LCMS-01	**Analysis Lot:**	680124
Analytical Method:	6850	**Signal ID:**	1

		Sodium Perchlorate-18O4	
		Area	**RT**
	ICAL Average ==>	110,677	3.07
	Upper Limit ==>	166,016	5.07
	Lower Limit ==>	55,339	1.07
Associated Analyses			
Continuing Calibration Verification	EQ2000186-04	117,011	2.99

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group Houston

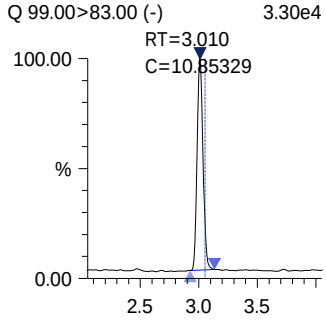
PERCHLORATE7

Date acquired: 5/12/2020 12:27:44 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200512\20200512_004.lcd
Vial: 3 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	5/12/2020 12:27:44 PM	114355	10.85329	20200512_004	3.010	25.0000	1.0000	3
Sodium Perchlorate-18O4_IS	PERCHLORATE7	5/12/2020 12:27:44 PM	77004	1.00000	20200512_004	3.008	25.0000	1.0000	3

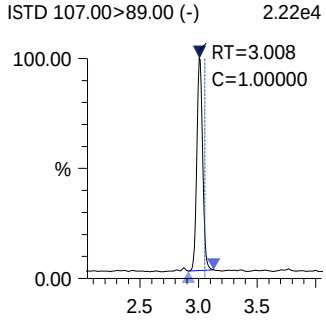
Perchlorate

Conc 10.85329
Area 114355



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 77004



ALS Group Houston

EQ2000173-01

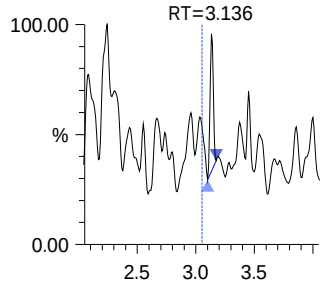
Date acquired: 5/12/2020 12:50:12 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200512\20200512_006.lcd
Vial: 5 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000173-01	5/12/2020 12:50:12 PM	----	----	20200512_006	----	25.0000	1.0000	5
Sodium Perchlorate-18O4_IS	EQ2000173-01	5/12/2020 12:50:12 PM	95026	1.00000	20200512_006	2.942	25.0000	1.0000	5

Perchlorate

Conc ----
Area ----

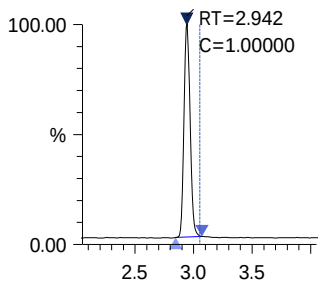
Q 99.00>83.00 (-) 3.00e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 95026

ISTD 107.00>89.00 (-) 2.66e4



ALS Group Houston

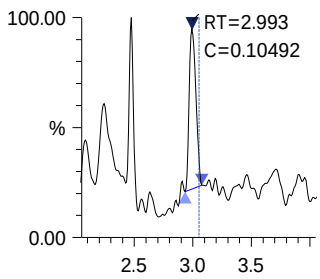
EQ2000173-02

Date acquired: 5/12/2020 12:58:07 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200512\20200512_007.lcd
Vial: 6 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000173-02	5/12/2020 12:58:07 PM	1559	0.10492	20200512_007	2.993	25.0000	1.0000	6
Sodium Perchlorate-18O4_IS	EQ2000173-02	5/12/2020 12:58:07 PM	108592	1.00000	20200512_007	3.004	25.0000	1.0000	6

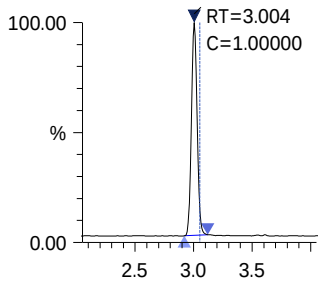
Perchlorate

Conc 0.10492
Area 1559
Q 99.00>83.00 (-) 5.16e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 108592
ISTD 107.00>89.00 (-) 3.19e4



ALS Group Houston

EQ2000173-03

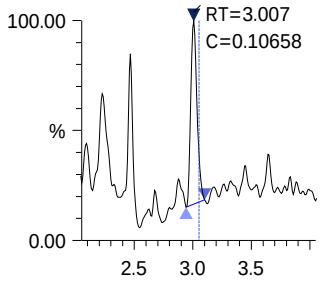
Date acquired: 5/12/2020 1:06:00 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200512\20200512_008.lcd
Vial: 7 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000173-03	5/12/2020 1:06:00 PM	1594	0.10658	20200512_008	3.007	25.0000	1.0000	7
Sodium Perchlorate-18O4_IS	EQ2000173-03	5/12/2020 1:06:00 PM	109300	1.00000	20200512_008	3.004	25.0000	1.0000	7

Perchlorate

Conc 0.10658
Area 1594

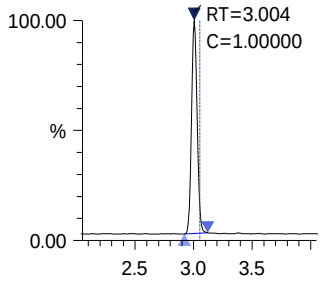
Q 99.00>83.00 (-) 4.99e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 109300

ISTD 107.00>89.00 (-) 3.26e4



ALS Group Houston

EQ2000173-04

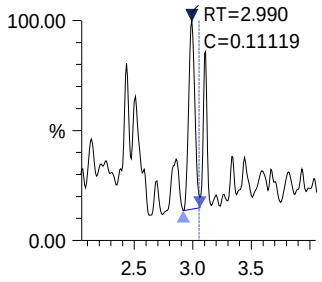
Date acquired: 5/12/2020 1:21:48 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200512\20200512_010.lcd
Vial: 9 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000173-04	5/12/2020 1:21:48 PM	1744	0.11119	20200512_010	2.990	25.0000	1.0000	9
Sodium Perchlorate-18O4_IS	EQ2000173-04	5/12/2020 1:21:48 PM	114639	1.00000	20200512_010	2.990	25.0000	1.0000	9

Perchlorate

Conc 0.11119
Area 1744

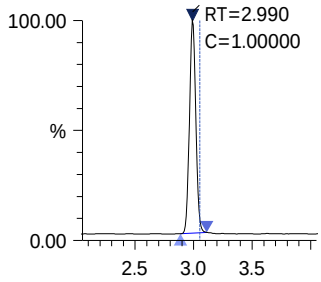
Q 99.00>83.00 (-) 5.32e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 114639

ISTD 107.00>89.00 (-) 3.06e4



ALS Group Houston

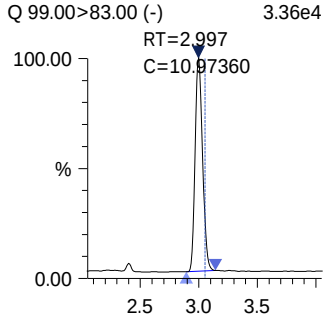
PERCHLORATE7

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Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200512\20200512_013.lcd
Vial: 3 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	5/12/2020 1:45:33 PM	148931	10.97360	20200512_013	2.997	25.0000	1.0000	3
Sodium Perchlorate-18O4_IS	PERCHLORATE7	5/12/2020 1:45:33 PM	99187	1.00000	20200512_013	2.994	25.0000	1.0000	3

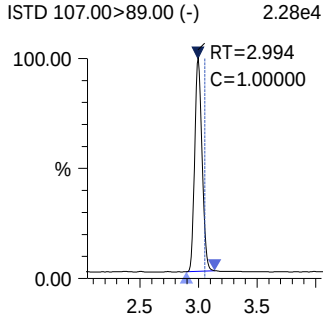
Perchlorate

Conc 10.97360
Area 148931



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 99187



ALS Group Houston

E2000407-001

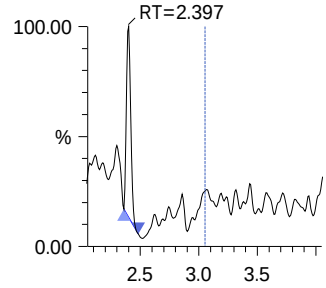
Date acquired: 5/12/2020 3:44:02 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200512\20200512_028.lcd
Vial: 25 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	E2000407-001	5/12/2020 3:44:02 PM	----	----	20200512_028	----	25.0000	1.0000	25
Sodium Perchlorate-18O4_IS	E2000407-001	5/12/2020 3:44:02 PM	124043	1.00000	20200512_028	2.974	25.0000	1.0000	25

Perchlorate

Conc ----
Area ----

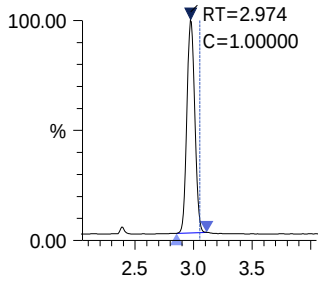
Q 99.00>83.00 (-) 5.18e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 124043

ISTD 107.00>89.00 (-) 2.69e4



ALS Group Houston

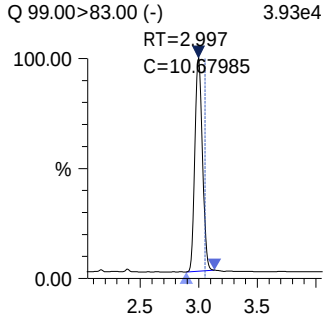
PERCHLORATE7

Date acquired: 5/13/2020 2:04:49 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200513\20200513_020.lcd
Vial: 3 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	5/13/2020 2:04:49 PM	176552	10.67985	20200513_020	2.997	25.0000	1.0000	3
Sodium Perchlorate-18O4_IS	PERCHLORATE7	5/13/2020 2:04:49 PM	120816	1.00000	20200513_020	2.995	25.0000	1.0000	3

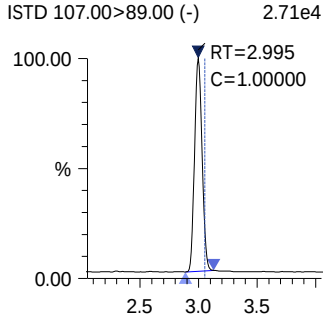
Perchlorate

Conc 10.67985
Area 176552



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 120816



ALS Group Houston

EQ2000173-05

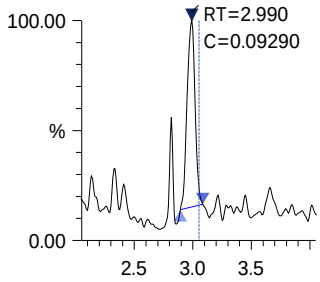
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Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200513\20200513_021.lcd
Vial: 18 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000173-05	5/13/2020 2:12:40 PM	1798	0.09290	20200513_021	2.990	25.0000	1.0000	18
Sodium Perchlorate-18O4_IS	EQ2000173-05	5/13/2020 2:12:40 PM	141444	1.00000	20200513_021	2.980	25.0000	1.0000	18

Perchlorate

Conc 0.09290
Area 1798

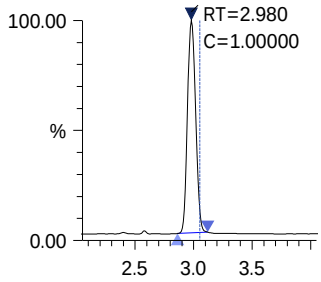
Q 99.00>83.00 (-) 4.31e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 141444

ISTD 107.00>89.00 (-) 2.95e4



ALS Group Houston

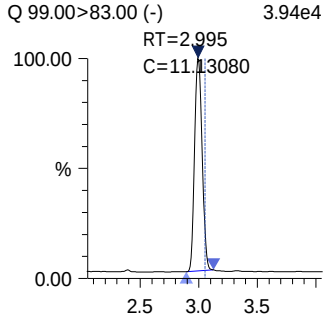
PERCHLORATE7

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Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200513\20200513_023.lcd
Vial: 3 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	5/13/2020 2:28:31 PM	178211	11.13080	20200513_023	2.995	25.0000	1.0000	3
Sodium Perchlorate-18O4_IS	PERCHLORATE7	5/13/2020 2:28:31 PM	117011	1.00000	20200513_023	2.992	25.0000	1.0000	3

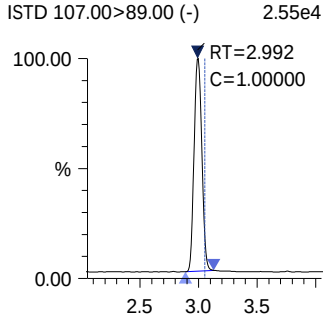
Perchlorate

Conc 11.13080
Area 178211



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 117011



HS20050176 8260 Raw Data

ALS WO# HS20050176

FORM 2
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: ALS GROUP Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20050176

	CLIENT SAMPLE NO.	SMC1 #	SMC2 (DCE)#	SMC3 (TOL)#	OTHER #	TOT OUT
01	CCB	90	90	96	92	0
02	VBLKW-200506	90	90	106	96	0
03	VLCSW-200506	102	104	102	106	0
04	HS20050176-03	91	92	107	91	0
05	HS20050176-01	91	92	106	94	0
06	HS20050176-01	89	90	104	103	0
07	HS20050176-01	89	89	104	96	0
08						
09						
10						
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27						
28						

		QC LIMITS
SMC1	= Dibromofluoromethane	(74-125)
SMC2 (DCE)	= 1,2-Dichloroethane-d4	(71-125)
SMC3 (TOL)	= Toluene-d8	(78-123)
OTHER	= 4-Bromofluorobenzene	(70-125)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS GROUP Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20050176

Matrix Spike - Sample No.: CCV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
Bromochloromethane	50.00	46.24	92	80-120
Vinyl Chloride	50.00	44.96	90	80-120
Chloromethane	50.00	44.24	88	80-120
Bromomethane	50.00	51.07	102	80-120
Chloroethane	50.00	45.31	91	80-120
Methylene Chloride	50.00	46.27	92	80-120
Acetone	100.00	111.45	111	80-120
Carbon Disulfide	100.00	93.70	94	80-120
1,1-Dichloroethene	50.00	49.81	100	80-120
trans-1,2-Dichloroethen	50.00	48.60	97	80-120
Carbon Tetrachloride	50.00	45.29	90	80-120
Bromodichloromethane	50.00	50.77	102	80-120
1,1-Dichloroethane	50.00	46.28	92	80-120
1,2-Dichloropropane	50.00	49.79	100	80-120
2-Butanone	100.00	95.95	96	80-120
cis-1,3-Dichloropropene	50.00	50.95	102	80-120
Dibromochloromethane	50.00	49.82	100	80-120
1,1,2-Trichloroethane	50.00	49.79	100	80-120
cis-1,2-Dichloroethene	50.00	48.41	97	80-120
Benzene	50.00	50.72	101	80-120
Chloroform	50.00	47.46	95	80-120
trans-1,3-Dichloroprope	50.00	53.07	106	80-120
Bromoform	50.00	46.87	94	80-120
1,1,1-Trichloroethane	50.00	47.03	94	80-120
4-Methyl-2-Pentanone	100.00	101.78	102	80-120
2-Hexanone	100.00	104.69	105	80-120
1,2-Dichloroethane	50.00	48.63	97	80-120
1,1,2,2-Tetrachloroetha	50.00	49.11	98	80-120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

_____

FORM III VOA

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS GROUP Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20050176

Matrix Spike - Sample No.: CCV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
Trichloroethene	50.00	48.94	98	80-120
Toluene	50.00	49.38	99	80-120
Dichlorodifluoromethane	50.00	44.87	90	80-120
Trichlorofluoromethane	50.00	48.87	98	80-120
Tetrachloroethene	50.00	48.04	96	80-120
1,2-Dibromoethane	50.00	51.45	103	80-120
Chlorobenzene	50.00	48.98	98	80-120
1,3-Dichlorobenzene	50.00	50.16	100	80-120
1,4-Dichlorobenzene	50.00	48.57	97	80-120
Ethylbenzene	50.00	49.72	99	80-120
1,2-Dichlorobenzene	50.00	50.62	101	80-120
m,p-Xylenes	100.00	99.89	100	80-120
o-Xylene	50.00	50.33	101	80-120
Styrene	50.00	52.29	104	80-120
2,2-Dichloropropane	50.00	47.32	95	80-120
1,1-Dichloropropene	50.00	47.07	94	80-120
Dibromomethane	50.00	49.32	99	80-120
1,3-Dichloropropane	50.00	49.31	99	80-120
1,1,1,2-Tetrachloroetha	50.00	50.56	101	80-120
Isopropylbenzene	50.00	48.14	96	80-120
Bromobenzene	50.00	47.82	96	80-120
1,2,3-Trichloropropane	50.00	50.37	101	80-120
n-Propylbenzene	50.00	46.72	93	80-120
2-Chlorotoluene	50.00	46.61	93	80-120
1,3,5-Trimethylbenzene	50.00	47.54	95	80-120
4-Chlorotoluene	50.00	47.91	96	80-120
tert-Butylbenzene	50.00	45.81	92	80-120
1,2,4-Trimethylbenzene	50.00	49.23	98	80-120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

_____

FORM 3
WATER VOLATILE METHOD SPIKE RECOVERY

Lab Name: ALS GROUP Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20050176

Matrix Spike - Sample No.: CCV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE AMOUNT ()	% REC #	QC. LIMITS REC.
sec-Butylbenzene	50.00	46.14	92	80-120
p-Isopropyltoluene	50.00	47.44	95	80-120
n-Butylbenzene	50.00	48.98	98	80-120
1,2-Dibromo-3-Chloropro	50.00	51.41	103	80-120
1,2,4-Trichlorobenzene	50.00	51.70	103	80-120
Hexachlorobutadiene	50.00	50.53	101	80-120
Naphthalene	50.00	54.14	108	80-120
1,2,3-Trichlorobenzene	50.00	54.43	109	80-120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS: _____

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ALS GROUP Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20050176

Lab File ID: X050101 BFB Injection Date: 05/01/20

Instrument ID: VOA6 BFB Injection Time: 1059

GC Column: DB624 ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	29.5
75	30.0 - 60.0% of mass 95	53.0
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.7 (1.0)1
174	Greater than 50.0% of mass 95	67.1
175	5.0 - 9.0% of mass 174	5.2 (7.8)1
176	95.0 - 101.0% of mass 174	65.6 (97.7)1
177	5.0 - 9.0% of mass 176	4.4 (6.8)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD000.25	VSTD000.25	X050102	05/01/20	1123
02	VSTD000.5	VSTD000.5	X050103	05/01/20	1147
03	VSTD001	VSTD001	X050104	05/01/20	1234
04	VSTD002	VSTD002	X050105	05/01/20	1258
05	VSTD005	VSTD005	X050106	05/01/20	1322
06	VSTD020	VSTD020	X050107	05/01/20	1346
07	VSTD050	VSTD050	X050108	05/01/20	1410
08	VSTD100	VSTD100	X050109	05/01/20	1434
09	VSTD150	VSTD150	X050110	05/01/20	1458
10	VSTD200	VSTD200	X050111	05/01/20	1522
11	ICV	ICV	X050114	05/01/20	1634
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS GROUP Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20050176

Instrument ID: VOA6 Calibration Date(s): 05/01/20 05/01/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1123 1522

LAB FILE ID: RF0.25: X050102 RF0.5: X050103 RF1: X050104
RF2: X050105 RF5: X050106 RF20: X050107

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
Bromochloromethane		0.291	0.361	0.306	0.334	0.332
Vinyl Chloride		0.971	0.968	0.867	0.897	0.886
Chloromethane		2844	5142	9328	24516	98402
Bromomethane		1851	3140	6160	14326	47340
Chloroethane		0.700	0.578	0.568	0.524	0.492
Methylene Chloride		1867	4461	6457	17911	67386
Acetone		3456	4880	7171	16600	59146
Carbon Disulfide		1.539	1.534	1.493	1.619	1.626
1,1-Dichloroethene		0.442	0.461	0.425	0.516	0.484
trans-1,2-Dichloroethene		0.433	0.511	0.514	0.562	0.559
Carbon Tetrachloride		0.484	0.533	0.450	0.505	0.483
Bromodichloromethane		0.438	0.431	0.438	0.534	0.517
1,1-Dichloroethane		1.343	1.422	1.337	1.312	1.321
1,2-Dichloropropane		0.452	0.382	0.368	0.461	0.436
2-Butanone		1390	3322	4605	15950	73004
cis-1,3-Dichloropropene		0.527	0.535	0.517	0.606	0.595
Dibromochloromethane		0.346	0.361	0.365	0.418	0.392
1,1,2-Trichloroethane		0.262	0.299	0.272	0.333	0.317
cis-1,2-Dichloroethene		0.570	0.608	0.591	0.661	0.656
Benzene		1.114	1.292	1.265	1.418	1.389
Chloroform		1.014	1.102	1.044	1.146	1.148
trans-1,3-Dichloropropene		0.445	0.462	0.454	0.548	0.539
Bromoform		670	1474	3471	9968	42114
1,1,1-Trichloroethane		0.803	0.931	0.853	0.982	0.954
4-Methyl-2-Pentanone		0.471	0.510	0.457	0.571	0.549
2-Hexanone		0.410	0.300	0.300	0.379	0.375
1,2-Dichloroethane		0.537	0.641	0.598	0.706	0.653
1,1,2,2-Tetrachloroethane		0.739	0.933	0.864	1.030	0.942
Trichloroethene		0.312	0.324	0.294	0.340	0.343
Toluene		1.399	1.400	1.429	1.624	1.598
Dichlorodifluoromethane		1277	2979	5819	15454	66534
Trichlorofluoromethane		0.750	1.081	0.986	0.944	1.011
Tetrachloroethene		0.269	0.243	0.263	0.296	0.299
1,2-Dibromoethane		0.310	0.325	0.319	0.398	0.382
Chlorobenzene		0.938	0.926	0.895	1.026	0.984
1,3-Dichlorobenzene		1.332	1.274	1.329	1.585	1.516
1,4-Dichlorobenzene		1.536	1.508	1.494	1.627	1.550
Ethylbenzene		0.439	0.482	0.483	0.536	0.527
1,2-Dichlorobenzene		1.280	1.095	1.143	1.498	1.410
m,p-Xylenes		0.528	0.569	0.529	0.640	0.648
o-Xylene		0.483	0.516	0.522	0.648	0.630
Styrene		0.882	0.861	0.876	1.081	1.114
2,2-Dichloropropane		1.000	0.998	0.908	1.014	0.956
1,1-Dichloropropene		0.506	0.492	0.468	0.470	0.490

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS GROUP Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2005017

Instrument ID: VOA6 Calibration Date(s): 05/01/20 05/01/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1123 1522

LAB FILE ID: RF0.25: X050102 RF0.5: X050103 RF1: X050104
RF2: X050105 RF5: X050106 RF20: X050107

COMPOUND	RF0.25	RF0.5	RF1	RF2	RF5	RF20
Dibromomethane		0.224	0.232	0.230	0.270	0.255
1,3-Dichloropropane		0.590	0.622	0.587	0.686	0.641
1,1,1,2-Tetrachloroethane		0.321	0.333	0.325	0.368	0.376
Isopropylbenzene		1.346	1.404	1.398	1.634	1.606
Bromobenzene		0.853	0.881	0.805	0.970	0.912
1,2,3-Trichloropropane		0.704	0.697	0.730	0.849	0.788
n-Propylbenzene		3.695	3.912	3.594	4.206	4.078
2-Chlorotoluene		2.368	2.354	2.313	2.546	2.376
1,3,5-Trimethylbenzene		2.494	2.546	2.420	2.949	2.801
4-Chlorotoluene		2.791	2.614	2.632	2.961	2.838
tert-Butylbenzene		2.193	2.140	2.023	2.327	2.298
1,2,4-Trimethylbenzene		2.463	2.529	2.400	2.948	2.882
sec-Butylbenzene		2.922	2.861	2.880	3.358	3.316
p-Isopropyltoluene		2.528	2.405	2.247	2.720	2.770
n-Butylbenzene		2.104	2.026	2.019	2.513	2.616
1,2-Dibromo-3-Chloropropane		58	238	518	1302	5505
1,2,4-Trichlorobenzene		397	790	1904	5784	25921
Hexachlorobutadiene		673	747	1970	4871	20852
Naphthalene		418	1430	2570	8113	35168
1,2,3-Trichlorobenzene		113	555	804	2742	12235
Dibromofluoromethane		1876	2946	6017	14521	59272
1,2-Dichloroethane-d4		2872	4483	10184	20862	82714
Toluene-d8		6250	10327	20338	49830	198319
4-Bromofluorobenzene		2666	4485	8105	20136	77667

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS GROUP Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2005017

Instrument ID: VOA6 Calibration Date(s): 05/01/20 05/01/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1123 1522

LAB FILE ID: RF50: X050108 RF100: X050109 RF150: X050110
RF200: X050111

COMPOUND	RF50	RF100	RF150	RF200
Bromochloromethane	0.312	0.320	0.331	0.320
Vinyl Chloride	0.863	0.950	1.008	0.999
Chloromethane	237492	516472	793293	1068913
Bromomethane	114250	245309	367884	495847
Chloroethane	0.482	0.502	0.519	0.545
Methylene Chloride	152868	315319	468841	619425
Acetone	140621	310590	438369	577858
Carbon Disulfide	1.588	1.684	1.772	1.798
1,1-Dichloroethene	0.482	0.558	0.583	0.568
trans-1,2-Dichloroethene	0.547	0.570	0.596	0.590
Carbon Tetrachloride	0.456	0.489	0.512	0.490
Bromodichloromethane	0.515	0.521	0.539	0.528
1,1-Dichloroethane	1.269	1.337	1.418	1.409
1,2-Dichloropropane	0.434	0.448	0.468	0.458
2-Butanone	176499	379018	550003	726777
cis-1,3-Dichloropropene	0.595	0.610	0.639	0.627
Dibromochloromethane	0.395	0.409	0.418	0.408
1,1,2-Trichloroethane	0.306	0.317	0.322	0.311
cis-1,2-Dichloroethene	0.638	0.672	0.700	0.692
Benzene	1.362	1.408	1.453	1.400
Chloroform	1.107	1.164	1.214	1.198
trans-1,3-Dichloropropene	0.560	0.569	0.596	0.581
Bromoform	108242	228250	347002	451491
1,1,1-Trichloroethane	0.917	0.986	1.051	1.030
4-Methyl-2-Pentanone	0.548	0.583	0.600	0.594
2-Hexanone	0.381	0.401	0.415	0.411
1,2-Dichloroethane	0.633	0.626	0.637	0.616
1,1,2,2-Tetrachloroethane	0.903	0.933	0.979	0.963
Trichloroethene	0.333	0.352	0.367	0.353
Toluene	1.587	1.654	1.679	1.620
Dichlorodifluoromethane	161138	353407	536461	707659
Trichlorofluoromethane	0.962	1.049	1.174	1.124
Tetrachloroethene	0.288	0.308	0.316	0.301
1,2-Dibromoethane	0.381	0.388	0.395	0.378
Chlorobenzene	0.988	1.029	1.050	1.009
1,3-Dichlorobenzene	1.520	1.572	1.642	1.609
1,4-Dichlorobenzene	1.533	1.592	1.640	1.606
Ethylbenzene	0.534	0.558	0.564	0.528
1,2-Dichlorobenzene	1.387	1.450	1.494	1.475
m,p-Xylenes	0.649	0.682	0.692	0.666
o-Xylene	0.634	0.666	0.687	0.651
Styrene	1.146	1.196	1.229	1.164
2,2-Dichloropropane	0.906	0.967	1.011	0.988
1,1-Dichloropropene	0.455	0.487	0.506	0.483

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS GROUP Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2005017

Instrument ID: VOA6 Calibration Date(s): 05/01/20 05/01/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1123 1522

LAB FILE ID: RF50: X050108 RF100: X050109 RF150: X050110
RF200: X050111

COMPOUND	RF50	RF100	RF150	RF200
Dibromomethane	0.247	0.252	0.261	0.252
1,3-Dichloropropane	0.631	0.640	0.658	0.634
1,1,1,2-Tetrachloroethane	0.380	0.390	0.395	0.380
Isopropylbenzene	1.606	1.736	1.790	1.680
Bromobenzene	0.900	0.927	0.970	0.952
1,2,3-Trichloropropane	0.787	0.798	0.828	0.808
n-Propylbenzene	3.908	4.097	4.375	4.241
2-Chlorotoluene	2.354	2.425	2.560	2.513
1,3,5-Trimethylbenzene	2.723	2.851	3.006	2.902
4-Chlorotoluene	2.801	2.906	3.028	2.936
tert-Butylbenzene	2.160	2.327	2.441	2.344
1,2,4-Trimethylbenzene	2.828	2.994	3.099	3.015
sec-Butylbenzene	3.159	3.419	3.600	3.496
p-Isopropyltoluene	2.692	2.890	3.040	2.940
n-Butylbenzene	2.470	2.746	2.864	2.777
1,2-Dibromo-3-Chloropropane	14995	31547	48716	68470
1,2,4-Trichlorobenzene	57724	131230	213780	304996
Hexachlorobutadiene	40674	89612	146902	207981
Naphthalene	88354	204668	337951	487714
1,2,3-Trichlorobenzene	27904	64972	109041	159880
Dibromofluoromethane	142415	293280	433898	570369
1,2-Dichloroethane-d4	196792	401798		
Toluene-d8	507352	1052124	1565382	2086499
4-Bromofluorobenzene	204406	422826	638294	

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS GROUP Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2005017

Instrument ID: VOA6 Calibration Date(s): 05/01/20 05/01/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1123 1522

COMPOUND	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
Bromochloromethane	AVRG		0.32312437		6.146	15.000
Vinyl Chloride	AVRG		0.93437693		6.074	15.000
Chloromethane	LINR	4.158e-002	0.89492487		0.9981770	0.9900000
Bromomethane	LINR	2.372e-002	1.93407421		0.9988454	0.9900000
Chloroethane	AVRG		0.54555225		12.216	15.000
Methylene Chloride	LINR	5.673e-003	1.53950798		0.9995651	0.9900000
Acetone	LINR	1.954e-003	3.28246002		0.9995338	0.9900000
Carbon Disulfide	AVRG		1.62815493		6.491	15.000
1,1-Dichloroethene	AVRG		0.50212972		11.387	15.000
trans-1,2-Dichloroethene	AVRG		0.54248251		9.313	15.000
Carbon Tetrachloride	AVRG		0.48934272		5.288	15.000
Bromodichloromethane	AVRG		0.49563601		9.196	15.000
1,1-Dichloroethane	AVRG		1.35203208		3.927	15.000
1,2-Dichloropropane	AVRG		0.43425465		8.150	15.000
2-Butanone	LINR	4.006e-002	2.60585350		0.9997253	0.9900000
cis-1,3-Dichloropropene	AVRG		0.58344282		7.769	15.000
Dibromochloromethane	AVRG		0.39028810		6.830	15.000
1,1,2-Trichloroethane	AVRG		0.30436167		7.730	15.000
cis-1,2-Dichloroethene	AVRG		0.64319746		7.037	15.000
Benzene	AVRG		1.34462595		7.835	15.000
Chloroform	AVRG		1.12634341		5.916	15.000
trans-1,3-Dichloropropene	AVRG		0.52825132		11.098	15.000
Bromoform	LINR	9.266e-003	3.47637845		0.9987948	0.9900000
1,1,1-Trichloroethane	AVRG		0.94542015		8.457	15.000
4-Methyl-2-Pentanone	AVRG		0.54250431		9.662	15.000
2-Hexanone	AVRG		0.37482567		11.992	15.000
1,2-Dichloroethane	AVRG		0.62759296		7.198	15.000
1,1,2,2-Tetrachloroethane	AVRG		0.92083885		8.952	15.000
Trichloroethene	AVRG		0.33529325		6.798	15.000
Toluene	AVRG		1.55427566		7.236	15.000
Dichlorodifluoromethane	2ORDR	1.59e-002	1.45212043	-4.15e-002	0.9993008	0.9900000
Trichlorofluoromethane	AVRG		1.00910428		12.192	15.000
Tetrachloroethene	AVRG		0.28717552		8.246	15.000
1,2-Dibromoethane	AVRG		0.36395705		9.688	15.000
Chlorobenzene	AVRG		0.98293627		5.341	15.000
1,3-Dichlorobenzene	AVRG		1.48648782		9.275	15.000
1,4-Dichlorobenzene	AVRG		1.56518565		3.380	15.000
Ethylbenzene	AVRG		0.51680871		7.866	15.000
1,2-Dichlorobenzene	AVRG		1.35920122		11.183	15.000
m,p-Xylenes	AVRG		0.62234238		10.212	15.000
o-Xylene	AVRG		0.60407937		12.514	15.000
Styrene	AVRG		1.06088050		13.883	15.000
2,2-Dichloropropane	AVRG		0.97199754		4.267	15.000
1,1-Dichloropropene	AVRG		0.48420551		3.534	15.000

FORM VI VOA

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ALS GROUP Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2005017

Instrument ID: VOA6 Calibration Date(s): 05/01/20 05/01/20

Column: DB624 ID: 0.18 (mm) Calibration Time(s): 1123 1522

COMPOUND	CURVE	COEFFICENTS A0	A1	A2	%RSD OR R^2	MAX %RSD OR R^2
Dibromomethane	AVRG		0.24703423		6.180	15.000
1,3-Dichloropropane	AVRG		0.63220206		4.885	15.000
1,1,1,2-Tetrachloroethane	AVRG		0.36323565		7.910	15.000
Isopropylbenzene	AVRG		1.57790175		10.053	15.000
Bromobenzene	AVRG		0.90768124		6.091	15.000
1,2,3-Trichloropropane	AVRG		0.77663545		6.963	15.000
n-Propylbenzene	AVRG		4.01182405		6.413	15.000
2-Chlorotoluene	AVRG		2.42317829		3.830	15.000
1,3,5-Trimethylbenzene	AVRG		2.74364085		7.707	15.000
4-Chlorotoluene	AVRG		2.83425626		5.010	15.000
tert-Butylbenzene	AVRG		2.25057540		5.760	15.000
1,2,4-Trimethylbenzene	AVRG		2.79528883		9.375	15.000
sec-Butylbenzene	AVRG		3.22347007		8.679	15.000
p-Isopropyltoluene	AVRG		2.69253853		9.621	15.000
n-Butylbenzene	AVRG		2.45966116		13.500	15.000
1,2-Dibromo-3-Chloropropane	2ORDR	3.759e-004	13.7479703	-7.0702776	0.9999145	0.9900000
1,2,4-Trichlorobenzene	2ORDR	-8.15e-004	3.36580645	-0.5394839	0.9991927	0.9900000
Hexachlorobutadiene	2ORDR	-2.5e-002	4.90892093	-1.1126523	0.9984834	0.9900000
Naphthalene	2ORDR	1.231e-002	2.16696131	-0.2383636	0.9992636	0.9900000
1,2,3-Trichlorobenzene	2ORDR	5.679e-003	6.85736487	-2.5055857	0.9989968	0.9900000
Dibromofluoromethane	LINR	9.739e-003	1.66480455		0.9996878	0.9900000
1,2-Dichloroethane-d4	2ORDR	-7.61e-003	1.27990632	-1.78e-002	0.9999506	0.9900000
Toluene-d8	LINR	-3.07e-004	0.76056066		0.9995959	0.9900000
4-Bromofluorobenzene	2ORDR	-2.54e-003	1.98414645	-9.53e-002	0.9999766	0.9900000

FORM VI VOA

MSVOA06 -Logbook

Batch: 40449
Date: 05-01-2020
Method: 8260
Comments:

Analyst: Presenta Cabascango
Reviewer:
Laboratory: Houston

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	05-01-2020 10:59 am	1.00	50 mL	50 mL	X050101.D	Liquid	Y	NA
2	*Auto find/ purged* VSTD000.25	ICAL1	05-01-2020 11:23 am	1.00	50 mL	50 mL	X050102.D	Liquid	Y	NA
3	*0.10 uL cal std/100 mL DI* VSTD000.5	ICAL2	05-01-2020 11:47 am	1.00	50 mL	50 mL	X050103.D	Liquid	Y	NA
4	*0.10 uL cal std/50 mL DI* VSTD001	ICAL3	05-01-2020 12:34 pm	1.00	50 mL	50 mL	X050104.D	Liquid	Y	NA
5	*0.20 uL cal std/50 mL DI* VSTD002	ICAL4	05-01-2020 12:58 pm	1.00	50 mL	50 mL	X050105.D	Liquid	Y	NA
6	*0.40 uL cal std/50 mL DI* VSTD005	ICAL5	05-01-2020 01:22 pm	1.00	50 mL	50 mL	X050106.D	Liquid	Y	NA
7	*1.0 uL cal std/50 mL DI* VSTD020	ICAL6	05-01-2020 01:46 pm	1.00	50 mL	50 mL	X050107.D	Liquid	Y	NA
8	*4.0 uL cal std/50 mL DI* VSTD050	ICAL7	05-01-2020 02:10 pm	1.00	50 mL	50 mL	X050108.D	Liquid	Y	NA
9	*10 uL cal std/50 mL DI* VSTD100	ICAL8	05-01-2020 02:34 pm	1.00	50 mL	50 mL	X050109.D	Liquid	Y	NA
10	*20 uL cal std/50 mL DI* VSTD150	ICAL9	05-01-2020 02:58 pm	1.00	50 mL	50 mL	X050110.D	Liquid	Y	NA
11	*30 uL cal std/50 mL DI* VSTD200	ICAL	05-01-2020 03:22 pm	1.00	50 mL	50 mL	X050111.D	Liquid	Y	NA
12	*40 uL cal std/50 mL DI* BLANK	SAMP	05-01-2020 03:46 pm	1.00	50 mL	50 mL	X050112.D	Liquid	Y	NA
13	BLANK	SAMP	05-01-2020 04:10 pm	1.00	50 mL	50 mL	X050113.D	Liquid	Y	NA
14	ICV	CCV	05-01-2020 04:34 pm	1.00	50 mL	50 mL	X050114.D	Liquid	Y	NA
15	*10 uL cal std/50 mL DI* BLANK	SAMP	05-01-2020 04:58 pm	1.00	50 mL	50 mL	X050115.D	Liquid	Y	NA
16	VLCSW-200501	LCS	05-01-2020 05:22 pm	1.00	50 mL	50 mL	X050116.D	Liquid	Y	NA
17	*4.0 uL cal std/50 mL DI* BLANK	SAMP	05-01-2020 05:46 pm	1.00	50 mL	50 mL	X050117.D	Liquid	Y	NA
18	VBLKW-200501	MBLK	05-01-2020 06:10 pm	1.00	50 mL	50 mL	X050118.D	Liquid	Y	NA
19	MBLK-153171	MBLK	05-01-2020 06:34 pm	20.00	2.5 mL	50 mL	X050119.D	Liquid	Y	NA
20	*tclps* HS20050015-01	SAMP	05-01-2020 06:58 pm	20.00	2.5 mL	50 mL	X050120.D	Liquid	Y	NA
21	HS20041189-01	SAMP	05-01-2020 07:22 pm	20.00	2.5 mL	50 mL	X050121.D	Liquid	Y	NA
22	HS20041189-01MS	MS	05-01-2020 07:46 pm	20.00	2.5 mL	50 mL	X050122.D	Liquid	Y	NA
23	HS20041209-01	SAMP	05-01-2020 08:10 pm	20.00	2.5 mL	50 mL	X050123.D	Liquid	Y	NA
24	MBLK-153177	MBLK	05-01-2020 08:34 pm	20.00	2.5 mL	50 mL	X050124.D	Liquid	Y	NA
25	HS20041160-01	SAMP	05-01-2020 08:58 pm	20.00	2.5 mL	50 mL	X050125.D	Liquid	Y	NA
26	HS20041204-01	SAMP	05-01-2020 09:22 pm	20.00	2.5 mL	50 mL	X050126.D	Liquid	Y	NA
27	HS20041205-01	SAMP	05-01-2020 09:46 pm	20.00	2.5 mL	50 mL	X050127.D	Liquid	Y	NA
28	HS20041208-01	SAMP	05-01-2020 10:10 pm	20.00	2.5 mL	50 mL	X050128.D	Liquid	Y	NA
29	BLANK	SAMP	05-01-2020 10:34 pm	1.00	50 mL	50 mL	X050140.D	Liquid	Y	NA

MSVOA06 -Logbook

Chemical	Value
SURR SPK ID	31106-26-06
IS ID	31106-26-06
CAL STD ID	31106-27-01/02
BFB ID	31106-26-06
pH Paper	634-64-11

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200501.b\X050101.D

Date : 01-MAY-2020 10:59

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

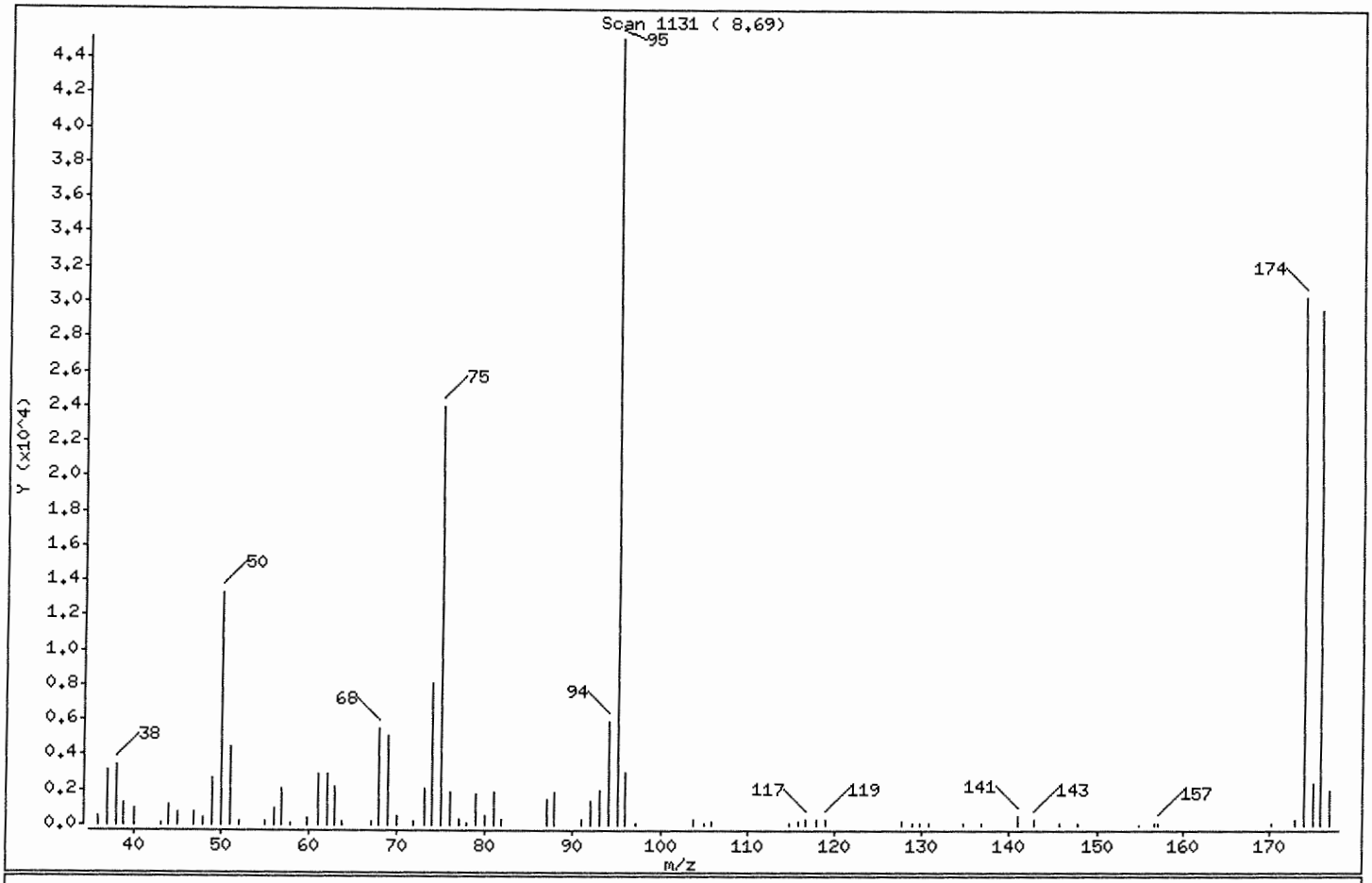
Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

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	29.52
75	30.00 - 60.00% of mass 95	52.99
96	5.00 - 9.00% of mass 95	6.66
173	Less than 2.00% of mass 174	0.68 (1.02)
174	Greater than 50.00% of mass 95	67.12
175	5.00 - 9.00% of mass 174	5.22 (7.77)
176	95.00 - 101.00% of mass 174	65.57 (97.70)
177	5.00 - 9.00% of mass 176	4.44 (6.77)

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200501.b\X050101.D

Date : 01-MAY-2020 10:59

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25

Data File: X050101.D
Spectrum: Scan 1131 (8.69)
Location of Maximum: 95.00
Number of points: 74

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.90	521	61.00	2938	86.90	1458	129.80	148
37.00	3096	62.00	2892	87.90	1907	130.80	87
38.00	3469	63.00	2231	91.00	315	134.70	62
38.90	1223	63.80	244	91.90	1401	136.90	91
40.00	895	67.00	166	93.00	1966	140.90	530
43.20	145	68.00	5511	94.00	5948	142.90	309
44.00	1131	69.00	5103	95.00	45152	145.80	54
45.00	723	70.00	476	96.00	3005	147.90	52
46.90	750	71.90	210	97.10	118	154.80	51
48.00	457	73.00	2085	103.80	311	156.70	79
49.00	2709	74.00	8100	105.00	68	157.10	85
50.00	13328	75.00	23928	105.90	223	170.20	55
51.00	4492	76.00	1917	114.90	103	172.90	309
52.20	172	77.00	321	115.90	171	173.90	30304
55.00	240	77.80	128	116.70	304	174.90	2356
56.10	971	78.80	1755	117.90	300	175.90	29608
57.00	2046	79.90	561	118.90	269	176.90	2004
58.00	80	80.90	1854	127.70	245		
59.80	448	81.90	346	129.00	99		

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200501.b\X050101.D

Date : 01-MAY-2020 10:59

Client ID: BFB

Instrument: voa6.i

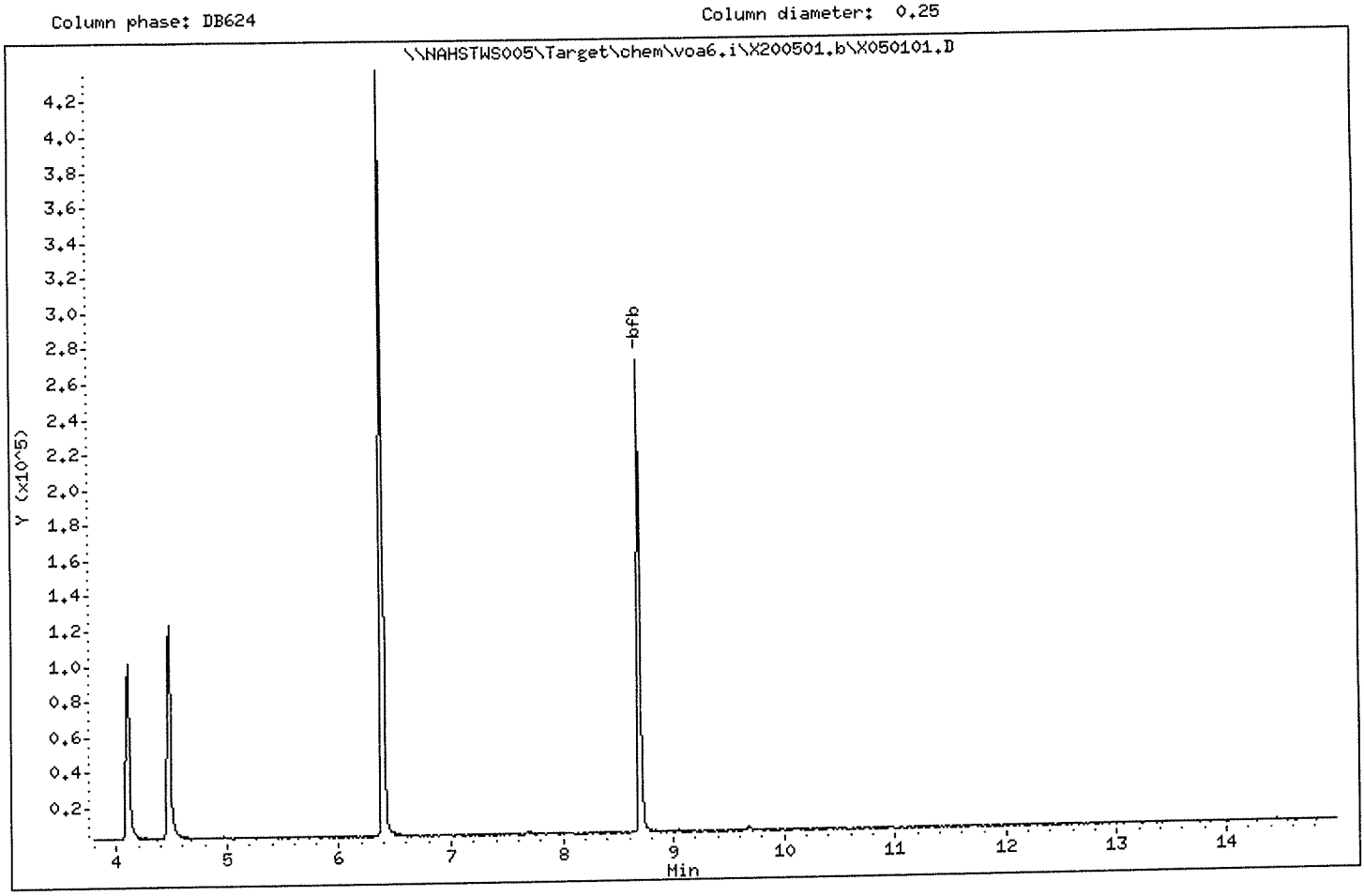
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25





ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200501.b\X050102.D
Lab Smp Id: VSTD000.25 Client Smp ID: VSTD000.25
Inj Date : 01-MAY-2020 11:23
Operator : PC Inst ID: voa6.i
Smp Info : VSTD000.25;VSTD000.25;1;1;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200501.b\8260W.m
Meth Date : 21-May-2020 17:44 voa6.i Quant Type: ISTD
Cal Date : 01-MAY-2020 14:10 Cal File: X050108.D
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0000000_Bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7142

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

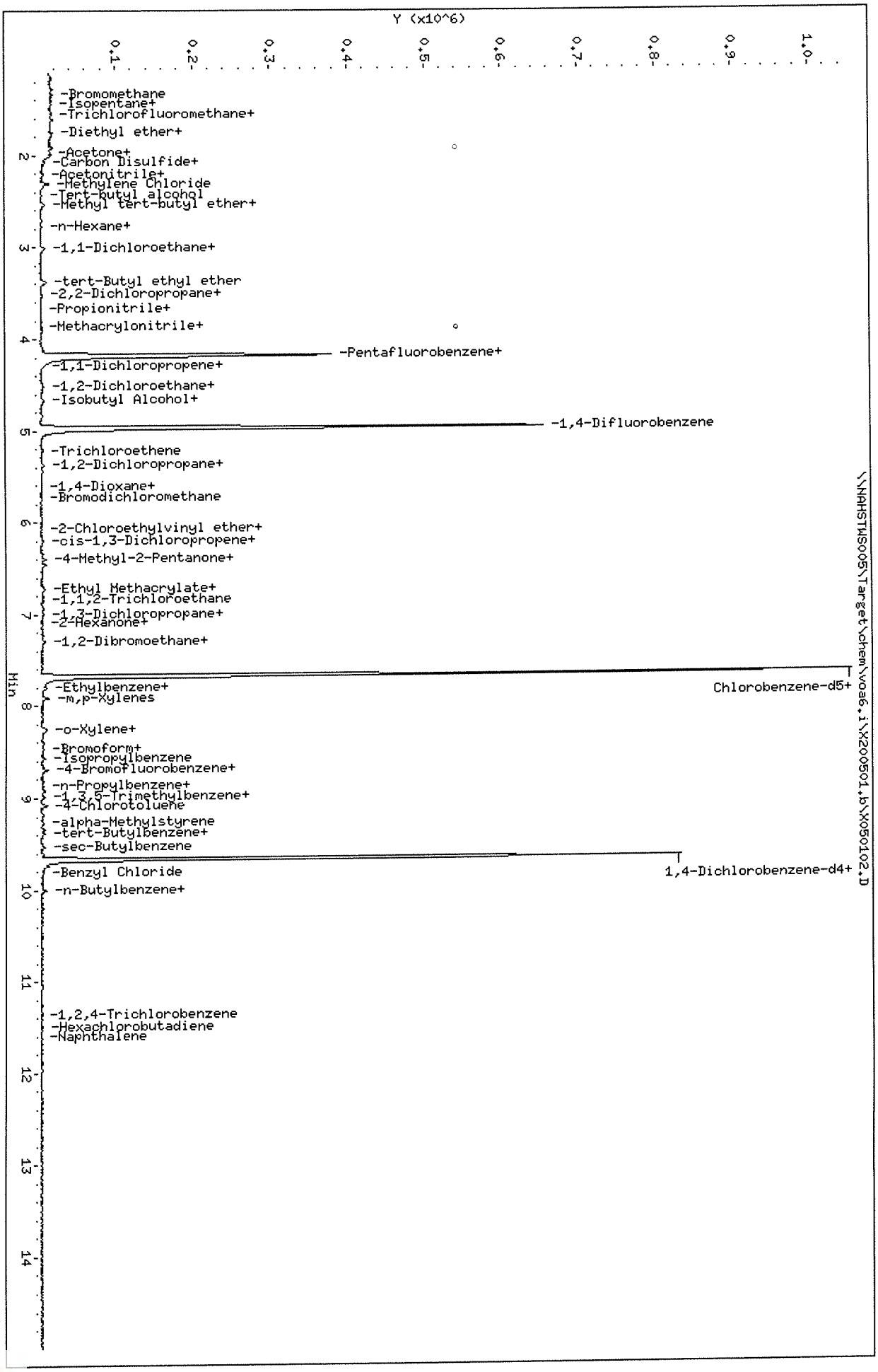
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	283450	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	481497	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	426778	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	179856	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	949	0.25000	0.76(a)
$ 35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.072)	2087	0.25000	0.09(Ta)
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	4067	0.25000	0.34(Ta)
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	2420	0.25000	0.43(a)
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	573	0.25000	0.18(aM)
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	1058	0.25000	0.19(a)
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	838	0.25000	0.25(aM)
53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	619	0.25000	0.23(a)
22 1,1-Dichloroethane	63	2.922	2.922	(0.699)	2034	0.25000	0.26(Ta)
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	607	0.25000	0.21(a)
32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	1216	0.25000	0.26(a)
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	692	0.25000	0.24(aM)
90 1,2,4-Trichlorobenzene	180	11.360	11.360	(1.175)	181	0.25000	0.12(aM)
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	2260	0.25000	0.22(a)
57 1,2-Dibromoethane	107	7.270	7.270	(0.948)	621	0.25000	0.19(a)
88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	1086	0.25000	0.22(a)
33 1,2-Dichloroethane	62	4.569	4.569	(0.919)	1262	0.25000	0.20(a)
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	743	0.25000	0.17(aM)

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200501.b\X050102.D Page 2
Report Date: 21-May-2020 17:44

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
75	1,3,5-Trimethylbenzene	105	9.075	9.075	(0.939)	2165	0.25000	0.21(a)
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	1190	0.25000	0.22(a)
54	1,3-Dichloropropane	76	6.997	6.997	(0.912)	972	0.25000	0.18(aM)
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	1502	0.25000	0.26(a)
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	1482	0.25000	0.26(aM)
24	2-Butanone	43	3.624	3.624	(0.866)	864	0.50000	2.40(M)
76	2-Chlorotoluene	91	8.982	8.982	(0.929)	2219	0.25000	0.25(a)
52	2-Hexanone	43	7.098	7.098	(0.925)	1308	0.50000	0.40(Ta)
77	4-Chlorotoluene	91	9.082	9.082	(0.939)	2379	0.25000	0.23(a)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	2122	0.25000	0.21(a)
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	1921	0.50000	0.41(a)
10	Acetone	43	1.969	1.969	(0.471)	2448	0.50000	1.51(a)
37	Benzene	78	4.519	4.519	(0.909)	3200	0.25000	0.24(a)
74	Bromobenzene	156	8.817	8.817	(0.912)	951	0.25000	0.29(a)
29	Bromochloromethane	128	3.795	3.795	(0.908)	368	0.25000	0.20(aM)
39	Bromodichloromethane	83	5.729	5.729	(1.153)	1090	0.25000	0.22(aM)
66	Bromoform	173	8.416	8.416	(1.097)	306	0.25000	0.58(aM)
6	Bromomethane	94	1.339	1.339	(0.320)	1164	0.25000	1.58(aM)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	1206	0.25000	0.25(aM)
59	Chlorobenzene	112	7.699	7.699	(1.004)	2074	0.25000	0.24(a)
7	Chloroethane	64	1.403	1.403	(0.336)	1087	0.25000	0.35(aM)
28	Chloroform	83	3.924	3.924	(0.938)	1511	0.25000	0.23(a)
3	Chloromethane	50	1.074	1.074	(0.257)	1308	0.25000	2.28(a)
27	cis-1,2-Dichloroethene	96	3.538	3.538	(0.846)	766	0.25000	0.21(aM)
46	cis-1,3-Dichloropropene	75	6.166	6.166	(1.241)	1170	0.25000	0.20(a)
55	Dibromochloromethane	129	7.176	7.176	(0.936)	782	0.25000	0.23(aM)
44	Dibromomethane	93	5.565	5.565	(1.120)	479	0.25000	0.20(aM)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	807	0.25000	1.00(aM)
19	Carbon Disulfide	76	2.069	2.069	(0.495)	4349	0.50000	0.47(a)
61	Ethylbenzene	106	7.807	7.807	(1.018)	755	0.25000	0.17(a)
67	Isopropylbenzene	105	8.566	8.566	(1.117)	3075	0.25000	0.22(a)
62	m,p-Xylenes	106	7.914	7.914	(1.032)	2253	0.50000	0.42(a)
17	Methylene Chloride	84	2.306	2.306	(0.551)	2386	0.25000	0.93(aM)
87	n-Butylbenzene	91	9.999	9.999	(1.034)	1673	0.25000	0.18(a)
73	n-Propylbenzene	91	8.917	8.917	(0.922)	3117	0.25000	0.21(a)
92	Naphthalene	128	11.603	11.603	(1.200)	181	0.25000	0.72(aM)
63	o-Xylene	106	8.251	8.251	(1.076)	1086	0.25000	0.21(a)
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	2751	0.25000	0.23(a)
64	Styrene	104	8.265	8.265	(1.078)	1552	0.25000	0.17(a)
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	1778	0.25000	0.21(a)
50	Toluene	91	6.453	6.453	(0.841)	3051	0.25000	0.22(a)
51	trans-1,3-Dichloropropene	75	6.697	6.697	(1.347)	1061	0.25000	0.20(aM)
38	Trichloroethene	130	5.221	5.221	(1.050)	747	0.25000	0.23(aM)
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	1420	0.25000	0.24(a)
5	Vinyl Chloride	62	1.138	1.138	(0.272)	1478	0.25000	0.27(a)

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200501.b\X050102.D
Date : 01-MAY-2020 11:23
Client ID: VSTD000.25
Sample Info: VSTD000.25;VSTD000.25;1;1;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

\\NAHSTWS005\Target\chem\voa6.i\X200501.b\X050102.D

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200501.b\X050103.D Page 1
Report Date: 21-May-2020 17:44

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200501.b\X050103.D
Lab Smp Id: VSTD000.5 Client Smp ID: VSTD000.5
Inj Date : 01-MAY-2020 11:47
Operator : PC Inst ID: voa6.i
Smp Info : VSTD000.5;VSTD000.5;1;2;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X200501.b\8260W.m
Meth Date : 21-May-2020 17:44 voa6.i Quant Type: ISTD
Cal Date : 01-MAY-2020 11:23 Cal File: X050102.D
Als bottle: 3 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0000000_Bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7142

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	260012	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	440048	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	392671	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	173426	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	1876	0.50000	1.08
$ 35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.072)	2872	0.50000	0.32(Ta)
$ 48 Toluene-d8	98	6.395	6.395	(0.834)	6250	0.50000	0.58(a)
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	2666	0.50000	0.54(a)
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	1261	0.50000	0.44(a)
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	2089	0.50000	0.42(a)
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	1282	0.50000	0.40(aM)
53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	1027	0.50000	0.42(a)
22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	3491	0.50000	0.49(Ta)
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	1149	0.50000	0.44(a)
32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	2225	0.50000	0.52(a)
93 1,2,3-Trichlorobenzene	180	11.753	11.753	(1.216)	113	0.50000	0.50(aM)
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	1221	0.50000	0.45(aM)
90 1,2,4-Trichlorobenzene	180	11.352	11.352	(1.174)	397	0.50000	0.34(aM)
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	4272	0.50000	0.44(a)
89 1,2-Dibromo-3-Chloropropane	155	10.665	10.665	(1.103)	58	0.50000	0.24(aM)
57 1,2-Dibromoethane	107	7.269	7.269	(0.948)	1218	0.50000	0.42(a)
88 1,2-Dichlorobenzene	146	10.006	10.006	(1.035)	2220	0.50000	0.47(a)

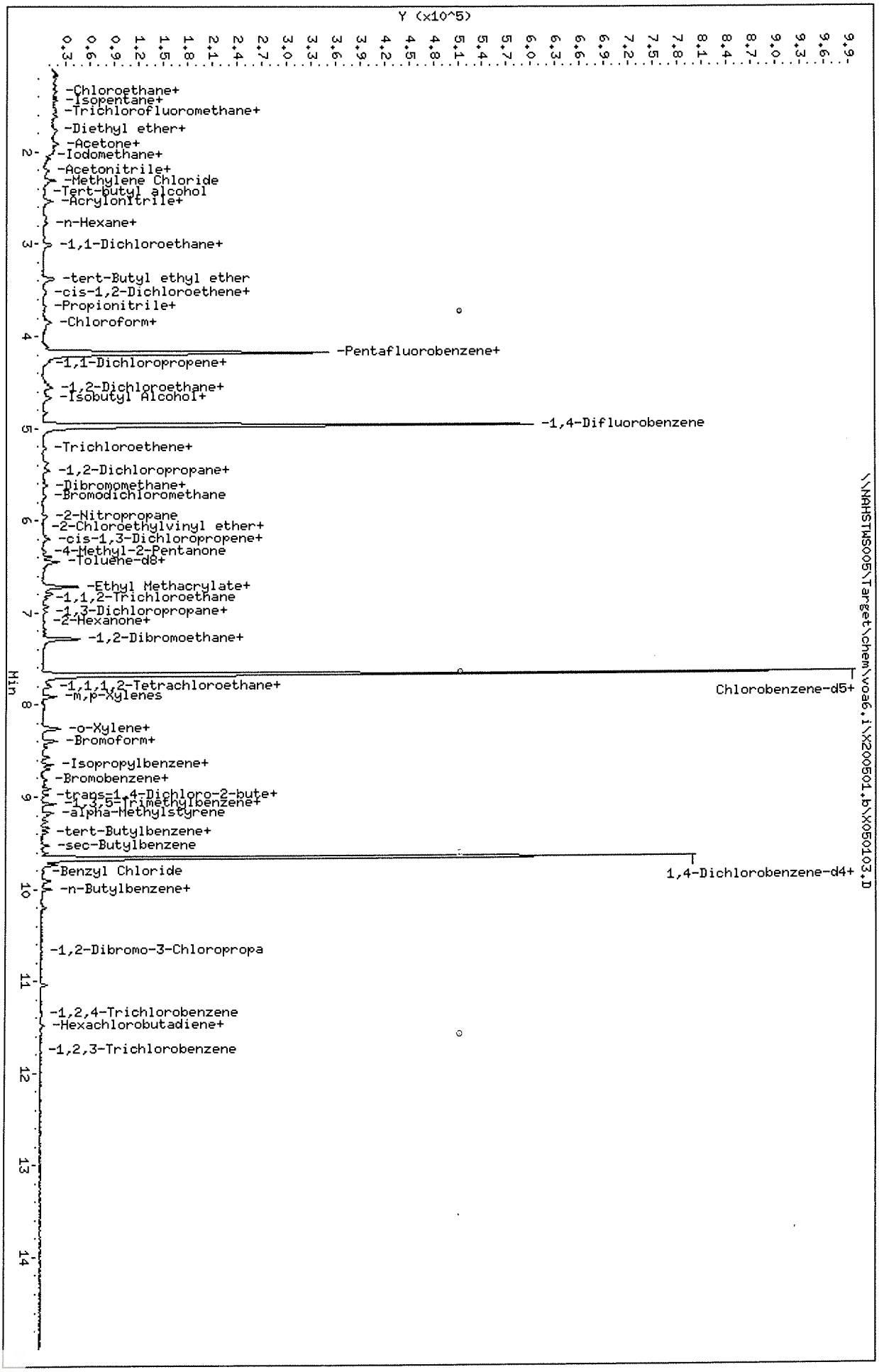
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	2363	0.50000	0.42(a)
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	1987	0.50000	0.51(aM)
75 1,3,5-Trimethylbenzene	105	9.074	9.074	(0.939)	4326	0.50000	0.45(a)
83 1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	2310	0.50000	0.44(a)
54 1,3-Dichloropropane	76	6.990	6.990	(0.911)	2316	0.50000	0.46(a)
84 1,4-Dichlorobenzene	146	9.690	9.690	(1.002)	2663	0.50000	0.49(a)
26 2,2-Dichloropropane	77	3.509	3.509	(0.839)	2599	0.50000	0.51(aM)
24 2-Butanone	43	3.623	3.623	(0.866)	1390	1.00000	2.69(M)
76 2-Chlorotoluene	91	8.974	8.974	(0.928)	4106	0.50000	0.48(a)
52 2-Hexanone	43	7.097	7.097	(0.925)	3223	1.00000	1.09(a)
77 4-Chlorotoluene	91	9.074	9.074	(0.939)	4840	0.50000	0.49(a)
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	4385	0.50000	0.46(a)
45 4-Methyl-2-Pentanone	43	6.338	6.338	(0.826)	3697	1.00000	0.86(a)
10 Acetone	43	1.969	1.969	(0.471)	3456	1.00000	2.27(a)
37 Benzene	78	4.519	4.519	(0.909)	4902	0.50000	0.41(a)
74 Bromobenzene	156	8.817	8.817	(0.912)	1479	0.50000	0.46(a)
29 Bromochloromethane	128	3.795	3.795	(0.908)	757	0.50000	0.45(a)
39 Bromodichloromethane	83	5.736	5.736	(1.154)	1929	0.50000	0.44(aM)
66 Bromoform	173	8.415	8.415	(1.097)	670	0.50000	0.75(aM)
6 Bromomethane	94	1.338	1.338	(0.320)	1851	0.50000	1.87(aM)
34 Carbon Tetrachloride	117	4.261	4.261	(0.857)	2131	0.50000	0.49(aH)
59 Chlorobenzene	112	7.699	7.699	(1.004)	3683	0.50000	0.47(a)
7 Chloroethane	64	1.396	1.396	(0.334)	1821	0.50000	0.64(a)
28 Chloroform	83	3.910	3.910	(0.935)	2636	0.50000	0.45(a)
3 Chloromethane	50	1.073	1.073	(0.257)	2844	0.50000	2.56(a)
27 cis-1,2-Dichloroethene	96	3.537	3.537	(0.846)	1481	0.50000	0.44(a)
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	2319	0.50000	0.45(a)
55 Dibromochloromethane	129	7.183	7.183	(0.937)	1358	0.50000	0.44(a)
44 Dibromomethane	93	5.557	5.557	(1.118)	985	0.50000	0.45(a)
2 Dichlorodifluoromethane	85	0.966	0.966	(0.231)	1277	0.50000	1.15(aM)
19 Carbon Disulfide	76	2.069	2.069	(0.495)	8005	1.00000	0.94(a)
61 Ethylbenzene	106	7.807	7.807	(1.018)	1725	0.50000	0.42(a)
67 Isopropylbenzene	105	8.566	8.566	(1.117)	5286	0.50000	0.42(a)
62 m,p-Xylenes	106	7.907	7.907	(1.031)	4144	1.00000	0.84(a)
17 Methylene Chloride	84	2.305	2.305	(0.551)	1867	0.50000	0.83(aM)
87 n-Butylbenzene	91	9.998	9.998	(1.034)	3649	0.50000	0.42(a)
73 n-Propylbenzene	91	8.917	8.917	(0.922)	6408	0.50000	0.46(a)
92 Naphthalene	128	11.567	11.567	(1.196)	418	0.50000	0.87(aM)
63 o-Xylene	106	8.244	8.244	(1.075)	1896	0.50000	0.39(a)
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	5068	0.50000	0.45(a)
64 Styrene	104	8.265	8.265	(1.078)	3463	0.50000	0.41(a)
78 tert-Butylbenzene	119	9.339	9.339	(0.966)	3803	0.50000	0.48(a)
56 Tetrachloroethene	164	6.933	6.933	(0.904)	1058	0.50000	0.46(a)
50 Toluene	91	6.460	6.460	(0.842)	5493	0.50000	0.45(a)
20 trans-1,2-Dichloroethene	96	2.535	2.535	(0.606)	1125	0.50000	0.39(a)
51 trans-1,3-Dichloropropene	75	6.696	6.696	(1.347)	1957	0.50000	0.42(a)
38 Trichloroethene	130	5.214	5.214	(1.049)	1371	0.50000	0.46(a)
8 Trichlorofluoromethane	101	1.560	1.560	(0.373)	1951	0.50000	0.37(a)
5 Vinyl Chloride	62	1.138	1.138	(0.272)	2524	0.50000	0.51(aM)

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200501.b\X050103.D
Date : 01-MAY-2020 11:47
Client ID: VSTD000.5
Sample Info: VSTD000.5;VSTD000.5;1;2;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200501.b\X050104.D Page 1
Report Date: 21-May-2020 17:44

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200501.b\X050104.D
Lab Smp Id: VSTD001 Client Smp ID: VSTD001
Inj Date : 01-MAY-2020 12:34
Operator : PC Inst ID: voa6.i
Smp Info : VSTD001;VSTD001;1;3;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200501.b\8260W.m
Meth Date : 21-May-2020 17:44 voa6.i Quant Type: ISTD
Cal Date : 01-MAY-2020 11:47 Cal File: X050103.D
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0000000_Bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7142

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	247331	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	421705	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	382053	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	171203	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	2946	1.00000	1.47
$	35 1,2-Dichloroethane-d4	65	4.483	4.483	(1.072)	4483	1.00000	0.77(a)
$	48 Toluene-d8	98	6.388	6.388	(0.833)	10327	1.00000	1.01
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	4485	1.00000	1.03
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	2548	1.00000	0.91(a)
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	4607	1.00000	0.98(a)
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	3196	1.00000	1.01(aM)
	53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	2288	1.00000	0.98(a)
	22 1,1-Dichloroethane	63	2.929	2.929	(0.700)	7033	1.00000	1.05
	11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	2282	1.00000	0.91(a)
	32 1,1-Dichloropropene	75	4.290	4.290	(0.863)	4154	1.00000	1.01(a)
	93 1,2,3-Trichlorobenzene	180	11.754	11.754	(1.216)	555	1.00000	1.39(aM)
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	2386	1.00000	0.89(aM)
	90 1,2,4-Trichlorobenzene	180	11.352	11.352	(1.174)	790	1.00000	0.73(aM)
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	8660	1.00000	0.90(a)
	89 1,2-Dibromo-3-Chloropropane	155	10.665	10.665	(1.103)	238	1.00000	0.97(aM)
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	2484	1.00000	0.89(a)
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	3751	1.00000	0.80(a)

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200501.b\X050104.D Page 2
Report Date: 21-May-2020 17:44

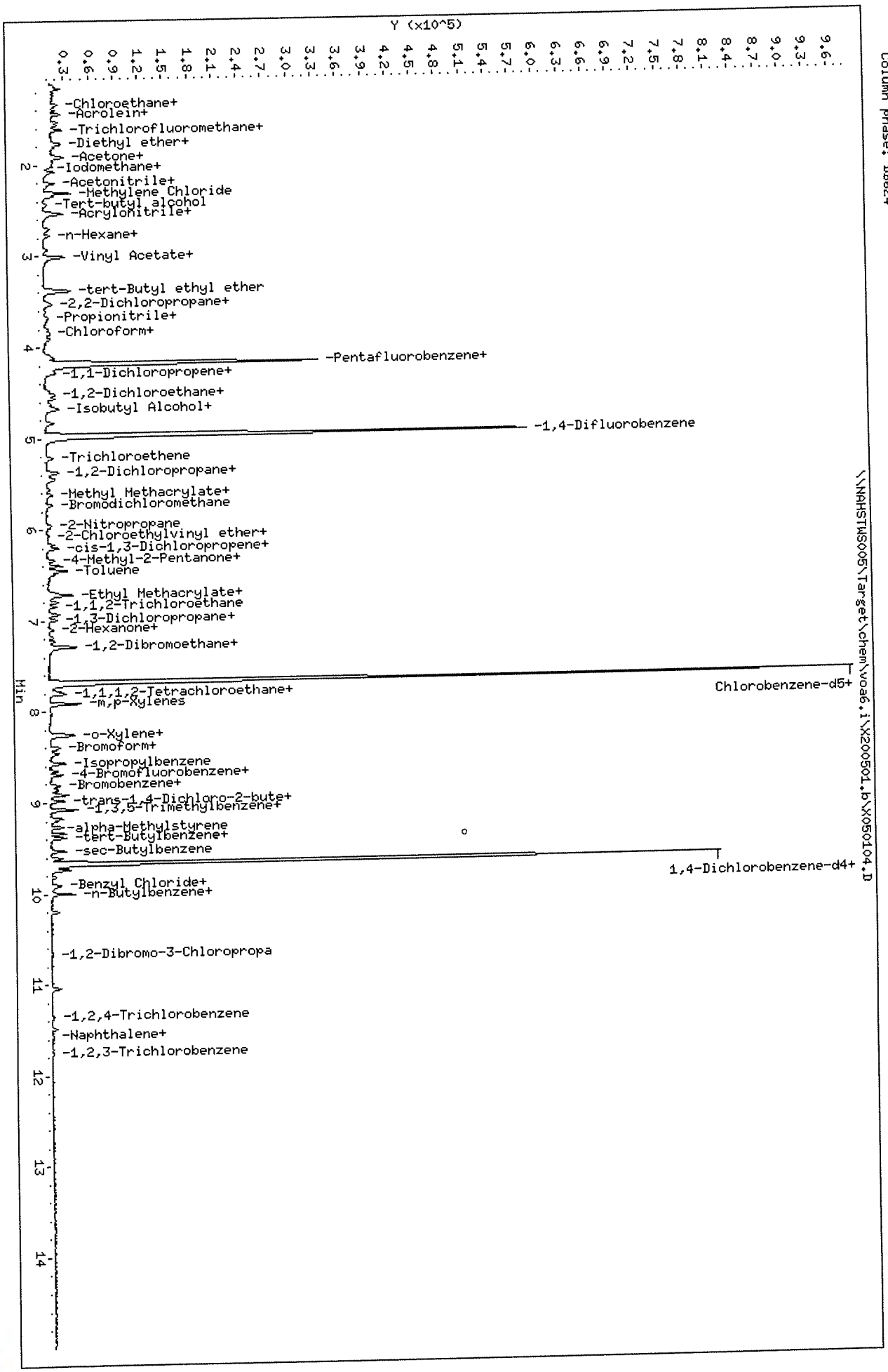
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	5404	1.00000	1.02
42	1,2-Dichloropropane	63	5.450	5.450	(1.097)	3226	1.00000	0.88(aM)
75	1,3,5-Trimethylbenzene	105	9.075	9.075	(0.939)	8717	1.00000	0.92(a)
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	4362	1.00000	0.85(a)
54	1,3-Dichloropropane	76	6.990	6.990	(0.911)	4755	1.00000	0.98(a)
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	5165	1.00000	0.96(a)
26	2,2-Dichloropropane	77	3.509	3.509	(0.839)	4939	1.00000	1.02(a)
24	2-Butanone	43	3.602	3.602	(0.861)	3322	2.00000	3.75
76	2-Chlorotoluene	91	8.981	8.981	(0.929)	8060	1.00000	0.97(a)
52	2-Hexanone	43	7.098	7.098	(0.925)	4589	2.00000	1.60(a)
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	8952	1.00000	0.92(a)
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	8234	1.00000	0.89(a)
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	7792	2.00000	1.87(a)
10	Acetone	43	1.976	1.976	(0.473)	4880	2.00000	3.33(a)
37	Benzene	78	4.519	4.519	(0.909)	10901	1.00000	0.96(a)
74	Bromobenzene	156	8.810	8.810	(0.911)	3018	1.00000	0.97(a)
29	Bromochloromethane	128	3.795	3.795	(0.908)	1784	1.00000	1.11(a)
39	Bromodichloromethane	83	5.729	5.729	(1.153)	3636	1.00000	0.86(aM)
66	Bromoform	173	8.416	8.416	(1.097)	1474	1.00000	1.13(Ta)
6	Bromomethane	94	1.339	1.339	(0.320)	3140	1.00000	2.41(aM)
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	4494	1.00000	1.08(aH)
59	Chlorobenzene	112	7.699	7.699	(1.004)	7080	1.00000	0.94(a)
7	Chloroethane	64	1.403	1.403	(0.336)	2859	1.00000	1.05(a)
28	Chloroform	83	3.910	3.910	(0.935)	5451	1.00000	0.97(a)
3	Chloromethane	50	1.073	1.073	(0.257)	5142	1.00000	3.00(a)
27	cis-1,2-Dichloroethene	96	3.538	3.538	(0.846)	3008	1.00000	0.94(a)
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	4512	1.00000	0.91(a)
55	Dibromochloromethane	129	7.184	7.184	(0.937)	2760	1.00000	0.92(a)
44	Dibromomethane	93	5.558	5.558	(1.118)	1961	1.00000	0.94(a)
2	Dichlorodifluoromethane	85	0.973	0.973	(0.233)	2979	1.00000	1.66(a)
19	Carbon Disulfide	76	2.069	2.069	(0.495)	15180	2.00000	1.88(a)
61	Ethylbenzene	106	7.800	7.800	(1.017)	3683	1.00000	0.93(a)
67	Isopropylbenzene	105	8.566	8.566	(1.117)	10732	1.00000	0.89(a)
62	m,p-Xylenes	106	7.907	7.907	(1.031)	8697	2.00000	1.82(a)
17	Methylene Chloride	84	2.306	2.306	(0.551)	4461	1.00000	1.67(aM)
87	n-Butylbenzene	91	9.999	9.999	(1.034)	6939	1.00000	0.82(a)
73	n-Propylbenzene	91	8.917	8.917	(0.922)	13394	1.00000	0.97(a)
92	Naphthalene	128	11.553	11.553	(1.195)	1430	1.00000	1.51(a)
63	o-Xylene	106	8.244	8.244	(1.075)	3941	1.00000	0.85(a)
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	9795	1.00000	0.88(a)
64	Styrene	104	8.265	8.265	(1.078)	6581	1.00000	0.81(a)
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	7328	1.00000	0.95(a)
56	Tetrachloroethene	164	6.926	6.926	(0.903)	1860	1.00000	0.84(a)
50	Toluene	91	6.453	6.453	(0.841)	10696	1.00000	0.90(a)
20	trans-1,2-Dichloroethene	96	2.528	2.528	(0.604)	2528	1.00000	0.94(a)
51	trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	3897	1.00000	0.87(a)
38	Trichloroethene	130	5.207	5.207	(1.048)	2729	1.00000	0.96(a)
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	5348	1.00000	1.07(a)
5	Vinyl Chloride	62	1.138	1.138	(0.272)	4790	1.00000	1.03(a)

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200501.b\X050104.D
Date : 01-MAY-2020 12:34
Client ID: VSTD001
Sample Info: VSTD001;VSTD001;1;3;;
Purge Volume: 5.0
Column phase: DB624

\\NAHSTWS005\Target\chem\voa6.i\X200501.b\X050104.D
Instrument: voa6.i
Operator: PC
Column diameter: 0.18

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200501.b\X050105.D
Lab Smp Id: VSTD002 Client Smp ID: VSTD002
Inj Date : 01-MAY-2020 12:58
Operator : PC Inst ID: voa6.i
Smp Info : VSTD002;VSTD002;1;4;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200501.b\8260W.m
Meth Date : 21-May-2020 17:44 voa6.i Quant Type: ISTD
Cal Date : 01-MAY-2020 12:34 Cal File: X050104.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0000000_Bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7142

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

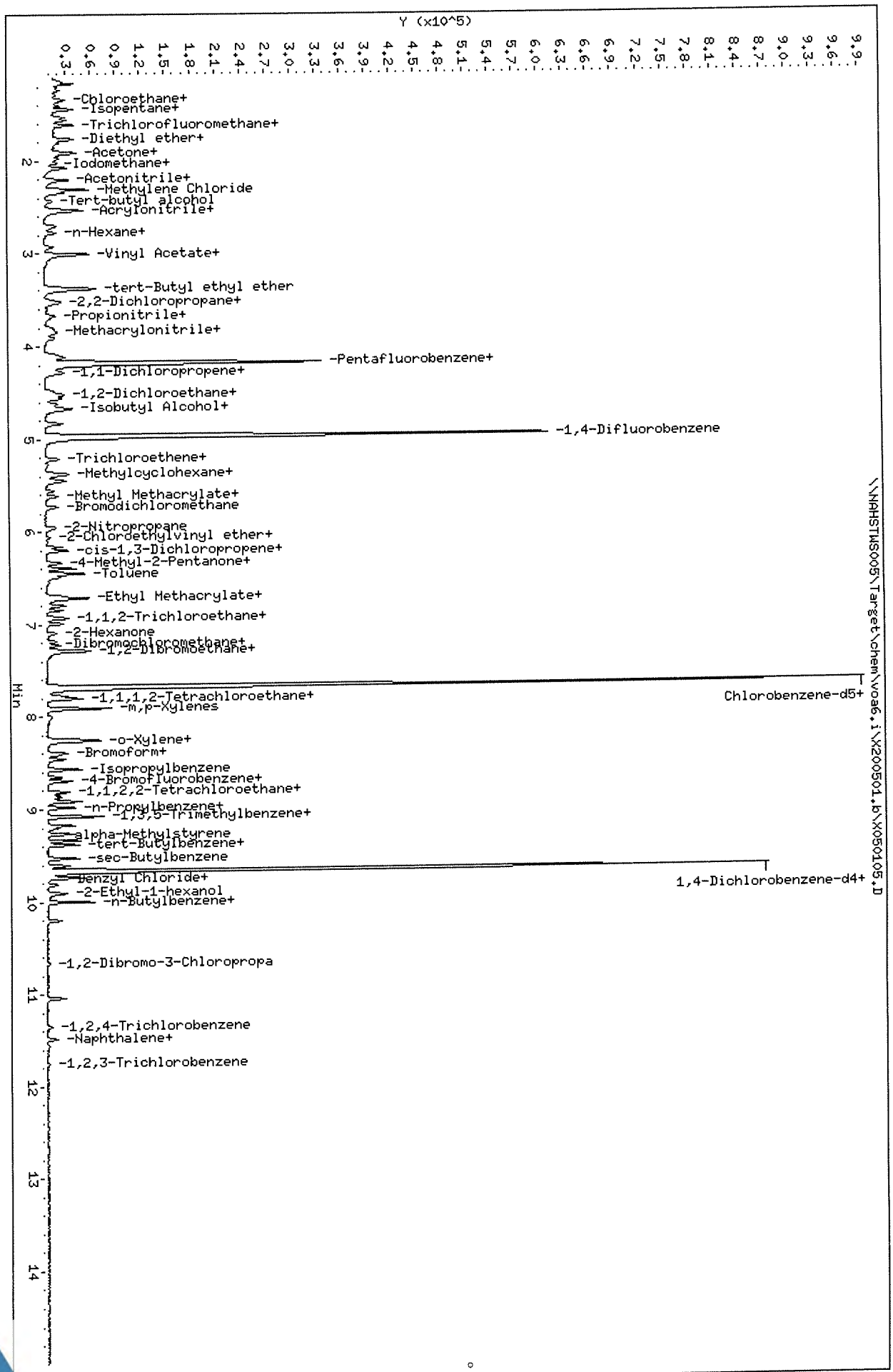
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	249038	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	426872	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	386680	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	174941	50.0000	
$	30 Dibromofluoromethane	113	4.111	4.111	(0.983)	6017	2.00000	2.49
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	10184	2.00000	2.23
$	48 Toluene-d8	98	6.388	6.388	(0.833)	20338	2.00000	1.98
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	8105	2.00000	1.95
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	5028	2.00000	1.78(a)
	31 1,1,1-Trichloroethane	97	4.096	4.096	(0.979)	8496	2.00000	1.80
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	6047	2.00000	1.87(a)
	53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	4206	2.00000	1.78(a)
	22 1,1-Dichloroethane	63	2.922	2.922	(0.699)	13315	2.00000	1.97
	11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	4231	2.00000	1.69(a)
	32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	7992	2.00000	1.93(a)
	93 1,2,3-Trichlorobenzene	180	11.754	11.754	(1.216)	804	2.00000	1.85(aM)
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	5109	2.00000	1.88(aM)
	90 1,2,4-Trichlorobenzene	180	11.345	11.345	(1.174)	1904	2.00000	1.78(aM)
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	16792	2.00000	1.71(a)
	89 1,2-Dibromo-3-Chloropropane	155	10.665	10.665	(1.104)	518	2.00000	2.05(aM)
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	4930	2.00000	1.75
	88 1,2-Dichlorobenzene	146	9.999	9.999	(1.035)	8001	2.00000	1.68(a)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	4.555	4.555	(0.916)	10216	2.00000	1.90
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	6280	2.00000	1.69(aM)
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	16933	2.00000	1.76(a)
83 1,3-Dichlorobenzene	146	9.612	9.612	(0.995)	9298	2.00000	1.78(a)
54 1,3-Dichloropropane	76	6.990	6.990	(0.911)	9085	2.00000	1.85(a)
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	10454	2.00000	1.90(a)
26 2,2-Dichloropropane	77	3.516	3.516	(0.841)	9042	2.00000	1.86(a)
24 2-Butanone	43	3.595	3.595	(0.860)	4605	4.00000	4.41
76 2-Chlorotoluene	91	8.974	8.974	(0.929)	16188	2.00000	1.90(a)
52 2-Hexanone	43	7.098	7.098	(0.925)	9277	4.00000	3.20(a)
77 4-Chlorotoluene	91	9.075	9.075	(0.939)	18420	2.00000	1.85(a)
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	15721	2.00000	1.66(a)
45 4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	14132	4.00000	3.36(a)
10 Acetone	43	1.969	1.969	(0.471)	7171	4.00000	4.82(a)
37 Benzene	78	4.519	4.519	(0.909)	21597	2.00000	1.88
74 Bromobenzene	156	8.810	8.810	(0.912)	5631	2.00000	1.77(a)
29 Bromochloromethane	128	3.803	3.803	(0.909)	3045	2.00000	1.89(a)
39 Bromodichloromethane	83	5.729	5.729	(1.153)	7477	2.00000	1.76(a)
66 Bromoform	173	8.416	8.416	(1.097)	3471	2.00000	2.02(Ta)
6 Bromomethane	94	1.338	1.338	(0.320)	6160	2.00000	3.57(aM)
34 Carbon Tetrachloride	117	4.261	4.261	(0.857)	7693	2.00000	1.84(aH)
59 Chlorobenzene	112	7.699	7.699	(1.004)	13848	2.00000	1.82
7 Chloroethane	64	1.403	1.403	(0.336)	5658	2.00000	2.08(a)
28 Chloroform	83	3.910	3.910	(0.935)	10398	2.00000	1.85
3 Chloromethane	50	1.073	1.073	(0.257)	9328	2.00000	3.75(a)
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	5889	2.00000	1.83(a)
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	8826	2.00000	1.77(a)
55 Dibromochloromethane	129	7.184	7.184	(0.937)	5649	2.00000	1.87(a)
44 Dibromomethane	93	5.558	5.558	(1.118)	3929	2.00000	1.86(a)
2 Dichlorodifluoromethane	85	0.973	0.973	(0.233)	5819	2.00000	2.49(a)
19 Carbon Disulfide	76	2.069	2.069	(0.495)	29742	4.00000	3.66(a)
61 Ethylbenzene	106	7.800	7.800	(1.017)	7467	2.00000	1.86
91 Hexachlorobutadiene	225	11.489	11.489	(1.189)	1970	2.00000	1.50(aM)
67 Isopropylbenzene	105	8.566	8.566	(1.117)	21621	2.00000	1.77(a)
62 m,p-Xylenes	106	7.907	7.907	(1.031)	16370	4.00000	3.40
17 Methylene Chloride	84	2.306	2.306	(0.551)	6457	2.00000	2.27(aM)
87 n-Butylbenzene	91	9.999	9.999	(1.035)	14130	2.00000	1.64(a)
73 n-Propylbenzene	91	8.917	8.917	(0.923)	25149	2.00000	1.79(a)
92 Naphthalene	128	11.560	11.560	(1.196)	2570	2.00000	2.20(a)
63 o-Xylene	106	8.244	8.244	(1.075)	8071	2.00000	1.72
81 sec-Butylbenzene	105	9.526	9.526	(0.986)	20150	2.00000	1.78(a)
64 Styrene	104	8.265	8.265	(1.078)	13547	2.00000	1.65
78 tert-Butylbenzene	119	9.340	9.340	(0.967)	14159	2.00000	1.79(a)
56 Tetrachloroethene	164	6.933	6.933	(0.904)	4072	2.00000	1.83
50 Toluene	91	6.453	6.453	(0.841)	22101	2.00000	1.83
20 trans-1,2-Dichloroethene	96	2.535	2.535	(0.606)	5124	2.00000	1.89(a)
51 trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	7749	2.00000	1.71(a)
38 Trichloroethene	130	5.214	5.214	(1.049)	5013	2.00000	1.75
8 Trichlorofluoromethane	101	1.561	1.561	(0.373)	9820	2.00000	1.95(a)
5 Vinyl Chloride	62	1.138	1.138	(0.272)	8633	2.00000	1.85(a)

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200501.b\X050105.D
Date : 01-MAY-2020 12:58
Client ID: VSTD002
Sample Info: VSTD002;VSTD002;1;4;;
Purge Volume: 5.0
Column phase: DB624

\\NAHSTWS005\Target\chem\voa6.i\X200501.b\X050105.D
Instrument: voa6.i
Operator: PC
Column diameter: 0.18

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200501.b\X050106.D
Lab Smp Id: VSTD005 Client Smp ID: VSTD005
Inj Date : 01-MAY-2020 13:22
Operator : PC Inst ID: voa6.i
Smp Info : VSTD005;VSTD005;1;5;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200501.b\8260W.m
Meth Date : 21-May-2020 17:44 voa6.i Quant Type: ISTD
Cal Date : 01-MAY-2020 12:58 Cal File: X050105.D
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0000000_Bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7142

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

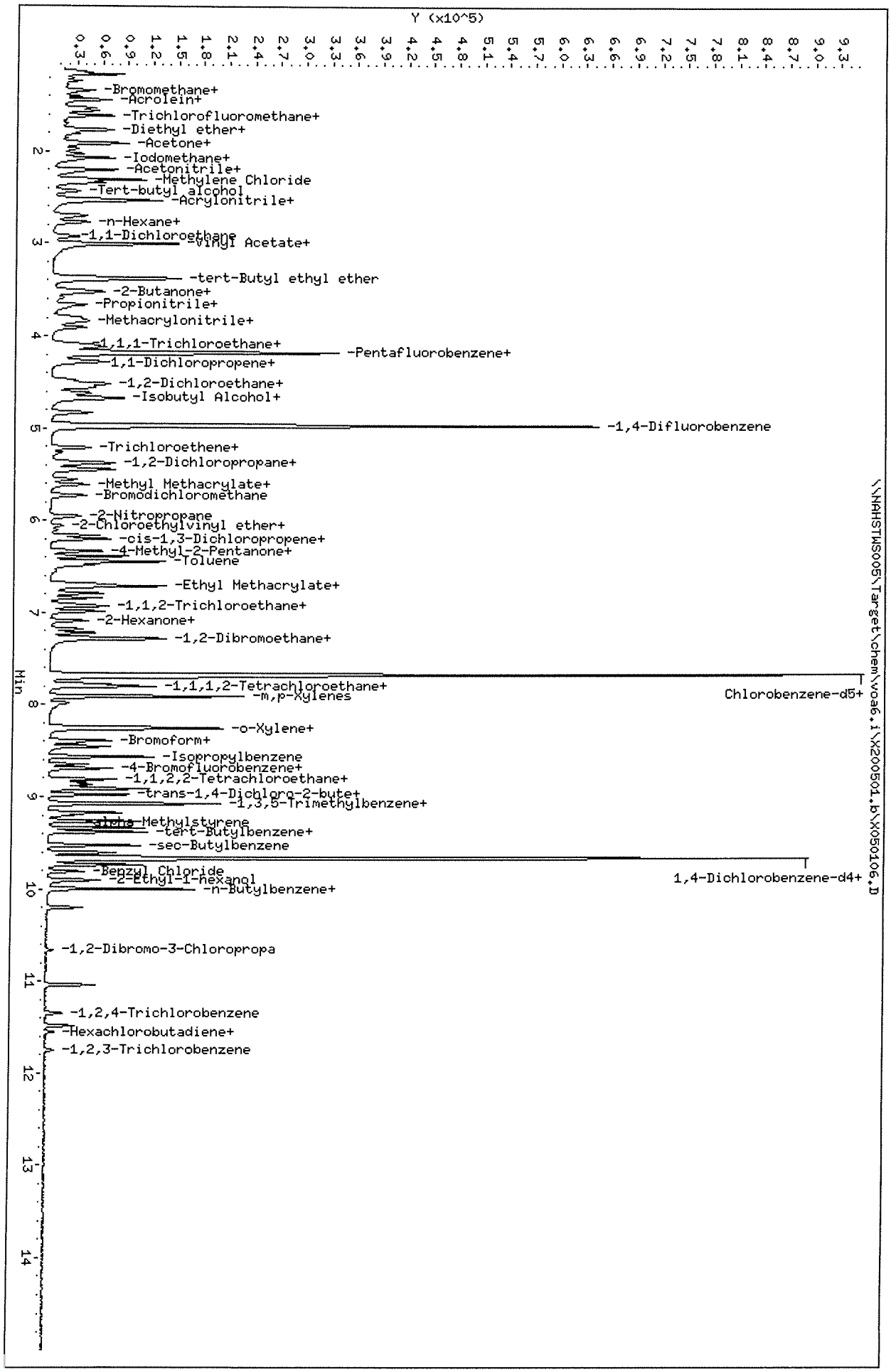
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	249996	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	417602	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	378847	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	171060	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	14521	5.00000	5.32
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	20862	5.00000	4.95
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	49830	5.00000	4.98
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	20136	5.00000	5.13
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	13947	5.00000	5.06
31 1,1,1-Trichloroethane	97	4.082	4.082	(0.976)	24551	5.00000	5.19
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	17615	5.00000	5.59
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	12633	5.00000	5.47
22 1,1-Dichloroethane	63	2.929	2.929	(0.700)	32811	5.00000	4.85
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	12893	5.00000	5.13
32 1,1-Dichloropropene	75	4.289	4.289	(0.863)	19635	5.00000	4.85(a)
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	2742	5.00000	5.74
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	14528	5.00000	5.46(M)
90 1,2,4-Trichlorobenzene	180	11.345	11.345	(1.173)	5784	5.00000	5.61
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	50424	5.00000	5.27
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.102)	1302	5.00000	5.23
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	15079	5.00000	5.46
88 1,2-Dichlorobenzene	146	9.998	9.998	(1.034)	25631	5.00000	5.51

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200501.b\X050106.D Page 2
Report Date: 21-May-2020 17:44

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	29488	5.00000	5.62
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	19250	5.00000	5.30
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	50443	5.00000	5.37
83 1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	27113	5.00000	5.33
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	26005	5.00000	5.42
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	27838	5.00000	5.19
26 2,2-Dichloropropane	77	3.516	3.516	(0.841)	25357	5.00000	5.21
24 2-Butanone	43	3.588	3.588	(0.858)	15950	10.0000	10.31
76 2-Chlorotoluene	91	8.981	8.981	(0.929)	43546	5.00000	5.25
52 2-Hexanone	43	7.090	7.090	(0.924)	28707	10.0000	10.10
77 4-Chlorotoluene	91	9.074	9.074	(0.939)	50645	5.00000	5.22
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	46523	5.00000	5.05
45 4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	43278	10.0000	10.52
10 Acetone	43	1.969	1.969	(0.471)	16600	10.0000	10.99
37 Benzene	78	4.512	4.512	(0.908)	59213	5.00000	5.27
74 Bromobenzene	156	8.809	8.809	(0.911)	16586	5.00000	5.34
29 Bromochloromethane	128	3.795	3.795	(0.908)	8360	5.00000	5.17
39 Bromodichloromethane	83	5.729	5.729	(1.153)	22283	5.00000	5.38
66 Bromoform	173	8.415	8.415	(1.097)	9968	5.00000	5.03
6 Bromomethane	94	1.338	1.338	(0.320)	14326	5.00000	6.72
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	21100	5.00000	5.16(H)
59 Chlorobenzene	112	7.699	7.699	(1.004)	38852	5.00000	5.21
7 Chloroethane	64	1.403	1.403	(0.336)	13101	5.00000	4.80(a)
28 Chloroform	83	3.910	3.910	(0.935)	28648	5.00000	5.08
3 Chloromethane	50	1.073	1.073	(0.257)	24516	5.00000	6.46
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	16528	5.00000	5.13
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	25289	5.00000	5.18
55 Dibromochloromethane	129	7.176	7.176	(0.936)	15822	5.00000	5.35
44 Dibromomethane	93	5.557	5.557	(1.118)	11272	5.00000	5.46
2 Dichlorodifluoromethane	85	0.973	0.973	(0.233)	15454	5.00000	5.27
19 Carbon Disulfide	76	2.069	2.069	(0.495)	80939	10.0000	9.94
61 Ethylbenzene	106	7.799	7.799	(1.017)	20328	5.00000	5.19
91 Hexachlorobutadiene	225	11.488	11.488	(1.188)	4871	5.00000	5.69
67 Isopropylbenzene	105	8.566	8.566	(1.117)	61912	5.00000	5.17
62 m,p-Xylenes	106	7.907	7.907	(1.031)	48465	10.0000	10.27
17 Methylene Chloride	84	2.305	2.305	(0.551)	17911	5.00000	5.79(M)
87 n-Butylbenzene	91	9.998	9.998	(1.034)	42994	5.00000	5.10
73 n-Propylbenzene	91	8.917	8.917	(0.922)	71951	5.00000	5.24
92 Naphthalene	128	11.546	11.546	(1.194)	8113	5.00000	5.72
63 o-Xylene	106	8.243	8.243	(1.075)	24541	5.00000	5.36
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	57436	5.00000	5.20
64 Styrene	104	8.265	8.265	(1.078)	40943	5.00000	5.09
78 tert-Butylbenzene	119	9.339	9.339	(0.966)	39805	5.00000	5.16
56 Tetrachloroethene	164	6.933	6.933	(0.904)	11201	5.00000	5.14
50 Toluene	91	6.446	6.446	(0.840)	61512	5.00000	5.22
20 trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	14040	5.00000	5.17
51 trans-1,3-Dichloropropene	75	6.689	6.689	(1.346)	22901	5.00000	5.19
38 Trichloroethene	130	5.206	5.206	(1.048)	14197	5.00000	5.06
8 Trichlorofluoromethane	101	1.560	1.560	(0.373)	23606	5.00000	4.67(a)
5 Vinyl Chloride	62	1.138	1.138	(0.272)	22432	5.00000	4.80(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200501.b\X050106.D
Date : 01-MAY-2020 13:22
Client ID: VSTD005
Sample Info: VSTD005;VSTD005;1;5;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200501.b\X050107.D
Lab Smp Id: VSTD020 Client Smp ID: VSTD020
Inj Date : 01-MAY-2020 13:46
Operator : PC Inst ID: voa6.i
Smp Info : VSTD020;VSTD020;1;6;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200501.b\8260W.m
Meth Date : 21-May-2020 17:44 voa6.i Quant Type: ISTD
Cal Date : 01-MAY-2020 13:22 Cal File: X050106.D
Als bottle: 8 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0000000_Bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7142

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

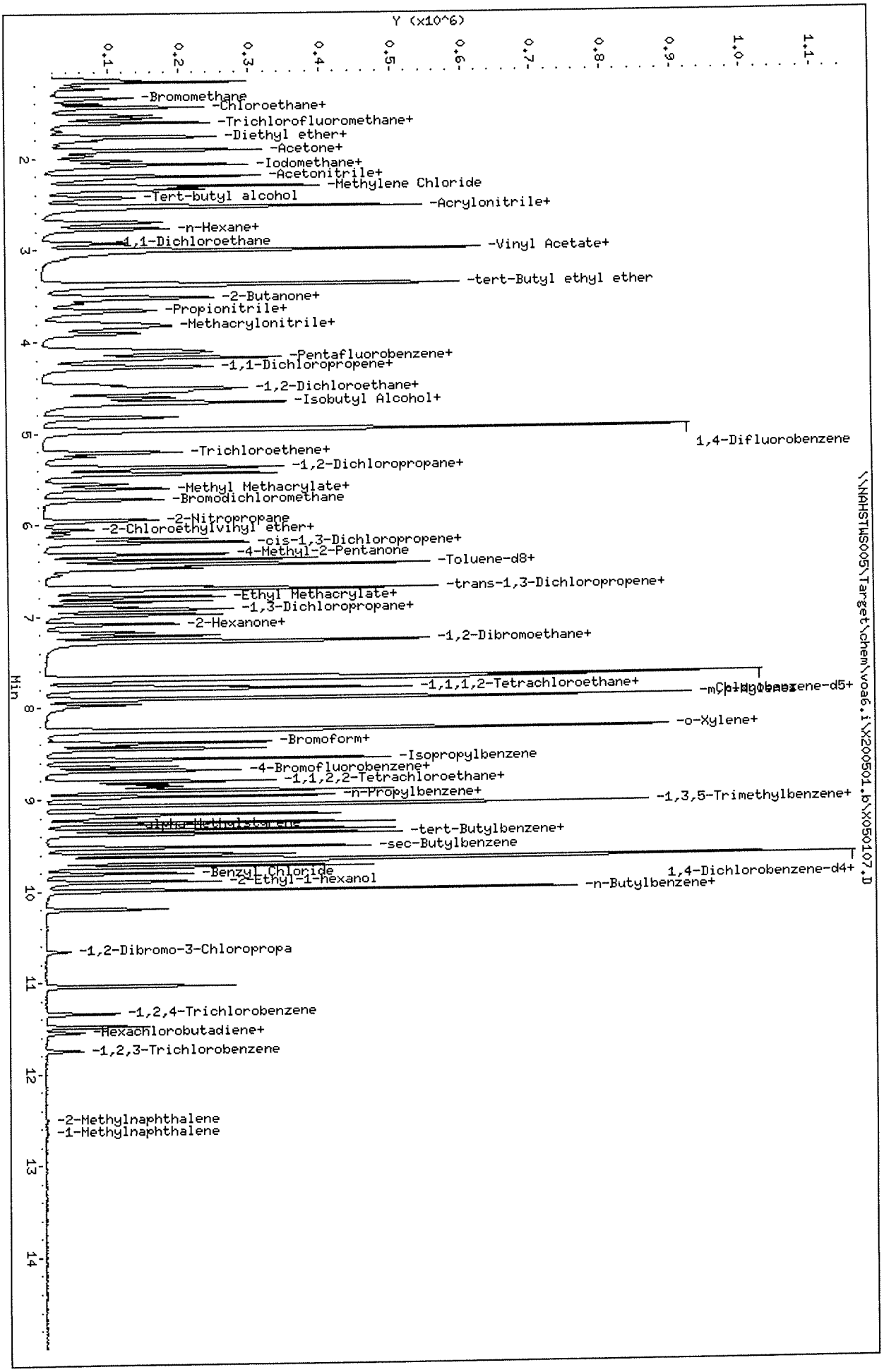
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	253076	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	426886	50.0000	
*	47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	387734	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	185875	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	59272	20.0000	19.98
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	82714	20.0000	20.44
$	48 Toluene-d8	98	6.388	6.388	(0.833)	198319	20.0000	19.43
$	69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	77667	20.0000	19.55
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	58253	20.0000	20.68
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	96553	20.0000	20.17
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.914)	70056	20.0000	20.46
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	49207	20.0000	20.84
	22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	133729	20.0000	19.54
	11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	49038	20.0000	19.29
	32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	83729	20.0000	20.25
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	12235	20.0000	22.31
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	58615	20.0000	20.30(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	25921	20.0000	22.90
	79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	214273	20.0000	20.62
	89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.102)	5505	20.0000	20.06
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	59187	20.0000	20.97
	88 1,2-Dichlorobenzene	146	9.998	9.998	(1.034)	104820	20.0000	20.74

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200501.b\X050107.D Page 2
Report Date: 21-May-2020 17:44

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	111569	20.0000	20.82
42	1,2-Dichloropropane	63	5.436	5.436	(1.094)	74548	20.0000	20.10
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	208271	20.0000	20.41
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	112720	20.0000	20.39
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	99384	20.0000	20.27
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	115233	20.0000	19.80
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	96832	20.0000	19.68
24	2-Butanone	43	3.580	3.580	(0.856)	73004	40.0000	39.58
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	176620	20.0000	19.60
52	2-Hexanone	43	7.090	7.090	(0.924)	116262	40.0000	39.99
77	4-Chlorotoluene	91	9.074	9.074	(0.939)	210972	20.0000	20.02
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	205976	20.0000	20.57
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	170309	40.0000	40.48
10	Acetone	43	1.976	1.976	(0.473)	59146	40.0000	38.45
37	Benzene	78	4.512	4.512	(0.908)	237138	20.0000	20.65
74	Bromobenzene	156	8.809	8.809	(0.911)	67776	20.0000	20.08
29	Bromochloromethane	128	3.802	3.802	(0.909)	33661	20.0000	20.58
39	Bromodichloromethane	83	5.729	5.729	(1.153)	88287	20.0000	20.86
66	Bromoform	173	8.415	8.415	(1.097)	42114	20.0000	19.34
6	Bromomethane	94	1.338	1.338	(0.320)	47340	20.0000	19.27
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	82468	20.0000	19.73(H)
59	Chlorobenzene	112	7.699	7.699	(1.004)	152647	20.0000	20.02
7	Chloroethane	64	1.403	1.403	(0.336)	49824	20.0000	18.04
28	Chloroform	83	3.910	3.910	(0.935)	116251	20.0000	20.39
3	Chloromethane	50	1.073	1.073	(0.257)	98402	20.0000	19.47
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	66447	20.0000	20.41
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	101680	20.0000	20.41
55	Dibromochloromethane	129	7.176	7.176	(0.936)	60777	20.0000	20.08
44	Dibromomethane	93	5.557	5.557	(1.118)	43560	20.0000	20.65
2	Dichlorodifluoromethane	85	0.966	0.966	(0.231)	66534	20.0000	19.73
19	Carbon Disulfide	76	2.069	2.069	(0.495)	329318	40.0000	39.96
61	Ethylbenzene	106	7.799	7.799	(1.017)	81775	20.0000	20.40
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	20852	20.0000	25.58
67	Isopropylbenzene	105	8.566	8.566	(1.117)	249102	20.0000	20.35
62	m,p-Xylenes	106	7.907	7.907	(1.031)	200962	40.0000	41.64
17	Methylene Chloride	84	2.305	2.305	(0.551)	67386	20.0000	20.77
87	n-Butylbenzene	91	9.998	9.998	(1.034)	194513	20.0000	21.27
73	n-Propylbenzene	91	8.917	8.917	(0.922)	303200	20.0000	20.32
92	Naphthalene	128	11.546	11.546	(1.194)	35168	20.0000	20.68
63	o-Xylene	106	8.244	8.244	(1.075)	97664	20.0000	20.84
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	246557	20.0000	20.57
64	Styrene	104	8.258	8.258	(1.077)	172750	20.0000	20.99
78	tert-Butylbenzene	119	9.339	9.339	(0.966)	170897	20.0000	20.42
56	Tetrachloroethene	164	6.933	6.933	(0.904)	46444	20.0000	20.85
50	Toluene	91	6.446	6.446	(0.840)	247911	20.0000	20.56
20	trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	56601	20.0000	20.61
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	91987	20.0000	20.39
38	Trichloroethene	130	5.206	5.206	(1.048)	58584	20.0000	20.46
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	102328	20.0000	20.03
5	Vinyl Chloride	62	1.138	1.138	(0.272)	89670	20.0000	18.96

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200501.b\X050107.D
Date : 01-MAY-2020 13:46
Client ID: VSTD020
Sample Info: VSTD020;VSTD020;1;6;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200501.b\X050108.D Page 1
Report Date: 21-May-2020 17:44

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200501.b\X050108.D
Lab Smp Id: VSTD050 Client Smp ID: VSTD050
Inj Date : 01-MAY-2020 14:10
Operator : PC Inst ID: voa6.i
Smp Info : VSTD050;VSTD050;1;7;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200501.b\8260W.m
Meth Date : 21-May-2020 17:44 voa6.i Quant Type: ISTD
Cal Date : 01-MAY-2020 13:46 Cal File: X050107.D
Als bottle: 9 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0000000_Bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7142

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

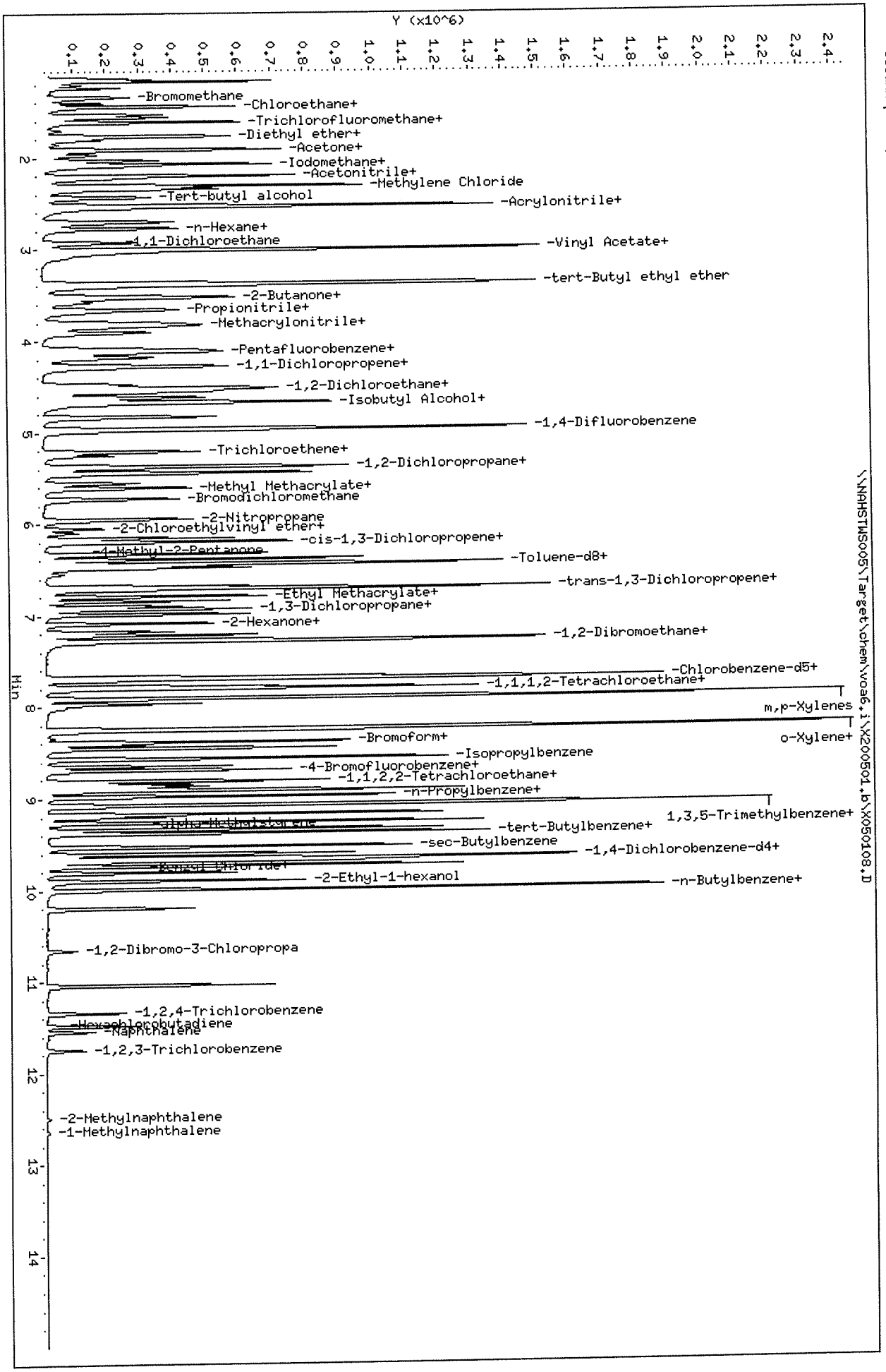
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	248633	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	418404	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	390712	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	196363	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	142415	50.0000	48.16
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	196792	50.0000	49.71
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	507352	50.0000	49.36
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	204406	50.0000	50.47
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	148542	50.0000	52.33
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	228111	50.0000	48.52
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	177384	50.0000	49.05
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	119565	50.0000	50.27
22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	315430	50.0000	46.91
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	119901	50.0000	48.01
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	190406	50.0000	46.99
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	27904	50.0000	46.47
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	154609	50.0000	50.69(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	57724	50.0000	47.09
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	555270	50.0000	50.58
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.102)	14995	50.0000	50.44
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	148747	50.0000	52.30
88 1,2-Dichlorobenzene	146	9.998	9.998	(1.034)	272325	50.0000	51.01

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.555	4.555	(0.916)	264794	50.0000	50.42
42	1,2-Dichloropropane	63	5.436	5.436	(1.094)	181800	50.0000	50.02
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	534705	50.0000	49.62
83	1,3-Dichlorobenzene	146	9.604	9.604	(0.993)	298438	50.0000	51.12
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	246590	50.0000	49.91
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	300987	50.0000	48.96
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	225233	50.0000	46.59
24	2-Butanone	43	3.580	3.580	(0.856)	176499	100.000	94.49
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	462227	50.0000	48.57
52	2-Hexanone	43	7.090	7.090	(0.924)	297941	100.000	101.72
77	4-Chlorotoluene	91	9.074	9.074	(0.939)	550104	50.0000	49.42
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	528624	50.0000	49.99
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	428581	100.000	101.09
10	Acetone	43	1.969	1.969	(0.471)	140621	100.000	92.92
37	Benzene	78	4.512	4.512	(0.908)	569964	50.0000	50.65
74	Bromobenzene	156	8.809	8.809	(0.911)	176683	50.0000	49.56
29	Bromochloromethane	128	3.795	3.795	(0.908)	77594	50.0000	48.29
39	Bromodichloromethane	83	5.729	5.729	(1.153)	215366	50.0000	51.92
66	Bromoform	173	8.415	8.415	(1.097)	108242	50.0000	48.61
6	Bromomethane	94	1.338	1.338	(0.320)	114250	50.0000	45.62
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	190848	50.0000	46.60(H)
59	Chlorobenzene	112	7.699	7.699	(1.004)	386257	50.0000	50.28
7	Chloroethane	64	1.403	1.403	(0.336)	119726	50.0000	44.13
28	Chloroform	83	3.910	3.910	(0.935)	275267	50.0000	49.14
3	Chloromethane	50	1.073	1.073	(0.257)	237492	50.0000	44.81
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	158601	50.0000	49.58
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	248806	50.0000	50.96
55	Dibromochloromethane	129	7.176	7.176	(0.936)	154394	50.0000	50.62
44	Dibromomethane	93	5.557	5.557	(1.118)	103373	50.0000	50.00
2	Dichlorodifluoromethane	85	0.966	0.966	(0.231)	161138	50.0000	46.97
19	Carbon Disulfide	76	2.069	2.069	(0.495)	789578	100.000	97.52
61	Ethylbenzene	106	7.799	7.799	(1.017)	208471	50.0000	51.62
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	40674	50.0000	47.20(M)
67	Isopropylbenzene	105	8.566	8.566	(1.117)	627565	50.0000	50.89
62	m,p-Xylenes	106	7.907	7.907	(1.031)	506890	100.000	104.23
17	Methylene Chloride	84	2.305	2.305	(0.551)	152868	50.0000	47.61
87	n-Butylbenzene	91	9.998	9.998	(1.034)	485020	50.0000	50.21
73	n-Propylbenzene	91	8.917	8.917	(0.922)	767464	50.0000	48.71
92	Naphthalene	128	11.546	11.546	(1.194)	88354	50.0000	46.95
63	o-Xylene	106	8.243	8.243	(1.075)	247777	50.0000	52.49
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	620346	50.0000	49.00
64	Styrene	104	8.258	8.258	(1.077)	447753	50.0000	54.01
78	tert-Butylbenzene	119	9.339	9.339	(0.966)	424229	50.0000	47.99
56	Tetrachloroethene	164	6.933	6.933	(0.904)	112583	50.0000	50.16
50	Toluene	91	6.446	6.446	(0.840)	619959	50.0000	51.04
20	trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	135980	50.0000	50.40
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	234492	50.0000	53.04
38	Trichloroethene	130	5.206	5.206	(1.048)	139346	50.0000	49.66
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	239272	50.0000	47.68
5	Vinyl Chloride	62	1.138	1.138	(0.272)	214620	50.0000	46.19

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200501.b\X050108.D
Date : 01-MAY-2020 14:10
Client ID: VSTD050
Sample Info: VSTD050;VSTD050;1;7;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200501.b\X050109.D Page 1
Report Date: 21-May-2020 17:44

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200501.b\X050109.D
Lab Smp Id: VSTD100 Client Smp ID: VSTD100
Inj Date : 01-MAY-2020 14:34
Operator : PC Inst ID: voa6.i
Smp Info : VSTD100;VSTD100;1;8;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200501.b\8260W.m
Meth Date : 21-May-2020 17:44 voa6.i Quant Type: ISTD
Cal Date : 01-MAY-2020 14:10 Cal File: X050108.D
Als bottle: 10 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0000000_Bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7142

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

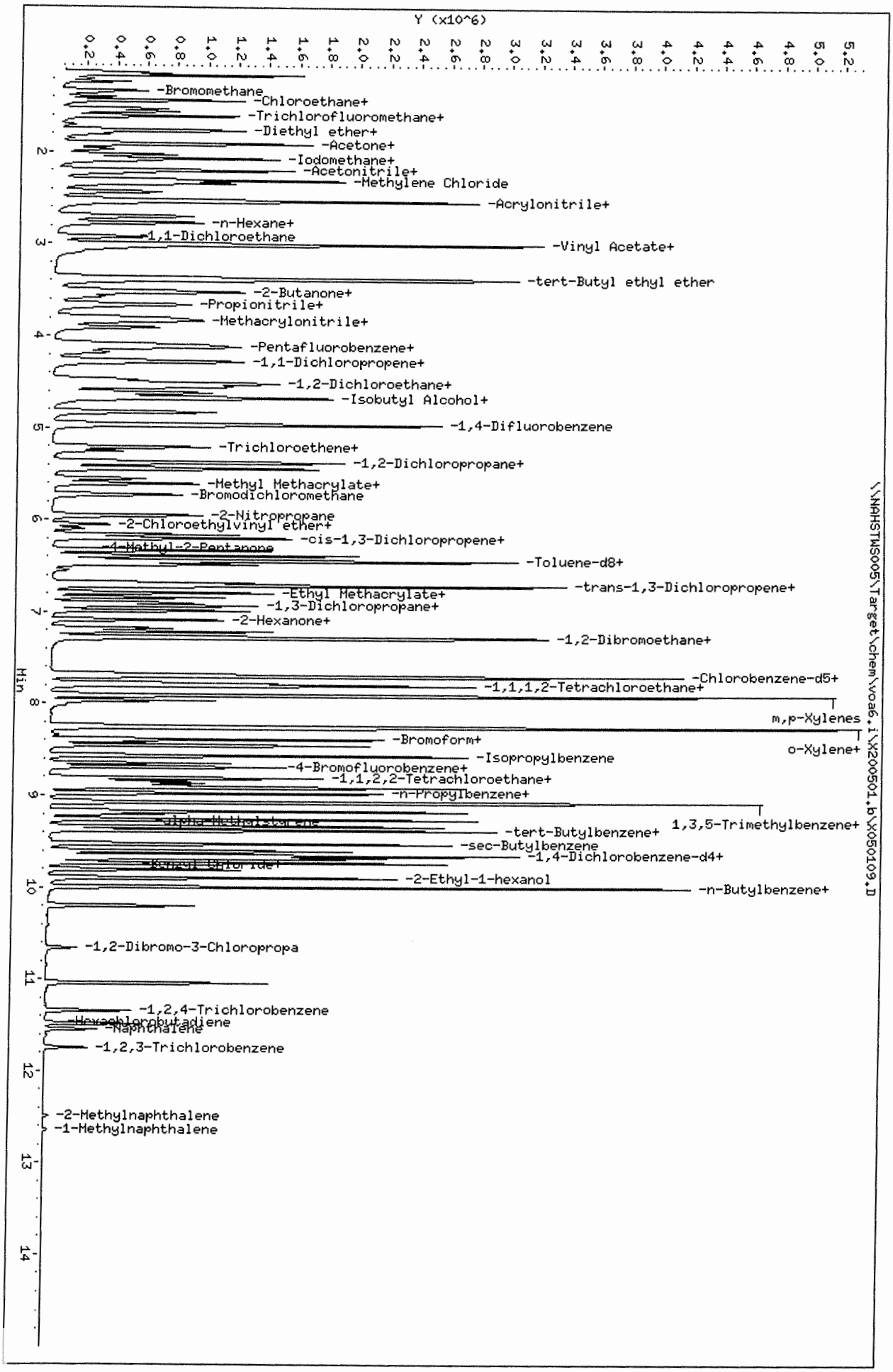
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	250320	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	430266	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.670	(1.000)	398606	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	202250	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	293280	100.000	98.01
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	401798	100.000	100.05
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1052124	100.000	100.35
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	422826	100.000	99.74
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	310703	100.000	107.29
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	493928	100.000	104.35(A)
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	377295	100.000	101.29
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	252824	100.000	104.19
22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	669592	100.000	98.92
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	279116	100.000	111.03
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	419096	100.000	100.58
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	64972	100.000	97.50
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	322802	100.000	102.75(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	131230	100.000	97.79
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	1210938	100.000	107.09
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.657	(1.102)	31547	100.000	98.63
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	309376	100.000	106.62(A)
88 1,2-Dichlorobenzene	146	9.998	9.998	(1.034)	586604	100.000	106.69

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200501.b\X050109.D Page 2
Report Date: 21-May-2020 17:44

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.555	4.555	(0.916)	538645	100.000	99.73
42	1,2-Dichloropropane	63	5.443	5.443	(1.095)	385748	100.000	103.22
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	1153097	100.000	103.90
83	1,3-Dichlorobenzene	146	9.604	9.604	(0.993)	635947	100.000	105.76
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	510116	100.000	101.21
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	643996	100.000	101.71
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	484160	100.000	99.49
24	2-Butanone	43	3.573	3.573	(0.854)	379018	200.000	199.28
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	981048	100.000	100.08
52	2-Hexanone	43	7.090	7.090	(0.924)	639789	200.000	214.10
77	4-Chlorotoluene	91	9.074	9.074	(0.939)	1175675	100.000	102.54
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	1169047	100.000	107.33
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	929862	200.000	215.00
10	Acetone	43	1.969	1.969	(0.471)	310590	200.000	203.73
37	Benzene	78	4.512	4.512	(0.908)	1211444	100.000	104.69(A)
74	Bromobenzene	156	8.809	8.809	(0.911)	375105	100.000	102.16
29	Bromochloromethane	128	3.795	3.795	(0.908)	160451	100.000	99.18
39	Bromodichloromethane	83	5.729	5.729	(1.153)	448228	100.000	105.09
66	Bromoform	173	8.415	8.415	(1.097)	228250	100.000	99.99
6	Bromomethane	94	1.331	1.331	(0.318)	245309	100.000	95.95
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	421219	100.000	100.02(H)
59	Chlorobenzene	112	7.699	7.699	(1.004)	820660	100.000	104.72(A)
7	Chloroethane	64	1.396	1.396	(0.334)	251222	100.000	91.98
28	Chloroform	83	3.910	3.910	(0.935)	582900	100.000	103.37(A)
3	Chloromethane	50	1.073	1.073	(0.257)	516472	100.000	94.40
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	336268	100.000	104.42(A)
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	525292	100.000	104.62
55	Dibromochloromethane	129	7.176	7.176	(0.936)	326321	100.000	104.87
44	Dibromomethane	93	5.557	5.557	(1.118)	216474	100.000	101.83
2	Dichlorodifluoromethane	85	0.966	0.966	(0.231)	353407	100.000	99.16
19	Carbon Disulfide	76	2.069	2.069	(0.495)	1685699	200.000	206.80
61	Ethylbenzene	106	7.799	7.799	(1.017)	444997	100.000	108.00(A)
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	89612	100.000	96.58
67	Isopropylbenzene	105	8.566	8.566	(1.117)	1384052	100.000	110.02
62	m,p-Xylenes	106	7.907	7.907	(1.031)	1086668	200.000	219.02(A)
17	Methylene Chloride	84	2.305	2.305	(0.551)	315319	100.000	97.24
87	n-Butylbenzene	91	9.998	9.998	(1.034)	1110823	100.000	111.64
73	n-Propylbenzene	91	8.917	8.917	(0.922)	1657360	100.000	102.13
92	Naphthalene	128	11.546	11.546	(1.194)	204668	100.000	98.05
63	o-Xylene	106	8.243	8.243	(1.075)	530998	100.000	110.26(A)
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	1383054	100.000	106.07
64	Styrene	104	8.258	8.258	(1.077)	953165	100.000	112.70(A)
78	tert-Butylbenzene	119	9.339	9.339	(0.966)	941253	100.000	103.39
56	Tetrachloroethene	164	6.933	6.933	(0.904)	245422	100.000	107.19(A)
50	Toluene	91	6.446	6.446	(0.840)	1318493	100.000	106.40(A)
20	trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	285554	100.000	105.14
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	489492	100.000	107.68
38	Trichloroethene	130	5.206	5.206	(1.048)	303252	100.000	105.10(A)
8	Trichlorofluoromethane	101	1.560	1.560	(0.373)	525129	100.000	103.94
5	Vinyl Chloride	62	1.138	1.138	(0.272)	475618	100.000	101.67

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200501.b\X050109.D
Date : 01-MAY-2020 14:34
Client ID: VSTD100
Sample Info: VSTD100;VSTD100;1;8;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200501.b\X050110.D
Lab Smp Id: VSTD150 Client Smp ID: VSTD150
Inj Date : 01-MAY-2020 14:58
Operator : PC Inst ID: voa6.i
Smp Info : VSTD150;VSTD150;1;9;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200501.b\8260W.m
Meth Date : 21-May-2020 17:44 voa6.i Quant Type: ISTD
Cal Date : 01-MAY-2020 14:34 Cal File: X050109.D
Als bottle: 11 Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0000000_Bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7142

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

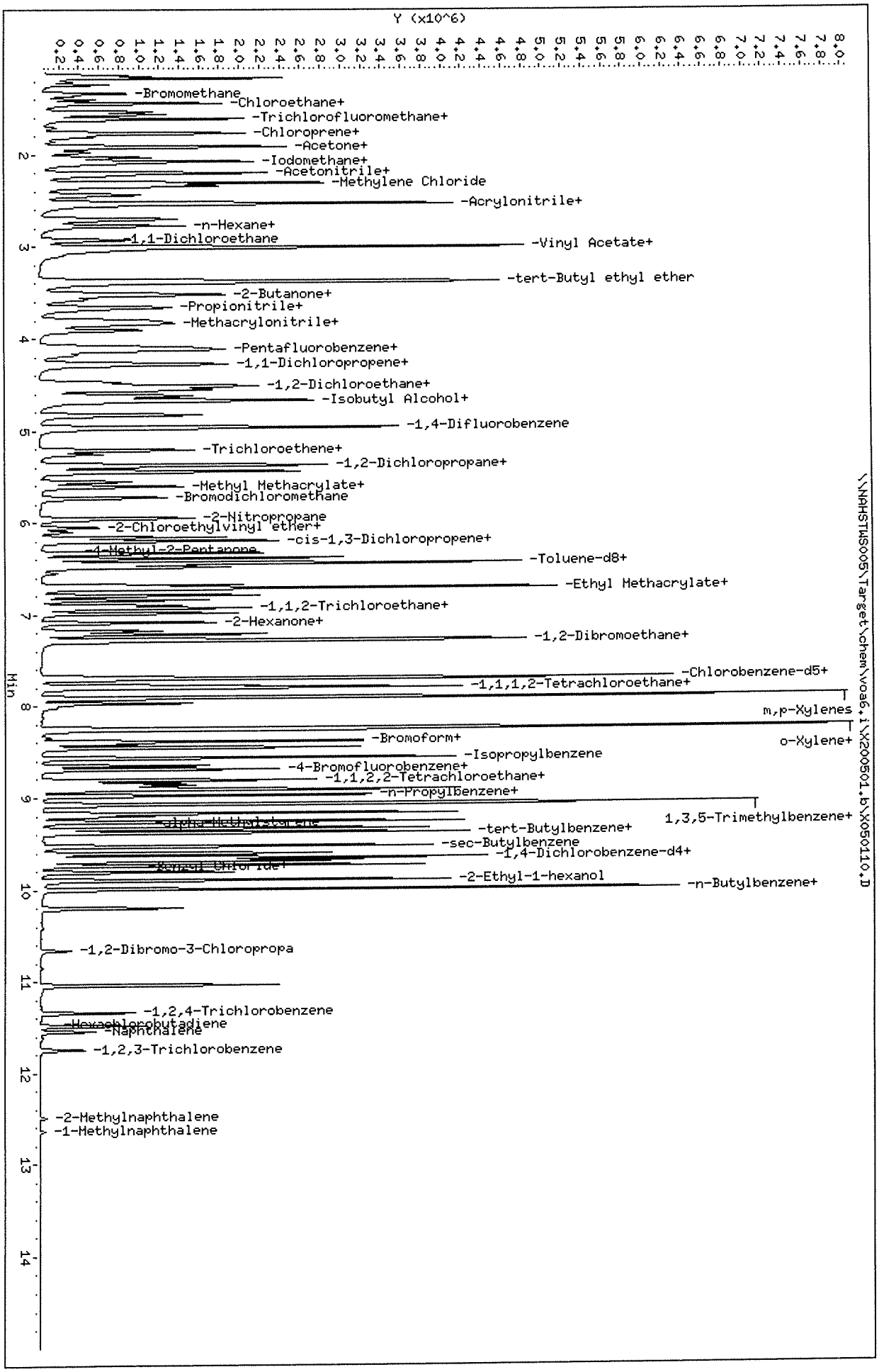
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	237848	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	413881	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	388325	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	192684	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	433898	150.000	152.33
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	601514	150.000	155.77
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	1565382	150.000	153.27
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	638294	150.000	150.06
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	460400	150.000	163.20
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	749708	150.000	166.70(A)
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	566129	150.000	159.53
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	374629	150.000	158.48
22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	1011944	150.000	157.34(A)
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	415843	150.000	174.09
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	627913	150.000	156.66
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	109041	150.000	154.19
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	478669	150.000	159.93(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	213780	150.000	153.47
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.970)	1791610	150.000	166.31
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	48716	150.000	151.21
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	460144	150.000	162.78(A)
88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	863322	150.000	164.82

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.555	4.555	(0.916)	791542	150.000	152.36(A)
42	1,2-Dichloropropane	63	5.436	5.436	(1.094)	581094	150.000	161.65
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	1737910	150.000	164.37
83	1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	949077	150.000	165.67
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	766075	150.000	156.02
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	948223	150.000	157.20
26	2,2-Dichloropropane	77	3.509	3.509	(0.839)	721114	150.000	155.95
24	2-Butanone	43	3.573	3.573	(0.854)	550003	300.000	303.29(A)
76	2-Chlorotoluene	91	8.974	8.974	(0.928)	1480158	150.000	158.50
52	2-Hexanone	43	7.090	7.090	(0.924)	967352	300.000	332.29
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	1750552	150.000	160.27
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	1757439	150.000	169.37
45	4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	1397177	300.000	331.60
10	Acetone	43	1.969	1.969	(0.471)	438369	300.000	302.58
37	Benzene	78	4.512	4.512	(0.908)	1804184	150.000	162.09(A)
74	Bromobenzene	156	8.810	8.810	(0.911)	560845	150.000	160.33
29	Bromochloromethane	128	3.795	3.795	(0.908)	236330	150.000	153.75
39	Bromodichloromethane	83	5.729	5.729	(1.153)	669618	150.000	163.21
66	Bromoform	173	8.416	8.416	(1.097)	347002	150.000	155.78
6	Bromomethane	94	1.331	1.331	(0.318)	367884	150.000	150.75
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	636368	150.000	157.10(H)
59	Chlorobenzene	112	7.699	7.699	(1.004)	1223085	150.000	160.21(A)
7	Chloroethane	64	1.396	1.396	(0.334)	370517	150.000	142.77
28	Chloroform	83	3.910	3.910	(0.935)	866020	150.000	161.63(A)
3	Chloromethane	50	1.073	1.073	(0.257)	793293	150.000	151.32
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	499770	150.000	163.34(A)
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	793404	150.000	164.28
55	Dibromochloromethane	129	7.176	7.176	(0.936)	487290	150.000	160.75
44	Dibromomethane	93	5.557	5.557	(1.118)	323914	150.000	158.40
2	Dichlorodifluoromethane	85	0.966	0.966	(0.231)	536461	150.000	154.00
19	Carbon Disulfide	76	2.069	2.069	(0.495)	2528331	300.000	326.44
61	Ethylbenzene	106	7.800	7.800	(1.017)	657134	150.000	163.71(A)
91	Hexachlorobutadiene	225	11.481	11.481	(1.187)	146902	150.000	153.54
67	Isopropylbenzene	105	8.566	8.566	(1.117)	2084886	150.000	170.12
62	m,p-Xylenes	106	7.907	7.907	(1.031)	1611349	300.000	333.37(A)
17	Methylene Chloride	84	2.305	2.305	(0.551)	468841	150.000	152.01
87	n-Butylbenzene	91	9.999	9.999	(1.034)	1655696	150.000	174.67
73	n-Propylbenzene	91	8.917	8.917	(0.922)	2528762	150.000	163.56
92	Naphthalene	128	11.546	11.546	(1.194)	337951	150.000	153.98
63	o-Xylene	106	8.244	8.244	(1.075)	800514	150.000	170.62(A)
81	sec-Butylbenzene	105	9.526	9.526	(0.985)	2081243	150.000	167.54
64	Styrene	104	8.258	8.258	(1.077)	1431716	150.000	173.76(A)
78	tert-Butylbenzene	119	9.340	9.340	(0.966)	1411253	150.000	162.71
56	Tetrachloroethene	164	6.933	6.933	(0.904)	368256	150.000	165.11(A)
50	Toluene	91	6.446	6.446	(0.840)	1955563	150.000	162.00(A)
20	trans-1,2-Dichloroethene	96	2.528	2.528	(0.604)	425425	150.000	164.85
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	739988	150.000	169.23
38	Trichloroethene	130	5.207	5.207	(1.048)	455769	150.000	164.21(A)
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	837544	150.000	174.47
5	Vinyl Chloride	62	1.138	1.138	(0.272)	719623	150.000	161.90

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200501.b\X050110.D
Date : 01-MAY-2020 14:58
Client ID: VSTD150
Sample Info: VSTD150;VSTD150;1;9;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200501.b\X050111.D
Lab Smp Id: VSTD200 Client Smp ID: VSTD200
Inj Date : 01-MAY-2020 15:22
Operator : PC Inst ID: voa6.i
Smp Info : VSTD200;VSTD200;1;10;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200501.b\8260W.m
Meth Date : 21-May-2020 17:45 voa6.i Quant Type: ISTD
Cal Date : 01-MAY-2020 14:58 Cal File: X050110.D
Als bottle: 12 Calibration Sample, Level: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0000000_Bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7142

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

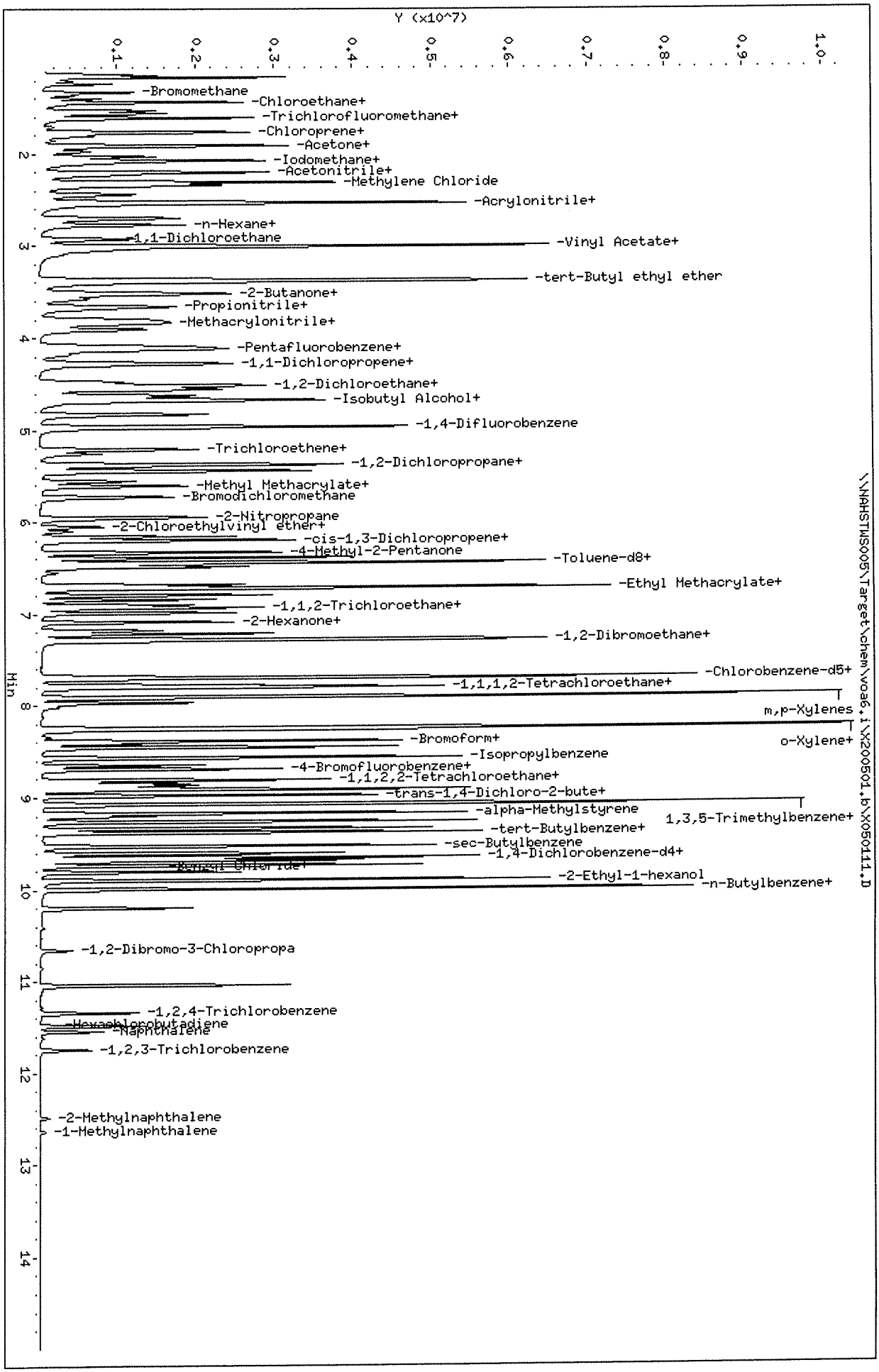
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	238430	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	424809	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	401747	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.669	(1.000)	192709	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	570369	200.000	199.61
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	785695	200.000	200.85(A)
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	2086499	200.000	197.48
$ 69 4-Bromofluorobenzene	95	8.695	8.695	(1.134)	829005	200.000	184.29
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	611598	200.000	209.55(A)
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	982852	200.000	218.00(A)
68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	742561	200.000	209.22(A)
53 1,1,2-Trichloroethane	83	6.847	6.847	(0.893)	499589	200.000	204.28(A)
22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	1344188	200.000	208.48(A)
11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	542202	200.000	226.44(A)
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	821245	200.000	199.62
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.215)	159880	200.000	198.51
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.917)	622538	200.000	207.97(AM)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	304996	200.000	198.74
79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.970)	2324035	200.000	215.71(A)
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.102)	68470	200.000	199.62
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	607761	200.000	207.82(A)
88 1,2-Dichlorobenzene	146	9.999	9.999	(1.034)	1137086	200.000	217.05(A)

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200501.b\X050111.D Page 2
Report Date: 21-May-2020 17:45

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	4.555	4.555	(0.916)	1047561	200.000	196.46(A)
42 1,2-Dichloropropane	63	5.443	5.443	(1.095)	778486	200.000	211.00(A)
75 1,3,5-Trimethylbenzene	105	9.074	9.074	(0.939)	2237294	200.000	211.57(A)
83 1,3-Dichlorobenzene	146	9.612	9.612	(0.994)	1240133	200.000	216.45(A)
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	1019674	200.000	200.73(A)
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	1238156	200.000	205.24(A)
26 2,2-Dichloropropane	77	3.509	3.509	(0.839)	942116	200.000	203.25(A)
24 2-Butanone	43	3.573	3.573	(0.854)	726777	400.000	399.15(A)
76 2-Chlorotoluene	91	8.981	8.981	(0.929)	1936873	200.000	207.38(A)
52 2-Hexanone	43	7.090	7.090	(0.924)	1322375	400.000	439.07(A)
77 4-Chlorotoluene	91	9.074	9.074	(0.939)	2263334	200.000	207.19(A)
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	2266663	200.000	218.42(A)
45 4-Methyl-2-Pentanone	43	6.331	6.331	(0.825)	1907571	400.000	437.61(A)
10 Acetone	43	1.976	1.976	(0.473)	577858	400.000	397.86
37 Benzene	78	4.512	4.512	(0.908)	2379876	200.000	208.31(A)
74 Bromobenzene	156	8.809	8.809	(0.911)	733594	200.000	209.69(A)
29 Bromochloromethane	128	3.795	3.795	(0.908)	305141	200.000	198.03
39 Bromodichloromethane	83	5.729	5.729	(1.153)	896892	200.000	212.98(A)
66 Bromoform	173	8.415	8.415	(1.097)	451491	200.000	195.80
6 Bromomethane	94	1.331	1.331	(0.318)	495847	200.000	202.29(A)
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	832741	200.000	200.29(AH)
59 Chlorobenzene	112	7.699	7.699	(1.004)	1621379	200.000	205.29(A)
7 Chloroethane	64	1.396	1.396	(0.334)	519613	200.000	199.73
28 Chloroform	83	3.910	3.910	(0.935)	1142625	200.000	212.73(A)
3 Chloromethane	50	1.073	1.073	(0.257)	1068913	200.000	202.68(A)
27 cis-1,2-Dichloroethene	96	3.523	3.523	(0.842)	660378	200.000	215.30(A)
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	1065417	200.000	214.93(A)
55 Dibromochloromethane	129	7.176	7.176	(0.936)	655723	200.000	209.09(A)
44 Dibromomethane	93	5.557	5.557	(1.118)	428772	200.000	204.28(A)
2 Dichlorodifluoromethane	85	0.966	0.966	(0.231)	707659	200.000	198.02
19 Carbon Disulfide	76	2.069	2.069	(0.495)	3430303	400.000	441.82(A)
61 Ethylbenzene	106	7.807	7.807	(1.018)	847755	200.000	204.15(A)
91 Hexachlorobutadiene	225	11.488	11.488	(1.188)	207981	200.000	198.85
67 Isopropylbenzene	105	8.566	8.566	(1.117)	2700136	200.000	212.97(A)
62 m,p-Xylenes	106	7.907	7.907	(1.031)	2139938	400.000	427.94(A)
17 Methylene Chloride	84	2.305	2.305	(0.551)	619425	200.000	200.26(A)
87 n-Butylbenzene	91	9.999	9.999	(1.034)	2140668	200.000	225.80(A)
73 n-Propylbenzene	91	8.917	8.917	(0.922)	3269340	200.000	211.43(A)
92 Naphthalene	128	11.546	11.546	(1.194)	487714	200.000	198.48
63 o-Xylene	106	8.244	8.244	(1.075)	1046805	200.000	215.66(A)
81 sec-Butylbenzene	105	9.526	9.526	(0.985)	2694962	200.000	216.91(A)
64 Styrene	104	8.265	8.265	(1.078)	1870119	200.000	219.39(A)
78 tert-Butylbenzene	119	9.340	9.340	(0.966)	1807207	200.000	208.34(A)
56 Tetrachloroethene	164	6.933	6.933	(0.904)	484075	200.000	209.78(A)
50 Toluene	91	6.446	6.446	(0.840)	2602554	200.000	208.39(A)
20 trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	562688	200.000	217.51(A)
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	987790	200.000	220.09(A)
38 Trichloroethene	130	5.206	5.206	(1.048)	600442	200.000	210.77(A)
8 Trichlorofluoromethane	101	1.553	1.553	(0.371)	1072467	200.000	222.87(A)
5 Vinyl Chloride	62	1.138	1.138	(0.272)	952633	200.000	213.80(A)

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200501.b\X050111.D
Date : 01-MAY-2020 15:22
Client ID: VSTD200
Sample Info: VSTD200;VSTD200;1;10;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200501.b\X050114.D
Lab Smp Id: ICV Client Smp ID: ICV
Inj Date : 01-MAY-2020 16:34
Operator : PC Inst ID: voa6.i
Smp Info : ICV;ICV;2;;;ICV
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\nahstws005\Target\chem\voa6.i\X200501.b\8260W.m
Meth Date : 21-May-2020 17:46 voa6.i Quant Type: ISTD
Cal Date : 01-MAY-2020 15:22 Cal File: X050111.D
Als bottle: 15 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0000000_Bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7142

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

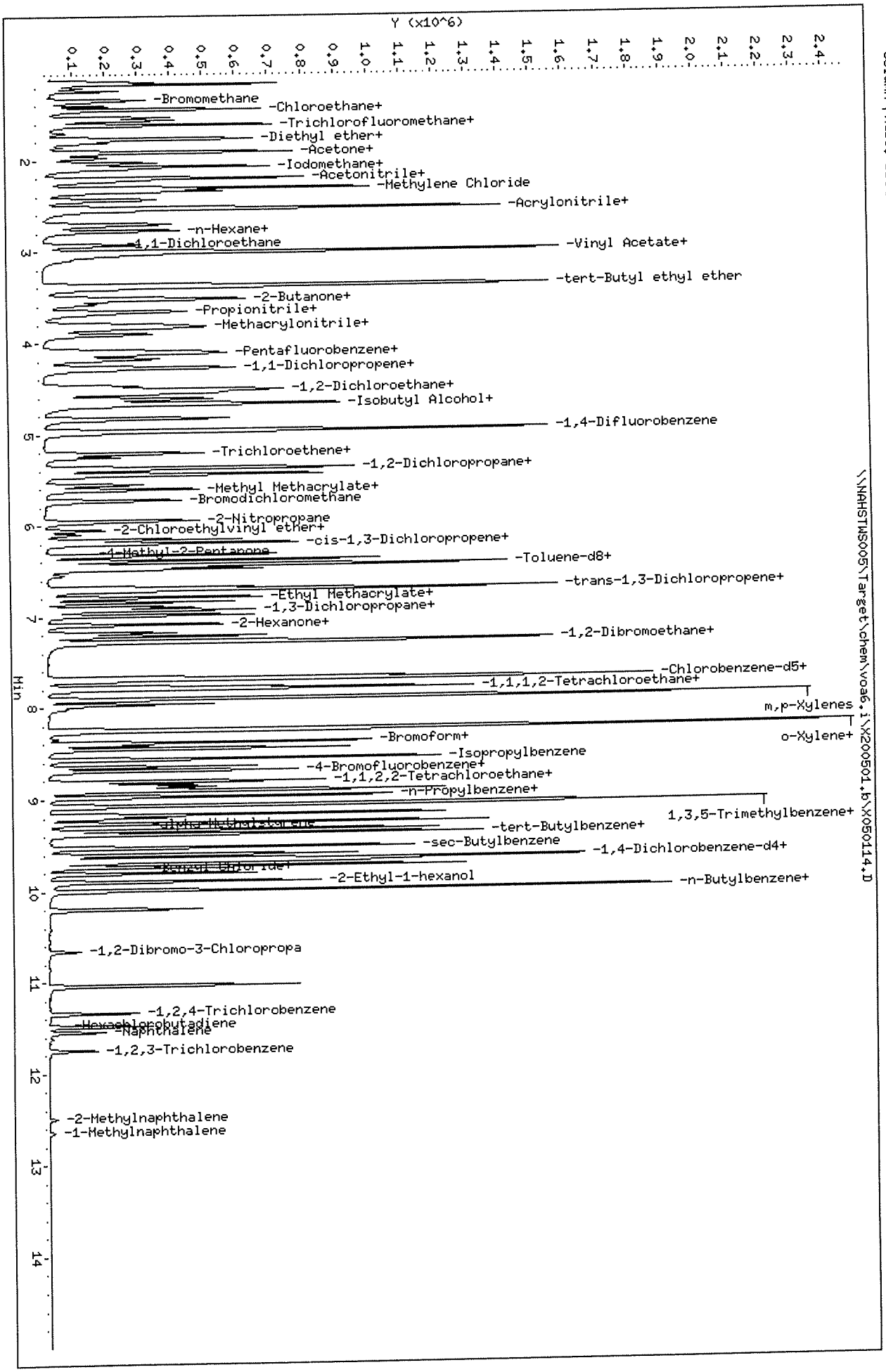
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	263535	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	437088	50.0000	
*	47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	407301	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.669	(1.000)	203748	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	149071	47.5726	47.57
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	209605	49.9565	49.95
$	48 Toluene-d8	98	6.388	6.388	(0.833)	529687	49.4394	49.43
$	69 4-Bromofluorobenzene	95	8.688	8.695	(1.133)	210592	49.8932	49.89
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	149617	50.5646	50.56
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	234352	47.0301	47.03
	68 1,1,2,2-Tetrachloroethane	83	8.845	8.845	(0.915)	184300	49.1155	49.11
	53 1,1,2-Trichloroethane	83	6.840	6.847	(0.892)	123449	49.7911	49.79
	22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	329805	46.2809	46.28
	11 1,1-Dichloroethene	96	1.911	1.911	(0.457)	131829	49.8112	49.81
	32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	199264	47.0761	47.07
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	34289	54.4375	54.43
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	159415	50.3719	50.37(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	66077	51.7001	51.70
	79 1,2,4-Trimethylbenzene	105	9.382	9.382	(0.971)	560856	49.2381	49.23
	89 1,2-Dibromo-3-Chloropropane	155	10.657	10.658	(1.103)	15870	51.4158	51.41
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	152543	51.4513	51.45
	88 1,2-Dichlorobenzene	146	9.998	9.999	(1.035)	280384	50.6228	50.62

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200501.b\X050114.D Page 2
Report Date: 21-May-2020 17:48

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
33 1,2-Dichloroethane	62	4.555	4.555	(0.916)	266798	48.6302	48.63
42 1,2-Dichloropropane	63	5.436	5.443	(1.094)	189022	49.7931	49.79
75 1,3,5-Trimethylbenzene	105	9.067	9.074	(0.938)	531606	47.5488	47.54
83 1,3-Dichlorobenzene	146	9.604	9.612	(0.994)	303858	50.1633	50.16
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	253989	49.3189	49.31
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	309838	48.5787	48.57
26 2,2-Dichloropropane	77	3.516	3.509	(0.841)	242445	47.3238	47.32
24 2-Butanone	43	3.573	3.573	(0.854)	190024	95.9517	95.95
76 2-Chlorotoluene	91	8.974	8.981	(0.929)	460326	46.6183	46.61
52 2-Hexanone	43	7.090	7.090	(0.924)	319678	104.698	104.69
77 4-Chlorotoluene	91	9.074	9.074	(0.939)	553432	47.9183	47.91
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	520604	47.4485	47.44
45 4-Methyl-2-Pentanone	43	6.324	6.331	(0.824)	449794	101.781	101.78
10 Acetone	43	1.969	1.976	(0.471)	178807	111.454	111.45
37 Benzene	78	4.512	4.512	(0.908)	596263	50.7268	50.72
74 Bromobenzene	156	8.809	8.809	(0.912)	176883	47.8222	47.82
29 Bromochloromethane	128	3.795	3.795	(0.908)	78764	46.2477	46.24
39 Bromodichloromethane	83	5.729	5.729	(1.153)	219975	50.7705	50.77
66 Bromoform	173	8.415	8.415	(1.097)	108760	46.8775	46.87
6 Bromomethane	94	1.338	1.331	(0.320)	135959	51.0760	51.07
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	193765	45.2964	45.29
59 Chlorobenzene	112	7.699	7.699	(1.004)	392232	48.9860	48.98
7 Chloroethane	64	1.403	1.396	(0.336)	130299	45.3144	45.31
28 Chloroform	83	3.910	3.910	(0.935)	281797	47.4676	47.46
3 Chloromethane	50	1.073	1.073	(0.257)	248338	44.2447	44.24
27 cis-1,2-Dichloroethene	96	3.530	3.523	(0.844)	164123	48.4124	48.41
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	259887	50.9551	50.95
55 Dibromochloromethane	129	7.176	7.176	(0.936)	158419	49.8283	49.82
44 Dibromomethane	93	5.557	5.557	(1.118)	106524	49.3278	49.32
2 Dichlorodifluoromethane	85	0.966	0.966	(0.231)	162866	44.8737	44.87
19 Carbon Disulfide	76	2.069	2.069	(0.495)	804105	93.7020	93.70
61 Ethylbenzene	106	7.799	7.807	(1.017)	209342	49.7257	49.72
91 Hexachlorobutadiene	225	11.488	11.488	(1.189)	45262	50.5319	50.53
67 Isopropylbenzene	105	8.566	8.566	(1.117)	618814	48.1432	48.14
62 m,p-Xylenes	106	7.907	7.907	(1.031)	506406	99.8905	99.89
17 Methylene Chloride	84	2.305	2.305	(0.551)	157441	46.2703	46.27
87 n-Butylbenzene	91	9.998	9.999	(1.035)	491007	48.9879	48.98
73 n-Propylbenzene	91	8.917	8.917	(0.923)	763927	46.7290	46.72
92 Naphthalene	128	11.546	11.546	(1.195)	106818	54.1429	54.14
63 o-Xylene	106	8.244	8.244	(1.075)	247670	50.3308	50.33
81 sec-Butylbenzene	105	9.526	9.526	(0.986)	606100	46.1421	46.14
64 Styrene	104	8.258	8.265	(1.077)	451910	52.2926	52.29
78 tert-Butylbenzene	119	9.339	9.340	(0.967)	420147	45.8125	45.81
56 Tetrachloroethene	164	6.933	6.933	(0.904)	112390	48.0435	48.04
50 Toluene	91	6.446	6.446	(0.840)	625276	49.3854	49.38
20 trans-1,2-Dichloroethene	96	2.527	2.527	(0.604)	138963	48.6010	48.60
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	245072	53.0706	53.07
38 Trichloroethene	130	5.206	5.206	(1.048)	143451	48.9418	48.94
8 Trichlorofluoromethane	101	1.560	1.553	(0.373)	259946	48.8741	48.87
5 Vinyl Chloride	62	1.138	1.138	(0.272)	221443	44.9647	44.96

QC Flag Legend

M - Compound response manually integrated.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200501.b\X050114.D
Date : 01-MAY-2020 16:34
Client ID: ICV
Sample Info: ICV;ICV;2;;;ICV
Purge Volume: 5.0
Column phase: DB624

\\NAHSTWS005\Target\chem\voa6.i\X200501.b\X050114.D

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ALS GROUP Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20050176

Lab File ID: X050601 BFB Injection Date: 05/06/20

Instrument ID: VOA6 BFB Injection Time: 1221

GC Column: DB624 ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	29.2
75	30.0 - 60.0% of mass 95	53.1
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.6
173	Less than 2.0% of mass 174	0.5 (0.8)1
174	Greater than 50.0% of mass 95	59.0
175	5.0 - 9.0% of mass 174	4.8 (8.1)1
176	95.0 - 101.0% of mass 174	57.1 (96.7)1
177	5.0 - 9.0% of mass 176	3.6 (6.4)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	CCV	CCV	X050603	05/06/20	1309
02	CCB	CCB	X050604	05/06/20	1357
03	VBLKW-200506	VBLKW-200506	X050606	05/06/20	1509
04	VLCSW-200506	VLCSW-200506	X050607	05/06/20	1533
05	HS20050176-0	HS20050176-03	X050608	05/06/20	1557
06	HS20050176-0	HS20050176-01	X050609	05/06/20	1621
07	HS20050176-0	HS20050176-01M	X050610	05/06/20	1645
08	HS20050176-0	HS20050176-01M	X050611	05/06/20	1709
09	CCV-END	CCV-END	X050612	05/06/20	1733
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FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS GROUP Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20050176

Instrument ID: VOA6 Calibration Date: 05/06/20 Time: 1309

Lab File ID: X050603 Init. Calib. Date(s): 05/01/20 05/01/20

Init. Calib. Times: 1123 1522

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Bromochloromethane	0.3230000	0.3153198	0.3153198	0.1	2.38	20.00	AVRG
Vinyl Chloride	0.9340000	0.8791761	0.8791761	0.1	5.87	20.00	AVRG
Chloromethane	43.760277	50.000000	0.9315087	0.1	12.48	20.00	LINR
Bromomethane	48.453766	50.000000	0.4887886	0.1	3.09	20.00	LINR
Chloroethane	0.5460000	0.4941008	0.4941008	0.1	9.50	20.00	AVRG
Methylene Chloride	48.456686	50.000000	0.6258239	0.1	3.09	20.00	LINR
Acetone	102.74804	100.00000	0.3127239	0.1	-2.75	20.00	LINR
Carbon Disulfide	1.6280000	1.6416855	1.6416855	0.1	-0.84	20.00	AVRG
1,1-Dichloroethene	0.5020000	0.5404628	0.5404628	0.1	-7.66	20.00	AVRG
trans-1,2-Dichloroethene	0.5420000	0.5563431	0.5563431	0.1	-2.65	20.00	AVRG
Carbon Tetrachloride	0.4890000	0.4982067	0.4982067	0.1	-1.88	20.00	AVRG
Bromodichloromethane	0.4960000	0.5236158	0.5236158	0.2	-5.57	20.00	AVRG
1,1-Dichloroethane	1.3520000	1.3154402	1.3154402	0.2	2.70	20.00	AVRG
1,2-Dichloropropane	0.4340000	0.4498744	0.4498744	0.1	-3.66	20.00	AVRG
2-Butanone	89.851657	100.00000	0.3371200	0.1	10.15	20.00	LINR
cis-1,3-Dichloropropene	0.5830000	0.6273761	0.6273761	0.2	-7.61	20.00	AVRG
Dibromochloromethane	0.3900000	0.3979585	0.3979585	0.1	-2.04	20.00	AVRG
1,1,2-Trichloroethane	0.3040000	0.3059977	0.3059977	0.1	-0.66	20.00	AVRG
cis-1,2-Dichloroethene	0.6430000	0.6587698	0.6587698	0.1	-2.45	20.00	AVRG
Benzene	1.3440000	1.4394405	1.4394405	0.5	-7.10	20.00	AVRG
Chloroform	1.1260000	1.1164221	1.1164221	0.2	0.85	20.00	AVRG
trans-1,3-Dichloropropene	0.5280000	0.5617740	0.5617740	0.1	-6.40	20.00	AVRG
Bromoform	46.663011	50.000000	0.2657922	0.1	6.67	20.00	LINR
1,1,1-Trichloroethane	0.9450000	0.9655079	0.9655079	0.1	-2.17	20.00	AVRG
4-Methyl-2-Pentanone	0.5420000	0.5190927	0.5190927	0.1	4.23	20.00	AVRG
2-Hexanone	0.3750000	0.3668651	0.3668651	0.1	2.17	20.00	AVRG
1,2-Dichloroethane	0.6270000	0.6369691	0.6369691	0.1	-1.59	20.00	AVRG
1,1,2,2-Tetrachloroethane	0.9210000	0.8915748	0.8915748	0.3	3.19	20.00	AVRG
Trichloroethene	0.3350000	0.3603717	0.3603717	0.2	-7.57	20.00	AVRG
Toluene	1.5540000	1.6298636	1.6298636	0.4	-4.88	20.00	AVRG
Dichlorodifluoromethane	40.504808	50.000000	0.5557449	0.1	18.99	20.00	2RDR
Trichlorofluoromethane	1.0090000	1.0170391	1.0170391	0.1	-0.80	20.00	AVRG
Tetrachloroethene	0.2870000	0.3117580	0.3117580	0.2	-8.63	20.00	AVRG
1,2-Dibromoethane	0.3640000	0.3834846	0.3834846	0.1	-5.35	20.00	AVRG
Chlorobenzene	0.9830000	1.0170520	1.0170520	0.5	-3.46	20.00	AVRG
1,3-Dichlorobenzene	1.4860000	1.6217465	1.6217465	0.6	-9.14	20.00	AVRG
1,4-Dichlorobenzene	1.5650000	1.5929760	1.5929760	0.4	-1.79	20.00	AVRG
Ethylbenzene	0.5170000	0.5610904	0.5610904	0.1	-8.53	20.00	AVRG
1,2-Dichlorobenzene	1.3590000	1.4097522	1.4097522	0.4	-3.73	20.00	AVRG
m,p-Xylenes	0.6220000	0.6816300	0.6816300	0.1	-9.59	20.00	AVRG
o-Xylene	0.6040000	0.6549713	0.6549713	0.3	-8.44	20.00	AVRG
Styrene	1.0610000	1.1743090	1.1743090	0.3	-10.68	20.00	AVRG

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS GROUP Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2005017

Instrument ID: VOA6 Calibration Date: 05/06/20 Time: 1309

Lab File ID: X050603 Init. Calib. Date(s): 05/01/20 05/01/20

Init. Calib. Times: 1123 1522

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
2,2-Dichloropropane	0.9720000	0.9698044	0.9698044	0.1	0.22	20.00	AVRG
1,1-Dichloropropene	0.4840000	0.4977647	0.4977647	0.1	-2.84	20.00	AVRG
Dibromomethane	0.2470000	0.2495021	0.2495021	0.1	-1.01	20.00	AVRG
1,3-Dichloropropane	0.6320000	0.6265449	0.6265449	0.1	0.86	20.00	AVRG
1,1,1,2-Tetrachloroethane	0.3630000	0.3898200	0.3898200	0.1	-7.39	20.00	AVRG
Isopropylbenzene	1.5780000	1.7319465	1.7319465	0.1	-9.76	20.00	AVRG
Bromobenzene	0.9080000	0.9678668	0.9678668	0.1	-6.59	20.00	AVRG
1,2,3-Trichloropropane	0.7760000	0.7966686	0.7966686	0.1	-2.66	20.00	AVRG
n-Propylbenzene	4.0120000	4.3716453	4.3716453	0.1	-8.96	20.00	AVRG
2-Chlorotoluene	2.4230000	2.5595104	2.5595104	0.1	-5.63	20.00	AVRG
1,3,5-Trimethylbenzene	2.7440000	2.9961883	2.9961883	0.1	-9.19	20.00	AVRG
4-Chlorotoluene	2.8340000	2.9904635	2.9904635	0.1	-5.52	20.00	AVRG
tert-Butylbenzene	2.2500000	2.4429445	2.4429445	0.1	-8.58	20.00	AVRG
1,2,4-Trimethylbenzene	2.7950000	3.0081602	3.0081602	0.1	-7.63	20.00	AVRG
sec-Butylbenzene	3.2230000	3.5465429	3.5465429	0.1	-10.04	20.00	AVRG
p-Isopropyltoluene	2.6920000	3.0405423	3.0405423	0.1	-12.95	20.00	AVRG
n-Butylbenzene	2.4590000	2.7452134	2.7452134	0.5	-11.64	20.00	AVRG
1,2-Dibromo-3-Chloropropane	44.768326	50.000000	6.74e-002	0.05	10.46	20.00	2RDR
1,2,4-Trichlorobenzene	48.264997	50.000000	0.3016198	0.2	3.47	20.00	2RDR
Hexachlorobutadiene	52.772009	50.000000	0.2323216	0.1	-5.54	20.00	2RDR
Naphthalene	47.346061	50.000000	0.4539696	0.2	5.31	20.00	2RDR
1,2,3-Trichlorobenzene	47.878555	50.000000	0.1466737	0.1	4.24	20.00	2RDR
Dibromofluoromethane	48.243927	50.000000	0.5737246	0.1	3.51	20.00	LINR
1,2-Dichloroethane-d4	48.500165	50.000000	0.7720956	0.1	3.00	20.00	2RDR
Toluene-d8	49.535944	50.000000	1.3030200	0.1	0.93	20.00	LINR
4-Bromofluorobenzene	51.126483	50.000000	0.5301322	0.1	-2.25	20.00	2RDR

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS GROUP Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20050176

Lab File ID (Standard): X050603 Date Analyzed: 05/06/20

Instrument ID: VOA6 Time Analyzed: 1309

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

		IS1 AREA #	IS1 RT #	IS2(DFB) AREA #	IS2(DFB) RT #	IS3(CBZ) AREA #	IS3(CBZ) RT #
	12 HOUR STD	265800	4.18	438858	4.97	410392	7.67
	UPPER LIMIT	531600	4.68	877716	5.47	820784	8.17
	LOWER LIMIT	132900	3.68	219429	4.47	205196	7.17
	CLIENT SAMPLE NO.						
01	CCB	332317	4.18	524744	4.97	528846	7.67
02	VBLKW-200506	332120	4.18	521962	4.97	448969	7.67
03	VLCSW-200506	254691	4.18	431671	4.97	396518	7.67
04	HS20050176-03	318473	4.18	507407	4.97	425006	7.67
05	HS20050176-01	321987	4.18	517360	4.97	441525	7.67
06	HS20050176-01	326462	4.18	515776	4.97	450001	7.67
07	HS20050176-01	319328	4.18	498821	4.97	434957	7.67
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IS1 = Pentafluorobenzene
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ALS GROUP Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20050176

Lab File ID (Standard): X050603 Date Analyzed: 05/06/20

Instrument ID: VOA6 Time Analyzed: 1309

GC Column: DB624 ID: 0.18 (mm) Heated Purge: (Y/N) N

		IS4 (DCB) AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	204897	9.66				
	UPPER LIMIT	409794	10.16				
	LOWER LIMIT	102449	9.16				
	CLIENT SAMPLE NO.						
01	CCB	195929	9.67				
02	VBLKW-200506	207762	9.67				
03	VLCSW-200506	212939	9.66				
04	HS20050176-03	188220	9.67				
05	HS20050176-01	189703	9.67				
06	HS20050176-01	227809	9.66				
07	HS20050176-01	213056	9.66				
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IS4 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS GROUP Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20050176

Instrument ID: VOA6 Calibration Date: 05/06/20 Time: 1733

Lab File ID: X050612 Init. Calib. Date(s): 05/01/20 05/01/20

Init. Calib. Times: 1123 1522

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
Bromochloromethane	0.3230000	0.3365592	0.3365592	0.1	-4.20	20.00	AVRG
Vinyl Chloride	0.9340000	0.9363722	0.9363722	0.1	-0.25	20.00	AVRG
Chloromethane	45.623802	50.000000	0.9731552	0.1	8.75	20.00	LINR
Bromomethane	50.641581	50.000000	0.5114125	0.1	-1.28	20.00	LINR
Chloroethane	0.5460000	0.5385923	0.5385923	0.1	1.36	20.00	AVRG
Methylene Chloride	51.557277	50.000000	0.6661042	0.1	-3.11	20.00	LINR
Acetone	91.125997	100.00000	0.2773173	0.1	8.87	20.00	LINR
Carbon Disulfide	1.6280000	1.7356109	1.7356109	0.1	-6.61	20.00	AVRG
1,1-Dichloroethene	0.5020000	0.5452963	0.5452963	0.1	-8.62	20.00	AVRG
trans-1,2-Dichloroethene	0.5420000	0.5955698	0.5955698	0.1	-9.88	20.00	AVRG
Carbon Tetrachloride	0.4890000	0.4859345	0.4859345	0.1	0.63	20.00	AVRG
Bromodichloromethane	0.4960000	0.5298165	0.5298165	0.2	-6.82	20.00	AVRG
1,1-Dichloroethane	1.3520000	1.3874159	1.3874159	0.2	-2.62	20.00	AVRG
1,2-Dichloropropane	0.4340000	0.4546391	0.4546391	0.1	-4.76	20.00	AVRG
2-Butanone	95.273464	100.00000	0.3579263	0.1	4.73	20.00	LINR
cis-1,3-Dichloropropene	0.5830000	0.6091229	0.6091229	0.2	-4.48	20.00	AVRG
Dibromochloromethane	0.3900000	0.4017211	0.4017211	0.1	-3.00	20.00	AVRG
1,1,2-Trichloroethane	0.3040000	0.3108022	0.3108022	0.1	-2.24	20.00	AVRG
cis-1,2-Dichloroethene	0.6430000	0.7000045	0.7000045	0.1	-8.86	20.00	AVRG
Benzene	1.3440000	1.4359892	1.4359892	0.5	-6.84	20.00	AVRG
Chloroform	1.1260000	1.1971861	1.1971861	0.2	-6.32	20.00	AVRG
trans-1,3-Dichloropropene	0.5280000	0.5562621	0.5562621	0.1	-5.35	20.00	AVRG
Bromoform	50.754368	50.000000	0.2893303	0.1	-1.51	20.00	LINR
1,1,1-Trichloroethane	0.9450000	1.0234163	1.0234163	0.1	-8.30	20.00	AVRG
4-Methyl-2-Pentanone	0.5420000	0.5458269	0.5458269	0.1	-0.71	20.00	AVRG
2-Hexanone	0.3750000	0.3712676	0.3712676	0.1	1.00	20.00	AVRG
1,2-Dichloroethane	0.6270000	0.6384464	0.6384464	0.1	-1.82	20.00	AVRG
1,1,2,2-Tetrachloroethane	0.9210000	0.9183311	0.9183311	0.3	0.29	20.00	AVRG
Trichloroethene	0.3350000	0.3585020	0.3585020	0.2	-7.02	20.00	AVRG
Toluene	1.5540000	1.6292791	1.6292791	0.4	-4.84	20.00	AVRG
Dichlorodifluoromethane	42.241765	50.000000	0.5804704	0.1	15.52	20.00	2RDR
Trichlorofluoromethane	1.0090000	1.0946745	1.0946745	0.1	-8.49	20.00	AVRG
Tetrachloroethene	0.2870000	0.3065559	0.3065559	0.2	-6.81	20.00	AVRG
1,2-Dibromoethane	0.3640000	0.3826594	0.3826594	0.1	-5.13	20.00	AVRG
Chlorobenzene	0.9830000	1.0138121	1.0138121	0.5	-3.13	20.00	AVRG
1,3-Dichlorobenzene	1.4860000	1.6110989	1.6110989	0.6	-8.42	20.00	AVRG
1,4-Dichlorobenzene	1.5650000	1.5970783	1.5970783	0.4	-2.05	20.00	AVRG
Ethylbenzene	0.5170000	0.5518188	0.5518188	0.1	-6.73	20.00	AVRG
1,2-Dichlorobenzene	1.3590000	1.4254467	1.4254467	0.4	-4.89	20.00	AVRG
m,p-Xylenes	0.6220000	0.6647450	0.6647450	0.1	-6.87	20.00	AVRG
o-Xylene	0.6040000	0.6895189	0.6895189	0.3	-14.16	20.00	AVRG
Styrene	1.0610000	1.2446935	1.2446935	0.3	-17.31	20.00	AVRG

FORM 7B
VOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: ALS GROUP Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2005017

Instrument ID: VOA6 Calibration Date: 05/06/20 Time: 1733

Lab File ID: X050612 Init. Calib. Date(s): 05/01/20 05/01/20

Init. Calib. Times: 1123 1522

GC Column: DB624 ID: 0.18 (mm)

COMPOUND	RRF or AMOUNT	RRF50.000 or AMOUNT	CCAL RRF50.000	MIN RRF	%D or %DRIFT	MAX %D or %DRIFT	CURV TYPE
2,2-Dichloropropane	0.9720000	0.9877955	0.9877955	0.1	-1.62	20.00	AVRG
1,1-Dichloropropene	0.4840000	0.4822115	0.4822115	0.1	0.37	20.00	AVRG
Dibromomethane	0.2470000	0.2523157	0.2523157	0.1	-2.15	20.00	AVRG
1,3-Dichloropropane	0.6320000	0.6365251	0.6365251	0.1	-0.72	20.00	AVRG
1,1,1,2-Tetrachloroethane	0.3630000	0.3780395	0.3780395	0.1	-4.14	20.00	AVRG
Isopropylbenzene	1.5780000	1.8042272	1.8042272	0.1	-14.34	20.00	AVRG
Bromobenzene	0.9080000	0.9348255	0.9348255	0.1	-2.95	20.00	AVRG
1,2,3-Trichloropropane	0.7760000	0.7983432	0.7983432	0.1	-2.88	20.00	AVRG
n-Propylbenzene	4.0120000	4.1911830	4.1911830	0.1	-4.47	20.00	AVRG
2-Chlorotoluene	2.4230000	2.4903419	2.4903419	0.1	-2.78	20.00	AVRG
1,3,5-Trimethylbenzene	2.7440000	2.8777440	2.8777440	0.1	-4.87	20.00	AVRG
4-Chlorotoluene	2.8340000	2.8429425	2.8429425	0.1	-0.32	20.00	AVRG
tert-Butylbenzene	2.2500000	2.3794365	2.3794365	0.1	-5.75	20.00	AVRG
1,2,4-Trimethylbenzene	2.7950000	2.9844510	2.9844510	0.1	-6.78	20.00	AVRG
sec-Butylbenzene	3.2230000	3.4178730	3.4178730	0.1	-6.05	20.00	AVRG
p-Isopropyltoluene	2.6920000	2.8869979	2.8869979	0.1	-7.24	20.00	AVRG
n-Butylbenzene	2.4590000	2.6266968	2.6266968	0.5	-6.82	20.00	AVRG
1,2-Dibromo-3-Chloropropane	50.874412	50.000000	7.7e-002	0.05	-1.75	20.00	2RDR
1,2,4-Trichlorobenzene	47.555174	50.000000	0.2969544	0.2	4.89	20.00	2RDR
Hexachlorobutadiene	49.064685	50.000000	0.2155108	0.1	1.87	20.00	2RDR
Naphthalene	46.380584	50.000000	0.4440819	0.2	7.24	20.00	2RDR
1,2,3-Trichlorobenzene	46.835831	50.000000	0.1432721	0.1	6.33	20.00	2RDR
Dibromofluoromethane	51.049313	50.000000	0.6074269	0.1	-2.10	20.00	LINR
1,2-Dichloroethane-d4	52.447682	50.000000	0.8351882	0.1	-4.90	20.00	2RDR
Toluene-d8	49.142679	50.000000	1.2926786	0.1	1.71	20.00	LINR
4-Bromofluorobenzene	52.072627	50.000000	0.5401862	0.1	-4.14	20.00	2RDR

MSVOA06 -Logbook

Batch: 40460
Date: 05-06-2020
Method: 8260
Comments:

Analyst: Presenta Cabascango
Reviewer:
Laboratory: Houston

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	BFB	TUNE	05-06-2020 12:21 pm	1.00	50 mL	50 mL	X050601.D	Liquid	Y	NA
2	*Auto find/ purged* CCV	CCV	05-06-2020 12:45 pm	1.00	50 mL	50 mL	X050602a.D	Liquid	Y	NA
3	*10 uL cal std/50 mL DI* CCV	CCV	05-06-2020 01:09 pm	1.00	50 mL	50 mL	X050603.D	Liquid	Y	NA
4	*10 uL cal std/50 mL DI* CCB	SAMP	05-06-2020 01:57 pm	1.00	50 mL	50 mL	X050604.D	Liquid	Y	NA
5	BLANK	SAMP	05-06-2020 02:45 pm	1.00	50 mL	50 mL	X050605.D	Liquid	Y	NA
6	VBLKW-200506	MBLK	05-06-2020 03:09 pm	1.00	50 mL	50 mL	X050606.D	Liquid	Y	NA
7	VLCSW-200506	LCS	05-06-2020 03:33 pm	1.00	50 mL	50 mL	X050607.D	Liquid	Y	NA
8	*4.0 uL cal std/50 mL DI* HS20050176-03	SAMP	05-06-2020 03:57 pm	1.00	50 mL	50 mL	X050608.D	Liquid	Y	<2
9	HS20050176-01	SAMP	05-06-2020 04:21 pm	1.00	50 mL	50 mL	X050609.D	Liquid	Y	<2
10	HS20050176-01MS	MS	05-06-2020 04:45 pm	1.00	50 mL	50 mL	X050610.D	Liquid	Y	<2
11	*3.5 uL cal std/40 mL samp* HS20050176-01MSD	MSD	05-06-2020 05:09 pm	1.00	50 mL	50 mL	X050611.D	Liquid	Y	<2
12	*3.5 uL cal std/40 mL samp* CCV-END	CCV	05-06-2020 05:33 pm	1.00	50 mL	50 mL	X050612.D	Liquid	Y	NA
13	*10 uL cal std/50 mL DI* HS20041197-09	SAMP	05-06-2020 05:57 pm	10.00	5 mL	50 mL	X050613.D	Liquid	Y	<2
14	HS20050174-02	SAMP	05-06-2020 06:21 pm	1.00	50 mL	50 mL	X050614.D	Liquid	Y	<2
15	HS20050152-06	SAMP	05-06-2020 06:45 pm	1.00	50 mL	50 mL	X050615.D	Liquid	Y	<2
16	HS20050152-10	SAMP	05-06-2020 07:10 pm	1.00	50 mL	50 mL	X050616.D	Liquid	Y	<2
17	HS20050143-04	SAMP	05-06-2020 07:34 pm	1.00	50 mL	50 mL	X050617.D	Liquid	Y	<2
18	HS20050152-01	SAMP	05-06-2020 07:58 pm	1.00	50 mL	50 mL	X050618.D	Liquid	Y	<2
19	HS20050152-02	SAMP	05-06-2020 08:22 pm	1.00	50 mL	50 mL	X050619.D	Liquid	Y	<2
20	HS20050152-03	SAMP	05-06-2020 08:46 pm	1.00	50 mL	50 mL	X050620.D	Liquid	Y	<2
21	HS20050152-04	SAMP	05-06-2020 09:10 pm	1.00	50 mL	50 mL	X050621.D	Liquid	Y	<2
22	HS20050152-05	SAMP	05-06-2020 09:34 pm	1.00	50 mL	50 mL	X050622.D	Liquid	Y	<2
23	HS20050152-07	SAMP	05-06-2020 09:58 pm	1.00	50 mL	50 mL	X050623.D	Liquid	Y	<2
24	HS20050152-08	SAMP	05-06-2020 10:22 pm	1.00	50 mL	50 mL	X050624.D	Liquid	Y	<2
25	HS20050152-09	SAMP	05-06-2020 10:46 pm	1.00	50 mL	50 mL	X050625.D	Liquid	Y	<2
26	HS20050131-07	SAMP	05-06-2020 11:10 pm	1.00	50 mL	50 mL	X050626.D	Liquid	Y	<2
27	HS20050131-08	SAMP	05-06-2020 11:34 pm	1.00	50 mL	50 mL	X050627.D	Liquid	Y	<2
28	HS20050131-09	SAMP	05-06-2020 11:58 pm	1.00	50 mL	50 mL	X050628.D	Liquid	Y	<2

Chemical	Value
SURR SPK ID	31106-26-06
IS ID	31106-26-06
CAL STD ID	31106-28-01/02
BFB ID	31106-26-06
pH Paper	634-64-11

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200506.b\X050601.D

Date : 06-MAY-2020 12:21

Client ID: BFB

Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

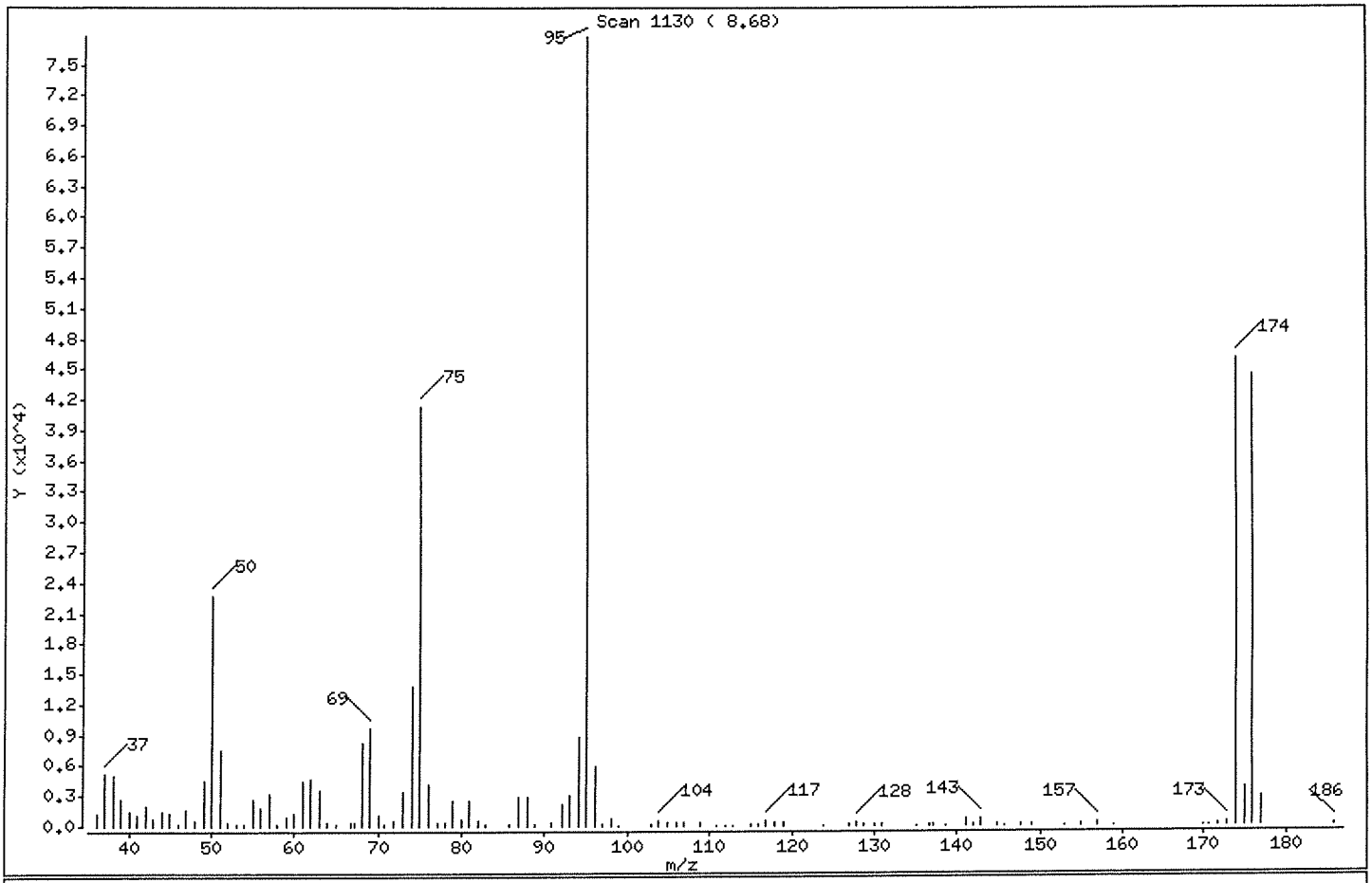
Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

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	29.15
75	30.00 - 60.00% of mass 95	53.14
96	5.00 - 9.00% of mass 95	7.57
173	Less than 2.00% of mass 174	0.46 (0.79)
174	Greater than 50.00% of mass 95	59.01
175	5.00 - 9.00% of mass 174	4.78 (8.11)
176	95.00 - 101.00% of mass 174	57.09 (96.74)
177	5.00 - 9.00% of mass 176	3.64 (6.38)

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200506.b\X050601.D

Date : 06-MAY-2020 12:21

Client ID: BFB Instrument: voa6.i

Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0 Operator: PC

Column phase: DB624 Column diameter: 0.25

Data File: X050601.D
Spectrum: Scan 1130 (8.68)
Location of Maximum: 95.00
Number of points: 105

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1197	63.00	3554	93.00	3005	135.00	70
37.00	5207	63.90	302	94.00	8770	136.60	110
38.00	4999	65.00	152	95.00	77792	137.00	96
39.00	2730	66.80	318	96.00	5886	138.70	79
40.00	1452	67.10	314	96.90	196	141.00	683
41.00	990	68.00	8283	98.10	786	141.90	232
42.00	2023	69.00	9720	99.00	76	142.80	783
43.00	744	70.00	1071	102.80	100	144.80	92
44.00	1346	70.80	101	103.70	455	145.60	53
44.90	1237	71.90	567	104.90	337	147.70	196
46.10	94	73.00	3437	106.00	319	148.90	98
47.00	1572	74.00	13729	106.90	329	152.90	69
47.90	539	75.00	41336	108.90	384	154.90	194
49.00	4382	76.00	4066	110.90	87	156.90	311
50.00	22680	77.00	373	112.00	60	158.90	61
51.00	7424	77.90	369	112.90	59	170.00	81
52.00	415	78.90	2500	115.10	98	170.60	74
53.00	244	79.90	764	115.90	193	171.60	93
54.00	258	80.90	2534	116.70	519	172.90	361
55.00	2695	81.90	498	117.90	398	173.90	45904
56.00	1717	82.90	196	118.90	381	174.90	3722
57.00	3185	85.60	90	123.90	73	175.90	44408
58.00	252	86.90	2893	126.90	206	176.90	2835
59.00	818	87.90	2788	127.80	338	185.90	117
59.90	1169	88.80	121	128.70	168		
61.00	4463	90.80	287	130.00	261		
62.00	4694	92.00	2118	131.00	125		

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200506.b\X050601.D

Date : 06-MAY-2020 12:21

Client ID: BFB

Instrument: voa6.i

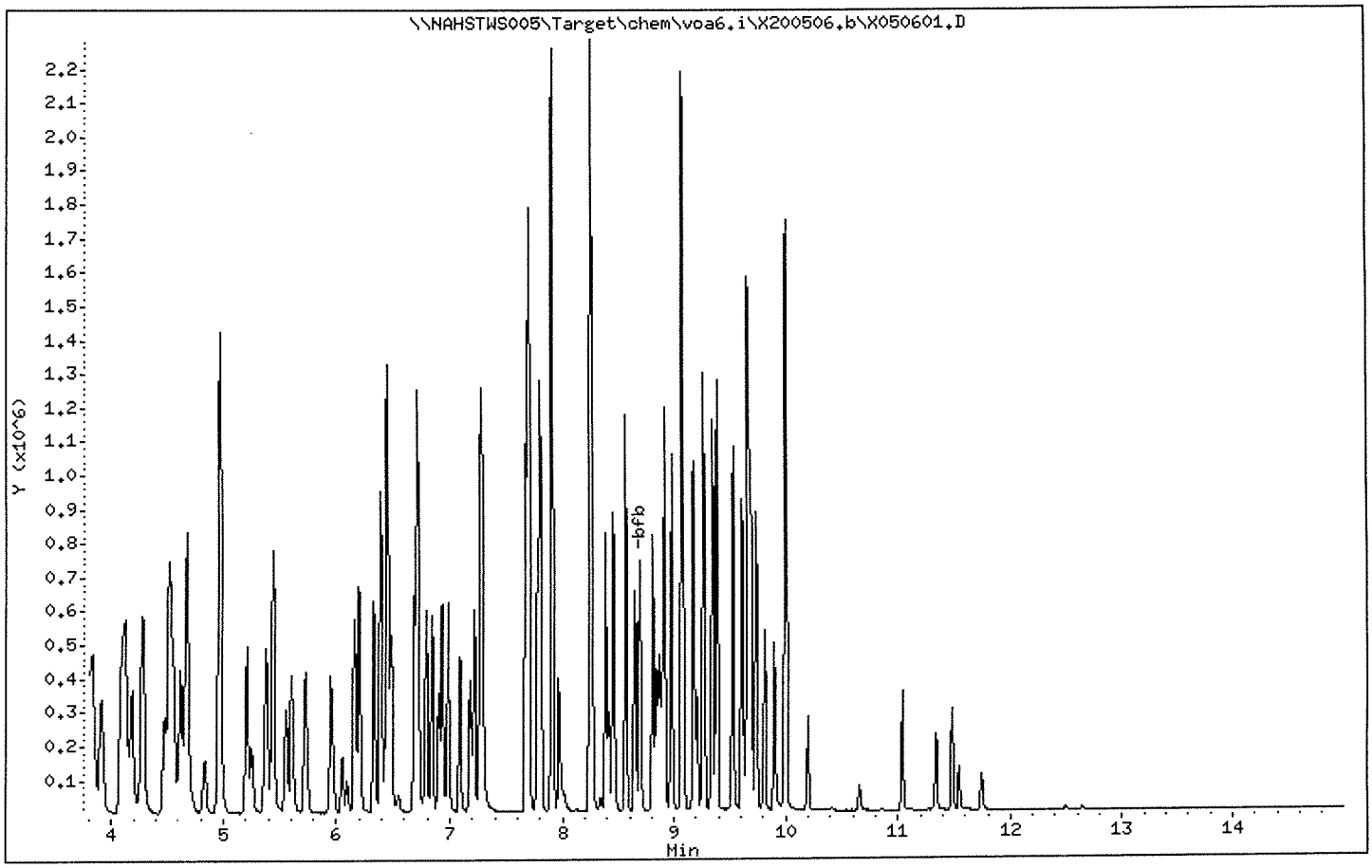
Sample Info: BFB;BFB;3;;BFB

Volume Injected (uL): 2.0

Operator: PC

Column phase: DB624

Column diameter: 0.25



ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200506.b\X050603.D
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 06-MAY-2020 13:09
Operator : PC Inst ID: voa6.i
Smp Info : CCV;CCV;2;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X200506.b\8260W.m
Meth Date : 21-May-2020 17:52 voa6.i Quant Type: ISTD
Cal Date : 01-MAY-2020 14:10 Cal File: X050108.D
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0000000_Bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7142

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

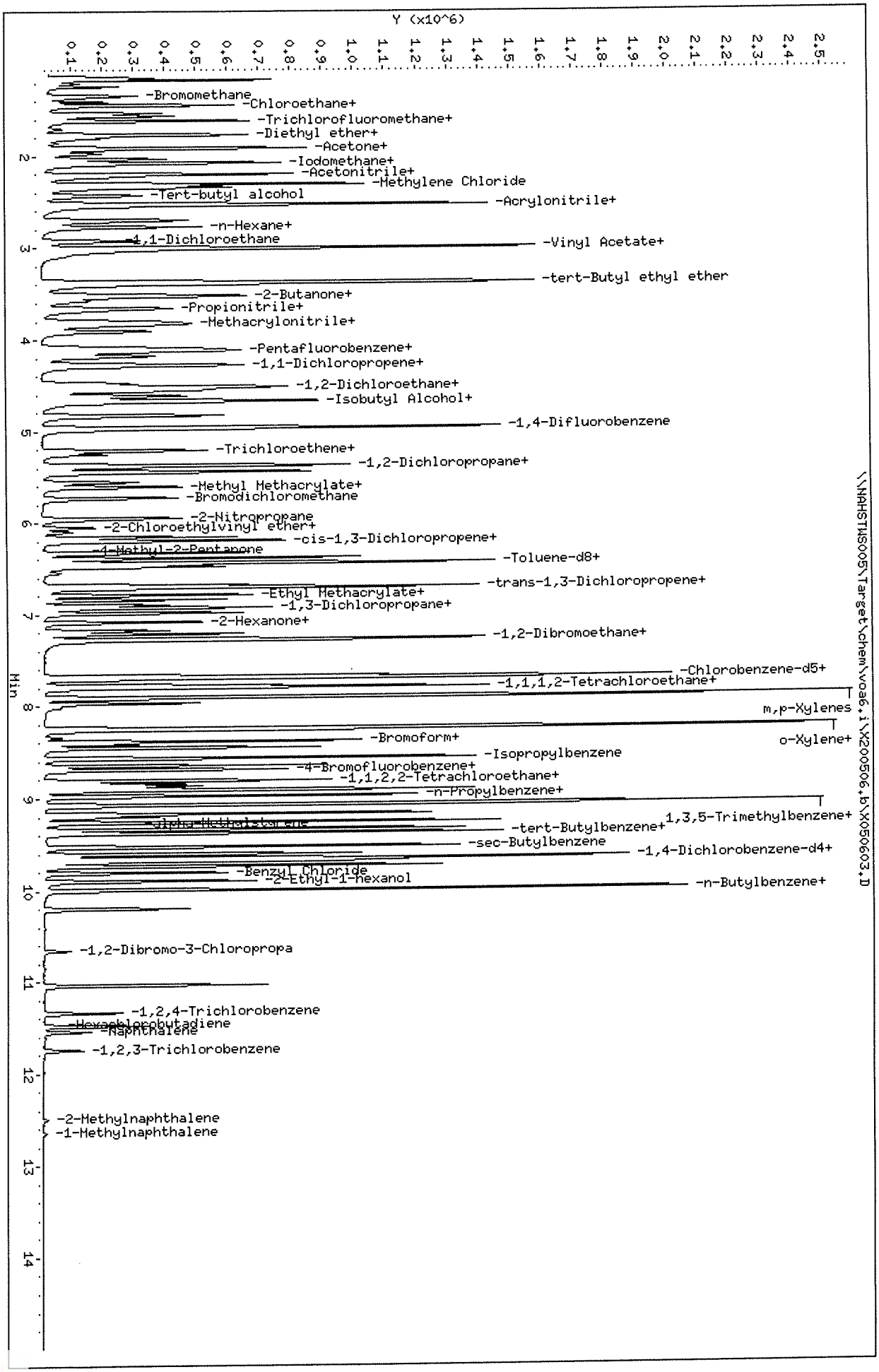
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	265800	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	438858	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	410392	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	204897	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	152496	50.0000	48.24
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	205223	50.0000	48.50
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	534749	50.0000	49.53
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	217562	50.0000	51.12
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	159979	50.0000	53.65
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	256632	50.0000	51.06
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	182681	50.0000	48.41
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	125579	50.0000	50.26
22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	349644	50.0000	48.64
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	143655	50.0000	53.81
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	218448	50.0000	51.40
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	30053	50.0000	47.87
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	163235	50.0000	51.28 (M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	61801	50.0000	48.26
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	616363	50.0000	53.80
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	13818	50.0000	44.76
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	157379	50.0000	52.68
88 1,2-Dichlorobenzene	146	9.999	9.999	(1.035)	288854	50.0000	51.85

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33	1,2-Dichloroethane	62	4.562	4.562	(0.918)	279539	50.0000	50.74
42	1,2-Dichloropropane	63	5.436	5.436	(1.094)	197431	50.0000	51.79
75	1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	613910	50.0000	54.60
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	332291	50.0000	54.54
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	257129	50.0000	49.55
84	1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	326396	50.0000	50.88
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	257774	50.0000	49.88
24	2-Butanone	43	3.573	3.573	(0.854)	179213	100.000	89.85
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	524436	50.0000	52.81
52	2-Hexanone	43	7.083	7.083	(0.923)	301117	100.000	97.87
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	612737	50.0000	52.75
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	622998	50.0000	56.46
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	426063	100.000	95.68
10	Acetone	43	1.969	1.969	(0.471)	166244	100.000	102.74
37	Benzene	78	4.512	4.512	(0.908)	631710	50.0000	53.52
74	Bromobenzene	156	8.810	8.810	(0.912)	198313	50.0000	53.31
29	Bromochloromethane	128	3.795	3.795	(0.908)	83812	50.0000	48.79
39	Bromodichloromethane	83	5.729	5.729	(1.153)	229793	50.0000	52.82
66	Bromoform	173	8.416	8.416	(1.097)	109079	50.0000	46.66
6	Bromomethane	94	1.338	1.338	(0.320)	129920	50.0000	48.45
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	218642	50.0000	50.90
59	Chlorobenzene	112	7.692	7.692	(1.003)	417390	50.0000	51.73
7	Chloroethane	64	1.403	1.403	(0.336)	131332	50.0000	45.28
28	Chloroform	83	3.910	3.910	(0.935)	296745	50.0000	49.55
3	Chloromethane	50	1.073	1.073	(0.257)	247595	50.0000	43.76
27	cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	175101	50.0000	51.21
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	275329	50.0000	53.76
55	Dibromochloromethane	129	7.176	7.176	(0.936)	163319	50.0000	50.98
44	Dibromomethane	93	5.557	5.557	(1.118)	109496	50.0000	50.49
2	Dichlorodifluoromethane	85	0.966	0.966	(0.231)	147717	50.0000	40.50
19	Carbon Disulfide	76	2.069	2.069	(0.495)	872720	100.000	100.83
61	Ethylbenzene	106	7.800	7.800	(1.017)	230267	50.0000	54.28
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	47602	50.0000	52.77
67	Isopropylbenzene	105	8.566	8.566	(1.117)	710777	50.0000	54.88
62	m,p-Xylenes	106	7.907	7.907	(1.031)	559471	100.000	109.52
17	Methylene Chloride	84	2.305	2.305	(0.551)	166344	50.0000	48.45
87	n-Butylbenzene	91	9.999	9.999	(1.035)	562486	50.0000	55.80
73	n-Propylbenzene	91	8.917	8.917	(0.923)	895737	50.0000	54.48
92	Naphthalene	128	11.546	11.546	(1.195)	93017	50.0000	47.34
63	o-Xylene	106	8.244	8.244	(1.075)	268795	50.0000	54.21
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	726676	50.0000	55.01
64	Styrene	104	8.258	8.258	(1.077)	481927	50.0000	55.34
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	500552	50.0000	54.27
56	Tetrachloroethene	164	6.933	6.933	(0.904)	127943	50.0000	54.28
50	Toluene	91	6.446	6.446	(0.840)	668883	50.0000	52.43
20	trans-1,2-Dichloroethene	96	2.528	2.528	(0.604)	147876	50.0000	51.27
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	246539	50.0000	53.17
38	Trichloroethene	130	5.207	5.207	(1.048)	158152	50.0000	53.73
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	270329	50.0000	50.39
5	Vinyl Chloride	62	1.138	1.138	(0.272)	233685	50.0000	47.04

QC Flag Legend

M - Compound response manually integrated.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200506.b\X050603.D
Date : 06-MAY-2020 13:09
Client ID: CCV
Sample Info: CCV;CCV;2;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200506.b\X050604.D Page 1
Report Date: 21-May-2020 17:52

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200506.b\X050604.D
Lab Smp Id: CCB Client Smp ID: CCB
Inj Date : 06-MAY-2020 13:57
Operator : PC Inst ID: voa6.i
Smp Info : CCB;CCB;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X200506.b\8260W.m
Meth Date : 21-May-2020 17:52 voa6.i Quant Type: ISTD
Cal Date : 01-MAY-2020 14:10 Cal File: X050108.D
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0000000_Bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7142

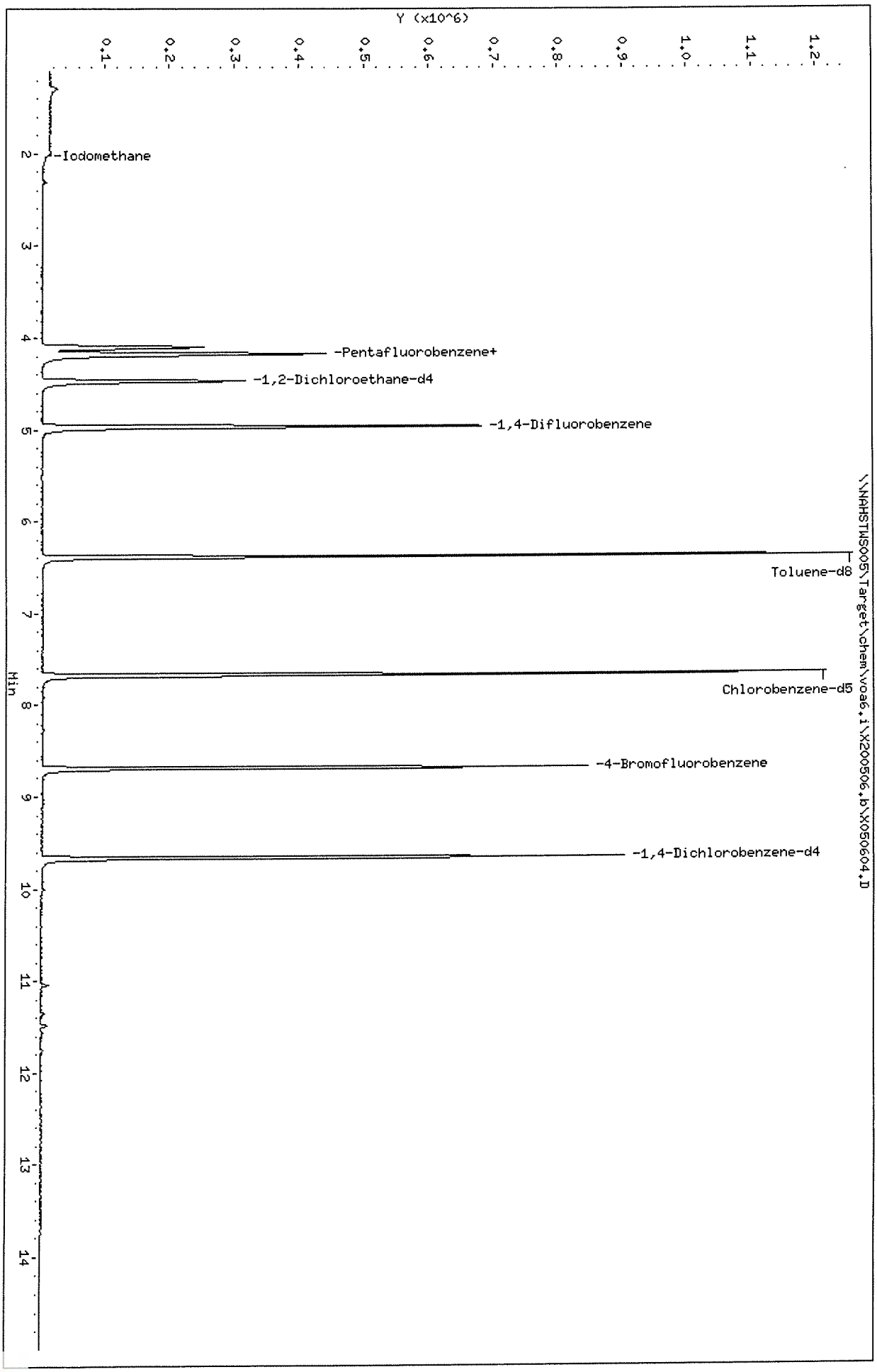
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Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	332317	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	524744	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	528846	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	195929	50.0000	
$ 30 Dibromofluoromethane	113	4.104	4.103	(0.981)	177098	44.8472	44.84
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	237900	44.9771	44.97
$ 48 Toluene-d8	98	6.389	6.388	(0.833)	671851	48.2958	48.29
$ 69 4-Bromofluorobenzene	95	8.695	8.688	(1.134)	250397	45.7770	45.77

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200506.b\X050604.D
Date : 06-MAY-2020 13:57
Client ID: CCB
Sample Info: CCB:CCB;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18



ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200506.b\X050606.D
Lab Smp Id: VBLKW-200506 Client Smp ID: VBLKW-200506
Inj Date : 06-MAY-2020 15:09
Operator : PC Inst ID: voa6.i
Smp Info : VBLKW-200506;VBLKW-200506;3;;BLANK
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X200506.b\8260W.m
Meth Date : 21-May-2020 17:52 voa6.i Quant Type: ISTD
Cal Date : 01-MAY-2020 14:10 Cal File: X050108.D
Als bottle: 8 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0000000_Bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7142

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

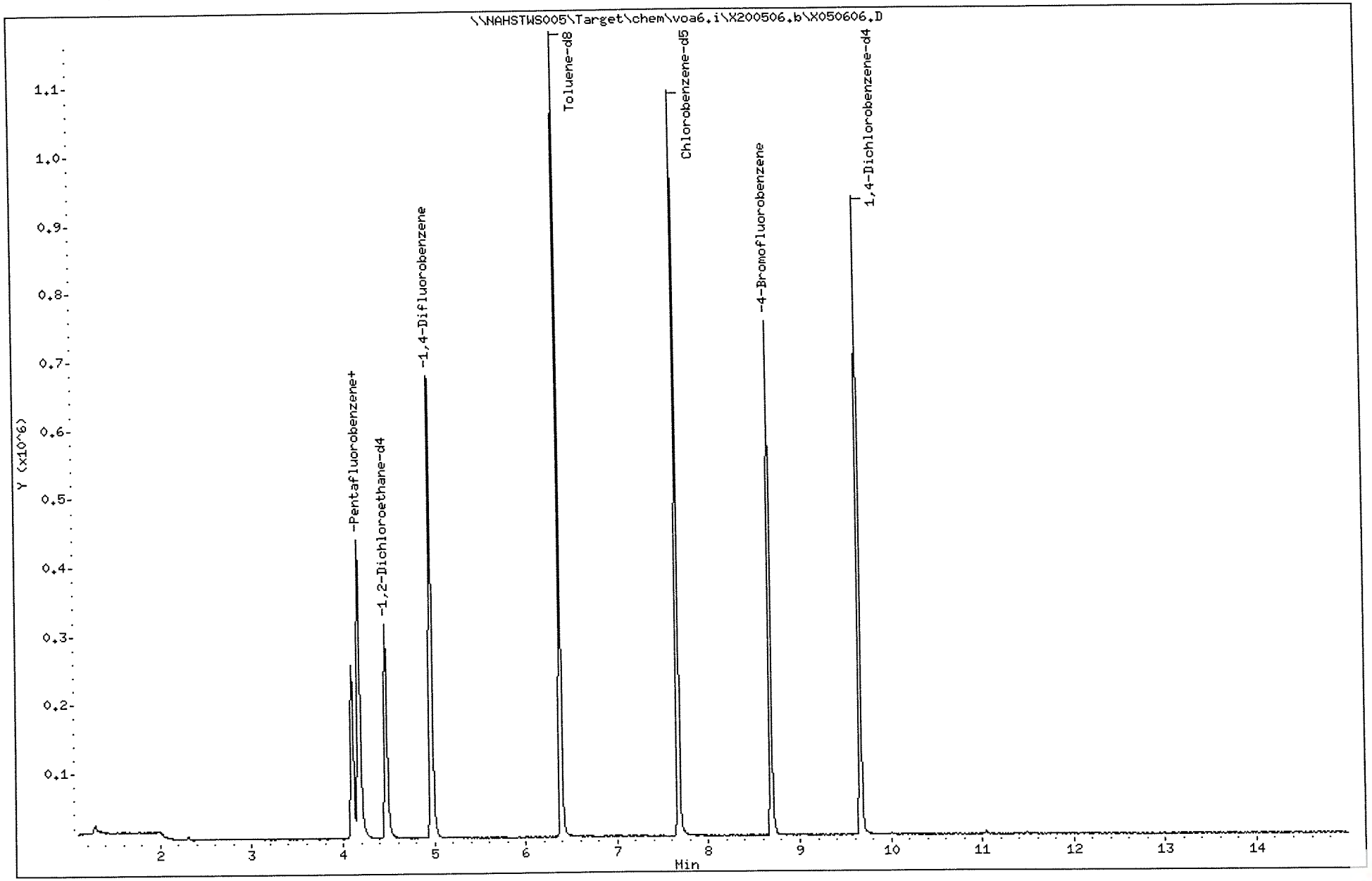
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	332120	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	521962	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	448969	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	207762	50.0000	
$ 30 Dibromofluoromethane	113	4.104	4.103	(0.981)	176772	44.7919	44.79
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	238276	45.0748	45.07
$ 48 Toluene-d8	98	6.389	6.388	(0.833)	623127	52.7640	52.76
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	222407	47.8480	47.84

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200506.b\X050606.D
Date : 06-MAY-2020 15:09
Client ID: VBLKW-200506
Sample Info: VBLKW-200506;VBLKW-200506;3;;BLANK
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i

Operator: PC
Column diameter: 0.18



ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200506.b\X050607.D
Lab Smp Id: VLCSW-200506 Client Smp ID: VLCSW-200506
Inj Date : 06-MAY-2020 15:33
Operator : PC Inst ID: voa6.i
Smp Info : VLCSW-200506;VLCSW-200506;3;;LCS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X200506.b\8260W.m
Meth Date : 21-May-2020 17:52 voa6.i Quant Type: ISTD
Cal Date : 01-MAY-2020 14:10 Cal File: X050108.D
Als bottle: 9 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0000000_Bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7142

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

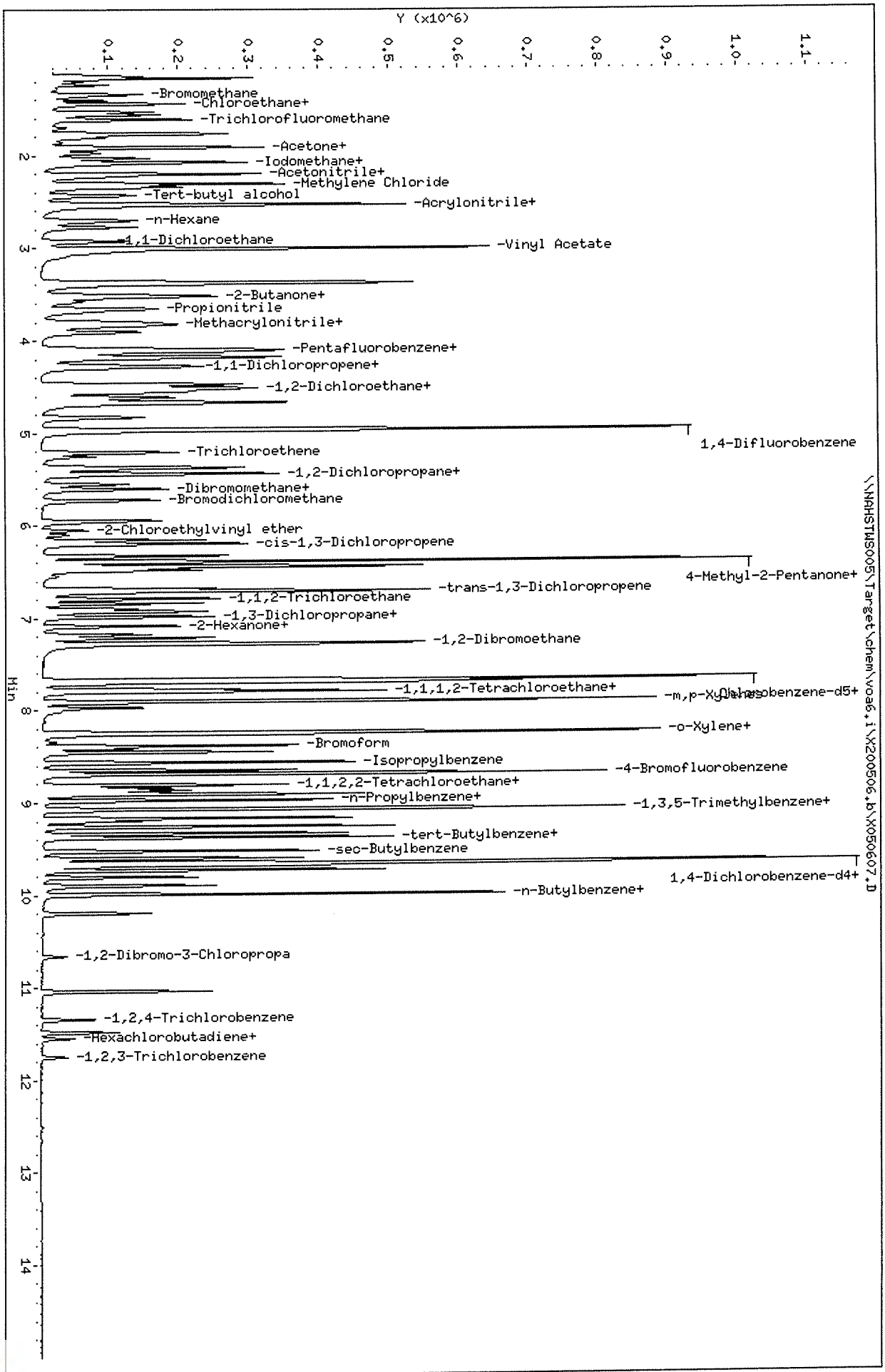
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	254691	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	431671	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	396518	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	212939	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	155324	51.2512	51.25
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	212057	52.2862	52.28
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	533148	51.1162	51.11
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	217062	52.7528	52.75
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	58714	20.3826	20.38
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	95742	19.8808	19.88
68 1,1,2,2-Tetrachloroethane	83	8.845	8.838	(0.915)	76579	19.5272	19.52
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	50276	20.8295	20.82
22 1,1-Dichloroethane	63	2.922	2.921	(0.699)	138743	20.1456	20.14
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	54962	21.4883	21.48
32 1,1-Dichloropropene	75	4.283	4.282	(0.862)	79994	19.1357	19.13
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	9368	15.1256	15.12
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	67824	20.5060	20.50(M)
90 1,2,4-Trichlorobenzene	180	11.345	11.338	(1.174)	21364	16.5722	16.57
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	215165	18.0742	18.07
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	6542	20.8037	20.80
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	62254	21.5687	21.56
88 1,2-Dichlorobenzene	146	9.999	9.999	(1.035)	110949	19.1670	19.16

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200506.b\X050607.D Page 2
Report Date: 21-May-2020 17:53

						CONCENTRATIONS	
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/l)	FINAL (ug/l)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	110071	20.3148	20.31
42 1,2-Dichloropropane	63	5.443	5.436	(1.095)	77257	20.6068	20.60
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	205175	17.5595	17.55
83 1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	120407	19.0198	19.01
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	101028	20.1508	20.15
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	122404	18.3630	18.36
26 2,2-Dichloropropane	77	3.509	3.516	(0.839)	99435	20.0831	20.08
24 2-Butanone	43	3.581	3.573	(0.856)	70518	38.0781	38.07
76 2-Chlorotoluene	91	8.974	8.974	(0.929)	190830	18.4917	18.49
52 2-Hexanone	43	7.090	7.083	(0.924)	120244	40.4521	40.45
77 4-Chlorotoluene	91	9.075	9.075	(0.939)	222742	18.4535	18.45
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	191864	16.7319	16.73
45 4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	170711	39.6794	39.67
10 Acetone	43	1.969	1.969	(0.471)	69965	45.1832	45.18
37 Benzene	78	4.512	4.512	(0.908)	245154	21.1181	21.11
74 Bromobenzene	156	8.810	8.810	(0.912)	79168	20.4801	20.48
29 Bromochloromethane	128	3.795	3.795	(0.908)	33968	20.6375	20.63
39 Bromodichloromethane	83	5.729	5.729	(1.153)	90736	21.2048	21.20
66 Bromoform	173	8.416	8.416	(1.097)	42936	19.2849	19.28
6 Bromomethane	94	1.339	1.338	(0.320)	58067	23.2336	23.23
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	77494	18.3431	18.34
59 Chlorobenzene	112	7.699	7.692	(1.004)	156092	20.0245	20.02
7 Chloroethane	64	1.403	1.403	(0.336)	55420	19.9428	19.94
28 Chloroform	83	3.910	3.910	(0.935)	119689	20.8612	20.86
3 Chloromethane	50	1.074	1.073	(0.257)	93637	18.5297	18.52
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	69083	21.0855	21.08
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	104909	20.8272	20.82
55 Dibromochloromethane	129	7.176	7.176	(0.936)	63704	20.5820	20.58
44 Dibromomethane	93	5.558	5.557	(1.118)	44261	20.7530	20.75
2 Dichlorodifluoromethane	85	0.966	0.966	(0.231)	52363	15.6346	15.63
19 Carbon Disulfide	76	2.069	2.069	(0.495)	335294	40.4284	40.42
61 Ethylbenzene	106	7.800	7.800	(1.017)	80842	19.7249	19.72
91 Hexachlorobutadiene	225	11.481	11.481	(1.188)	16202	17.1056	17.10
67 Isopropylbenzene	105	8.566	8.566	(1.117)	235205	18.7964	18.79
62 m,p-Xylenes	106	7.907	7.907	(1.031)	191079	38.7160	38.71
17 Methylene Chloride	84	2.306	2.305	(0.551)	66087	20.2571	20.25
87 n-Butylbenzene	91	9.999	9.999	(1.035)	164619	15.7152	15.71
73 n-Propylbenzene	91	8.917	8.917	(0.923)	291017	17.0330	17.03
92 Naphthalene	128	11.546	11.546	(1.195)	30513	15.8965	15.89
63 o-Xylene	106	8.244	8.244	(1.075)	95237	19.8801	19.88
81 sec-Butylbenzene	105	9.526	9.526	(0.986)	221125	16.1075	16.10
64 Styrene	104	8.258	8.258	(1.077)	165890	19.7179	19.71
78 tert-Butylbenzene	119	9.340	9.340	(0.967)	160424	16.7375	16.73
56 Tetrachloroethene	164	6.933	6.933	(0.904)	43146	18.9452	18.94
50 Toluene	91	6.446	6.446	(0.840)	246849	20.0267	20.02
20 trans-1,2-Dichloroethene	96	2.528	2.528	(0.604)	59060	21.3729	21.37
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	97944	21.4760	21.47
38 Trichloroethene	130	5.207	5.207	(1.048)	57575	19.8896	19.88
8 Trichlorofluoromethane	101	1.561	1.561	(0.373)	101865	19.8173	19.81
5 Vinyl Chloride	62	1.138	1.138	(0.272)	90246	18.9610	18.96

QC Flag Legend

M - Compound response manually integrated.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200506.b\X050607.D
Date : 06-MAY-2020 15:33
Client ID: VLCSW-200506
Sample Info: VLCSW-200506;VLCSW-200506;3;;LCS
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200506.b\X050608.D Page 1
Report Date: 21-May-2020 17:53

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200506.b\X050608.D
Lab Smp Id: HS20050176-03 Client Smp ID: HS20050176-03
Inj Date : 06-MAY-2020 15:57
Operator : PC Inst ID: voa6.i
Smp Info : HS20050176-03;HS20050176-03;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X200506.b\8260W.m
Meth Date : 21-May-2020 17:52 voa6.i Quant Type: ISTD
Cal Date : 01-MAY-2020 14:10 Cal File: X050108.D
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0000000_Bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7142

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	318473	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	507407	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	425006	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	188220	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	171867	45.4083	45.40
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	232735	45.9116	45.91
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	596598	53.3661	53.36
$ 69 4-Bromofluorobenzene	95	8.695	8.688	(1.134)	199917	45.4841	45.48

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200506.b\X050608.D

Date : 06-MAY-2020 15:57

Client ID: HS20050176-03

Instrument: voa6.i

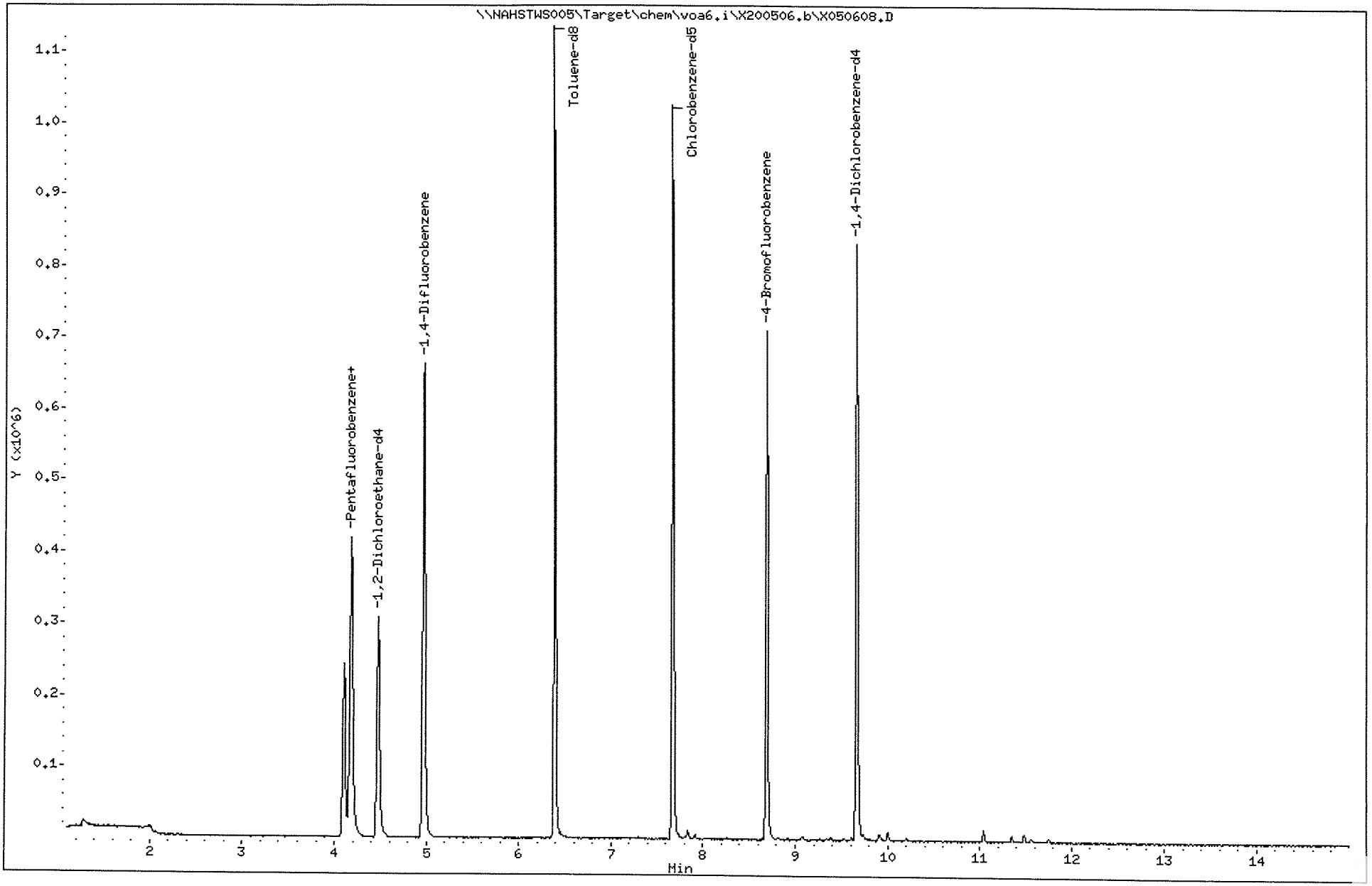
Sample Info: HS20050176-03;HS20050176-03;;;

Purge Volume: 5.0

Operator: PC

Column phase: DB624

Column diameter: 0.18



ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200506.b\X050609.D
Lab Smp Id: HS20050176-01 Client Smp ID: HS20050176-01
Inj Date : 06-MAY-2020 16:21
Operator : PC Inst ID: voa6.i
Smp Info : HS20050176-01;HS20050176-01;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X200506.b\8260W.m
Meth Date : 21-May-2020 17:52 voa6.i Quant Type: ISTD
Cal Date : 01-MAY-2020 14:10 Cal File: X050108.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0000000_Bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7142

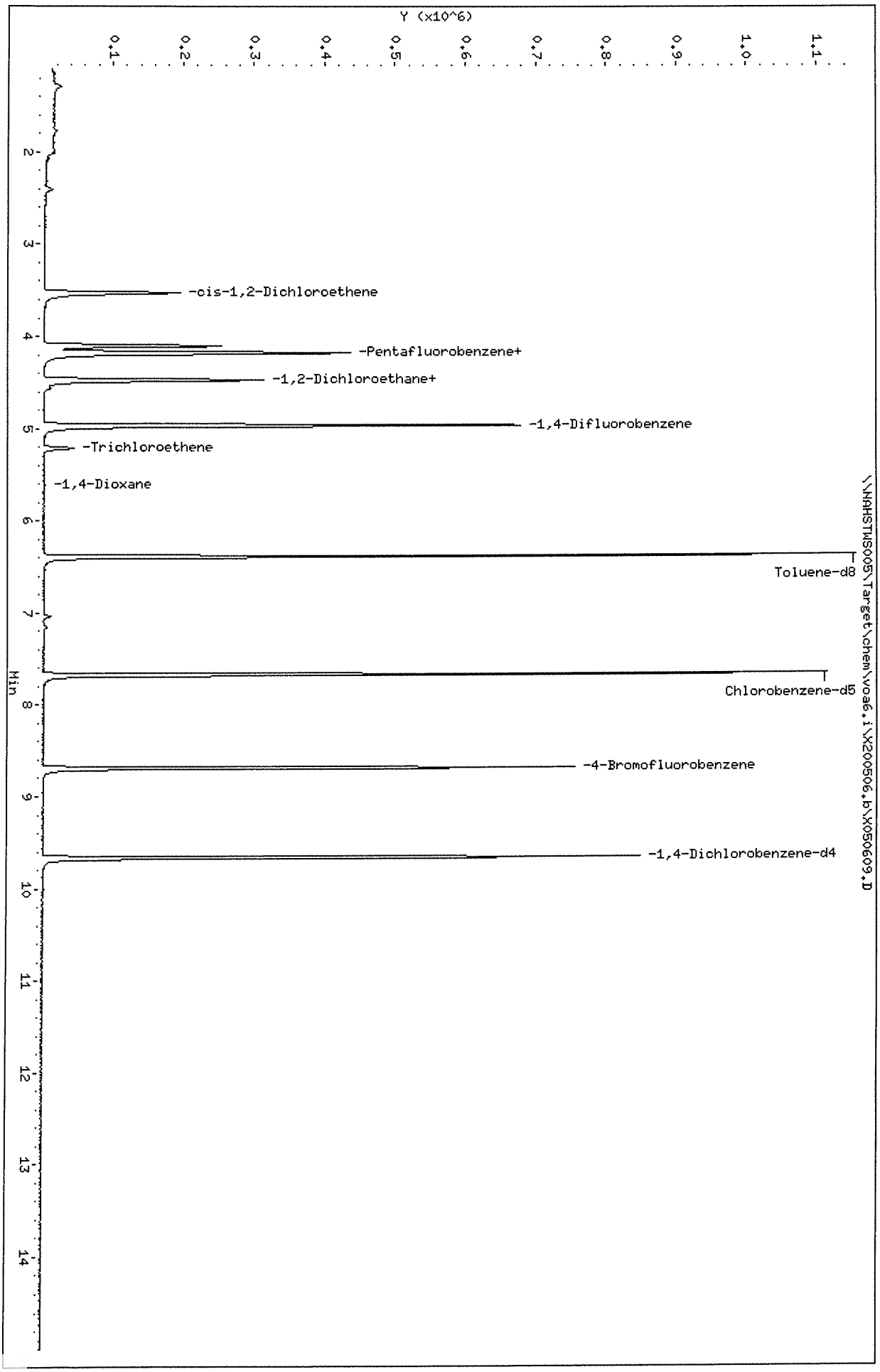
Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	321987	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	517360	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	441525	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.669	9.662	(1.000)	189703	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	173453	45.3281	45.32
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	235976	46.0426	46.04
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	615530	52.9995	52.99
$ 69 4-Bromofluorobenzene	95	8.695	8.688	(1.134)	214289	46.8994	46.89
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	6107	0.94043	0.94(a)
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	86318	20.8396	20.83
38 Trichloroethene	130	5.214	5.207	(1.049)	13098	3.77535	3.77

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200506.b\X050609.D
Date : 06-MAY-2020 16:21
Client ID: HS20050176-01
Sample Info: HS20050176-01;HS20050176-01;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200506.b\X050609.D

Date : 06-MAY-2020 16:21

Client ID: HS20050176-01

Instrument: voa6.i

Sample Info: HS20050176-01;HS20050176-01;;;

Purge Volume: 5.0

Operator: PC

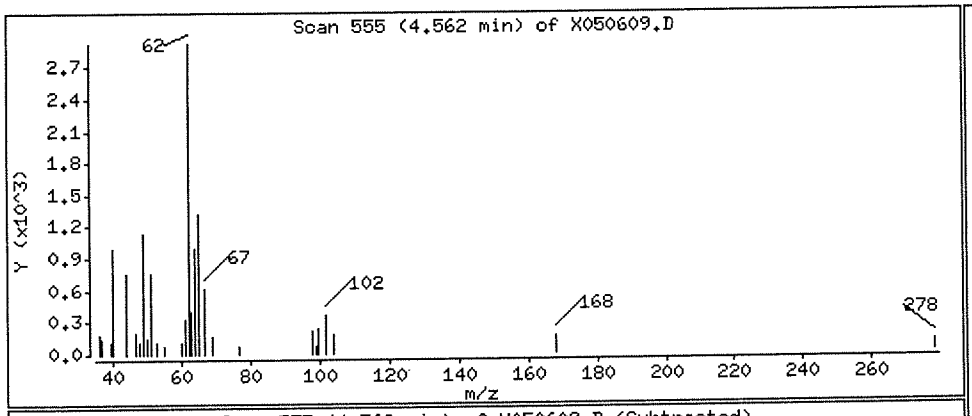
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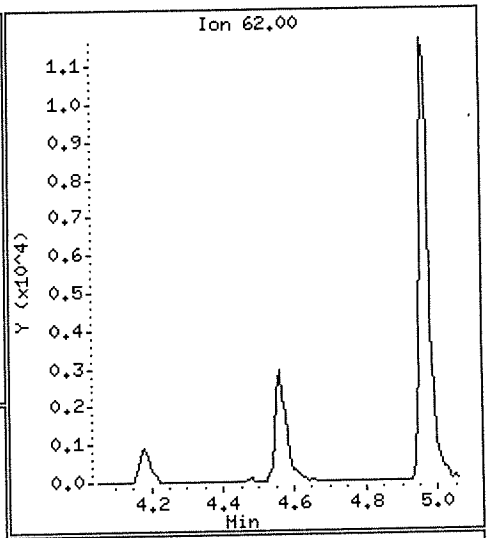
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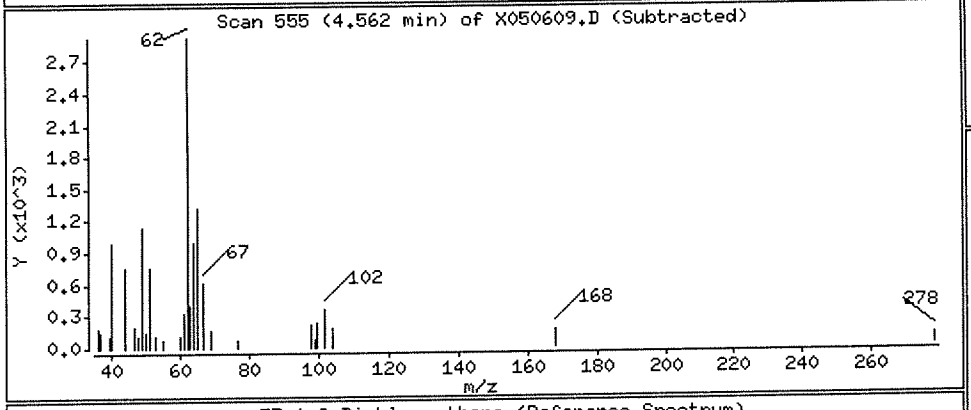
33 1,2-Dichloroethane

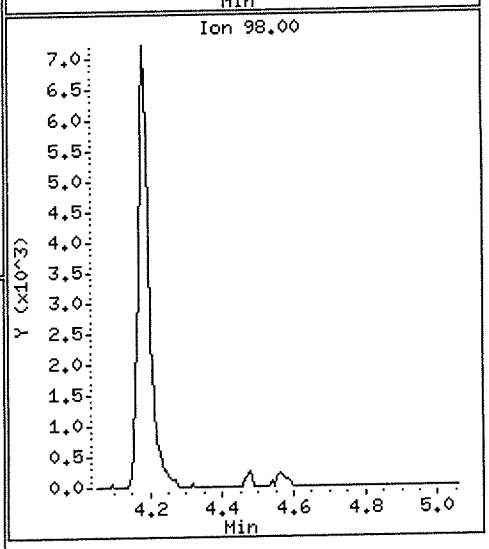
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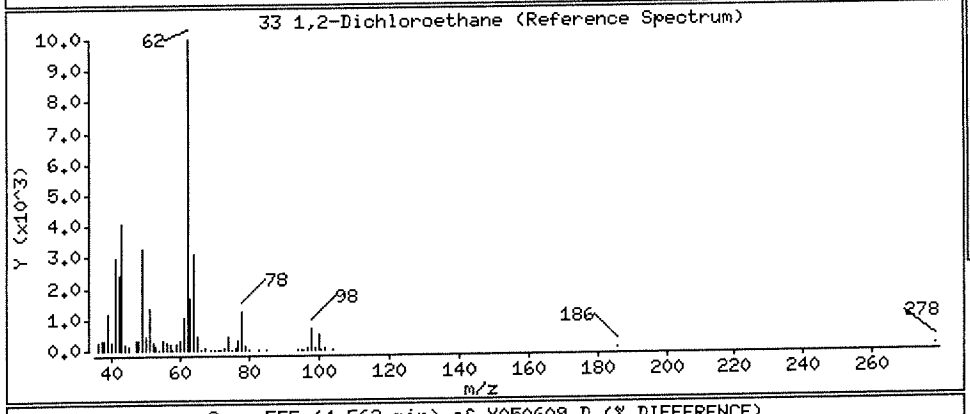
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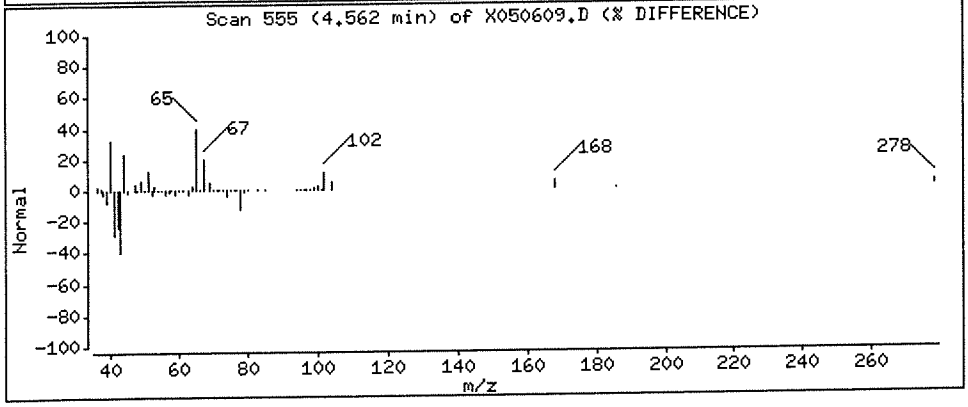












Data File: \\NAHSTWS005\Target\chem\voa6.i\X200506.b\X050609.D

Date : 06-MAY-2020 16:21

Client ID: HS20050176-01

Instrument: voa6.i

Sample Info: HS20050176-01;HS20050176-01;;;

Purge Volume: 5.0

Operator: PC

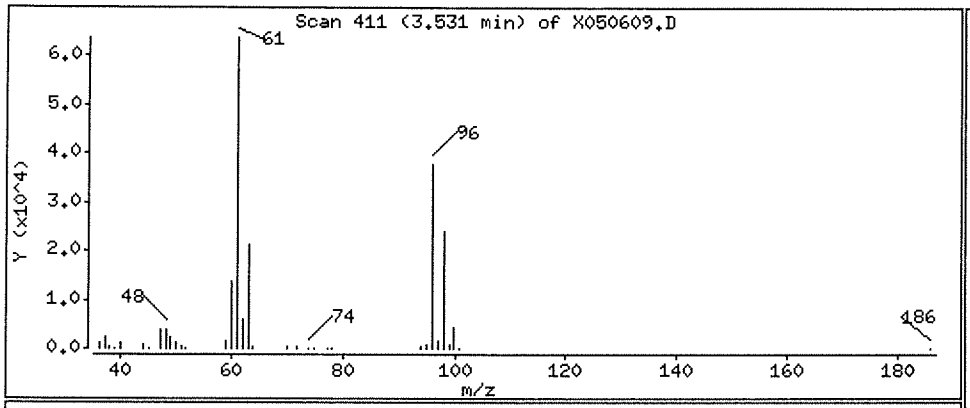
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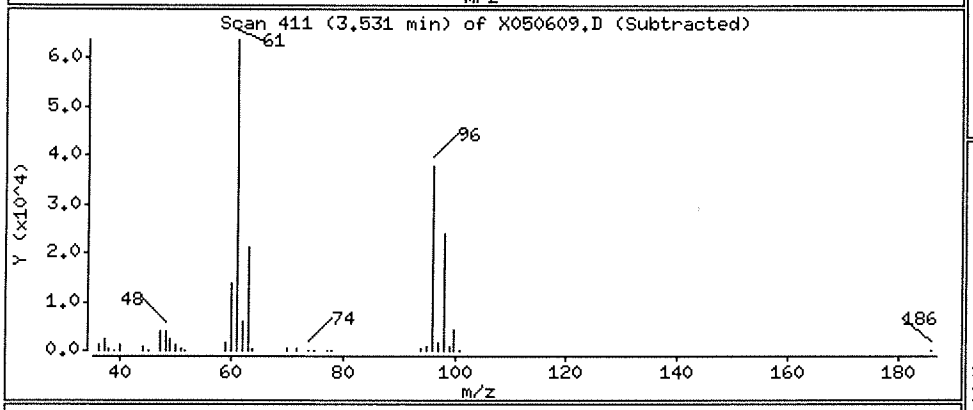
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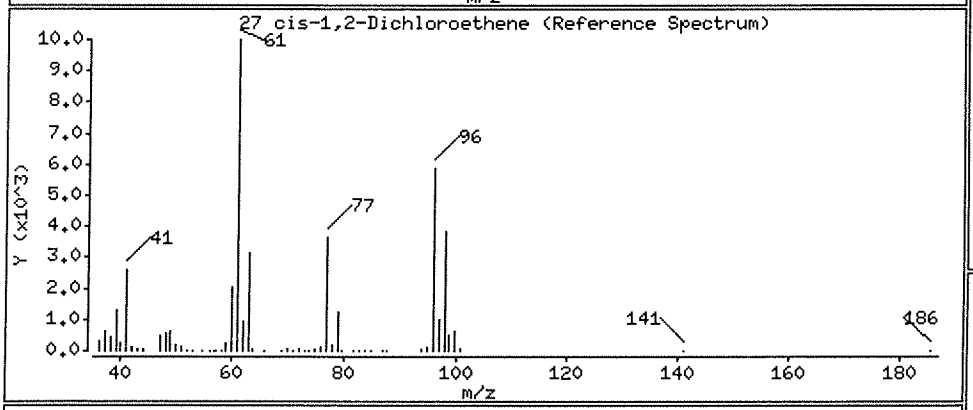
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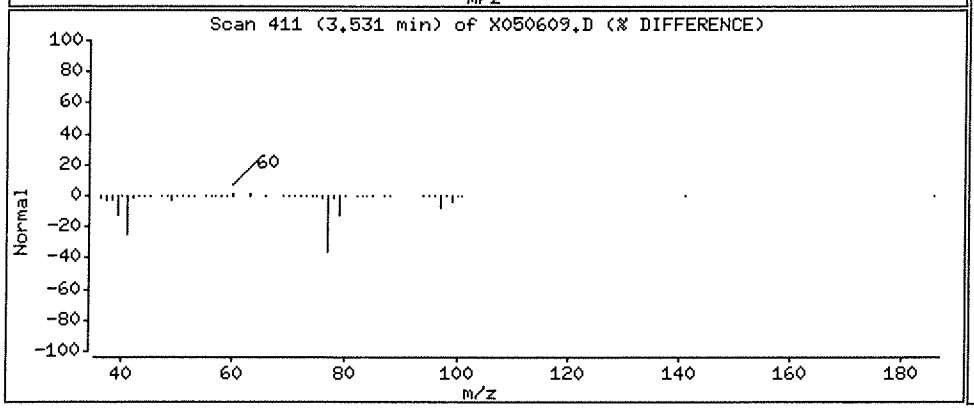
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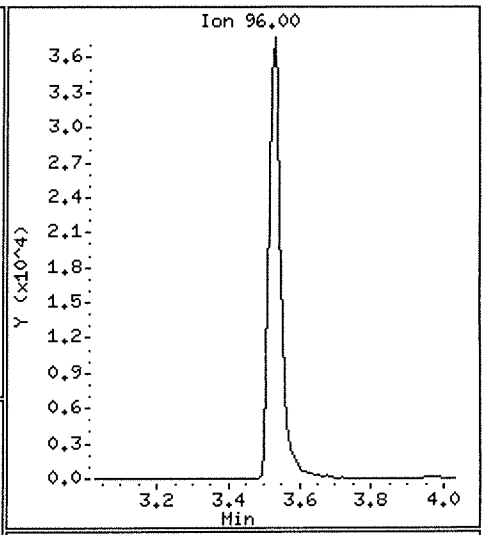
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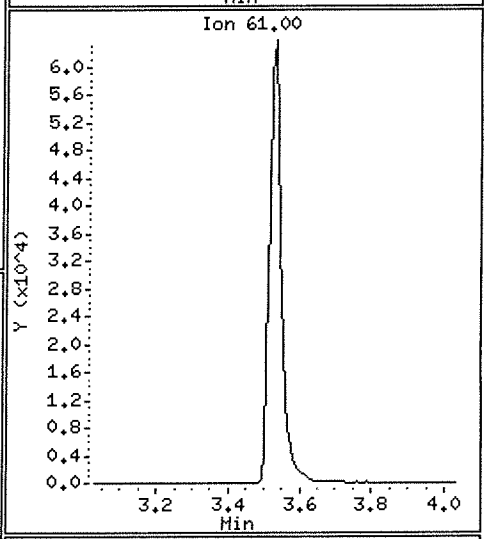


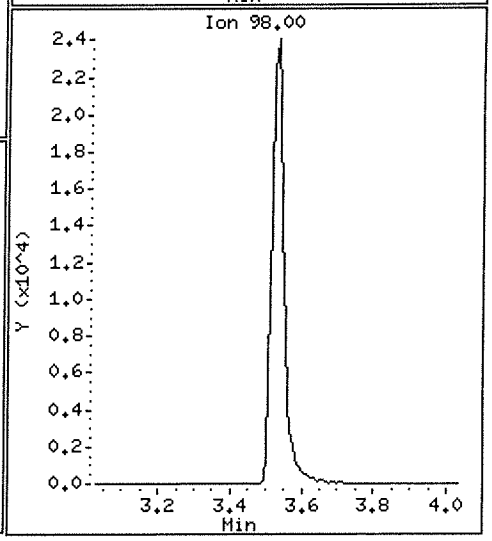












Data File: \\NAHSTWS005\Target\chem\voa6.i\X200506.b\X050609.D

Date : 06-MAY-2020 16:21

Client ID: HS20050176-01

Instrument: voa6.i

Sample Info: HS20050176-01;HS20050176-01;;;

Purge Volume: 5.0

Operator: PC

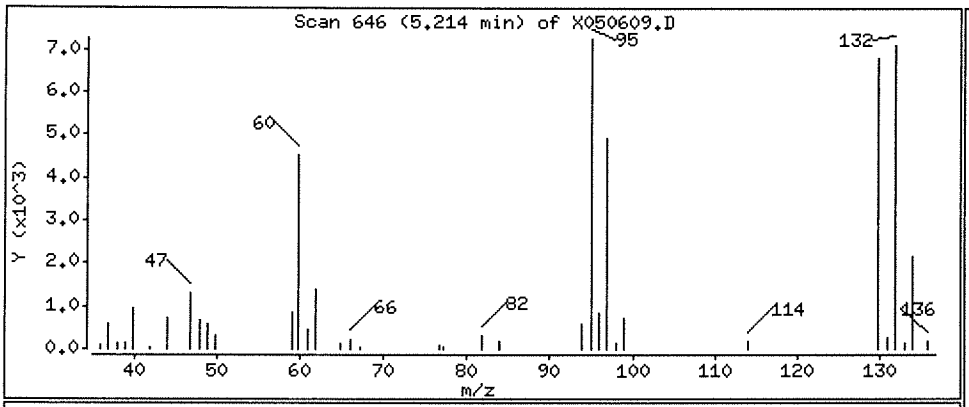
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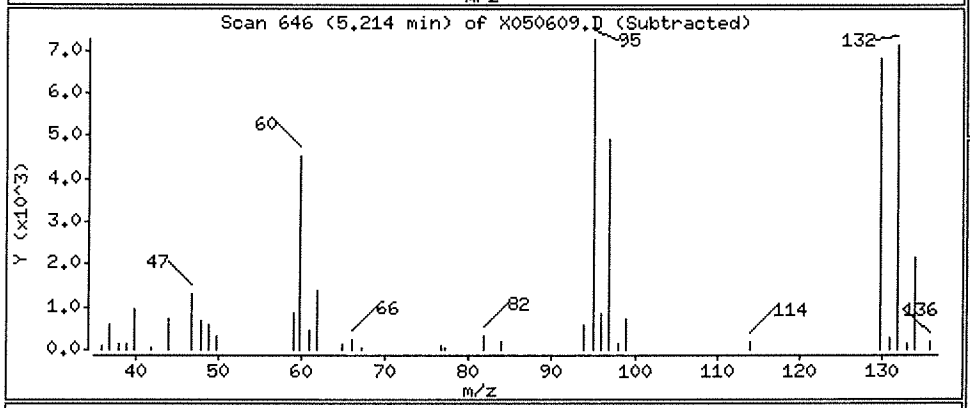
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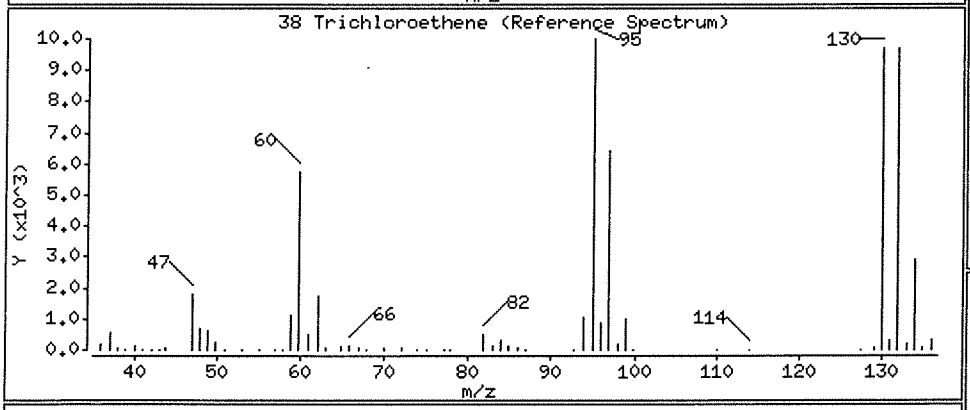
38 Trichloroethene

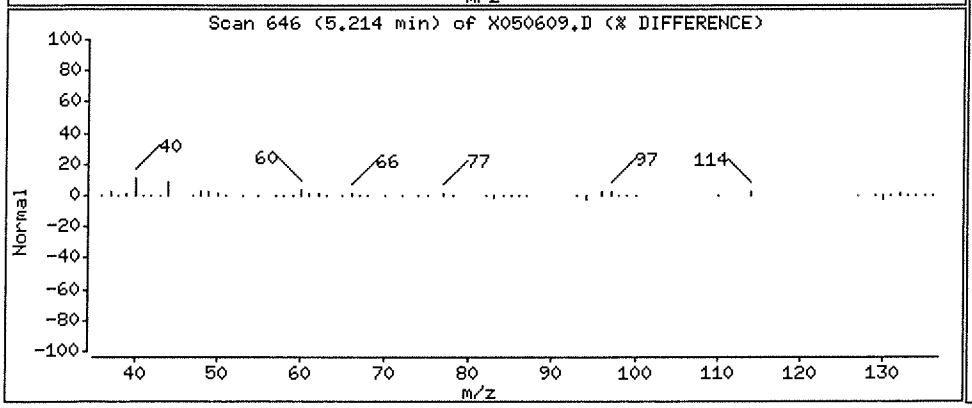
Concentration: 3.77 ug/l

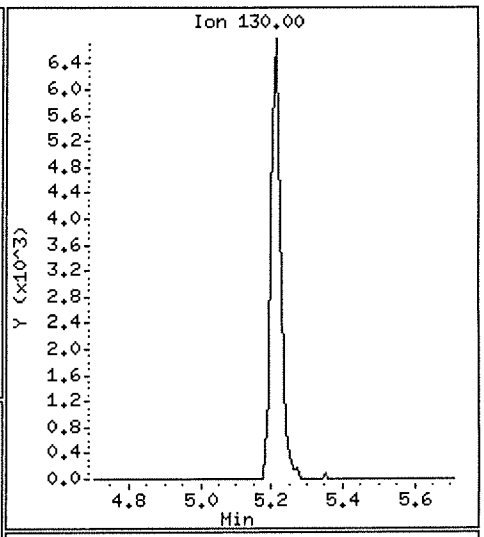
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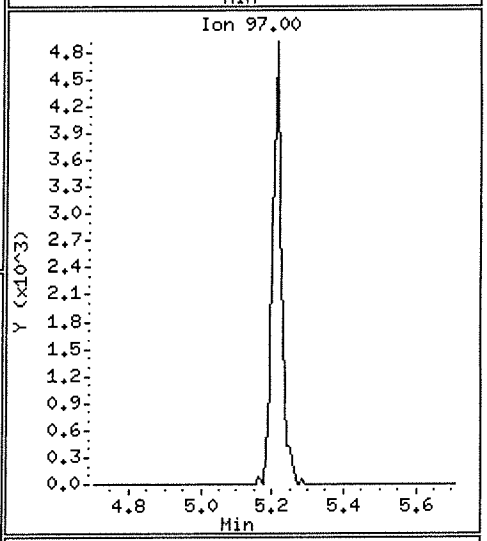


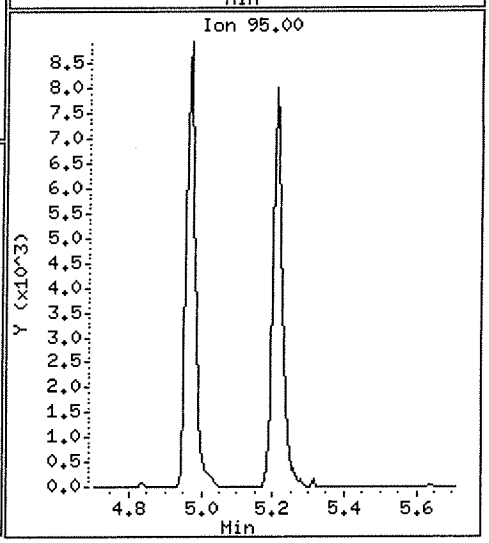












Data File: \\NAHSTWS005\Target\chem\voa6.i\X200506.b\X050610.D Page 1
Report Date: 21-May-2020 17:53

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200506.b\X050610.D
Lab Smp Id: HS20050176-01MS Client Smp ID: HS20050176-01MS
Inj Date : 06-MAY-2020 16:45
Operator : PC Inst ID: voa6.i
Smp Info : HS20050176-01MS;HS20050176-01MS;3;;MS
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X200506.b\8260W.m
Meth Date : 21-May-2020 17:52 voa6.i Quant Type: ISTD
Cal Date : 01-MAY-2020 14:10 Cal File: X050108.D
Als bottle: 12 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0000000_Bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7142

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
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Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

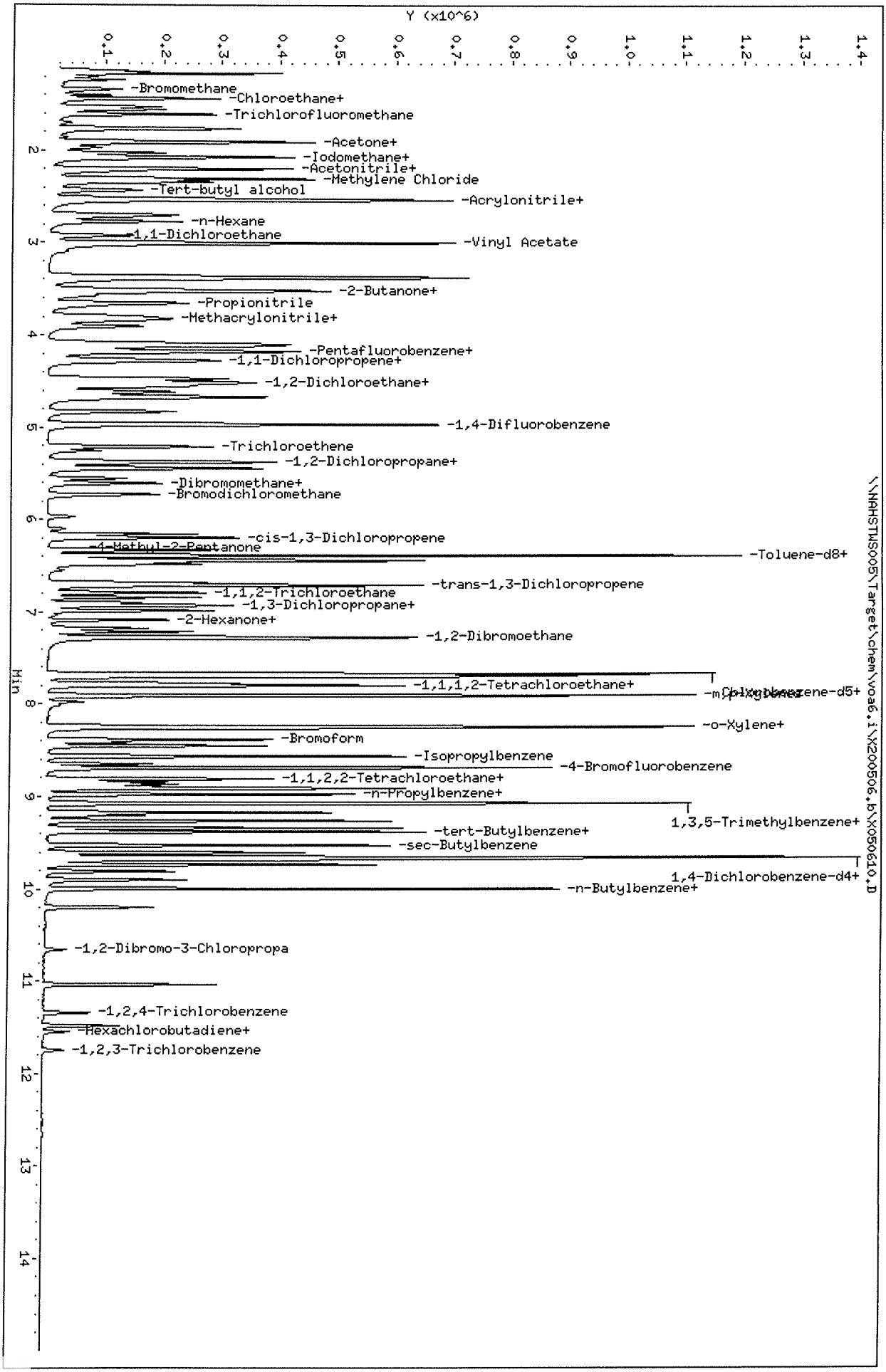
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	326462	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	515776	50.0000	
* 47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	450001	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	227809	50.0000	
$ 30 Dibromofluoromethane	113	4.104	4.103	(0.981)	173229	44.6563	44.65
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	234863	45.1989	45.19
$ 48 Toluene-d8	98	6.389	6.388	(0.833)	614810	51.9401	51.94
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	241503	51.7420	51.74
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	68617	20.9894	20.98
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	119249	19.3182	19.31
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	81763	19.4882	19.48
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	54506	19.8981	19.89
22 1,1-Dichloroethane	63	2.922	2.921	(0.699)	159905	18.1139	18.11
11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	69871	21.3117	21.31
32 1,1-Dichloropropene	75	4.283	4.282	(0.862)	101619	20.3448	20.34
93 1,2,3-Trichlorobenzene	180	11.747	11.746	(1.216)	9212	13.9438	13.94
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	70433	19.9048	19.90(M)
90 1,2,4-Trichlorobenzene	180	11.345	11.338	(1.174)	20474	14.8662	14.86
79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	273157	21.4479	21.44
89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	6490	19.3150	19.31
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	68537	20.9234	20.92
88 1,2-Dichlorobenzene	146	9.999	9.999	(1.035)	125510	20.2672	20.26

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200506.b\X050610.D Page 2
Report Date: 21-May-2020 17:53

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
33	1,2-Dichloroethane	62	4.555	4.562	(0.916)	131649	20.3352	20.33
42	1,2-Dichloropropane	63	5.436	5.436	(1.094)	87159	19.4570	19.45
75	1,3,5-Trimethylbenzene	105	9.068	9.067	(0.938)	270712	21.6561	21.65
83	1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	140358	20.7241	20.72
54	1,3-Dichloropropane	76	6.983	6.983	(0.910)	113921	20.0219	20.02
84	1,4-Dichlorobenzene	146	9.684	9.683	(1.002)	141777	19.8810	19.88
26	2,2-Dichloropropane	77	3.516	3.516	(0.841)	118809	18.7207	18.72
24	2-Butanone	43	3.581	3.573	(0.856)	73948	31.5161	31.51
76	2-Chlorotoluene	91	8.974	8.974	(0.929)	230099	20.8415	20.84
52	2-Hexanone	43	7.091	7.083	(0.924)	128320	38.0383	38.03
77	4-Chlorotoluene	91	9.075	9.075	(0.939)	277867	21.5178	21.51
82	p-Isopropyltoluene	119	9.655	9.655	(0.999)	275224	22.4349	22.43
45	4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	189103	38.7304	38.73
10	Acetone	43	1.969	1.969	(0.471)	64496	32.5219	32.52
37	Benzene	78	4.512	4.512	(0.908)	284176	20.4878	20.48
74	Bromobenzene	156	8.810	8.810	(0.912)	85465	20.6659	20.66
29	Bromochloromethane	128	3.796	3.795	(0.908)	38183	18.0983	18.09
39	Bromodichloromethane	83	5.730	5.729	(1.153)	100510	19.6587	19.65
66	Bromoform	173	8.416	8.416	(1.097)	48791	19.3095	19.30
6	Bromomethane	94	1.339	1.338	(0.320)	59981	18.9535	18.95
34	Carbon Tetrachloride	117	4.268	4.268	(0.859)	102444	20.2947	20.29
59	Chlorobenzene	112	7.699	7.692	(1.004)	185479	20.9665	20.96
7	Chloroethane	64	1.403	1.403	(0.336)	63768	17.9021	17.90
28	Chloroform	83	3.910	3.910	(0.935)	134282	18.2593	18.25
3	Chloromethane	50	1.074	1.073	(0.257)	105035	16.4753	16.47
27	cis-1,2-Dichloroethene	96	3.531	3.530	(0.844)	163872	39.0209	39.02
46	cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	116543	19.3641	19.36
55	Dibromochloromethane	129	7.177	7.176	(0.936)	70800	20.1560	20.15
44	Dibromomethane	93	5.558	5.557	(1.118)	48703	19.1121	19.11
2	Dichlorodifluoromethane	85	0.966	0.966	(0.231)	65471	15.2724	15.27
19	Carbon Disulfide	76	2.069	2.069	(0.495)	488263	45.9299	45.92
61	Ethylbenzene	106	7.800	7.800	(1.017)	101779	21.8819	21.88
91	Hexachlorobutadiene	225	11.481	11.481	(1.188)	19108	18.9482	18.94
67	Isopropylbenzene	105	8.566	8.566	(1.117)	327027	23.0282	23.02
62	m,p-Xylenes	106	7.907	7.907	(1.031)	248332	44.3363	44.33
17	Methylene Chloride	84	2.306	2.305	(0.551)	73888	17.7054	17.70
87	n-Butylbenzene	91	9.999	9.999	(1.035)	246101	21.9602	21.96
73	n-Propylbenzene	91	8.917	8.917	(0.923)	393424	21.5238	21.52
92	Naphthalene	128	11.546	11.546	(1.195)	29968	14.6623	14.66
63	o-Xylene	106	8.244	8.244	(1.075)	125292	23.0455	23.04
81	sec-Butylbenzene	105	9.526	9.526	(0.986)	321780	21.9096	21.90
64	Styrene	104	8.258	8.258	(1.077)	218211	22.8542	22.85
78	tert-Butylbenzene	119	9.340	9.340	(0.967)	224076	21.8525	21.85
56	Tetrachloroethene	164	6.933	6.933	(0.904)	57315	22.1757	22.17
50	Toluene	91	6.446	6.446	(0.840)	300617	21.4903	21.49
20	trans-1,2-Dichloroethene	96	2.528	2.528	(0.604)	69836	19.7166	19.71
51	trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	106573	19.5576	19.55
38	Trichloroethene	130	5.207	5.207	(1.048)	85788	24.8034	24.80
8	Trichlorofluoromethane	101	1.561	1.561	(0.373)	125709	19.0795	19.07
5	Vinyl Chloride	62	1.138	1.138	(0.272)	103785	17.0118	17.01

QC Flag Legend

M - Compound response manually integrated.



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Sample Info: HS20050176-01HS;HS20050176-01HS;3;;HS
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200506.b\X050611.D Page 1
Report Date: 21-May-2020 17:53

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200506.b\X050611.D
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Inj Date : 06-MAY-2020 17:09
Operator : PC Inst ID: voa6.i
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Misc Info : HS18090001;WATER;0;1;
Comment :
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Als bottle: 12 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0000000_Bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7142

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

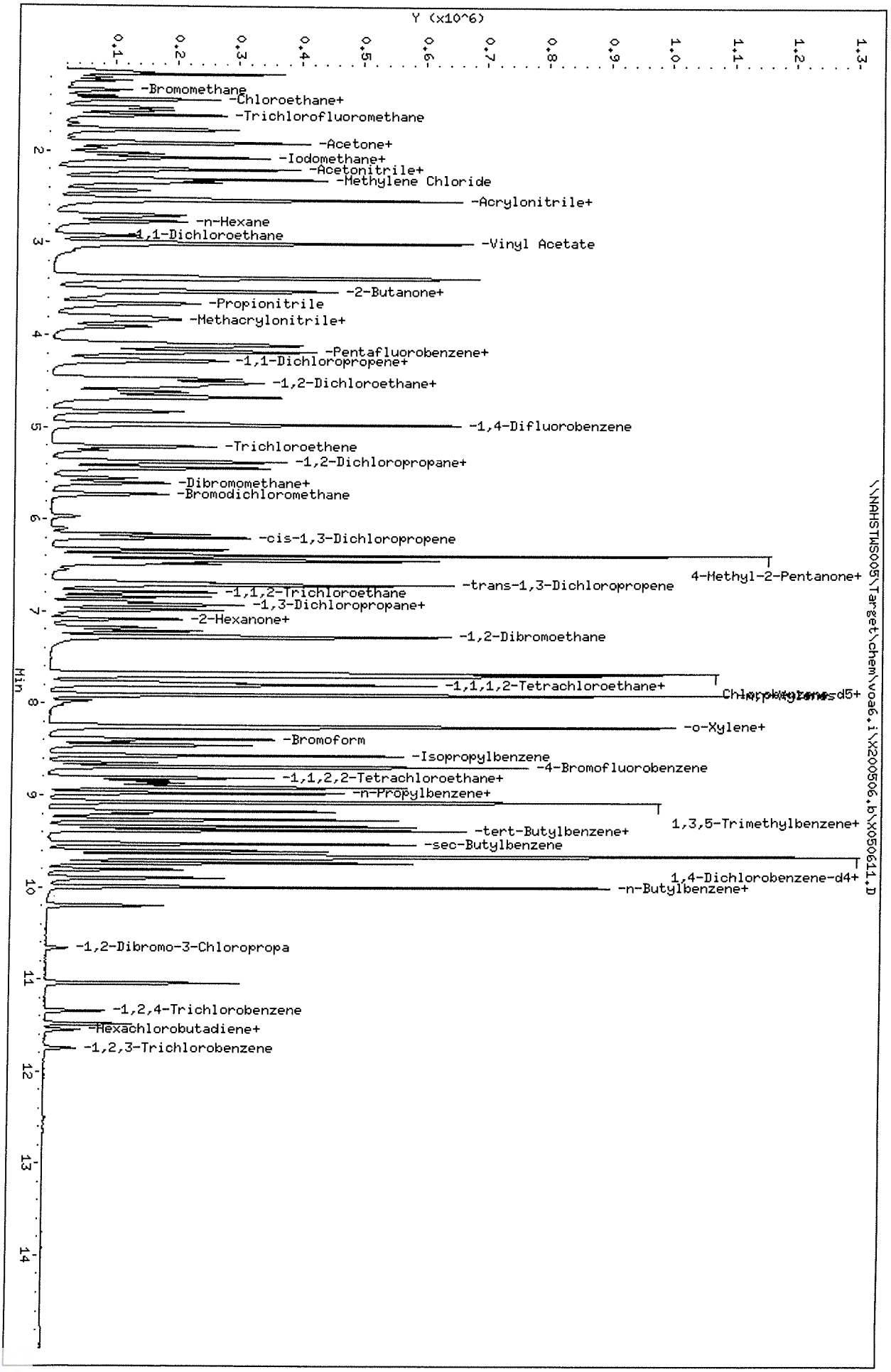
Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)
* 1 Pentafluorobenzene	168	4.182	4.182	(1.000)	319328	50.0000	
* 36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	498821	50.0000	
* 47 Chlorobenzene-d5	117	7.670	7.671	(1.000)	434957	50.0000	
* 70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	213056	50.0000	
$ 30 Dibromofluoromethane	113	4.103	4.103	(0.981)	168378	44.3786	44.37
$ 35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	226303	44.5256	44.52
$ 48 Toluene-d8	98	6.388	6.388	(0.833)	597475	52.2215	52.22
$ 69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	216208	48.0092	48.00
60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	66514	21.0498	21.04
31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	113283	18.7617	18.76
68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	76762	19.5632	19.56
53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	54338	20.5228	20.52
22 1,1-Dichloroethane	63	2.921	2.921	(0.699)	150798	17.4639	17.46
11 1,1-Dichloroethene	96	1.911	1.912	(0.457)	62358	19.4451	19.44
32 1,1-Dichloropropene	75	4.282	4.282	(0.862)	94675	19.5989	19.59
93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	12869	20.5368	20.53
71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	65968	19.9339	19.93(M)
90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	24596	19.0278	19.02
79 1,2,4-Trimethylbenzene	105	9.382	9.383	(0.971)	273399	22.9534	22.95
89 1,2-Dibromo-3-Chloropropane	155	10.657	10.658	(1.103)	6185	19.6760	19.67
57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	65067	20.5511	20.55
88 1,2-Dichlorobenzene	146	9.998	9.999	(1.035)	128841	22.2457	22.24

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)
33 1,2-Dichloroethane	62	4.562	4.562	(0.918)	127643	20.3866	20.38
42 1,2-Dichloropropane	63	5.443	5.436	(1.095)	83169	19.1974	19.19
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	246541	21.0881	21.08
83 1,3-Dichlorobenzene	146	9.604	9.605	(0.994)	145451	22.9632	22.96
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	111647	20.3009	20.30
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	141817	21.2637	21.26
26 2,2-Dichloropropane	77	3.509	3.516	(0.839)	111371	17.9407	17.94
24 2-Butanone	43	3.580	3.573	(0.856)	78750	34.1348	34.13
76 2-Chlorotoluene	91	8.974	8.974	(0.929)	210773	20.4130	20.41
52 2-Hexanone	43	7.090	7.083	(0.924)	126788	38.8841	38.88
77 4-Chlorotoluene	91	9.074	9.075	(0.939)	246061	20.3742	20.37
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	265961	23.1810	23.18
45 4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	184621	39.1202	39.12
10 Acetone	43	1.969	1.969	(0.471)	59821	30.8435	30.84
37 Benzene	78	4.512	4.512	(0.908)	272561	20.3183	20.31
74 Bromobenzene	156	8.809	8.810	(0.912)	78927	20.4065	20.40
29 Bromochloromethane	128	3.802	3.795	(0.909)	36529	17.7011	17.70
39 Bromodichloromethane	83	5.729	5.729	(1.153)	98316	19.8832	19.88
66 Bromoform	173	8.415	8.416	(1.097)	45743	18.7433	18.74
6 Bromomethane	94	1.338	1.338	(0.320)	57631	18.6388	18.63
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	97281	19.9269	19.92
59 Chlorobenzene	112	7.699	7.692	(1.004)	176459	20.6368	20.63
7 Chloroethane	64	1.403	1.403	(0.336)	58322	16.7390	16.73
28 Chloroform	83	3.910	3.910	(0.935)	130946	18.2035	18.20
3 Chloromethane	50	1.073	1.073	(0.257)	99886	16.0754	16.07
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	158442	38.5708	38.57
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	113122	19.4345	19.43
55 Dibromochloromethane	129	7.176	7.176	(0.936)	70683	20.8187	20.81
44 Dibromomethane	93	5.557	5.557	(1.118)	46876	19.0204	19.02
2 Dichlorodifluoromethane	85	0.973	0.966	(0.233)	64348	15.3416	15.34
19 Carbon Disulfide	76	2.069	2.069	(0.495)	392379	37.7349	37.73
61 Ethylbenzene	106	7.799	7.800	(1.017)	99005	22.0217	22.02
91 Hexachlorobutadiene	225	11.481	11.481	(1.188)	20867	22.2579	22.25
67 Isopropylbenzene	105	8.566	8.566	(1.117)	298731	21.7633	21.76
62 m,p-Xylenes	106	7.907	7.907	(1.031)	236691	43.7196	43.71
17 Methylene Chloride	84	2.305	2.305	(0.551)	72597	17.7835	17.78
87 n-Butylbenzene	91	9.998	9.999	(1.035)	250469	23.8976	23.89
73 n-Propylbenzene	91	8.917	8.917	(0.923)	360959	21.1151	21.11
92 Naphthalene	128	11.546	11.546	(1.195)	37465	19.2996	19.29
63 o-Xylene	106	8.244	8.244	(1.075)	115154	21.9133	21.91
81 sec-Butylbenzene	105	9.526	9.526	(0.986)	331151	24.1090	24.10
64 Styrene	104	8.258	8.258	(1.077)	196273	21.2676	21.26
78 tert-Butylbenzene	119	9.339	9.340	(0.967)	216313	22.5562	22.55
56 Tetrachloroethene	164	6.933	6.933	(0.904)	55337	22.1509	22.15
50 Toluene	91	6.446	6.446	(0.840)	285457	21.1123	21.11
20 trans-1,2-Dichloroethene	96	2.527	2.528	(0.604)	64749	18.6888	18.68
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	103886	19.7125	19.71
38 Trichloroethene	130	5.214	5.207	(1.049)	81260	24.2928	24.29
8 Trichlorofluoromethane	101	1.560	1.561	(0.373)	118748	18.4257	18.42
5 Vinyl Chloride	62	1.138	1.138	(0.272)	96835	16.2272	16.22

QC Flag Legend

M - Compound response manually integrated.



Data File: \\NAHSTWS005\Target\chem\voa6,i\X200506,b\X050611.D
Date : 06-MAY-2020 17:09
Client ID: HS20050176-01MSD
Sample Info: HS20050176-01MSD;HS20050176-01MSD;3;;MSD
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6,i
Operator: PC
Column diameter: 0.18

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200506.b\X050612.D Page 1
Report Date: 21-May-2020 17:53

ALS Laboratory Group

Data file : \\NAHSTWS005\Target\chem\voa6.i\X200506.b\X050612.D
Lab Smp Id: CCV-END Client Smp ID: CCV-END
Inj Date : 06-MAY-2020 17:33
Operator : PC Inst ID: voa6.i
Smp Info : CCV-END;CCV-END;2;;;
Misc Info : HS18090001;WATER;0;1;
Comment :
Method : \\NAHSTWS005\Target\chem\voa6.i\X200506.b\8260W.m
Meth Date : 21-May-2020 17:53 voa6.i Quant Type: ISTD
Cal Date : 01-MAY-2020 14:10 Cal File: X050108.D
Als bottle: 13 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 0000000_Bhate.sub
Target Version: 4.14
Processing Host: NAHSTW7142

Concentration Formula: Amt * DF * (Uf/Vo)*1 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	5.000	ng unit correction factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

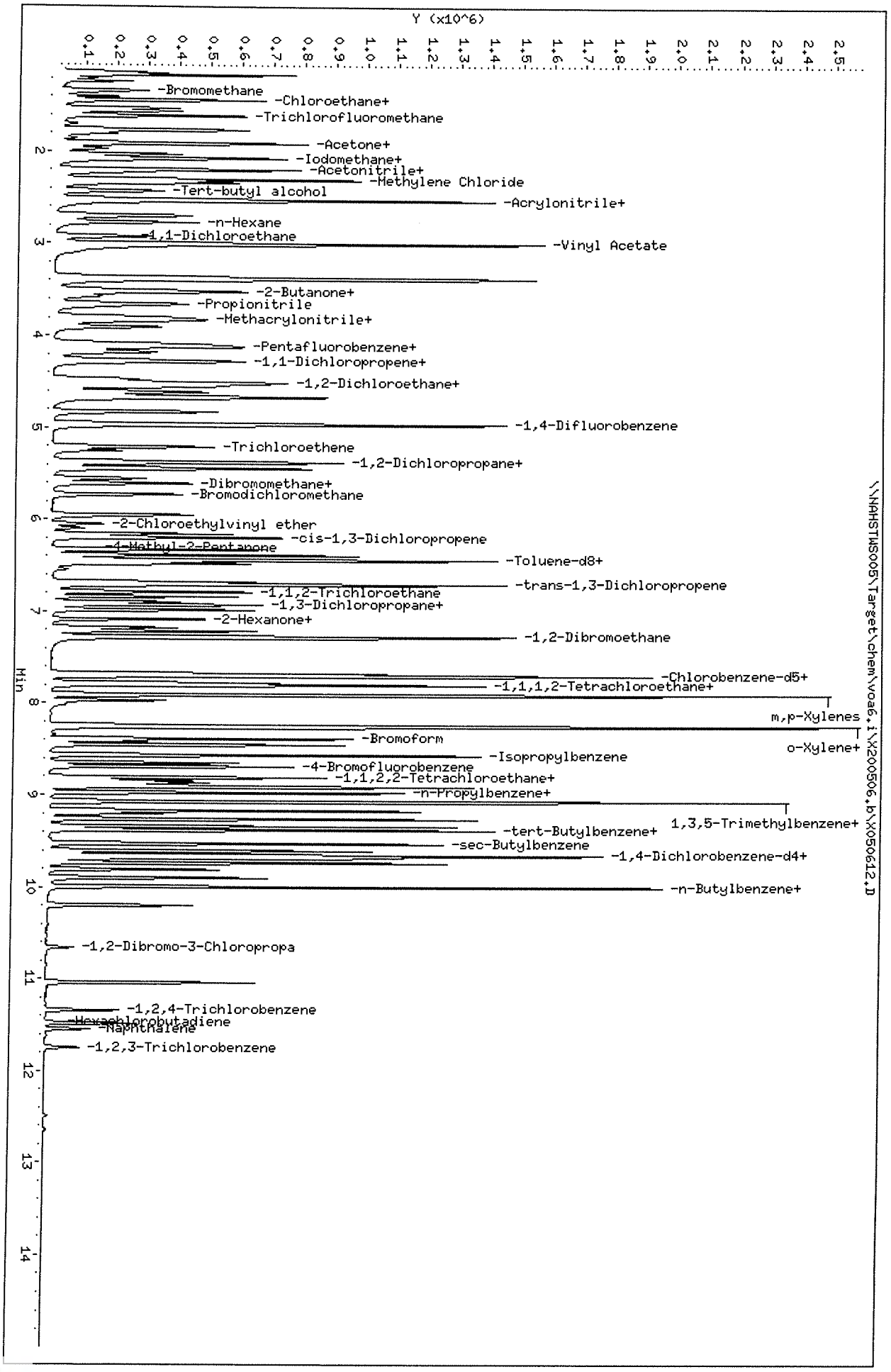
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
*	1 Pentafluorobenzene	168	4.182	4.182	(1.000)	241797	50.0000	
*	36 1,4-Difluorobenzene	114	4.970	4.970	(1.000)	426006	50.0000	
*	47 Chlorobenzene-d5	117	7.671	7.671	(1.000)	398707	50.0000	
*	70 1,4-Dichlorobenzene-d4	152	9.662	9.662	(1.000)	204129	50.0000	
$	30 Dibromofluoromethane	113	4.103	4.103	(0.981)	146874	50.0000	51.04
$	35 1,2-Dichloroethane-d4	65	4.476	4.476	(1.070)	201946	50.0000	52.44
$	48 Toluene-d8	98	6.389	6.389	(0.833)	515400	50.0000	49.14
$	69 4-Bromofluorobenzene	95	8.688	8.688	(1.133)	215376	50.0000	52.07
	60 1,1,1,2-Tetrachloroethane	131	7.778	7.778	(1.014)	150727	50.0000	52.03
	31 1,1,1-Trichloroethane	97	4.089	4.089	(0.978)	247459	50.0000	54.12
	68 1,1,2,2-Tetrachloroethane	83	8.838	8.838	(0.915)	187458	50.0000	49.86
	53 1,1,2-Trichloroethane	83	6.840	6.840	(0.892)	123919	50.0000	51.05
	22 1,1-Dichloroethane	63	2.922	2.922	(0.699)	335473	50.0000	51.30
	11 1,1-Dichloroethene	96	1.912	1.912	(0.457)	131851	50.0000	54.29
	32 1,1-Dichloropropene	75	4.283	4.283	(0.862)	205425	50.0000	49.79
	93 1,2,3-Trichlorobenzene	180	11.746	11.746	(1.216)	29246	50.0000	46.83
	71 1,2,3-Trichloropropane	75	8.867	8.867	(0.918)	162965	50.0000	51.39(M)
	90 1,2,4-Trichlorobenzene	180	11.338	11.338	(1.173)	60617	50.0000	47.55
	79 1,2,4-Trimethylbenzene	105	9.383	9.383	(0.971)	609213	50.0000	53.38
	89 1,2-Dibromo-3-Chloropropane	155	10.658	10.658	(1.103)	15725	50.0000	50.87
	57 1,2-Dibromoethane	107	7.262	7.262	(0.947)	152569	50.0000	52.56
	88 1,2-Dichlorobenzene	146	9.992	9.992	(1.034)	290975	50.0000	52.43

Data File: \\NAHSTWS005\Target\chem\voa6.i\X200506.b\X050612.D Page 2
Report Date: 21-May-2020 17:53

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)
33 1,2-Dichloroethane	62	4.555	4.555	(0.916)	271982	50.0000	50.86
42 1,2-Dichloropropane	63	5.436	5.436	(1.094)	193679	50.0000	52.34
75 1,3,5-Trimethylbenzene	105	9.067	9.067	(0.938)	587431	50.0000	52.44
83 1,3-Dichlorobenzene	146	9.605	9.605	(0.994)	328872	50.0000	54.19
54 1,3-Dichloropropane	76	6.983	6.983	(0.910)	253787	50.0000	50.34
84 1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	326010	50.0000	51.01
26 2,2-Dichloropropane	77	3.509	3.509	(0.839)	238846	50.0000	50.81
24 2-Butanone	43	3.573	3.573	(0.854)	173091	100.000	95.27
76 2-Chlorotoluene	91	8.974	8.974	(0.929)	508351	50.0000	51.38
52 2-Hexanone	43	7.083	7.083	(0.923)	296054	100.000	99.05
77 4-Chlorotoluene	91	9.075	9.075	(0.939)	580327	50.0000	50.15
82 p-Isopropyltoluene	119	9.655	9.655	(0.999)	589320	50.0000	53.61
45 4-Methyl-2-Pentanone	43	6.324	6.324	(0.824)	435250	100.000	100.61
10 Acetone	43	1.969	1.969	(0.471)	134109	100.000	91.12
37 Benzene	78	4.512	4.512	(0.908)	611740	50.0000	53.39
74 Bromobenzene	156	8.810	8.810	(0.912)	190825	50.0000	51.49
29 Bromochloromethane	128	3.795	3.795	(0.908)	81379	50.0000	52.07
39 Bromodichloromethane	83	5.730	5.730	(1.153)	225705	50.0000	53.44
66 Bromoform	173	8.416	8.416	(1.097)	115358	50.0000	50.75
6 Bromomethane	94	1.339	1.339	(0.320)	123658	50.0000	50.64
34 Carbon Tetrachloride	117	4.268	4.268	(0.859)	207011	50.0000	49.65
59 Chlorobenzene	112	7.692	7.692	(1.003)	404214	50.0000	51.57
7 Chloroethane	64	1.403	1.403	(0.336)	130230	50.0000	49.36
28 Chloroform	83	3.910	3.910	(0.935)	289476	50.0000	53.14
3 Chloromethane	50	1.074	1.074	(0.257)	235306	50.0000	45.62
27 cis-1,2-Dichloroethene	96	3.530	3.530	(0.844)	169259	50.0000	54.41
46 cis-1,3-Dichloropropene	75	6.159	6.159	(1.239)	259490	50.0000	52.20
55 Dibromochloromethane	129	7.176	7.176	(0.936)	160169	50.0000	51.46
44 Dibromomethane	93	5.558	5.558	(1.118)	107488	50.0000	51.06
2 Dichlorodifluoromethane	85	0.966	0.966	(0.231)	140356	50.0000	42.24
19 Carbon Disulfide	76	2.069	2.069	(0.495)	839331	100.000	106.59
61 Ethylbenzene	106	7.800	7.800	(1.017)	220014	50.0000	53.38
91 Hexachlorobutadiene	225	11.481	11.481	(1.188)	43992	50.0000	49.06
67 Isopropylbenzene	105	8.566	8.566	(1.117)	719358	50.0000	57.17
62 m,p-Xylenes	106	7.907	7.907	(1.031)	530077	100.000	106.81
17 Methylene Chloride	84	2.306	2.306	(0.551)	161062	50.0000	51.55
87 n-Butylbenzene	91	9.999	9.999	(1.035)	536185	50.0000	53.39
73 n-Propylbenzene	91	8.917	8.917	(0.923)	855542	50.0000	52.23
92 Naphthalene	128	11.546	11.546	(1.195)	90650	50.0000	46.38
63 o-Xylene	106	8.244	8.244	(1.075)	274916	50.0000	57.07
81 sec-Butylbenzene	105	9.526	9.526	(0.986)	697687	50.0000	53.01
64 Styrene	104	8.258	8.258	(1.077)	496268	50.0000	58.66
78 tert-Butylbenzene	119	9.340	9.340	(0.967)	485712	50.0000	52.86
56 Tetrachloroethene	164	6.933	6.933	(0.904)	122226	50.0000	53.37
50 Toluene	91	6.446	6.446	(0.840)	649605	50.0000	52.41
20 trans-1,2-Dichloroethene	96	2.528	2.528	(0.604)	144007	50.0000	54.89
51 trans-1,3-Dichloropropene	75	6.682	6.682	(1.344)	236971	50.0000	52.65
38 Trichloroethene	130	5.207	5.207	(1.048)	152724	50.0000	53.46
8 Trichlorofluoromethane	101	1.561	1.561	(0.373)	264689	50.0000	54.23
5 Vinyl Chloride	62	1.138	1.138	(0.272)	226412	50.0000	50.10

QC Flag Legend

M - Compound response manually integrated.



Data File: \\NAHSTWS005\Target\chem\voa6.i\X200506.b\X050612.D
Date : 06-MAY-2020 17:33
Client ID: CCV-END
Sample Info: CCV-END;CCV-END;2;;;
Purge Volume: 5.0
Column phase: DB624

Instrument: voa6.i
Operator: PC
Column diameter: 0.18

HS20050176 8270 Raw Data

ALS WO# HS20050176

SV06 -Logbook

Batch: 37098
Date: 08-20-2019
Method: 8270D-LL & SIM
Comments: MSSV003

Analyst: Linda Graham
Reviewer:
Laboratory: Houston

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	DFTPP02	TUNE	08-20-2019 08:34 am	1.00			001.D		Y	NA
2	SLSTD-2.5	CCV	08-20-2019 08:59 am	1.00			002.D		Y	NA
3	SIMDX-0.08	SAMP	08-20-2019 09:27 am	1.00			003.D		Y	NA
4	SIMDX-0.01	SAMP	08-20-2019 09:52 am	1.00			004.D		Y	NA
5	SIMDX-0.03	ICAL2	08-20-2019 10:13 am	1.00			005.D		Y	NA
6	SIMDX-0.05	ICAL3	08-20-2019 10:32 am	1.00			006.D		Y	NA
7	SIMDX-0.08	ICAL4	08-20-2019 10:51 am	1.00			007.D		Y	NA
8	SIMDX-0.1	ICAL5	08-20-2019 11:10 am	1.00			008.D		Y	NA
9	SIMDX-0.15	ICAL6	08-20-2019 11:29 am	1.00			009.D		Y	NA
10	SIMDX-0.2	ICAL7	08-20-2019 11:49 am	1.00			010.D		Y	NA
11	SIMDX-0.5	ICAL8	08-20-2019 12:08 pm	1.00			011.D		Y	NA
12	SIMDX-0.01	ICAL1	08-20-2019 12:27 pm	1.00			012.D		Y	NA
13	SIMDX-ICV	SAMP	08-20-2019 12:46 pm	1.00			013.D		Y	NA
14	CCB	SAMP	08-20-2019 01:05 pm	1.00			014.D		Y	NA
15	MBLK-144188	MBLK	08-20-2019 01:24 pm	1.00	1000.00 mL	1.00 mL	015.D	Liquid	Y	NA
16	LCS-144188	LCS	08-20-2019 01:43 pm	1.00	1000.00 mL	1.00 mL	016.D	Liquid	Y	NA
17	LCSD-144188	LCSD	08-20-2019 02:02 pm	1.00	1000.00 mL	1.00 mL	017.D	Liquid	Y	NA
18	HS19080732-01	SAMP	08-20-2019 02:21 pm	1.00	1000.00 mL	1.00 mL	018.D	Liquid	Y	NA
19	HS19080732-01	SAMP	08-20-2019 02:43 pm	1.00	1000.00 mL	1.00 mL	019.D	Liquid	Y	NA
20	SIMDX-0.08	CCV	08-20-2019 03:05 pm	1.00			020.D		Y	NA
21	SPIKE	SAMP	08-20-2019 03:24 pm	1.00	1000.00 mL	1.00 mL	021.D	Liquid	Y	NA
22	HS19080732-01	SAMP	08-20-2019 03:52 pm	5.00	1000.00 mL	1.00 mL	022.D	Liquid	Y	NA
23	CCB	SAMP	08-20-2019 04:16 pm	1.00			023.D		Y	NA
24	HS19080727-02	SAMP	08-20-2019 04:42 pm	100.0(	30.00 gm	1.00 mL	024.D	Solid	Y	NA
25	HS19080727-03	SAMP	08-20-2019 05:01 pm	100.0(	30.00 gm	1.00 mL	025.D	Solid	Y	NA
26	HS19080727-04	SAMP	08-20-2019 05:19 pm	5.00	30.00 gm	1.00 mL	026.D	Solid	Y	NA
27	HS19080727-07	SAMP	08-20-2019 05:38 pm	10.00	30.00 gm	1.00 mL	027.D	Solid	Y	NA
28	HS19080727-05	SAMP	08-20-2019 05:57 pm	100.0(	30.00 gm	1.00 mL	028.D	Solid	Y	NA

Chemical	Value
IS ID	3081958-02 & 3081957-10
CAL STD ID	3081945-06 & 3081962-05
DFTPP ID	3081958-01
PCP Tailing	0.91
Benz. Tailing	0.82
STD-01	3081962-02 - 3081962-09
ICV ID	3081962-10
Routine SOP Maintenance	LG

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20050176

Lab File ID: 001 DFTPP Injection Date: 08/20/19

Instrument ID: SV6 DFTPP Injection Time: 0834

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	37.3
68	Less than 2.0% of mass 69	0.7 (1.3)1
69	Mass 69 relative abundance	52.4
70	Less than 2.0% of mass 69	0.2 (0.4)1
127	10.0 - 80.0% of mass 198	50.4
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.5
275	10.0 - 60.0% of mass 198	30.5
365	1.0 - 100.0% of mass 198	5.4
441	Present, but less than mass 443	15.3
442	50.0 - 150.0% of mass 198	94.0
443	15.0 - 24.0% of mass 442	17.6 (18.7)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SIMDX-0.03	SIMDX-0.03	005	08/20/19	1013
02	SIMDX-0.05	SIMDX-0.05	006	08/20/19	1032
03	SIMDX-0.08	SIMDX-0.08	007	08/20/19	1051
04	SIMDX-0.1	SIMDX-0.1	008	08/20/19	1110
05	SIMDX-0.15	SIMDX-0.15	009	08/20/19	1129
06	SIMDX-0.2	SIMDX-0.2	010	08/20/19	1149
07	SIMDX-0.5	SIMDX-0.5	011	08/20/19	1208
08	SIMDX-0.01	SIMDX-0.01	012	08/20/19	1227
09	SIMDX-ICV	SIMDX-ICV	013	08/20/19	1246
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM V SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20050176

Instrument ID: SV6 Calibration Date(s): 08/20/19 08/20/19

Column: RTX-5SIL MS ID: 0.28 (mm) Calibration Time(s): 1013 1227

LAB FILE ID: RF0.01: 012 RF0.03: 005 RF0.05: 006
RF0.08: 007 RF0.1: 008 RF0.15: 009

COMPOUND	RF0.01	RF0.03	RF0.05	RF0.08	RF0.1	RF0.15
1,4-Dioxane	0.068	0.066	0.062	0.062	0.066	0.058
Nitrobenzene-d5	0.259	0.253	0.248	0.235	0.256	0.251
4-Terphenyl-d14	0.864	0.799	0.804	0.815	0.808	0.822
2-Fluorobiphenyl	1.190	1.244	1.156	1.138	1.196	1.178

FORM VI SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS2005017

Instrument ID: SV6 Calibration Date(s): 08/20/19 08/20/19

Column: RTX-5SIL MS ID: 0.28 (mm) Calibration Time(s): 1013 1227

LAB FILE ID: RF0.2: 010 RF0.5: 011

COMPOUND	RF0.2	RF0.5	CURVE	COEFFICENT A1	%RSD OR R^2	MAX %RSD OR R^2
1,4-Dioxane	0.067	0.058	AVRG	6.346e-002	6.165	20.000
Nitrobenzene-d5	0.298	0.288	AVRG	0.26110947	8.070	20.000
4-Terphenyl-d14	0.864	0.822	AVRG	0.82462670	3.080	20.000
2-Fluorobiphenyl	1.198	1.196	AVRG	1.18704840	2.670	20.000

FORM VI SV

FORM 3
WATER SEMIVOLATILE METHOD SPIKE RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20050176

Matrix Spike - Sample No.: SIMDX-ICV

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	% REC #	QC. LIMITS REC.
1,4-Dioxane	0.08000	0.06515	81	75-125

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

COMMENTS: _____

_____

FORM III SV

Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\001.D

Date : 20-AUG-2019 08:34

Client ID: DFTPP02

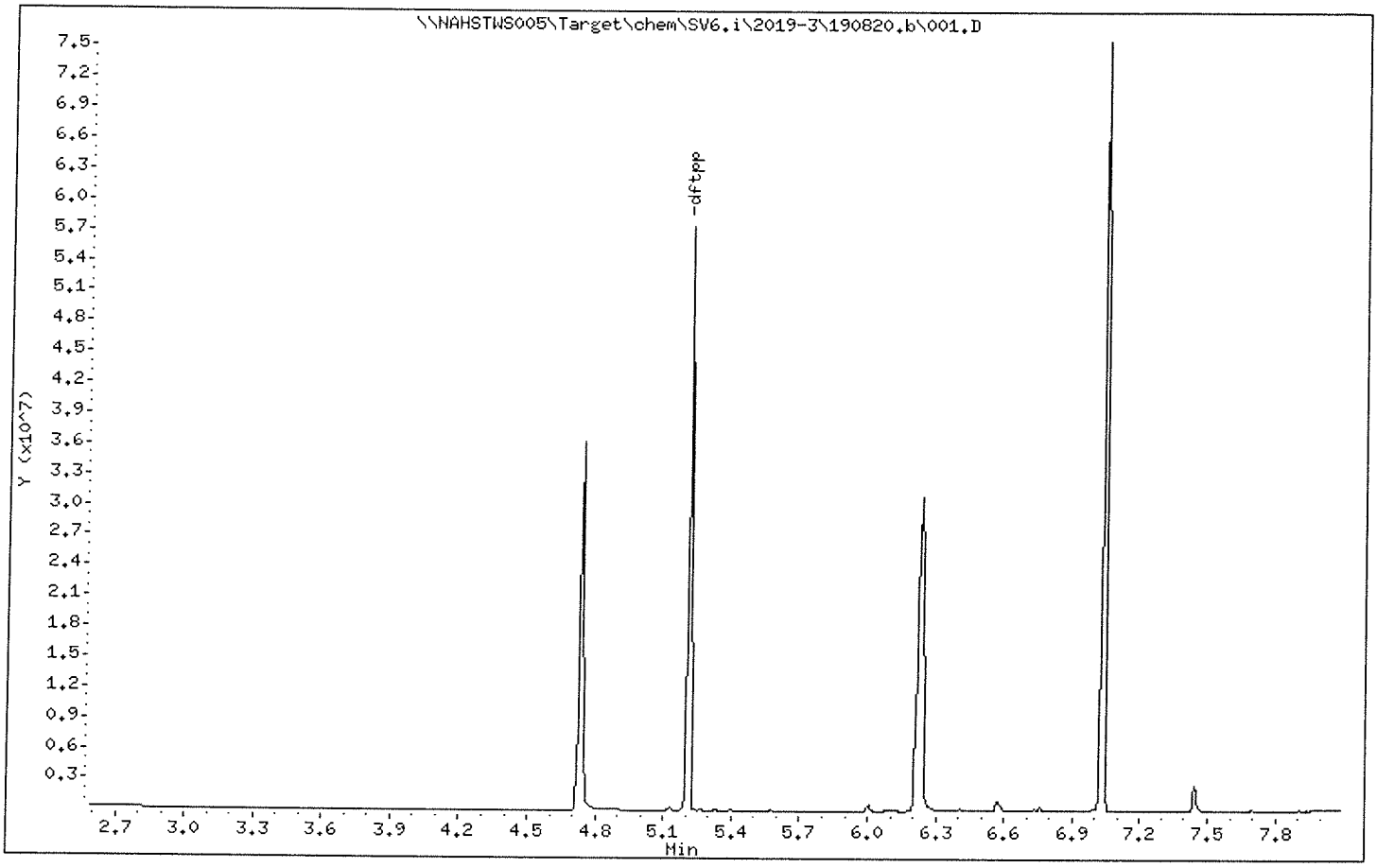
Instrument: SV6.i

Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: smith

Column phase: DB-5MS

Column diameter: 0.25



Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\001.D

Date : 20-AUG-2019 08:34

Client ID: DFTPP02

Instrument: SV6.i

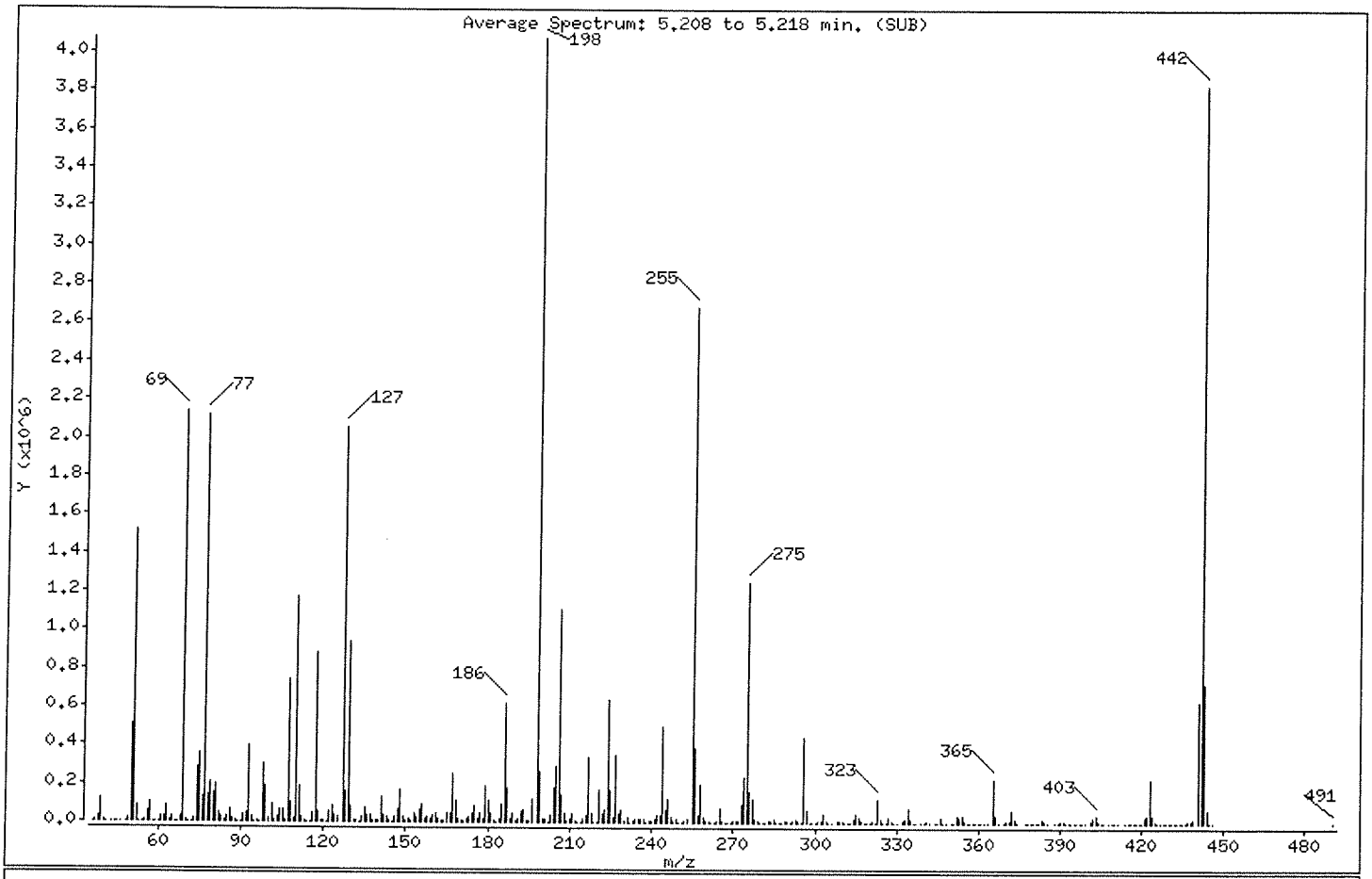
Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: smith

Column phase: DB-5MS

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	37.27
68	Less than 2.00% of mass 69	0.66 (1.27)
69	Mass 69 relative abundance	52.42
70	Less than 2.00% of mass 69	0.21 (0.40)
127	10.00 - 80.00% of mass 198	50.38
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.54
275	10.00 - 60.00% of mass 198	30.53
365	1.00 - 100.00% of mass 198	5.43
441	Present, but less than mass 443	15.33
442	50.00 - 150.00% of mass 198	93.99
443	15.00 - 24.00% of mass 442	17.61 (18.74)

Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\001.D

Date : 20-AUG-2019 08:34

Client ID: DFTPP02

Instrument: SV6.i

Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: smith

Column phase: DB-5MS

Column diameter: 0.25

Data File: 001.D
Spectrum: Average Spectrum: 5.208 to 5.218 min. (SUB)
Location of Maximum: 198.00
Number of points: 391

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	835	137.00	33208	236.00	14798	337.00	100
37.00	12102	138.00	8411	237.00	22248	339.00	2477
38.00	25296	139.00	4795	238.00	2941	340.00	1567
39.00	117160	140.00	12158	239.00	13468	341.00	13981
40.00	5499	141.00	131200	240.00	9878	342.00	3948
41.00	753	142.00	36240	241.00	19728	344.00	804
43.00	91	143.00	24424	242.00	35264	345.00	480
44.00	1276	144.00	6124	243.00	41928	346.00	28472
45.00	3402	145.00	4643	244.00	496256	347.00	4140
46.00	106	146.00	26048	245.00	67520	348.00	271
48.00	1625	147.00	64000	246.00	122680	350.00	1935
49.00	14501	148.00	169408	247.00	24744	351.00	4169
50.00	504320	149.00	25880	248.00	4938	352.00	37592
51.00	1518592	150.00	7101	249.00	19120	353.00	27976
52.00	83816	151.00	16800	250.00	4389	354.00	36440
53.00	3136	152.00	9343	251.00	4453	355.00	7095
54.00	184	153.00	44568	252.00	6078	356.00	446
55.00	11858	154.00	31536	253.00	17208	357.00	391
56.00	54208	155.00	64536	255.00	2677248	358.00	1318
57.00	102632	156.00	92080	256.00	382592	359.00	2789
58.00	3650	157.00	15872	257.00	33904	360.00	1244
59.00	1625	158.00	23880	258.00	193536	361.00	1450
60.00	1858	159.00	18264	259.00	31792	362.00	1798
61.00	24904	160.00	36112	260.00	5628	363.00	1262
62.00	32112	161.00	51192	261.00	5009	365.00	221376
63.00	80232	162.00	14572	262.00	603	366.00	34008
64.00	12711	163.00	5995	263.00	2490	367.00	1707
65.00	29088	164.00	6170	264.00	6905	369.00	407
66.00	1294	165.00	51448	265.00	76376	370.00	5368
67.00	922	166.00	42280	266.00	13210	371.00	11263
68.00	27024	167.00	255744	267.00	1076	372.00	67920
69.00	2136064	168.00	107920	268.00	2066	373.00	18112
70.00	8518	169.00	18928	269.00	956	374.00	1860
71.00	489	170.00	10335	270.00	5559	377.00	1403
72.00	1438	171.00	7634	271.00	7831	378.00	915

Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\001.D

Date : 20-AUG-2019 08:34

Client ID: DFTPP02

Instrument: SV6.i

Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: smith

Column phase: DB-5MS

Column diameter: 0.25

Data File: 001.D
Spectrum: Average Spectrum: 5.208 to 5.218 min. (SUB)
Location of Maximum: 198.00
Number of points: 391

m/z	Y	m/z	Y	m/z	Y	m/z	Y
73.00	21832	172.00	21320	272.00	12923	379.00	143
74.00	279552	173.00	29712	273.00	90072	380.00	144
75.00	360000	174.00	45472	274.00	231936	381.00	498
76.00	127952	175.00	80656	275.00	1244160	382.00	629
77.00	2114048	176.00	21440	276.00	161152	383.00	20544
78.00	137728	177.00	47248	277.00	122616	384.00	4734
79.00	204864	178.00	18200	278.00	18792	385.00	1203
80.00	153472	179.00	183168	279.00	5011	388.00	451
81.00	199296	180.00	113264	280.00	604	389.00	265
82.00	46040	181.00	49512	281.00	900	390.00	10255
83.00	31856	182.00	11982	282.00	4109	391.00	6532
84.00	5566	183.00	3715	283.00	13570	392.00	4418
85.00	32504	184.00	16784	284.00	11220	393.00	1245
86.00	61824	185.00	89160	285.00	20912	394.00	513
87.00	21392	186.00	620608	286.00	3760	395.00	749
88.00	9127	187.00	175296	287.00	1271	396.00	444
89.00	3136	188.00	16624	288.00	1937	397.00	691
90.00	443	189.00	45672	289.00	5097	398.00	405
91.00	41216	190.00	7016	290.00	4794	399.00	123
92.00	50488	191.00	19680	291.00	3934	401.00	5262
93.00	394112	192.00	59496	292.00	8215	402.00	29296
94.00	24512	193.00	62640	293.00	21280	403.00	40856
95.00	3693	194.00	12573	294.00	8043	404.00	14012
96.00	9479	195.00	6966	295.00	4289	405.00	1459
97.00	44	196.00	124048	296.00	436544	406.00	138
98.00	303680	198.00	4075008	297.00	62032	408.00	284
99.00	191552	199.00	266624	298.00	3806	409.00	264
100.00	15372	200.00	19696	299.00	1143	410.00	1263
101.00	94456	201.00	17256	300.00	676	411.00	294
102.00	5355	202.00	1968	301.00	6097	414.00	403
103.00	32272	203.00	40488	302.00	8958	415.00	1669
104.00	67864	204.00	179392	303.00	43928	416.00	498
105.00	62672	205.00	294784	304.00	10193	417.00	65
106.00	12815	206.00	1107456	305.00	1447	418.00	1538
107.00	743744	207.00	142720	306.00	106	419.00	1353

Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\001.D

Date : 20-AUG-2019 08:34

Client ID: DFTPP02

Instrument: SV6.i

Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: smith

Column phase: DB-5MS

Column diameter: 0.25

Data File: 001.D
Spectrum: Average Spectrum: 5.208 to 5.218 min. (SUB)
Location of Maximum: 198.00
Number of points: 391

m/z	Y	m/z	Y	m/z	Y	m/z	Y
108.00	101768	208.00	46152	308.00	6241	420.00	2993
109.00	17928	209.00	12596	309.00	6298	421.00	29488
110.00	1171456	210.00	19512	310.00	6172	422.00	36720
111.00	184832	211.00	45856	311.00	604	423.00	226496
112.00	25208	212.00	5547	312.00	1912	424.00	41632
113.00	6233	213.00	3969	313.00	3850	425.00	5802
114.00	2033	214.00	2043	314.00	19248	426.00	59
115.00	4354	215.00	17152	315.00	48288	427.00	586
116.00	48960	216.00	34016	316.00	24504	428.00	274
117.00	878976	217.00	341696	317.00	4752	429.00	576
118.00	56712	218.00	43448	318.00	87	430.00	1543
119.00	5084	219.00	3982	319.00	1150	431.00	1228
120.00	8536	220.00	3610	320.00	3527	432.00	2552
121.00	3746	221.00	168960	321.00	11938	433.00	1912
122.00	60432	222.00	45336	322.00	2915	434.00	2804
123.00	81152	223.00	66888	323.00	123376	435.00	3410
124.00	36080	224.00	638528	324.00	20024	436.00	3032
125.00	28848	225.00	166336	325.00	3713	437.00	7750
127.00	2053120	226.00	23496	326.00	3277	438.00	8493
128.00	154816	227.00	346624	327.00	25960	439.00	15936
129.00	939136	228.00	46312	328.00	10207	441.00	624704
130.00	80128	229.00	62808	329.00	3443	442.00	3830272
131.00	12860	230.00	8935	330.00	592	443.00	717696
132.00	9218	231.00	23840	332.00	10907	444.00	65712
133.00	3460	232.00	4201	333.00	16824	445.00	3400
134.00	26576	233.00	6938	334.00	79336	446.00	239
135.00	73008	234.00	21800	335.00	21480	491.00	180
136.00	35592	235.00	17528	336.00	2596		

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\005.D
Lab Smp Id: SIMDX-0.03 Client Smp ID: SIMDX-0.03
Inj Date : 20-AUG-2019 10:13 MS Autotune Date: 27-FEB-2008 05:32
Operator : LG Inst ID: SV6.i
Smp Info : SIMDX-0.03;SIMDX-0.03
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\DXSIM.m
Meth Date : 23-Mar-2020 17:29 lgraham Quant Type: ISTD
Cal Date : 18-JUL-2019 10:08 Cal File: 002.D
Als bottle: 5 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)	
* 20 1,4-Dichlorobenzene-d4	152	3.339	3.334	(1.000)	33546	0.10000		(aQH)
* 45 Naphthalene-d8	136	4.439	4.442	(1.000)	136953	0.10000		(QH)
$ 33 Nitrobenzene-d5	82	3.801	3.801	(0.856)	10387	0.03000		(QM)
* 86 Acenaphthene-d10	164	6.105	6.110	(1.000)	81893	0.10000		(QH)
$ 69 2-Fluorobiphenyl	172	5.463	5.464	(0.868)	30574	0.03000		(aQ)
* 126 Phenanthrene-d10	188	7.549	7.555	(1.000)	160375	0.10000		(Q)
* 182 Chrysene-d12	240	10.298	10.304	(1.000)	153711	0.10000		(QH)
$ 158 4-Terphenyl-d14	244	9.120	9.125	(0.849)	36860	0.03000		(aQH)
* 198 Perylene-d12	264	12.292	12.297	(1.000)	170856	0.10000		(QM)
1 1,4-Dioxane	58	1.652	1.612	(0.468)	666	0.03000		(aH)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\005.D

Date : 20-AUG-2019 10:13

Client ID: SIMDX-0.03

Instrument: SV6.i

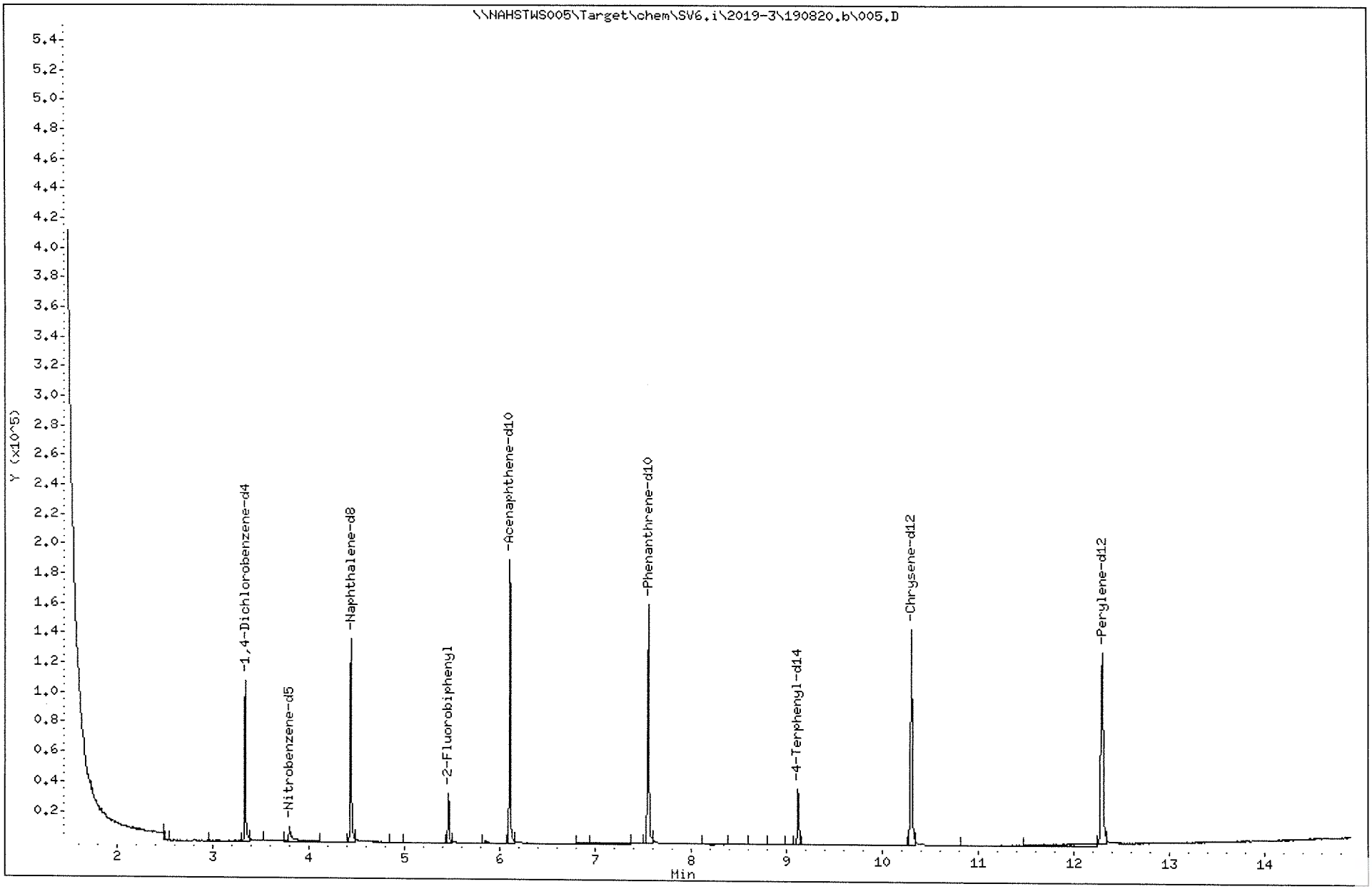
Sample Info: SIMDX-0.03;SIMDX-0.03

Purge Volume: 1000.0

Operator: LG

Column phase: RTX-5SIL MS

Column diameter: 0.28



ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\006.D
Lab Smp Id: SIMDX-0.05 Client Smp ID: SIMDX-0.05
Inj Date : 20-AUG-2019 10:32 MS Autotune Date: 27-FEB-2008 05:32
Operator : LG Inst ID: SV6.i
Smp Info : SIMDX-0.05;SIMDX-0.05
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\DXSIM.m
Meth Date : 23-Mar-2020 17:29 lgraham Quant Type: ISTD
Cal Date : 20-AUG-2019 10:13 Cal File: 005.D
Als bottle: 6 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

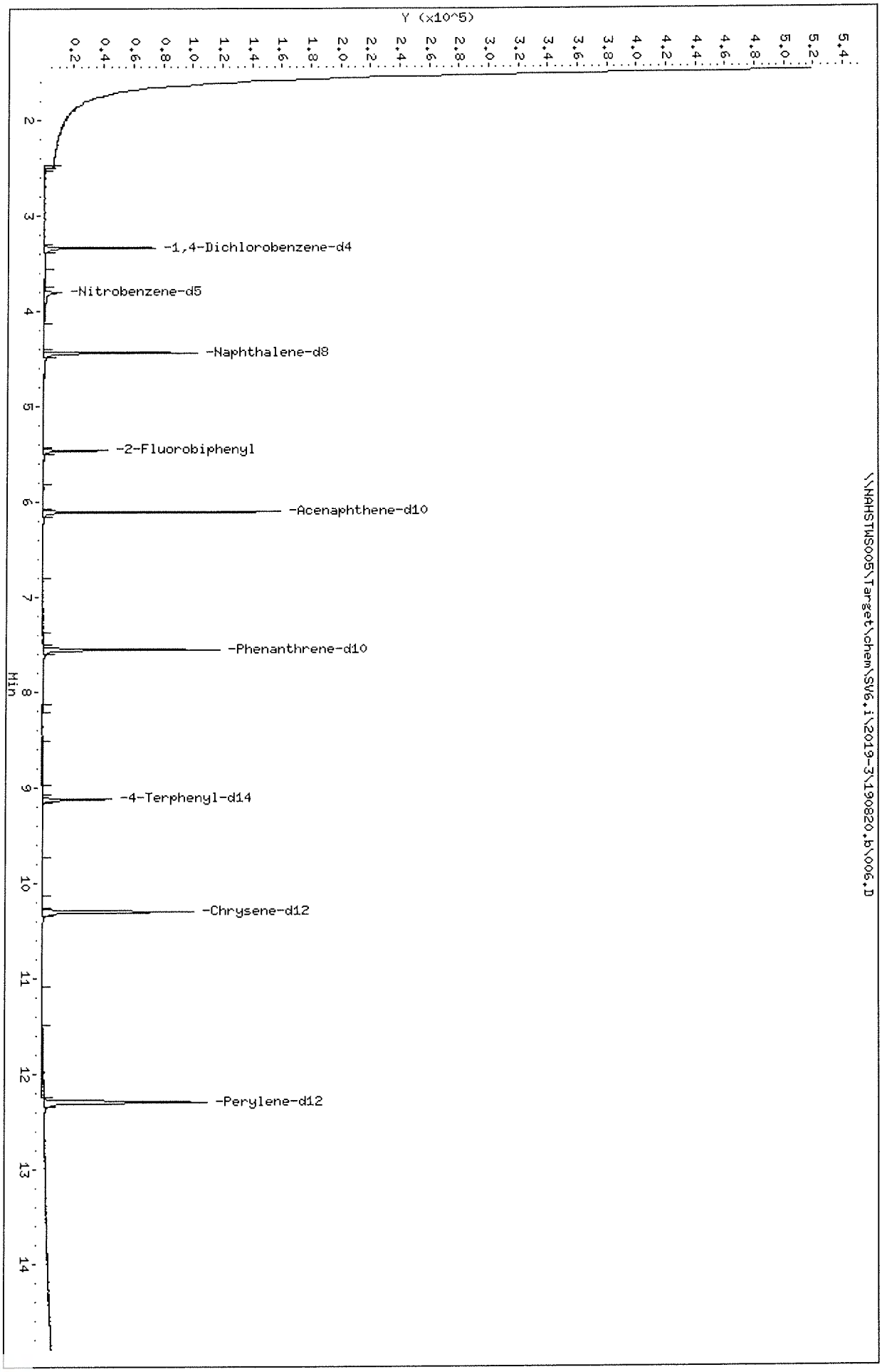
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)
* 20 1,4-Dichlorobenzene-d4	152	3.339	3.334	(1.000)	25816	0.10000	(a)
* 45 Naphthalene-d8	136	4.439	4.442	(1.000)	94844	0.10000	(M)
$ 33 Nitrobenzene-d5	82	3.801	3.801	(0.856)	11773	0.05000	0.04910(QM)
* 86 Acenaphthene-d10	164	6.105	6.110	(1.000)	61276	0.10000	
$ 69 2-Fluorobiphenyl	172	5.463	5.464	(0.895)	35405	0.05000	0.04643
* 126 Phenanthrene-d10	188	7.549	7.555	(1.000)	119311	0.10000	
* 182 Chrysene-d12	240	10.298	10.304	(1.000)	113920	0.10000	
$ 158 4-Terphenyl-d14	244	9.120	9.125	(0.886)	45770	0.05000	0.05026
* 198 Perylene-d12	264	12.292	12.297	(1.000)	125817	0.10000	
1 1,4-Dioxane	58	1.641	1.612	(0.492)	803	0.05000	0.04700(aM)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.

Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\006.D
Date : 20-AUG-2019 10:32
Client ID: SIMDX-0.05
Sample Info: SIMDX-0.05;SIMDX-0.05
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28



ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\007.D
Lab Smp Id: SIMDX-0.08 Client Smp ID: SIMDX-0.08
Inj Date : 20-AUG-2019 10:51 MS Autotune Date: 27-FEB-2008 05:32
Operator : LG Inst ID: SV6.i
Smp Info : SIMDX-0.08;SIMDX-0.08
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\DXSIM.m
Meth Date : 23-Mar-2020 17:29 lgraham Quant Type: ISTD
Cal Date : 20-AUG-2019 10:32 Cal File: 006.D
Als bottle: 7 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

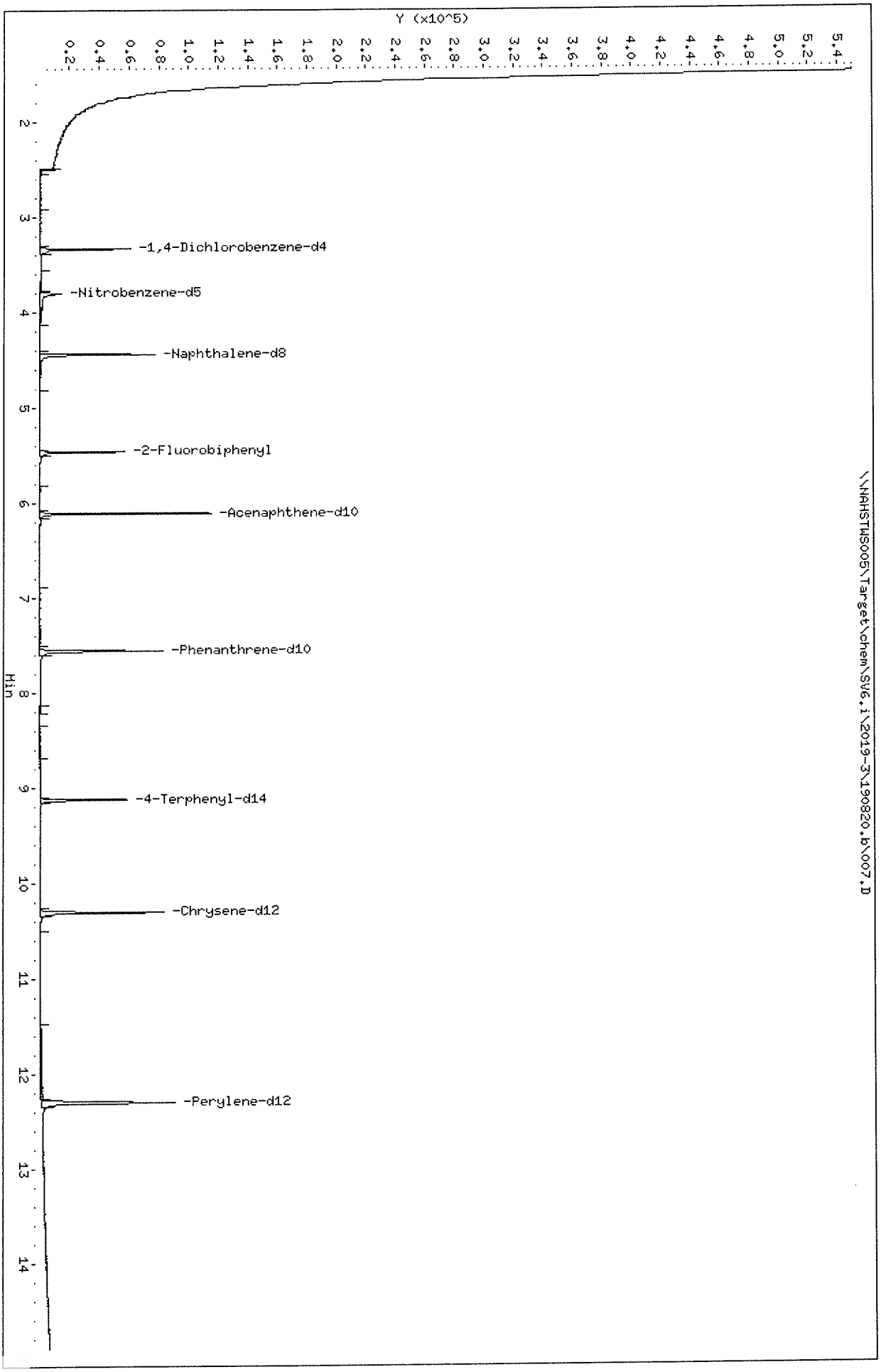
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)
* 20 1,4-Dichlorobenzene-d4	152	3.334	3.334	(1.000)	21258	0.10000	(a)
* 45 Naphthalene-d8	136	4.442	4.442	(1.000)	78809	0.10000	
$ 33 Nitrobenzene-d5	82	3.801	3.801	(0.856)	14821	0.08000	0.07202(M)
* 86 Acenaphthene-d10	164	6.110	6.110	(1.000)	46108	0.10000	
$ 69 2-Fluorobiphenyl	172	5.464	5.464	(0.894)	41986	0.08000	0.07671
* 126 Phenanthrene-d10	188	7.555	7.555	(1.000)	88651	0.10000	
* 182 Chrysene-d12	240	10.304	10.304	(1.000)	83555	0.10000	(M)
$ 158 4-Terphenyl-d14	244	9.125	9.125	(0.889)	54489	0.08000	0.07908
* 198 Perylene-d12	264	12.297	12.297	(1.000)	95521	0.10000	
1 1,4-Dioxane	58	1.612	1.612	(0.483)	1060	0.08000	0.07857(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\007.D
Date : 20-AUG-2019 10:51
Client ID: SIHDX-0.08
Sample Info: SIHDX-0.08;SIHDX-0.08
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28



ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\008.D
Lab Smp Id: SIMDX-0.1 Client Smp ID: SIMDX-0.1
Inj Date : 20-AUG-2019 11:10 MS Autotune Date: 27-FEB-2008 05:32
Operator : LG Inst ID: SV6.i
Smp Info : SIMDX-0.1;SIMDX-0.1
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\DXSIM.m
Meth Date : 23-Mar-2020 17:29 lgraham Quant Type: ISTD
Cal Date : 20-AUG-2019 10:51 Cal File: 007.D
Als bottle: 8 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

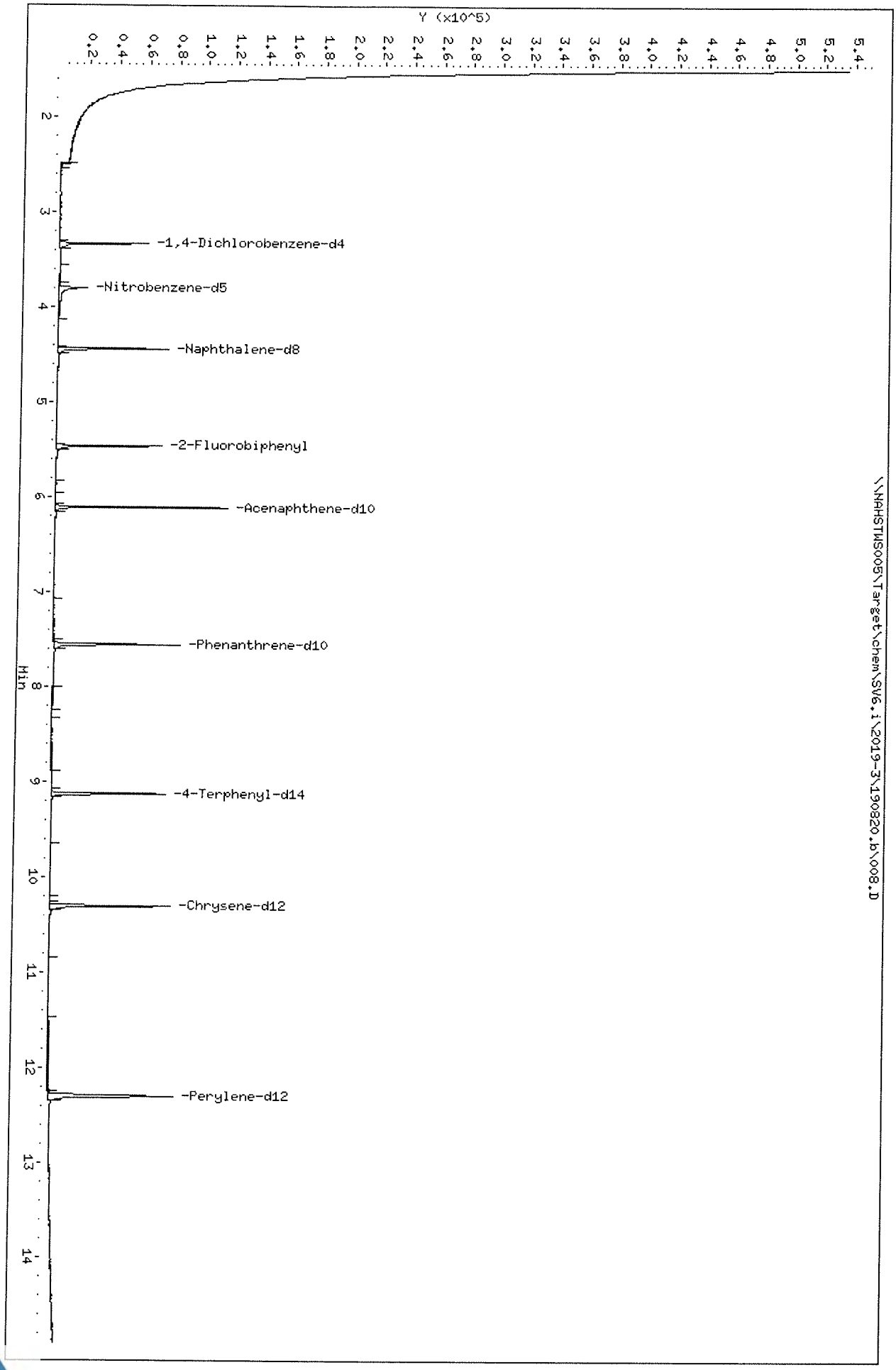
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)
* 20 1,4-Dichlorobenzene-d4	152	3.334	3.334	(1.000)	18520	0.10000	(a)
* 45 Naphthalene-d8	136	4.443	4.442	(1.000)	77644	0.10000	
$ 33 Nitrobenzene-d5	82	3.801	3.801	(0.856)	19915	0.10000	0.1045(M)
* 86 Acenaphthene-d10	164	6.110	6.110	(1.000)	45687	0.10000	
$ 69 2-Fluorobiphenyl	172	5.464	5.464	(0.894)	54630	0.10000	0.1014
* 126 Phenanthrene-d10	188	7.555	7.555	(1.000)	94205	0.10000	
* 182 Chrysene-d12	240	10.304	10.304	(1.000)	87080	0.10000	
$ 158 4-Terphenyl-d14	244	9.126	9.125	(0.886)	70350	0.10000	0.1002
* 198 Perylene-d12	264	12.297	12.297	(1.000)	96547	0.10000	
1 1,4-Dioxane	58	1.612	1.612	(0.484)	1224	0.10000	0.1040(aM)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\008.D
Date : 20-AUG-2019 11:10
Client ID: SIMDX-0.1
Sample Info: SIMDX-0.1;SIMDX-0.1
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28



ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\009.D
Lab Smp Id: SIMDX-0.15 Client Smp ID: SIMDX-0.15
Inj Date : 20-AUG-2019 11:29 MS Autotune Date: 27-FEB-2008 05:32
Operator : LG Inst ID: SV6.i
Smp Info : SIMDX-0.15;SIMDX-0.15
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\DXSIM.m
Meth Date : 23-Mar-2020 17:29 lgraham Quant Type: ISTD
Cal Date : 20-AUG-2019 11:10 Cal File: 008.D
Als bottle: 9 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

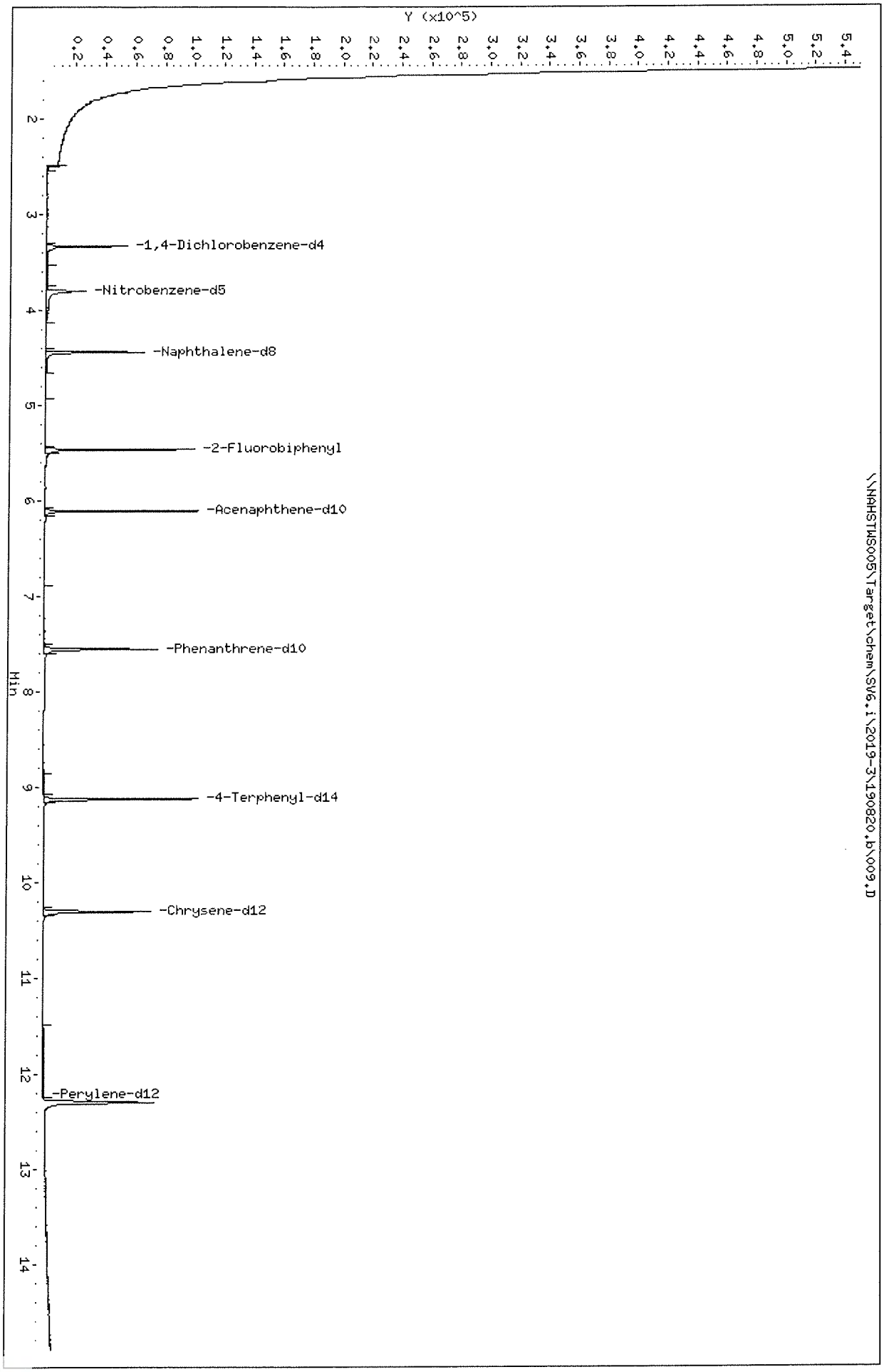
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)
* 20 1,4-Dichlorobenzene-d4	152	3.334	3.334	(1.000)	18250	0.10000	(a)
* 45 Naphthalene-d8	136	4.443	4.442	(1.000)	69930	0.10000	
$ 33 Nitrobenzene-d5	82	3.801	3.801	(0.856)	26336	0.15000	0.1518(AM)
* 86 Acenaphthene-d10	164	6.110	6.110	(1.000)	42317	0.10000	
$ 69 2-Fluorobiphenyl	172	5.464	5.464	(0.894)	74789	0.15000	0.1493
* 126 Phenanthrene-d10	188	7.550	7.555	(1.000)	87386	0.10000	
* 182 Chrysene-d12	240	10.304	10.304	(1.000)	79255	0.10000	
$ 158 4-Terphenyl-d14	244	9.120	9.125	(0.885)	97729	0.15000	0.1529(A)
* 198 Perylene-d12	264	12.297	12.297	(1.000)	88054	0.10000	
1 1,4-Dioxane	58	1.612	1.612	(0.484)	1583	0.15000	0.1351(a)

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\009.D
Date : 20-AUG-2019 11:29
Client ID: SIMDX-0.15
Sample Info: SIMDX-0.15;SIMDX-0.15
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28



\\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\009.D

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\010.D
Lab Smp Id: SIMDX-0.2 Client Smp ID: SIMDX-0.2
Inj Date : 20-AUG-2019 11:49 MS Autotune Date: 27-FEB-2008 05:32
Operator : LG Inst ID: SV6.i
Smp Info : SIMDX-0.2;SIMDX-0.2
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\DXSIM.m
Meth Date : 23-Mar-2020 17:29 lgraham Quant Type: ISTD
Cal Date : 20-AUG-2019 11:29 Cal File: 009.D
Als bottle: 10 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14

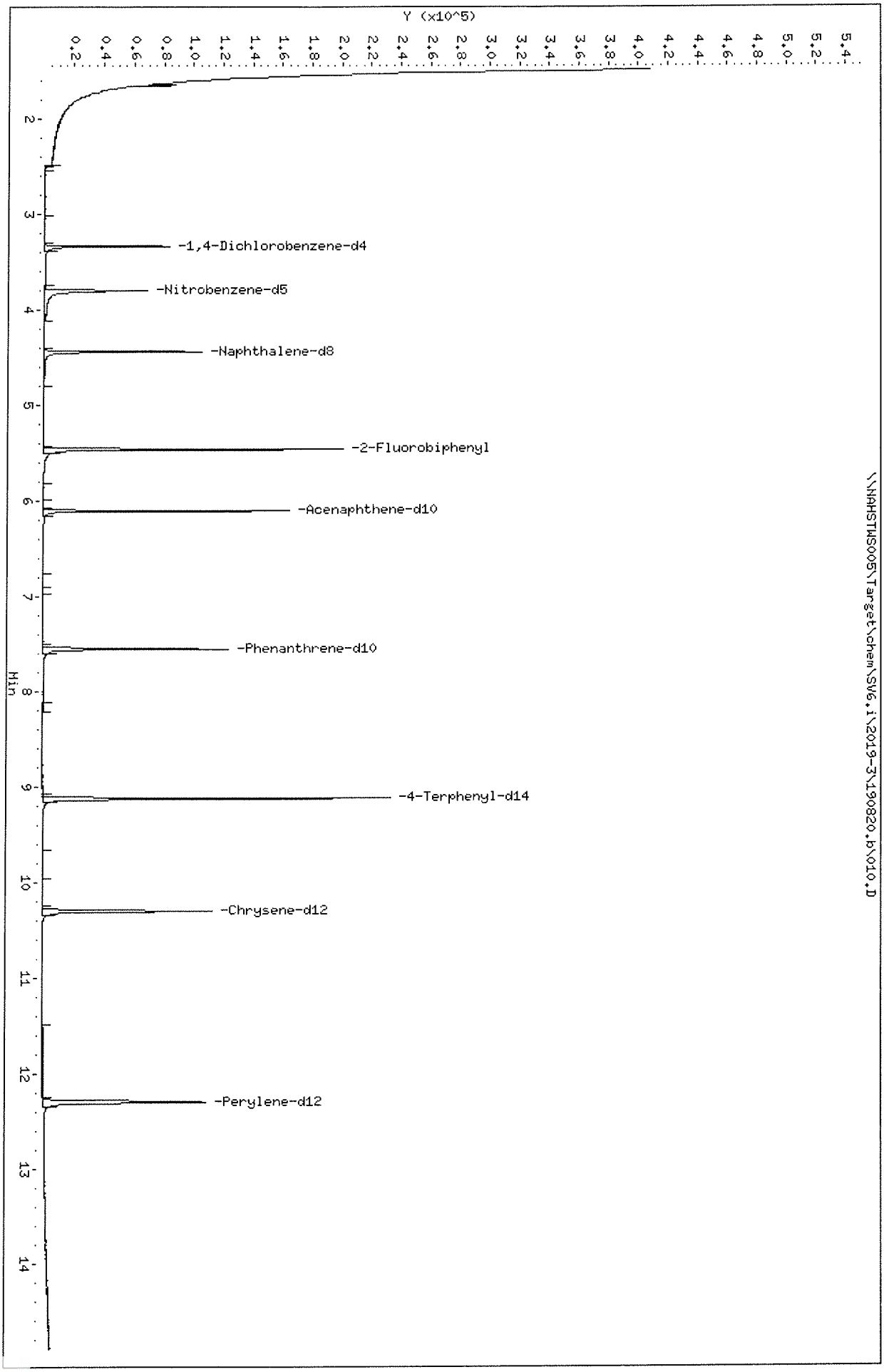
Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)
* 20 1,4-Dichlorobenzene-d4	152	3.339	3.334	(1.000)	29701	0.10000	(a)
* 45 Naphthalene-d8	136	4.439	4.442	(1.000)	114404	0.10000	
$ 33 Nitrobenzene-d5	82	3.801	3.801	(0.856)	68087	0.20000	0.2331(AM)
* 86 Acenaphthene-d10	164	6.105	6.110	(1.000)	67885	0.10000	
$ 69 2-Fluorobiphenyl	172	5.463	5.464	(0.895)	162627	0.20000	0.2022(AM)
* 126 Phenanthrene-d10	188	7.549	7.555	(1.000)	130309	0.10000	
* 182 Chrysene-d12	240	10.298	10.304	(1.000)	128572	0.10000	
$ 158 4-Terphenyl-d14	244	9.120	9.125	(0.886)	222096	0.20000	0.2128(A)
* 198 Perylene-d12	264	12.292	12.297	(1.000)	144072	0.10000	
1 1,4-Dioxane	58	1.648	1.612	(0.494)	3958	0.20000	0.2144

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.



Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\010.D
Date : 20-AUG-2019 11:49
Client ID: SIMDX-0.2
Sample Info: SIMDX-0.2;SIMDX-0.2
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28

Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\011.D Page 1
Report Date: 01-Jun-2020 15:41

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\011.D
Lab Smp Id: SIMDX-0.5 Client Smp ID: SIMDX-0.5
Inj Date : 20-AUG-2019 12:08 MS Autotune Date: 27-FEB-2008 05:32
Operator : LG Inst ID: SV6.i
Smp Info : SIMDX-0.5;SIMDX-0.5
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\DXSIM.m
Meth Date : 23-Mar-2020 17:29 lgraham Quant Type: ISTD
Cal Date : 20-AUG-2019 11:29 Cal File: 009.D
Als bottle: 11 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14

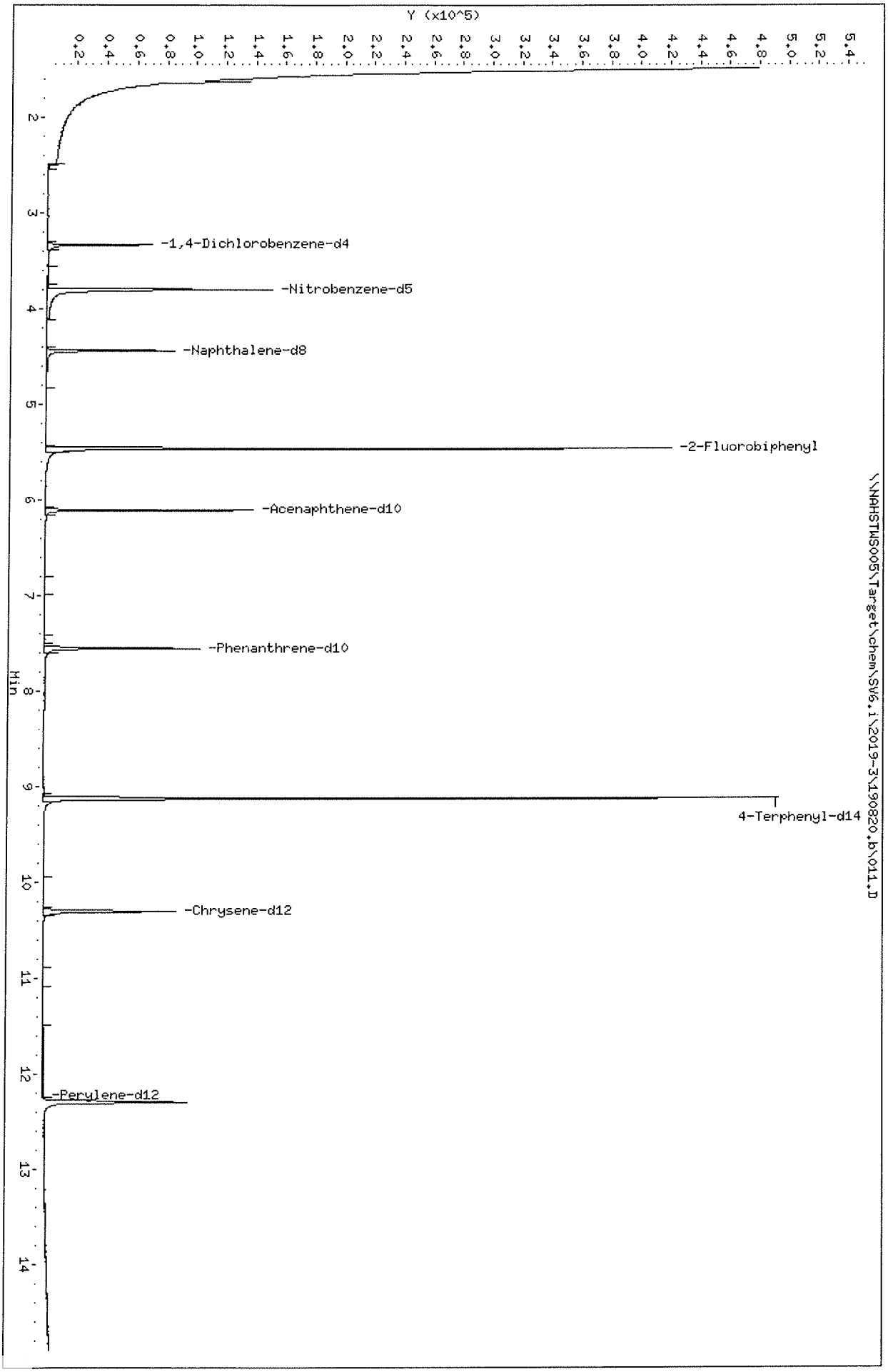
Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)
* 20 1,4-Dichlorobenzene-d4	152	3.334	3.334	(1.000)	24883	0.10000	(a)
* 45 Naphthalene-d8	136	4.439	4.442	(1.000)	93180	0.10000	
$ 33 Nitrobenzene-d5	82	3.801	3.801	(0.856)	134339	0.50000	0.5521(AM)
* 86 Acenaphthene-d10	164	6.105	6.110	(1.000)	55005	0.10000	
$ 69 2-Fluorobiphenyl	172	5.464	5.464	(0.895)	328985	0.50000	0.5038(A)
* 126 Phenanthrene-d10	188	7.550	7.555	(1.000)	104825	0.10000	
* 182 Chrysene-d12	240	10.298	10.304	(1.000)	99506	0.10000	(M)
$ 158 4-Terphenyl-d14	244	9.120	9.125	(0.894)	408835	0.50000	0.4982(A)
* 198 Perylene-d12	264	12.292	12.297	(1.000)	114944	0.10000	
1 1,4-Dioxane	58	1.630	1.612	(0.489)	7255	0.50000	0.4594(M)

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.



Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\011.D
Date : 20-AUG-2019 12:08
Client ID: SIMDX-0.5
Sample Info: SIMDX-0.5;SIMDX-0.5
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\012.D
Lab Smp Id: SIMDX-0.01 Client Smp ID: SIMDX-0.01
Inj Date : 20-AUG-2019 12:27 MS Autotune Date: 27-FEB-2008 05:32
Operator : LG Inst ID: SV6.i
Smp Info : SIMDX-0.01;SIMDX-0.01
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\DXSIM.m
Meth Date : 23-Mar-2020 17:29 lgraham Quant Type: ISTD
Cal Date : 20-AUG-2019 11:49 Cal File: 010.D
Als bottle: 12 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)
* 20 1,4-Dichlorobenzene-d4	152	3.339	3.334	(1.000)	26864	0.10000	(a)
* 45 Naphthalene-d8	136	4.439	4.442	(1.000)	99904	0.10000	
$ 33 Nitrobenzene-d5	82	3.806	3.801	(0.857)	2590	0.01000	0.009919(QM)
* 86 Acenaphthene-d10	164	6.105	6.110	(1.000)	62399	0.10000	
$ 69 2-Fluorobiphenyl	172	5.463	5.464	(0.895)	7426	0.01000	0.01003
* 126 Phenanthrene-d10	188	7.549	7.555	(1.000)	119188	0.10000	
* 182 Chrysene-d12	240	10.298	10.304	(1.000)	118702	0.10000	
$ 158 4-Terphenyl-d14	244	9.120	9.125	(0.886)	10251	0.01000	0.01054
* 198 Perylene-d12	264	12.292	12.297	(1.000)	130498	0.10000	
1 1,4-Dioxane	58	1.637	1.612	(0.490)	183	0.01000	0.01085(aM)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.

Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\012.D

Page 2

Date : 20-AUG-2019 12:27

Client ID: SIMDX-0.01

Instrument: SV6.i

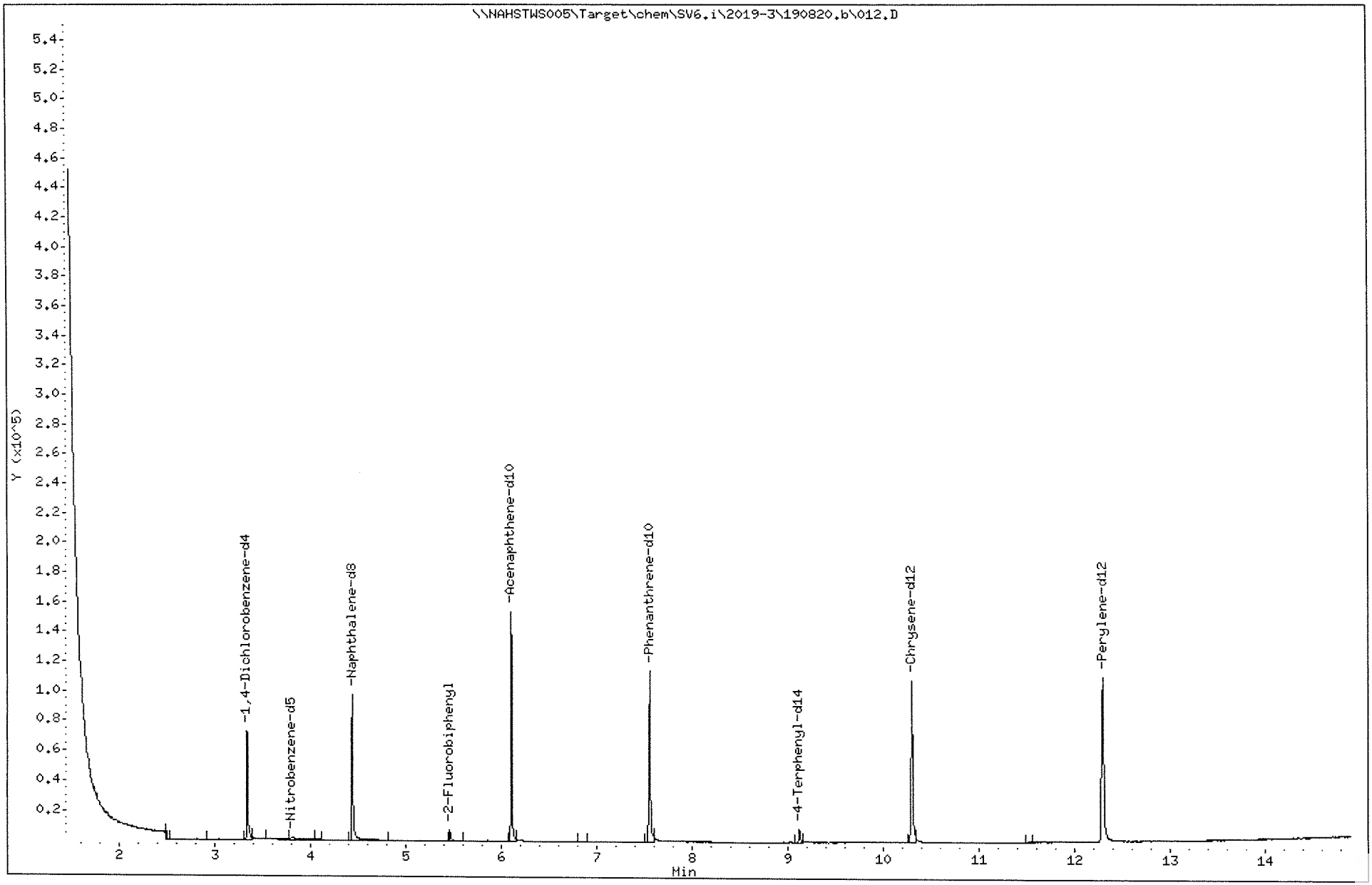
Sample Info: SIMDX-0.01;SIMDX-0.01

Purge Volume: 1000.0

Operator: LG

Column phase: RTX-5SIL MS

Column diameter: 0.28



ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\013.D
Lab Smp Id: SIMDX-ICV Client Smp ID: SIMDX-ICV
Inj Date : 20-AUG-2019 12:46 MS Autotune Date: 27-FEB-2008 05:32
Operator : LG Inst ID: SV6.i
Smp Info : SIMDX-ICV;SIMDX-ICV
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\DXSIM.m
Meth Date : 23-Mar-2020 17:29 lgraham Quant Type: ISTD
Cal Date : 20-AUG-2019 12:27 Cal File: 012.D
Als bottle: 13 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

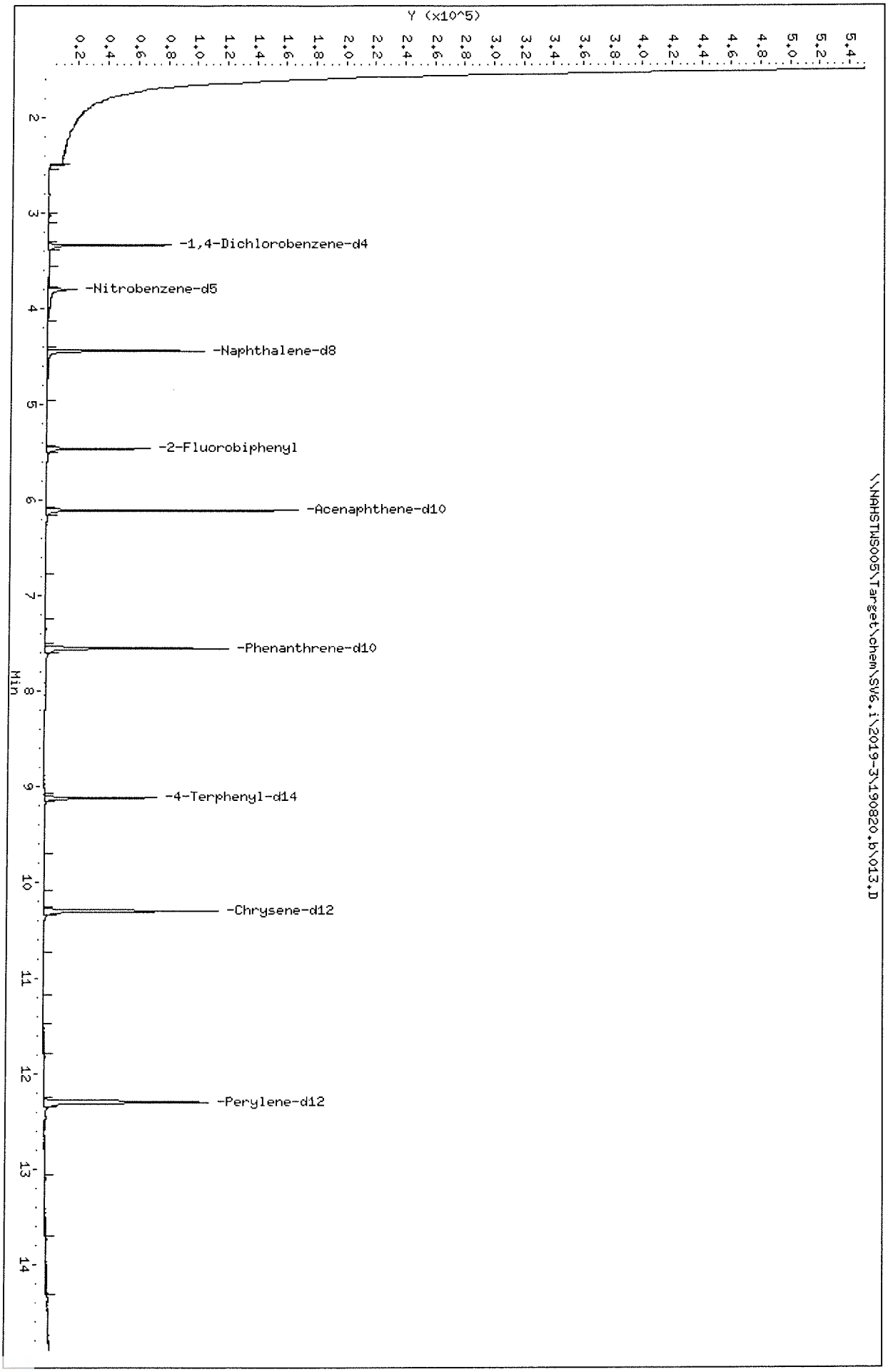
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)	
* 20 1,4-Dichlorobenzene-d4	152	3.339	3.334	(1.000)	28781	0.10000		(a)
* 45 Naphthalene-d8	136	4.439	4.442	(1.000)	106230	0.10000		
$ 33 Nitrobenzene-d5	82	3.801	3.801	(0.856)	21420	0.07722	0.07722	(M)
* 86 Acenaphthene-d10	164	6.105	6.110	(1.000)	65527	0.10000		
$ 69 2-Fluorobiphenyl	172	5.464	5.464	(0.895)	55855	0.07181	0.07181	
* 126 Phenanthrene-d10	188	7.550	7.555	(1.000)	124804	0.10000		
* 182 Chrysene-d12	240	10.298	10.304	(1.000)	120805	0.10000		(M)
$ 158 4-Terphenyl-d14	244	9.120	9.125	(0.896)	70816	0.07109	0.07109	
* 198 Perylene-d12	264	12.292	12.297	(1.000)	136762	0.10000		
1 1,4-Dioxane	58	1.634	1.612	(0.489)	1190	0.06515	0.06515	(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

Data File: \\NAHSTWS005\Target\chem\SV6.i\2019-3\190820.b\013.D
Date : 20-AUG-2019 12:46
Client ID: SIMDX-ICV
Sample Info: SIMDX-ICV;SIMDX-ICV
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28



SV06 -Logbook

Batch: 40675 **Analyst:** Andrew Neir
Date: 05-14-2020 **Reviewer:**
Method: 8270DLL/SIM **Laboratory:** Houston
Comments: MSSV003

#	Samp ID	Type	Analyzed	DF	Init Wt/Vol	Final Vol	File ID	Matrix	Status	pH
1	DFTPP	TUNE	05-14-2020 12:20 pm	1.00			001.D		Y	NA
2	SLSTD-2.5	SAMP	05-14-2020 12:30 pm	1.00			002.D		Y	NA
3	DCPD-2.5	CCV	05-14-2020 01:00 pm	1.00			003.D		Y	NA
4	SIMPAH-0.08	CCV	05-14-2020 01:36 pm	1.00			004.D		Y	NA
5	SIMDX-0.08	CCV	05-14-2020 01:54 pm	1.00			005.D		Y	NA
6	SIMPAH-0.08	CCV	05-14-2020 02:16 pm	1.00			006.D		Y	NA
7	CCB	SAMP	05-14-2020 02:40 pm	1.00			007.D		Y	NA
8	MBLK-153439	MBLK	05-14-2020 03:01 pm	1.00	33.00 mL	1.00 mL	008.D	Liquid	Y	NA
9	LCS-153439	LCS	05-14-2020 03:21 pm	1.00	33.00 mL	1.00 mL	009.D	Liquid	Y	NA
10	LCSD-153439	LCSD	05-14-2020 03:41 pm	1.00	33.00 mL	1.00 mL	010.D	Liquid	Y	NA
11	HS20050378-01	SAMP	05-14-2020 04:00 pm	1.00	33.00 mL	1.00 mL	011.D	Liquid	Y	NA
12	MBLK-153402	MBLK	05-14-2020 04:17 pm	1.00	1000.00 mL	1.00 mL	012.D	Liquid	Y	NA
13	LCS-153402	LCS	05-14-2020 04:36 pm	1.00	1000.00 mL	1.00 mL	013.D	Liquid	Y	NA
14	LCSD-153402	LCSD	05-14-2020 04:56 pm	1.00	1000.00 mL	1.00 mL	014.D	Liquid	Y	NA
15	HS20050176-01	SAMP	05-14-2020 05:15 pm	1.00	1000.00 mL	1.00 mL	015.D	Liquid	Y	NA
16	HS20050176-01	SAMP	05-14-2020 05:34 pm	10.00	1000.00 mL	1.00 mL	016.D	Liquid	Y	NA
17	HS20050176-01	SAMP	05-14-2020 05:53 pm	100.0(	1000.00 mL	1.00 mL	017.D	Liquid	Y	NA
18	HS20050176-01	SAMP	05-14-2020 06:12 pm	1000.0	1000.00 mL	1.00 mL	018.D	Liquid	Y	NA
19	SIMDX-0.08	CCV	05-14-2020 06:31 pm	1.00	1000.00 mL	1.00 mL	019.D	Liquid	Y	NA
20	HS20050202-20	SAMP	05-14-2020 06:50 pm	10000.(	15.01 gm	1.00 mL	020.D	Solid	Y	NA
21	SLSTD-2.5	SAMP	05-14-2020 07:09 pm	1.00	1000.00 mL	1.00 mL	021.D	Liquid	Y	NA
22	DCPD-2.5	SAMP	05-14-2020 07:29 pm	1.00	1000.00 mL	1.00 mL	022.D	Liquid	Y	NA

Chemical	Value
IS ID	311824-11
CAL STD ID	3111832-06/ 3111836-05/3111818-12/31111823-06
DFTPP ID	311820-01
PCP Tailing	1.21
Benz. Tailing	0.99
Routine SOP Maintenance	ACN

FORM 2
WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20050176

	CLIENT SAMPLE NO.	S1 (NBZ)#	S2 #	S3 (FBP)#	S4 #	S5 #	S6 #	S7 #	S8 #	TOT OUT
01	MBLK-153402	106	164*	128						1
02	LCS-153402	105	108	110						0
03	LCSD-153402	98	116	104						0
04	HS20050176-0	0D	0D	0D						0
05										
06										
07										
08										
09										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										

		QC LIMITS
S1 (NBZ)	= Nitrobenzene-d5	(40-140)
S2	= 4-Terphenyl-d14	(40-140)
S3 (FBP)	= 2-Fluorobiphenyl	(40-140)

\# Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20050176

Lab File ID: 001 DFTPP Injection Date: 05/14/20

Instrument ID: SV6 DFTPP Injection Time: 1220

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	46.5
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	50.8
70	Less than 2.0% of mass 69	0.2 (0.4)1
127	10.0 - 80.0% of mass 198	61.1
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 60.0% of mass 198	26.7
365	1.0 - 100.0% of mass 198	3.6
441	Present, but less than mass 443	20.8
442	50.0 - 150.0% of mass 198	132.3
443	15.0 - 24.0% of mass 442	25.3 (19.1)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SIMPAH-0.08	SIMPAH-0.08	005	05/14/20	1354
02	MBLK-153402	MBLK-153402	012	05/14/20	1617
03	LCS-153402	LCS-153402	013	05/14/20	1636
04	LCSD-153402	LCSD-153402	014	05/14/20	1656
05	HS20050176-0	HS20050176-01	017	05/14/20	1753
06	SIMPAH-0.08	SIMPAH-0.08	019	05/14/20	1831
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20050176

Instrument ID: SV6 Calibration Date: 05/14/20 Time: 1354

Lab File ID: 005 Init. Calib. Date(s): 08/20/19 08/20/19

Init. Calib. Times: 1013 1227

GC Column: RTX-5SIL MS ID: 0.28 (mm)

COMPOUND	RRF OR AMOUNT	RRF8e-002 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
1,4-Dioxane	6.3e-002	7.44e-002	0.01	18.10	20.00	AVRG
Nitrobenzene-d5	0.2610000	0.2213295	0.01	-15.20	20.00	AVRG
4-Terphenyl-d14	0.8250000	0.6773703	0.01	-17.89	20.00	AVRG
2-Fluorobiphenyl	1.1870000	1.0974831	0.01	-7.54	20.00	AVRG

FORM VII SV

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20050176

Instrument ID: SV6 Calibration Date: 05/14/20 Time: 1831

Lab File ID: 019 Init. Calib. Date(s): 08/20/19 08/20/19

Init. Calib. Times: 1013 1227

GC Column: RTX-5SIL MS ID: 0.28 (mm)

COMPOUND	RRF OR AMOUNT	RRF8e-002 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
1,4-Dioxane	6.3e-002	7.91e-002	0.01	25.56	50.00	AVRG
Nitrobenzene-d5	0.2610000	0.3237954	0.01	24.06	50.00	AVRG
4-Terphenyl-d14	0.8250000	0.6843122	0.01	-17.05	50.00	AVRG
2-Fluorobiphenyl	1.1870000	1.1262391	0.01	-5.12	50.00	AVRG

FORM VII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20050176

Lab File ID (Standard): 005 Date Analyzed: 05/14/20

Instrument ID: SV6 Time Analyzed: 1354

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	12 HOUR STD	51422	3.52	174282	4.63	81786	6.31
	UPPER LIMIT	102844	4.02	348564	5.13	163572	6.81
	LOWER LIMIT	25711	3.02	87141	4.13	40893	5.81
	CLIENT SAMPLE NO.						
01	MBLK-153402	57584	3.52	221199	4.63	94714	6.31
02	LCS-153402	67758	3.52	171374	4.63	83379	6.31
03	LCSD-153402	61227	3.52	172133	4.63	87828	6.31
04	HS20050176-0	33258	3.52	133844	4.63	68776	6.31
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: HS20050176

Lab File ID (Standard): 005 Date Analyzed: 05/14/20

Instrument ID: SV6 Time Analyzed: 1354

		IS4 (PHN) AREA	#	RT	#	IS5 (CRY) AREA	#	RT	#	IS6 (PRY) AREA	#	RT	#
	12 HOUR STD	150706		7.76		123782		10.61		155410		12.68	
	UPPER LIMIT	301412		8.26		247564		11.11		310820		13.18	
	LOWER LIMIT	75353		7.26		61891		10.11		77705		12.18	
	CLIENT SAMPLE NO.												
01	MBLK-153402	165299		7.77		166022		10.60		171820		12.68	
02	LCS-153402	142581		7.77		133004		10.60		143212		12.67	
03	LCSD-153402	147960		7.77		125129		10.60		150240		12.67	
04	HS20050176-0	113407		7.77		97987		10.60		116469		12.68	
05													
06													
07													
08													
09													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

Data File: \\NAHSTWS005\Target\chem\SV6.i\200514.b\001.D

Date : 14-MAY-2020 12:20

Client ID: DFTPP

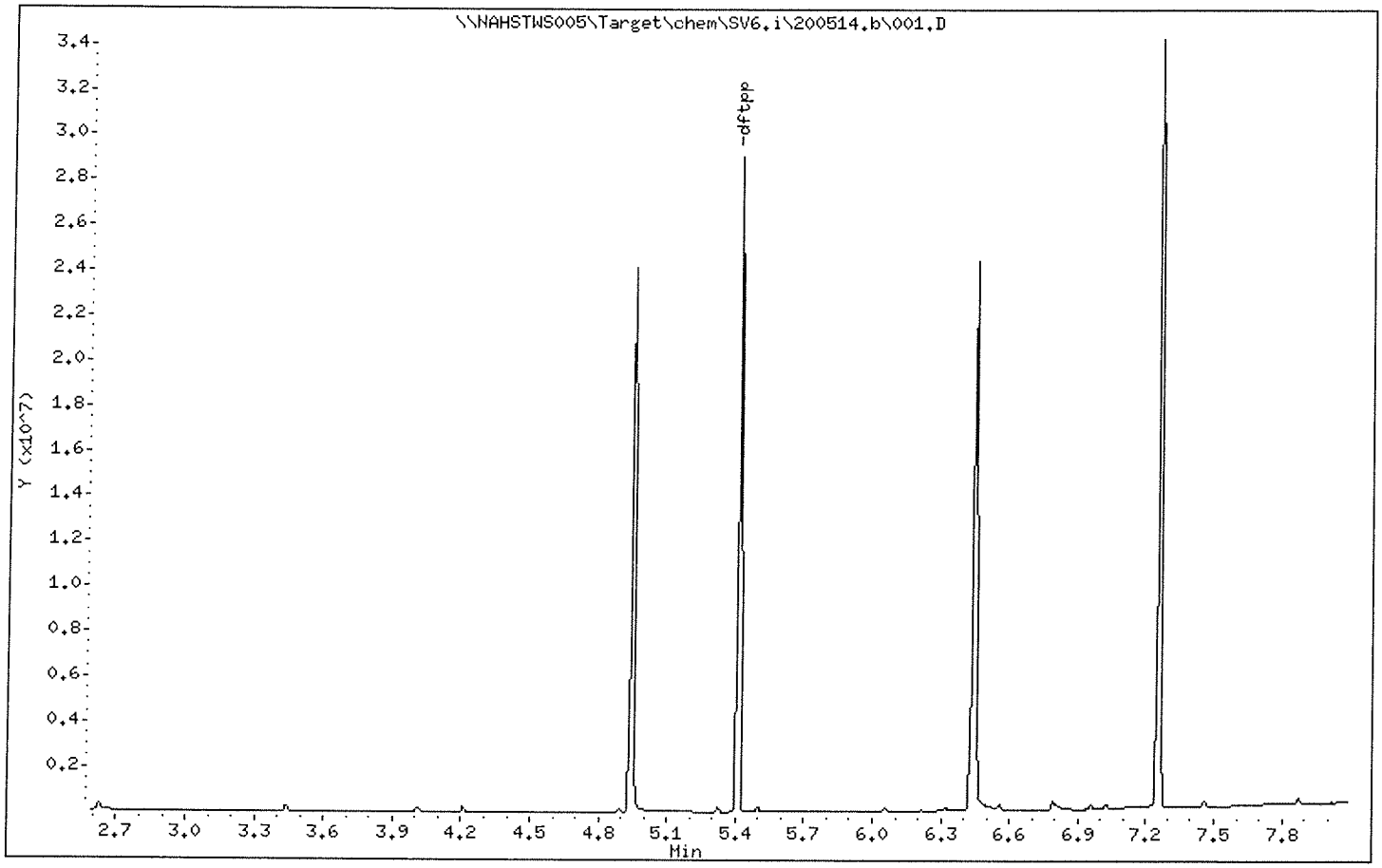
Instrument: SV6.i

Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: LG

Column phase: DB-5MS

Column diameter: 0.25



Data File: \\NAHSTWS005\Target\chem\SV6.i\200514.b\001.D

Date : 14-MAY-2020 12:20

Client ID: DFTPP

Instrument: SV6.i

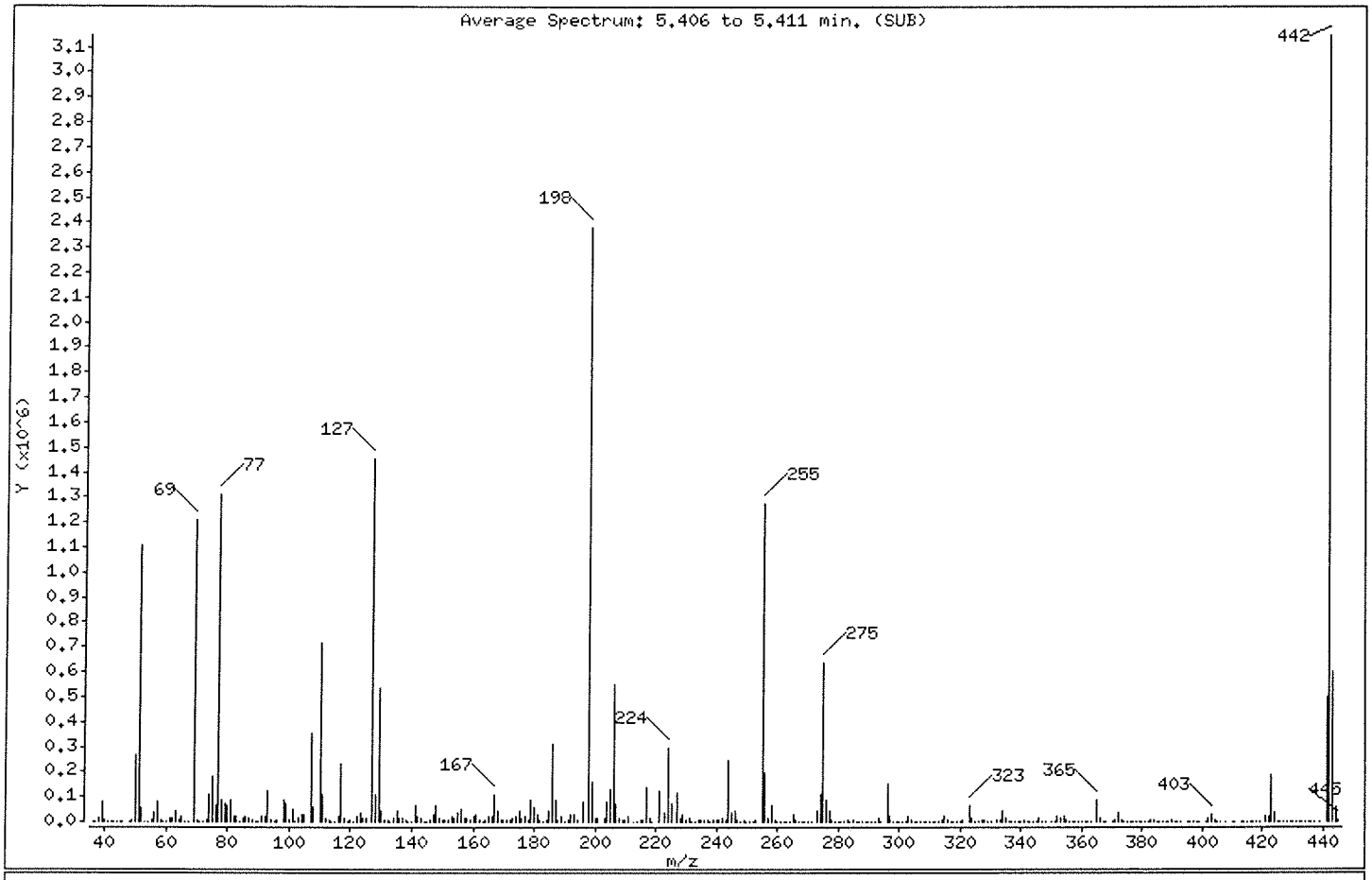
Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: LG

Column phase: DB-5MS

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	46.50
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	50.79
70	Less than 2.00% of mass 69	0.21 (0.42)
127	10.00 - 80.00% of mass 198	61.11
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.74
275	10.00 - 60.00% of mass 198	26.66
365	1.00 - 100.00% of mass 198	3.59
441	Present, but less than mass 443	20.85
442	50.00 - 150.00% of mass 198	132.33
443	15.00 - 24.00% of mass 442	25.31 (19.12)

Data File: \\NAHSTWS005\Target\chem\SV6.i\200514.b\001.D

Date : 14-MAY-2020 12:20

Client ID: DFTPP

Instrument: SV6.i

Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: LG

Column phase: DB-5MS

Column diameter: 0.25

Data File: 001.D
Spectrum: Average Spectrum: 5.406 to 5.411 min. (SUB)
Location of Maximum: 442.00
Number of points: 381

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	280	138.00	5108	241.00	7060	342.00	2339
37.00	3427	139.00	2410	242.00	15648	343.00	304
38.00	11348	140.00	2519	243.00	8312	344.00	144
39.00	76272	141.00	62752	244.00	242688	345.00	288
40.00	3779	142.00	19928	245.00	32904	346.00	13567
41.00	1539	143.00	14549	246.00	43224	347.00	2346
42.00	23	144.00	3354	247.00	9270	348.00	467
43.00	339	145.00	3499	248.00	1982	350.00	843
44.00	363	146.00	10366	249.00	10037	351.00	1312
45.00	1707	147.00	28944	250.00	2047	352.00	19888
46.00	76	148.00	61784	251.00	2776	353.00	14361
48.00	250	149.00	11011	252.00	2758	354.00	21568
49.00	6457	150.00	4035	253.00	6378	355.00	3865
50.00	268288	151.00	8397	255.00	1273344	356.00	307
51.00	1105920	152.00	5544	256.00	191808	357.00	302
52.00	54960	153.00	18344	257.00	14018	358.00	557
53.00	2181	154.00	14571	258.00	66816	359.00	1628
54.00	32	155.00	33624	259.00	9998	360.00	536
55.00	4921	156.00	50416	260.00	2352	361.00	558
56.00	33736	157.00	11383	261.00	2378	362.00	383
57.00	81096	158.00	11325	262.00	639	363.00	396
58.00	3938	159.00	8131	263.00	752	365.00	85392
59.00	740	160.00	19024	264.00	2516	366.00	11871
60.00	652	161.00	26912	265.00	26784	367.00	855
61.00	13103	162.00	7331	266.00	3893	368.00	208
62.00	16113	163.00	2106	267.00	406	370.00	2384
63.00	44208	164.00	4194	268.00	549	371.00	6877
64.00	6552	165.00	20120	269.00	169	372.00	36488
65.00	23184	166.00	19472	270.00	1801	373.00	9608
66.00	1401	167.00	109960	271.00	3249	374.00	430
67.00	1149	168.00	40112	273.00	42728	375.00	191
69.00	1208320	169.00	9561	274.00	111008	376.00	32
70.00	5114	170.00	4260	275.00	634176	377.00	871
71.00	281	171.00	5091	276.00	84392	378.00	178
72.00	55	172.00	9950	277.00	45080	379.00	200

Data File: \\NAHSTWS005\Target\chem\SV6.i\200514.b\001.D

Date : 14-MAY-2020 12:20

Client ID: DFTPP

Instrument: SV6.i

Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: LG

Column phase: DB-5MS

Column diameter: 0.25

Data File: 001.D
Spectrum: Average Spectrum: 5.406 to 5.411 min. (SUB)
Location of Maximum: 442.00
Number of points: 381

m/z	Y	m/z	Y	m/z	Y	m/z	Y
73.00	8321	173.00	13612	278.00	7813	380.00	89
74.00	107200	174.00	23528	279.00	1763	381.00	307
75.00	178496	175.00	41456	280.00	257	382.00	137
76.00	61776	176.00	16051	281.00	342	383.00	9952
77.00	1312768	177.00	19456	282.00	1356	384.00	3626
78.00	83680	178.00	6653	283.00	5331	385.00	1225
79.00	72056	179.00	84472	284.00	3585	386.00	223
80.00	62960	180.00	56152	285.00	8412	387.00	296
81.00	89704	181.00	26888	286.00	2202	388.00	146
82.00	21672	182.00	6013	287.00	294	389.00	676
83.00	22504	183.00	2431	288.00	660	390.00	6093
84.00	2293	184.00	6901	289.00	2600	391.00	3504
85.00	14522	185.00	41816	290.00	1560	392.00	3119
86.00	22304	186.00	310336	291.00	1619	393.00	294
87.00	11656	187.00	87488	292.00	2828	395.00	710
88.00	3651	188.00	8945	293.00	11070	396.00	333
89.00	2201	189.00	19208	294.00	3354	397.00	575
90.00	583	190.00	3294	296.00	154560	398.00	9
91.00	18624	191.00	9549	297.00	21408	399.00	217
92.00	22384	192.00	25816	298.00	1500	401.00	2945
93.00	123880	193.00	26392	299.00	598	402.00	15866
94.00	7933	194.00	5949	300.00	457	403.00	25920
95.00	1946	196.00	77576	301.00	2456	404.00	8001
96.00	5978	198.00	2378752	302.00	3322	405.00	1118
98.00	89760	199.00	160384	303.00	19792	406.00	211
99.00	74416	200.00	12305	304.00	5291	408.00	345
100.00	6513	201.00	12562	305.00	1000	410.00	1086
101.00	50232	203.00	15704	306.00	307	411.00	192
102.00	3034	204.00	76056	307.00	378	413.00	208
103.00	16504	205.00	132608	308.00	2420	414.00	124
104.00	29640	206.00	548800	309.00	1145	415.00	1485
105.00	27032	207.00	70344	310.00	2338	416.00	514
107.00	355264	208.00	17312	311.00	834	417.00	96
108.00	58848	209.00	4989	312.00	644	418.00	277
110.00	717056	210.00	10396	313.00	1175	419.00	637

Data File: \\NAHSTWS005\Target\chem\SV6.i\200514.b\001.D

Date : 14-MAY-2020 12:20

Client ID: DFTPP

Instrument: SV6.i

Sample Info: DFTPP;DFTPP;3;;DFTPP

Operator: LG

Column phase: DB-5MS

Column diameter: 0.25

Data File: 001.D
Spectrum: Average Spectrum: 5.406 to 5.411 min. (SUB)
Location of Maximum: 442.00
Number of points: 381

m/z	Y	m/z	Y	m/z	Y	m/z	Y
111.00	105848	211.00	21360	314.00	8775	421.00	25144
112.00	12054	213.00	1777	315.00	18728	422.00	25096
113.00	3801	214.00	410	316.00	10106	423.00	186560
114.00	1074	215.00	6125	317.00	2622	424.00	37032
115.00	701	216.00	4569	318.00	263	425.00	3459
116.00	20928	217.00	138880	319.00	664	426.00	413
117.00	232256	218.00	17424	320.00	1163	427.00	287
118.00	17472	219.00	1963	321.00	7115	428.00	80
119.00	1730	221.00	123400	323.00	61936	429.00	99
120.00	4447	223.00	33800	324.00	11064	430.00	318
121.00	1626	224.00	295808	325.00	1211	431.00	141
122.00	24432	225.00	73632	326.00	1542	432.00	231
123.00	37352	227.00	118296	327.00	10738	433.00	382
124.00	15658	228.00	16198	328.00	5528	434.00	569
125.00	15956	229.00	25592	329.00	1212	435.00	1338
127.00	1453568	230.00	3741	330.00	737	436.00	969
128.00	111040	231.00	11019	332.00	5042	437.00	1911
129.00	536320	232.00	1879	333.00	7932	439.00	1916
130.00	41720	233.00	1848	334.00	39904	441.00	496000
131.00	8655	234.00	6936	335.00	10902	442.00	3148288
132.00	5773	235.00	8674	336.00	1402	443.00	602112
133.00	754	236.00	5552	337.00	289	444.00	55208
134.00	14816	237.00	9260	338.00	377	445.00	3761
135.00	40456	238.00	1321	339.00	1195		
136.00	15295	239.00	5062	340.00	1006		
137.00	17664	240.00	4175	341.00	7045		

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS005\Target\chem\SV6.i\200514.b\005.D
Lab Smp Id: SIMPAH-0.08 Client Smp ID: SIMPAH-0.08
Inj Date : 14-MAY-2020 13:54 MS Autotune Date: 27-FEB-2008 05:32
Operator : LG Inst ID: SV6.i
Smp Info : SIMPAH-0.08;SIMPAH-0.08
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\SV6.i\200514.b\DXSIM.m
Meth Date : 01-Jun-2020 15:53 SV6.i Quant Type: ISTD
Cal Date : 20-AUG-2019 12:27 Cal File: 012.D
Als bottle: 5 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14
Processing Host: NAHSTW7133

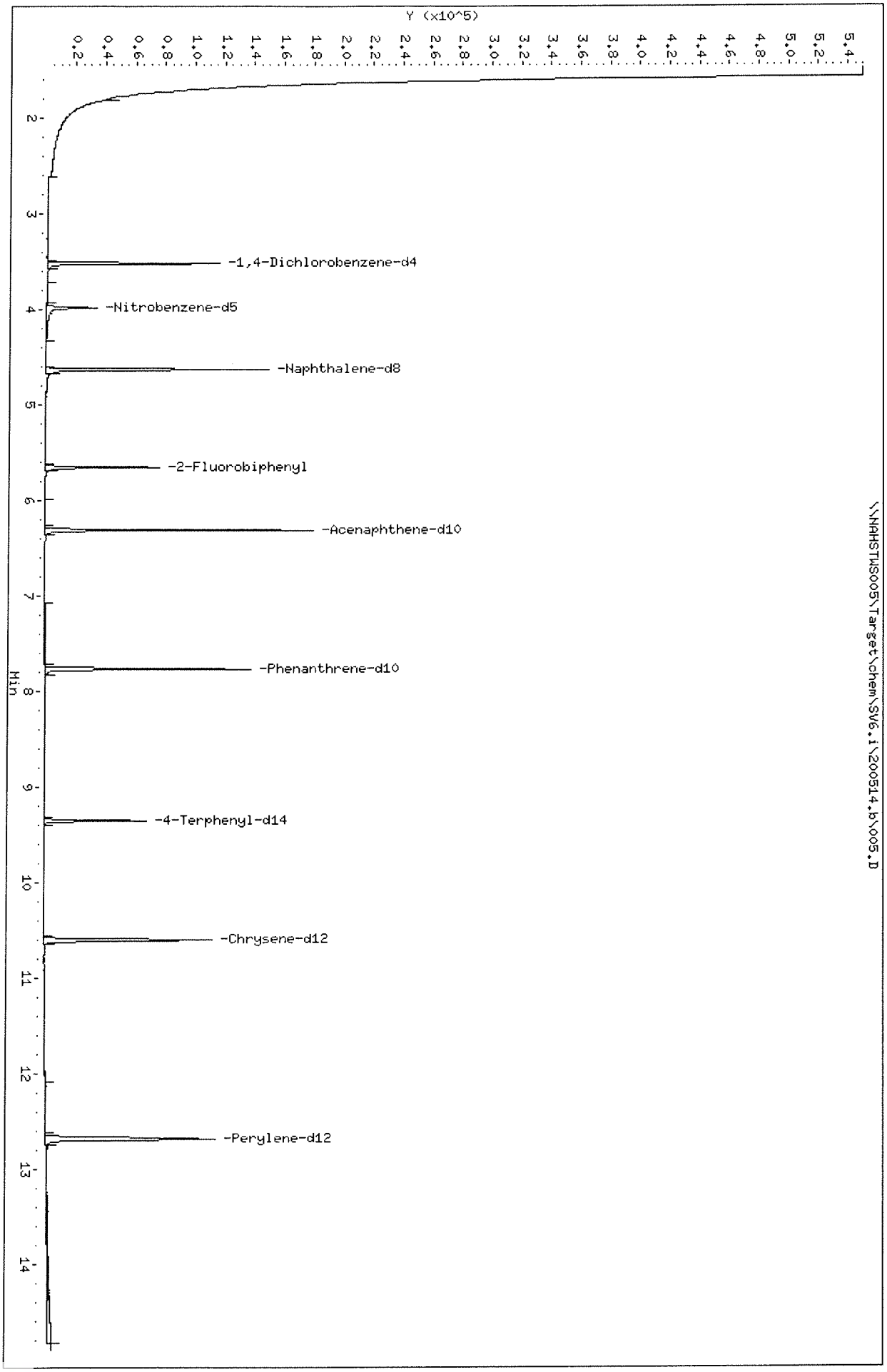
Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)	
* 20 1,4-Dichlorobenzene-d4	152	3.518	3.518	(1.000)	51422	0.10000		(aQM)
* 45 Naphthalene-d8	136	4.631	4.631	(1.000)	174282	0.10000		
$ 33 Nitrobenzene-d5	82	3.985	3.985	(0.860)	30859	0.08000	0.06781	(QM)
* 86 Acenaphthene-d10	164	6.309	6.309	(1.000)	81786	0.10000		
$ 69 2-Fluorobiphenyl	172	5.653	5.653	(0.896)	71807	0.08000	0.07396	
* 126 Phenanthrene-d10	188	7.764	7.764	(1.000)	150706	0.10000		
* 182 Chrysene-d12	240	10.605	10.605	(1.000)	123782	0.10000		(M)
$ 158 4-Terphenyl-d14	244	9.351	9.351	(1.000)	67077	0.08000	0.06571	
* 198 Perylene-d12	264	12.683	12.683	(1.000)	155410	0.10000		
1 1,4-Dioxane	58	1.814	1.814	(0.516)	3059	0.08000	0.09374	(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.



Data File: \\NAHSTWS005\Target\chem\SV6.i\200514.b\005.D
Date : 14-MAY-2020 13:54
Client ID: SIMPAH-0.08
Sample Info: SIMPAH-0.08;SIMPAH-0.08
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28

Data File: \\NAHSTWS005\Target\chem\SV6.i\200514.b\012.D
Report Date: 01-Jun-2020 15:53

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS005\Target\chem\SV6.i\200514.b\012.D
Lab Smp Id: MBLK-153402 Client Smp ID: MBLK-153402
Inj Date : 14-MAY-2020 16:17 MS Autotune Date: 27-FEB-2008 05:32
Operator : LG Inst ID: SV6.i
Smp Info : MBLK-153402;MBLK-153402;3;;BLANK
Misc Info : HS20050176;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\SV6.i\200514.b\DXSIM.m
Meth Date : 01-Jun-2020 15:53 SV6.i Quant Type: ISTD
Cal Date : 20-AUG-2019 12:27 Cal File: 012.D
Als bottle: 12 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14
Processing Host: NAHSTW7133

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

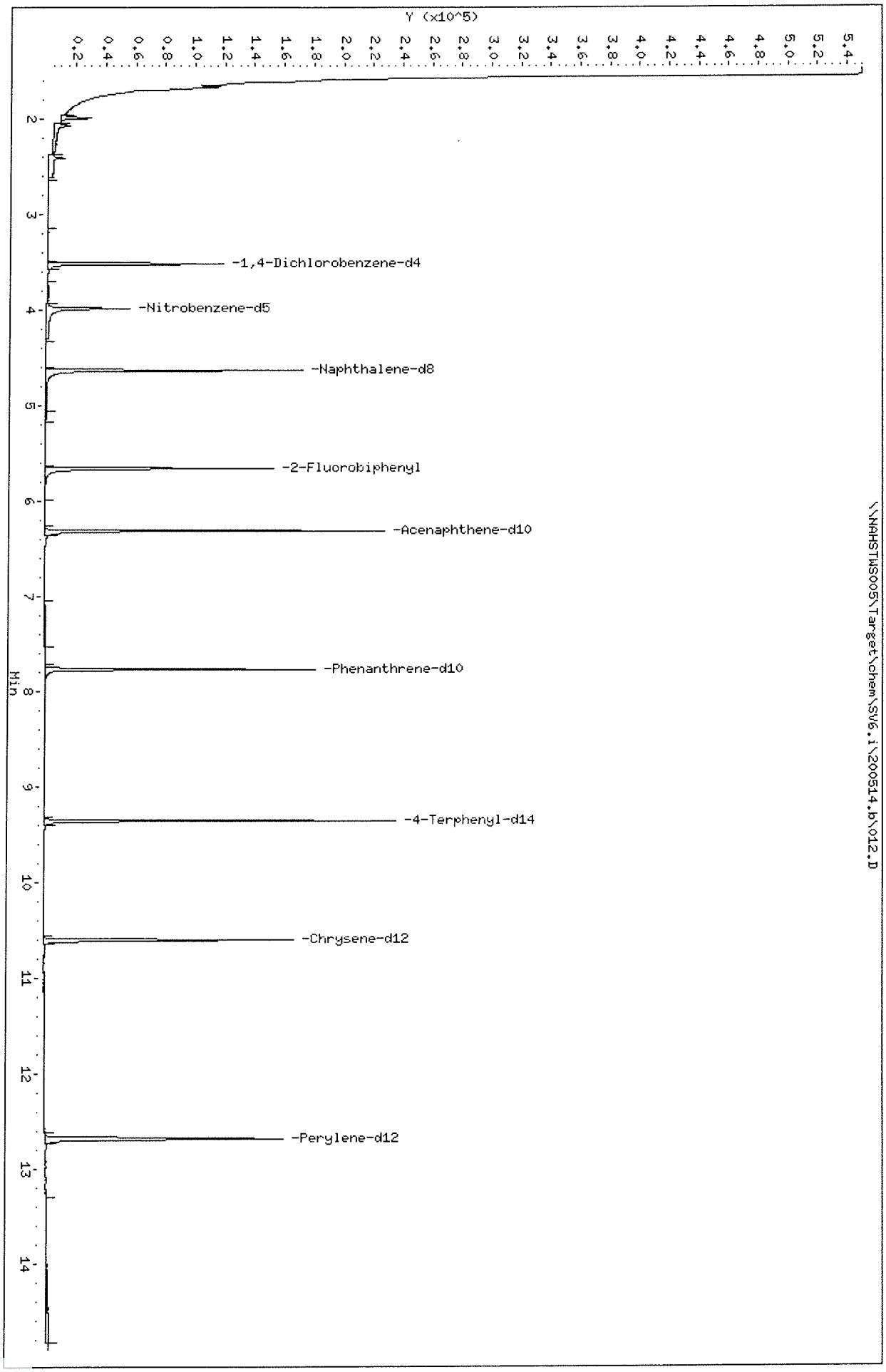
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)	
* 20 1,4-Dichlorobenzene-d4	152	3.518	3.518	(1.000)	57584	0.10000		(aM)
* 45 Naphthalene-d8	136	4.632	4.631	(1.000)	221199	0.10000		(M)
$ 33 Nitrobenzene-d5	82	3.985	3.985	(0.860)	48839	0.08456	0.08456	(M)
* 86 Acenaphthene-d10	164	6.310	6.309	(1.000)	94714	0.10000		
$ 69 2-Fluorobiphenyl	172	5.656	5.653	(0.896)	115211	0.10247	0.1025	(M)
* 126 Phenanthrene-d10	188	7.765	7.764	(1.000)	165299	0.10000		
* 182 Chrysene-d12	240	10.599	10.605	(1.000)	166022	0.10000		(M)
$ 158 4-Terphenyl-d14	244	9.351	9.351	(0.882)	179160	0.13086	0.1309	(RM)
* 198 Perylene-d12	264	12.678	12.683	(1.000)	171820	0.10000		

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: \\NAHSTWS005\Target\chem\SV6.i\200514.b\012.D
Date : 14-MAY-2020 16:17
Client ID: MBLK-153402
Sample Info: MBLK-153402;MBLK-153402;3;;BLANK
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28



Data File: \\NAHSTWS005\Target\chem\SV6.i\200514.b\013.D
Report Date: 01-Jun-2020 15:53

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS005\Target\chem\SV6.i\200514.b\013.D
Lab Smp Id: LCS-153402 Client Smp ID: LCS-153402
Inj Date : 14-MAY-2020 16:36 MS Autotune Date: 27-FEB-2008 05:32
Operator : LG Inst ID: SV6.i
Smp Info : LCS-153402;LCS-153402;3;;LCS
Misc Info : HS20050176;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\SV6.i\200514.b\DXSIM.m
Meth Date : 01-Jun-2020 15:53 SV6.i Quant Type: ISTD
Cal Date : 20-AUG-2019 12:27 Cal File: 012.D
Als bottle: 13 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14
Processing Host: NAHSTW7133

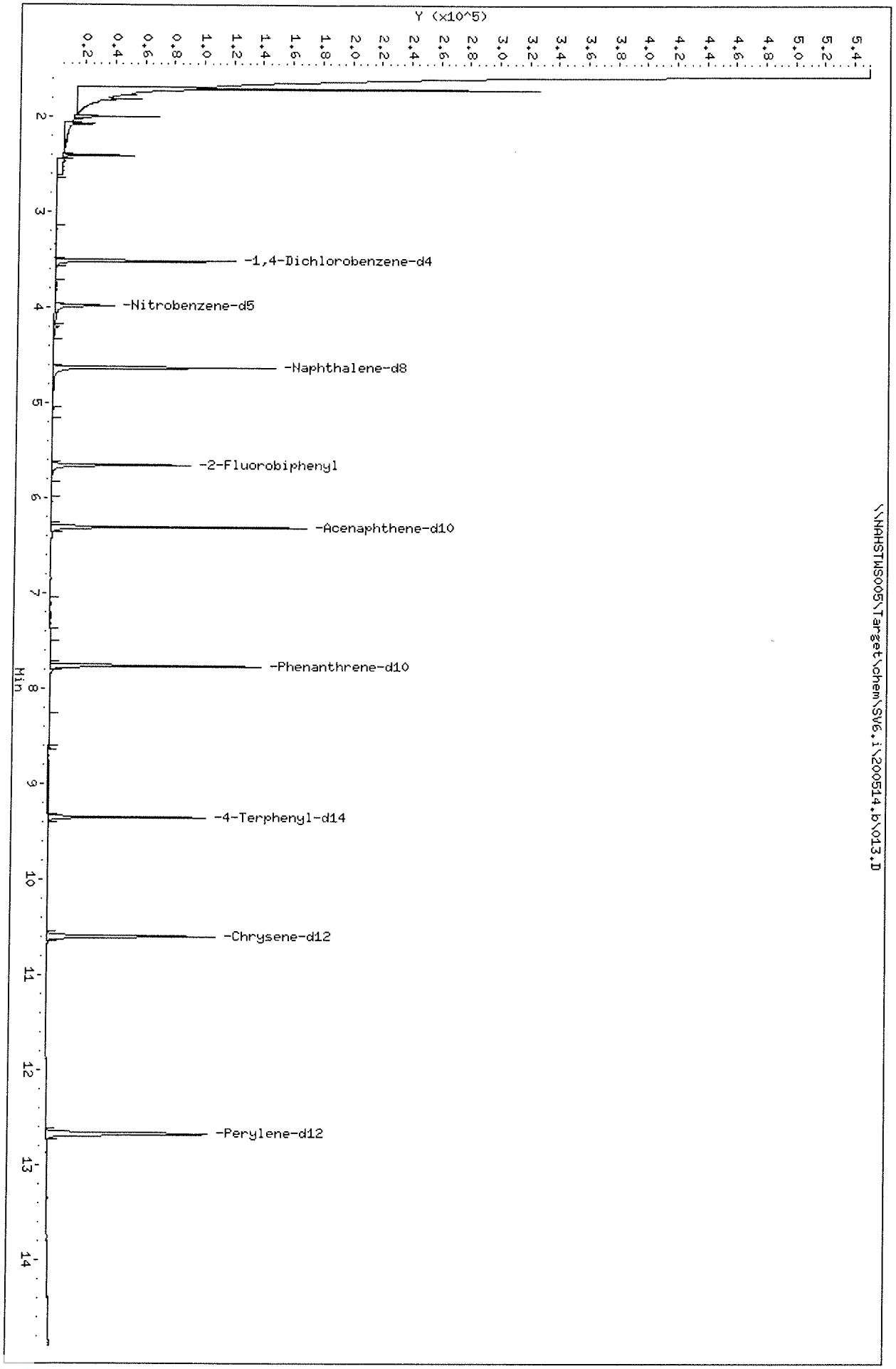
Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)	
* 20 1,4-Dichlorobenzene-d4	152	3.518	3.518	(1.000)	67758	0.10000		(aM)
* 45 Naphthalene-d8	136	4.632	4.631	(1.000)	171374	0.10000		(M)
$ 33 Nitrobenzene-d5	82	3.985	3.985	(0.860)	37618	0.08407	0.08407	(M)
* 86 Acenaphthene-d10	164	6.310	6.309	(1.000)	83379	0.10000		
$ 69 2-Fluorobiphenyl	172	5.656	5.653	(0.897)	86886	0.08779	0.08778	
* 126 Phenanthrene-d10	188	7.765	7.764	(1.000)	142581	0.10000		
* 182 Chrysene-d12	240	10.599	10.605	(1.000)	133004	0.10000		(M)
$ 158 4-Terphenyl-d14	244	9.351	9.351	(1.000)	95257	0.08685	0.08685	
* 198 Perylene-d12	264	12.673	12.683	(1.000)	143212	0.10000		
1 1,4-Dioxane	58	1.818	1.814	(0.517)	4260	0.09907	0.09907	(aMH)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.



Data File: \\NAHSTWS005\Target\chem\SV6.i\200514.b\013.D
Date : 14-MAY-2020 16:36
Client ID: LCS-153402
Sample Info: LCS-153402;LCS-153402;3;;LCS
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28

Data File: \\NAHSTWS005\Target\chem\SV6.i\200514.b\013.D

Date : 14-MAY-2020 16:36

Client ID: LCS-153402

Instrument: SV6.i

Sample Info: LCS-153402;LCS-153402;3;;LCS

Purge Volume: 1000.0

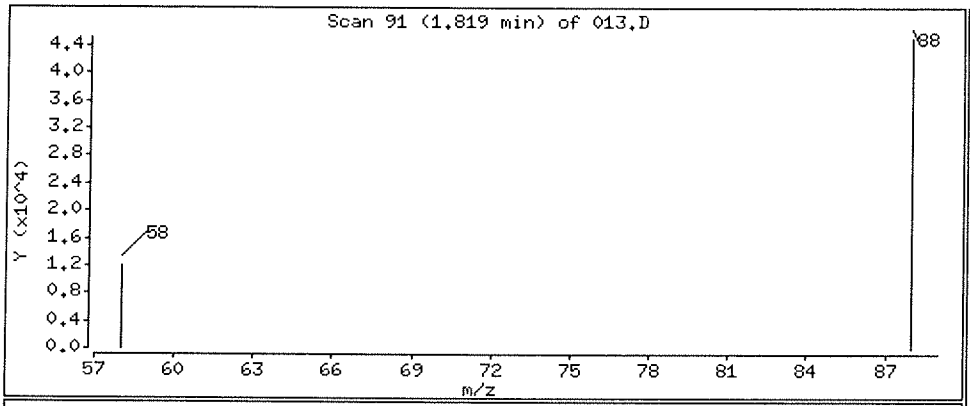
Operator: LG

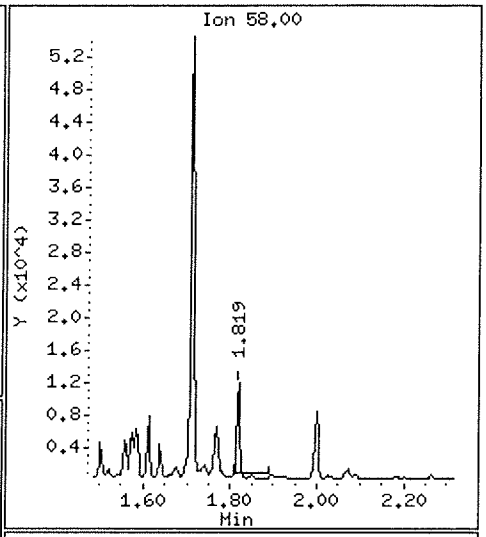
Column phase: RTX-5SIL MS

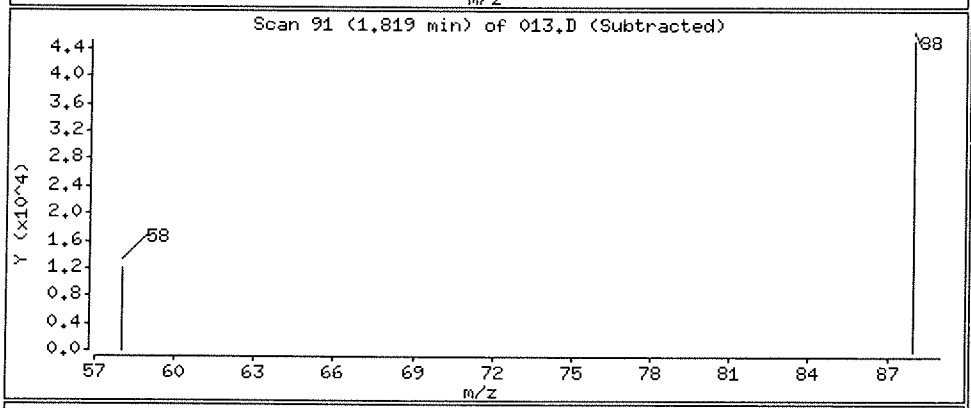
Column diameter: 0.28

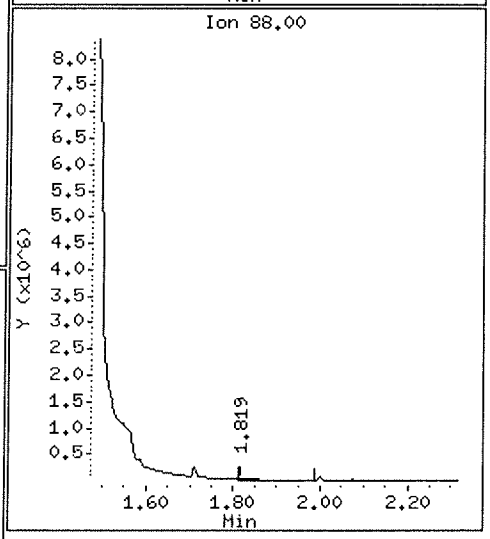
1 1,4-Dioxane

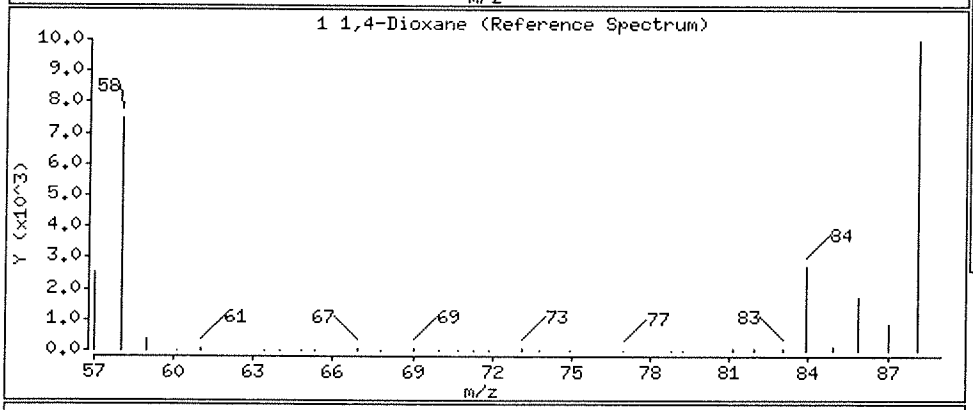
Concentration: 0.09907 ug/L

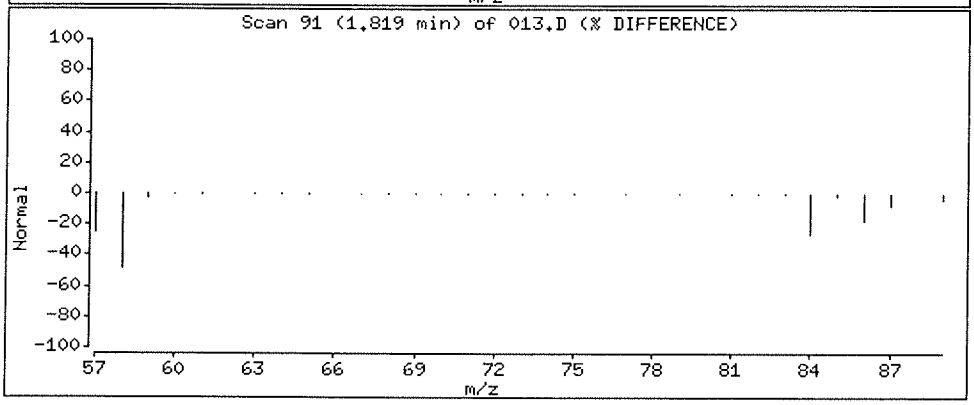












Data File: \\NAHSTWS005\Target\chem\SV6.i\200514.b\014.D Page 1
Report Date: 01-Jun-2020 16:05

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS005\Target\chem\SV6.i\200514.b\014.D
Lab Smp Id: LCSD-153402 Client Smp ID: LCSD-153402
Inj Date : 14-MAY-2020 16:56 MS Autotune Date: 27-FEB-2008 05:32
Operator : LG Inst ID: SV6.i
Smp Info : LCSD-153402;LCSD-153402;3;;LCSD
Misc Info : HS20050176;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\SV6.i\200514.b\DXSIMEND.m
Meth Date : 01-Jun-2020 15:57 SV6.i Quant Type: ISTD
Cal Date : 20-AUG-2019 12:08 Cal File: 011.D
Als bottle: 14 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14
Processing Host: NAHSTW7133

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)	
* 20 1,4-Dichlorobenzene-d4	152	3.518	3.523	(1.000)	61227	0.10000		(aM)
* 45 Naphthalene-d8	136	4.632	4.632	(1.000)	172133	0.10000		(M)
$ 33 Nitrobenzene-d5	82	3.985	3.985	(0.860)	35308	0.07856	0.07856	(M)
* 86 Acenaphthene-d10	164	6.310	6.310	(1.000)	87828	0.10000		
$ 69 2-Fluorobiphenyl	172	5.656	5.657	(0.896)	86697	0.08316	0.08316	
* 126 Phenanthrene-d10	188	7.765	7.765	(1.000)	147960	0.10000		
* 182 Chrysene-d12	240	10.599	10.599	(1.000)	125129	0.10000		(M)
$ 158 4-Terphenyl-d14	244	9.351	9.351	(1.000)	96004	0.09304	0.09304	
* 198 Perylene-d12	264	12.673	12.673	(1.000)	150240	0.10000		
1 1,4-Dioxane	58	1.829	1.844	(0.520)	4195	0.10796	0.1080	(aMH)

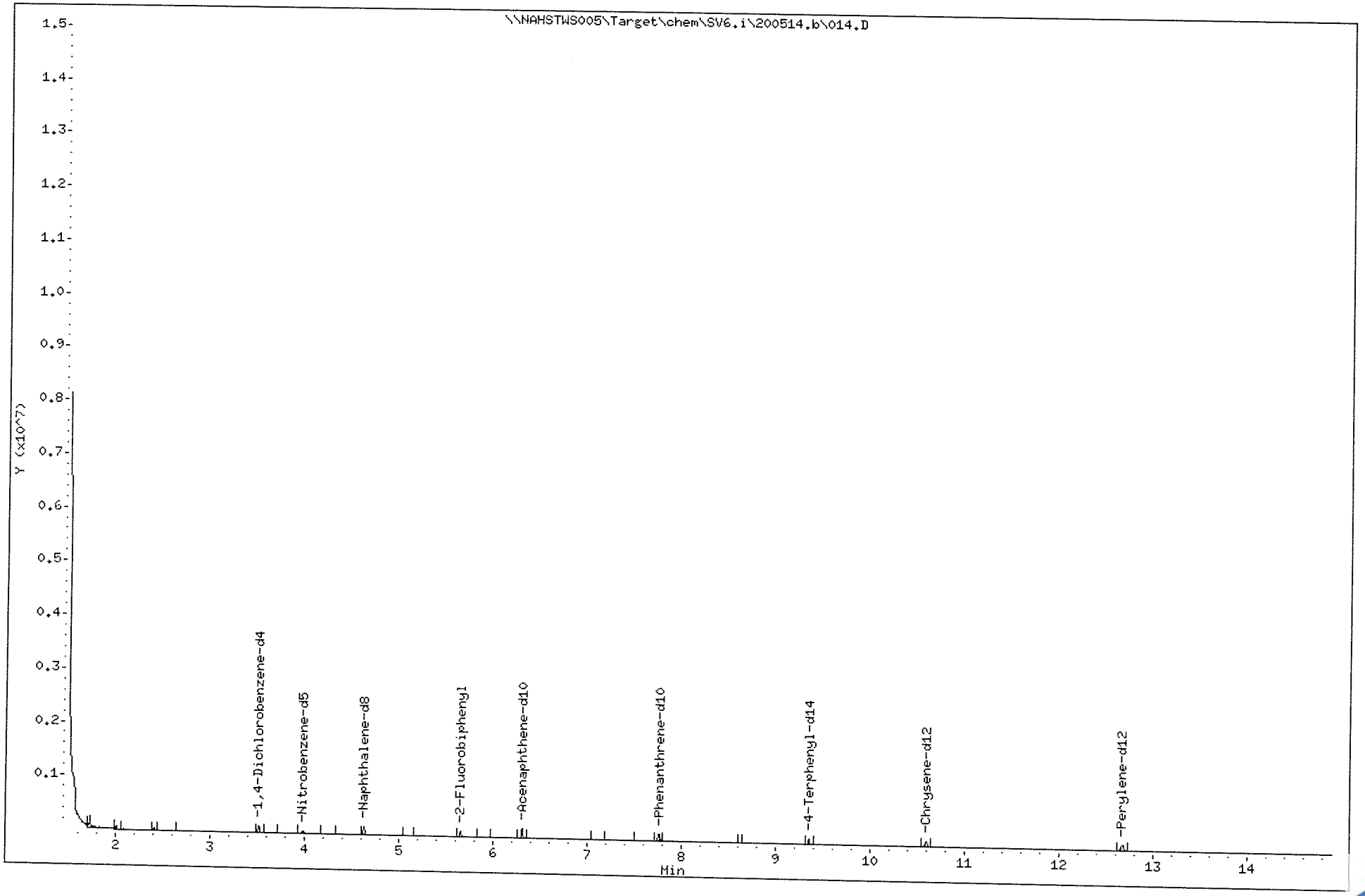
QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Data File: \\NAHSTWS005\Target\chem\SV6.i\200514.b\014.D
Date : 14-MAY-2020 16:56
Client ID: LCSD-153402
Sample Info: LCSD-153402;LCSD-153402;3;;LCSD
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i

Operator: LG
Column diameter: 0.28



Data File: \\NAHSTWS005\Target\chem\SV6.i\200514.b\017.D Page 1
Report Date: 01-Jun-2020 15:55

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS005\Target\chem\SV6.i\200514.b\017.D
Lab Smp Id: HS20050176-01 Client Smp ID: HS20050176-01
Inj Date : 14-MAY-2020 17:53 MS Autotune Date: 27-FEB-2008 05:32
Operator : LG Inst ID: SV6.i
Smp Info : HS20050176-01;HS20050176-01
Misc Info : HS20050176;1;0;100
Comment :
Method : \\NAHSTWS005\Target\chem\SV6.i\200514.b\DXSIM.m
Meth Date : 01-Jun-2020 15:53 SV6.i Quant Type: ISTD
Cal Date : 20-AUG-2019 12:27 Cal File: 012.D
Als bottle: 17
Dil Factor: 100.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14
Processing Host: NAHSTW7133

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	100.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

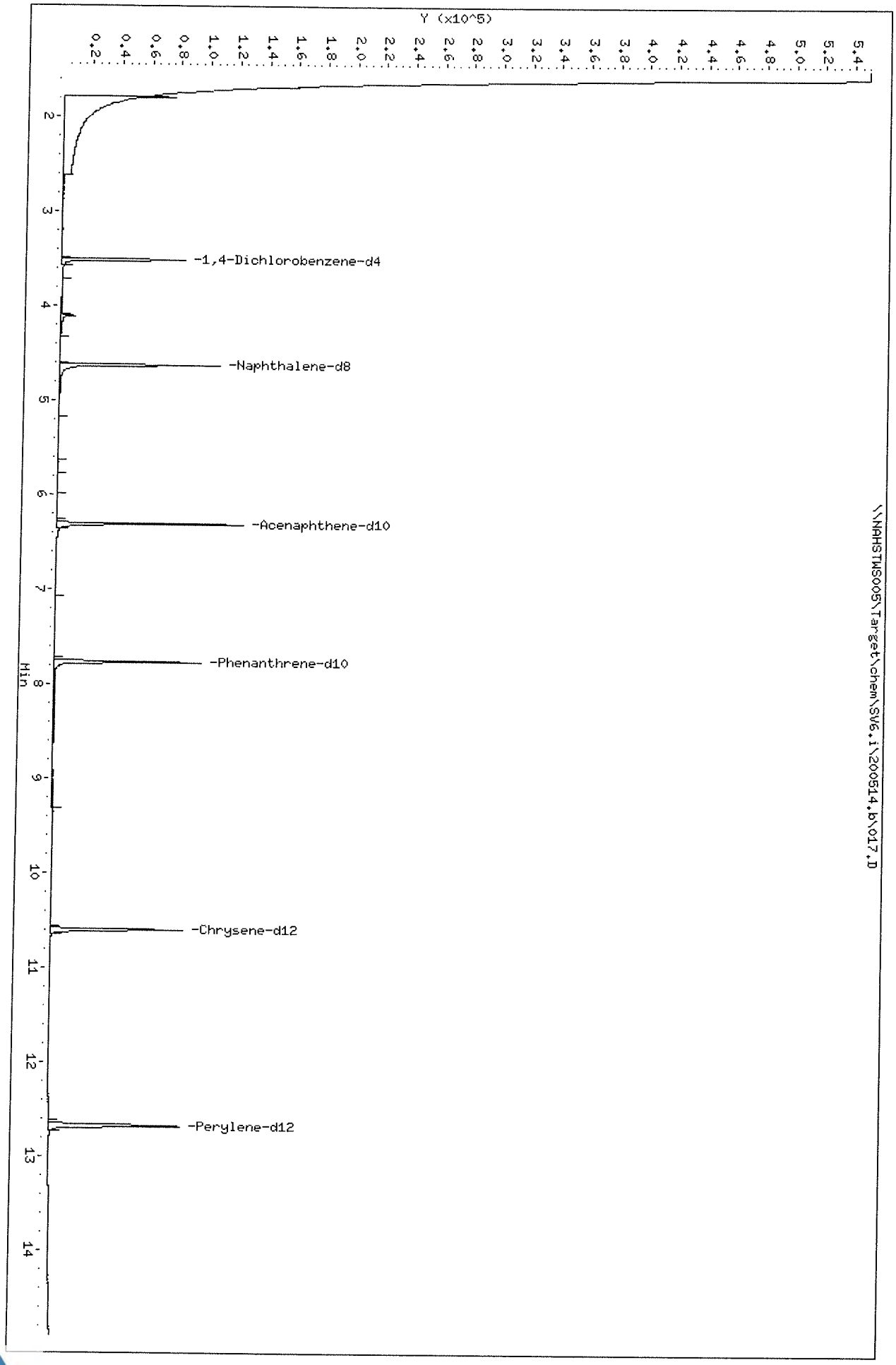
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)	
* 20 1,4-Dichlorobenzene-d4	152	3.518	3.518	(1.000)	33258	0.10000		(a)
* 45 Naphthalene-d8	136	4.632	4.631	(1.000)	133844	0.10000		(M)
* 86 Acenaphthene-d10	164	6.310	6.309	(1.000)	68776	0.10000		
* 126 Phenanthrene-d10	188	7.765	7.764	(1.000)	113407	0.10000		
* 182 Chrysene-d12	240	10.599	10.605	(1.000)	97987	0.10000		(M)
* 198 Perylene-d12	264	12.678	12.683	(1.000)	116469	0.10000		
1 1,4-Dioxane	58	1.796	1.814	(0.511)	7076	0.33526	33.52	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

Data File: \\NAHSTWS005\Target\chem\SV6.i\200514.b\017.D
Date : 14-MAY-2020 17:53
Client ID: HS20050176-01
Sample Info: HS20050176-01;HS20050176-01
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28



Data File: \\NAHSTWS005\Target\chem\SV6.i\200514.b\017.D

Date : 14-MAY-2020 17:53

Client ID: HS20050176-01

Instrument: SV6.i

Sample Info: HS20050176-01;HS20050176-01

Purge Volume: 1000.0

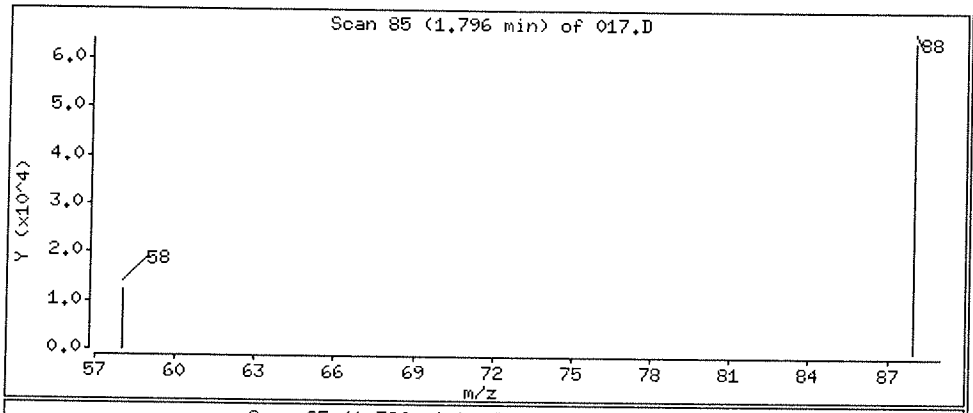
Operator: LG

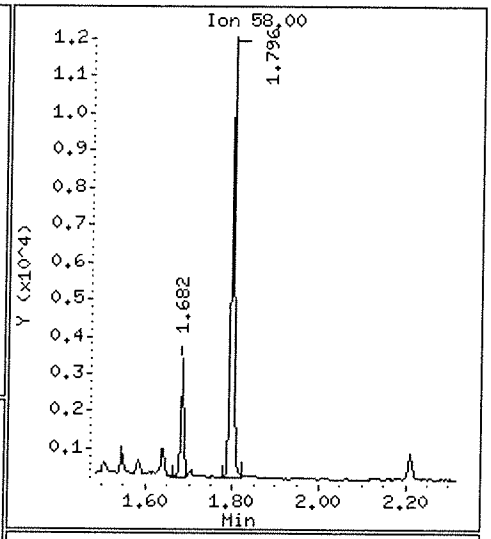
Column phase: RTX-5SIL MS

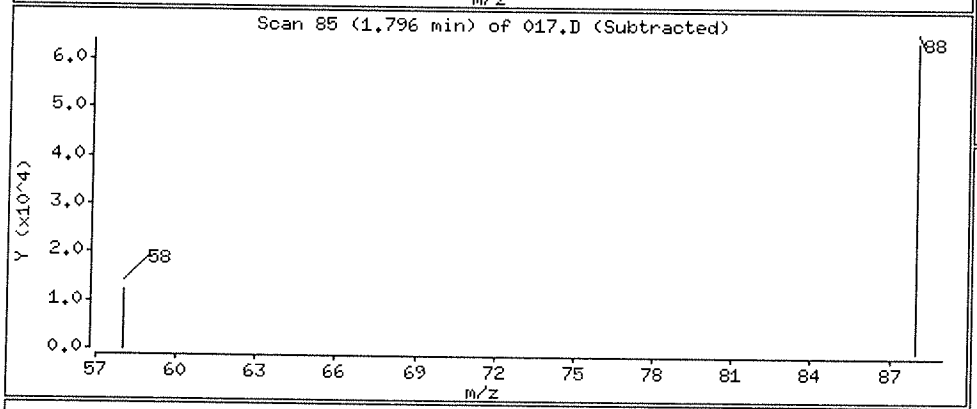
Column diameter: 0.28

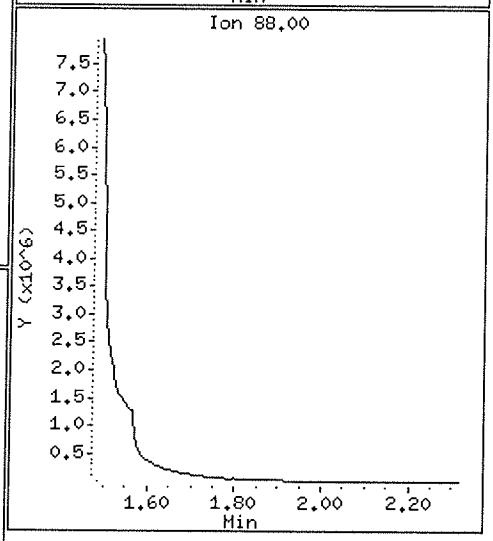
1 1,4-Dioxane

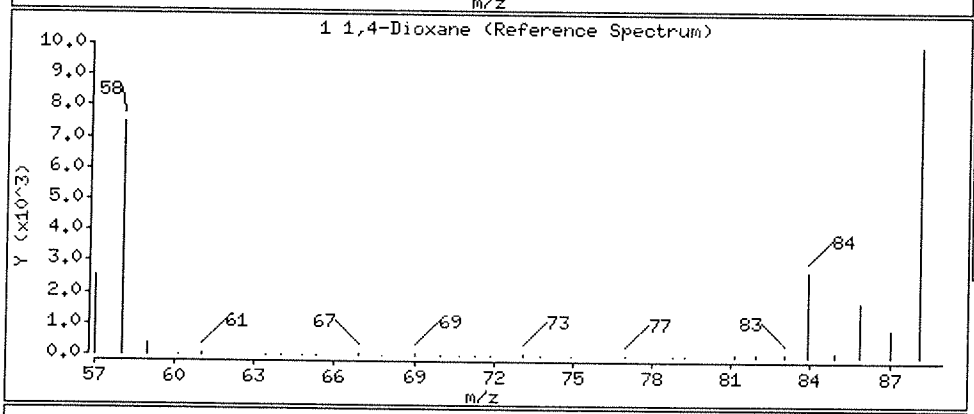
Concentration: 33.52 ug/L

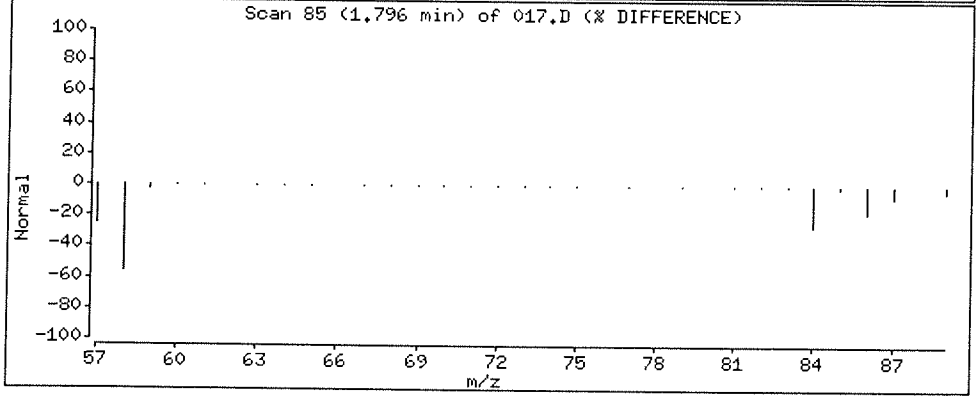












Data File: \\NAHSTWS005\Target\chem\SV6.i\200514.b\019.D Page 1
Report Date: 01-Jun-2020 15:57

ALS Laboratory Group

GC/MS Semivolatiles EPA method 8270D

Data file : \\NAHSTWS005\Target\chem\SV6.i\200514.b\019.D
Lab Smp Id: SIMPAH-0.08 Client Smp ID: SIMPAH-0.08
Inj Date : 14-MAY-2020 18:31 MS Autotune Date: 27-FEB-2008 05:32
Operator : LG Inst ID: SV6.i
Smp Info : SIMPAH-0.08;SIMPAH-0.08
Misc Info : ;1;0;1
Comment :
Method : \\NAHSTWS005\Target\chem\SV6.i\200514.b\DXSIMEND.m
Meth Date : 01-Jun-2020 15:57 SV6.i Quant Type: ISTD
Cal Date : 20-AUG-2019 12:08 Cal File: 011.D
Als bottle: 19 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 14dx.sub
Target Version: 4.14
Processing Host: NAHSTW7133

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1000.000	Volume of final extract (uL)
Vo	1000.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

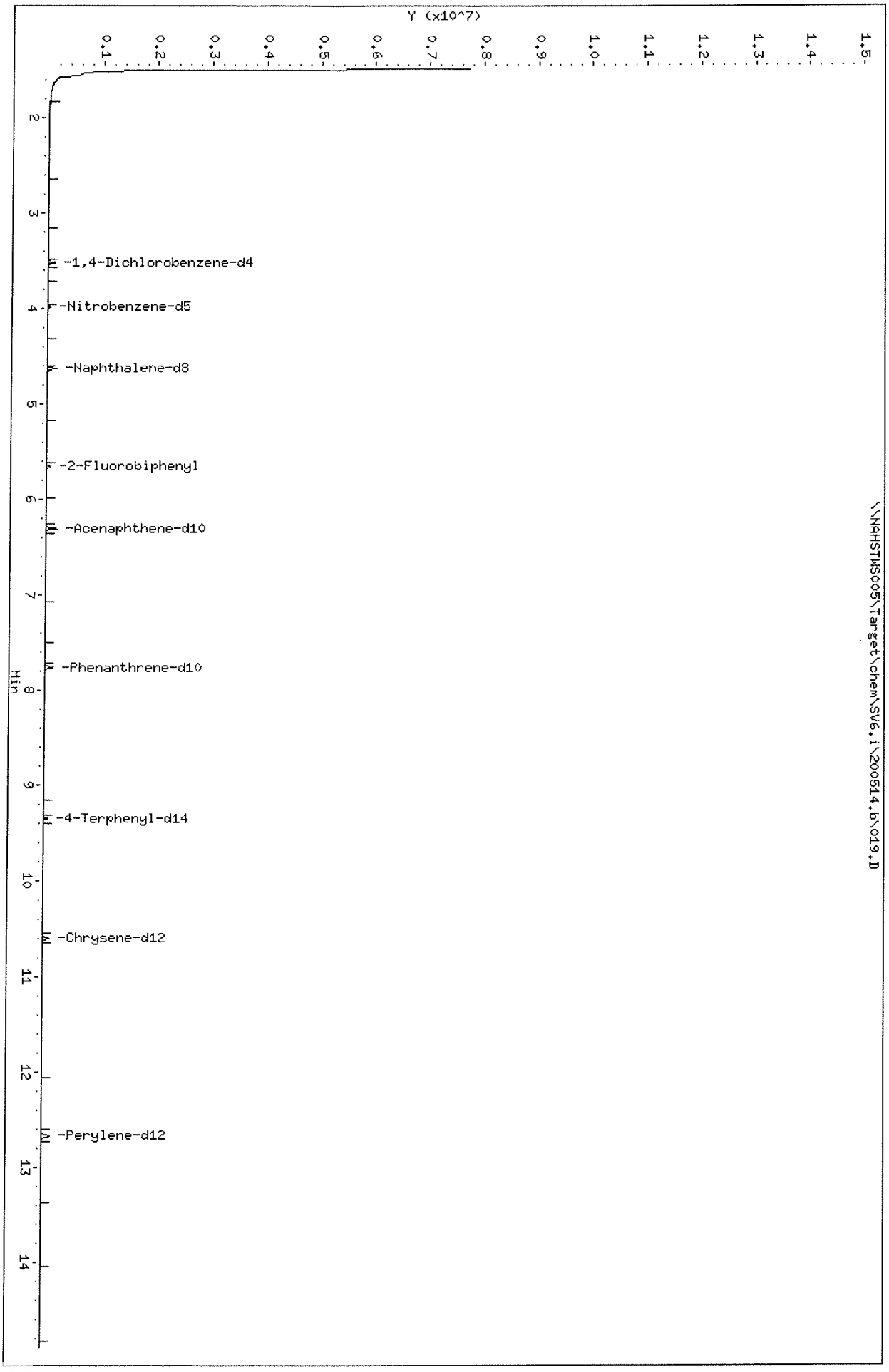
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)	
* 20 1,4-Dichlorobenzene-d4	152	3.523	3.523	(1.000)	59737	0.10000		(aM)
* 45 Naphthalene-d8	136	4.632	4.632	(1.000)	207801	0.10000		
$ 33 Nitrobenzene-d5	82	3.985	3.985	(0.860)	53828	0.08000	0.09921	
* 86 Acenaphthene-d10	164	6.310	6.310	(1.000)	98052	0.10000		(QM)
$ 69 2-Fluorobiphenyl	172	5.657	5.657	(0.934)	88344	0.08000	0.07590	
* 126 Phenanthrene-d10	188	7.765	7.765	(1.000)	179994	0.10000		
* 182 Chrysene-d12	240	10.599	10.599	(1.000)	151044	0.10000		(M)
$ 158 4-Terphenyl-d14	244	9.351	9.351	(0.882)	82689	0.08000	0.06639	(M)
* 198 Perylene-d12	264	12.673	12.673	(1.000)	191439	0.10000		
1 1,4-Dioxane	58	1.844	1.844	(0.523)	3779	0.08000	0.09968	(aQM)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.

Data File: \\NAHSTWS005\Target\chem\SV6.i\200514.b\019.D
Date : 14-MAY-2020 18:31
Client ID: SIMPAH-0.08
Sample Info: SIMPAH-0.08;SIMPAH-0.08
Purge Volume: 1000.0
Column phase: RTX-5SIL MS

Instrument: SV6.i
Operator: LG
Column diameter: 0.28



Prep Batch Report

Batch ID: 153402
Prep Code: 3510_B_SIM
Start Date: 11 May 2020 07:00 AM
End Date: 11 May 2020 12:30 PM
Technician: Todi Lala

Init Sample Weight / Volume: 1000
Final Sample Volume: 1
Original Factor: 0.001
Prep Unit Factor: 1
Prep Unit: mL

Sample ID	Fraction	Matrix	pH	Initial Weight / Volume	Final Volume	Prep Factor	Spike Factor	Fail Safe	Due Date	Comments
HS20050176-01	C	Water	7	1000	1	0.001	1	18 May 2020	21 May 2020	ph adj 1/13
LCS-153402	A		5	1000	1	0.001	1			ph adj 1/13
LCSD-153402	A		5	1000	1	0.001	1			ph adj 1/13
MBLK-153402	A		5	1000	1	0.001	1			ph adj 1/13

HS20050176 - ME - ICP_W_DOD

ALS WO# HS20050176

ALS Houston, US Date: 28-May-20

Form 11 - INTERNAL STANDARD ASSOCIATION

Client: Bhate Environmental Associates, Inc. Instrument:ICPMS05
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20050176

Mass	Analyte	Assoc Int Standard 1	Assoc Int Standard 2	Mode
9	Beryllium	Lithium		Ar
11	Boron	Lithium		Ar
23	Sodium	Germanium		Ar
24	Magnesium	Germanium		Ar
27	Aluminum	Germanium		Ar
39	Potassium	Germanium		Ar
44	Calcium	Germanium		Ar
47	Titanium	Germanium		Ar
51	Vanadium	Germanium		ArHe
52	Chromium	Germanium		ArHe
55	Manganese	Germanium		ArHe
56	Iron	Germanium		ArHe
59	Cobalt	Germanium		ArHe
60	Nickel	Germanium		ArHe
63	Copper	Germanium		ArHe
66	Zinc	Germanium		ArHe
75	Arsenic	Germanium		ArHe
78	Selenium	Germanium		ArHe
88	Strontium	Germanium		Ar
95	Molybdenum	Germanium		Ar
105	Palladium	Germanium		Ar
107	Silver	Germanium		Ar
114	Cadmium	Indium		Ar
118	Tin	Germanium		Ar
121	Antimony	Germanium		ArHe
137	Barium	Indium		Ar
205	Thallium	Bismuth		Ar
208	Lead	Bismuth		Ar

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ALS Houston, US Date: 28-May-20

FORM 12 - PREPARATION LOG

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20050176
Start Date: 08-May-2020 09:30 End Date: 08-May-2020 13:30

Batch ID: 153375
Prep Code: 3010A
Method: SW3010A
Technician:

SampID	ClientID	Matrix	Init Wt	Init Vol	FinalVol (mL)	PrepFac
HS20050176-01	LH18/24-SP650_050520	Water		10	10	1
HS20050176-01MS				10	10	1
HS20050176-01MSD				10	10	1
HS20050176-01PDS				10	10	1
HS20050176-01SD				10	10	1
LCS-153375				10	10	1
MBLK-153375				10	10	1

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ALS Houston, US Date: 28-May-20

FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20050176
Start Date: 11-May-2020 End Date: 11-May-2020

Run ID:ICPMS05_361332
Instrument:ICPMS05
Method:

Sample No.	D/F	Time	FileID	Analytes
ICPMS05_361332_Tune	1	11-May-2020 00:00	ICPMS05_361332_Tune_1	
CAL BLK	1	11-May-2020 13:01	019CALB.d_5579835	AG BA PB SE
2/10/200	1	11-May-2020 13:04	020CALS.d_5579836	AG BA PB SE
5/25/500	1	11-May-2020 13:06	021CALS.d_5579837	AG BA PB SE
10/50/1000	1	11-May-2020 13:08	022CALS.d_5579838	AG BA PB SE
100/500/10K	1	11-May-2020 13:11	023CALS.d_5579839	AG BA PB SE
200/1000/20K	1	11-May-2020 13:13	024CALS.d_5579840	AG BA PB SE
ICV	1	11-May-2020 13:18	026_ICV.d_5579842	AG BA PB SE
LLICV2	1	11-May-2020 13:21	027LCV2.d_5579843	AG BA PB SE
LLICV5	1	11-May-2020 13:23	028LCV5.d_5579844	AG BA PB SE
ICB	1	11-May-2020 13:25	029_ICB.d_5579845	AG BA PB SE
ICSA	1	11-May-2020 13:31	031ICSA.d_5579847	AG BA PB SE
ICSAB	1	11-May-2020 13:33	032ICSB.d_5579848	AG BA PB SE
MBLK-153375	1	11-May-2020 14:51	058SMPL.d_5580067	AG BA PB SE
LCS-153375	1	11-May-2020 14:53	059SMPL.d_5580068	AG BA PB SE
LH18/24-SP650_050520	1	11-May-2020 14:56	060SMPL.d_5580069	AG BA PB SE
LH18/24-SP650_050520SD	5	11-May-2020 14:58	061SMPL.d_5580070	AG BA PB SE
LH18/24-SP650_050520MS	1	11-May-2020 15:00	062SMPL.d_5580071	AG BA PB SE
LH18/24-SP650_050520MSD	1	11-May-2020 15:03	063SMPL.d_5580072	AG BA PB SE
LH18/24-SP650_050520PDS	1	11-May-2020 15:05	064SMPL.d_5580073	AG BA PB SE
CCV 1	1	11-May-2020 15:13	067_CCV.d_5580076	AG BA PB SE
CCB 1	1	11-May-2020 15:15	068_CCB.d_5580077	AG BA PB SE

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ALS Houston, US Date: 28-May-20

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20050176

Run ID: ICPMS05_361332
Instrument: ICPMS05
Method: SW6020

ICV Date: 11-May-2020 13:18 Seq: 5579842 ICV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	102.15	102	90-110	
Lead	100	99.838	100	90-110	
Selenium	100	104.463	104	90-110	
Silver	100	100.928	101	90-110	

CCV1 Date: 11-May-2020 15:13 Seq: 5580076 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Barium	100	99.632	100	90-110	
Lead	100	98.003	98	90-110	
Selenium	100	102.18	102	90-110	
Silver	100	99.517	100	90-110	

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Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20050176

Run ID: ICPMS05_361332
Instrument: ICPMS05
Method: SW6020

ICB	Date: 11-May-2020 13:25		Seq: 5579845	ICB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	5	1.9	5	U	
Lead	5	0.6	5	U	
Selenium	5	1.1	5	U	
Silver	5	0.2	5	U	

MBLK-153375	Date: 11-May-2020 14:51		Seq: 5580067	MBLK	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	5	1.9	5	U	
Lead	5	0.6	5	U	
Selenium	5	1.1	5	U	
Silver	5	0.2	5	U	

CCB1	Date: 11-May-2020 15:15		Seq: 5580077	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Barium	4	1.9	4	U	
Lead	2	0.6	2	U	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	

ALS Houston, US

Date: 28-May-20

Form 4 - ICP Interference Check Sample

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20050176

Run ID:ICPMS05_361332
Instrument:ICPMS05
Method:SW6020

ICSA	Date: 11-May-2020 13:31	Seq: 5579847	ICSA	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Barium		0.005	0	
Lead		0.052	0	
Selenium		0.445	0	
Silver		-0.047	0	

ICSAB	Date: 11-May-2020 13:33	Seq: 5579848	ICSAB	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Barium	100	114.2	114	
Lead	100	104.8	105	
Selenium	100	112	112	
Silver	100	105.9	106	

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ALS Houston, US Date: 28-May-20

Form 5A - Matrix Spike/Matrix Spike Duplicate Recovery

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20050176

Date Analyzed: 11-May-2020 15:03
Date Extracted: 08-May-2020 13:30
Units: ug/L

Matrix Spike: HS20050176-01MS
Client Sample ID: LH18/24-SP650_050520

Analysis Method: SW6020

Analyte	Sample Result	MS Result	Spike Amount	% Rec	MSD Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Barium	64.43	111.3	50.00	93.7	118.0	50.00	107	86-114	5.87	20
Lead	5.000	44.93	50.00	89.5	48.28	50.00	96.2	88-115	7.21	20
Selenium	5.000	49.55	50.00	97.9	52.51	50.00	104	80-120	5.81	20
Silver	5.000	47.05	50.00	94.2	49.13	50.00	98.4	85-116	4.33	20

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ALS Houston, US Date: 28-May-20

Form 5B - Post Digest Sample Recovery

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20050176

Date Analyzed: 11-May-2020 15:05
Date Extracted: 08-May-2020 13:30
Units: ug/L

Lab Sample ID: HS20050176-01PDS
Client Sample ID: LH18/24-SP650_050520

Analysis Method: SW6020

Analyte	Sample Result	PDS Result	Spike Amount	% Rec	% Rec Limits
Barium	64.43	168.4	100	104	80-120
Lead	0	95.96	100	96	80-120
Selenium	0	100.7	100	100	80-120
Silver	0	95.66	100	96	80-120

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ALS Houston, US

Date: 28-May-20

Form 7 - Laboratory Control Sample

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20050176

Date Analyzed: 11-May-2020 14:53
Date Extracted: 08-May-2020 13:30
Units: ug/L

Lab Sample ID: LCS-153375
Analysis Method: SW6020

Analyte	Spike Amount	LCS Result	% Rec	% Rec Limits
Barium	50	47.53	95	86-114
Lead	50	45.31	91	88-115
Selenium	50	48.1	96	80-120
Silver	50	50.04	100	85-116

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ALS Houston, US Date: 28-May-20

Form 8 - ICP Serial Dilutions

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Effluent Samples
WorkOrder: HS20050176

Date Analyzed: 11-May-2020 14:58
Date Extracted: 08-May-2020 13:30
Units: ug/L

Lab Sample ID: HS20050176-01SD
Client Sample ID:LH18/24-SP650_050520

Analysis Method: SW6020

Analyte	Sample Result	C	SD Result	C	RPD	Q
Barium	64.43		66.23		3	
Lead	0	U	0	U	0	
Selenium	0	U	0	U	0	
Silver	0	U	0	U	0	

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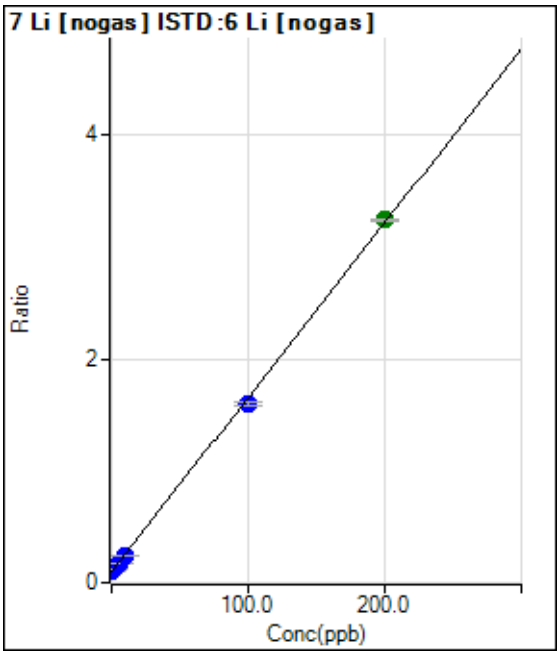
Calibration for 207_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\051120A.b\
Analysis File: 051120A.batch.bin
DA Date-Time: 5/12/2020 12:14:40 AM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	200CALB.d	IRBK	5/11/2020 11:57:13 PM
2	201CALS.d	2/10/200	5/11/2020 11:59:35 PM
3	202CALS.d	5/25/500	5/12/2020 12:01:59 AM
4	203CALS.d	10/50/1000	5/12/2020 12:04:23 AM
5	204CALS.d	100/500/10K	5/12/2020 12:06:46 AM
6	205CALS.d	200/1000/20K	5/12/2020 12:09:07 AM
7			

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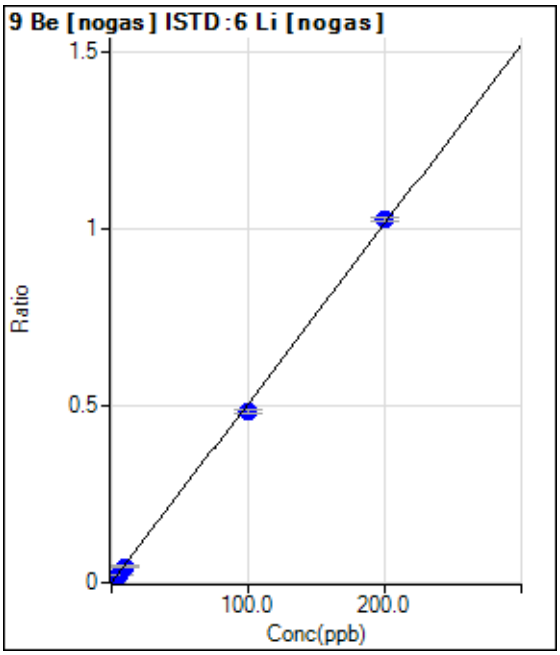
Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	58611.66	0.0983	P	0.7
2	☐	2.000	1.884	74987.67	0.1277	P	0.3
3	☐	5.000	4.890	102046.93	0.1744	P	2.5
4	☐	10.000	9.458	142742.45	0.2455	P	1.2
5	☐	100.000	96.333	879321.52	1.5975	P	1.9
6	☐	200.000	201.864	1637305.76	3.2398	A	0.7
7	☐	1.000					

y = 0.0156 * x + 0.0983
R = 0.9998
DL = 0.1384
BEC = 6.319

Weight: <None>
Min Conc: <None>



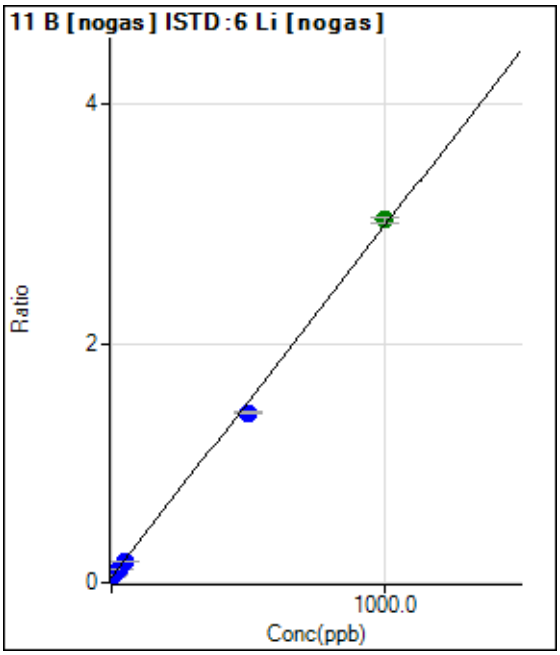
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	28.33	0.0000	P	26.5
2	☐	2.000	1.886	5647.53	0.0096	P	1.7
3	☐	5.000	4.699	13973.44	0.0239	P	2.2
4	☐	10.000	9.066	26761.95	0.0460	P	2.2
5	☐	100.000	95.498	266655.70	0.4844	P	1.8
6	☐	200.000	202.306	518587.19	1.0262	P	1.1
7	☐	1.000					

y = 0.0051 * x + 4.7489E-005
R = 0.9997
DL = 0.00744
BEC = 0.009363

Weight: <None>
Min Conc: <None>

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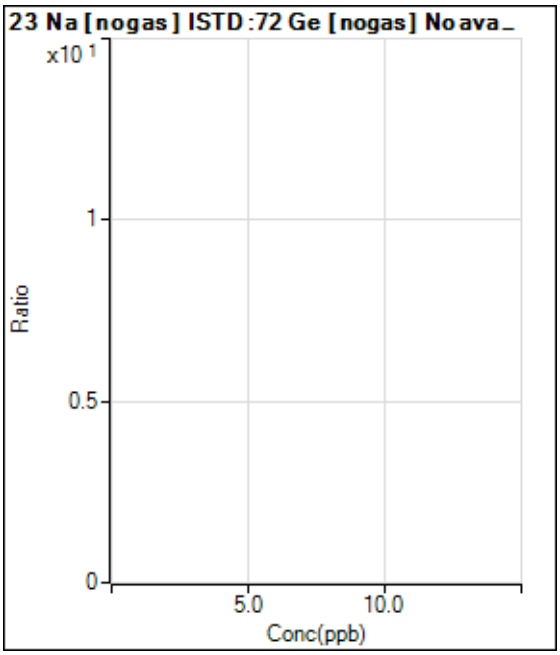
Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	27518.02	0.0462	P	1.5
2	☐	10.000	8.591	41948.83	0.0714	P	2.1
3	☐	25.000	21.493	63970.57	0.1093	P	1.1
4	☐	50.000	42.836	100039.05	0.1721	P	2.4
5	☐	500.000	466.476	780161.39	1.4173	P	1.2
6	☐	1000.000	1017.222	1534228.47	3.0360	A	1.9
7	☐	5.000					

y = 0.0029 * x + 0.0462
R = 0.9992
DL = 0.7068
BEC = 15.71

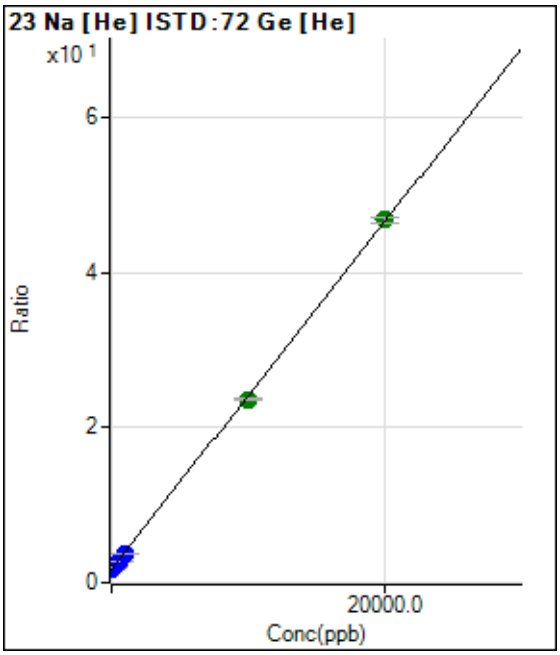
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

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Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	556414.94	1.7543	P	0.5
2	☐	200.000	153.320	664794.65	2.0970	P	0.9
3	☐	500.000	424.673	848627.64	2.7036	P	2.4
4	☐	1000.000	859.525	1144389.36	3.6757	P	1.0
5	☐	10000.000	9769.125	7243649.48	23.5927	A	0.7
6	☐	20000.000	20124.811	13799789.79	46.7424	A	1.6
7	☐	100.000					

y = 0.0022 * x + 1.7543

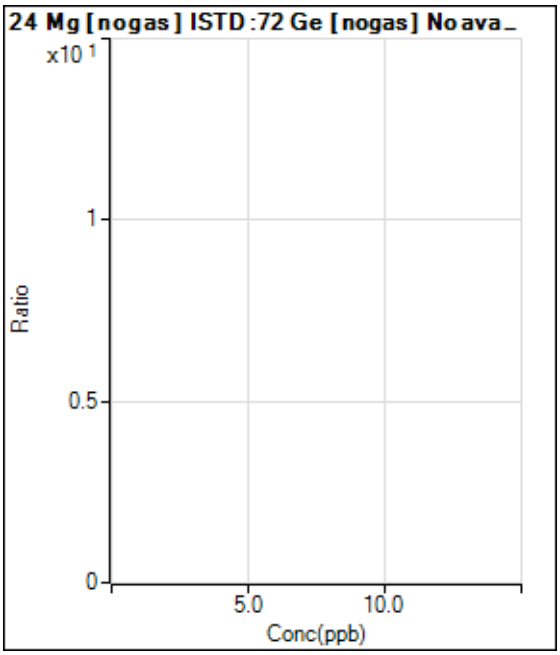
R = 0.9999

DL = 11.05

BEC = 784.7

Weight: <None>

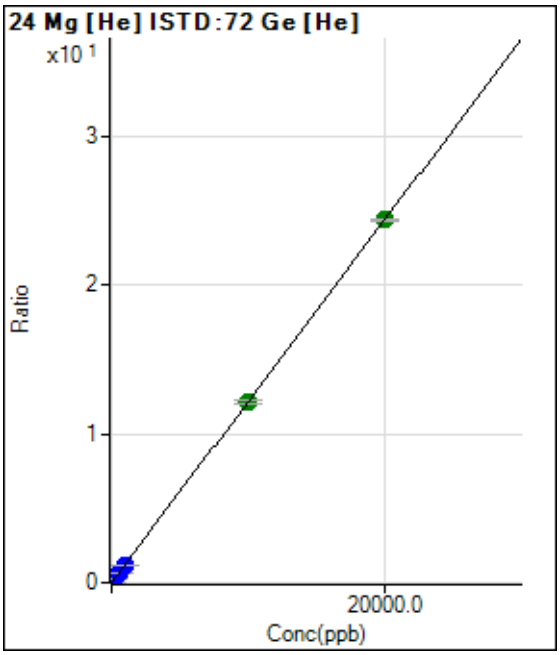
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

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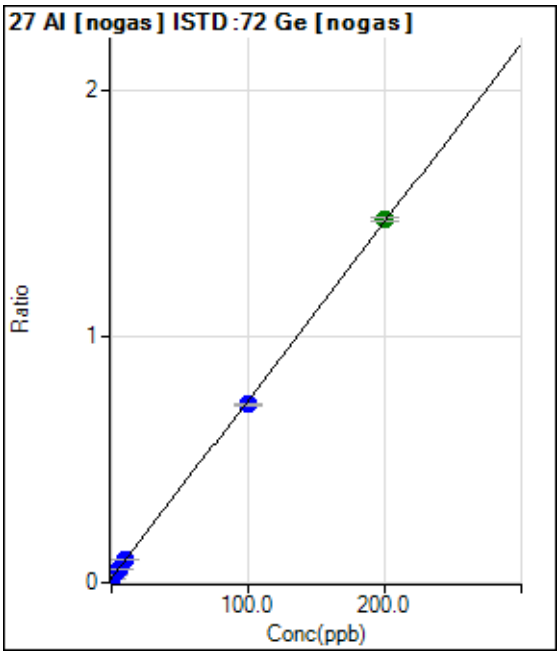
Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1600.10	0.0050	P	3.5
2	☐	200.000	193.180	76289.40	0.2407	P	2.0
3	☐	500.000	488.288	188530.20	0.6006	P	2.1
4	☐	1000.000	953.387	363605.65	1.1679	P	1.2
5	☐	10000.000	9968.625	3734511.40	12.1637	A	1.6
6	☐	20000.000	20018.379	7210696.56	24.4213	A	0.4
7	☐	100.000					

y = 0.0012 * x + 0.0050
R = 1.0000
DL = 0.4357
BEC = 4.137

Weight: <None>
Min Conc: <None>

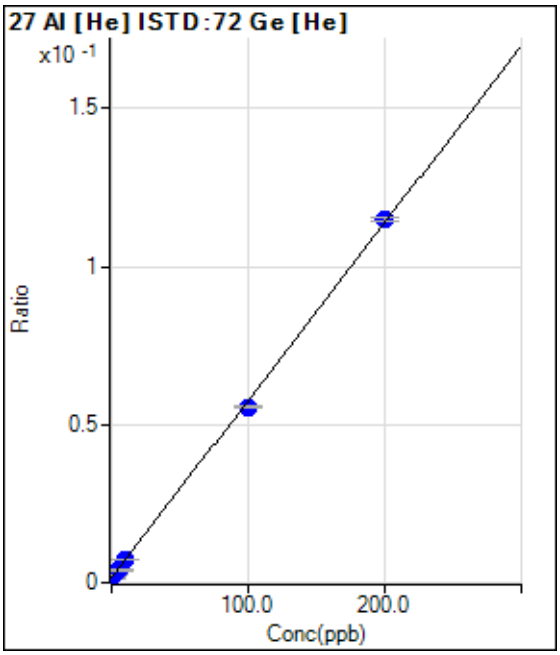


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20444.58	0.0177	P	0.7
2	☐	2.000	2.304	39759.04	0.0343	P	3.9
3	☐	5.000	5.296	64713.91	0.0560	P	2.0
4	☐	10.000	10.626	108266.35	0.0945	P	0.6
5	☐	100.000	97.489	822097.12	0.7224	P	1.2
6	☐	200.000	201.214	1620216.28	1.4722	A	1.1
7	☐	1.000					

y = 0.0072 * x + 0.0177
R = 0.9999
DL = 0.05156
BEC = 2.445

Weight: <None>
Min Conc: <None>

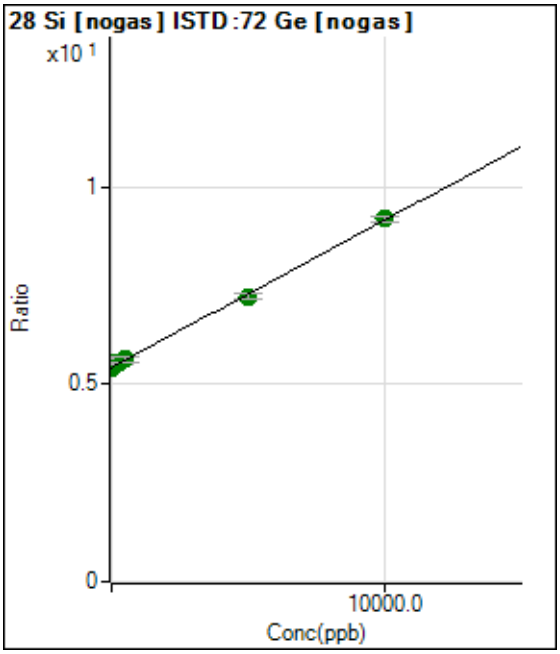
Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	490.02	0.0015	P	33.2
2	☐	2.000	1.916	830.03	0.0026	P	5.7
3	☐	5.000	4.348	1250.07	0.0040	P	2.2
4	☐	10.000	10.062	2236.84	0.0072	P	4.5
5	☐	100.000	96.390	17067.88	0.0556	P	1.5
6	☐	200.000	201.819	33870.50	0.1147	P	1.2
7	☐	1.000					

y = 5.6073E-004 * x + 0.0015
R = 0.9998
DL = 2.745
BEC = 2.752

Weight: <None>
Min Conc: <None>



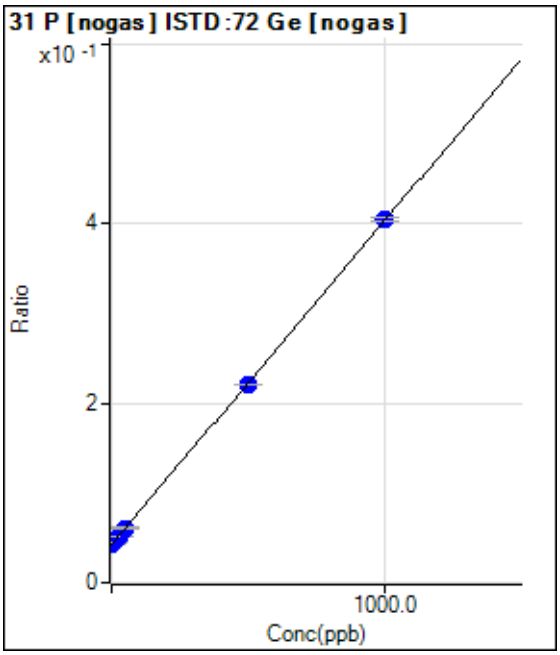
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6285108.24	5.4331	A	1.3
2	☐	100.000	341.936	6440616.78	5.5608	A	1.5
3	☐	250.000	392.676	6452226.99	5.5798	A	3.1
4	☐	500.000	542.897	6457075.11	5.6359	A	2.9
5	☐	5000.000	4828.293	8235934.67	7.2366	A	2.0
6	☐	10000.000	10077.723	10121761.93	9.1973	A	1.5
7	☐	50.000					

y = 3.7351E-004 * x + 5.4331
R = 0.9995
DL = 571.3
BEC = 1.455E+04

Weight: <None>
Min Conc: <None>

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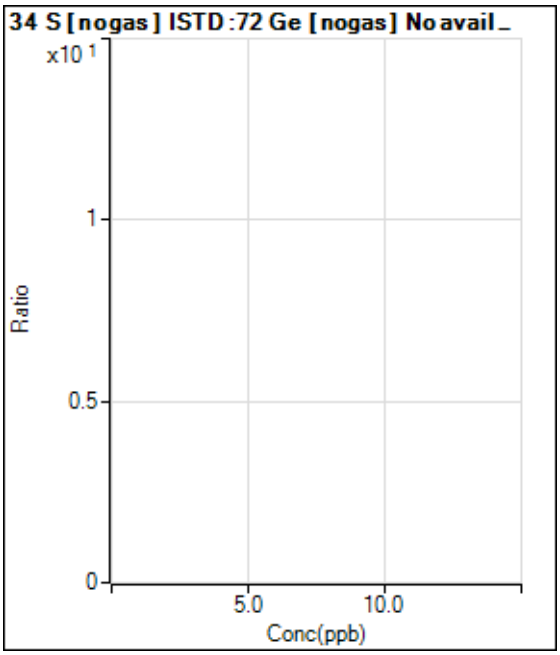
Calibration for 207_ICV.d



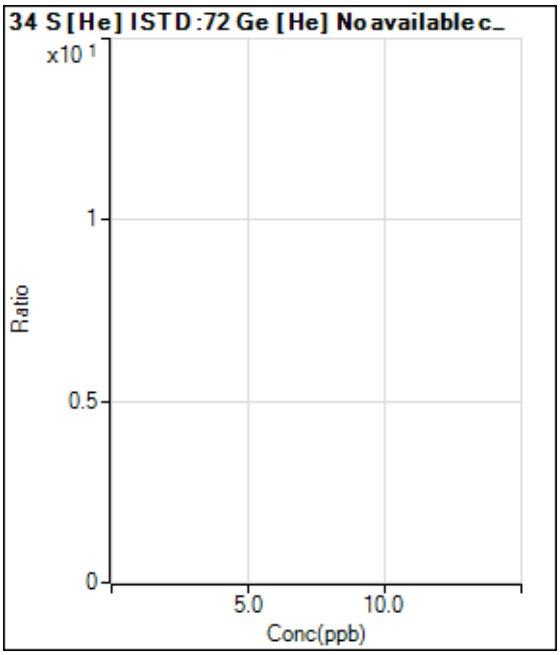
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	49103.95	0.0424	P	1.7
2	☐	10.000	8.791	52840.51	0.0456	P	2.5
3	☐	25.000	24.432	59286.26	0.0513	P	1.3
4	☐	50.000	51.370	69888.74	0.0610	P	2.4
5	☐	500.000	494.337	251426.30	0.2209	P	0.8
6	☐	1000.000	1002.789	445197.22	0.4045	P	1.1
7	☐	5.000					

y = 3.6104E-004 * x + 0.0424
R = 1.0000
DL = 6.038
BEC = 117.6

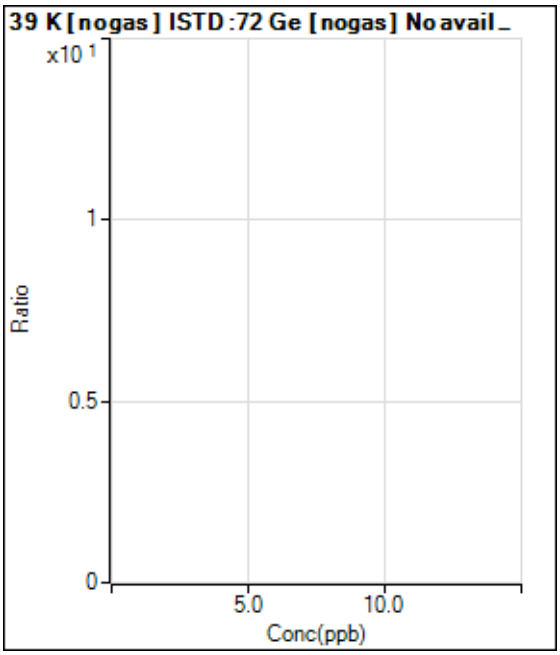
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	400.000					
3	☐	1000.000					
4	☐	2000.000					
5	☐	20000.000					
6	☐	40000.000					
7	☐	200.000					

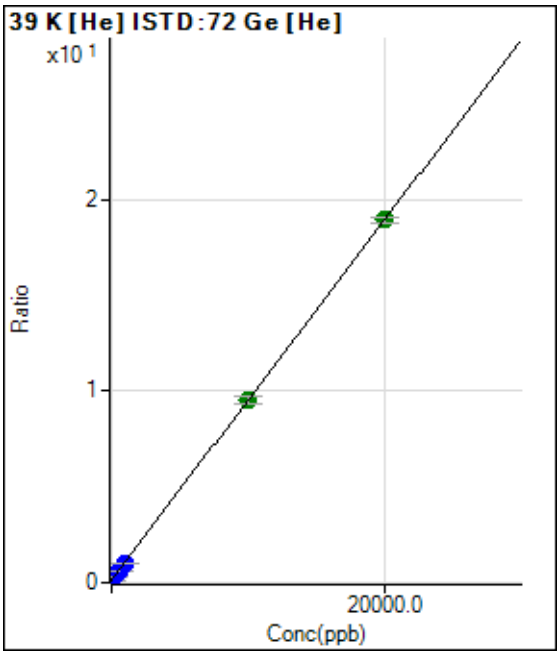


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	400.000					
3	☐	1000.000					
4	☐	2000.000					
5	☐	20000.000					
6	☐	40000.000					
7	☐	200.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	45883.07	0.1447	P	2.8
2	☐	200.000	194.827	103888.67	0.3277	P	2.0
3	☐	500.000	471.021	184303.23	0.5871	P	2.2
4	☐	1000.000	953.021	323773.22	1.0399	P	1.1
5	☐	10000.000	9990.548	2925518.91	9.5297	A	3.9
6	☐	20000.000	20007.851	5592673.88	18.9398	A	1.7
7	☐	100.000					

y = 9.3939E-004 * x + 0.1447

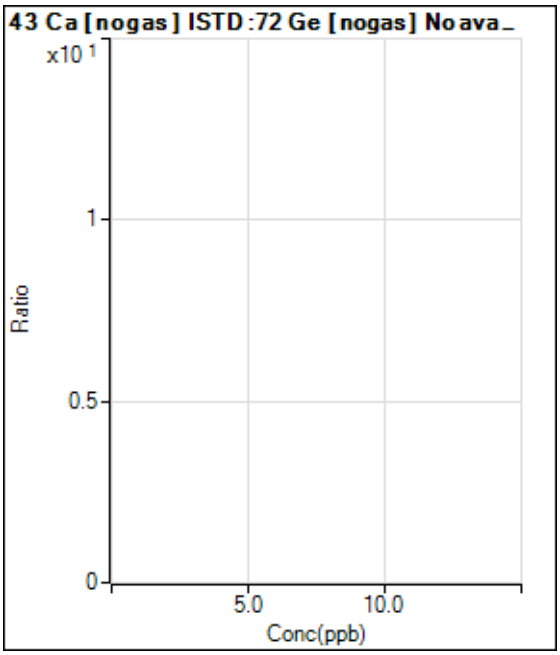
R = 1.0000

DL = 13.03

BEC = 154

Weight: <None>

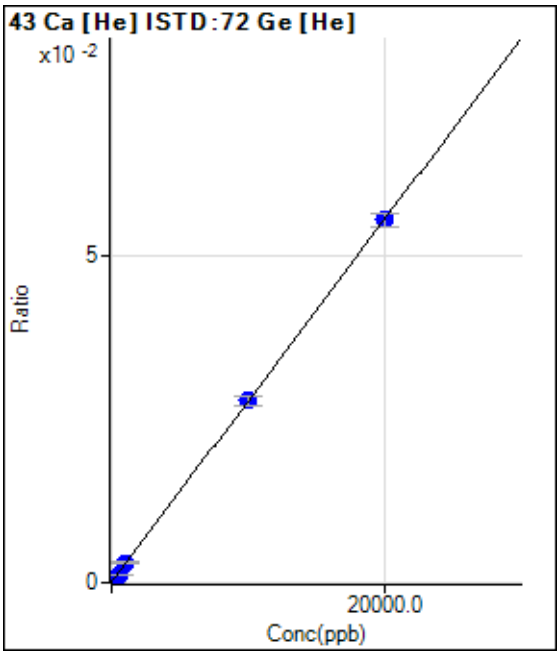
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

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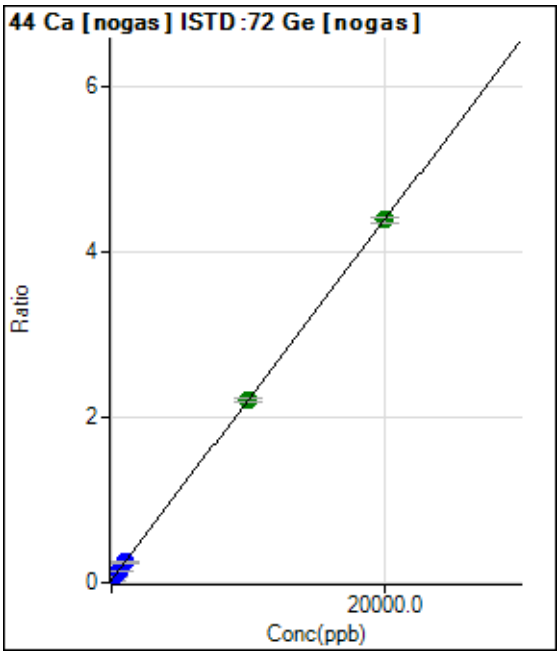
Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0001	P	124.8
2	☐	200.000	227.605	216.67	0.0007	P	38.8
3	☐	500.000	440.436	400.01	0.0013	P	5.6
4	☐	1000.000	1073.451	943.37	0.0030	P	7.3
5	☐	10000.000	10027.715	8558.72	0.0279	P	4.8
6	☐	20000.000	19983.683	16380.74	0.0555	P	3.7
7	☐	100.000					

y = 2.7740E-006 * x + 5.2914E-005
R = 1.0000
DL = 71.39
BEC = 19.08

Weight: <None>
Min Conc: <None>



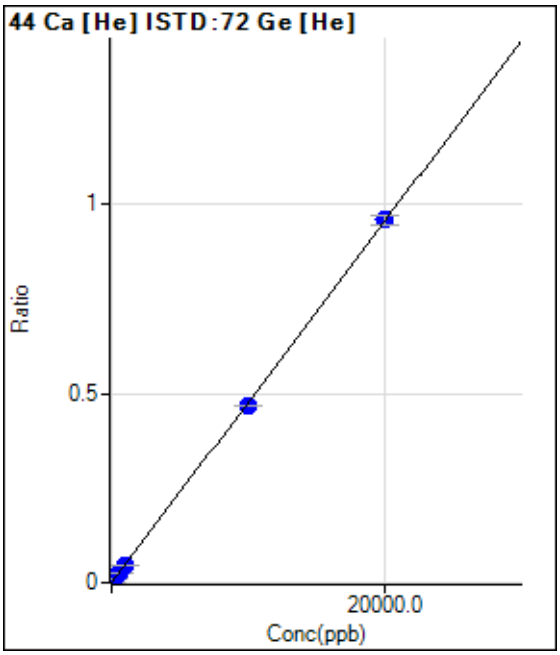
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	39165.24	0.0339	P	1.7
2	☐	200.000	196.777	88773.05	0.0767	P	1.7
3	☐	500.000	491.239	162695.94	0.1407	P	1.3
4	☐	1000.000	970.142	280525.29	0.2448	P	2.2
5	☐	10000.000	10007.447	2515273.97	2.2102	A	1.6
6	☐	20000.000	19998.021	4823456.39	4.3830	A	1.7
7	☐	100.000					

y = 2.1748E-004 * x + 0.0339
R = 1.0000
DL = 8.13
BEC = 155.7

Weight: <None>
Min Conc: <None>

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Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	226.68	0.0007	P	2.0
2	☐	200.000	203.577	3303.68	0.0104	P	6.8
3	☐	500.000	500.483	7718.37	0.0246	P	2.7
4	☐	1000.000	981.668	14802.73	0.0475	P	2.1
5	☐	10000.000	9800.197	143763.12	0.4682	P	0.7
6	☐	20000.000	20100.770	283280.62	0.9596	P	2.7
7	☐	100.000					

y = 4.7703E-005 * x + 7.1462E-004

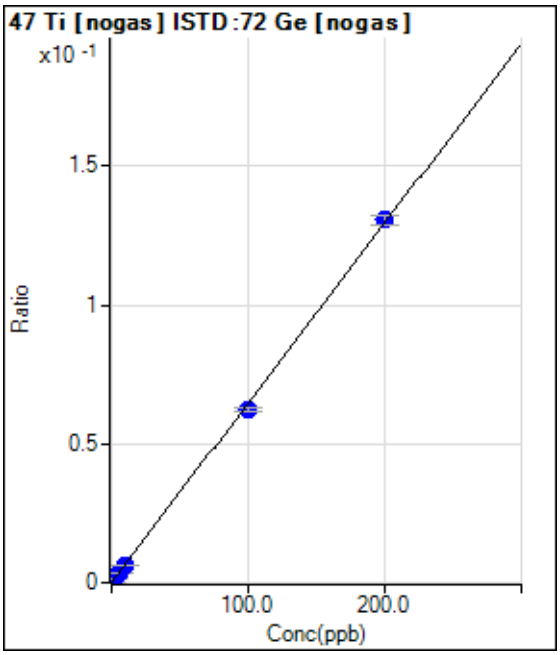
R = 0.9999

DL = 0.9096

BEC = 14.98

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	120.00	0.0001	P	25.4
2	☐	2.000	1.998	1616.76	0.0014	P	10.5
3	☐	5.000	4.966	3833.78	0.0033	P	1.1
4	☐	10.000	9.607	7238.19	0.0063	P	3.2
5	☐	100.000	96.133	70867.69	0.0623	P	1.9
6	☐	200.000	201.954	143838.79	0.1307	P	2.9
7	☐	1.000					

y = 6.4673E-004 * x + 1.0380E-004

R = 0.9997

DL = 0.1224

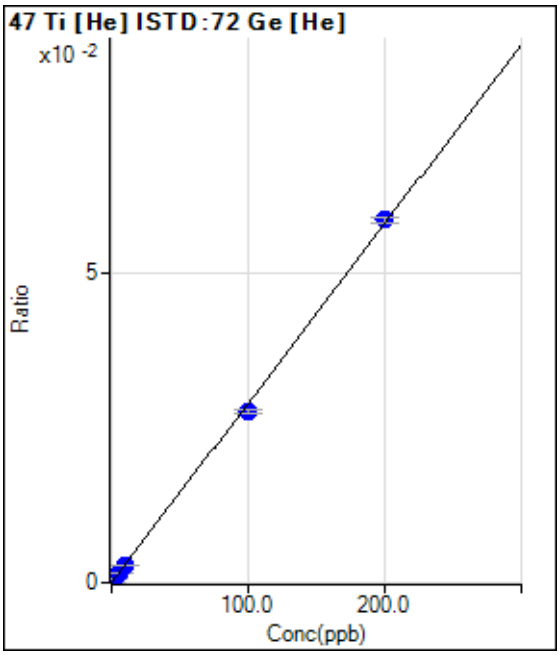
BEC = 0.1605

Weight: <None>

Min Conc: <None>

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Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6.67	0.0000	P	173.2
2	☐	2.000	1.810	173.33	0.0005	P	11.6
3	☐	5.000	5.227	483.35	0.0015	P	4.7
4	☐	10.000	9.662	880.04	0.0028	P	6.7
5	☐	100.000	95.430	8512.06	0.0277	P	2.9
6	☐	200.000	202.298	17348.27	0.0588	P	1.4
7	☐	1.000					

y = 2.9031E-004 * x + 2.1148E-005

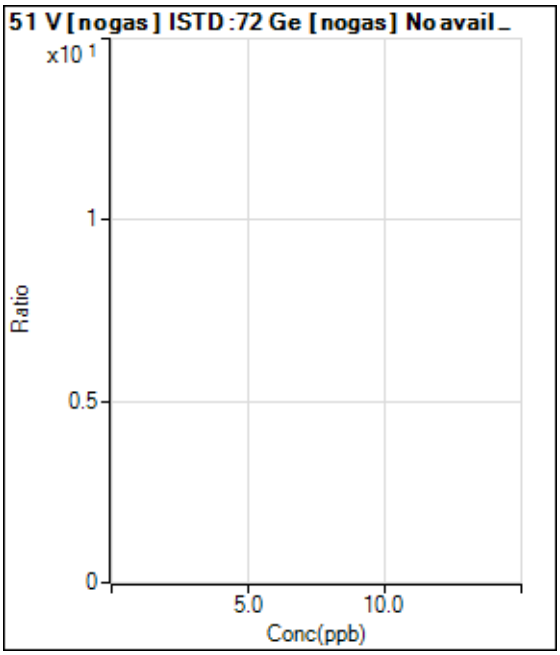
R = 0.9996

DL = 0.3785

BEC = 0.07285

Weight: <None>

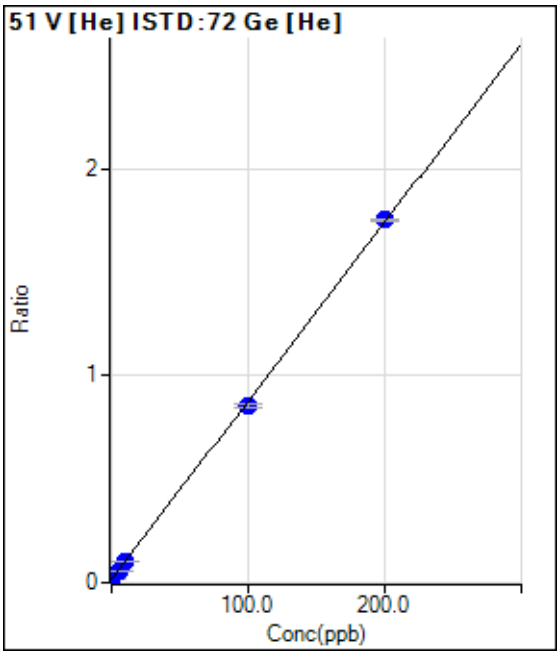
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

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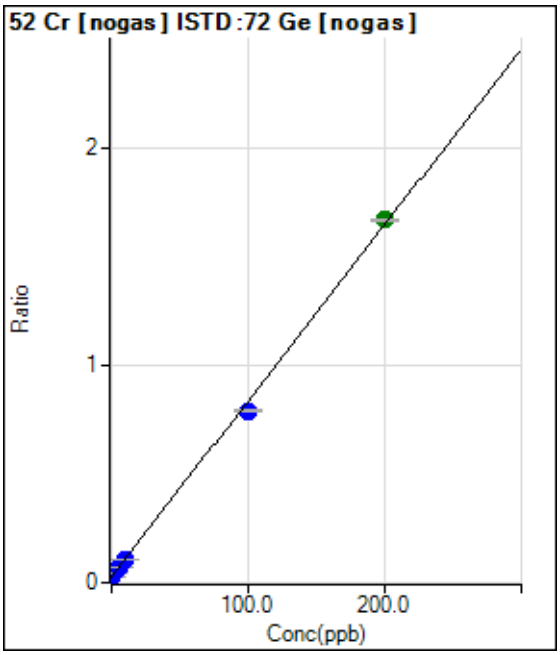
Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5048.49	0.0159	P	2.7
2	☐	2.000	1.968	10424.07	0.0329	P	1.9
3	☐	5.000	4.964	18435.82	0.0587	P	1.0
4	☐	10.000	9.752	31140.46	0.1000	P	0.7
5	☐	100.000	97.061	261878.25	0.8530	P	2.0
6	☐	200.000	201.483	517752.90	1.7535	P	0.4
7	☐	1.000					

y = 0.0086 * x + 0.0159
R = 0.9998
DL = 0.1473
BEC = 1.845

Weight: <None>
Min Conc: <None>



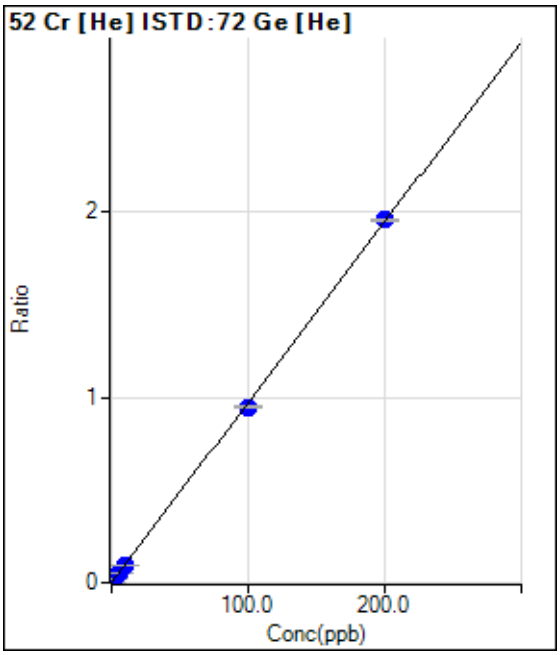
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	32268.34	0.0279	P	2.9
2	☐	2.000	1.849	49616.47	0.0428	P	1.7
3	☐	5.000	4.985	78850.22	0.0682	P	1.2
4	☐	10.000	9.526	120173.28	0.1049	P	2.6
5	☐	100.000	94.289	899043.40	0.7900	P	1.7
6	☐	200.000	202.881	1835511.80	1.6678	A	0.9
7	☐	1.000					

y = 0.0081 * x + 0.0279
R = 0.9994
DL = 0.3006
BEC = 3.451

Weight: <None>
Min Conc: <None>

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Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	400.01	0.0013	P	12.2
2	☐	2.000	2.009	6591.28	0.0208	P	2.3
3	☐	5.000	4.982	15606.74	0.0497	P	1.8
4	☐	10.000	9.838	30168.16	0.0969	P	2.9
5	☐	100.000	97.363	291005.98	0.9478	P	0.6
6	☐	200.000	201.327	578266.60	1.9584	P	0.8
7	☐	1.000					

y = 0.0097 * x + 0.0013

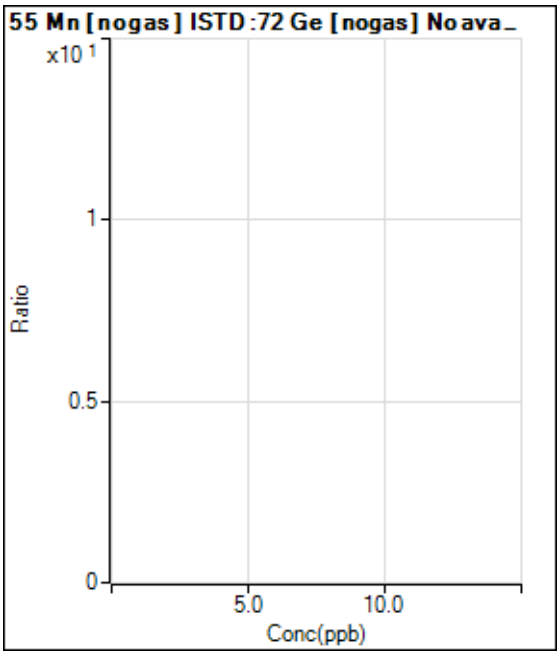
R = 0.9999

DL = 0.04745

BEC = 0.1299

Weight: <None>

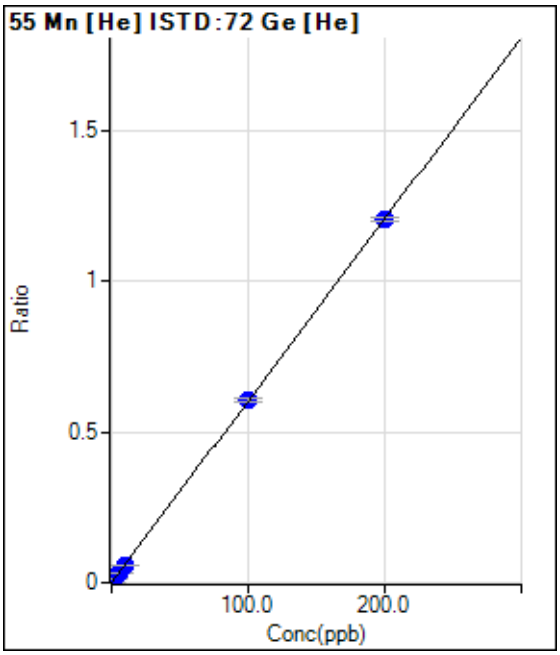
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

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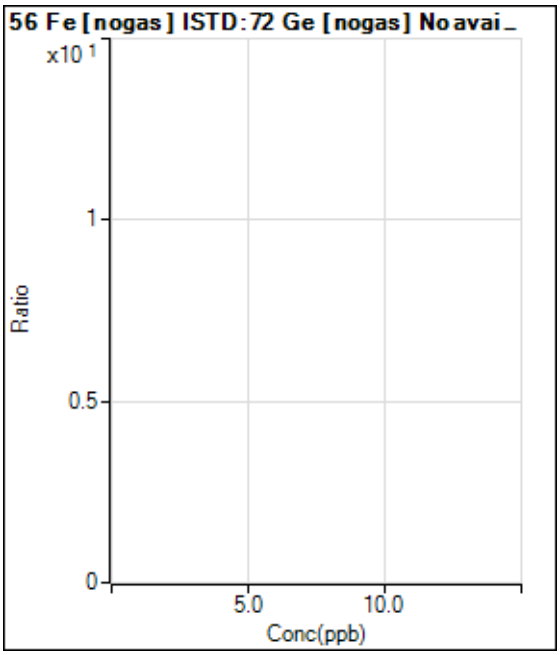
Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	106.67	0.0003	P	38.2
2	☐	2.000	2.028	3980.50	0.0126	P	1.8
3	☐	5.000	5.111	9772.76	0.0311	P	3.8
4	☐	10.000	9.807	18502.80	0.0594	P	1.0
5	☐	100.000	100.741	186487.91	0.6074	P	1.7
6	☐	200.000	199.636	355255.06	1.2033	P	1.2
7	☐	1.000					

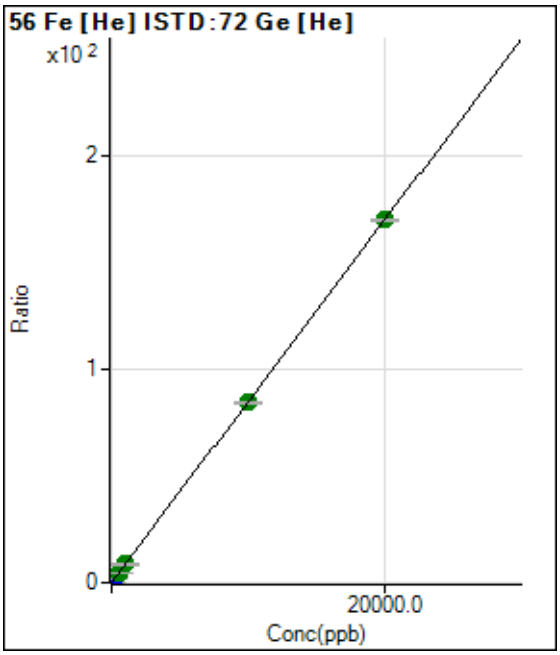
y = 0.0060 * x + 3.3632E-004
R = 1.0000
DL = 0.06395
BEC = 0.05581

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

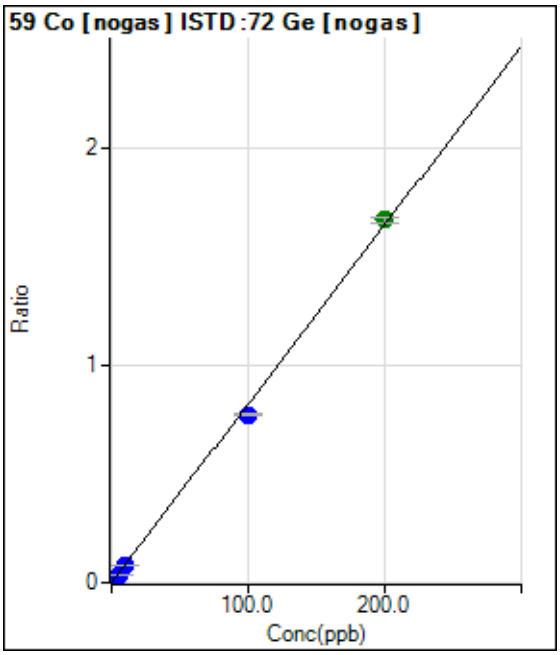
Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5237.49	0.0165	P	3.6
2	☐	200.000	191.891	521574.87	1.6453	P	1.3
3	☐	500.000	528.937	1413932.58	4.5061	A	4.6
4	☐	1000.000	1017.014	2693021.52	8.6488	A	5.2
5	☐	10000.000	9950.646	25936562.11	84.4760	A	1.4
6	☐	20000.000	20023.184	50184542.59	169.9701	A	0.6
7	☐	100.000					

y = 0.0085 * x + 0.0165
R = 1.0000
DL = 0.209
BEC = 1.946

Weight: <None>
Min Conc: <None>



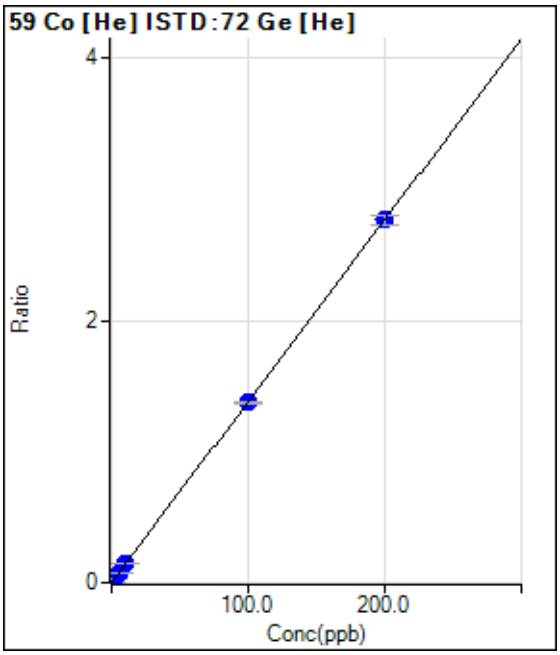
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	223.34	0.0002	P	41.1
2	☐	2.000	1.916	18459.50	0.0159	P	5.3
3	☐	5.000	4.764	45499.66	0.0393	P	1.0
4	☐	10.000	9.618	90793.09	0.0792	P	1.4
5	☐	100.000	94.099	880318.42	0.7735	P	0.9
6	☐	200.000	202.976	1836050.96	1.6684	A	1.5
7	☐	1.000					

y = 0.0082 * x + 1.9328E-004
R = 0.9994
DL = 0.02898
BEC = 0.02352

Weight: <None>
Min Conc: <None>

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Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	50.00	0.0002	P	53.8
2	☐	2.000	2.128	9372.53	0.0296	P	3.5
3	☐	5.000	5.225	22717.51	0.0724	P	2.0
4	☐	10.000	10.146	43708.90	0.1404	P	1.1
5	☐	100.000	99.624	422780.64	1.3770	P	1.2
6	☐	200.000	200.174	816792.33	2.7667	P	2.4
7	☐	1.000					

y = 0.0138 * x + 1.5802E-004

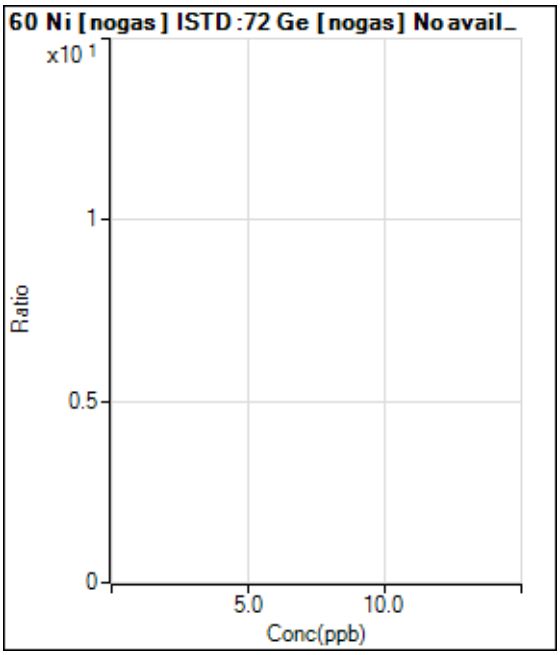
R = 1.0000

DL = 0.01847

BEC = 0.01143

Weight: <None>

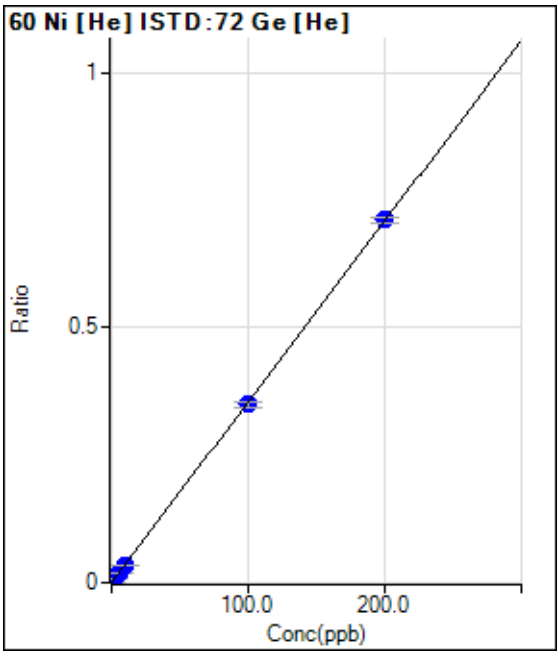
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

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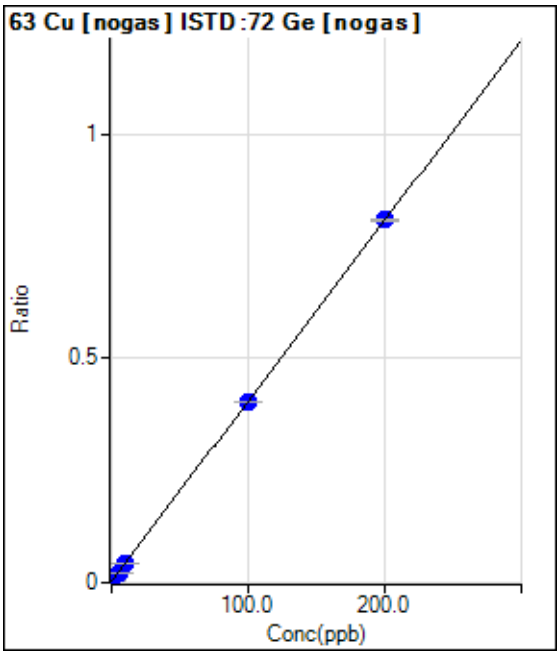
Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	43.33	0.0001	P	53.9
2	☐	2.000	2.027	2320.18	0.0073	P	6.0
3	☐	5.000	5.273	5897.69	0.0188	P	9.3
4	☐	10.000	9.781	10826.64	0.0348	P	0.5
5	☐	100.000	98.441	107056.68	0.3487	P	3.7
6	☐	200.000	200.783	209953.67	0.7111	P	1.3
7	☐	1.000					

y = 0.0035 * x + 1.3689E-004
R = 1.0000
DL = 0.0625
BEC = 0.03866

Weight: <None>
Min Conc: <None>



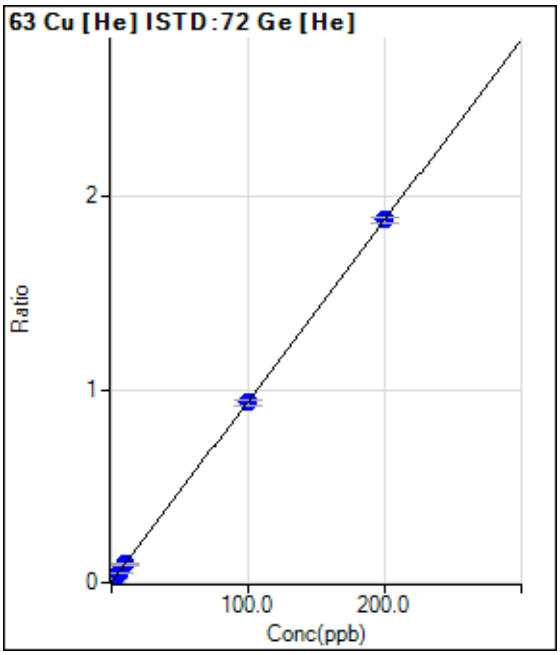
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3730.45	0.0032	P	1.5
2	☐	2.000	1.980	12948.09	0.0112	P	3.7
3	☐	5.000	5.035	27123.57	0.0235	P	0.3
4	☐	10.000	10.066	50031.41	0.0437	P	2.6
5	☐	100.000	99.285	457673.52	0.4022	P	0.7
6	☐	200.000	200.354	889545.27	0.8083	P	0.7
7	☐	1.000					

y = 0.0040 * x + 0.0032
R = 1.0000
DL = 0.03576
BEC = 0.8026

Weight: <None>
Min Conc: <None>

RIGHT SOLUTIONS | RIGHT PARTNER

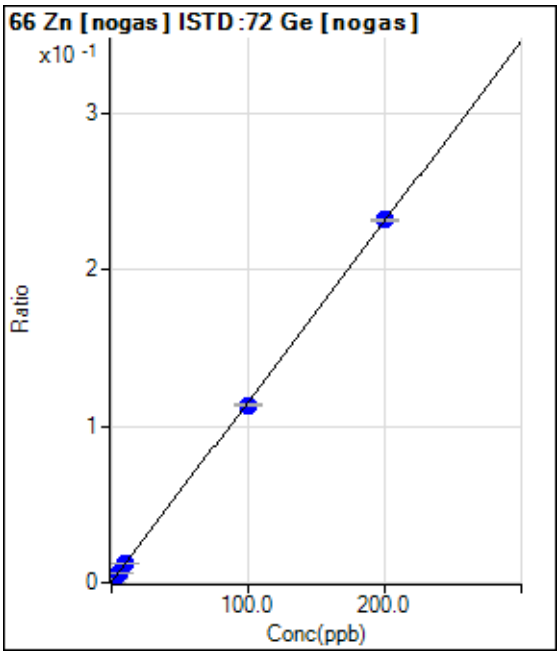
Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1046.71	0.0033	P	19.5
2	☐	2.000	2.085	7234.83	0.0228	P	5.0
3	☐	5.000	5.070	15927.11	0.0507	P	4.0
4	☐	10.000	9.910	29897.92	0.0960	P	3.2
5	☐	100.000	99.431	286646.41	0.9337	P	3.2
6	☐	200.000	200.286	554275.95	1.8774	P	1.3
7	☐	1.000					

y = 0.0094 * x + 0.0033
R = 1.0000
DL = 0.2065
BEC = 0.3531

Weight: <None>
Min Conc: <None>



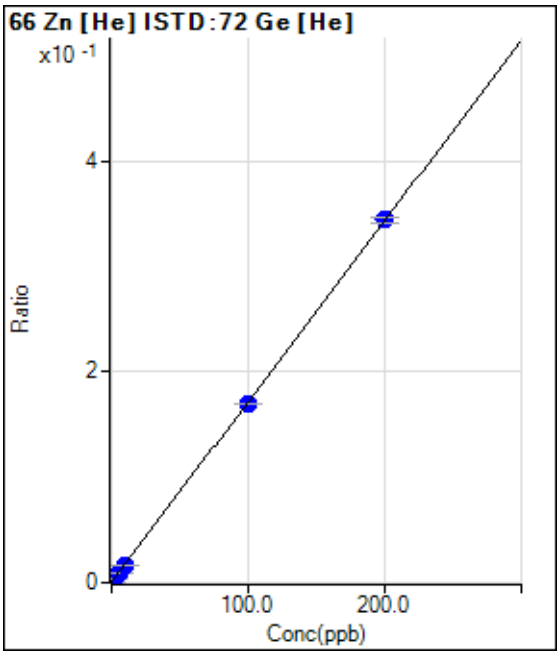
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	380.01	0.0003	P	10.2
2	☐	2.000	2.042	3103.64	0.0027	P	3.8
3	☐	5.000	4.986	7018.10	0.0061	P	5.7
4	☐	10.000	10.087	13688.61	0.0119	P	3.7
5	☐	100.000	98.205	129073.18	0.1134	P	1.1
6	☐	200.000	200.893	254976.37	0.2317	P	0.8
7	☐	1.000					

y = 0.0012 * x + 3.2841E-004
R = 0.9999
DL = 0.08689
BEC = 0.2852

Weight: <None>
Min Conc: <None>

RIGHT SOLUTIONS | RIGHT PARTNER

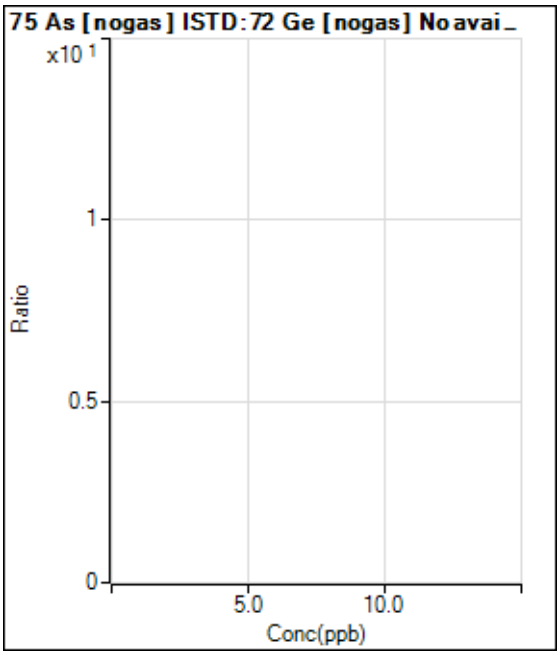
Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	173.33	0.0005	P	4.1
2	☐	2.000	1.987	1253.39	0.0040	P	6.0
3	☐	5.000	4.973	2846.92	0.0091	P	3.0
4	☐	10.000	9.496	5237.50	0.0168	P	4.1
5	☐	100.000	98.716	52110.95	0.1697	P	0.8
6	☐	200.000	200.668	101694.32	0.3444	P	1.6
7	☐	1.000					

y = 0.0017 * x + 5.4660E-004
R = 1.0000
DL = 0.03903
BEC = 0.3189

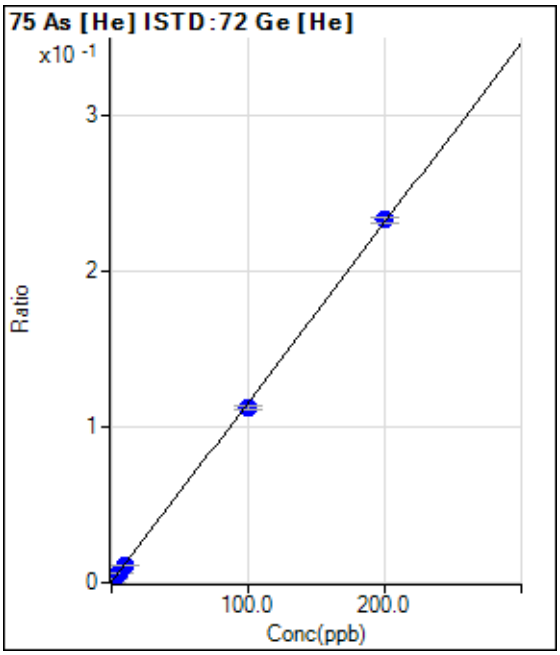
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

RIGHT SOLUTIONS | RIGHT PARTNER

Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	115.55	0.0004	P	19.0
2	☐	2.000	1.819	782.24	0.0025	P	4.1
3	☐	5.000	4.921	1901.22	0.0061	P	1.8
4	☐	10.000	9.655	3588.15	0.0115	P	3.0
5	☐	100.000	96.922	34513.67	0.1124	P	2.3
6	☐	200.000	201.560	68901.48	0.2334	P	1.7
7	☐	1.000					

y = 0.0012 * x + 3.6376E-004

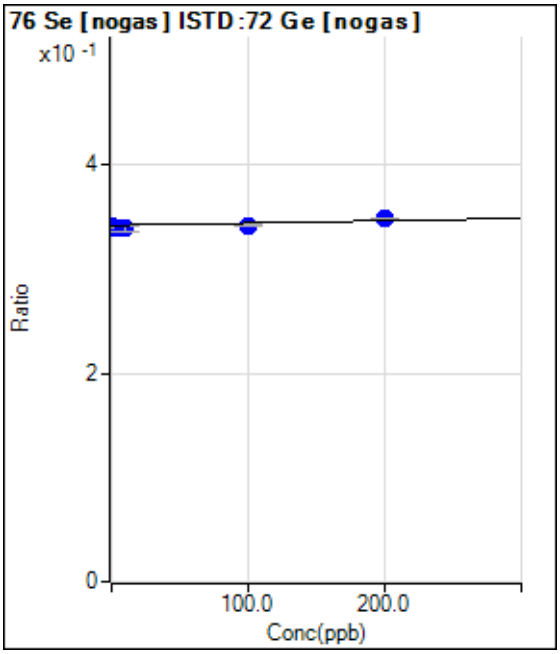
R = 0.9998

DL = 0.1794

BEC = 0.3147

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	395918.24	0.3422	P	0.5
2	☐	2.000	-83.892	394193.77	0.3404	P	0.6
3	☐	5.000	-115.319	392774.01	0.3397	P	0.3
4	☐	10.000	-147.770	388332.88	0.3389	P	1.5
5	☐	100.000	-22.491	388913.37	0.3417	P	0.6
6	☐	200.000	273.001	383435.89	0.3484	P	0.7
7	☐	1.000					

y = 2.2525E-005 * x + 0.3422

R = 0.8888

DL = 222.4

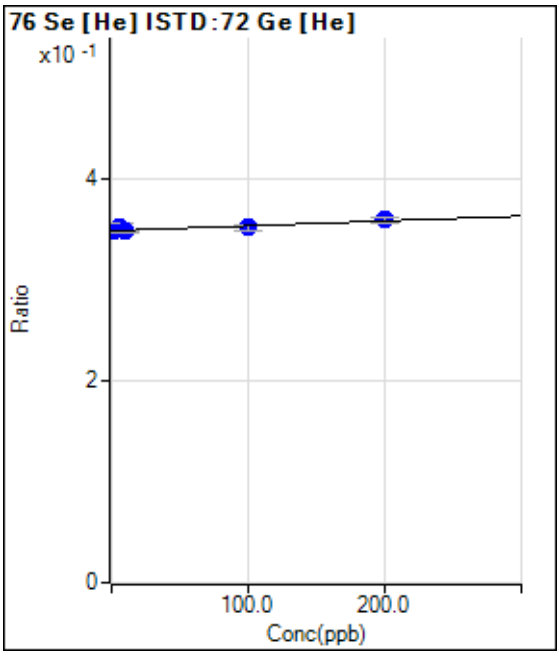
BEC = 1.519E+04

Weight: <None>

Min Conc: <None>

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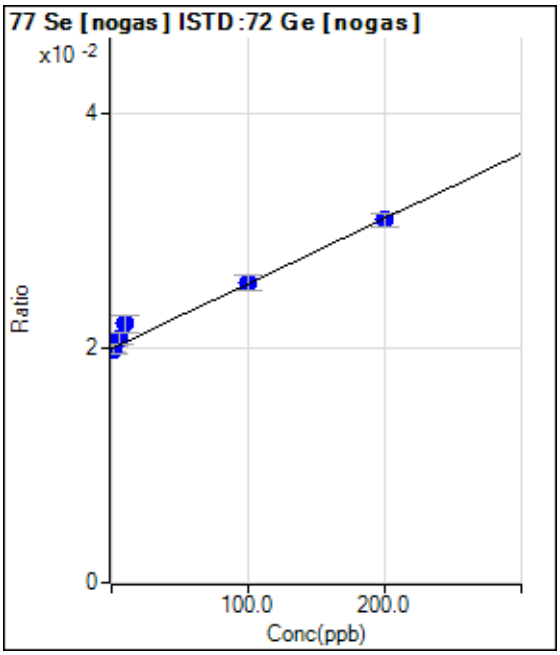
Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	110782.79	0.3493	P	1.2
2	☐	2.000	-18.945	110436.65	0.3484	P	0.9
3	☐	5.000	69.380	110704.94	0.3527	P	1.9
4	☐	10.000	-9.393	108606.53	0.3488	P	0.5
5	☐	100.000	59.660	108126.89	0.3522	P	2.0
6	☐	200.000	219.740	106279.67	0.3600	P	1.4
7	☐	1.000					

y = 4.8719E-005 * x + 0.3493
R = 0.9086
DL = 253.3
BEC = 7169

Weight: <None>
Min Conc: <None>



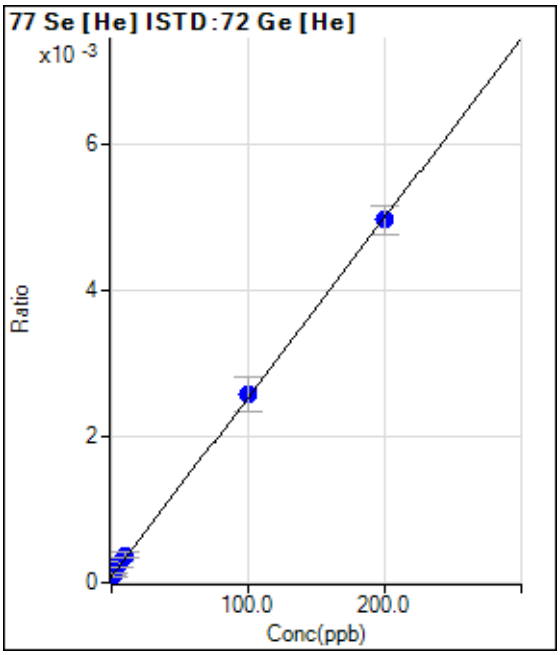
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23035.03	0.0199	P	3.0
2	☐	2.000	-3.086	22861.46	0.0197	P	3.5
3	☐	5.000	16.106	24059.68	0.0208	P	5.2
4	☐	10.000	38.279	25244.71	0.0220	P	6.5
5	☐	100.000	101.383	29053.65	0.0255	P	5.3
6	☐	200.000	197.668	33972.18	0.0309	P	3.8
7	☐	1.000					

y = 5.5452E-005 * x + 0.0199
R = 0.9889
DL = 32.15
BEC = 359.1

Weight: <None>
Min Conc: <None>

RIGHT SOLUTIONS | RIGHT PARTNER

Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26.67	0.0001	P	41.7
2	☐	2.000	0.870	33.33	0.0001	P	45.9
3	☐	5.000	7.030	80.00	0.0003	P	34.7
4	☐	10.000	11.876	116.67	0.0004	P	18.3
5	☐	100.000	102.051	793.36	0.0026	P	18.3
6	☐	200.000	198.841	1463.42	0.0050	P	8.3
7	☐	1.000					

y = 2.4518E-005 * x + 8.3739E-005

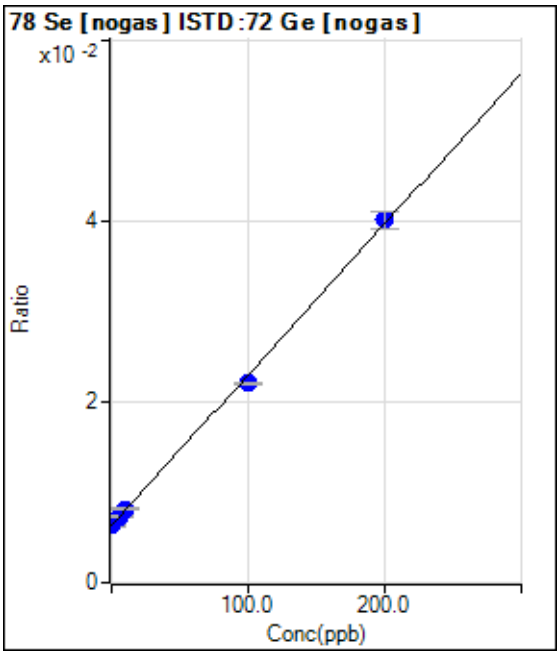
R = 0.9998

DL = 4.273

BEC = 3.415

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7321.57	0.0063	P	2.9
2	☐	2.000	2.804	7871.81	0.0068	P	2.4
3	☐	5.000	5.820	8442.05	0.0073	P	3.0
4	☐	10.000	10.987	9355.89	0.0082	P	3.6
5	☐	100.000	94.546	25164.35	0.0221	P	0.8
6	☐	200.000	202.649	44187.28	0.0402	P	4.8
7	☐	1.000					

y = 1.6694E-004 * x + 0.0063

R = 0.9994

DL = 3.3

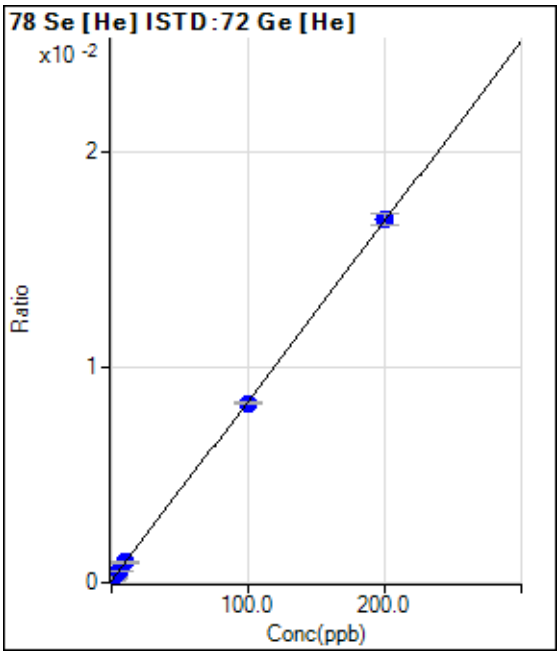
BEC = 37.91

Weight: <None>

Min Conc: <None>

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Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	27.33	0.0001	P	22.9
2	☐	2.000	1.819	75.33	0.0002	P	12.7
3	☐	5.000	5.027	158.67	0.0005	P	2.1
4	☐	10.000	10.522	300.00	0.0010	P	9.7
5	☐	100.000	98.541	2550.19	0.0083	P	1.3
6	☐	200.000	200.704	4968.02	0.0168	P	3.2
7	☐	1.000					

y = 8.3418E-005 * x + 8.6086E-005

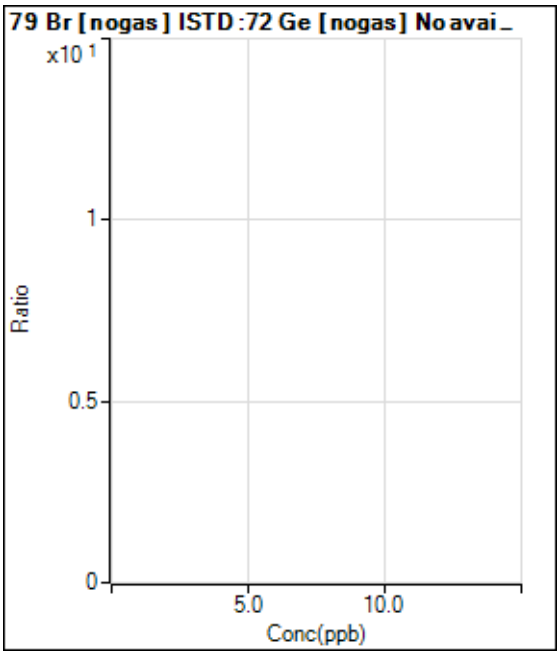
R = 1.0000

DL = 0.7083

BEC = 1.032

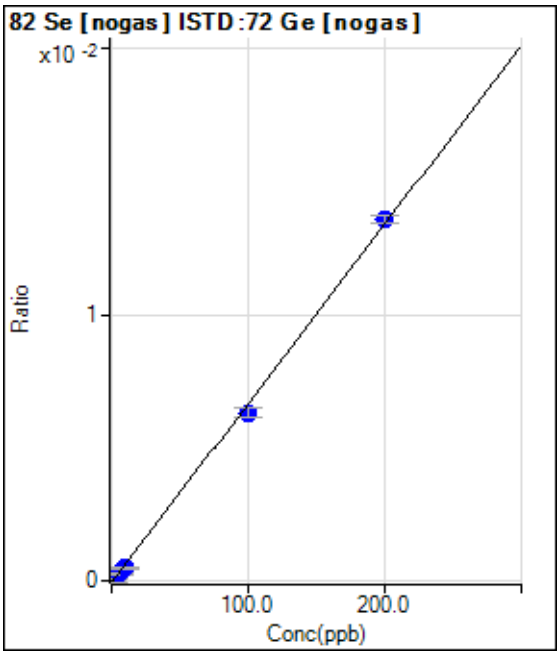
Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

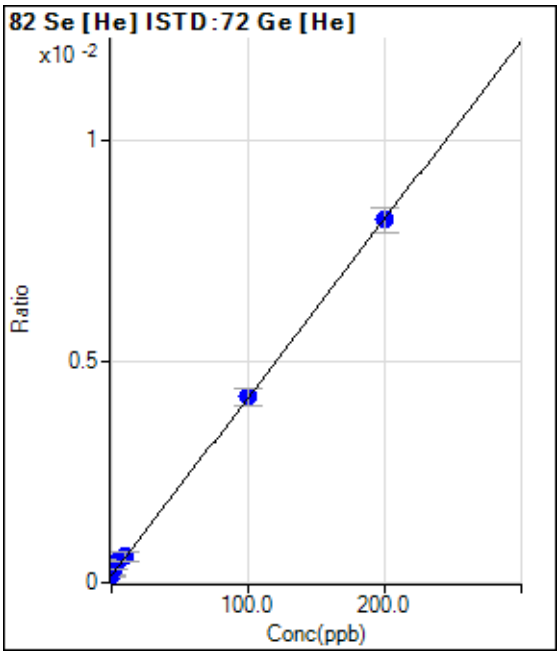
Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-47.20	0.0000	P	-235.2
2	☐	2.000	1.238	49.01	0.0000	P	244.2
3	☐	5.000	5.027	343.20	0.0003	P	20.8
4	☐	10.000	8.087	575.56	0.0005	P	16.8
5	☐	100.000	94.631	7187.73	0.0063	P	5.6
6	☐	200.000	202.787	14945.40	0.0136	P	1.8
7	☐	1.000					

y = 6.7156E-005 * x - 4.0684E-005
R = 0.9995
DL = 4.275
BEC = -0.6058

Weight: <None>
Min Conc: <None>



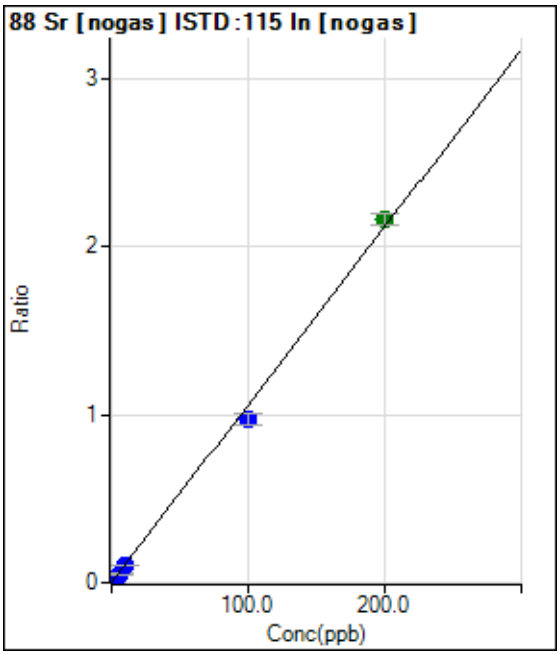
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	50.00	0.0002	P	33.1
2	☐	2.000	3.669	96.67	0.0003	P	5.1
3	☐	5.000	8.762	160.00	0.0005	P	6.9
4	☐	10.000	10.742	183.33	0.0006	P	33.8
5	☐	100.000	100.536	1290.07	0.0042	P	9.2
6	☐	200.000	199.584	2416.86	0.0082	P	7.1
7	☐	1.000					

y = 4.0244E-005 * x + 1.5714E-004
R = 0.9999
DL = 3.872
BEC = 3.905

Weight: <None>
Min Conc: <None>

RIGHT SOLUTIONS | RIGHT PARTNER

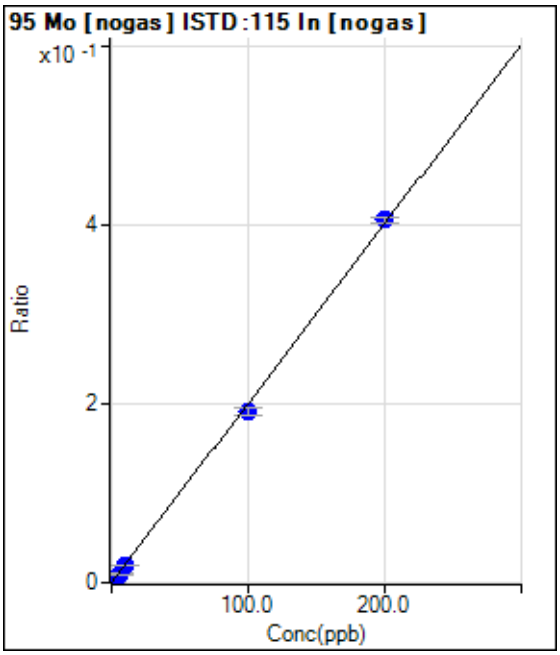
Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2420.20	0.0020	P	11.2
2	☐	2.000	1.859	25615.10	0.0216	P	1.5
3	☐	5.000	4.679	60876.52	0.0514	P	1.3
4	☐	10.000	9.323	116877.40	0.1004	P	1.4
5	☐	100.000	91.893	1140488.37	0.9722	P	6.0
6	☐	200.000	204.097	2386868.04	2.1568	A	3.4
7	☐	1.000					

y = 0.0106 * x + 0.0020
R = 0.9989
DL = 0.06417
BEC = 0.1917

Weight: <None>
Min Conc: <None>

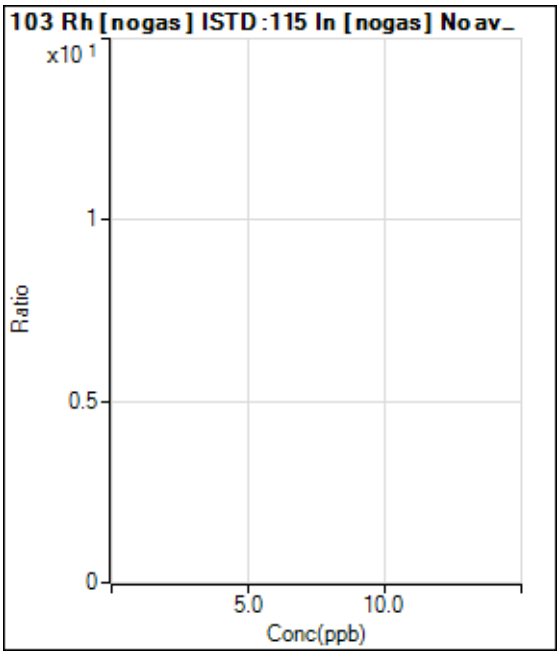


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	53.33	0.0000	P	60.9
2	☐	2.000	1.949	4677.35	0.0040	P	4.9
3	☐	5.000	4.789	11413.79	0.0096	P	0.6
4	☐	10.000	9.682	22624.73	0.0194	P	4.6
5	☐	100.000	95.477	224581.66	0.1914	P	5.3
6	☐	200.000	202.283	448737.67	0.4055	P	1.9
7	☐	1.000					

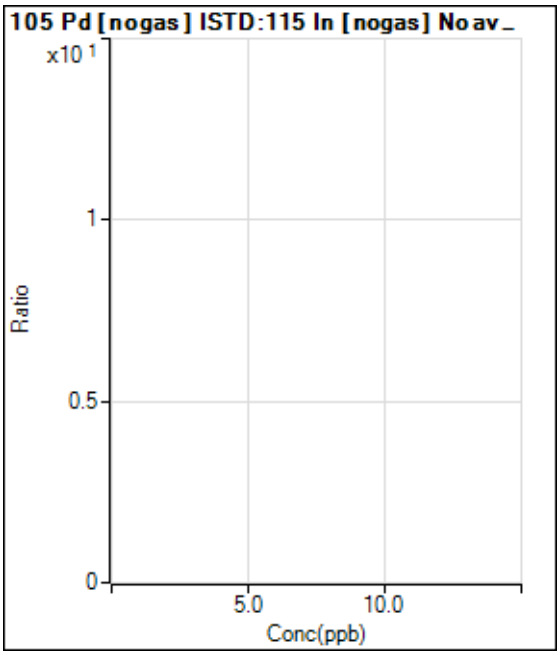
y = 0.0020 * x + 4.4724E-005
R = 0.9996
DL = 0.04078
BEC = 0.02232

Weight: <None>
Min Conc: <None>

RIGHT SOLUTIONS | RIGHT PARTNER

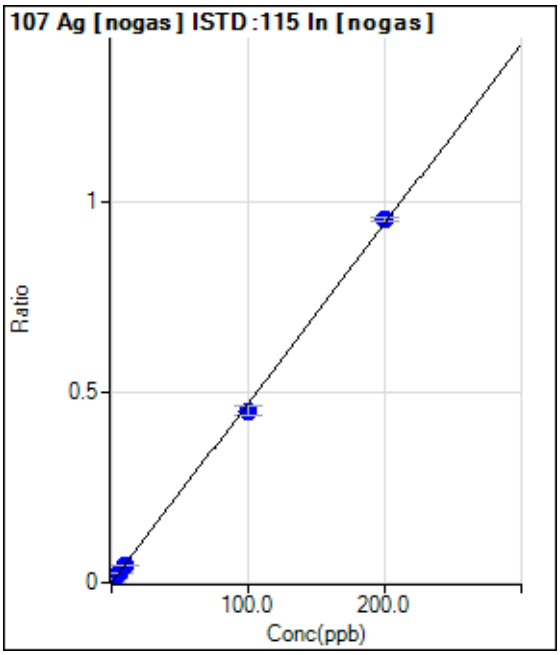


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

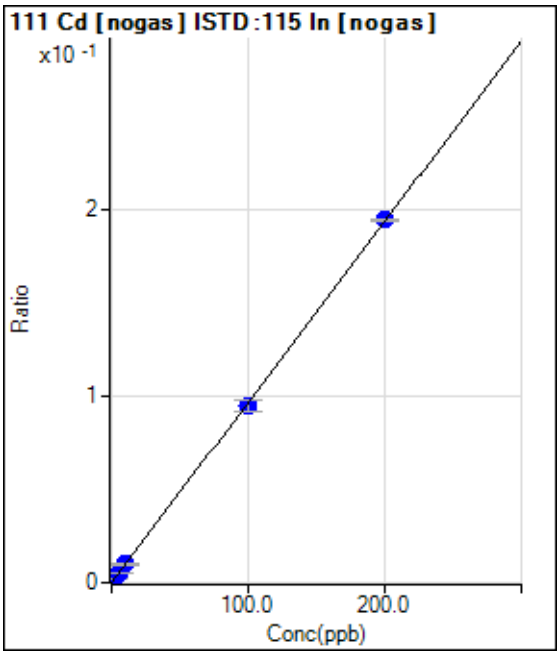
Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	360.01	0.0003	P	8.6
2	☐	2.000	1.925	11073.59	0.0094	P	3.3
3	☐	5.000	4.911	27708.54	0.0234	P	3.8
4	☐	10.000	9.813	54072.70	0.0465	P	2.8
5	☐	100.000	95.608	528278.91	0.4502	P	5.3
6	☐	200.000	202.208	1053448.53	0.9518	P	1.2
7	☐	1.000					

y = 0.0047 * x + 3.0118E-004
R = 0.9997
DL = 0.01643
BEC = 0.064

Weight: <None>
Min Conc: <None>



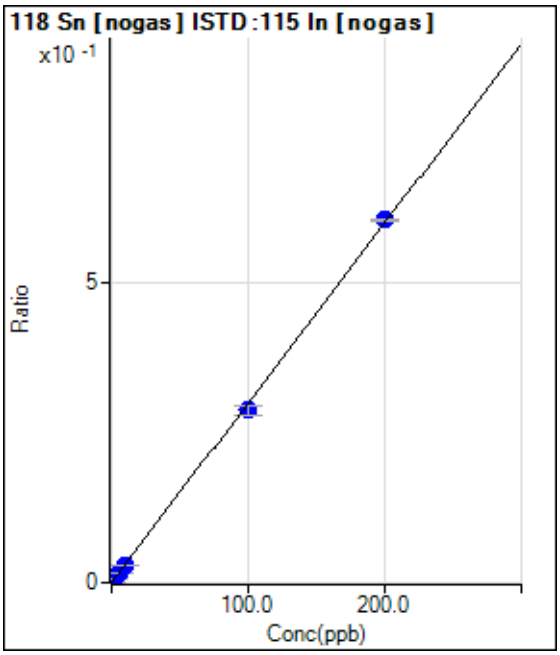
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	0.00	0.0000	P	
2	☐	2.000	2.009	2300.18	0.0019	P	10.4
3	☐	5.000	5.149	5901.06	0.0050	P	1.4
4	☐	10.000	10.136	11417.19	0.0098	P	2.2
5	☐	100.000	97.931	111196.27	0.0948	P	6.6
6	☐	200.000	201.024	215385.33	0.1946	P	0.6
7	☐	1.000					

y = 9.6810E-004 * x + 0.0000E+000
R = 0.9999
DL = 0
BEC = 0

Weight: <None>
Min Conc: <None>

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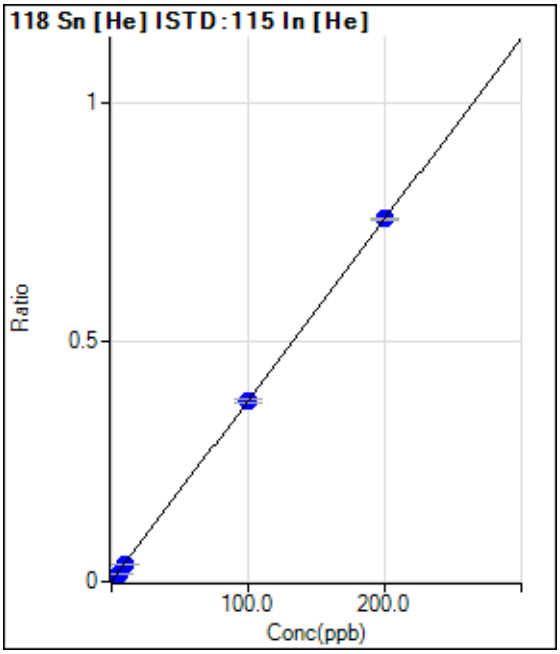
Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	570.02	0.0005	P	7.2
2	☐	2.000	1.903	7311.63	0.0062	P	6.1
3	☐	5.000	4.827	17682.45	0.0149	P	0.6
4	☐	10.000	9.805	34728.00	0.0298	P	2.4
5	☐	100.000	96.026	338044.03	0.2881	P	5.7
6	☐	200.000	202.002	670267.15	0.6056	P	0.4
7	☐	1.000					

y = 0.0030 * x + 4.7687E-004
R = 0.9997
DL = 0.03462
BEC = 0.1592

Weight: <None>
Min Conc: <None>



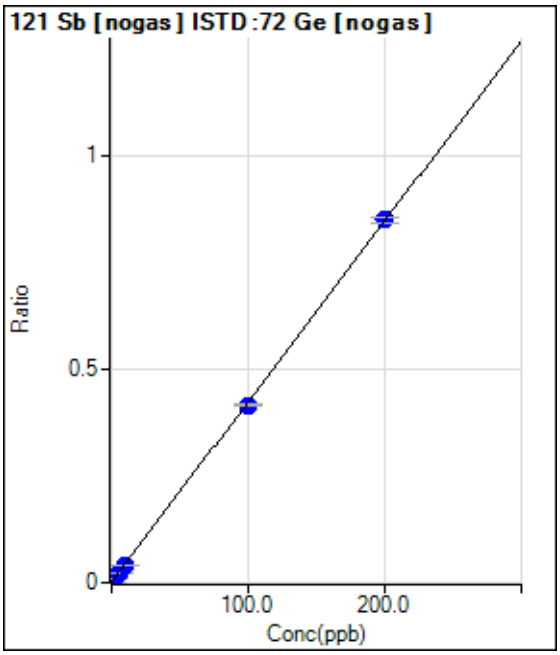
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	286.67	0.0006	P	47.0
2	☐	2.000	1.921	3530.40	0.0079	P	2.2
3	☐	5.000	4.534	8015.26	0.0178	P	1.3
4	☐	10.000	9.704	16291.13	0.0373	P	3.4
5	☐	100.000	99.498	161098.69	0.3764	P	1.5
6	☐	200.000	200.278	316621.17	0.7570	P	0.2
7	☐	1.000					

y = 0.0038 * x + 6.4523E-004
R = 1.0000
DL = 0.2407
BEC = 0.1708

Weight: <None>
Min Conc: <None>

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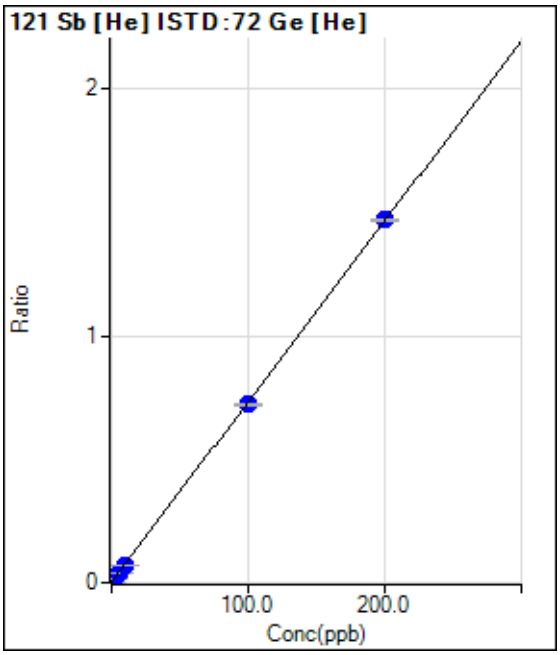
Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	980.05	0.0008	P	20.0
2	☐	2.000	2.011	10803.45	0.0093	P	1.8
3	☐	5.000	4.961	25174.96	0.0218	P	2.7
4	☐	10.000	9.685	47768.55	0.0417	P	3.0
5	☐	100.000	98.218	472396.57	0.4151	P	1.3
6	☐	200.000	200.907	933459.57	0.8482	P	1.9
7	☐	1.000					

y = 0.0042 * x + 8.4668E-004
R = 0.9999
DL = 0.1204
BEC = 0.2007

Weight: <None>
Min Conc: <None>



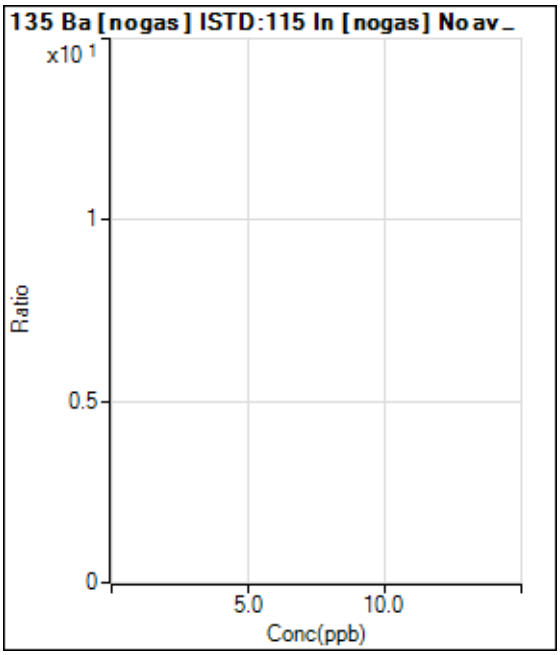
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	593.35	0.0019	P	8.8
2	☐	2.000	1.956	5120.83	0.0162	P	5.7
3	☐	5.000	4.694	11343.85	0.0361	P	4.3
4	☐	10.000	9.610	22431.20	0.0720	P	0.6
5	☐	100.000	98.391	221176.60	0.7204	P	1.4
6	☐	200.000	200.832	433573.72	1.4685	P	0.7
7	☐	1.000					

y = 0.0073 * x + 0.0019
R = 1.0000
DL = 0.06762
BEC = 0.2561

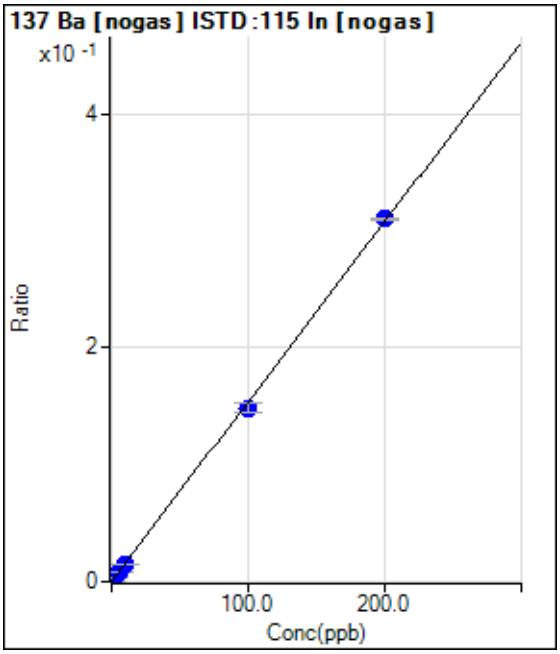
Weight: <None>
Min Conc: <None>

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Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	330.01	0.0003	P	20.5
2	☐	2.000	1.919	3813.81	0.0032	P	4.4
3	☐	5.000	4.838	9119.21	0.0077	P	5.2
4	☐	10.000	9.716	17672.63	0.0152	P	3.0
5	☐	100.000	96.519	174109.69	0.1484	P	6.0
6	☐	200.000	201.760	343055.75	0.3100	P	0.5
7	☐	1.000					

y = 0.0015 * x + 2.7586E-004

R = 0.9998

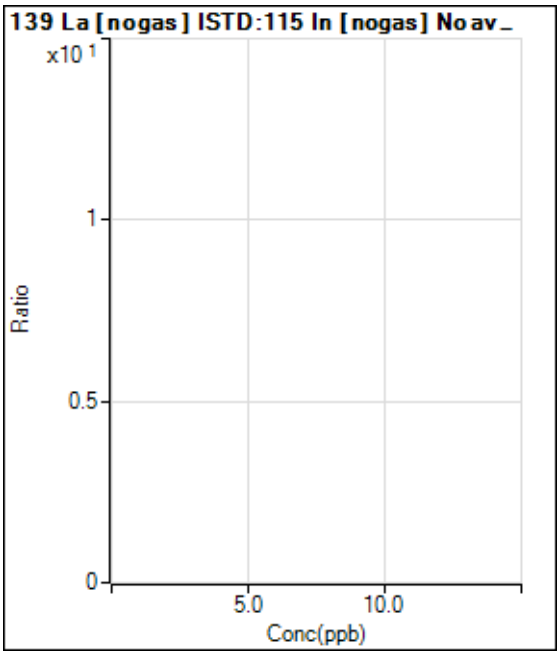
DL = 0.1103

BEC = 0.1797

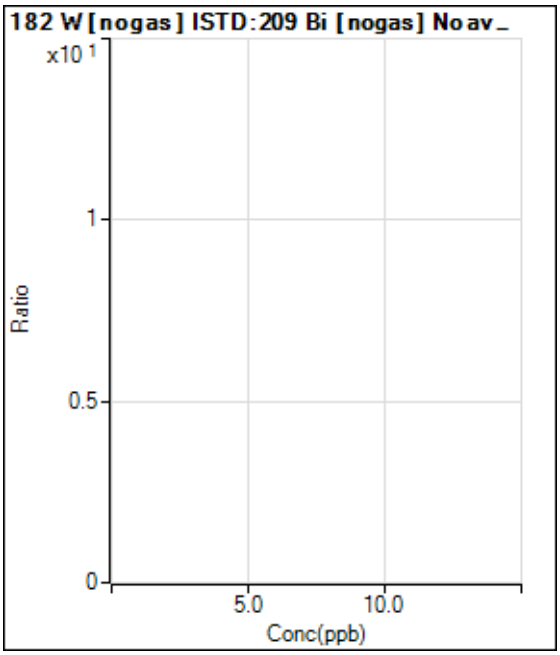
Weight: <None>

Min Conc: <None>

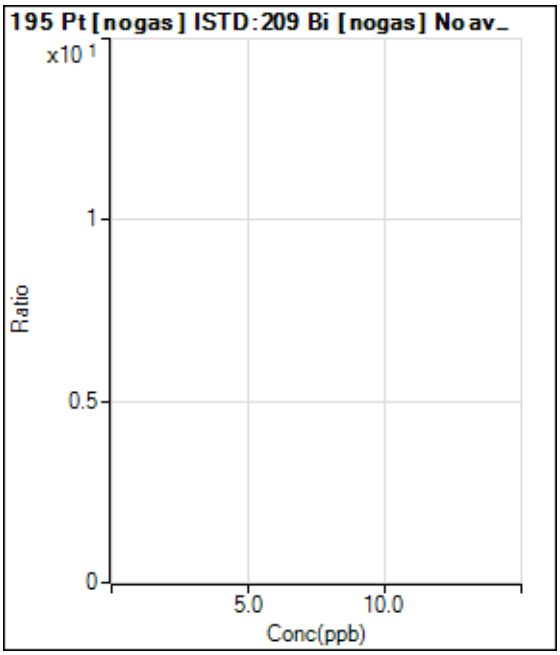
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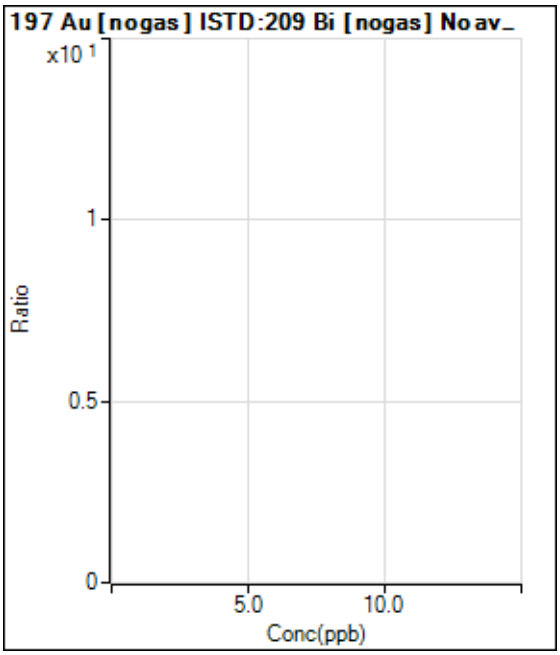
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					



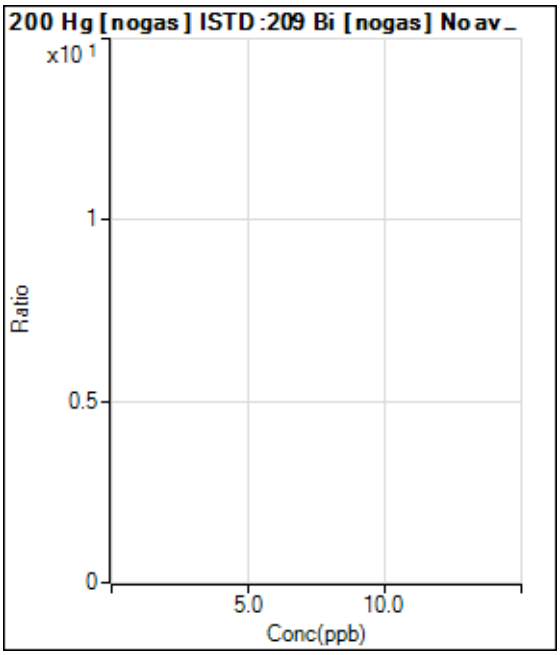
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					



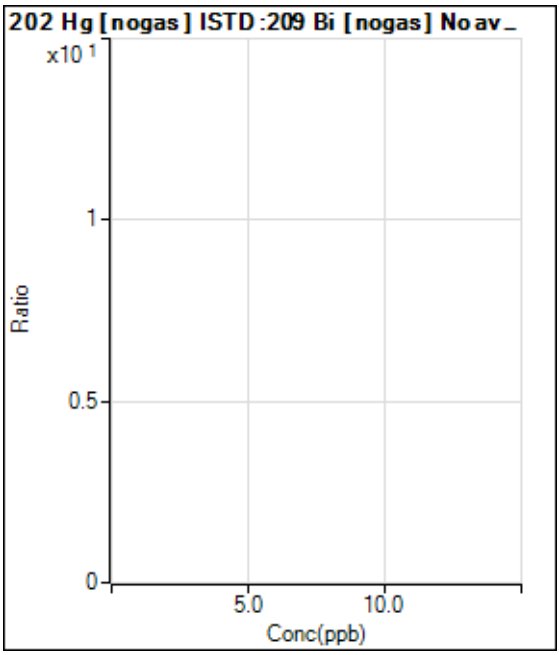
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

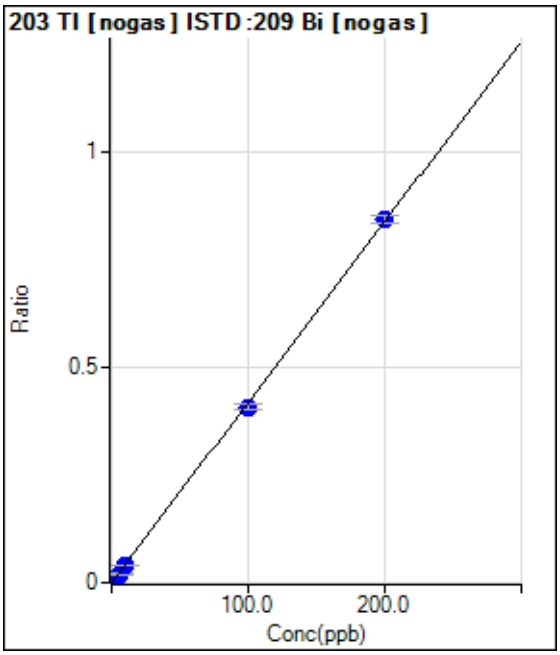


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	0.050					
3	☐	0.200					
4	☐	0.500					
5	☐	2.000					
6	☐	5.000					
7	☐	10.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	0.050					
3	☐	0.200					
4	☐	0.500					
5	☐	5.000					
6	☐	5.000					
7	☐	10.000					

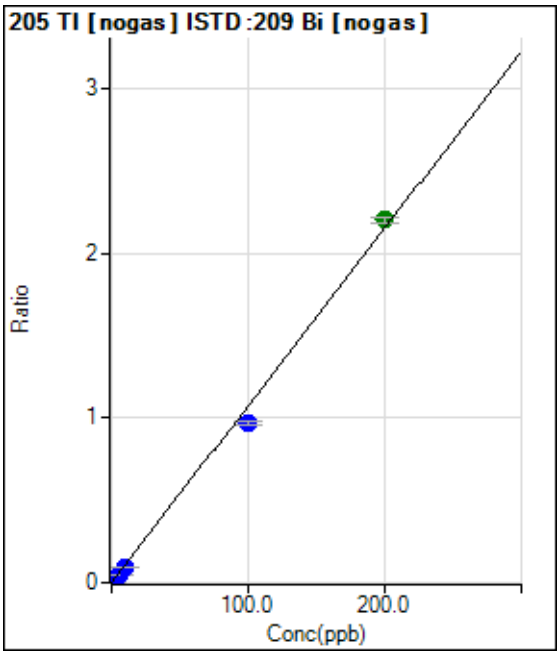
Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26.67	0.0000	P	42.5
2	☐	2.000	1.864	7838.70	0.0078	P	5.9
3	☐	5.000	4.775	19892.19	0.0201	P	3.9
4	☐	10.000	9.653	40139.32	0.0405	P	6.0
5	☐	100.000	97.583	392572.68	0.4093	P	2.4
6	☐	200.000	201.233	772319.78	0.8440	P	2.0
7	☐	1.000					

y = 0.0042 * x + 2.6620E-005
R = 0.9999
DL = 0.008095
BEC = 0.006347

Weight: <None>
Min Conc: <None>



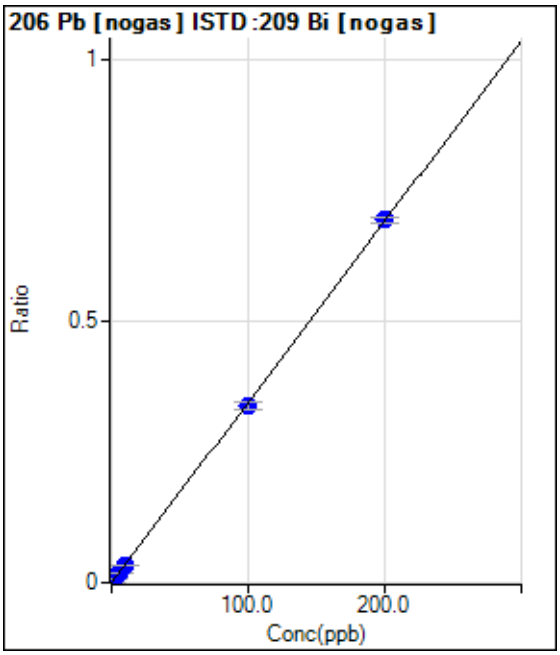
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	73.33	0.0001	P	7.5
2	☐	2.000	1.836	19829.01	0.0198	P	1.8
3	☐	5.000	4.526	48388.27	0.0488	P	3.0
4	☐	10.000	8.850	94468.85	0.0953	P	3.5
5	☐	100.000	90.310	932103.50	0.9718	P	2.3
6	☐	200.000	204.916	2017801.89	2.2048	A	1.7
7	☐	1.000					

y = 0.0108 * x + 7.3333E-005
R = 0.9984
DL = 0.001532
BEC = 0.006816

Weight: <None>
Min Conc: <None>

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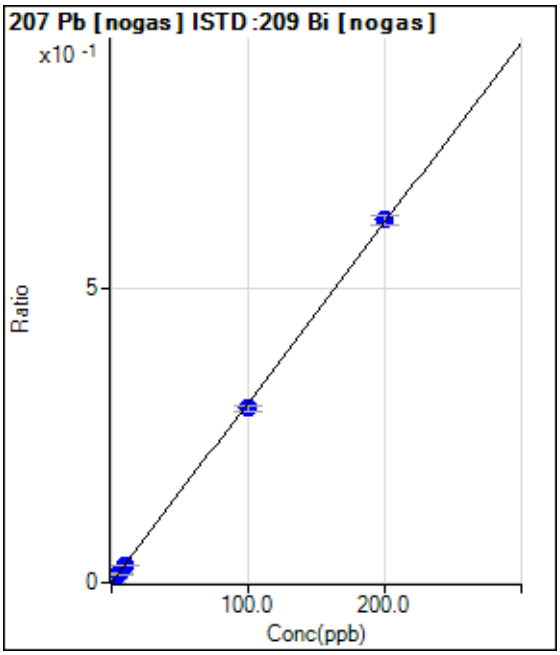
Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	116.67	0.0001	P	32.5
2	☐	2.000	2.051	7185.01	0.0072	P	4.7
3	☐	5.000	4.969	17109.07	0.0172	P	2.3
4	☐	10.000	9.472	32485.95	0.0328	P	1.7
5	☐	100.000	98.054	324176.55	0.3380	P	3.5
6	☐	200.000	201.000	633987.70	0.6928	P	1.6
7	☐	1.000					

y = 0.0034 * x + 1.1728E-004
R = 0.9999
DL = 0.03314
BEC = 0.03403

Weight: <None>
Min Conc: <None>



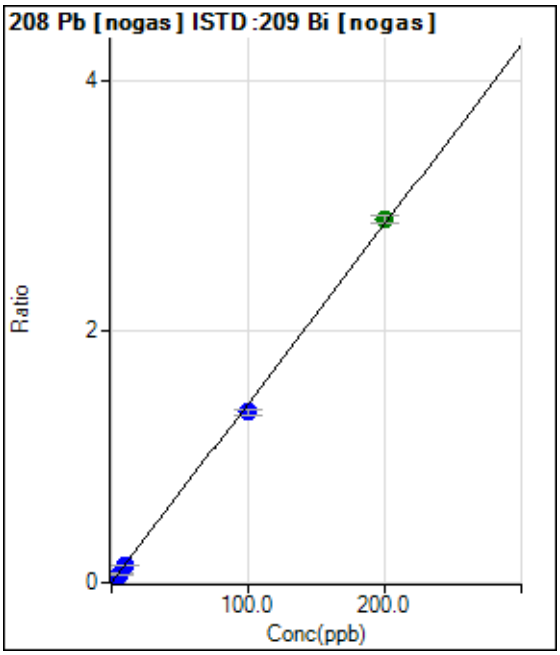
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	120.00	0.0001	P	5.9
2	☐	2.000	1.900	5924.51	0.0059	P	1.6
3	☐	5.000	4.820	14720.16	0.0148	P	5.4
4	☐	10.000	9.628	29276.45	0.0295	P	3.3
5	☐	100.000	96.909	284026.50	0.2961	P	2.8
6	☐	200.000	201.570	563513.14	0.6158	P	2.8
7	☐	1.000					

y = 0.0031 * x + 1.1988E-004
R = 0.9998
DL = 0.006963
BEC = 0.03925

Weight: <None>
Min Conc: <None>

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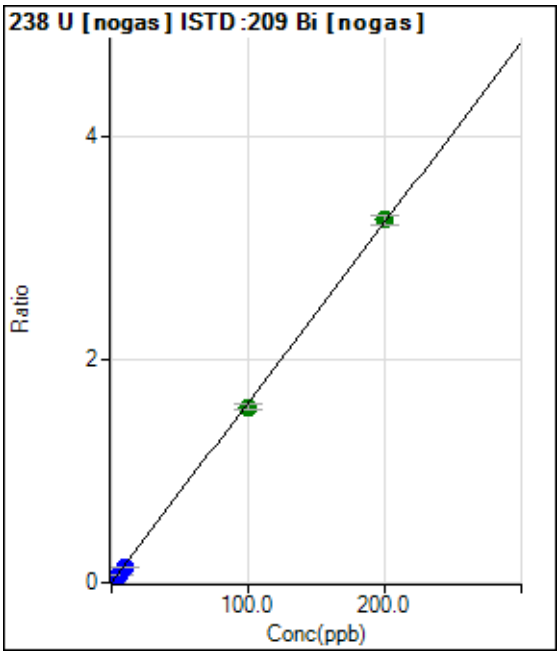
Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	500.00	0.0005	P	17.4
2	☐	2.000	1.921	27919.81	0.0279	P	1.4
3	☐	5.000	4.786	68243.51	0.0688	P	3.4
4	☐	10.000	9.331	132539.64	0.1337	P	2.2
5	☐	100.000	95.169	1303115.46	1.3587	P	2.9
6	☐	200.000	202.455	2644388.42	2.8897	A	2.2
7	☐	1.000					

y = 0.0143 * x + 5.0039E-004
R = 0.9996
DL = 0.01828
BEC = 0.03506

Weight: <None>
Min Conc: <None>



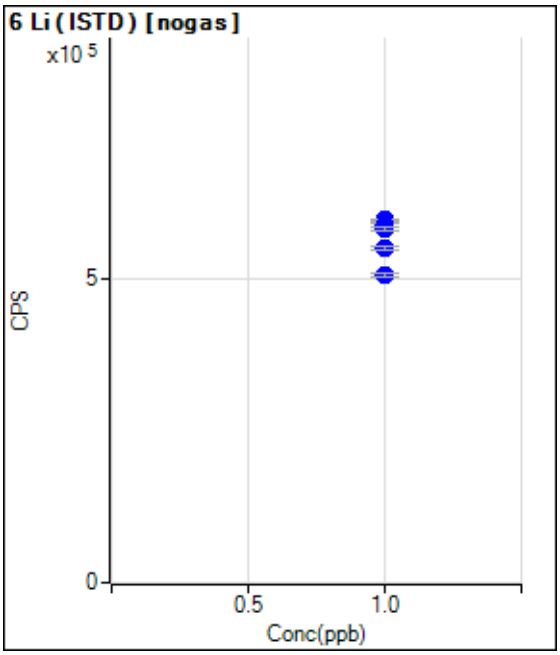
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	53.33	0.0001	P	9.1
2	☐	2.000	1.770	28689.41	0.0287	P	2.7
3	☐	5.000	4.484	72035.98	0.0726	P	2.8
4	☐	10.000	8.749	140391.20	0.1416	P	3.6
5	☐	100.000	97.230	1509167.22	1.5733	A	3.2
6	☐	200.000	201.463	2982779.02	3.2598	A	2.9
7	☐	1.000					

y = 0.0162 * x + 5.3285E-005
R = 0.9999
DL = 0.0008996
BEC = 0.003293

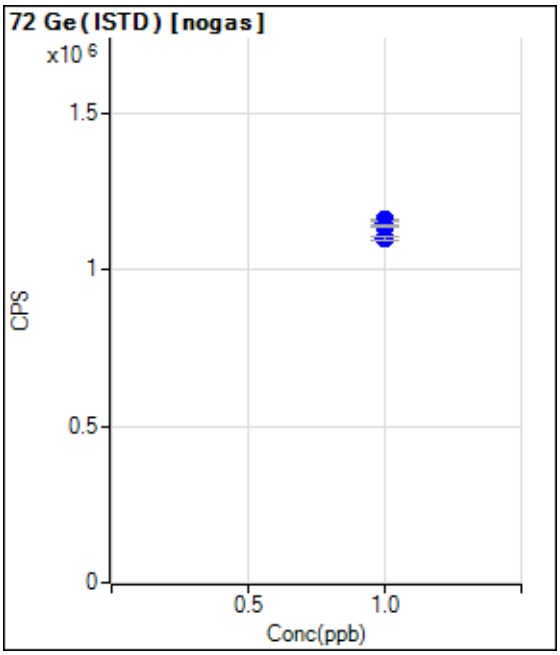
Weight: <None>
Min Conc: <None>

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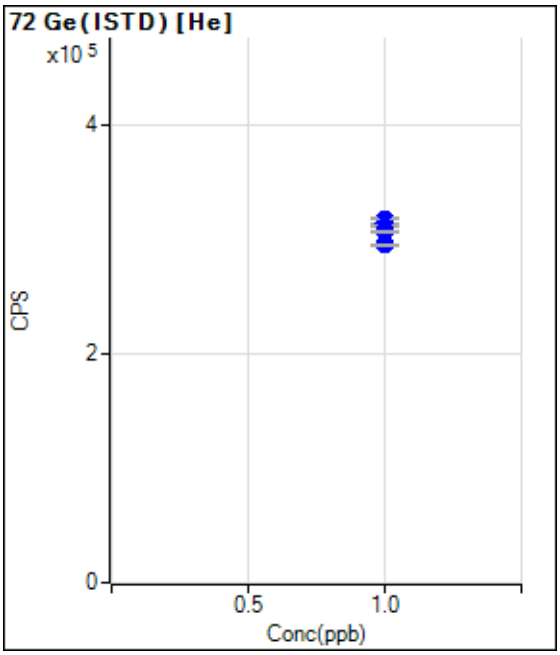
Calibration for 207_ICV.d



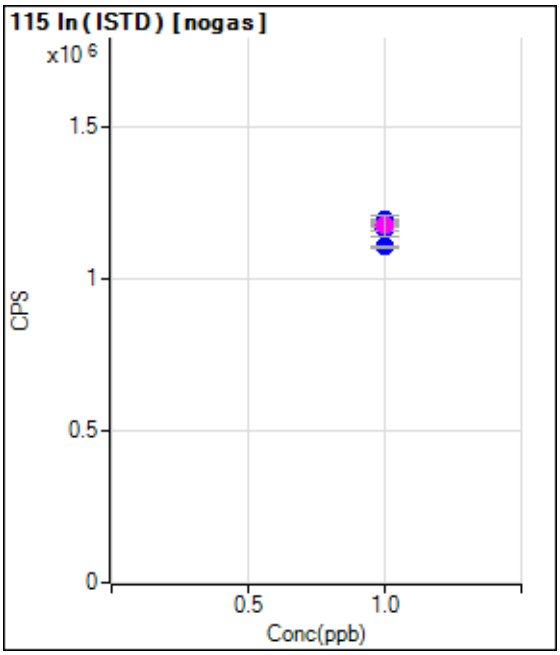
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		596022.35		P	0.6
2	☐	1.000		587437.13		P	1.2
3	☐	1.000		585034.67		P	0.2
4	☐	1.000		581419.85		P	0.6
5	☐	1.000		550531.01		P	1.4
6	☐	1.000		505373.66		P	0.7
7	☐	1.000					



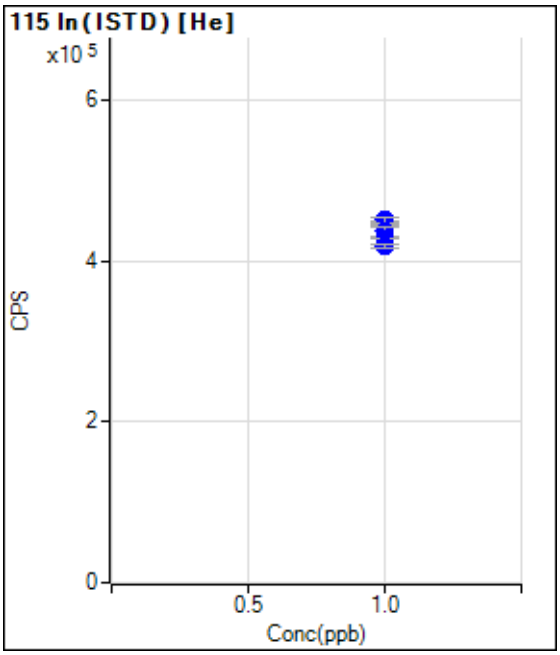
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1156828.63		P	0.5
2	☐	1.000		1158178.60		P	0.2
3	☐	1.000		1156397.20		P	0.2
4	☐	1.000		1145878.76		P	1.0
5	☐	1.000		1138058.52		P	0.7
6	☐	1.000		1100613.60		P	1.0
7	☐	1.000					



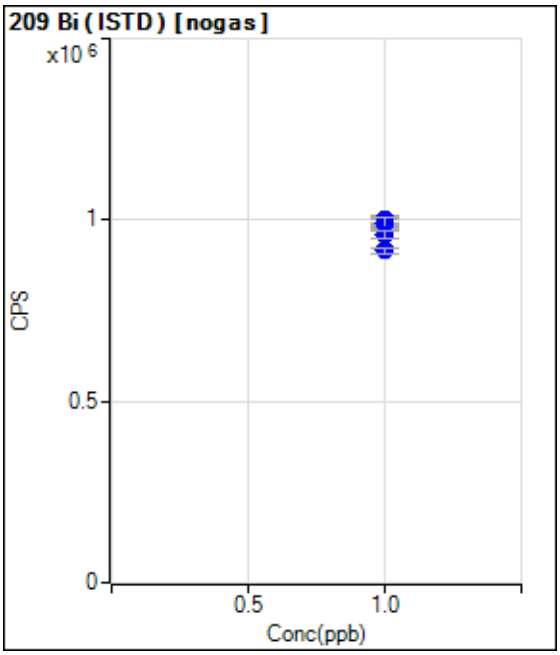
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		317195.11		P	1.4
2	☐	1.000		317046.18		P	1.3
3	☐	1.000		314000.28		P	2.3
4	☐	1.000		311348.33		P	0.5
5	☐	1.000		307037.79		P	0.6
6	☐	1.000		295259.10		P	0.9
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1195503.44		P	0.6
2	☐	1.000		1183481.55		P	1.6
3	☐	1.000		1183749.74		P	0.6
4	☐	1.000		1163670.59		P	1.1
5	☐	1.000		1175910.91		M	6.1
6	☐	1.000		1106767.08		P	0.4
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		444648.44		P	1.2
2	☐	1.000		446915.76		P	0.7
3	☐	1.000		451110.53		P	1.3
4	☐	1.000		436679.11		P	2.3
5	☐	1.000		427976.53		P	0.3
6	☐	1.000		418252.22		P	0.7
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1000066.18		P	2.6
2	☐	1.000		999963.14		P	1.3
3	☐	1.000		992469.18		P	2.3
4	☐	1.000		992047.82		P	3.0
5	☐	1.000		959470.33		P	1.9
6	☐	1.000		915297.62		P	1.7
7	☐	1.000					

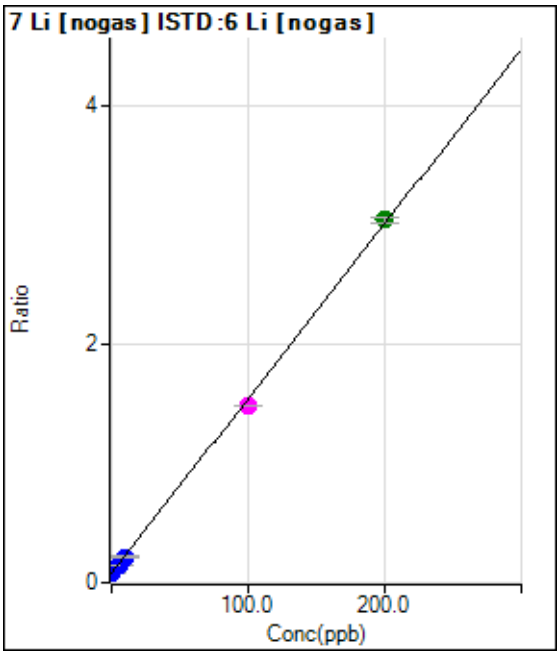
Calibration for 154_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\051120A.b\
Analysis File: 051120A.batch.bin
DA Date-Time: 5/11/2020 9:33:31 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	147CALB.d	IRBK	5/11/2020 9:16:06 PM
2	148CALS.d	2/10/200	5/11/2020 9:18:29 PM
3	149CALS.d	5/25/500	5/11/2020 9:20:51 PM
4	150CALS.d	10/50/1000	5/11/2020 9:23:14 PM
5	151CALS.d	100/500/10K	5/11/2020 9:25:38 PM
6	152CALS.d	200/1000/20K	5/11/2020 9:27:59 PM
7			

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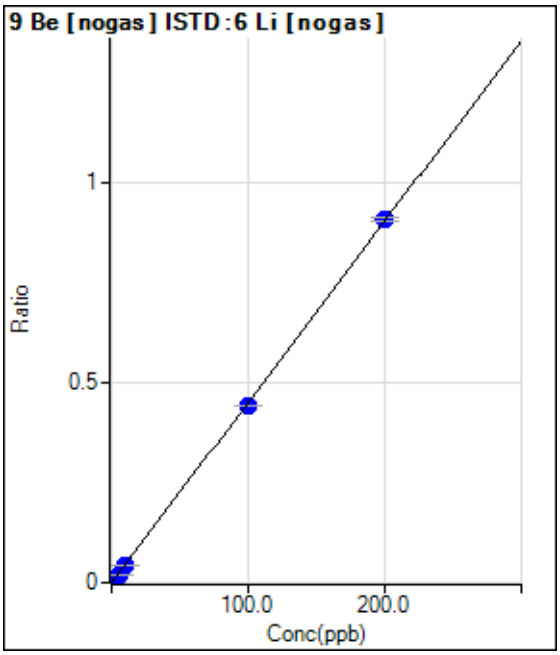
Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	58892.44	0.0802	P	1.2
2	☐	2.000	1.903	79877.00	0.1081	P	0.5
3	☐	5.000	4.686	111069.13	0.1488	P	0.9
4	☐	10.000	9.324	161469.69	0.2167	P	1.1
5	☐	100.000	95.535	1066503.03	1.4782	M	0.1
6	☐	200.000	202.275	2070506.90	3.0402	A	1.6
7	☐	1.000					

y = 0.0146 * x + 0.0802
R = 0.9997
DL = 0.1943
BEC = 5.484

Weight: <None>
Min Conc: <None>



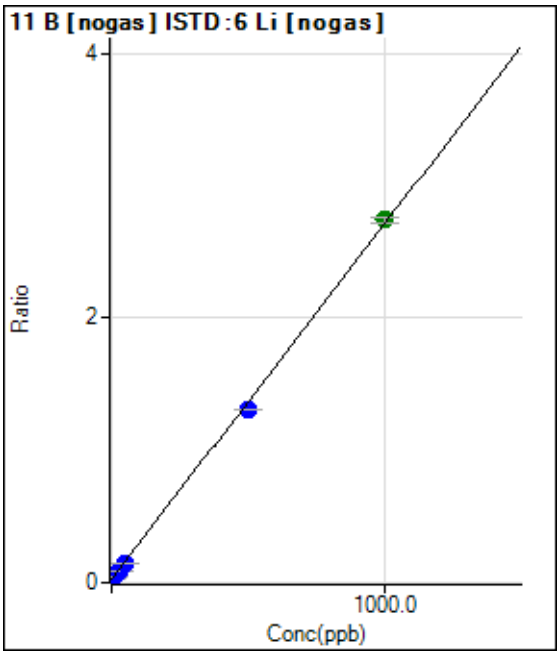
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	80.00	0.0001	P	16.5
2	☐	2.000	1.893	6404.44	0.0087	P	0.7
3	☐	5.000	4.641	15738.15	0.0211	P	2.1
4	☐	10.000	9.256	31258.68	0.0419	P	1.5
5	☐	100.000	98.095	319998.19	0.4435	P	0.5
6	☐	200.000	201.000	618855.78	0.9087	P	1.0
7	☐	1.000					

y = 0.0045 * x + 1.0901E-004
R = 0.9999
DL = 0.01191
BEC = 0.02411

Weight: <None>
Min Conc: <None>

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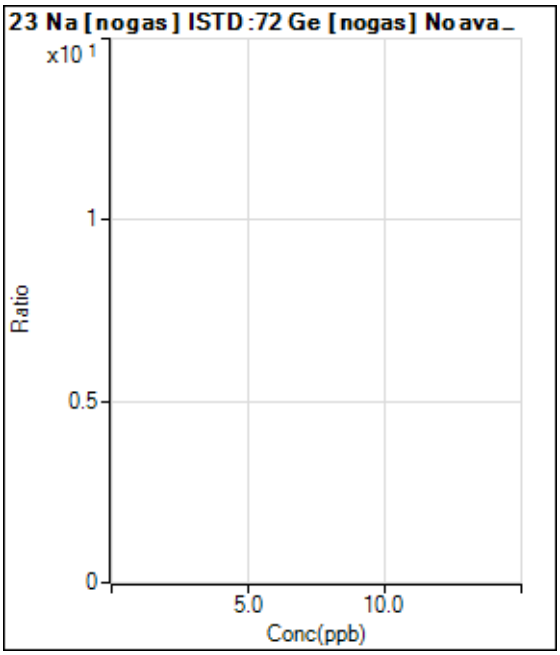
Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	19182.94	0.0261	P	0.6
2	☐	10.000	9.046	37259.37	0.0504	P	0.8
3	☐	25.000	22.110	63803.27	0.0855	P	3.1
4	☐	50.000	44.625	108747.65	0.1459	P	1.6
5	☐	500.000	477.618	943932.33	1.3083	P	0.9
6	☐	1000.000	1011.541	1867112.16	2.7417	A	1.9
7	☐	5.000					

y = 0.0027 * x + 0.0261
R = 0.9997
DL = 0.1659
BEC = 9.737

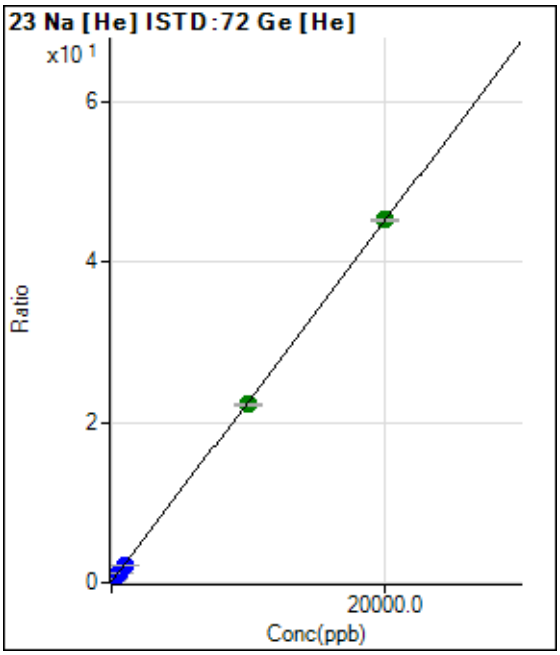
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

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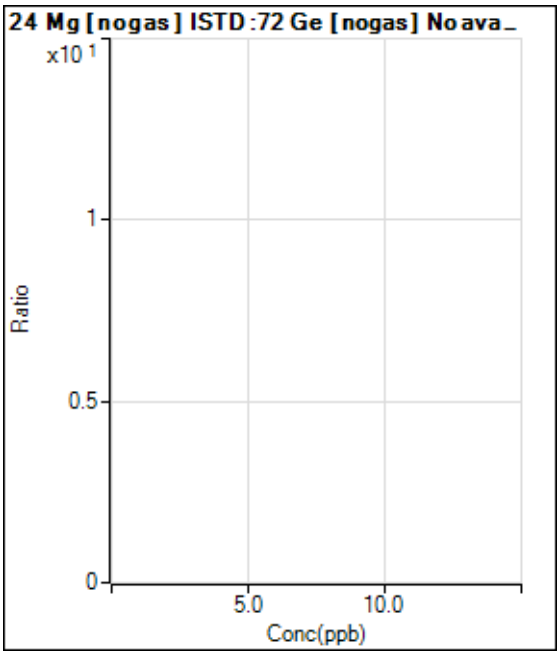
Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	39878.65	0.1217	P	1.1
2	☐	200.000	190.712	182921.60	0.5506	P	1.8
3	☐	500.000	481.197	397720.53	1.2039	P	2.5
4	☐	1000.000	945.639	750350.67	2.2485	P	1.0
5	☐	10000.000	9833.918	7439559.05	22.2386	A	1.3
6	☐	20000.000	20086.322	14649425.61	45.2967	A	0.5
7	☐	100.000					

y = 0.0022 * x + 0.1217
R = 1.0000
DL = 1.782
BEC = 54.11

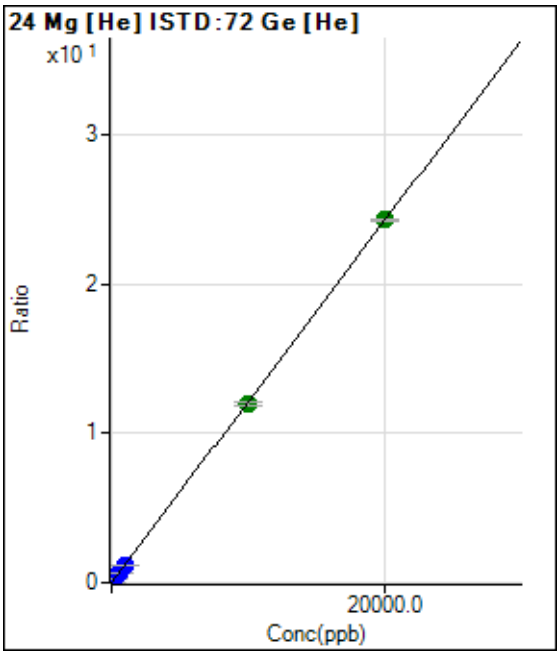
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

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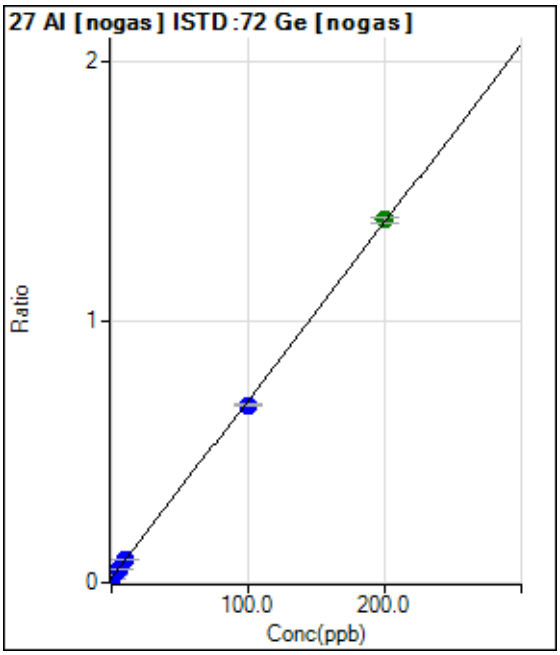
Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	696.69	0.0021	P	14.0
2	☐	200.000	197.827	80335.86	0.2418	P	2.1
3	☐	500.000	485.594	195029.07	0.5903	P	1.4
4	☐	1000.000	962.643	389848.98	1.1682	P	0.7
5	☐	10000.000	9885.013	4006994.63	11.9760	A	1.8
6	☐	20000.000	20059.743	7859114.05	24.3008	A	0.3
7	☐	100.000					

y = 0.0012 * x + 0.0021
R = 1.0000
DL = 0.7397
BEC = 1.756

Weight: <None>
Min Conc: <None>

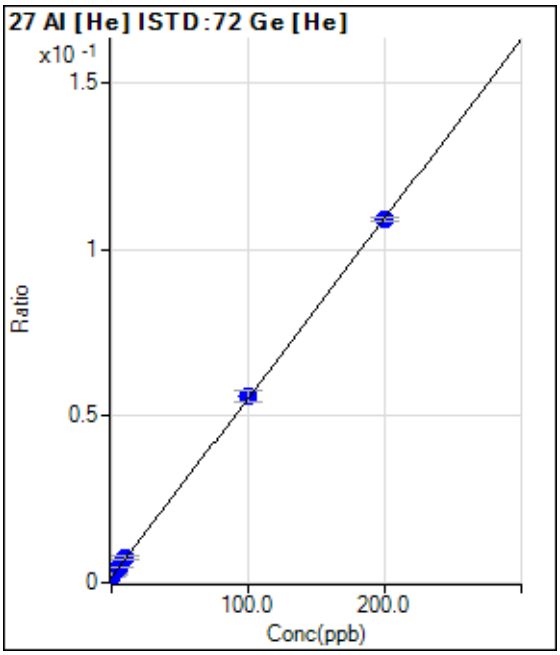


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	24520.07	0.0174	P	2.9
2	☐	2.000	2.074	44773.12	0.0316	P	1.1
3	☐	5.000	5.176	75777.55	0.0527	P	4.3
4	☐	10.000	10.198	124821.10	0.0870	P	1.9
5	☐	100.000	97.090	991124.31	0.6800	P	0.9
6	☐	200.000	201.440	1982738.72	1.3921	A	1.8
7	☐	1.000					

y = 0.0068 * x + 0.0174
R = 0.9998
DL = 0.2199
BEC = 2.553

Weight: <None>
Min Conc: <None>

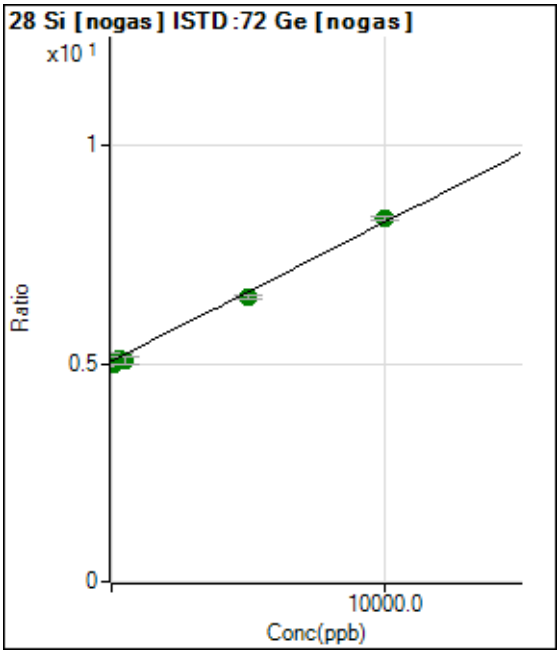
Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	503.35	0.0015	P	6.0
2	☐	2.000	2.069	880.03	0.0026	P	8.5
3	☐	5.000	5.575	1500.08	0.0045	P	8.7
4	☐	10.000	11.081	2503.54	0.0075	P	9.1
5	☐	100.000	101.313	18766.18	0.0561	P	6.0
6	☐	200.000	199.274	35209.43	0.1089	P	1.0
7	☐	1.000					

y = 5.3863E-004 * x + 0.0015
R = 1.0000
DL = 0.5117
BEC = 2.851

Weight: <None>
Min Conc: <None>

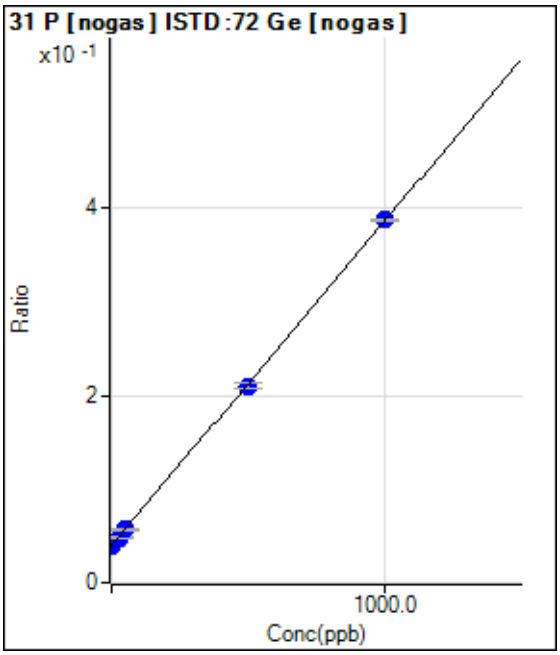


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7113622.40	5.0552	A	4.6
2	☐	100.000	-173.441	7089114.27	5.0000	A	2.6
3	☐	250.000	150.392	7330225.93	5.1030	A	4.8
4	☐	500.000	52.561	7273870.72	5.0719	A	3.4
5	☐	5000.000	4582.284	9493242.36	6.5131	A	1.4
6	☐	10000.000	10236.455	11839533.99	8.3121	A	1.1
7	☐	50.000					

y = 3.1817E-004 * x + 5.0552
R = 0.9985
DL = 2204
BEC = 1.589E+04

Weight: <None>
Min Conc: <None>

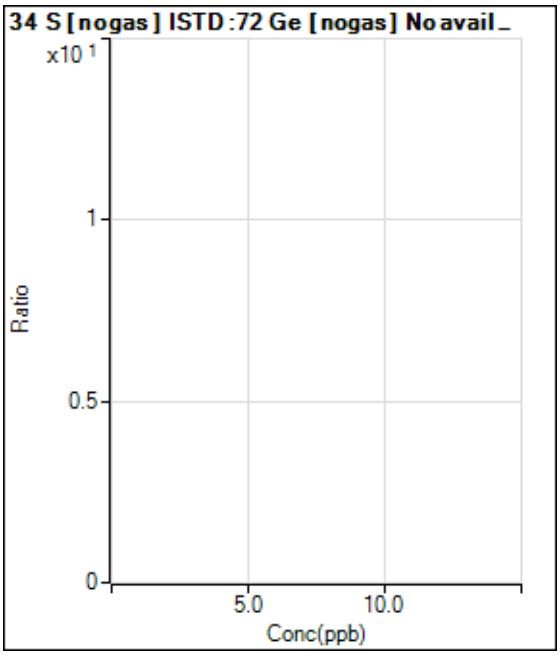
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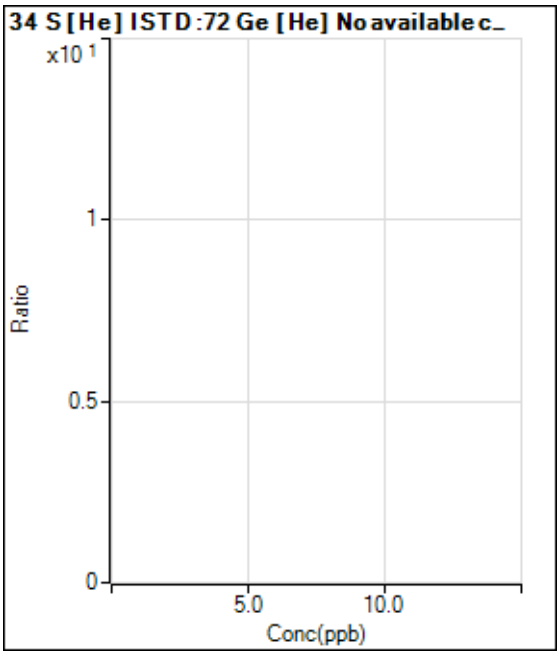
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	55825.95	0.0397	P	2.6
2	☐	10.000	10.904	61593.50	0.0434	P	1.1
3	☐	25.000	23.082	68466.99	0.0477	P	4.0
4	☐	50.000	50.728	82081.02	0.0572	P	2.9
5	☐	500.000	492.565	306396.79	0.2102	P	2.4
6	☐	1000.000	1003.720	551563.48	0.3872	P	0.3
7	☐	5.000					

y = 3.4626E-004 * x + 0.0397
R = 1.0000
DL = 8.791
BEC = 114.5

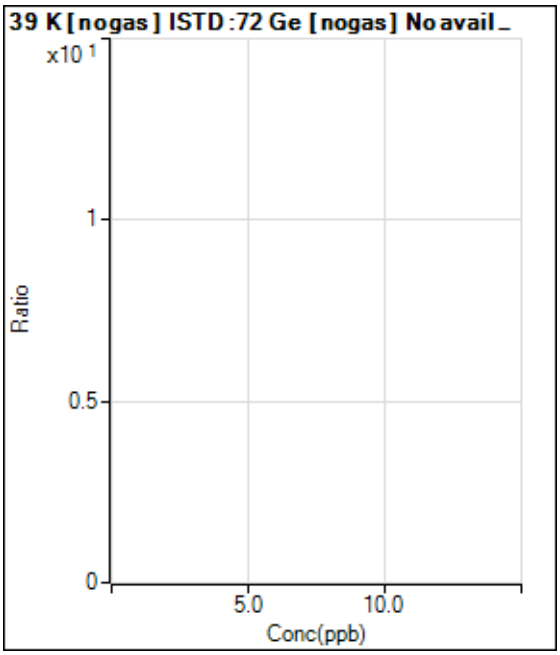
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	400.000					
3	☐	1000.000					
4	☐	2000.000					
5	☐	20000.000					
6	☐	40000.000					
7	☐	200.000					

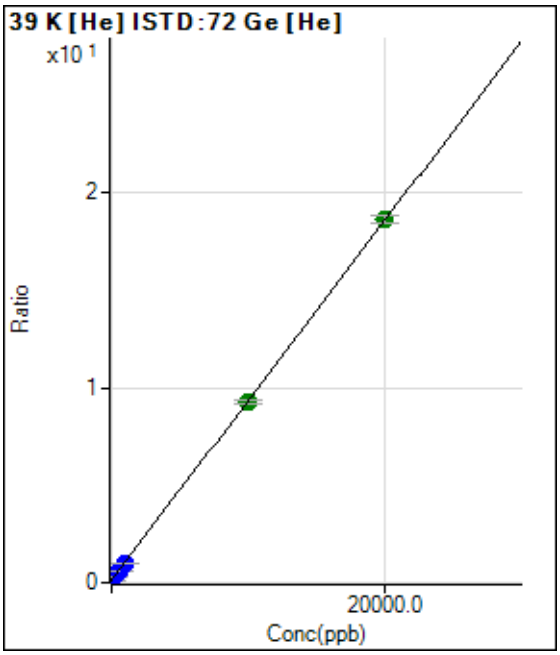


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	400.000					
3	☐	1000.000					
4	☐	2000.000					
5	☐	20000.000					
6	☐	40000.000					
7	☐	200.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

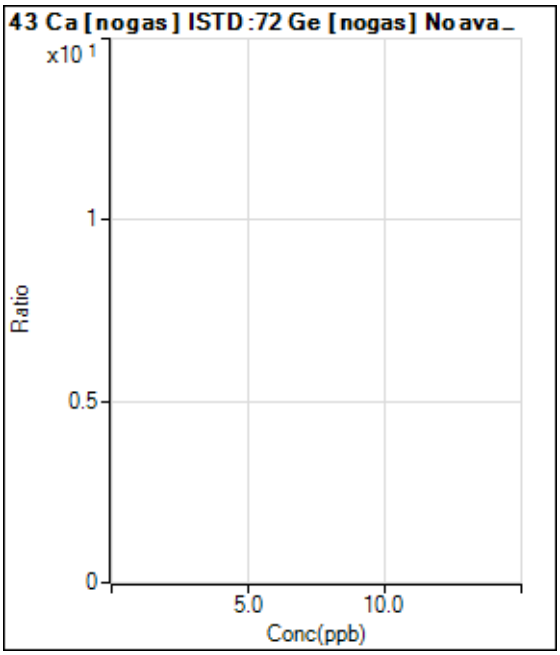
Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	44205.78	0.1349	P	2.5
2	☐	200.000	186.575	101871.13	0.3066	P	1.0
3	☐	500.000	490.748	193778.43	0.5866	P	1.2
4	☐	1000.000	956.112	338719.49	1.0149	P	0.3
5	☐	10000.000	9891.859	3090940.48	9.2395	A	1.9
6	☐	20000.000	20056.631	6013738.04	18.5953	A	2.1
7	☐	100.000					

y = 9.2041E-004 * x + 0.1349
R = 1.0000
DL = 11
BEC = 146.6

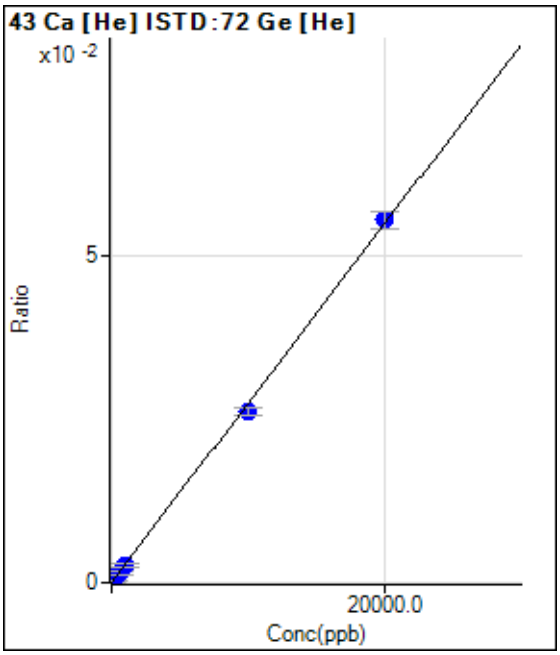
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

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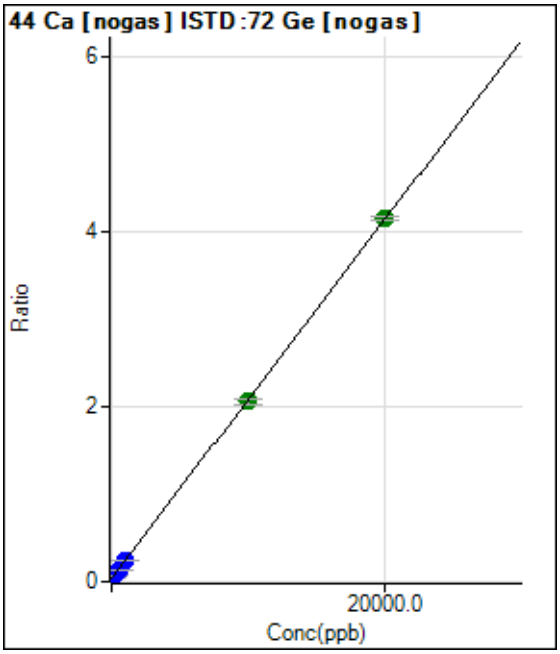
Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0001	P	68.5
2	☐	200.000	128.380	133.33	0.0004	P	13.0
3	☐	500.000	507.763	476.68	0.0014	P	37.9
4	☐	1000.000	917.368	853.37	0.0026	P	17.8
5	☐	10000.000	9563.638	8765.51	0.0262	P	4.1
6	☐	20000.000	20222.835	17902.12	0.0554	P	5.0
7	☐	100.000					

y = 2.7349E-006 * x + 5.0683E-005
R = 0.9997
DL = 38.06
BEC = 18.53

Weight: <None>
Min Conc: <None>



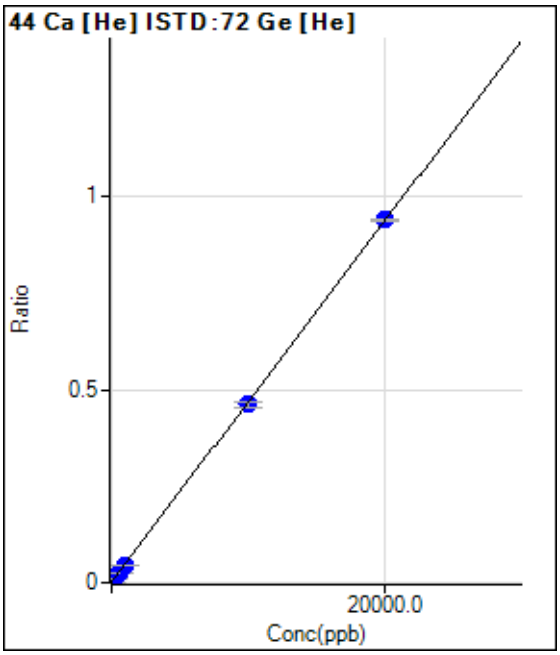
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	48922.07	0.0348	P	2.0
2	☐	200.000	195.988	106333.79	0.0750	P	2.2
3	☐	500.000	486.164	193316.90	0.1346	P	4.3
4	☐	1000.000	982.963	339302.71	0.2366	P	2.4
5	☐	10000.000	9878.865	3006665.16	2.0628	A	2.7
6	☐	20000.000	20061.806	5915971.37	4.1533	A	1.0
7	☐	100.000					

y = 2.0529E-004 * x + 0.0348
R = 1.0000
DL = 10.23
BEC = 169.3

Weight: <None>
Min Conc: <None>

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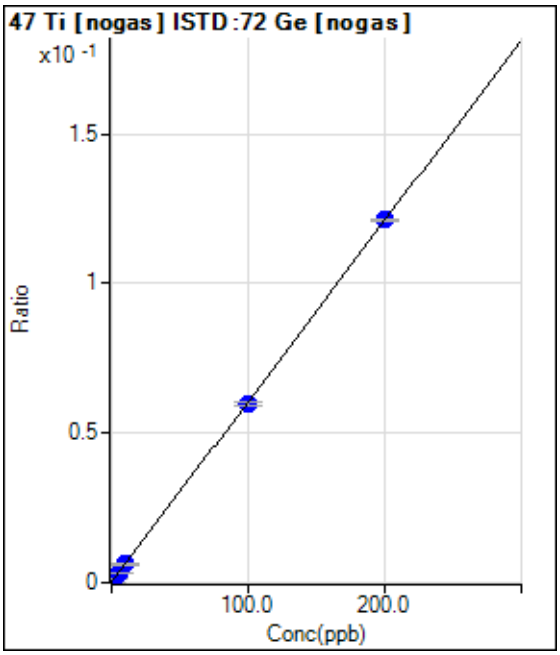
Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	290.01	0.0009	P	12.7
2	☐	200.000	194.978	3327.02	0.0100	P	6.4
3	☐	500.000	491.374	7891.78	0.0239	P	3.1
4	☐	1000.000	944.580	15052.95	0.0451	P	4.3
5	☐	10000.000	9849.701	154540.01	0.4619	P	2.5
6	☐	20000.000	20078.186	304240.14	0.9407	P	0.2
7	☐	100.000					

y = 4.6809E-005 * x + 8.8560E-004
R = 1.0000
DL = 7.214
BEC = 18.92

Weight: <None>
Min Conc: <None>



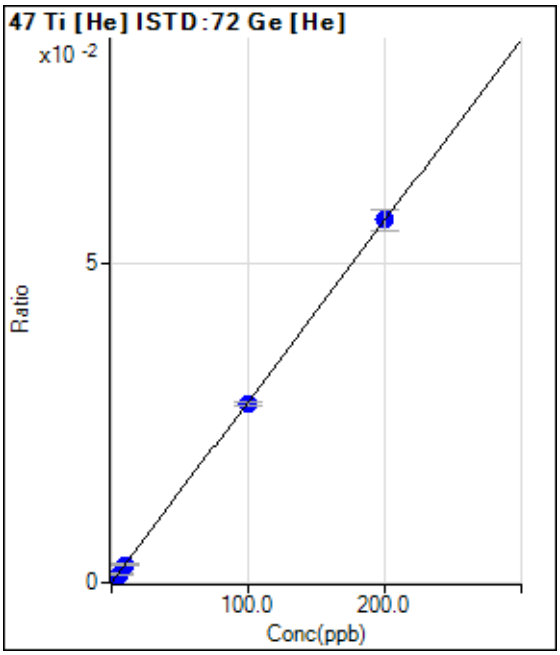
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	190.00	0.0001	P	5.8
2	☐	2.000	1.997	1900.12	0.0013	P	14.9
3	☐	5.000	4.838	4393.92	0.0031	P	5.1
4	☐	10.000	9.920	8778.89	0.0061	P	5.9
5	☐	100.000	98.876	87206.74	0.0598	P	1.9
6	☐	200.000	200.570	172678.37	0.1212	P	0.7
7	☐	1.000					

y = 6.0374E-004 * x + 1.3501E-004
R = 1.0000
DL = 0.03915
BEC = 0.2236

Weight: <None>
Min Conc: <None>

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Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	0.00	0.0000	P	
2	☐	2.000	2.053	193.33	0.0006	P	4.5
3	☐	5.000	4.627	433.34	0.0013	P	7.2
4	☐	10.000	10.014	946.71	0.0028	P	19.5
5	☐	100.000	99.196	9402.52	0.0281	P	2.4
6	☐	200.000	200.410	18365.98	0.0568	P	6.1
7	☐	1.000					

y = 2.8335E-004 * x + 0.0000E+000

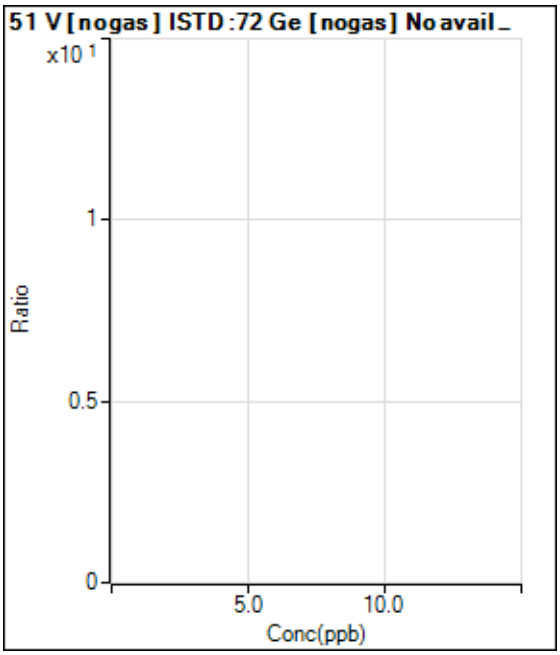
R = 1.0000

DL = 0

BEC = 0

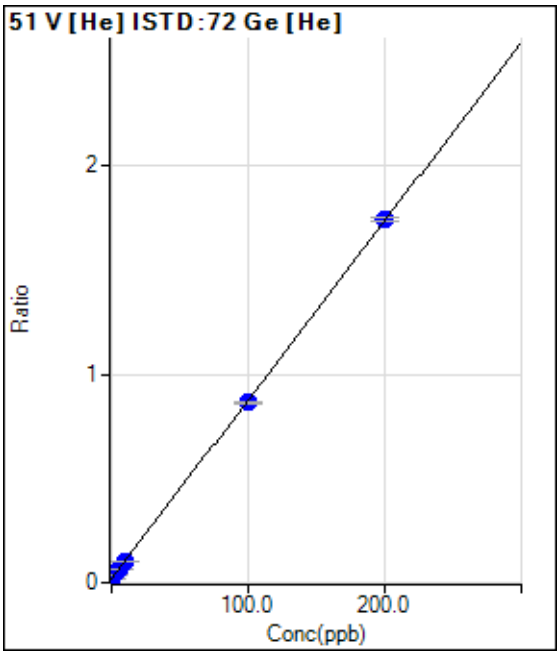
Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

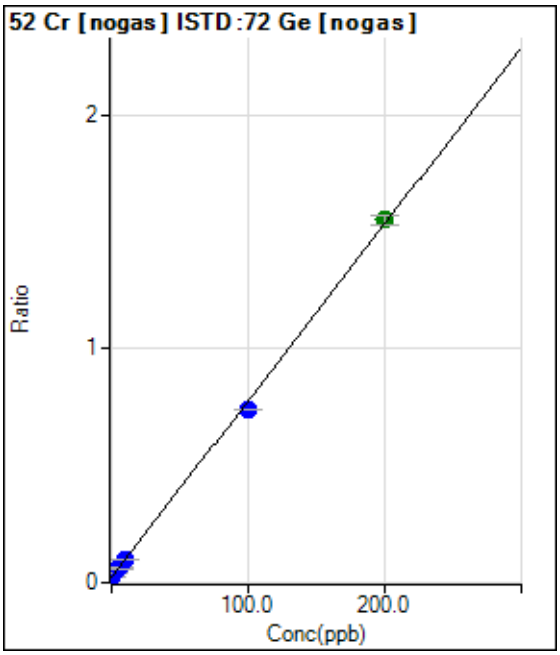
Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6358.89	0.0194	P	1.8
2	☐	2.000	1.889	11828.23	0.0356	P	0.6
3	☐	5.000	4.900	20292.18	0.0614	P	1.8
4	☐	10.000	9.427	33457.83	0.1002	P	0.9
5	☐	100.000	98.484	289059.13	0.8640	P	1.5
6	☐	200.000	200.790	563202.32	1.7414	P	1.2
7	☐	1.000					

y = 0.0086 * x + 0.0194
R = 1.0000
DL = 0.125
BEC = 2.263

Weight: <None>
Min Conc: <None>

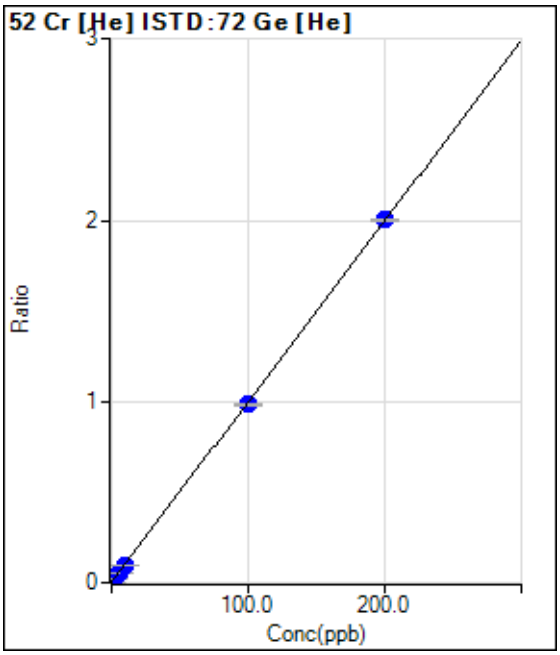


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	32829.32	0.0233	P	3.6
2	☐	2.000	2.081	55355.85	0.0390	P	2.4
3	☐	5.000	5.130	89105.73	0.0621	P	6.3
4	☐	10.000	9.877	140436.16	0.0979	P	2.5
5	☐	100.000	95.156	1081378.42	0.7419	P	0.6
6	☐	200.000	202.424	2210234.76	1.5519	A	2.9
7	☐	1.000					

y = 0.0076 * x + 0.0233
R = 0.9996
DL = 0.3358
BEC = 3.089

Weight: <None>
Min Conc: <None>

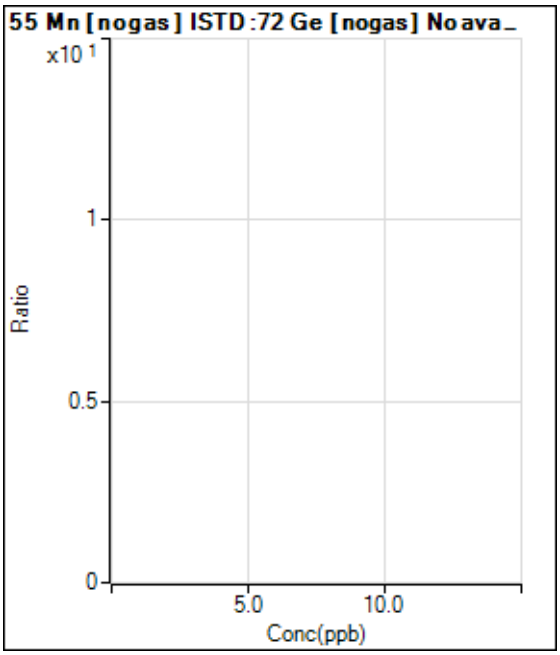
Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	700.02	0.0021	P	20.6
2	☐	2.000	2.045	7484.97	0.0225	P	4.9
3	☐	5.000	4.917	16907.88	0.0512	P	4.7
4	☐	10.000	9.723	33069.70	0.0991	P	1.6
5	☐	100.000	98.643	329796.95	0.9858	P	1.1
6	☐	200.000	200.694	647951.48	2.0035	P	0.8
7	☐	1.000					

y = 0.0100 * x + 0.0021
R = 1.0000
DL = 0.1328
BEC = 0.2146

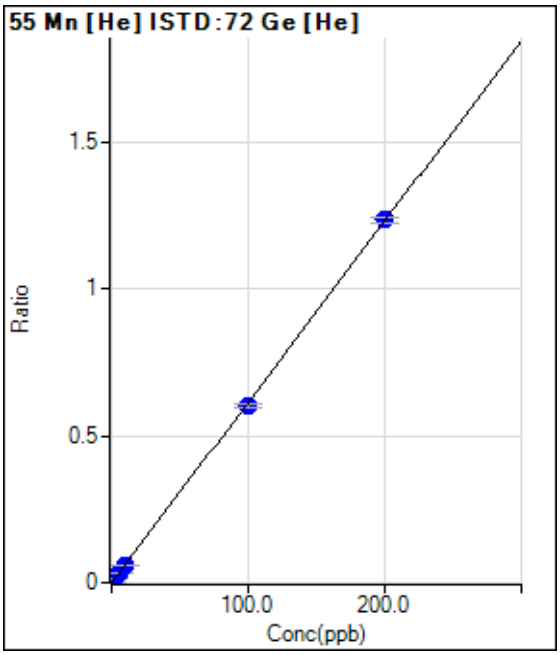
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

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Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	66.67	0.0002	P	38.9
2	☐	2.000	1.951	4043.83	0.0122	P	4.9
3	☐	5.000	4.973	10149.60	0.0307	P	1.0
4	☐	10.000	9.856	20254.68	0.0607	P	2.5
5	☐	100.000	98.169	201631.64	0.6027	P	1.7
6	☐	200.000	200.924	398890.65	1.2334	P	1.6
7	☐	1.000					

y = 0.0061 * x + 2.0405E-004

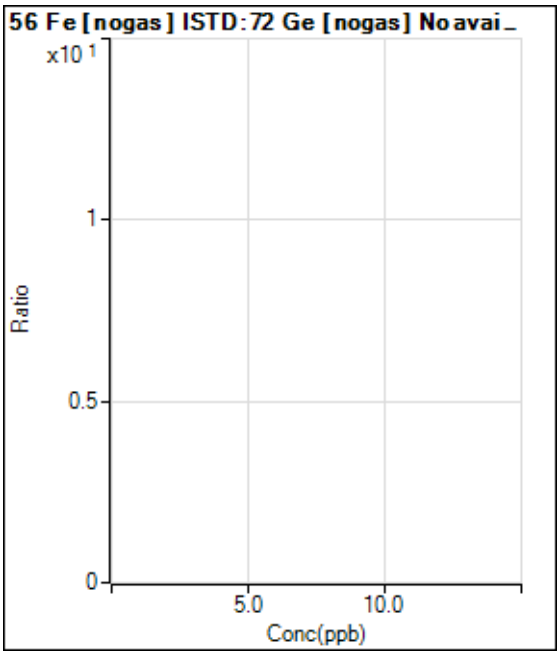
R = 0.9999

DL = 0.03877

BEC = 0.03325

Weight: <None>

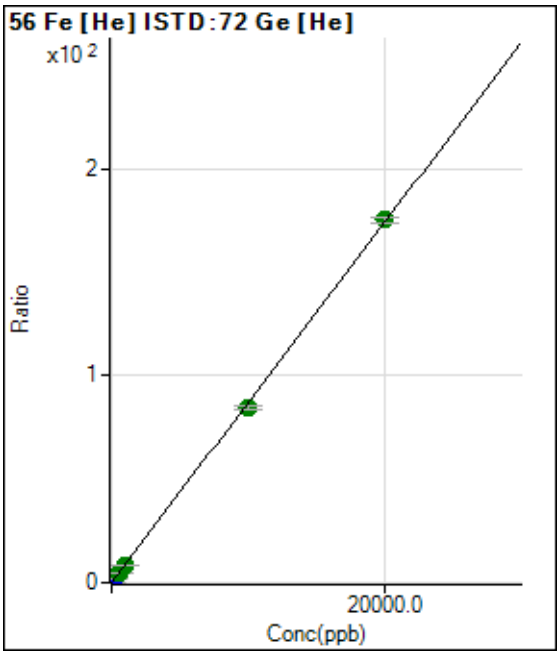
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

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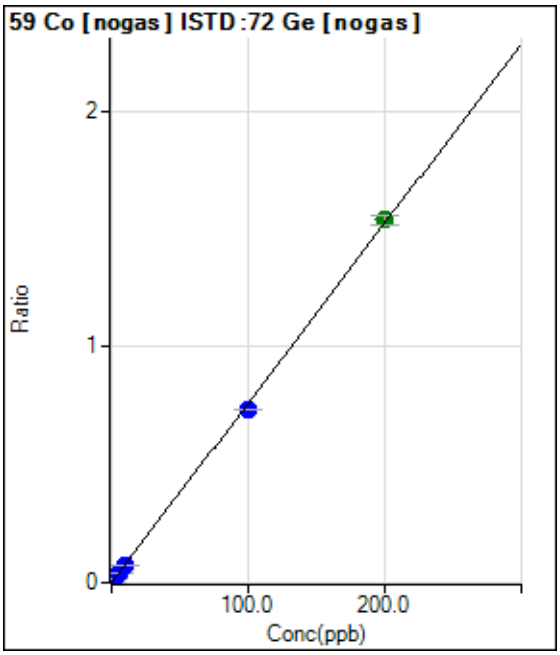
Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6898.05	0.0210	P	3.0
2	☐	200.000	190.365	557595.63	1.6785	P	1.6
3	☐	500.000	522.873	1510721.91	4.5735	A	2.6
4	☐	1000.000	989.969	2883324.95	8.6403	A	2.5
5	☐	10000.000	9718.055	28311702.91	84.6323	A	2.8
6	☐	20000.000	20140.998	56718670.82	175.3807	A	1.6
7	☐	100.000					

y = 0.0087 * x + 0.0210
R = 0.9999
DL = 0.2155
BEC = 2.417

Weight: <None>
Min Conc: <None>



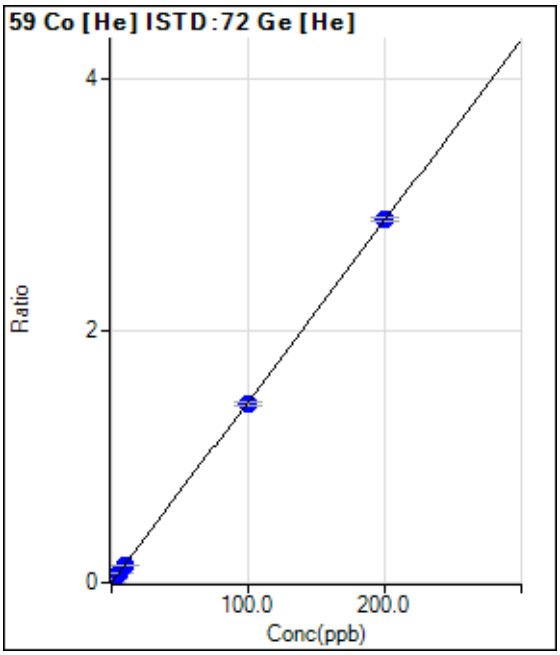
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	300.01	0.0002	P	19.8
2	☐	2.000	2.002	21896.55	0.0154	P	0.5
3	☐	5.000	4.974	54630.99	0.0380	P	6.0
4	☐	10.000	9.867	107958.45	0.0753	P	3.0
5	☐	100.000	95.913	1063778.81	0.7298	P	0.1
6	☐	200.000	202.051	2189265.64	1.5372	A	2.7
7	☐	1.000					

y = 0.0076 * x + 2.1285E-004
R = 0.9997
DL = 0.01665
BEC = 0.02798

Weight: <None>
Min Conc: <None>

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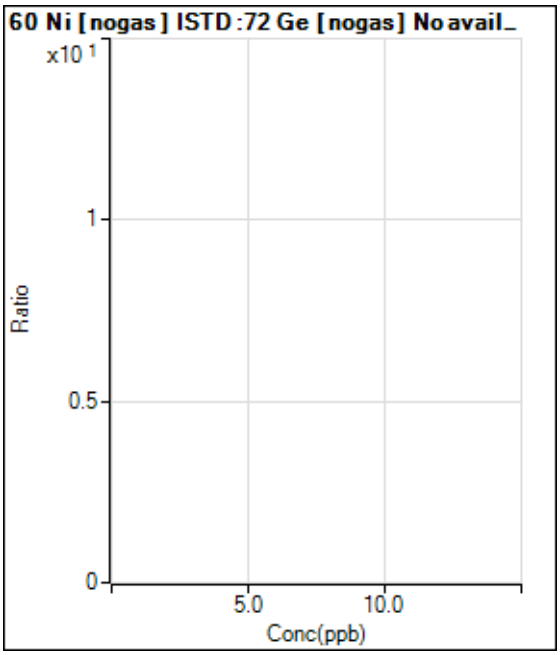
Calibration for 154_ICV.d



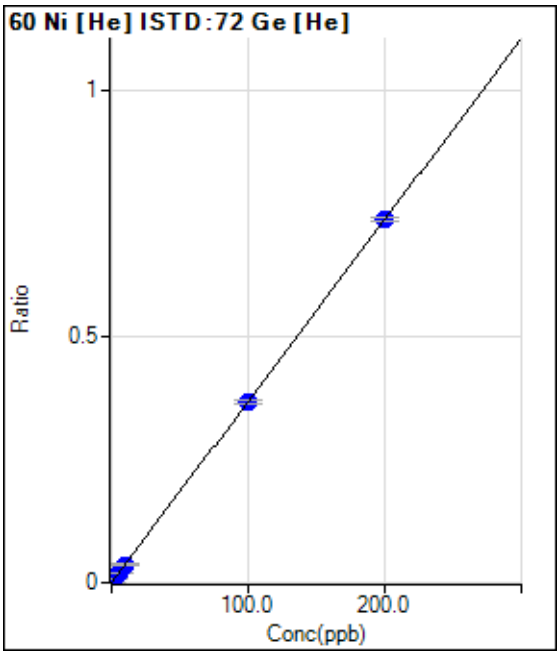
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	103.33	0.0003	P	24.0
2	☐	2.000	2.037	9839.44	0.0296	P	2.6
3	☐	5.000	5.190	24773.58	0.0750	P	3.9
4	☐	10.000	9.785	47076.94	0.1411	P	2.0
5	☐	100.000	99.106	477035.31	1.4260	P	2.5
6	☐	200.000	200.452	932650.51	2.8838	P	1.1
7	☐	1.000					

y = 0.0144 * x + 3.1523E-004
R = 1.0000
DL = 0.01575
BEC = 0.02191

Weight: <None>
Min Conc: <None>



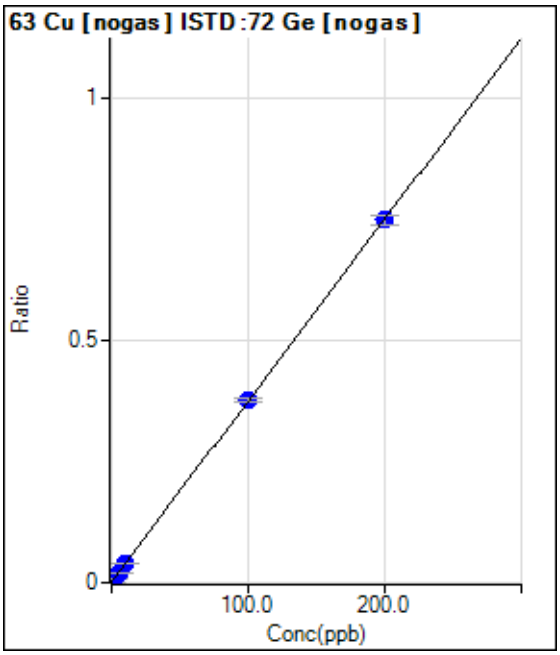
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26.67	0.0001	P	22.3
2	☐	2.000	2.017	2493.54	0.0075	P	9.7
3	☐	5.000	5.148	6294.50	0.0190	P	6.1
4	☐	10.000	9.722	11977.39	0.0359	P	8.2
5	☐	100.000	99.914	123160.27	0.3682	P	2.6
6	☐	200.000	200.053	238391.45	0.7371	P	0.9
7	☐	1.000					

y = 0.0037 * x + 8.1472E-005
R = 1.0000
DL = 0.01482
BEC = 0.02211

Weight: <None>
Min Conc: <None>

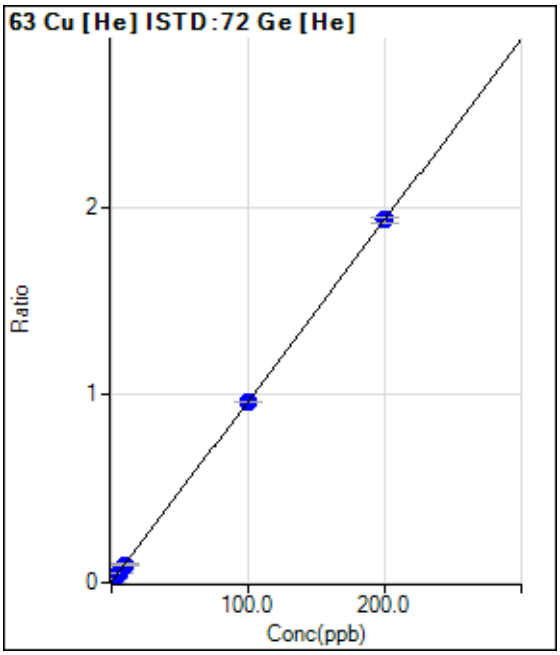


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1736.78	0.0012	P	2.4
2	☐	2.000	2.108	12944.74	0.0091	P	1.9
3	☐	5.000	5.144	29440.37	0.0205	P	5.6
4	☐	10.000	10.345	57352.92	0.0400	P	2.2
5	☐	100.000	100.274	549214.17	0.3768	P	1.6
6	☐	200.000	199.841	1067779.05	0.7497	P	2.5
7	☐	1.000					

y = 0.0037 * x + 0.0012
R = 1.0000
DL = 0.02383
BEC = 0.3294

Weight: <None>
Min Conc: <None>

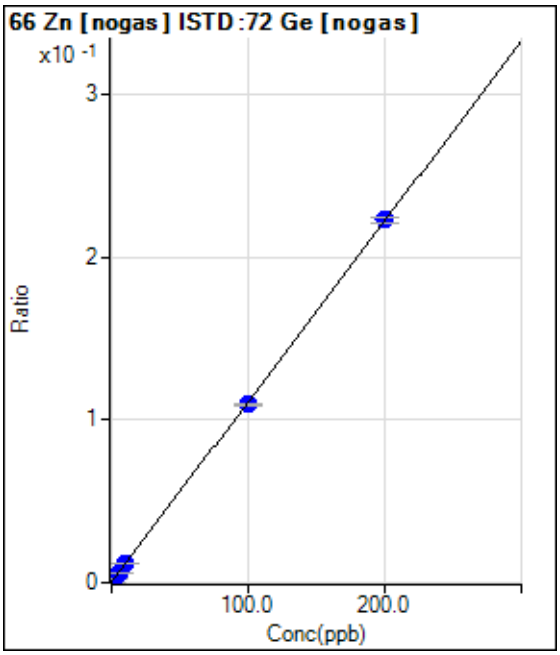
Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	736.69	0.0022	P	9.5
2	☐	2.000	1.989	7114.80	0.0214	P	3.6
3	☐	5.000	5.025	16741.10	0.0507	P	4.1
4	☐	10.000	9.843	32415.50	0.0971	P	0.5
5	☐	100.000	99.730	322389.18	0.9636	P	0.5
6	☐	200.000	200.142	624714.23	1.9316	P	1.2
7	☐	1.000					

y = 0.0096 * x + 0.0022
R = 1.0000
DL = 0.06613
BEC = 0.2331

Weight: <None>
Min Conc: <None>



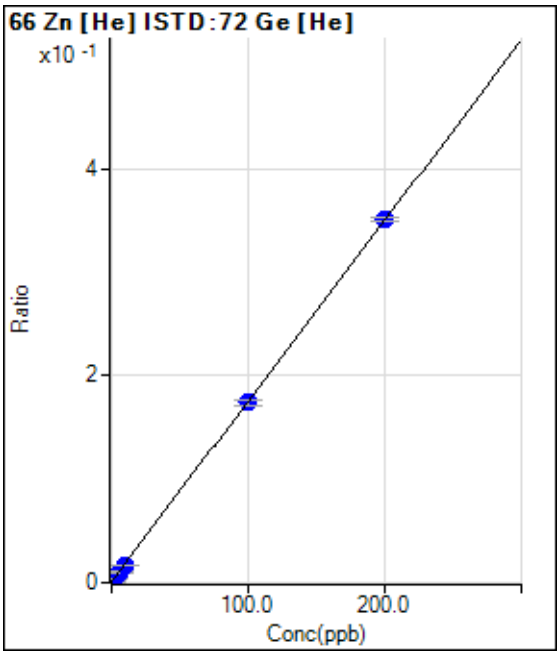
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	630.02	0.0004	P	14.1
2	☐	2.000	2.122	3970.50	0.0028	P	6.1
3	☐	5.000	5.316	9112.39	0.0063	P	2.7
4	☐	10.000	10.043	16607.72	0.0116	P	2.4
5	☐	100.000	98.488	159733.07	0.1096	P	0.6
6	☐	200.000	200.745	317485.12	0.2229	P	1.4
7	☐	1.000					

y = 0.0011 * x + 4.4818E-004
R = 1.0000
DL = 0.1705
BEC = 0.4044

Weight: <None>
Min Conc: <None>

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Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	296.67	0.0009	P	16.6
2	☐	2.000	2.006	1466.75	0.0044	P	9.6
3	☐	5.000	5.237	3320.35	0.0101	P	8.9
4	☐	10.000	9.205	5667.64	0.0170	P	6.5
5	☐	100.000	99.272	58316.26	0.1743	P	2.6
6	☐	200.000	200.398	113517.04	0.3510	P	1.0
7	☐	1.000					

y = 0.0017 * x + 9.0514E-004

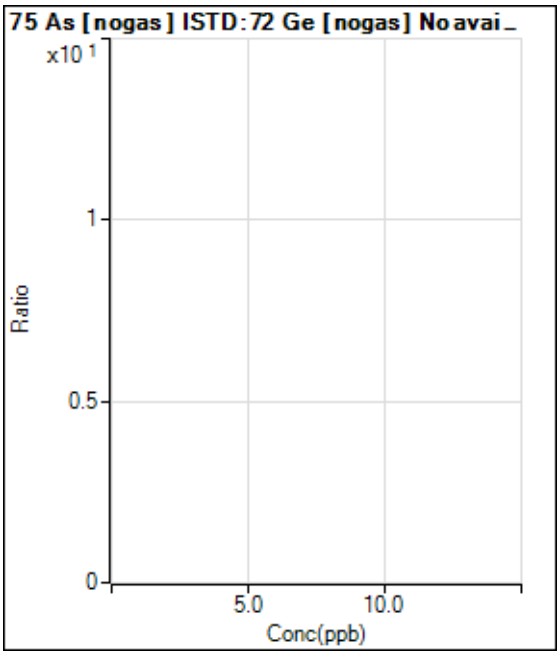
R = 1.0000

DL = 0.2587

BEC = 0.5181

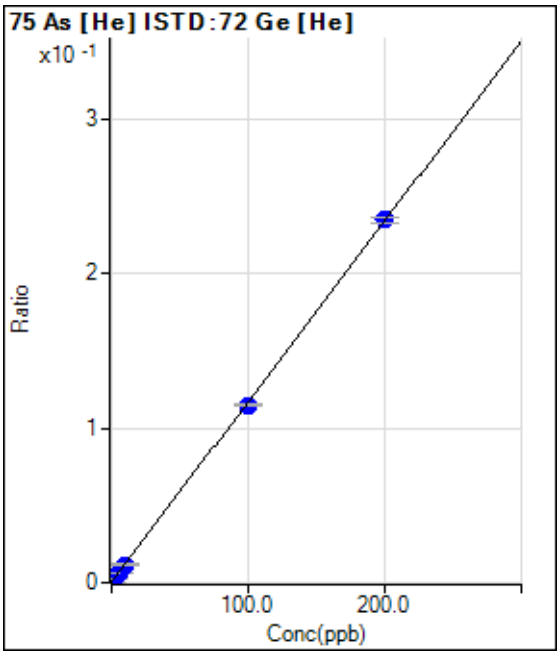
Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	82.22	0.0003	P	1.0
2	☐	2.000	1.967	845.58	0.0025	P	1.9
3	☐	5.000	5.039	2023.45	0.0061	P	3.7
4	☐	10.000	9.825	3905.99	0.0117	P	3.4
5	☐	100.000	98.029	38321.25	0.1145	P	1.2
6	☐	200.000	200.994	75866.57	0.2346	P	1.5
7	☐	1.000					

y = 0.0012 * x + 2.5087E-004

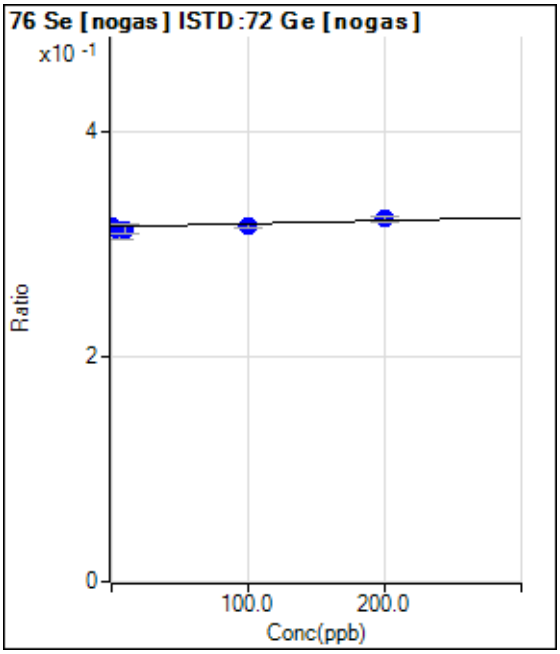
R = 0.9999

DL = 0.006386

BEC = 0.2152

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	444627.61	0.3159	P	2.2
2	☐	2.000	-66.059	445332.36	0.3141	P	1.0
3	☐	5.000	-139.222	448252.88	0.3120	P	4.5
4	☐	10.000	-88.803	449551.35	0.3134	P	2.8
5	☐	100.000	19.460	461273.76	0.3165	P	1.2
6	☐	200.000	249.497	459927.84	0.3229	P	1.5
7	☐	1.000					

y = 2.7975E-005 * x + 0.3159

R = 0.9179

DL = 744.9

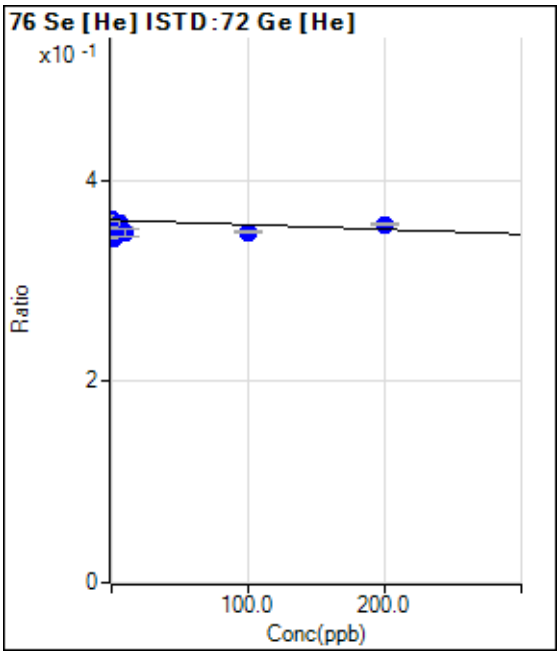
BEC = 1.129E+04

Weight: <None>

Min Conc: <None>

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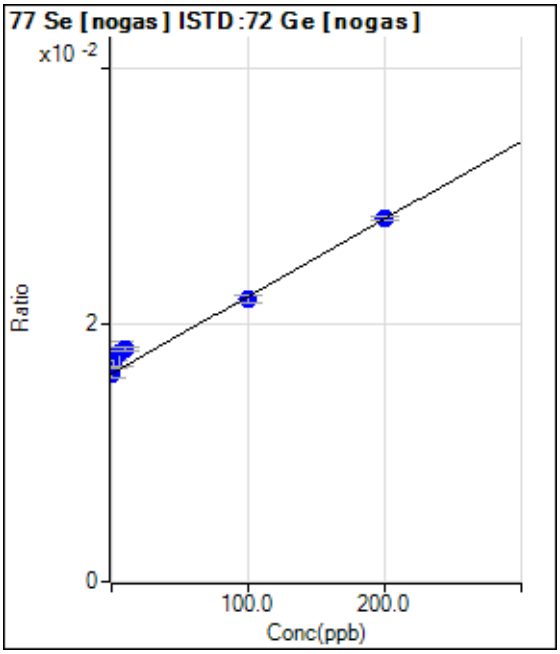
Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	118057.54	0.3603	P	2.2
2	☐	2.000	378.462	113807.39	0.3425	P	0.4
3	☐	5.000	86.822	117675.67	0.3562	P	2.0
4	☐	10.000	268.196	116034.94	0.3477	P	1.7
5	☐	100.000	259.531	116467.54	0.3481	P	0.6
6	☐	200.000	101.515	114985.76	0.3555	P	0.6
7	☐	1.000					

y = -4.7007E-005 * x + 0.3603
R = 0.1328
DL = -497.5
BEC = -7665

Weight: <None>
Min Conc: <None>



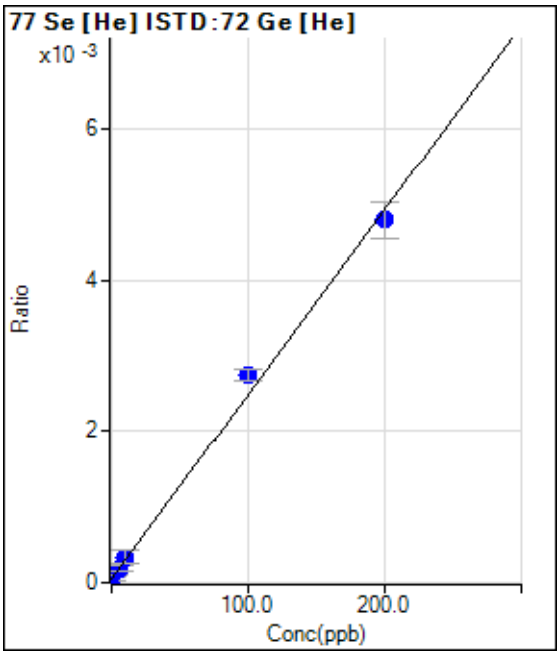
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	22788.11	0.0162	P	5.0
2	☐	2.000	12.305	24012.99	0.0169	P	4.1
3	☐	5.000	26.357	25495.07	0.0178	P	11.1
4	☐	10.000	32.513	26045.71	0.0182	P	1.4
5	☐	100.000	96.814	32112.09	0.0220	P	3.0
6	☐	200.000	199.830	40224.87	0.0282	P	1.1
7	☐	1.000					

y = 6.0274E-005 * x + 0.0162
R = 0.9924
DL = 40.17
BEC = 268.7

Weight: <None>
Min Conc: <None>

RIGHT SOLUTIONS | RIGHT PARTNER

Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0001	P	91.1
2	☐	2.000	3.248	43.33	0.0001	P	52.2
3	☐	5.000	5.380	60.00	0.0002	P	44.6
4	☐	10.000	11.894	113.33	0.0003	P	53.7
5	☐	100.000	110.385	916.71	0.0027	P	6.1
6	☐	200.000	194.691	1550.09	0.0048	P	10.1
7	☐	1.000					

y = 2.4353E-005 * x + 5.0916E-005

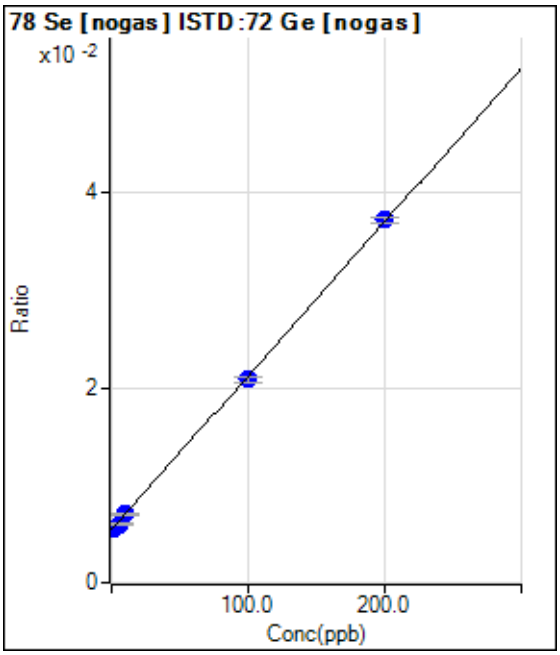
R = 0.9981

DL = 5.713

BEC = 2.091

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7681.73	0.0055	P	5.6
2	☐	2.000	0.669	7888.53	0.0056	P	4.3
3	☐	5.000	3.321	8592.14	0.0060	P	5.0
4	☐	10.000	9.880	10066.26	0.0070	P	1.9
5	☐	100.000	97.453	30382.25	0.0208	P	2.5
6	☐	200.000	201.335	53054.29	0.0372	P	1.6
7	☐	1.000					

y = 1.5790E-004 * x + 0.0055

R = 0.9999

DL = 5.81

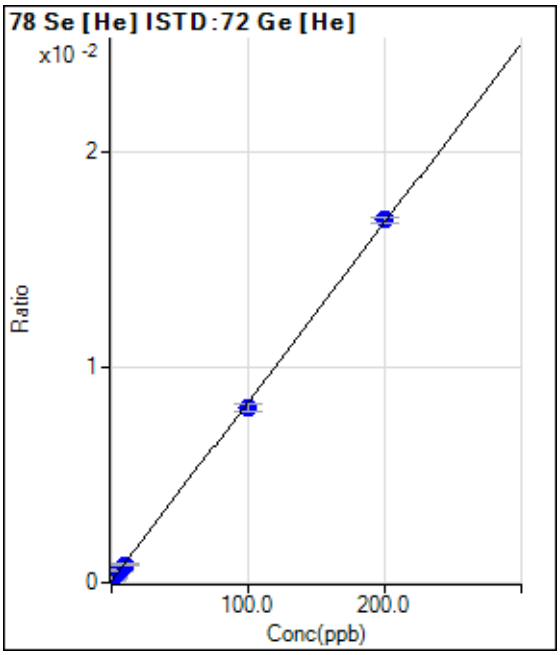
BEC = 34.56

Weight: <None>

Min Conc: <None>

RIGHT SOLUTIONS | RIGHT PARTNER

Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	28.00	0.0001	P	31.7
2	☐	2.000	1.672	74.67	0.0002	P	24.1
3	☐	5.000	5.740	186.00	0.0006	P	16.5
4	☐	10.000	8.859	274.67	0.0008	P	9.2
5	☐	100.000	96.839	2726.88	0.0082	P	4.1
6	☐	200.000	201.622	5459.49	0.0169	P	1.7
7	☐	1.000					

y = 8.3306E-005 * x + 8.5246E-005

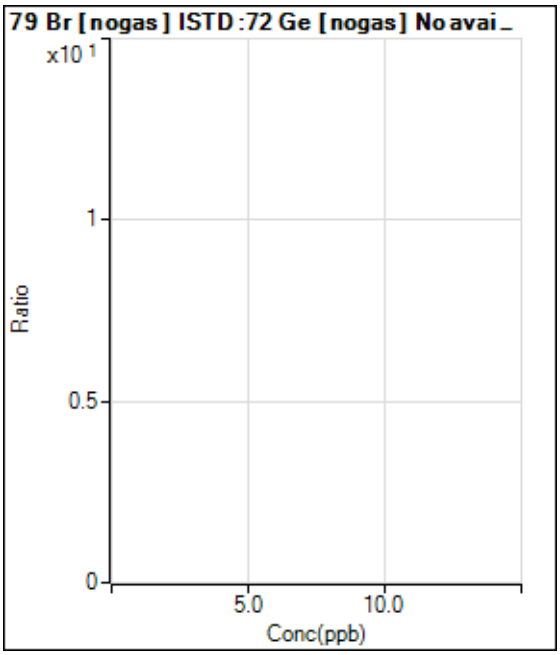
R = 0.9998

DL = 0.9742

BEC = 1.023

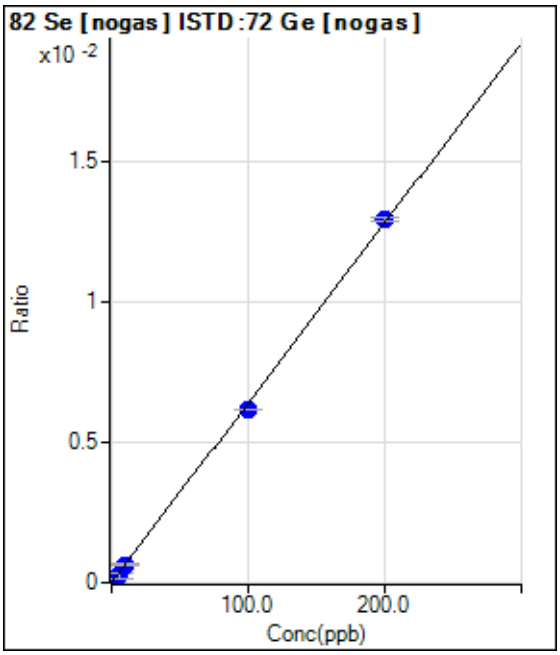
Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-47.36	0.0000	P	-186.3
2	☐	2.000	2.416	172.60	0.0001	P	35.6
3	☐	5.000	3.759	295.33	0.0002	P	68.5
4	☐	10.000	10.000	872.91	0.0006	P	10.3
5	☐	100.000	96.117	8958.56	0.0061	P	0.5
6	☐	200.000	201.968	18449.36	0.0130	P	1.1
7	☐	1.000					

y = 6.4291E-005 * x - 3.3429E-005

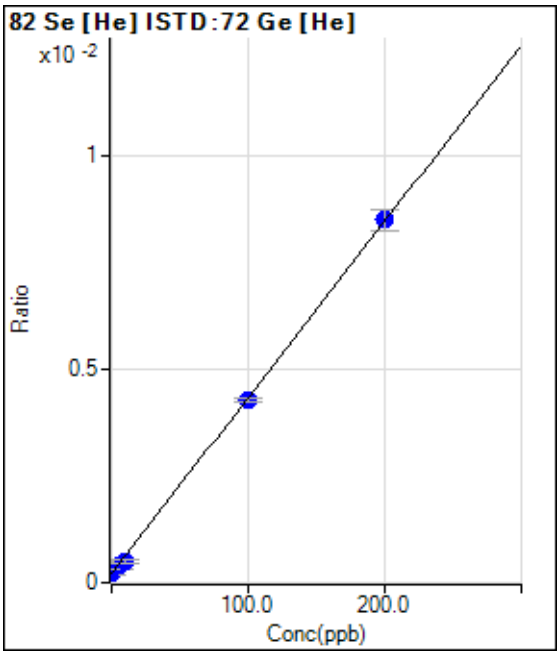
R = 0.9997

DL = 2.905

BEC = -0.52

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	70.00	0.0002	P	37.0
2	☐	2.000	3.347	116.67	0.0004	P	17.1
3	☐	5.000	4.890	136.67	0.0004	P	47.1
4	☐	10.000	6.946	166.67	0.0005	P	11.6
5	☐	100.000	98.443	1426.74	0.0043	P	2.5
6	☐	200.000	200.921	2743.58	0.0085	P	5.6
7	☐	1.000					

y = 4.1159E-005 * x + 2.1318E-004

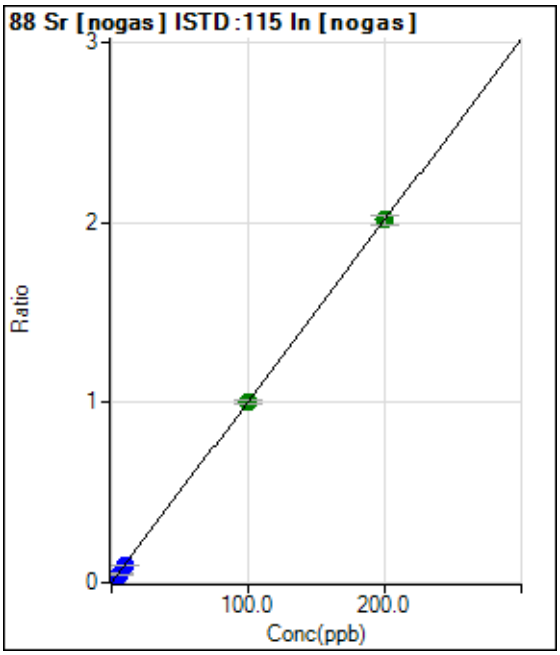
R = 0.9998

DL = 5.754

BEC = 5.179

Weight: <None>

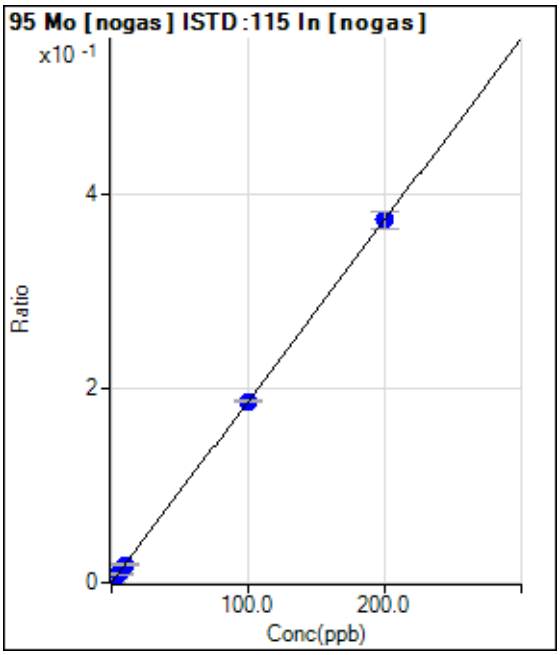
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1500.09	0.0010	P	10.8
2	☐	2.000	1.878	29000.46	0.0199	P	0.9
3	☐	5.000	4.644	71529.09	0.0478	P	1.5
4	☐	10.000	9.268	137886.19	0.0943	P	1.9
5	☐	100.000	99.718	1462856.33	1.0043	A	2.4
6	☐	200.000	200.188	2898269.65	2.0151	A	2.5
7	☐	1.000					

y = 0.0101 * x + 0.0010
R = 1.0000
DL = 0.03313
BEC = 0.1026

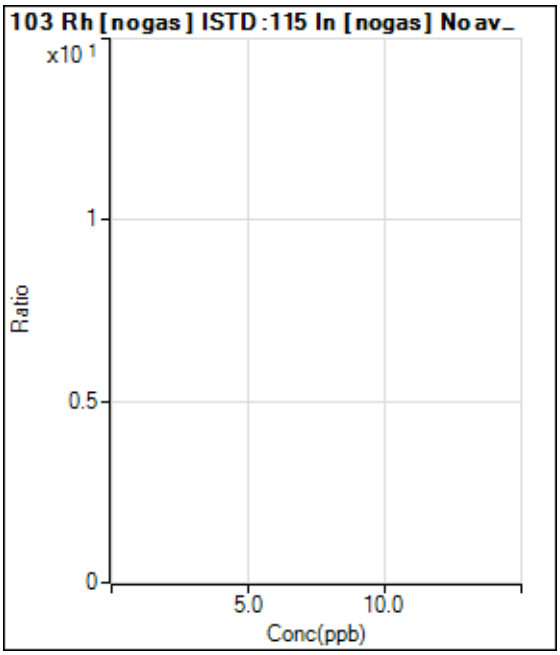
Weight: <None>
Min Conc: <None>



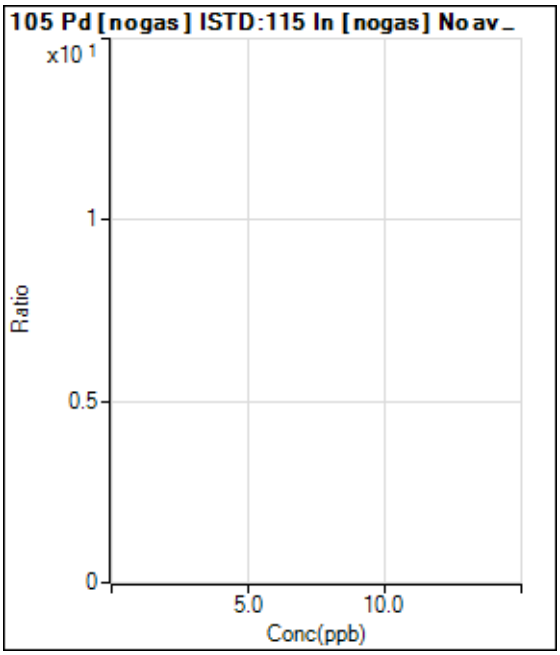
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	163.34	0.0001	P	45.9
2	☐	2.000	1.835	5147.49	0.0035	P	4.2
3	☐	5.000	4.736	13405.25	0.0090	P	2.9
4	☐	10.000	9.891	27157.71	0.0186	P	3.2
5	☐	100.000	100.021	272032.67	0.1868	P	1.3
6	☐	200.000	200.003	536848.15	0.3734	P	4.5
7	☐	1.000					

y = 0.0019 * x + 1.1198E-004
R = 1.0000
DL = 0.08253
BEC = 0.06

Weight: <None>
Min Conc: <None>

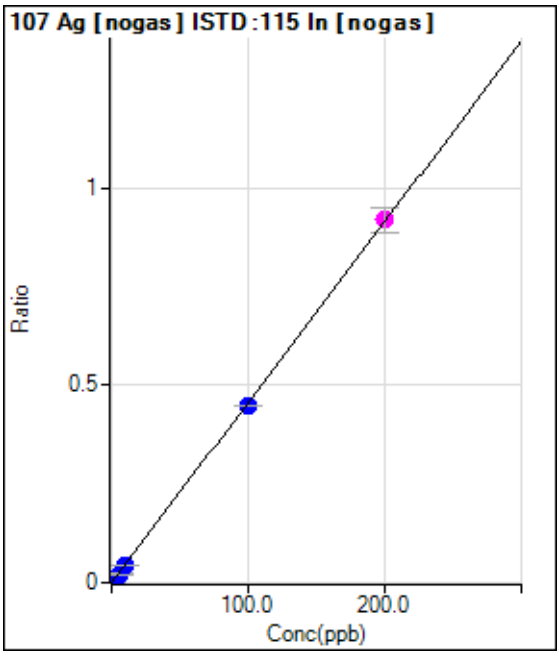


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

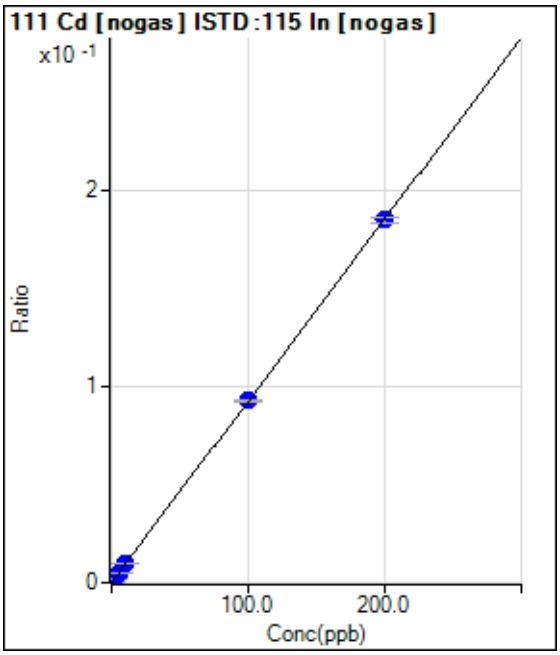
Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	496.68	0.0003	P	7.9
2	☐	2.000	1.912	13215.06	0.0091	P	5.8
3	☐	5.000	4.716	32810.58	0.0219	P	2.2
4	☐	10.000	9.839	66304.19	0.0453	P	0.5
5	☐	100.000	97.968	652844.38	0.4483	P	0.8
6	☐	200.000	201.032	1321588.16	0.9195	M	6.6
7	☐	1.000					

y = 0.0046 * x + 3.4140E-004
R = 0.9999
DL = 0.0178
BEC = 0.07467

Weight: <None>
Min Conc: <None>



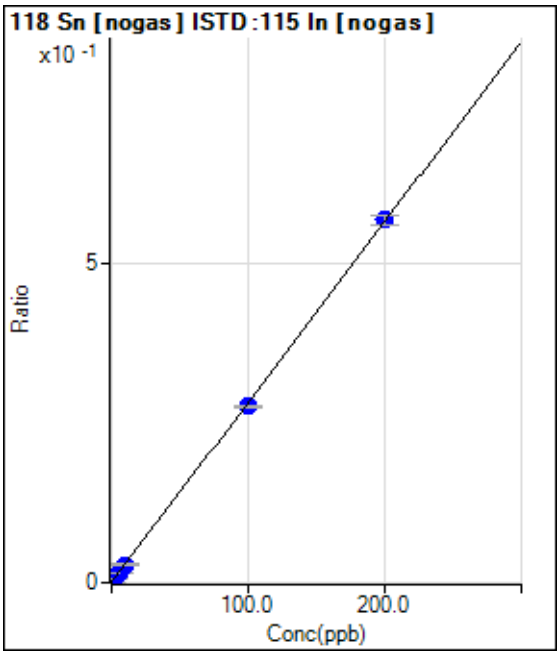
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3.33	0.0000	P	173.2
2	☐	2.000	2.036	2743.60	0.0019	P	7.1
3	☐	5.000	5.243	7264.93	0.0048	P	2.0
4	☐	10.000	10.131	13702.18	0.0094	P	1.4
5	☐	100.000	100.379	135148.73	0.0928	P	1.0
6	☐	200.000	199.797	265708.30	0.1847	P	1.7
7	☐	1.000					

y = 9.2442E-004 * x + 2.3128E-006
R = 1.0000
DL = 0.013
BEC = 0.002502

Weight: <None>
Min Conc: <None>

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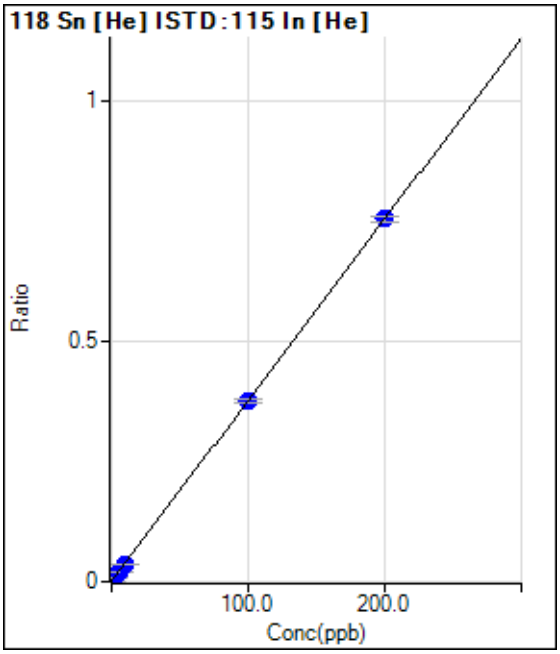
Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	893.37	0.0006	P	3.2
2	☐	2.000	1.904	8705.62	0.0060	P	4.0
3	☐	5.000	4.768	21046.19	0.0141	P	3.7
4	☐	10.000	9.746	41091.93	0.0281	P	5.3
5	☐	100.000	97.631	401749.21	0.2758	P	0.7
6	☐	200.000	201.204	816680.72	0.5678	P	2.8
7	☐	1.000					

y = 0.0028 * x + 6.1425E-004
R = 0.9999
DL = 0.02092
BEC = 0.2179

Weight: <None>
Min Conc: <None>

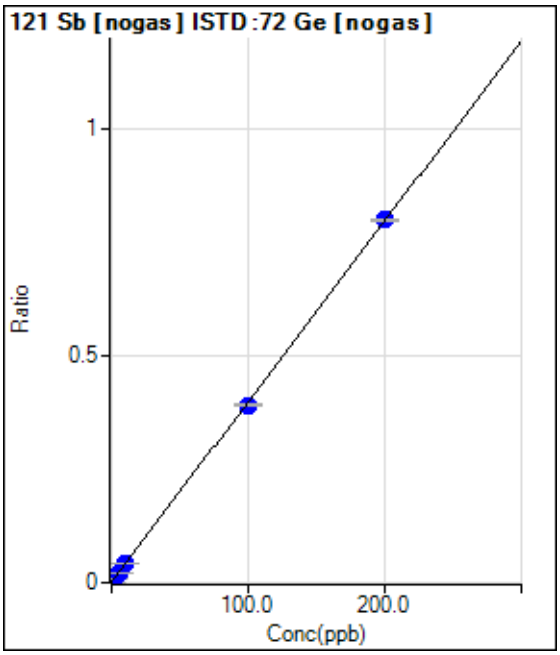


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	396.68	0.0008	P	9.9
2	☐	2.000	1.854	3637.11	0.0078	P	8.6
3	☐	5.000	4.948	9059.13	0.0194	P	1.3
4	☐	10.000	9.556	17252.11	0.0367	P	0.6
5	☐	100.000	99.508	175319.34	0.3748	P	2.0
6	☐	200.000	200.271	340189.68	0.7534	P	1.7
7	☐	1.000					

y = 0.0038 * x + 8.4010E-004
R = 1.0000
DL = 0.06666
BEC = 0.2236

Weight: <None>
Min Conc: <None>

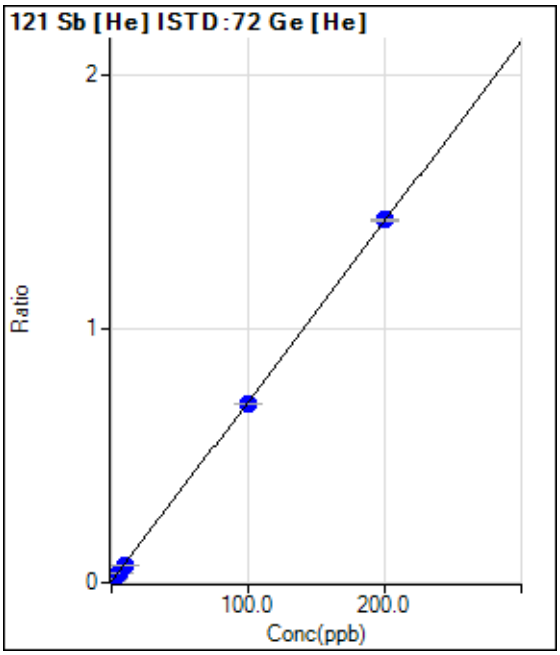
Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2653.57	0.0019	P	23.8
2	☐	2.000	2.032	14112.56	0.0100	P	3.5
3	☐	5.000	4.981	31061.13	0.0217	P	9.6
4	☐	10.000	9.912	59129.76	0.0412	P	1.9
5	☐	100.000	98.203	570762.47	0.3916	P	1.1
6	☐	200.000	200.903	1138271.96	0.7991	P	0.6
7	☐	1.000					

y = 0.0040 * x + 0.0019
R = 0.9999
DL = 0.34
BEC = 0.4764

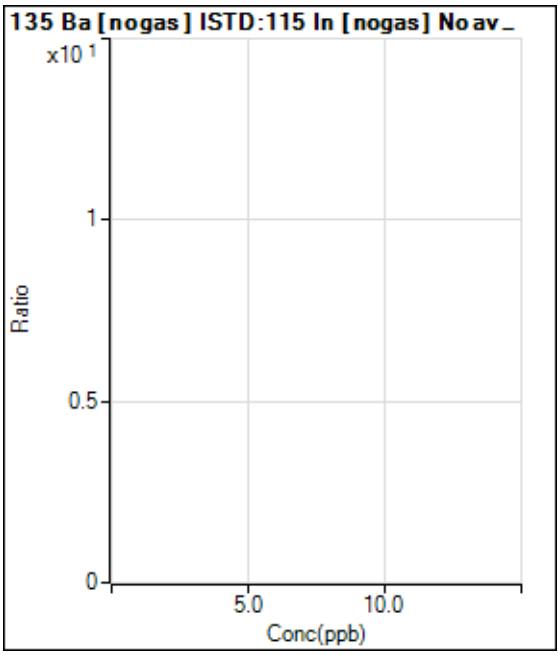
Weight: <None>
Min Conc: <None>



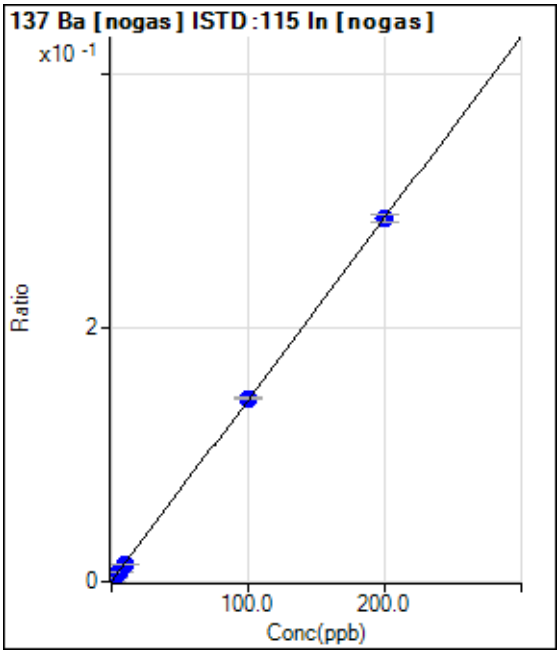
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1273.40	0.0039	P	3.0
2	☐	2.000	1.992	5981.11	0.0180	P	3.8
3	☐	5.000	4.886	12724.79	0.0385	P	6.3
4	☐	10.000	9.290	23282.43	0.0698	P	2.7
5	☐	100.000	98.638	235282.99	0.7033	P	0.6
6	☐	200.000	200.719	461521.73	1.4271	P	0.2
7	☐	1.000					

y = 0.0071 * x + 0.0039
R = 1.0000
DL = 0.05006
BEC = 0.5481

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	303.34	0.0002	P	32.6
2	☐	2.000	2.002	4473.98	0.0031	P	3.4
3	☐	5.000	4.905	10816.88	0.0072	P	5.8
4	☐	10.000	9.662	20519.14	0.0140	P	2.4
5	☐	100.000	100.872	210436.81	0.1445	P	0.2
6	☐	200.000	199.583	410883.64	0.2857	P	2.3
7	☐	1.000					

y = 0.0014 * x + 2.0916E-004

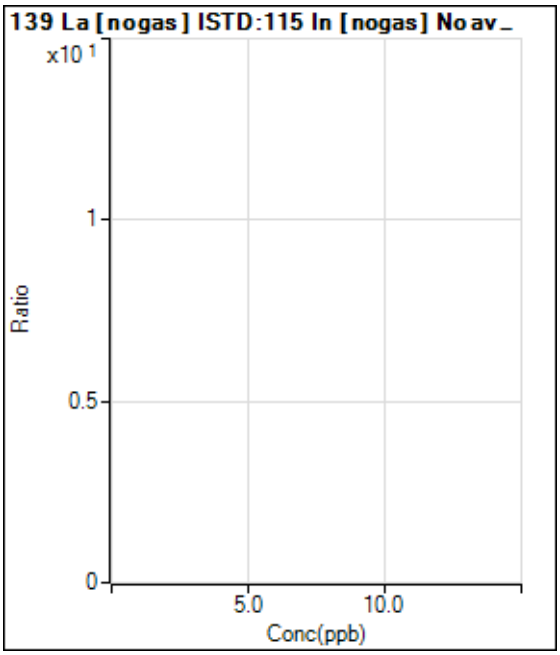
R = 1.0000

DL = 0.1429

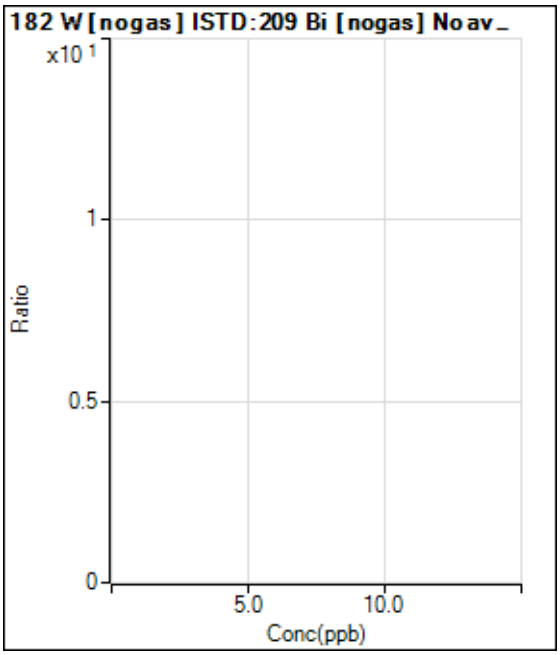
BEC = 0.1462

Weight: <None>

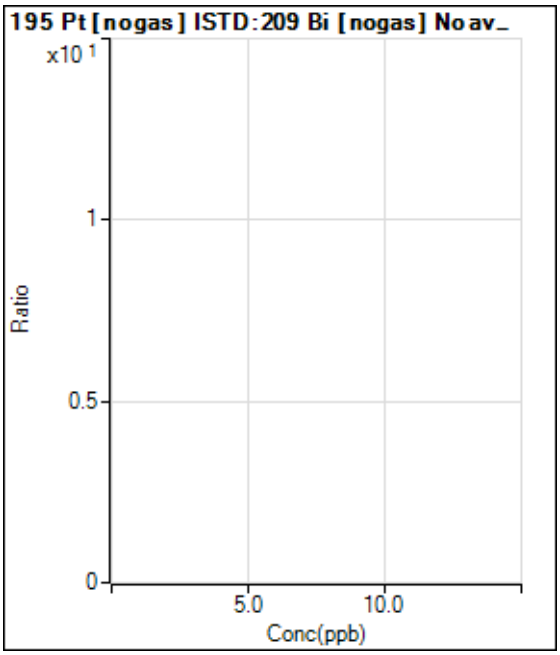
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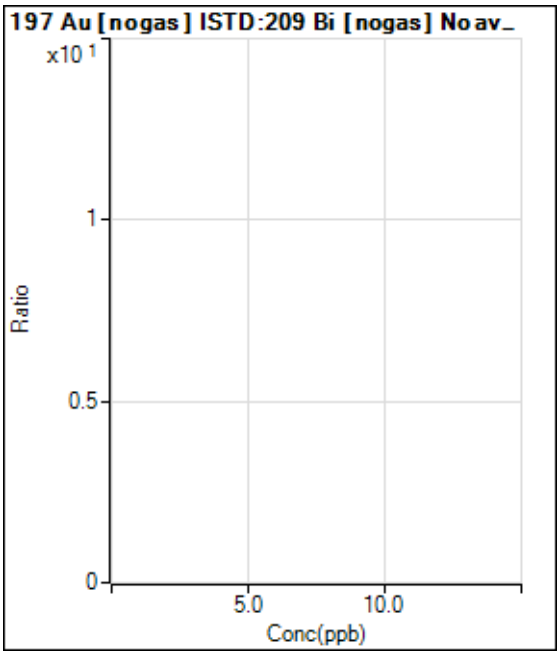
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					



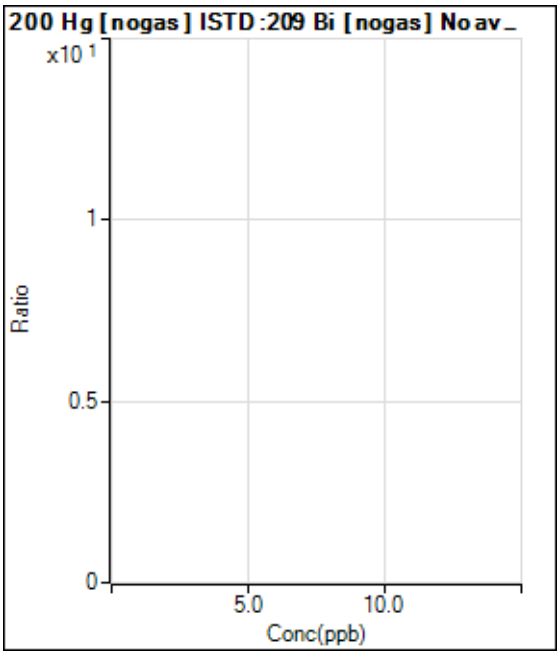
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					



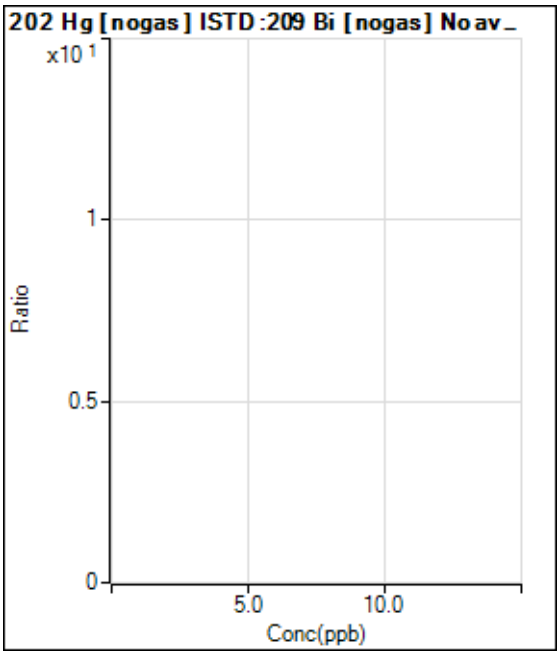
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

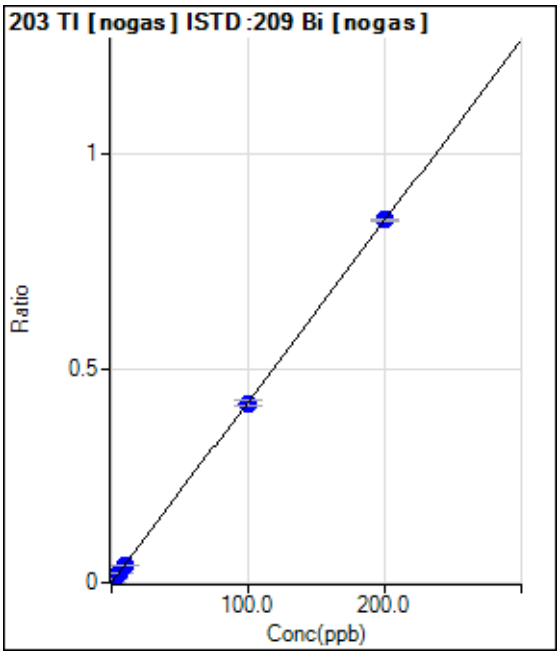


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	0.050					
3	☐	0.200					
4	☐	0.500					
5	☐	2.000					
6	☐	5.000					
7	☐	10.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	0.050					
3	☐	0.200					
4	☐	0.500					
5	☐	5.000					
6	☐	5.000					
7	☐	10.000					

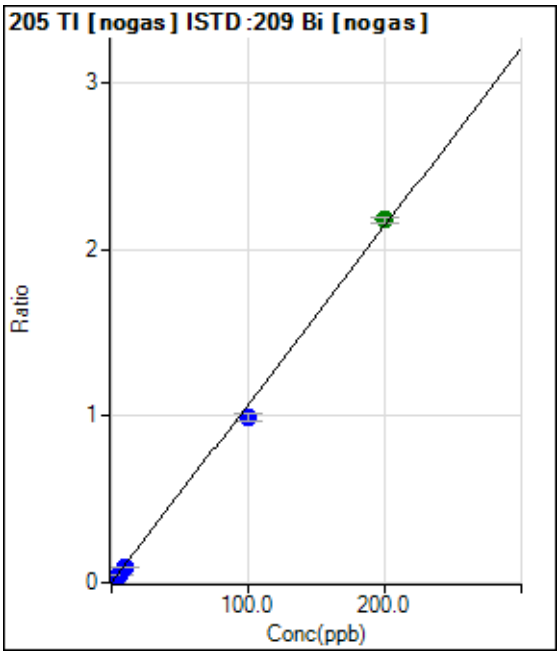
Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	46.67	0.0000	P	27.5
2	☐	2.000	1.942	9442.83	0.0082	P	6.5
3	☐	5.000	4.893	24188.11	0.0207	P	0.8
4	☐	10.000	9.509	46944.16	0.0402	P	3.6
5	☐	100.000	99.083	471051.64	0.4189	P	3.6
6	☐	200.000	200.486	929739.15	0.8475	P	0.8
7	☐	1.000					

y = 0.0042 * x + 4.1431E-005
R = 1.0000
DL = 0.008087
BEC = 0.009802

Weight: <None>
Min Conc: <None>

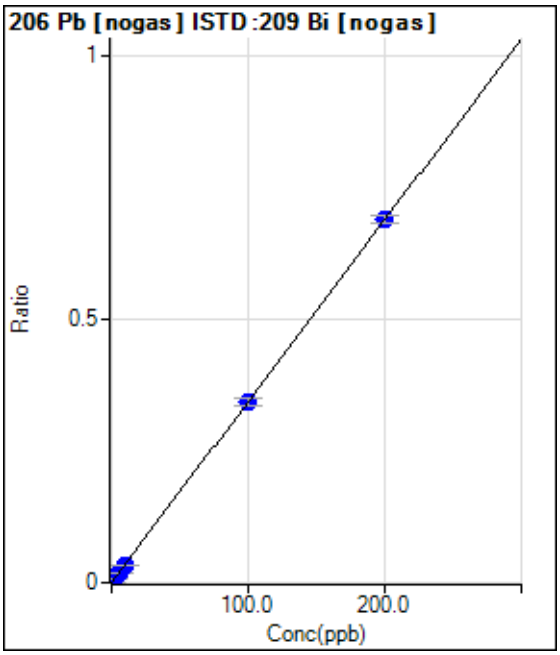


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	123.33	0.0001	P	22.6
2	☐	2.000	1.818	22438.96	0.0196	P	2.1
3	☐	5.000	4.499	56380.37	0.0483	P	4.3
4	☐	10.000	8.816	110378.00	0.0946	P	2.0
5	☐	100.000	93.134	1122395.14	0.9982	P	4.8
6	☐	200.000	203.507	2392574.91	2.1811	A	1.9
7	☐	1.000					

y = 0.0107 * x + 1.0933E-004
R = 0.9992
DL = 0.006926
BEC = 0.0102

Weight: <None>
Min Conc: <None>

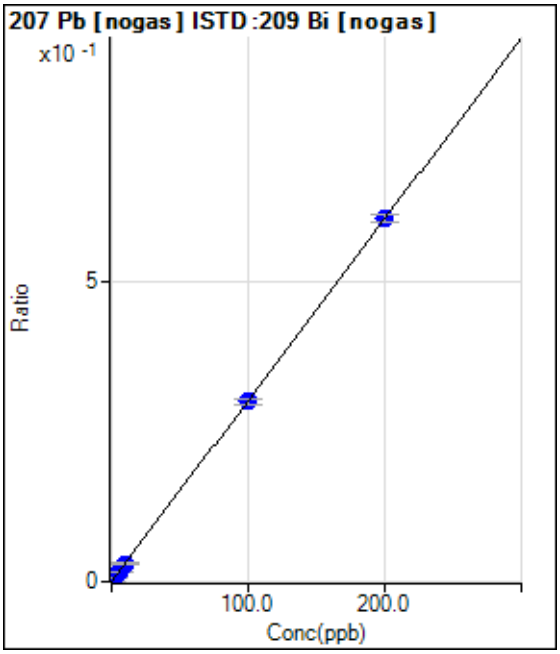
Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	360.01	0.0003	P	12.3
2	☐	2.000	2.017	8282.23	0.0072	P	6.6
3	☐	5.000	4.835	19728.84	0.0169	P	3.1
4	☐	10.000	9.581	38736.22	0.0332	P	0.6
5	☐	100.000	99.574	384542.86	0.3420	P	4.0
6	☐	200.000	200.238	753988.06	0.6874	P	2.2
7	☐	1.000					

y = 0.0034 * x + 3.1748E-004
R = 1.0000
DL = 0.03406
BEC = 0.09253

Weight: <None>
Min Conc: <None>



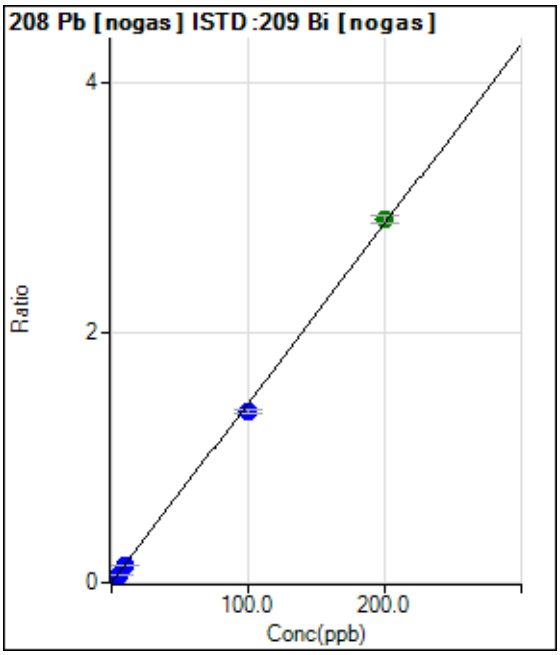
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	363.34	0.0003	P	31.5
2	☐	2.000	1.949	7088.34	0.0062	P	7.0
3	☐	5.000	4.888	17559.72	0.0150	P	1.7
4	☐	10.000	9.781	34747.21	0.0298	P	6.3
5	☐	100.000	99.483	337436.33	0.3000	P	3.1
6	☐	200.000	200.273	662162.93	0.6037	P	2.3
7	☐	1.000					

y = 0.0030 * x + 3.1944E-004
R = 1.0000
DL = 0.1002
BEC = 0.106

Weight: <None>
Min Conc: <None>

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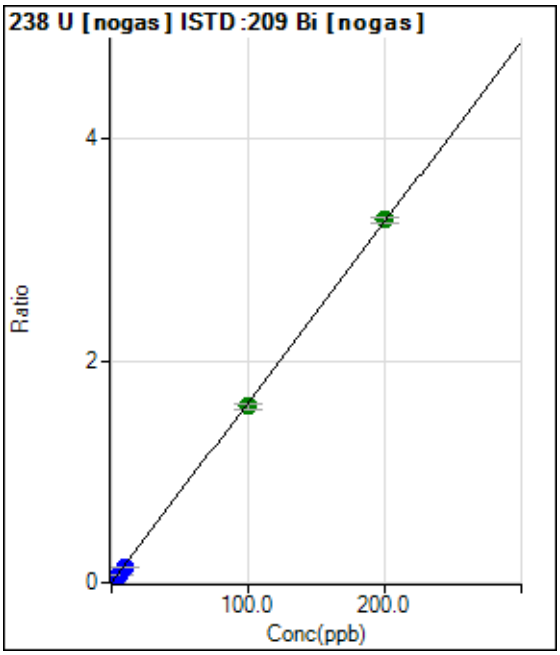
Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1566.72	0.0014	P	10.9
2	☐	2.000	1.853	32009.31	0.0280	P	3.3
3	☐	5.000	4.659	79607.16	0.0682	P	2.0
4	☐	10.000	9.312	157466.42	0.1350	P	3.7
5	☐	100.000	95.633	1544423.01	1.3731	P	2.7
6	☐	200.000	202.228	3183396.85	2.9021	A	2.1
7	☐	1.000					

y = 0.0143 * x + 0.0014
R = 0.9997
DL = 0.03146
BEC = 0.09637

Weight: <None>
Min Conc: <None>



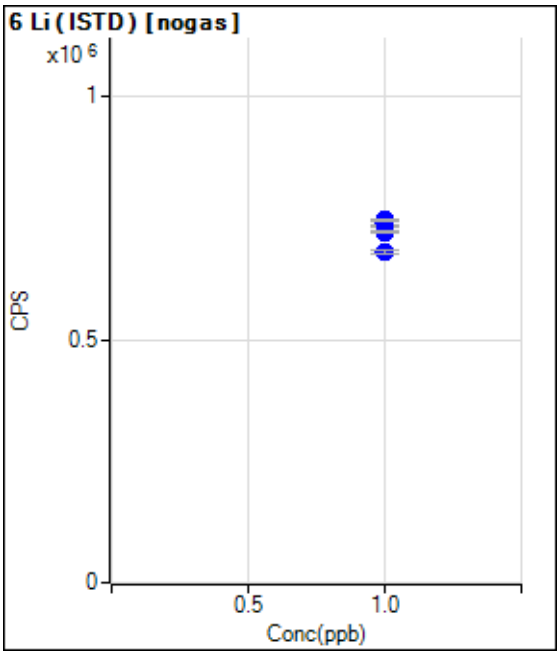
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1	☐	0.000	0.000	73.33	0.0001	P	47.1
2	☐	2.000	1.766	32937.80	0.0288	P	2.2
3	☐	5.000	4.371	82995.81	0.0711	P	2.1
4	☐	10.000	8.627	163682.69	0.1403	P	2.1
5	☐	100.000	97.982	1791036.64	1.5925	A	3.3
6	☐	200.000	201.096	3585523.69	3.2684	A	1.4
7	☐	1.000					

y = 0.0163 * x + 6.4527E-005
R = 0.9999
DL = 0.005615
BEC = 0.00397

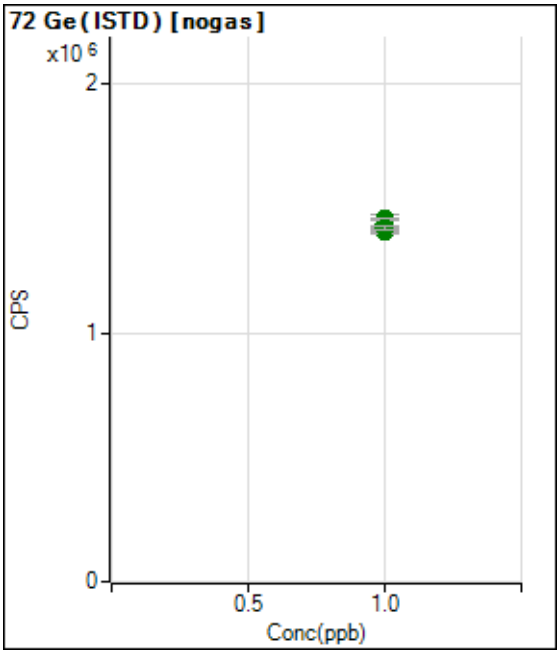
Weight: <None>
Min Conc: <None>

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Calibration for 154_ICV.d



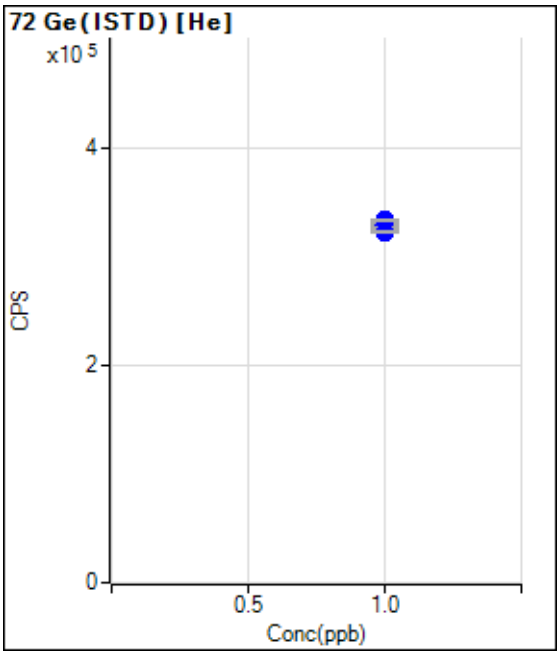
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1	☐	1.000		733859.90		P	0.6
2	☐	1.000		738908.91		P	1.0
3	☐	1.000		746343.17		P	0.5
4	☐	1.000		745176.78		P	0.4
5	☐	1.000		721469.49		P	0.3
6	☐	1.000		681073.59		P	0.9
7	☐	1.000					



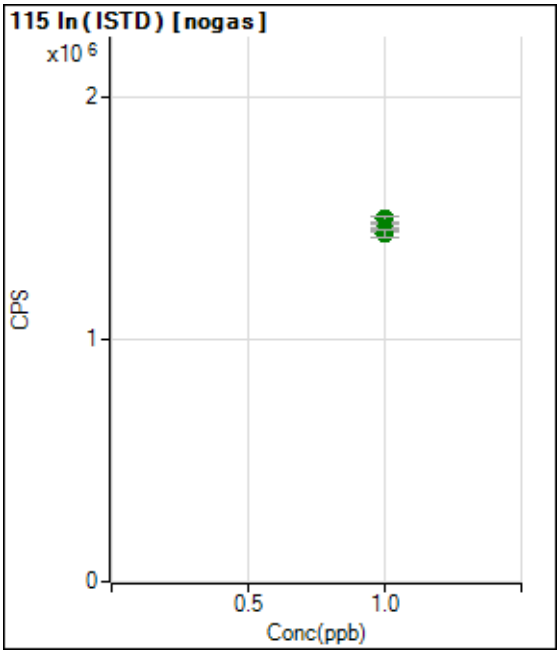
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1407720.24		A	1.8
2	☐	1.000		1417971.70		A	0.6
3	☐	1.000		1438495.97		A	4.6
4	☐	1.000		1434952.58		A	2.8
5	☐	1.000		1457621.64		A	0.5
6	☐	1.000		1424482.79		A	1.1
7	☐	1.000					

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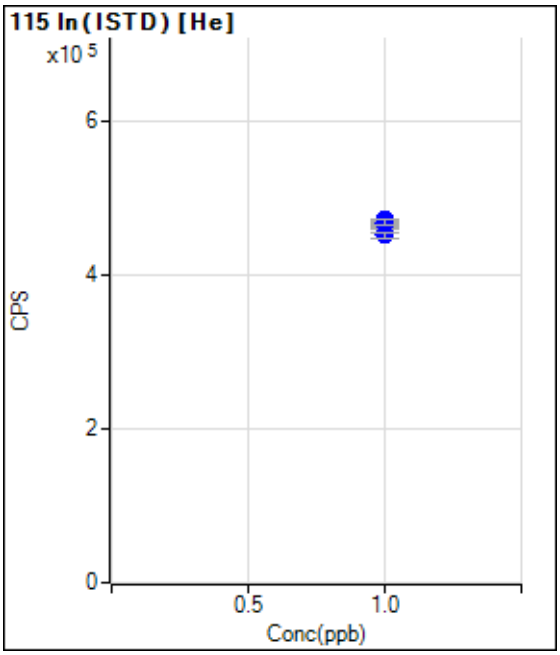
Calibration for 154_ICV.d



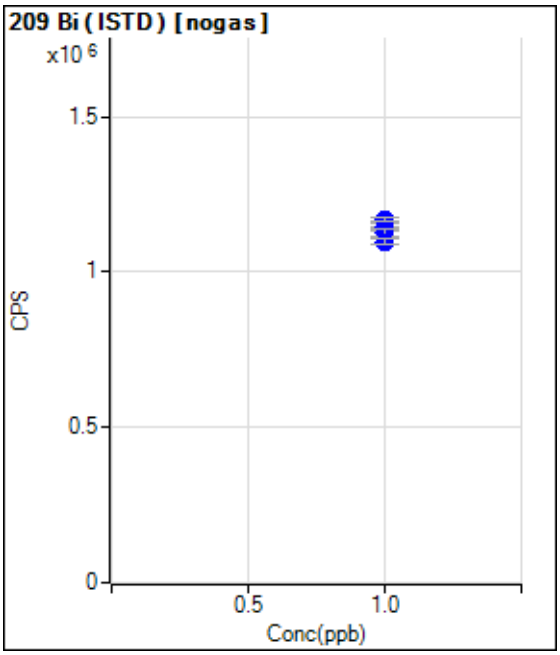
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		327714.61		P	1.4
2	☐	1.000		332257.60		P	1.6
3	☐	1.000		330365.63		P	1.0
4	☐	1.000		333733.78		P	0.9
5	☐	1.000		334555.28		P	0.9
6	☐	1.000		323409.02		P	0.3
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1454014.66		A	1.3
2	☐	1.000		1455641.59		A	1.0
3	☐	1.000		1498035.75		A	1.5
4	☐	1.000		1462961.30		A	2.0
5	☐	1.000		1456488.25		A	0.8
6	☐	1.000		1438855.67		A	2.4
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		471989.60		P	0.7
2	☐	1.000		465967.47		P	1.0
3	☐	1.000		466241.47		P	2.3
4	☐	1.000		469481.05		P	0.7
5	☐	1.000		467918.53		P	1.6
6	☐	1.000		451617.57		P	1.4
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1131561.60		P	2.7
2	☐	1.000		1145395.32		P	1.8
3	☐	1.000		1167337.46		P	1.6
4	☐	1.000		1167080.87		P	1.1
5	☐	1.000		1125230.68		P	2.4
6	☐	1.000		1097147.90		P	1.4
7	☐	1.000					

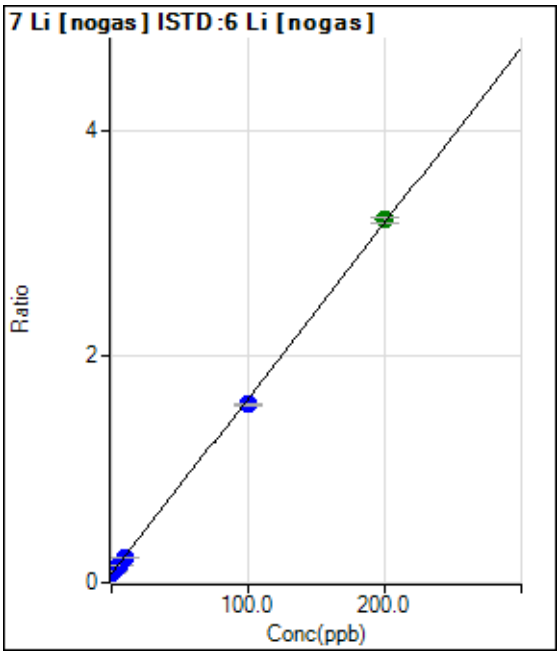
Calibration for 090_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\051120A.b\
Analysis File: 051120A.batch.bin
DA Date-Time: 5/11/2020 5:48:10 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	083CALB.d	CAL BLK	5/11/2020 3:57:25 PM
2	084CALS.d	2/10/200	5/11/2020 3:59:47 PM
3	085CALS.d	5/25/500	5/11/2020 4:02:10 PM
4	086CALS.d	10/50/1000	5/11/2020 4:04:33 PM
5	087CALS.d	100/500/10K	5/11/2020 4:06:57 PM
6	088CALS.d	200/1000/20K	5/11/2020 4:09:20 PM
7			

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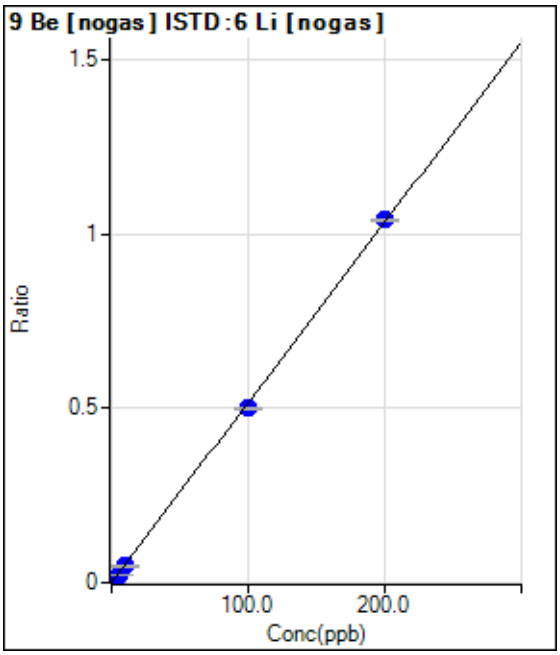
Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	46990.29	0.0799	P	1.6
2	☐	2.000	1.901	64326.44	0.1093	P	1.7
3	☐	5.000	4.627	88891.14	0.1515	P	1.0
4	☐	10.000	9.165	130162.23	0.2219	P	0.8
5	☐	100.000	96.500	870604.83	1.5748	P	1.3
6	☐	200.000	201.802	1669817.11	3.2062	A	1.3
7	☐	1.000					

y = 0.0155 * x + 0.0799
R = 0.9998
DL = 0.2425
BEC = 5.155

Weight: <None>
Min Conc: <None>



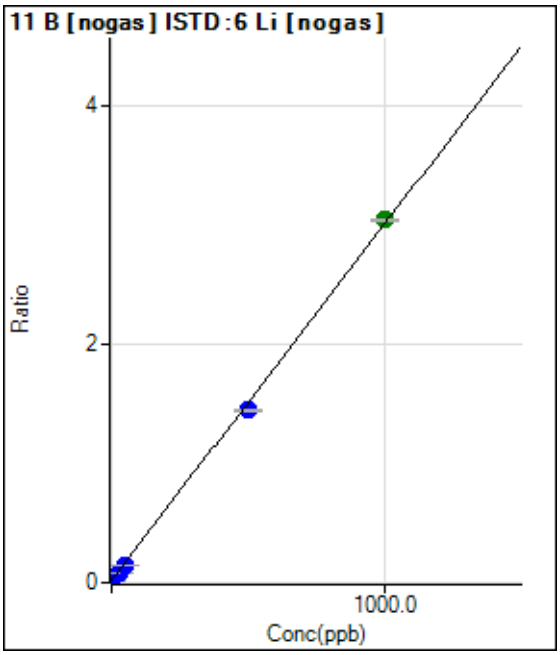
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36.67	0.0001	P	83.6
2	☐	2.000	1.841	5627.55	0.0096	P	4.7
3	☐	5.000	4.672	14181.93	0.0242	P	2.6
4	☐	10.000	9.192	27875.18	0.0475	P	3.1
5	☐	100.000	97.056	277003.95	0.5011	P	1.0
6	☐	200.000	201.522	541807.99	1.0403	P	0.8
7	☐	1.000					

y = 0.0052 * x + 6.2382E-005
R = 0.9999
DL = 0.03032
BEC = 0.01208

Weight: <None>
Min Conc: <None>

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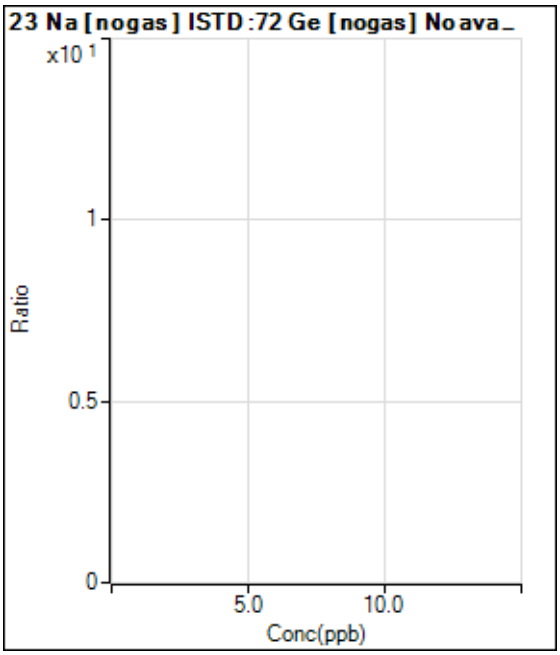
Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	11286.69	0.0192	P	1.4
2	☐	10.000	8.723	26628.48	0.0452	P	1.7
3	☐	25.000	22.094	49969.48	0.0852	P	2.4
4	☐	50.000	44.311	88937.33	0.1516	P	1.4
5	☐	500.000	476.801	798193.06	1.4439	P	1.4
6	☐	1000.000	1011.969	1584935.81	3.0431	A	0.8
7	☐	5.000					

y = 0.0030 * x + 0.0192
R = 0.9996
DL = 0.2721
BEC = 6.419

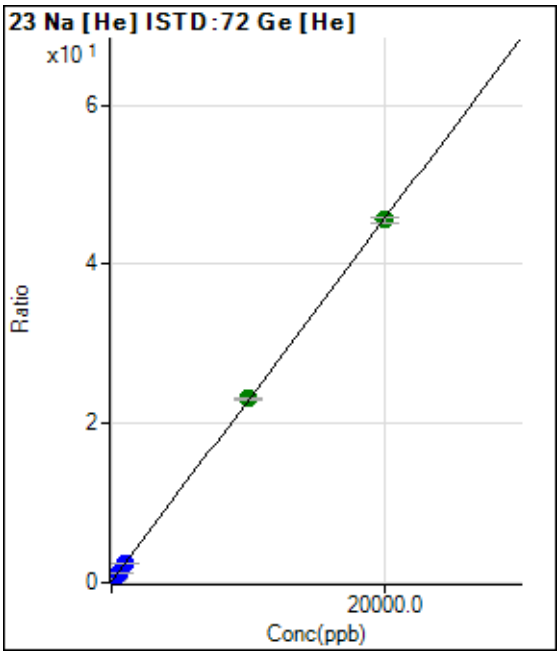
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

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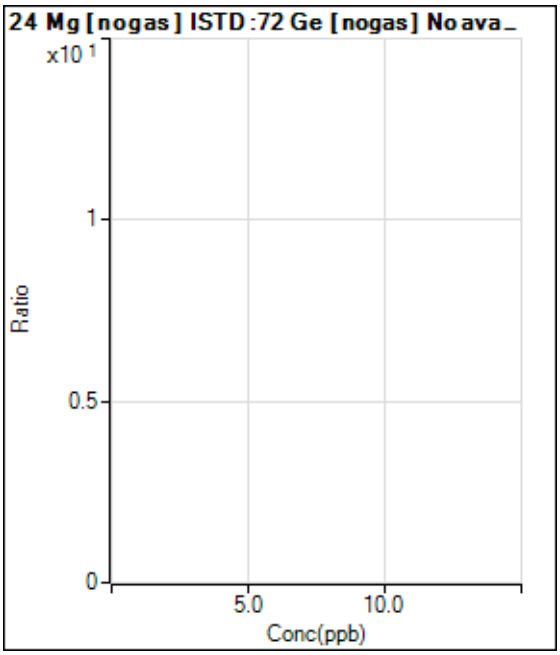
Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	45524.76	0.1463	P	2.5
2	☐	200.000	195.068	183466.94	0.5903	P	2.7
3	☐	500.000	479.116	390691.59	1.2368	P	0.6
4	☐	1000.000	953.586	717699.02	2.3167	P	1.9
5	☐	10000.000	10096.395	6989187.19	23.1261	A	1.0
6	☐	20000.000	19954.694	13596201.05	45.5640	A	1.7
7	☐	100.000					

y = 0.0023 * x + 0.1463
R = 1.0000
DL = 4.905
BEC = 64.28

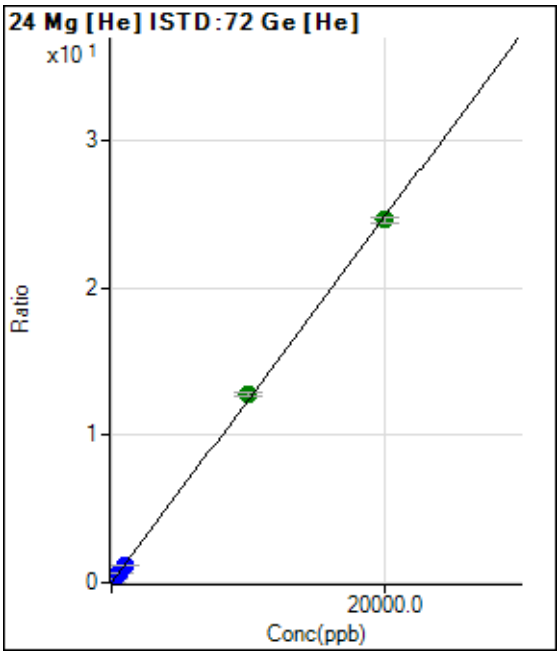
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

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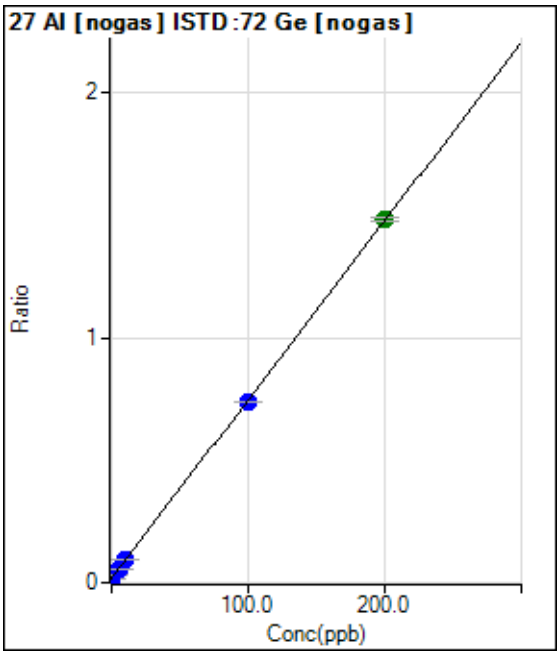
Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	373.34	0.0012	P	6.3
2	☐	200.000	196.663	76312.70	0.2455	P	0.7
3	☐	500.000	492.302	193540.68	0.6127	P	1.0
4	☐	1000.000	967.324	372632.45	1.2027	P	1.6
5	☐	10000.000	10317.872	3873571.71	12.8171	A	1.5
6	☐	20000.000	19842.923	7355096.35	24.6483	A	1.3
7	☐	100.000					

y = 0.0012 * x + 0.0012
R = 0.9998
DL = 0.1823
BEC = 0.9656

Weight: <None>
Min Conc: <None>

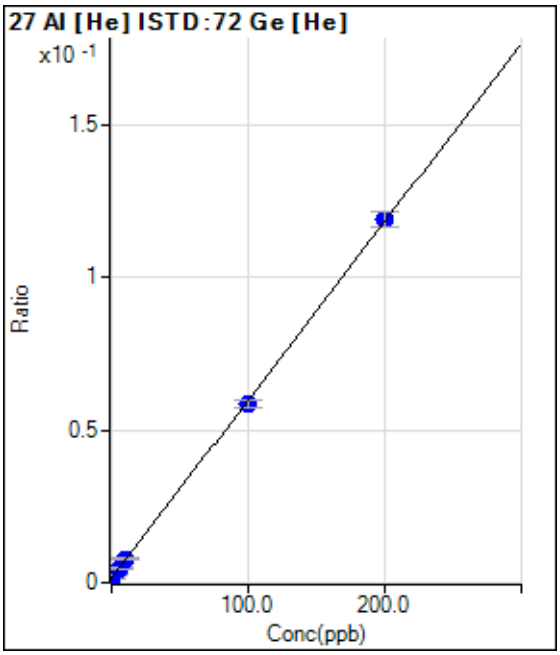


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	19843.88	0.0176	P	3.0
2	☐	2.000	2.964	44524.07	0.0392	P	25.5
3	☐	5.000	5.210	63138.59	0.0556	P	3.9
4	☐	10.000	10.071	102623.35	0.0910	P	1.2
5	☐	100.000	98.609	823996.60	0.7361	P	0.2
6	☐	200.000	200.677	1636289.98	1.4798	A	1.2
7	☐	1.000					

y = 0.0073 * x + 0.0176
R = 1.0000
DL = 0.2144
BEC = 2.42

Weight: <None>
Min Conc: <None>

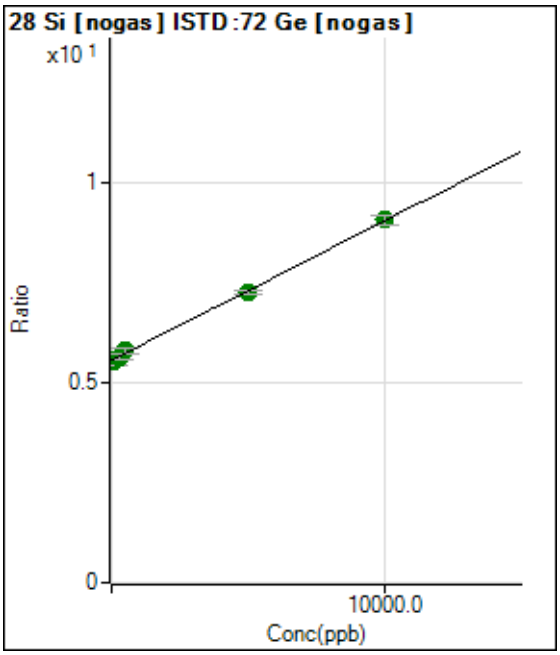
Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	446.68	0.0014	P	11.7
2	☐	2.000	2.697	933.37	0.0030	P	19.5
3	☐	5.000	5.343	1436.74	0.0045	P	15.3
4	☐	10.000	10.856	2403.53	0.0078	P	11.4
5	☐	100.000	97.603	17631.78	0.0583	P	4.1
6	☐	200.000	201.140	35426.85	0.1187	P	4.1
7	☐	1.000					

y = 5.8311E-004 * x + 0.0014
R = 0.9999
DL = 0.8636
BEC = 2.46

Weight: <None>
Min Conc: <None>



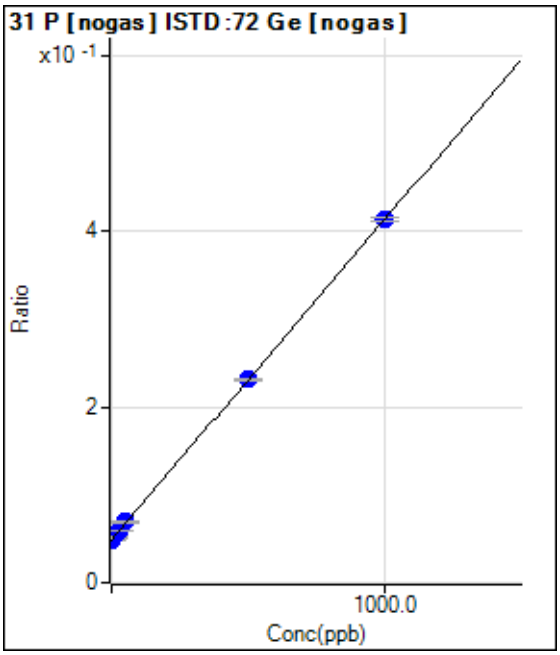
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6274341.99	5.5752	A	2.8
2	☐	100.000	-150.076	6275587.20	5.5228	A	2.1
3	☐	250.000	210.159	6413099.49	5.6487	A	2.5
4	☐	500.000	697.996	6561168.44	5.8192	A	2.4
5	☐	5000.000	4873.257	8147180.29	7.2784	A	1.6
6	☐	10000.000	10056.968	10051547.35	9.0901	A	2.3
7	☐	50.000					

y = 3.4950E-004 * x + 5.5752
R = 0.9993
DL = 1330
BEC = 1.595E+04

Weight: <None>
Min Conc: <None>

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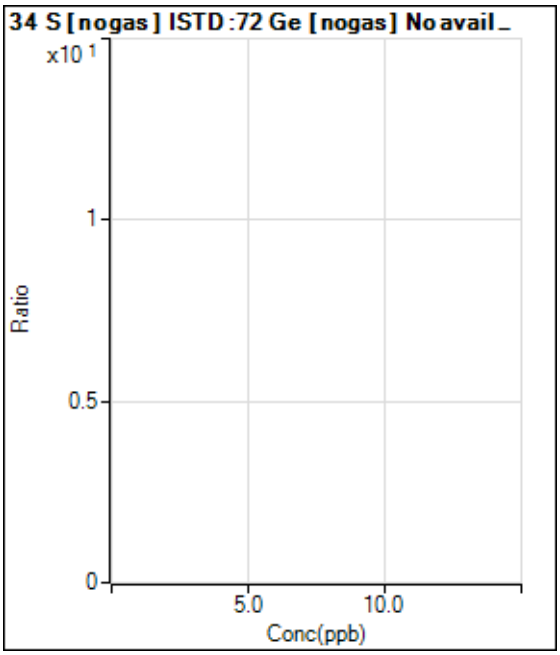
Calibration for 090_ICV.d



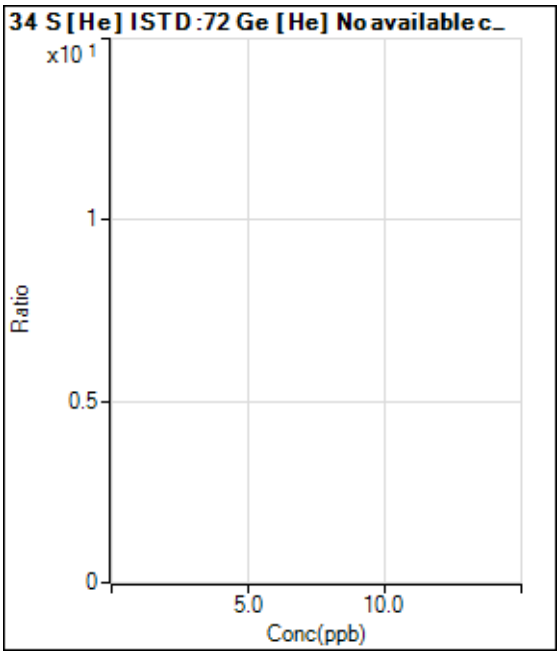
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	54953.36	0.0488	P	2.3
2	☐	10.000	8.666	59058.92	0.0520	P	2.6
3	☐	25.000	27.511	66821.56	0.0589	P	0.2
4	☐	50.000	55.928	78047.33	0.0692	P	3.6
5	☐	500.000	501.523	259266.51	0.2316	P	1.2
6	☐	1000.000	998.893	456610.50	0.4129	P	1.2
7	☐	5.000					

y = 3.6450E-004 * x + 0.0488
R = 1.0000
DL = 9.042
BEC = 133.9

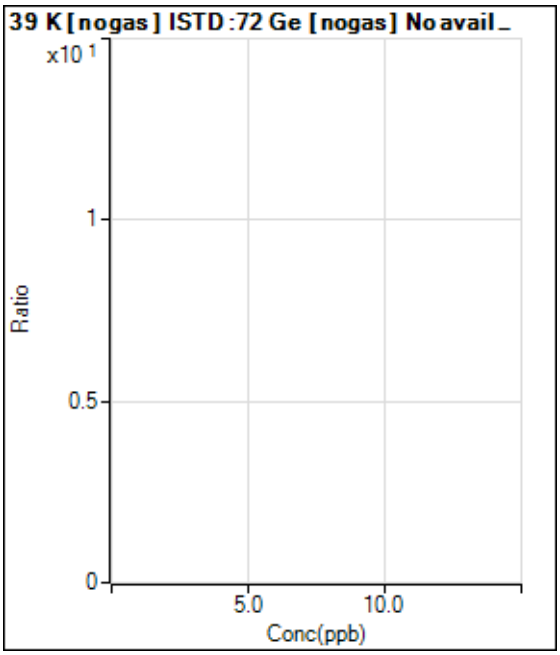
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	400.000					
3	☐	1000.000					
4	☐	2000.000					
5	☐	20000.000					
6	☐	40000.000					
7	☐	200.000					

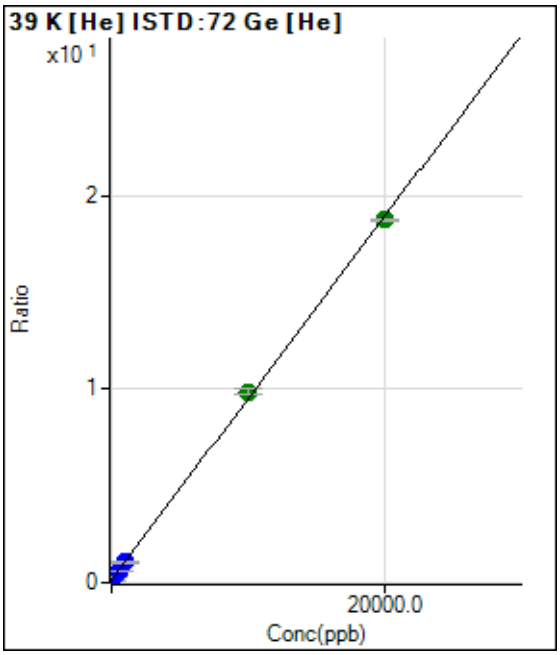


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	400.000					
3	☐	1000.000					
4	☐	2000.000					
5	☐	20000.000					
6	☐	40000.000					
7	☐	200.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

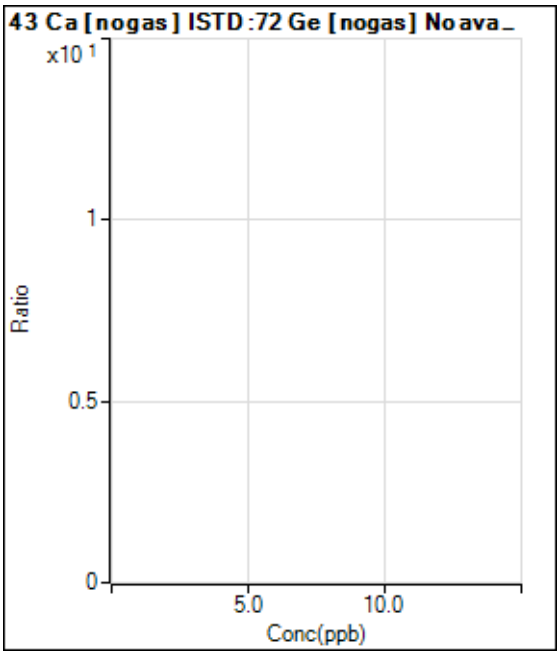
Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	43550.91	0.1399	P	1.6
2	☐	200.000	192.307	99595.42	0.3203	P	1.3
3	☐	500.000	476.652	185445.04	0.5871	P	2.1
4	☐	1000.000	963.956	323518.76	1.0442	P	1.1
5	☐	10000.000	10354.788	2977629.85	9.8536	A	2.9
6	☐	20000.000	19825.069	5591400.12	18.7376	A	0.8
7	☐	100.000					

y = 9.3809E-004 * x + 0.1399
R = 0.9998
DL = 6.977
BEC = 149.2

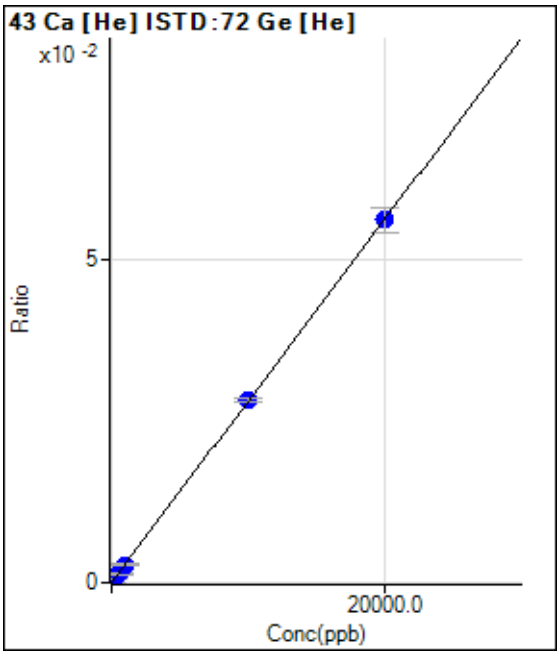
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

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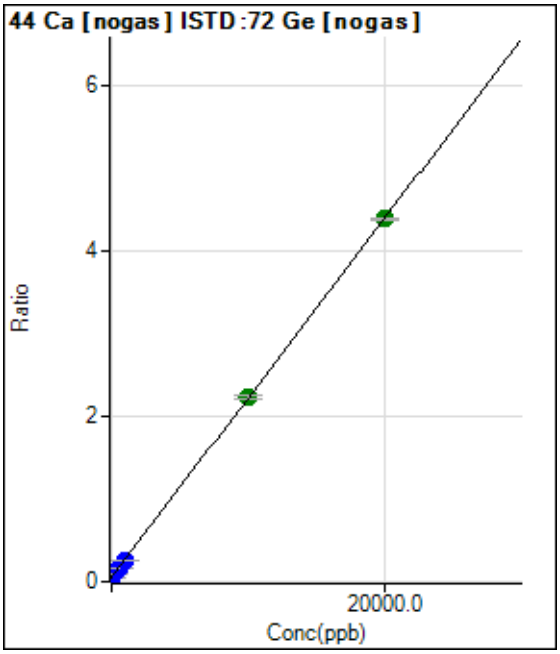
Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10.00	0.0000	P	100.5
2	☐	200.000	236.047	216.67	0.0007	P	24.4
3	☐	500.000	484.095	440.01	0.0014	P	10.1
4	☐	1000.000	994.641	876.70	0.0028	P	4.8
5	☐	10000.000	10025.221	8525.41	0.0282	P	1.8
6	☐	20000.000	19987.695	16774.45	0.0562	P	6.8
7	☐	100.000					

y = 2.8108E-006 * x + 3.2443E-005
R = 1.0000
DL = 34.8
BEC = 11.54

Weight: <None>
Min Conc: <None>



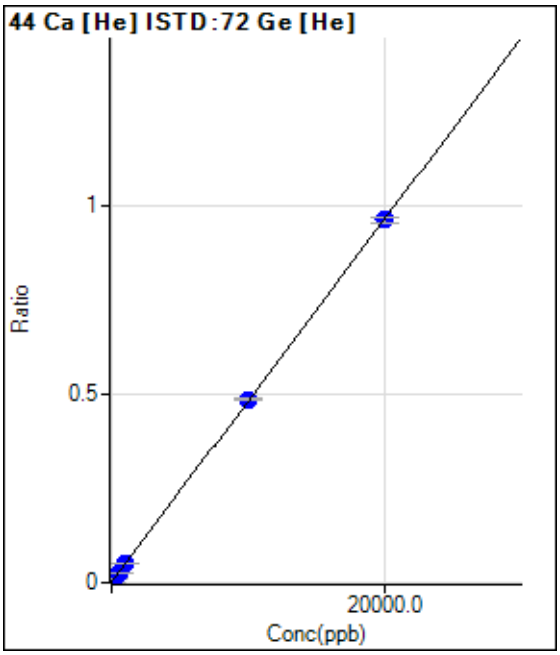
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	60619.78	0.0539	P	1.5
2	☐	200.000	194.191	109065.81	0.0960	P	0.8
3	☐	500.000	495.081	183095.49	0.1613	P	2.3
4	☐	1000.000	973.395	298876.20	0.2650	P	0.5
5	☐	10000.000	10043.523	2499401.89	2.2329	A	1.4
6	☐	20000.000	19979.750	4852867.95	4.3886	A	0.6
7	☐	100.000					

y = 2.1695E-004 * x + 0.0539
R = 1.0000
DL = 10.97
BEC = 248.3

Weight: <None>
Min Conc: <None>

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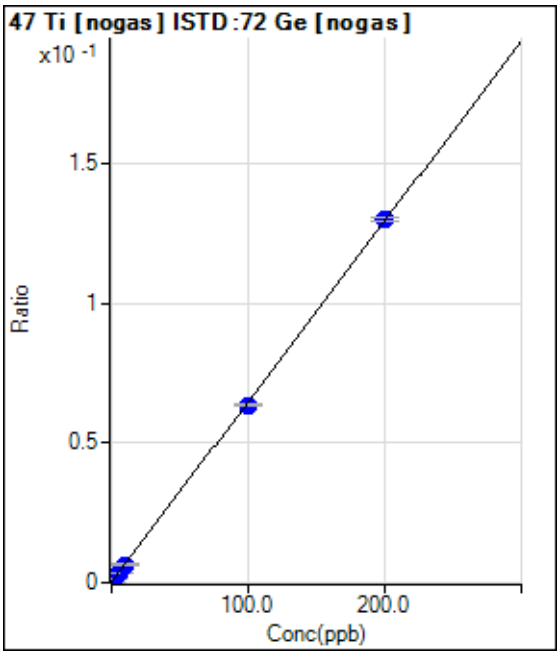
Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	366.68	0.0012	P	9.6
2	☐	200.000	195.583	3290.34	0.0106	P	1.9
3	☐	500.000	497.107	7925.14	0.0251	P	2.4
4	☐	1000.000	1022.357	15603.39	0.0504	P	1.9
5	☐	10000.000	10053.569	146510.64	0.4848	P	1.2
6	☐	20000.000	19972.214	287043.61	0.9619	P	1.7
7	☐	100.000					

y = 4.8104E-005 * x + 0.0012
R = 1.0000
DL = 7.041
BEC = 24.47

Weight: <None>
Min Conc: <None>

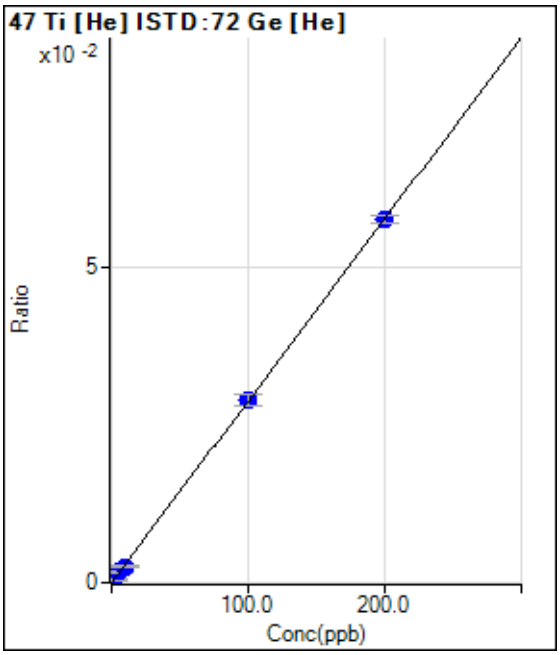


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	153.34	0.0001	P	65.8
2	☐	2.000	2.005	1626.76	0.0014	P	9.5
3	☐	5.000	5.122	3910.49	0.0034	P	6.9
4	☐	10.000	9.725	7238.23	0.0064	P	4.1
5	☐	100.000	98.268	71226.30	0.0636	P	0.7
6	☐	200.000	200.876	143666.82	0.1299	P	1.0
7	☐	1.000					

y = 6.4610E-004 * x + 1.3578E-004
R = 0.9999
DL = 0.4146
BEC = 0.2102

Weight: <None>
Min Conc: <None>

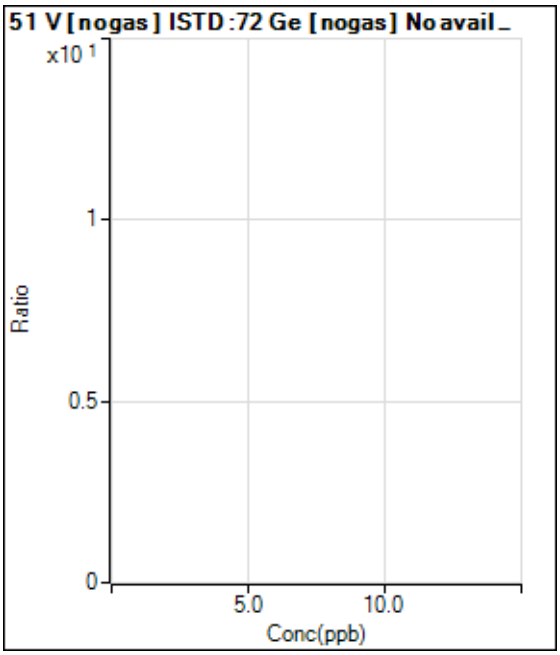
Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	0.00	0.0000	P	
2	☐	2.000	1.899	170.00	0.0005	P	43.8
3	☐	5.000	5.868	533.35	0.0017	P	8.2
4	☐	10.000	8.931	796.70	0.0026	P	5.5
5	☐	100.000	100.786	8765.49	0.0290	P	6.1
6	☐	200.000	199.640	17148.13	0.0575	P	2.1
7	☐	1.000					

y = 2.8784E-004 * x + 0.0000E+000
R = 1.0000
DL = 0
BEC = 0

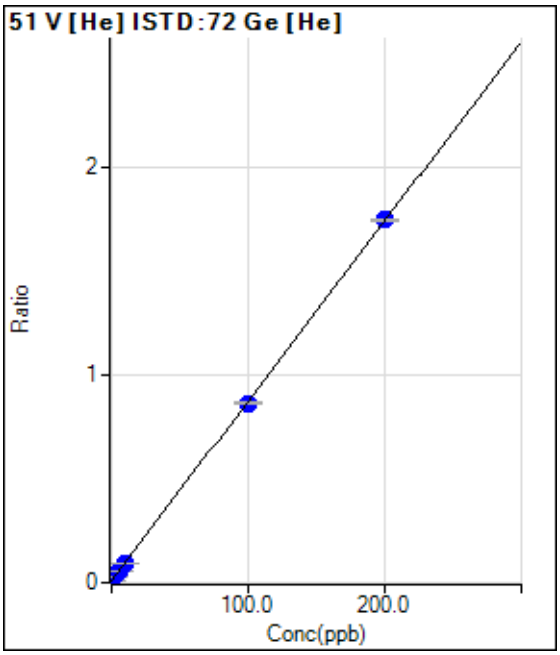
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

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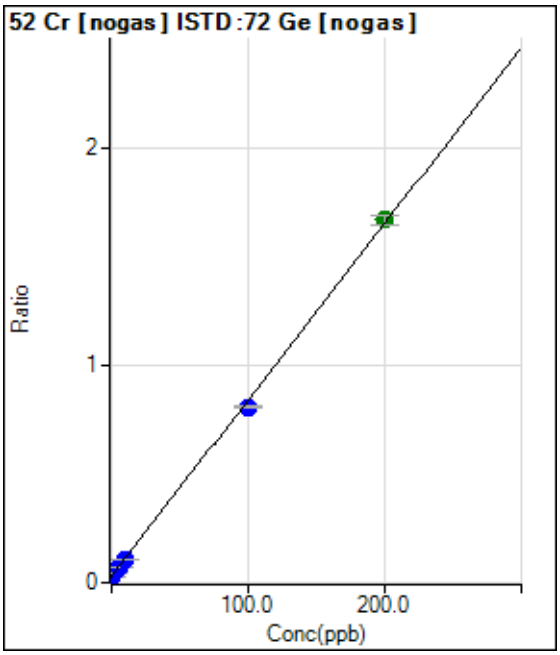
Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3196.96	0.0103	P	2.8
2	☐	2.000	1.952	8453.06	0.0272	P	2.5
3	☐	5.000	4.976	16868.77	0.0534	P	3.7
4	☐	10.000	9.672	29155.01	0.0941	P	2.9
5	☐	100.000	98.501	261131.27	0.8641	P	1.2
6	☐	200.000	200.767	522356.75	1.7505	P	0.4
7	☐	1.000					

y = 0.0087 * x + 0.0103
R = 1.0000
DL = 0.1005
BEC = 1.185

Weight: <None>
Min Conc: <None>



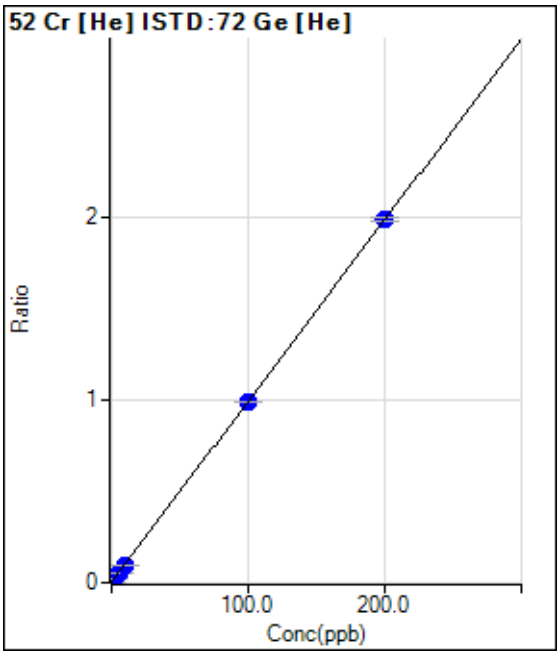
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	34539.00	0.0307	P	1.8
2	☐	2.000	1.956	52895.47	0.0466	P	0.8
3	☐	5.000	4.979	80694.83	0.0711	P	2.2
4	☐	10.000	9.645	122820.58	0.1089	P	0.5
5	☐	100.000	95.678	903102.07	0.8067	P	1.0
6	☐	200.000	202.180	1847217.16	1.6706	A	2.5
7	☐	1.000					

y = 0.0081 * x + 0.0307
R = 0.9997
DL = 0.2073
BEC = 3.783

Weight: <None>
Min Conc: <None>

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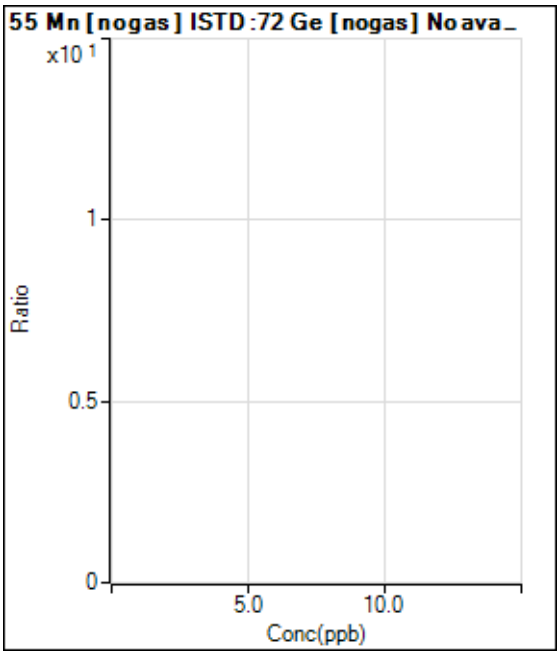
Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	570.02	0.0018	P	12.6
2	☐	2.000	2.020	6777.99	0.0218	P	5.4
3	☐	5.000	4.972	16113.85	0.0510	P	1.0
4	☐	10.000	9.656	30151.65	0.0973	P	4.0
5	☐	100.000	99.754	298779.90	0.9886	P	0.6
6	☐	200.000	200.140	591304.16	1.9815	P	0.9
7	☐	1.000					

y = 0.0099 * x + 0.0018
R = 1.0000
DL = 0.07004
BEC = 0.185

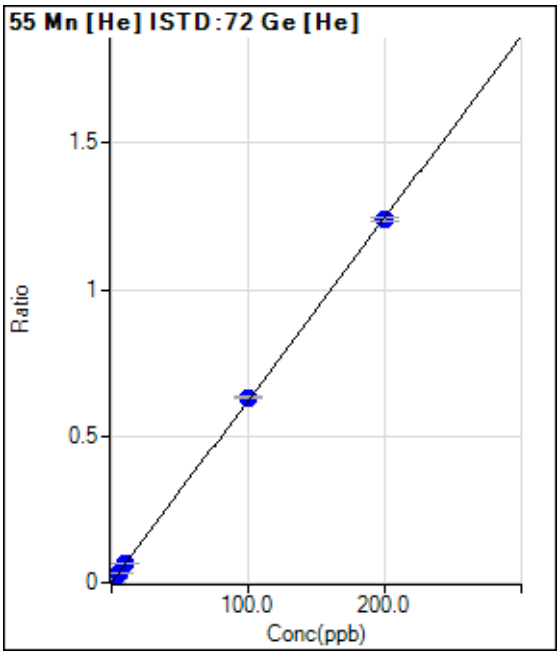
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

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Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	76.67	0.0002	P	7.7
2	☐	2.000	2.122	4177.20	0.0134	P	2.3
3	☐	5.000	4.964	9822.76	0.0311	P	1.1
4	☐	10.000	10.164	19654.00	0.0634	P	2.7
5	☐	100.000	101.744	191181.01	0.6326	P	0.9
6	☐	200.000	199.119	369349.40	1.2378	P	1.1
7	☐	1.000					

y = 0.0062 * x + 2.4637E-004

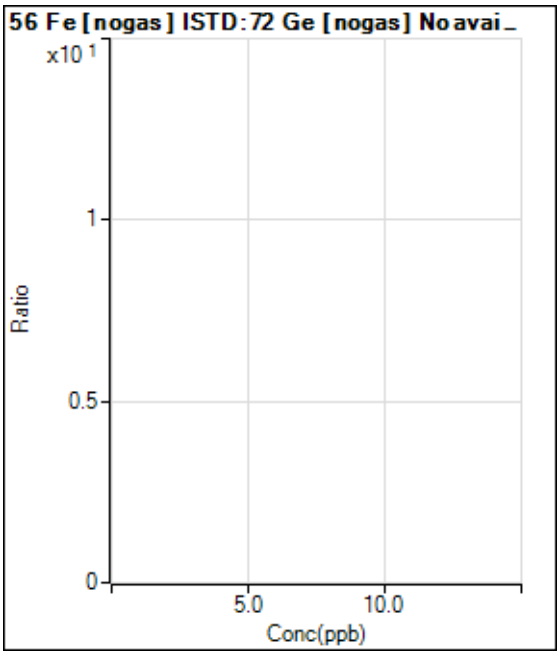
R = 0.9999

DL = 0.009188

BEC = 0.03964

Weight: <None>

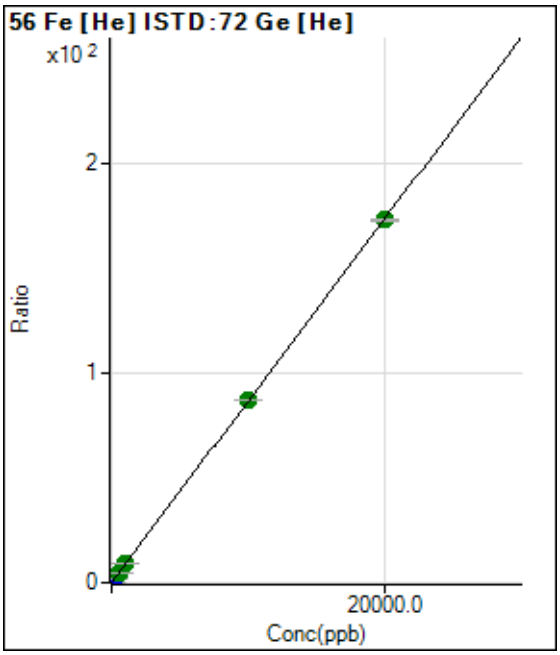
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

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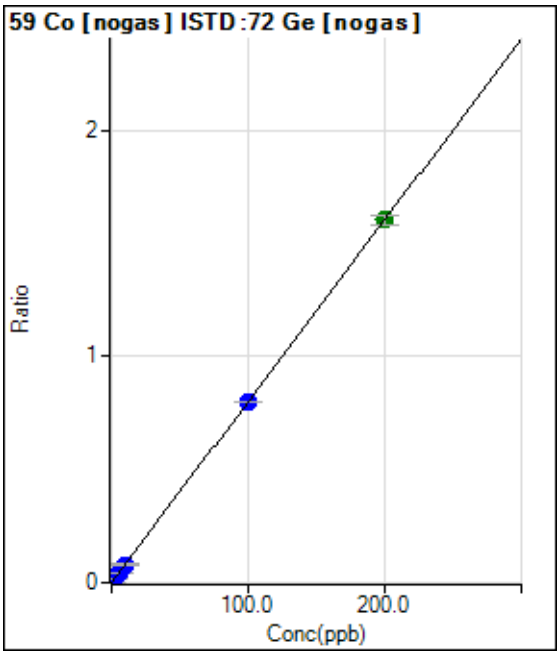
Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4670.66	0.0150	P	4.1
2	☐	200.000	189.602	516238.62	1.6605	P	1.8
3	☐	500.000	522.478	1437191.07	4.5495	A	1.2
4	☐	1000.000	1024.309	2758689.34	8.9047	A	2.0
5	☐	10000.000	10074.320	26429226.27	87.4476	A	0.5
6	☐	20000.000	19961.166	51700032.56	173.2532	A	0.5
7	☐	100.000					

y = 0.0087 * x + 0.0150
R = 1.0000
DL = 0.2149
BEC = 1.729

Weight: <None>
Min Conc: <None>



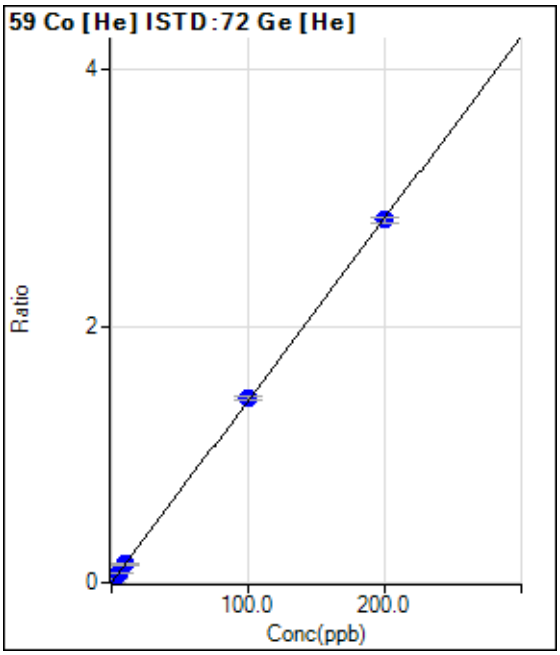
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	223.34	0.0002	P	24.1
2	☐	2.000	2.012	18546.15	0.0163	P	3.6
3	☐	5.000	5.039	46064.60	0.0406	P	3.2
4	☐	10.000	9.997	90562.30	0.0803	P	2.3
5	☐	100.000	99.601	893590.58	0.7983	P	0.3
6	☐	200.000	200.198	1773853.10	1.6043	A	2.8
7	☐	1.000					

y = 0.0080 * x + 1.9823E-004
R = 1.0000
DL = 0.0179
BEC = 0.02474

Weight: <None>
Min Conc: <None>

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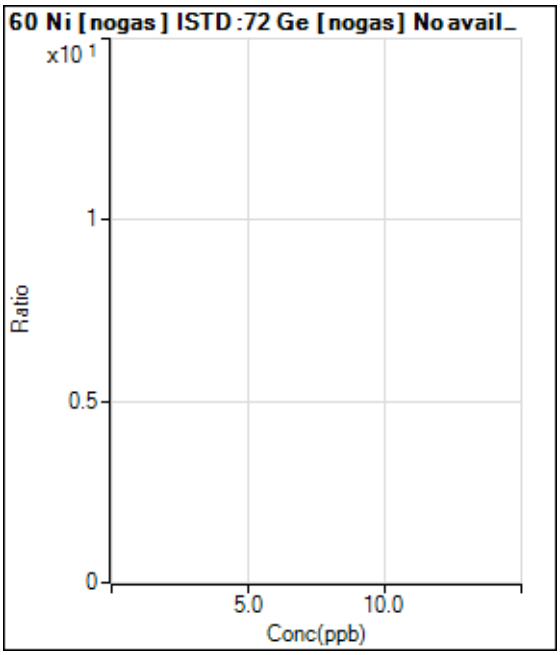
Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	90.00	0.0003	P	23.2
2	☐	2.000	2.091	9325.82	0.0300	P	3.7
3	☐	5.000	5.040	22700.94	0.0719	P	3.1
4	☐	10.000	10.127	44630.83	0.1441	P	4.9
5	☐	100.000	101.567	435978.55	1.4426	P	1.9
6	☐	200.000	199.208	844277.12	2.8293	P	1.5
7	☐	1.000					

y = 0.0142 * x + 2.8954E-004
R = 1.0000
DL = 0.01416
BEC = 0.02039

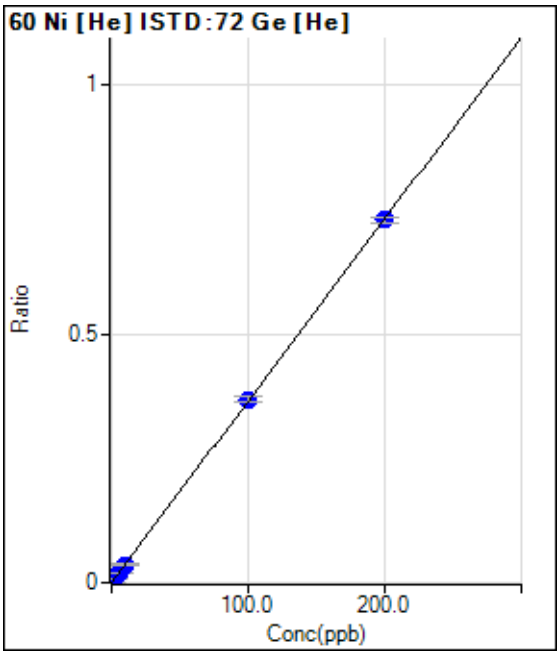
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

RIGHT SOLUTIONS | RIGHT PARTNER

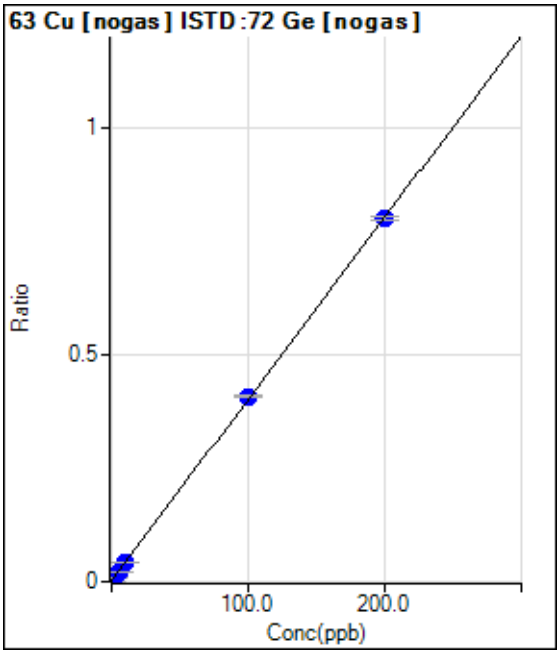
Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36.67	0.0001	P	42.4
2	☐	2.000	2.086	2403.53	0.0077	P	3.7
3	☐	5.000	5.178	6004.37	0.0190	P	2.4
4	☐	10.000	9.995	11336.97	0.0366	P	1.5
5	☐	100.000	100.739	111107.15	0.3677	P	2.9
6	☐	200.000	199.626	217374.91	0.7285	P	1.3
7	☐	1.000					

y = 0.0036 * x + 1.1800E-004
R = 1.0000
DL = 0.04109
BEC = 0.03234

Weight: <None>
Min Conc: <None>



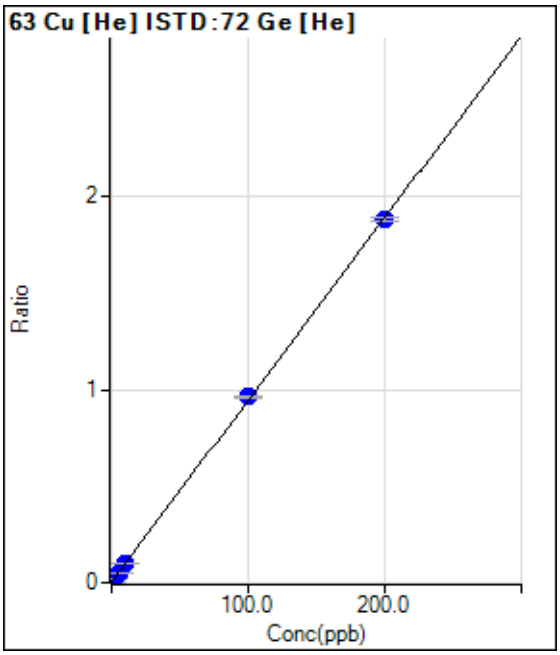
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2293.51	0.0020	P	2.2
2	☐	2.000	2.042	11580.43	0.0102	P	0.9
3	☐	5.000	5.215	25965.28	0.0229	P	2.7
4	☐	10.000	10.481	49496.96	0.0439	P	1.6
5	☐	100.000	101.285	455053.46	0.4065	P	1.1
6	☐	200.000	199.328	882505.77	0.7981	P	1.2
7	☐	1.000					

y = 0.0040 * x + 0.0020
R = 1.0000
DL = 0.03349
BEC = 0.5102

Weight: <None>
Min Conc: <None>

RIGHT SOLUTIONS | RIGHT PARTNER

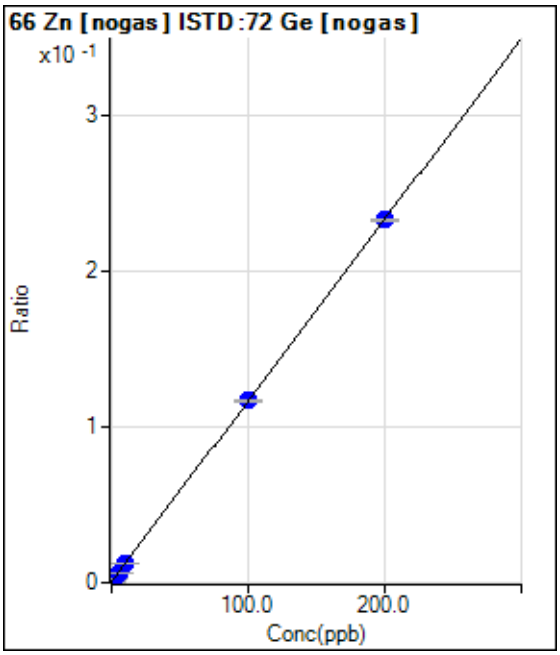
Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1053.38	0.0034	P	5.4
2	☐	2.000	2.092	7181.50	0.0231	P	1.0
3	☐	5.000	5.284	16794.52	0.0532	P	3.5
4	☐	10.000	9.987	30198.34	0.0975	P	3.0
5	☐	100.000	101.907	291198.39	0.9635	P	0.8
6	☐	200.000	199.039	560611.61	1.8787	P	1.2
7	☐	1.000					

y = 0.0094 * x + 0.0034
R = 0.9999
DL = 0.05816
BEC = 0.3593

Weight: <None>
Min Conc: <None>



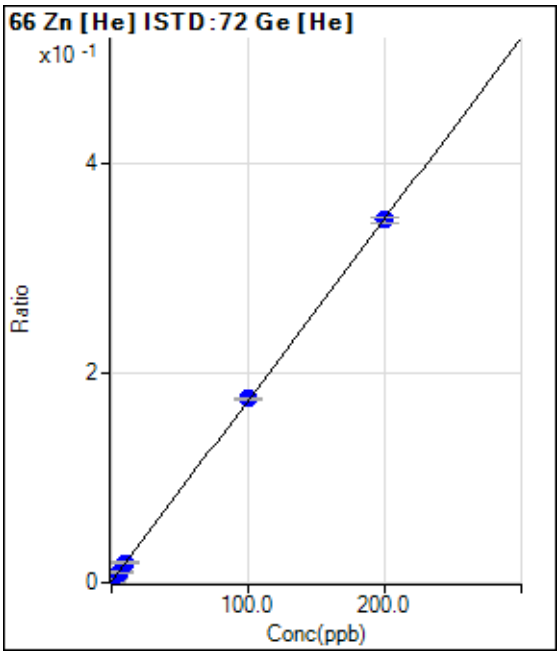
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	670.02	0.0006	P	8.5
2	☐	2.000	2.086	3430.38	0.0030	P	6.0
3	☐	5.000	5.024	7301.54	0.0064	P	4.4
4	☐	10.000	10.235	14082.26	0.0125	P	3.8
5	☐	100.000	100.119	130842.91	0.1169	P	1.4
6	☐	200.000	199.927	257459.43	0.2328	P	0.7
7	☐	1.000					

y = 0.0012 * x + 5.9558E-004
R = 1.0000
DL = 0.1311
BEC = 0.5127

Weight: <None>
Min Conc: <None>

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Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	310.01	0.0010	P	30.4
2	☐	2.000	2.130	1453.42	0.0047	P	4.0
3	☐	5.000	5.162	3133.64	0.0099	P	6.2
4	☐	10.000	10.189	5761.00	0.0186	P	10.3
5	☐	100.000	100.773	52946.35	0.1752	P	2.0
6	☐	200.000	199.599	103259.42	0.3460	P	1.4
7	☐	1.000					

y = 0.0017 * x + 9.9329E-004

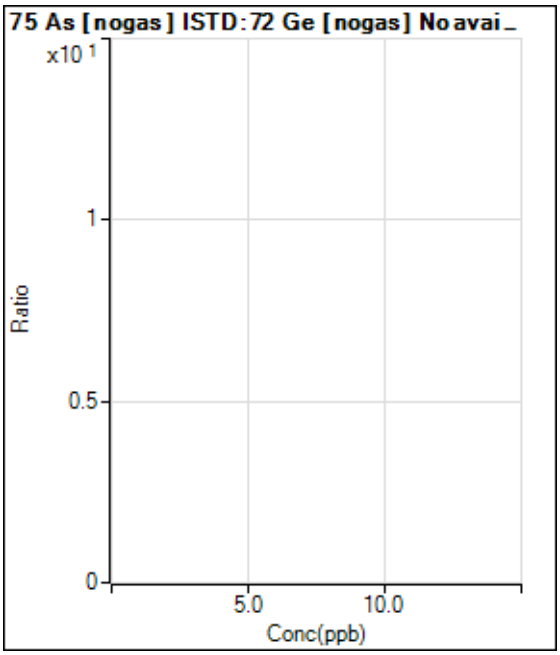
R = 1.0000

DL = 0.5233

BEC = 0.5746

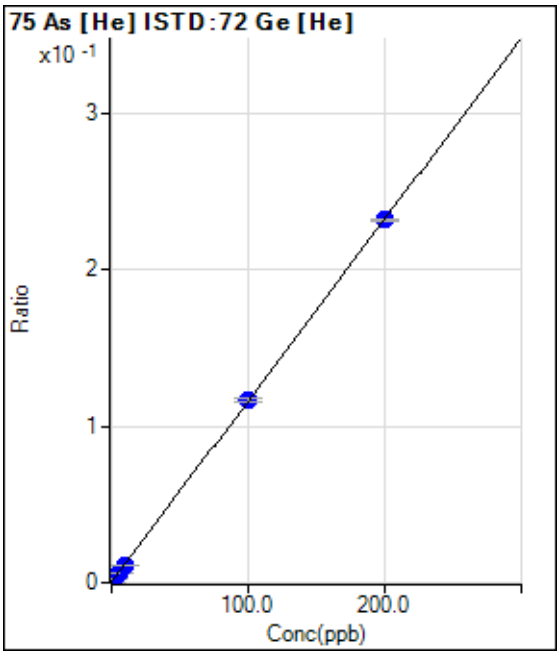
Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

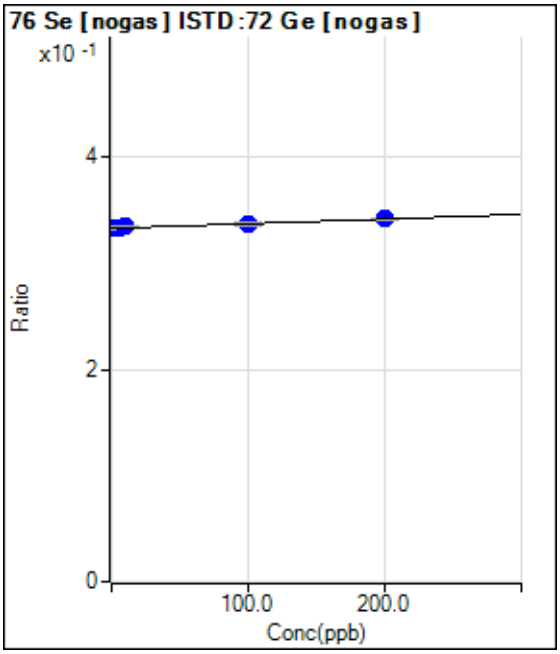
Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	98.89	0.0003	P	25.4
2	☐	2.000	1.988	815.58	0.0026	P	11.9
3	☐	5.000	4.811	1862.33	0.0059	P	3.9
4	☐	10.000	9.500	3511.47	0.0113	P	1.0
5	☐	100.000	100.511	35317.40	0.1169	P	1.8
6	☐	200.000	199.774	69220.49	0.2320	P	0.7
7	☐	1.000					

y = 0.0012 * x + 3.1780E-004
R = 1.0000
DL = 0.2088
BEC = 0.2741

Weight: <None>
Min Conc: <None>



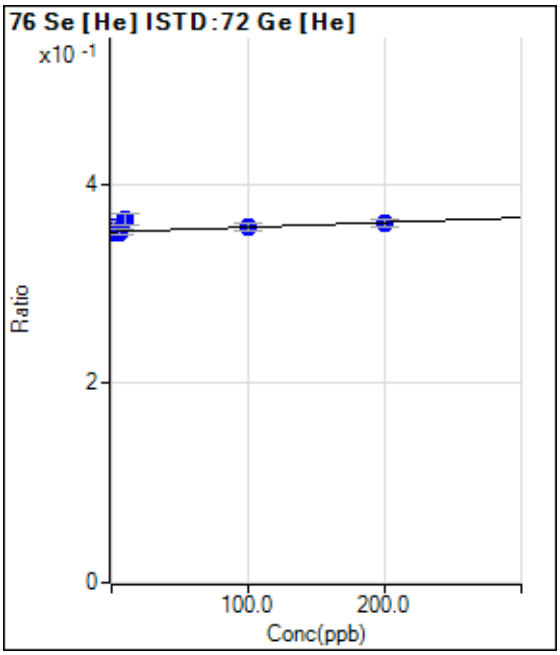
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	375118.97	0.3333	P	0.8
2	☐	2.000	2.846	378829.00	0.3334	P	1.1
3	☐	5.000	-8.665	378004.25	0.3329	P	0.5
4	☐	10.000	52.303	378462.01	0.3356	P	0.2
5	☐	100.000	95.326	377786.75	0.3375	P	1.1
6	☐	200.000	200.555	378369.01	0.3422	P	0.3
7	☐	1.000					

y = 4.4127E-005 * x + 0.3333
R = 0.9714
DL = 186.2
BEC = 7553

Weight: <None>
Min Conc: <None>

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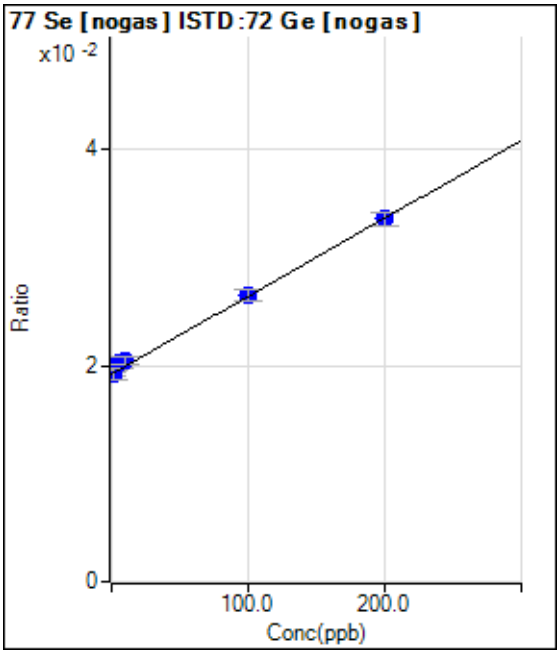
Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	109474.87	0.3518	P	1.7
2	☐	2.000	100.770	110883.33	0.3566	P	2.9
3	☐	5.000	-3.352	111074.29	0.3516	P	1.6
4	☐	10.000	251.150	112721.02	0.3639	P	3.2
5	☐	100.000	110.587	107918.31	0.3571	P	2.3
6	☐	200.000	181.870	107586.45	0.3605	P	1.9
7	☐	1.000					

y = 4.8066E-005 * x + 0.3518
R = 0.3978
DL = 363.3
BEC = 7319

Weight: <None>
Min Conc: <None>

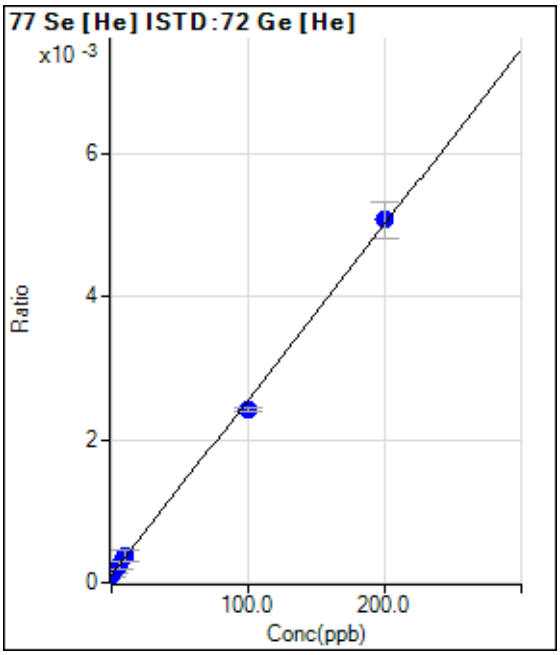


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	21619.93	0.0192	P	1.7
2	☐	2.000	-0.549	21780.31	0.0192	P	4.4
3	☐	5.000	14.627	23015.00	0.0203	P	5.2
4	☐	10.000	16.994	23048.47	0.0204	P	3.6
5	☐	100.000	100.887	29658.10	0.0265	P	3.9
6	☐	200.000	198.991	37125.02	0.0336	P	4.1
7	☐	1.000					

y = 7.2166E-005 * x + 0.0192
R = 0.9984
DL = 13.86
BEC = 266.2

Weight: <None>
Min Conc: <None>

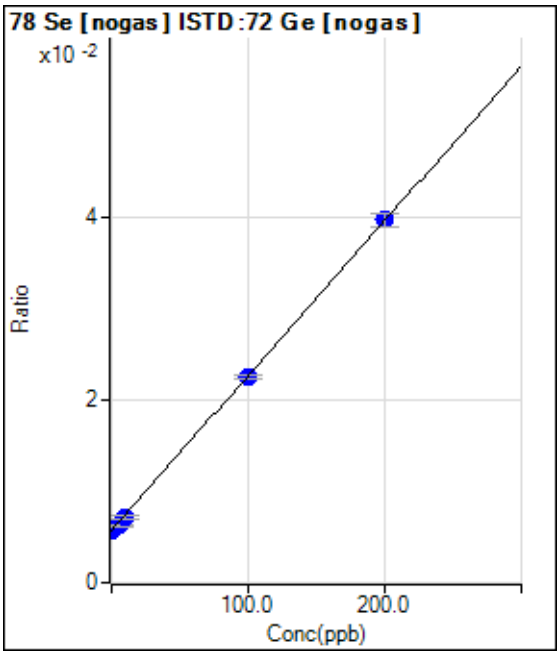
Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33.33	0.0001	P	45.6
2	☐	2.000	2.212	50.00	0.0002	P	21.4
3	☐	5.000	5.549	76.67	0.0002	P	45.9
4	☐	10.000	11.022	116.67	0.0004	P	41.2
5	☐	100.000	94.670	733.36	0.0024	P	2.7
6	☐	200.000	202.598	1513.42	0.0051	P	9.9
7	☐	1.000					

y = 2.4504E-005 * x + 1.0695E-004
R = 0.9995
DL = 5.973
BEC = 4.364

Weight: <None>
Min Conc: <None>



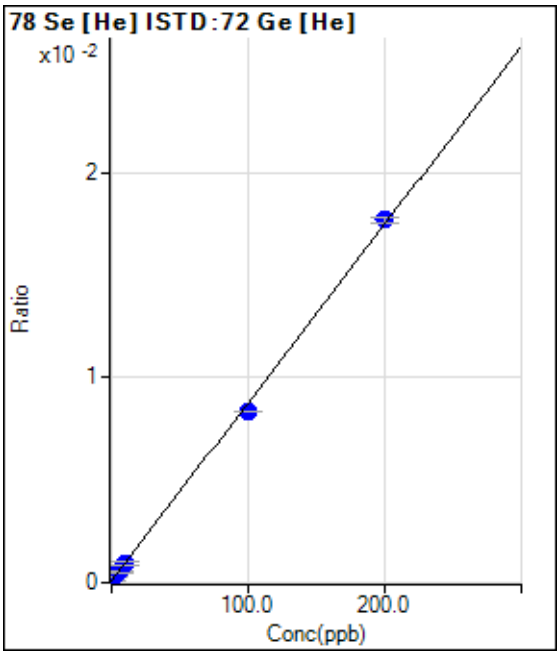
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6474.59	0.0058	P	5.1
2	☐	2.000	1.672	6858.06	0.0060	P	5.5
3	☐	5.000	3.242	7158.20	0.0063	P	3.4
4	☐	10.000	8.125	8041.92	0.0071	P	3.8
5	☐	100.000	99.131	25244.40	0.0226	P	1.3
6	☐	200.000	200.576	43940.14	0.0397	P	3.9
7	☐	1.000					

y = 1.6945E-004 * x + 0.0058
R = 1.0000
DL = 5.196
BEC = 33.96

Weight: <None>
Min Conc: <None>

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Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	28.00	0.0001	P	5.7
2	☐	2.000	2.245	88.67	0.0003	P	4.6
3	☐	5.000	4.940	164.00	0.0005	P	16.3
4	☐	10.000	9.540	284.67	0.0009	P	15.1
5	☐	100.000	94.813	2519.51	0.0083	P	0.1
6	☐	200.000	202.615	5285.45	0.0177	P	1.8
7	☐	1.000					

y = 8.6976E-005 * x + 8.9915E-005

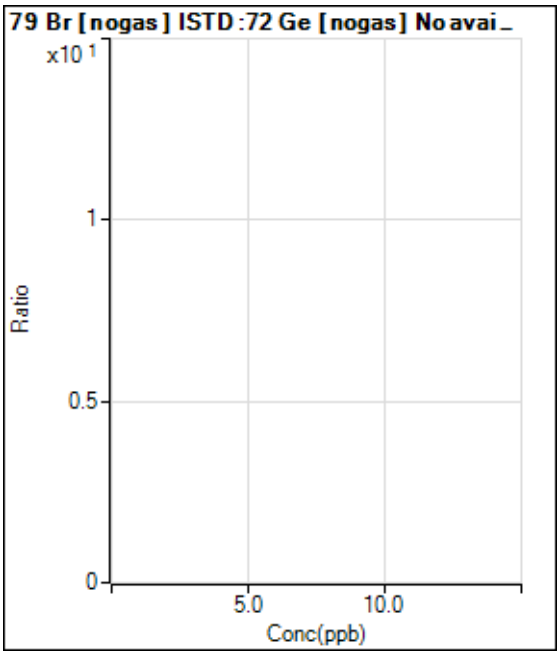
R = 0.9995

DL = 0.177

BEC = 1.034

Weight: <None>

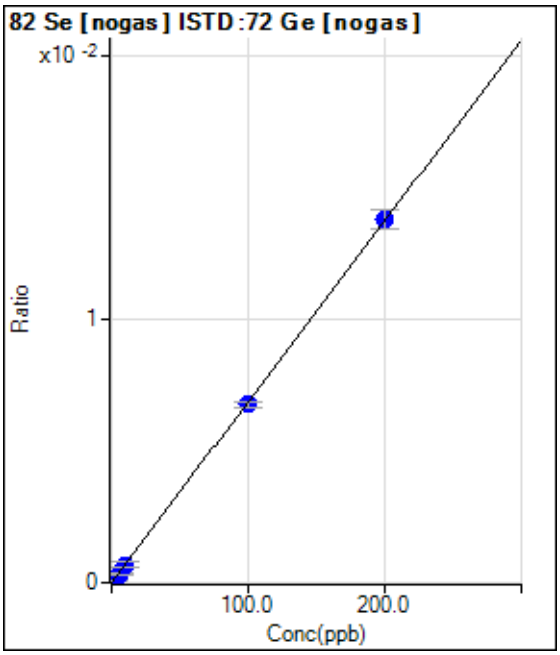
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

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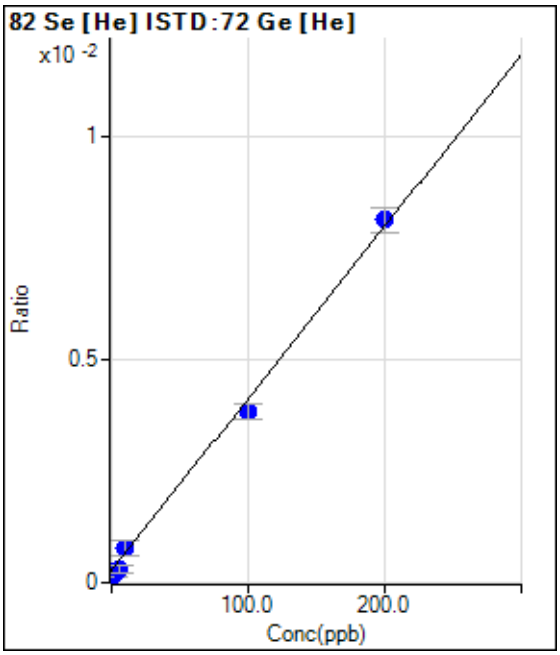
Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3.40	0.0000	P	2978.7
2	☐	2.000	1.092	89.53	0.0001	P	65.1
3	☐	5.000	4.718	372.67	0.0003	P	27.6
4	☐	10.000	9.993	776.83	0.0007	P	39.3
5	☐	100.000	98.654	7594.74	0.0068	P	3.5
6	☐	200.000	200.690	15253.12	0.0138	P	5.4
7	☐	1.000					

y = 6.8724E-005 * x + 3.5629E-006
R = 1.0000
DL = 4.633
BEC = 0.05184

Weight: <None>
Min Conc: <None>

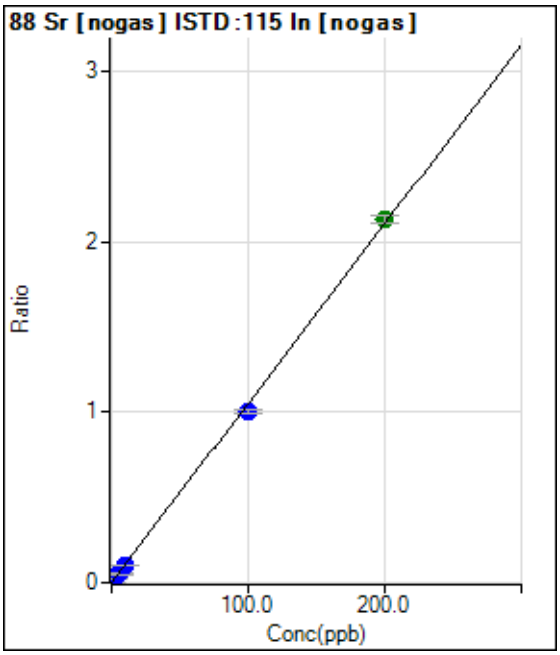


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	86.67	0.0003	P	25.6
2	☐	2.000	-2.234	60.00	0.0002	P	87.5
3	☐	5.000	0.713	96.67	0.0003	P	46.1
4	☐	10.000	12.946	240.00	0.0008	P	41.1
5	☐	100.000	92.180	1156.72	0.0038	P	8.4
6	☐	200.000	203.912	2426.87	0.0081	P	7.1
7	☐	1.000					

y = 3.8519E-005 * x + 2.7787E-004
R = 0.9986
DL = 5.549
BEC = 7.214

Weight: <None>
Min Conc: <None>

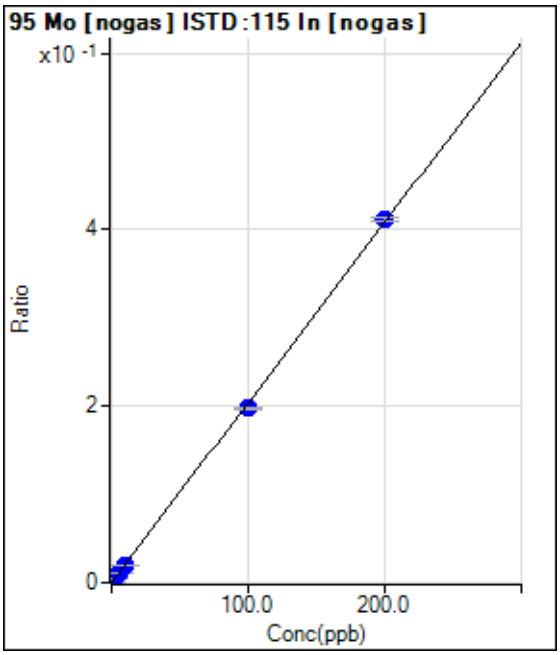
Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1366.74	0.0012	P	6.2
2	☐	2.000	1.872	24053.07	0.0209	P	4.2
3	☐	5.000	4.740	59151.44	0.0510	P	2.1
4	☐	10.000	9.309	114962.68	0.0990	P	1.3
5	☐	100.000	95.358	1142926.88	1.0036	P	2.1
6	☐	200.000	202.363	2344598.98	2.1285	A	2.1
7	☐	1.000					

y = 0.0105 * x + 0.0012
R = 0.9996
DL = 0.02088
BEC = 0.1121

Weight: <None>
Min Conc: <None>

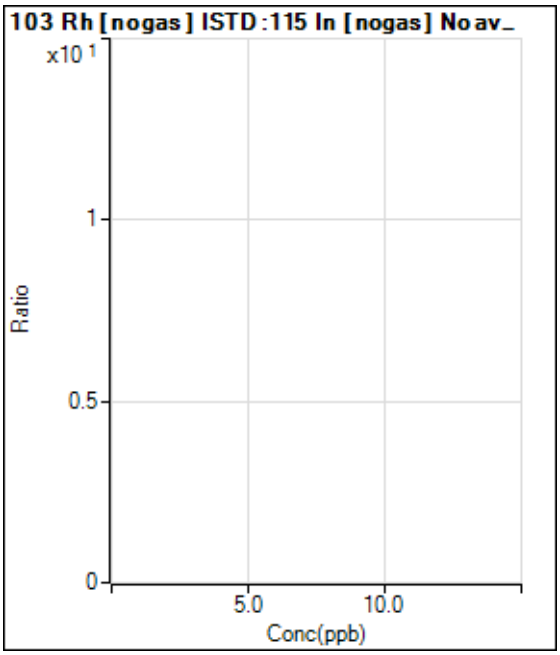


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	113.33	0.0001	P	53.2
2	☐	2.000	1.909	4600.66	0.0040	P	6.4
3	☐	5.000	4.852	11583.92	0.0100	P	2.6
4	☐	10.000	9.569	22754.65	0.0196	P	1.2
5	☐	100.000	96.826	224887.37	0.1975	P	1.2
6	☐	200.000	201.613	452801.74	0.4111	P	1.1
7	☐	1.000					

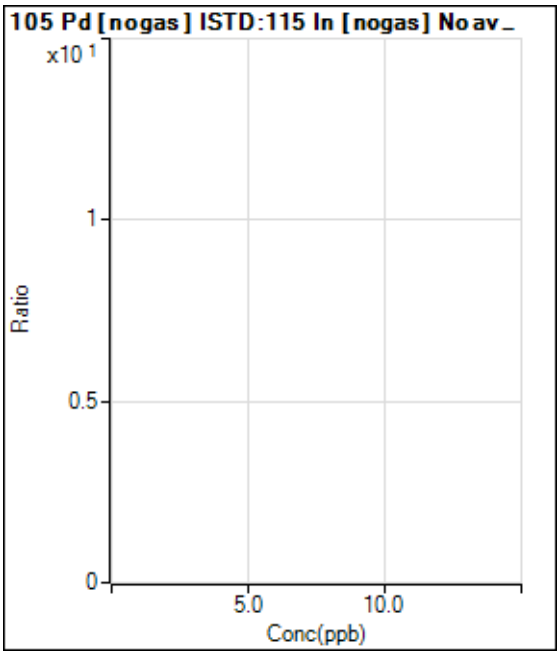
y = 0.0020 * x + 9.8165E-005
R = 0.9998
DL = 0.0768
BEC = 0.04816

Weight: <None>
Min Conc: <None>

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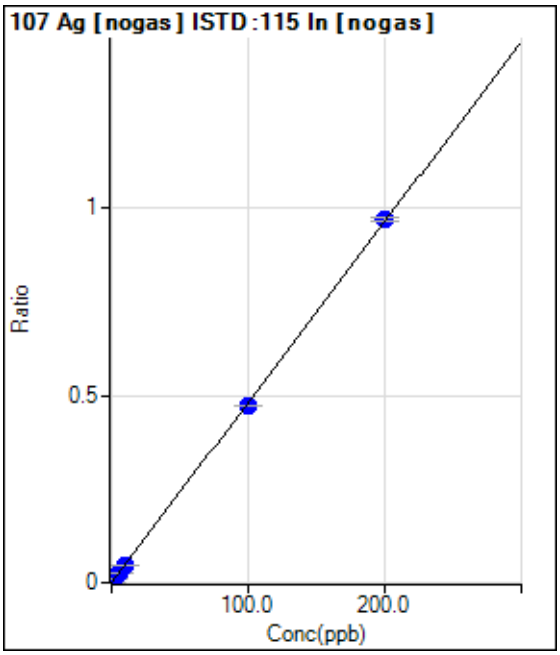


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

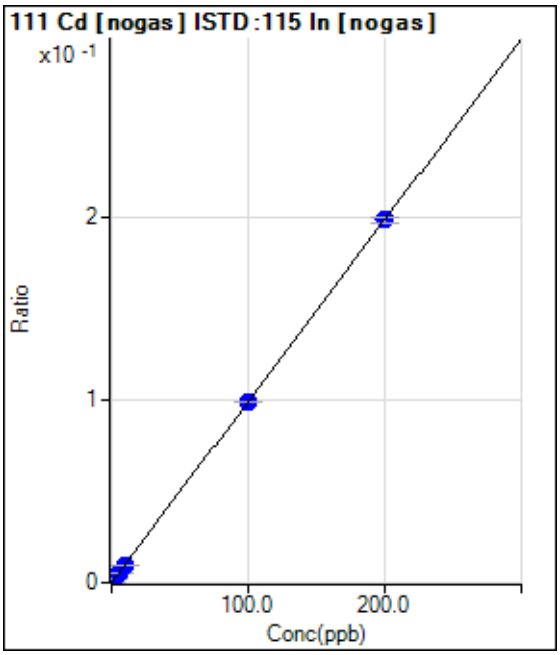
Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	350.01	0.0003	P	7.0
2	☐	2.000	1.911	10970.23	0.0095	P	5.5
3	☐	5.000	4.851	27444.82	0.0237	P	2.2
4	☐	10.000	9.618	54119.71	0.0466	P	1.0
5	☐	100.000	97.942	537595.77	0.4720	P	0.6
6	☐	200.000	201.053	1066995.40	0.9687	P	1.1
7	☐	1.000					

y = 0.0048 * x + 3.0175E-004
R = 0.9999
DL = 0.01318
BEC = 0.06265

Weight: <None>
Min Conc: <None>



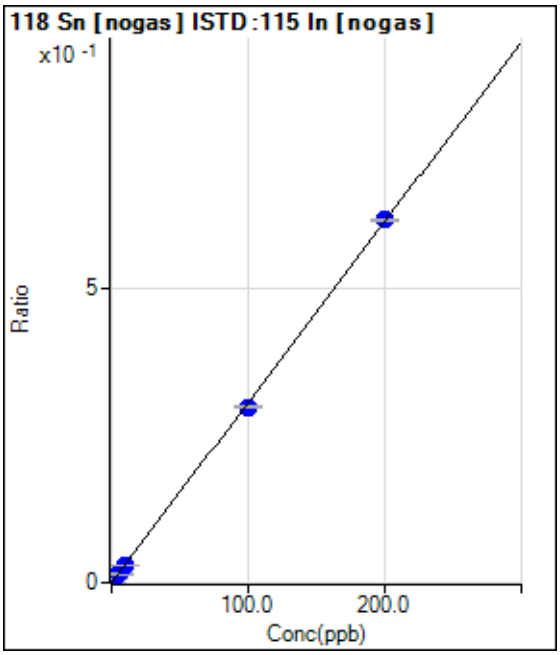
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0000	P	173.2
2	☐	2.000	1.925	2220.18	0.0019	P	7.1
3	☐	5.000	5.036	5817.73	0.0050	P	4.8
4	☐	10.000	9.658	11157.01	0.0096	P	6.8
5	☐	100.000	99.698	112866.54	0.0991	P	0.4
6	☐	200.000	200.168	219144.16	0.1989	P	1.3
7	☐	1.000					

y = 9.9383E-004 * x + 1.1224E-005
R = 1.0000
DL = 0.05868
BEC = 0.01129

Weight: <None>
Min Conc: <None>

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Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	510.01	0.0004	P	6.3
2	☐	2.000	1.885	7144.89	0.0062	P	5.4
3	☐	5.000	4.727	17242.08	0.0149	P	2.8
4	☐	10.000	9.638	34664.72	0.0299	P	1.9
5	☐	100.000	97.470	339428.39	0.2980	P	1.3
6	☐	200.000	201.291	677379.81	0.6149	P	0.5
7	☐	1.000					

y = 0.0031 * x + 4.3973E-004

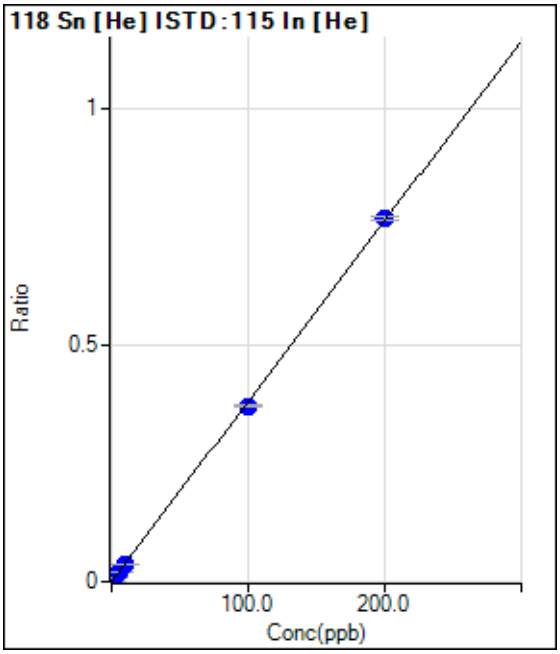
R = 0.9999

DL = 0.02726

BEC = 0.144

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	250.01	0.0006	P	35.4
2	☐	2.000	1.890	3410.39	0.0078	P	2.0
3	☐	5.000	4.936	8698.95	0.0194	P	2.3
4	☐	10.000	9.764	16921.67	0.0377	P	1.6
5	☐	100.000	97.477	161131.57	0.3717	P	1.1
6	☐	200.000	201.276	326023.53	0.7669	P	1.1
7	☐	1.000					

y = 0.0038 * x + 5.6179E-004

R = 0.9999

DL = 0.1569

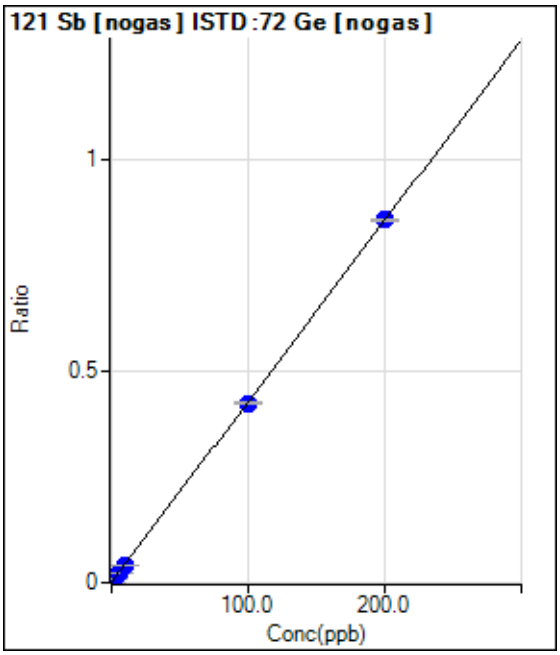
BEC = 0.1475

Weight: <None>

Min Conc: <None>

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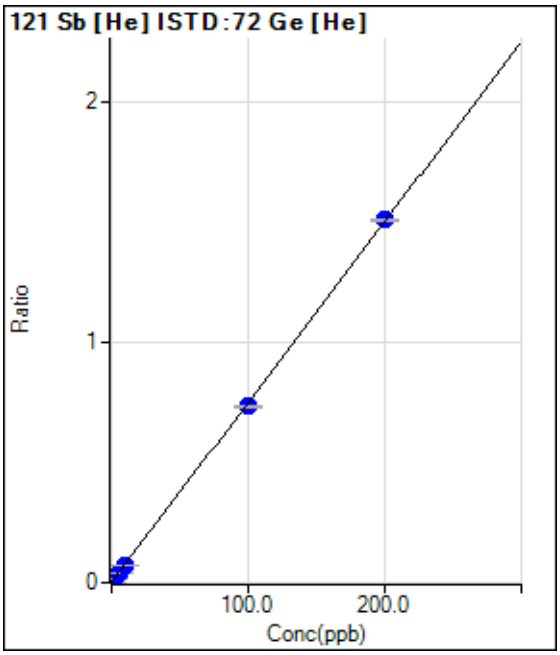
Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	790.03	0.0007	P	4.9
2	☐	2.000	1.943	10246.49	0.0090	P	2.3
3	☐	5.000	4.940	24794.52	0.0218	P	1.1
4	☐	10.000	9.733	47752.19	0.0423	P	0.4
5	☐	100.000	99.005	474991.49	0.4243	P	1.0
6	☐	200.000	200.513	949519.83	0.8586	P	0.4
7	☐	1.000					

y = 0.0043 * x + 7.0180E-004
R = 1.0000
DL = 0.02411
BEC = 0.164

Weight: <None>
Min Conc: <None>



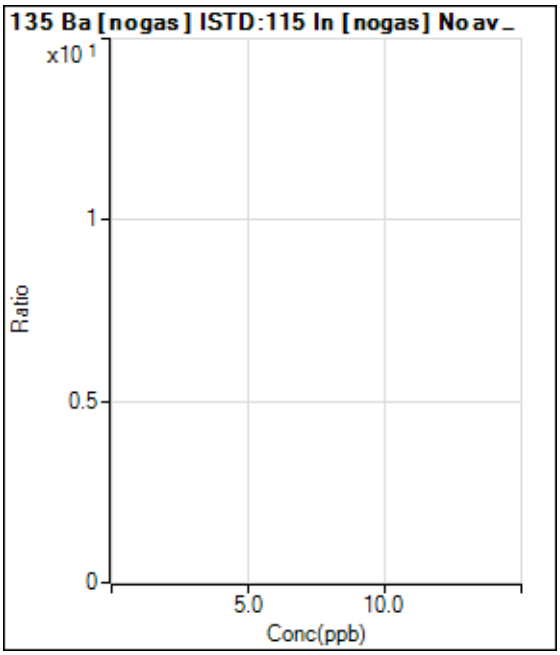
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	476.68	0.0015	P	2.5
2	☐	2.000	1.948	5007.45	0.0161	P	3.1
3	☐	5.000	4.834	11910.85	0.0377	P	2.7
4	☐	10.000	9.401	22271.08	0.0719	P	0.9
5	☐	100.000	97.760	221548.01	0.7331	P	1.1
6	☐	200.000	201.154	449634.28	1.5068	P	0.4
7	☐	1.000					

y = 0.0075 * x + 0.0015
R = 0.9999
DL = 0.01526
BEC = 0.2047

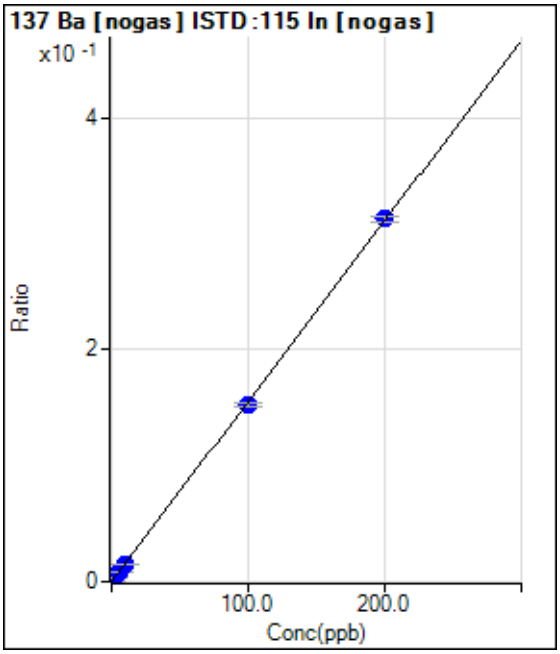
Weight: <None>
Min Conc: <None>

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Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	290.01	0.0003	P	2.2
2	☐	2.000	2.101	4057.22	0.0035	P	4.3
3	☐	5.000	4.837	9012.47	0.0078	P	2.9
4	☐	10.000	9.434	17322.29	0.0149	P	1.5
5	☐	100.000	97.891	173651.36	0.1525	P	2.2
6	☐	200.000	201.086	344769.38	0.3130	P	1.3
7	☐	1.000					

y = 0.0016 * x + 2.5026E-004

R = 0.9999

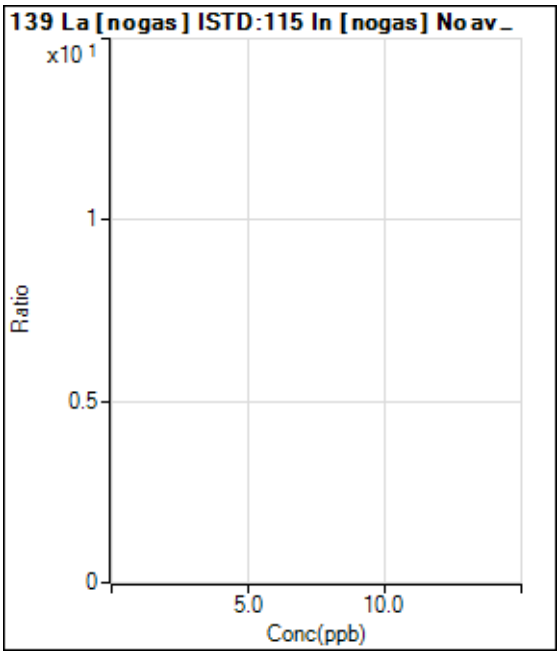
DL = 0.01039

BEC = 0.1609

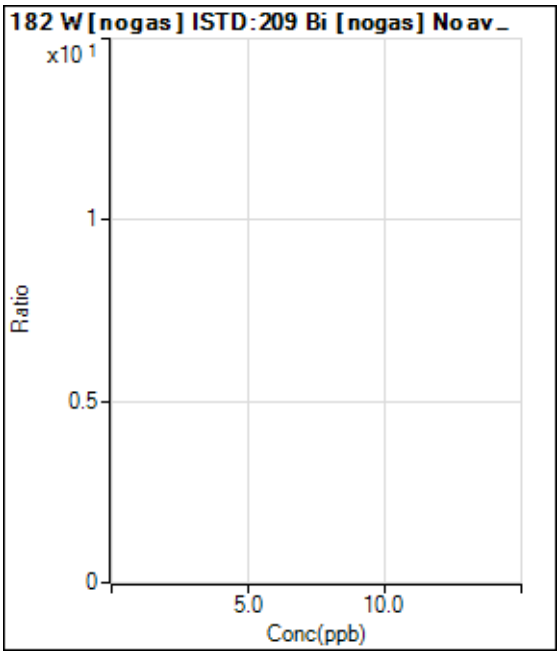
Weight: <None>

Min Conc: <None>

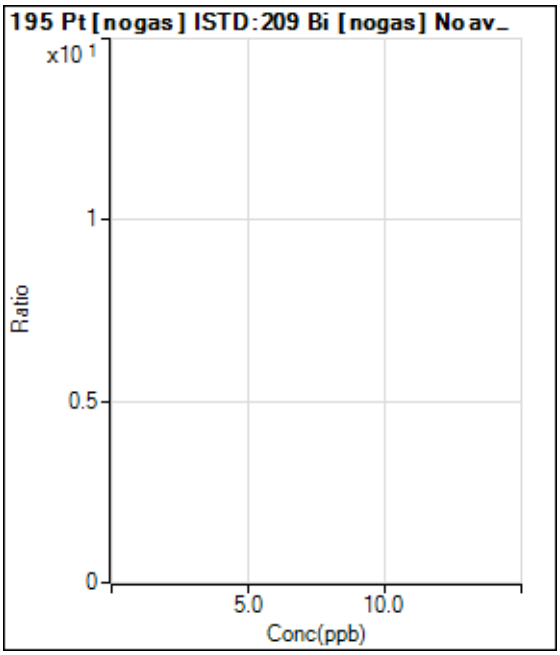
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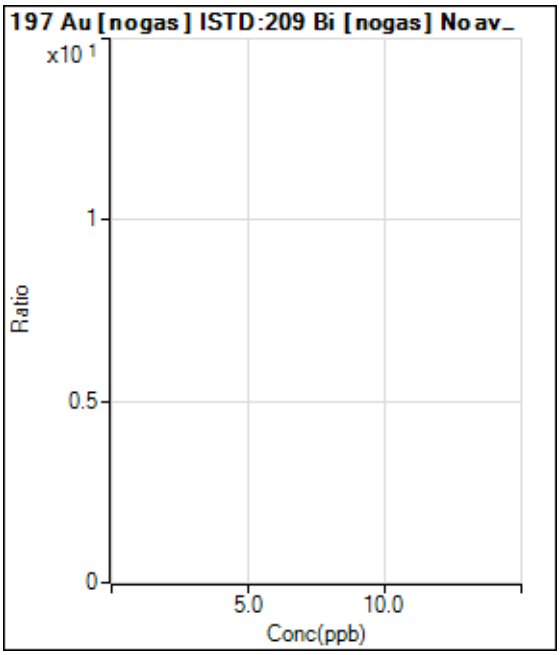
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					



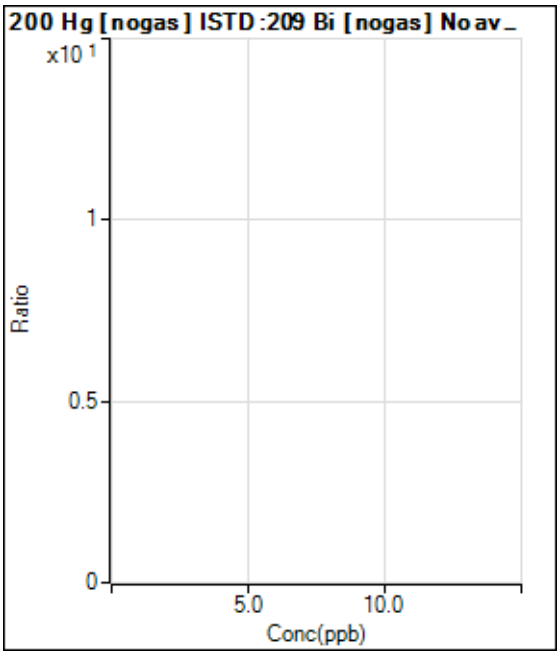
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					



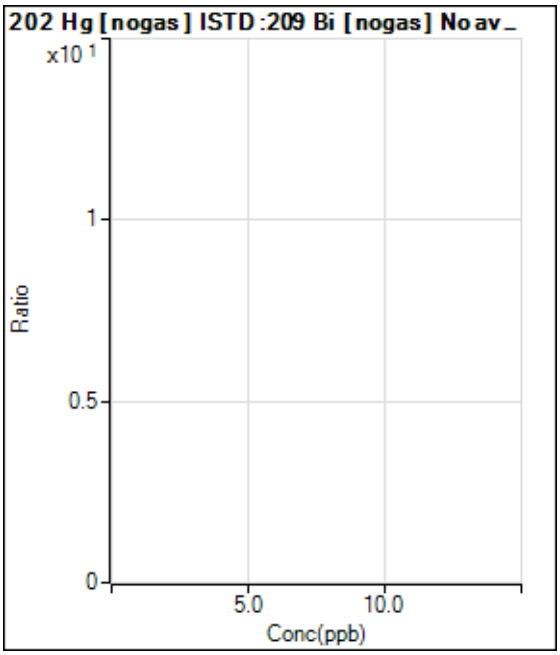
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

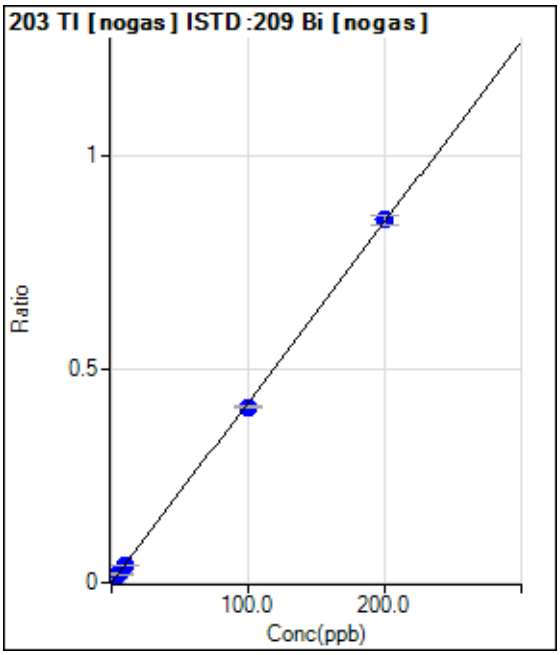


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	0.050					
3	☐	0.200					
4	☐	0.500					
5	☐	2.000					
6	☐	5.000					
7	☐	10.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	0.050					
3	☐	0.200					
4	☐	0.500					
5	☐	5.000					
6	☐	5.000					
7	☐	10.000					

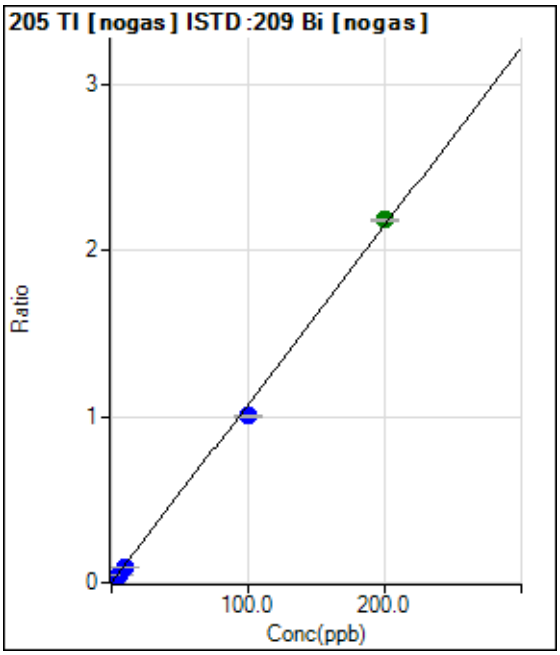
Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33.33	0.0000	P	69.5
2	☐	2.000	1.894	7972.05	0.0081	P	3.3
3	☐	5.000	4.835	20479.65	0.0205	P	2.0
4	☐	10.000	9.581	40333.47	0.0406	P	0.4
5	☐	100.000	97.525	402059.37	0.4127	P	0.8
6	☐	200.000	201.264	799123.61	0.8517	P	2.7
7	☐	1.000					

y = 0.0042 * x + 3.4026E-005
R = 0.9999
DL = 0.01676
BEC = 0.008041

Weight: <None>
Min Conc: <None>

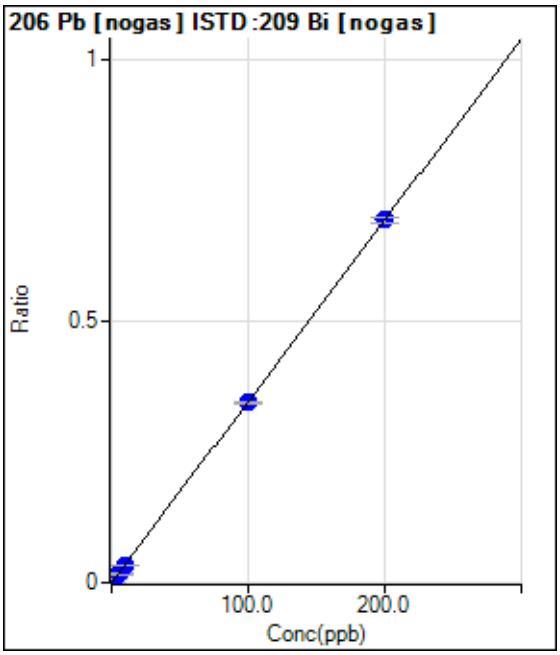


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	30.00	0.0000	P	56.8
2	☐	2.000	1.792	19108.10	0.0193	P	4.3
3	☐	5.000	4.511	48515.75	0.0485	P	2.4
4	☐	10.000	9.007	96305.32	0.0969	P	0.8
5	☐	100.000	93.526	979821.97	1.0058	P	1.5
6	☐	200.000	203.301	2051555.85	2.1862	A	0.7
7	☐	1.000					

y = 0.0108 * x + 3.0496E-005
R = 0.9993
DL = 0.00483
BEC = 0.002836

Weight: <None>
Min Conc: <None>

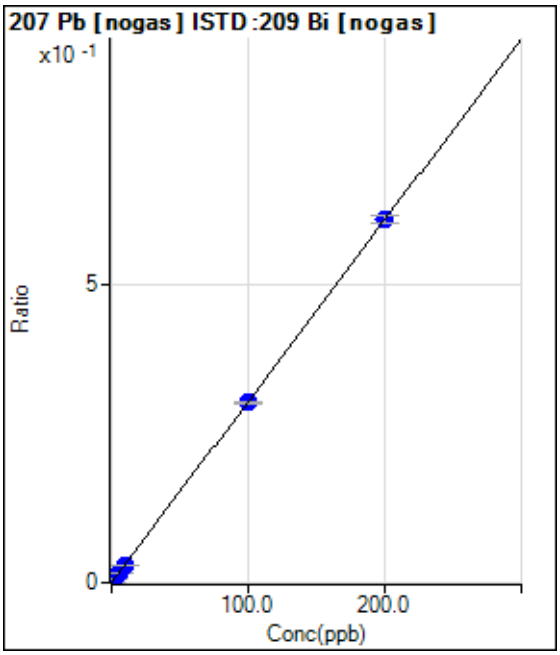
Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	66.67	0.0001	P	48.6
2	☐	2.000	2.045	7088.31	0.0072	P	7.3
3	☐	5.000	4.847	16858.91	0.0169	P	4.7
4	☐	10.000	9.786	33795.28	0.0340	P	0.3
5	☐	100.000	99.408	335876.62	0.3448	P	1.6
6	☐	200.000	200.310	651828.75	0.6946	P	1.7
7	☐	1.000					

y = 0.0035 * x + 6.8173E-005
R = 1.0000
DL = 0.02869
BEC = 0.01966

Weight: <None>
Min Conc: <None>



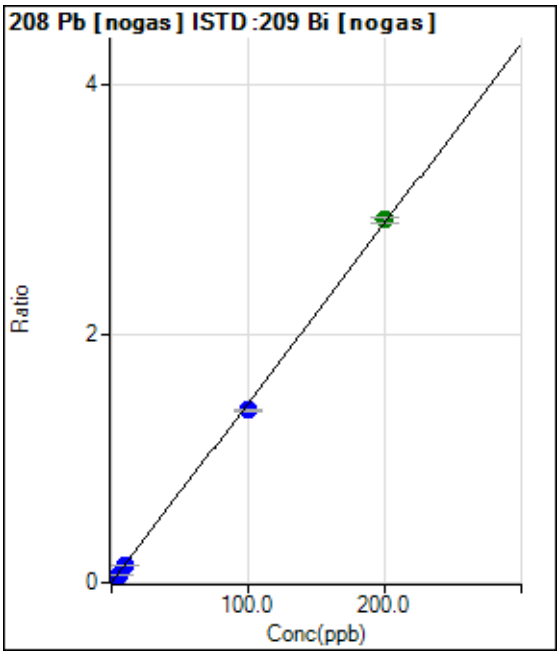
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	76.67	0.0001	P	15.3
2	☐	2.000	1.895	5794.45	0.0059	P	1.7
3	☐	5.000	4.932	15090.50	0.0151	P	4.4
4	☐	10.000	9.891	30024.59	0.0302	P	1.9
5	☐	100.000	99.504	295390.44	0.3032	P	1.5
6	☐	200.000	200.256	572482.80	0.6101	P	2.0
7	☐	1.000					

y = 0.0030 * x + 7.8210E-005
R = 1.0000
DL = 0.01177
BEC = 0.02567

Weight: <None>
Min Conc: <None>

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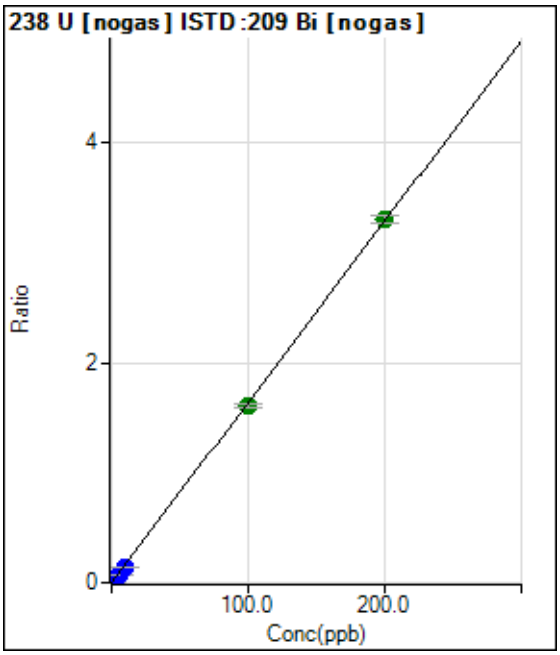
Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	356.67	0.0004	P	19.4
2	☐	2.000	1.906	27606.30	0.0279	P	2.5
3	☐	5.000	4.719	68453.86	0.0685	P	2.9
4	☐	10.000	9.411	135420.34	0.1362	P	1.6
5	☐	100.000	96.125	1352548.62	1.3883	P	1.1
6	☐	200.000	201.975	2736937.99	2.9166	A	1.4
7	☐	1.000					

y = 0.0144 * x + 3.6419E-004
R = 0.9997
DL = 0.01472
BEC = 0.02522

Weight: <None>
Min Conc: <None>



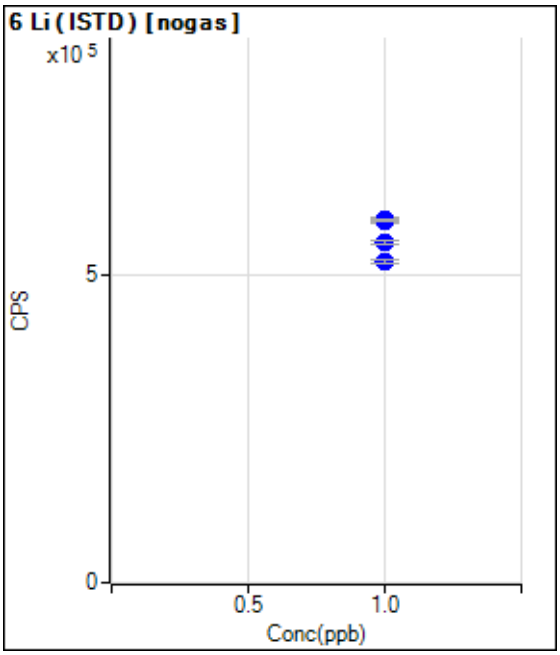
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0000	P	34.5
2	☐	2.000	1.793	29183.78	0.0295	P	2.9
3	☐	5.000	4.496	73821.21	0.0739	P	2.7
4	☐	10.000	8.853	144576.59	0.1455	P	1.7
5	☐	100.000	98.230	1571907.74	1.6137	A	1.7
6	☐	200.000	200.957	3097790.79	3.3013	A	2.2
7	☐	1.000					

y = 0.0164 * x + 1.6992E-005
R = 0.9999
DL = 0.001071
BEC = 0.001034

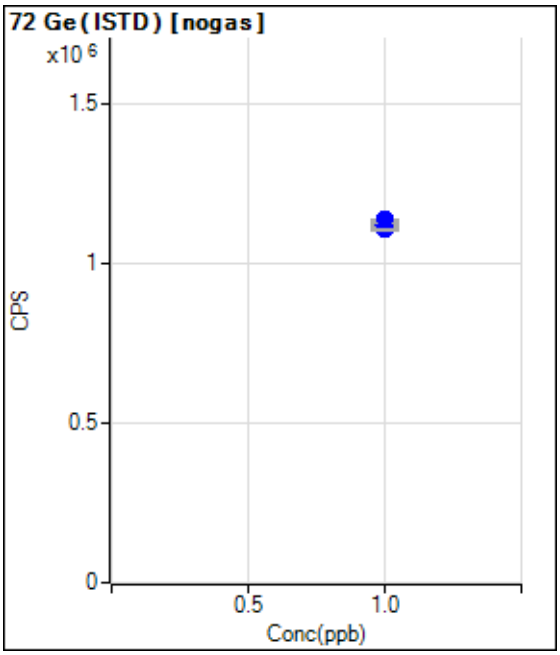
Weight: <None>
Min Conc: <None>

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Calibration for 090_ICV.d



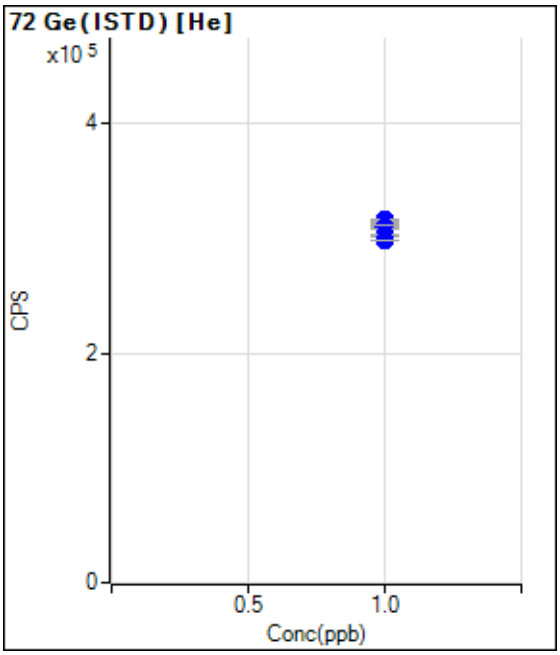
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2	☐	1.000		588512.83		P	0.9
3	☐	1.000		586613.04		P	1.3
4	☐	1.000		586695.50		P	0.6
5	☐	1.000		552864.16		P	1.3
6	☐	1.000		520818.73		P	0.7
7	☐	1.000					



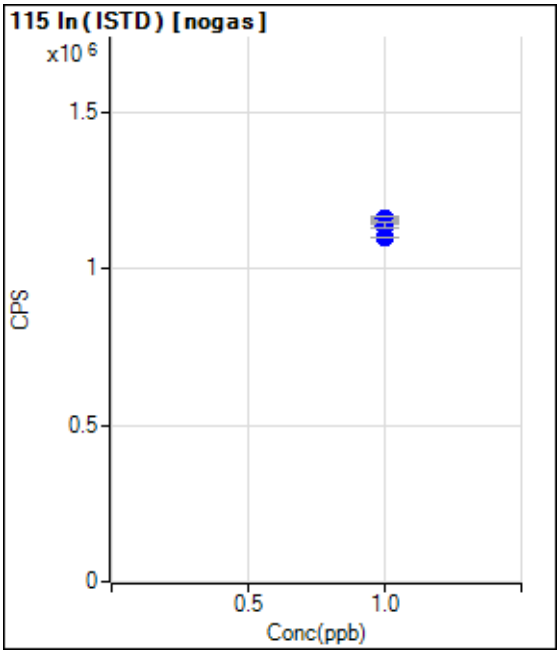
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
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2	☐	1.000		1136216.08		P	0.8
3	☐	1.000		1135441.36		P	0.8
4	☐	1.000		1127670.11		P	1.0
5	☐	1.000		1119397.87		P	0.8
6	☐	1.000		1105832.33		P	0.8
7	☐	1.000					

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Calibration for 090_ICV.d



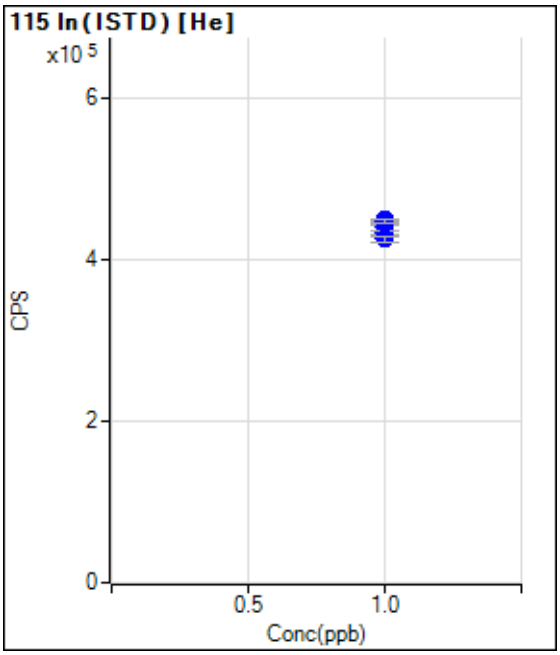
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2	☐	1.000		310899.61		P	1.6
3	☐	1.000		315899.57		P	0.7
4	☐	1.000		309848.16		P	1.4
5	☐	1.000		302230.12		P	0.8
6	☐	1.000		298406.62		P	0.3
7	☐	1.000					



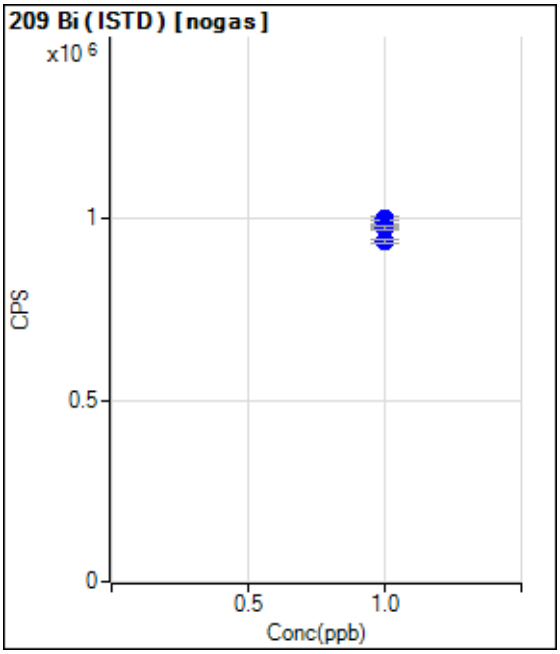
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
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2	☐	1.000		1154082.22		P	1.9
3	☐	1.000		1159625.88		P	0.9
4	☐	1.000		1160826.63		P	0.9
5	☐	1.000		1138984.81		P	1.6
6	☐	1.000		1101523.46		P	0.1
7	☐	1.000					

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Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		444866.66		P	0.2
2	☐	1.000		439478.94		P	1.1
3	☐	1.000		449353.98		P	0.8
4	☐	1.000		448424.25		P	0.8
5	☐	1.000		433534.21		P	1.3
6	☐	1.000		425157.30		P	1.5
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		980503.21		P	0.9
2	☐	1.000		990320.58		P	0.8
3	☐	1.000		999390.22		P	1.0
4	☐	1.000		993971.76		P	0.1
5	☐	1.000		974202.75		P	1.1
6	☐	1.000		938443.32		P	1.0
7	☐	1.000					

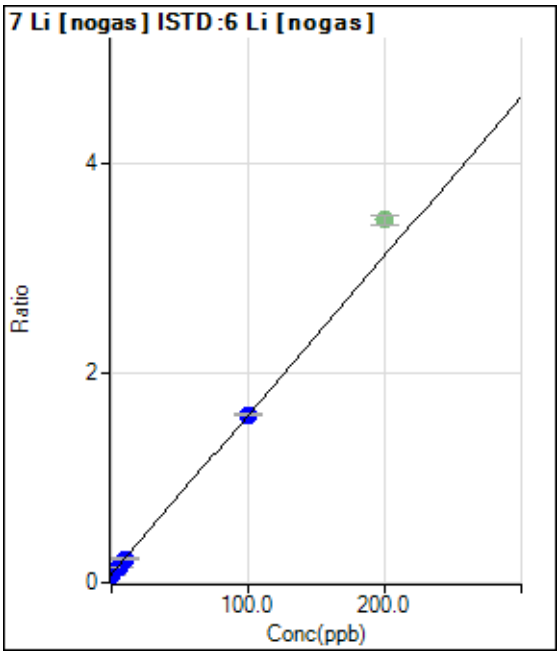
Calibration for 026_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\051120A.b\
Analysis File: 051120A.batch.bin
DA Date-Time: 5/11/2020 5:48:09 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	019CALB.d	CAL BLK	5/11/2020 1:01:40 PM
2	020CALS.d	2/10/200	5/11/2020 1:04:05 PM
3	021CALS.d	5/25/500	5/11/2020 1:06:29 PM
4	022CALS.d	10/50/1000	5/11/2020 1:08:51 PM
5	023CALS.d	100/500/10K	5/11/2020 1:11:13 PM
6	024CALS.d	200/1000/20K	5/11/2020 1:13:35 PM
7			

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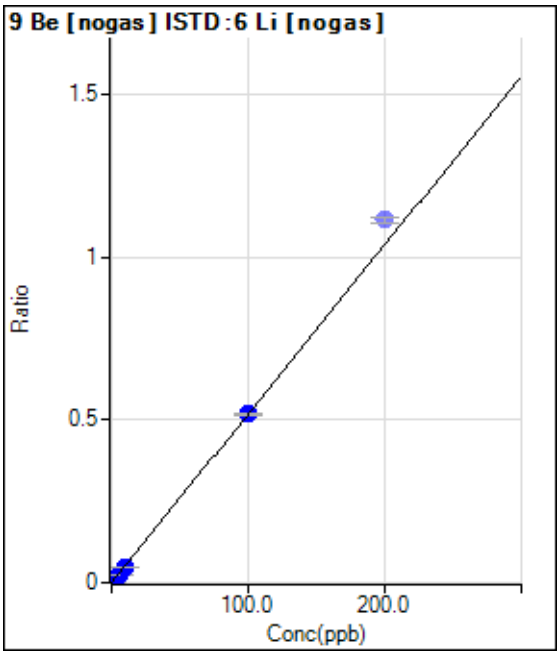
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	54068.71	0.0824	P	2.2
2	☐	2.000	1.865	73213.00	0.1107	P	1.1
3	☐	5.000	4.725	101176.33	0.1542	P	0.5
4	☐	10.000	9.556	148692.62	0.2277	P	2.1
5	☐	100.000	100.061	985012.04	1.6041	P	0.6
6	☑	200.000		1928000.13	3.4675	A	2.6
7	☐	1.000					

y = 0.0152 * x + 0.0824
R = 1.0000
DL = 0.3629
BEC = 5.417

Weight: <None>
Min Conc: <None>



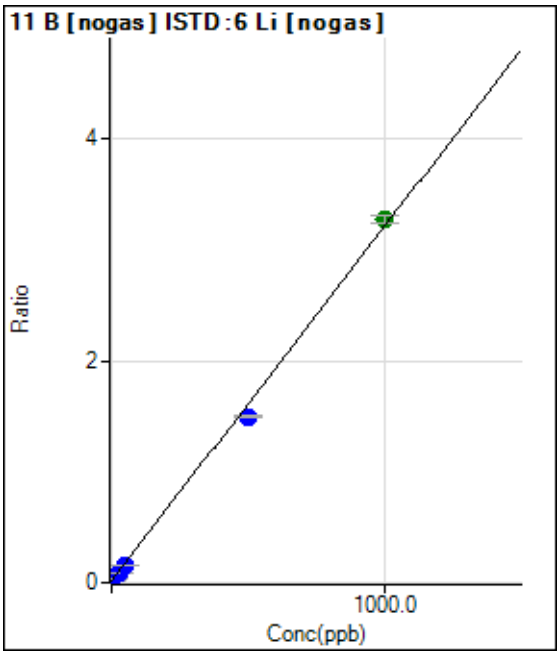
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	56.67	0.0001	P	43.4
2	☐	2.000	1.885	6511.14	0.0098	P	1.1
3	☐	5.000	4.820	16433.75	0.0251	P	2.1
4	☐	10.000	9.301	31515.80	0.0483	P	0.8
5	☐	100.000	100.081	318308.32	0.5184	P	1.2
6	☑	200.000		618965.81	1.1132	P	1.3
7	☐	1.000					

y = 0.0052 * x + 8.6293E-005
R = 1.0000
DL = 0.0217
BEC = 0.01666

Weight: <None>
Min Conc: <None>

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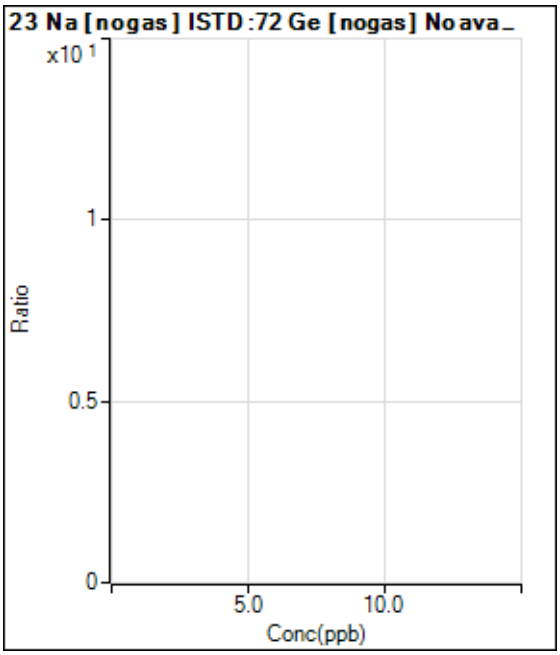
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10953.18	0.0167	P	3.0
2	☐	10.000	8.363	28681.46	0.0434	P	2.4
3	☐	25.000	21.684	56350.43	0.0859	P	0.9
4	☐	50.000	43.523	101622.97	0.1556	P	1.6
5	☐	500.000	463.660	918909.83	1.4966	P	1.5
6	☐	1000.000	1018.593	1817221.79	3.2679	A	2.0
7	☐	5.000					

y = 0.0032 * x + 0.0167
R = 0.9991
DL = 0.4703
BEC = 5.228

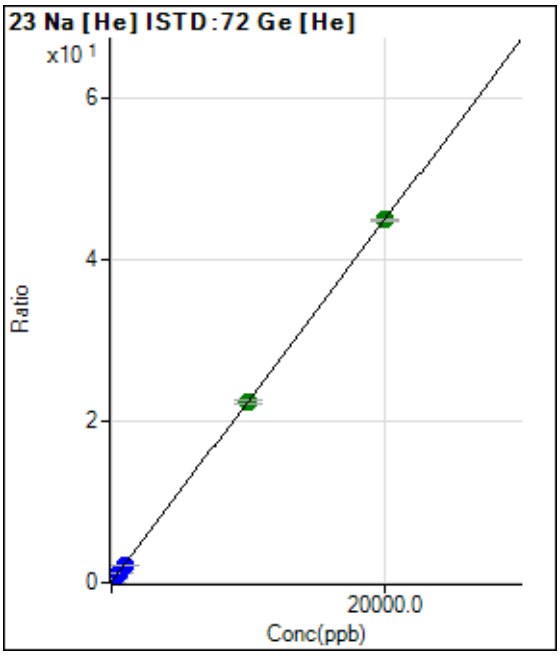
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

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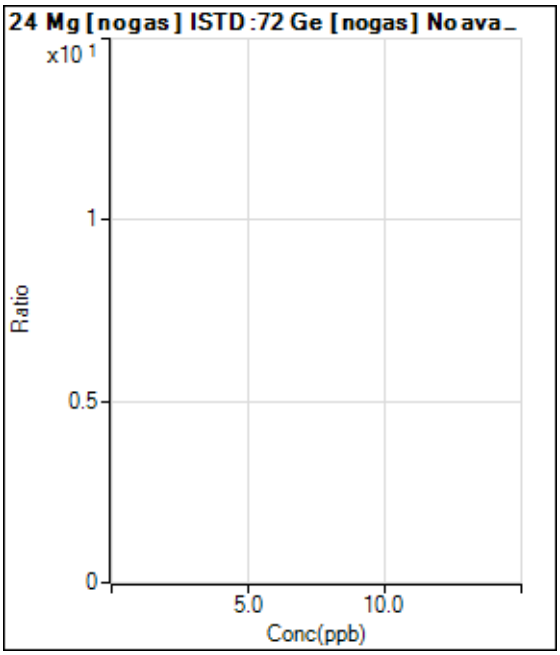
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26448.66	0.0721	P	2.3
2	☐	200.000	194.532	185356.27	0.5086	P	2.1
3	☐	500.000	482.622	422659.03	1.1549	P	1.1
4	☐	1000.000	958.430	800882.83	2.2225	P	2.5
5	☐	10000.000	9964.614	7954069.26	22.4287	A	1.8
6	☐	20000.000	20020.260	15416881.44	44.9895	A	0.8
7	☐	100.000					

y = 0.0022 * x + 0.0721
R = 1.0000
DL = 2.183
BEC = 32.15

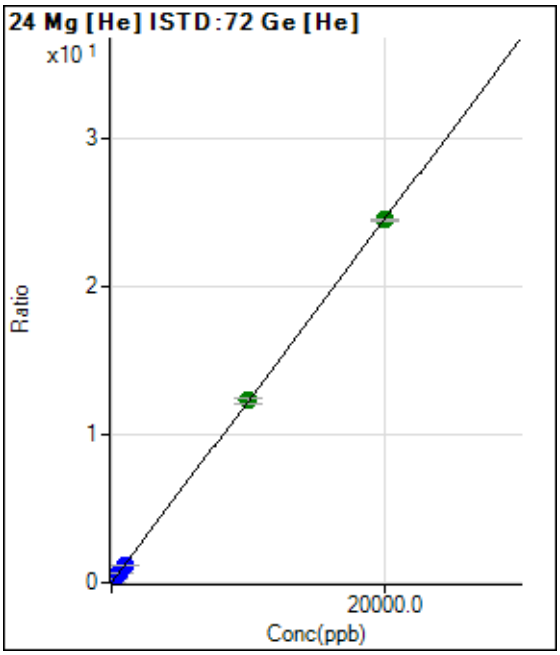
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

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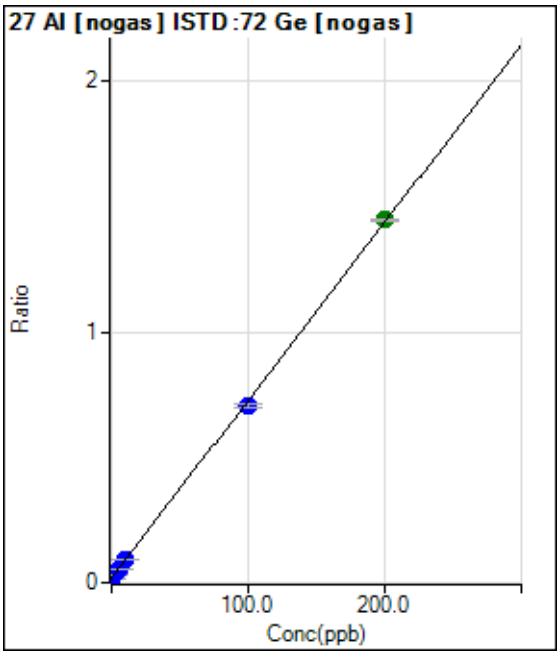
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	453.35	0.0012	P	13.9
2	☐	200.000	198.334	89121.79	0.2445	P	0.4
3	☐	500.000	495.314	222799.92	0.6088	P	1.4
4	☐	1000.000	955.737	422928.59	1.1735	P	1.2
5	☐	10000.000	10045.656	4369920.45	12.3231	A	3.3
6	☐	20000.000	19979.519	8398588.83	24.5079	A	0.7
7	☐	100.000					

y = 0.0012 * x + 0.0012
R = 1.0000
DL = 0.4195
BEC = 1.009

Weight: <None>
Min Conc: <None>



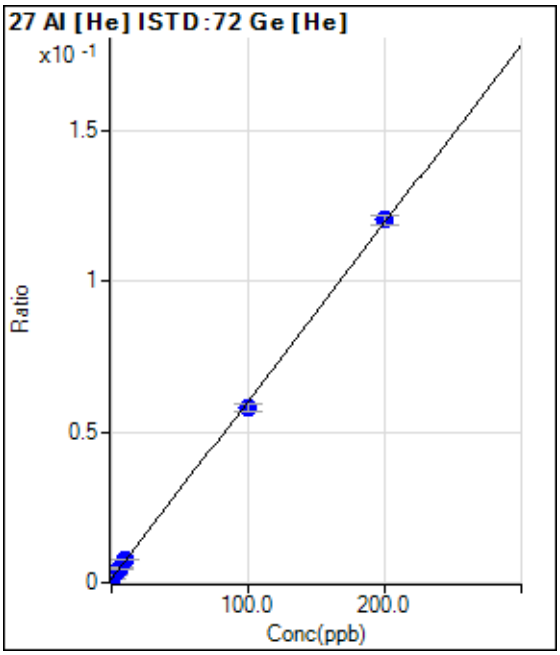
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23848.62	0.0184	P	2.1
2	☐	2.000	2.195	45007.16	0.0340	P	4.9
3	☐	5.000	5.281	73428.49	0.0559	P	3.4
4	☐	10.000	10.183	121282.61	0.0906	P	2.3
5	☐	100.000	96.838	937146.24	0.7053	P	2.6
6	☐	200.000	201.563	1861960.18	1.4482	A	0.6
7	☐	1.000					

y = 0.0071 * x + 0.0184
R = 0.9998
DL = 0.1634
BEC = 2.594

Weight: <None>
Min Conc: <None>

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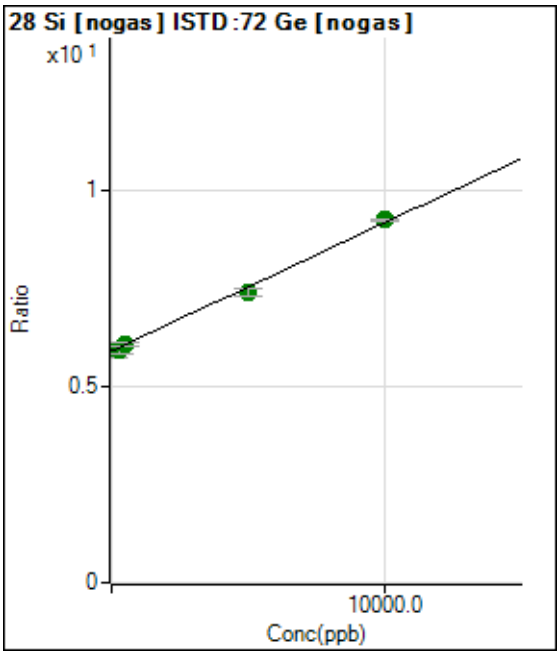
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	450.02	0.0012	P	9.7
2	☐	2.000	2.679	1023.37	0.0028	P	8.6
3	☐	5.000	5.599	1660.10	0.0045	P	15.8
4	☐	10.000	11.020	2786.92	0.0077	P	5.7
5	☐	100.000	96.422	20628.17	0.0582	P	3.8
6	☐	200.000	201.716	41241.74	0.1204	P	2.3
7	☐	1.000					

y = 5.9056E-004 * x + 0.0012
R = 0.9997
DL = 0.6024
BEC = 2.078

Weight: <None>
Min Conc: <None>



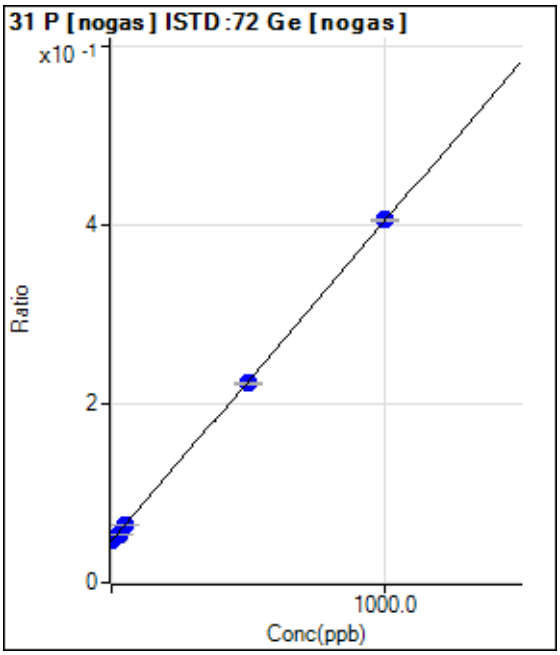
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7674929.05	5.9211	A	1.7
2	☐	100.000	49.823	7861975.09	5.9375	A	6.8
3	☐	250.000	127.781	7837751.55	5.9630	A	3.4
4	☐	500.000	502.040	8144312.80	6.0857	A	1.7
5	☐	5000.000	4586.915	9866206.52	7.4247	A	3.0
6	☐	10000.000	10209.998	11916018.57	9.2679	A	0.3
7	☐	50.000					

y = 3.2780E-004 * x + 5.9211
R = 0.9988
DL = 930.2
BEC = 1.806E+04

Weight: <None>
Min Conc: <None>

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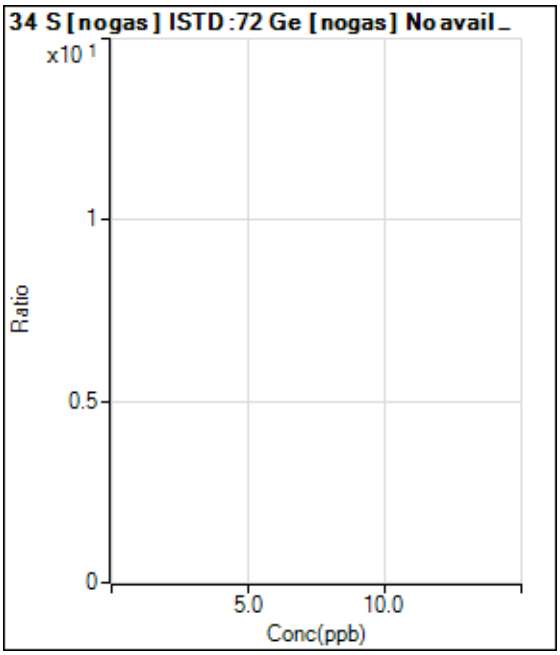
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	60513.65	0.0467	P	3.3
2	☐	10.000	8.042	65663.69	0.0496	P	5.8
3	☐	25.000	19.654	70638.01	0.0537	P	1.5
4	☐	50.000	49.506	86212.13	0.0644	P	1.2
5	☐	500.000	492.029	296159.48	0.2229	P	1.5
6	☐	1000.000	1004.164	522341.37	0.4063	P	0.4
7	☐	5.000					

y = 3.5807E-004 * x + 0.0467
R = 1.0000
DL = 12.86
BEC = 130.4

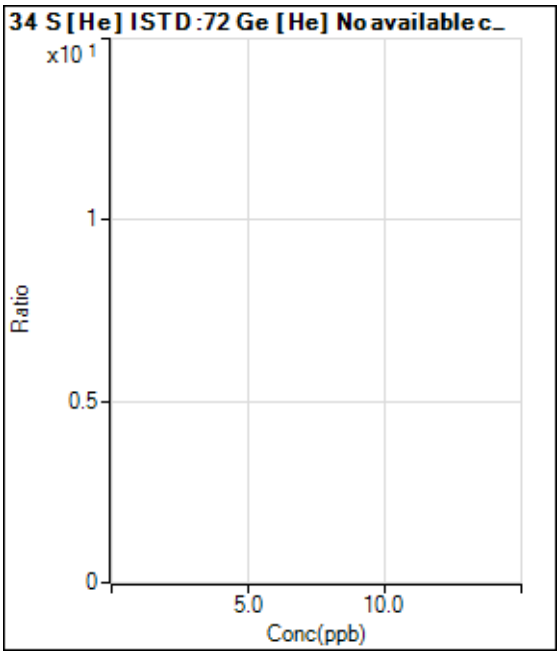
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Min Conc: <None>



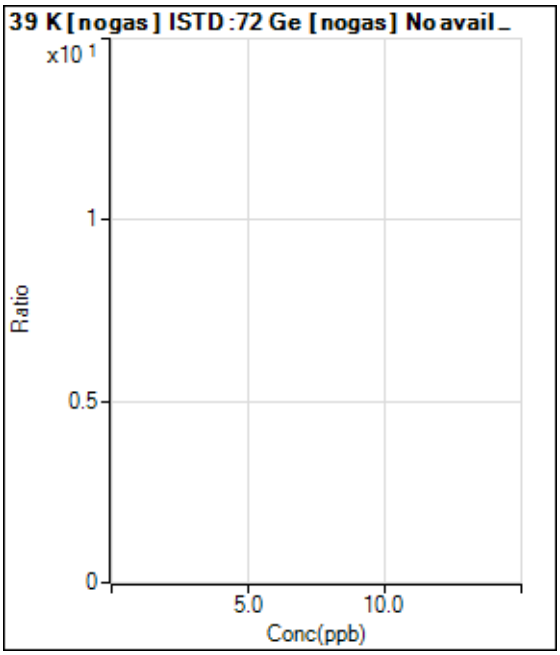
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	400.000					
3	☐	1000.000					
4	☐	2000.000					
5	☐	20000.000					
6	☐	40000.000					
7	☐	200.000					

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Calibration for 026_ICV.d

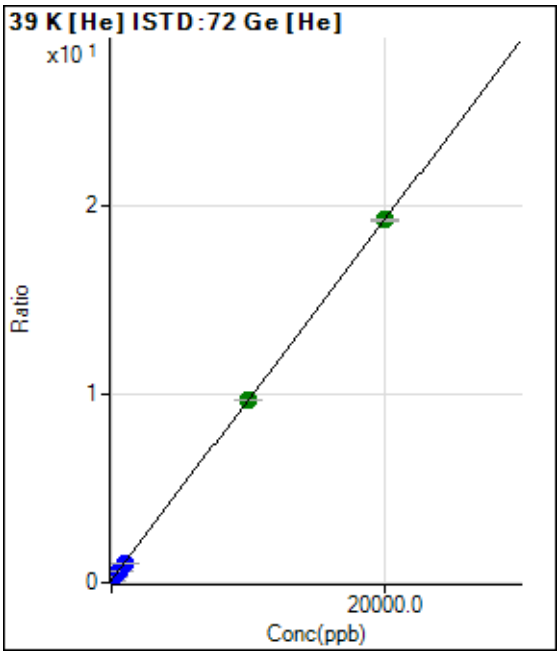


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	400.000					
3	☐	1000.000					
4	☐	2000.000					
5	☐	20000.000					
6	☐	40000.000					
7	☐	200.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	47517.14	0.1296	P	2.8
2	☐	200.000	196.176	115469.18	0.3168	P	0.6
3	☐	500.000	488.134	217879.01	0.5953	P	1.8
4	☐	1000.000	957.912	376121.38	1.0436	P	1.4
5	☐	10000.000	10000.486	3429921.83	9.6714	A	0.9
6	☐	20000.000	20002.196	6584504.69	19.2143	A	0.3
7	☐	100.000					

y = 9.5413E-004 * x + 0.1296

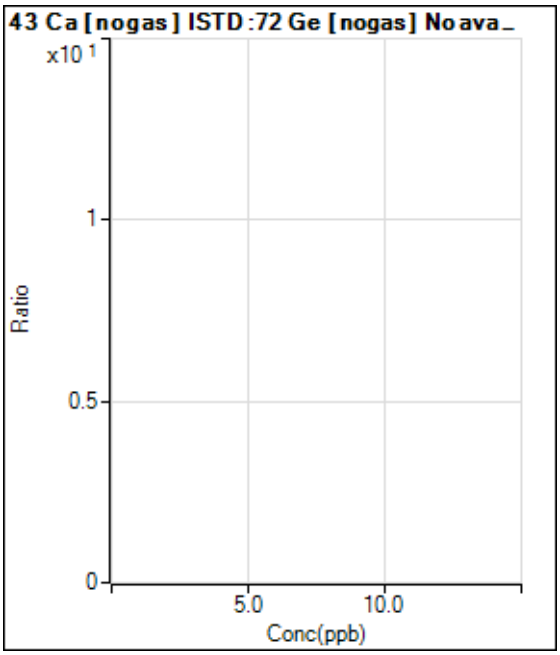
R = 1.0000

DL = 11.27

BEC = 135.8

Weight: <None>

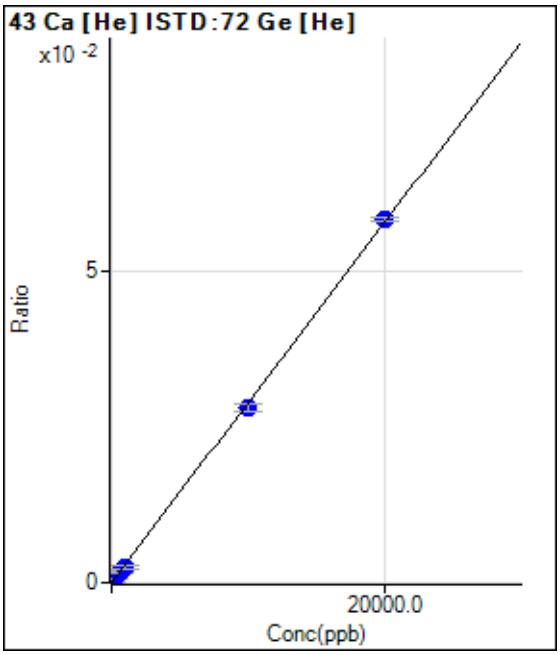
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

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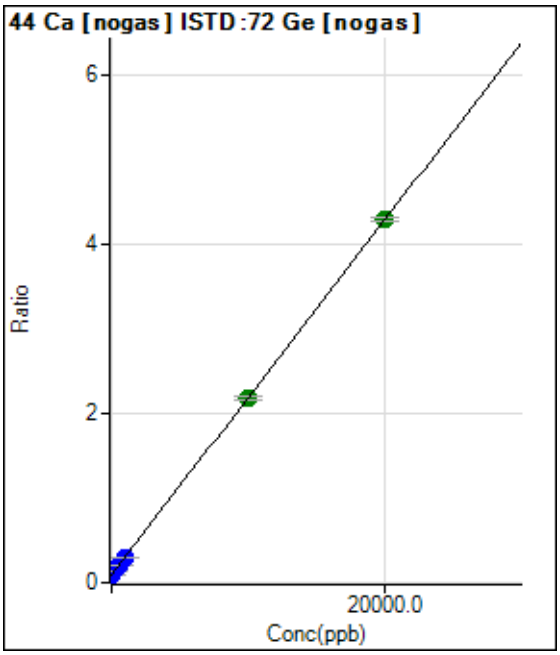
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6.67	0.0000	P	86.6
2	☐	200.000	224.606	243.34	0.0007	P	18.0
3	☐	500.000	569.090	610.02	0.0017	P	15.4
4	☐	1000.000	853.922	896.70	0.0025	P	22.3
5	☐	10000.000	9708.147	9979.49	0.0281	P	3.6
6	☐	20000.000	20151.257	20007.68	0.0584	P	1.0
7	☐	100.000					

y = 2.8963E-006 * x + 1.8118E-005
R = 0.9998
DL = 16.25
BEC = 6.255

Weight: <None>
Min Conc: <None>

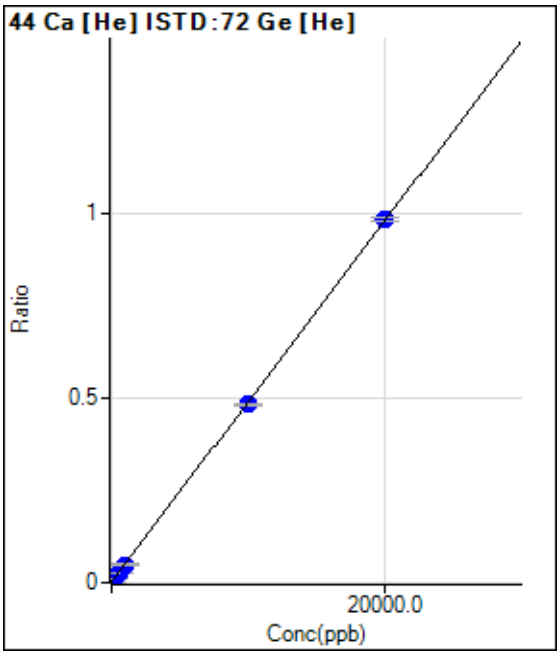


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	122109.26	0.0942	P	2.1
2	☐	200.000	176.799	174070.01	0.1313	P	2.2
3	☐	500.000	499.276	261528.19	0.1989	P	1.9
4	☐	1000.000	949.686	392718.68	0.2934	P	1.3
5	☐	10000.000	9971.171	2904992.98	2.1863	A	2.5
6	☐	20000.000	20017.180	5520910.33	4.2941	A	1.0
7	☐	100.000					

y = 2.0982E-004 * x + 0.0942
R = 1.0000
DL = 28.89
BEC = 448.9

Weight: <None>
Min Conc: <None>

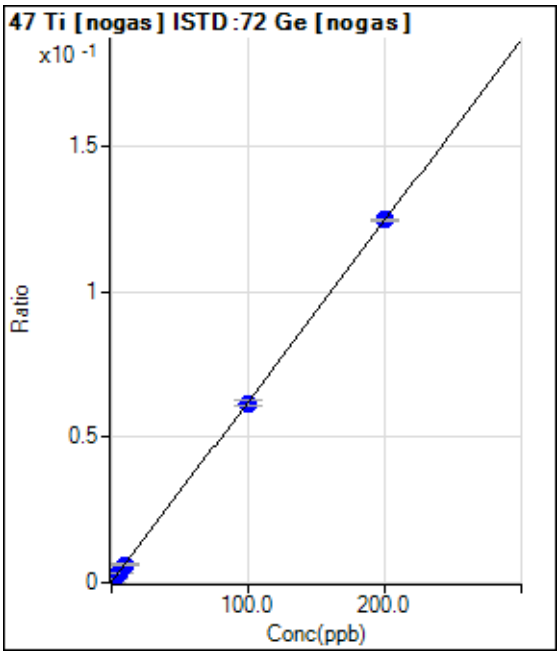
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	546.68	0.0015	P	9.3
2	☐	200.000	206.260	4213.87	0.0116	P	6.4
3	☐	500.000	483.851	9192.39	0.0251	P	1.4
4	☐	1000.000	970.698	17618.51	0.0489	P	4.2
5	☐	10000.000	9832.683	170822.08	0.4817	P	0.5
6	☐	20000.000	20085.465	336639.32	0.9823	P	1.2
7	☐	100.000					

y = 4.8834E-005 * x + 0.0015
R = 1.0000
DL = 8.555
BEC = 30.54

Weight: <None>
Min Conc: <None>



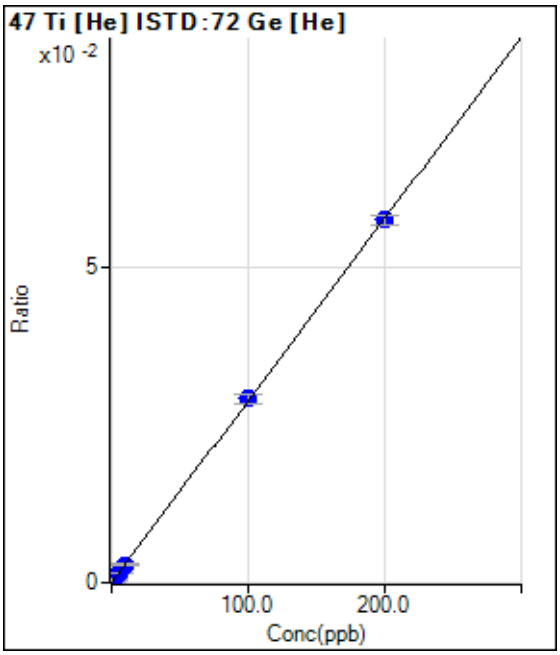
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	163.33	0.0001	P	14.6
2	☐	2.000	1.924	1756.78	0.0013	P	5.6
3	☐	5.000	5.197	4420.60	0.0034	P	4.5
4	☐	10.000	9.869	8392.04	0.0063	P	5.3
5	☐	100.000	99.170	82167.96	0.0618	P	3.6
6	☐	200.000	200.417	160509.32	0.1248	P	0.8
7	☐	1.000					

y = 6.2229E-004 * x + 1.2591E-004
R = 1.0000
DL = 0.08854
BEC = 0.2023

Weight: <None>
Min Conc: <None>

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Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10.00	0.0000	P	0.6
2	☐	2.000	1.617	180.00	0.0005	P	23.3
3	☐	5.000	4.841	520.02	0.0014	P	2.2
4	☐	10.000	9.865	1033.38	0.0029	P	11.7
5	☐	100.000	101.083	10333.02	0.0291	P	4.7
6	☐	200.000	199.473	19690.62	0.0575	P	2.3
7	☐	1.000					

y = 2.8793E-004 * x + 2.7276E-005

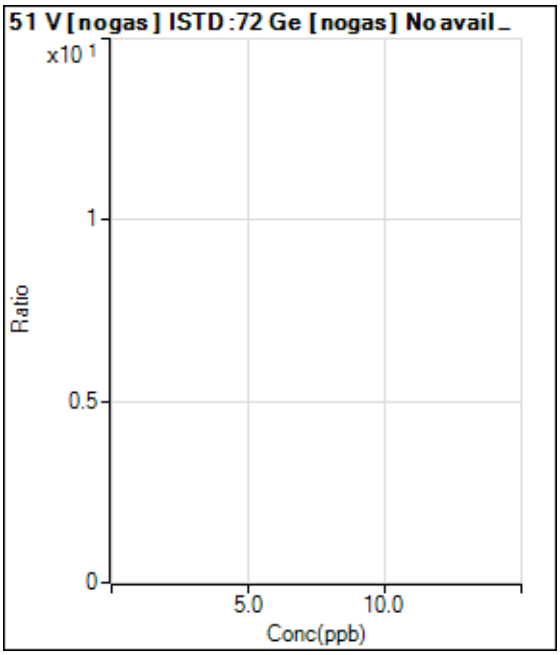
R = 1.0000

DL = 0.001803

BEC = 0.09473

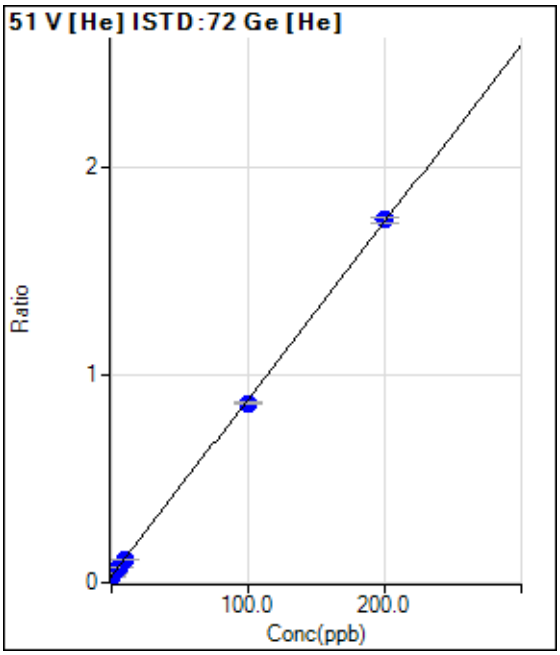
Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

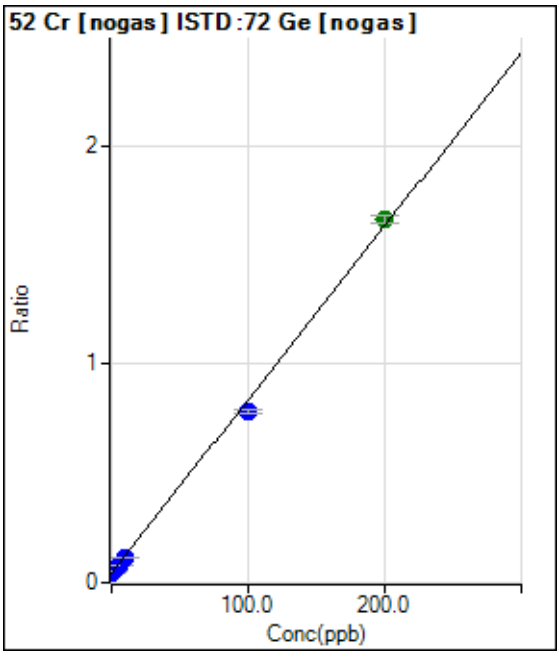
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	11782.66	0.0321	P	3.5
2	☐	2.000	1.951	17784.05	0.0488	P	2.3
3	☐	5.000	4.879	27008.44	0.0738	P	0.9
4	☐	10.000	9.144	39722.23	0.1102	P	1.7
5	☐	100.000	97.680	307197.77	0.8662	P	1.1
6	☐	200.000	201.207	599782.37	1.7502	P	1.2
7	☐	1.000					

y = 0.0085 * x + 0.0321
R = 0.9999
DL = 0.3998
BEC = 3.764

Weight: <None>
Min Conc: <None>

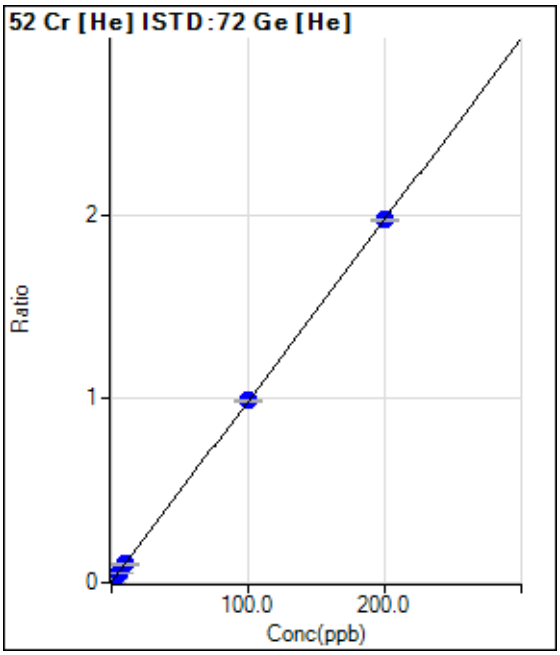


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	57000.79	0.0440	P	2.1
2	☐	2.000	1.623	75348.95	0.0569	P	3.6
3	☐	5.000	4.647	106302.55	0.0809	P	1.4
4	☐	10.000	9.343	158123.71	0.1181	P	0.2
5	☐	100.000	92.880	1038323.19	0.7813	P	1.7
6	☐	200.000	203.606	2134583.98	1.6604	A	2.0
7	☐	1.000					

y = 0.0079 * x + 0.0440
R = 0.9991
DL = 0.3457
BEC = 5.538

Weight: <None>
Min Conc: <None>

Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	763.36	0.0021	P	6.4
2	☐	2.000	1.959	7798.44	0.0214	P	3.6
3	☐	5.000	5.051	18989.96	0.0519	P	1.8
4	☐	10.000	9.898	35918.56	0.0997	P	3.6
5	☐	100.000	100.143	350962.07	0.9896	P	1.4
6	☐	200.000	199.933	676342.64	1.9736	P	0.3
7	☐	1.000					

y = 0.0099 * x + 0.0021

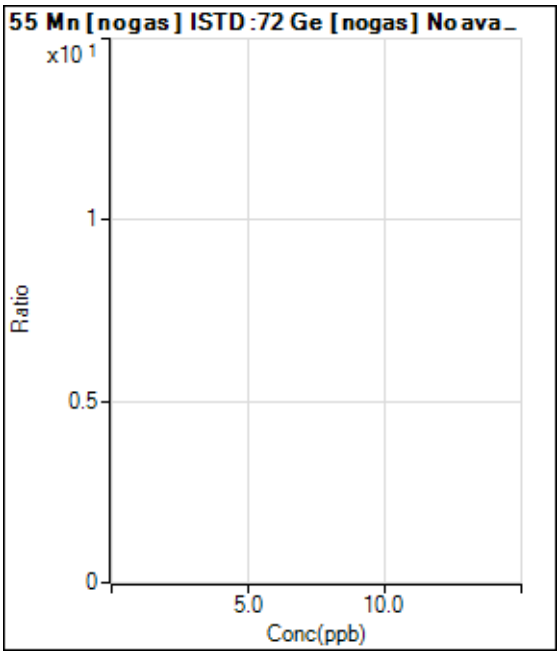
R = 1.0000

DL = 0.04081

BEC = 0.2112

Weight: <None>

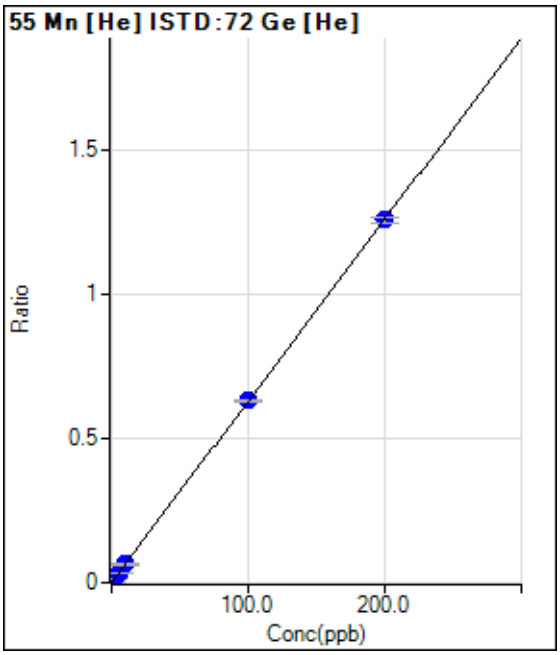
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

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Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	120.00	0.0003	P	33.1
2	☐	2.000	2.035	4780.69	0.0131	P	6.2
3	☐	5.000	5.002	11623.82	0.0318	P	1.6
4	☐	10.000	10.028	22830.98	0.0634	P	1.7
5	☐	100.000	100.190	223439.24	0.6300	P	0.2
6	☐	200.000	199.903	430626.18	1.2567	P	1.5
7	☐	1.000					

y = 0.0063 * x + 3.2725E-004

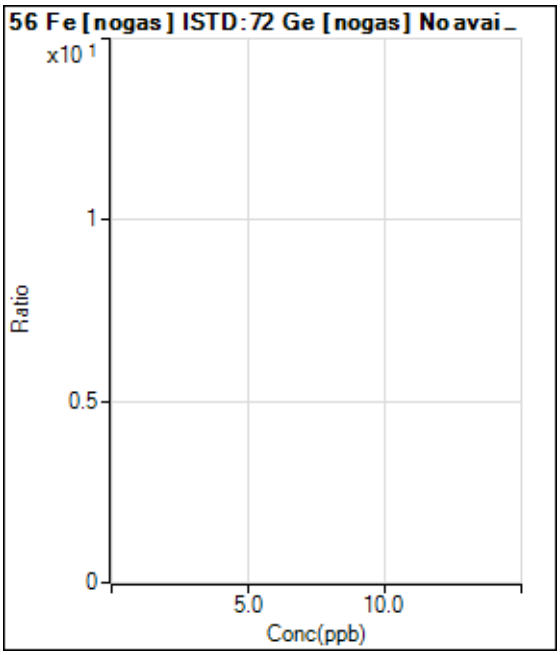
R = 1.0000

DL = 0.05177

BEC = 0.05207

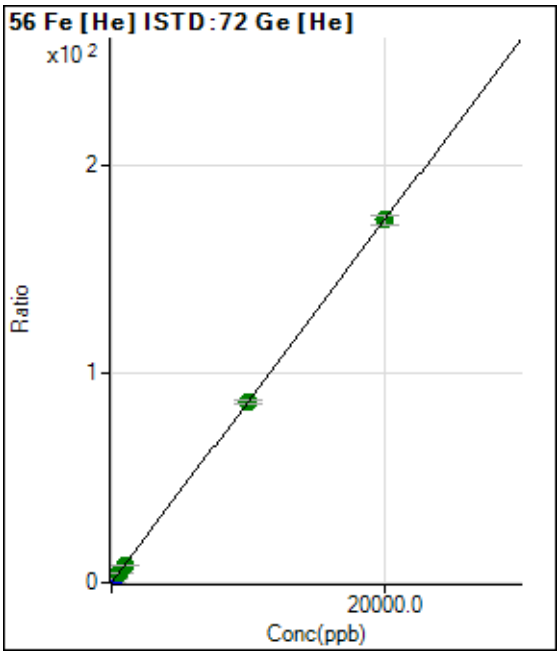
Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

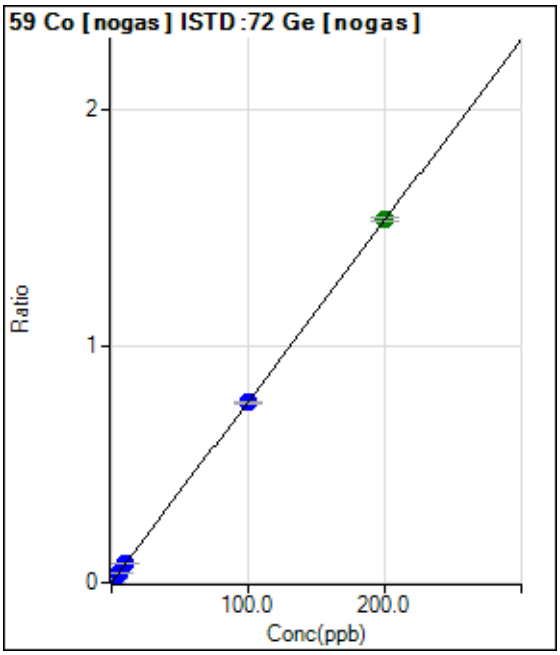
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6134.45	0.0167	P	3.9
2	☐	200.000	190.732	609059.26	1.6711	P	2.4
3	☐	500.000	503.901	1605567.42	4.3874	A	1.0
4	☐	1000.000	992.105	3107539.64	8.6219	A	0.8
5	☐	10000.000	9972.643	30681817.88	86.5163	A	1.9
6	☐	20000.000	20014.068	59488177.45	173.6125	A	2.3
7	☐	100.000					

y = 0.0087 * x + 0.0167
R = 1.0000
DL = 0.2229
BEC = 1.929

Weight: <None>
Min Conc: <None>



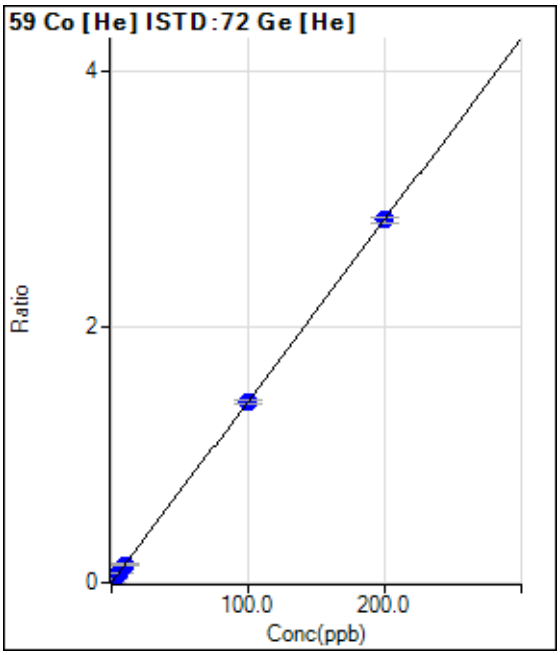
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	266.67	0.0002	P	21.6
2	☐	2.000	2.119	21732.97	0.0164	P	4.3
3	☐	5.000	5.317	53682.02	0.0408	P	4.5
4	☐	10.000	10.131	103918.28	0.0776	P	0.7
5	☐	100.000	99.294	1008773.22	0.7592	P	1.9
6	☐	200.000	200.337	1969208.46	1.5315	A	1.1
7	☐	1.000					

y = 0.0076 * x + 2.0562E-004
R = 1.0000
DL = 0.01745
BEC = 0.0269

Weight: <None>
Min Conc: <None>

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Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	86.67	0.0002	P	23.7
2	☐	2.000	2.031	10596.50	0.0291	P	2.0
3	☐	5.000	4.931	25708.23	0.0702	P	0.7
4	☐	10.000	10.023	51378.63	0.1425	P	0.7
5	☐	100.000	100.069	503982.91	1.4210	P	2.1
6	☐	200.000	199.966	972958.61	2.8394	P	1.4
7	☐	1.000					

y = 0.0142 * x + 2.3629E-004

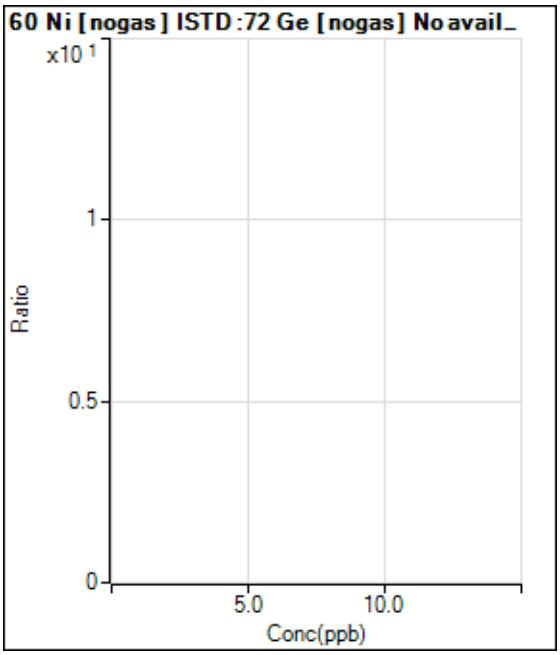
R = 1.0000

DL = 0.01183

BEC = 0.01664

Weight: <None>

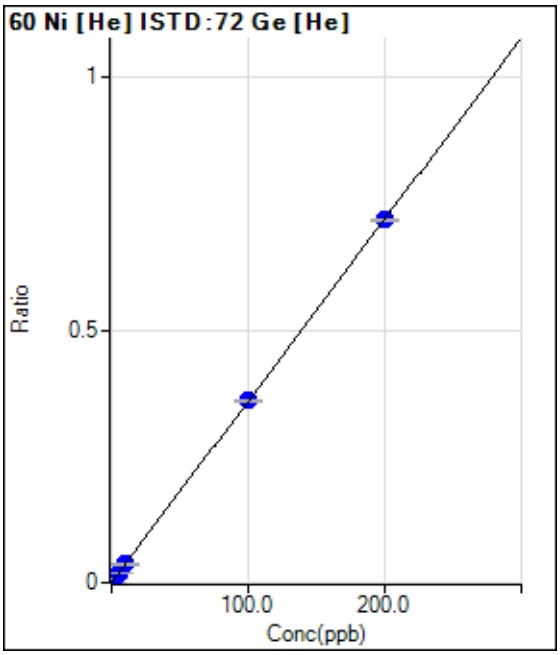
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

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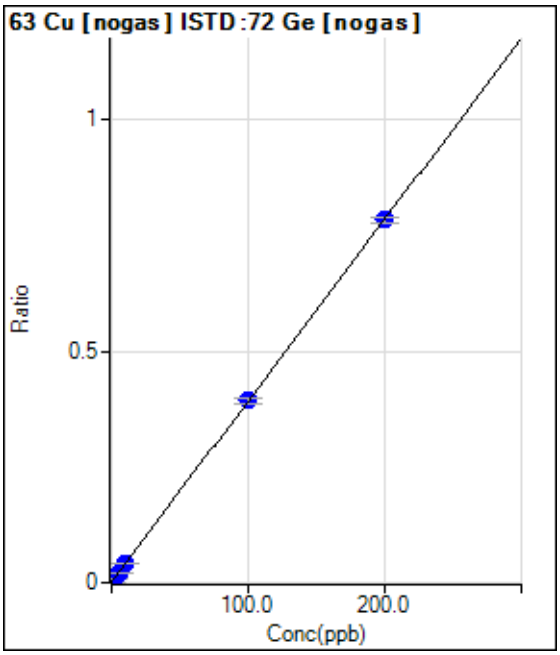
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	56.67	0.0002	P	53.6
2	☐	2.000	2.120	2833.60	0.0078	P	2.9
3	☐	5.000	5.003	6634.65	0.0181	P	2.8
4	☐	10.000	10.046	13061.49	0.0362	P	4.2
5	☐	100.000	100.369	127942.55	0.3607	P	1.3
6	☐	200.000	199.812	246055.63	0.7180	P	0.3
7	☐	1.000					

y = 0.0036 * x + 1.5445E-004
R = 1.0000
DL = 0.06908
BEC = 0.04299

Weight: <None>
Min Conc: <None>



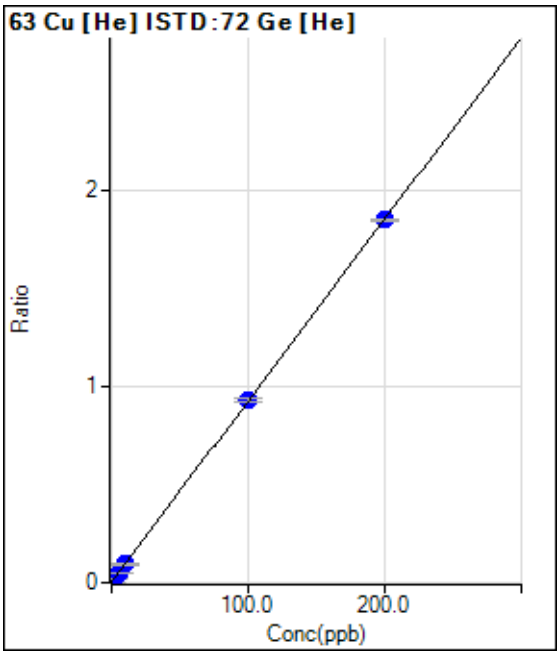
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1570.09	0.0012	P	7.4
2	☐	2.000	2.083	12401.01	0.0094	P	5.2
3	☐	5.000	5.439	29567.39	0.0225	P	2.4
4	☐	10.000	10.159	54818.38	0.0410	P	2.9
5	☐	100.000	100.187	522459.91	0.3932	P	2.7
6	☐	200.000	199.887	1007097.75	0.7833	P	1.3
7	☐	1.000					

y = 0.0039 * x + 0.0012
R = 1.0000
DL = 0.0684
BEC = 0.3094

Weight: <None>
Min Conc: <None>

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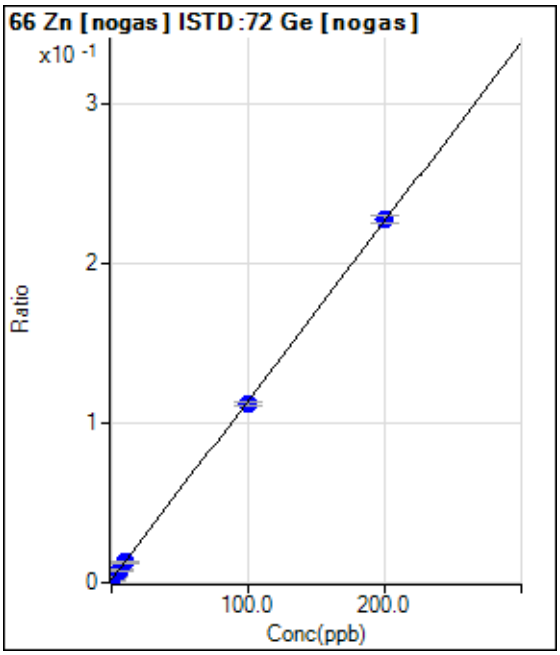
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	750.02	0.0020	P	12.3
2	☐	2.000	2.117	7901.80	0.0217	P	0.9
3	☐	5.000	5.139	18182.55	0.0497	P	4.8
4	☐	10.000	9.977	34065.22	0.0945	P	3.5
5	☐	100.000	100.504	331182.33	0.9338	P	1.3
6	☐	200.000	199.745	635280.66	1.8538	P	0.6
7	☐	1.000					

y = 0.0093 * x + 0.0020
R = 1.0000
DL = 0.08141
BEC = 0.2208

Weight: <None>
Min Conc: <None>



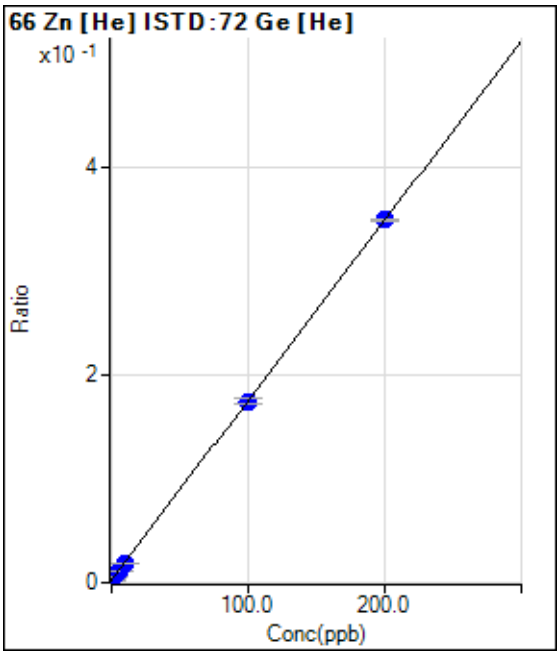
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2413.53	0.0019	P	12.0
2	☐	2.000	2.140	5650.95	0.0043	P	7.5
3	☐	5.000	5.197	10122.92	0.0077	P	4.6
4	☐	10.000	9.768	17181.61	0.0128	P	2.8
5	☐	100.000	98.377	149324.39	0.1124	P	2.5
6	☐	200.000	200.817	292453.80	0.2275	P	2.0
7	☐	1.000					

y = 0.0011 * x + 0.0019
R = 1.0000
DL = 0.597
BEC = 1.658

Weight: <None>
Min Conc: <None>

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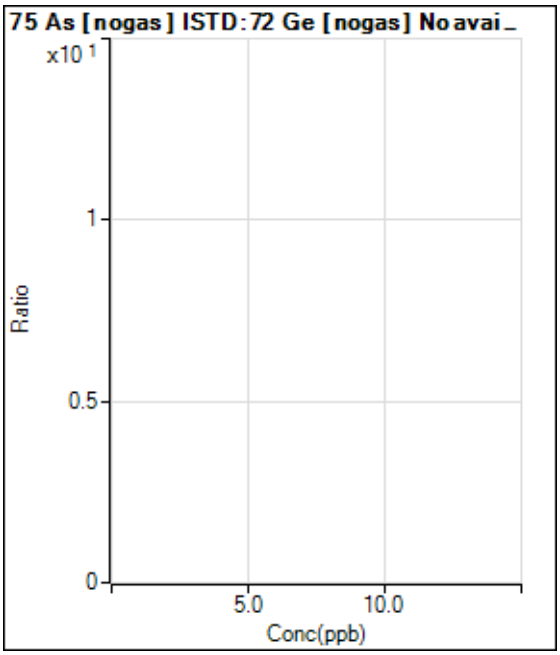
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	983.37	0.0027	P	15.7
2	☐	2.000	2.028	2253.51	0.0062	P	4.3
3	☐	5.000	4.990	4133.86	0.0113	P	6.5
4	☐	10.000	9.289	6744.67	0.0187	P	5.0
5	☐	100.000	99.323	61757.49	0.1741	P	3.4
6	☐	200.000	200.374	119456.96	0.3486	P	0.7
7	☐	1.000					

y = 0.0017 * x + 0.0027
R = 1.0000
DL = 0.7317
BEC = 1.554

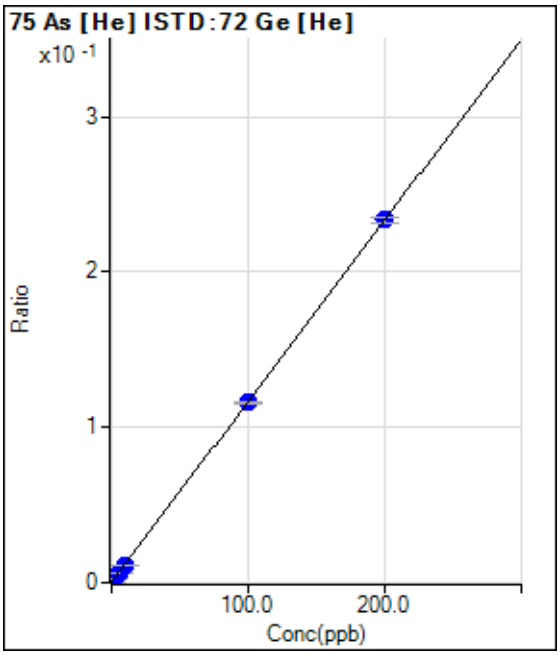
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

RIGHT SOLUTIONS | RIGHT PARTNER

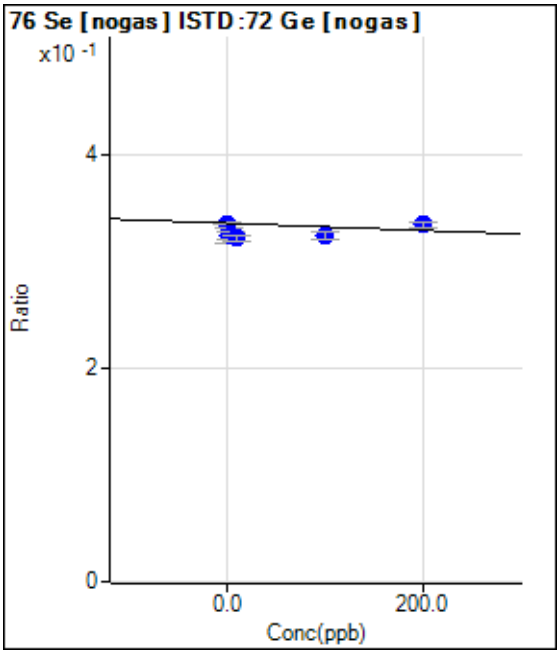
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	111.11	0.0003	P	18.2
2	☐	2.000	2.014	964.47	0.0026	P	2.3
3	☐	5.000	5.018	2247.93	0.0061	P	1.4
4	☐	10.000	9.483	4086.03	0.0113	P	1.4
5	☐	100.000	99.370	41118.34	0.1159	P	1.0
6	☐	200.000	200.340	79994.07	0.2334	P	1.3
7	☐	1.000					

y = 0.0012 * x + 3.0311E-004
R = 1.0000
DL = 0.142
BEC = 0.2605

Weight: <None>
Min Conc: <None>



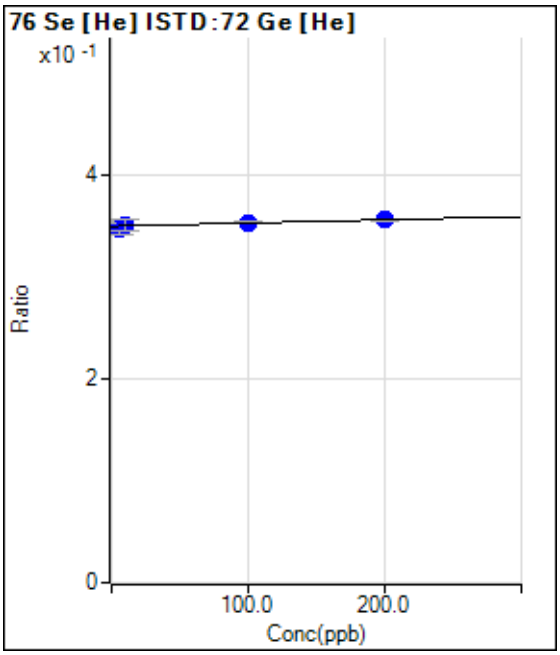
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	435116.40	0.3357	P	0.4
2	☐	2.000	326.382	430124.78	0.3246	P	4.5
3	☐	5.000	333.651	426392.43	0.3244	P	2.2
4	☐	10.000	416.332	430329.92	0.3216	P	2.0
5	☐	100.000	336.067	431009.03	0.3243	P	2.4
6	☐	200.000	50.190	429358.78	0.3340	P	1.8
7	☐	1.000					

y = -3.3867E-005 * x + 0.3357
R = 0.3835
DL = -129.6
BEC = -9911

Weight: <None>
Min Conc: <None>

RIGHT SOLUTIONS | RIGHT PARTNER

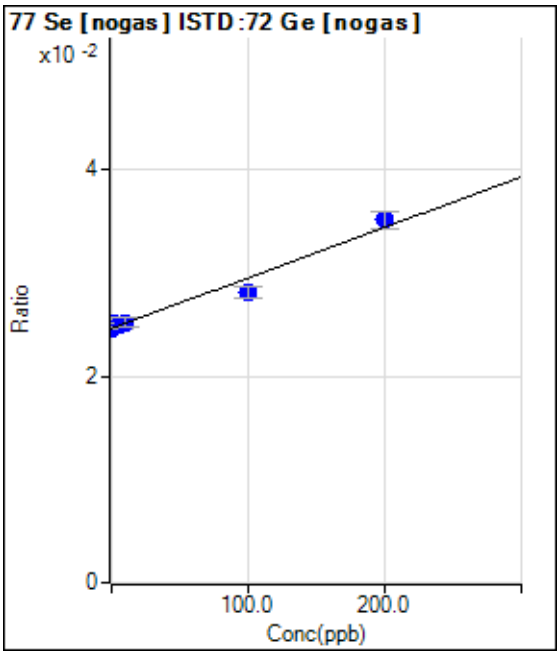
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	128521.05	0.3505	P	0.7
2	☐	2.000	-20.154	127511.38	0.3499	P	2.7
3	☐	5.000	-93.745	127175.92	0.3476	P	3.5
4	☐	10.000	39.077	126760.91	0.3518	P	3.1
5	☐	100.000	120.149	125672.47	0.3544	P	0.6
6	☐	200.000	191.162	122208.88	0.3566	P	0.3
7	☐	1.000					

y = 3.1804E-005 * x + 0.3505
R = 0.9000
DL = 245.3
BEC = 1.102E+04

Weight: <None>
Min Conc: <None>



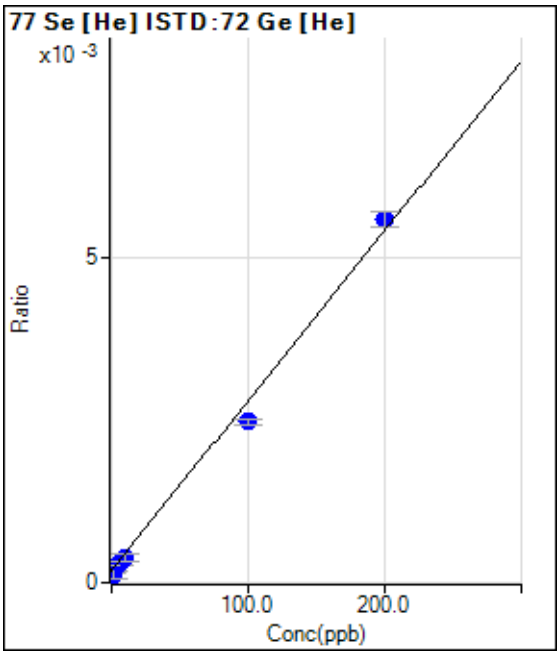
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	31955.15	0.0247	P	1.7
2	☐	2.000	10.856	33391.37	0.0252	P	3.3
3	☐	5.000	5.988	32800.24	0.0249	P	2.2
4	☐	10.000	11.998	33785.21	0.0252	P	3.7
5	☐	100.000	70.459	37332.28	0.0281	P	3.9
6	☐	200.000	214.557	45183.11	0.0351	P	4.5
7	☐	1.000					

y = 4.8932E-005 * x + 0.0247
R = 0.9832
DL = 25.18
BEC = 503.8

Weight: <None>
Min Conc: <None>

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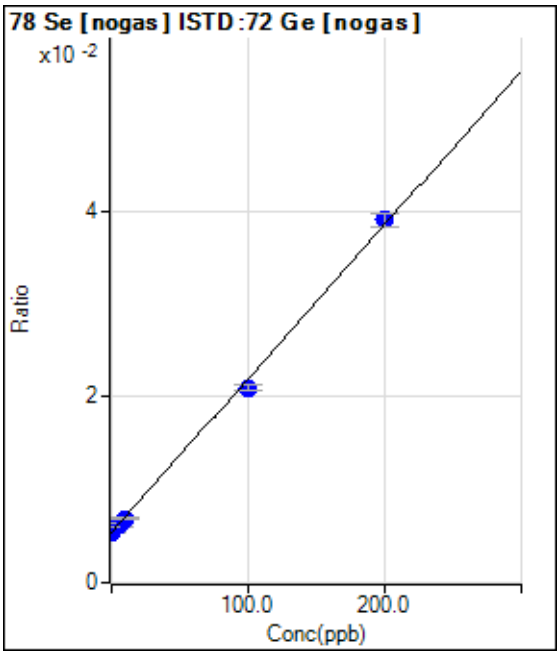
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	70.00	0.0002	P	42.4
2	☐	2.000	-2.753	43.33	0.0001	P	87.1
3	☐	5.000	4.209	110.00	0.0003	P	17.7
4	☐	10.000	7.613	140.00	0.0004	P	29.5
5	☐	100.000	87.463	876.70	0.0025	P	3.5
6	☐	200.000	206.455	1910.13	0.0056	P	4.1
7	☐	1.000					

y = 2.6081E-005 * x + 1.9061E-004
R = 0.9974
DL = 9.297
BEC = 7.308

Weight: <None>
Min Conc: <None>

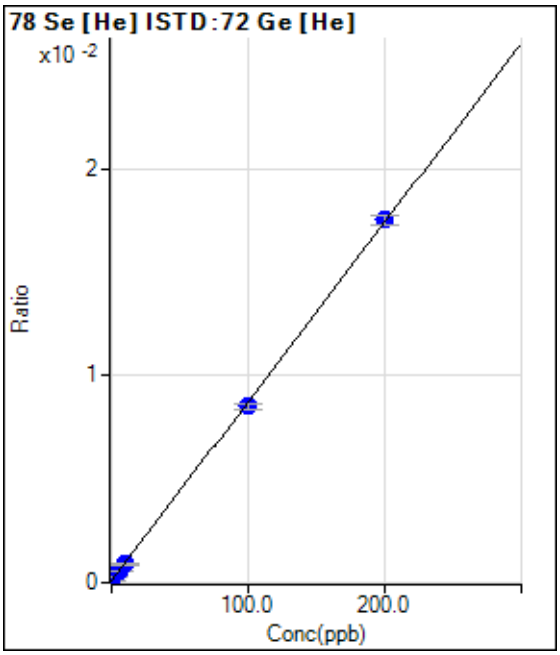


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7028.12	0.0054	P	2.5
2	☐	2.000	2.778	7801.78	0.0059	P	1.6
3	☐	5.000	4.722	8151.92	0.0062	P	5.3
4	☐	10.000	8.738	9195.77	0.0069	P	2.6
5	☐	100.000	93.888	27861.68	0.0210	P	3.2
6	☐	200.000	203.118	50223.03	0.0391	P	3.4
7	☐	1.000					

y = 1.6560E-004 * x + 0.0054
R = 0.9993
DL = 2.427
BEC = 32.74

Weight: <None>
Min Conc: <None>

Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	34.00	0.0001	P	30.9
2	☐	2.000	2.686	118.67	0.0003	P	10.4
3	☐	5.000	5.304	202.00	0.0006	P	10.4
4	☐	10.000	9.317	324.00	0.0009	P	8.0
5	☐	100.000	97.151	3015.60	0.0085	P	2.6
6	☐	200.000	201.444	6009.00	0.0175	P	2.8
7	☐	1.000					

y = 8.6574E-005 * x + 9.2810E-005

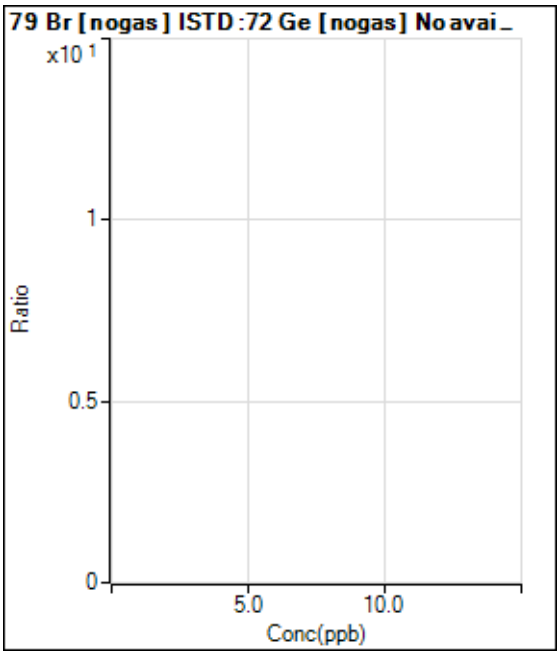
R = 0.9998

DL = 0.9926

BEC = 1.072

Weight: <None>

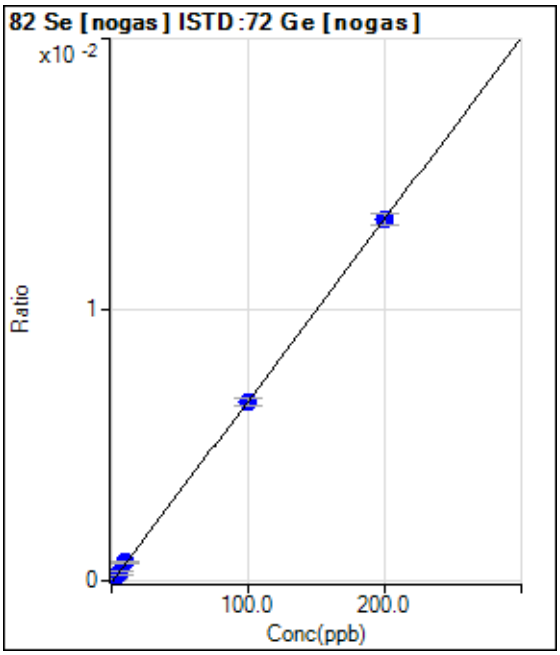
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

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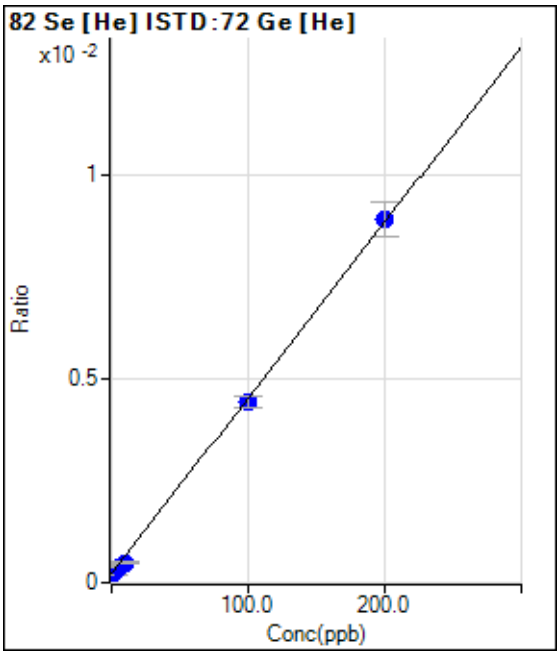
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-110.60	-0.0001	P	-92.2
2	☐	2.000	2.056	68.89	0.0001	P	81.2
3	☐	5.000	5.658	389.16	0.0003	P	46.4
4	☐	10.000	11.606	929.42	0.0007	P	10.2
5	☐	100.000	99.574	8772.11	0.0066	P	4.8
6	☐	200.000	200.116	17171.95	0.0134	P	3.4
7	☐	1.000					

y = 6.7162E-005 * x - 8.5432E-005
R = 1.0000
DL = 3.517
BEC = -1.272

Weight: <None>
Min Conc: <None>

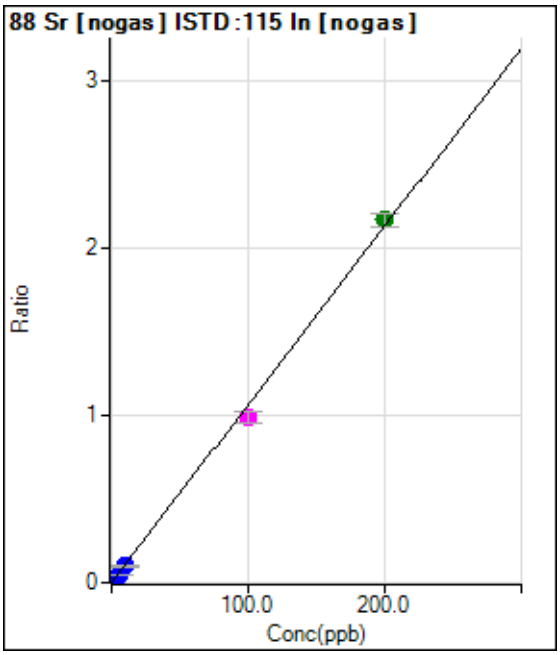


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	83.33	0.0002	P	38.2
2	☐	2.000	0.263	86.67	0.0002	P	37.8
3	☐	5.000	3.821	143.33	0.0004	P	7.6
4	☐	10.000	5.899	173.33	0.0005	P	12.3
5	☐	100.000	97.609	1570.09	0.0044	P	5.6
6	☐	200.000	201.447	3050.31	0.0089	P	9.6
7	☐	1.000					

y = 4.3039E-005 * x + 2.2712E-004
R = 0.9998
DL = 6.046
BEC = 5.277

Weight: <None>
Min Conc: <None>

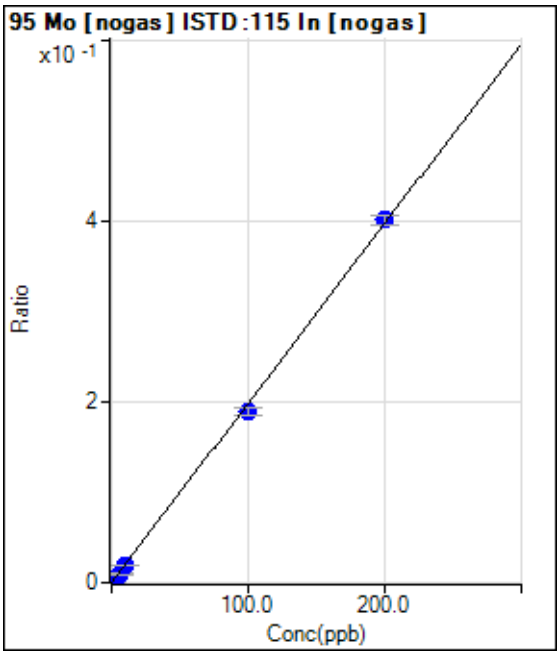
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1476.75	0.0011	P	6.0
2	☐	2.000	1.898	28062.12	0.0213	P	2.6
3	☐	5.000	4.617	68179.58	0.0503	P	3.6
4	☐	10.000	9.100	131750.04	0.0981	P	2.3
5	☐	100.000	92.672	1292665.69	0.9887	M	7.0
6	☐	200.000	203.720	2680580.59	2.1722	A	3.9
7	☐	1.000					

y = 0.0107 * x + 0.0011
R = 0.9991
DL = 0.01832
BEC = 0.1024

Weight: <None>
Min Conc: <None>

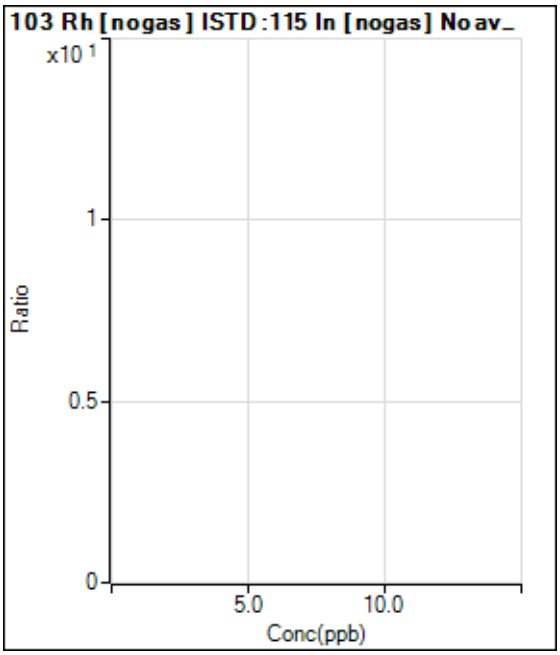


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	70.00	0.0001	P	64.6
2	☐	2.000	1.996	5287.53	0.0040	P	3.8
3	☐	5.000	4.714	12751.43	0.0094	P	8.5
4	☐	10.000	9.424	25204.88	0.0188	P	5.6
5	☐	100.000	95.753	248935.21	0.1903	P	4.2
6	☐	200.000	202.159	495682.52	0.4017	P	2.4
7	☐	1.000					

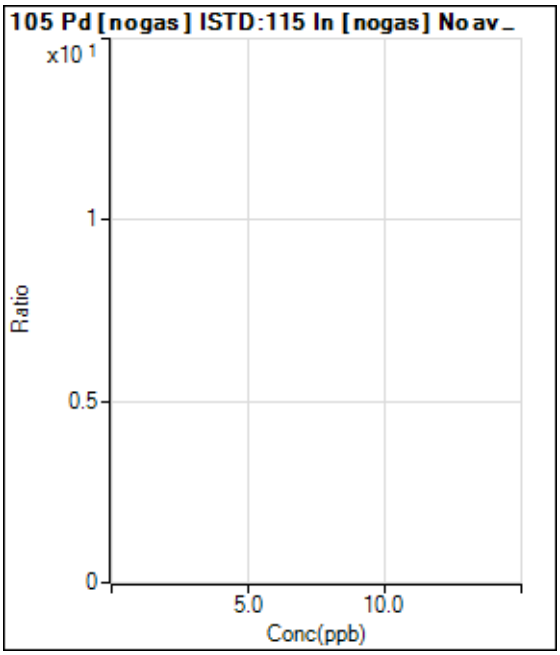
y = 0.0020 * x + 5.1612E-005
R = 0.9997
DL = 0.05037
BEC = 0.02598

Weight: <None>
Min Conc: <None>

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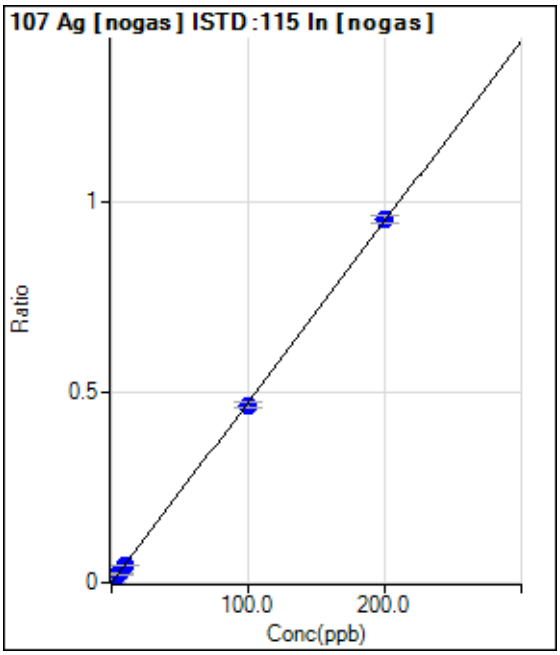


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

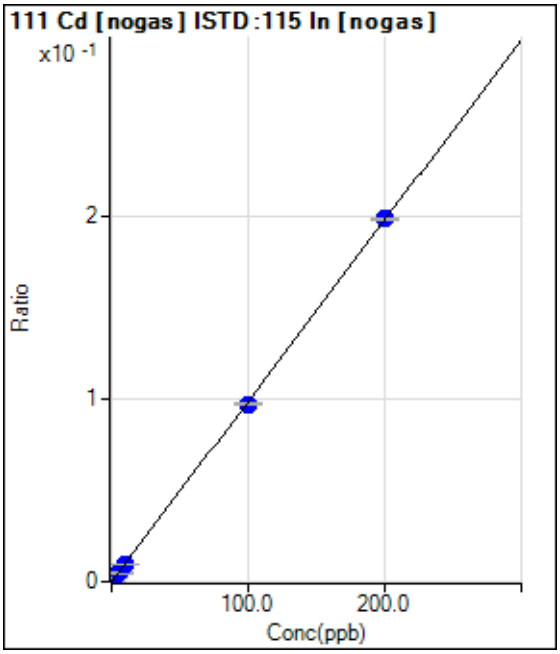
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	476.68	0.0004	P	13.2
2	☐	2.000	1.908	12394.56	0.0094	P	2.4
3	☐	5.000	4.844	31651.93	0.0234	P	5.6
4	☐	10.000	9.355	60149.36	0.0448	P	5.4
5	☐	100.000	98.269	611490.32	0.4672	P	3.3
6	☐	200.000	200.902	1178334.15	0.9548	P	2.3
7	☐	1.000					

y = 0.0048 * x + 3.5180E-004
R = 0.9999
DL = 0.02926
BEC = 0.07405

Weight: <None>
Min Conc: <None>

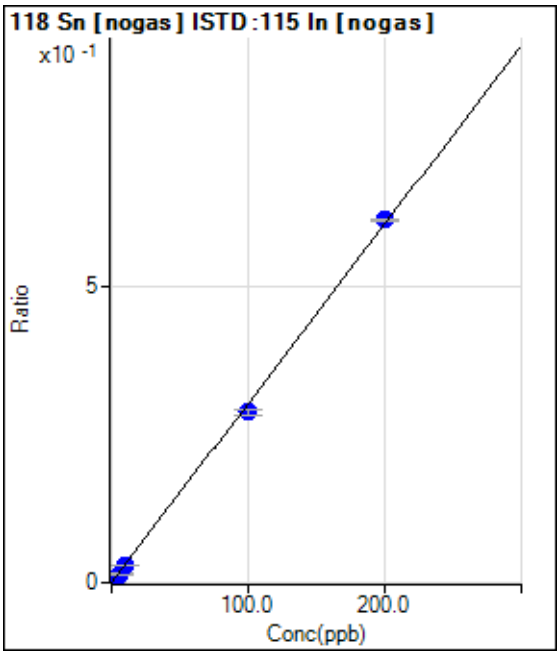


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0000	P	42.8
2	☐	2.000	1.925	2510.22	0.0019	P	9.1
3	☐	5.000	4.842	6487.95	0.0048	P	3.9
4	☐	10.000	9.485	12584.67	0.0094	P	3.4
5	☐	100.000	98.327	127025.61	0.0970	P	1.6
6	☐	200.000	200.867	244588.00	0.1982	P	0.8
7	☐	1.000					

y = 9.8657E-004 * x + 9.8390E-006
R = 1.0000
DL = 0.01281
BEC = 0.009973

Weight: <None>
Min Conc: <None>

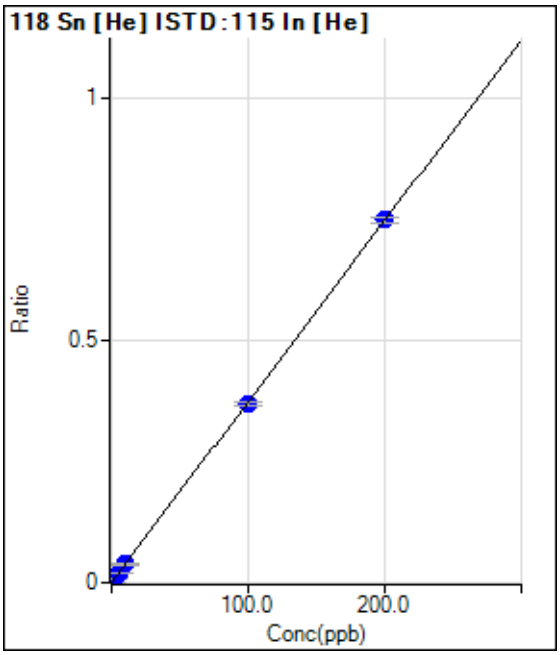
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	530.01	0.0004	P	4.6
2	☐	2.000	1.892	8021.94	0.0061	P	5.7
3	☐	5.000	4.654	19554.46	0.0144	P	5.7
4	☐	10.000	9.341	38388.91	0.0286	P	2.7
5	☐	100.000	94.991	375454.20	0.2869	P	3.7
6	☐	200.000	202.547	754580.30	0.6114	P	0.6
7	☐	1.000					

y = 0.0030 * x + 3.9174E-004
R = 0.9996
DL = 0.01802
BEC = 0.1299

Weight: <None>
Min Conc: <None>



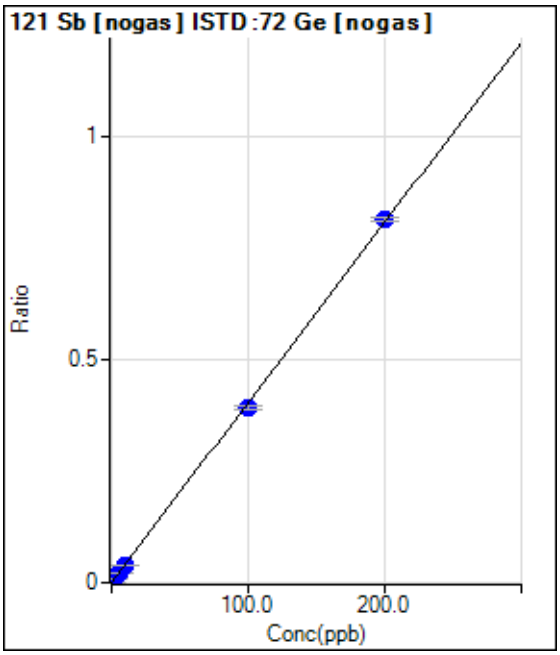
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	273.34	0.0005	P	7.2
2	☐	2.000	2.057	4193.89	0.0082	P	5.8
3	☐	5.000	4.883	9559.40	0.0187	P	3.7
4	☐	10.000	10.078	19247.43	0.0381	P	2.3
5	☐	100.000	98.791	183545.52	0.3684	P	2.0
6	☐	200.000	200.603	366538.81	0.7476	P	1.6
7	☐	1.000					

y = 0.0037 * x + 5.2626E-004
R = 1.0000
DL = 0.03062
BEC = 0.1413

Weight: <None>
Min Conc: <None>

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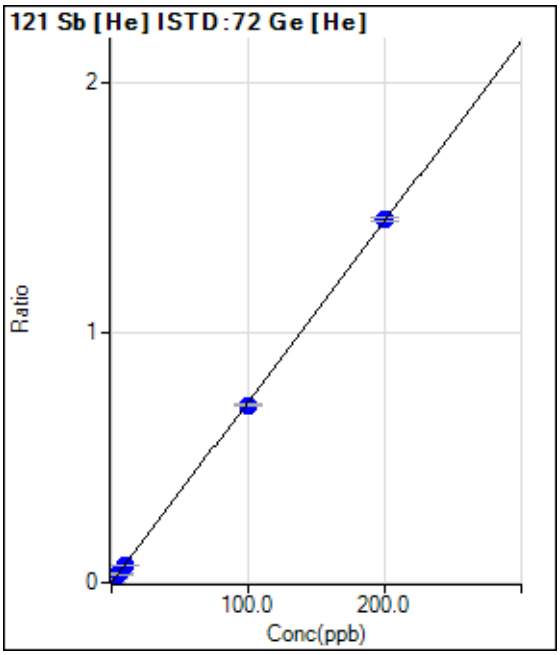
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	480.01	0.0004	P	16.3
2	☐	2.000	2.061	11503.93	0.0087	P	3.1
3	☐	5.000	5.079	27401.72	0.0208	P	1.1
4	☐	10.000	9.758	53130.72	0.0397	P	2.3
5	☐	100.000	96.944	519753.33	0.3911	P	1.8
6	☐	200.000	201.538	1044901.02	0.8127	P	1.2
7	☐	1.000					

y = 0.0040 * x + 3.7055E-004
R = 0.9998
DL = 0.04489
BEC = 0.09193

Weight: <None>
Min Conc: <None>



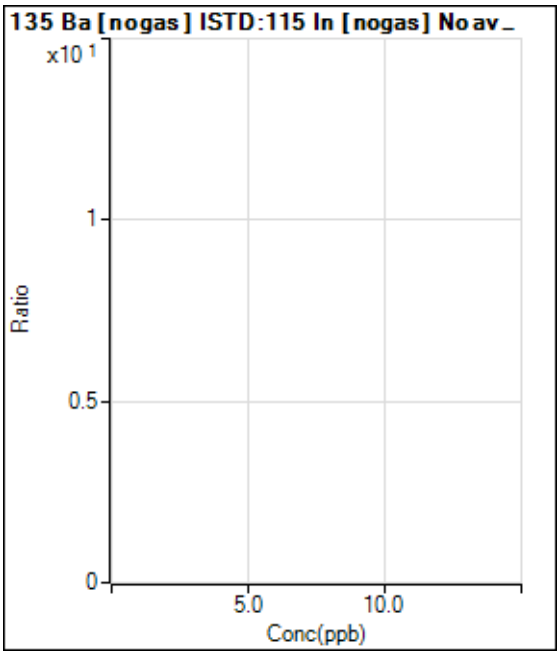
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	270.01	0.0007	P	33.9
2	☐	2.000	1.989	5507.61	0.0151	P	4.6
3	☐	5.000	4.760	12851.56	0.0351	P	4.6
4	☐	10.000	9.851	25912.69	0.0719	P	2.2
5	☐	100.000	98.325	252196.72	0.7111	P	0.5
6	☐	200.000	200.851	497491.51	1.4518	P	1.2
7	☐	1.000					

y = 0.0072 * x + 7.3652E-004
R = 1.0000
DL = 0.1036
BEC = 0.1019

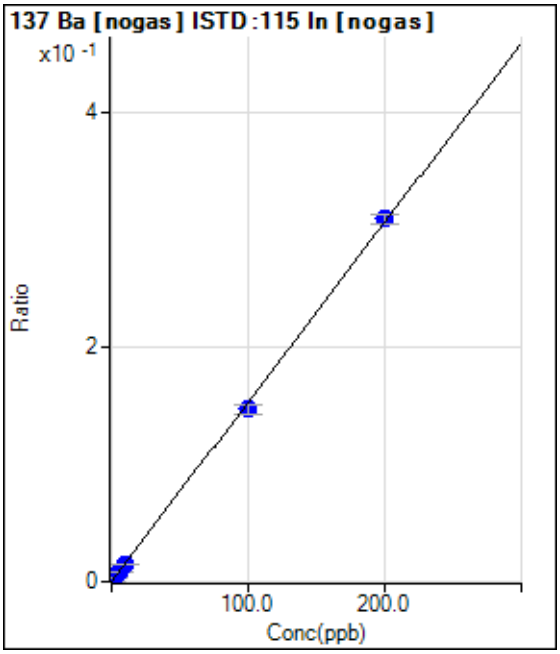
Weight: <None>
Min Conc: <None>

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Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	326.68	0.0002	P	16.7
2	☐	2.000	1.966	4270.59	0.0032	P	3.3
3	☐	5.000	4.882	10436.63	0.0077	P	4.2
4	☐	10.000	9.219	19237.60	0.0143	P	4.7
5	☐	100.000	95.889	191938.56	0.1467	P	5.1
6	☐	200.000	202.098	381348.04	0.3090	P	2.8
7	☐	1.000					

y = 0.0015 * x + 2.4116E-004

R = 0.9997

DL = 0.07909

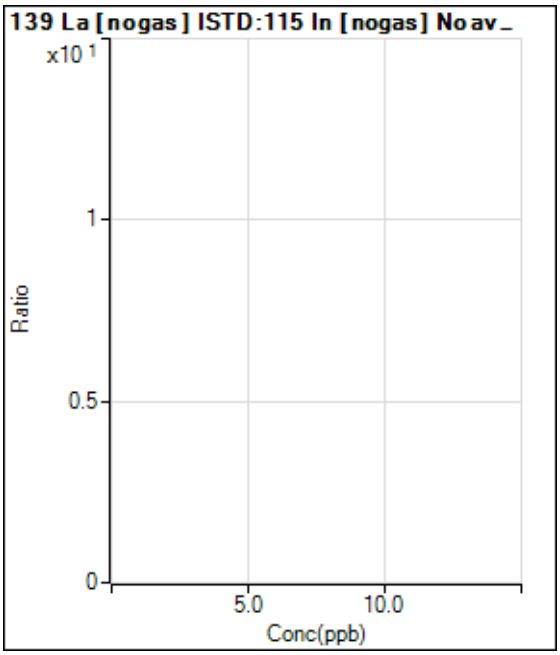
BEC = 0.1578

Weight: <None>

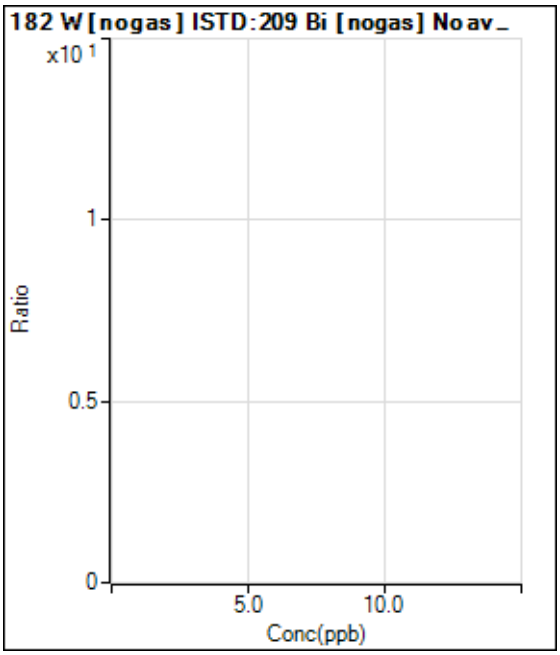
Min Conc: <None>

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Calibration for 026_ICV.d

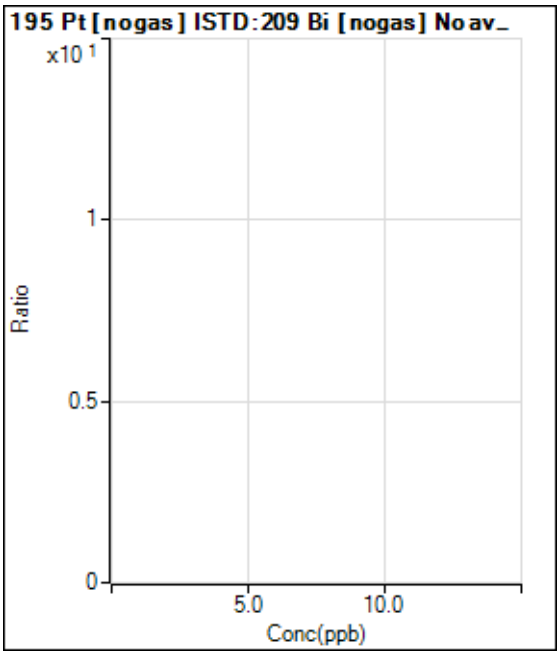


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

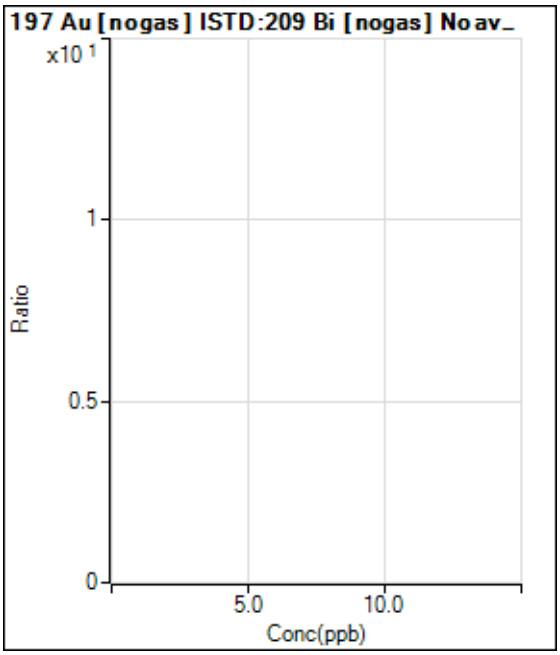


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

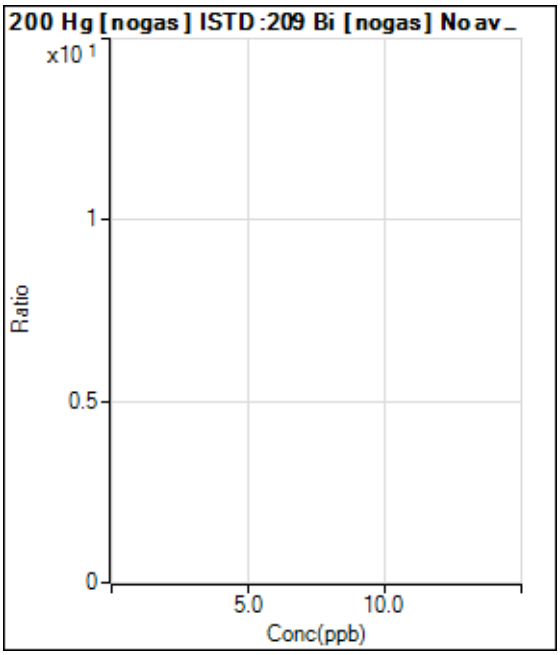
Calibration for 026_ICV.d



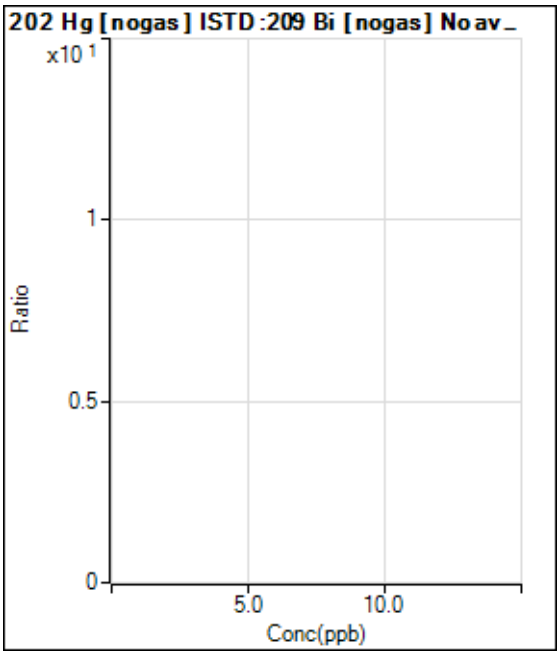
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

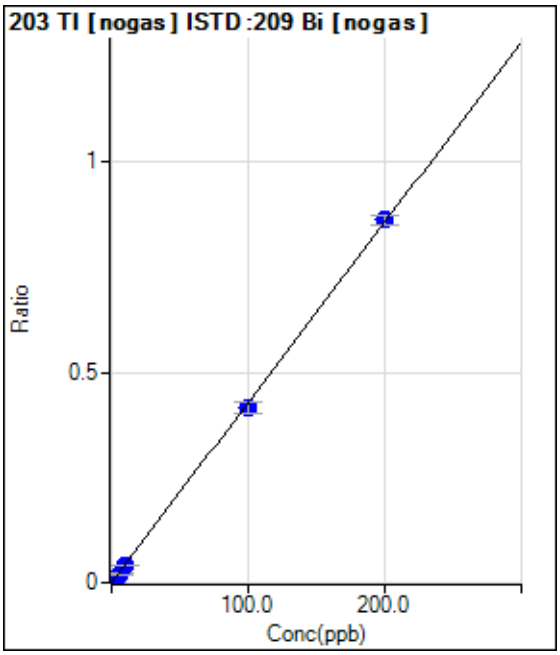


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	0.050					
3	☐	0.200					
4	☐	0.500					
5	☐	2.000					
6	☐	5.000					
7	☐	10.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	0.050					
3	☐	0.200					
4	☐	0.500					
5	☐	5.000					
6	☐	5.000					
7	☐	10.000					

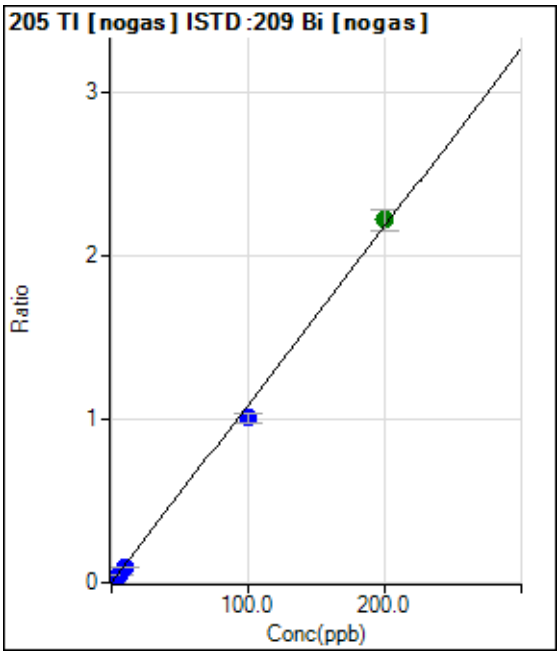
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26.67	0.0000	P	56.6
2	☐	2.000	1.859	8845.88	0.0080	P	4.1
3	☐	5.000	4.794	22595.82	0.0206	P	3.5
4	☐	10.000	9.493	44985.33	0.0407	P	3.6
5	☐	100.000	97.270	442210.98	0.4170	P	6.0
6	☐	200.000	201.397	867149.15	0.8633	P	2.6
7	☐	1.000					

y = 0.0043 * x + 2.4369E-005
R = 0.9999
DL = 0.009646
BEC = 0.005685

Weight: <None>
Min Conc: <None>



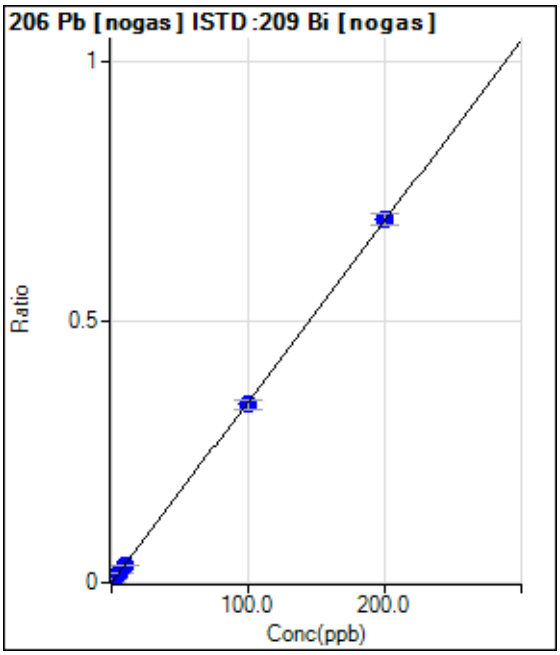
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	73.33	0.0001	P	19.1
2	☐	2.000	1.799	21731.44	0.0196	P	2.6
3	☐	5.000	4.585	54848.74	0.0499	P	2.7
4	☐	10.000	8.769	105459.36	0.0954	P	3.2
5	☐	100.000	92.708	1069638.58	1.0085	P	5.6
6	☐	200.000	203.720	2224773.30	2.2159	A	5.9
7	☐	1.000					

y = 0.0109 * x + 6.6980E-005
R = 0.9991
DL = 0.003527
BEC = 0.006158

Weight: <None>
Min Conc: <None>

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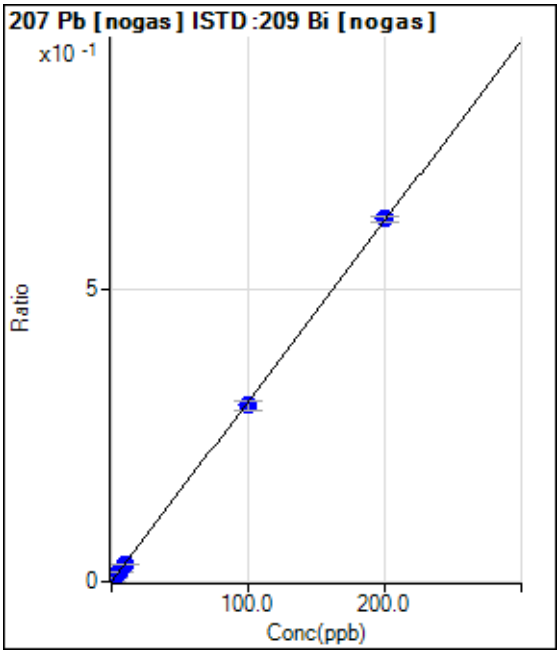
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	73.33	0.0001	P	52.6
2	☐	2.000	1.948	7548.50	0.0068	P	4.4
3	☐	5.000	4.984	19058.01	0.0173	P	2.7
4	☐	10.000	9.436	36230.61	0.0328	P	2.6
5	☐	100.000	98.728	363243.89	0.3424	P	5.1
6	☐	200.000	200.665	698924.36	0.6959	P	3.3
7	☐	1.000					

y = 0.0035 * x + 6.7509E-005
R = 1.0000
DL = 0.03072
BEC = 0.01947

Weight: <None>
Min Conc: <None>



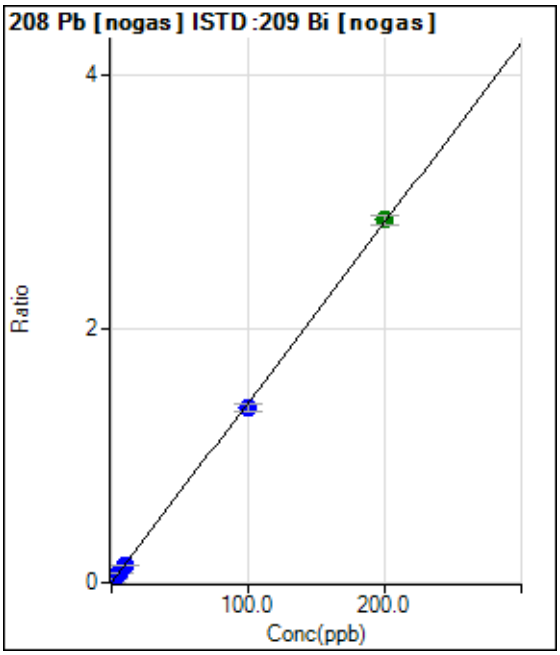
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	103.33	0.0001	P	29.4
2	☐	2.000	1.892	6548.08	0.0059	P	7.4
3	☐	5.000	4.821	16408.45	0.0149	P	1.3
4	☐	10.000	9.472	32332.47	0.0293	P	2.0
5	☐	100.000	97.739	319297.84	0.3010	P	5.4
6	☐	200.000	201.162	622263.98	0.6194	P	1.9
7	☐	1.000					

y = 0.0031 * x + 9.4290E-005
R = 0.9999
DL = 0.02701
BEC = 0.03063

Weight: <None>
Min Conc: <None>

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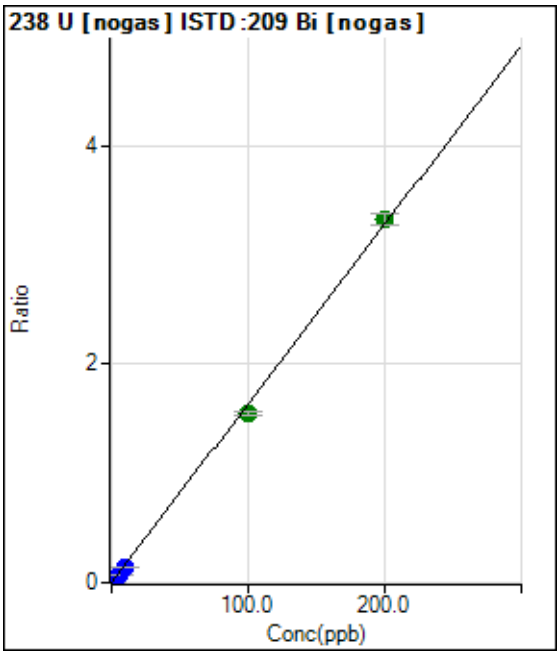
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	370.00	0.0003	P	21.2
2	☐	2.000	1.878	29857.73	0.0270	P	2.6
3	☐	5.000	4.833	75689.88	0.0689	P	1.6
4	☐	10.000	9.392	147587.42	0.1336	P	2.9
5	☐	100.000	96.986	1460158.65	1.3761	P	4.3
6	☐	200.000	201.543	2872235.61	2.8592	A	2.8
7	☐	1.000					

y = 0.0142 * x + 3.3855E-004
R = 0.9998
DL = 0.01515
BEC = 0.02387

Weight: <None>
Min Conc: <None>

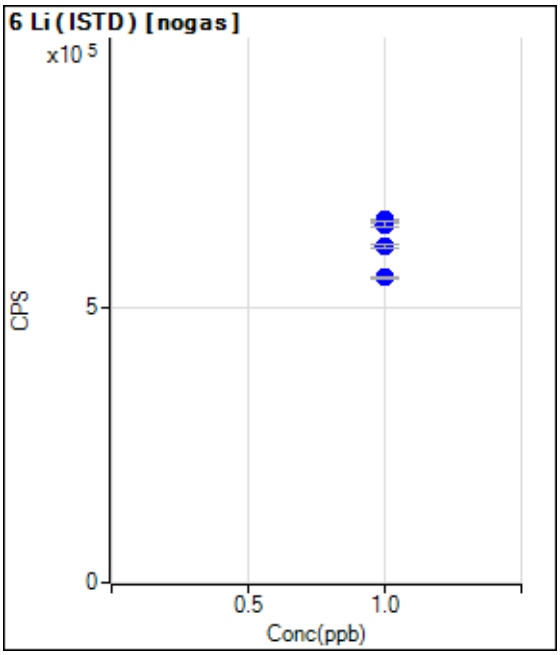


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36.67	0.0000	P	14.4
2	☐	2.000	1.727	31377.98	0.0284	P	1.0
3	☐	5.000	4.464	80443.77	0.0732	P	4.8
4	☐	10.000	8.693	157600.97	0.1426	P	2.1
5	☐	100.000	94.856	1652144.24	1.5558	A	2.6
6	☐	200.000	202.653	3338605.05	3.3239	A	3.1
7	☐	1.000					

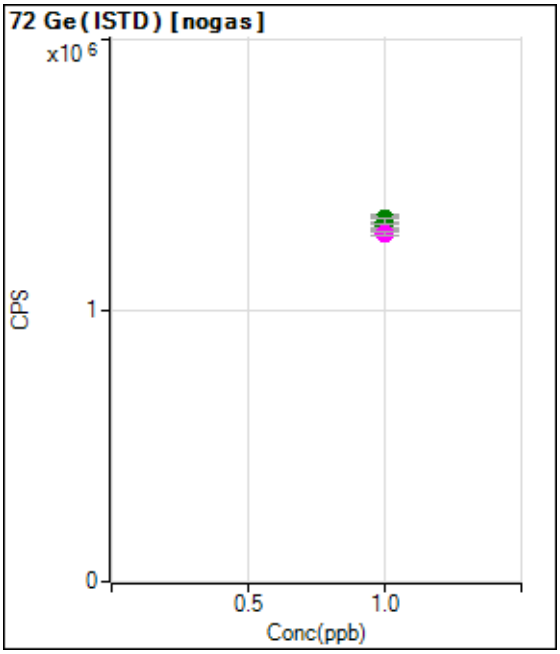
y = 0.0164 * x + 3.3515E-005
R = 0.9996
DL = 0.0008804
BEC = 0.002043

Weight: <None>
Min Conc: <None>

Calibration for 026_ICV.d



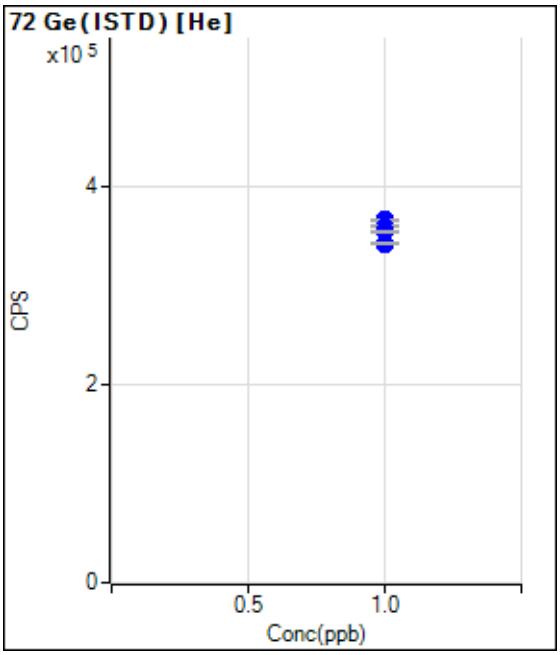
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		656424.75		P	0.5
2	☐	1.000		661166.78		P	0.3
3	☐	1.000		656015.37		P	0.4
4	☐	1.000		653122.97		P	1.4
5	☐	1.000		614042.07		P	1.0
6	☐	1.000		556066.50		P	0.7
7	☐	1.000					



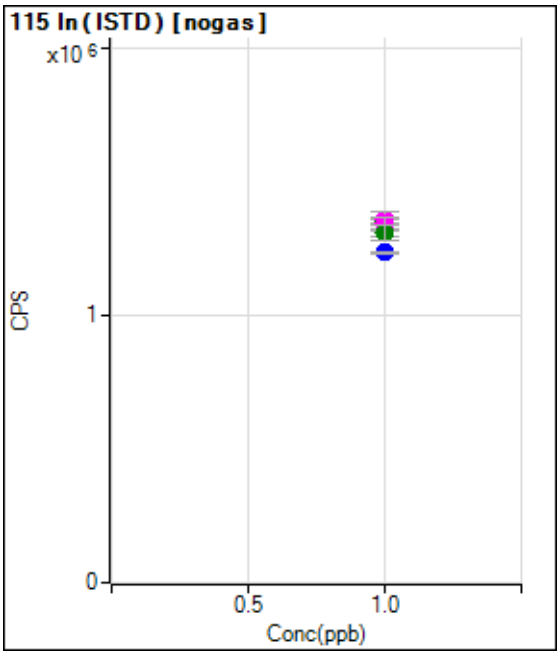
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1296301.91		M	1.0
2	☐	1.000		1326749.72		M	4.4
3	☐	1.000		1314911.54		A	2.0
4	☐	1.000		1338447.22		A	1.3
5	☐	1.000		1329055.71		A	1.7
6	☐	1.000		1285737.14		M	0.9
7	☐	1.000					

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Calibration for 026_ICV.d

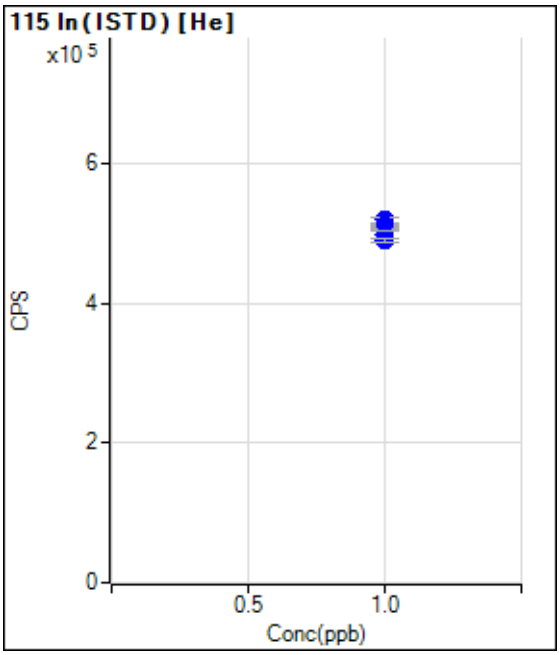


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		366638.38		P	0.6
2	☐	1.000		364495.53		P	1.4
3	☐	1.000		365959.53		P	0.5
4	☐	1.000		360414.84		P	1.0
5	☐	1.000		354659.15		P	0.7
6	☐	1.000		342687.47		P	0.7
7	☐	1.000					

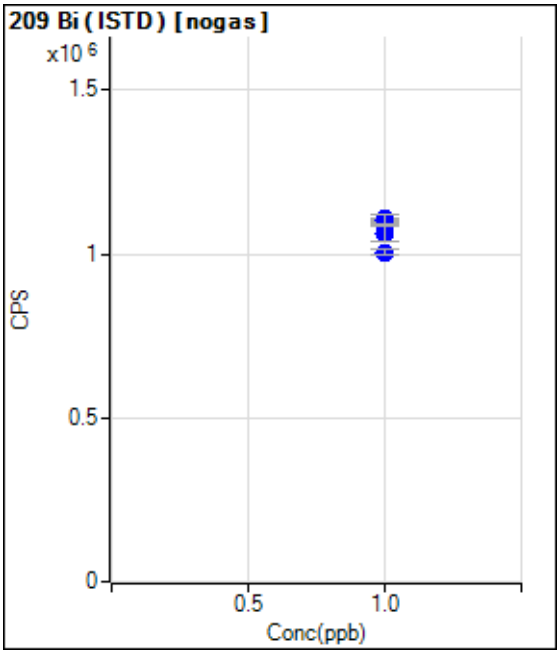


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1353535.16		A	1.3
2	☐	1.000		1316952.75		M	3.4
3	☐	1.000		1356968.79		M	4.6
4	☐	1.000		1344239.57		M	3.7
5	☐	1.000		1309884.21		A	4.4
6	☐	1.000		1234228.41		P	0.9
7	☐	1.000					

Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		519817.56		P	1.7
2	☐	1.000		511981.06		P	1.1
3	☐	1.000		510821.71		P	0.9
4	☐	1.000		505722.95		P	0.3
5	☐	1.000		498317.05		P	2.3
6	☐	1.000		490337.39		P	1.3
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1092467.40		P	1.8
2	☐	1.000		1106617.72		P	0.6
3	☐	1.000		1098508.86		P	0.7
4	☐	1.000		1105389.77		P	2.2
5	☐	1.000		1062444.07		P	4.5
6	☐	1.000		1004801.42		P	2.0
7	☐	1.000					

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	019CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\051
Acq Date Time	2020-05-11T13:01:40-05:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	57	76.81
B	11	1	nogas	10953	0.03
Al	27	1	nogas	23849	0.01
P	31	1	nogas	60514	0.00
Ca	44	1	nogas	122109	0.00
Ti	47	1	nogas	163	9.43
Cr	52	1	nogas	57001	0.00
Co	59	1	nogas	267	8.24
Cu	63	1	nogas	1570	0.54
Zn	66	1	nogas	2414	0.49
Se	77	1	nogas	31955	0.01
Sr	88	1	nogas	1477	0.40
Mo	95	1	nogas	70	93.52
Ag	107	1	nogas	477	3.00
Cd	111	1	nogas	13	324.76
Sn	118	1	nogas	530	0.62
Sb	121	1	nogas	480	3.28
Ba	137	1	nogas	327	5.33
Tl	205	1	nogas	73	28.40
Pb	208	1	nogas	370	5.80
Li	7	1	nogas	54069	0.00
Si	28	1	nogas	7674929	0.00
Na	23	2	He	26449	0.01
Mg	24	2	He	453	2.93
Al	27	2	He	450	2.26
K	39	2	He	47517	0.01
Ca	43	2	He	7	1299.04
Ca	44	2	He	547	1.65
V	51	2	He	11783	0.03
Cr	52	2	He	763	0.79
Mn	55	2	He	120	27.78
Fe	56	2	He	6134	0.05
Co	59	2	He	87	27.71
Ni	60	2	He	57	95.14
Cu	63	2	He	750	1.55
Zn	66	2	He	983	1.56
As	75	2	He	111	16.28
Sb	121	2	He	270	12.57

Calibration Blank Report

Se	78	2	He	34	89.90

Calibration Blank Report

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Ge	72	1	nogas	1296302	1.04
In	115	1	nogas	1353535	1.34
Li	6	1	nogas	656425	0.46
Bi	209	1	nogas	1092467	1.77
Ge	72	2	He	366638	0.63
In	115	2	He	519818	1.70

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	020CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\051
Acq Date Time	2020-05-11T13:04:05-05:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	6511	0.01
B	11	1	nogas	28681	0.01
Al	27	1	nogas	45007	0.00
P	31	1	nogas	65664	0.00
Ca	44	1	nogas	174070	0.00
Ti	47	1	nogas	1757	0.49
Cr	52	1	nogas	75349	0.00
Co	59	1	nogas	21733	0.01
Cu	63	1	nogas	12401	0.01
Zn	66	1	nogas	5651	0.09
Se	77	1	nogas	33391	0.01
Se	82	1	nogas	69	118.74
Sr	88	1	nogas	28062	0.00
Mo	95	1	nogas	5288	0.06
Ag	107	1	nogas	12395	0.01
Cd	111	1	nogas	2510	0.29
Sn	118	1	nogas	8022	0.03
Sb	121	1	nogas	11504	0.01
Ba	137	1	nogas	4271	0.06
Tl	205	1	nogas	21731	0.01
Pb	208	1	nogas	29858	0.01
Si	28	1	nogas	7861975	0.00
Na	23	2	He	185356	0.00
Mg	24	2	He	89122	0.00
Al	27	2	He	1023	0.77
K	39	2	He	115469	0.00
Ca	43	2	He	243	6.83
Ca	44	2	He	4214	0.14
V	51	2	He	17784	0.01
Cr	52	2	He	7798	0.03
Mn	55	2	He	4781	0.13
Fe	56	2	He	609059	0.00
Co	59	2	He	10597	0.02
Ni	60	2	He	2834	0.15
Cu	63	2	He	7902	0.03
Zn	66	2	He	2254	0.15

Calibration Standard Report

As	75	2	He	964	0.25
Sb	121	2	He	5508	0.10
Se	78	2	He	119	9.46

Calibration Standard Report

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1326750	4.38	1296302	102.35	70	120	
In	115	1	nogas	1316953	3.37	1353535	97.30	70	120	
Li	6	1	nogas	661167	0.33	656425	100.72	70	120	
Bi	209	1	nogas	1106618	0.63	1092467	101.30	70	120	
Ge	72	2	He	364496	1.44	366638	99.42	70	120	
In	115	2	He	511981	1.12	519818	98.49	70	120	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	021CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\051
Acq Date Time	2020-05-11T13:06:29-05:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	16434	0.01
B	11	1	nogas	56350	0.00
Al	27	1	nogas	73428	0.00
P	31	1	nogas	70638	0.00
Ca	44	1	nogas	261528	0.00
Ti	47	1	nogas	4421	0.14
Cr	52	1	nogas	106303	0.00
Co	59	1	nogas	53682	0.01
Cu	63	1	nogas	29567	0.00
Zn	66	1	nogas	10123	0.04
Se	77	1	nogas	32800	0.01
Se	82	1	nogas	389	12.28
Sr	88	1	nogas	68180	0.00
Mo	95	1	nogas	12751	0.05
Ag	107	1	nogas	31652	0.00
Cd	111	1	nogas	6488	0.02
Sn	118	1	nogas	19554	0.02
Sb	121	1	nogas	27402	0.01
Ba	137	1	nogas	10437	0.01
Tl	205	1	nogas	54849	0.00
Pb	208	1	nogas	75690	0.00
Si	28	1	nogas	7837752	0.00
Na	23	2	He	422659	0.00
Mg	24	2	He	222800	0.00
Al	27	2	He	1660	0.98
K	39	2	He	217879	0.00
Ca	43	2	He	610	2.56
Ca	44	2	He	9192	0.01
V	51	2	He	27008	0.00
Cr	52	2	He	18990	0.01
Mn	55	2	He	11624	0.01
Fe	56	2	He	1605567	0.00
Co	59	2	He	25708	0.00
Ni	60	2	He	6635	0.05
Cu	63	2	He	18183	0.02
Zn	66	2	He	4134	0.16

Calibration Standard Report

As	75	2	He	2248	0.08
Sb	121	2	He	12852	0.03
Se	78	2	He	202	5.12

Calibration Standard Report

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1314912	1.97	1296302	101.44	70	120	
In	115	1	nogas	1356969	4.63	1353535	100.25	70	120	
Li	6	1	nogas	656015	0.43	656425	99.94	70	120	
Bi	209	1	nogas	1098509	0.67	1092467	100.55	70	120	
Ge	72	2	He	365960	0.54	366638	99.81	70	120	
In	115	2	He	510822	0.94	519818	98.27	70	120	

Calibration Standard Report

Sample Table

Sample Name	10/50/1000
Data File Name	022CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\051
Acq Date Time	2020-05-11T13:08:51-05:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	31516	0.00
B	11	1	nogas	101623	0.00
Al	27	1	nogas	121283	0.00
P	31	1	nogas	86212	0.00
Ca	44	1	nogas	392719	0.00
Ti	47	1	nogas	8392	0.08
Cr	52	1	nogas	158124	0.00
Co	59	1	nogas	103918	0.00
Cu	63	1	nogas	54818	0.00
Zn	66	1	nogas	17182	0.02
Se	77	1	nogas	33785	0.01
Se	82	1	nogas	929	1.18
Sr	88	1	nogas	131750	0.00
Mo	95	1	nogas	25205	0.01
Ag	107	1	nogas	60149	0.00
Cd	111	1	nogas	12585	0.02
Sn	118	1	nogas	38389	0.01
Sb	121	1	nogas	53131	0.00
Ba	137	1	nogas	19238	0.01
Tl	205	1	nogas	105459	0.00
Pb	208	1	nogas	147587	0.00
Si	28	1	nogas	8144313	0.00
Na	23	2	He	800883	0.00
Mg	24	2	He	422929	0.00
Al	27	2	He	2787	0.18
K	39	2	He	376121	0.00
Ca	43	2	He	897	2.38
Ca	44	2	He	17619	0.02
V	51	2	He	39722	0.00
Cr	52	2	He	35919	0.01
Mn	55	2	He	22831	0.01
Fe	56	2	He	3107540	0.00
Co	59	2	He	51379	0.00
Ni	60	2	He	13061	0.03
Cu	63	2	He	34065	0.01
Zn	66	2	He	6745	0.07

Calibration Standard Report

As	75	2	He	4086	0.02
Sb	121	2	He	25913	0.00
Se	78	2	He	324	2.20

Calibration Standard Report

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1338447	1.31	1296302	103.25	70	120	
In	115	1	nogas	1344240	3.74	1353535	99.31	70	120	
Li	6	1	nogas	653123	1.43	656425	99.50	70	120	
Bi	209	1	nogas	1105390	2.17	1092467	101.18	70	120	
Ge	72	2	He	360415	0.96	366638	98.30	70	120	
In	115	2	He	505723	0.29	519818	97.29	70	120	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	023CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\051
Acq Date Time	2020-05-11T13:11:13-05:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	318308	0.00
B	11	1	nogas	918910	0.00
Al	27	1	nogas	937146	0.00
P	31	1	nogas	296159	0.00
Ca	44	1	nogas	2904993	0.00
Ti	47	1	nogas	82168	0.00
Cr	52	1	nogas	1038323	0.00
Co	59	1	nogas	1008773	0.00
Cu	63	1	nogas	522460	0.00
Zn	66	1	nogas	149324	0.00
Se	77	1	nogas	37332	0.01
Se	82	1	nogas	8772	0.05
Sr	88	1	nogas	1292666	0.00
Mo	95	1	nogas	248935	0.00
Ag	107	1	nogas	611490	0.00
Cd	111	1	nogas	127026	0.00
Sn	118	1	nogas	375454	0.00
Sb	121	1	nogas	519753	0.00
Ba	137	1	nogas	191939	0.00
Tl	205	1	nogas	1069639	0.00
Pb	208	1	nogas	1460159	0.00
Si	28	1	nogas	9866207	0.00
Na	23	2	He	7954069	0.00
Mg	24	2	He	4369920	0.00
Al	27	2	He	20628	0.02
K	39	2	He	3429922	0.00
Ca	43	2	He	9979	0.04
Ca	44	2	He	170822	0.00
V	51	2	He	307198	0.00
Cr	52	2	He	350962	0.00
Mn	55	2	He	223439	0.00
Fe	56	2	He	30681818	0.00
Co	59	2	He	503983	0.00
Ni	60	2	He	127943	0.00
Cu	63	2	He	331182	0.00
Zn	66	2	He	61757	0.01

Calibration Standard Report

As	75	2	He	41118	0.00
Sb	121	2	He	252197	0.00
Se	78	2	He	3016	0.07

Calibration Standard Report

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1329056	1.72	1296302	102.53	70	120	
In	115	1	nogas	1309884	4.44	1353535	96.78	70	120	
Li	6	1	nogas	614042	1.05	656425	93.54	70	120	
Bi	209	1	nogas	1062444	4.46	1092467	97.25	70	120	
Ge	72	2	He	354659	0.66	366638	96.73	70	120	
In	115	2	He	498317	2.26	519818	95.86	70	120	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	024CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\051
Acq Date Time	2020-05-11T13:13:35-05:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	618966	0.00
B	11	1	nogas	1817222	0.00
Al	27	1	nogas	1861960	0.00
P	31	1	nogas	522341	0.00
Ca	44	1	nogas	5520910	0.00
Ti	47	1	nogas	160509	0.00
Cr	52	1	nogas	2134584	0.00
Co	59	1	nogas	1969208	0.00
Cu	63	1	nogas	1007098	0.00
Zn	66	1	nogas	292454	0.00
Se	77	1	nogas	45183	0.01
Se	82	1	nogas	17172	0.02
Sr	88	1	nogas	2680581	0.00
Mo	95	1	nogas	495683	0.00
Ag	107	1	nogas	1178334	0.00
Cd	111	1	nogas	244588	0.00
Sn	118	1	nogas	754580	0.00
Sb	121	1	nogas	1044901	0.00
Ba	137	1	nogas	381348	0.00
Tl	205	1	nogas	2224773	0.00
Pb	208	1	nogas	2872236	0.00
Si	28	1	nogas	11916019	0.00
Na	23	2	He	15416881	0.00
Mg	24	2	He	8398589	0.00
Al	27	2	He	41242	0.01
K	39	2	He	6584505	0.00
Ca	43	2	He	20008	0.01
Ca	44	2	He	336639	0.00
V	51	2	He	599782	0.00
Cr	52	2	He	676343	0.00
Mn	55	2	He	430626	0.00
Fe	56	2	He	59488177	0.00
Co	59	2	He	972959	0.00
Ni	60	2	He	246056	0.00
Cu	63	2	He	635281	0.00
Zn	66	2	He	119457	0.00

Calibration Standard Report

As	75	2	He	79994	0.00
Sb	121	2	He	497492	0.00
Se	78	2	He	6009	0.06

Calibration Standard Report

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1285737	0.88	1296302	99.19	70	120	
In	115	1	nogas	1234228	0.93	1353535	91.19	70	120	
Li	6	1	nogas	556066	0.69	656425	84.71	70	120	
Bi	209	1	nogas	1004801	2.03	1092467	91.98	70	120	
Ge	72	2	He	342687	0.72	366638	93.47	70	120	
In	115	2	He	490337	1.25	519818	94.33	70	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV
Data File Name	026_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\051
Acq Date Time	2020-05-11T13:18:43-05:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	nogas	101.812	1.200	329229	0.10	100	101.8	90	110	
B	11	1	nogas	515.706	2.118	979773	2.20	500	103.1	90	110	
Al	27	1	nogas	103.945	0.688	953653	0.84	100	103.9	90	110	
P	31	1	nogas	555.551	0.684	309935	0.67	500	111.1	90	110	ICV Main CR1 Failed
Ca	44	1	nogas	10470.133	0.945	2890965	1.32	10000	104.7	90	110	
Ti	47	1	nogas	104.759	0.781	82422	1.22	100	104.8	90	110	
Cr	52	1	nogas	98.122	0.620	1038419	0.15	100	98.1	90	110	
Co	59	1	nogas	107.312	1.925	1035248	1.60	100	107.3	90	110	
Cu	63	1	nogas	109.745	0.588	543387	0.58	100	109.7	90	110	
Zn	66	1	nogas	106.725	2.330	153648	2.33	100	106.7	90	110	
Se	77	1	nogas	39.647	30.828	33551	1.88	100	39.6	90	110	ICV Main CR1 Failed
Se	82	1	nogas	107.981	4.515	9042	4.13	100	108.0	90	110	
Sr	88	1	nogas	95.365	1.323	1306260	1.02	100	95.4	90	110	
Mo	95	1	nogas	98.421	4.067	250992	1.92	100	98.4	90	110	
Ag	107	1	nogas	100.928	4.129	615840	2.02	100	100.9	90	110	
Cd	111	1	nogas	100.499	3.439	127270	1.28	100	100.5	90	110	
Sn	118	1	nogas	98.545	2.484	382115	1.16	100	98.5	90	110	
Sb	121	1	nogas	110.637	1.168	563159	0.75	100	110.6	90	110	ICV Main CR1 Failed
Ba	137	1	nogas	102.150	3.120	200639	1.01	100	102.1	90	110	
Tl	205	1	nogas	98.122	3.500	1130410	1.71	100	98.1	90	110	
Pb	208	1	nogas	99.838	2.216	1500466	0.13	100	99.8	90	110	
U	238	1	nogas	95.239	3.767	1654675	3.05	100	95.2	90	110	
Li	7	1	nogas	97.445	1.162	1000417	0.21	100	97.4	90	110	
Si	28	1	nogas	8571.450	5.783	11017264	2.05	5000	171.4	90	110	ICV Main CR1 Failed
Tl	203	1	nogas	102.885	3.217	467099	1.26	100	102.9	90	110	
Na	23	2	He	10021.784	1.567	7883236	0.61	10000	100.2	90	110	
Mg	24	2	He	10180.895	0.954	4365057	1.21	10000	101.8	90	110	
Al	27	2	He	104.355	1.912	21966	0.87	100	104.4	90	110	
K	39	2	He	10406.166	1.883	3515110	0.53	10000	104.1	90	110	
Ca	43	2	He	10550.743	3.362	10683	1.32	10000	105.5	90	110	
Ca	44	2	He	10122.537	4.111	173224	2.25	10000	101.2	90	110	
V	51	2	He	99.704	3.513	308695	1.46	100	99.7	90	110	
Cr	52	2	He	100.450	3.763	346794	1.65	100	100.4	90	110	
Mn	55	2	He	102.633	2.745	225509	0.79	100	102.6	90	110	
Fe	56	2	He	10068.576	1.336	30528393	1.21	10000	100.7	90	110	
Co	59	2	He	103.268	0.893	512543	1.28	100	103.3	90	110	
Ni	60	2	He	104.158	1.623	130833	0.89	100	104.2	90	110	
Cu	63	2	He	107.169	2.446	347907	1.14	100	107.2	90	110	
Zn	66	2	He	102.500	2.470	62774	1.89	100	102.5	90	110	
As	75	2	He	106.199	2.271	43290	0.72	100	106.2	90	110	
Sn	118	2	He	100.088	1.815	185108	1.46	100	100.1	90	110	
Sb	121	2	He	105.239	2.858	265930	1.06	100	105.2	90	110	
Se	78	2	He	104.463	4.270	3192	2.90	100	104.5	90	110	
Ti	47	2	He	103.296	2.362	10403	1.13	100	103.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1261860	0.44	1296302	97.34	70	120	
In	115	1	nogas	1284131	2.20	1353535	94.87	70	120	
Li	6	1	nogas	589262	1.12	656425	89.77	70	120	
Bi	209	1	nogas	1059579	2.13	1092467	96.99	70	120	
Ge	72	2	He	349556	2.08	366638	95.34	70	120	

Initial Calibration Verification (ICV) Report

In	115	2	He	495978	1.42	519818	95.41	70	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	029_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\051
Acq Date Time	2020-05-11T13:25:51-05:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.009	31.3	88	11.8	1	
B	11	1	nogas	5.971	11.4	23531	5.6	10	
Al	27	1	nogas	-0.460	-17.7	20388	3.2	5	
P	31	1	nogas	-5.429	-52.0	60299	3.0	10	
Ca	44	1	nogas	-83.968	-3.9	103185	2.6	100	
Ti	47	1	nogas	0.040	62.8	203	10.2	2.5	
Cr	52	1	nogas	-1.205	-11.4	46338	1.4	2.5	
Co	59	1	nogas	0.001	120.0	287	5.3	2.5	
Cu	63	1	nogas	-0.053	-8.6	1353	3.3	1	
Zn	66	1	nogas	-0.594	-8.6	1610	4.5	2.5	
Se	77	1	nogas	-67.181	-30.7	28777	3.9	2.5	
Se	82	1	nogas	0.561	105.0	-64	-81.0	1	
Sr	88	1	nogas	0.006	103.2	1550	5.7	2.5	
Mo	95	1	nogas	0.027	25.6	140	12.4	2.5	
Ag	107	1	nogas	-0.059	-4.3	97	15.8	2.5	
Cd	111	1	nogas	0.003	166.2	17	34.6	1	
Sn	118	1	nogas	0.152	17.0	1137	8.1	5	
Sb	121	1	nogas	0.117	24.9	1133	12.4	2.5	
Ba	137	1	nogas	-0.039	-32.7	243	10.3	2.5	
Tl	205	1	nogas	0.034	31.3	477	28.3	1	
Pb	208	1	nogas	0.011	89.8	543	26.9	2.5	
U	238	1	nogas	0.012	16.4	247	15.3	2.5	
Si	28	1	nogas	-1015.009	-41.4	7528164	0.7	5	
Na	23	2	He	3.029	25.0	28231	2.9	100	
Mg	24	2	He	0.260	25.3	557	5.5	100	
Al	27	2	He	0.388	153.6	520	23.3	5	
K	39	2	He	2.779	115.5	47290	1.5	100	
Ca	43	2	He	16.271	34.1	23	24.7	100	
Ca	44	2	He	-4.391	-48.5	457	8.3	100	
V	51	2	He	-1.698	-4.0	6310	3.8	2.5	
Cr	52	2	He	-0.007	-638.0	720	21.7	2.5	
Mn	55	2	He	0.004	253.1	127	19.9	2.5	
Fe	56	2	He	-0.036	-289.5	5871	4.7	100	
Co	59	2	He	0.010	97.6	133	35.4	2.5	
Ni	60	2	He	-0.001	-1340.6	53	43.3	2.5	
Cu	63	2	He	-0.005	-358.6	717	7.9	1	

Initial Calibration Blank (ICB) Report

Zn	66	2	He	-0.345	-28.0	747	8.9	2.5	
As	75	2	He	0.009	704.1	112	24.0	2.5	
Sb	121	2	He	0.108	34.1	543	17.9	2.5	
Se	78	2	He	0.090	254.4	36	20.0	1	
Ti	47	2	He	-0.095	0.0	0	#DIV/0!	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1347494	1.77	1296302	103.95	70	120	
In	115	1	nogas	1336307	1.10	1353535	98.73	70	120	
Li	6	1	nogas	658464	0.91	656425	100.31	70	120	
Bi	209	1	nogas	1094482	2.05	1092467	100.18	70	120	
Ge	72	2	He	357611	0.94	366638	97.54	70	120	
In	115	2	He	511416	0.94	519818	98.38	70	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	031ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\051
Acq Date Time	2020-05-11T13:31:02-05:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.001	299.9	53	14.3	0	ICSA Main CR1 Failed
B	11	1	nogas	3.884	4.9	17114	1.8	0	ICSA Main CR1 Failed
Al	27	1	nogas	86275.182	2.8	765507109	0.1	0	
P	31	1	nogas	89160.815	2.0	39996839	0.9	0	
Ca	44	1	nogas	92641.475	2.4	24432665	1.0	0	
Ti	47	1	nogas	2041.422	3.2	1588993	0.3	0	
Cr	52	1	nogas	0.427	33.6	59251	2.6	0	ICSA Main CR1 Failed
Co	59	1	nogas	0.481	7.7	4851	5.2	0	ICSA Main CR1 Failed
Cu	63	1	nogas	3.161	10.3	17002	10.2	0	
Zn	66	1	nogas	1.718	22.4	4741	10.0	0	ICSA Main CR1 Failed
Se	77	1	nogas	-59.907	-63.3	27148	6.7	0	ICSA Main CR1 Failed
Se	82	1	nogas	-0.113	-1026.5	-115	-83.6	0	ICSA Main CR1 Failed
Sr	88	1	nogas	0.825	5.3	11364	3.3	0	ICSA Main CR1 Failed
Mo	95	1	nogas	2000.365	4.0	4570178	1.7	0	
Ag	107	1	nogas	-0.047	-14.1	147	27.6	0	ICSA Main CR1 Failed
Cd	111	1	nogas	3.842	5.5	4377	8.1	0	
Sn	118	1	nogas	0.126	37.2	887	16.1	0	ICSA Main CR1 Failed
Sb	121	1	nogas	0.108	24.1	1007	10.4	0	ICSA Main CR1 Failed
Ba	137	1	nogas	0.005	248.7	287	5.3	0	ICSA Main CR1 Failed
Tl	205	1	nogas	0.025	13.8	317	10.2	0	ICSA Main CR1 Failed
Pb	208	1	nogas	0.052	15.3	1013	11.9	0	ICSA Main CR1 Failed
Si	28	1	nogas	-415.179	-111.8	7236682	1.6	0	ICSA Main CR1 Failed
Na	23	2	He	96733.850	0.8	70617252	1.0	0	
Mg	24	2	He	95618.753	1.9	38149555	2.0	0	
Al	27	2	He	92797.817	1.3	17826361	1.5	0	
K	39	2	He	97611.750	0.5	30335544	0.5	0	
Ca	43	2	He	94002.973	0.9	88566	1.3	0	
Ca	44	2	He	97893.717	1.4	1555376	0.8	0	
V	51	2	He	-1.931	-3.1	5090	2.6	0	ICSA Main CR1 Failed
Cr	52	2	He	0.914	5.4	3610	4.9	0	ICSA Main CR1 Failed
Mn	55	2	He	0.254	7.2	627	6.4	0	ICSA Main CR1 Failed
Fe	56	2	He	94837.758	0.2	267569649	0.6	0	
Co	59	2	He	0.182	2.7	917	2.7	0	ICSA Main CR1 Failed
Ni	60	2	He	0.219	4.7	307	3.8	0	ICSA Main CR1 Failed
Cu	63	2	He	0.499	16.7	2170	11.8	0	ICSA Main CR1 Failed
Zn	66	2	He	0.505	35.4	1157	9.1	0	ICSA Main CR1 Failed
As	75	2	He	0.148	33.9	154	11.9	0	ICSA Main CR1 Failed
Sb	121	2	He	0.138	19.4	563	11.8	0	ICSA Main CR1 Failed
Se	78	2	He	0.445	123.2	43	35.8	0	ICSA Main CR1 Failed
Ti	47	2	He	1983.487	0.3	185775	0.9	0	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1251476	2.96	1296302	96.54	70	120	

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Interference Check Solution A (ICS-A) Report

In	115	1	nogas	1150903	3.09	1353535	85.03	70	120	
Li	6	1	nogas	588487	0.51	656425	89.65	70	120	
Bi	209	1	nogas	941780	1.59	1092467	86.21	70	120	
Ge	72	2	He	325271	0.69	366638	88.72	70	120	
In	115	2	He	457482	0.93	519818	88.01	70	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	032ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\051
Acq Date Time	2020-05-11T13:33:22-05:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	nogas	101.234	0.970	312850	0.31	100	101.2	80	120	
B	11	1	nogas	493.267	0.856	895961	0.49	100	493.3	80	120	
Al	27	1	nogas	85516.461	1.729	767233695	0.65	100	85516.5	80	120	ICSB Main CR1 Failed
Ca	44	1	nogas	101105.553	5.474	26936431	3.75	100	101105.6	80	120	
Ti	47	1	nogas	2146.723	6.201	1688755	4.40	100	2146.7	80	120	
Cr	52	1	nogas	93.343	4.861	992412	2.49	100	93.3	80	120	
Co	59	1	nogas	99.351	1.348	960743	0.94	100	99.4	80	120	
Cu	63	1	nogas	103.190	1.651	512225	1.56	100	103.2	80	120	
Zn	66	1	nogas	103.853	2.350	149910	1.22	100	103.9	80	120	
Se	77	1	nogas	88.288	45.312	36614	4.63	100	88.3	80	120	ICSB Main CR1 Failed
Se	82	1	nogas	98.364	2.338	8247	1.11	100	98.4	80	120	
Sr	88	1	nogas	112.570	0.484	1336385	0.45	100	112.6	80	120	
Mo	95	1	nogas	2238.520	0.700	4949312	0.88	100	2238.5	80	120	ICSB Main CR1 Failed
Ag	107	1	nogas	105.875	1.579	560246	2.05	100	105.9	80	120	
Cd	111	1	nogas	112.957	3.111	124038	3.19	100	113.0	80	120	
Sn	118	1	nogas	108.220	1.812	363745	1.45	100	108.2	80	120	
Sb	121	1	nogas	102.687	1.941	523965	1.75	100	102.7	80	120	
Ba	137	1	nogas	114.197	1.212	194449	0.85	100	114.2	80	120	
Tl	205	1	nogas	100.108	6.546	1016520	3.43	100	100.1	80	120	
Pb	208	1	nogas	104.779	4.905	1388270	1.79	100	104.8	80	120	
U	238	1	nogas	110.384	4.742	1691648	4.11	100	110.4	80	120	
Si	28	1	nogas	4564.946	20.525	9378257	2.31	100	4564.9	80	120	ICSB Main CR1 Failed
Na	23	2	He	106301.340	3.343	78556502	1.73	100	106301.3	80	120	
Mg	24	2	He	105817.527	3.270	42739368	1.58	100	105817.5	80	120	
Al	27	2	He	91514.230	2.041	17798943	0.34	100	91514.2	80	120	ICSB Main CR1 Failed
K	39	2	He	106960.780	2.287	33651177	0.60	100	106960.8	80	120	
Ca	43	2	He	105385.171	1.114	100549	2.04	100	105385.2	80	120	
Ca	44	2	He	109306.821	4.528	1758027	3.15	100	109306.8	80	120	
V	51	2	He	106.620	0.897	310454	0.97	100	106.6	80	120	
Cr	52	2	He	104.828	1.274	341143	0.46	100	104.8	80	120	
Mn	55	2	He	104.828	2.899	217075	1.81	100	104.8	80	120	
Fe	56	2	He	104366.035	2.605	298124596	1.61	100	104366.0	80	120	
Co	59	2	He	105.183	1.904	491902	0.22	100	105.2	80	120	
Ni	60	2	He	104.559	2.216	123761	0.84	100	104.6	80	120	
Cu	63	2	He	105.060	2.793	321406	1.14	100	105.1	80	120	
Zn	66	2	He	105.047	1.634	60607	0.77	100	105.0	80	120	
As	75	2	He	109.370	2.495	42010	0.88	100	109.4	80	120	
Sb	121	2	He	107.100	2.335	255079	1.75	100	107.1	80	120	
Se	78	2	He	112.011	1.625	3224	0.38	100	112.0	80	120	
Ti	47	2	He	2098.350	1.189	199003	0.68	100	2098.4	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1265011	2.06	1296302	97.59	70	120	
In	115	1	nogas	1112939	0.49	1353535	82.22	70	120	
Li	6	1	nogas	563115	0.67	656425	85.79	70	120	
Bi	209	1	nogas	934822	3.25	1092467	85.57	70	120	
Ge	72	2	He	329405	1.73	366638	89.84	70	120	
In	115	2	He	457654	1.60	519818	88.04	70	120	

Sample Report

Sample Table

Sample Name	MBLK-153375
Data File Name	058SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\051
Acq Date Time	2020-05-11T14:51:22-05:00
Sample Type	Sample
Dilution	1
Comment	DOD B 153375
ISTD Ref FileName	019CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	-0.003	-0.003	-155.84	43	-0.01	2000	
B	11	1	nogas	2.856	2.856	12.83	16369	0.02	2000	
Al	27	1	nogas	10.283	10.283	4.34	111593	0.01	2000	
Ca	44	1	nogas	-154.282	-154.282	-6.84	75521	-0.20	200000	
Ti	47	1	nogas	0.127	0.127	54.17	250	0.05	2000	
Cr	52	1	nogas	-1.250	-1.250	-20.12	41584	0.00	2000	
Co	59	1	nogas	0.001	0.001	515.49	260	0.00	2000	
Cu	63	1	nogas	0.229	0.229	19.99	2574	0.01	2000	
Zn	66	1	nogas	-0.001	-0.001	-10954.80	2274	0.00	2000	
Se	77	1	nogas	-71.437	-71.437	-35.51	25842	-0.28	2000	
Se	82	1	nogas	1.761	1.761	73.89	40	4.45	2000	
Sr	88	1	nogas	-0.030	-0.030	-24.09	977	0.00	2000	
Mo	95	1	nogas	0.026	0.026	102.43	130	0.02	2000	
Ag	107	1	nogas	-0.064	-0.064	-3.95	63	-0.10	2000	
Cd	111	1	nogas	0.006	0.006	237.47	20	0.03	2000	
Sn	118	1	nogas	0.059	0.059	76.12	720	0.01	2000	
Sb	121	1	nogas	0.083	0.083	16.32	860	0.01	2000	
Ba	137	1	nogas	0.016	0.016	181.42	337	0.00	2000	
Tl	205	1	nogas	0.001	0.001	251.41	83	0.00	2000	
Pb	208	1	nogas	0.046	0.046	20.54	1057	0.00	2000	
U	238	1	nogas	0.002	0.002	4.88	70	0.00	2000	
Li	7	1	nogas	-0.036	-0.036	-105.33	51924	0.00	1000	
Si	28	1	nogas	224.175	224.175	261.34	7324024	0.00	2000	
Tl	203	1	nogas	0.005	0.005	69.45	47	0.01	2000	
Na	23	2	He	43.288	43.288	0.55	57079	0.08	200000	
Mg	24	2	He	15.690	15.690	7.28	6908	0.23	200000	
Al	27	2	He	9.554	9.554	8.38	2317	0.41	2000	
K	39	2	He	16.019	16.019	21.58	48867	0.03	200000	
Ca	43	2	He	10.882	10.882	110.66	17	65.29	200000	
Ca	44	2	He	2.013	2.013	331.55	537	0.38	200000	
V	51	2	He	-2.043	-2.043	-2.15	4957	-0.04	2000	
Cr	52	2	He	0.016	0.016	21.42	757	0.00	2000	
Mn	55	2	He	0.122	0.122	30.59	370	0.03	2000	
Fe	56	2	He	0.964	0.964	5.22	8462	0.01	200000	
Co	59	2	He	-0.009	-0.009	-13.95	37	-0.02	2000	
Ni	60	2	He	0.028	0.028	59.20	87	0.03	2000	

Sample Report

Cu	63	2	He	0.256	0.256	42.93	1493	0.02	2000	
Zn	66	2	He	0.026	0.026	487.50	920	0.00	2000	
As	75	2	He	0.014	0.014	231.42	108	0.01	2000	
Sb	121	2	He	0.138	0.138	48.11	583	0.02	2000	
Se	78	2	He	0.230	0.230	181.81	38	0.61	2000	
Ti	47	2	He	0.247	0.247	85.76	33	0.74	2000	

Sample Report

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1222265	1.92	1296302	94.29	70	120	
In	115	1	nogas	1269209	3.84	1353535	93.77	70	120	
Li	6	1	nogas	634552	0.66	656425	96.67	70	120	
Bi	209	1	nogas	1060419	2.43	1092467	97.07	70	120	
Ge	72	2	He	337228	0.94	366638	91.98	70	120	
In	115	2	He	480798	0.86	519818	92.49	70	120	

Sample Report

Sample Table

Sample Name	LCS-153375
Data File Name	059SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\051
Acq Date Time	2020-05-11T14:53:46-05:00
Sample Type	Sample
Dilution	1
Comment	DOD B 153375
ISTD Ref FileName	019CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	45.561	45.561	1.68	146564	0.03	2000	
B	11	1	nogas	2.205	2.205	2.51	14731	0.01	2000	
Al	27	1	nogas	57.062	57.062	1.35	505885	0.01	2000	
Ca	44	1	nogas	4906.703	4906.703	2.78	1343308	0.37	200000	
Ti	47	1	nogas	48.755	48.755	2.16	36419	0.13	2000	
Cr	52	1	nogas	44.646	44.646	2.76	476256	0.01	2000	
Co	59	1	nogas	50.034	50.034	2.73	457391	0.01	2000	
Cu	63	1	nogas	51.056	51.056	2.57	240251	0.02	2000	
Zn	66	1	nogas	50.613	50.613	0.88	70208	0.07	2000	
Se	77	1	nogas	-51.771	-51.771	-45.05	26436	-0.20	2000	
Se	82	1	nogas	51.226	51.226	3.14	4010	1.28	2000	
Sr	88	1	nogas	0.032	0.032	68.69	1713	0.00	2000	
Mo	95	1	nogas	47.581	47.581	1.58	113459	0.04	2000	
Ag	107	1	nogas	50.043	50.043	2.27	285643	0.02	2000	
Cd	111	1	nogas	49.095	49.095	0.44	58126	0.08	2000	
Sn	118	1	nogas	0.091	0.091	36.01	800	0.01	2000	
Sb	121	1	nogas	49.587	49.587	0.71	239376	0.02	2000	
Ba	137	1	nogas	47.531	47.531	1.25	87414	0.05	2000	
Tl	205	1	nogas	42.329	42.329	1.02	478597	0.01	2000	
Pb	208	1	nogas	45.310	45.310	1.13	668371	0.01	2000	
U	238	1	nogas	0.001	0.001	49.68	57	0.00	2000	
Li	7	1	nogas	0.059	0.059	132.23	51699	0.00	1000	
Si	28	1	nogas	587.647	587.647	70.61	7309129	0.01	2000	
Tl	203	1	nogas	45.336	45.336	2.18	201977	0.02	2000	
Na	23	2	He	4898.766	4898.766	0.73	3738555	0.13	200000	
Mg	24	2	He	4985.586	4985.586	1.91	2066969	0.24	200000	
Al	27	2	He	54.444	54.444	3.02	11280	0.48	2000	
K	39	2	He	4955.086	4955.086	2.58	1641482	0.30	200000	
Ca	43	2	He	4581.816	4581.816	3.25	4491	102.03	200000	
Ca	44	2	He	4663.486	4663.486	1.63	77464	6.02	200000	
V	51	2	He	44.498	44.498	0.62	139265	0.03	2000	
Cr	52	2	He	46.891	46.891	2.08	156963	0.03	2000	
Mn	55	2	He	46.711	46.711	1.62	99319	0.05	2000	
Fe	56	2	He	4664.191	4664.191	0.38	13677008	0.03	200000	
Co	59	2	He	47.186	47.186	0.26	226480	0.02	2000	
Ni	60	2	He	48.607	48.607	1.43	59065	0.08	2000	
Cu	63	2	He	48.718	48.718	1.88	153319	0.03	2000	
Zn	66	2	He	47.631	47.631	1.42	28693	0.17	2000	

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As	75	2	He	47.785	47.785	1.54	18893	0.25	2000	
Sb	121	2	He	46.726	46.726	1.86	114328	0.04	2000	
Se	78	2	He	48.105	48.105	4.66	1439	3.34	2000	
Ti	47	2	He	47.907	47.907	2.06	4671	1.03	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1195497	0.69	1296302	92.22	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
In	115	1	nogas	1199824	1.31	1353535	88.64	70	120	
Li	6	1	nogas	620945	1.23	656425	94.59	70	120	
Bi	209	1	nogas	1039427	1.43	1092467	95.14	70	120	
Ge	72	2	He	337934	0.02	366638	92.17	70	120	
In	115	2	He	468713	1.14	519818	90.17	70	120	

Sample Report

Sample Table

Sample Name	HS20050176-01
Data File Name	060SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\051
Acq Date Time	2020-05-11T14:56:09-05:00
Sample Type	Sample
Dilution	1
Comment	DOD B 153375
ISTD Ref FileName	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	0.052	0.052	19.40	203	0.03	2000	
B	11	1	nogas	35.771	35.771	0.76	74928	0.05	2000	
Al	27	1	nogas	49.882	49.882	1.47	413300	0.01	2000	
Ca	44	1	nogas	7574.227	7574.227	1.33	1869200	0.41	200000	
Ti	47	1	nogas	4.870	4.870	8.71	3504	0.14	2000	
Cr	52	1	nogas	4.096	4.096	7.91	84920	0.00	2000	
Co	59	1	nogas	2.333	2.333	1.36	20028	0.01	2000	
Cu	63	1	nogas	21.996	21.996	6.18	96898	0.02	2000	
Zn	66	1	nogas	60.768	60.768	1.36	77868	0.08	2000	
Se	77	1	nogas	-65.881	-65.881	-48.60	23789	-0.28	2000	
Se	82	1	nogas	-3.292	-3.292	-32.01	-340	0.97	2000	
Sr	88	1	nogas	156.704	156.704	0.60	1870309	0.01	2000	
Mo	95	1	nogas	1.793	1.793	7.28	4044	0.04	2000	
Ag	107	1	nogas	-0.056	-0.056	-5.45	93	-0.06	2000	
Cd	111	1	nogas	0.105	0.105	5.69	127	0.08	2000	
Sn	118	1	nogas	0.057	0.057	36.65	630	0.01	2000	
Sb	121	1	nogas	0.872	0.872	7.55	4314	0.02	2000	
Ba	137	1	nogas	64.434	64.434	1.10	110445	0.06	2000	
Tl	205	1	nogas	0.148	0.148	39.48	1573	0.01	2000	
Pb	208	1	nogas	0.183	0.183	6.78	2743	0.01	2000	
U	238	1	nogas	0.348	0.348	4.05	5351	0.01	2000	
Li	7	1	nogas	17.980	17.980	1.89	203718	0.01	1000	
Si	28	1	nogas	175523.675	175523.675	0.50	70457771	0.25	2000	>LDR
Tl	203	1	nogas	0.179	0.179	33.51	740	0.02	2000	
Na	23	2	He	313526.134	313526.134	1.75	221550937	0.14	200000	>LDR
Mg	24	2	He	12321.252	12321.252	0.98	4759613	0.26	200000	
Al	27	2	He	57.325	57.325	12.32	11039	0.52	2000	
K	39	2	He	1479.854	1479.854	0.99	485416	0.30	200000	
Ca	43	2	He	7487.637	7487.637	8.51	6831	109.61	200000	
Ca	44	2	He	7525.407	7525.407	3.71	116172	6.48	200000	
V	51	2	He	-1.193	-1.193	-13.20	6915	-0.02	2000	
Cr	52	2	He	5.436	5.436	2.15	17539	0.03	2000	
Mn	55	2	He	122.224	122.224	0.96	241983	0.05	2000	
Fe	56	2	He	231.554	231.554	3.34	637590	0.04	200000	
Co	59	2	He	2.260	2.260	10.47	10173	0.02	2000	
Ni	60	2	He	5.808	5.808	4.58	6621	0.09	2000	
Cu	63	2	He	2.041	2.041	4.93	6601	0.03	2000	
Zn	66	2	He	59.647	59.647	2.47	33264	0.18	2000	

Sample Report

As	75	2	He	0.706	0.706	12.06	354	0.20	2000	
Sb	121	2	He	0.824	0.824	6.06	2107	0.04	2000	
Se	78	2	He	0.589	0.589	92.96	45	1.30	2000	
Ti	47	2	He	1.268	1.268	27.43	123	1.03	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1110339	0.56	1296302	85.65	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
In	115	1	nogas	1119199	1.13	1353535	82.69	70	120	
Li	6	1	nogas	572596	0.99	656425	87.23	70	120	
Bi	209	1	nogas	933552	1.85	1092467	85.45	70	120	
Ge	72	2	He	314897	0.94	366638	85.89	70	120	
In	115	2	He	441849	3.39	519818	85.00	70	120	

Sample Report

Sample Table

Sample Name	HS20050176-01SD
Data File Name	061SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\051
Acq Date Time	2020-05-11T14:58:33-05:00
Sample Type	Sample
Dilution	5
Comment	DOD B 153375
ISTD Ref FileName	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	0.009	0.045	62.86	80	0.01	2000	
B	11	1	nogas	9.201	46.003	0.25	27615	0.03	2000	
Al	27	1	nogas	10.927	54.636	3.86	107623	0.01	2000	
Ca	44	1	nogas	1397.885	6989.427	0.47	434827	0.32	200000	
Ti	47	1	nogas	0.987	4.933	5.10	830	0.12	2000	
Cr	52	1	nogas	0.209	1.047	58.75	51211	0.00	2000	
Co	59	1	nogas	0.492	2.458	1.95	4447	0.01	2000	
Cu	63	1	nogas	1.421	7.103	4.36	7595	0.02	2000	
Zn	66	1	nogas	12.321	61.603	1.54	17622	0.07	2000	
Se	77	1	nogas	-39.329	-196.645	-9.44	25502	-0.15	2000	
Se	82	1	nogas	0.387	1.937	342.17	-67	-0.58	2000	
Sr	88	1	nogas	30.549	152.747	0.41	373535	0.01	2000	
Mo	95	1	nogas	0.422	2.108	12.38	1017	0.04	2000	
Ag	107	1	nogas	-0.056	-0.281	-19.76	97	-0.06	2000	
Cd	111	1	nogas	0.031	0.157	43.17	47	0.07	2000	
Sn	118	1	nogas	0.069	0.346	10.70	687	0.01	2000	
Sb	121	1	nogas	0.294	1.468	8.59	1743	0.02	2000	
Ba	137	1	nogas	13.247	66.233	1.60	23420	0.06	2000	
Tl	205	1	nogas	0.018	0.089	20.88	250	0.01	2000	
Pb	208	1	nogas	0.049	0.247	22.66	997	0.00	2000	
U	238	1	nogas	0.064	0.320	8.04	1040	0.01	2000	
Li	7	1	nogas	3.857	19.283	4.84	84555	0.00	1000	
Si	28	1	nogas	35531.367	177656.837	1.51	19713413	0.18	2000	>LDR
Tl	203	1	nogas	0.019	0.093	12.43	100	0.02	2000	
Na	23	2	He	61837.333	309186.666	1.78	45218286	0.14	200000	
Mg	24	2	He	2358.731	11793.657	0.88	942901	0.25	200000	
Al	27	2	He	9.966	49.832	9.97	2317	0.43	2000	
K	39	2	He	298.546	1492.732	0.55	135017	0.22	200000	
Ca	43	2	He	1559.339	7796.695	7.98	1477	105.59	200000	
Ca	44	2	He	1464.524	7322.622	1.94	23782	6.16	200000	
V	51	2	He	-1.400	-7.001	-4.84	6575	-0.02	2000	
Cr	52	2	He	1.055	5.274	3.45	4067	0.03	2000	
Mn	55	2	He	24.392	121.958	1.92	50045	0.05	2000	
Fe	56	2	He	46.283	231.417	3.01	136214	0.03	200000	
Co	59	2	He	0.436	2.179	4.50	2093	0.02	2000	
Ni	60	2	He	1.085	5.425	11.08	1320	0.08	2000	
Cu	63	2	He	0.695	3.477	5.12	2767	0.03	2000	
Zn	66	2	He	11.497	57.486	5.02	7338	0.16	2000	

Sample Report

As	75	2	He	0.180	0.898	67.73	167	0.11	2000	
Sb	121	2	He	0.285	1.424	10.57	910	0.03	2000	
Se	78	2	He	0.156	0.779	199.90	35	0.45	2000	
Ti	47	2	He	0.082	0.412	197.33	17	0.49	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1122192	1.11	1296302	86.57	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
In	115	1	nogas	1143488	0.09	1353535	84.48	70	120	
Li	6	1	nogas	599639	0.83	656425	91.35	70	120	
Bi	209	1	nogas	959409	1.63	1092467	87.82	70	120	
Ge	72	2	He	325766	0.72	366638	88.85	70	120	
In	115	2	He	454066	0.94	519818	87.35	70	120	

Sample Report

Sample Table

Sample Name	HS20050176-01MS
Data File Name	062SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\051
Acq Date Time	2020-05-11T15:00:55-05:00
Sample Type	Sample
Dilution	1
Comment	DOD B 153375
ISTD Ref FileName	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	46.254	46.254	0.37	139289	0.03	2000	
B	11	1	nogas	34.328	34.328	2.96	73371	0.05	2000	
Al	27	1	nogas	98.924	98.924	3.22	811672	0.01	2000	
Ca	44	1	nogas	12458.297	12458.297	0.54	3052326	0.41	200000	
Ti	47	1	nogas	54.325	54.325	1.77	38243	0.14	2000	
Cr	52	1	nogas	46.203	46.203	1.18	462962	0.01	2000	
Co	59	1	nogas	50.727	50.727	1.03	437264	0.01	2000	
Cu	63	1	nogas	61.937	61.937	3.48	274540	0.02	2000	
Zn	66	1	nogas	108.273	108.273	1.61	139198	0.08	2000	
Se	77	1	nogas	-38.099	-38.099	-70.18	25685	-0.15	2000	
Se	82	1	nogas	49.633	49.633	5.72	3661	1.36	2000	
Sr	88	1	nogas	158.100	158.100	2.13	1894490	0.01	2000	
Mo	95	1	nogas	49.132	49.132	1.83	109735	0.04	2000	
Ag	107	1	nogas	47.050	47.050	2.23	251568	0.02	2000	
Cd	111	1	nogas	46.549	46.549	1.17	51616	0.09	2000	
Sn	118	1	nogas	0.051	0.051	21.24	613	0.01	2000	
Sb	121	1	nogas	49.466	49.466	1.75	225147	0.02	2000	
Ba	137	1	nogas	111.266	111.266	1.18	191301	0.06	2000	
Tl	205	1	nogas	42.366	42.366	1.41	431664	0.01	2000	
Pb	208	1	nogas	44.926	44.926	0.70	597212	0.01	2000	
U	238	1	nogas	0.356	0.356	4.32	5504	0.01	2000	
Li	7	1	nogas	18.051	18.051	1.55	207407	0.01	1000	
Si	28	1	nogas	174309.270	174309.270	0.41	71074347	0.25	2000	>LDR
Tl	203	1	nogas	45.221	45.221	1.03	181582	0.02	2000	
Na	23	2	He	310443.565	310443.565	2.93	221440450	0.14	200000	>LDR
Mg	24	2	He	16732.723	16732.723	3.07	6524824	0.26	200000	
Al	27	2	He	100.292	100.292	1.00	19227	0.52	2000	
K	39	2	He	6557.680	6557.680	3.57	2030129	0.32	200000	
Ca	43	2	He	11925.409	11925.409	8.18	10980	108.61	200000	
Ca	44	2	He	12177.677	12177.677	4.03	189496	6.43	200000	
V	51	2	He	45.736	45.736	2.67	134376	0.03	2000	
Cr	52	2	He	48.514	48.514	2.92	152741	0.03	2000	
Mn	55	2	He	167.160	167.160	1.99	334119	0.05	2000	
Fe	56	2	He	4959.472	4959.472	1.65	13682394	0.04	200000	
Co	59	2	He	49.700	49.700	3.35	224385	0.02	2000	
Ni	60	2	He	51.250	51.250	3.66	58577	0.09	2000	
Cu	63	2	He	49.030	49.030	3.79	145131	0.03	2000	
Zn	66	2	He	104.640	104.640	2.49	58279	0.18	2000	

Sample Report

As	75	2	He	49.064	49.064	3.71	18245	0.27	2000	
Sb	121	2	He	47.601	47.601	5.48	109525	0.04	2000	
Se	78	2	He	49.547	49.547	5.53	1393	3.56	2000	
Ti	47	2	He	51.023	51.023	5.67	4677	1.09	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1127100	0.38	1296302	86.95	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
In	115	1	nogas	1123741	0.65	1353535	83.02	70	120	
Li	6	1	nogas	581214	1.34	656425	88.54	70	120	
Bi	209	1	nogas	936646	0.54	1092467	85.74	70	120	
Ge	72	2	He	318007	1.83	366638	86.74	70	120	
In	115	2	He	453621	1.21	519818	87.27	70	120	

Sample Report

Sample Table

Sample Name	HS20050176-01MSD
Data File Name	063SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\051
Acq Date Time	2020-05-11T15:03:18-05:00
Sample Type	Sample
Dilution	1
Comment	DOD B 153375
ISTD Ref FileName	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	48.698	48.698	1.26	147069	0.03	2000	
B	11	1	nogas	37.465	37.465	0.99	79443	0.05	2000	
Al	27	1	nogas	108.276	108.276	3.14	886954	0.01	2000	
Ca	44	1	nogas	13067.202	13067.202	1.24	3198528	0.41	200000	
Ti	47	1	nogas	56.666	56.666	0.66	39917	0.14	2000	
Cr	52	1	nogas	49.340	49.340	1.65	491369	0.01	2000	
Co	59	1	nogas	53.329	53.329	2.10	459959	0.01	2000	
Cu	63	1	nogas	74.582	74.582	2.71	330621	0.02	2000	
Zn	66	1	nogas	113.854	113.854	1.06	146382	0.08	2000	
Se	77	1	nogas	-33.275	-33.275	-56.65	25975	-0.13	2000	
Se	82	1	nogas	48.933	48.933	3.09	3612	1.35	2000	
Sr	88	1	nogas	167.326	167.326	2.11	2006685	0.01	2000	
Mo	95	1	nogas	52.275	52.275	2.45	116851	0.04	2000	
Ag	107	1	nogas	49.130	49.130	0.96	262912	0.02	2000	
Cd	111	1	nogas	49.380	49.380	2.62	54799	0.09	2000	
Sn	118	1	nogas	0.061	0.061	32.58	647	0.01	2000	
Sb	121	1	nogas	53.382	53.382	1.11	243098	0.02	2000	
Ba	137	1	nogas	117.998	117.998	1.80	203029	0.06	2000	
Tl	205	1	nogas	44.733	44.733	2.01	451778	0.01	2000	
Pb	208	1	nogas	48.284	48.284	2.69	636099	0.01	2000	
U	238	1	nogas	0.359	0.359	4.89	5501	0.01	2000	
Li	7	1	nogas	19.128	19.128	1.92	217590	0.01	1000	
Si	28	1	nogas	188006.453	188006.453	1.25	76187289	0.25	2000	>LDR
Tl	203	1	nogas	47.776	47.776	2.43	190127	0.03	2000	
Na	23	2	He	326128.957	326128.957	1.95	235002943	0.14	200000	>LDR
Mg	24	2	He	17678.986	17678.986	1.30	6965302	0.25	200000	
Al	27	2	He	98.164	98.164	3.20	19013	0.52	2000	
K	39	2	He	6693.726	6693.726	1.40	2092995	0.32	200000	
Ca	43	2	He	12276.467	12276.467	6.78	11420	107.50	200000	
Ca	44	2	He	12672.296	12672.296	3.55	199195	6.36	200000	
V	51	2	He	49.063	49.063	1.07	144877	0.03	2000	
Cr	52	2	He	51.835	51.835	0.96	164833	0.03	2000	
Mn	55	2	He	173.078	173.078	1.67	349446	0.05	2000	
Fe	56	2	He	5093.214	5093.214	2.11	14192191	0.04	200000	
Co	59	2	He	50.636	50.636	1.96	230965	0.02	2000	
Ni	60	2	He	53.893	53.893	1.46	62232	0.09	2000	
Cu	63	2	He	51.213	51.213	3.64	153106	0.03	2000	
Zn	66	2	He	111.251	111.251	1.38	62547	0.18	2000	

Sample Report

As	75	2	He	52.003	52.003	2.56	19529	0.27	2000	
Sb	121	2	He	49.711	49.711	3.95	115553	0.04	2000	
Se	78	2	He	52.513	52.513	3.68	1490	3.52	2000	
Ti	47	2	He	53.271	53.271	3.74	4934	1.08	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1127994	1.43	1296302	87.02	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
In	115	1	nogas	1124669	0.33	1353535	83.09	70	120	
Li	6	1	nogas	582957	0.87	656425	88.81	70	120	
Bi	209	1	nogas	928520	1.48	1092467	84.99	70	120	
Ge	72	2	He	321200	1.42	366638	87.61	70	120	
In	115	2	He	446091	0.70	519818	85.82	70	120	

Sample Report

Sample Table

Sample Name	HS20050176-01PDS
Data File Name	064SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\051
Acq Date Time	2020-05-11T15:05:40-05:00
Sample Type	Sample
Dilution	1
Comment	DOD B 153375
ISTD Ref FileName	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	97.645	97.645	1.11	294559	0.03	2000	
B	11	1	nogas	35.270	35.270	0.67	75284	0.05	2000	
Al	27	1	nogas	161.919	161.919	0.58	1332185	0.01	2000	
Ca	44	1	nogas	17877.016	17877.016	0.67	4389311	0.41	200000	
Ti	47	1	nogas	109.270	109.270	0.74	77768	0.14	2000	
Cr	52	1	nogas	95.661	95.661	1.28	917115	0.01	2000	
Co	59	1	nogas	103.730	103.730	2.02	905278	0.01	2000	
Cu	63	1	nogas	133.969	133.969	3.69	599737	0.02	2000	
Zn	66	1	nogas	164.859	164.859	1.53	213545	0.08	2000	
Se	77	1	nogas	3.097	3.097	638.43	28316	0.01	2000	
Se	82	1	nogas	100.068	100.068	6.98	7572	1.32	2000	
Sr	88	1	nogas	165.913	165.913	2.28	1980697	0.01	2000	
Mo	95	1	nogas	104.616	104.616	2.08	232727	0.04	2000	
Ag	107	1	nogas	95.664	95.664	1.17	509275	0.02	2000	
Cd	111	1	nogas	100.841	100.841	0.83	111406	0.09	2000	
Sn	118	1	nogas	0.063	0.063	37.26	650	0.01	2000	
Sb	121	1	nogas	91.836	91.836	2.76	422947	0.02	2000	
Ba	137	1	nogas	168.417	168.417	3.92	288293	0.06	2000	
Tl	205	1	nogas	90.667	90.667	1.55	925011	0.01	2000	
Pb	208	1	nogas	95.957	95.957	1.12	1277027	0.01	2000	
U	238	1	nogas	0.329	0.329	1.55	5091	0.01	2000	
Li	7	1	nogas	18.574	18.574	1.21	212473	0.01	1000	
Si	28	1	nogas	178580.917	178580.917	1.46	73580612	0.24	2000	>LDR
Tl	203	1	nogas	96.328	96.328	3.52	387234	0.02	2000	
Na	23	2	He	315512.935	315512.935	1.45	230126343	0.14	200000	>LDR
Mg	24	2	He	21955.995	21955.995	1.20	8754550	0.25	200000	
Al	27	2	He	153.559	153.559	5.57	29878	0.51	2000	
K	39	2	He	11539.916	11539.916	1.34	3621250	0.32	200000	
Ca	43	2	He	17073.951	17073.951	0.85	16080	106.18	200000	
Ca	44	2	He	17137.387	17137.387	1.31	272520	6.29	200000	
V	51	2	He	96.843	96.843	0.75	279250	0.03	2000	
Cr	52	2	He	97.906	97.906	0.94	314505	0.03	2000	
Mn	55	2	He	216.491	216.491	0.75	442393	0.05	2000	
Fe	56	2	He	10028.787	10028.787	1.08	28281792	0.04	200000	
Co	59	2	He	98.746	98.746	1.51	455817	0.02	2000	
Ni	60	2	He	100.708	100.708	1.93	117660	0.09	2000	
Cu	63	2	He	98.532	98.532	0.91	297599	0.03	2000	
Zn	66	2	He	155.797	155.797	1.50	88295	0.18	2000	

Sample Report

As	75	2	He	102.009	102.009	0.52	38684	0.26	2000	
Sb	121	2	He	87.184	87.184	0.18	204987	0.04	2000	
Se	78	2	He	100.680	100.680	3.10	2864	3.52	2000	
Ti	47	2	He	103.925	103.925	3.92	9736	1.07	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1141578	0.73	1296302	88.06	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
In	115	1	nogas	1119779	1.62	1353535	82.73	70	120	
Li	6	1	nogas	582403	1.27	656425	88.72	70	120	
Bi	209	1	nogas	938019	1.13	1092467	85.86	70	120	
Ge	72	2	He	325064	0.30	366638	88.66	70	120	
In	115	2	He	450149	1.15	519818	86.60	70	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV
Data File Name	067_CCV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\051
Acq Date Time	2020-05-11T15:13:28-05:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	nogas	96.428	1.141	295066	2.40	100	96.4	90	110	
B	11	1	nogas	438.645	1.660	836862	2.24	500	87.7	90	110	CCV Main CR1-2 Failed
Al	27	1	nogas	99.748	0.284	852135	0.70	100	99.7	90	110	
P	31	1	nogas	517.991	1.318	272512	1.18	500	103.6	90	110	
Ca	44	1	nogas	10159.174	1.665	2612487	1.65	10000	101.6	90	110	
Ti	47	1	nogas	102.451	1.197	74984	1.79	100	102.5	90	110	
Cr	52	1	nogas	96.815	0.885	953734	0.27	100	96.8	90	110	
Co	59	1	nogas	104.091	1.162	934169	1.78	100	104.1	90	110	
Cu	63	1	nogas	104.336	1.771	480643	2.28	100	104.3	90	110	
Zn	66	1	nogas	103.569	0.592	138758	0.12	100	103.6	90	110	
Se	77	1	nogas	29.709	56.595	30643	3.59	100	29.7	90	110	CCV Main CR1-2 Failed
Se	82	1	nogas	100.016	4.442	7785	4.82	100	100.0	90	110	
Sr	88	1	nogas	94.568	0.778	1187328	0.25	100	94.6	90	110	
Mo	95	1	nogas	100.087	0.061	234056	0.57	100	100.1	90	110	
Ag	107	1	nogas	99.517	1.804	556810	1.38	100	99.5	90	110	
Cd	111	1	nogas	99.915	0.650	116021	1.28	100	99.9	90	110	
Sn	118	1	nogas	99.351	0.860	353156	0.50	100	99.4	90	110	
Sb	121	1	nogas	104.802	1.645	496290	2.25	100	104.8	90	110	
Ba	137	1	nogas	99.632	0.440	179431	0.59	100	99.6	90	110	
Tl	205	1	nogas	92.060	2.978	995055	2.09	100	92.1	90	110	
Pb	208	1	nogas	98.003	1.187	1381841	0.31	100	98.0	90	110	
U	238	1	nogas	96.365	1.641	1570713	0.90	100	96.4	90	110	
Li	7	1	nogas	97.692	0.085	926196	1.31	100	97.7	90	110	
Si	28	1	nogas	6265.087	4.879	9360152	0.74	5000	125.3	90	110	CCV Main CR1-2 Failed
Tl	203	1	nogas	97.764	3.732	416405	2.82	100	97.8	90	110	
Na	23	2	He	10130.493	0.915	7419983	1.03	10000	101.3	90	110	
Mg	24	2	He	10115.691	1.126	4038208	1.19	10000	101.2	90	110	
Al	27	2	He	97.949	2.446	19223	2.34	100	97.9	90	110	
K	39	2	He	10240.502	2.096	3221810	2.06	10000	102.4	90	110	
Ca	43	2	He	9927.346	2.198	9363	2.08	10000	99.3	90	110	
Ca	44	2	He	10122.692	1.446	161351	1.33	10000	101.2	90	110	
V	51	2	He	98.961	0.500	285448	0.52	100	99.0	90	110	
Cr	52	2	He	98.874	0.664	317961	0.55	100	98.9	90	110	
Mn	55	2	He	98.607	0.467	201785	0.49	100	98.6	90	110	
Fe	56	2	He	9873.643	0.380	27874915	0.30	10000	98.7	90	110	
Co	59	2	He	101.613	0.934	469568	1.00	100	101.6	90	110	
Ni	60	2	He	102.011	0.644	119314	0.52	100	102.0	90	110	
Cu	63	2	He	102.729	0.948	310592	1.04	100	102.7	90	110	
Zn	66	2	He	99.433	1.138	56731	1.22	100	99.4	90	110	
As	75	2	He	99.642	1.305	37830	1.28	100	99.6	90	110	
Sb	121	2	He	100.622	1.931	236810	1.99	100	100.6	90	110	
Se	78	2	He	102.180	2.265	2909	2.18	100	102.2	90	110	
Ti	47	2	He	104.775	1.783	9826	1.69	100	104.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1173772	0.63	1296302	90.55	70	120	
In	115	1	nogas	1176856	0.63	1353535	86.95	70	120	
Li	6	1	nogas	590664	1.28	656425	89.98	70	120	
Bi	209	1	nogas	993842	0.93	1092467	90.97	70	120	
Ge	72	2	He	325423	0.13	366638	88.76	70	120	
In	115	2	He	464348	1.15	519818	89.33	70	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB
Data File Name	068_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\051
Acq Date Time	2020-05-11T15:15:51-05:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.033	24.7	158	16.2	1	
B	11	1	nogas	6.782	9.6	23728	5.5	10	
Al	27	1	nogas	-0.387	-21.3	18593	1.8	5	
P	31	1	nogas	-1.351	-274.8	54886	1.4	10	
Ca	44	1	nogas	-165.704	-6.6	70572	2.4	100	
Ti	47	1	nogas	0.112	73.0	233	27.6	2.5	
Cr	52	1	nogas	-1.674	-6.8	36446	2.8	2.5	
Co	59	1	nogas	0.019	30.0	420	10.9	2.5	
Cu	63	1	nogas	0.254	17.3	2617	6.4	2	
Zn	66	1	nogas	-0.876	-16.2	1040	16.2	2.5	
Se	77	1	nogas	-121.111	-23.2	22257	8.3	2.5	
Se	82	1	nogas	0.059	2478.2	-97	-119.9	2	
Sr	88	1	nogas	0.009	76.2	1433	6.3	2.5	
Mo	95	1	nogas	0.172	16.4	477	14.0	2.5	
Ag	107	1	nogas	-0.036	-46.7	220	43.4	2.5	
Cd	111	1	nogas	0.007	213.2	20	86.6	1	
Sn	118	1	nogas	0.412	7.6	1977	5.6	5	
Sb	121	1	nogas	0.899	4.4	4744	3.1	2.5	
Ba	137	1	nogas	0.024	170.5	337	22.7	2.5	
Tl	205	1	nogas	0.126	18.7	1457	19.3	1	
Pb	208	1	nogas	0.027	31.8	733	17.7	2.5	
U	238	1	nogas	0.095	40.8	1613	41.3	2.5	
Si	28	1	nogas	637.930	118.1	7282146	3.5	5	CCB Main CR1 Failed
Na	23	2	He	121.589	3.6	115229	2.9	100	CCB Main CR1 Failed
Mg	24	2	He	1.245	15.2	923	8.4	100	
Al	27	2	He	0.305	175.0	470	22.4	5	
K	39	2	He	9.314	25.3	46264	1.6	100	
Ca	43	2	He	7.534	209.8	13	114.6	100	
Ca	44	2	He	-5.204	-78.1	413	16.1	100	
V	51	2	He	-2.019	-1.7	4978	1.9	2.5	
Cr	52	2	He	-0.013	-121.5	653	7.9	2.5	
Mn	55	2	He	-0.003	-692.7	103	40.3	2.5	
Fe	56	2	He	1.096	22.3	8766	8.1	100	
Co	59	2	He	0.016	40.9	153	19.9	2.5	
Ni	60	2	He	0.029	32.8	87	13.3	2.5	
Cu	63	2	He	0.091	13.1	967	3.9	2	
Zn	66	2	He	-0.797	-23.1	437	24.3	2.5	
As	75	2	He	0.020	91.9	109	6.4	2.5	
Sb	121	2	He	0.924	10.4	2477	9.3	2.5	
Se	78	2	He	0.426	83.4	43	23.7	2	
Ti	47	2	He	-0.095	0.0	0	#DIV/0!	2.5	

Continuing Calibration Blank (CCB) Report

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1188248	2.19	1296302	91.66	70	120	
In	115	1	nogas	1209333	0.35	1353535	89.35	70	120	
Li	6	1	nogas	618975	0.24	656425	94.29	70	120	
Bi	209	1	nogas	1011833	1.70	1092467	92.62	70	120	
Ge	72	2	He	334059	0.08	366638	91.11	70	120	
Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
In	115	2	He	469865	0.38	519818	90.39	70	120	

Tune Report

Batch Folder C:\Agilent\ICPMH\1\DATA\051120A.b
Report Comment
Instrument Name G3281A JP11080910

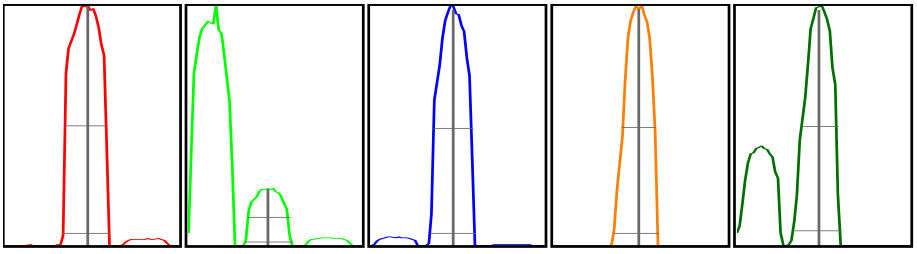
[nogas]

Mass	Range	Count (Actual)	Response (Actual) [cps/ug/l]	Response (Required) [cps/ug/l]	Response (Flag)	Resp Ratio (Actual)	Resp Ratio (Required)	Resp Ratio (Flag)
9		16086				NaN	-	
24		48970				NaN	-	
59		48547				NaN	-	
115		59390				NaN	-	
208		38431				NaN	-	

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)	Background (Actual)	Background (Required)	Background (Flag)
9	0.53	5.00				
24	0.66	5.00				
59	0.70	5.00				
115	0.55	5.00				
208	0.34	5.00				

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	16131	16031	16071	16207	15988
24	49498	48962	48984	48735	48671
59	48792	48454	48339	48156	48995
115	59490	59285	59623	58873	59677
208	38480	38277	38609	38340	38448

Integration Time [sec] 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	W-50%	W-X% (Actual)	W-X% (Required)	W-X% (Flag)
9	2420.83	8.95	8.9 - 9.1		0.70	0.793		
24	7802.29	23.90	23.9 - 24.1		0.68	0.805		
59	8039.18	58.95	58.9 - 59.1		0.64	0.776		
115	10501.28	115.00	114.9 - 115.1		0.59	0.759		
208	6612.50	207.95	207.9 - 208.1		0.60	0.813		

X = 5 **Integration Time [sec]** 0.1 **Acquisition Time [sec]** 168.5 **Y Axis** Linear

Tune Parameters

Plasma Paramters

RF Power	1600 W	Carrier Gas	0.45 L/min	S/C Temp	2 ℃
RF Matching	1.70 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.50 L/min
Smpl Depth	8.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Extract 1	0.0 V	Omega Lens	8.0 V	Deflect	10.0 V
Extract 2	-200.0 V	Cell Entrance	-30 V	Plate Bias	-50 V
Omega Bias	-100 V	Cell Exit	-50 V		

Cell Parameters

OctP Bias	-8.0 V	He Flow	0.0 mL/min	Energy Discrimination	5.0 V
OctP RF	190 V	H2 Flow	0.0 mL/min		
Use Gas	false	3rd Gas Flow	0 %		

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Tune Report

[He]

Mass	Range	Count (Actual)	Response (Actual) [cps/ug/l]	Response (Required) [cps/ug/l]	Response (Flag)	Resp Ratio (Actual)	Resp Ratio (Required)	Resp Ratio (Flag)
9		397				NaN	-	
24		3321				NaN	-	
59		27454				NaN	-	

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)	Background (Actual)	Background (Required)	Background (Flag)
9	4.42	5.00				
24	1.03	5.00				
59	0.35	5.00				

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	402	394	368	409	412
24	3322	3368	3331	3274	3308
59	27467	27392	27618	27398	27394

Integration Time [sec] 0.1

Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	W-50%	W-X% (Actual)	W-X% (Required)	W-X% (Flag)
9	62.64	8.90	8.9 - 9.1		0.68	0.794		
24	521.12	23.95	23.9 - 24.1		0.68	0.795		
59	4551.46	59.00	58.9 - 59.1		0.64	0.769		

X = 5 **Integration Time [sec]** 0.1 **Acquisition Time [sec]** 100.6 **Y Axis** Linear

Tune Parameters

Plasma Paramters

RF Power	1600 W	Carrier Gas	0.45 L/min	S/C Temp	2 ℃
RF Matching	1.70 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.50 L/min
Smpl Depth	8.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Extract 1	0.0 V	Omega Lens	8.0 V	Deflect	2.0 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

OctP Bias	-18.0 V	He Flow	4.3 mL/min	Energy Discrimination	5.0 V
OctP RF	190 V	H2 Flow	0.0 mL/min		
Use Gas	true	3rd Gas Flow	0 %		

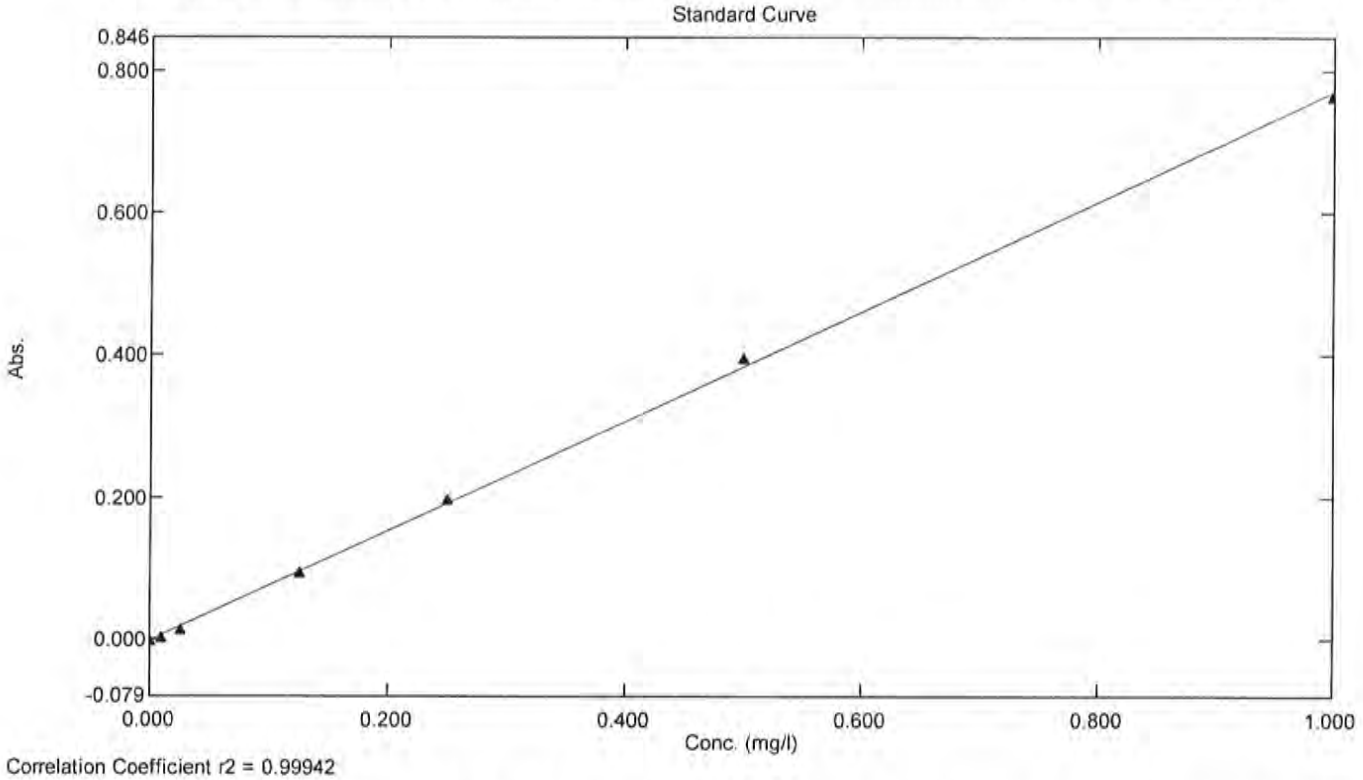
HS20050176 WC CR

ALS WO# HS20050176

Standard Table Report

05/28/2020 04:45:35 PM

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Correlation Coefficient r2 = 0.99942

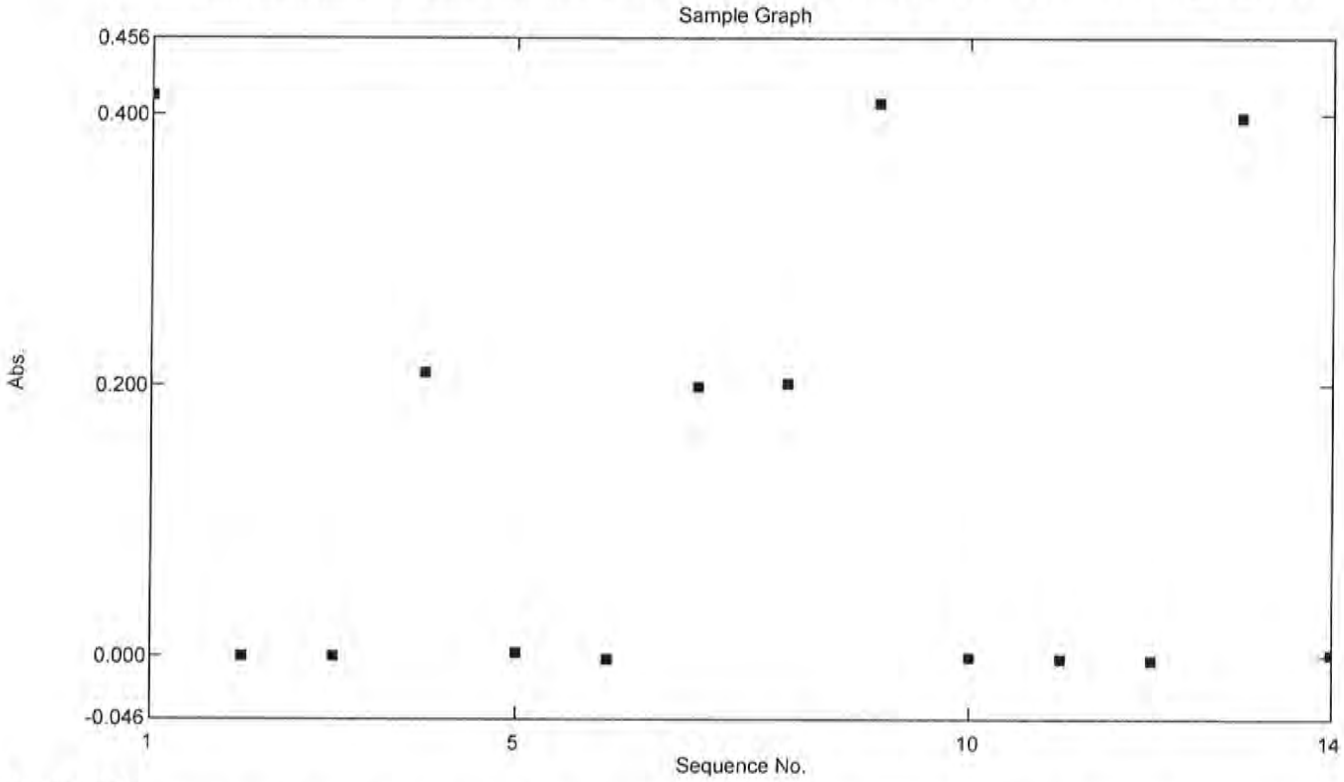
Standard Table

	Sample ID	Type	Ex	Conc	WL540.0	Wgt.Factor	Comments
1	STD1	Standard		0.000	-0.002	1.000	
2	STD2	Standard		0.010	0.002	1.000	
3	STD3	Standard		0.025	0.013	1.000	
4	STD4	Standard		0.125	0.094	1.000	
5	STD5	Standard		0.250	0.197	1.000	
6	STD6	Standard		0.500	0.397	1.000	
7	SYD7	Standard		1.000	0.763	1.000	
8							

Sample Table Report

05/28/2020 04:45:38 PM

File Name: C:\Program Files (x86)\Shimadzu\UVProbe\Data\CR6+_UNKNOWN\2020\05062020CR6_W_.pho



Sample Table

	Sample ID	Type	Ex	Conc	WL540.0	Comments
1	CCV	Unknown		0.539	0.414	313104511 WC-14
2	CCB	Unknown		0.001	-0.001	313102507 WC-13
3	MBLK	Unknown		0.001	-0.000	313103411 WC-13
4	LCS	Unknown		0.273	0.209	313104510 WC-14
5	20050177.01	Unknown		0.005	0.002	1:33PM SAMP-BKG=TOTAL
6	20050177.01BKG	Unknown		-0.001	-0.002	1:34PM 0.005
7	20050177.01MS	Unknown		0.259	0.198	1:35PM
8	20050177.01MSD	Unknown		0.262	0.201	1:36PM
9	CCV2	Unknown		0.531	0.408	
10	CCB2	Unknown		-0.000	-0.002	
11	20050176.01	Unknown		-0.002	-0.003	2:00PM 0
12	20050176.01BKG	Unknown		-0.004	-0.004	2:00PM
13	CCV3	Unknown		0.517	0.397	
14	CCB3	Unknown		0.002	0.000	
15						

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WorkOrder: HS20050177

Longhorn GW Treatment Plant Monthly Influent Samples

Bhate Environmental Associates, Inc.

Marcia Olive
445 Union Blvd Ste 129
Lakewood CO 80228

04-Jun-2020

ALS Environmental
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Form 5B - ICPMS05_361332 PDS
Form 7 - ICPMS05_361332 LCS
Form 8 - ICPMS05_361332 SD
HS20050177 WC CR

HS20050177

ALS WO# HS20050177

HS20050177 Longhorn GW Treatment Plant Monthly Influent Samples Final

ALS WO# HS20050177

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May 21, 2020

Marcia Olive
Bhate Environmental Associates, Inc.
445 Union Blvd Ste 129
Lakewood, CO 80228

Work Order: **HS20050177**

Laboratory Results for: **Longhorn GW Treatment Plant Monthly Influent Samples**

Dear Marcia,

ALS Environmental received 1 sample(s) on May 06, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

ALS Houston, US Date: 21-May-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
Work Order: HS20050177

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20050177-01	LH18/24-SP140_050520	Water		05-May-2020 14:00	06-May-2020 09:00	☐

ALS Houston, US Date: 21-May-20

Client: Bhate Environmental Associates, Inc. **CASE NARRATIVE**
Project: Longhorn GW Treatment Plant Monthly Influent Samples
Work Order: HS20050177

Work Order Comments

• Analysis of Perchlorate was performed by ALS Houston TX, High Resolution. Laboratory. Final report attached

Metals by Method SW6020

Batch ID: 153375

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method SW7196

Batch ID: R361188

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

ALS Houston, US Date: 21-May-20

Client: Bhate Environmental Associates, Inc. **ANALYTICAL REPORT**

Project: Longhorn GW Treatment Plant Monthly Influent Samples WorkOrder:HS20050177

Sample ID: LH18/24-SP140_050520 Lab ID:HS20050177-01

Collection Date: 05-May-2020 14:00 Matrix:Water

ANALYSES	RESULT	QUAL	DL	LOD	LOQ	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY ICPMS BY SW6020A		**Method:SW6020**				Prep:SW3010A / 08-May-2020		Analyst: JC
Selenium	0.00250	U	0.00110	0.00250	0.00500	mg/L	1	11-May-2020 15:08
Silver	0.000500	U	0.000200	0.000500	0.00500	mg/L	1	11-May-2020 15:08
HEXAVALENT CHROMIUM BY SW7196A		**Method:SW7196**						Analyst: TH
Chromium, Hexavalent	**0.00600**	J	**0.00600**	**0.0100**	**0.0100**	**mg/L**	1	06-May-2020 13:30
SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)		**Method:NA**						Analyst: SUB
Subcontract Analysis	See Attached		0	0		NA	1	21-May-2020 10:37

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 21-May-20

Weight / Prep Log

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20050177

Batch ID: 153375 **Start Date:** 08 May 2020 09:30 **End Date:** 08 May 2020 13:30
Method: WATER - SW3010A **Prep Code:** 3010A

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20050177-01		10 (mL)	10 (mL)	1

ALS Houston, US Date: 21-May-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20050177

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 153375 (0)	**Test Name :** METALS BY ICPMS BY SW6020A				**Matrix:** Water	
HS20050177-01	LH18/24-SP140_050520	05 May 2020 14:00		08 May 2020 13:30	11 May 2020 15:08	1
Batch ID: R361188 (0)	**Test Name :** HEXAVALENT CHROMIUM BY SW7196A				**Matrix:** Water	
HS20050177-01	LH18/24-SP140_050520	05 May 2020 14:00			06 May 2020 13:30	1
Batch ID: R361905 (0)	**Test Name :** SUBCONTRACT ANALYSIS - PERCHLORATE (EPA 6850)				**Matrix:** Water	
HS20050177-01	LH18/24-SP140_050520	05 May 2020 14:00			21 May 2020 10:37	1

ALS Houston, US Date: 21-May-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20050177

QC BATCH REPORT

Batch ID: 153375 (0) **Instrument: ICPMS05** **Method: METALS BY ICPMS BY SW6020A**

MBLK Sample ID: **MBLK-153375** Units: **mg/L** Analysis Date: **11-May-2020 14:51**
Client ID: Run ID: **ICPMS05_361332** SeqNo: **5580067** PrepDate: **08-May-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.00250	0.00500								U
Silver	0.000500	0.00500								U

LCS Sample ID: **LCS-153375** Units: **mg/L** Analysis Date: **11-May-2020 14:53**
Client ID: Run ID: **ICPMS05_361332** SeqNo: **5580068** PrepDate: **08-May-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.0481	0.00500	0.05	0	96.2	80 - 120				
Silver	0.05004	0.00500	0.05	0	100	85 - 116				

MS Sample ID: **HS20050176-01MS** Units: **mg/L** Analysis Date: **11-May-2020 15:00**
Client ID: Run ID: **ICPMS05_361332** SeqNo: **5580071** PrepDate: **08-May-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.04955	0.00500	0.05	0.000589	97.9	80 - 120				
Silver	0.04705	0.00500	0.05	-0.000056	94.2	85 - 116				

MSD Sample ID: **HS20050176-01MSD** Units: **mg/L** Analysis Date: **11-May-2020 15:03**
Client ID: Run ID: **ICPMS05_361332** SeqNo: **5580072** PrepDate: **08-May-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.05251	0.00500	0.05	0.000589	104	80 - 120	0.04955	5.81	20	
Silver	0.04913	0.00500	0.05	-0.000056	98.4	85 - 116	0.04705	4.33	20	

PDS Sample ID: **HS20050176-01PDS** Units: **mg/L** Analysis Date: **11-May-2020 15:05**
Client ID: Run ID: **ICPMS05_361332** SeqNo: **5580073** PrepDate: **08-May-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.1007	0.00500	0.1	0.000589	100	80 - 120				
Silver	0.09566	0.00500	0.1	-0.000056	95.7	80 - 120				

ALS Houston, US Date: 21-May-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20050177

QC BATCH REPORT

Batch ID: 153375 (0) **Instrument: ICPMS05** **Method: METALS BY ICPMS BY SW6020A**

SD Sample ID: **HS20050176-01SD** Units: **mg/L** Analysis Date: **11-May-2020 14:58**
Client ID: Run ID: **ICPMS05_361332** SeqNo: **5580070** PrepDate: **08-May-2020** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Selenium	0.0125	0.0250					0.000589	0	10	U
Silver	0.00250	0.0250					-0.000056	0	10	U

The following samples were analyzed in this batch: HS20050177-01

ALS Houston, US Date: 21-May-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20050177

QC BATCH REPORT

Batch ID: R361188 (0) **Instrument: UV-2450** **Method: HEXAVALENT CHROMIUM BY SW7196A**

MBLK Sample ID: **MBLK-R361188** Units: **mg/L** Analysis Date: **06-May-2020 13:30**
Client ID: Run ID: **UV-2450_361188** SeqNo: **5577350** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.0100	0.0100								U

LCS Sample ID: **LCS-R361188** Units: **mg/L** Analysis Date: **06-May-2020 13:30**
Client ID: Run ID: **UV-2450_361188** SeqNo: **5577349** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.273	0.0100	0.25	0	109	90 - 111				

MS Sample ID: **HS20050177-01MS** Units: **mg/L** Analysis Date: **06-May-2020 13:30**
Client ID: **LH18/24-SP140_050520** Run ID: **UV-2450_361188** SeqNo: **5577352** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.259	0.0100	0.25	0.006	101	90 - 111				

MSD Sample ID: **HS20050177-01MSD** Units: **mg/L** Analysis Date: **06-May-2020 13:30**
Client ID: **LH18/24-SP140_050520** Run ID: **UV-2450_361188** SeqNo: **5577351** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	0.262	0.0100	0.25	0.006	102	90 - 111	0.259	1.15	20	

The following samples were analyzed in this batch: HS20050177-01

ALS Houston, US Date: 21-May-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: **HS20050177**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
Dept of Defense	ANAB L2231 V009	22-Dec-2021
Florida	E87611-28	30-Jun-2020
Kansas	E-10352 2019-2020	31-Jul-2020
Louisiana	03087, 2019-2020	30-Jun-2020
Maryland	343, 2019-2020	30-Jun-2020
North Carolina	624-2020	31-Dec-2020
Oklahoma	2019-141	31-Aug-2020
Texas	T104704231-20-26	30-Apr-2021

ALS Houston, US Date: 21-May-20

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
Work Order: HS20050177

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20050177-01	LH18/24-SP140_050520	Login	5/6/2020 12:05:37 PM	PMG	MET063
HS20050177-01	LH18/24-SP140_050520	Login	5/6/2020 12:05:37 PM	PMG	Sub
HS20050177-01	LH18/24-SP140_050520	Login	5/6/2020 12:05:37 PM	PMG	WET134

ALS Houston, US Date: 21-May-20

Sample Receipt Checklist

Work Order ID: HS20050177 **Date/Time Received:** 06-May-2020 09:00

Client Name: Bhate Environmental **Received by:** Asad Chaudhry

Completed By: /S/ Paresh M. Giga (eSignature) 06-May-2020 12:06 (Date/Time) **Reviewed by:** /S/ RJ Modashia (eSignature) 06-May-2020 14:48 (Date/Time)

Matrices: **Water** Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	COC IDs:None
Samplers name present on COC?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	1.4C U/C	IR25	
Cooler(s)/Kit(s):	43868		
Date/Time sample(s) sent to storage:	5/6/2020 12:15		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

CHAIN OF CUSTODY

Name Of Lab Shipping To: ALS 10450 Stancliff Rd., Suite 210 Houston, TX. 77099 (281) 530-5656 ATTN: RJ Modashia

Project: BHATE
LONGHORN ARMY AMMN. PLANT (LHAAP)
GROUNDWATER TREATMENT PLANT (GWTP)
KARNACK, TEXAS

Project No.
NWO1312.0150.0
16.0001

Job:
GROUNDWATER TREATMENT PLANT MONTHLY INFLUENT SAMPLES

Prepared By:
Scott Beesinger

P.O. Number

HS20050177
Bhate Environmental Associates, Inc.
Longhorn GW Treatment Plant Monthly Influent Sample

Field Sample I.D.	Sample Matrix	Date / Time	MS / MSD	No. OF CONTAINERS	Analyses: SILVER & SELENIUM	Analyses: HEXAVALENT CHROMIUM	Analyses: PERCHLORATE	Remarks (Preservatives, etc.)	Lab I.D.#
LH18/24-SP140_050520	Water	05/05/20 / 14:00		1	X			HNO3	
LH18/24-SP140_050520	Water	05/05/20 / 14:00		2		X	X	NONE	

Additional Remarks: **STANDARD TURN AROUND TIME**

Relinquished By:	Date	Time	Received By:	Date	Time	Relinquished By:	Date	Time	Received By:	Date	Time
Scott Beesinger	05/05/20	14:30							AC	5/6/2020	09:00

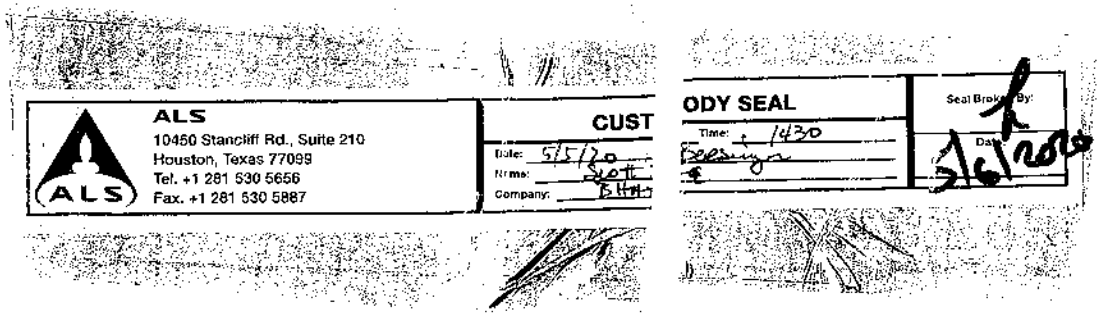
For Lab Use Only

Received At Lab By:	Date	Time	Airbill No.	Opened By:	Date	Time	Temp of Container	Seal No.	Condition

Remarks:

W/C 1.4 IR#25 cf0.0 43868

(Word) S:\1-ces\Forms\Chain of Custody - BiWeekly



ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

CUST
Date: 5/5/20
Name: Scott
Company: BHA

ODY SEAL
Time: 1430
Seal Broken By:
Date: 5/6/2020

ORIGIN ID:SGRA (303) 597-2450
SCOTT BEESINGER
BHATE ENVIRONMENTAL ASSOCIATES
1203-B EAST GRAND AVE.
PMB202
MARSHALL, TX 75670
UNITED STATES US

SHIP DATE: 07APR20
ACTWGT: 1.00 LB MAN
CAD: 300130/CAFE3211
DIMS: 26x14x14 IN

TO CLIENT SERVICES
ALS LABORATORY GROUP
10450 STANCLIEF ROAD
SUITE 210
HOUSTON TX 77099
(281) 530-5856
REF: ADDITIONAL BOTTLES - BO 71321 - RJ

J3868

RMA:

FedEx Express

FedEx
TRK# (0221) 1251 0296 2152

WED - 06 MAY 10:30A
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US IAH

May 20, 2020 Service Request No:E2000408

RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Suite 210
Houston, TX 77099-4338

Laboratory Results for: HS20050177

Dear RJ,

Enclosed are the results of the sample(s) submitted to our laboratory May 06, 2020
For your reference, these analyses have been assigned our service request number **E2000408.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Corey Grandits
Project Manager

Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client:	ALS Houston	**Service Request No.:**	E2000408
Project:	HS20050177	**Date Received:**	05/06/20
Sample Matrix:	W		

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier IV. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

One sample was received for analysis at ALS Environmental in Houston on 05/06/20.

The sample was received in good condition and is consistent with the accompanying chain of custody form. The sample was stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2000173: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in addition to a MS/MSD for this extraction batch. MS/MSD performed on an unrelated sample.

DOD Certification is held for the method/matrix/analytes provided in this report.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: ALS Environmental - US **Service Request:**E2000408
Project: HS20050177

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2000408-001	LH18/24-SP140_050520	5/5/2020	1400

Service Request Summary

Folder #: **E2000408**
Client Name: ALS Environmental - US
Project Name: HS20050177
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 05/06/20
Internal Due Date: 5/20/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20050177
EDD: No EDD Specified

1 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
Location: EHRMS-WIC 3B
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON ClO4 DOD/6850
E2000408-001	LH18/24-SP140_050520	Water	05/05/20 1400	**IV**

Service Request Summary

Folder #: **E2000408**
Client Name: ALS Environmental - US
Project Name: HS20050177
Project Number:

Report To: RJ Modashia
ALS Laboratory Group
10450 Stancliff Road
Houston, TX 77099-4338
USA
Phone Number: 281-530-5656
Cell Number:
Fax Number: 281-530-5887
E-mail: rj.modashia@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 05/06/20
Internal Due Date: 5/20/2020
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number: HS20050177
EDD: No EDD Specified

1 250 mL-Plastic Bottle HDPE WM CLEAR Unpreserved
Location: EHRMS-WIC 3B
Pressure Gas:

Data Qualifiers

Lab Standard

+	Possible Tedlar bag artifact.
A	TIC is a suspected aldol-condensation product
B	Analyte found in the associated method blank as well as in the sample.
BC	Reported results are not blank corrected.
BH	The back section of the tube yielded higher results than the front.
BT	Results indicated possible breakthrough; back section >=10% front section.
C	Result identification confirmed.
D	Compound identified in an analysis at a secondary dilution factor
D	Spike was diluted out
DE	Reported results are corrected for desorption efficiency.
E	Estimated value. Concentration above calibration range
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
H1	Sample analysis performed past holding time. See case narrative.
H2	Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
H3	Sample was received and analyzed past holding time.
H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
I	Internal standard not within the specified limits. See case narrative.
J	Estimated Value. Concentration found below MRL.
K	A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
K	Analyte was detected above the method reporting limit prior to normalization.
L1	Laboratory control sample recovery outside the specified limits; results may be biased high.
L2	Laboratory control sample recovery outside the specified limits; results may be biased low.
L3	Laboratory control sample recovery outside the specified limits.
M	Matrix interference; results may be biased high.
M	The duplicate injection precision not met.
M1	Matrix interference due to coelution with a non-target compound; results may be biased high.
N	Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
P	Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
P	Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
Q	Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
R	Duplicate Precision not met.
R1	Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
S	Surrogate recovery not within specified limits.

Data Qualifiers

Lab Standard

S	The reported value was determined by the Method of Standard Additions (MSA).
T	Analyte is a tentatively identified compound, result is estimated.
U	Compound was analyzed for, but was not detected (ND).
V1	The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
V2	The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
W	Result quantified, but the corresponding peak was detected outside the generated retention time window.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
X	See case narrative.
Y	Recovery outside limits
Y	The chromatogram resembles a petroleum product but does not match the calibration standard.
Z	The chromatogram does not resemble a petroleum product.
i	The MRL/MDL has been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

10450 Stancliff Rd, Houston, TX 77099 | 281-530-5656 | www.alsglobal.com

ALS Environmental

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
Arizona Department of Health Services	AZ0793	5/27/2020
Arkansas Department of Environmental Quality	20-030-0	3/26/2021
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611	6/30/2020
Hawaii Department of Health	2020	4/30/2021
Kansas Department of Health and Environment	E-10352	7/31/2020
Louisiana Department of Environmental Quality	03087	6/30/2020
Louisiana Department of Health and Hospitals	LA028-2020	12/31/2020
Maine Center for Disease Control and Prevention	201815	6/5/2020
Maryland Department of the Environment	343	6/30/2020
Minnesota Department of Health	1785988	12/31/2020
Nevada Department of Concervation and Natural Resources	TX026932019-1	7/31/2020
New Hampshire Environmental Laboratory Accreditation Program	209420	4/24/2021
New Jersey Department of Environmental Protection	NLC190001	6/30/2020
New York Department of Health	11707	3/31/2021
Oklahoma Department of Environmental Quality	2019-067	8/31/2020
Pennsylvania Department of Environmental Protection	68-03441-013	6/30/2020
Tennessee Department of Environment and Concervation	04016-2020	4/30/2021
Texas Commision on Environmental Quality	T104704231-20-26	4/30/2021
United States Department of Agriculture	P330-19-00299	10/10/2022
Utah Department of Health Environmental Laboratory Certification	TX026932019-9	7/31/2020
Washington Department of Health	C819	11/14/2020
West Virginia Department of Environmental Protection	347	6/30/2020

ALS

Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

E2000408 5
ALS Laboratory Group
HS20050177

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Houston, TX 77099
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F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

SAMPLING STATE: **Dept of Defense** **COC ID:** **13860**

SUBCONTRACT TO:

ALS Environmental
10450 Stancliff RoadSuite 210
Houston, TX 77084

Phone: +1 281 530 5656

CUSTOMER INFORMATION:

Company:	ALS Houston
Contact:	RJ Modashia
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Email:	RJ.Modashia@alsglobal.com
Alternate Contact:	
Email:	

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20050177
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20050177-01**	**LH18/24-SP140_050520**	**Water**	**05 May 2020 14:00**
	SUB_Perch-6850			20 May 2020

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: DOD IV (DoD Data Package)

Relinquished By: J. Modashia Date/Time: 5/6/20 14:40

Received By: LOREY G Date/Time: 5/6/20 14:40

Cooler ID(s): Temperature(s):

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Environmental

Cooler Receipt Form

Project Chemist CH

Client/Project ALS-H

Thermometer ID SMOM / IR 11

Date/Time Received: 5/6/20 Initials: CH Date/Time Logged in: 5/6/20 Initials CH

1. Method of delivery: ○ US Mail ○ Fed Ex ○ UPS ○ DHL ✓ ALS Courier ○ Client

2. Samples received in: ✓ Cooler ○ Box ○ Envelope ○ Other

3. Were custody seals on coolers? ○ Yes ✓ No If yes, how many and where?

Were they intact? ○ Yes ○ No ✓ N/A

Were they signed and dated? ○ Yes ○ No ✓ N/A

4. Packing Material: ○ Inserts ✓ Baggies ○ Bubble Wrap ○ Gel Packs ✓ Wet Ice ○ Sleeves ○ Other

5. Foreign or Regulated Soil? ○ Yes ○ No Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
-		5/6/20	1440	CH	1.5	✓
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No

7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ✓ Yes ○ No

8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No

9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No

10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label: E2000408 5

ALS Laboratory Group HS20050177

HS-HRMSCoolerReceipt R1.0

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SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6ºC.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10ºC.
- ✓ Air samples are shipped and stored cold, at 0 to 6ºC
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

Preparation Information Benchsheets

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Preparation Information Benchsheet

Prep Run#: 358306 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/KBROWN **Prep Method:** Method **Prep Date/Time:** 5/12/20 09:34

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2000382-001	LH18/24-SP650_042820_BIX	.01	6850/ClO4 DOD			Water	10mL	
2	E2000404-001	04WW02-200504	.01	6850/ClO4 DOD			Ground Water	10mL	
3	E2000404-002	04WW06-200504	.01	6850/ClO4 DOD			Ground Water	10mL	
4	E2000404-003	LHSMW02-200504	.01	6850/ClO4 DOD			Ground Water	10mL	
5	E2000404-004	LHSMW02-200504-FD	.01	6850/ClO4 DOD			Ground Water	10mL	
6	E2000404-005	04WW11-200504	.01	6850/ClO4 DOD			Ground Water	10mL	
7	E2000404-006	04WW04-200504	.01	6850/ClO4 DOD			Ground Water	10mL	
8	E2000405-001	04WW05-200505	.01	6850/ClO4 DOD			Ground Water	10mL	
9	E2000405-002	04WW09-200505	.01	6850/ClO4 DOD			Ground Water	10mL	
10	E2000405-003	04WW10-200505	.01	6850/ClO4 DOD			Ground Water	10mL	
11	E2000405-004	04WW10-200505-FD	.01	6850/ClO4 DOD			Ground Water	10mL	
12	E2000405-005	04WW07-200505	.01	6850/ClO4 DOD			Ground Water	10mL	
13	E2000406-001	04WW08-200504	.01	6850/ClO4 DOD			Ground Water	10mL	
14	E2000406-002	LHSMW01-200504	.01	6850/ClO4 DOD			Ground Water	10mL	
15	E2000406-003	04WW01-200504	.01	6850/ClO4 DOD			Ground Water	10mL	
16	E2000407-001	LH18/24-SP650_050520_BIX	.01	6850/ClO4 DOD			Water	10mL	
17	E2000408-001	LH18/24-SP140_050520	.01	6850/ClO4 DOD			Water	10mL	
18	E2000409-001	LH18/24-SP650_050520_BIX	.01	6850/ClO4 DOD			Water	10mL	
19	EQ2000173-01	MB		6850/ClO4 DOD			Liquid	10mL	
20	EQ2000173-02	LCS		6850/ClO4 DOD			Liquid	10mL	
21	EQ2000173-03	DLCS		6850/ClO4 DOD			Liquid	10mL	
22	EQ2000173-04	04WW06-200504 MS	.01	6850/ClO4 DOD			Liquid	10mL	
23	EQ2000173-05	04WW06-200504 DMS	.01	6850/ClO4 DOD			Liquid	10mL	

Spiking Solutions

Name: Sodium Perchlorate 1 ug/mL (IS) (18-O) as CLO4 Inventory ID 202037 Logbook Ref: Sodium Perchlorate Expires On: 05/22/2021

E2000382-001	100.00µL	E2000404-001	100.00µL	E2000404-002	100.00µL	E2000404-003	100.00µL	E2000404-004	100.00µL	E2000404-005	100.00µL
E2000404-006	100.00µL	E2000405-001	100.00µL	E2000405-002	100.00µL	E2000405-003	100.00µL	E2000405-004	100.00µL	E2000405-005	100.00µL
E2000406-001	100.00µL	E2000406-002	100.00µL	E2000406-003	100.00µL	E2000407-001	100.00µL	E2000408-001	100.00µL	E2000409-001	100.00µL
EQ2000173-01	100.00µL	EQ2000173-02	100.00µL	EQ2000173-03	100.00µL	EQ2000173-04	100.00µL	EQ2000173-05	100.00µL		

Name: Perchlorate Intermediate Stock1 Inventory ID 204799 Logbook Ref: 200657 1.0ug/mL KN Expires On: 05/15/2020

EQ2000173-02	1.00µL	EQ2000173-03	1.00µL	EQ2000173-04	1.00µL	EQ2000173-05	1.00µL

Preparation Information Benchsheet

Prep Run#: 358306 **Prep WorkFlow:** GenExt28Day **Status:** Prepped
Team: Semivoa GCMS/KBROWN **Prep Method:** Method **Prep Date/Time:** 5/12/20 09:34

Preparation Steps

Step: Preparation
Started: 5/12/20 09:34
Finished: 5/12/20 12:00
By: KBROWN
Comments

Comments: _____

Reviewed By: GR Date: 5/12/2020

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

Analytical Results

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ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000408
Project:	HS20050177	**Date Collected:**	5/ 5/20 1400
Sample Matrix:	Water	**Date Received:**	5/ 6/20
Sample Name:	LH18/24-SP140_050520	**Units:**	µg/L
Lab Code:	E2000408-001	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**6740**		20.0	10.0	5.00	200	5/12/20	5/13/20 13:56	358306	680124	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000408
Project:	HS20050177	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	EQ2000173-01	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	ND	U	0.100	0.0500	0.0250	1	5/12/20	5/12/20 12:50	358306	679868	

Accuracy & Precision

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ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: HS20050177
Sample Matrix: Water

Service Request: E2000408
Date Analyzed: 5/12/20

Lab Control Sample Summary
Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Units: µg/L
Basis: NA

Extraction Lot: 358306

	Lab Control Sample EQ2000173-02			Duplicate Lab Control Sample EQ2000173-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perchlorate	0.105	0.100	105	0.107	0.100	107	84 - 119	2	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000408
Project:	HS20050177	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000173-02	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.105**		0.100	0.0500	0.0250	1	5/12/20	5/12/20 12:58	358306	679868	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000408
Project:	HS20050177	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	µg/L
Lab Code:	EQ2000173-03	**Basis:**	NA

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.107**		0.100	0.0500	0.0250	1	5/12/20	5/12/20 13:06	358306	679868	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	E2000408
Project:	HS20050177	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	5/12/20 - 5/13/20

Matrix Spike Summary

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Sample Name:	Batch QC	**Units:**	µg/L
Lab Code:	E2000404-002	**Basis:**	NA

Analytical Method: 6850
Prep Method: Method

		Batch QCMS **Matrix Spike** EQ2000173-04			Batch QCDMS **Duplicate Matrix Spike** EQ2000173-05						
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**		**RPD Limit**
Perchlorate	ND	0.111	0.100	111	0.0929	0.100	93	84 - 119	18	*	15

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000408
Project:	HS20050177	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Batch QC	**Units:**	µg/L
Lab Code:	EQ2000173-04	**Basis:**	NA
Run Type:	Matrix Spike		

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.111**		0.100	0.0500	0.0250	1	5/12/20	5/12/20 13:21	358306	679868	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	E2000408
Project:	HS20050177	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Batch QC	**Units:**	µg/L
Lab Code:	EQ2000173-05	**Basis:**	NA
Run Type:	Duplicate Matrix Spike		

Perchlorates in Water, Soils, Solid Wastes Using High Performance LC/Electrospray/Mass Spectrometry

Analytical Method: 6850
Prep Method: Method

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Perchlorate	**0.0929**	J	0.100	0.0500	0.0250	1	5/12/20	5/13/20 14:12	358306	680124	

Initial Calibration

ALS Environmental - Houston HRMS
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20200420

ICAL Date: 4/20/2020
Cal. Std. xp: 5/14/2020
ICAL ID: **EC2000003**

1st Review: Kneir
2nd Review: Hvan

ALS Environmental
LCMS01 -Shimadzu 8050

Mobile Phases **A:** 0.75% Formic Acid/Water 3100803-09 **B:** MeOH 3100802-01

	Sample Name		File Name	Acquisition Method	Dilution	R	Comments	Date/Time
	null		20200420_001	Perchlorate6850b.lcm	1x	☒		4/20/2020 13:01
	null		20200420_002	Perchlorate6850b.lcm	1x	☒		4/20/2020 13:06
	DIBLK		20200420_003	Perchlorate6850b.lcm	1x	☒		4/20/2020 13:11
	IB		20200420_004	Perchlorate6850b.lcm	1x	☒		4/20/2020 13:19
	PERCHLORATE7		20200420_005	Perchlorate6850b.lcm	1x	☒	3100805-02	4/20/2020 13:27
	LODV		20200420_006	Perchlorate6850b.lcm	1x	☒		4/20/2020 13:35
	PERCHLORATE1		20200420_007	Perchlorate6850b.lcm	1x	☒	3100804-05	4/20/2020 13:43
	PERCHLORATE2		20200420_008	Perchlorate6850b.lcm	1x	☒	3100804-06	4/20/2020 13:51
	PERCHLORATE3		20200420_009	Perchlorate6850b.lcm	1x	☒	3100804-07	4/20/2020 13:58
	PERCHLORATE4		20200420_010	Perchlorate6850b.lcm	1x	☒	3100804-08	4/20/2020 14:06
	PERCHLORATE5		20200420_011	Perchlorate6850b.lcm	1x	☒	3100804-09	4/20/2020 14:14
	PERCHLORATE6		20200420_012	Perchlorate6850b.lcm	1x	☒	3100805-01	4/20/2020 14:22
	PERCHLORATE8		20200420_013	Perchlorate6850b.lcm	1x	☒	3100805-03	4/20/2020 14:30
	PERCHLORATE9		20200420_014	Perchlorate6850b.lcm	1x	☒	3100805-04	4/20/2020 14:38
	PERCHLORATE10		20200420_015	Perchlorate6850b.lcm	1x	☒	3100805-05	4/20/2020 14:46
	ICV		20200420_016	Perchlorate6850b.lcm	1x	☒	3100805-06	4/20/2020 14:54
	LODV		20200420_017	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:02
	EQ2000143-01		20200420_018	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:10
	EQ2000143-02		20200420_019	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:18
	EQ2000143-03		20200420_020	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:26
	E2000275-001		20200420_021	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:33
	E2000275-002		20200420_022	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:41
	E2000275-003		20200420_023	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:49
	E2000287-001		20200420_024	Perchlorate6850b.lcm	1x	☒		4/20/2020 15:57
	E2000303-001		20200420_025	Perchlorate6850b.lcm	1x	☒		4/20/2020 16:05
	E2000304-001		20200420_026	Perchlorate6850b.lcm	1x	☒		4/20/2020 16:13
	E2000305-001		20200420_027	Perchlorate6850b.lcm	1x	☒		4/20/2020 16:21
	PERCHLORATE7		20200420_028	Perchlorate6850b.lcm	1x	☒	3100805-02	4/20/2020 16:29
	E2000303-001		20200420_029	Perchlorate6850b.lcm	1x	☒		4/20/2020 16:47
	E2000304-001		20200420_030	Perchlorate6850b.lcm	1x	☒		4/20/2020 16:55
	PERCHLORATE7		20200420_031	Perchlorate6850b.lcm	1x	☒	3100805-02	4/20/2020 17:02

Initial Calibration - Detailed Report

Calibration ID: EC2000003 **Instrument ID:** E-LCMS-01
Column Name: 1

#	Lab Code	Sample Name	File Location	Aquisition Date
08	EC2000003-08	PERCHLORATE7	20200420_005	04/20/2020 13:27
01	EC2000003-01	PERCHLORATE1	20200420_007	04/20/2020 13:43
02	EC2000003-02	PERCHLORATE2	20200420_008	04/20/2020 13:51
03	EC2000003-03	PERCHLORATE3	20200420_009	04/20/2020 13:58
04	EC2000003-04	PERCHLORATE4	20200420_010	04/20/2020 14:06
05	EC2000003-05	PERCHLORATE5	20200420_011	04/20/2020 14:14
06	EC2000003-06	PERCHLORATE6	20200420_012	04/20/2020 14:22
07	EC2000003-07	PERCHLORATE8	20200420_013	04/20/2020 14:30
09	EC2000003-09	PERCHLORATE9	20200420_014	04/20/2020 14:38
10	EC2000003-10	PERCHLORATE10	20200420_015	04/20/2020 14:46

Analyte **Curve Fit** **Weighting**

Perchlorate **Average RF** **RSD = 8.066** **Average RF = 0.1368**

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.1000	0.1558	02	0.5000	0.1297	03	0.7000	0.1277	04	1.0000	0.1397
05	2.0000	0.1298	06	5.0000	0.1245	07	20.0000	0.1341	08	10.0000	0.1562
09	30.0000	0.1365	10	50.0000	0.1345						

Analyte

Perchlorate

#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D	#	Amount	Calculated Conc	%D
01	0.1000	0.114	13.9	02	0.5000	0.474	-5.2	03	0.7000	0.653	-6.7
04	1.0000	1.02	2.1	05	2.0000	1.90	-5.1	06	5.0000	4.55	-9.0
07	20.0000	19.6	-2.0	08	10.0000	11.4	14.2	09	30.0000	29.9	-0.2
10	50.0000	49.1	-1.7								

Initial Calibration Verification Summary Report

Calibration ID:	EC2000003	**Instrument ID:**	E-LCMS-01
Datafile ID:	20200420_016	**Column Name:**	1

Analyte	Lab Code	Type	Curve Fit	True Value	Calc Conc	Units	Result	Criteria
Perchlorate	EC2000003-11	T	Average RF	10	11.345	ng/mL	13.4	<= 15

ALS Group Houston

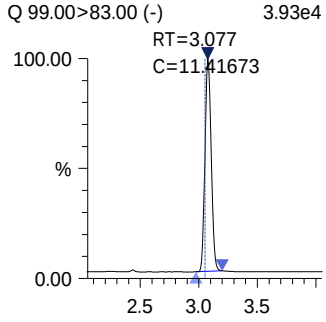
PERCHLORATE7

Date acquired: 4/20/2020 1:27:21 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_005.lcd
Vial: 3 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	4/20/2020 1:27:21 PM	144494	11.41673	20200420_005	3.077	25.0000	1.0000	3
Sodium Perchlorate-18O4_IS	PERCHLORATE7	4/20/2020 1:27:21 PM	92497	1.00000	20200420_005	3.076	25.0000	1.0000	3

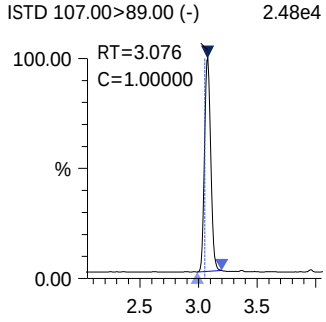
Perchlorate

Conc 11.41673
Area 144494



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 92497



ALS Group Houston

PERCHLORATE1

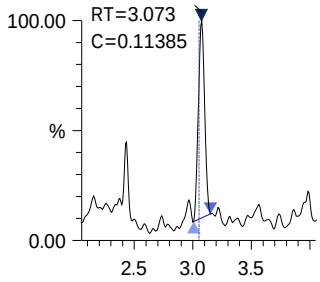
Date acquired: 4/20/2020 1:43:09 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_007.lcd
Vial: 5 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE1	4/20/2020 1:43:09 PM	1840	0.11385	20200420_007	3.073	25.0000	1.0000	5
Sodium Perchlorate-18O4_IS	PERCHLORATE1	4/20/2020 1:43:09 PM	118078	1.00000	20200420_007	3.073	25.0000	1.0000	5

Perchlorate

Conc 0.11385
Area 1840

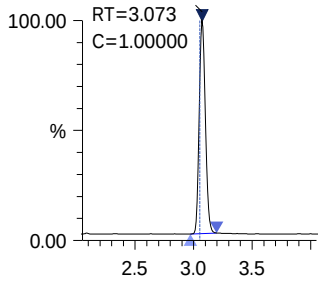
Q 99.00>83.00 (-) 5.37e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 118078

ISTD 107.00>89.00 (-) 3.18e4



ALS Group Houston

PERCHLORATE2

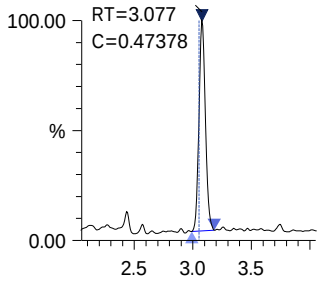
Date acquired: 4/20/2020 1:51:02 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_008.lcd
Vial: 6 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE2	4/20/2020 1:51:02 PM	7551	0.47378	20200420_008	3.077	25.0000	1.0000	6
Sodium Perchlorate-18O4_IS	PERCHLORATE2	4/20/2020 1:51:02 PM	116479	1.00000	20200420_008	3.075	25.0000	1.0000	6

Perchlorate

Conc 0.47378
Area 7551

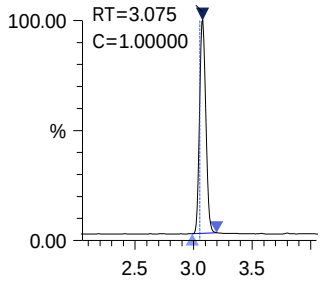
Q 99.00>83.00 (-) 2.00e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 116479

ISTD 107.00>89.00 (-) 3.08e4



ALS Group Houston

PERCHLORATE3

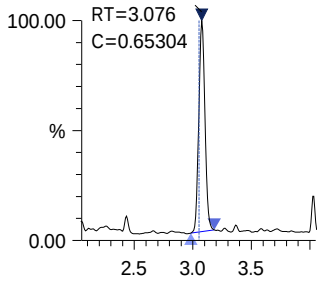
Date acquired: 4/20/2020 1:58:56 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_009.lcd
Vial: 7 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE3	4/20/2020 1:58:56 PM	11235	0.65304	20200420_009	3.076	25.0000	1.0000	7
Sodium Perchlorate-18O4_IS	PERCHLORATE3	4/20/2020 1:58:56 PM	125731	1.00000	20200420_009	3.073	25.0000	1.0000	7

Perchlorate

Conc 0.65304
Area 11235

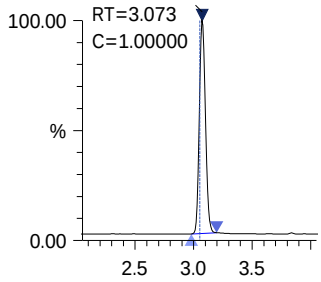
Q 99.00>83.00 (-) 3.12e3



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 125731

ISTD 107.00>89.00 (-) 3.41e4



ALS Group Houston

PERCHLORATE4

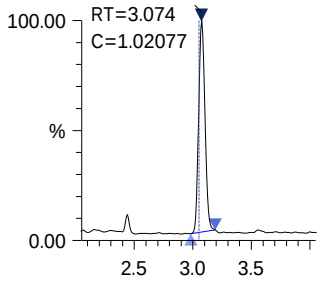
Date acquired: 4/20/2020 2:06:51 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_010.lcd
Vial: 8 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE4	4/20/2020 2:06:51 PM	16670	1.02077	20200420_010	3.074	25.0000	1.0000	8
Sodium Perchlorate-18O4_IS	PERCHLORATE4	4/20/2020 2:06:51 PM	119354	1.00000	20200420_010	3.074	25.0000	1.0000	8

Perchlorate

Conc 1.02077
Area 16670

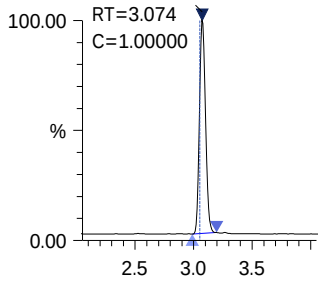
Q 99.00>83.00 (-) 4.51e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 119354

ISTD 107.00>89.00 (-) 3.26e4



ALS Group Houston

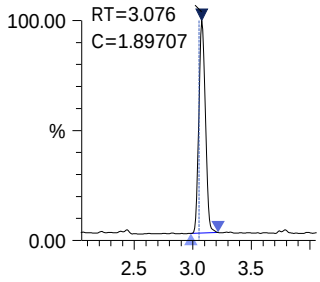
PERCHLORATE5

Date acquired: 4/20/2020 2:14:45 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_011.lcd
Vial: 9 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE5	4/20/2020 2:14:45 PM	33786	1.89707	20200420_011	3.076	25.0000	1.0000	9
Sodium Perchlorate-18O4_IS	PERCHLORATE5	4/20/2020 2:14:45 PM	130159	1.00000	20200420_011	3.075	25.0000	1.0000	9

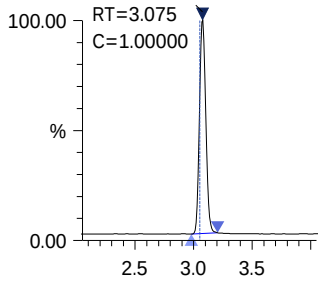
Perchlorate

Conc 1.89707
Area 33786
Q 99.00>83.00 (-) 8.73e3



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 130159
ISTD 107.00>89.00 (-) 3.41e4



ALS Group Houston

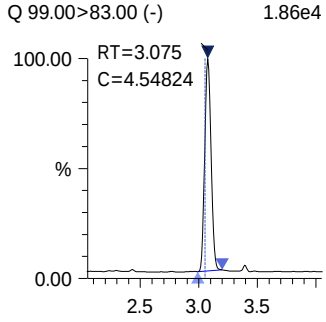
PERCHLORATE6

Date acquired: 4/20/2020 2:22:39 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_012.lcd
Vial: 10 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE6	4/20/2020 2:22:39 PM	69848	4.54824	20200420_012	3.075	25.0000	1.0000	10
Sodium Perchlorate-18O4_IS	PERCHLORATE6	4/20/2020 2:22:39 PM	112235	1.00000	20200420_012	3.074	25.0000	1.0000	10

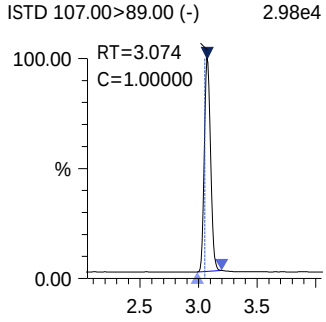
Perchlorate

Conc 4.54824
Area 69848



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 112235



ALS Group Houston

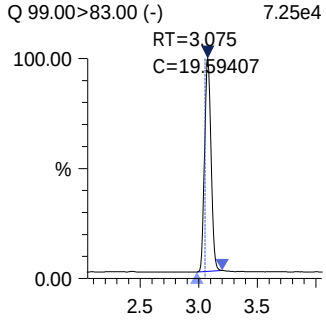
PERCHLORATE8

Date acquired: 4/20/2020 2:30:36 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_013.lcd
Vial: 11 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE8	4/20/2020 2:30:36 PM	275854	19.59407	20200420_013	3.075	25.0000	1.0000	11
Sodium Perchlorate-18O4_IS	PERCHLORATE8	4/20/2020 2:30:36 PM	102890	1.00000	20200420_013	3.072	25.0000	1.0000	11

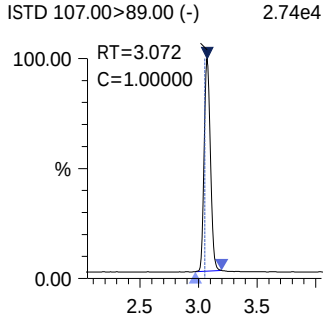
Perchlorate

Conc 19.59407
Area 275854



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 102890



ALS Group Houston

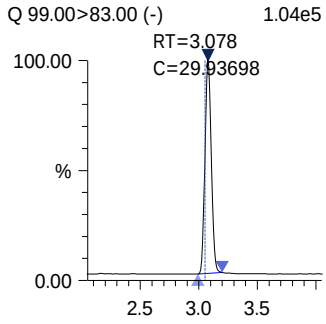
PERCHLORATE9

Date acquired: 4/20/2020 2:38:33 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_014.lcd
Vial: 12 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE9	4/20/2020 2:38:33 PM	390068	29.93698	20200420_014	3.078	25.0000	1.0000	12
Sodium Perchlorate-18O4_IS	PERCHLORATE9	4/20/2020 2:38:33 PM	95225	1.00000	20200420_014	3.075	25.0000	1.0000	12

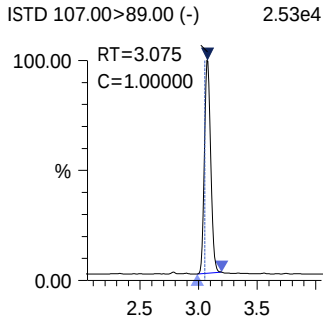
Perchlorate

Conc 29.93698
Area 390068



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 95225



ALS Group Houston

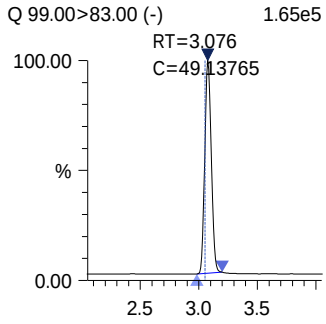
PERCHLORATE10

Date acquired: 4/20/2020 2:46:25 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_015.lcd
Vial: 13 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE10	4/20/2020 2:46:25 PM	632804	49.13765	20200420_015	3.076	25.0000	1.0000	13
Sodium Perchlorate-18O4_IS	PERCHLORATE10	4/20/2020 2:46:25 PM	94118	1.00000	20200420_015	3.075	25.0000	1.0000	13

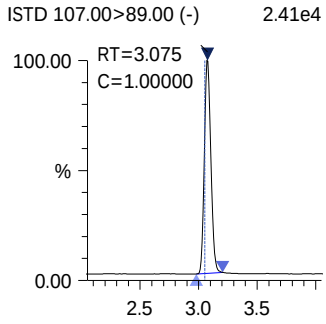
Perchlorate

Conc 49.13765
Area 632804



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 94118



ALS Group Houston

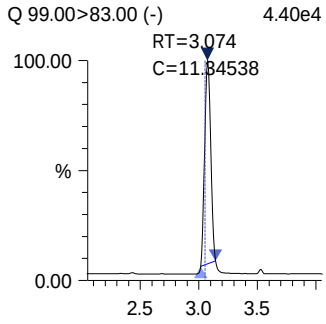
PERCHLORATEICV

Date acquired: 4/20/2020 2:54:20 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200420\20200420_016.lcd
Vial: 14 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATEICV	4/20/2020 2:54:20 PM	149807	11.34538	20200420_016	3.074	25.0000	1.0000	14
Sodium Perchlorate-18O4_IS	PERCHLORATEICV	4/20/2020 2:54:20 PM	96501	1.00000	20200420_016	3.072	25.0000	1.0000	14

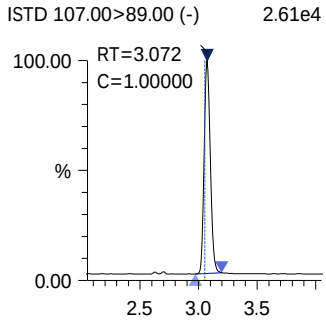
Perchlorate

Conc 11.34538
Area 149807



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 96501



Chromatograms and Selected Ion Monitoring

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 320, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

20200512

ICAL Date: 4/20/2020
Cal. Std. xp: 5/14/2020
ICAL ID: **EC2000003**

1st Review: Kneir
2nd Review: Hvan

ALS Environmental
LCMS01 -Shimadzu 8050

Mobile Phases **A:** 0.75% Formic Acid/Water 3100803-09 **B:** MeOH 3100802-01

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
	null		20200512_001	Perchlorate6850b.lcm	1x	☒		5/12/2020 12:09
	null		20200512_002	Perchlorate6850b.lcm	1x	☒		5/12/2020 12:14
	IB		20200512_003	Perchlorate6850b.lcm	1x	☒		5/12/2020 12:19
	PERCHLORATE7		20200512_004	Perchlorate6850b.lcm	1x	☒	3100805-02	5/12/2020 12:27
	LODV		20200512_005	Perchlorate6850b.lcm	1x	☒		5/12/2020 12:35
	EQ2000173-01		20200512_006	Perchlorate6850b.lcm	1x	☒		5/12/2020 12:50
	EQ2000173-02		20200512_007	Perchlorate6850b.lcm	1x	☒		5/12/2020 12:58
	EQ2000173-03		20200512_008	Perchlorate6850b.lcm	1x	☒		5/12/2020 13:06
	E2000404-002		20200512_009	Perchlorate6850b.lcm	1x	☒		5/12/2020 13:13
	EQ2000173-04		20200512_010	Perchlorate6850b.lcm	1x	☒		5/12/2020 13:21
	EQ2000173-05		20200512_011	Perchlorate6850b.lcm	1x	☒	do not use	5/12/2020 13:29
	E2000382-001		20200512_012	Perchlorate6850b.lcm	1x	☒		5/12/2020 13:37
	PERCHLORATE7		20200512_013	Perchlorate6850b.lcm	1x	☒	3100805-02	5/12/2020 13:45
	E2000404-001		20200512_014	Perchlorate6850b.lcm	1x	☒		5/12/2020 13:53
	E2000404-003		20200512_015	Perchlorate6850b.lcm	1x	☒		5/12/2020 14:01
	E2000404-004		20200512_016	Perchlorate6850b.lcm	1x	☒		5/12/2020 14:09
	E2000404-005		20200512_017	Perchlorate6850b.lcm	1x	☒		5/12/2020 14:17
	E2000404-006		20200512_018	Perchlorate6850b.lcm	1x	☒		5/12/2020 14:25
	E2000405-001		20200512_019	Perchlorate6850b.lcm	1x	☒		5/12/2020 14:32
	E2000405-002		20200512_020	Perchlorate6850b.lcm	1x	☒		5/12/2020 14:40
	E2000405-003		20200512_021	Perchlorate6850b.lcm	1x	☒		5/12/2020 14:48
	E2000405-004		20200512_022	Perchlorate6850b.lcm	1x	☒		5/12/2020 14:56
	E2000405-005		20200512_023	Perchlorate6850b.lcm	1x	☒		5/12/2020 15:04
	PERCHLORATE7		20200512_024	Perchlorate6850b.lcm	1x	☒	3100805-02	5/12/2020 15:12
	E2000406-001		20200512_025	Perchlorate6850b.lcm	1x	☒		5/12/2020 15:20
	E2000406-002		20200512_26	Perchlorate6850b.lcm	1x	☒		5/12/2020 15:28
	E2000406-003		20200512_027	Perchlorate6850b.lcm	1x	☒		5/12/2020 15:36
	E2000407-001		20200512_028	Perchlorate6850b.lcm	1x	☒		5/12/2020 15:44
	E2000408-001		20200512_029	Perchlorate6850b.lcm	1x	☒	dilution	5/12/2020 15:51
	E2000409-001		20200512_030	Perchlorate6850b.lcm	1x	☒	RR-poss carry-over	5/12/2020 15:59
	EQ2000173-05		20200512_031	Perchlorate6850b.lcm	1x	☒	do not use	5/12/2020 16:07
	PERCHLORATE7		20200512_032	Perchlorate6850b.lcm	1x	☒	3100805-02	5/12/2020 16:15

20200513

1st Review: Kneir
2nd Review: Hvan

ALS Environmental
LCMS01 -Shimadzu 8050

ICAL Date: 4/20/2020
Cal. Std. xp: 5/14/2020
ICAL ID: **EC2000003**

Mobile Phases **A:** 0.75% Formic Acid/Water 3100803-09 **B:** MeOH 3100802-01

			File Name	Acquisition Method	Dilution	R	Comments	Date/Time
	null		20200513_001	Perchlorate6850b.lcm	1x	☒		5/13/2020 11:40
	null		20200513_002	Perchlorate6850b.lcm	1x	☒		5/13/2020 11:45
	IB		20200513_003	Perchlorate6850b.lcm	1x	☒		5/13/2020 11:50
	PERCHLORATE7		20200513_004	Perchlorate6850b.lcm	1x	☒	3100805-02	5/13/2020 11:58
	LODV		20200513_005	Perchlorate6850b.lcm	1x	☒		5/13/2020 12:06
	EQ2000179-01		20200513_006	Perchlorate6850b.lcm	1x	☒		5/13/2020 12:14
	EQ2000179-02		20200513_007	Perchlorate6850b.lcm	1x	☒		5/13/2020 12:22
	EQ2000179-03		20200513_008	Perchlorate6850b.lcm	1x	☒		5/13/2020 12:29
	EQ2000179-04		20200513_009	Perchlorate6850b.lcm	1x	☒		5/13/2020 12:37
	EQ2000179-05		20200513_010	Perchlorate6850b.lcm	1x	☒		5/13/2020 12:45
	E2000410-001		20200513_011	Perchlorate6850b.lcm	1x	☒		5/13/2020 12:53
	E2000410-002		20200513_012	Perchlorate6850b.lcm	1x	☒		5/13/2020 13:01
	E2000410-003		20200513_013	Perchlorate6850b.lcm	1x	☒		5/13/2020 13:09
	E2000410-004		20200513_014	Perchlorate6850b.lcm	1x	☒		5/13/2020 13:17
	E2000410-005		20200513_015	Perchlorate6850b.lcm	1x	☒		5/13/2020 13:25
	PERCHLORATE7		20200513_016	Perchlorate6850b.lcm	1x	☒	3100805-02	5/13/2020 13:33
	E2000410-006		20200513_017	Perchlorate6850b.lcm	1x	☒		5/13/2020 13:41
	E2000410-007		20200513_018	Perchlorate6850b.lcm	1x	☒		5/13/2020 13:49
	E2000408-001X200		20200513_019	Perchlorate6850b.lcm	200x	☒		5/13/2020 13:56
	PERCHLORATE7		20200513_020	Perchlorate6850b.lcm	1x	☒	3100805-02	5/13/2020 14:04
	EQ2000173-05		20200513_021	Perchlorate6850b.lcm	1x	☒		5/13/2020 14:12
	E2000409-001		20200513_022	Perchlorate6850b.lcm	1x	☒		5/13/2020 14:20
	PERCHLORATE7		20200513_023	Perchlorate6850b.lcm	1x	☒	3100805-02	5/13/2020 14:28

ALS Group Houston

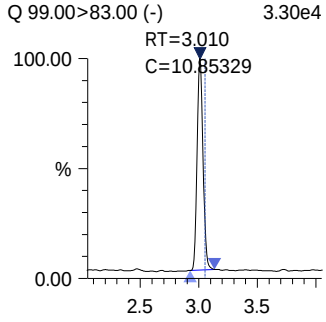
PERCHLORATE7

Date acquired: 5/12/2020 12:27:44 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200512\20200512_004.lcd
Vial: 3 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	5/12/2020 12:27:44 PM	114355	10.85329	20200512_004	3.010	25.0000	1.0000	3
Sodium Perchlorate-18O4_IS	PERCHLORATE7	5/12/2020 12:27:44 PM	77004	1.00000	20200512_004	3.008	25.0000	1.0000	3

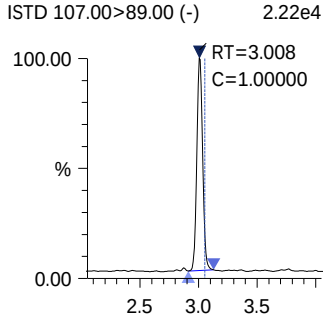
Perchlorate

Conc 10.85329
Area 114355



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 77004



ALS Group Houston

EQ2000173-01

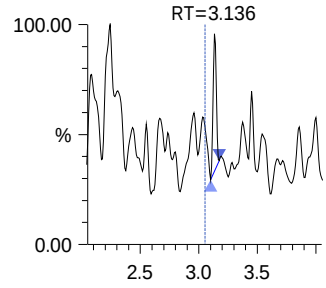
Date acquired: 5/12/2020 12:50:12 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200512\20200512_006.lcd
Vial: 5 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000173-01	5/12/2020 12:50:12 PM	----	----	20200512_006	----	25.0000	1.0000	5
Sodium Perchlorate-18O4_IS	EQ2000173-01	5/12/2020 12:50:12 PM	95026	1.00000	20200512_006	2.942	25.0000	1.0000	5

Perchlorate

Conc ----
Area ----

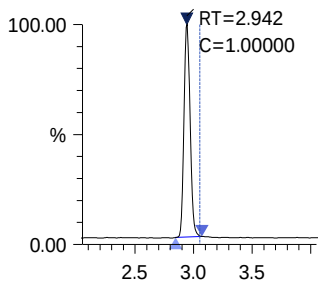
Q 99.00>83.00 (-) 3.00e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 95026

ISTD 107.00>89.00 (-) 2.66e4



ALS Group Houston

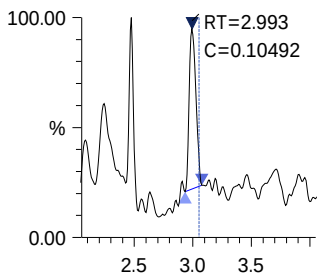
EQ2000173-02

Date acquired: 5/12/2020 12:58:07 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200512\20200512_007.lcd
Vial: 6 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000173-02	5/12/2020 12:58:07 PM	1559	0.10492	20200512_007	2.993	25.0000	1.0000	6
Sodium Perchlorate-18O4_IS	EQ2000173-02	5/12/2020 12:58:07 PM	108592	1.00000	20200512_007	3.004	25.0000	1.0000	6

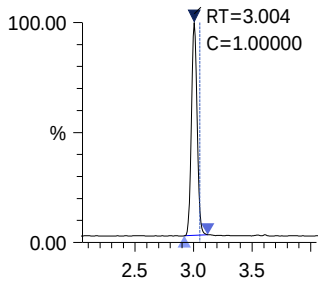
Perchlorate

Conc 0.10492
Area 1559
Q 99.00>83.00 (-) 5.16e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 108592
ISTD 107.00>89.00 (-) 3.19e4



ALS Group Houston

EQ2000173-03

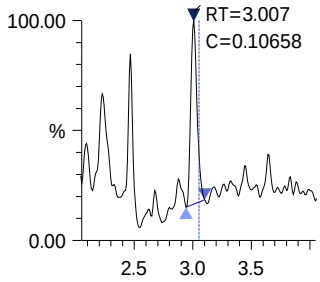
Date acquired: 5/12/2020 1:06:00 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200512\20200512_008.lcd
Vial: 7 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000173-03	5/12/2020 1:06:00 PM	1594	0.10658	20200512_008	3.007	25.0000	1.0000	7
Sodium Perchlorate-18O4_IS	EQ2000173-03	5/12/2020 1:06:00 PM	109300	1.00000	20200512_008	3.004	25.0000	1.0000	7

Perchlorate

Conc 0.10658
Area 1594

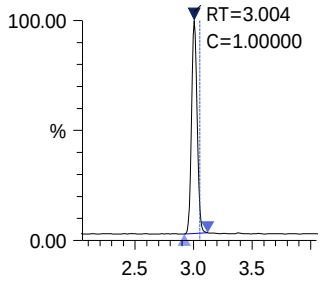
Q 99.00>83.00 (-) 4.99e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 109300

ISTD 107.00>89.00 (-) 3.26e4



ALS Group Houston

EQ2000173-04

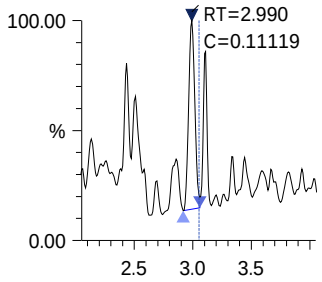
Date acquired: 5/12/2020 1:21:48 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200512\20200512_010.lcd
Vial: 9 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000173-04	5/12/2020 1:21:48 PM	1744	0.11119	20200512_010	2.990	25.0000	1.0000	9
Sodium Perchlorate-18O4_IS	EQ2000173-04	5/12/2020 1:21:48 PM	114639	1.00000	20200512_010	2.990	25.0000	1.0000	9

Perchlorate

Conc 0.11119
Area 1744

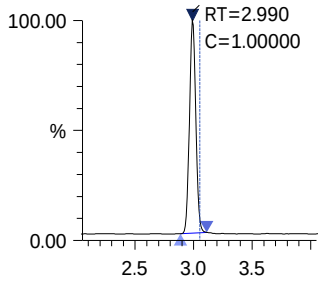
Q 99.00>83.00 (-) 5.32e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 114639

ISTD 107.00>89.00 (-) 3.06e4



ALS Group Houston

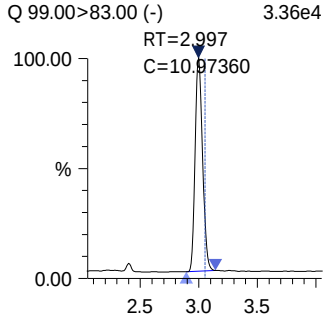
PERCHLORATE7

Date acquired: 5/12/2020 1:45:33 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200512\20200512_013.lcd
Vial: 3 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	5/12/2020 1:45:33 PM	148931	10.97360	20200512_013	2.997	25.0000	1.0000	3
Sodium Perchlorate-18O4_IS	PERCHLORATE7	5/12/2020 1:45:33 PM	99187	1.00000	20200512_013	2.994	25.0000	1.0000	3

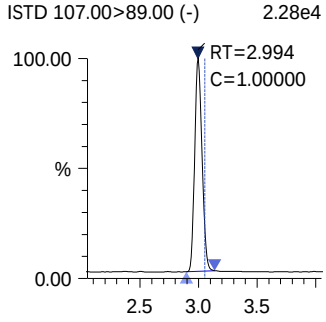
Perchlorate

Conc 10.97360
Area 148931



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 99187



ALS Group Houston

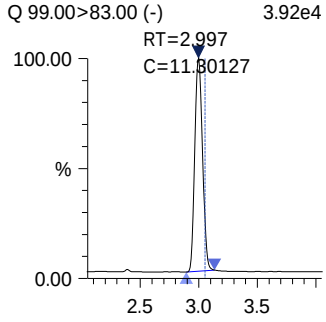
PERCHLORATE7

Date acquired: 5/13/2020 1:33:13 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200513\20200513_016.lcd
Vial: 3 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	5/13/2020 1:33:13 PM	180833	11.30127	20200513_016	2.997	25.0000	1.0000	3
Sodium Perchlorate-18O4_IS	PERCHLORATE7	5/13/2020 1:33:13 PM	116942	1.00000	20200513_016	2.995	25.0000	1.0000	3

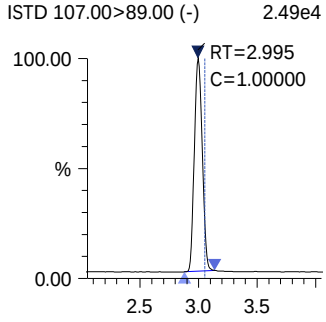
Perchlorate

Conc 11.30127
Area 180833



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 116942



ALS Group Houston

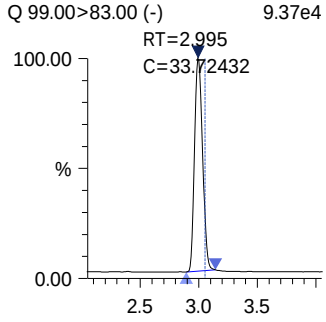
E2000408-001X200

Date acquired: 5/13/2020 1:56:53 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200513\20200513_019.lcd
Vial: 17 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	E2000408-001X200	5/13/2020 1:56:53 PM	448696	33.72432	20200513_019	2.995	25.0000	1.0000	17
Sodium Perchlorate-18O4_IS	E2000408-001X200	5/13/2020 1:56:53 PM	97236	1.00000	20200513_019	2.992	25.0000	1.0000	17

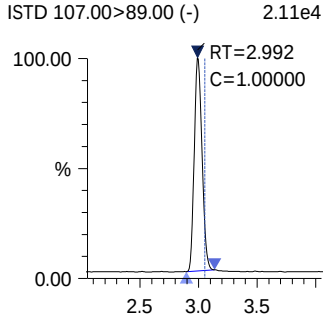
Perchlorate

Conc 33.72432
Area 448696



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 97236



ALS Group Houston

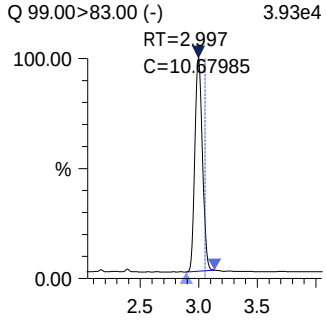
PERCHLORATE7

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Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200513\20200513_020.lcd
Vial: 3 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	5/13/2020 2:04:49 PM	176552	10.67985	20200513_020	2.997	25.0000	1.0000	3
Sodium Perchlorate-18O4_IS	PERCHLORATE7	5/13/2020 2:04:49 PM	120816	1.00000	20200513_020	2.995	25.0000	1.0000	3

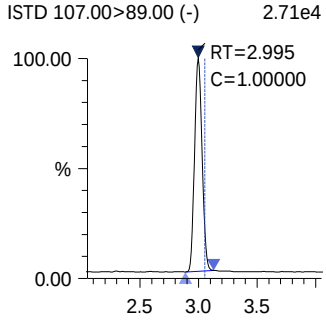
Perchlorate

Conc 10.67985
Area 176552



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 120816



ALS Group Houston

EQ2000173-05

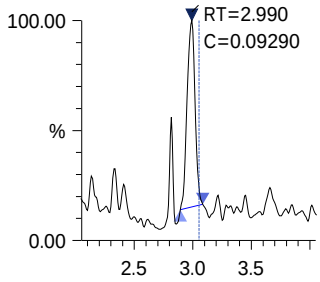
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Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200513\20200513_021.lcd
Vial: 18 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	EQ2000173-05	5/13/2020 2:12:40 PM	1798	0.09290	20200513_021	2.990	25.0000	1.0000	18
Sodium Perchlorate-18O4_IS	EQ2000173-05	5/13/2020 2:12:40 PM	141444	1.00000	20200513_021	2.980	25.0000	1.0000	18

Perchlorate

Conc 0.09290
Area 1798

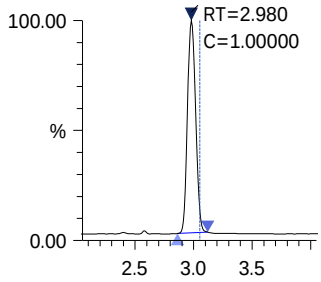
Q 99.00>83.00 (-) 4.31e2



Sodium Perchlorate-18O4_IS

Conc 1.00000
Area 141444

ISTD 107.00>89.00 (-) 2.95e4



ALS Group Houston

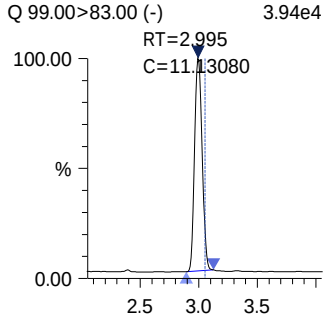
PERCHLORATE7

Date acquired: 5/13/2020 2:28:31 PM
Acquired by: System Administrator
Data File: I:\LCMS01\DATA\20200513\20200513_023.lcd
Vial: 3 | Inj. Volume: 25.0000uL | Tray: 1

Name	Sample ID	Acquired Date	Area	Conc.	Data Filename	Found RT	Inj Vol	ISTD Amount	Vial
Perchlorate	PERCHLORATE7	5/13/2020 2:28:31 PM	178211	11.13080	20200513_023	2.995	25.0000	1.0000	3
Sodium Perchlorate-18O4_IS	PERCHLORATE7	5/13/2020 2:28:31 PM	117011	1.00000	20200513_023	2.992	25.0000	1.0000	3

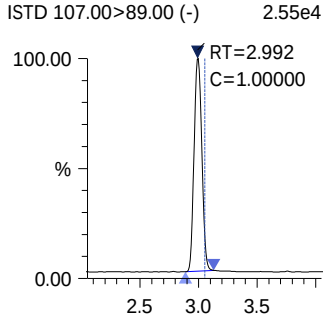
Perchlorate

Conc 11.13080
Area 178211



Sodium Perchlorate-18O4 _IS

Conc 1.00000
Area 117011



HS20050177 - ME - ICP_W_DOD

ALS WO# HS20050177

ALS Houston, US Date: 28-May-20

Form 11 - INTERNAL STANDARD ASSOCIATION

Client: Bhate Environmental Associates, Inc. Instrument:ICPMS05
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20050177

Mass	Analyte	Assoc Int Standard 1	Assoc Int Standard 2	Mode
9	Beryllium	Lithium		Ar
11	Boron	Lithium		Ar
23	Sodium	Germanium		Ar
24	Magnesium	Germanium		Ar
27	Aluminum	Germanium		Ar
39	Potassium	Germanium		Ar
44	Calcium	Germanium		Ar
47	Titanium	Germanium		Ar
51	Vanadium	Germanium		ArHe
52	Chromium	Germanium		ArHe
55	Manganese	Germanium		ArHe
56	Iron	Germanium		ArHe
59	Cobalt	Germanium		ArHe
60	Nickel	Germanium		ArHe
63	Copper	Germanium		ArHe
66	Zinc	Germanium		ArHe
75	Arsenic	Germanium		ArHe
78	Selenium	Germanium		ArHe
88	Strontium	Germanium		Ar
95	Molybdenum	Germanium		Ar
105	Palladium	Germanium		Ar
107	Silver	Germanium		Ar
114	Cadmium	Indium		Ar
118	Tin	Germanium		Ar
121	Antimony	Germanium		ArHe
137	Barium	Indium		Ar
205	Thallium	Bismuth		Ar
208	Lead	Bismuth		Ar

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Houston, US Date: 28-May-20

FORM 12 - PREPARATION LOG

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20050177
Start Date: 08-May-2020 09:30 End Date: 08-May-2020 13:30

Batch ID: 153375
Prep Code: 3010A
Method: SW3010A
Technician:

SampID	ClientID	Matrix	Init Wt	Init Vol	FinalVol (mL)	PrepFac
HS20050176-01MS				10	10	1
HS20050176-01MSD				10	10	1
HS20050176-01PDS				10	10	1
HS20050176-01SD				10	10	1
HS20050177-01	LH18/24-SP140_050520	Water		10	10	1
LCS-153375				10	10	1
MBLK-153375				10	10	1

ALS Houston, US

Date: 28-May-20

FORM 13 - ANALYSIS RUN LOG

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20050177
Start Date: 11-May-2020 End Date: 11-May-2020

Run ID:ICPMS05_361332
Instrument:ICPMS05
Method:

Sample No.	D/F	Time	FileID	Analytes
ICPMS05_361332_Tune	1	11-May-2020 00:00	ICPMS05_361332_Tune_1	
CAL BLK	1	11-May-2020 13:01	019CALB.d_5579835	AG SE
2/10/200	1	11-May-2020 13:04	020CALS.d_5579836	AG SE
5/25/500	1	11-May-2020 13:06	021CALS.d_5579837	AG SE
10/50/1000	1	11-May-2020 13:08	022CALS.d_5579838	AG SE
100/500/10K	1	11-May-2020 13:11	023CALS.d_5579839	AG SE
200/1000/20K	1	11-May-2020 13:13	024CALS.d_5579840	AG SE
ICV	1	11-May-2020 13:18	026_ICV.d_5579842	AG SE
LLICV2	1	11-May-2020 13:21	027LCV2.d_5579843	AG SE
LLICV5	1	11-May-2020 13:23	028LCV5.d_5579844	AG SE
ICB	1	11-May-2020 13:25	029_ICB.d_5579845	AG SE
ICSA	1	11-May-2020 13:31	031ICSA.d_5579847	AG SE
ICSAB	1	11-May-2020 13:33	032ICSB.d_5579848	AG SE
MBLK-153375	1	11-May-2020 14:51	058SMPL.d_5580067	AG SE
LCS-153375	1	11-May-2020 14:53	059SMPL.d_5580068	AG SE
ZZZZZZSD	5	11-May-2020 14:58	061SMPL.d_5580070	AG SE
ZZZZZZMS	1	11-May-2020 15:00	062SMPL.d_5580071	AG SE
ZZZZZZMSD	1	11-May-2020 15:03	063SMPL.d_5580072	AG SE
ZZZZZZPDS	1	11-May-2020 15:05	064SMPL.d_5580073	AG SE
LH18/24-SP140_050520	1	11-May-2020 15:08	065SMPL.d_5580074	AG SE
CCV 1	1	11-May-2020 15:13	067_CCV.d_5580076	AG SE
CCB 1	1	11-May-2020 15:15	068_CCB.d_5580077	AG SE

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ALS Houston, US Date: 28-May-20

Form 2 - Initial and Continuing Calibration Verification

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20050177

Run ID: ICPMS05_361332
Instrument: ICPMS05
Method: SW6020

ICV Date: 11-May-2020 13:18 Seq: 5579842 ICV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Selenium	100	104.463	104	90-110	
Silver	100	100.928	101	90-110	

CCV1 Date: 11-May-2020 15:13 Seq: 5580076 CCV Units: ug/L

Analyte	True	Found	%R	Control Limits	Flag
Selenium	100	102.18	102	90-110	
Silver	100	99.517	100	90-110	

Form 3 - BLANKS

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20050177

Run ID: ICPMS05_361332
Instrument: ICPMS05
Method: SW6020

ICB	Date: 11-May-2020 13:25		Seq: 5579845	ICB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	5	1.1	5	U	
Silver	5	0.2	5	U	
MBLK-153375	Date: 11-May-2020 14:51		Seq: 5580067	MBLK	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	5	1.1	5	U	
Silver	5	0.2	5	U	
CCB1	Date: 11-May-2020 15:15		Seq: 5580077	CCB	Units: ug/L
Analyte	**Result**	**MDL**	**Report Limit**	**Qual**	
Selenium	2	1.1	2	U	
Silver	2	0.2	2	U	

ALS Houston, US Date: 28-May-20

Form 4 - ICP Interference Check Sample

Client: Bhate Environmental Associates, Inc. Run ID: ICPMS05_361332
Project: Longhorn GW Treatment Plant Monthly Influent Samples Instrument: ICPMS05
WorkOrder: HS20050177 Method: SW6020

ICSA	Date: 11-May-2020 13:31	Seq: 5579847	ICSA	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Selenium		0.445	0	
Silver		-0.047	0	

ICSAB	Date: 11-May-2020 13:33	Seq: 5579848	ICSAB	Units: ug/L
Analyte	**True**	**Found**	**%R**	
Selenium	100	112	112	
Silver	100	105.9	106	

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ALS Houston, US Date: 28-May-20

Form 5A - Matrix Spike/Matrix Spike Duplicate Recovery

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20050177

Date Analyzed: 11-May-2020 15:03
Date Extracted: 08-May-2020 13:30
Units: ug/L

Matrix Spike: HS20050176-01MS
Client Sample ID:

Analysis Method: SW6020

Analyte	Sample Result	MS Result	Spike Amount	% Rec	MSD Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Selenium	5.000	49.55	50.00	97.9	52.51	50.00	104	80-120	5.81	20
Silver	5.000	47.05	50.00	94.2	49.13	50.00	98.4	85-116	4.33	20

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ALS Houston, US Date: 28-May-20

Form 5B - Post Digest Sample Recovery

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20050177

Date Analyzed: 11-May-2020 15:05
Date Extracted: 08-May-2020 13:30
Units: ug/L

Lab Sample ID: HS20050176-01PDS
Client Sample ID:

Analysis Method: SW6020

Analyte	Sample Result	PDS Result	Spike Amount	% Rec	% Rec Limits
Selenium	0	100.7	100	100	80-120
Silver	0	95.66	100	96	80-120

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Date: 28-May-20

Form 7 - Laboratory Control Sample

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20050177

Date Analyzed: 11-May-2020 14:53
Date Extracted: 08-May-2020 13:30
Units: ug/L

Lab Sample ID: LCS-153375
Analysis Method: SW6020

Analyte	Spike Amount	LCS Result	% Rec	% Rec Limits
Selenium	50	48.1	96	80-120
Silver	50	50.04	100	85-116

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ALS Houston, US Date: 28-May-20

Form 8 - ICP Serial Dilutions

Client: Bhate Environmental Associates, Inc.
Project: Longhorn GW Treatment Plant Monthly Influent Samples
WorkOrder: HS20050177

Date Analyzed: 11-May-2020 14:58
Date Extracted: 08-May-2020 13:30
Units: ug/L

Lab Sample ID: HS20050176-01SD
Client Sample ID:

Analysis Method: SW6020

Analyte	Sample Result	C	SD Result	C	RPD	Q
Selenium	0	U	0	U	0	
Silver	0	U	0	U	0	

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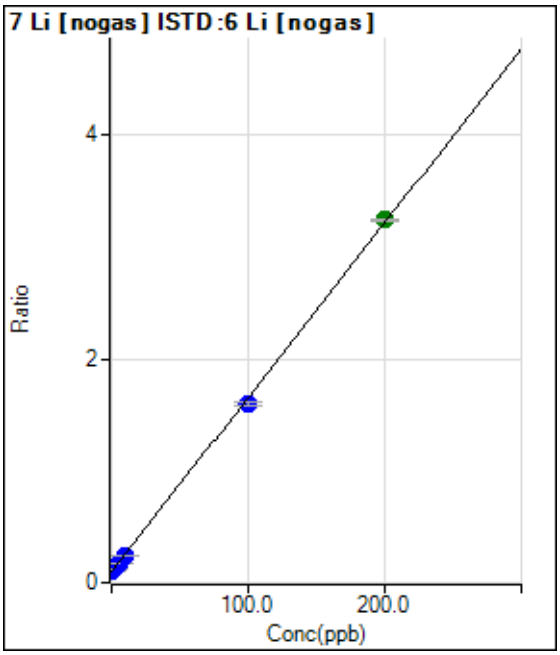
Calibration for 207_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\051120A.b\
Analysis File: 051120A.batch.bin
DA Date-Time: 5/12/2020 12:14:40 AM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	200CALB.d	IRBK	5/11/2020 11:57:13 PM
2	201CALS.d	2/10/200	5/11/2020 11:59:35 PM
3	202CALS.d	5/25/500	5/12/2020 12:01:59 AM
4	203CALS.d	10/50/1000	5/12/2020 12:04:23 AM
5	204CALS.d	100/500/10K	5/12/2020 12:06:46 AM
6	205CALS.d	200/1000/20K	5/12/2020 12:09:07 AM
7			

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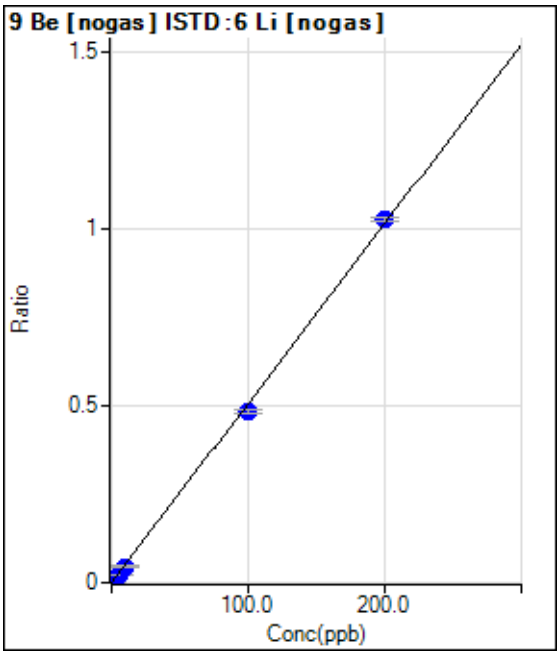
Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	58611.66	0.0983	P	0.7
2	☐	2.000	1.884	74987.67	0.1277	P	0.3
3	☐	5.000	4.890	102046.93	0.1744	P	2.5
4	☐	10.000	9.458	142742.45	0.2455	P	1.2
5	☐	100.000	96.333	879321.52	1.5975	P	1.9
6	☐	200.000	201.864	1637305.76	3.2398	A	0.7
7	☐	1.000					

y = 0.0156 * x + 0.0983
R = 0.9998
DL = 0.1384
BEC = 6.319

Weight: <None>
Min Conc: <None>

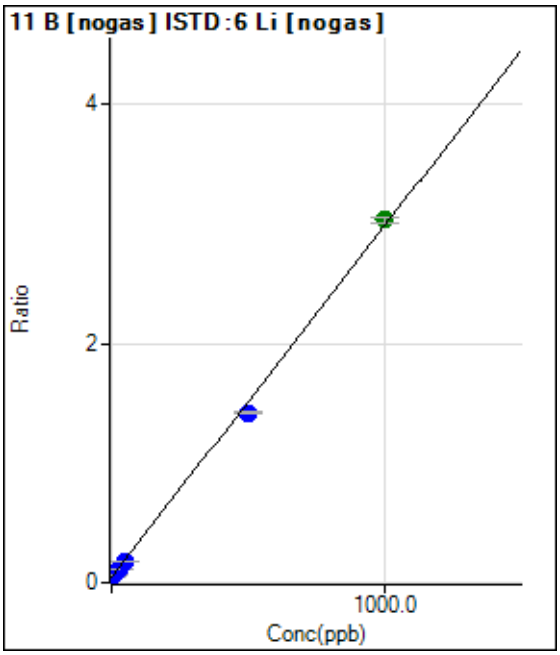


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	28.33	0.0000	P	26.5
2	☐	2.000	1.886	5647.53	0.0096	P	1.7
3	☐	5.000	4.699	13973.44	0.0239	P	2.2
4	☐	10.000	9.066	26761.95	0.0460	P	2.2
5	☐	100.000	95.498	266655.70	0.4844	P	1.8
6	☐	200.000	202.306	518587.19	1.0262	P	1.1
7	☐	1.000					

y = 0.0051 * x + 4.7489E-005
R = 0.9997
DL = 0.00744
BEC = 0.009363

Weight: <None>
Min Conc: <None>

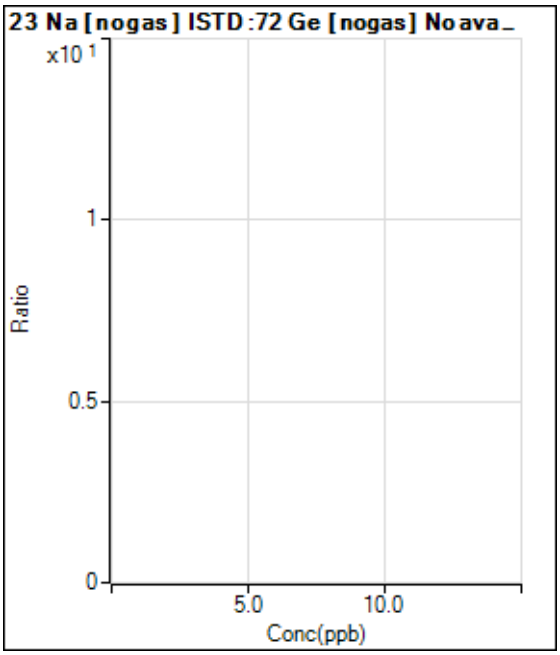
Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	27518.02	0.0462	P	1.5
2	☐	10.000	8.591	41948.83	0.0714	P	2.1
3	☐	25.000	21.493	63970.57	0.1093	P	1.1
4	☐	50.000	42.836	100039.05	0.1721	P	2.4
5	☐	500.000	466.476	780161.39	1.4173	P	1.2
6	☐	1000.000	1017.222	1534228.47	3.0360	A	1.9
7	☐	5.000					

y = 0.0029 * x + 0.0462
R = 0.9992
DL = 0.7068
BEC = 15.71

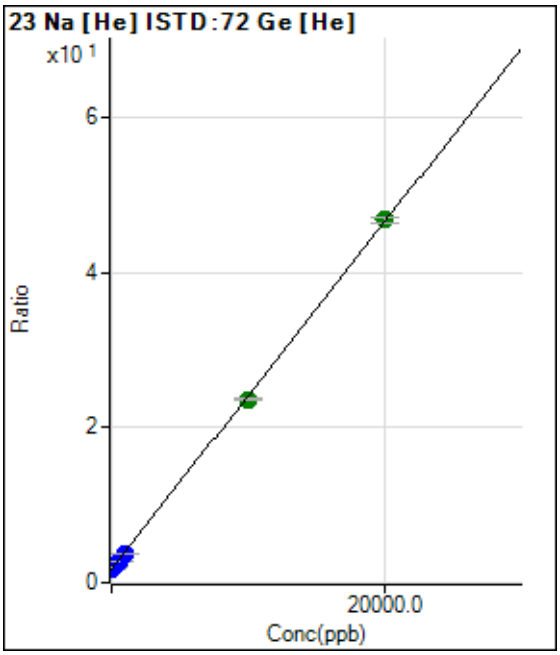
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

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Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	556414.94	1.7543	P	0.5
2	☐	200.000	153.320	664794.65	2.0970	P	0.9
3	☐	500.000	424.673	848627.64	2.7036	P	2.4
4	☐	1000.000	859.525	1144389.36	3.6757	P	1.0
5	☐	10000.000	9769.125	7243649.48	23.5927	A	0.7
6	☐	20000.000	20124.811	13799789.79	46.7424	A	1.6
7	☐	100.000					

y = 0.0022 * x + 1.7543

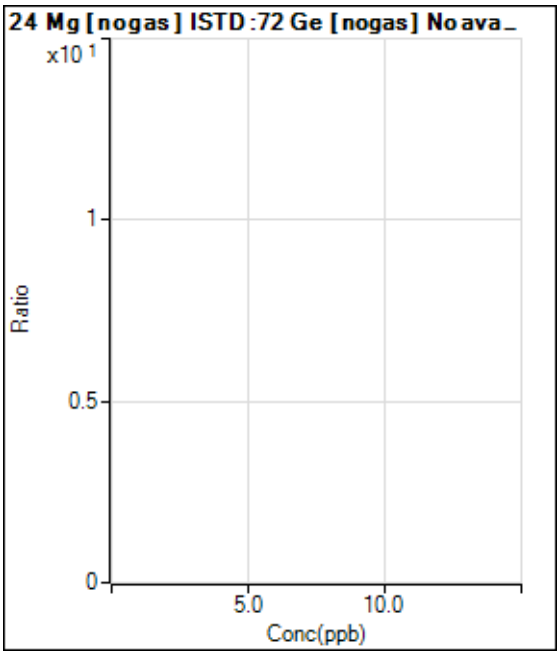
R = 0.9999

DL = 11.05

BEC = 784.7

Weight: <None>

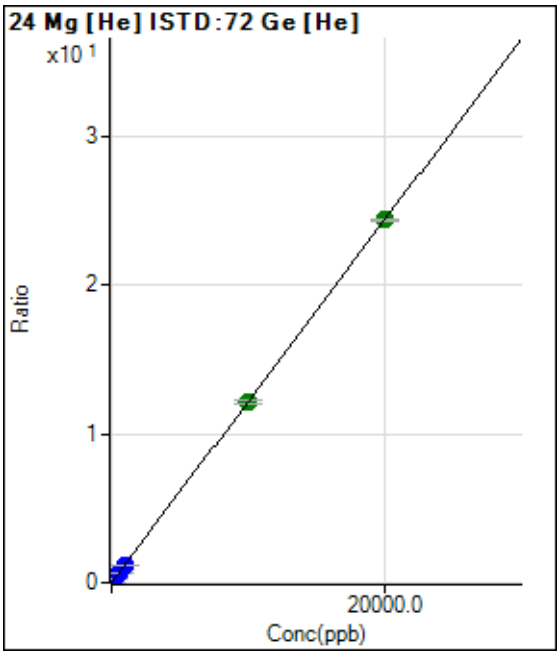
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

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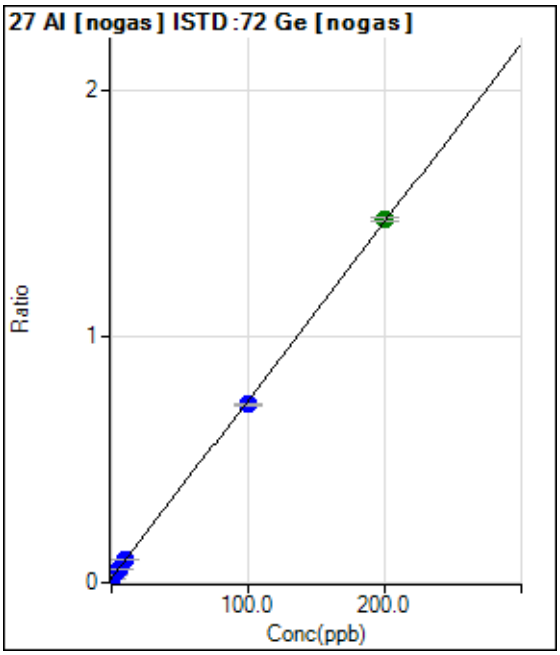
Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1600.10	0.0050	P	3.5
2	☐	200.000	193.180	76289.40	0.2407	P	2.0
3	☐	500.000	488.288	188530.20	0.6006	P	2.1
4	☐	1000.000	953.387	363605.65	1.1679	P	1.2
5	☐	10000.000	9968.625	3734511.40	12.1637	A	1.6
6	☐	20000.000	20018.379	7210696.56	24.4213	A	0.4
7	☐	100.000					

y = 0.0012 * x + 0.0050
R = 1.0000
DL = 0.4357
BEC = 4.137

Weight: <None>
Min Conc: <None>

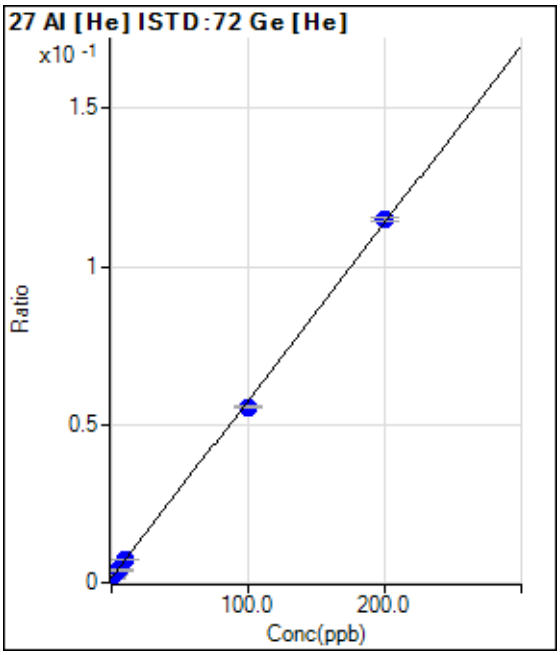


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20444.58	0.0177	P	0.7
2	☐	2.000	2.304	39759.04	0.0343	P	3.9
3	☐	5.000	5.296	64713.91	0.0560	P	2.0
4	☐	10.000	10.626	108266.35	0.0945	P	0.6
5	☐	100.000	97.489	822097.12	0.7224	P	1.2
6	☐	200.000	201.214	1620216.28	1.4722	A	1.1
7	☐	1.000					

y = 0.0072 * x + 0.0177
R = 0.9999
DL = 0.05156
BEC = 2.445

Weight: <None>
Min Conc: <None>

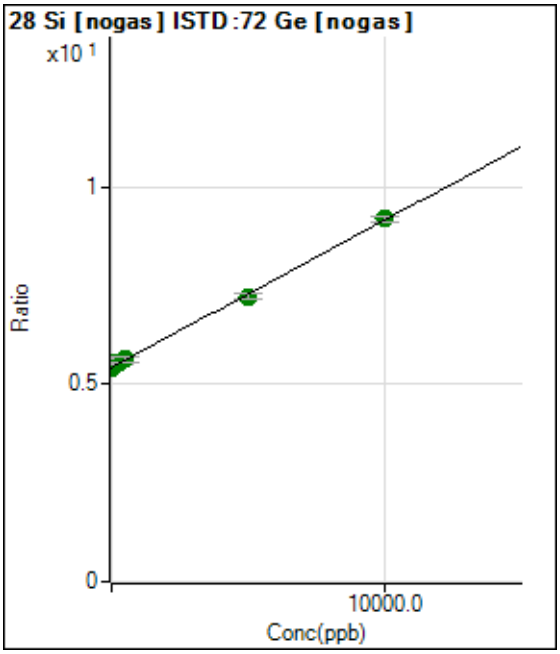
Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	490.02	0.0015	P	33.2
2	☐	2.000	1.916	830.03	0.0026	P	5.7
3	☐	5.000	4.348	1250.07	0.0040	P	2.2
4	☐	10.000	10.062	2236.84	0.0072	P	4.5
5	☐	100.000	96.390	17067.88	0.0556	P	1.5
6	☐	200.000	201.819	33870.50	0.1147	P	1.2
7	☐	1.000					

y = 5.6073E-004 * x + 0.0015
R = 0.9998
DL = 2.745
BEC = 2.752

Weight: <None>
Min Conc: <None>



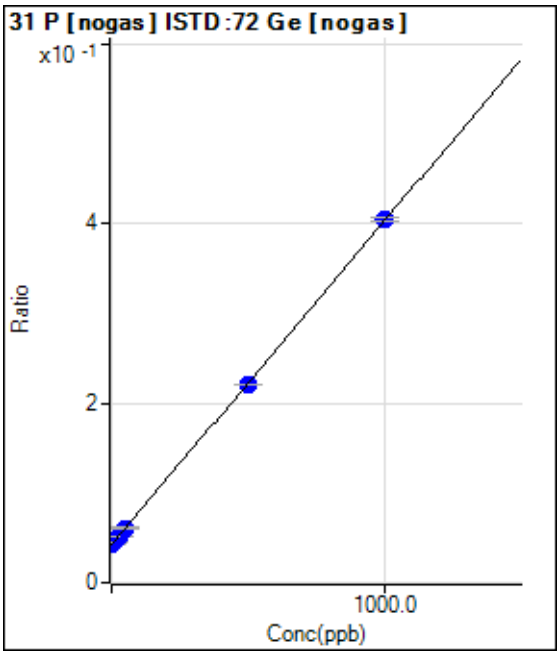
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6285108.24	5.4331	A	1.3
2	☐	100.000	341.936	6440616.78	5.5608	A	1.5
3	☐	250.000	392.676	6452226.99	5.5798	A	3.1
4	☐	500.000	542.897	6457075.11	5.6359	A	2.9
5	☐	5000.000	4828.293	8235934.67	7.2366	A	2.0
6	☐	10000.000	10077.723	10121761.93	9.1973	A	1.5
7	☐	50.000					

y = 3.7351E-004 * x + 5.4331
R = 0.9995
DL = 571.3
BEC = 1.455E+04

Weight: <None>
Min Conc: <None>

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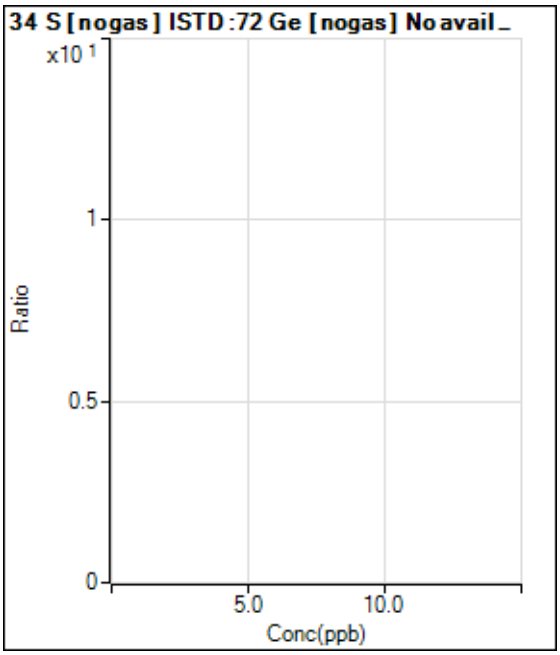
Calibration for 207_ICV.d



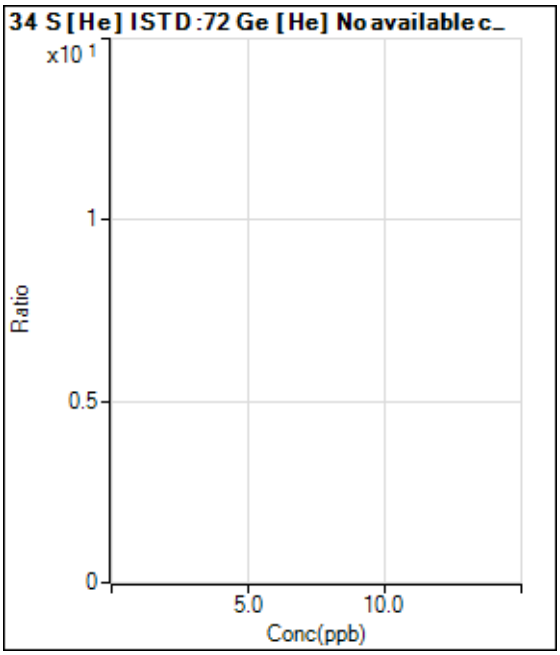
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	49103.95	0.0424	P	1.7
2	☐	10.000	8.791	52840.51	0.0456	P	2.5
3	☐	25.000	24.432	59286.26	0.0513	P	1.3
4	☐	50.000	51.370	69888.74	0.0610	P	2.4
5	☐	500.000	494.337	251426.30	0.2209	P	0.8
6	☐	1000.000	1002.789	445197.22	0.4045	P	1.1
7	☐	5.000					

y = 3.6104E-004 * x + 0.0424
R = 1.0000
DL = 6.038
BEC = 117.6

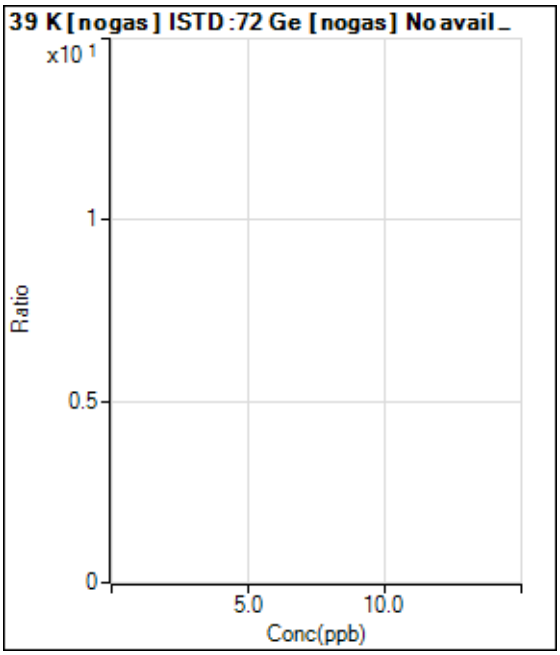
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	400.000					
3	☐	1000.000					
4	☐	2000.000					
5	☐	20000.000					
6	☐	40000.000					
7	☐	200.000					

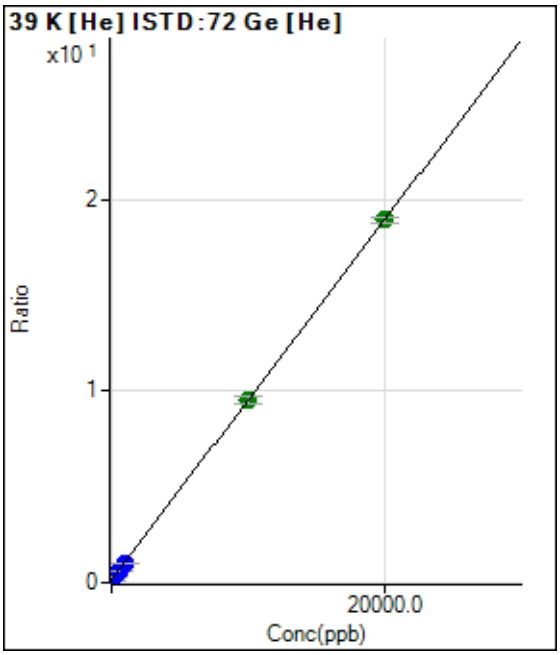


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	400.000					
3	☐	1000.000					
4	☐	2000.000					
5	☐	20000.000					
6	☐	40000.000					
7	☐	200.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	45883.07	0.1447	P	2.8
2	☐	200.000	194.827	103888.67	0.3277	P	2.0
3	☐	500.000	471.021	184303.23	0.5871	P	2.2
4	☐	1000.000	953.021	323773.22	1.0399	P	1.1
5	☐	10000.000	9990.548	2925518.91	9.5297	A	3.9
6	☐	20000.000	20007.851	5592673.88	18.9398	A	1.7
7	☐	100.000					

y = 9.3939E-004 * x + 0.1447

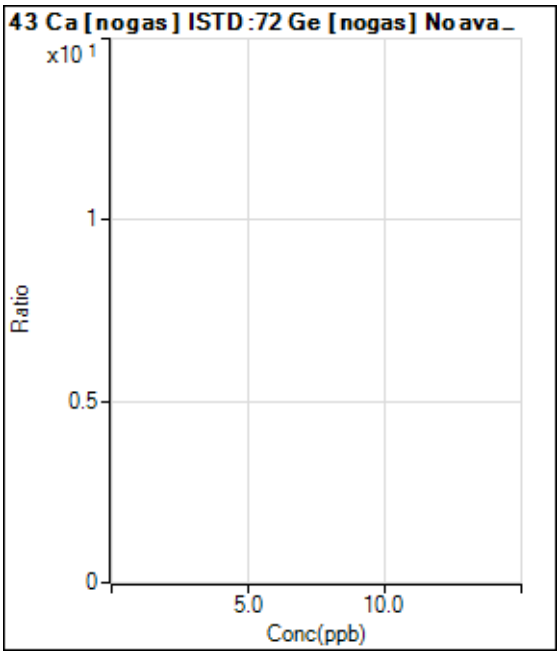
R = 1.0000

DL = 13.03

BEC = 154

Weight: <None>

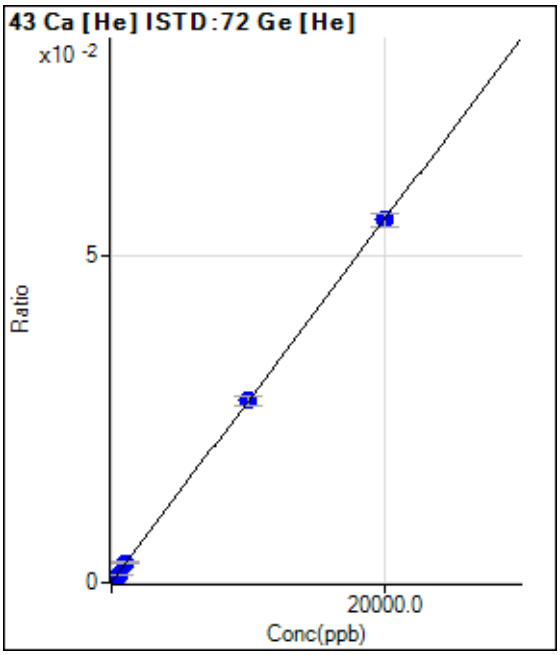
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

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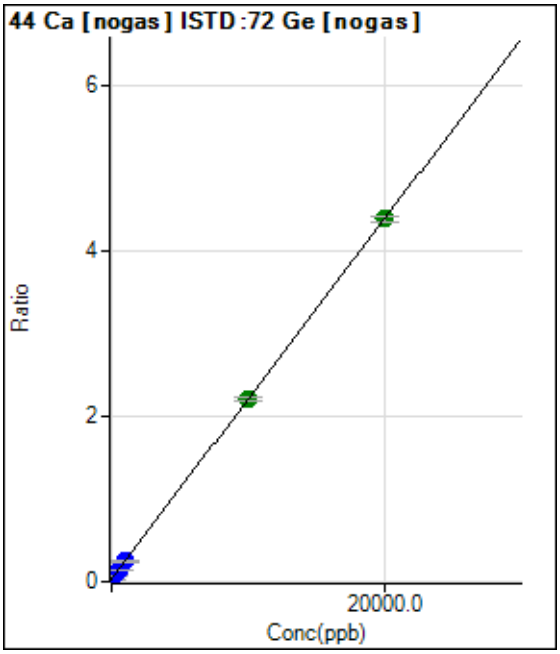
Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0001	P	124.8
2	☐	200.000	227.605	216.67	0.0007	P	38.8
3	☐	500.000	440.436	400.01	0.0013	P	5.6
4	☐	1000.000	1073.451	943.37	0.0030	P	7.3
5	☐	10000.000	10027.715	8558.72	0.0279	P	4.8
6	☐	20000.000	19983.683	16380.74	0.0555	P	3.7
7	☐	100.000					

y = 2.7740E-006 * x + 5.2914E-005
R = 1.0000
DL = 71.39
BEC = 19.08

Weight: <None>
Min Conc: <None>

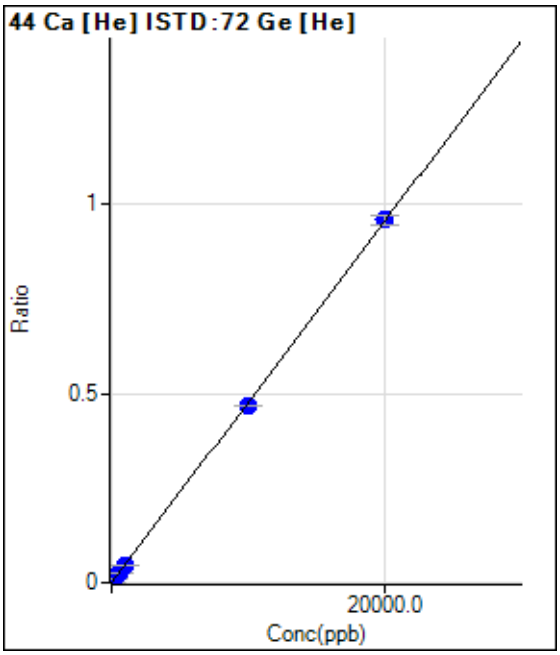


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	39165.24	0.0339	P	1.7
2	☐	200.000	196.777	88773.05	0.0767	P	1.7
3	☐	500.000	491.239	162695.94	0.1407	P	1.3
4	☐	1000.000	970.142	280525.29	0.2448	P	2.2
5	☐	10000.000	10007.447	2515273.97	2.2102	A	1.6
6	☐	20000.000	19998.021	4823456.39	4.3830	A	1.7
7	☐	100.000					

y = 2.1748E-004 * x + 0.0339
R = 1.0000
DL = 8.13
BEC = 155.7

Weight: <None>
Min Conc: <None>

Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	226.68	0.0007	P	2.0
2	☐	200.000	203.577	3303.68	0.0104	P	6.8
3	☐	500.000	500.483	7718.37	0.0246	P	2.7
4	☐	1000.000	981.668	14802.73	0.0475	P	2.1
5	☐	10000.000	9800.197	143763.12	0.4682	P	0.7
6	☐	20000.000	20100.770	283280.62	0.9596	P	2.7
7	☐	100.000					

y = 4.7703E-005 * x + 7.1462E-004

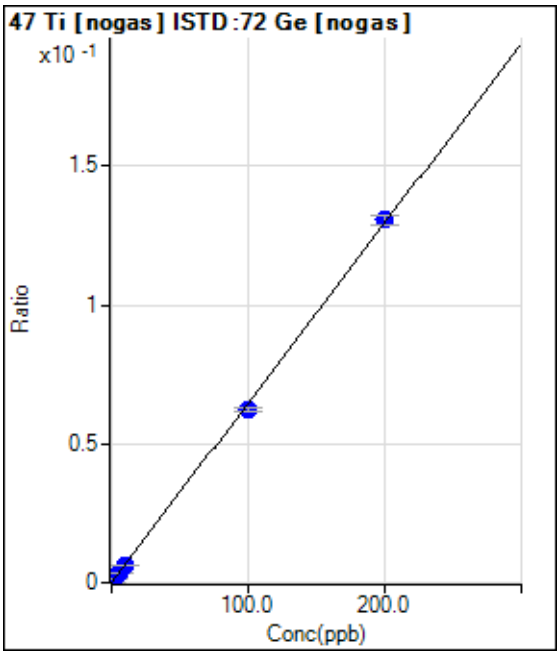
R = 0.9999

DL = 0.9096

BEC = 14.98

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	120.00	0.0001	P	25.4
2	☐	2.000	1.998	1616.76	0.0014	P	10.5
3	☐	5.000	4.966	3833.78	0.0033	P	1.1
4	☐	10.000	9.607	7238.19	0.0063	P	3.2
5	☐	100.000	96.133	70867.69	0.0623	P	1.9
6	☐	200.000	201.954	143838.79	0.1307	P	2.9
7	☐	1.000					

y = 6.4673E-004 * x + 1.0380E-004

R = 0.9997

DL = 0.1224

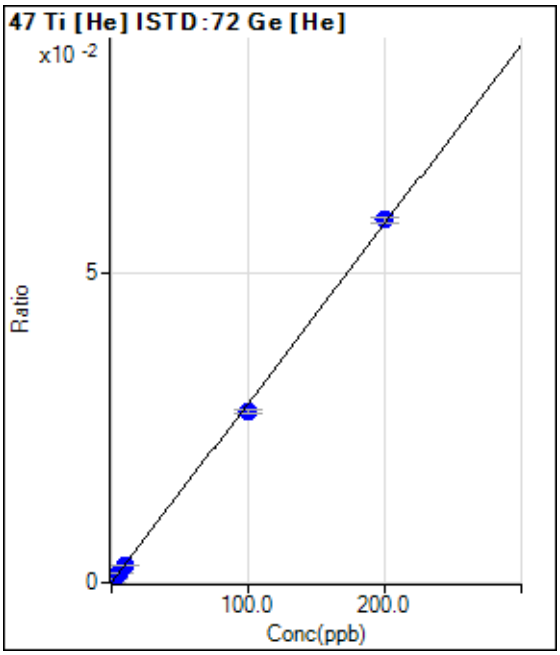
BEC = 0.1605

Weight: <None>

Min Conc: <None>

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Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6.67	0.0000	P	173.2
2	☐	2.000	1.810	173.33	0.0005	P	11.6
3	☐	5.000	5.227	483.35	0.0015	P	4.7
4	☐	10.000	9.662	880.04	0.0028	P	6.7
5	☐	100.000	95.430	8512.06	0.0277	P	2.9
6	☐	200.000	202.298	17348.27	0.0588	P	1.4
7	☐	1.000					

y = 2.9031E-004 * x + 2.1148E-005

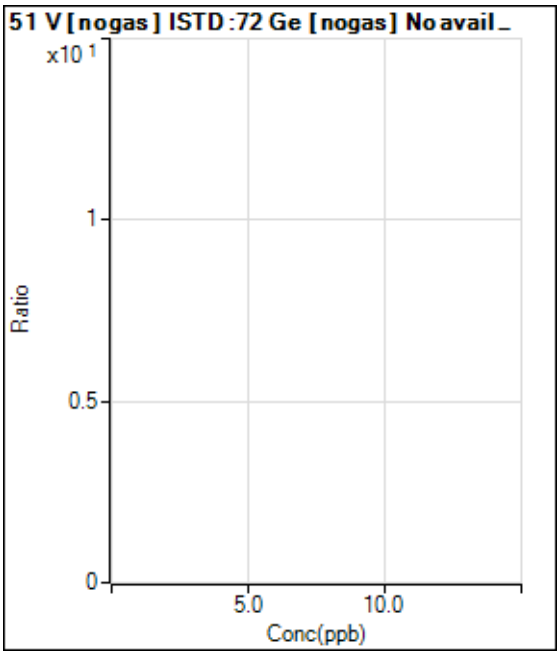
R = 0.9996

DL = 0.3785

BEC = 0.07285

Weight: <None>

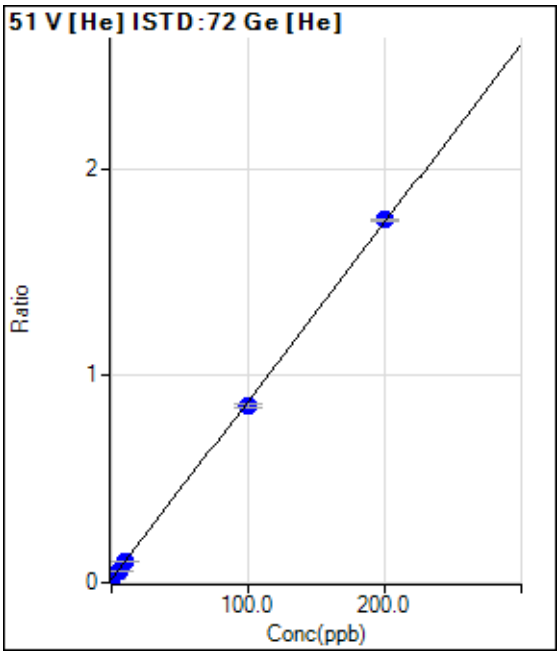
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

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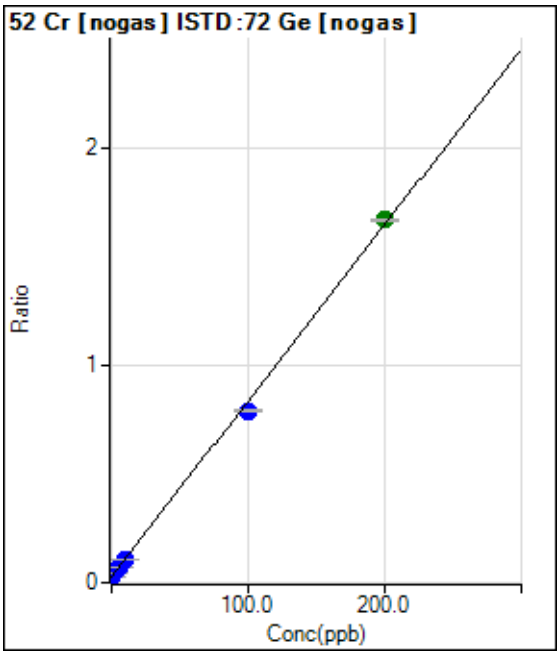
Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5048.49	0.0159	P	2.7
2	☐	2.000	1.968	10424.07	0.0329	P	1.9
3	☐	5.000	4.964	18435.82	0.0587	P	1.0
4	☐	10.000	9.752	31140.46	0.1000	P	0.7
5	☐	100.000	97.061	261878.25	0.8530	P	2.0
6	☐	200.000	201.483	517752.90	1.7535	P	0.4
7	☐	1.000					

y = 0.0086 * x + 0.0159
R = 0.9998
DL = 0.1473
BEC = 1.845

Weight: <None>
Min Conc: <None>

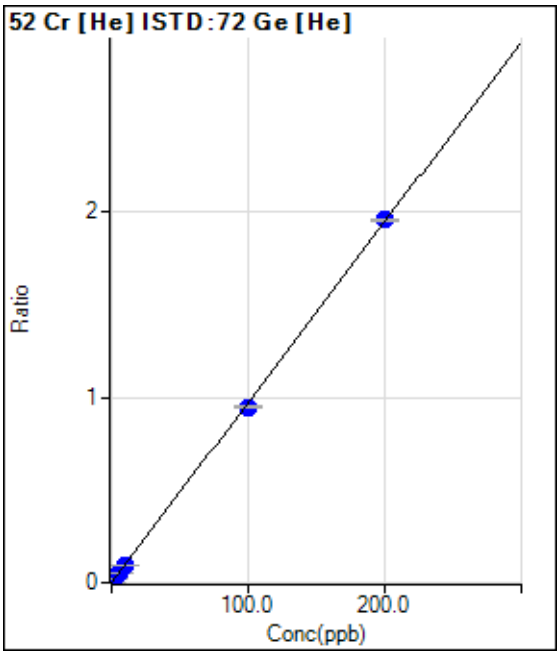


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	32268.34	0.0279	P	2.9
2	☐	2.000	1.849	49616.47	0.0428	P	1.7
3	☐	5.000	4.985	78850.22	0.0682	P	1.2
4	☐	10.000	9.526	120173.28	0.1049	P	2.6
5	☐	100.000	94.289	899043.40	0.7900	P	1.7
6	☐	200.000	202.881	1835511.80	1.6678	A	0.9
7	☐	1.000					

y = 0.0081 * x + 0.0279
R = 0.9994
DL = 0.3006
BEC = 3.451

Weight: <None>
Min Conc: <None>

Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	400.01	0.0013	P	12.2
2	☐	2.000	2.009	6591.28	0.0208	P	2.3
3	☐	5.000	4.982	15606.74	0.0497	P	1.8
4	☐	10.000	9.838	30168.16	0.0969	P	2.9
5	☐	100.000	97.363	291005.98	0.9478	P	0.6
6	☐	200.000	201.327	578266.60	1.9584	P	0.8
7	☐	1.000					

y = 0.0097 * x + 0.0013

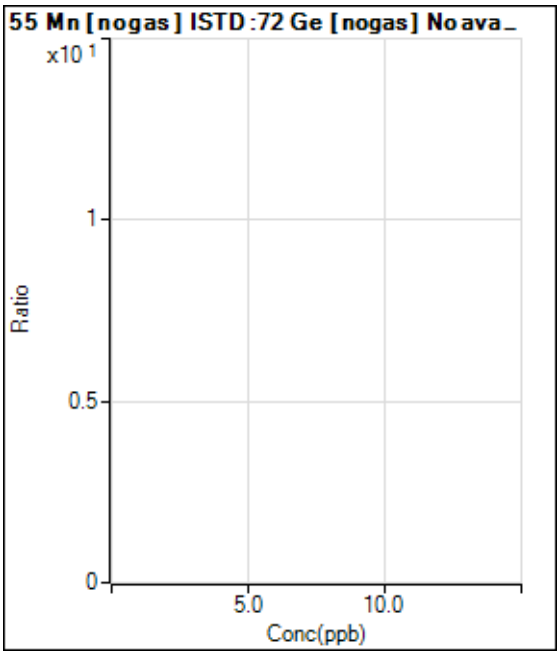
R = 0.9999

DL = 0.04745

BEC = 0.1299

Weight: <None>

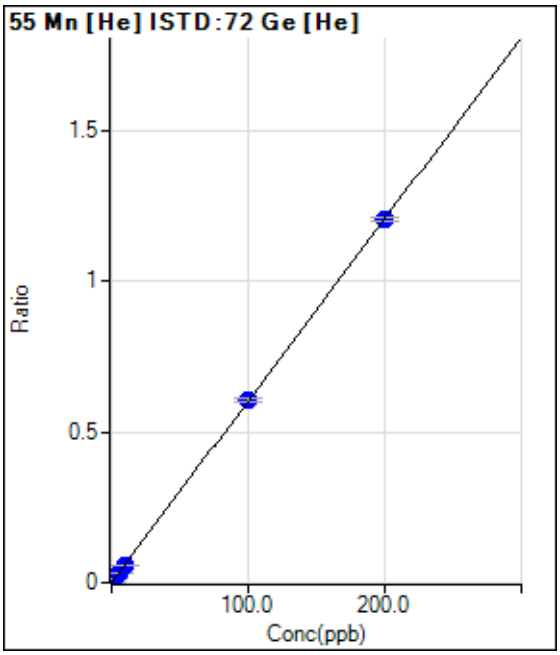
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

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Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	106.67	0.0003	P	38.2
2	☐	2.000	2.028	3980.50	0.0126	P	1.8
3	☐	5.000	5.111	9772.76	0.0311	P	3.8
4	☐	10.000	9.807	18502.80	0.0594	P	1.0
5	☐	100.000	100.741	186487.91	0.6074	P	1.7
6	☐	200.000	199.636	355255.06	1.2033	P	1.2
7	☐	1.000					

y = 0.0060 * x + 3.3632E-004

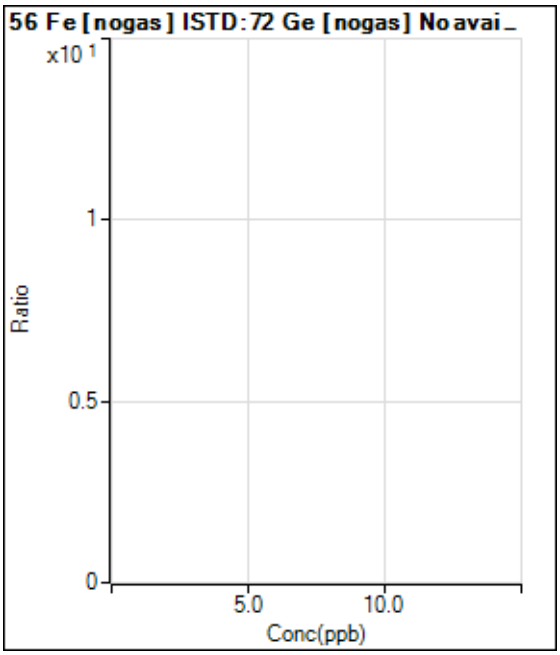
R = 1.0000

DL = 0.06395

BEC = 0.05581

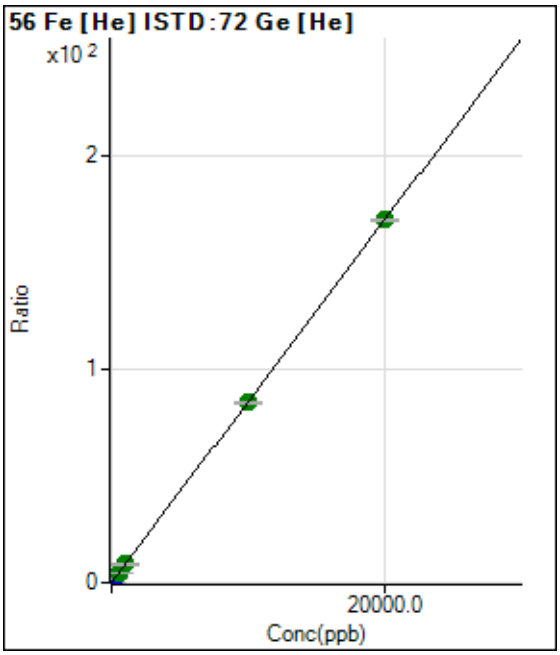
Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

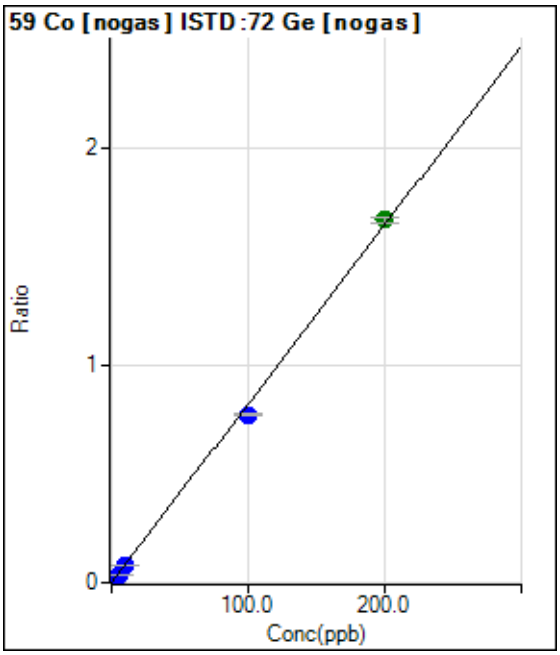
Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5237.49	0.0165	P	3.6
2	☐	200.000	191.891	521574.87	1.6453	P	1.3
3	☐	500.000	528.937	1413932.58	4.5061	A	4.6
4	☐	1000.000	1017.014	2693021.52	8.6488	A	5.2
5	☐	10000.000	9950.646	25936562.11	84.4760	A	1.4
6	☐	20000.000	20023.184	50184542.59	169.9701	A	0.6
7	☐	100.000					

y = 0.0085 * x + 0.0165
R = 1.0000
DL = 0.209
BEC = 1.946

Weight: <None>
Min Conc: <None>



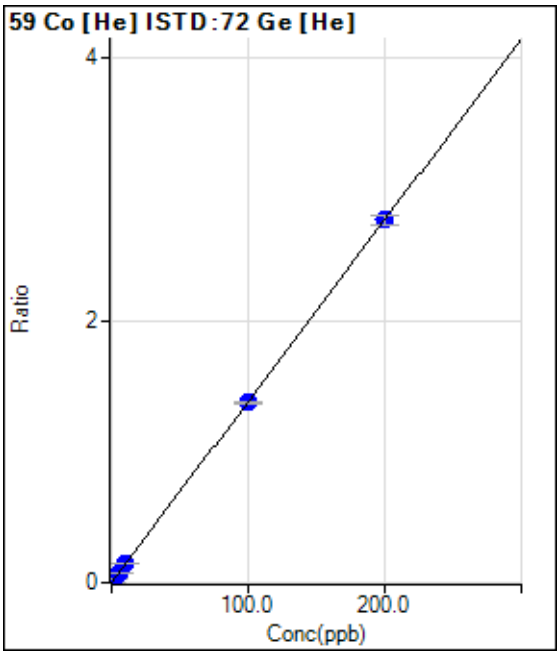
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	223.34	0.0002	P	41.1
2	☐	2.000	1.916	18459.50	0.0159	P	5.3
3	☐	5.000	4.764	45499.66	0.0393	P	1.0
4	☐	10.000	9.618	90793.09	0.0792	P	1.4
5	☐	100.000	94.099	880318.42	0.7735	P	0.9
6	☐	200.000	202.976	1836050.96	1.6684	A	1.5
7	☐	1.000					

y = 0.0082 * x + 1.9328E-004
R = 0.9994
DL = 0.02898
BEC = 0.02352

Weight: <None>
Min Conc: <None>

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Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	50.00	0.0002	P	53.8
2	☐	2.000	2.128	9372.53	0.0296	P	3.5
3	☐	5.000	5.225	22717.51	0.0724	P	2.0
4	☐	10.000	10.146	43708.90	0.1404	P	1.1
5	☐	100.000	99.624	422780.64	1.3770	P	1.2
6	☐	200.000	200.174	816792.33	2.7667	P	2.4
7	☐	1.000					

y = 0.0138 * x + 1.5802E-004

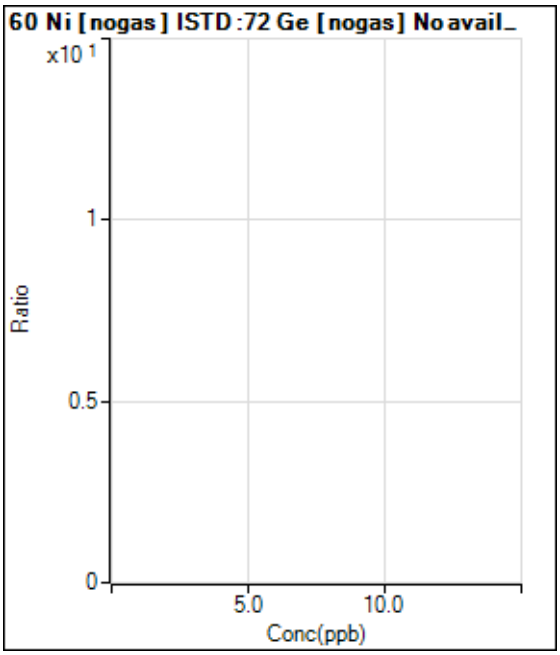
R = 1.0000

DL = 0.01847

BEC = 0.01143

Weight: <None>

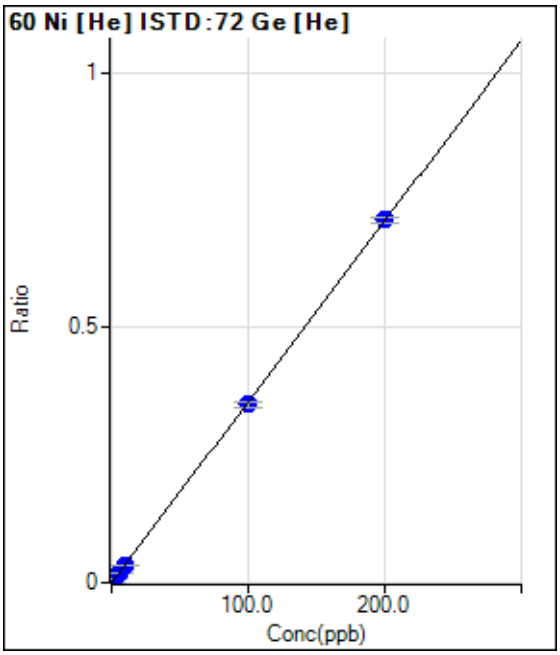
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

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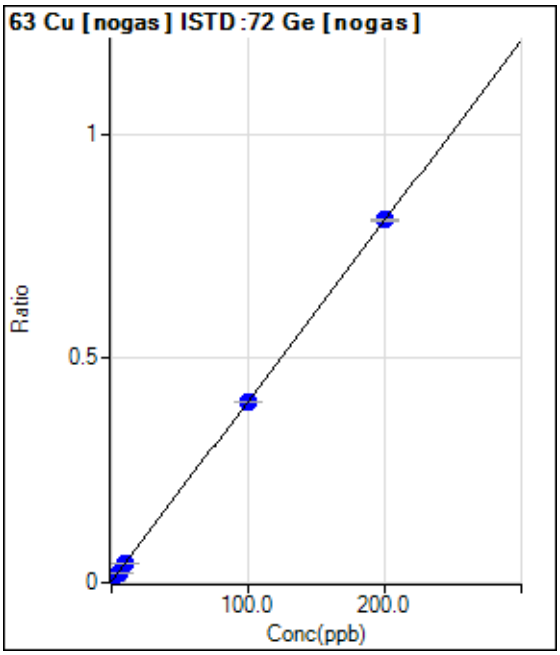
Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	43.33	0.0001	P	53.9
2	☐	2.000	2.027	2320.18	0.0073	P	6.0
3	☐	5.000	5.273	5897.69	0.0188	P	9.3
4	☐	10.000	9.781	10826.64	0.0348	P	0.5
5	☐	100.000	98.441	107056.68	0.3487	P	3.7
6	☐	200.000	200.783	209953.67	0.7111	P	1.3
7	☐	1.000					

y = 0.0035 * x + 1.3689E-004
R = 1.0000
DL = 0.0625
BEC = 0.03866

Weight: <None>
Min Conc: <None>

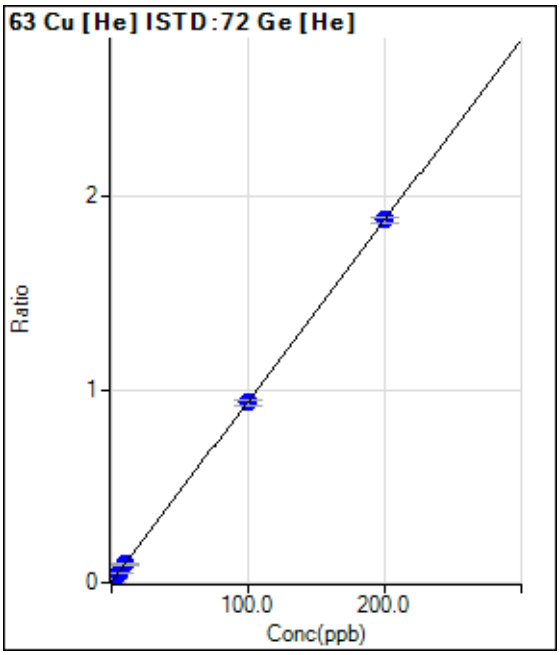


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3730.45	0.0032	P	1.5
2	☐	2.000	1.980	12948.09	0.0112	P	3.7
3	☐	5.000	5.035	27123.57	0.0235	P	0.3
4	☐	10.000	10.066	50031.41	0.0437	P	2.6
5	☐	100.000	99.285	457673.52	0.4022	P	0.7
6	☐	200.000	200.354	889545.27	0.8083	P	0.7
7	☐	1.000					

y = 0.0040 * x + 0.0032
R = 1.0000
DL = 0.03576
BEC = 0.8026

Weight: <None>
Min Conc: <None>

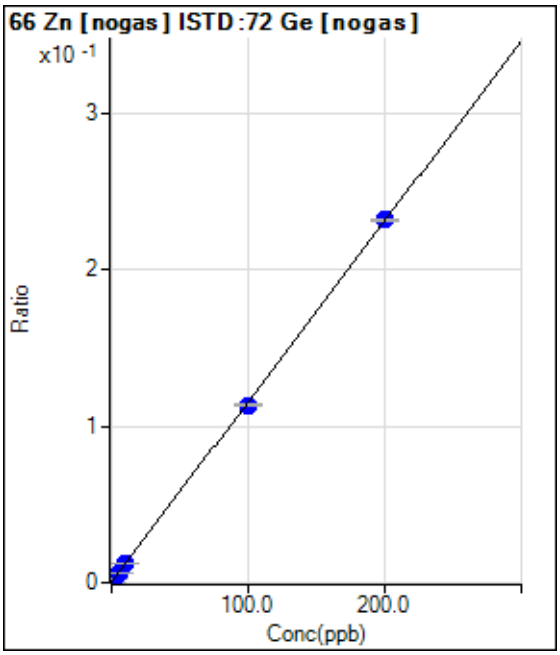
Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1046.71	0.0033	P	19.5
2	☐	2.000	2.085	7234.83	0.0228	P	5.0
3	☐	5.000	5.070	15927.11	0.0507	P	4.0
4	☐	10.000	9.910	29897.92	0.0960	P	3.2
5	☐	100.000	99.431	286646.41	0.9337	P	3.2
6	☐	200.000	200.286	554275.95	1.8774	P	1.3
7	☐	1.000					

y = 0.0094 * x + 0.0033
R = 1.0000
DL = 0.2065
BEC = 0.3531

Weight: <None>
Min Conc: <None>

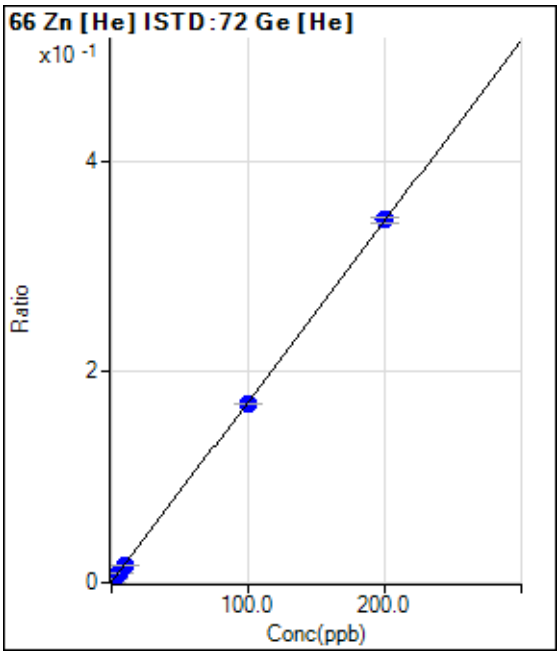


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	380.01	0.0003	P	10.2
2	☐	2.000	2.042	3103.64	0.0027	P	3.8
3	☐	5.000	4.986	7018.10	0.0061	P	5.7
4	☐	10.000	10.087	13688.61	0.0119	P	3.7
5	☐	100.000	98.205	129073.18	0.1134	P	1.1
6	☐	200.000	200.893	254976.37	0.2317	P	0.8
7	☐	1.000					

y = 0.0012 * x + 3.2841E-004
R = 0.9999
DL = 0.08689
BEC = 0.2852

Weight: <None>
Min Conc: <None>

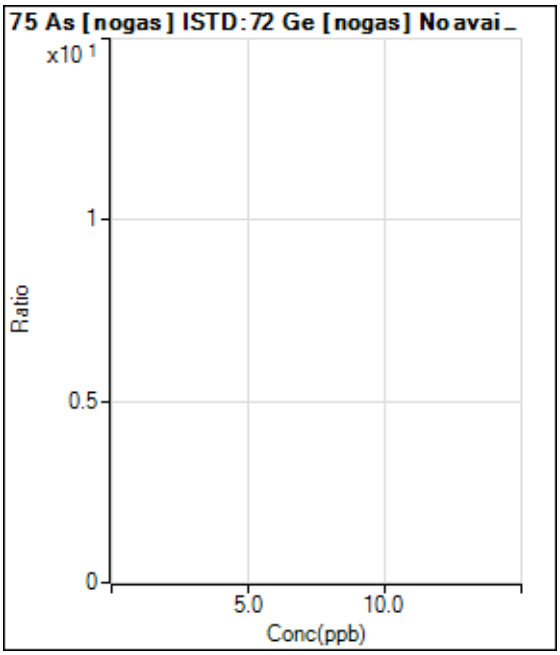
Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	173.33	0.0005	P	4.1
2	☐	2.000	1.987	1253.39	0.0040	P	6.0
3	☐	5.000	4.973	2846.92	0.0091	P	3.0
4	☐	10.000	9.496	5237.50	0.0168	P	4.1
5	☐	100.000	98.716	52110.95	0.1697	P	0.8
6	☐	200.000	200.668	101694.32	0.3444	P	1.6
7	☐	1.000					

y = 0.0017 * x + 5.4660E-004
R = 1.0000
DL = 0.03903
BEC = 0.3189

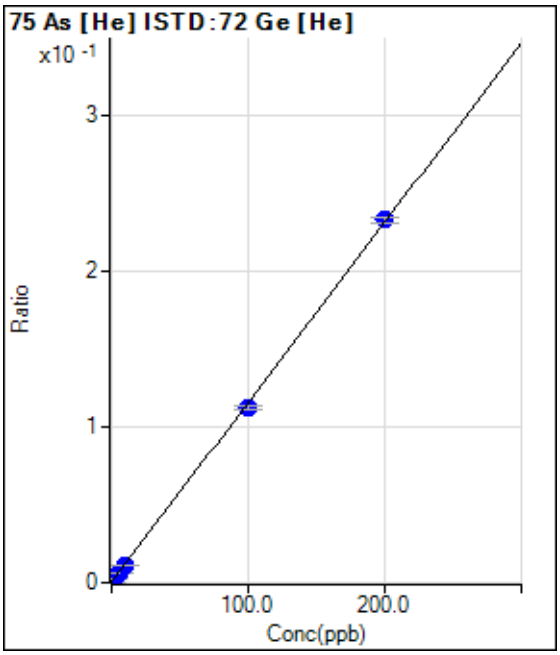
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

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Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	115.55	0.0004	P	19.0
2	☐	2.000	1.819	782.24	0.0025	P	4.1
3	☐	5.000	4.921	1901.22	0.0061	P	1.8
4	☐	10.000	9.655	3588.15	0.0115	P	3.0
5	☐	100.000	96.922	34513.67	0.1124	P	2.3
6	☐	200.000	201.560	68901.48	0.2334	P	1.7
7	☐	1.000					

y = 0.0012 * x + 3.6376E-004

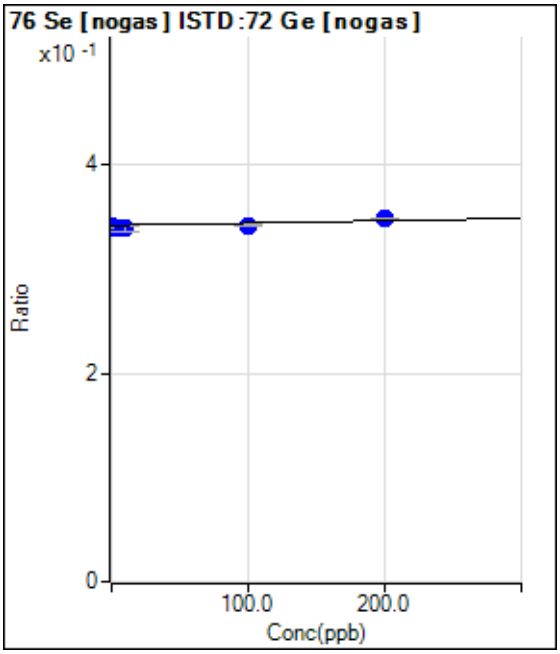
R = 0.9998

DL = 0.1794

BEC = 0.3147

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	395918.24	0.3422	P	0.5
2	☐	2.000	-83.892	394193.77	0.3404	P	0.6
3	☐	5.000	-115.319	392774.01	0.3397	P	0.3
4	☐	10.000	-147.770	388332.88	0.3389	P	1.5
5	☐	100.000	-22.491	388913.37	0.3417	P	0.6
6	☐	200.000	273.001	383435.89	0.3484	P	0.7
7	☐	1.000					

y = 2.2525E-005 * x + 0.3422

R = 0.8888

DL = 222.4

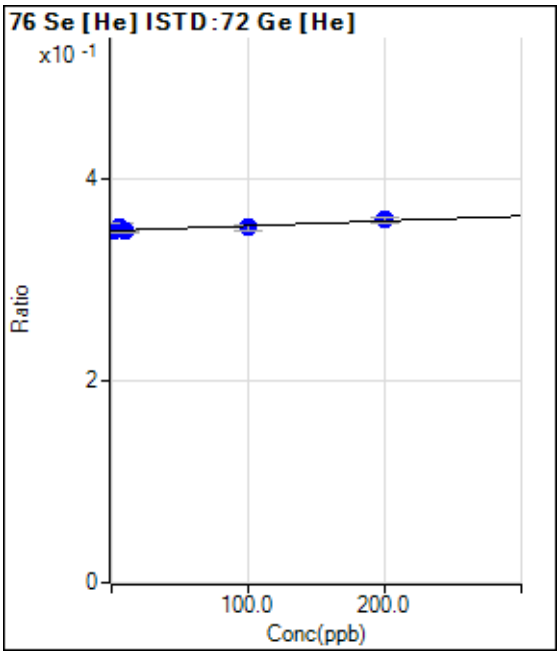
BEC = 1.519E+04

Weight: <None>

Min Conc: <None>

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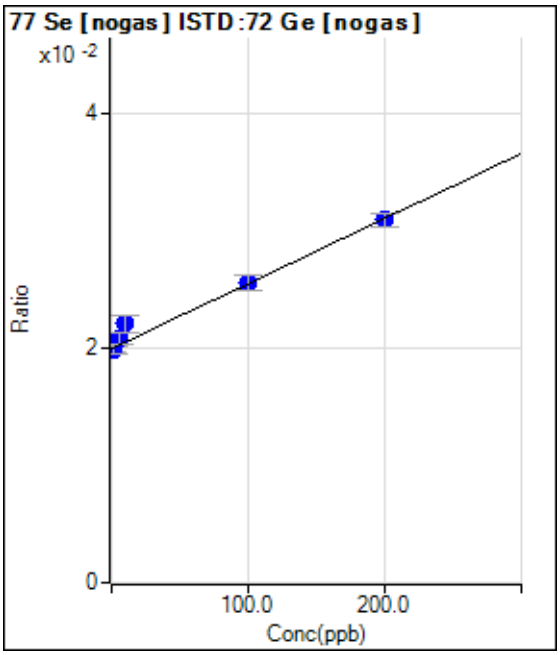
Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	110782.79	0.3493	P	1.2
2	☐	2.000	-18.945	110436.65	0.3484	P	0.9
3	☐	5.000	69.380	110704.94	0.3527	P	1.9
4	☐	10.000	-9.393	108606.53	0.3488	P	0.5
5	☐	100.000	59.660	108126.89	0.3522	P	2.0
6	☐	200.000	219.740	106279.67	0.3600	P	1.4
7	☐	1.000					

y = 4.8719E-005 * x + 0.3493
R = 0.9086
DL = 253.3
BEC = 7169

Weight: <None>
Min Conc: <None>



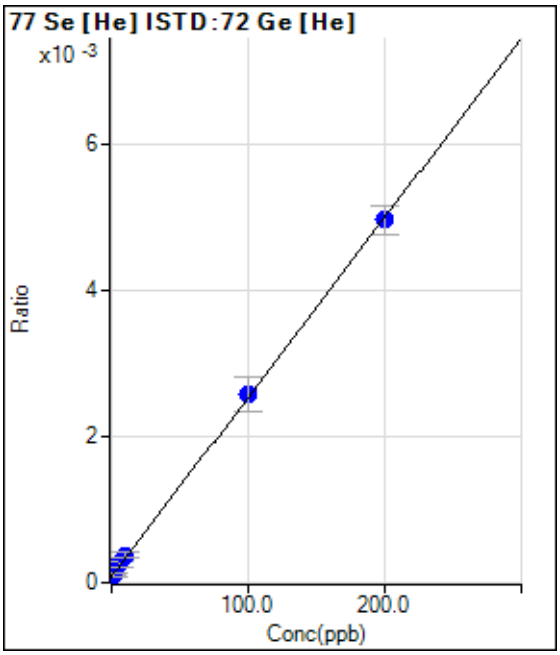
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23035.03	0.0199	P	3.0
2	☐	2.000	-3.086	22861.46	0.0197	P	3.5
3	☐	5.000	16.106	24059.68	0.0208	P	5.2
4	☐	10.000	38.279	25244.71	0.0220	P	6.5
5	☐	100.000	101.383	29053.65	0.0255	P	5.3
6	☐	200.000	197.668	33972.18	0.0309	P	3.8
7	☐	1.000					

y = 5.5452E-005 * x + 0.0199
R = 0.9889
DL = 32.15
BEC = 359.1

Weight: <None>
Min Conc: <None>

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Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26.67	0.0001	P	41.7
2	☐	2.000	0.870	33.33	0.0001	P	45.9
3	☐	5.000	7.030	80.00	0.0003	P	34.7
4	☐	10.000	11.876	116.67	0.0004	P	18.3
5	☐	100.000	102.051	793.36	0.0026	P	18.3
6	☐	200.000	198.841	1463.42	0.0050	P	8.3
7	☐	1.000					

y = 2.4518E-005 * x + 8.3739E-005

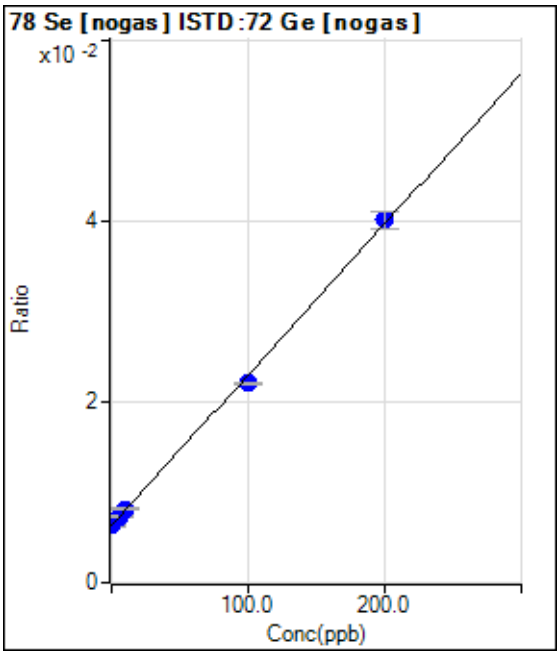
R = 0.9998

DL = 4.273

BEC = 3.415

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7321.57	0.0063	P	2.9
2	☐	2.000	2.804	7871.81	0.0068	P	2.4
3	☐	5.000	5.820	8442.05	0.0073	P	3.0
4	☐	10.000	10.987	9355.89	0.0082	P	3.6
5	☐	100.000	94.546	25164.35	0.0221	P	0.8
6	☐	200.000	202.649	44187.28	0.0402	P	4.8
7	☐	1.000					

y = 1.6694E-004 * x + 0.0063

R = 0.9994

DL = 3.3

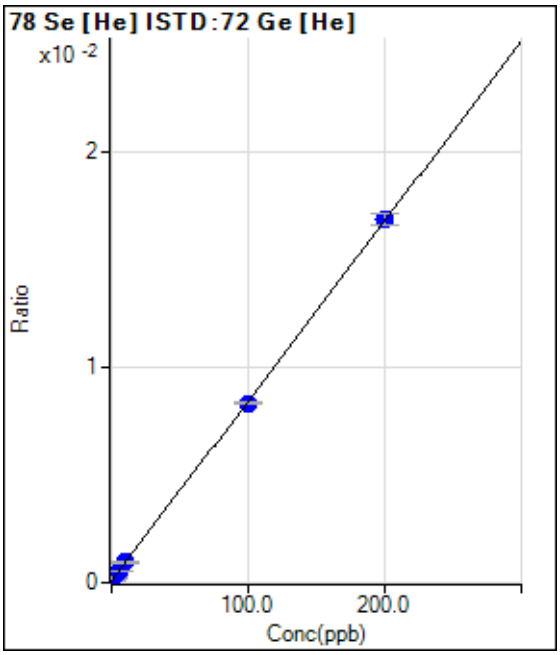
BEC = 37.91

Weight: <None>

Min Conc: <None>

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Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	27.33	0.0001	P	22.9
2	☐	2.000	1.819	75.33	0.0002	P	12.7
3	☐	5.000	5.027	158.67	0.0005	P	2.1
4	☐	10.000	10.522	300.00	0.0010	P	9.7
5	☐	100.000	98.541	2550.19	0.0083	P	1.3
6	☐	200.000	200.704	4968.02	0.0168	P	3.2
7	☐	1.000					

y = 8.3418E-005 * x + 8.6086E-005

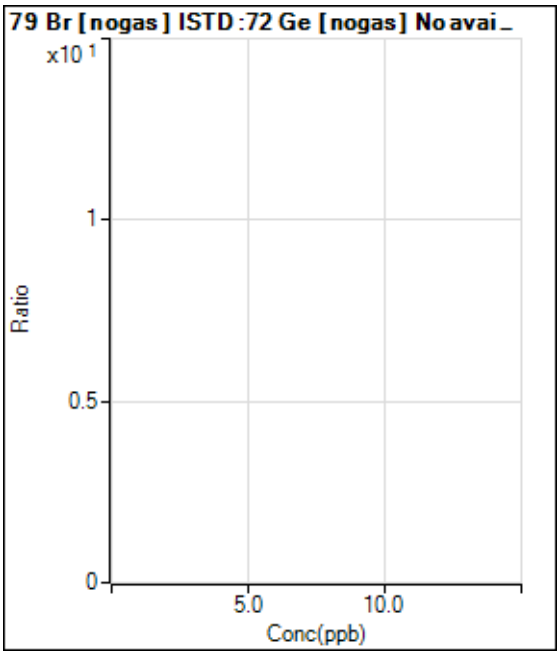
R = 1.0000

DL = 0.7083

BEC = 1.032

Weight: <None>

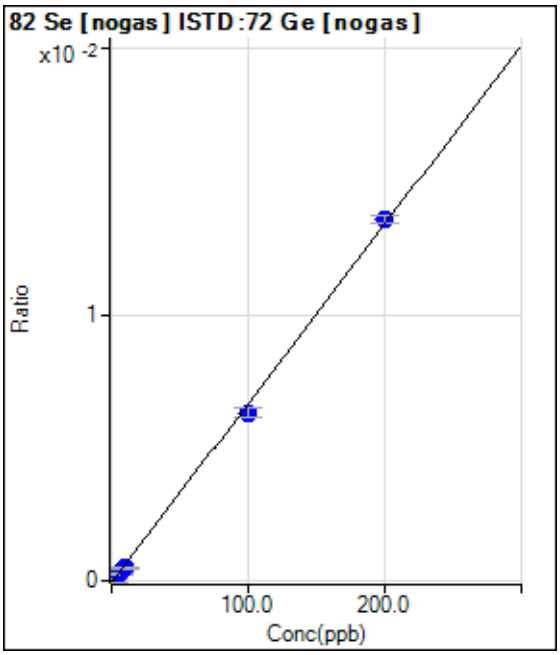
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

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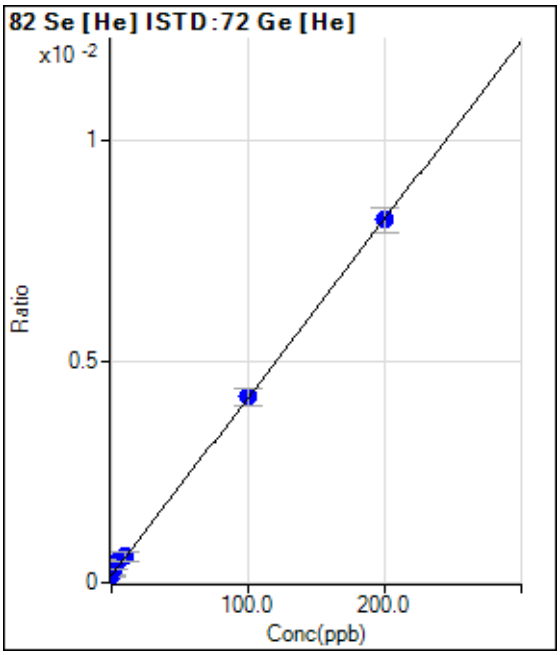
Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-47.20	0.0000	P	-235.2
2	☐	2.000	1.238	49.01	0.0000	P	244.2
3	☐	5.000	5.027	343.20	0.0003	P	20.8
4	☐	10.000	8.087	575.56	0.0005	P	16.8
5	☐	100.000	94.631	7187.73	0.0063	P	5.6
6	☐	200.000	202.787	14945.40	0.0136	P	1.8
7	☐	1.000					

y = 6.7156E-005 * x - 4.0684E-005
R = 0.9995
DL = 4.275
BEC = -0.6058

Weight: <None>
Min Conc: <None>



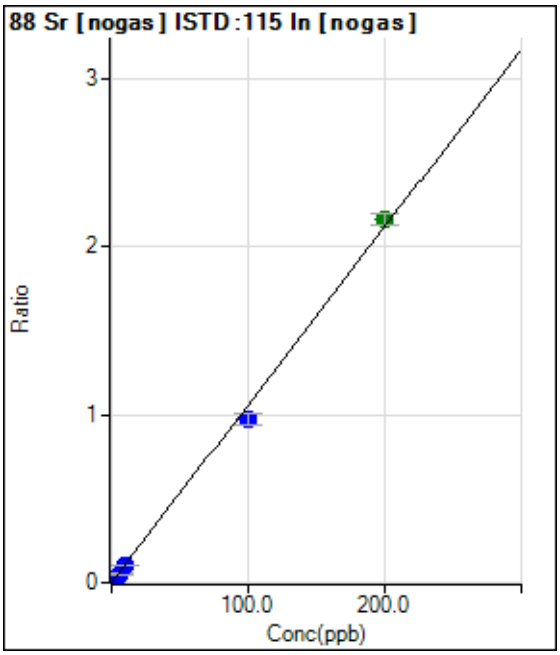
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	50.00	0.0002	P	33.1
2	☐	2.000	3.669	96.67	0.0003	P	5.1
3	☐	5.000	8.762	160.00	0.0005	P	6.9
4	☐	10.000	10.742	183.33	0.0006	P	33.8
5	☐	100.000	100.536	1290.07	0.0042	P	9.2
6	☐	200.000	199.584	2416.86	0.0082	P	7.1
7	☐	1.000					

y = 4.0244E-005 * x + 1.5714E-004
R = 0.9999
DL = 3.872
BEC = 3.905

Weight: <None>
Min Conc: <None>

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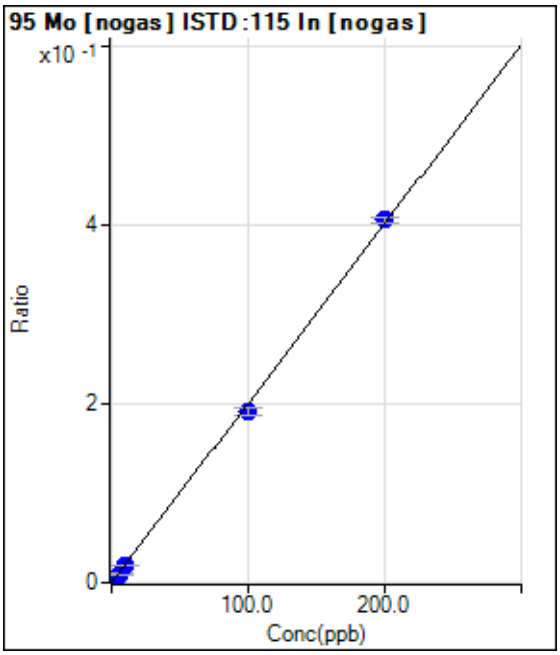
Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2420.20	0.0020	P	11.2
2	☐	2.000	1.859	25615.10	0.0216	P	1.5
3	☐	5.000	4.679	60876.52	0.0514	P	1.3
4	☐	10.000	9.323	116877.40	0.1004	P	1.4
5	☐	100.000	91.893	1140488.37	0.9722	P	6.0
6	☐	200.000	204.097	2386868.04	2.1568	A	3.4
7	☐	1.000					

y = 0.0106 * x + 0.0020
R = 0.9989
DL = 0.06417
BEC = 0.1917

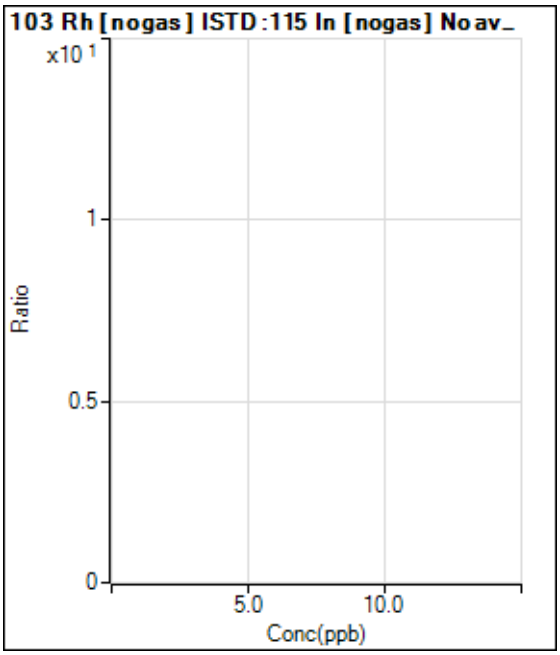
Weight: <None>
Min Conc: <None>



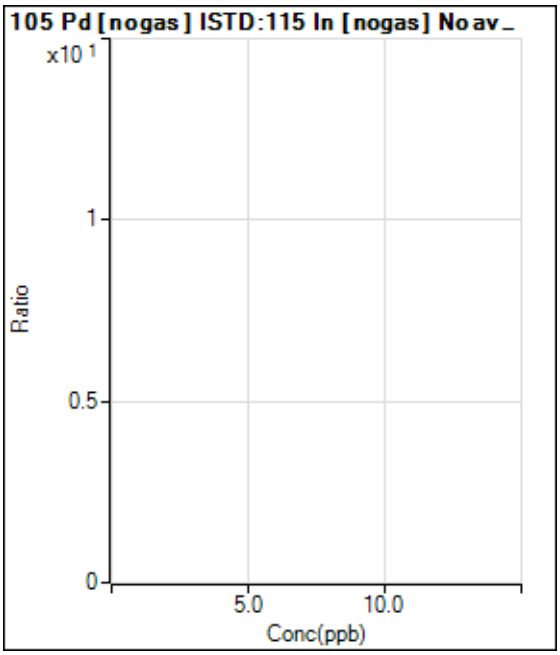
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	53.33	0.0000	P	60.9
2	☐	2.000	1.949	4677.35	0.0040	P	4.9
3	☐	5.000	4.789	11413.79	0.0096	P	0.6
4	☐	10.000	9.682	22624.73	0.0194	P	4.6
5	☐	100.000	95.477	224581.66	0.1914	P	5.3
6	☐	200.000	202.283	448737.67	0.4055	P	1.9
7	☐	1.000					

y = 0.0020 * x + 4.4724E-005
R = 0.9996
DL = 0.04078
BEC = 0.02232

Weight: <None>
Min Conc: <None>

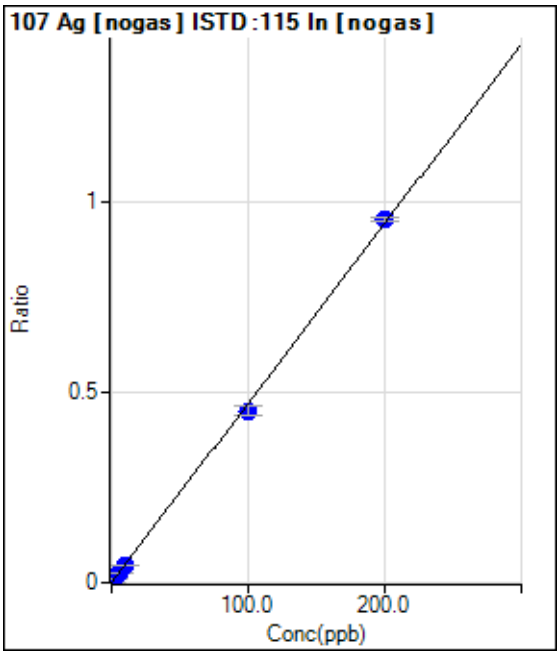


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

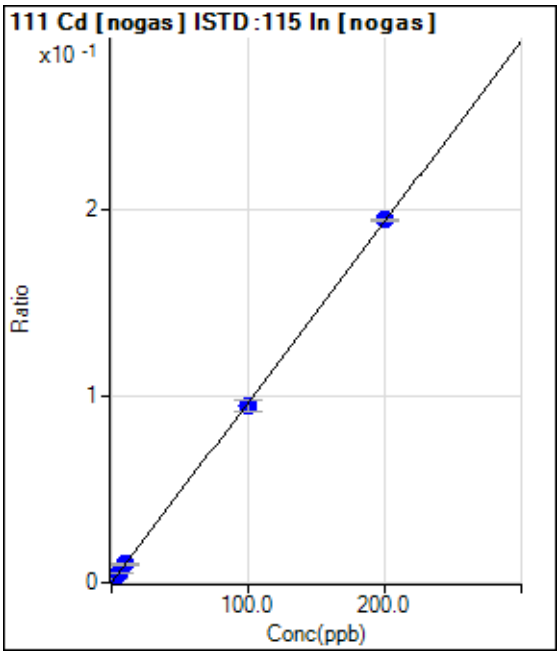
Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	360.01	0.0003	P	8.6
2	☐	2.000	1.925	11073.59	0.0094	P	3.3
3	☐	5.000	4.911	27708.54	0.0234	P	3.8
4	☐	10.000	9.813	54072.70	0.0465	P	2.8
5	☐	100.000	95.608	528278.91	0.4502	P	5.3
6	☐	200.000	202.208	1053448.53	0.9518	P	1.2
7	☐	1.000					

y = 0.0047 * x + 3.0118E-004
R = 0.9997
DL = 0.01643
BEC = 0.064

Weight: <None>
Min Conc: <None>

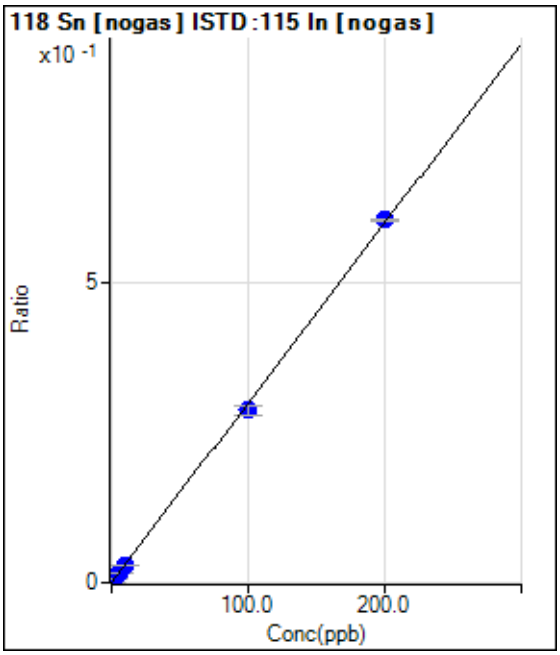


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	0.00	0.0000	P	
2	☐	2.000	2.009	2300.18	0.0019	P	10.4
3	☐	5.000	5.149	5901.06	0.0050	P	1.4
4	☐	10.000	10.136	11417.19	0.0098	P	2.2
5	☐	100.000	97.931	111196.27	0.0948	P	6.6
6	☐	200.000	201.024	215385.33	0.1946	P	0.6
7	☐	1.000					

y = 9.6810E-004 * x + 0.0000E+000
R = 0.9999
DL = 0
BEC = 0

Weight: <None>
Min Conc: <None>

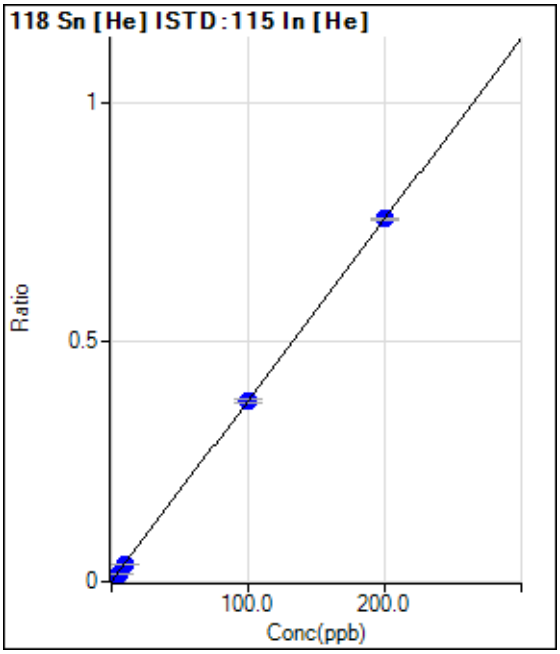
Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	570.02	0.0005	P	7.2
2	☐	2.000	1.903	7311.63	0.0062	P	6.1
3	☐	5.000	4.827	17682.45	0.0149	P	0.6
4	☐	10.000	9.805	34728.00	0.0298	P	2.4
5	☐	100.000	96.026	338044.03	0.2881	P	5.7
6	☐	200.000	202.002	670267.15	0.6056	P	0.4
7	☐	1.000					

y = 0.0030 * x + 4.7687E-004
R = 0.9997
DL = 0.03462
BEC = 0.1592

Weight: <None>
Min Conc: <None>



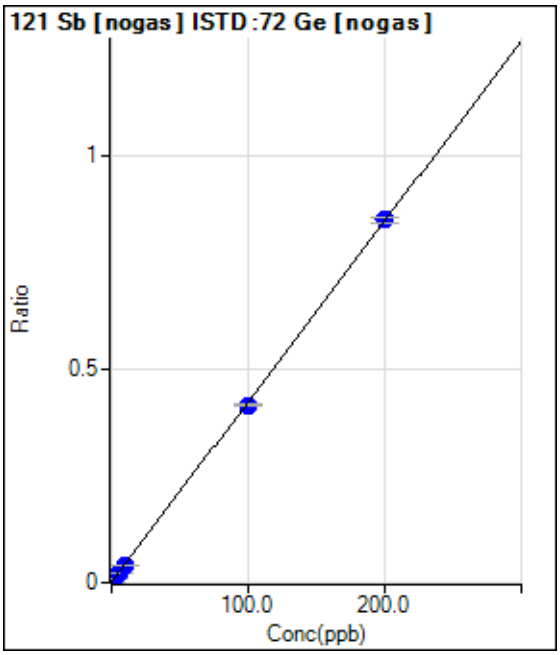
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	286.67	0.0006	P	47.0
2	☐	2.000	1.921	3530.40	0.0079	P	2.2
3	☐	5.000	4.534	8015.26	0.0178	P	1.3
4	☐	10.000	9.704	16291.13	0.0373	P	3.4
5	☐	100.000	99.498	161098.69	0.3764	P	1.5
6	☐	200.000	200.278	316621.17	0.7570	P	0.2
7	☐	1.000					

y = 0.0038 * x + 6.4523E-004
R = 1.0000
DL = 0.2407
BEC = 0.1708

Weight: <None>
Min Conc: <None>

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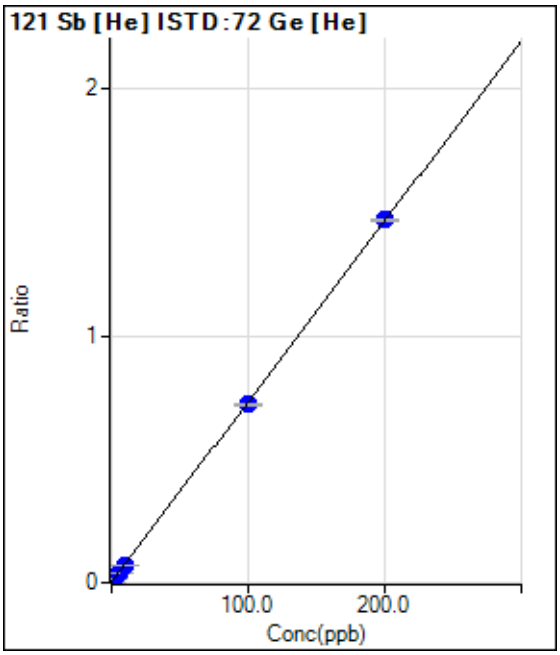
Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	980.05	0.0008	P	20.0
2	☐	2.000	2.011	10803.45	0.0093	P	1.8
3	☐	5.000	4.961	25174.96	0.0218	P	2.7
4	☐	10.000	9.685	47768.55	0.0417	P	3.0
5	☐	100.000	98.218	472396.57	0.4151	P	1.3
6	☐	200.000	200.907	933459.57	0.8482	P	1.9
7	☐	1.000					

y = 0.0042 * x + 8.4668E-004
R = 0.9999
DL = 0.1204
BEC = 0.2007

Weight: <None>
Min Conc: <None>

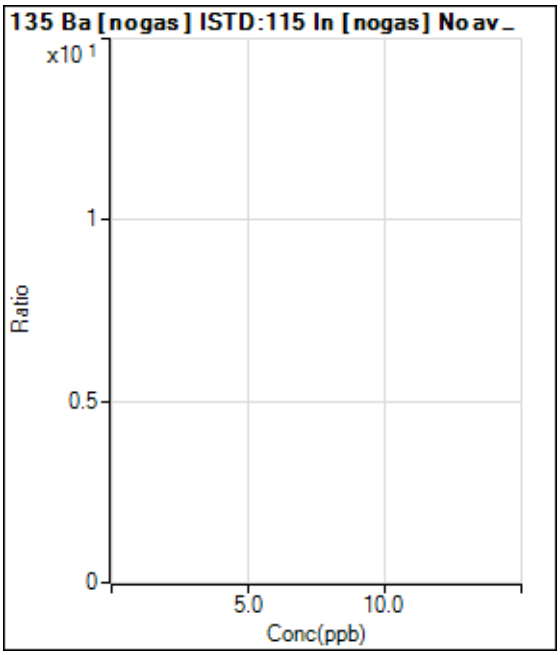


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	593.35	0.0019	P	8.8
2	☐	2.000	1.956	5120.83	0.0162	P	5.7
3	☐	5.000	4.694	11343.85	0.0361	P	4.3
4	☐	10.000	9.610	22431.20	0.0720	P	0.6
5	☐	100.000	98.391	221176.60	0.7204	P	1.4
6	☐	200.000	200.832	433573.72	1.4685	P	0.7
7	☐	1.000					

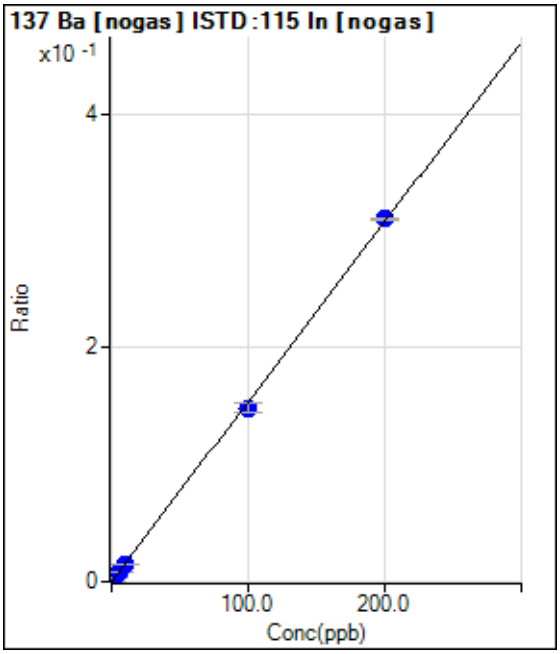
y = 0.0073 * x + 0.0019
R = 1.0000
DL = 0.06762
BEC = 0.2561

Weight: <None>
Min Conc: <None>

Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	330.01	0.0003	P	20.5
2	☐	2.000	1.919	3813.81	0.0032	P	4.4
3	☐	5.000	4.838	9119.21	0.0077	P	5.2
4	☐	10.000	9.716	17672.63	0.0152	P	3.0
5	☐	100.000	96.519	174109.69	0.1484	P	6.0
6	☐	200.000	201.760	343055.75	0.3100	P	0.5
7	☐	1.000					

y = 0.0015 * x + 2.7586E-004

R = 0.9998

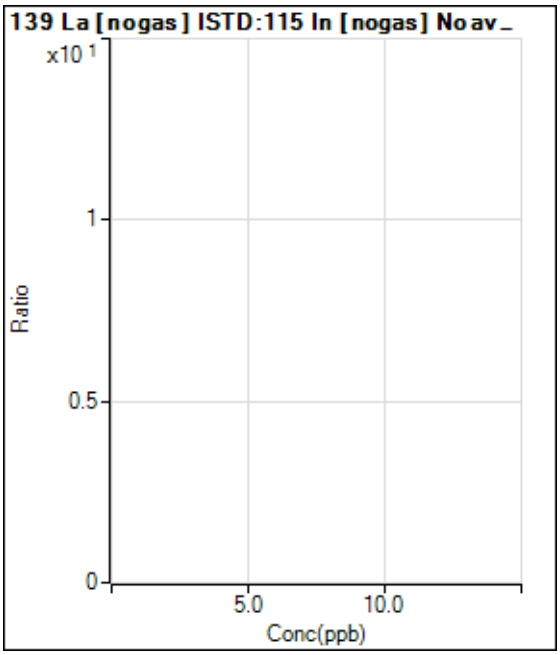
DL = 0.1103

BEC = 0.1797

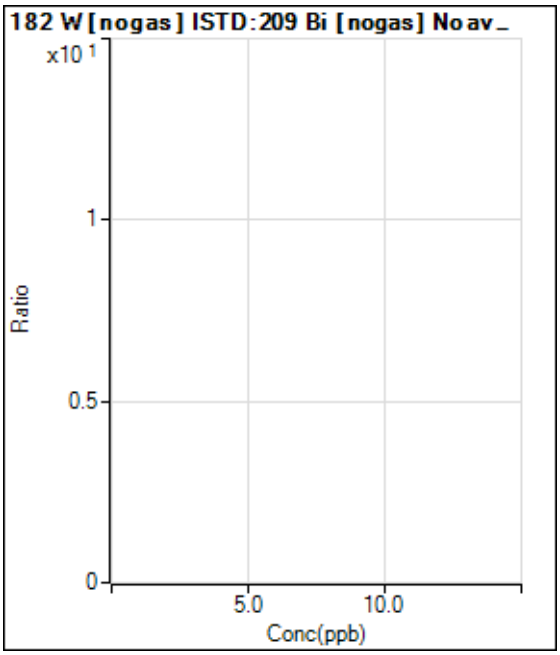
Weight: <None>

Min Conc: <None>

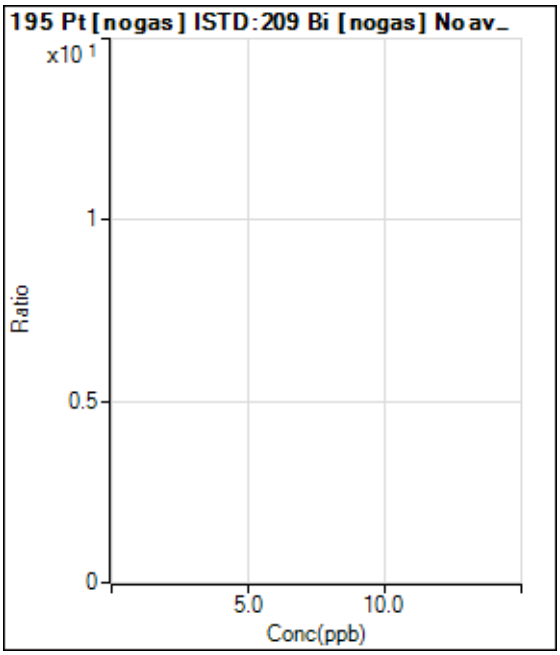
RIGHT SOLUTIONS | RIGHT PARTNER



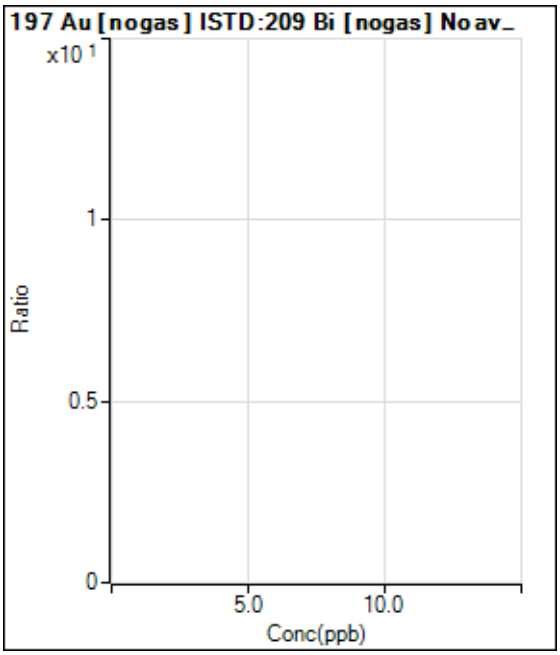
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

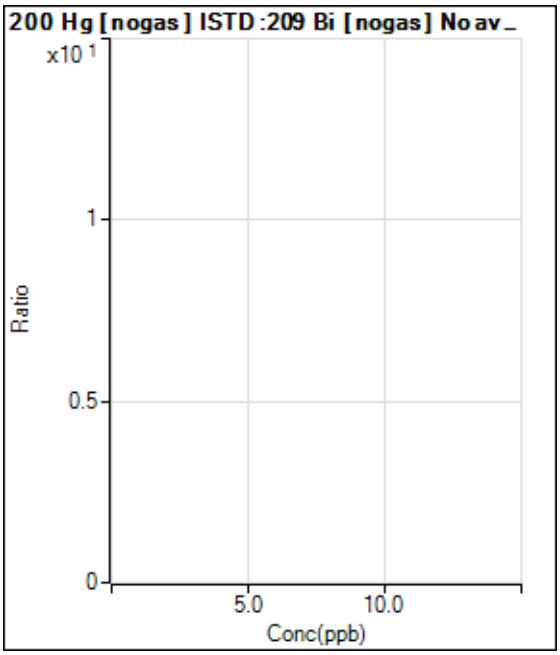


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

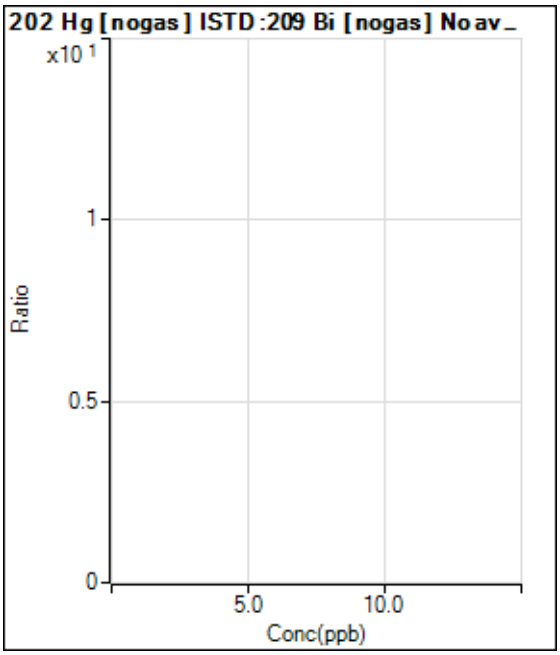


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

Calibration for 207_ICV.d

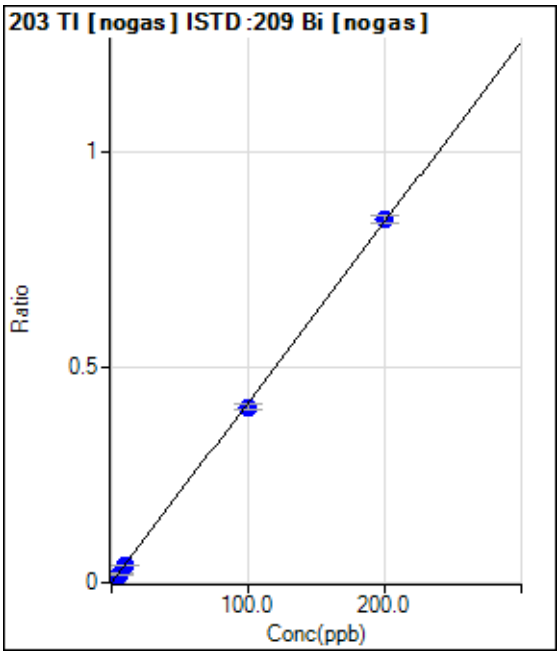


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	0.050					
3	☐	0.200					
4	☐	0.500					
5	☐	2.000					
6	☐	5.000					
7	☐	10.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	0.050					
3	☐	0.200					
4	☐	0.500					
5	☐	5.000					
6	☐	5.000					
7	☐	10.000					

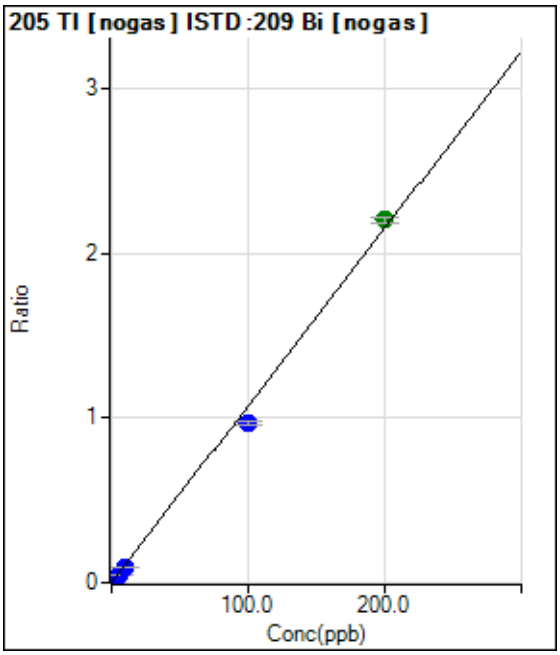
Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26.67	0.0000	P	42.5
2	☐	2.000	1.864	7838.70	0.0078	P	5.9
3	☐	5.000	4.775	19892.19	0.0201	P	3.9
4	☐	10.000	9.653	40139.32	0.0405	P	6.0
5	☐	100.000	97.583	392572.68	0.4093	P	2.4
6	☐	200.000	201.233	772319.78	0.8440	P	2.0
7	☐	1.000					

y = 0.0042 * x + 2.6620E-005
R = 0.9999
DL = 0.008095
BEC = 0.006347

Weight: <None>
Min Conc: <None>

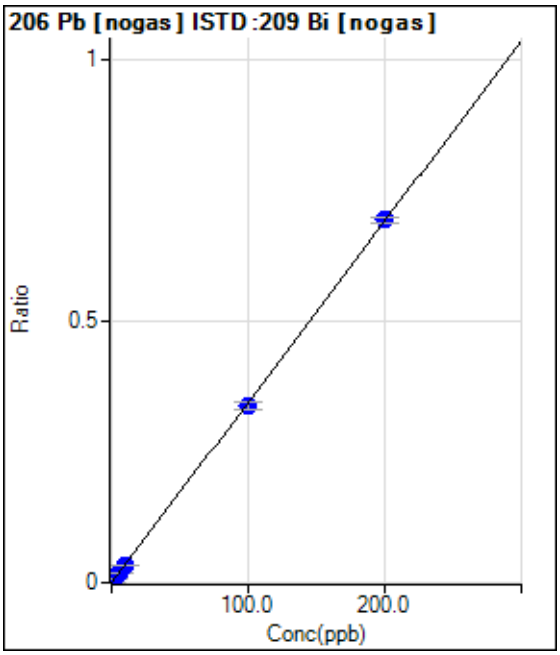


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	73.33	0.0001	P	7.5
2	☐	2.000	1.836	19829.01	0.0198	P	1.8
3	☐	5.000	4.526	48388.27	0.0488	P	3.0
4	☐	10.000	8.850	94468.85	0.0953	P	3.5
5	☐	100.000	90.310	932103.50	0.9718	P	2.3
6	☐	200.000	204.916	2017801.89	2.2048	A	1.7
7	☐	1.000					

y = 0.0108 * x + 7.3333E-005
R = 0.9984
DL = 0.001532
BEC = 0.006816

Weight: <None>
Min Conc: <None>

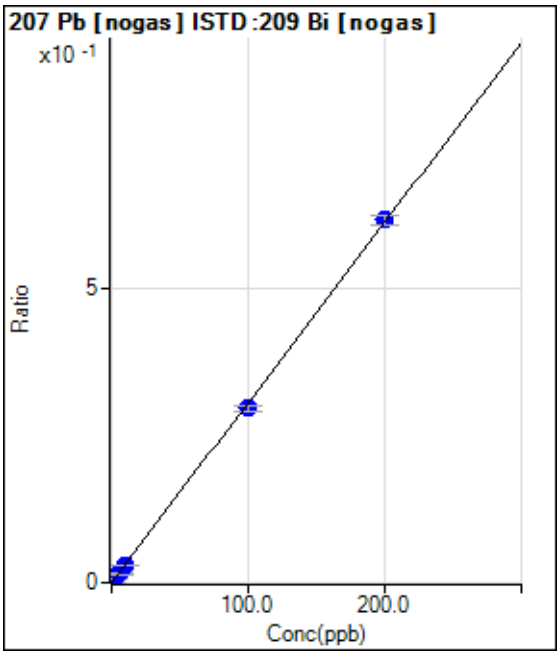
Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	116.67	0.0001	P	32.5
2	☐	2.000	2.051	7185.01	0.0072	P	4.7
3	☐	5.000	4.969	17109.07	0.0172	P	2.3
4	☐	10.000	9.472	32485.95	0.0328	P	1.7
5	☐	100.000	98.054	324176.55	0.3380	P	3.5
6	☐	200.000	201.000	633987.70	0.6928	P	1.6
7	☐	1.000					

y = 0.0034 * x + 1.1728E-004
R = 0.9999
DL = 0.03314
BEC = 0.03403

Weight: <None>
Min Conc: <None>

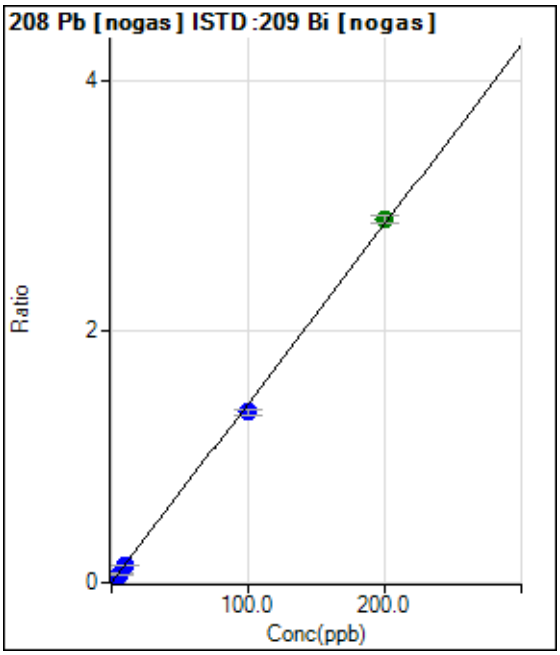


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	120.00	0.0001	P	5.9
2	☐	2.000	1.900	5924.51	0.0059	P	1.6
3	☐	5.000	4.820	14720.16	0.0148	P	5.4
4	☐	10.000	9.628	29276.45	0.0295	P	3.3
5	☐	100.000	96.909	284026.50	0.2961	P	2.8
6	☐	200.000	201.570	563513.14	0.6158	P	2.8
7	☐	1.000					

y = 0.0031 * x + 1.1988E-004
R = 0.9998
DL = 0.006963
BEC = 0.03925

Weight: <None>
Min Conc: <None>

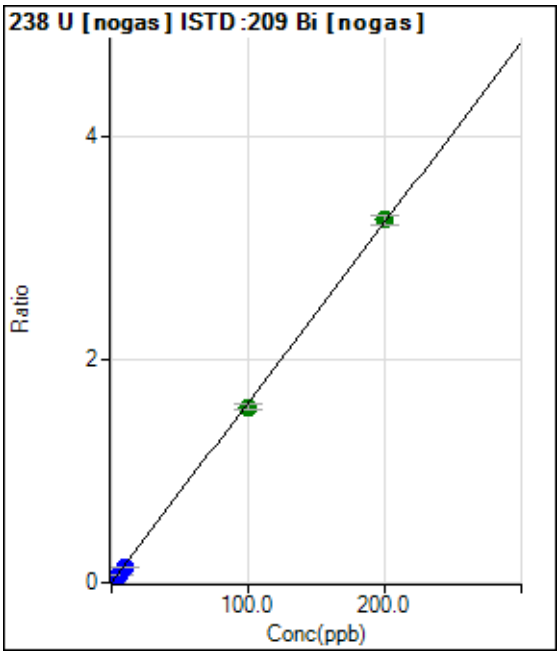
Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	500.00	0.0005	P	17.4
2	☐	2.000	1.921	27919.81	0.0279	P	1.4
3	☐	5.000	4.786	68243.51	0.0688	P	3.4
4	☐	10.000	9.331	132539.64	0.1337	P	2.2
5	☐	100.000	95.169	1303115.46	1.3587	P	2.9
6	☐	200.000	202.455	2644388.42	2.8897	A	2.2
7	☐	1.000					

y = 0.0143 * x + 5.0039E-004
R = 0.9996
DL = 0.01828
BEC = 0.03506

Weight: <None>
Min Conc: <None>

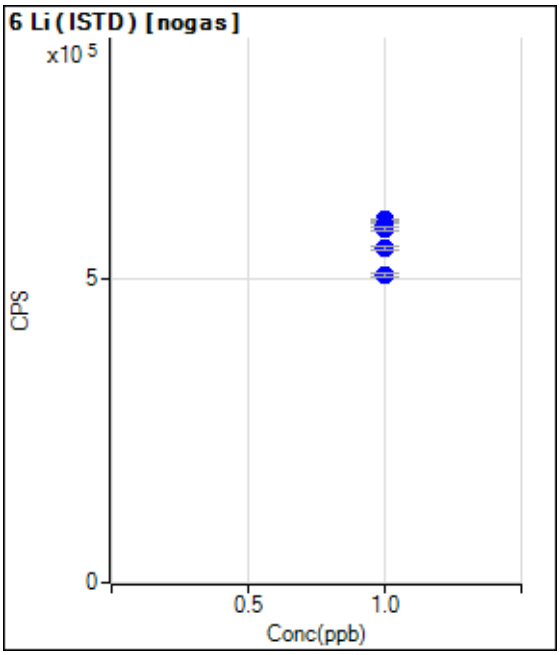


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	53.33	0.0001	P	9.1
2	☐	2.000	1.770	28689.41	0.0287	P	2.7
3	☐	5.000	4.484	72035.98	0.0726	P	2.8
4	☐	10.000	8.749	140391.20	0.1416	P	3.6
5	☐	100.000	97.230	1509167.22	1.5733	A	3.2
6	☐	200.000	201.463	2982779.02	3.2598	A	2.9
7	☐	1.000					

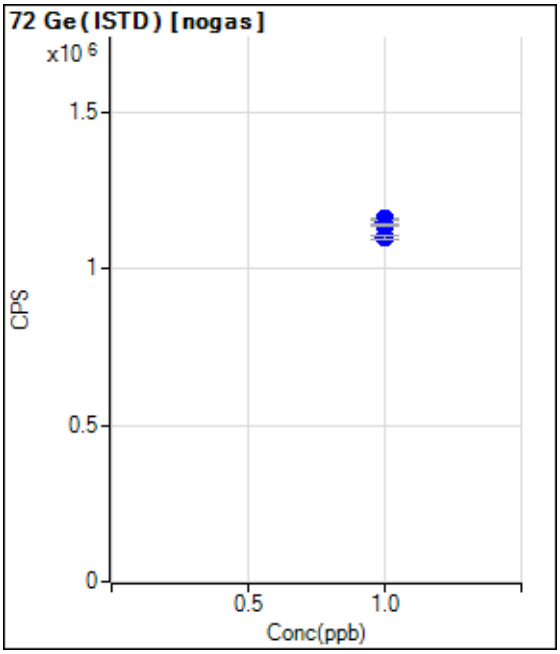
y = 0.0162 * x + 5.3285E-005
R = 0.9999
DL = 0.0008996
BEC = 0.003293

Weight: <None>
Min Conc: <None>

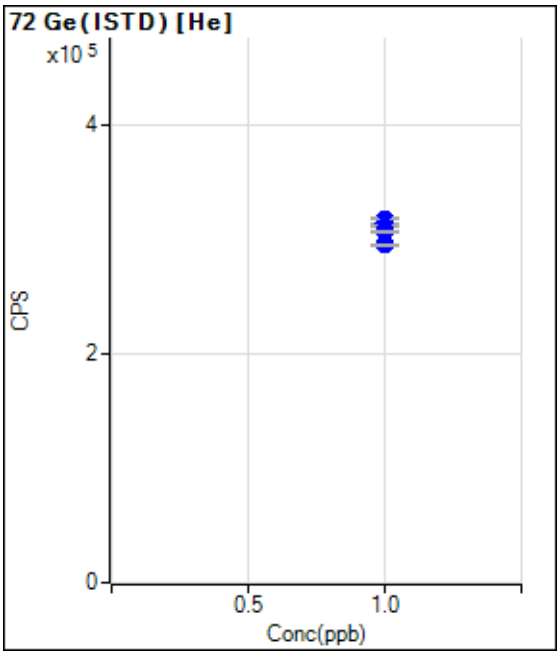
RIGHT SOLUTIONS | RIGHT PARTNER



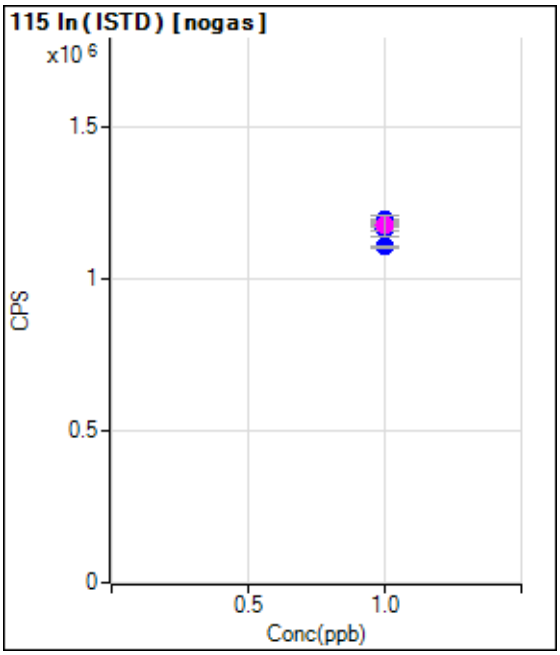
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		596022.35		P	0.6
2	☐	1.000		587437.13		P	1.2
3	☐	1.000		585034.67		P	0.2
4	☐	1.000		581419.85		P	0.6
5	☐	1.000		550531.01		P	1.4
6	☐	1.000		505373.66		P	0.7
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1156828.63		P	0.5
2	☐	1.000		1158178.60		P	0.2
3	☐	1.000		1156397.20		P	0.2
4	☐	1.000		1145878.76		P	1.0
5	☐	1.000		1138058.52		P	0.7
6	☐	1.000		1100613.60		P	1.0
7	☐	1.000					

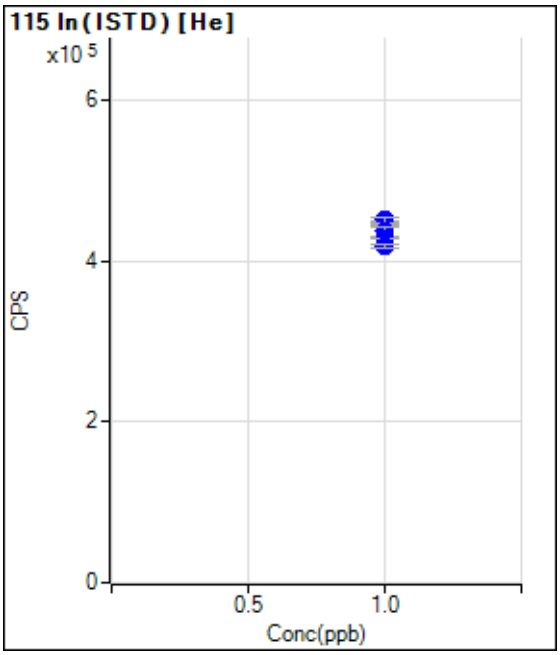


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		317195.11		P	1.4
2	☐	1.000		317046.18		P	1.3
3	☐	1.000		314000.28		P	2.3
4	☐	1.000		311348.33		P	0.5
5	☐	1.000		307037.79		P	0.6
6	☐	1.000		295259.10		P	0.9
7	☐	1.000					

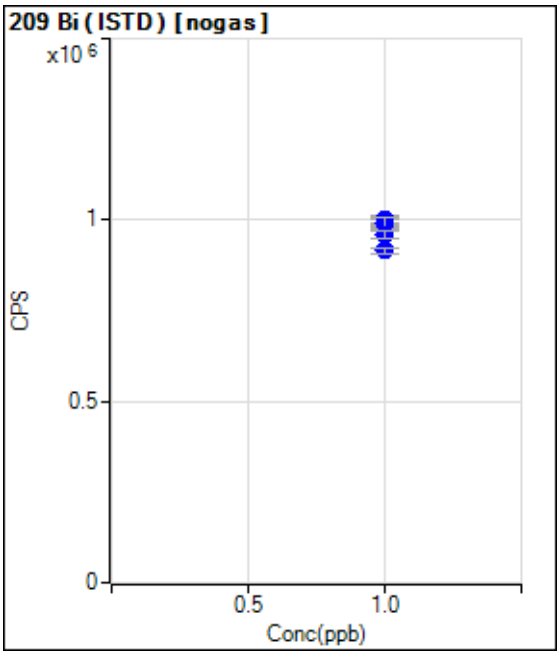


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1195503.44		P	0.6
2	☐	1.000		1183481.55		P	1.6
3	☐	1.000		1183749.74		P	0.6
4	☐	1.000		1163670.59		P	1.1
5	☐	1.000		1175910.91		M	6.1
6	☐	1.000		1106767.08		P	0.4
7	☐	1.000					

Calibration for 207_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		444648.44		P	1.2
2	☐	1.000		446915.76		P	0.7
3	☐	1.000		451110.53		P	1.3
4	☐	1.000		436679.11		P	2.3
5	☐	1.000		427976.53		P	0.3
6	☐	1.000		418252.22		P	0.7
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1000066.18		P	2.6
2	☐	1.000		999963.14		P	1.3
3	☐	1.000		992469.18		P	2.3
4	☐	1.000		992047.82		P	3.0
5	☐	1.000		959470.33		P	1.9
6	☐	1.000		915297.62		P	1.7
7	☐	1.000					

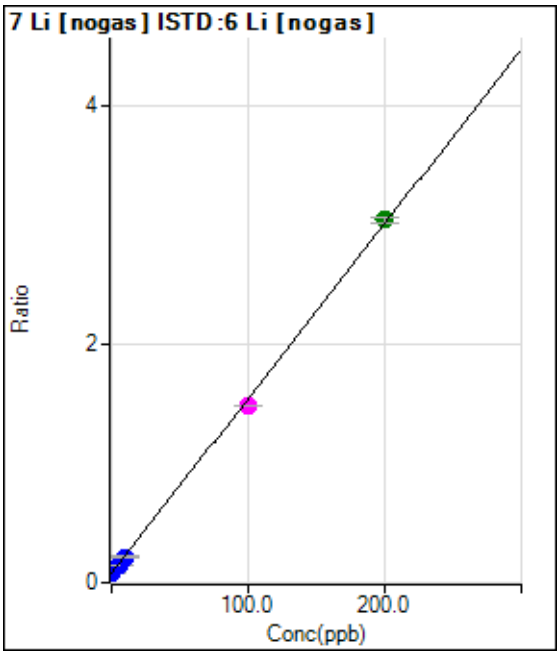
Calibration for 154_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\051120A.b\
Analysis File: 051120A.batch.bin
DA Date-Time: 5/11/2020 9:33:31 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	147CALB.d	IRBK	5/11/2020 9:16:06 PM
2	148CALS.d	2/10/200	5/11/2020 9:18:29 PM
3	149CALS.d	5/25/500	5/11/2020 9:20:51 PM
4	150CALS.d	10/50/1000	5/11/2020 9:23:14 PM
5	151CALS.d	100/500/10K	5/11/2020 9:25:38 PM
6	152CALS.d	200/1000/20K	5/11/2020 9:27:59 PM
7			

RIGHT SOLUTIONS | RIGHT PARTNER

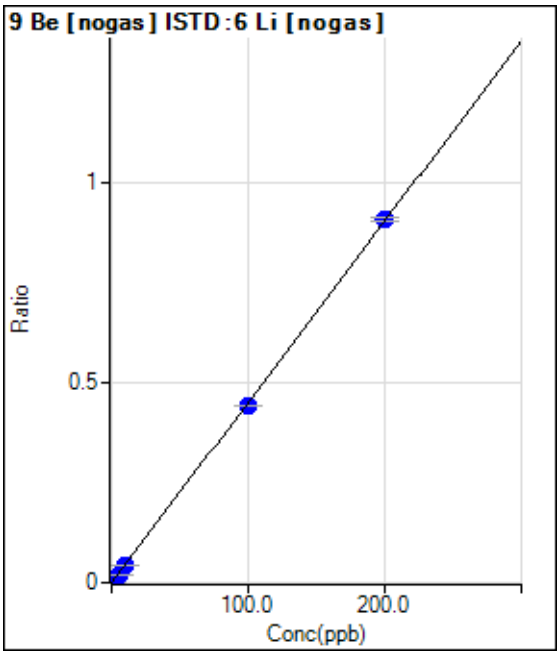
Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	58892.44	0.0802	P	1.2
2	☐	2.000	1.903	79877.00	0.1081	P	0.5
3	☐	5.000	4.686	111069.13	0.1488	P	0.9
4	☐	10.000	9.324	161469.69	0.2167	P	1.1
5	☐	100.000	95.535	1066503.03	1.4782	M	0.1
6	☐	200.000	202.275	2070506.90	3.0402	A	1.6
7	☐	1.000					

y = 0.0146 * x + 0.0802
R = 0.9997
DL = 0.1943
BEC = 5.484

Weight: <None>
Min Conc: <None>



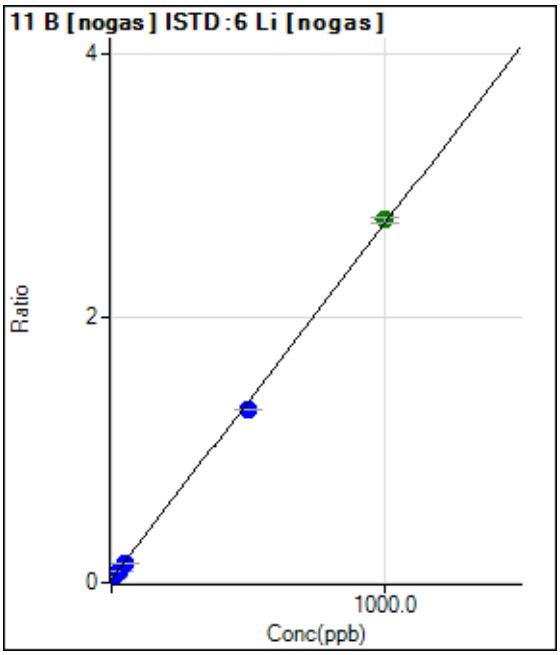
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	80.00	0.0001	P	16.5
2	☐	2.000	1.893	6404.44	0.0087	P	0.7
3	☐	5.000	4.641	15738.15	0.0211	P	2.1
4	☐	10.000	9.256	31258.68	0.0419	P	1.5
5	☐	100.000	98.095	319998.19	0.4435	P	0.5
6	☐	200.000	201.000	618855.78	0.9087	P	1.0
7	☐	1.000					

y = 0.0045 * x + 1.0901E-004
R = 0.9999
DL = 0.01191
BEC = 0.02411

Weight: <None>
Min Conc: <None>

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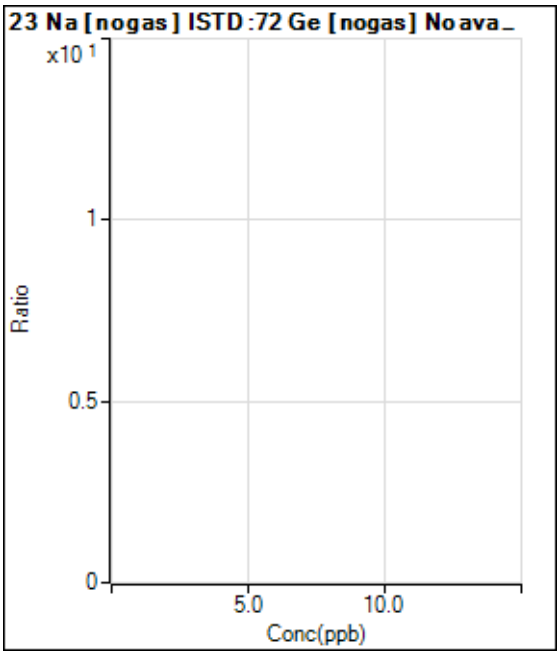
Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	19182.94	0.0261	P	0.6
2	☐	10.000	9.046	37259.37	0.0504	P	0.8
3	☐	25.000	22.110	63803.27	0.0855	P	3.1
4	☐	50.000	44.625	108747.65	0.1459	P	1.6
5	☐	500.000	477.618	943932.33	1.3083	P	0.9
6	☐	1000.000	1011.541	1867112.16	2.7417	A	1.9
7	☐	5.000					

y = 0.0027 * x + 0.0261
R = 0.9997
DL = 0.1659
BEC = 9.737

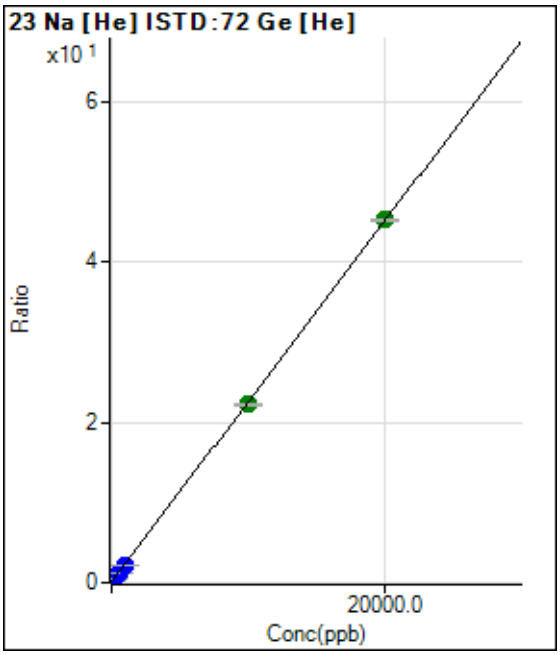
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

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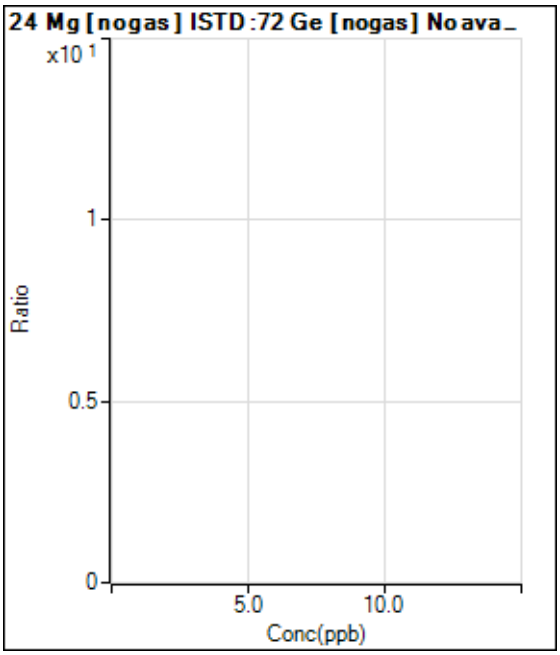
Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	39878.65	0.1217	P	1.1
2	☐	200.000	190.712	182921.60	0.5506	P	1.8
3	☐	500.000	481.197	397720.53	1.2039	P	2.5
4	☐	1000.000	945.639	750350.67	2.2485	P	1.0
5	☐	10000.000	9833.918	7439559.05	22.2386	A	1.3
6	☐	20000.000	20086.322	14649425.61	45.2967	A	0.5
7	☐	100.000					

y = 0.0022 * x + 0.1217
R = 1.0000
DL = 1.782
BEC = 54.11

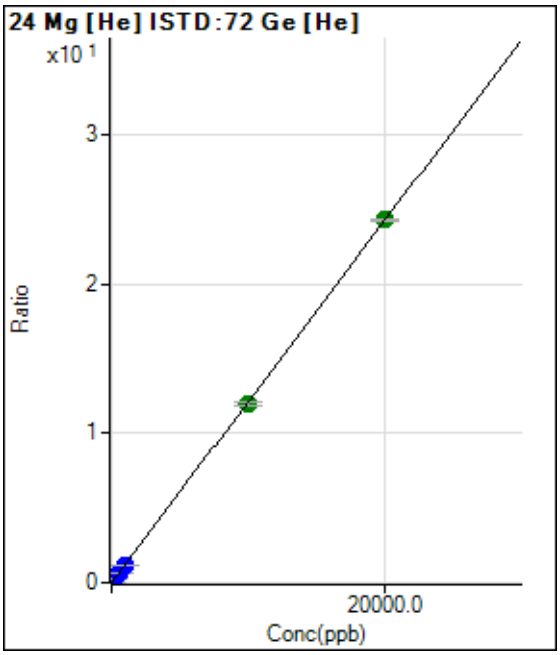
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

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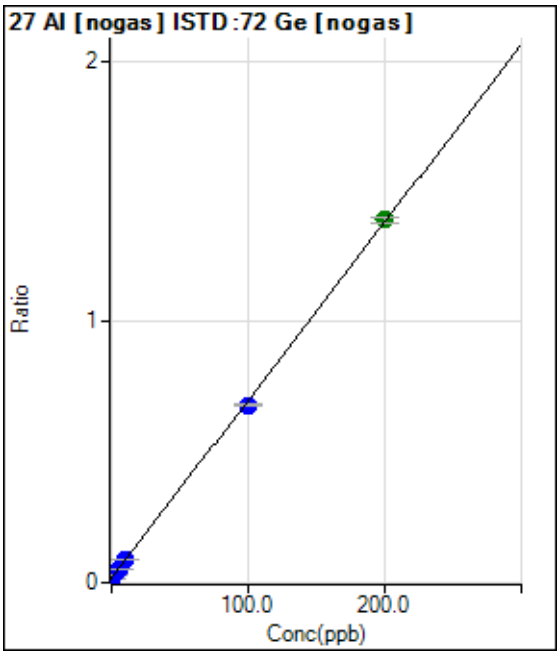
Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	696.69	0.0021	P	14.0
2	☐	200.000	197.827	80335.86	0.2418	P	2.1
3	☐	500.000	485.594	195029.07	0.5903	P	1.4
4	☐	1000.000	962.643	389848.98	1.1682	P	0.7
5	☐	10000.000	9885.013	4006994.63	11.9760	A	1.8
6	☐	20000.000	20059.743	7859114.05	24.3008	A	0.3
7	☐	100.000					

y = 0.0012 * x + 0.0021
R = 1.0000
DL = 0.7397
BEC = 1.756

Weight: <None>
Min Conc: <None>



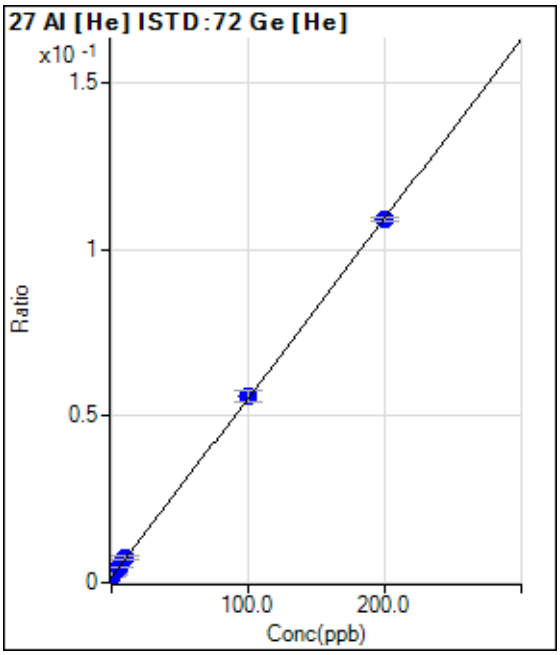
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	24520.07	0.0174	P	2.9
2	☐	2.000	2.074	44773.12	0.0316	P	1.1
3	☐	5.000	5.176	75777.55	0.0527	P	4.3
4	☐	10.000	10.198	124821.10	0.0870	P	1.9
5	☐	100.000	97.090	991124.31	0.6800	P	0.9
6	☐	200.000	201.440	1982738.72	1.3921	A	1.8
7	☐	1.000					

y = 0.0068 * x + 0.0174
R = 0.9998
DL = 0.2199
BEC = 2.553

Weight: <None>
Min Conc: <None>

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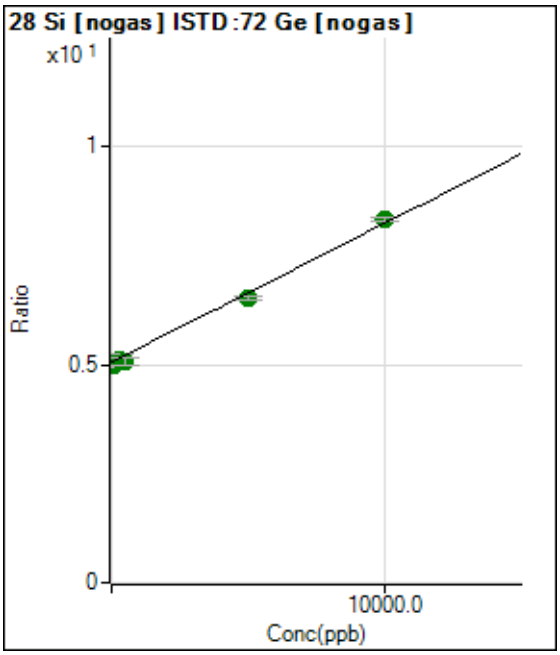
Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	503.35	0.0015	P	6.0
2	☐	2.000	2.069	880.03	0.0026	P	8.5
3	☐	5.000	5.575	1500.08	0.0045	P	8.7
4	☐	10.000	11.081	2503.54	0.0075	P	9.1
5	☐	100.000	101.313	18766.18	0.0561	P	6.0
6	☐	200.000	199.274	35209.43	0.1089	P	1.0
7	☐	1.000					

y = 5.3863E-004 * x + 0.0015
R = 1.0000
DL = 0.5117
BEC = 2.851

Weight: <None>
Min Conc: <None>



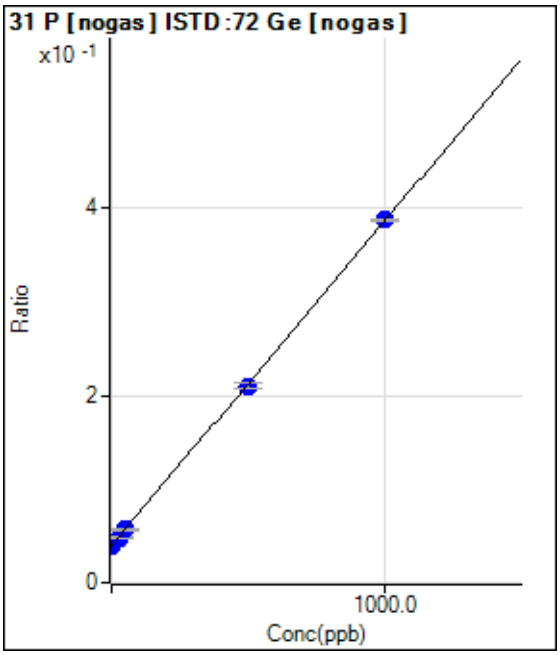
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7113622.40	5.0552	A	4.6
2	☐	100.000	-173.441	7089114.27	5.0000	A	2.6
3	☐	250.000	150.392	7330225.93	5.1030	A	4.8
4	☐	500.000	52.561	7273870.72	5.0719	A	3.4
5	☐	5000.000	4582.284	9493242.36	6.5131	A	1.4
6	☐	10000.000	10236.455	11839533.99	8.3121	A	1.1
7	☐	50.000					

y = 3.1817E-004 * x + 5.0552
R = 0.9985
DL = 2204
BEC = 1.589E+04

Weight: <None>
Min Conc: <None>

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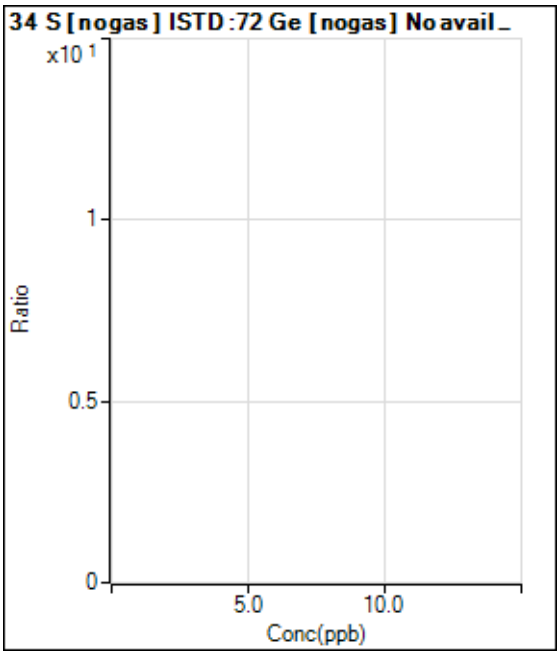
Calibration for 154_ICV.d



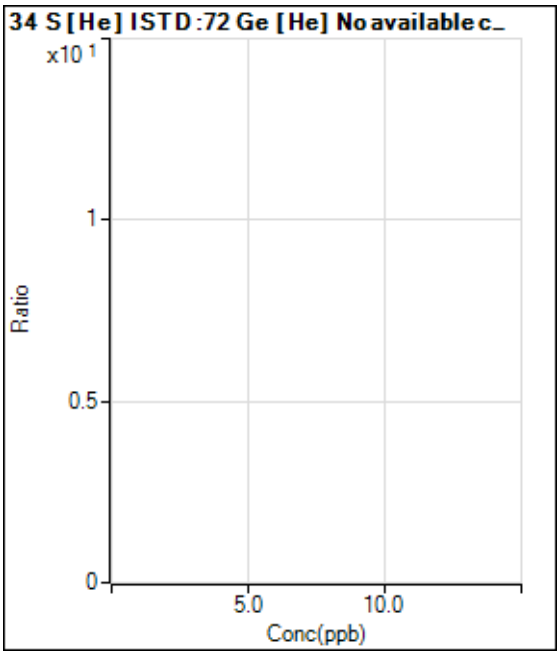
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	55825.95	0.0397	P	2.6
2	☐	10.000	10.904	61593.50	0.0434	P	1.1
3	☐	25.000	23.082	68466.99	0.0477	P	4.0
4	☐	50.000	50.728	82081.02	0.0572	P	2.9
5	☐	500.000	492.565	306396.79	0.2102	P	2.4
6	☐	1000.000	1003.720	551563.48	0.3872	P	0.3
7	☐	5.000					

y = 3.4626E-004 * x + 0.0397
R = 1.0000
DL = 8.791
BEC = 114.5

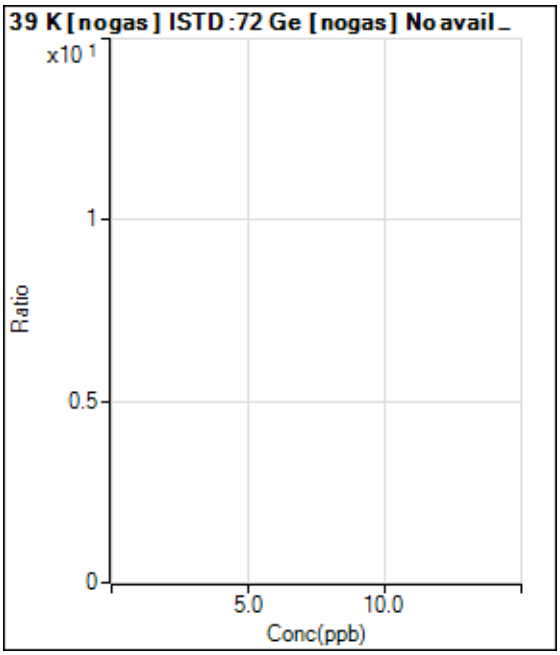
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	400.000					
3	☐	1000.000					
4	☐	2000.000					
5	☐	20000.000					
6	☐	40000.000					
7	☐	200.000					

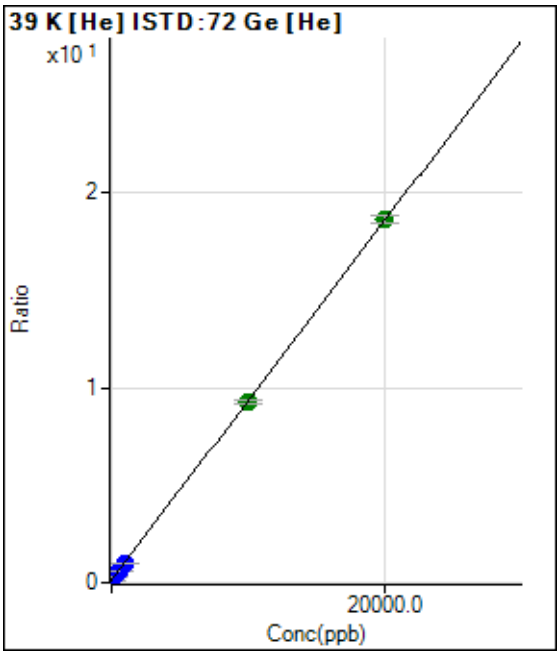


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	400.000					
3	☐	1000.000					
4	☐	2000.000					
5	☐	20000.000					
6	☐	40000.000					
7	☐	200.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	44205.78	0.1349	P	2.5
2	☐	200.000	186.575	101871.13	0.3066	P	1.0
3	☐	500.000	490.748	193778.43	0.5866	P	1.2
4	☐	1000.000	956.112	338719.49	1.0149	P	0.3
5	☐	10000.000	9891.859	3090940.48	9.2395	A	1.9
6	☐	20000.000	20056.631	6013738.04	18.5953	A	2.1
7	☐	100.000					

y = 9.2041E-004 * x + 0.1349

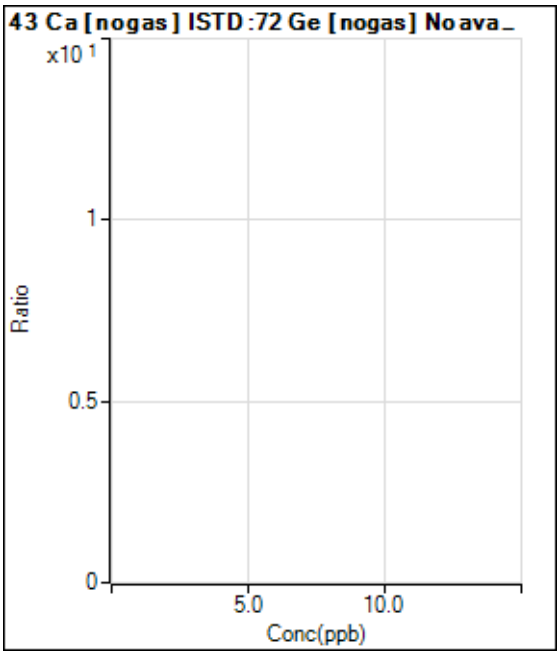
R = 1.0000

DL = 11

BEC = 146.6

Weight: <None>

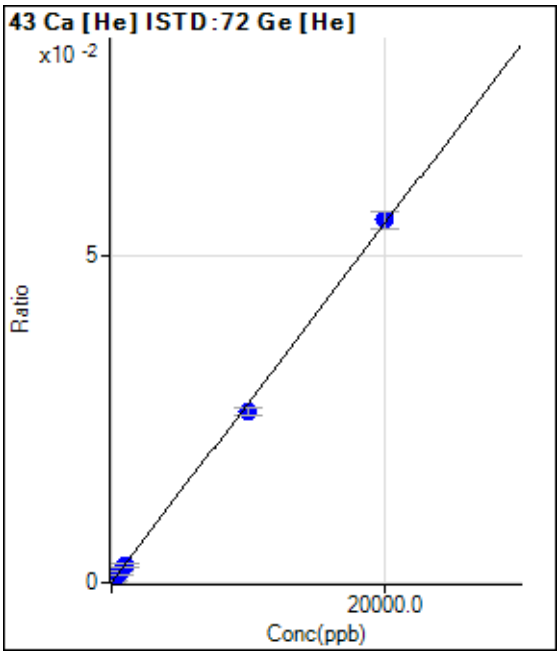
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

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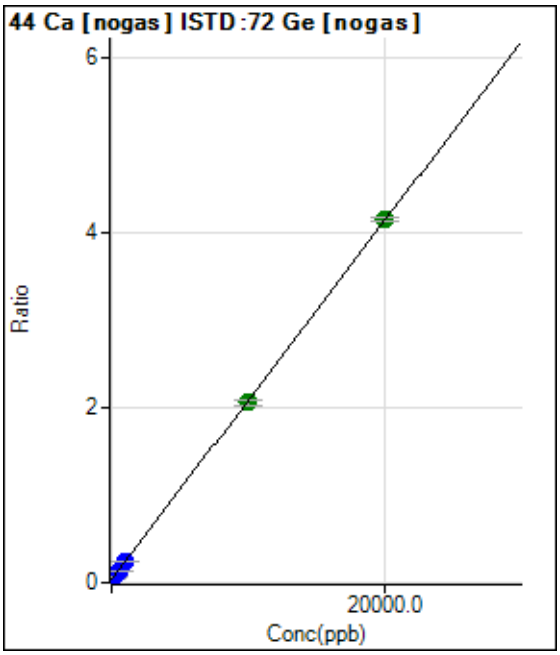
Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0001	P	68.5
2	☐	200.000	128.380	133.33	0.0004	P	13.0
3	☐	500.000	507.763	476.68	0.0014	P	37.9
4	☐	1000.000	917.368	853.37	0.0026	P	17.8
5	☐	10000.000	9563.638	8765.51	0.0262	P	4.1
6	☐	20000.000	20222.835	17902.12	0.0554	P	5.0
7	☐	100.000					

y = 2.7349E-006 * x + 5.0683E-005
R = 0.9997
DL = 38.06
BEC = 18.53

Weight: <None>
Min Conc: <None>

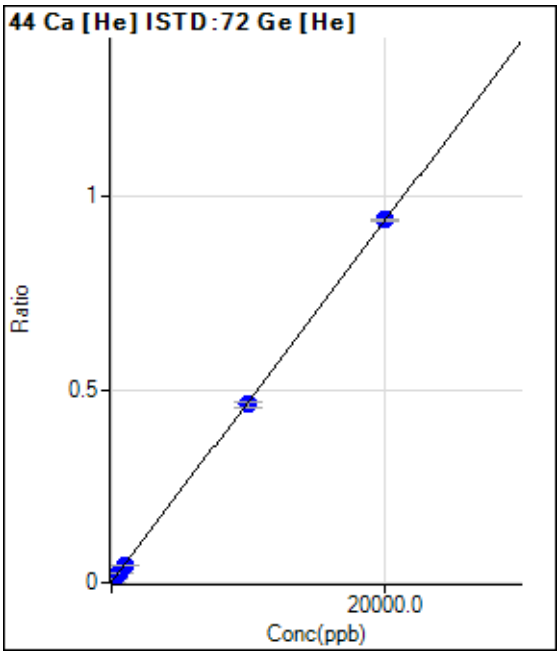


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	48922.07	0.0348	P	2.0
2	☐	200.000	195.988	106333.79	0.0750	P	2.2
3	☐	500.000	486.164	193316.90	0.1346	P	4.3
4	☐	1000.000	982.963	339302.71	0.2366	P	2.4
5	☐	10000.000	9878.865	3006665.16	2.0628	A	2.7
6	☐	20000.000	20061.806	5915971.37	4.1533	A	1.0
7	☐	100.000					

y = 2.0529E-004 * x + 0.0348
R = 1.0000
DL = 10.23
BEC = 169.3

Weight: <None>
Min Conc: <None>

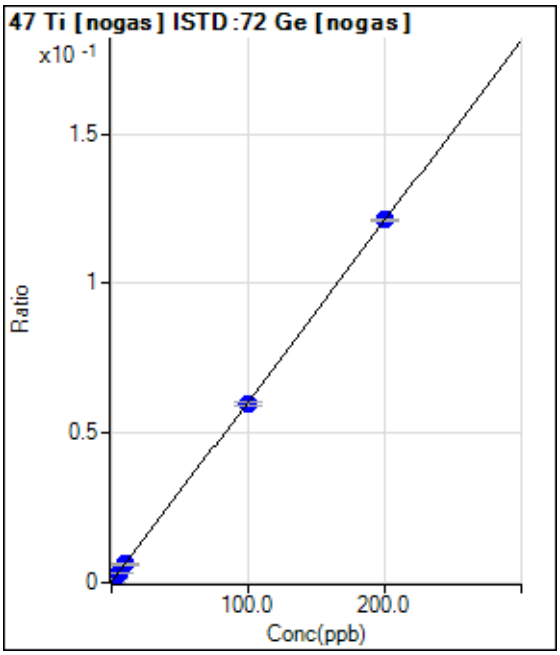
Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	290.01	0.0009	P	12.7
2	☐	200.000	194.978	3327.02	0.0100	P	6.4
3	☐	500.000	491.374	7891.78	0.0239	P	3.1
4	☐	1000.000	944.580	15052.95	0.0451	P	4.3
5	☐	10000.000	9849.701	154540.01	0.4619	P	2.5
6	☐	20000.000	20078.186	304240.14	0.9407	P	0.2
7	☐	100.000					

y = 4.6809E-005 * x + 8.8560E-004
R = 1.0000
DL = 7.214
BEC = 18.92

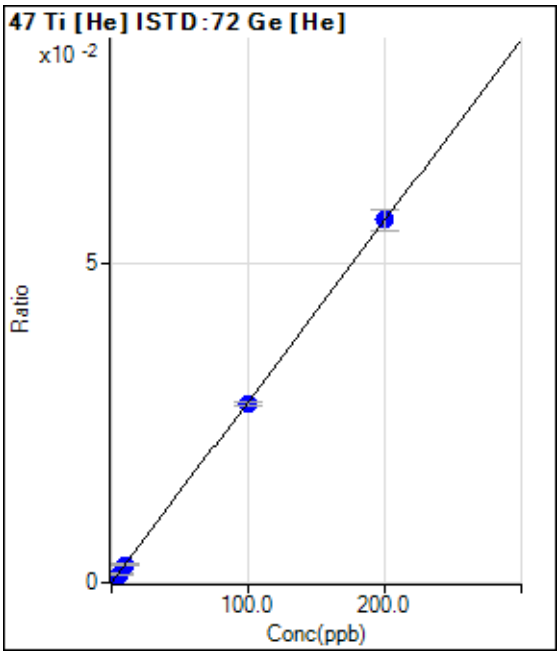
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	190.00	0.0001	P	5.8
2	☐	2.000	1.997	1900.12	0.0013	P	14.9
3	☐	5.000	4.838	4393.92	0.0031	P	5.1
4	☐	10.000	9.920	8778.89	0.0061	P	5.9
5	☐	100.000	98.876	87206.74	0.0598	P	1.9
6	☐	200.000	200.570	172678.37	0.1212	P	0.7
7	☐	1.000					

y = 6.0374E-004 * x + 1.3501E-004
R = 1.0000
DL = 0.03915
BEC = 0.2236

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	0.00	0.0000	P	
2	☐	2.000	2.053	193.33	0.0006	P	4.5
3	☐	5.000	4.627	433.34	0.0013	P	7.2
4	☐	10.000	10.014	946.71	0.0028	P	19.5
5	☐	100.000	99.196	9402.52	0.0281	P	2.4
6	☐	200.000	200.410	18365.98	0.0568	P	6.1
7	☐	1.000					

y = 2.8335E-004 * x + 0.0000E+000

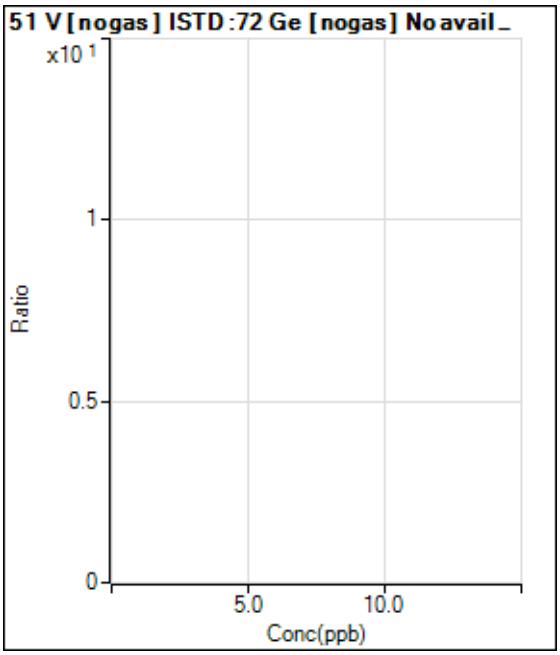
R = 1.0000

DL = 0

BEC = 0

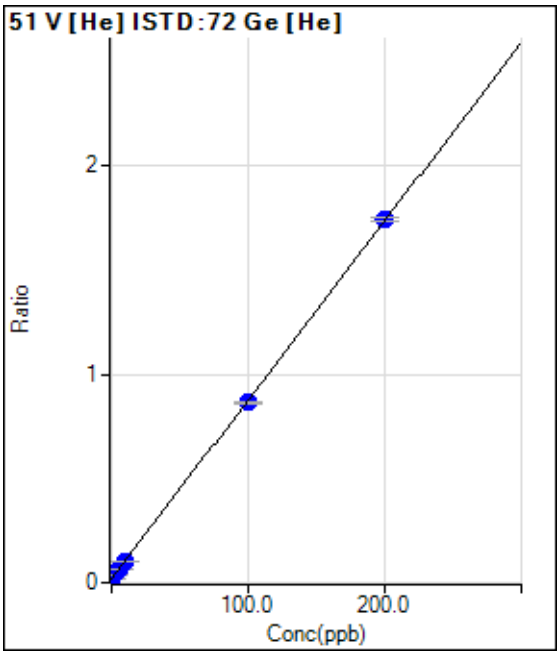
Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

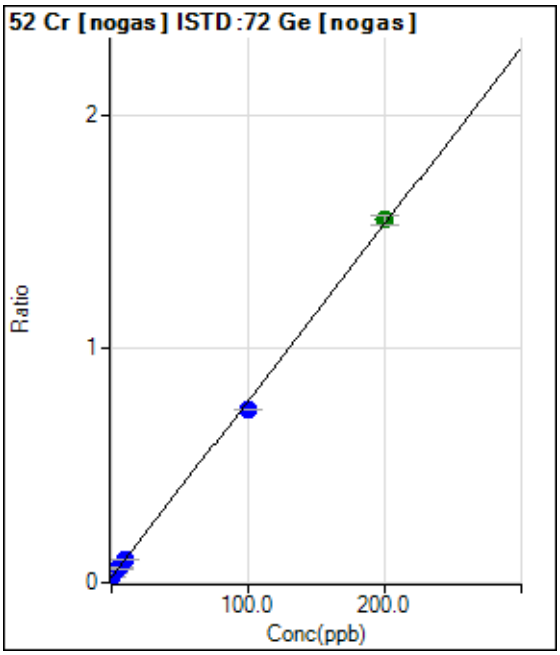
Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6358.89	0.0194	P	1.8
2	☐	2.000	1.889	11828.23	0.0356	P	0.6
3	☐	5.000	4.900	20292.18	0.0614	P	1.8
4	☐	10.000	9.427	33457.83	0.1002	P	0.9
5	☐	100.000	98.484	289059.13	0.8640	P	1.5
6	☐	200.000	200.790	563202.32	1.7414	P	1.2
7	☐	1.000					

y = 0.0086 * x + 0.0194
R = 1.0000
DL = 0.125
BEC = 2.263

Weight: <None>
Min Conc: <None>

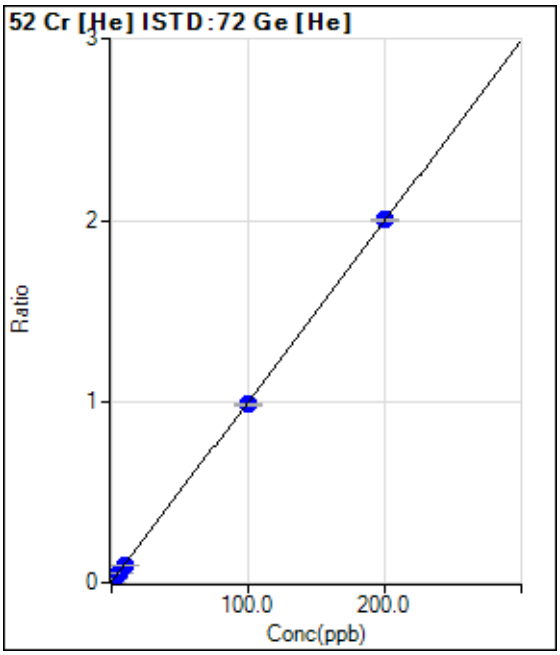


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	32829.32	0.0233	P	3.6
2	☐	2.000	2.081	55355.85	0.0390	P	2.4
3	☐	5.000	5.130	89105.73	0.0621	P	6.3
4	☐	10.000	9.877	140436.16	0.0979	P	2.5
5	☐	100.000	95.156	1081378.42	0.7419	P	0.6
6	☐	200.000	202.424	2210234.76	1.5519	A	2.9
7	☐	1.000					

y = 0.0076 * x + 0.0233
R = 0.9996
DL = 0.3358
BEC = 3.089

Weight: <None>
Min Conc: <None>

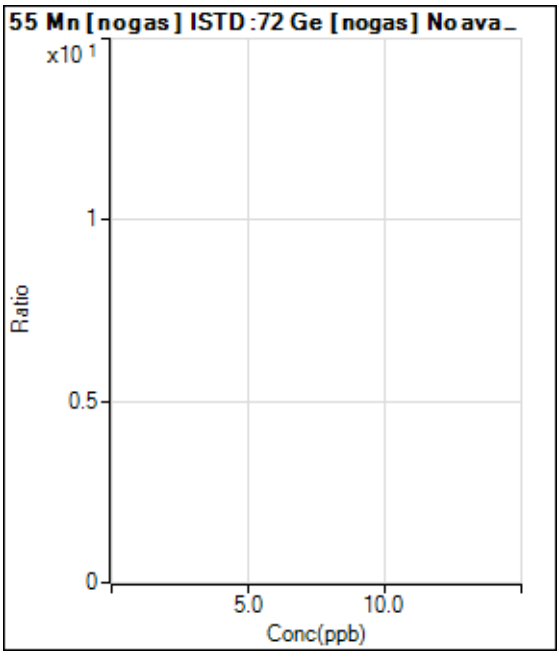
Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	700.02	0.0021	P	20.6
2	☐	2.000	2.045	7484.97	0.0225	P	4.9
3	☐	5.000	4.917	16907.88	0.0512	P	4.7
4	☐	10.000	9.723	33069.70	0.0991	P	1.6
5	☐	100.000	98.643	329796.95	0.9858	P	1.1
6	☐	200.000	200.694	647951.48	2.0035	P	0.8
7	☐	1.000					

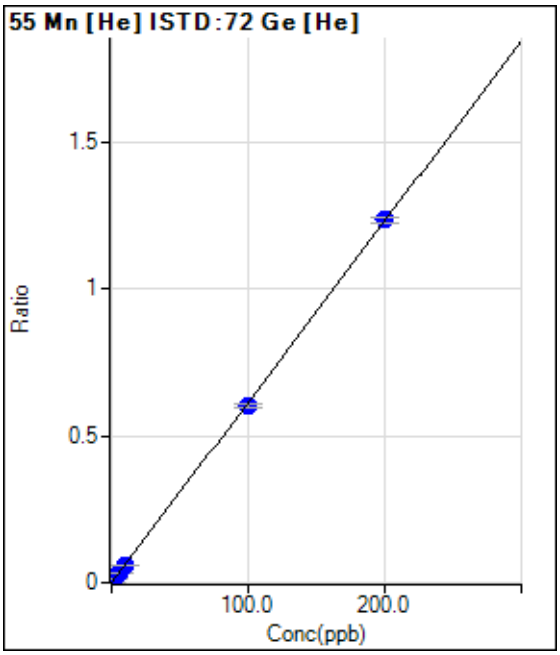
y = 0.0100 * x + 0.0021
R = 1.0000
DL = 0.1328
BEC = 0.2146

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	66.67	0.0002	P	38.9
2	☐	2.000	1.951	4043.83	0.0122	P	4.9
3	☐	5.000	4.973	10149.60	0.0307	P	1.0
4	☐	10.000	9.856	20254.68	0.0607	P	2.5
5	☐	100.000	98.169	201631.64	0.6027	P	1.7
6	☐	200.000	200.924	398890.65	1.2334	P	1.6
7	☐	1.000					

y = 0.0061 * x + 2.0405E-004

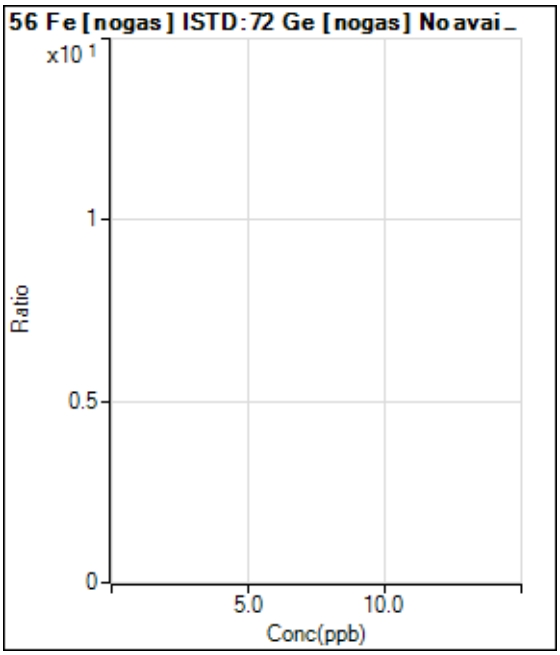
R = 0.9999

DL = 0.03877

BEC = 0.03325

Weight: <None>

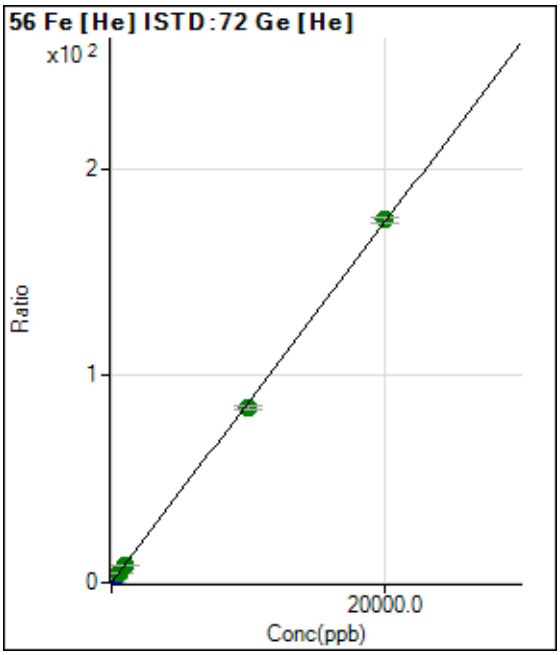
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

RIGHT SOLUTIONS | RIGHT PARTNER

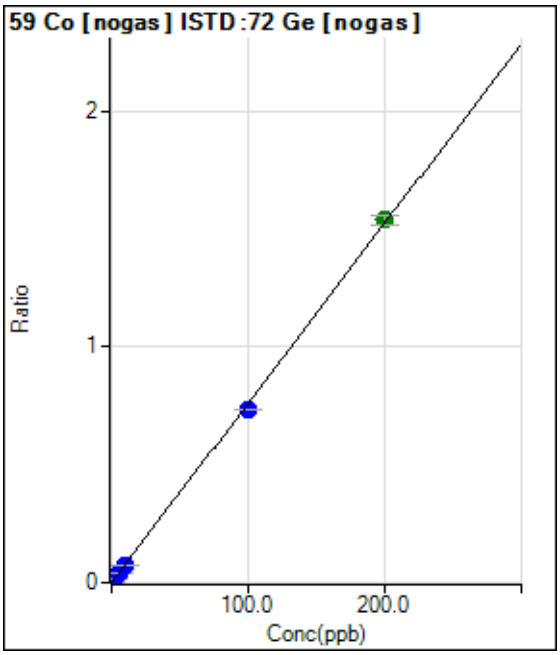
Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6898.05	0.0210	P	3.0
2	☐	200.000	190.365	557595.63	1.6785	P	1.6
3	☐	500.000	522.873	1510721.91	4.5735	A	2.6
4	☐	1000.000	989.969	2883324.95	8.6403	A	2.5
5	☐	10000.000	9718.055	28311702.91	84.6323	A	2.8
6	☐	20000.000	20140.998	56718670.82	175.3807	A	1.6
7	☐	100.000					

y = 0.0087 * x + 0.0210
R = 0.9999
DL = 0.2155
BEC = 2.417

Weight: <None>
Min Conc: <None>



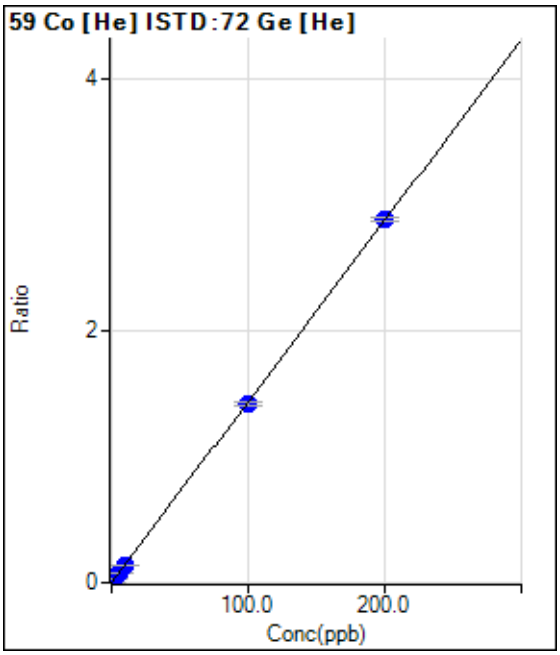
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	300.01	0.0002	P	19.8
2	☐	2.000	2.002	21896.55	0.0154	P	0.5
3	☐	5.000	4.974	54630.99	0.0380	P	6.0
4	☐	10.000	9.867	107958.45	0.0753	P	3.0
5	☐	100.000	95.913	1063778.81	0.7298	P	0.1
6	☐	200.000	202.051	2189265.64	1.5372	A	2.7
7	☐	1.000					

y = 0.0076 * x + 2.1285E-004
R = 0.9997
DL = 0.01665
BEC = 0.02798

Weight: <None>
Min Conc: <None>

RIGHT SOLUTIONS | RIGHT PARTNER

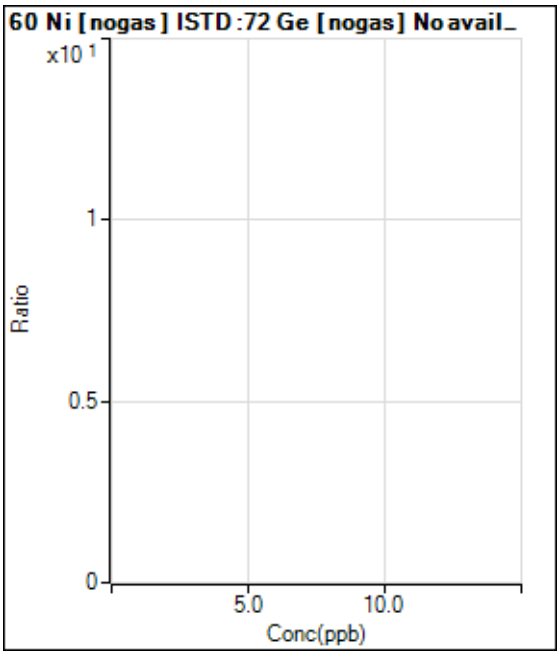
Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	103.33	0.0003	P	24.0
2	☐	2.000	2.037	9839.44	0.0296	P	2.6
3	☐	5.000	5.190	24773.58	0.0750	P	3.9
4	☐	10.000	9.785	47076.94	0.1411	P	2.0
5	☐	100.000	99.106	477035.31	1.4260	P	2.5
6	☐	200.000	200.452	932650.51	2.8838	P	1.1
7	☐	1.000					

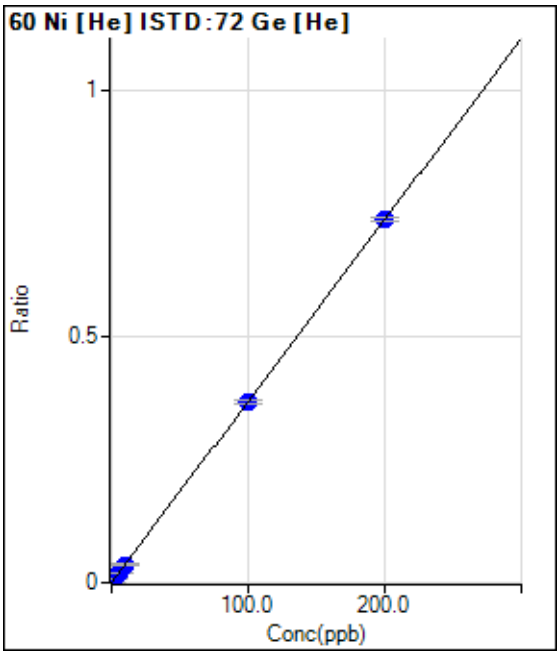
y = 0.0144 * x + 3.1523E-004
R = 1.0000
DL = 0.01575
BEC = 0.02191

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

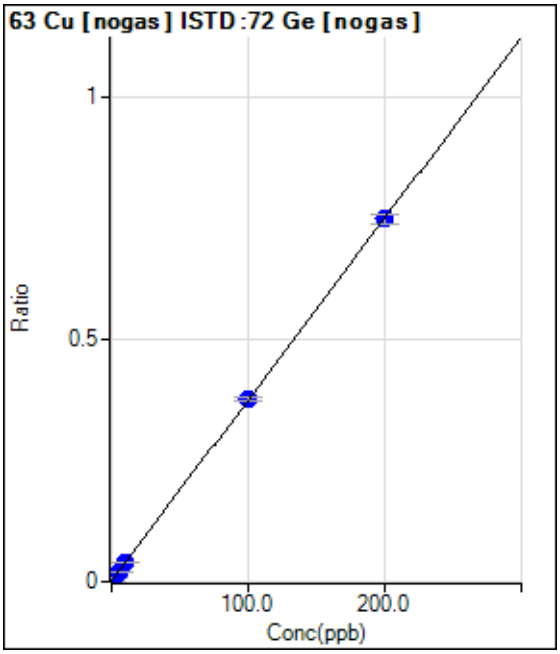
Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26.67	0.0001	P	22.3
2	☐	2.000	2.017	2493.54	0.0075	P	9.7
3	☐	5.000	5.148	6294.50	0.0190	P	6.1
4	☐	10.000	9.722	11977.39	0.0359	P	8.2
5	☐	100.000	99.914	123160.27	0.3682	P	2.6
6	☐	200.000	200.053	238391.45	0.7371	P	0.9
7	☐	1.000					

y = 0.0037 * x + 8.1472E-005
R = 1.0000
DL = 0.01482
BEC = 0.02211

Weight: <None>
Min Conc: <None>



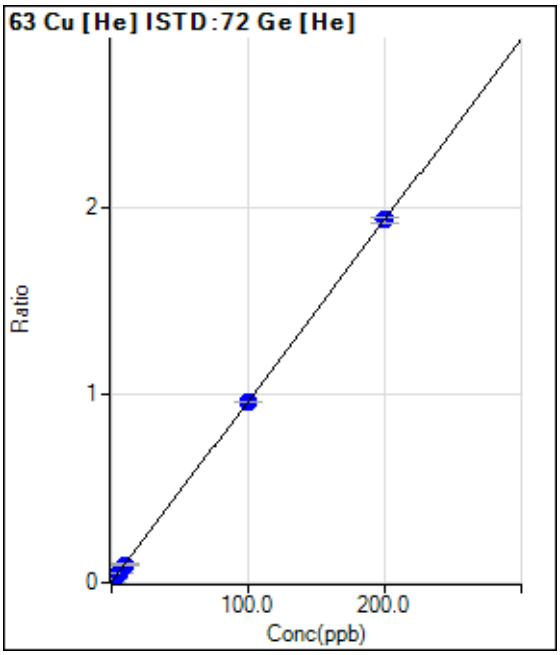
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1736.78	0.0012	P	2.4
2	☐	2.000	2.108	12944.74	0.0091	P	1.9
3	☐	5.000	5.144	29440.37	0.0205	P	5.6
4	☐	10.000	10.345	57352.92	0.0400	P	2.2
5	☐	100.000	100.274	549214.17	0.3768	P	1.6
6	☐	200.000	199.841	1067779.05	0.7497	P	2.5
7	☐	1.000					

y = 0.0037 * x + 0.0012
R = 1.0000
DL = 0.02383
BEC = 0.3294

Weight: <None>
Min Conc: <None>

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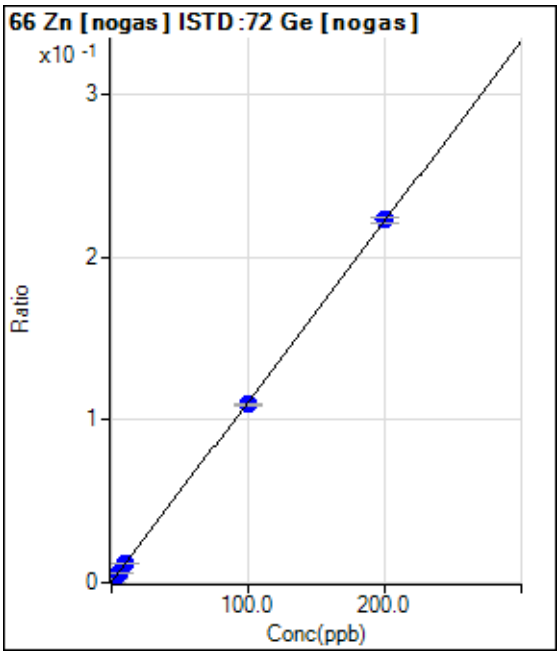
Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	736.69	0.0022	P	9.5
2	☐	2.000	1.989	7114.80	0.0214	P	3.6
3	☐	5.000	5.025	16741.10	0.0507	P	4.1
4	☐	10.000	9.843	32415.50	0.0971	P	0.5
5	☐	100.000	99.730	322389.18	0.9636	P	0.5
6	☐	200.000	200.142	624714.23	1.9316	P	1.2
7	☐	1.000					

y = 0.0096 * x + 0.0022
R = 1.0000
DL = 0.06613
BEC = 0.2331

Weight: <None>
Min Conc: <None>

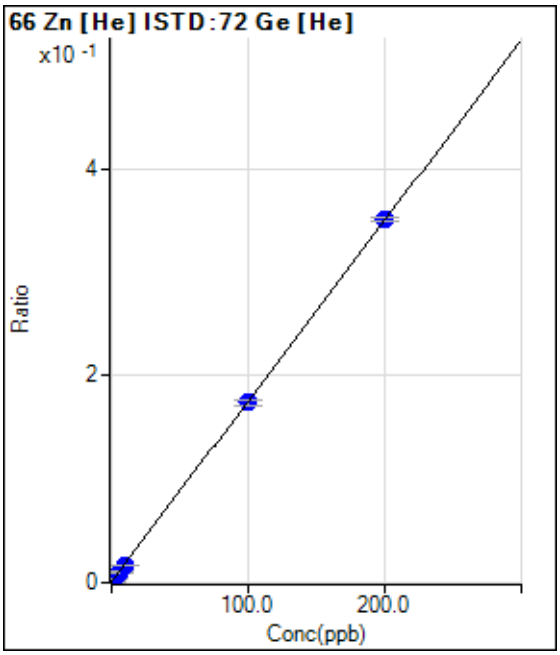


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	630.02	0.0004	P	14.1
2	☐	2.000	2.122	3970.50	0.0028	P	6.1
3	☐	5.000	5.316	9112.39	0.0063	P	2.7
4	☐	10.000	10.043	16607.72	0.0116	P	2.4
5	☐	100.000	98.488	159733.07	0.1096	P	0.6
6	☐	200.000	200.745	317485.12	0.2229	P	1.4
7	☐	1.000					

y = 0.0011 * x + 4.4818E-004
R = 1.0000
DL = 0.1705
BEC = 0.4044

Weight: <None>
Min Conc: <None>

Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	296.67	0.0009	P	16.6
2	☐	2.000	2.006	1466.75	0.0044	P	9.6
3	☐	5.000	5.237	3320.35	0.0101	P	8.9
4	☐	10.000	9.205	5667.64	0.0170	P	6.5
5	☐	100.000	99.272	58316.26	0.1743	P	2.6
6	☐	200.000	200.398	113517.04	0.3510	P	1.0
7	☐	1.000					

y = 0.0017 * x + 9.0514E-004

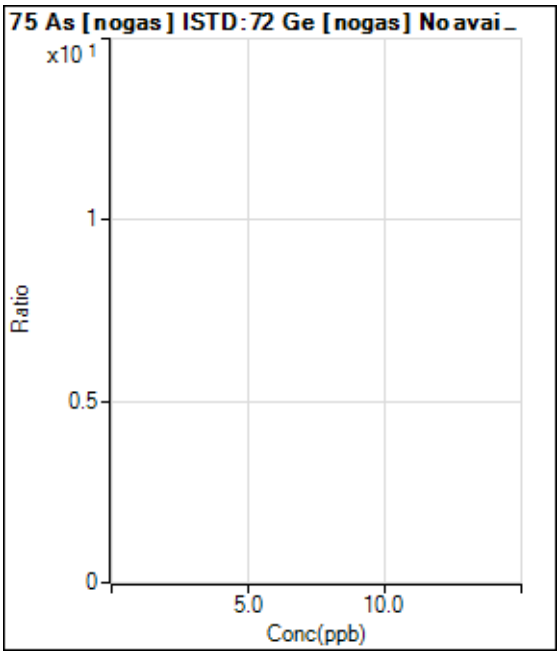
R = 1.0000

DL = 0.2587

BEC = 0.5181

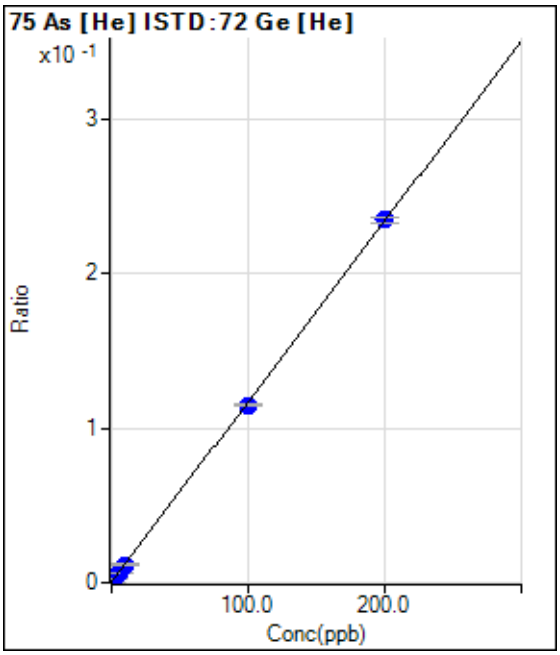
Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	82.22	0.0003	P	1.0
2	☐	2.000	1.967	845.58	0.0025	P	1.9
3	☐	5.000	5.039	2023.45	0.0061	P	3.7
4	☐	10.000	9.825	3905.99	0.0117	P	3.4
5	☐	100.000	98.029	38321.25	0.1145	P	1.2
6	☐	200.000	200.994	75866.57	0.2346	P	1.5
7	☐	1.000					

y = 0.0012 * x + 2.5087E-004

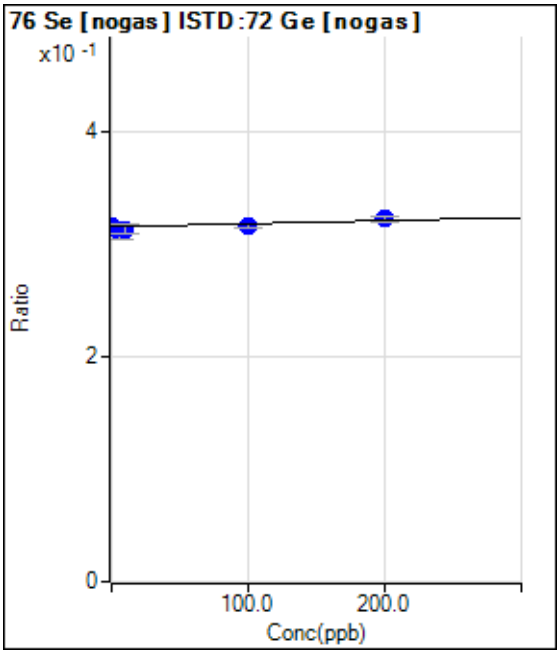
R = 0.9999

DL = 0.006386

BEC = 0.2152

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	444627.61	0.3159	P	2.2
2	☐	2.000	-66.059	445332.36	0.3141	P	1.0
3	☐	5.000	-139.222	448252.88	0.3120	P	4.5
4	☐	10.000	-88.803	449551.35	0.3134	P	2.8
5	☐	100.000	19.460	461273.76	0.3165	P	1.2
6	☐	200.000	249.497	459927.84	0.3229	P	1.5
7	☐	1.000					

y = 2.7975E-005 * x + 0.3159

R = 0.9179

DL = 744.9

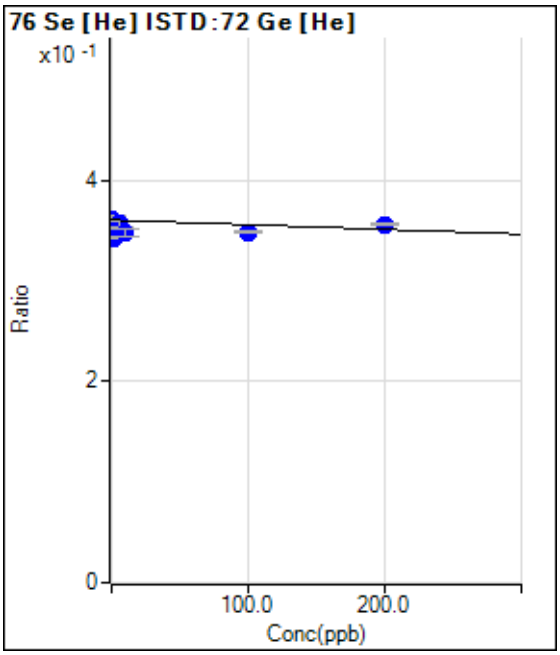
BEC = 1.129E+04

Weight: <None>

Min Conc: <None>

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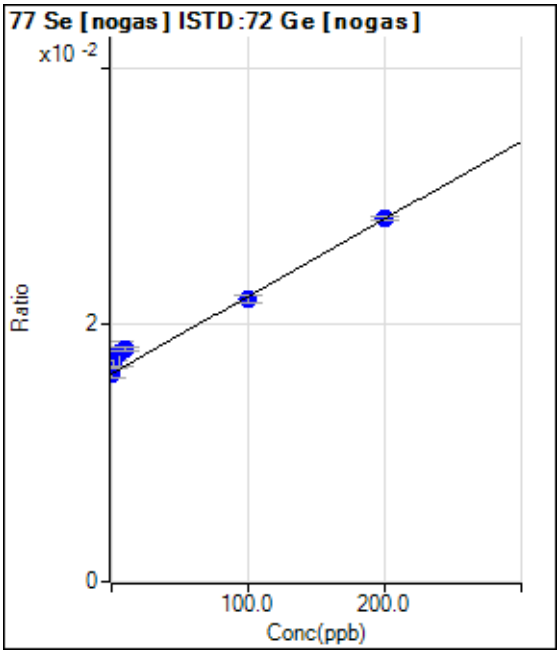
Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	118057.54	0.3603	P	2.2
2	☐	2.000	378.462	113807.39	0.3425	P	0.4
3	☐	5.000	86.822	117675.67	0.3562	P	2.0
4	☐	10.000	268.196	116034.94	0.3477	P	1.7
5	☐	100.000	259.531	116467.54	0.3481	P	0.6
6	☐	200.000	101.515	114985.76	0.3555	P	0.6
7	☐	1.000					

y = -4.7007E-005 * x + 0.3603
R = 0.1328
DL = -497.5
BEC = -7665

Weight: <None>
Min Conc: <None>

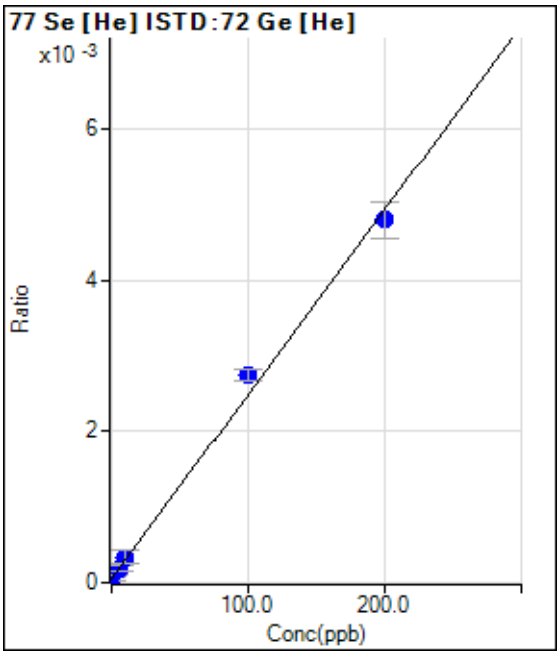


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	22788.11	0.0162	P	5.0
2	☐	2.000	12.305	24012.99	0.0169	P	4.1
3	☐	5.000	26.357	25495.07	0.0178	P	11.1
4	☐	10.000	32.513	26045.71	0.0182	P	1.4
5	☐	100.000	96.814	32112.09	0.0220	P	3.0
6	☐	200.000	199.830	40224.87	0.0282	P	1.1
7	☐	1.000					

y = 6.0274E-005 * x + 0.0162
R = 0.9924
DL = 40.17
BEC = 268.7

Weight: <None>
Min Conc: <None>

Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0001	P	91.1
2	☐	2.000	3.248	43.33	0.0001	P	52.2
3	☐	5.000	5.380	60.00	0.0002	P	44.6
4	☐	10.000	11.894	113.33	0.0003	P	53.7
5	☐	100.000	110.385	916.71	0.0027	P	6.1
6	☐	200.000	194.691	1550.09	0.0048	P	10.1
7	☐	1.000					

y = 2.4353E-005 * x + 5.0916E-005

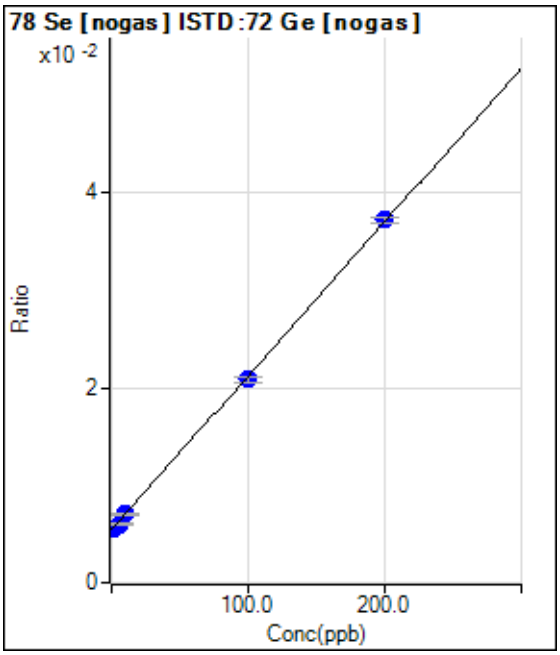
R = 0.9981

DL = 5.713

BEC = 2.091

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7681.73	0.0055	P	5.6
2	☐	2.000	0.669	7888.53	0.0056	P	4.3
3	☐	5.000	3.321	8592.14	0.0060	P	5.0
4	☐	10.000	9.880	10066.26	0.0070	P	1.9
5	☐	100.000	97.453	30382.25	0.0208	P	2.5
6	☐	200.000	201.335	53054.29	0.0372	P	1.6
7	☐	1.000					

y = 1.5790E-004 * x + 0.0055

R = 0.9999

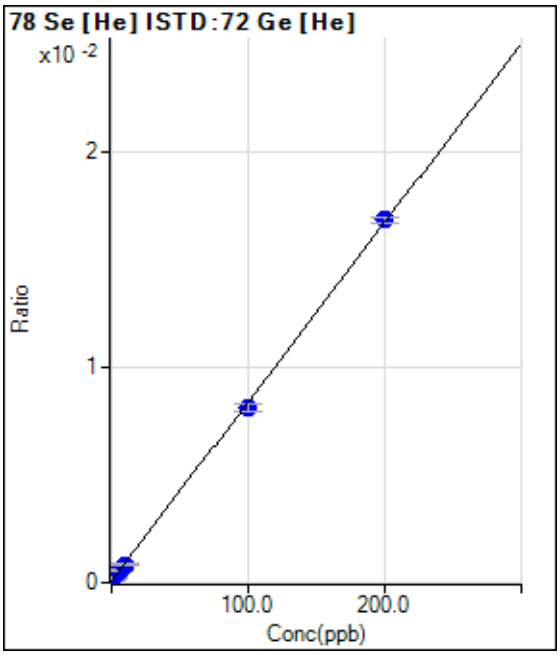
DL = 5.81

BEC = 34.56

Weight: <None>

Min Conc: <None>

Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	28.00	0.0001	P	31.7
2	☐	2.000	1.672	74.67	0.0002	P	24.1
3	☐	5.000	5.740	186.00	0.0006	P	16.5
4	☐	10.000	8.859	274.67	0.0008	P	9.2
5	☐	100.000	96.839	2726.88	0.0082	P	4.1
6	☐	200.000	201.622	5459.49	0.0169	P	1.7
7	☐	1.000					

y = 8.3306E-005 * x + 8.5246E-005

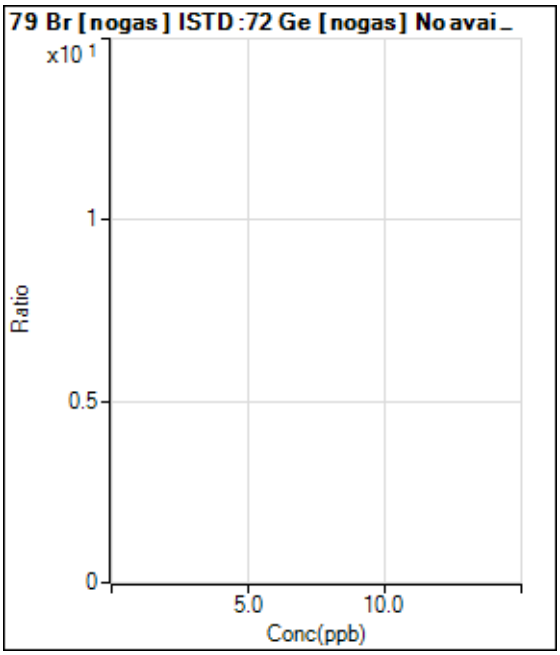
R = 0.9998

DL = 0.9742

BEC = 1.023

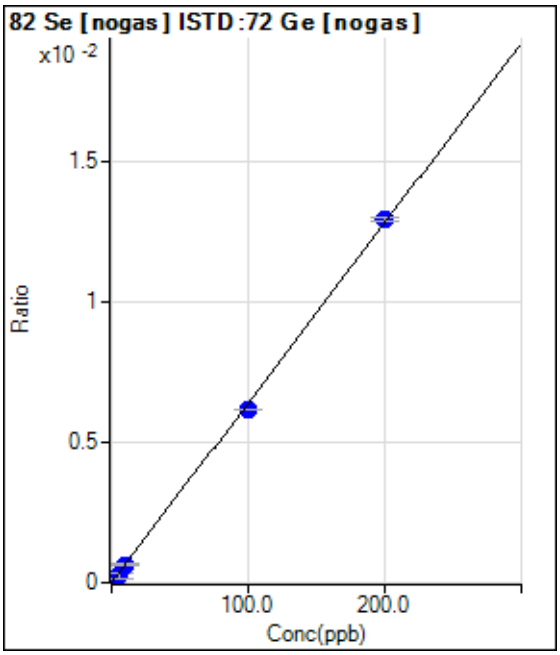
Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-47.36	0.0000	P	-186.3
2	☐	2.000	2.416	172.60	0.0001	P	35.6
3	☐	5.000	3.759	295.33	0.0002	P	68.5
4	☐	10.000	10.000	872.91	0.0006	P	10.3
5	☐	100.000	96.117	8958.56	0.0061	P	0.5
6	☐	200.000	201.968	18449.36	0.0130	P	1.1
7	☐	1.000					

y = 6.4291E-005 * x - 3.3429E-005

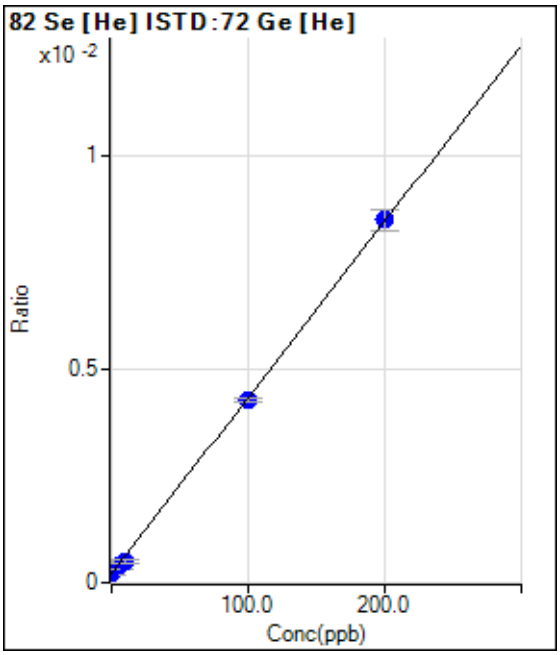
R = 0.9997

DL = 2.905

BEC = -0.52

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	70.00	0.0002	P	37.0
2	☐	2.000	3.347	116.67	0.0004	P	17.1
3	☐	5.000	4.890	136.67	0.0004	P	47.1
4	☐	10.000	6.946	166.67	0.0005	P	11.6
5	☐	100.000	98.443	1426.74	0.0043	P	2.5
6	☐	200.000	200.921	2743.58	0.0085	P	5.6
7	☐	1.000					

y = 4.1159E-005 * x + 2.1318E-004

R = 0.9998

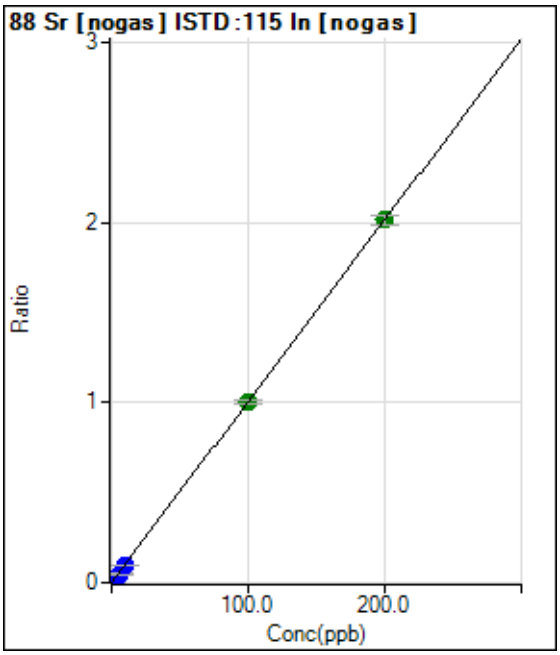
DL = 5.754

BEC = 5.179

Weight: <None>

Min Conc: <None>

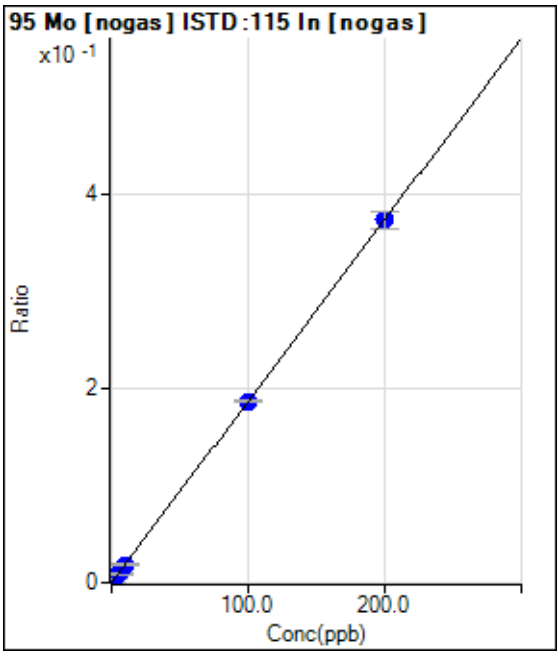
Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1500.09	0.0010	P	10.8
2	☐	2.000	1.878	29000.46	0.0199	P	0.9
3	☐	5.000	4.644	71529.09	0.0478	P	1.5
4	☐	10.000	9.268	137886.19	0.0943	P	1.9
5	☐	100.000	99.718	1462856.33	1.0043	A	2.4
6	☐	200.000	200.188	2898269.65	2.0151	A	2.5
7	☐	1.000					

y = 0.0101 * x + 0.0010
R = 1.0000
DL = 0.03313
BEC = 0.1026

Weight: <None>
Min Conc: <None>

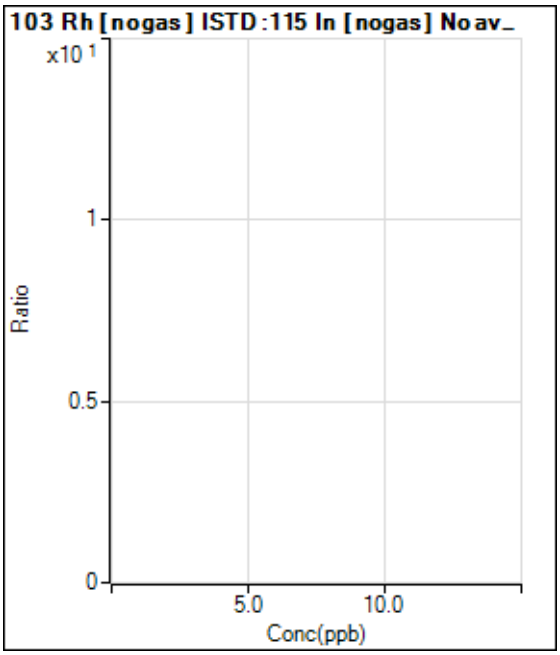


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	163.34	0.0001	P	45.9
2	☐	2.000	1.835	5147.49	0.0035	P	4.2
3	☐	5.000	4.736	13405.25	0.0090	P	2.9
4	☐	10.000	9.891	27157.71	0.0186	P	3.2
5	☐	100.000	100.021	272032.67	0.1868	P	1.3
6	☐	200.000	200.003	536848.15	0.3734	P	4.5
7	☐	1.000					

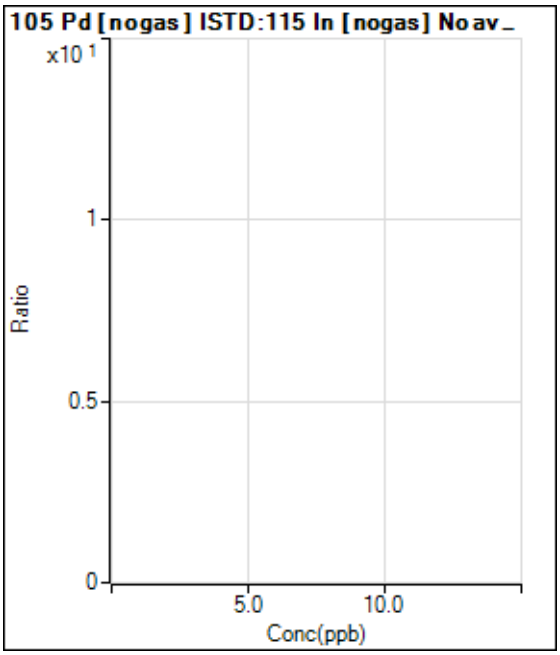
y = 0.0019 * x + 1.1198E-004
R = 1.0000
DL = 0.08253
BEC = 0.06

Weight: <None>
Min Conc: <None>

Calibration for 154_ICV.d

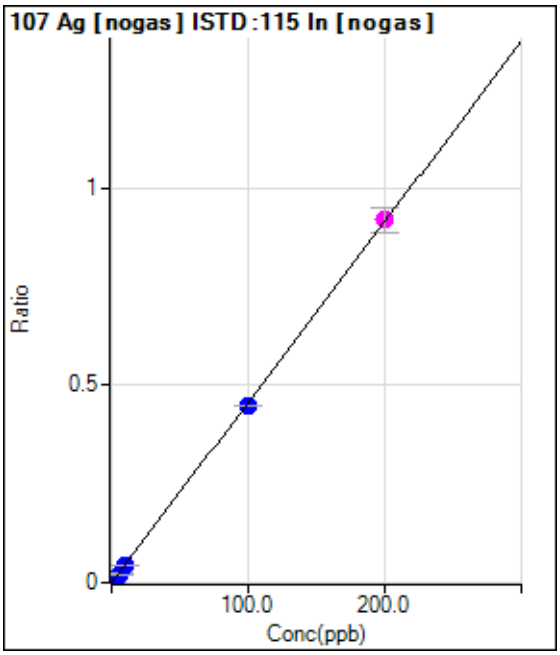


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

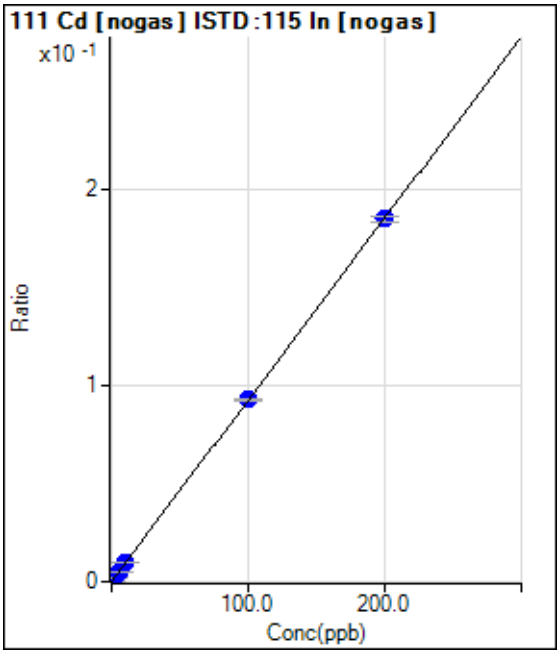
Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	496.68	0.0003	P	7.9
2	☐	2.000	1.912	13215.06	0.0091	P	5.8
3	☐	5.000	4.716	32810.58	0.0219	P	2.2
4	☐	10.000	9.839	66304.19	0.0453	P	0.5
5	☐	100.000	97.968	652844.38	0.4483	P	0.8
6	☐	200.000	201.032	1321588.16	0.9195	M	6.6
7	☐	1.000					

y = 0.0046 * x + 3.4140E-004
R = 0.9999
DL = 0.0178
BEC = 0.07467

Weight: <None>
Min Conc: <None>

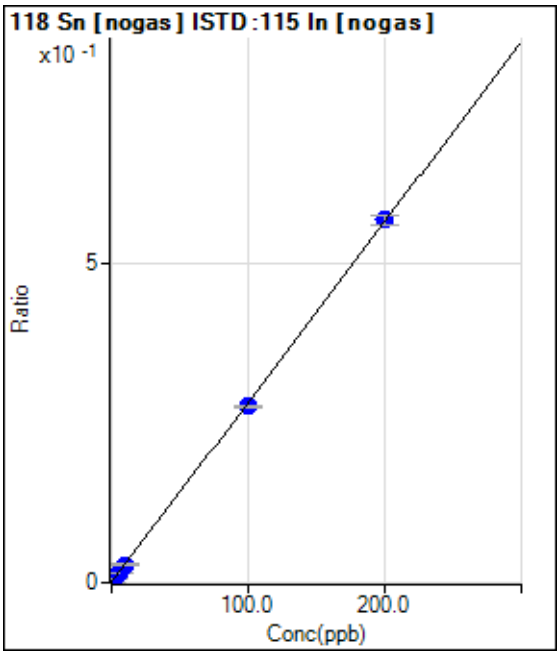


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3.33	0.0000	P	173.2
2	☐	2.000	2.036	2743.60	0.0019	P	7.1
3	☐	5.000	5.243	7264.93	0.0048	P	2.0
4	☐	10.000	10.131	13702.18	0.0094	P	1.4
5	☐	100.000	100.379	135148.73	0.0928	P	1.0
6	☐	200.000	199.797	265708.30	0.1847	P	1.7
7	☐	1.000					

y = 9.2442E-004 * x + 2.3128E-006
R = 1.0000
DL = 0.013
BEC = 0.002502

Weight: <None>
Min Conc: <None>

Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	893.37	0.0006	P	3.2
2	☐	2.000	1.904	8705.62	0.0060	P	4.0
3	☐	5.000	4.768	21046.19	0.0141	P	3.7
4	☐	10.000	9.746	41091.93	0.0281	P	5.3
5	☐	100.000	97.631	401749.21	0.2758	P	0.7
6	☐	200.000	201.204	816680.72	0.5678	P	2.8
7	☐	1.000					

y = 0.0028 * x + 6.1425E-004

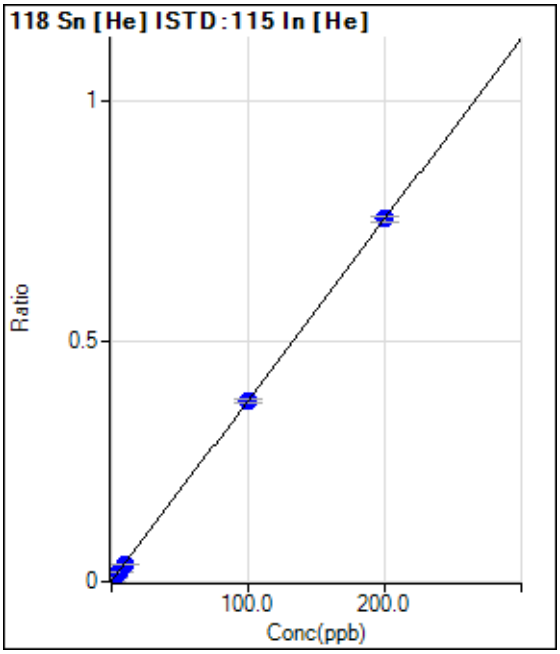
R = 0.9999

DL = 0.02092

BEC = 0.2179

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	396.68	0.0008	P	9.9
2	☐	2.000	1.854	3637.11	0.0078	P	8.6
3	☐	5.000	4.948	9059.13	0.0194	P	1.3
4	☐	10.000	9.556	17252.11	0.0367	P	0.6
5	☐	100.000	99.508	175319.34	0.3748	P	2.0
6	☐	200.000	200.271	340189.68	0.7534	P	1.7
7	☐	1.000					

y = 0.0038 * x + 8.4010E-004

R = 1.0000

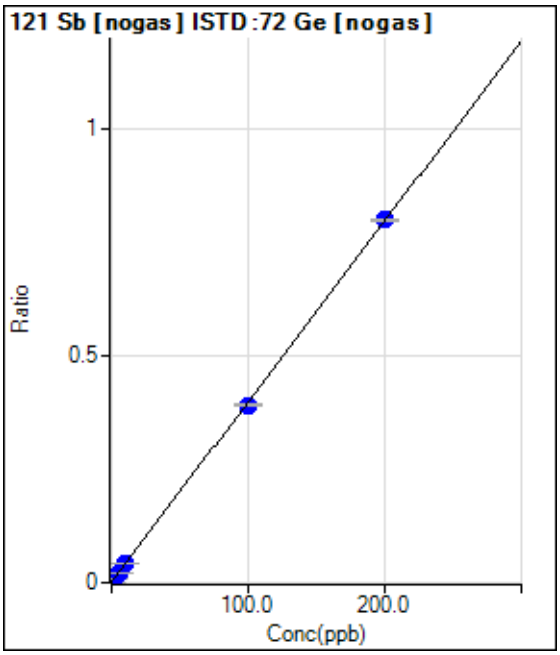
DL = 0.06666

BEC = 0.2236

Weight: <None>

Min Conc: <None>

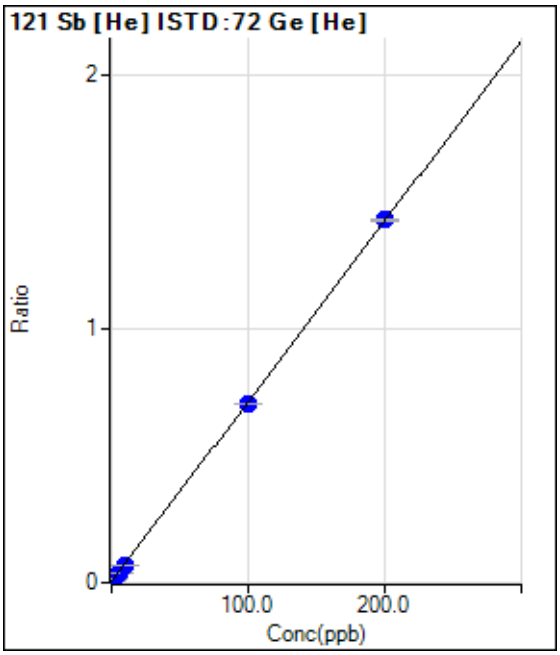
Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2653.57	0.0019	P	23.8
2	☐	2.000	2.032	14112.56	0.0100	P	3.5
3	☐	5.000	4.981	31061.13	0.0217	P	9.6
4	☐	10.000	9.912	59129.76	0.0412	P	1.9
5	☐	100.000	98.203	570762.47	0.3916	P	1.1
6	☐	200.000	200.903	1138271.96	0.7991	P	0.6
7	☐	1.000					

y = 0.0040 * x + 0.0019
R = 0.9999
DL = 0.34
BEC = 0.4764

Weight: <None>
Min Conc: <None>

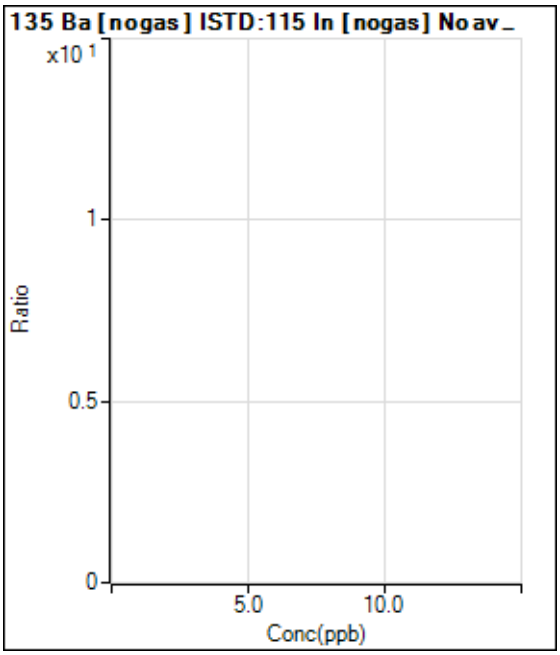


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1273.40	0.0039	P	3.0
2	☐	2.000	1.992	5981.11	0.0180	P	3.8
3	☐	5.000	4.886	12724.79	0.0385	P	6.3
4	☐	10.000	9.290	23282.43	0.0698	P	2.7
5	☐	100.000	98.638	235282.99	0.7033	P	0.6
6	☐	200.000	200.719	461521.73	1.4271	P	0.2
7	☐	1.000					

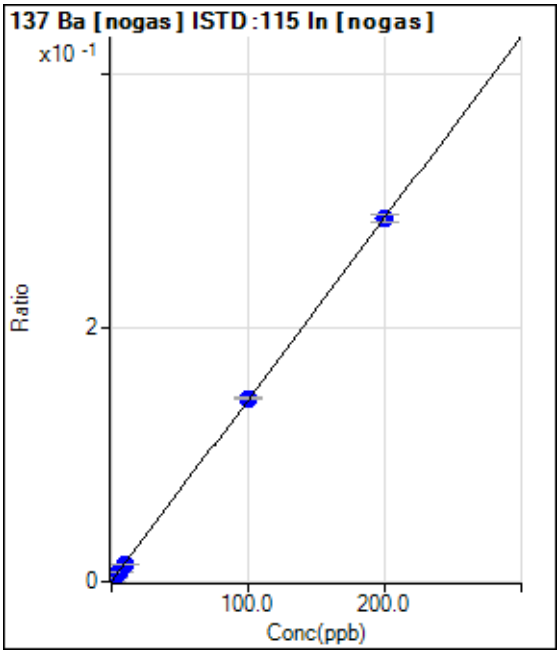
y = 0.0071 * x + 0.0039
R = 1.0000
DL = 0.05006
BEC = 0.5481

Weight: <None>
Min Conc: <None>

Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	303.34	0.0002	P	32.6
2	☐	2.000	2.002	4473.98	0.0031	P	3.4
3	☐	5.000	4.905	10816.88	0.0072	P	5.8
4	☐	10.000	9.662	20519.14	0.0140	P	2.4
5	☐	100.000	100.872	210436.81	0.1445	P	0.2
6	☐	200.000	199.583	410883.64	0.2857	P	2.3
7	☐	1.000					

y = 0.0014 * x + 2.0916E-004

R = 1.0000

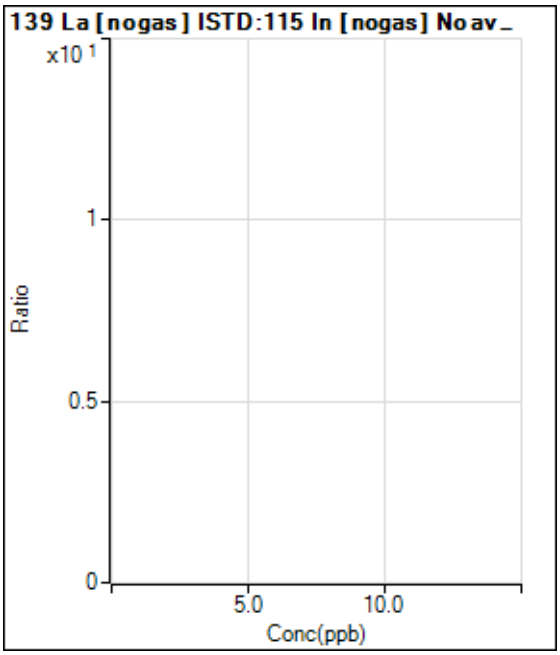
DL = 0.1429

BEC = 0.1462

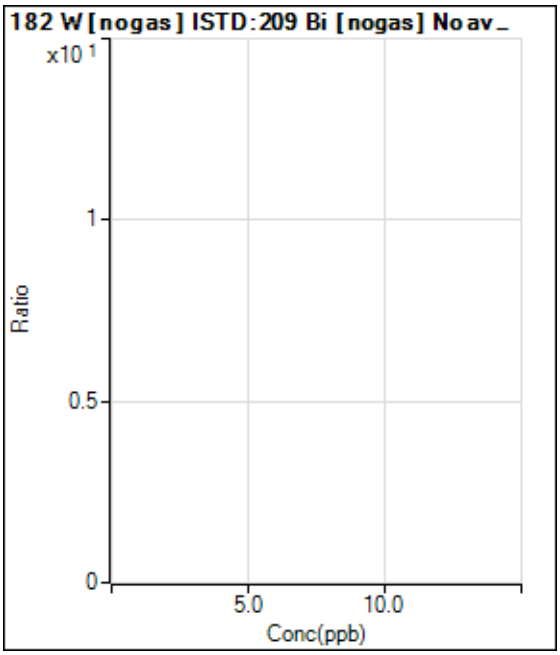
Weight: <None>

Min Conc: <None>

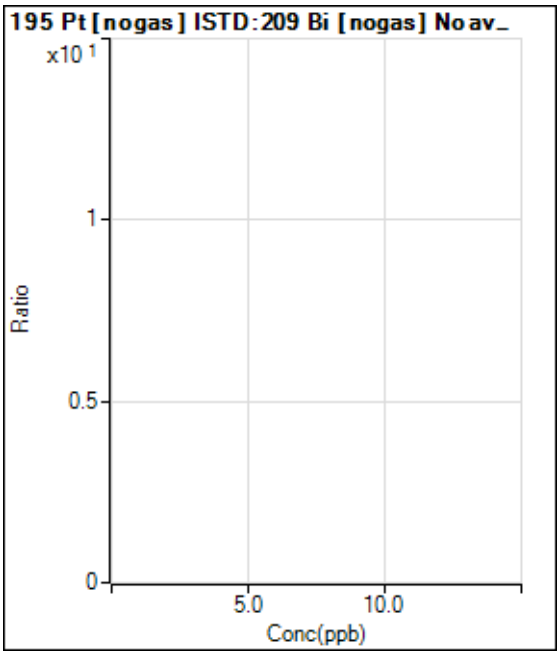
RIGHT SOLUTIONS | RIGHT PARTNER



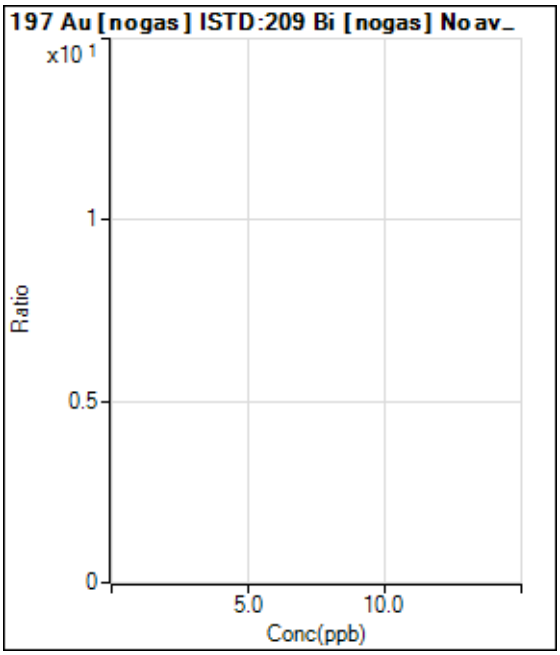
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					



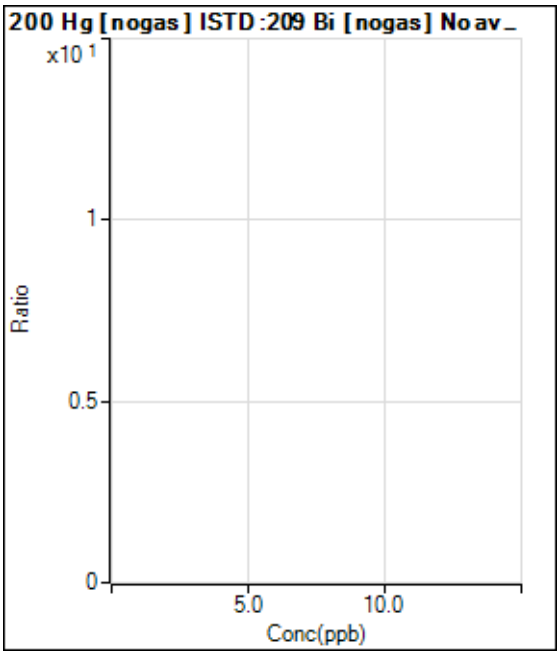
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					



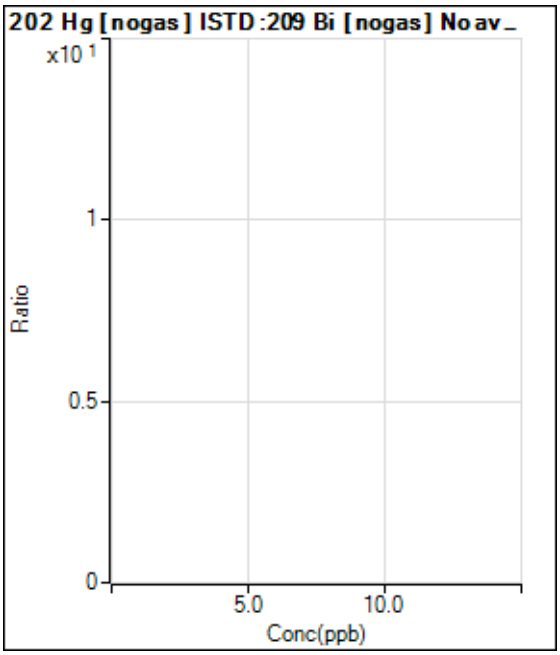
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

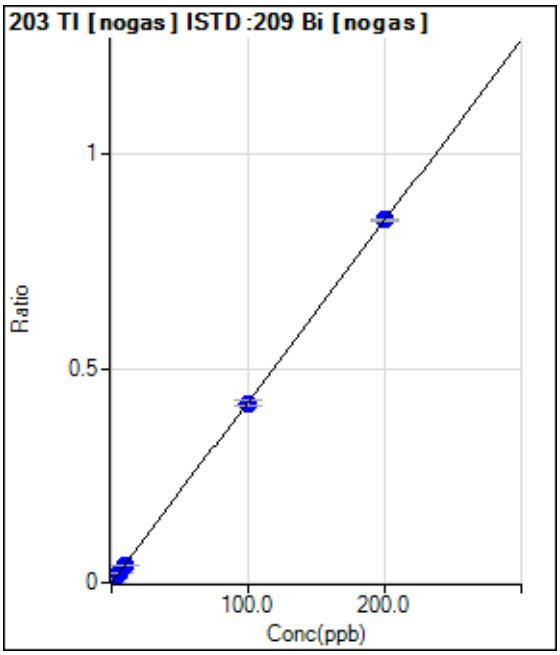


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	0.050					
3	☐	0.200					
4	☐	0.500					
5	☐	2.000					
6	☐	5.000					
7	☐	10.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	0.050					
3	☐	0.200					
4	☐	0.500					
5	☐	5.000					
6	☐	5.000					
7	☐	10.000					

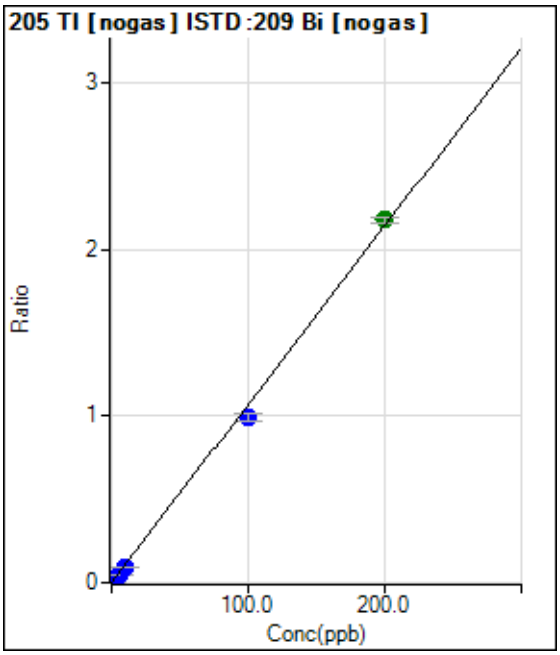
Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	46.67	0.0000	P	27.5
2	☐	2.000	1.942	9442.83	0.0082	P	6.5
3	☐	5.000	4.893	24188.11	0.0207	P	0.8
4	☐	10.000	9.509	46944.16	0.0402	P	3.6
5	☐	100.000	99.083	471051.64	0.4189	P	3.6
6	☐	200.000	200.486	929739.15	0.8475	P	0.8
7	☐	1.000					

y = 0.0042 * x + 4.1431E-005
R = 1.0000
DL = 0.008087
BEC = 0.009802

Weight: <None>
Min Conc: <None>



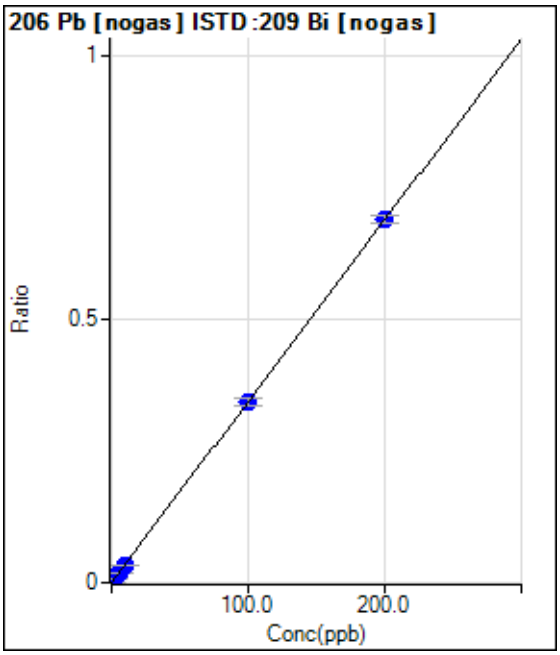
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	123.33	0.0001	P	22.6
2	☐	2.000	1.818	22438.96	0.0196	P	2.1
3	☐	5.000	4.499	56380.37	0.0483	P	4.3
4	☐	10.000	8.816	110378.00	0.0946	P	2.0
5	☐	100.000	93.134	1122395.14	0.9982	P	4.8
6	☐	200.000	203.507	2392574.91	2.1811	A	1.9
7	☐	1.000					

y = 0.0107 * x + 1.0933E-004
R = 0.9992
DL = 0.006926
BEC = 0.0102

Weight: <None>
Min Conc: <None>

RIGHT SOLUTIONS | RIGHT PARTNER

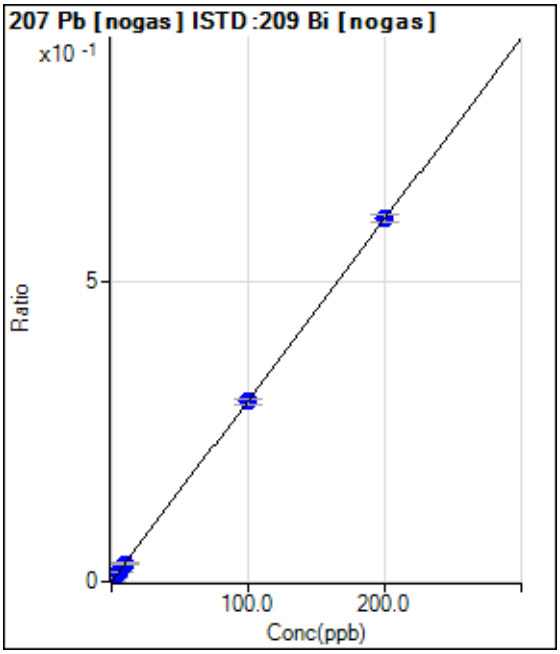
Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	360.01	0.0003	P	12.3
2	☐	2.000	2.017	8282.23	0.0072	P	6.6
3	☐	5.000	4.835	19728.84	0.0169	P	3.1
4	☐	10.000	9.581	38736.22	0.0332	P	0.6
5	☐	100.000	99.574	384542.86	0.3420	P	4.0
6	☐	200.000	200.238	753988.06	0.6874	P	2.2
7	☐	1.000					

y = 0.0034 * x + 3.1748E-004
R = 1.0000
DL = 0.03406
BEC = 0.09253

Weight: <None>
Min Conc: <None>



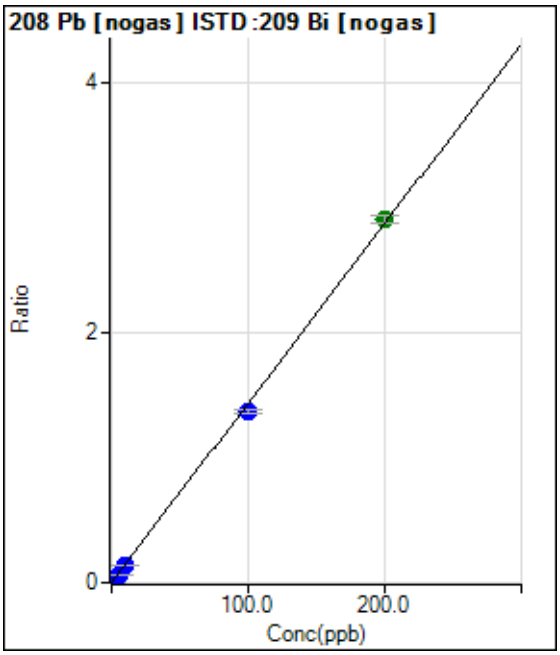
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	363.34	0.0003	P	31.5
2	☐	2.000	1.949	7088.34	0.0062	P	7.0
3	☐	5.000	4.888	17559.72	0.0150	P	1.7
4	☐	10.000	9.781	34747.21	0.0298	P	6.3
5	☐	100.000	99.483	337436.33	0.3000	P	3.1
6	☐	200.000	200.273	662162.93	0.6037	P	2.3
7	☐	1.000					

y = 0.0030 * x + 3.1944E-004
R = 1.0000
DL = 0.1002
BEC = 0.106

Weight: <None>
Min Conc: <None>

RIGHT SOLUTIONS | RIGHT PARTNER

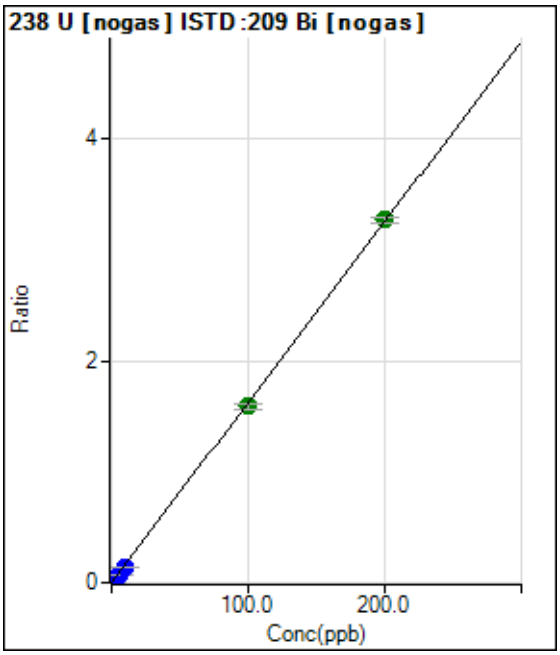
Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1566.72	0.0014	P	10.9
2	☐	2.000	1.853	32009.31	0.0280	P	3.3
3	☐	5.000	4.659	79607.16	0.0682	P	2.0
4	☐	10.000	9.312	157466.42	0.1350	P	3.7
5	☐	100.000	95.633	1544423.01	1.3731	P	2.7
6	☐	200.000	202.228	3183396.85	2.9021	A	2.1
7	☐	1.000					

y = 0.0143 * x + 0.0014
R = 0.9997
DL = 0.03146
BEC = 0.09637

Weight: <None>
Min Conc: <None>



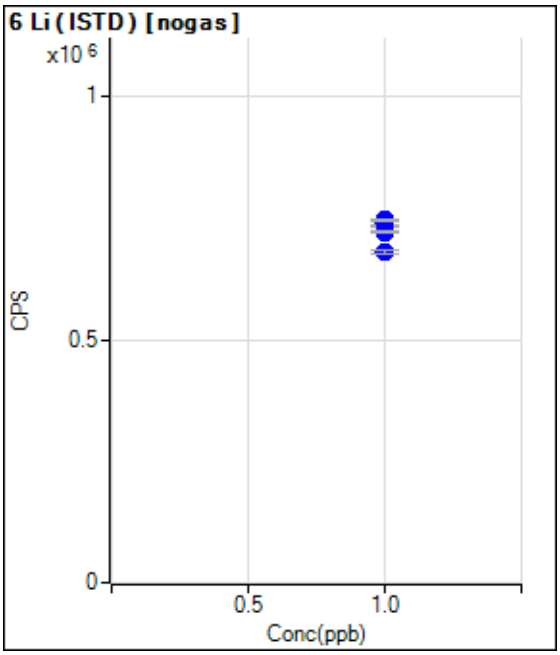
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	73.33	0.0001	P	47.1
2	☐	2.000	1.766	32937.80	0.0288	P	2.2
3	☐	5.000	4.371	82995.81	0.0711	P	2.1
4	☐	10.000	8.627	163682.69	0.1403	P	2.1
5	☐	100.000	97.982	1791036.64	1.5925	A	3.3
6	☐	200.000	201.096	3585523.69	3.2684	A	1.4
7	☐	1.000					

y = 0.0163 * x + 6.4527E-005
R = 0.9999
DL = 0.005615
BEC = 0.00397

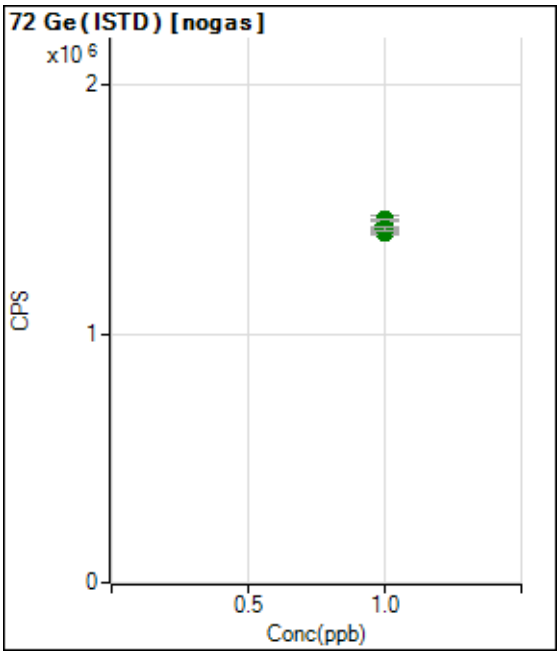
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Min Conc: <None>

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Calibration for 154_ICV.d



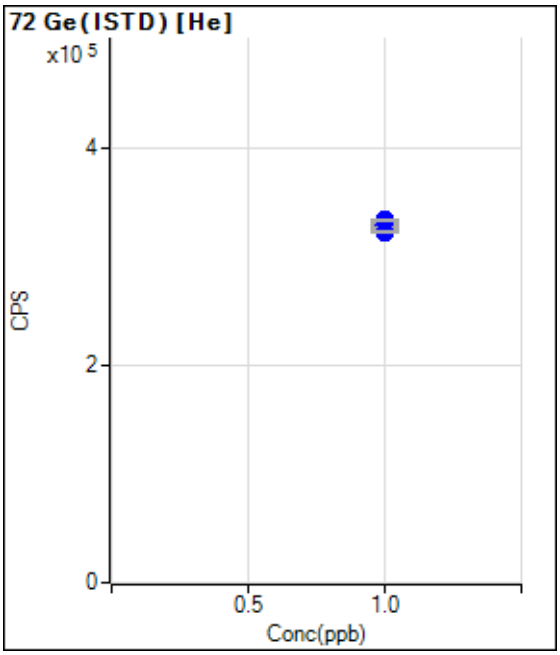
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		733859.90		P	0.6
2	☐	1.000		738908.91		P	1.0
3	☐	1.000		746343.17		P	0.5
4	☐	1.000		745176.78		P	0.4
5	☐	1.000		721469.49		P	0.3
6	☐	1.000		681073.59		P	0.9
7	☐	1.000					



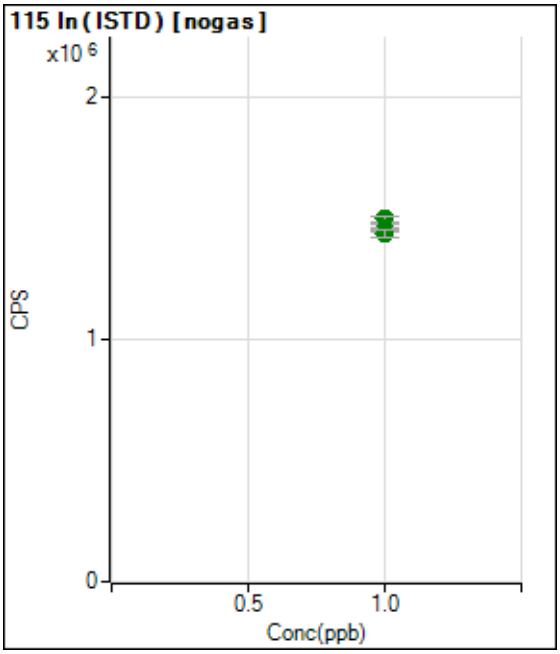
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1407720.24		A	1.8
2	☐	1.000		1417971.70		A	0.6
3	☐	1.000		1438495.97		A	4.6
4	☐	1.000		1434952.58		A	2.8
5	☐	1.000		1457621.64		A	0.5
6	☐	1.000		1424482.79		A	1.1
7	☐	1.000					

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Calibration for 154_ICV.d

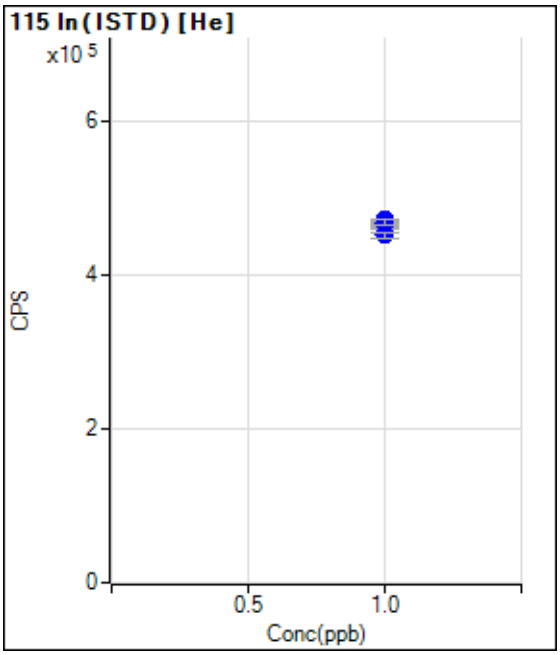


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		327714.61		P	1.4
2	☐	1.000		332257.60		P	1.6
3	☐	1.000		330365.63		P	1.0
4	☐	1.000		333733.78		P	0.9
5	☐	1.000		334555.28		P	0.9
6	☐	1.000		323409.02		P	0.3
7	☐	1.000					

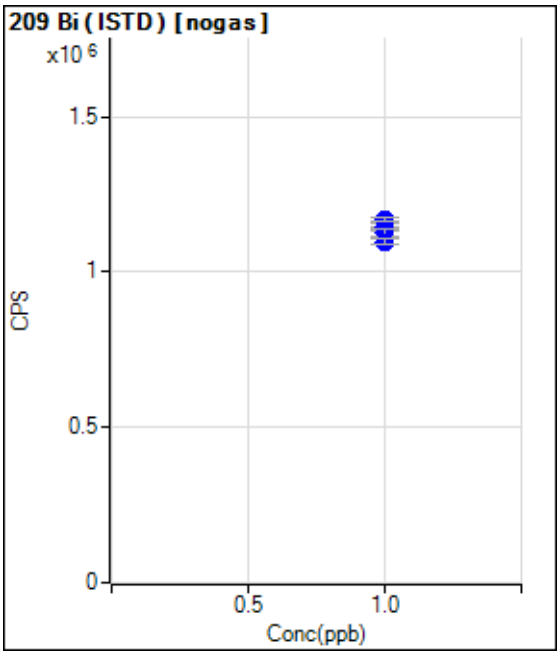


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1454014.66		A	1.3
2	☐	1.000		1455641.59		A	1.0
3	☐	1.000		1498035.75		A	1.5
4	☐	1.000		1462961.30		A	2.0
5	☐	1.000		1456488.25		A	0.8
6	☐	1.000		1438855.67		A	2.4
7	☐	1.000					

Calibration for 154_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		471989.60		P	0.7
2	☐	1.000		465967.47		P	1.0
3	☐	1.000		466241.47		P	2.3
4	☐	1.000		469481.05		P	0.7
5	☐	1.000		467918.53		P	1.6
6	☐	1.000		451617.57		P	1.4
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1131561.60		P	2.7
2	☐	1.000		1145395.32		P	1.8
3	☐	1.000		1167337.46		P	1.6
4	☐	1.000		1167080.87		P	1.1
5	☐	1.000		1125230.68		P	2.4
6	☐	1.000		1097147.90		P	1.4
7	☐	1.000					

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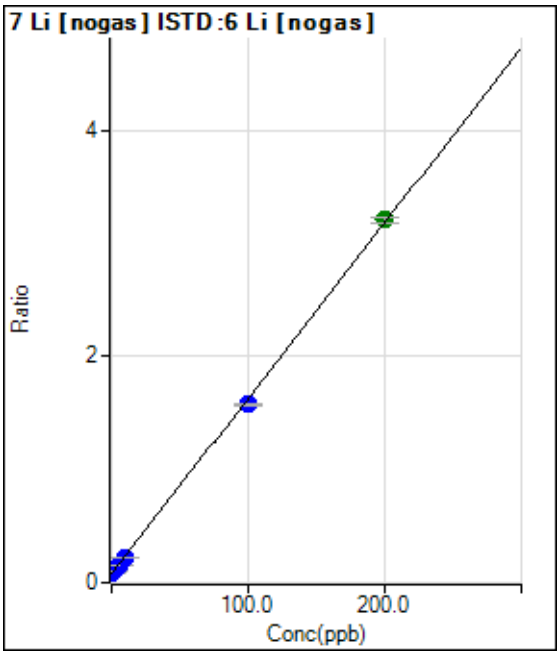
Calibration for 090_ICV.d

Batch Folder: C:\Agilent\ICPMH\1\DATA\051120A.b\
Analysis File: 051120A.batch.bin
DA Date-Time: 5/11/2020 5:48:10 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	083CALB.d	CAL BLK	5/11/2020 3:57:25 PM
2	084CALS.d	2/10/200	5/11/2020 3:59:47 PM
3	085CALS.d	5/25/500	5/11/2020 4:02:10 PM
4	086CALS.d	10/50/1000	5/11/2020 4:04:33 PM
5	087CALS.d	100/500/10K	5/11/2020 4:06:57 PM
6	088CALS.d	200/1000/20K	5/11/2020 4:09:20 PM
7			

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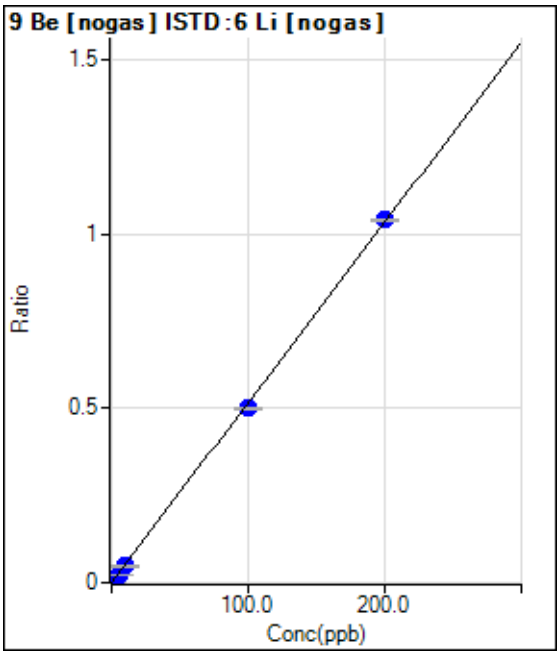
Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	46990.29	0.0799	P	1.6
2	☐	2.000	1.901	64326.44	0.1093	P	1.7
3	☐	5.000	4.627	88891.14	0.1515	P	1.0
4	☐	10.000	9.165	130162.23	0.2219	P	0.8
5	☐	100.000	96.500	870604.83	1.5748	P	1.3
6	☐	200.000	201.802	1669817.11	3.2062	A	1.3
7	☐	1.000					

y = 0.0155 * x + 0.0799
R = 0.9998
DL = 0.2425
BEC = 5.155

Weight: <None>
Min Conc: <None>



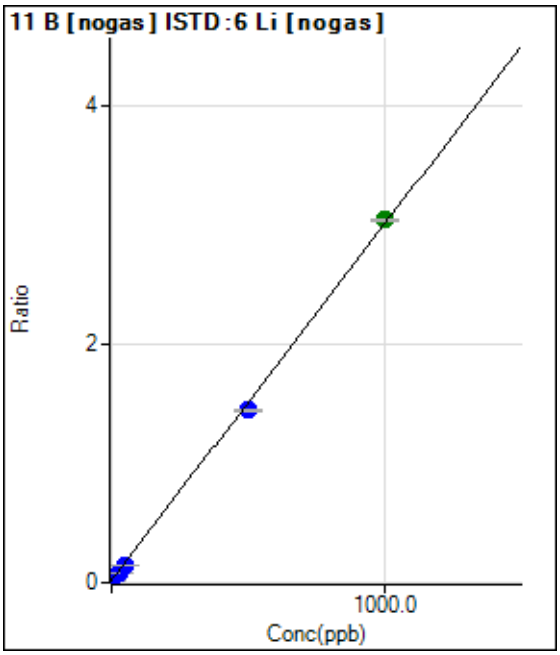
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36.67	0.0001	P	83.6
2	☐	2.000	1.841	5627.55	0.0096	P	4.7
3	☐	5.000	4.672	14181.93	0.0242	P	2.6
4	☐	10.000	9.192	27875.18	0.0475	P	3.1
5	☐	100.000	97.056	277003.95	0.5011	P	1.0
6	☐	200.000	201.522	541807.99	1.0403	P	0.8
7	☐	1.000					

y = 0.0052 * x + 6.2382E-005
R = 0.9999
DL = 0.03032
BEC = 0.01208

Weight: <None>
Min Conc: <None>

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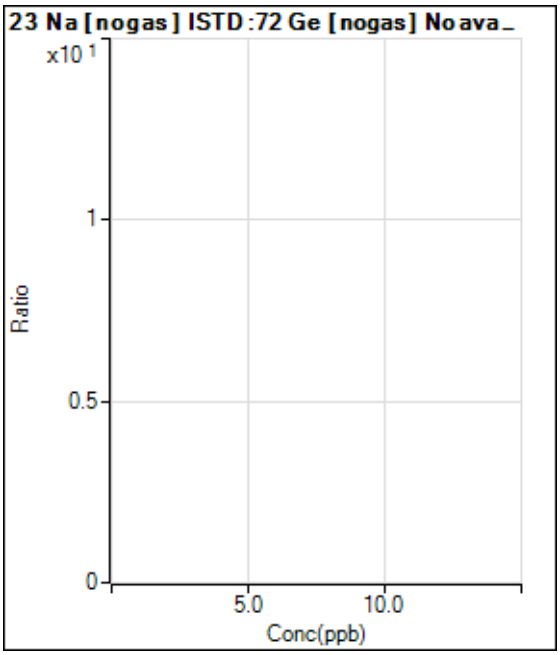
Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	11286.69	0.0192	P	1.4
2	☐	10.000	8.723	26628.48	0.0452	P	1.7
3	☐	25.000	22.094	49969.48	0.0852	P	2.4
4	☐	50.000	44.311	88937.33	0.1516	P	1.4
5	☐	500.000	476.801	798193.06	1.4439	P	1.4
6	☐	1000.000	1011.969	1584935.81	3.0431	A	0.8
7	☐	5.000					

y = 0.0030 * x + 0.0192
R = 0.9996
DL = 0.2721
BEC = 6.419

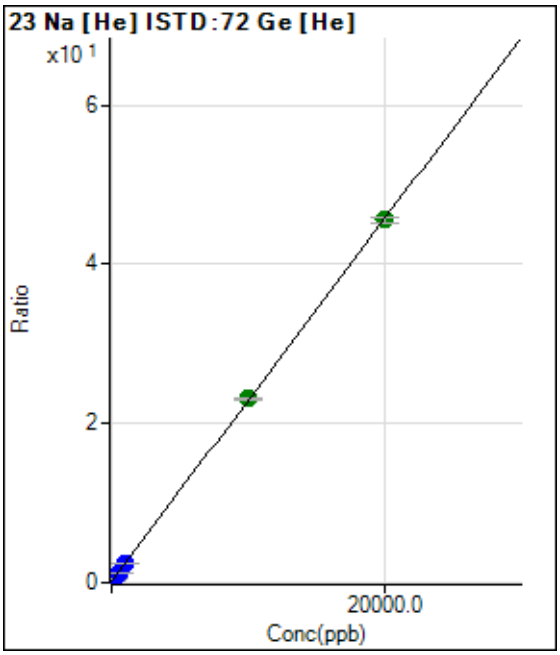
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

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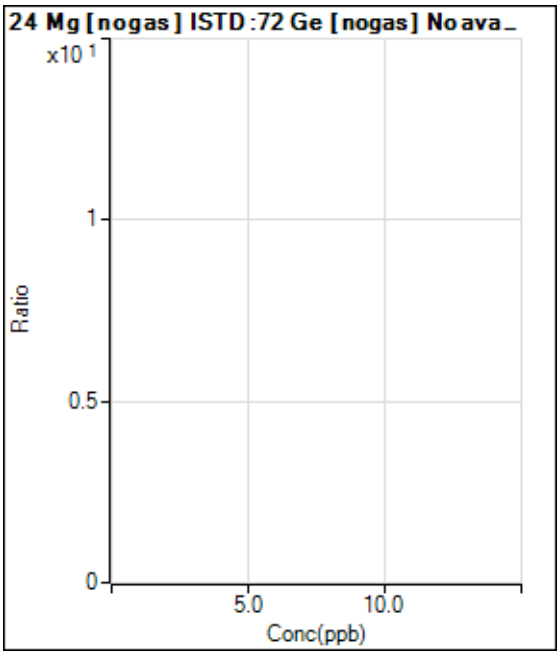
Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	45524.76	0.1463	P	2.5
2	☐	200.000	195.068	183466.94	0.5903	P	2.7
3	☐	500.000	479.116	390691.59	1.2368	P	0.6
4	☐	1000.000	953.586	717699.02	2.3167	P	1.9
5	☐	10000.000	10096.395	6989187.19	23.1261	A	1.0
6	☐	20000.000	19954.694	13596201.05	45.5640	A	1.7
7	☐	100.000					

y = 0.0023 * x + 0.1463
R = 1.0000
DL = 4.905
BEC = 64.28

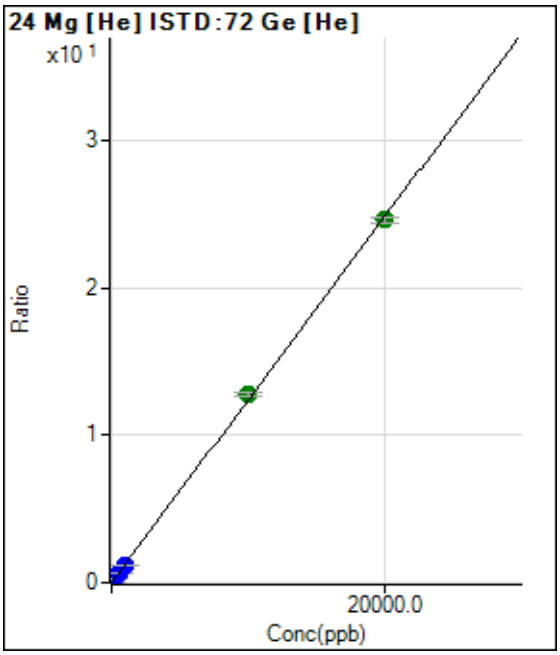
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

RIGHT SOLUTIONS | RIGHT PARTNER

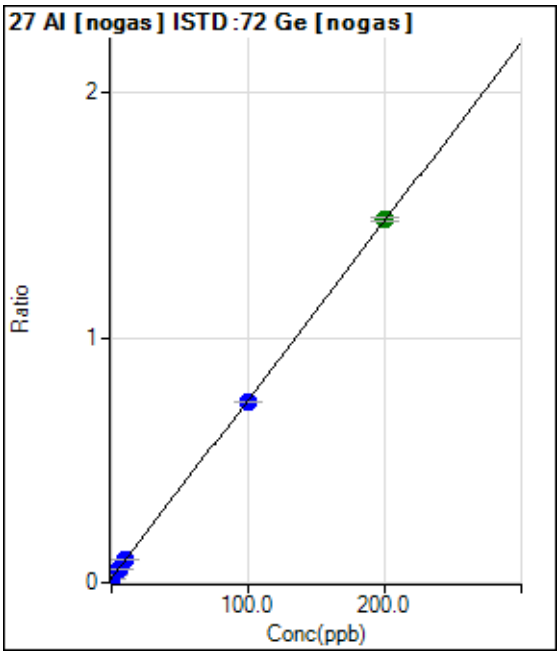
Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	373.34	0.0012	P	6.3
2	☐	200.000	196.663	76312.70	0.2455	P	0.7
3	☐	500.000	492.302	193540.68	0.6127	P	1.0
4	☐	1000.000	967.324	372632.45	1.2027	P	1.6
5	☐	10000.000	10317.872	3873571.71	12.8171	A	1.5
6	☐	20000.000	19842.923	7355096.35	24.6483	A	1.3
7	☐	100.000					

y = 0.0012 * x + 0.0012
R = 0.9998
DL = 0.1823
BEC = 0.9656

Weight: <None>
Min Conc: <None>



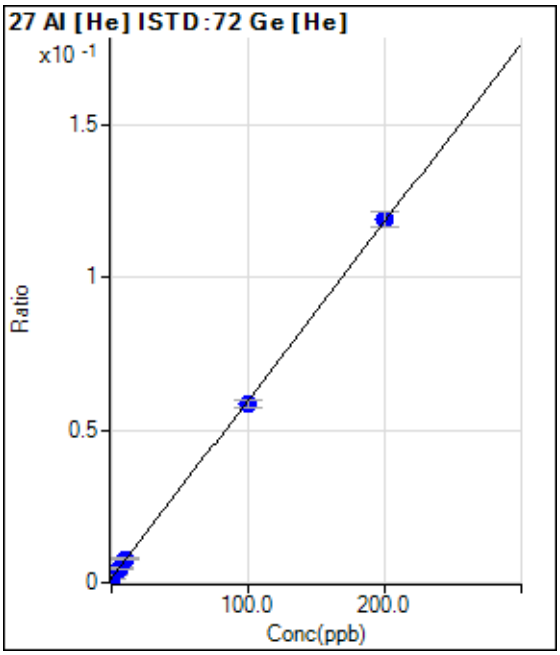
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	19843.88	0.0176	P	3.0
2	☐	2.000	2.964	44524.07	0.0392	P	25.5
3	☐	5.000	5.210	63138.59	0.0556	P	3.9
4	☐	10.000	10.071	102623.35	0.0910	P	1.2
5	☐	100.000	98.609	823996.60	0.7361	P	0.2
6	☐	200.000	200.677	1636289.98	1.4798	A	1.2
7	☐	1.000					

y = 0.0073 * x + 0.0176
R = 1.0000
DL = 0.2144
BEC = 2.42

Weight: <None>
Min Conc: <None>

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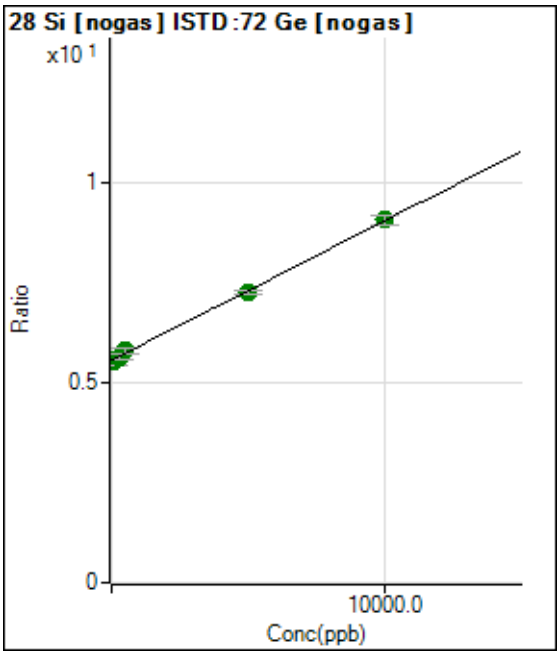
Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	446.68	0.0014	P	11.7
2	☐	2.000	2.697	933.37	0.0030	P	19.5
3	☐	5.000	5.343	1436.74	0.0045	P	15.3
4	☐	10.000	10.856	2403.53	0.0078	P	11.4
5	☐	100.000	97.603	17631.78	0.0583	P	4.1
6	☐	200.000	201.140	35426.85	0.1187	P	4.1
7	☐	1.000					

y = 5.8311E-004 * x + 0.0014
R = 0.9999
DL = 0.8636
BEC = 2.46

Weight: <None>
Min Conc: <None>



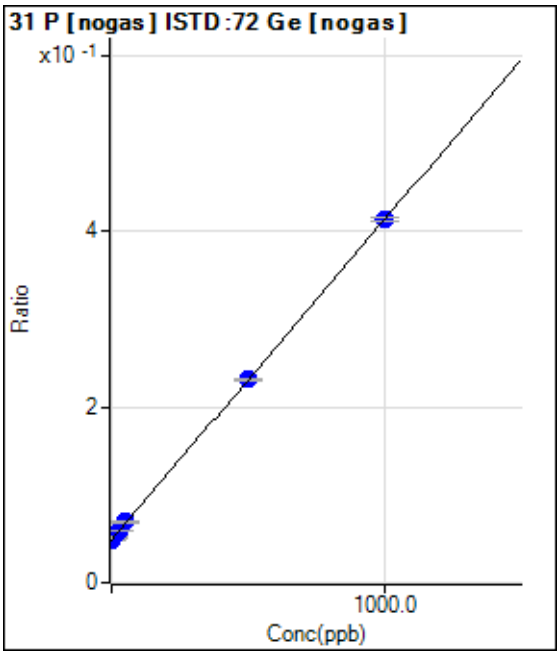
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6274341.99	5.5752	A	2.8
2	☐	100.000	-150.076	6275587.20	5.5228	A	2.1
3	☐	250.000	210.159	6413099.49	5.6487	A	2.5
4	☐	500.000	697.996	6561168.44	5.8192	A	2.4
5	☐	5000.000	4873.257	8147180.29	7.2784	A	1.6
6	☐	10000.000	10056.968	10051547.35	9.0901	A	2.3
7	☐	50.000					

y = 3.4950E-004 * x + 5.5752
R = 0.9993
DL = 1330
BEC = 1.595E+04

Weight: <None>
Min Conc: <None>

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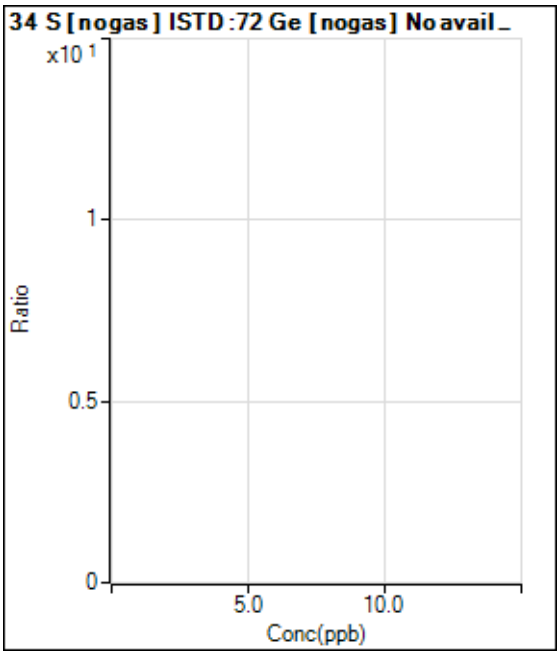
Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	54953.36	0.0488	P	2.3
2	☐	10.000	8.666	59058.92	0.0520	P	2.6
3	☐	25.000	27.511	66821.56	0.0589	P	0.2
4	☐	50.000	55.928	78047.33	0.0692	P	3.6
5	☐	500.000	501.523	259266.51	0.2316	P	1.2
6	☐	1000.000	998.893	456610.50	0.4129	P	1.2
7	☐	5.000					

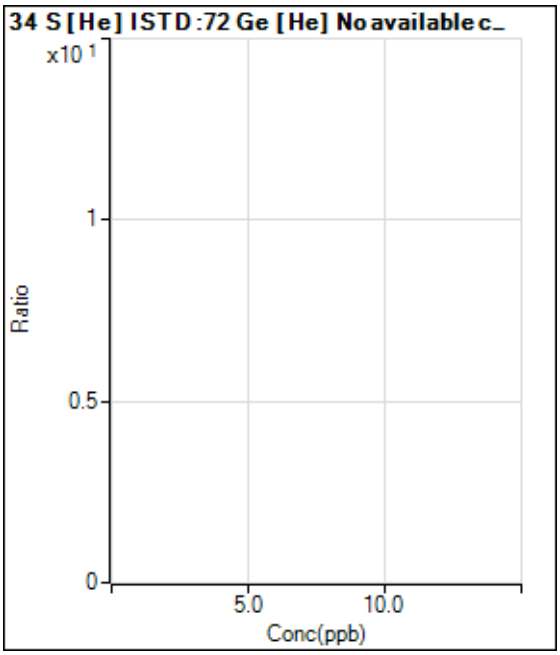
y = 3.6450E-004 * x + 0.0488
R = 1.0000
DL = 9.042
BEC = 133.9

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Min Conc: <None>

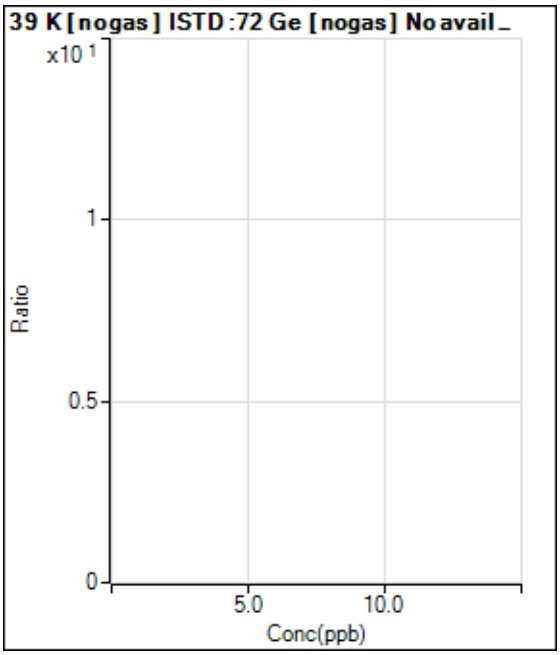


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	400.000					
3	☐	1000.000					
4	☐	2000.000					
5	☐	20000.000					
6	☐	40000.000					
7	☐	200.000					

Calibration for 090_ICV.d



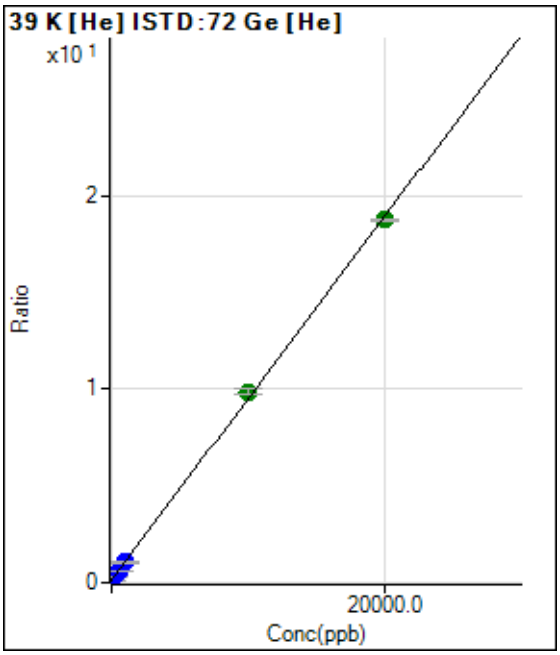
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	400.000					
3	☐	1000.000					
4	☐	2000.000					
5	☐	20000.000					
6	☐	40000.000					
7	☐	200.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

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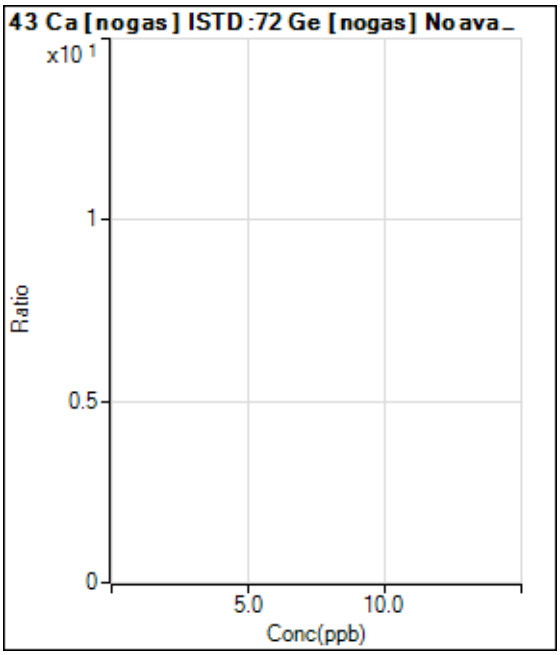
Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	43550.91	0.1399	P	1.6
2	☐	200.000	192.307	99595.42	0.3203	P	1.3
3	☐	500.000	476.652	185445.04	0.5871	P	2.1
4	☐	1000.000	963.956	323518.76	1.0442	P	1.1
5	☐	10000.000	10354.788	2977629.85	9.8536	A	2.9
6	☐	20000.000	19825.069	5591400.12	18.7376	A	0.8
7	☐	100.000					

y = 9.3809E-004 * x + 0.1399
R = 0.9998
DL = 6.977
BEC = 149.2

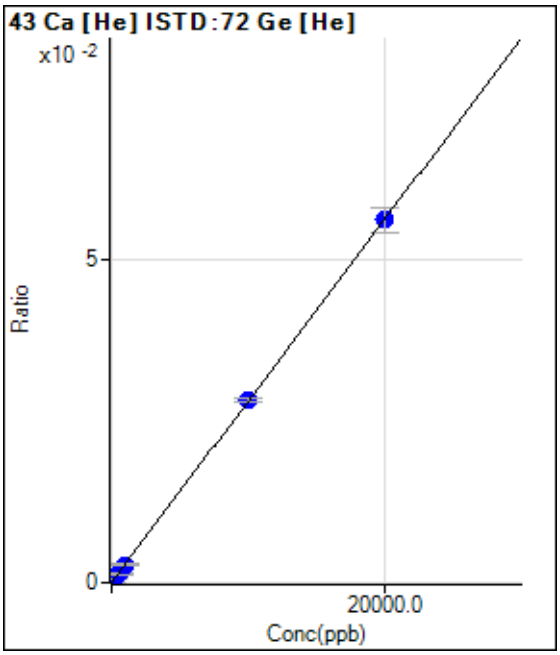
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

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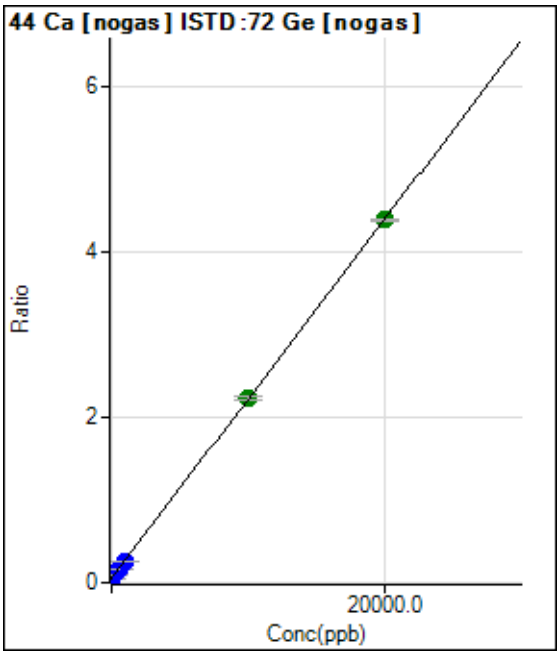
Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10.00	0.0000	P	100.5
2	☐	200.000	236.047	216.67	0.0007	P	24.4
3	☐	500.000	484.095	440.01	0.0014	P	10.1
4	☐	1000.000	994.641	876.70	0.0028	P	4.8
5	☐	10000.000	10025.221	8525.41	0.0282	P	1.8
6	☐	20000.000	19987.695	16774.45	0.0562	P	6.8
7	☐	100.000					

y = 2.8108E-006 * x + 3.2443E-005
R = 1.0000
DL = 34.8
BEC = 11.54

Weight: <None>
Min Conc: <None>



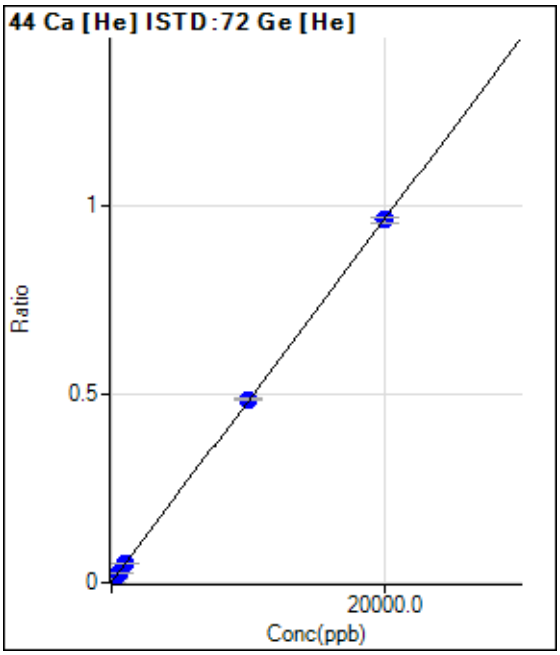
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	60619.78	0.0539	P	1.5
2	☐	200.000	194.191	109065.81	0.0960	P	0.8
3	☐	500.000	495.081	183095.49	0.1613	P	2.3
4	☐	1000.000	973.395	298876.20	0.2650	P	0.5
5	☐	10000.000	10043.523	2499401.89	2.2329	A	1.4
6	☐	20000.000	19979.750	4852867.95	4.3886	A	0.6
7	☐	100.000					

y = 2.1695E-004 * x + 0.0539
R = 1.0000
DL = 10.97
BEC = 248.3

Weight: <None>
Min Conc: <None>

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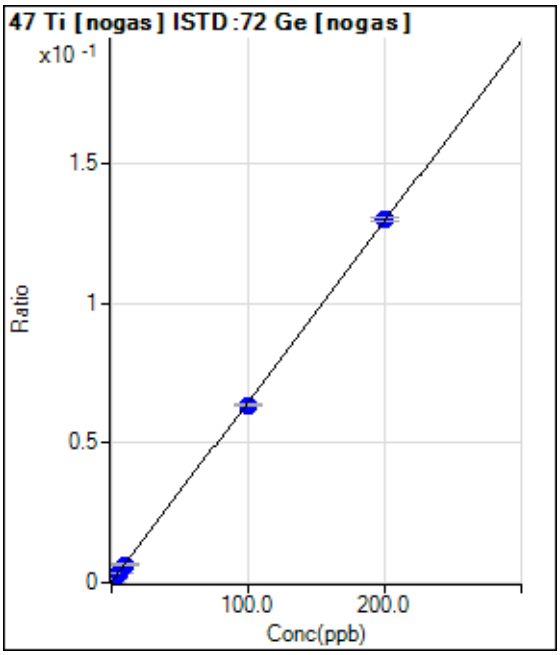
Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	366.68	0.0012	P	9.6
2	☐	200.000	195.583	3290.34	0.0106	P	1.9
3	☐	500.000	497.107	7925.14	0.0251	P	2.4
4	☐	1000.000	1022.357	15603.39	0.0504	P	1.9
5	☐	10000.000	10053.569	146510.64	0.4848	P	1.2
6	☐	20000.000	19972.214	287043.61	0.9619	P	1.7
7	☐	100.000					

y = 4.8104E-005 * x + 0.0012
R = 1.0000
DL = 7.041
BEC = 24.47

Weight: <None>
Min Conc: <None>



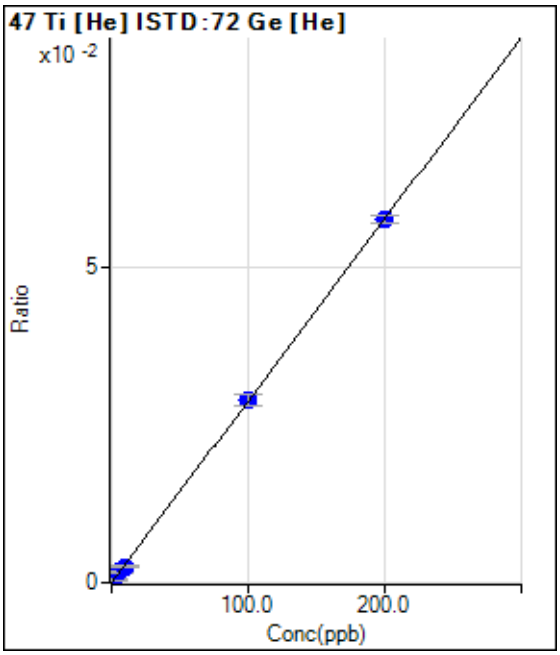
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	153.34	0.0001	P	65.8
2	☐	2.000	2.005	1626.76	0.0014	P	9.5
3	☐	5.000	5.122	3910.49	0.0034	P	6.9
4	☐	10.000	9.725	7238.23	0.0064	P	4.1
5	☐	100.000	98.268	71226.30	0.0636	P	0.7
6	☐	200.000	200.876	143666.82	0.1299	P	1.0
7	☐	1.000					

y = 6.4610E-004 * x + 1.3578E-004
R = 0.9999
DL = 0.4146
BEC = 0.2102

Weight: <None>
Min Conc: <None>

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Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	0.00	0.0000	P	
2	☐	2.000	1.899	170.00	0.0005	P	43.8
3	☐	5.000	5.868	533.35	0.0017	P	8.2
4	☐	10.000	8.931	796.70	0.0026	P	5.5
5	☐	100.000	100.786	8765.49	0.0290	P	6.1
6	☐	200.000	199.640	17148.13	0.0575	P	2.1
7	☐	1.000					

y = 2.8784E-004 * x + 0.0000E+000

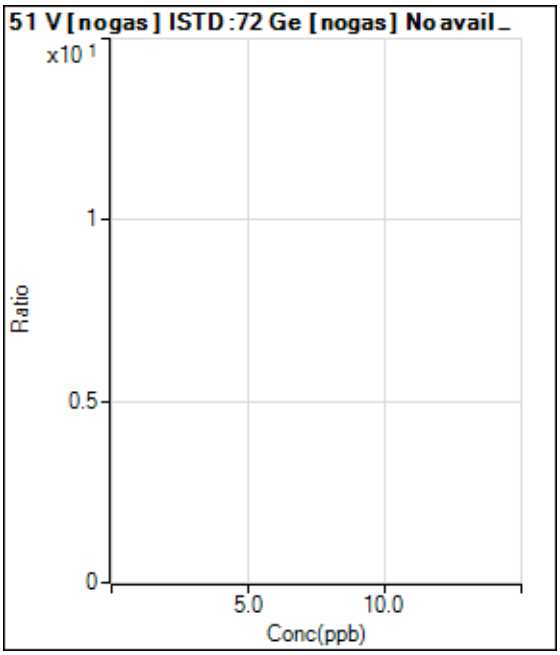
R = 1.0000

DL = 0

BEC = 0

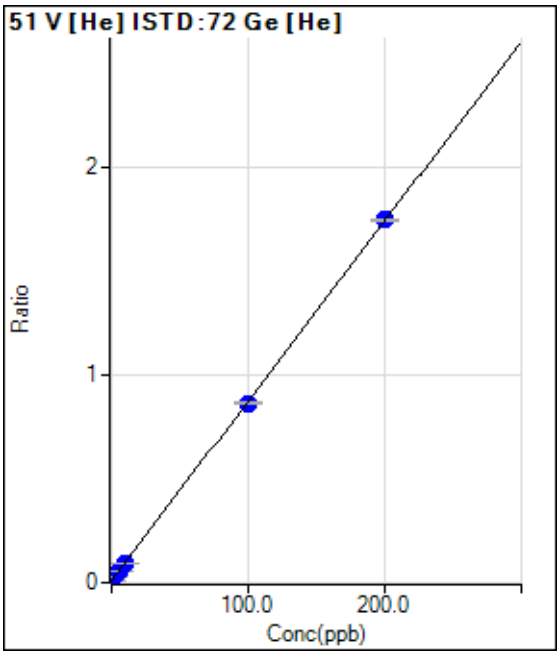
Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

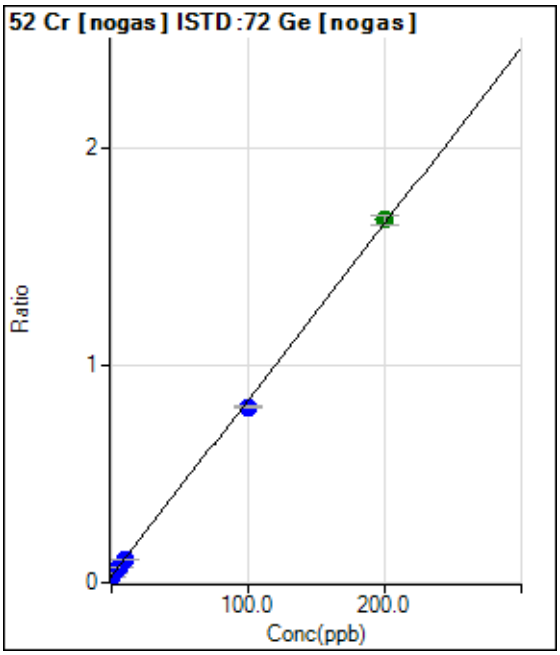
Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3196.96	0.0103	P	2.8
2	☐	2.000	1.952	8453.06	0.0272	P	2.5
3	☐	5.000	4.976	16868.77	0.0534	P	3.7
4	☐	10.000	9.672	29155.01	0.0941	P	2.9
5	☐	100.000	98.501	261131.27	0.8641	P	1.2
6	☐	200.000	200.767	522356.75	1.7505	P	0.4
7	☐	1.000					

y = 0.0087 * x + 0.0103
R = 1.0000
DL = 0.1005
BEC = 1.185

Weight: <None>
Min Conc: <None>

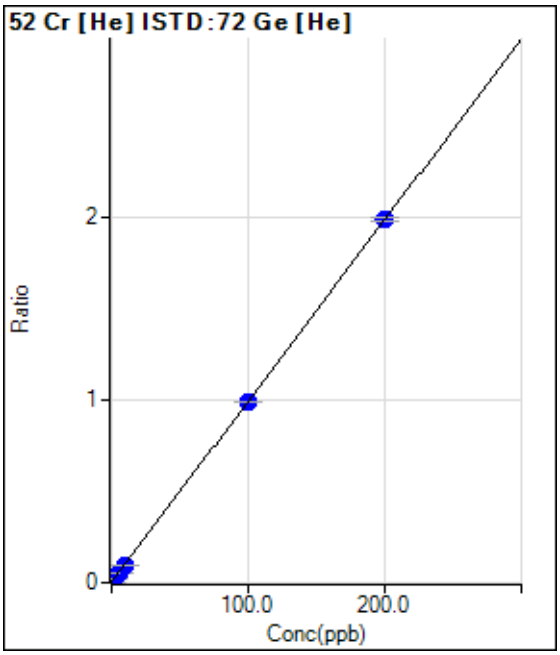


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	34539.00	0.0307	P	1.8
2	☐	2.000	1.956	52895.47	0.0466	P	0.8
3	☐	5.000	4.979	80694.83	0.0711	P	2.2
4	☐	10.000	9.645	122820.58	0.1089	P	0.5
5	☐	100.000	95.678	903102.07	0.8067	P	1.0
6	☐	200.000	202.180	1847217.16	1.6706	A	2.5
7	☐	1.000					

y = 0.0081 * x + 0.0307
R = 0.9997
DL = 0.2073
BEC = 3.783

Weight: <None>
Min Conc: <None>

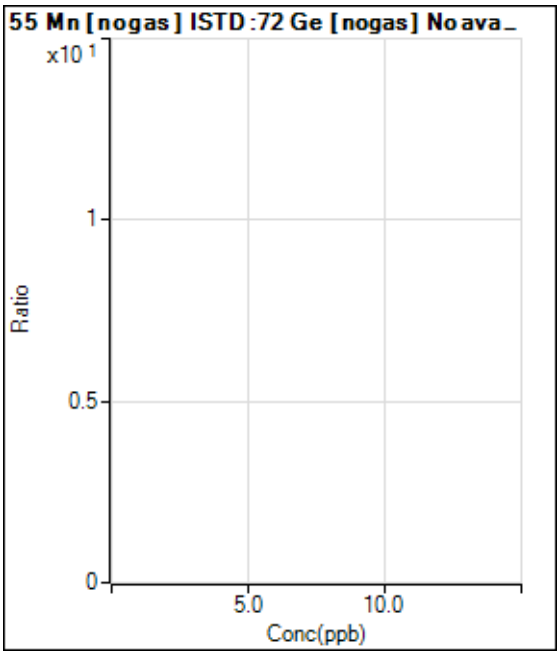
Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	570.02	0.0018	P	12.6
2	☐	2.000	2.020	6777.99	0.0218	P	5.4
3	☐	5.000	4.972	16113.85	0.0510	P	1.0
4	☐	10.000	9.656	30151.65	0.0973	P	4.0
5	☐	100.000	99.754	298779.90	0.9886	P	0.6
6	☐	200.000	200.140	591304.16	1.9815	P	0.9
7	☐	1.000					

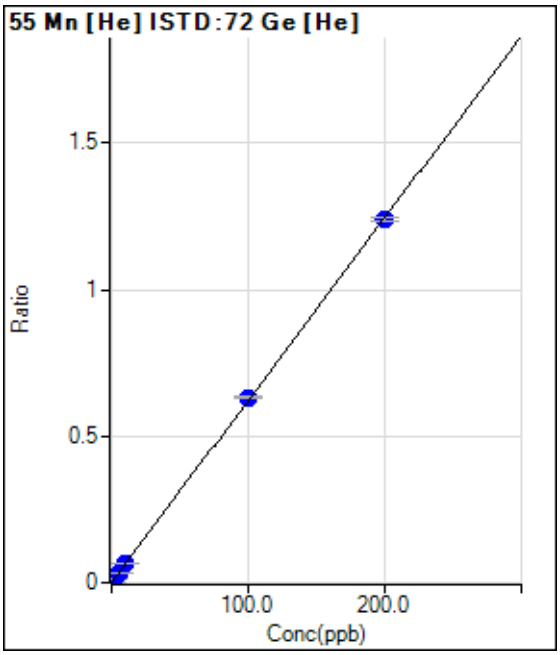
y = 0.0099 * x + 0.0018
R = 1.0000
DL = 0.07004
BEC = 0.185

Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	76.67	0.0002	P	7.7
2	☐	2.000	2.122	4177.20	0.0134	P	2.3
3	☐	5.000	4.964	9822.76	0.0311	P	1.1
4	☐	10.000	10.164	19654.00	0.0634	P	2.7
5	☐	100.000	101.744	191181.01	0.6326	P	0.9
6	☐	200.000	199.119	369349.40	1.2378	P	1.1
7	☐	1.000					

y = 0.0062 * x + 2.4637E-004

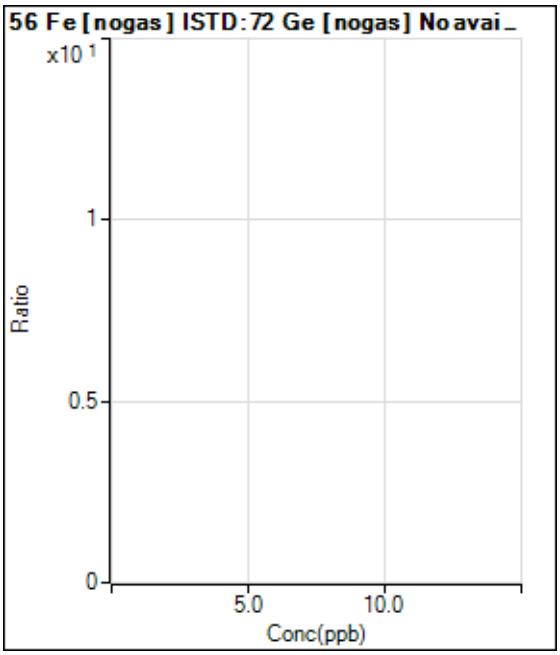
R = 0.9999

DL = 0.009188

BEC = 0.03964

Weight: <None>

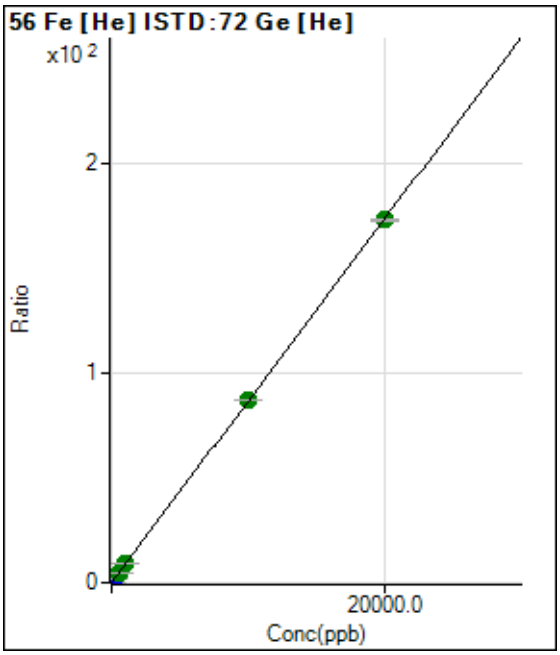
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

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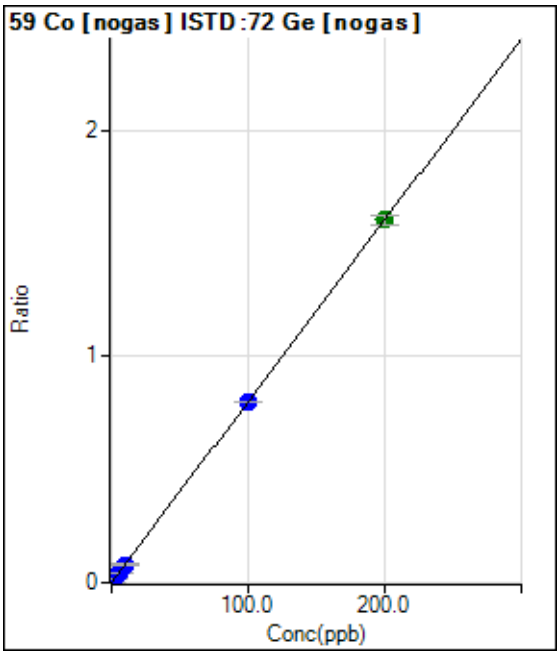
Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4670.66	0.0150	P	4.1
2	☐	200.000	189.602	516238.62	1.6605	P	1.8
3	☐	500.000	522.478	1437191.07	4.5495	A	1.2
4	☐	1000.000	1024.309	2758689.34	8.9047	A	2.0
5	☐	10000.000	10074.320	26429226.27	87.4476	A	0.5
6	☐	20000.000	19961.166	51700032.56	173.2532	A	0.5
7	☐	100.000					

y = 0.0087 * x + 0.0150
R = 1.0000
DL = 0.2149
BEC = 1.729

Weight: <None>
Min Conc: <None>



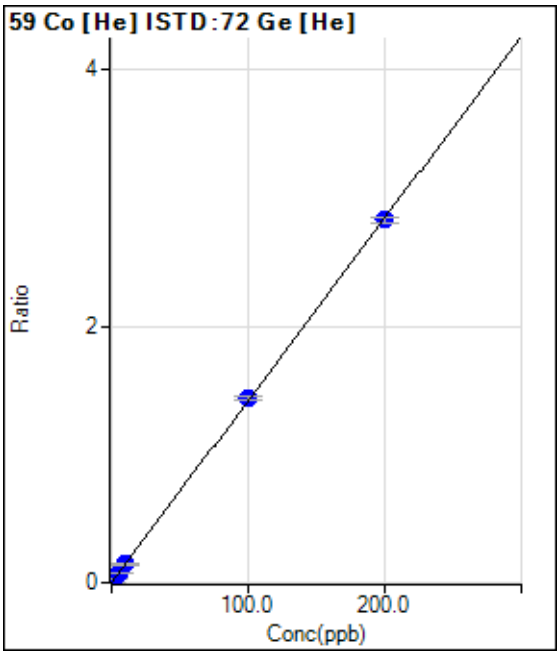
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	223.34	0.0002	P	24.1
2	☐	2.000	2.012	18546.15	0.0163	P	3.6
3	☐	5.000	5.039	46064.60	0.0406	P	3.2
4	☐	10.000	9.997	90562.30	0.0803	P	2.3
5	☐	100.000	99.601	893590.58	0.7983	P	0.3
6	☐	200.000	200.198	1773853.10	1.6043	A	2.8
7	☐	1.000					

y = 0.0080 * x + 1.9823E-004
R = 1.0000
DL = 0.0179
BEC = 0.02474

Weight: <None>
Min Conc: <None>

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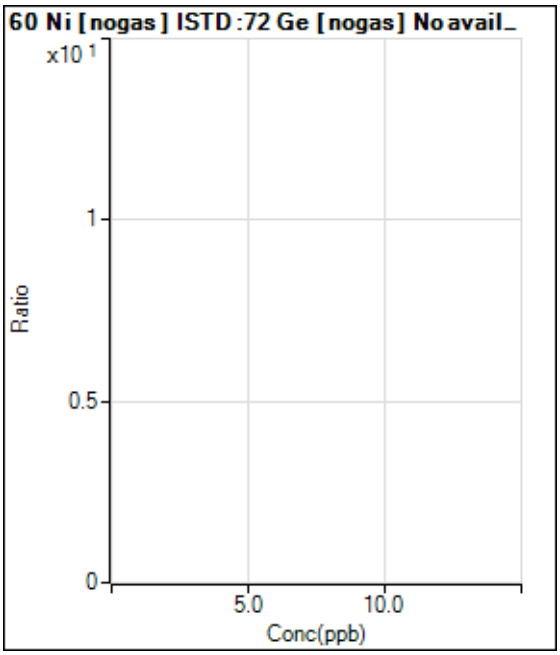
Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	90.00	0.0003	P	23.2
2	☐	2.000	2.091	9325.82	0.0300	P	3.7
3	☐	5.000	5.040	22700.94	0.0719	P	3.1
4	☐	10.000	10.127	44630.83	0.1441	P	4.9
5	☐	100.000	101.567	435978.55	1.4426	P	1.9
6	☐	200.000	199.208	844277.12	2.8293	P	1.5
7	☐	1.000					

y = 0.0142 * x + 2.8954E-004
R = 1.0000
DL = 0.01416
BEC = 0.02039

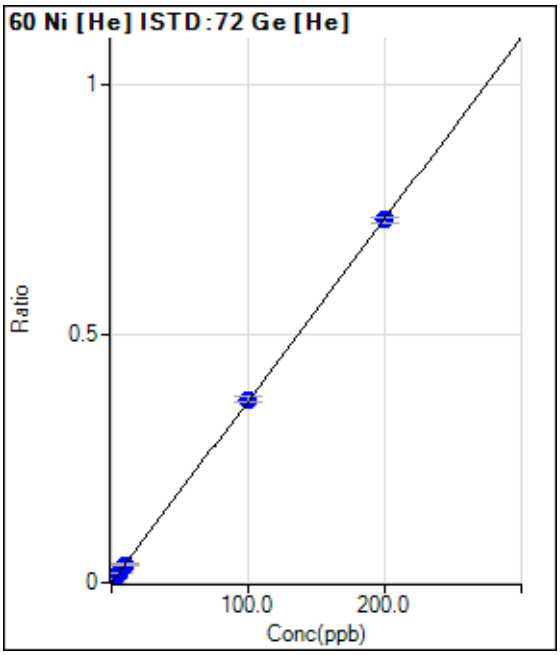
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

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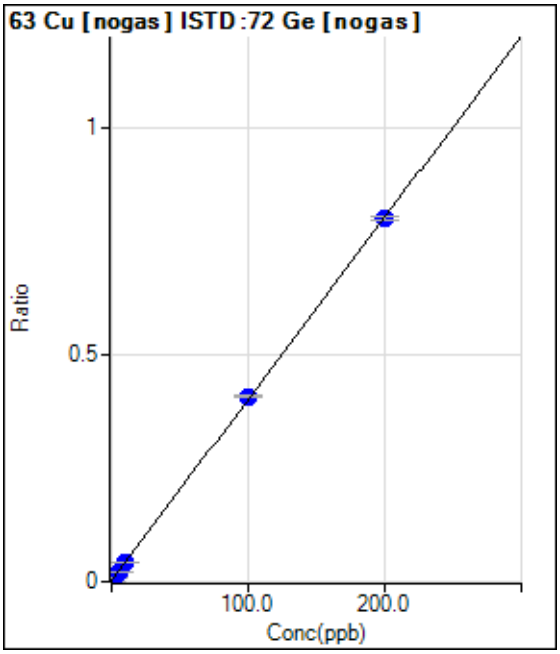
Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36.67	0.0001	P	42.4
2	☐	2.000	2.086	2403.53	0.0077	P	3.7
3	☐	5.000	5.178	6004.37	0.0190	P	2.4
4	☐	10.000	9.995	11336.97	0.0366	P	1.5
5	☐	100.000	100.739	111107.15	0.3677	P	2.9
6	☐	200.000	199.626	217374.91	0.7285	P	1.3
7	☐	1.000					

y = 0.0036 * x + 1.1800E-004
R = 1.0000
DL = 0.04109
BEC = 0.03234

Weight: <None>
Min Conc: <None>



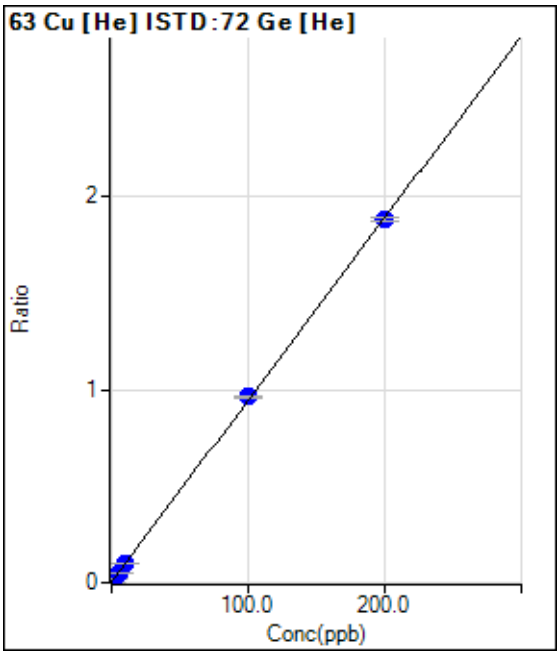
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2293.51	0.0020	P	2.2
2	☐	2.000	2.042	11580.43	0.0102	P	0.9
3	☐	5.000	5.215	25965.28	0.0229	P	2.7
4	☐	10.000	10.481	49496.96	0.0439	P	1.6
5	☐	100.000	101.285	455053.46	0.4065	P	1.1
6	☐	200.000	199.328	882505.77	0.7981	P	1.2
7	☐	1.000					

y = 0.0040 * x + 0.0020
R = 1.0000
DL = 0.03349
BEC = 0.5102

Weight: <None>
Min Conc: <None>

RIGHT SOLUTIONS | RIGHT PARTNER

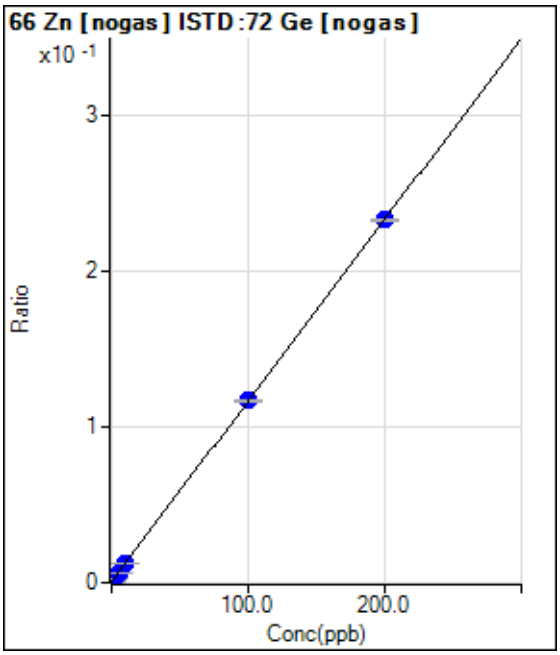
Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1053.38	0.0034	P	5.4
2	☐	2.000	2.092	7181.50	0.0231	P	1.0
3	☐	5.000	5.284	16794.52	0.0532	P	3.5
4	☐	10.000	9.987	30198.34	0.0975	P	3.0
5	☐	100.000	101.907	291198.39	0.9635	P	0.8
6	☐	200.000	199.039	560611.61	1.8787	P	1.2
7	☐	1.000					

y = 0.0094 * x + 0.0034
R = 0.9999
DL = 0.05816
BEC = 0.3593

Weight: <None>
Min Conc: <None>

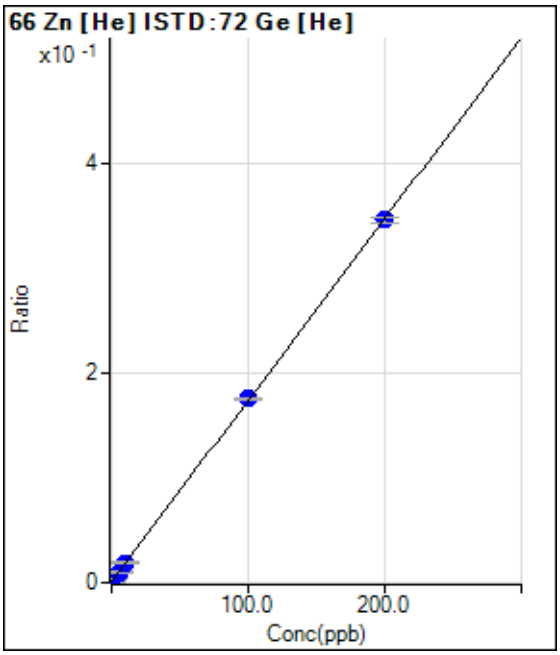


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	670.02	0.0006	P	8.5
2	☐	2.000	2.086	3430.38	0.0030	P	6.0
3	☐	5.000	5.024	7301.54	0.0064	P	4.4
4	☐	10.000	10.235	14082.26	0.0125	P	3.8
5	☐	100.000	100.119	130842.91	0.1169	P	1.4
6	☐	200.000	199.927	257459.43	0.2328	P	0.7
7	☐	1.000					

y = 0.0012 * x + 5.9558E-004
R = 1.0000
DL = 0.1311
BEC = 0.5127

Weight: <None>
Min Conc: <None>

Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	310.01	0.0010	P	30.4
2	☐	2.000	2.130	1453.42	0.0047	P	4.0
3	☐	5.000	5.162	3133.64	0.0099	P	6.2
4	☐	10.000	10.189	5761.00	0.0186	P	10.3
5	☐	100.000	100.773	52946.35	0.1752	P	2.0
6	☐	200.000	199.599	103259.42	0.3460	P	1.4
7	☐	1.000					

y = 0.0017 * x + 9.9329E-004

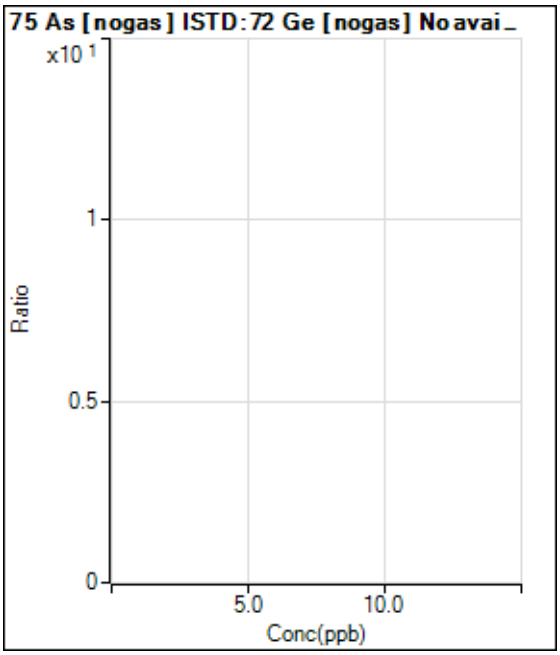
R = 1.0000

DL = 0.5233

BEC = 0.5746

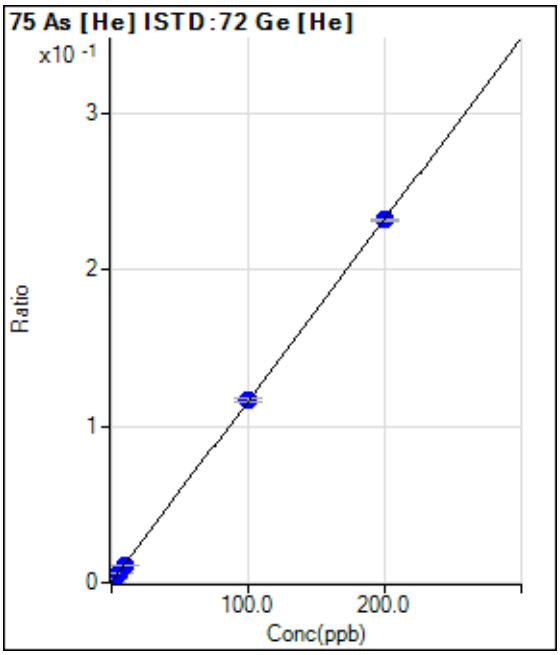
Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	98.89	0.0003	P	25.4
2	☐	2.000	1.988	815.58	0.0026	P	11.9
3	☐	5.000	4.811	1862.33	0.0059	P	3.9
4	☐	10.000	9.500	3511.47	0.0113	P	1.0
5	☐	100.000	100.511	35317.40	0.1169	P	1.8
6	☐	200.000	199.774	69220.49	0.2320	P	0.7
7	☐	1.000					

y = 0.0012 * x + 3.1780E-004

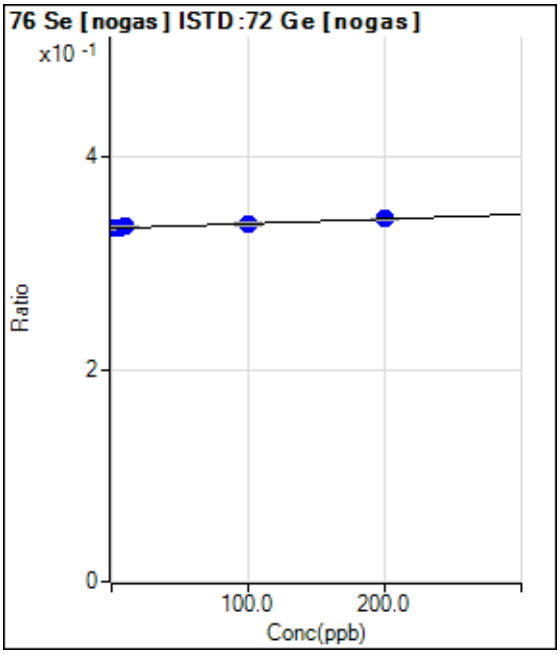
R = 1.0000

DL = 0.2088

BEC = 0.2741

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	375118.97	0.3333	P	0.8
2	☐	2.000	2.846	378829.00	0.3334	P	1.1
3	☐	5.000	-8.665	378004.25	0.3329	P	0.5
4	☐	10.000	52.303	378462.01	0.3356	P	0.2
5	☐	100.000	95.326	377786.75	0.3375	P	1.1
6	☐	200.000	200.555	378369.01	0.3422	P	0.3
7	☐	1.000					

y = 4.4127E-005 * x + 0.3333

R = 0.9714

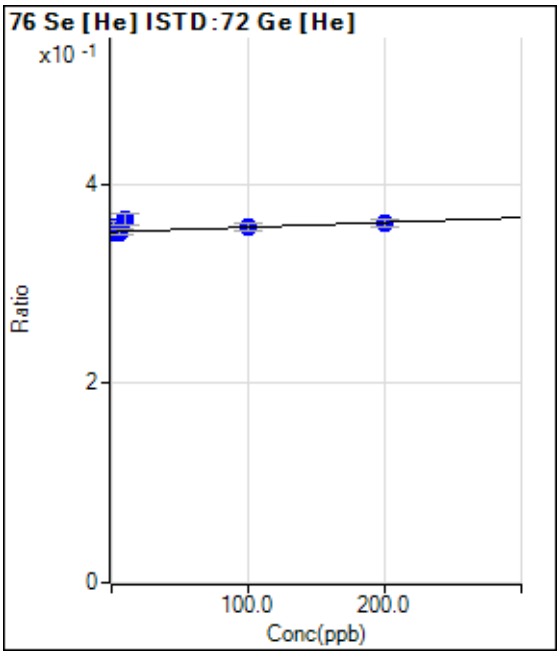
DL = 186.2

BEC = 7553

Weight: <None>

Min Conc: <None>

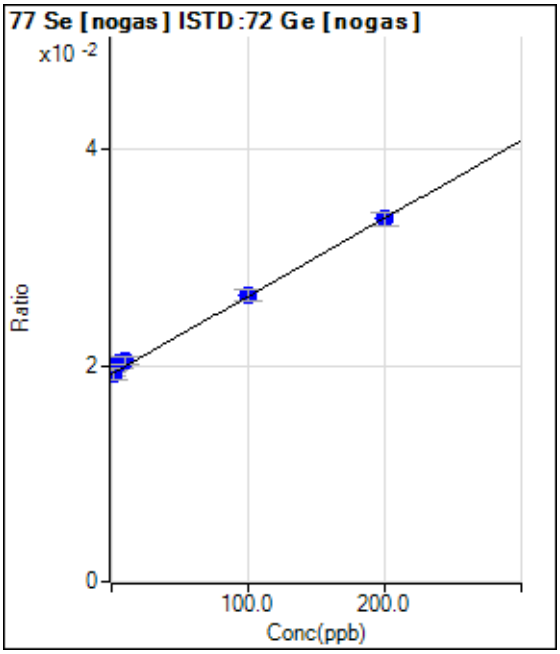
Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	109474.87	0.3518	P	1.7
2	☐	2.000	100.770	110883.33	0.3566	P	2.9
3	☐	5.000	-3.352	111074.29	0.3516	P	1.6
4	☐	10.000	251.150	112721.02	0.3639	P	3.2
5	☐	100.000	110.587	107918.31	0.3571	P	2.3
6	☐	200.000	181.870	107586.45	0.3605	P	1.9
7	☐	1.000					

y = 4.8066E-005 * x + 0.3518
R = 0.3978
DL = 363.3
BEC = 7319

Weight: <None>
Min Conc: <None>

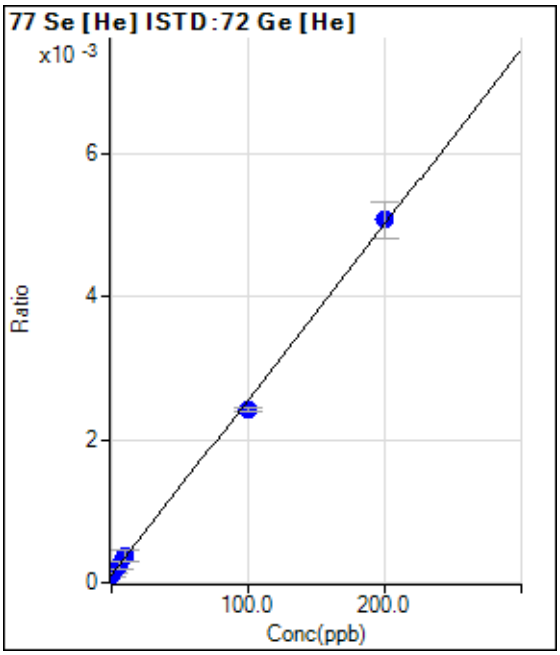


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	21619.93	0.0192	P	1.7
2	☐	2.000	-0.549	21780.31	0.0192	P	4.4
3	☐	5.000	14.627	23015.00	0.0203	P	5.2
4	☐	10.000	16.994	23048.47	0.0204	P	3.6
5	☐	100.000	100.887	29658.10	0.0265	P	3.9
6	☐	200.000	198.991	37125.02	0.0336	P	4.1
7	☐	1.000					

y = 7.2166E-005 * x + 0.0192
R = 0.9984
DL = 13.86
BEC = 266.2

Weight: <None>
Min Conc: <None>

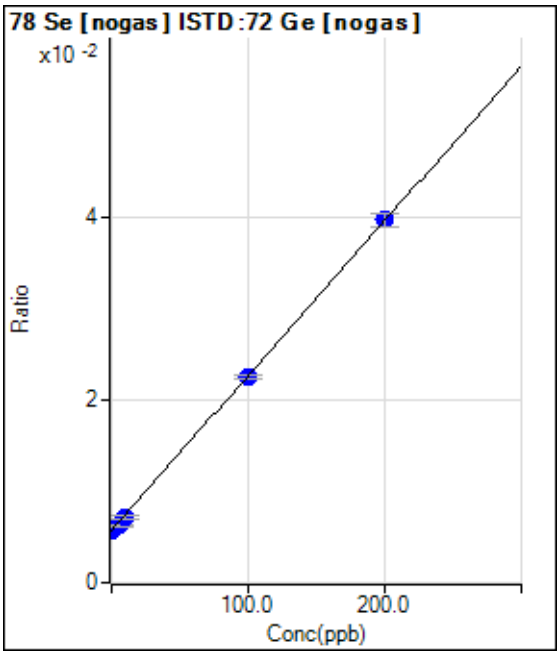
Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33.33	0.0001	P	45.6
2	☐	2.000	2.212	50.00	0.0002	P	21.4
3	☐	5.000	5.549	76.67	0.0002	P	45.9
4	☐	10.000	11.022	116.67	0.0004	P	41.2
5	☐	100.000	94.670	733.36	0.0024	P	2.7
6	☐	200.000	202.598	1513.42	0.0051	P	9.9
7	☐	1.000					

y = 2.4504E-005 * x + 1.0695E-004
R = 0.9995
DL = 5.973
BEC = 4.364

Weight: <None>
Min Conc: <None>

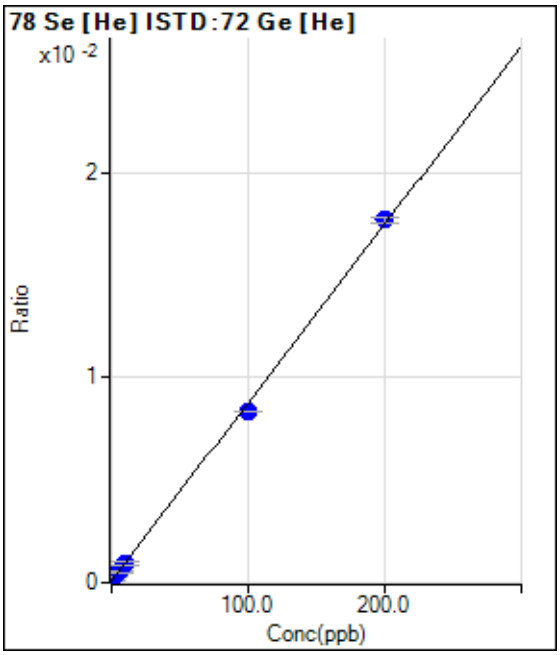


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6474.59	0.0058	P	5.1
2	☐	2.000	1.672	6858.06	0.0060	P	5.5
3	☐	5.000	3.242	7158.20	0.0063	P	3.4
4	☐	10.000	8.125	8041.92	0.0071	P	3.8
5	☐	100.000	99.131	25244.40	0.0226	P	1.3
6	☐	200.000	200.576	43940.14	0.0397	P	3.9
7	☐	1.000					

y = 1.6945E-004 * x + 0.0058
R = 1.0000
DL = 5.196
BEC = 33.96

Weight: <None>
Min Conc: <None>

Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	28.00	0.0001	P	5.7
2	☐	2.000	2.245	88.67	0.0003	P	4.6
3	☐	5.000	4.940	164.00	0.0005	P	16.3
4	☐	10.000	9.540	284.67	0.0009	P	15.1
5	☐	100.000	94.813	2519.51	0.0083	P	0.1
6	☐	200.000	202.615	5285.45	0.0177	P	1.8
7	☐	1.000					

y = 8.6976E-005 * x + 8.9915E-005

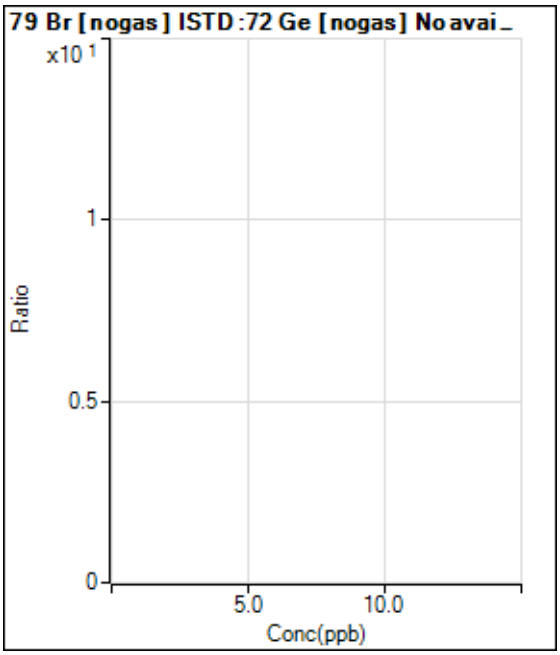
R = 0.9995

DL = 0.177

BEC = 1.034

Weight: <None>

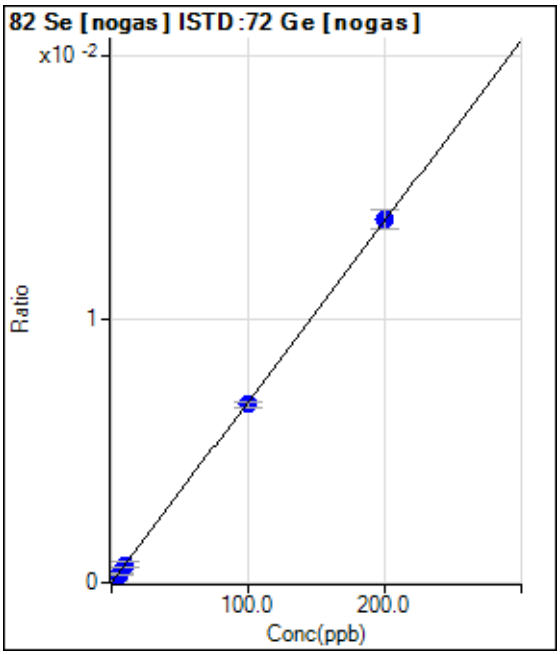
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

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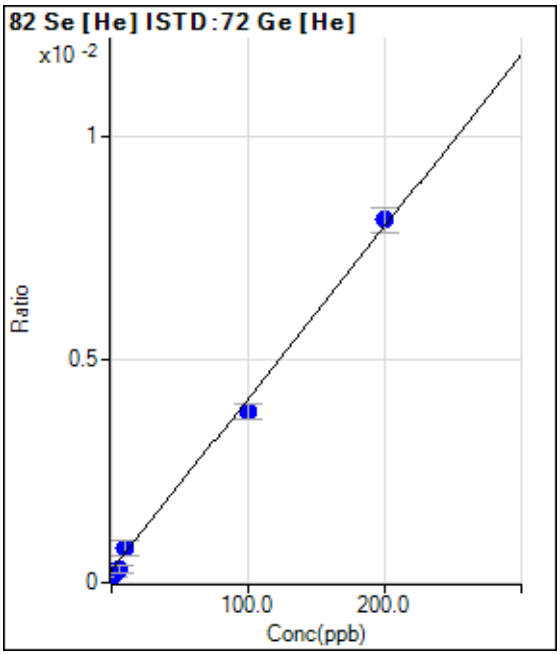
Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3.40	0.0000	P	2978.7
2	☐	2.000	1.092	89.53	0.0001	P	65.1
3	☐	5.000	4.718	372.67	0.0003	P	27.6
4	☐	10.000	9.993	776.83	0.0007	P	39.3
5	☐	100.000	98.654	7594.74	0.0068	P	3.5
6	☐	200.000	200.690	15253.12	0.0138	P	5.4
7	☐	1.000					

y = 6.8724E-005 * x + 3.5629E-006
R = 1.0000
DL = 4.633
BEC = 0.05184

Weight: <None>
Min Conc: <None>

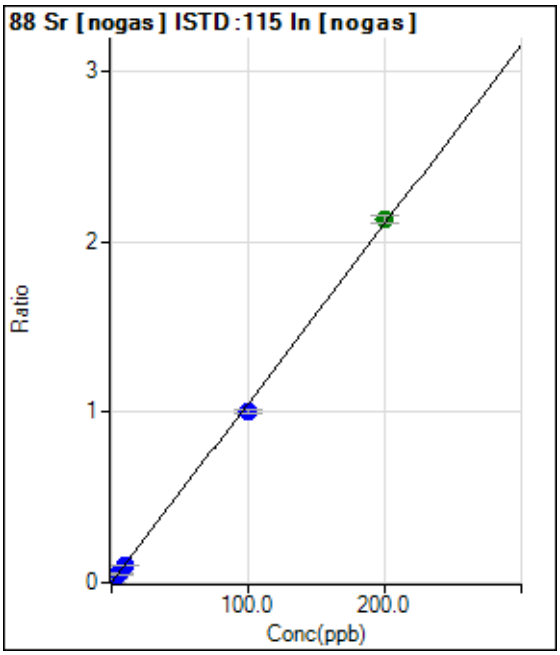


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	86.67	0.0003	P	25.6
2	☐	2.000	-2.234	60.00	0.0002	P	87.5
3	☐	5.000	0.713	96.67	0.0003	P	46.1
4	☐	10.000	12.946	240.00	0.0008	P	41.1
5	☐	100.000	92.180	1156.72	0.0038	P	8.4
6	☐	200.000	203.912	2426.87	0.0081	P	7.1
7	☐	1.000					

y = 3.8519E-005 * x + 2.7787E-004
R = 0.9986
DL = 5.549
BEC = 7.214

Weight: <None>
Min Conc: <None>

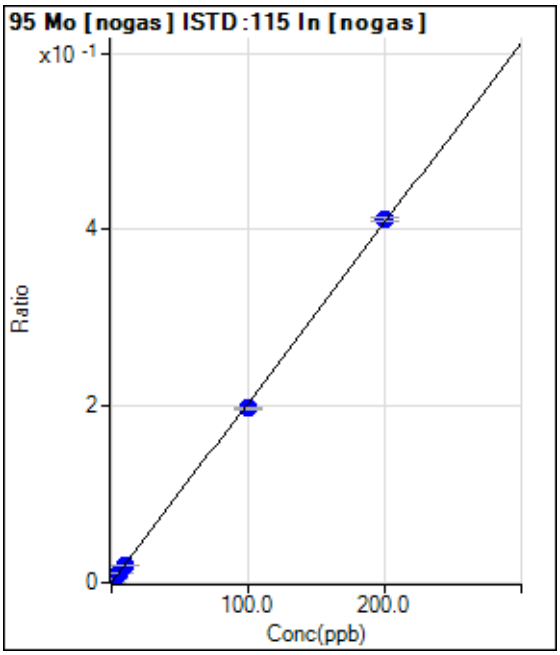
Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1366.74	0.0012	P	6.2
2	☐	2.000	1.872	24053.07	0.0209	P	4.2
3	☐	5.000	4.740	59151.44	0.0510	P	2.1
4	☐	10.000	9.309	114962.68	0.0990	P	1.3
5	☐	100.000	95.358	1142926.88	1.0036	P	2.1
6	☐	200.000	202.363	2344598.98	2.1285	A	2.1
7	☐	1.000					

y = 0.0105 * x + 0.0012
R = 0.9996
DL = 0.02088
BEC = 0.1121

Weight: <None>
Min Conc: <None>



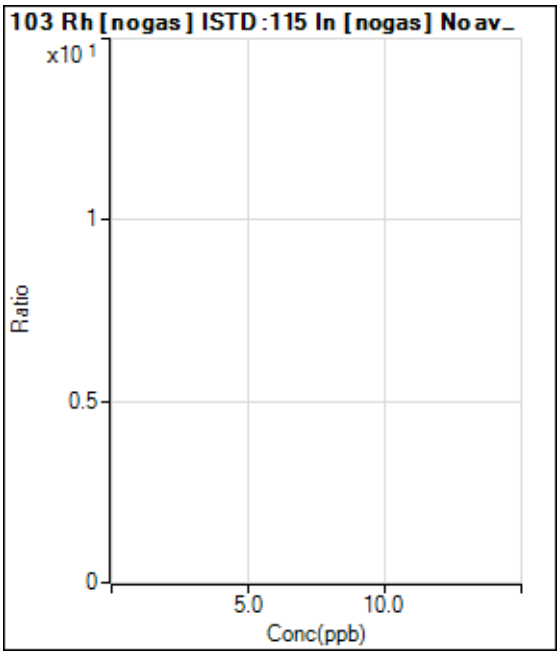
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	113.33	0.0001	P	53.2
2	☐	2.000	1.909	4600.66	0.0040	P	6.4
3	☐	5.000	4.852	11583.92	0.0100	P	2.6
4	☐	10.000	9.569	22754.65	0.0196	P	1.2
5	☐	100.000	96.826	224887.37	0.1975	P	1.2
6	☐	200.000	201.613	452801.74	0.4111	P	1.1
7	☐	1.000					

y = 0.0020 * x + 9.8165E-005
R = 0.9998
DL = 0.0768
BEC = 0.04816

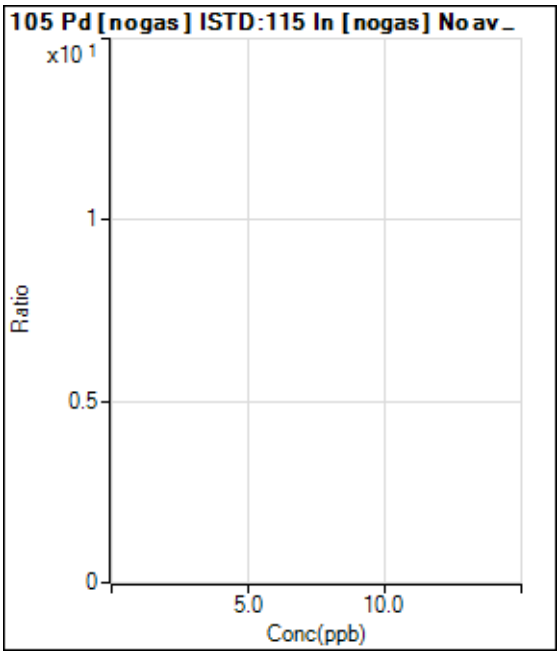
Weight: <None>
Min Conc: <None>

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Calibration for 090_ICV.d

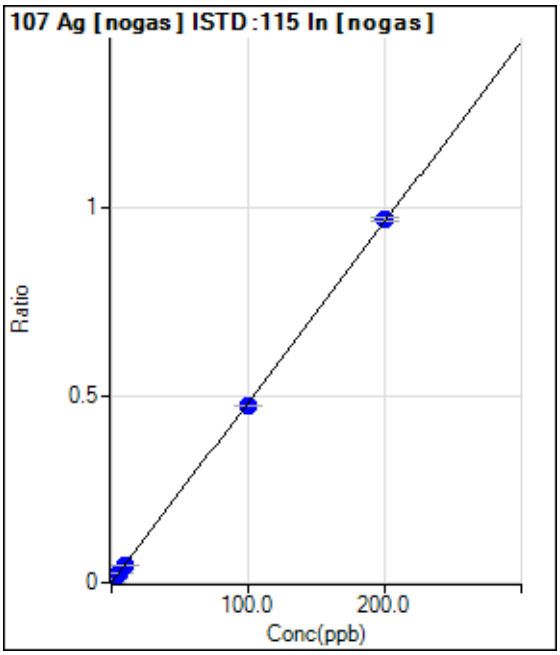


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

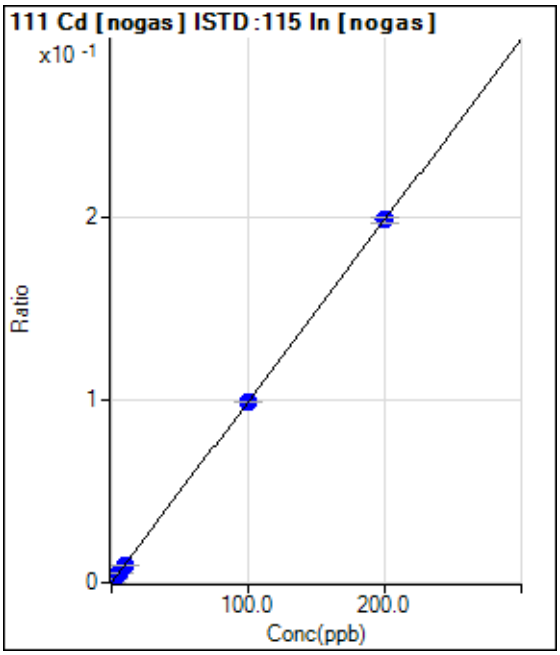
Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	350.01	0.0003	P	7.0
2	☐	2.000	1.911	10970.23	0.0095	P	5.5
3	☐	5.000	4.851	27444.82	0.0237	P	2.2
4	☐	10.000	9.618	54119.71	0.0466	P	1.0
5	☐	100.000	97.942	537595.77	0.4720	P	0.6
6	☐	200.000	201.053	1066995.40	0.9687	P	1.1
7	☐	1.000					

y = 0.0048 * x + 3.0175E-004
R = 0.9999
DL = 0.01318
BEC = 0.06265

Weight: <None>
Min Conc: <None>

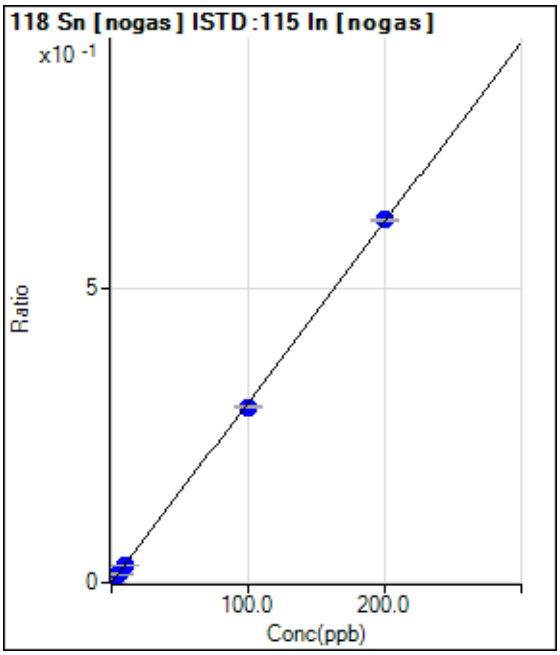


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0000	P	173.2
2	☐	2.000	1.925	2220.18	0.0019	P	7.1
3	☐	5.000	5.036	5817.73	0.0050	P	4.8
4	☐	10.000	9.658	11157.01	0.0096	P	6.8
5	☐	100.000	99.698	112866.54	0.0991	P	0.4
6	☐	200.000	200.168	219144.16	0.1989	P	1.3
7	☐	1.000					

y = 9.9383E-004 * x + 1.1224E-005
R = 1.0000
DL = 0.05868
BEC = 0.01129

Weight: <None>
Min Conc: <None>

Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	510.01	0.0004	P	6.3
2	☐	2.000	1.885	7144.89	0.0062	P	5.4
3	☐	5.000	4.727	17242.08	0.0149	P	2.8
4	☐	10.000	9.638	34664.72	0.0299	P	1.9
5	☐	100.000	97.470	339428.39	0.2980	P	1.3
6	☐	200.000	201.291	677379.81	0.6149	P	0.5
7	☐	1.000					

y = 0.0031 * x + 4.3973E-004

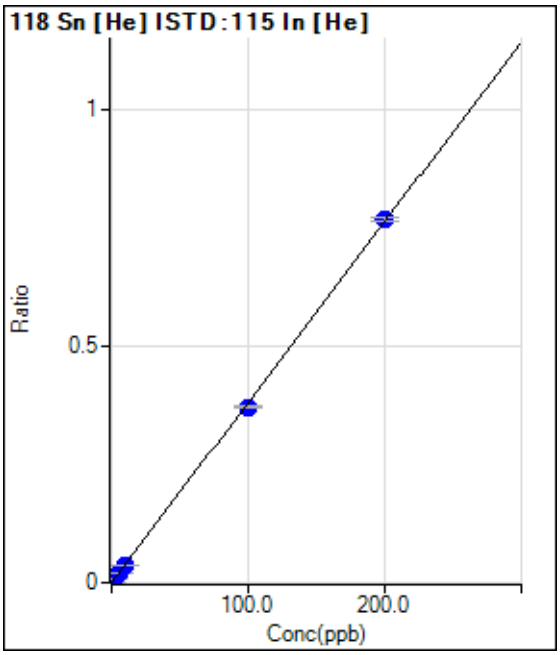
R = 0.9999

DL = 0.02726

BEC = 0.144

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	250.01	0.0006	P	35.4
2	☐	2.000	1.890	3410.39	0.0078	P	2.0
3	☐	5.000	4.936	8698.95	0.0194	P	2.3
4	☐	10.000	9.764	16921.67	0.0377	P	1.6
5	☐	100.000	97.477	161131.57	0.3717	P	1.1
6	☐	200.000	201.276	326023.53	0.7669	P	1.1
7	☐	1.000					

y = 0.0038 * x + 5.6179E-004

R = 0.9999

DL = 0.1569

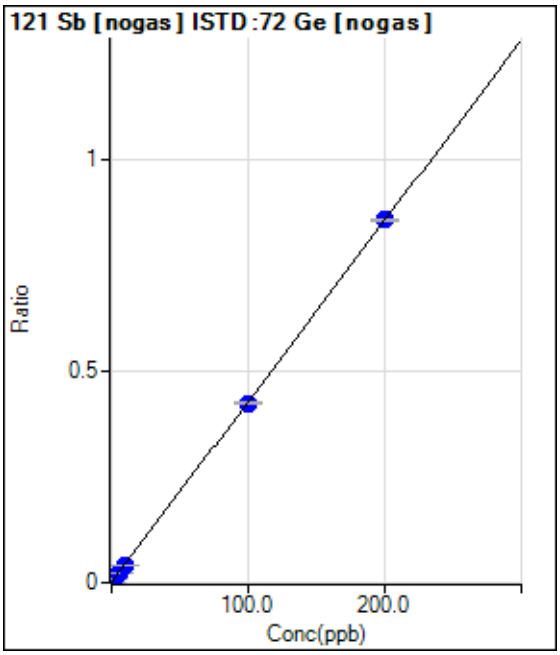
BEC = 0.1475

Weight: <None>

Min Conc: <None>

RIGHT SOLUTIONS | RIGHT PARTNER

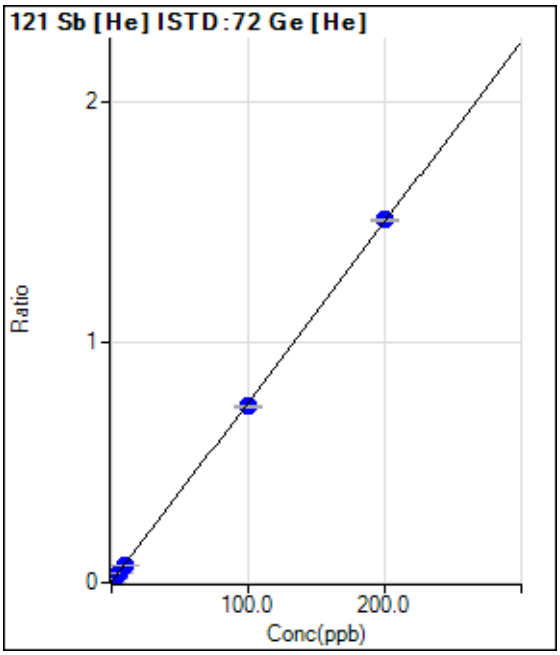
Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	790.03	0.0007	P	4.9
2	☐	2.000	1.943	10246.49	0.0090	P	2.3
3	☐	5.000	4.940	24794.52	0.0218	P	1.1
4	☐	10.000	9.733	47752.19	0.0423	P	0.4
5	☐	100.000	99.005	474991.49	0.4243	P	1.0
6	☐	200.000	200.513	949519.83	0.8586	P	0.4
7	☐	1.000					

y = 0.0043 * x + 7.0180E-004
R = 1.0000
DL = 0.02411
BEC = 0.164

Weight: <None>
Min Conc: <None>

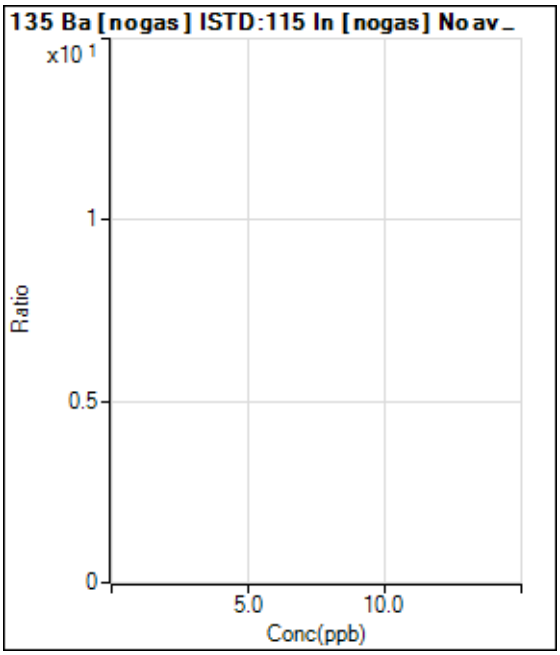


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	476.68	0.0015	P	2.5
2	☐	2.000	1.948	5007.45	0.0161	P	3.1
3	☐	5.000	4.834	11910.85	0.0377	P	2.7
4	☐	10.000	9.401	22271.08	0.0719	P	0.9
5	☐	100.000	97.760	221548.01	0.7331	P	1.1
6	☐	200.000	201.154	449634.28	1.5068	P	0.4
7	☐	1.000					

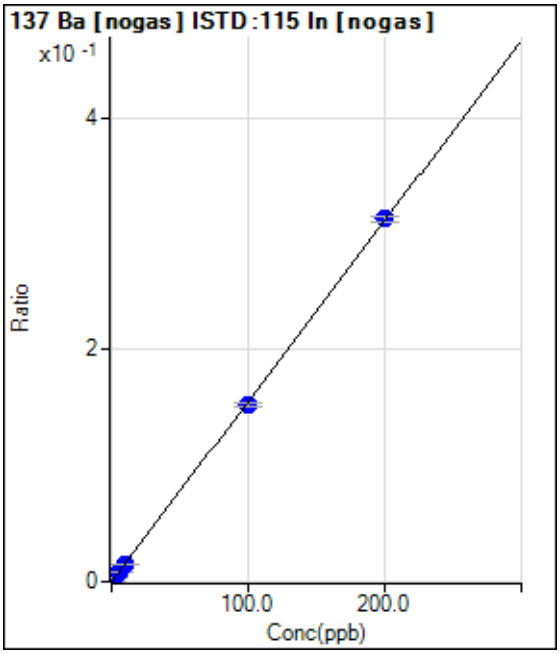
y = 0.0075 * x + 0.0015
R = 0.9999
DL = 0.01526
BEC = 0.2047

Weight: <None>
Min Conc: <None>

Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	290.01	0.0003	P	2.2
2	☐	2.000	2.101	4057.22	0.0035	P	4.3
3	☐	5.000	4.837	9012.47	0.0078	P	2.9
4	☐	10.000	9.434	17322.29	0.0149	P	1.5
5	☐	100.000	97.891	173651.36	0.1525	P	2.2
6	☐	200.000	201.086	344769.38	0.3130	P	1.3
7	☐	1.000					

y = 0.0016 * x + 2.5026E-004

R = 0.9999

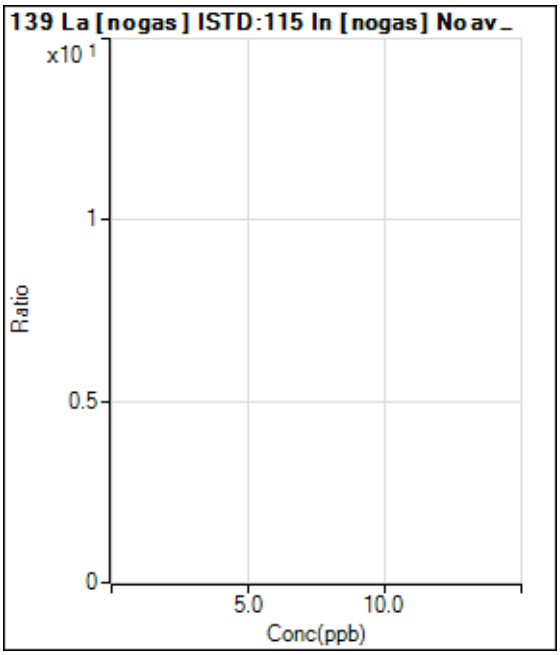
DL = 0.01039

BEC = 0.1609

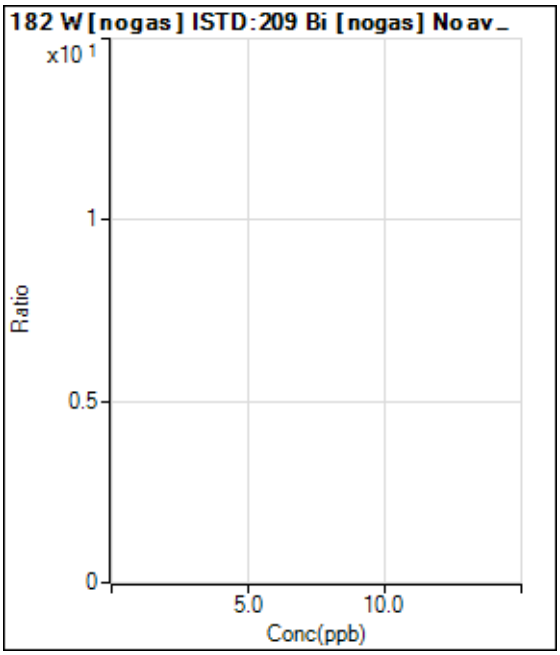
Weight: <None>

Min Conc: <None>

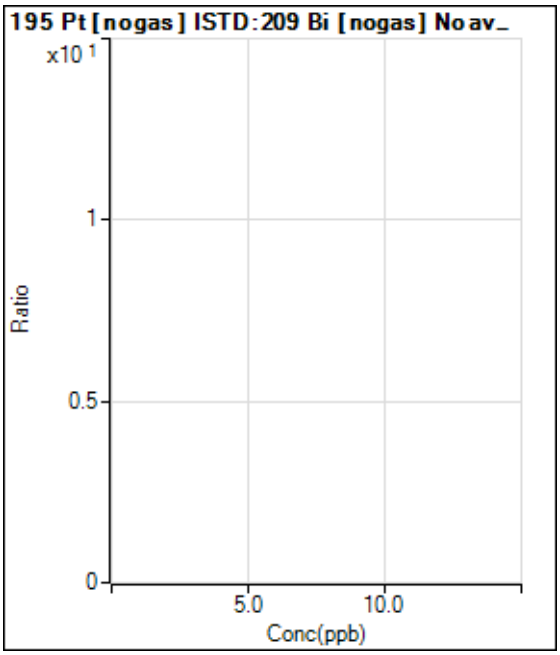
RIGHT SOLUTIONS | RIGHT PARTNER



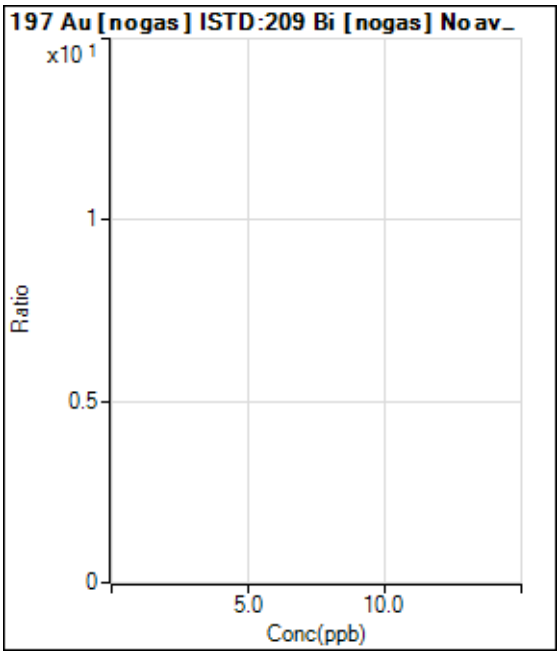
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

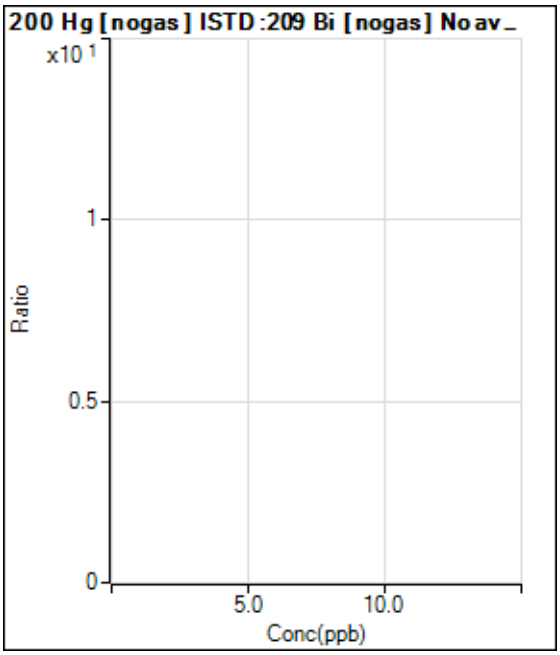


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

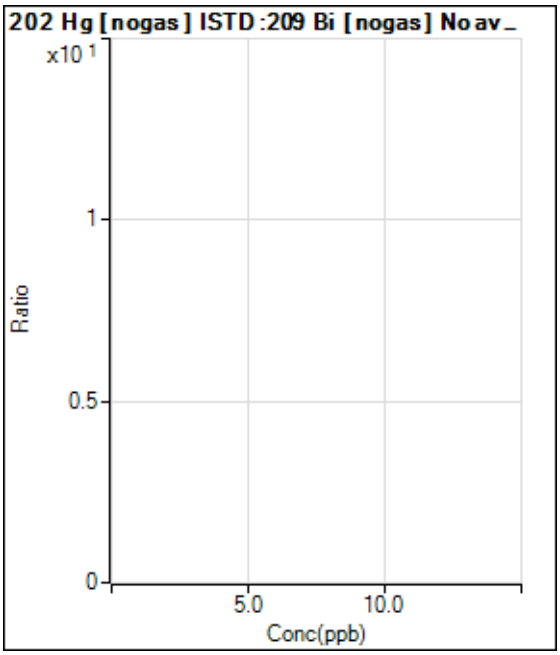


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

Calibration for 090_ICV.d

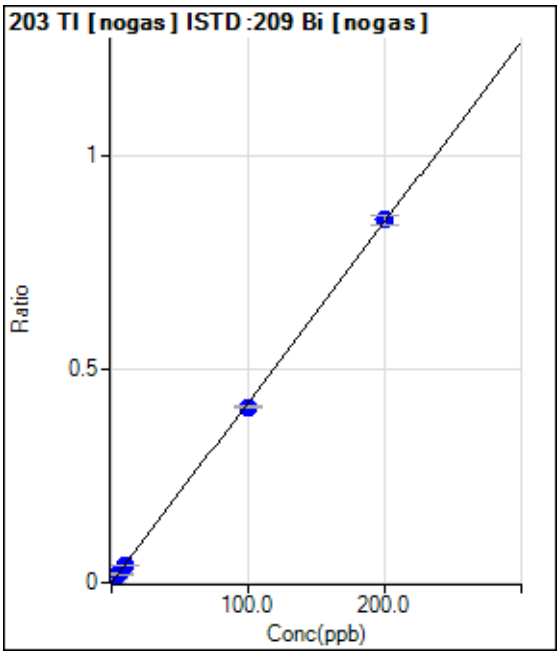


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	0.050					
3	☐	0.200					
4	☐	0.500					
5	☐	2.000					
6	☐	5.000					
7	☐	10.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	0.050					
3	☐	0.200					
4	☐	0.500					
5	☐	5.000					
6	☐	5.000					
7	☐	10.000					

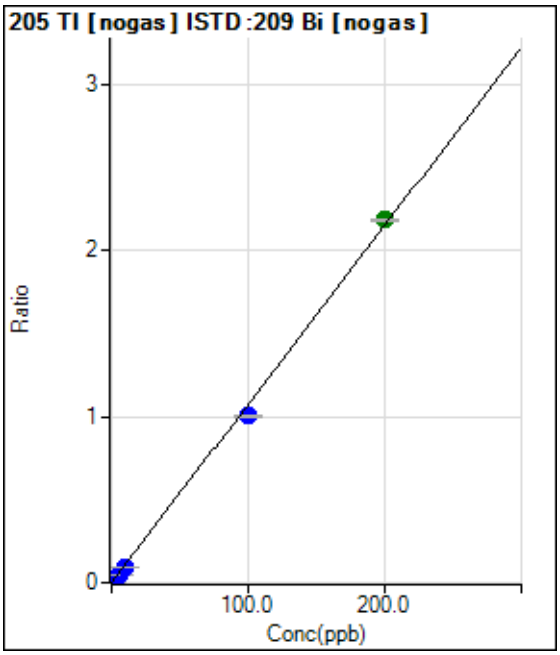
Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33.33	0.0000	P	69.5
2	☐	2.000	1.894	7972.05	0.0081	P	3.3
3	☐	5.000	4.835	20479.65	0.0205	P	2.0
4	☐	10.000	9.581	40333.47	0.0406	P	0.4
5	☐	100.000	97.525	402059.37	0.4127	P	0.8
6	☐	200.000	201.264	799123.61	0.8517	P	2.7
7	☐	1.000					

y = 0.0042 * x + 3.4026E-005
R = 0.9999
DL = 0.01676
BEC = 0.008041

Weight: <None>
Min Conc: <None>



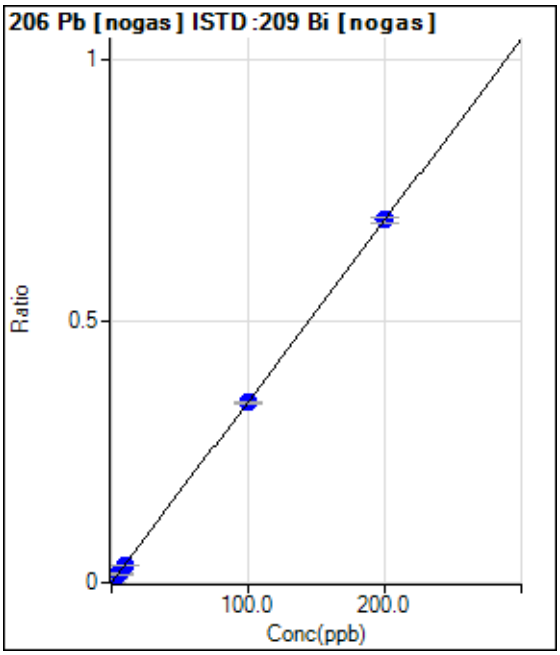
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	30.00	0.0000	P	56.8
2	☐	2.000	1.792	19108.10	0.0193	P	4.3
3	☐	5.000	4.511	48515.75	0.0485	P	2.4
4	☐	10.000	9.007	96305.32	0.0969	P	0.8
5	☐	100.000	93.526	979821.97	1.0058	P	1.5
6	☐	200.000	203.301	2051555.85	2.1862	A	0.7
7	☐	1.000					

y = 0.0108 * x + 3.0496E-005
R = 0.9993
DL = 0.00483
BEC = 0.002836

Weight: <None>
Min Conc: <None>

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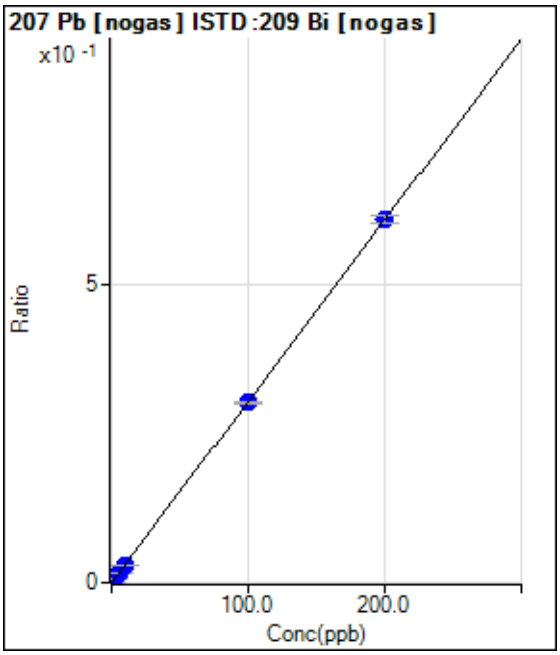
Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	66.67	0.0001	P	48.6
2	☐	2.000	2.045	7088.31	0.0072	P	7.3
3	☐	5.000	4.847	16858.91	0.0169	P	4.7
4	☐	10.000	9.786	33795.28	0.0340	P	0.3
5	☐	100.000	99.408	335876.62	0.3448	P	1.6
6	☐	200.000	200.310	651828.75	0.6946	P	1.7
7	☐	1.000					

y = 0.0035 * x + 6.8173E-005
R = 1.0000
DL = 0.02869
BEC = 0.01966

Weight: <None>
Min Conc: <None>



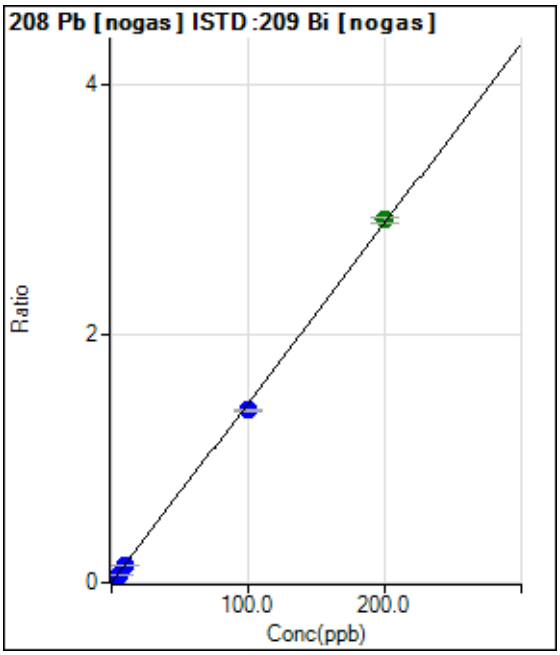
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	76.67	0.0001	P	15.3
2	☐	2.000	1.895	5794.45	0.0059	P	1.7
3	☐	5.000	4.932	15090.50	0.0151	P	4.4
4	☐	10.000	9.891	30024.59	0.0302	P	1.9
5	☐	100.000	99.504	295390.44	0.3032	P	1.5
6	☐	200.000	200.256	572482.80	0.6101	P	2.0
7	☐	1.000					

y = 0.0030 * x + 7.8210E-005
R = 1.0000
DL = 0.01177
BEC = 0.02567

Weight: <None>
Min Conc: <None>

RIGHT SOLUTIONS | RIGHT PARTNER

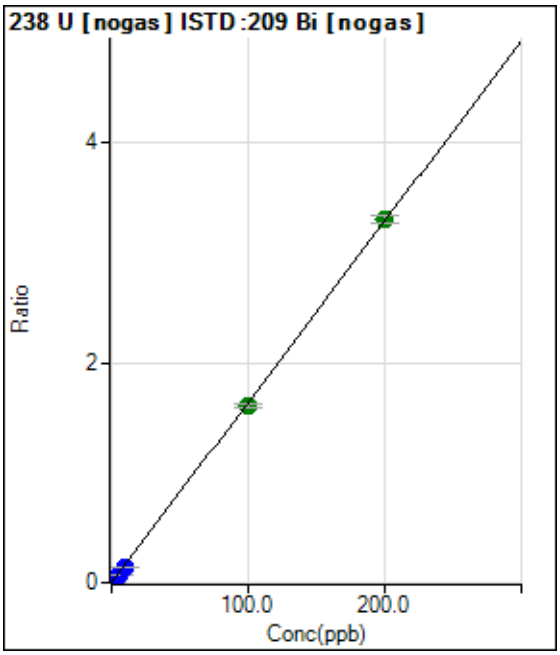
Calibration for 090_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	356.67	0.0004	P	19.4
2	☐	2.000	1.906	27606.30	0.0279	P	2.5
3	☐	5.000	4.719	68453.86	0.0685	P	2.9
4	☐	10.000	9.411	135420.34	0.1362	P	1.6
5	☐	100.000	96.125	1352548.62	1.3883	P	1.1
6	☐	200.000	201.975	2736937.99	2.9166	A	1.4
7	☐	1.000					

y = 0.0144 * x + 3.6419E-004
R = 0.9997
DL = 0.01472
BEC = 0.02522

Weight: <None>
Min Conc: <None>



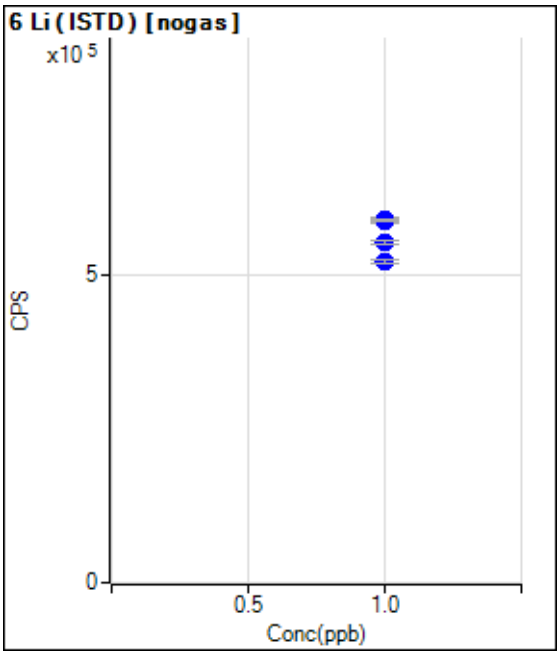
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0000	P	34.5
2	☐	2.000	1.793	29183.78	0.0295	P	2.9
3	☐	5.000	4.496	73821.21	0.0739	P	2.7
4	☐	10.000	8.853	144576.59	0.1455	P	1.7
5	☐	100.000	98.230	1571907.74	1.6137	A	1.7
6	☐	200.000	200.957	3097790.79	3.3013	A	2.2
7	☐	1.000					

y = 0.0164 * x + 1.6992E-005
R = 0.9999
DL = 0.001071
BEC = 0.001034

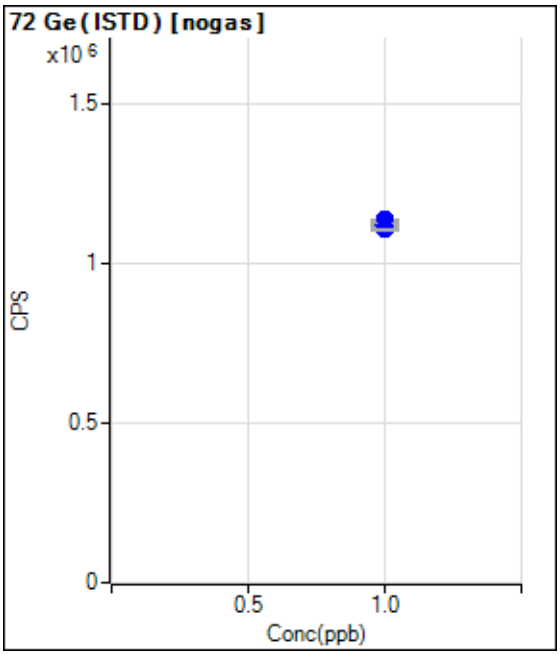
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Min Conc: <None>

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Calibration for 090_ICV.d

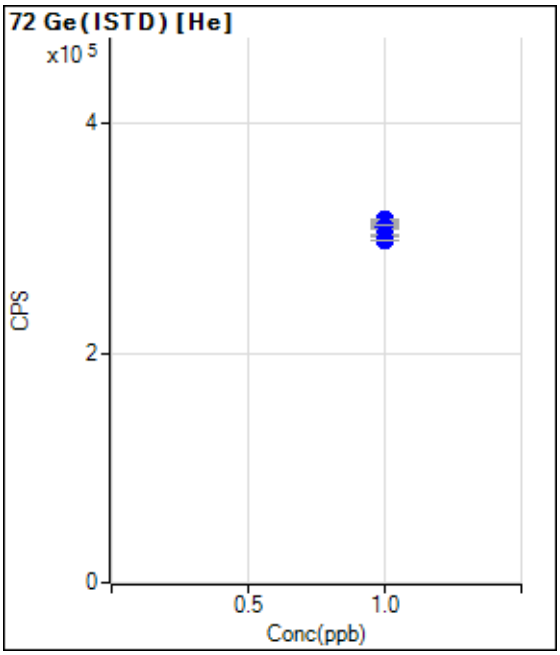


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		588407.57		P	0.4
2	☐	1.000		588512.83		P	0.9
3	☐	1.000		586613.04		P	1.3
4	☐	1.000		586695.50		P	0.6
5	☐	1.000		552864.16		P	1.3
6	☐	1.000		520818.73		P	0.7
7	☐	1.000					

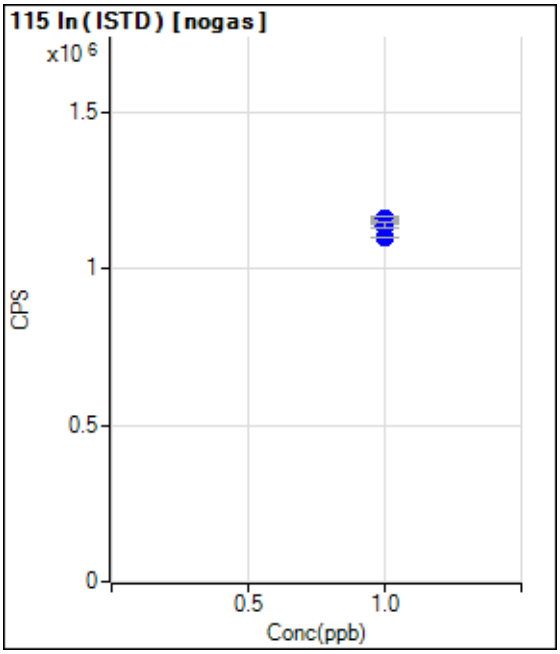


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1125503.50		P	0.8
2	☐	1.000		1136216.08		P	0.8
3	☐	1.000		1135441.36		P	0.8
4	☐	1.000		1127670.11		P	1.0
5	☐	1.000		1119397.87		P	0.8
6	☐	1.000		1105832.33		P	0.8
7	☐	1.000					

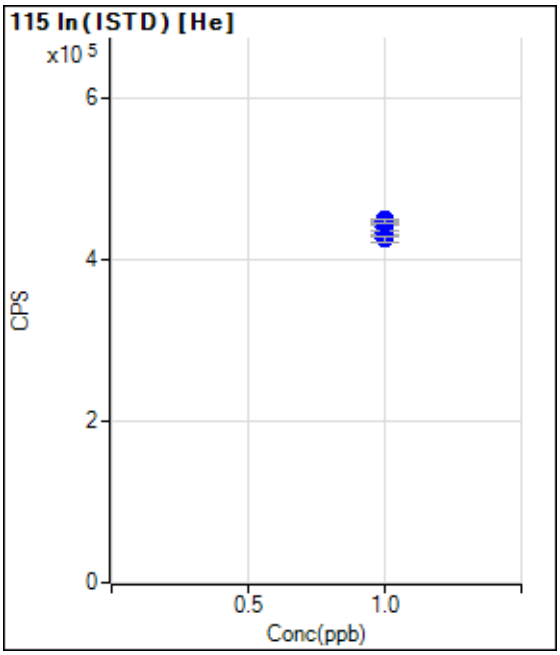
Calibration for 090_ICV.d



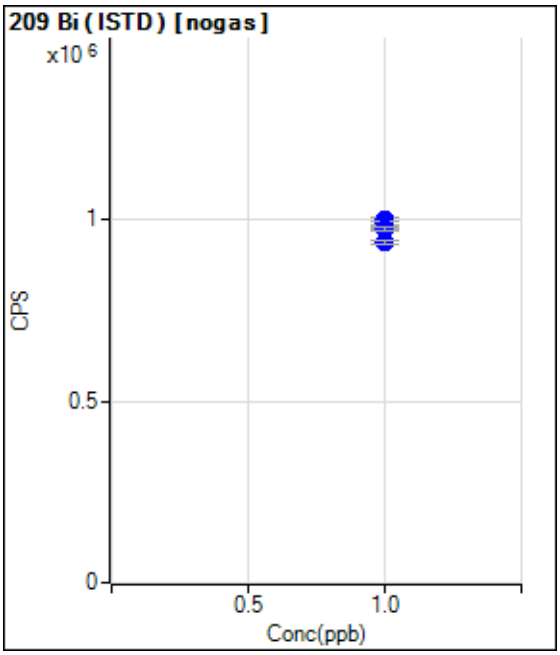
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		311232.93		P	1.4
2	☐	1.000		310899.61		P	1.6
3	☐	1.000		315899.57		P	0.7
4	☐	1.000		309848.16		P	1.4
5	☐	1.000		302230.12		P	0.8
6	☐	1.000		298406.62		P	0.3
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1159184.25		P	2.2
2	☐	1.000		1154082.22		P	1.9
3	☐	1.000		1159625.88		P	0.9
4	☐	1.000		1160826.63		P	0.9
5	☐	1.000		1138984.81		P	1.6
6	☐	1.000		1101523.46		P	0.1
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		444866.66		P	0.2
2	☐	1.000		439478.94		P	1.1
3	☐	1.000		449353.98		P	0.8
4	☐	1.000		448424.25		P	0.8
5	☐	1.000		433534.21		P	1.3
6	☐	1.000		425157.30		P	1.5
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		980503.21		P	0.9
2	☐	1.000		990320.58		P	0.8
3	☐	1.000		999390.22		P	1.0
4	☐	1.000		993971.76		P	0.1
5	☐	1.000		974202.75		P	1.1
6	☐	1.000		938443.32		P	1.0
7	☐	1.000					

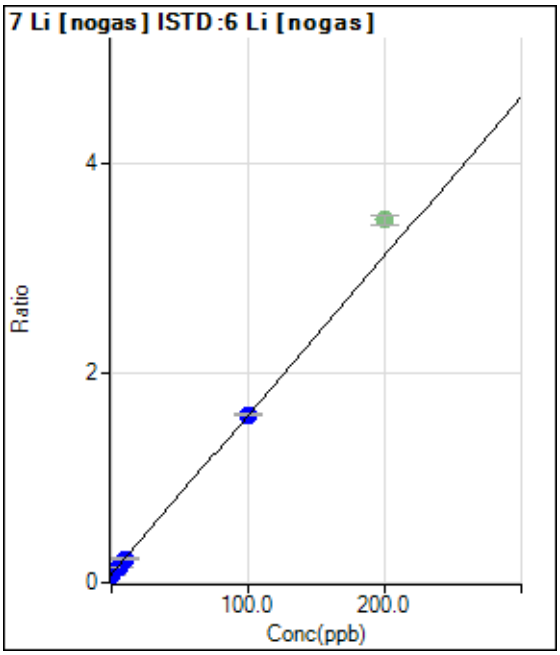
Calibration for 026_ICV.d

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Analysis File: 051120A.batch.bin
DA Date-Time: 5/11/2020 5:48:09 PM
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	019CALB.d	CAL BLK	5/11/2020 1:01:40 PM
2	020CALS.d	2/10/200	5/11/2020 1:04:05 PM
3	021CALS.d	5/25/500	5/11/2020 1:06:29 PM
4	022CALS.d	10/50/1000	5/11/2020 1:08:51 PM
5	023CALS.d	100/500/10K	5/11/2020 1:11:13 PM
6	024CALS.d	200/1000/20K	5/11/2020 1:13:35 PM
7			

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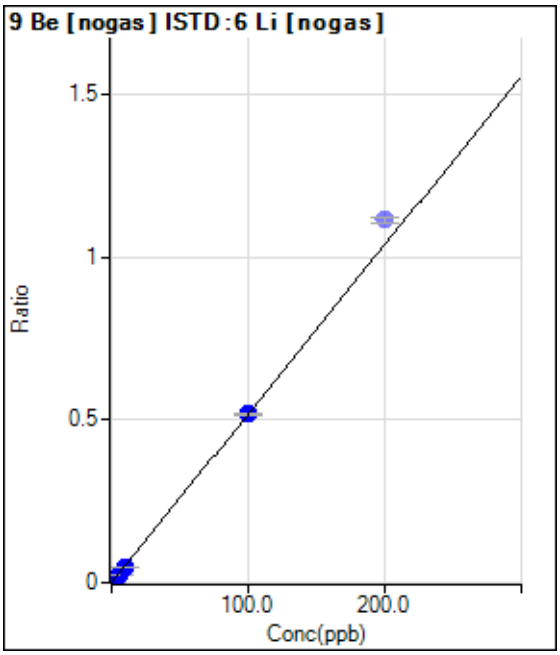
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	54068.71	0.0824	P	2.2
2	☐	2.000	1.865	73213.00	0.1107	P	1.1
3	☐	5.000	4.725	101176.33	0.1542	P	0.5
4	☐	10.000	9.556	148692.62	0.2277	P	2.1
5	☐	100.000	100.061	985012.04	1.6041	P	0.6
6	☑	200.000		1928000.13	3.4675	A	2.6
7	☐	1.000					

y = 0.0152 * x + 0.0824
R = 1.0000
DL = 0.3629
BEC = 5.417

Weight: <None>
Min Conc: <None>



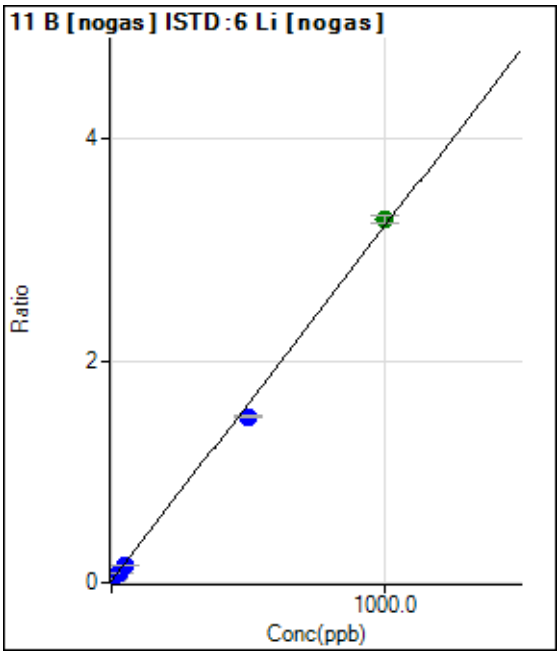
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	56.67	0.0001	P	43.4
2	☐	2.000	1.885	6511.14	0.0098	P	1.1
3	☐	5.000	4.820	16433.75	0.0251	P	2.1
4	☐	10.000	9.301	31515.80	0.0483	P	0.8
5	☐	100.000	100.081	318308.32	0.5184	P	1.2
6	☑	200.000		618965.81	1.1132	P	1.3
7	☐	1.000					

y = 0.0052 * x + 8.6293E-005
R = 1.0000
DL = 0.0217
BEC = 0.01666

Weight: <None>
Min Conc: <None>

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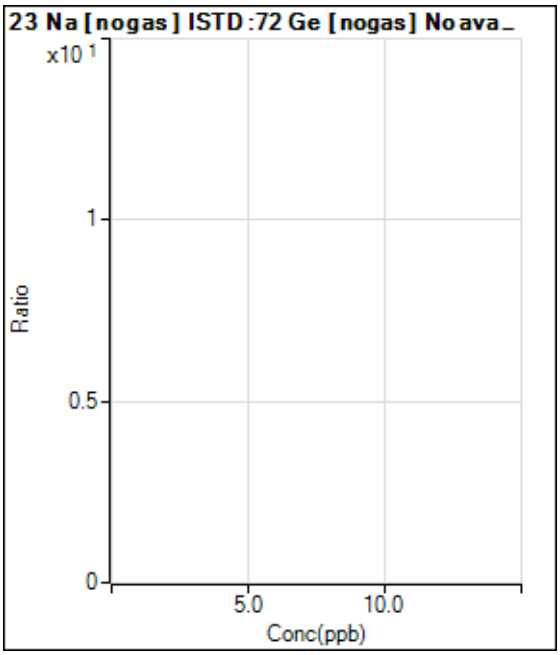
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10953.18	0.0167	P	3.0
2	☐	10.000	8.363	28681.46	0.0434	P	2.4
3	☐	25.000	21.684	56350.43	0.0859	P	0.9
4	☐	50.000	43.523	101622.97	0.1556	P	1.6
5	☐	500.000	463.660	918909.83	1.4966	P	1.5
6	☐	1000.000	1018.593	1817221.79	3.2679	A	2.0
7	☐	5.000					

y = 0.0032 * x + 0.0167
R = 0.9991
DL = 0.4703
BEC = 5.228

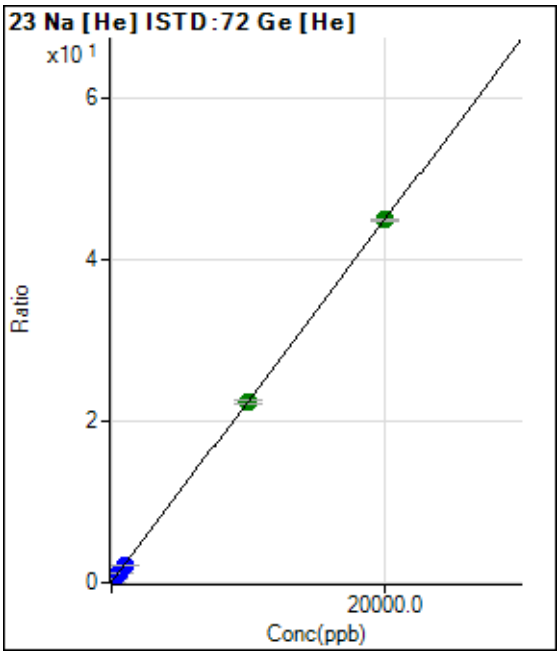
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

RIGHT SOLUTIONS | RIGHT PARTNER

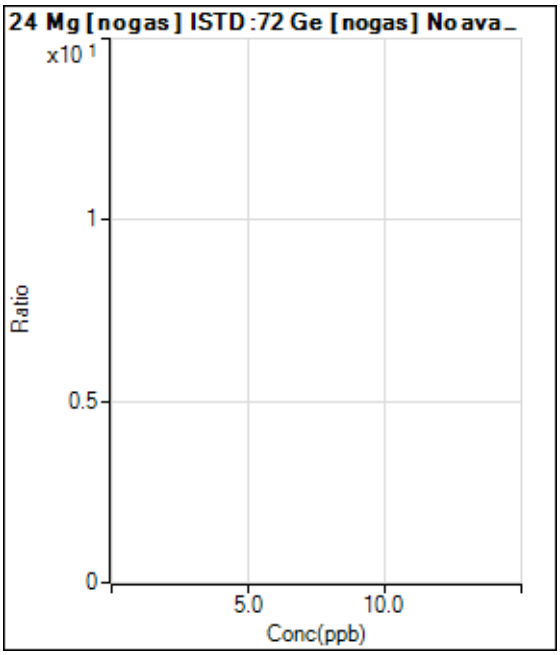
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26448.66	0.0721	P	2.3
2	☐	200.000	194.532	185356.27	0.5086	P	2.1
3	☐	500.000	482.622	422659.03	1.1549	P	1.1
4	☐	1000.000	958.430	800882.83	2.2225	P	2.5
5	☐	10000.000	9964.614	7954069.26	22.4287	A	1.8
6	☐	20000.000	20020.260	15416881.44	44.9895	A	0.8
7	☐	100.000					

y = 0.0022 * x + 0.0721
R = 1.0000
DL = 2.183
BEC = 32.15

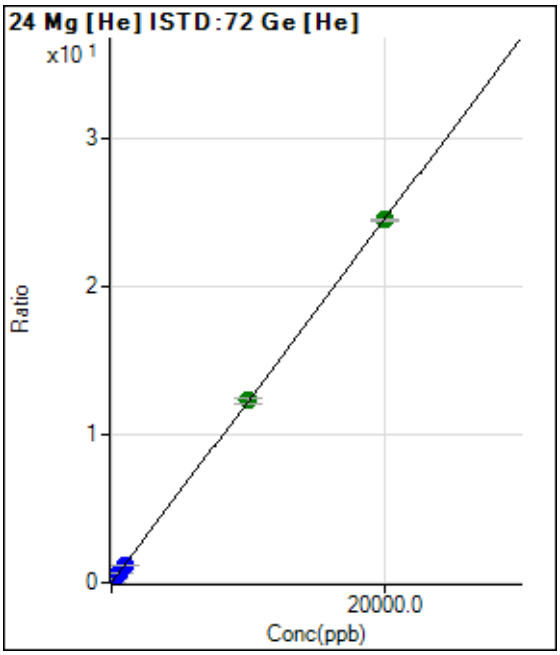
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

RIGHT SOLUTIONS | RIGHT PARTNER

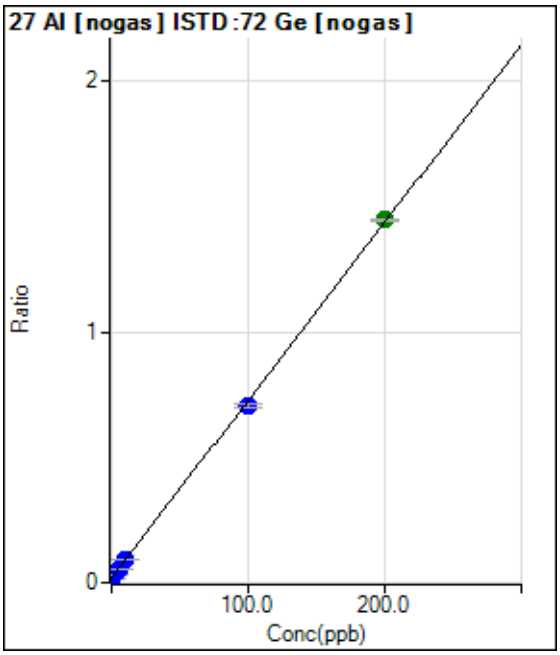
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	453.35	0.0012	P	13.9
2	☐	200.000	198.334	89121.79	0.2445	P	0.4
3	☐	500.000	495.314	222799.92	0.6088	P	1.4
4	☐	1000.000	955.737	422928.59	1.1735	P	1.2
5	☐	10000.000	10045.656	4369920.45	12.3231	A	3.3
6	☐	20000.000	19979.519	8398588.83	24.5079	A	0.7
7	☐	100.000					

y = 0.0012 * x + 0.0012
R = 1.0000
DL = 0.4195
BEC = 1.009

Weight: <None>
Min Conc: <None>



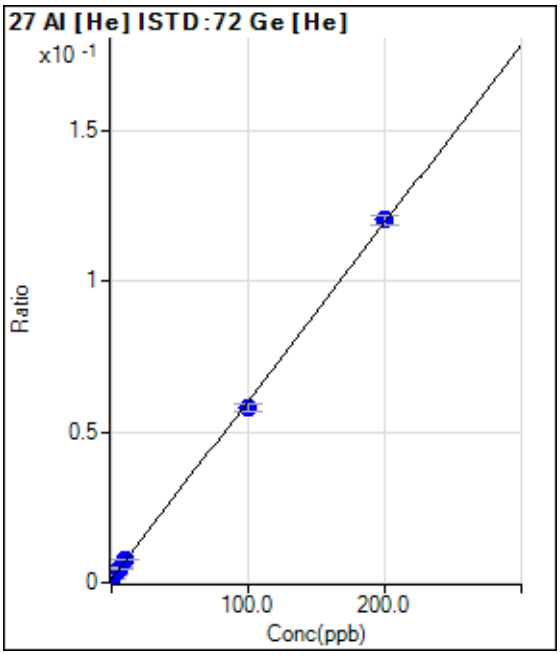
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23848.62	0.0184	P	2.1
2	☐	2.000	2.195	45007.16	0.0340	P	4.9
3	☐	5.000	5.281	73428.49	0.0559	P	3.4
4	☐	10.000	10.183	121282.61	0.0906	P	2.3
5	☐	100.000	96.838	937146.24	0.7053	P	2.6
6	☐	200.000	201.563	1861960.18	1.4482	A	0.6
7	☐	1.000					

y = 0.0071 * x + 0.0184
R = 0.9998
DL = 0.1634
BEC = 2.594

Weight: <None>
Min Conc: <None>

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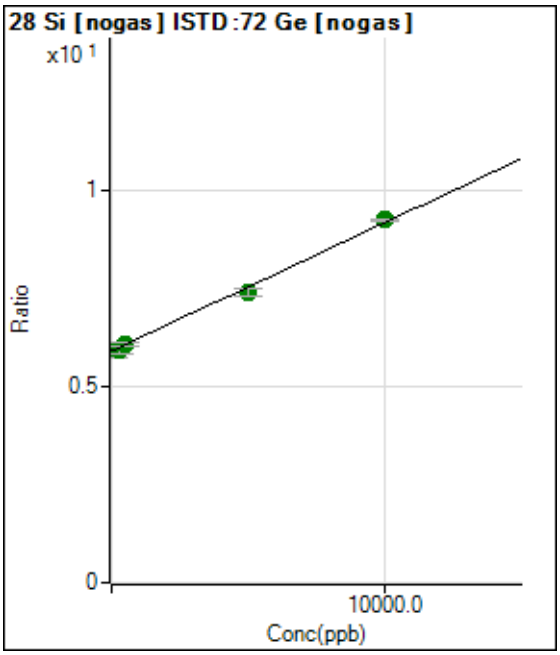
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	450.02	0.0012	P	9.7
2	☐	2.000	2.679	1023.37	0.0028	P	8.6
3	☐	5.000	5.599	1660.10	0.0045	P	15.8
4	☐	10.000	11.020	2786.92	0.0077	P	5.7
5	☐	100.000	96.422	20628.17	0.0582	P	3.8
6	☐	200.000	201.716	41241.74	0.1204	P	2.3
7	☐	1.000					

y = 5.9056E-004 * x + 0.0012
R = 0.9997
DL = 0.6024
BEC = 2.078

Weight: <None>
Min Conc: <None>



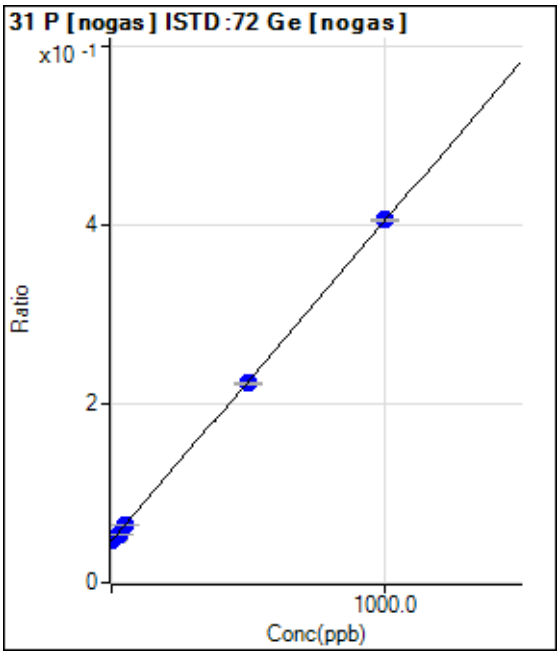
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7674929.05	5.9211	A	1.7
2	☐	100.000	49.823	7861975.09	5.9375	A	6.8
3	☐	250.000	127.781	7837751.55	5.9630	A	3.4
4	☐	500.000	502.040	8144312.80	6.0857	A	1.7
5	☐	5000.000	4586.915	9866206.52	7.4247	A	3.0
6	☐	10000.000	10209.998	11916018.57	9.2679	A	0.3
7	☐	50.000					

y = 3.2780E-004 * x + 5.9211
R = 0.9988
DL = 930.2
BEC = 1.806E+04

Weight: <None>
Min Conc: <None>

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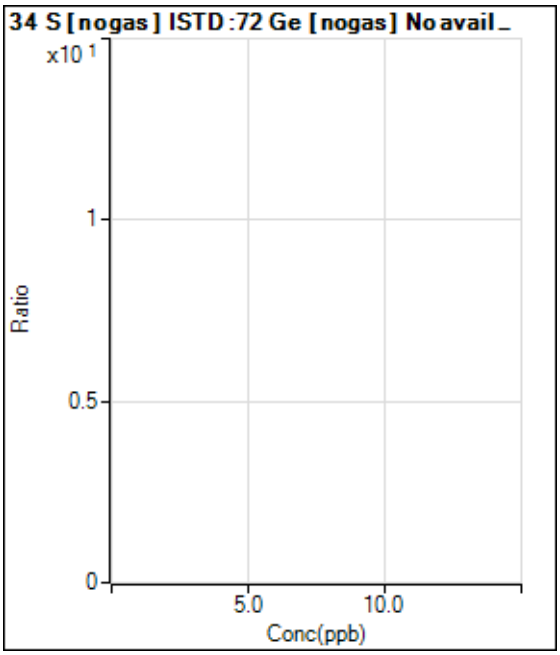
Calibration for 026_ICV.d



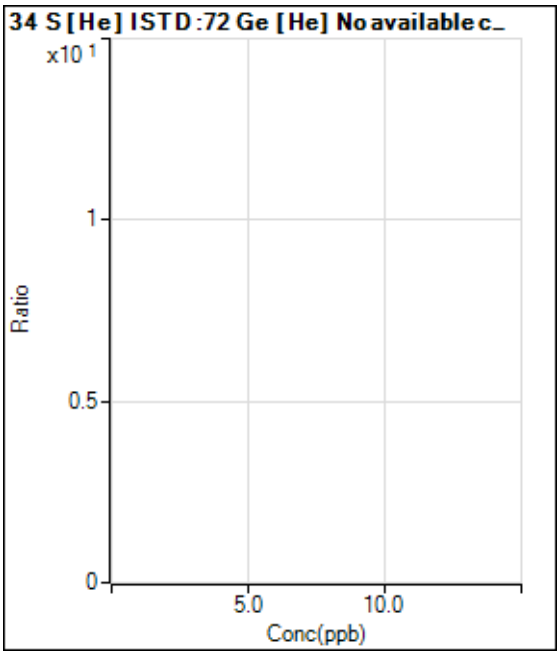
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	60513.65	0.0467	P	3.3
2	☐	10.000	8.042	65663.69	0.0496	P	5.8
3	☐	25.000	19.654	70638.01	0.0537	P	1.5
4	☐	50.000	49.506	86212.13	0.0644	P	1.2
5	☐	500.000	492.029	296159.48	0.2229	P	1.5
6	☐	1000.000	1004.164	522341.37	0.4063	P	0.4
7	☐	5.000					

y = 3.5807E-004 * x + 0.0467
R = 1.0000
DL = 12.86
BEC = 130.4

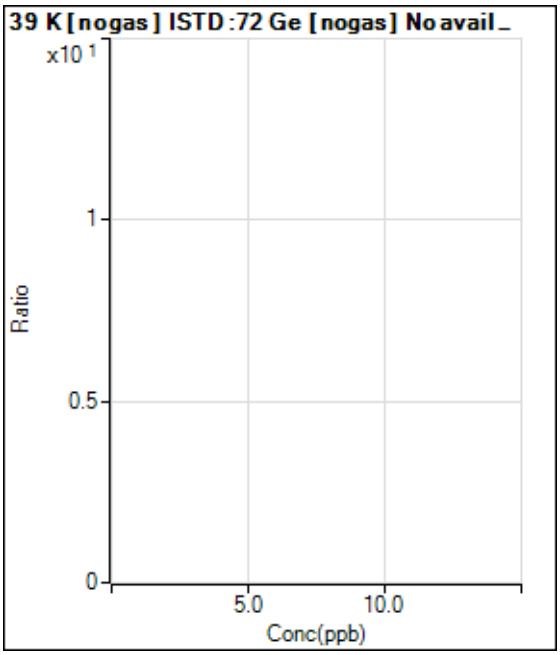
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	400.000					
3	☐	1000.000					
4	☐	2000.000					
5	☐	20000.000					
6	☐	40000.000					
7	☐	200.000					

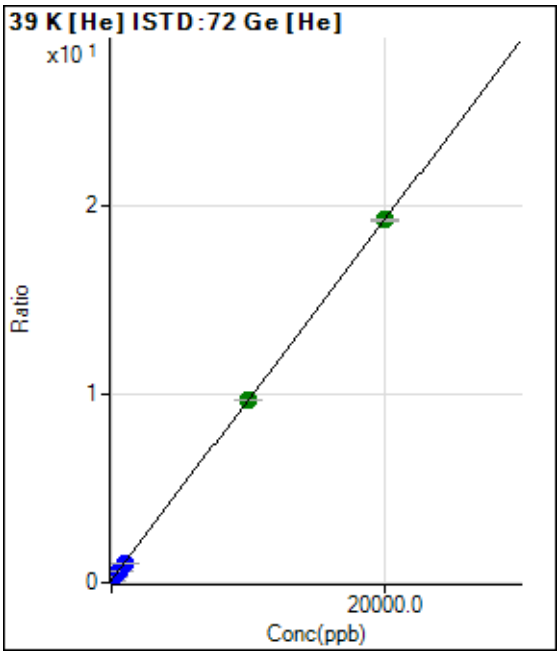


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	400.000					
3	☐	1000.000					
4	☐	2000.000					
5	☐	20000.000					
6	☐	40000.000					
7	☐	200.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	47517.14	0.1296	P	2.8
2	☐	200.000	196.176	115469.18	0.3168	P	0.6
3	☐	500.000	488.134	217879.01	0.5953	P	1.8
4	☐	1000.000	957.912	376121.38	1.0436	P	1.4
5	☐	10000.000	10000.486	3429921.83	9.6714	A	0.9
6	☐	20000.000	20002.196	6584504.69	19.2143	A	0.3
7	☐	100.000					

y = 9.5413E-004 * x + 0.1296

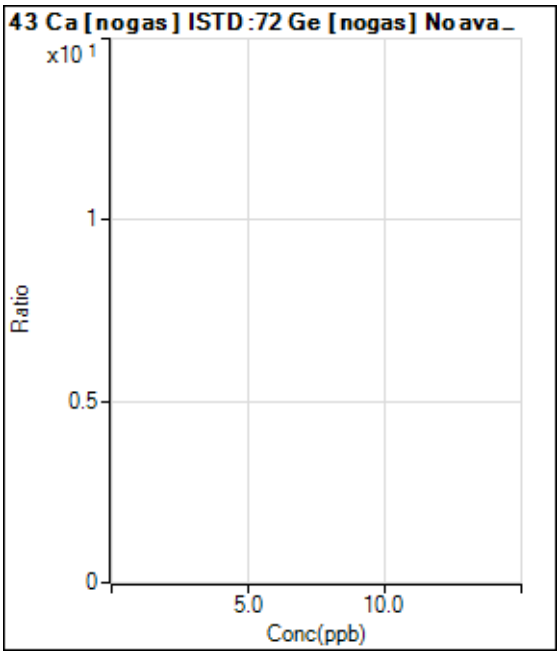
R = 1.0000

DL = 11.27

BEC = 135.8

Weight: <None>

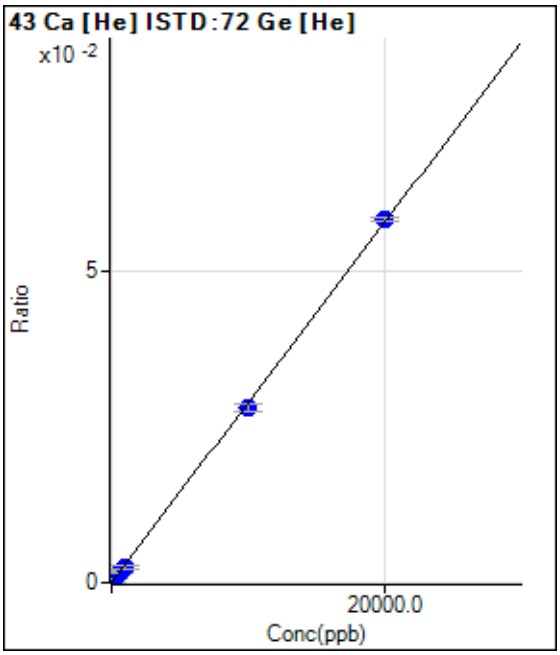
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

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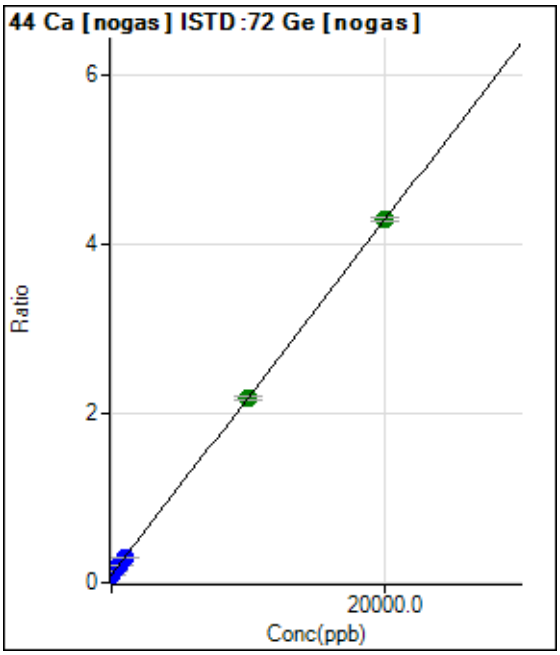
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6.67	0.0000	P	86.6
2	☐	200.000	224.606	243.34	0.0007	P	18.0
3	☐	500.000	569.090	610.02	0.0017	P	15.4
4	☐	1000.000	853.922	896.70	0.0025	P	22.3
5	☐	10000.000	9708.147	9979.49	0.0281	P	3.6
6	☐	20000.000	20151.257	20007.68	0.0584	P	1.0
7	☐	100.000					

y = 2.8963E-006 * x + 1.8118E-005
R = 0.9998
DL = 16.25
BEC = 6.255

Weight: <None>
Min Conc: <None>

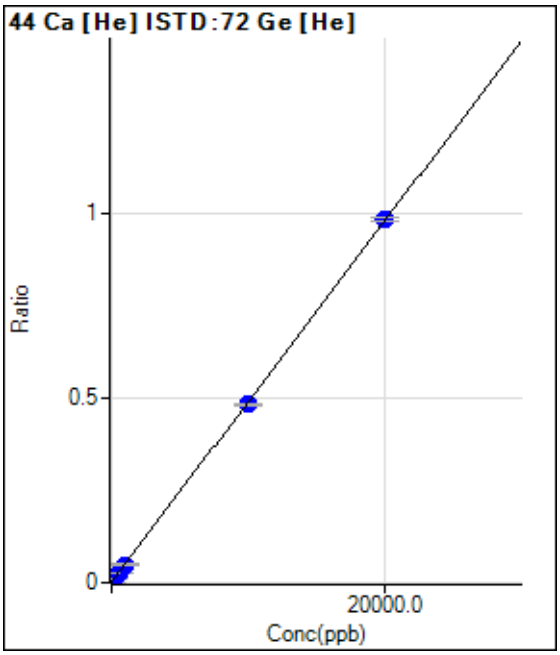


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	122109.26	0.0942	P	2.1
2	☐	200.000	176.799	174070.01	0.1313	P	2.2
3	☐	500.000	499.276	261528.19	0.1989	P	1.9
4	☐	1000.000	949.686	392718.68	0.2934	P	1.3
5	☐	10000.000	9971.171	2904992.98	2.1863	A	2.5
6	☐	20000.000	20017.180	5520910.33	4.2941	A	1.0
7	☐	100.000					

y = 2.0982E-004 * x + 0.0942
R = 1.0000
DL = 28.89
BEC = 448.9

Weight: <None>
Min Conc: <None>

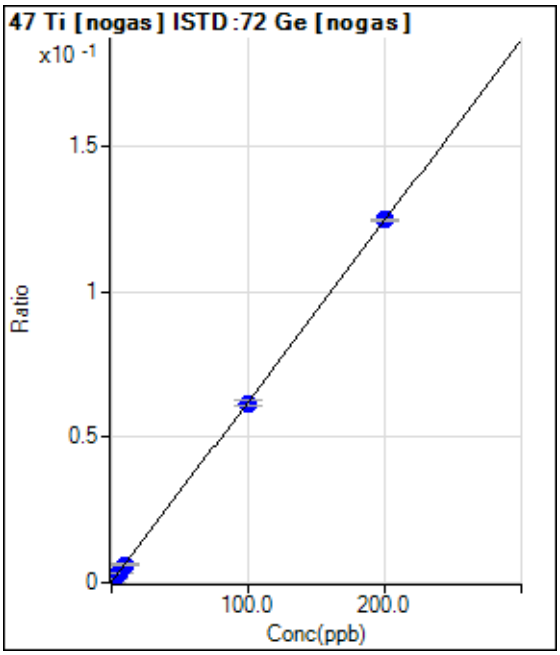
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	546.68	0.0015	P	9.3
2	☐	200.000	206.260	4213.87	0.0116	P	6.4
3	☐	500.000	483.851	9192.39	0.0251	P	1.4
4	☐	1000.000	970.698	17618.51	0.0489	P	4.2
5	☐	10000.000	9832.683	170822.08	0.4817	P	0.5
6	☐	20000.000	20085.465	336639.32	0.9823	P	1.2
7	☐	100.000					

y = 4.8834E-005 * x + 0.0015
R = 1.0000
DL = 8.555
BEC = 30.54

Weight: <None>
Min Conc: <None>



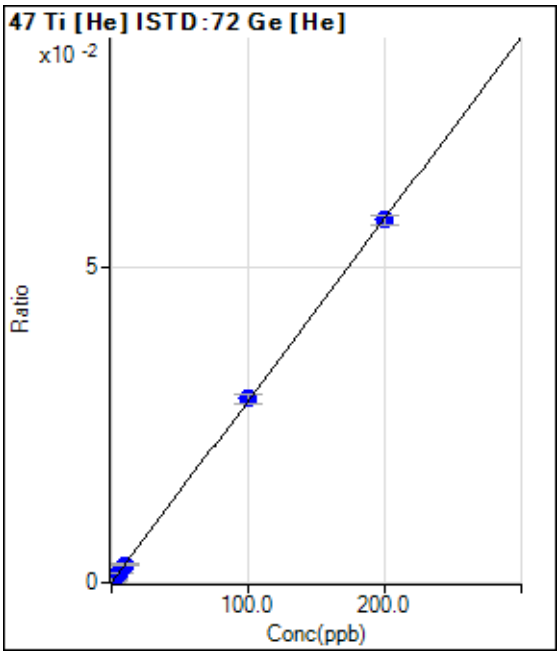
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	163.33	0.0001	P	14.6
2	☐	2.000	1.924	1756.78	0.0013	P	5.6
3	☐	5.000	5.197	4420.60	0.0034	P	4.5
4	☐	10.000	9.869	8392.04	0.0063	P	5.3
5	☐	100.000	99.170	82167.96	0.0618	P	3.6
6	☐	200.000	200.417	160509.32	0.1248	P	0.8
7	☐	1.000					

y = 6.2229E-004 * x + 1.2591E-004
R = 1.0000
DL = 0.08854
BEC = 0.2023

Weight: <None>
Min Conc: <None>

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Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10.00	0.0000	P	0.6
2	☐	2.000	1.617	180.00	0.0005	P	23.3
3	☐	5.000	4.841	520.02	0.0014	P	2.2
4	☐	10.000	9.865	1033.38	0.0029	P	11.7
5	☐	100.000	101.083	10333.02	0.0291	P	4.7
6	☐	200.000	199.473	19690.62	0.0575	P	2.3
7	☐	1.000					

y = 2.8793E-004 * x + 2.7276E-005

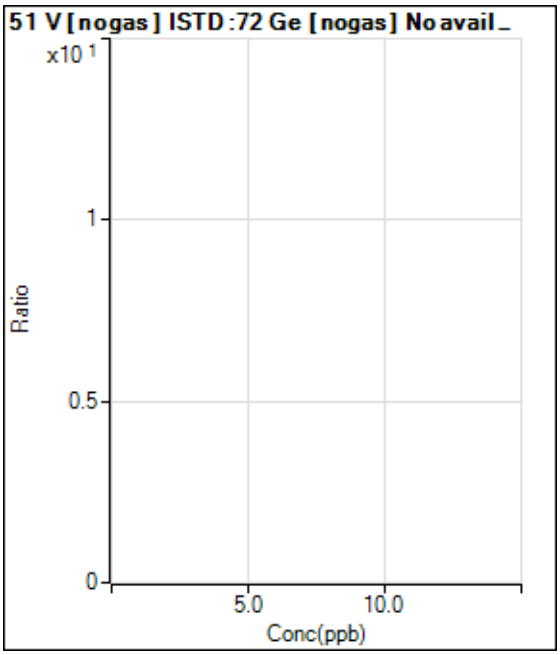
R = 1.0000

DL = 0.001803

BEC = 0.09473

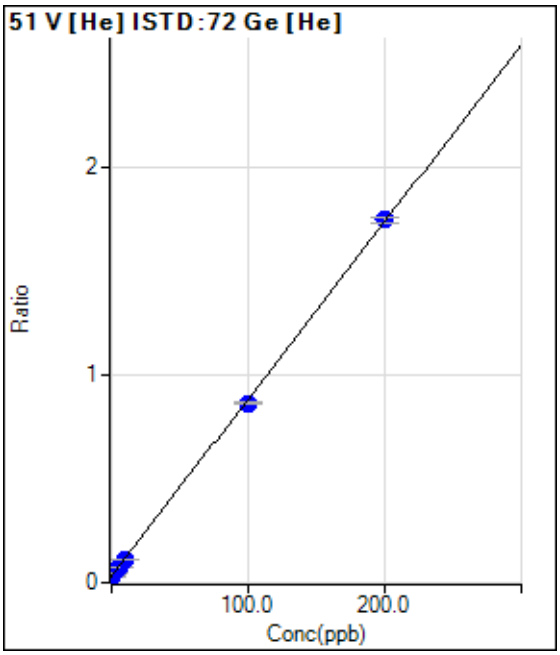
Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

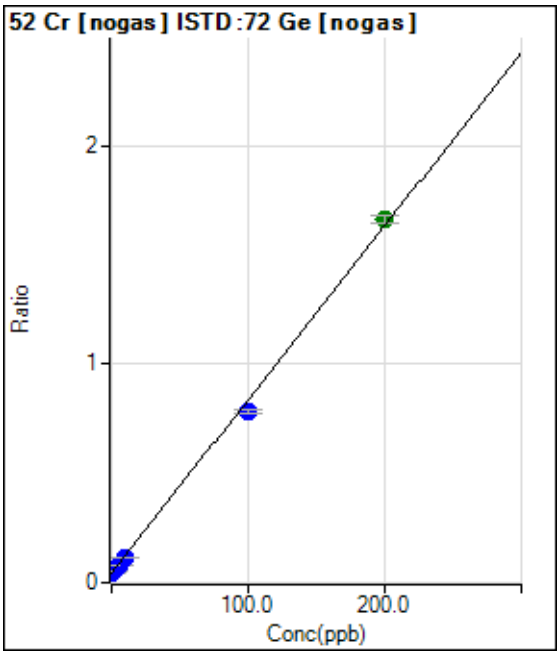
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	11782.66	0.0321	P	3.5
2	☐	2.000	1.951	17784.05	0.0488	P	2.3
3	☐	5.000	4.879	27008.44	0.0738	P	0.9
4	☐	10.000	9.144	39722.23	0.1102	P	1.7
5	☐	100.000	97.680	307197.77	0.8662	P	1.1
6	☐	200.000	201.207	599782.37	1.7502	P	1.2
7	☐	1.000					

y = 0.0085 * x + 0.0321
R = 0.9999
DL = 0.3998
BEC = 3.764

Weight: <None>
Min Conc: <None>

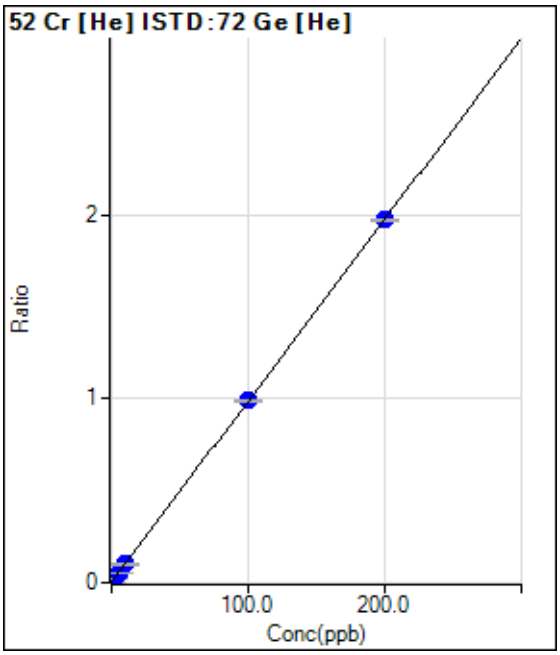


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	57000.79	0.0440	P	2.1
2	☐	2.000	1.623	75348.95	0.0569	P	3.6
3	☐	5.000	4.647	106302.55	0.0809	P	1.4
4	☐	10.000	9.343	158123.71	0.1181	P	0.2
5	☐	100.000	92.880	1038323.19	0.7813	P	1.7
6	☐	200.000	203.606	2134583.98	1.6604	A	2.0
7	☐	1.000					

y = 0.0079 * x + 0.0440
R = 0.9991
DL = 0.3457
BEC = 5.538

Weight: <None>
Min Conc: <None>

Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	763.36	0.0021	P	6.4
2	☐	2.000	1.959	7798.44	0.0214	P	3.6
3	☐	5.000	5.051	18989.96	0.0519	P	1.8
4	☐	10.000	9.898	35918.56	0.0997	P	3.6
5	☐	100.000	100.143	350962.07	0.9896	P	1.4
6	☐	200.000	199.933	676342.64	1.9736	P	0.3
7	☐	1.000					

y = 0.0099 * x + 0.0021

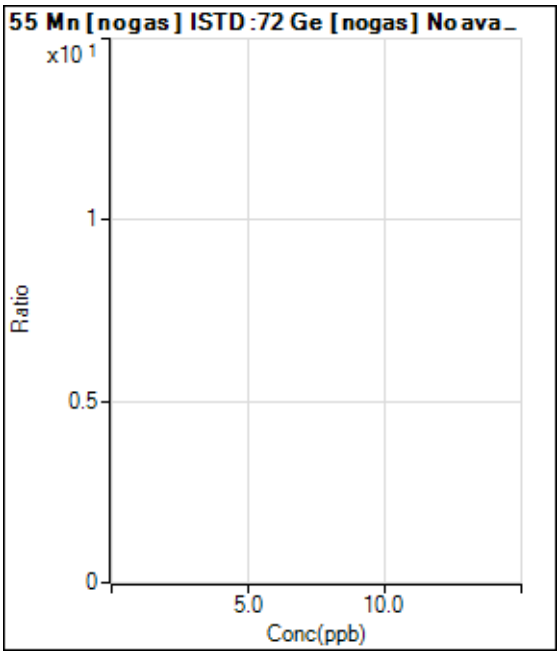
R = 1.0000

DL = 0.04081

BEC = 0.2112

Weight: <None>

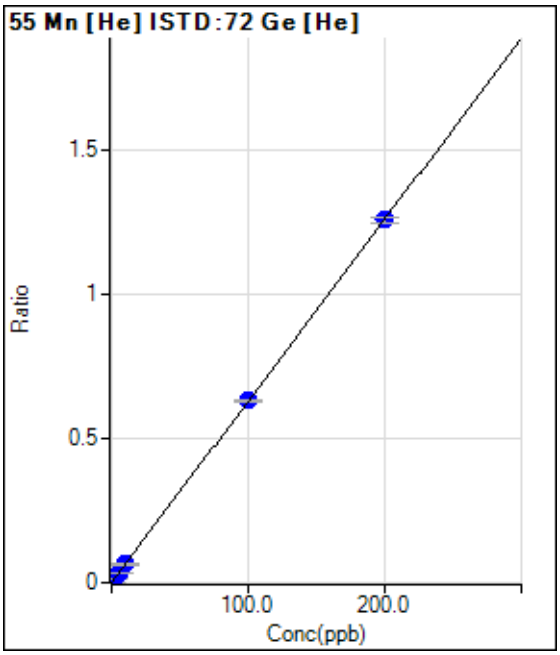
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

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Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	120.00	0.0003	P	33.1
2	☐	2.000	2.035	4780.69	0.0131	P	6.2
3	☐	5.000	5.002	11623.82	0.0318	P	1.6
4	☐	10.000	10.028	22830.98	0.0634	P	1.7
5	☐	100.000	100.190	223439.24	0.6300	P	0.2
6	☐	200.000	199.903	430626.18	1.2567	P	1.5
7	☐	1.000					

y = 0.0063 * x + 3.2725E-004

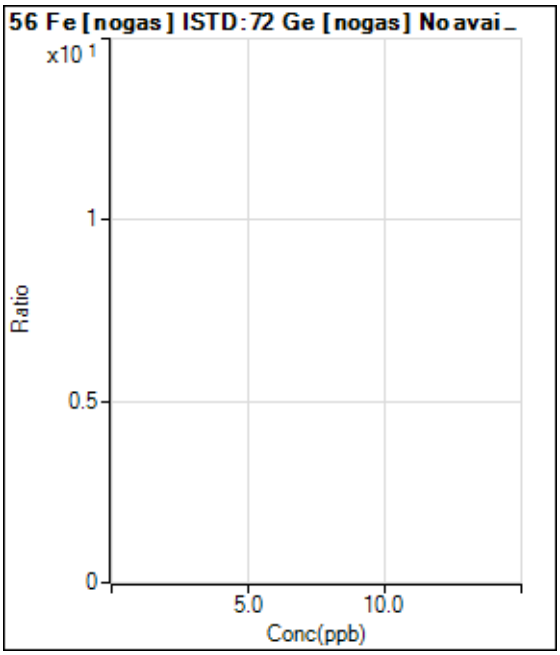
R = 1.0000

DL = 0.05177

BEC = 0.05207

Weight: <None>

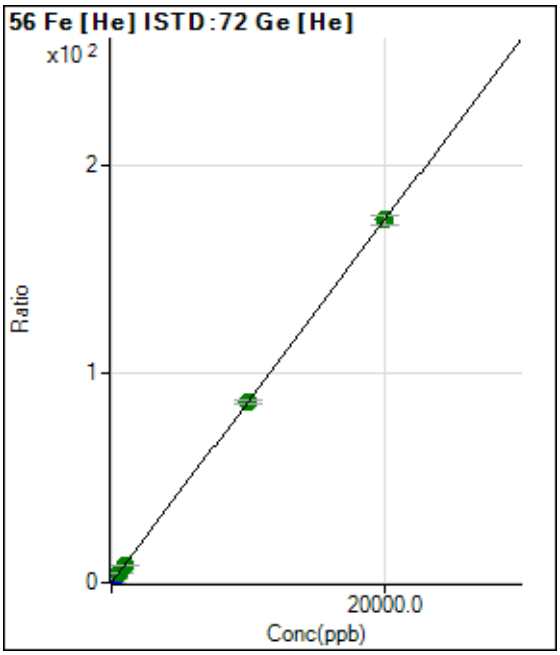
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	200.000					
3	☐	500.000					
4	☐	1000.000					
5	☐	10000.000					
6	☐	20000.000					
7	☐	100.000					

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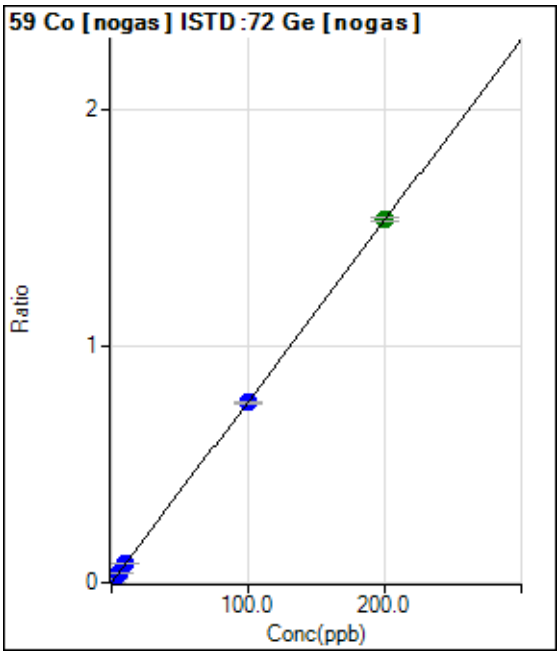
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6134.45	0.0167	P	3.9
2	☐	200.000	190.732	609059.26	1.6711	P	2.4
3	☐	500.000	503.901	1605567.42	4.3874	A	1.0
4	☐	1000.000	992.105	3107539.64	8.6219	A	0.8
5	☐	10000.000	9972.643	30681817.88	86.5163	A	1.9
6	☐	20000.000	20014.068	59488177.45	173.6125	A	2.3
7	☐	100.000					

y = 0.0087 * x + 0.0167
R = 1.0000
DL = 0.2229
BEC = 1.929

Weight: <None>
Min Conc: <None>



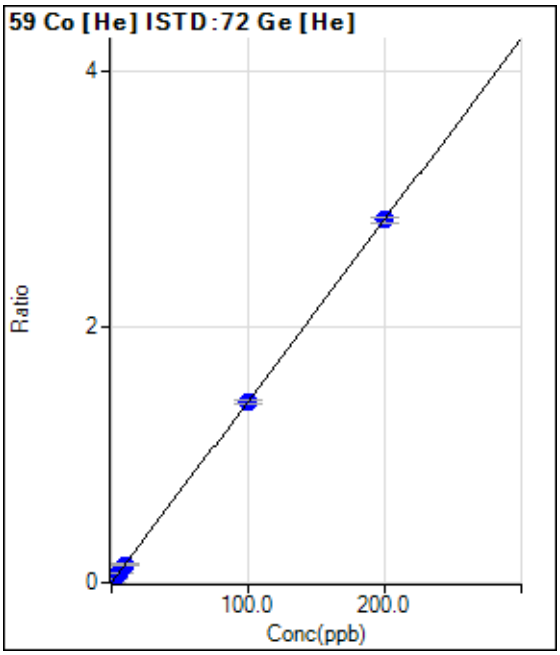
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	266.67	0.0002	P	21.6
2	☐	2.000	2.119	21732.97	0.0164	P	4.3
3	☐	5.000	5.317	53682.02	0.0408	P	4.5
4	☐	10.000	10.131	103918.28	0.0776	P	0.7
5	☐	100.000	99.294	1008773.22	0.7592	P	1.9
6	☐	200.000	200.337	1969208.46	1.5315	A	1.1
7	☐	1.000					

y = 0.0076 * x + 2.0562E-004
R = 1.0000
DL = 0.01745
BEC = 0.0269

Weight: <None>
Min Conc: <None>

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Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	86.67	0.0002	P	23.7
2	☐	2.000	2.031	10596.50	0.0291	P	2.0
3	☐	5.000	4.931	25708.23	0.0702	P	0.7
4	☐	10.000	10.023	51378.63	0.1425	P	0.7
5	☐	100.000	100.069	503982.91	1.4210	P	2.1
6	☐	200.000	199.966	972958.61	2.8394	P	1.4
7	☐	1.000					

y = 0.0142 * x + 2.3629E-004

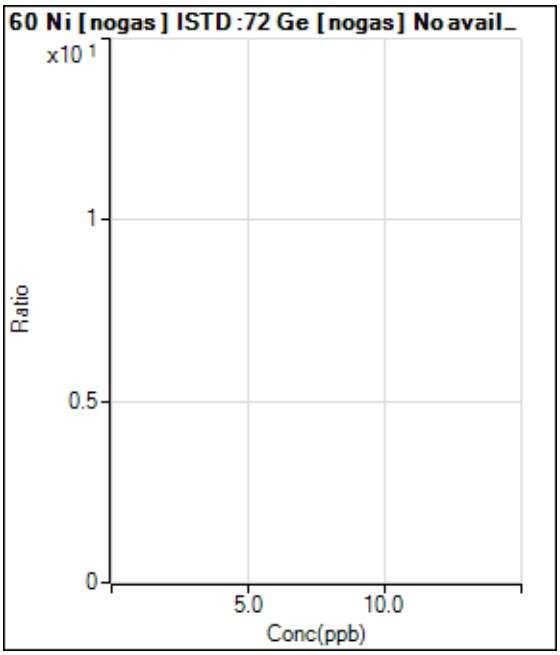
R = 1.0000

DL = 0.01183

BEC = 0.01664

Weight: <None>

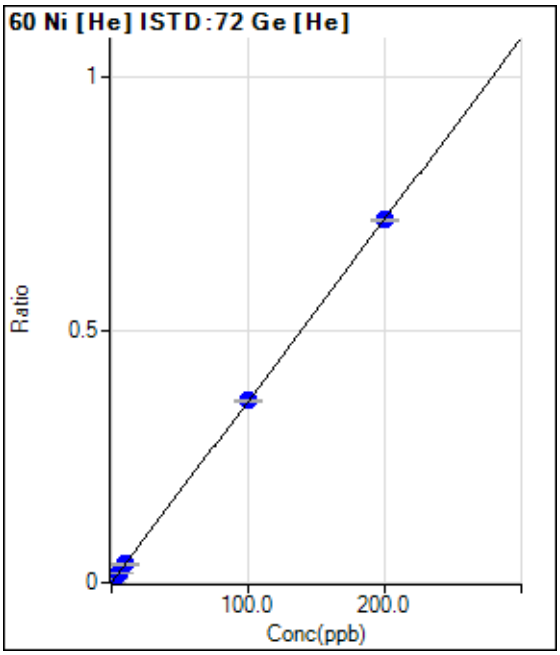
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

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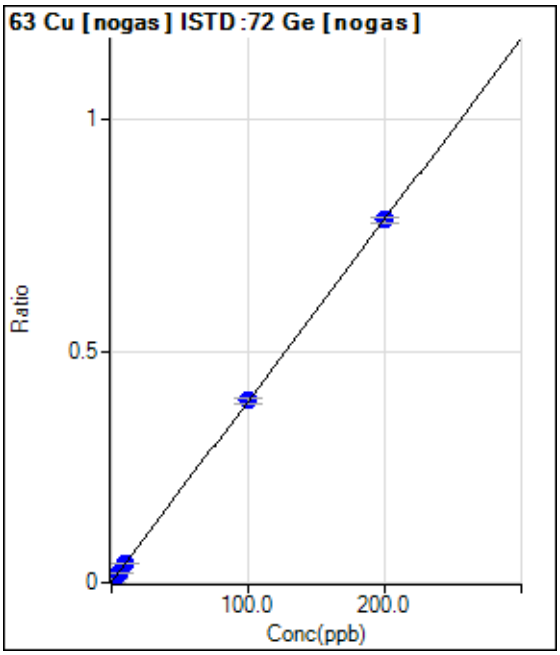
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	56.67	0.0002	P	53.6
2	☐	2.000	2.120	2833.60	0.0078	P	2.9
3	☐	5.000	5.003	6634.65	0.0181	P	2.8
4	☐	10.000	10.046	13061.49	0.0362	P	4.2
5	☐	100.000	100.369	127942.55	0.3607	P	1.3
6	☐	200.000	199.812	246055.63	0.7180	P	0.3
7	☐	1.000					

y = 0.0036 * x + 1.5445E-004
R = 1.0000
DL = 0.06908
BEC = 0.04299

Weight: <None>
Min Conc: <None>

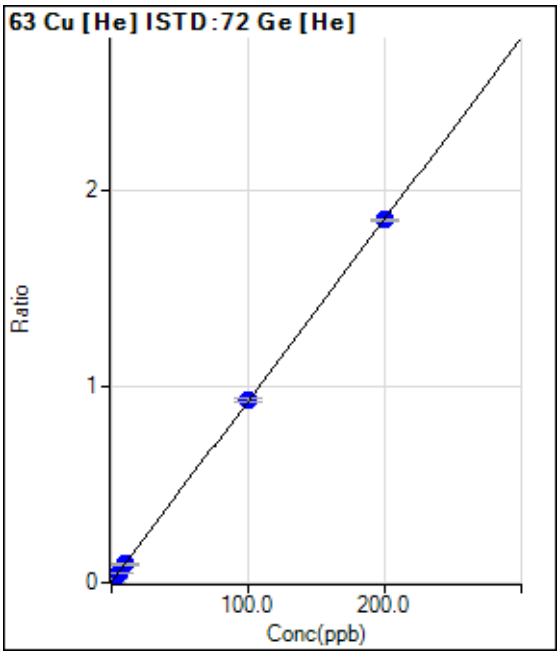


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1570.09	0.0012	P	7.4
2	☐	2.000	2.083	12401.01	0.0094	P	5.2
3	☐	5.000	5.439	29567.39	0.0225	P	2.4
4	☐	10.000	10.159	54818.38	0.0410	P	2.9
5	☐	100.000	100.187	522459.91	0.3932	P	2.7
6	☐	200.000	199.887	1007097.75	0.7833	P	1.3
7	☐	1.000					

y = 0.0039 * x + 0.0012
R = 1.0000
DL = 0.0684
BEC = 0.3094

Weight: <None>
Min Conc: <None>

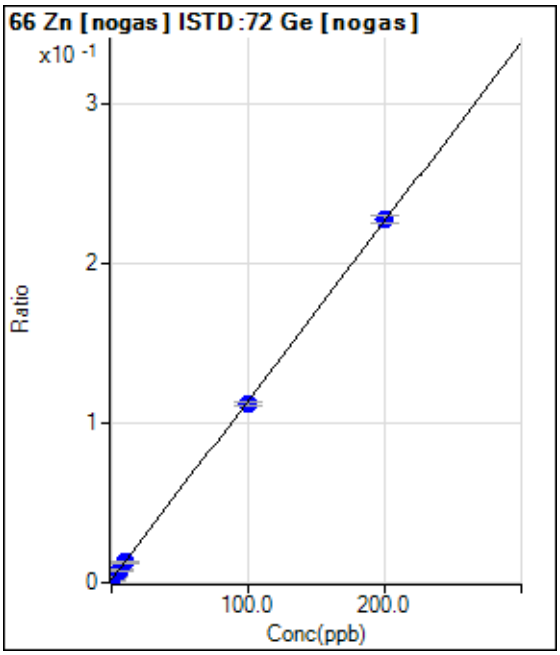
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	750.02	0.0020	P	12.3
2	☐	2.000	2.117	7901.80	0.0217	P	0.9
3	☐	5.000	5.139	18182.55	0.0497	P	4.8
4	☐	10.000	9.977	34065.22	0.0945	P	3.5
5	☐	100.000	100.504	331182.33	0.9338	P	1.3
6	☐	200.000	199.745	635280.66	1.8538	P	0.6
7	☐	1.000					

y = 0.0093 * x + 0.0020
R = 1.0000
DL = 0.08141
BEC = 0.2208

Weight: <None>
Min Conc: <None>

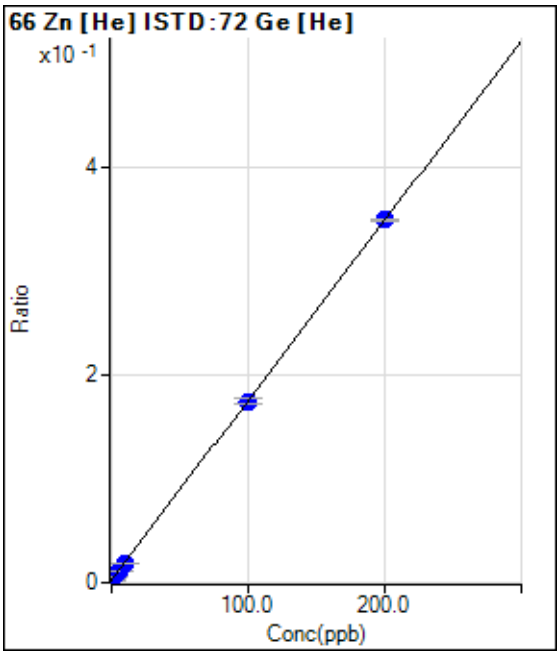


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2413.53	0.0019	P	12.0
2	☐	2.000	2.140	5650.95	0.0043	P	7.5
3	☐	5.000	5.197	10122.92	0.0077	P	4.6
4	☐	10.000	9.768	17181.61	0.0128	P	2.8
5	☐	100.000	98.377	149324.39	0.1124	P	2.5
6	☐	200.000	200.817	292453.80	0.2275	P	2.0
7	☐	1.000					

y = 0.0011 * x + 0.0019
R = 1.0000
DL = 0.597
BEC = 1.658

Weight: <None>
Min Conc: <None>

Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	983.37	0.0027	P	15.7
2	☐	2.000	2.028	2253.51	0.0062	P	4.3
3	☐	5.000	4.990	4133.86	0.0113	P	6.5
4	☐	10.000	9.289	6744.67	0.0187	P	5.0
5	☐	100.000	99.323	61757.49	0.1741	P	3.4
6	☐	200.000	200.374	119456.96	0.3486	P	0.7
7	☐	1.000					

y = 0.0017 * x + 0.0027

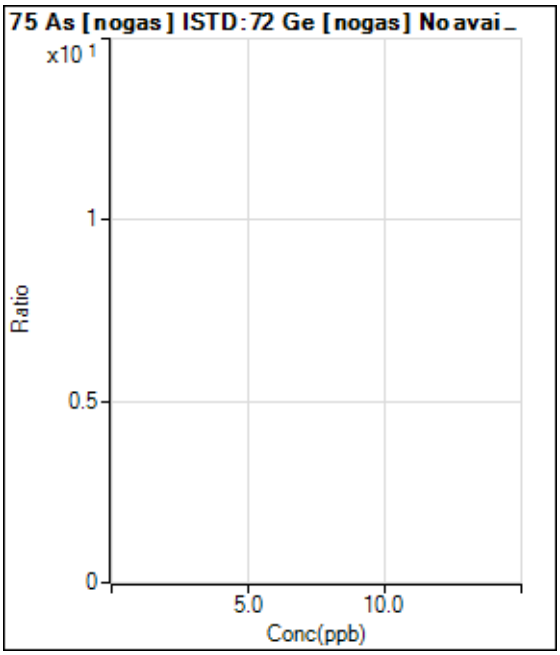
R = 1.0000

DL = 0.7317

BEC = 1.554

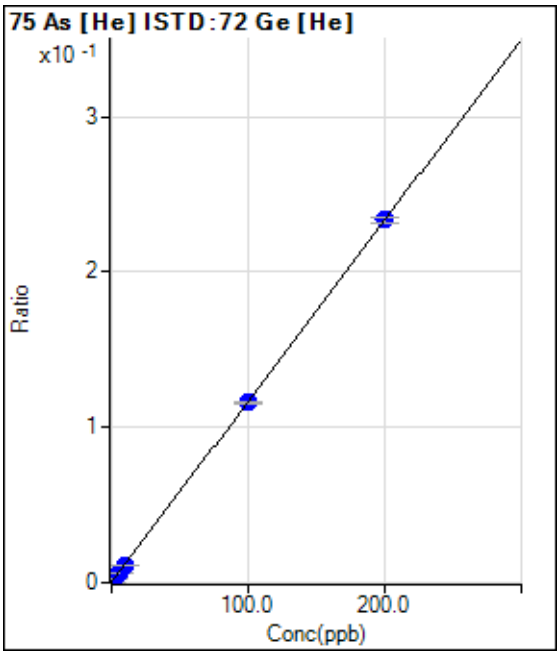
Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	111.11	0.0003	P	18.2
2	☐	2.000	2.014	964.47	0.0026	P	2.3
3	☐	5.000	5.018	2247.93	0.0061	P	1.4
4	☐	10.000	9.483	4086.03	0.0113	P	1.4
5	☐	100.000	99.370	41118.34	0.1159	P	1.0
6	☐	200.000	200.340	79994.07	0.2334	P	1.3
7	☐	1.000					

y = 0.0012 * x + 3.0311E-004

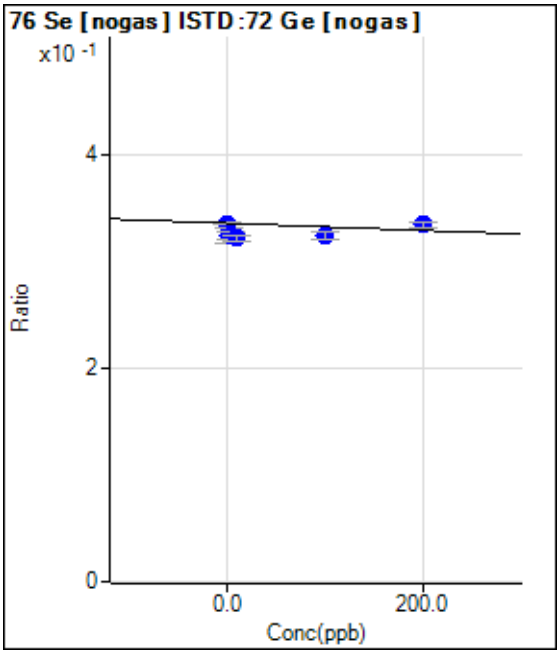
R = 1.0000

DL = 0.142

BEC = 0.2605

Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	435116.40	0.3357	P	0.4
2	☐	2.000	326.382	430124.78	0.3246	P	4.5
3	☐	5.000	333.651	426392.43	0.3244	P	2.2
4	☐	10.000	416.332	430329.92	0.3216	P	2.0
5	☐	100.000	336.067	431009.03	0.3243	P	2.4
6	☐	200.000	50.190	429358.78	0.3340	P	1.8
7	☐	1.000					

y = -3.3867E-005 * x + 0.3357

R = 0.3835

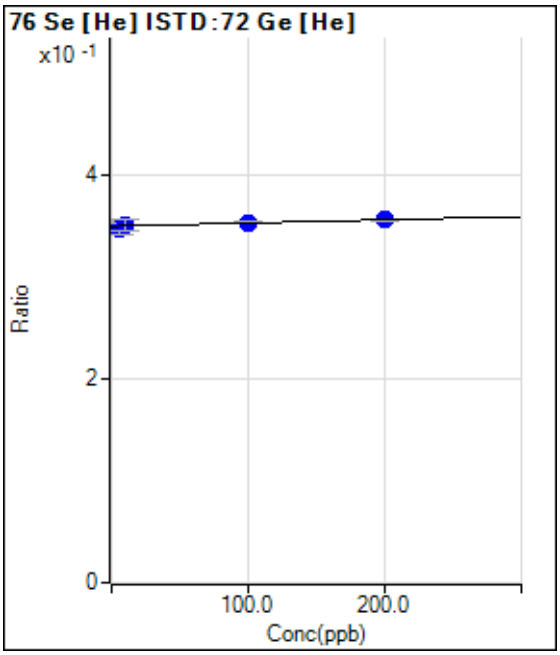
DL = -129.6

BEC = -9911

Weight: <None>

Min Conc: <None>

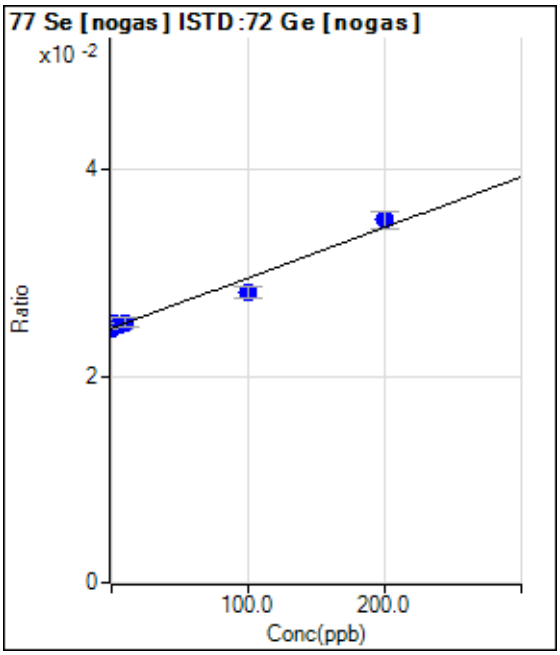
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	128521.05	0.3505	P	0.7
2	☐	2.000	-20.154	127511.38	0.3499	P	2.7
3	☐	5.000	-93.745	127175.92	0.3476	P	3.5
4	☐	10.000	39.077	126760.91	0.3518	P	3.1
5	☐	100.000	120.149	125672.47	0.3544	P	0.6
6	☐	200.000	191.162	122208.88	0.3566	P	0.3
7	☐	1.000					

y = 3.1804E-005 * x + 0.3505
R = 0.9000
DL = 245.3
BEC = 1.102E+04

Weight: <None>
Min Conc: <None>



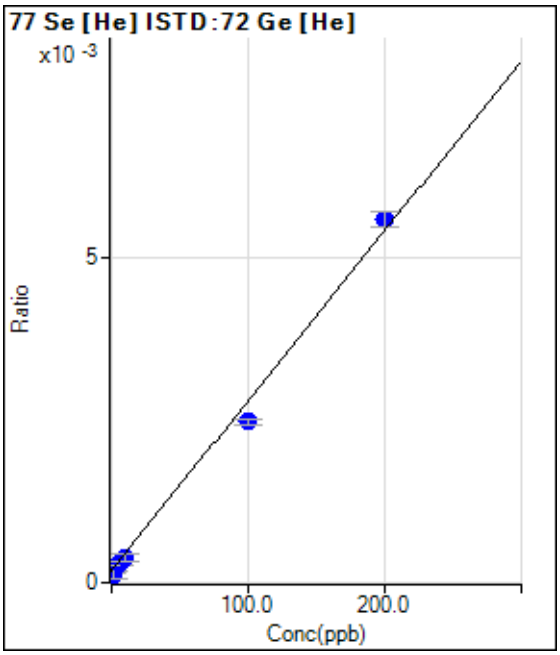
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	31955.15	0.0247	P	1.7
2	☐	2.000	10.856	33391.37	0.0252	P	3.3
3	☐	5.000	5.988	32800.24	0.0249	P	2.2
4	☐	10.000	11.998	33785.21	0.0252	P	3.7
5	☐	100.000	70.459	37332.28	0.0281	P	3.9
6	☐	200.000	214.557	45183.11	0.0351	P	4.5
7	☐	1.000					

y = 4.8932E-005 * x + 0.0247
R = 0.9832
DL = 25.18
BEC = 503.8

Weight: <None>
Min Conc: <None>

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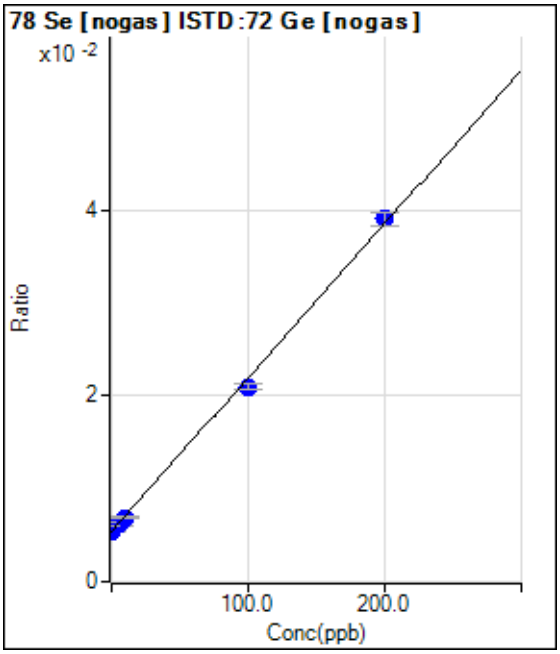
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	70.00	0.0002	P	42.4
2	☐	2.000	-2.753	43.33	0.0001	P	87.1
3	☐	5.000	4.209	110.00	0.0003	P	17.7
4	☐	10.000	7.613	140.00	0.0004	P	29.5
5	☐	100.000	87.463	876.70	0.0025	P	3.5
6	☐	200.000	206.455	1910.13	0.0056	P	4.1
7	☐	1.000					

y = 2.6081E-005 * x + 1.9061E-004
R = 0.9974
DL = 9.297
BEC = 7.308

Weight: <None>
Min Conc: <None>

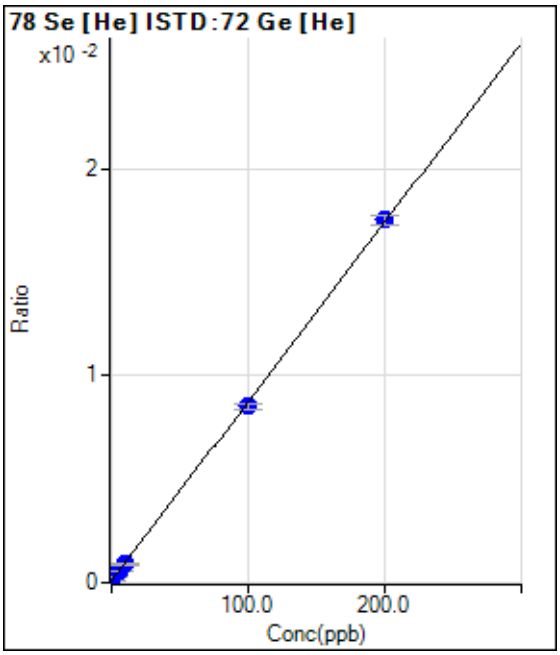


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7028.12	0.0054	P	2.5
2	☐	2.000	2.778	7801.78	0.0059	P	1.6
3	☐	5.000	4.722	8151.92	0.0062	P	5.3
4	☐	10.000	8.738	9195.77	0.0069	P	2.6
5	☐	100.000	93.888	27861.68	0.0210	P	3.2
6	☐	200.000	203.118	50223.03	0.0391	P	3.4
7	☐	1.000					

y = 1.6560E-004 * x + 0.0054
R = 0.9993
DL = 2.427
BEC = 32.74

Weight: <None>
Min Conc: <None>

Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	34.00	0.0001	P	30.9
2	☐	2.000	2.686	118.67	0.0003	P	10.4
3	☐	5.000	5.304	202.00	0.0006	P	10.4
4	☐	10.000	9.317	324.00	0.0009	P	8.0
5	☐	100.000	97.151	3015.60	0.0085	P	2.6
6	☐	200.000	201.444	6009.00	0.0175	P	2.8
7	☐	1.000					

y = 8.6574E-005 * x + 9.2810E-005

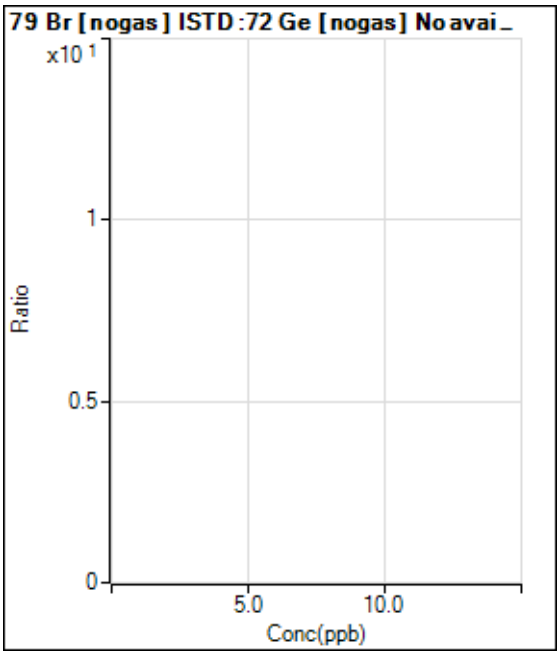
R = 0.9998

DL = 0.9926

BEC = 1.072

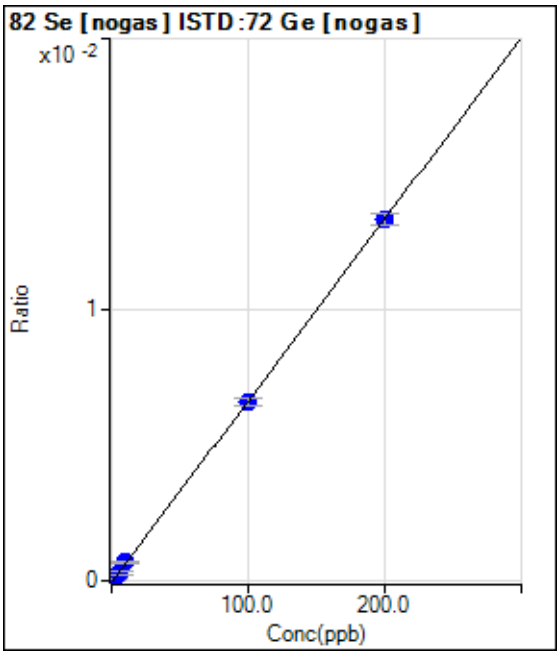
Weight: <None>

Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

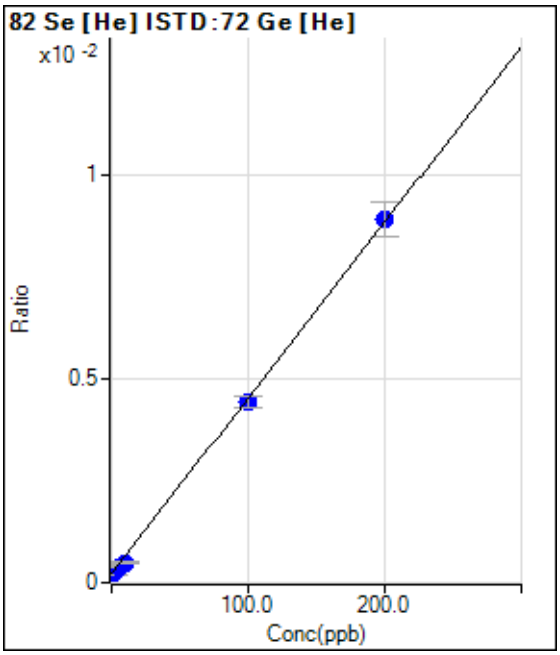
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-110.60	-0.0001	P	-92.2
2	☐	2.000	2.056	68.89	0.0001	P	81.2
3	☐	5.000	5.658	389.16	0.0003	P	46.4
4	☐	10.000	11.606	929.42	0.0007	P	10.2
5	☐	100.000	99.574	8772.11	0.0066	P	4.8
6	☐	200.000	200.116	17171.95	0.0134	P	3.4
7	☐	1.000					

y = 6.7162E-005 * x - 8.5432E-005
R = 1.0000
DL = 3.517
BEC = -1.272

Weight: <None>
Min Conc: <None>



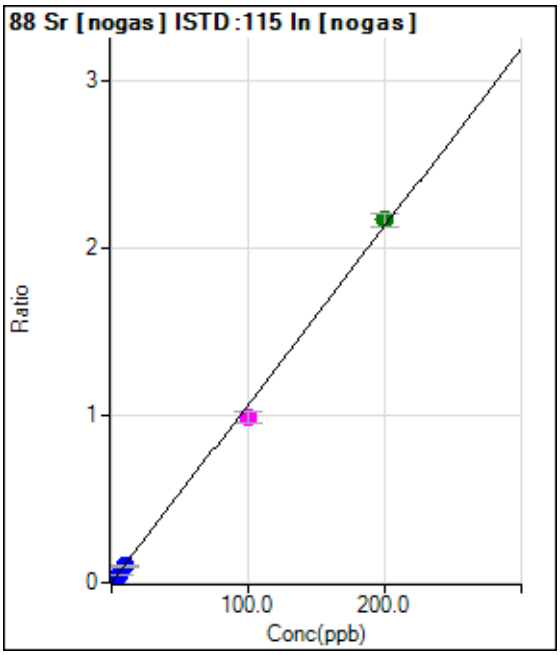
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	83.33	0.0002	P	38.2
2	☐	2.000	0.263	86.67	0.0002	P	37.8
3	☐	5.000	3.821	143.33	0.0004	P	7.6
4	☐	10.000	5.899	173.33	0.0005	P	12.3
5	☐	100.000	97.609	1570.09	0.0044	P	5.6
6	☐	200.000	201.447	3050.31	0.0089	P	9.6
7	☐	1.000					

y = 4.3039E-005 * x + 2.2712E-004
R = 0.9998
DL = 6.046
BEC = 5.277

Weight: <None>
Min Conc: <None>

RIGHT SOLUTIONS | RIGHT PARTNER

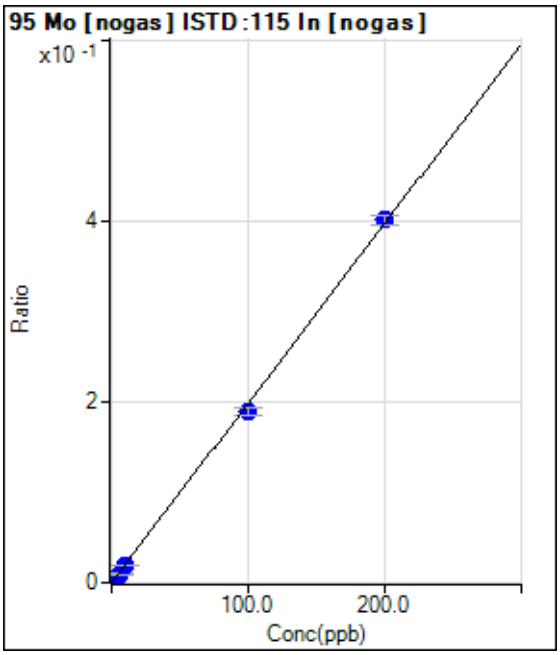
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1476.75	0.0011	P	6.0
2	☐	2.000	1.898	28062.12	0.0213	P	2.6
3	☐	5.000	4.617	68179.58	0.0503	P	3.6
4	☐	10.000	9.100	131750.04	0.0981	P	2.3
5	☐	100.000	92.672	1292665.69	0.9887	M	7.0
6	☐	200.000	203.720	2680580.59	2.1722	A	3.9
7	☐	1.000					

y = 0.0107 * x + 0.0011
R = 0.9991
DL = 0.01832
BEC = 0.1024

Weight: <None>
Min Conc: <None>

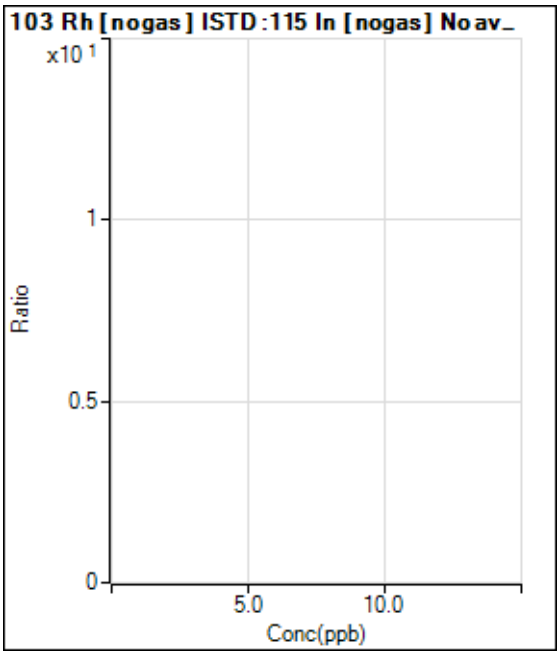


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	70.00	0.0001	P	64.6
2	☐	2.000	1.996	5287.53	0.0040	P	3.8
3	☐	5.000	4.714	12751.43	0.0094	P	8.5
4	☐	10.000	9.424	25204.88	0.0188	P	5.6
5	☐	100.000	95.753	248935.21	0.1903	P	4.2
6	☐	200.000	202.159	495682.52	0.4017	P	2.4
7	☐	1.000					

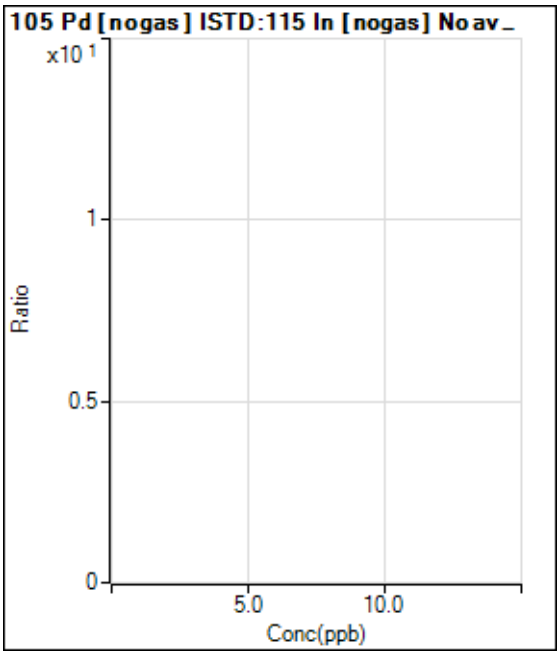
y = 0.0020 * x + 5.1612E-005
R = 0.9997
DL = 0.05037
BEC = 0.02598

Weight: <None>
Min Conc: <None>

RIGHT SOLUTIONS | RIGHT PARTNER

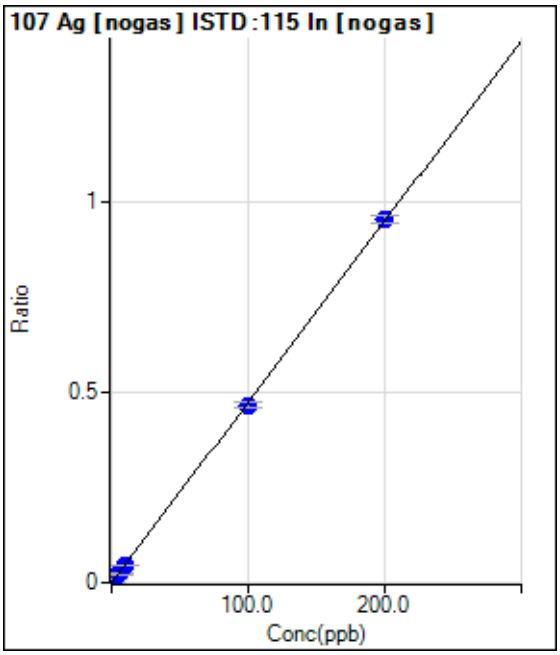


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

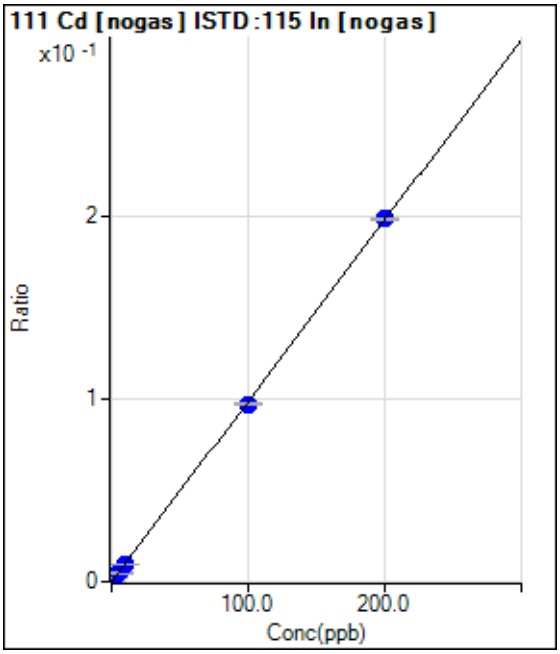
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	476.68	0.0004	P	13.2
2	☐	2.000	1.908	12394.56	0.0094	P	2.4
3	☐	5.000	4.844	31651.93	0.0234	P	5.6
4	☐	10.000	9.355	60149.36	0.0448	P	5.4
5	☐	100.000	98.269	611490.32	0.4672	P	3.3
6	☐	200.000	200.902	1178334.15	0.9548	P	2.3
7	☐	1.000					

y = 0.0048 * x + 3.5180E-004
R = 0.9999
DL = 0.02926
BEC = 0.07405

Weight: <None>
Min Conc: <None>

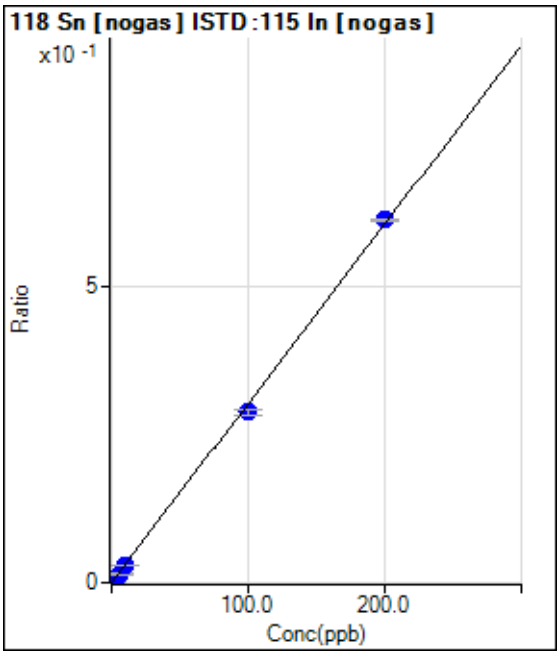


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.33	0.0000	P	42.8
2	☐	2.000	1.925	2510.22	0.0019	P	9.1
3	☐	5.000	4.842	6487.95	0.0048	P	3.9
4	☐	10.000	9.485	12584.67	0.0094	P	3.4
5	☐	100.000	98.327	127025.61	0.0970	P	1.6
6	☐	200.000	200.867	244588.00	0.1982	P	0.8
7	☐	1.000					

y = 9.8657E-004 * x + 9.8390E-006
R = 1.0000
DL = 0.01281
BEC = 0.009973

Weight: <None>
Min Conc: <None>

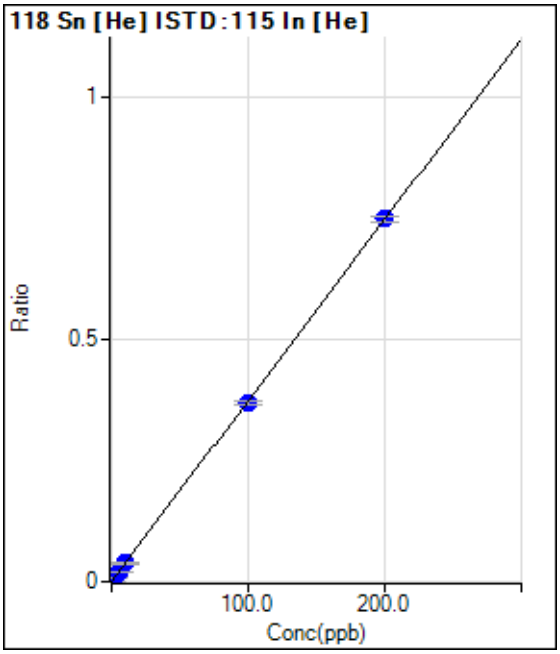
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	530.01	0.0004	P	4.6
2	☐	2.000	1.892	8021.94	0.0061	P	5.7
3	☐	5.000	4.654	19554.46	0.0144	P	5.7
4	☐	10.000	9.341	38388.91	0.0286	P	2.7
5	☐	100.000	94.991	375454.20	0.2869	P	3.7
6	☐	200.000	202.547	754580.30	0.6114	P	0.6
7	☐	1.000					

y = 0.0030 * x + 3.9174E-004
R = 0.9996
DL = 0.01802
BEC = 0.1299

Weight: <None>
Min Conc: <None>

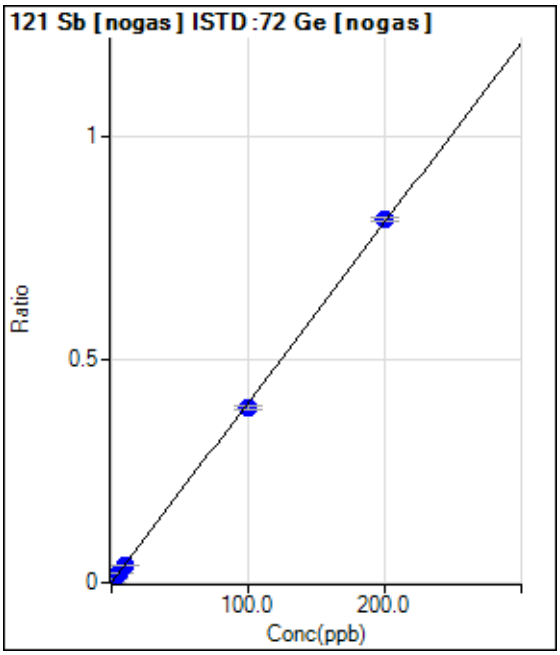


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	273.34	0.0005	P	7.2
2	☐	2.000	2.057	4193.89	0.0082	P	5.8
3	☐	5.000	4.883	9559.40	0.0187	P	3.7
4	☐	10.000	10.078	19247.43	0.0381	P	2.3
5	☐	100.000	98.791	183545.52	0.3684	P	2.0
6	☐	200.000	200.603	366538.81	0.7476	P	1.6
7	☐	1.000					

y = 0.0037 * x + 5.2626E-004
R = 1.0000
DL = 0.03062
BEC = 0.1413

Weight: <None>
Min Conc: <None>

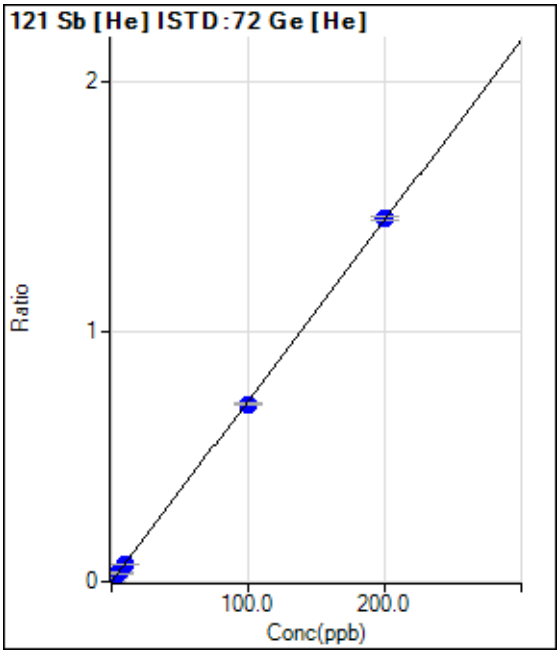
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	480.01	0.0004	P	16.3
2	☐	2.000	2.061	11503.93	0.0087	P	3.1
3	☐	5.000	5.079	27401.72	0.0208	P	1.1
4	☐	10.000	9.758	53130.72	0.0397	P	2.3
5	☐	100.000	96.944	519753.33	0.3911	P	1.8
6	☐	200.000	201.538	1044901.02	0.8127	P	1.2
7	☐	1.000					

y = 0.0040 * x + 3.7055E-004
R = 0.9998
DL = 0.04489
BEC = 0.09193

Weight: <None>
Min Conc: <None>

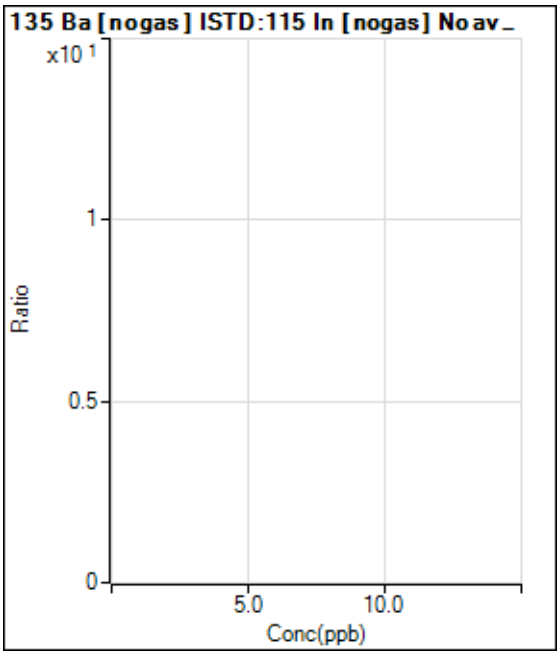


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	270.01	0.0007	P	33.9
2	☐	2.000	1.989	5507.61	0.0151	P	4.6
3	☐	5.000	4.760	12851.56	0.0351	P	4.6
4	☐	10.000	9.851	25912.69	0.0719	P	2.2
5	☐	100.000	98.325	252196.72	0.7111	P	0.5
6	☐	200.000	200.851	497491.51	1.4518	P	1.2
7	☐	1.000					

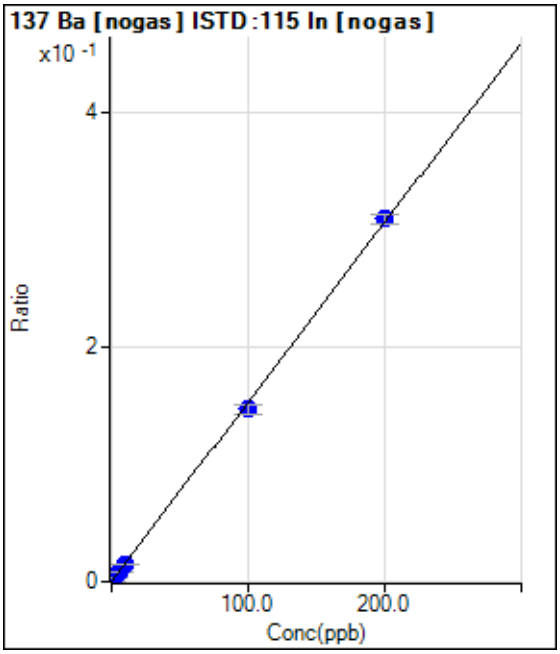
y = 0.0072 * x + 7.3652E-004
R = 1.0000
DL = 0.1036
BEC = 0.1019

Weight: <None>
Min Conc: <None>

Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	326.68	0.0002	P	16.7
2	☐	2.000	1.966	4270.59	0.0032	P	3.3
3	☐	5.000	4.882	10436.63	0.0077	P	4.2
4	☐	10.000	9.219	19237.60	0.0143	P	4.7
5	☐	100.000	95.889	191938.56	0.1467	P	5.1
6	☐	200.000	202.098	381348.04	0.3090	P	2.8
7	☐	1.000					

y = 0.0015 * x + 2.4116E-004

R = 0.9997

DL = 0.07909

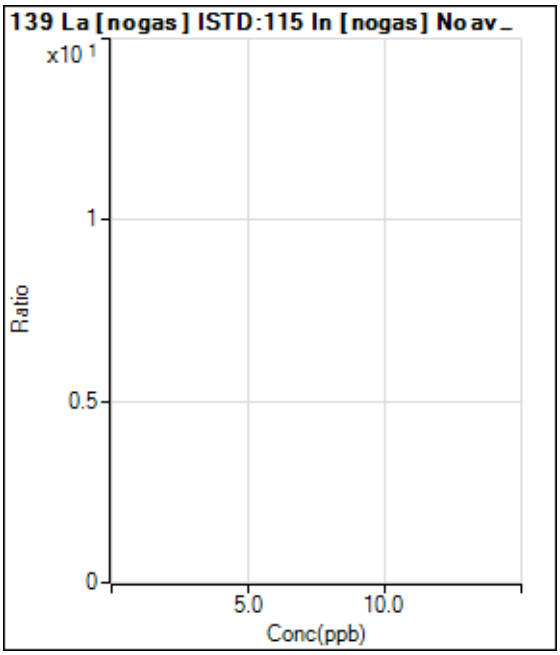
BEC = 0.1578

Weight: <None>

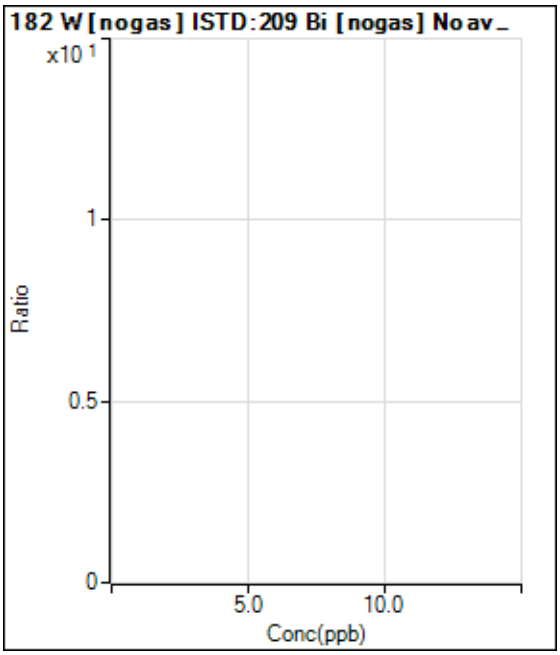
Min Conc: <None>

RIGHT SOLUTIONS | RIGHT PARTNER

Calibration for 026_ICV.d

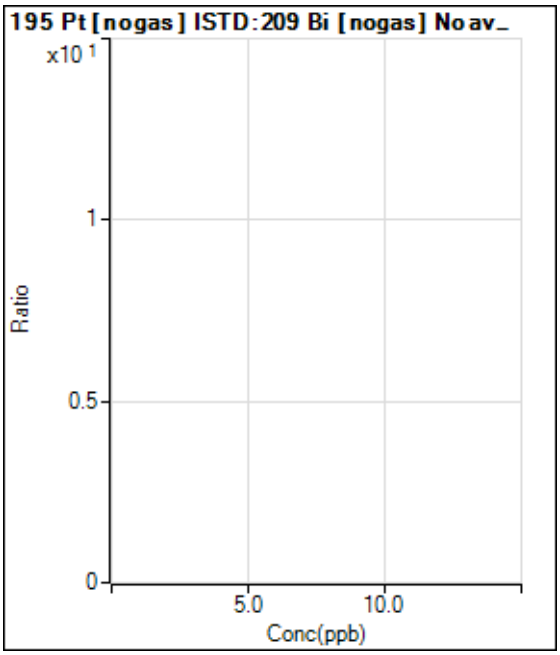


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

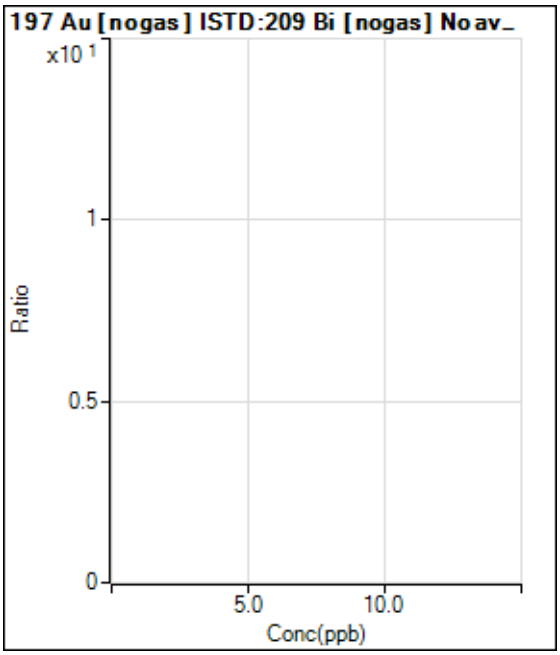


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

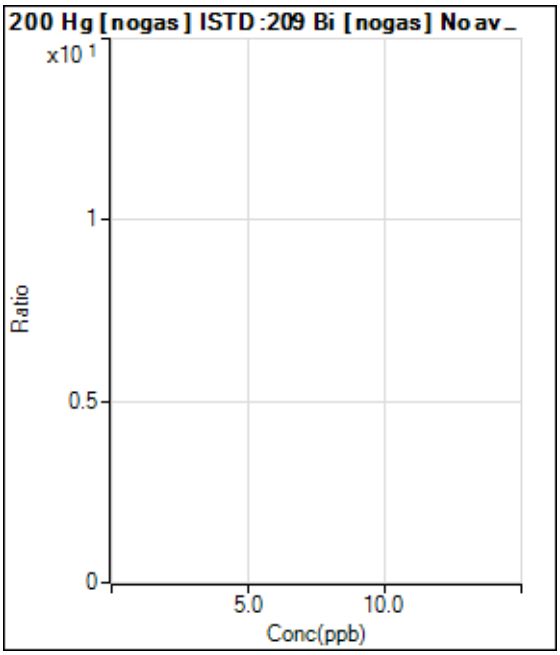
Calibration for 026_ICV.d



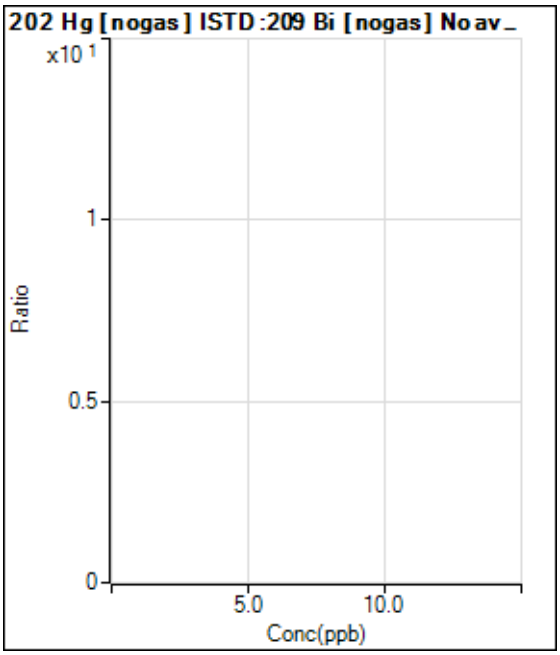
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	2.000					
3	☐	5.000					
4	☐	10.000					
5	☐	100.000					
6	☐	200.000					
7	☐	1.000					

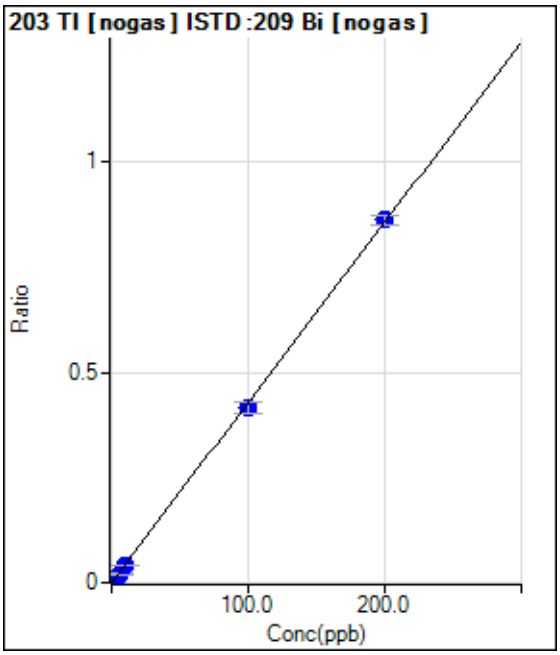


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	0.050					
3	☐	0.200					
4	☐	0.500					
5	☐	2.000					
6	☐	5.000					
7	☐	10.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000					
2	☐	0.050					
3	☐	0.200					
4	☐	0.500					
5	☐	5.000					
6	☐	5.000					
7	☐	10.000					

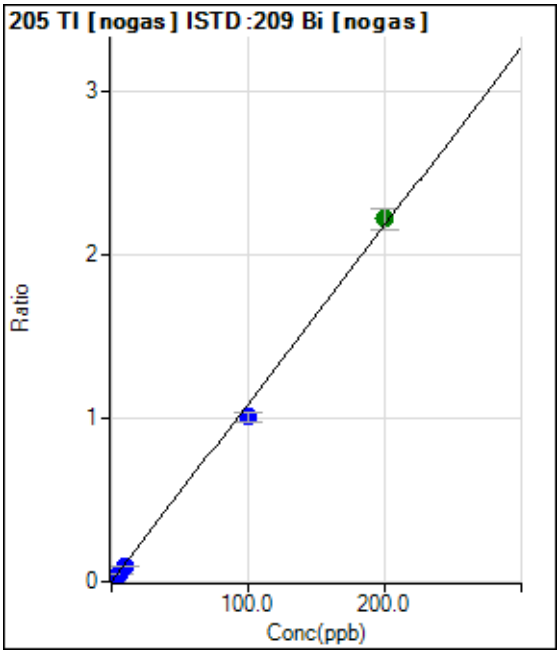
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26.67	0.0000	P	56.6
2	☐	2.000	1.859	8845.88	0.0080	P	4.1
3	☐	5.000	4.794	22595.82	0.0206	P	3.5
4	☐	10.000	9.493	44985.33	0.0407	P	3.6
5	☐	100.000	97.270	442210.98	0.4170	P	6.0
6	☐	200.000	201.397	867149.15	0.8633	P	2.6
7	☐	1.000					

y = 0.0043 * x + 2.4369E-005
R = 0.9999
DL = 0.009646
BEC = 0.005685

Weight: <None>
Min Conc: <None>

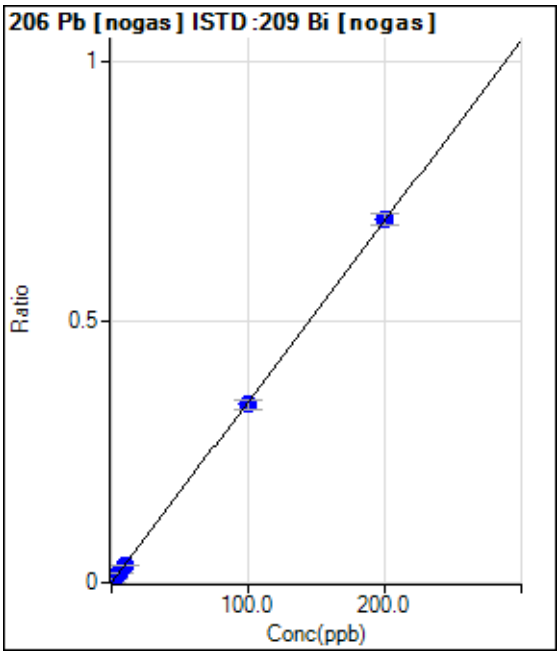


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	73.33	0.0001	P	19.1
2	☐	2.000	1.799	21731.44	0.0196	P	2.6
3	☐	5.000	4.585	54848.74	0.0499	P	2.7
4	☐	10.000	8.769	105459.36	0.0954	P	3.2
5	☐	100.000	92.708	1069638.58	1.0085	P	5.6
6	☐	200.000	203.720	2224773.30	2.2159	A	5.9
7	☐	1.000					

y = 0.0109 * x + 6.6980E-005
R = 0.9991
DL = 0.003527
BEC = 0.006158

Weight: <None>
Min Conc: <None>

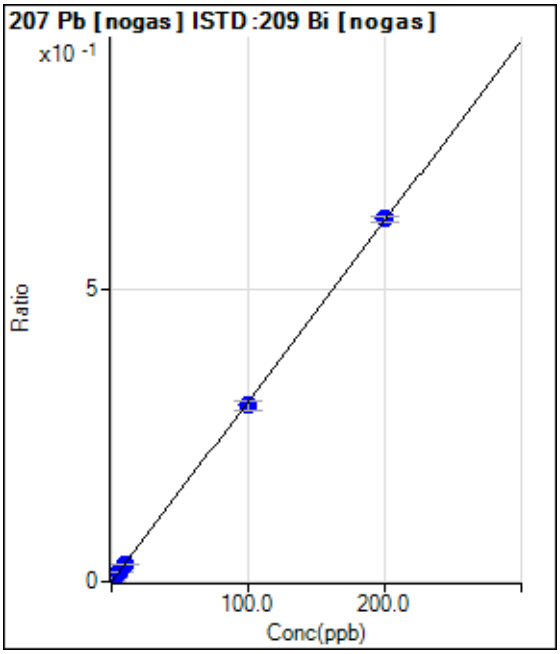
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	73.33	0.0001	P	52.6
2	☐	2.000	1.948	7548.50	0.0068	P	4.4
3	☐	5.000	4.984	19058.01	0.0173	P	2.7
4	☐	10.000	9.436	36230.61	0.0328	P	2.6
5	☐	100.000	98.728	363243.89	0.3424	P	5.1
6	☐	200.000	200.665	698924.36	0.6959	P	3.3
7	☐	1.000					

y = 0.0035 * x + 6.7509E-005
R = 1.0000
DL = 0.03072
BEC = 0.01947

Weight: <None>
Min Conc: <None>

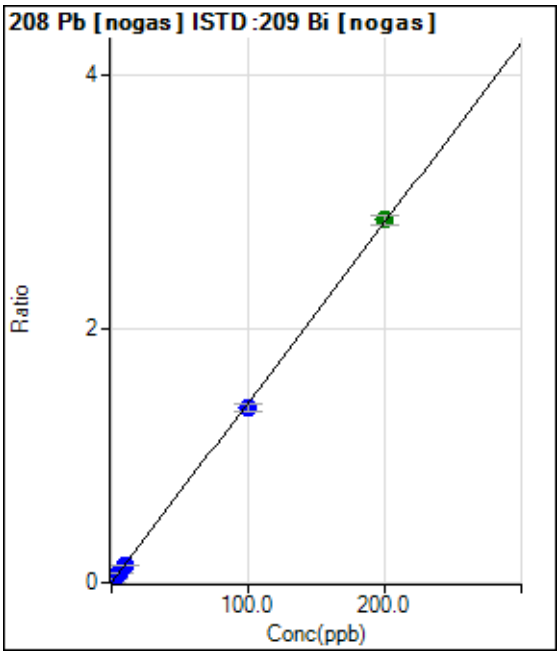


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	103.33	0.0001	P	29.4
2	☐	2.000	1.892	6548.08	0.0059	P	7.4
3	☐	5.000	4.821	16408.45	0.0149	P	1.3
4	☐	10.000	9.472	32332.47	0.0293	P	2.0
5	☐	100.000	97.739	319297.84	0.3010	P	5.4
6	☐	200.000	201.162	622263.98	0.6194	P	1.9
7	☐	1.000					

y = 0.0031 * x + 9.4290E-005
R = 0.9999
DL = 0.02701
BEC = 0.03063

Weight: <None>
Min Conc: <None>

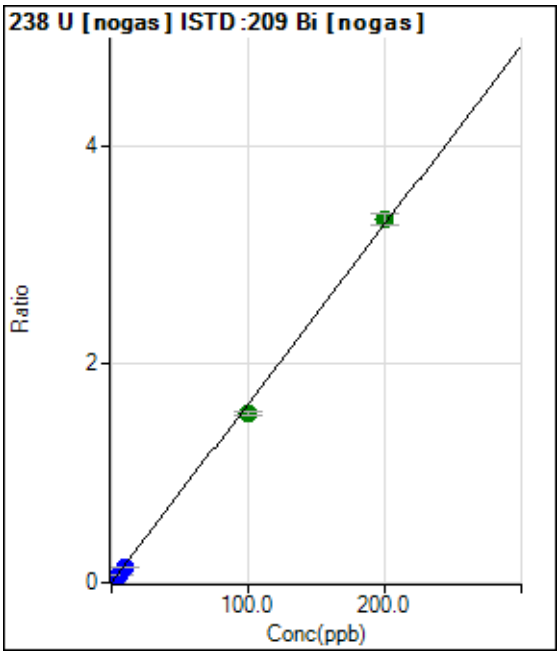
Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	370.00	0.0003	P	21.2
2	☐	2.000	1.878	29857.73	0.0270	P	2.6
3	☐	5.000	4.833	75689.88	0.0689	P	1.6
4	☐	10.000	9.392	147587.42	0.1336	P	2.9
5	☐	100.000	96.986	1460158.65	1.3761	P	4.3
6	☐	200.000	201.543	2872235.61	2.8592	A	2.8
7	☐	1.000					

y = 0.0142 * x + 3.3855E-004
R = 0.9998
DL = 0.01515
BEC = 0.02387

Weight: <None>
Min Conc: <None>

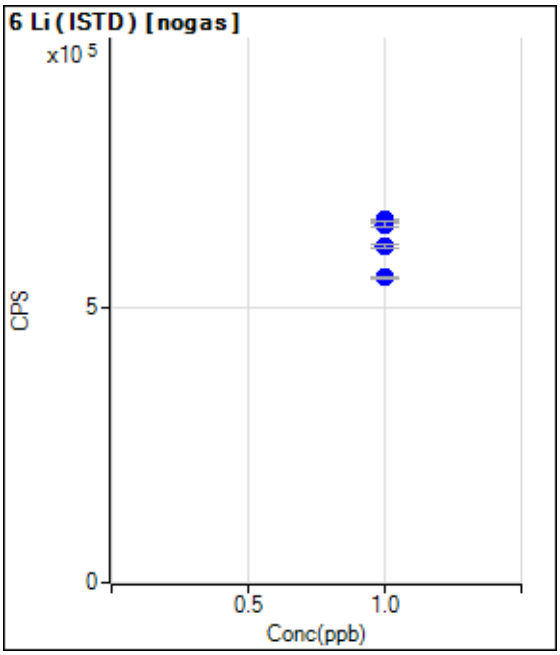


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36.67	0.0000	P	14.4
2	☐	2.000	1.727	31377.98	0.0284	P	1.0
3	☐	5.000	4.464	80443.77	0.0732	P	4.8
4	☐	10.000	8.693	157600.97	0.1426	P	2.1
5	☐	100.000	94.856	1652144.24	1.5558	A	2.6
6	☐	200.000	202.653	3338605.05	3.3239	A	3.1
7	☐	1.000					

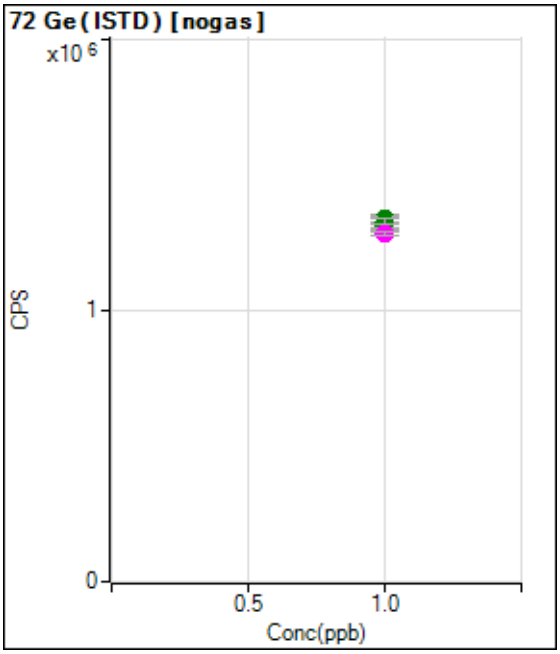
y = 0.0164 * x + 3.3515E-005
R = 0.9996
DL = 0.0008804
BEC = 0.002043

Weight: <None>
Min Conc: <None>

Calibration for 026_ICV.d

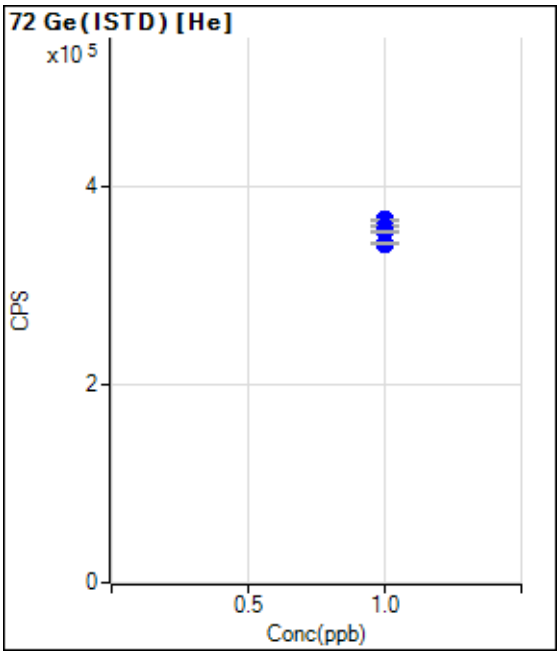


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		656424.75		P	0.5
2	☐	1.000		661166.78		P	0.3
3	☐	1.000		656015.37		P	0.4
4	☐	1.000		653122.97		P	1.4
5	☐	1.000		614042.07		P	1.0
6	☐	1.000		556066.50		P	0.7
7	☐	1.000					

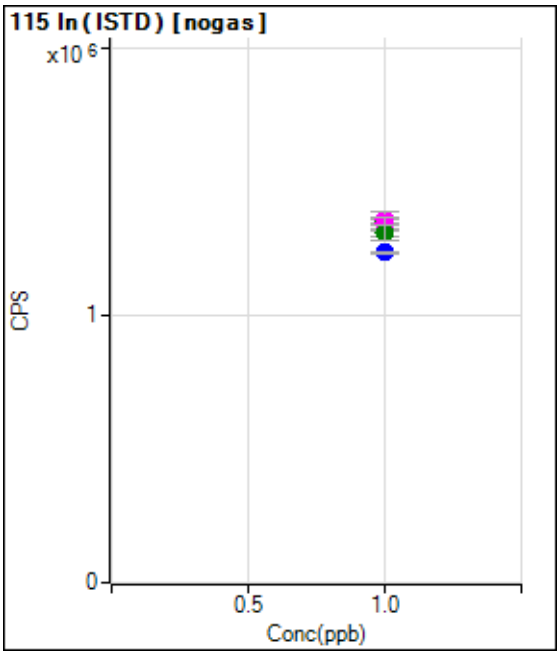


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1296301.91		M	1.0
2	☐	1.000		1326749.72		M	4.4
3	☐	1.000		1314911.54		A	2.0
4	☐	1.000		1338447.22		A	1.3
5	☐	1.000		1329055.71		A	1.7
6	☐	1.000		1285737.14		M	0.9
7	☐	1.000					

Calibration for 026_ICV.d

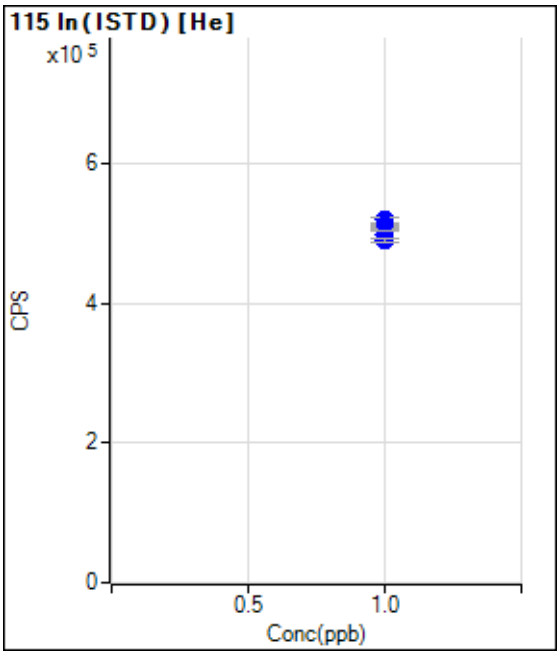


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		366638.38		P	0.6
2	☐	1.000		364495.53		P	1.4
3	☐	1.000		365959.53		P	0.5
4	☐	1.000		360414.84		P	1.0
5	☐	1.000		354659.15		P	0.7
6	☐	1.000		342687.47		P	0.7
7	☐	1.000					

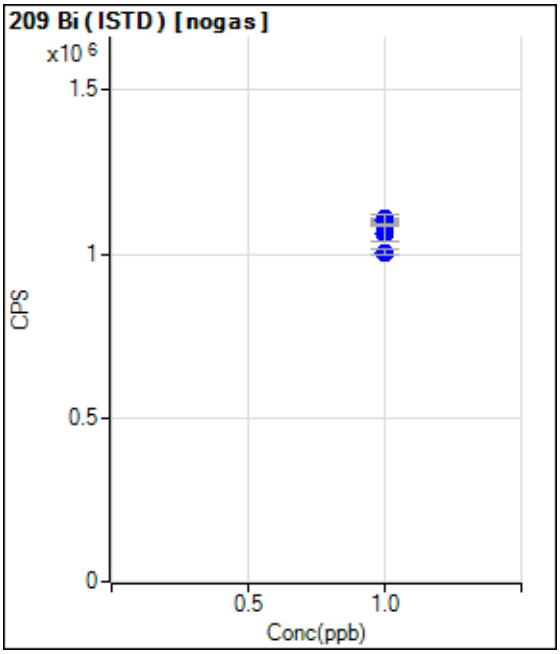


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1353535.16		A	1.3
2	☐	1.000		1316952.75		M	3.4
3	☐	1.000		1356968.79		M	4.6
4	☐	1.000		1344239.57		M	3.7
5	☐	1.000		1309884.21		A	4.4
6	☐	1.000		1234228.41		P	0.9
7	☐	1.000					

Calibration for 026_ICV.d



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		519817.56		P	1.7
2	☐	1.000		511981.06		P	1.1
3	☐	1.000		510821.71		P	0.9
4	☐	1.000		505722.95		P	0.3
5	☐	1.000		498317.05		P	2.3
6	☐	1.000		490337.39		P	1.3
7	☐	1.000					



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1092467.40		P	1.8
2	☐	1.000		1106617.72		P	0.6
3	☐	1.000		1098508.86		P	0.7
4	☐	1.000		1105389.77		P	2.2
5	☐	1.000		1062444.07		P	4.5
6	☐	1.000		1004801.42		P	2.0
7	☐	1.000					

Calibration Blank Report

Sample Table

Sample Name	CAL BLK
Data File Name	019CALB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\051
Acq Date Time	2020-05-11T13:01:40-05:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	57	76.81
B	11	1	nogas	10953	0.03
Al	27	1	nogas	23849	0.01
P	31	1	nogas	60514	0.00
Ca	44	1	nogas	122109	0.00
Ti	47	1	nogas	163	9.43
Cr	52	1	nogas	57001	0.00
Co	59	1	nogas	267	8.24
Cu	63	1	nogas	1570	0.54
Zn	66	1	nogas	2414	0.49
Se	77	1	nogas	31955	0.01
Sr	88	1	nogas	1477	0.40
Mo	95	1	nogas	70	93.52
Ag	107	1	nogas	477	3.00
Cd	111	1	nogas	13	324.76
Sn	118	1	nogas	530	0.62
Sb	121	1	nogas	480	3.28
Ba	137	1	nogas	327	5.33
Tl	205	1	nogas	73	28.40
Pb	208	1	nogas	370	5.80
Li	7	1	nogas	54069	0.00
Si	28	1	nogas	7674929	0.00
Na	23	2	He	26449	0.01
Mg	24	2	He	453	2.93
Al	27	2	He	450	2.26
K	39	2	He	47517	0.01
Ca	43	2	He	7	1299.04
Ca	44	2	He	547	1.65
V	51	2	He	11783	0.03
Cr	52	2	He	763	0.79
Mn	55	2	He	120	27.78
Fe	56	2	He	6134	0.05
Co	59	2	He	87	27.71
Ni	60	2	He	57	95.14
Cu	63	2	He	750	1.55
Zn	66	2	He	983	1.56
As	75	2	He	111	16.28
Sb	121	2	He	270	12.57

Calibration Blank Report

Se	78	2	He	34	89.90

Calibration Blank Report

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Ge	72	1	nogas	1296302	1.04
In	115	1	nogas	1353535	1.34
Li	6	1	nogas	656425	0.46
Bi	209	1	nogas	1092467	1.77
Ge	72	2	He	366638	0.63
In	115	2	He	519818	1.70

Calibration Standard Report

Sample Table

Sample Name	2/10/200
Data File Name	020CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\051
Acq Date Time	2020-05-11T13:04:05-05:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	6511	0.01
B	11	1	nogas	28681	0.01
Al	27	1	nogas	45007	0.00
P	31	1	nogas	65664	0.00
Ca	44	1	nogas	174070	0.00
Ti	47	1	nogas	1757	0.49
Cr	52	1	nogas	75349	0.00
Co	59	1	nogas	21733	0.01
Cu	63	1	nogas	12401	0.01
Zn	66	1	nogas	5651	0.09
Se	77	1	nogas	33391	0.01
Se	82	1	nogas	69	118.74
Sr	88	1	nogas	28062	0.00
Mo	95	1	nogas	5288	0.06
Ag	107	1	nogas	12395	0.01
Cd	111	1	nogas	2510	0.29
Sn	118	1	nogas	8022	0.03
Sb	121	1	nogas	11504	0.01
Ba	137	1	nogas	4271	0.06
Tl	205	1	nogas	21731	0.01
Pb	208	1	nogas	29858	0.01
Si	28	1	nogas	7861975	0.00
Na	23	2	He	185356	0.00
Mg	24	2	He	89122	0.00
Al	27	2	He	1023	0.77
K	39	2	He	115469	0.00
Ca	43	2	He	243	6.83
Ca	44	2	He	4214	0.14
V	51	2	He	17784	0.01
Cr	52	2	He	7798	0.03
Mn	55	2	He	4781	0.13
Fe	56	2	He	609059	0.00
Co	59	2	He	10597	0.02
Ni	60	2	He	2834	0.15
Cu	63	2	He	7902	0.03
Zn	66	2	He	2254	0.15

Calibration Standard Report

As	75	2	He	964	0.25
Sb	121	2	He	5508	0.10
Se	78	2	He	119	9.46

Calibration Standard Report

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1326750	4.38	1296302	102.35	70	120	
In	115	1	nogas	1316953	3.37	1353535	97.30	70	120	
Li	6	1	nogas	661167	0.33	656425	100.72	70	120	
Bi	209	1	nogas	1106618	0.63	1092467	101.30	70	120	
Ge	72	2	He	364496	1.44	366638	99.42	70	120	
In	115	2	He	511981	1.12	519818	98.49	70	120	

Calibration Standard Report

Sample Table

Sample Name	5/25/500
Data File Name	021CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\051
Acq Date Time	2020-05-11T13:06:29-05:00
Sample Type	CalStd
Level	3
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	16434	0.01
B	11	1	nogas	56350	0.00
Al	27	1	nogas	73428	0.00
P	31	1	nogas	70638	0.00
Ca	44	1	nogas	261528	0.00
Ti	47	1	nogas	4421	0.14
Cr	52	1	nogas	106303	0.00
Co	59	1	nogas	53682	0.01
Cu	63	1	nogas	29567	0.00
Zn	66	1	nogas	10123	0.04
Se	77	1	nogas	32800	0.01
Se	82	1	nogas	389	12.28
Sr	88	1	nogas	68180	0.00
Mo	95	1	nogas	12751	0.05
Ag	107	1	nogas	31652	0.00
Cd	111	1	nogas	6488	0.02
Sn	118	1	nogas	19554	0.02
Sb	121	1	nogas	27402	0.01
Ba	137	1	nogas	10437	0.01
Tl	205	1	nogas	54849	0.00
Pb	208	1	nogas	75690	0.00
Si	28	1	nogas	7837752	0.00
Na	23	2	He	422659	0.00
Mg	24	2	He	222800	0.00
Al	27	2	He	1660	0.98
K	39	2	He	217879	0.00
Ca	43	2	He	610	2.56
Ca	44	2	He	9192	0.01
V	51	2	He	27008	0.00
Cr	52	2	He	18990	0.01
Mn	55	2	He	11624	0.01
Fe	56	2	He	1605567	0.00
Co	59	2	He	25708	0.00
Ni	60	2	He	6635	0.05
Cu	63	2	He	18183	0.02
Zn	66	2	He	4134	0.16

Calibration Standard Report

As	75	2	He	2248	0.08
Sb	121	2	He	12852	0.03
Se	78	2	He	202	5.12

Calibration Standard Report

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1314912	1.97	1296302	101.44	70	120	
In	115	1	nogas	1356969	4.63	1353535	100.25	70	120	
Li	6	1	nogas	656015	0.43	656425	99.94	70	120	
Bi	209	1	nogas	1098509	0.67	1092467	100.55	70	120	
Ge	72	2	He	365960	0.54	366638	99.81	70	120	
In	115	2	He	510822	0.94	519818	98.27	70	120	

Calibration Standard Report

Sample Table

Sample Name	10/50/1000
Data File Name	022CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\051
Acq Date Time	2020-05-11T13:08:51-05:00
Sample Type	CalStd
Level	4
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	31516	0.00
B	11	1	nogas	101623	0.00
Al	27	1	nogas	121283	0.00
P	31	1	nogas	86212	0.00
Ca	44	1	nogas	392719	0.00
Ti	47	1	nogas	8392	0.08
Cr	52	1	nogas	158124	0.00
Co	59	1	nogas	103918	0.00
Cu	63	1	nogas	54818	0.00
Zn	66	1	nogas	17182	0.02
Se	77	1	nogas	33785	0.01
Se	82	1	nogas	929	1.18
Sr	88	1	nogas	131750	0.00
Mo	95	1	nogas	25205	0.01
Ag	107	1	nogas	60149	0.00
Cd	111	1	nogas	12585	0.02
Sn	118	1	nogas	38389	0.01
Sb	121	1	nogas	53131	0.00
Ba	137	1	nogas	19238	0.01
Tl	205	1	nogas	105459	0.00
Pb	208	1	nogas	147587	0.00
Si	28	1	nogas	8144313	0.00
Na	23	2	He	800883	0.00
Mg	24	2	He	422929	0.00
Al	27	2	He	2787	0.18
K	39	2	He	376121	0.00
Ca	43	2	He	897	2.38
Ca	44	2	He	17619	0.02
V	51	2	He	39722	0.00
Cr	52	2	He	35919	0.01
Mn	55	2	He	22831	0.01
Fe	56	2	He	3107540	0.00
Co	59	2	He	51379	0.00
Ni	60	2	He	13061	0.03
Cu	63	2	He	34065	0.01
Zn	66	2	He	6745	0.07

Calibration Standard Report

As	75	2	He	4086	0.02
Sb	121	2	He	25913	0.00
Se	78	2	He	324	2.20

Calibration Standard Report

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1338447	1.31	1296302	103.25	70	120	
In	115	1	nogas	1344240	3.74	1353535	99.31	70	120	
Li	6	1	nogas	653123	1.43	656425	99.50	70	120	
Bi	209	1	nogas	1105390	2.17	1092467	101.18	70	120	
Ge	72	2	He	360415	0.96	366638	98.30	70	120	
In	115	2	He	505723	0.29	519818	97.29	70	120	

Calibration Standard Report

Sample Table

Sample Name	100/500/10K
Data File Name	023CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\051
Acq Date Time	2020-05-11T13:11:13-05:00
Sample Type	CalStd
Level	5
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	318308	0.00
B	11	1	nogas	918910	0.00
Al	27	1	nogas	937146	0.00
P	31	1	nogas	296159	0.00
Ca	44	1	nogas	2904993	0.00
Ti	47	1	nogas	82168	0.00
Cr	52	1	nogas	1038323	0.00
Co	59	1	nogas	1008773	0.00
Cu	63	1	nogas	522460	0.00
Zn	66	1	nogas	149324	0.00
Se	77	1	nogas	37332	0.01
Se	82	1	nogas	8772	0.05
Sr	88	1	nogas	1292666	0.00
Mo	95	1	nogas	248935	0.00
Ag	107	1	nogas	611490	0.00
Cd	111	1	nogas	127026	0.00
Sn	118	1	nogas	375454	0.00
Sb	121	1	nogas	519753	0.00
Ba	137	1	nogas	191939	0.00
Tl	205	1	nogas	1069639	0.00
Pb	208	1	nogas	1460159	0.00
Si	28	1	nogas	9866207	0.00
Na	23	2	He	7954069	0.00
Mg	24	2	He	4369920	0.00
Al	27	2	He	20628	0.02
K	39	2	He	3429922	0.00
Ca	43	2	He	9979	0.04
Ca	44	2	He	170822	0.00
V	51	2	He	307198	0.00
Cr	52	2	He	350962	0.00
Mn	55	2	He	223439	0.00
Fe	56	2	He	30681818	0.00
Co	59	2	He	503983	0.00
Ni	60	2	He	127943	0.00
Cu	63	2	He	331182	0.00
Zn	66	2	He	61757	0.01

Calibration Standard Report

As	75	2	He	41118	0.00
Sb	121	2	He	252197	0.00
Se	78	2	He	3016	0.07

Calibration Standard Report

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1329056	1.72	1296302	102.53	70	120	
In	115	1	nogas	1309884	4.44	1353535	96.78	70	120	
Li	6	1	nogas	614042	1.05	656425	93.54	70	120	
Bi	209	1	nogas	1062444	4.46	1092467	97.25	70	120	
Ge	72	2	He	354659	0.66	366638	96.73	70	120	
In	115	2	He	498317	2.26	519818	95.86	70	120	

Calibration Standard Report

Sample Table

Sample Name	200/1000/20K
Data File Name	024CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\051
Acq Date Time	2020-05-11T13:13:35-05:00
Sample Type	CalStd
Level	6
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Be	9	1	nogas	618966	0.00
B	11	1	nogas	1817222	0.00
Al	27	1	nogas	1861960	0.00
P	31	1	nogas	522341	0.00
Ca	44	1	nogas	5520910	0.00
Ti	47	1	nogas	160509	0.00
Cr	52	1	nogas	2134584	0.00
Co	59	1	nogas	1969208	0.00
Cu	63	1	nogas	1007098	0.00
Zn	66	1	nogas	292454	0.00
Se	77	1	nogas	45183	0.01
Se	82	1	nogas	17172	0.02
Sr	88	1	nogas	2680581	0.00
Mo	95	1	nogas	495683	0.00
Ag	107	1	nogas	1178334	0.00
Cd	111	1	nogas	244588	0.00
Sn	118	1	nogas	754580	0.00
Sb	121	1	nogas	1044901	0.00
Ba	137	1	nogas	381348	0.00
Tl	205	1	nogas	2224773	0.00
Pb	208	1	nogas	2872236	0.00
Si	28	1	nogas	11916019	0.00
Na	23	2	He	15416881	0.00
Mg	24	2	He	8398589	0.00
Al	27	2	He	41242	0.01
K	39	2	He	6584505	0.00
Ca	43	2	He	20008	0.01
Ca	44	2	He	336639	0.00
V	51	2	He	599782	0.00
Cr	52	2	He	676343	0.00
Mn	55	2	He	430626	0.00
Fe	56	2	He	59488177	0.00
Co	59	2	He	972959	0.00
Ni	60	2	He	246056	0.00
Cu	63	2	He	635281	0.00
Zn	66	2	He	119457	0.00

Calibration Standard Report

As	75	2	He	79994	0.00
Sb	121	2	He	497492	0.00
Se	78	2	He	6009	0.06

Calibration Standard Report

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1285737	0.88	1296302	99.19	70	120	
In	115	1	nogas	1234228	0.93	1353535	91.19	70	120	
Li	6	1	nogas	556066	0.69	656425	84.71	70	120	
Bi	209	1	nogas	1004801	2.03	1092467	91.98	70	120	
Ge	72	2	He	342687	0.72	366638	93.47	70	120	
In	115	2	He	490337	1.25	519818	94.33	70	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV
Data File Name	026_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\051
Acq Date Time	2020-05-11T13:18:43-05:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	nogas	101.812	1.200	329229	0.10	100	101.8	90	110	
B	11	1	nogas	515.706	2.118	979773	2.20	500	103.1	90	110	
Al	27	1	nogas	103.945	0.688	953653	0.84	100	103.9	90	110	
P	31	1	nogas	555.551	0.684	309935	0.67	500	111.1	90	110	ICV Main CR1 Failed
Ca	44	1	nogas	10470.133	0.945	2890965	1.32	10000	104.7	90	110	
Ti	47	1	nogas	104.759	0.781	82422	1.22	100	104.8	90	110	
Cr	52	1	nogas	98.122	0.620	1038419	0.15	100	98.1	90	110	
Co	59	1	nogas	107.312	1.925	1035248	1.60	100	107.3	90	110	
Cu	63	1	nogas	109.745	0.588	543387	0.58	100	109.7	90	110	
Zn	66	1	nogas	106.725	2.330	153648	2.33	100	106.7	90	110	
Se	77	1	nogas	39.647	30.828	33551	1.88	100	39.6	90	110	ICV Main CR1 Failed
Se	82	1	nogas	107.981	4.515	9042	4.13	100	108.0	90	110	
Sr	88	1	nogas	95.365	1.323	1306260	1.02	100	95.4	90	110	
Mo	95	1	nogas	98.421	4.067	250992	1.92	100	98.4	90	110	
Ag	107	1	nogas	100.928	4.129	615840	2.02	100	100.9	90	110	
Cd	111	1	nogas	100.499	3.439	127270	1.28	100	100.5	90	110	
Sn	118	1	nogas	98.545	2.484	382115	1.16	100	98.5	90	110	
Sb	121	1	nogas	110.637	1.168	563159	0.75	100	110.6	90	110	ICV Main CR1 Failed
Ba	137	1	nogas	102.150	3.120	200639	1.01	100	102.1	90	110	
Tl	205	1	nogas	98.122	3.500	1130410	1.71	100	98.1	90	110	
Pb	208	1	nogas	99.838	2.216	1500466	0.13	100	99.8	90	110	
U	238	1	nogas	95.239	3.767	1654675	3.05	100	95.2	90	110	
Li	7	1	nogas	97.445	1.162	1000417	0.21	100	97.4	90	110	
Si	28	1	nogas	8571.450	5.783	11017264	2.05	5000	171.4	90	110	ICV Main CR1 Failed
Tl	203	1	nogas	102.885	3.217	467099	1.26	100	102.9	90	110	
Na	23	2	He	10021.784	1.567	7883236	0.61	10000	100.2	90	110	
Mg	24	2	He	10180.895	0.954	4365057	1.21	10000	101.8	90	110	
Al	27	2	He	104.355	1.912	21966	0.87	100	104.4	90	110	
K	39	2	He	10406.166	1.883	3515110	0.53	10000	104.1	90	110	
Ca	43	2	He	10550.743	3.362	10683	1.32	10000	105.5	90	110	
Ca	44	2	He	10122.537	4.111	173224	2.25	10000	101.2	90	110	
V	51	2	He	99.704	3.513	308695	1.46	100	99.7	90	110	
Cr	52	2	He	100.450	3.763	346794	1.65	100	100.4	90	110	
Mn	55	2	He	102.633	2.745	225509	0.79	100	102.6	90	110	
Fe	56	2	He	10068.576	1.336	30528393	1.21	10000	100.7	90	110	
Co	59	2	He	103.268	0.893	512543	1.28	100	103.3	90	110	
Ni	60	2	He	104.158	1.623	130833	0.89	100	104.2	90	110	
Cu	63	2	He	107.169	2.446	347907	1.14	100	107.2	90	110	
Zn	66	2	He	102.500	2.470	62774	1.89	100	102.5	90	110	
As	75	2	He	106.199	2.271	43290	0.72	100	106.2	90	110	
Sn	118	2	He	100.088	1.815	185108	1.46	100	100.1	90	110	
Sb	121	2	He	105.239	2.858	265930	1.06	100	105.2	90	110	
Se	78	2	He	104.463	4.270	3192	2.90	100	104.5	90	110	
Ti	47	2	He	103.296	2.362	10403	1.13	100	103.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1261860	0.44	1296302	97.34	70	120	
In	115	1	nogas	1284131	2.20	1353535	94.87	70	120	
Li	6	1	nogas	589262	1.12	656425	89.77	70	120	
Bi	209	1	nogas	1059579	2.13	1092467	96.99	70	120	
Ge	72	2	He	349556	2.08	366638	95.34	70	120	

Initial Calibration Verification (ICV) Report

In	115	2	He	495978	1.42	519818	95.41	70	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB
Data File Name	029_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\051
Acq Date Time	2020-05-11T13:25:51-05:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.009	31.3	88	11.8	1	
B	11	1	nogas	5.971	11.4	23531	5.6	10	
Al	27	1	nogas	-0.460	-17.7	20388	3.2	5	
P	31	1	nogas	-5.429	-52.0	60299	3.0	10	
Ca	44	1	nogas	-83.968	-3.9	103185	2.6	100	
Ti	47	1	nogas	0.040	62.8	203	10.2	2.5	
Cr	52	1	nogas	-1.205	-11.4	46338	1.4	2.5	
Co	59	1	nogas	0.001	120.0	287	5.3	2.5	
Cu	63	1	nogas	-0.053	-8.6	1353	3.3	1	
Zn	66	1	nogas	-0.594	-8.6	1610	4.5	2.5	
Se	77	1	nogas	-67.181	-30.7	28777	3.9	2.5	
Se	82	1	nogas	0.561	105.0	-64	-81.0	1	
Sr	88	1	nogas	0.006	103.2	1550	5.7	2.5	
Mo	95	1	nogas	0.027	25.6	140	12.4	2.5	
Ag	107	1	nogas	-0.059	-4.3	97	15.8	2.5	
Cd	111	1	nogas	0.003	166.2	17	34.6	1	
Sn	118	1	nogas	0.152	17.0	1137	8.1	5	
Sb	121	1	nogas	0.117	24.9	1133	12.4	2.5	
Ba	137	1	nogas	-0.039	-32.7	243	10.3	2.5	
Tl	205	1	nogas	0.034	31.3	477	28.3	1	
Pb	208	1	nogas	0.011	89.8	543	26.9	2.5	
U	238	1	nogas	0.012	16.4	247	15.3	2.5	
Si	28	1	nogas	-1015.009	-41.4	7528164	0.7	5	
Na	23	2	He	3.029	25.0	28231	2.9	100	
Mg	24	2	He	0.260	25.3	557	5.5	100	
Al	27	2	He	0.388	153.6	520	23.3	5	
K	39	2	He	2.779	115.5	47290	1.5	100	
Ca	43	2	He	16.271	34.1	23	24.7	100	
Ca	44	2	He	-4.391	-48.5	457	8.3	100	
V	51	2	He	-1.698	-4.0	6310	3.8	2.5	
Cr	52	2	He	-0.007	-638.0	720	21.7	2.5	
Mn	55	2	He	0.004	253.1	127	19.9	2.5	
Fe	56	2	He	-0.036	-289.5	5871	4.7	100	
Co	59	2	He	0.010	97.6	133	35.4	2.5	
Ni	60	2	He	-0.001	-1340.6	53	43.3	2.5	
Cu	63	2	He	-0.005	-358.6	717	7.9	1	

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Initial Calibration Blank (ICB) Report

Zn	66	2	He	-0.345	-28.0	747	8.9	2.5	
As	75	2	He	0.009	704.1	112	24.0	2.5	
Sb	121	2	He	0.108	34.1	543	17.9	2.5	
Se	78	2	He	0.090	254.4	36	20.0	1	
Ti	47	2	He	-0.095	0.0	0	#DIV/0!	2.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1347494	1.77	1296302	103.95	70	120	
In	115	1	nogas	1336307	1.10	1353535	98.73	70	120	
Li	6	1	nogas	658464	0.91	656425	100.31	70	120	
Bi	209	1	nogas	1094482	2.05	1092467	100.18	70	120	
Ge	72	2	He	357611	0.94	366638	97.54	70	120	
In	115	2	He	511416	0.94	519818	98.38	70	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	ICSA
Data File Name	031ICSA.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\051
Acq Date Time	2020-05-11T13:31:02-05:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Upper Limit	QC Flag
Be	9	1	nogas	0.001	299.9	53	14.3	0	ICSA Main CR1 Failed
B	11	1	nogas	3.884	4.9	17114	1.8	0	ICSA Main CR1 Failed
Al	27	1	nogas	86275.182	2.8	765507109	0.1	0	
P	31	1	nogas	89160.815	2.0	39996839	0.9	0	
Ca	44	1	nogas	92641.475	2.4	24432665	1.0	0	
Ti	47	1	nogas	2041.422	3.2	1588993	0.3	0	
Cr	52	1	nogas	0.427	33.6	59251	2.6	0	ICSA Main CR1 Failed
Co	59	1	nogas	0.481	7.7	4851	5.2	0	ICSA Main CR1 Failed
Cu	63	1	nogas	3.161	10.3	17002	10.2	0	
Zn	66	1	nogas	1.718	22.4	4741	10.0	0	ICSA Main CR1 Failed
Se	77	1	nogas	-59.907	-63.3	27148	6.7	0	ICSA Main CR1 Failed
Se	82	1	nogas	-0.113	-1026.5	-115	-83.6	0	ICSA Main CR1 Failed
Sr	88	1	nogas	0.825	5.3	11364	3.3	0	ICSA Main CR1 Failed
Mo	95	1	nogas	2000.365	4.0	4570178	1.7	0	
Ag	107	1	nogas	-0.047	-14.1	147	27.6	0	ICSA Main CR1 Failed
Cd	111	1	nogas	3.842	5.5	4377	8.1	0	
Sn	118	1	nogas	0.126	37.2	887	16.1	0	ICSA Main CR1 Failed
Sb	121	1	nogas	0.108	24.1	1007	10.4	0	ICSA Main CR1 Failed
Ba	137	1	nogas	0.005	248.7	287	5.3	0	ICSA Main CR1 Failed
Tl	205	1	nogas	0.025	13.8	317	10.2	0	ICSA Main CR1 Failed
Pb	208	1	nogas	0.052	15.3	1013	11.9	0	ICSA Main CR1 Failed
Si	28	1	nogas	-415.179	-111.8	7236682	1.6	0	ICSA Main CR1 Failed
Na	23	2	He	96733.850	0.8	70617252	1.0	0	
Mg	24	2	He	95618.753	1.9	38149555	2.0	0	
Al	27	2	He	92797.817	1.3	17826361	1.5	0	
K	39	2	He	97611.750	0.5	30335544	0.5	0	
Ca	43	2	He	94002.973	0.9	88566	1.3	0	
Ca	44	2	He	97893.717	1.4	1555376	0.8	0	
V	51	2	He	-1.931	-3.1	5090	2.6	0	ICSA Main CR1 Failed
Cr	52	2	He	0.914	5.4	3610	4.9	0	ICSA Main CR1 Failed
Mn	55	2	He	0.254	7.2	627	6.4	0	ICSA Main CR1 Failed
Fe	56	2	He	94837.758	0.2	267569649	0.6	0	
Co	59	2	He	0.182	2.7	917	2.7	0	ICSA Main CR1 Failed
Ni	60	2	He	0.219	4.7	307	3.8	0	ICSA Main CR1 Failed
Cu	63	2	He	0.499	16.7	2170	11.8	0	ICSA Main CR1 Failed
Zn	66	2	He	0.505	35.4	1157	9.1	0	ICSA Main CR1 Failed
As	75	2	He	0.148	33.9	154	11.9	0	ICSA Main CR1 Failed
Sb	121	2	He	0.138	19.4	563	11.8	0	ICSA Main CR1 Failed
Se	78	2	He	0.445	123.2	43	35.8	0	ICSA Main CR1 Failed
Ti	47	2	He	1983.487	0.3	185775	0.9	0	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1251476	2.96	1296302	96.54	70	120	

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Interference Check Solution A (ICS-A) Report

In	115	1	nogas	1150903	3.09	1353535	85.03	70	120	
Li	6	1	nogas	588487	0.51	656425	89.65	70	120	
Bi	209	1	nogas	941780	1.59	1092467	86.21	70	120	
Ge	72	2	He	325271	0.69	366638	88.72	70	120	
In	115	2	He	457482	0.93	519818	88.01	70	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	ICSAB
Data File Name	032ICSB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\051
Acq Date Time	2020-05-11T13:33:22-05:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	019CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	Conc %RSD	CPS	CPS %RSD	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	nogas	101.234	0.970	312850	0.31	100	101.2	80	120	
B	11	1	nogas	493.267	0.856	895961	0.49	100	493.3	80	120	
Al	27	1	nogas	85516.461	1.729	767233695	0.65	100	85516.5	80	120	ICSB Main CR1 Failed
Ca	44	1	nogas	101105.553	5.474	26936431	3.75	100	101105.6	80	120	
Ti	47	1	nogas	2146.723	6.201	1688755	4.40	100	2146.7	80	120	
Cr	52	1	nogas	93.343	4.861	992412	2.49	100	93.3	80	120	
Co	59	1	nogas	99.351	1.348	960743	0.94	100	99.4	80	120	
Cu	63	1	nogas	103.190	1.651	512225	1.56	100	103.2	80	120	
Zn	66	1	nogas	103.853	2.350	149910	1.22	100	103.9	80	120	
Se	77	1	nogas	88.288	45.312	36614	4.63	100	88.3	80	120	ICSB Main CR1 Failed
Se	82	1	nogas	98.364	2.338	8247	1.11	100	98.4	80	120	
Sr	88	1	nogas	112.570	0.484	1336385	0.45	100	112.6	80	120	
Mo	95	1	nogas	2238.520	0.700	4949312	0.88	100	2238.5	80	120	ICSB Main CR1 Failed
Ag	107	1	nogas	105.875	1.579	560246	2.05	100	105.9	80	120	
Cd	111	1	nogas	112.957	3.111	124038	3.19	100	113.0	80	120	
Sn	118	1	nogas	108.220	1.812	363745	1.45	100	108.2	80	120	
Sb	121	1	nogas	102.687	1.941	523965	1.75	100	102.7	80	120	
Ba	137	1	nogas	114.197	1.212	194449	0.85	100	114.2	80	120	
Tl	205	1	nogas	100.108	6.546	1016520	3.43	100	100.1	80	120	
Pb	208	1	nogas	104.779	4.905	1388270	1.79	100	104.8	80	120	
U	238	1	nogas	110.384	4.742	1691648	4.11	100	110.4	80	120	
Si	28	1	nogas	4564.946	20.525	9378257	2.31	100	4564.9	80	120	ICSB Main CR1 Failed
Na	23	2	He	106301.340	3.343	78556502	1.73	100	106301.3	80	120	
Mg	24	2	He	105817.527	3.270	42739368	1.58	100	105817.5	80	120	
Al	27	2	He	91514.230	2.041	17798943	0.34	100	91514.2	80	120	ICSB Main CR1 Failed
K	39	2	He	106960.780	2.287	33651177	0.60	100	106960.8	80	120	
Ca	43	2	He	105385.171	1.114	100549	2.04	100	105385.2	80	120	
Ca	44	2	He	109306.821	4.528	1758027	3.15	100	109306.8	80	120	
V	51	2	He	106.620	0.897	310454	0.97	100	106.6	80	120	
Cr	52	2	He	104.828	1.274	341143	0.46	100	104.8	80	120	
Mn	55	2	He	104.828	2.899	217075	1.81	100	104.8	80	120	
Fe	56	2	He	104366.035	2.605	298124596	1.61	100	104366.0	80	120	
Co	59	2	He	105.183	1.904	491902	0.22	100	105.2	80	120	
Ni	60	2	He	104.559	2.216	123761	0.84	100	104.6	80	120	
Cu	63	2	He	105.060	2.793	321406	1.14	100	105.1	80	120	
Zn	66	2	He	105.047	1.634	60607	0.77	100	105.0	80	120	
As	75	2	He	109.370	2.495	42010	0.88	100	109.4	80	120	
Sb	121	2	He	107.100	2.335	255079	1.75	100	107.1	80	120	
Se	78	2	He	112.011	1.625	3224	0.38	100	112.0	80	120	
Ti	47	2	He	2098.350	1.189	199003	0.68	100	2098.4	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1265011	2.06	1296302	97.59	70	120	
In	115	1	nogas	1112939	0.49	1353535	82.22	70	120	
Li	6	1	nogas	563115	0.67	656425	85.79	70	120	
Bi	209	1	nogas	934822	3.25	1092467	85.57	70	120	
Ge	72	2	He	329405	1.73	366638	89.84	70	120	
In	115	2	He	457654	1.60	519818	88.04	70	120	

Sample Report

Sample Table

Sample Name	MBLK-153375
Data File Name	058SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\051
Acq Date Time	2020-05-11T14:51:22-05:00
Sample Type	Sample
Dilution	1
Comment	DOD B 153375
ISTD Ref FileName	019CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	nogas	-0.003	-0.003	-155.84	43	-0.01	2000	
B	11	1	nogas	2.856	2.856	12.83	16369	0.02	2000	
Al	27	1	nogas	10.283	10.283	4.34	111593	0.01	2000	
Ca	44	1	nogas	-154.282	-154.282	-6.84	75521	-0.20	200000	
Ti	47	1	nogas	0.127	0.127	54.17	250	0.05	2000	
Cr	52	1	nogas	-1.250	-1.250	-20.12	41584	0.00	2000	
Co	59	1	nogas	0.001	0.001	515.49	260	0.00	2000	
Cu	63	1	nogas	0.229	0.229	19.99	2574	0.01	2000	
Zn	66	1	nogas	-0.001	-0.001	-10954.80	2274	0.00	2000	
Se	77	1	nogas	-71.437	-71.437	-35.51	25842	-0.28	2000	
Se	82	1	nogas	1.761	1.761	73.89	40	4.45	2000	
Sr	88	1	nogas	-0.030	-0.030	-24.09	977	0.00	2000	
Mo	95	1	nogas	0.026	0.026	102.43	130	0.02	2000	
Ag	107	1	nogas	-0.064	-0.064	-3.95	63	-0.10	2000	
Cd	111	1	nogas	0.006	0.006	237.47	20	0.03	2000	
Sn	118	1	nogas	0.059	0.059	76.12	720	0.01	2000	
Sb	121	1	nogas	0.083	0.083	16.32	860	0.01	2000	
Ba	137	1	nogas	0.016	0.016	181.42	337	0.00	2000	
Tl	205	1	nogas	0.001	0.001	251.41	83	0.00	2000	
Pb	208	1	nogas	0.046	0.046	20.54	1057	0.00	2000	
U	238	1	nogas	0.002	0.002	4.88	70	0.00	2000	
Li	7	1	nogas	-0.036	-0.036	-105.33	51924	0.00	1000	
Si	28	1	nogas	224.175	224.175	261.34	7324024	0.00	2000	
Tl	203	1	nogas	0.005	0.005	69.45	47	0.01	2000	
Na	23	2	He	43.288	43.288	0.55	57079	0.08	200000	
Mg	24	2	He	15.690	15.690	7.28	6908	0.23	200000	
Al	27	2	He	9.554	9.554	8.38	2317	0.41	2000	
K	39	2	He	16.019	16.019	21.58	48867	0.03	200000	
Ca	43	2	He	10.882	10.882	110.66	17	65.29	200000	
Ca	44	2	He	2.013	2.013	331.55	537	0.38	200000	
V	51	2	He	-2.043	-2.043	-2.15	4957	-0.04	2000	
Cr	52	2	He	0.016	0.016	21.42	757	0.00	2000	
Mn	55	2	He	0.122	0.122	30.59	370	0.03	2000	
Fe	56	2	He	0.964	0.964	5.22	8462	0.01	200000	
Co	59	2	He	-0.009	-0.009	-13.95	37	-0.02	2000	
Ni	60	2	He	0.028	0.028	59.20	87	0.03	2000	

Sample Report

Cu	63	2	He	0.256	0.256	42.93	1493	0.02	2000	
Zn	66	2	He	0.026	0.026	487.50	920	0.00	2000	
As	75	2	He	0.014	0.014	231.42	108	0.01	2000	
Sb	121	2	He	0.138	0.138	48.11	583	0.02	2000	
Se	78	2	He	0.230	0.230	181.81	38	0.61	2000	
Ti	47	2	He	0.247	0.247	85.76	33	0.74	2000	

Sample Report

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Ge	72	1	nogas	1222265	1.92	1296302	94.29	70	120	
In	115	1	nogas	1269209	3.84	1353535	93.77	70	120	
Li	6	1	nogas	634552	0.66	656425	96.67	70	120	
Bi	209	1	nogas	1060419	2.43	1092467	97.07	70	120	
Ge	72	2	He	337228	0.94	366638	91.98	70	120	
In	115	2	He	480798	0.86	519818	92.49	70	120	